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## Catalogo generale IV EDIZIONE General catalogue IV EDITION

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Benvenuti nella nuova  
edizione del catalogo  
generale New Elfin.  
Vi ricordiamo di visitare  
costantemente  
il nostro sito  
**[www.newelfin.com](http://www.newelfin.com)**

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New Elfin catalogue.  
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and keep up with  
the latest news.

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NEW ELFIN - COMMAND AND CONTROL

## Pulsanteria d'eccellenza Top-class push-buttons



**25.000**

COMMANDS AND  
CONTROLS DAILY  
PRODUCED





## Made in Italy dal 1967

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Progettazione, costruzione  
di attrezzature, stampaggio  
delle materie plastiche,  
assemblaggi automatizzati,  
collaudi e spedizioni.

**E COSTANTI INVESTIMENTI  
IN RICERCA E SVILUPPO.**

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## Made in Italy since 1967

---

Design, construction  
of equipment, stamping  
of raw materials,  
automated assemblies,  
testing and delivery.

**INVESTMENT IN RESEARCH  
AND DEVELOPMENT.**

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# E like Elfin

## **New Elfin per essere precisi**

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**UN'AZIENDA CHE SI  
METTE IN DISCUSSIONE  
OGNI GIORNO.**

C'è qualcosa di nuovo. Sempre.  
La novità è nel contenuto,  
non nella ragione sociale.

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## **New Elfin to be precise**

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**A COMPANY THAT  
CHALLENGES ITSELF EVERY  
DAY.**

That makes always something  
new. Where novelty is the  
content.

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# E

# like Elected

## **Qualità e creatività italiana**

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IN QUESTO CATALOGO  
SI PARLA DI QUALITÀ  
INVISIBILE, NELLA  
RICERCA DELLA  
PERFEZIONE DI MATERIALI  
E FORME.

Qualità percepita,  
nell'ergonomia e nel  
design della parte tangibile  
dall'utilizzatore. Qualità  
nell'aria, dei servizi e  
dell'assistenza. In questi  
prodotti c'è la creatività italiana  
e competenza tecnica.

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## **Italian quality & creativity**

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IN THIS CATALOGUE THE  
QUALITY OF MATERIAL  
AND SHAPE PERFECTION  
RESEARCH, ERGONOMICS  
AND DESIGN IS A TANGIBLE  
SENSATION.

The quality of services  
and assistance is well  
perceived.  
Italian creativity and  
technical knowledge is a good  
recipe to get perfect product.

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# E like Energy

## Collega pensieri e azioni

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ACCENDERE, CHIUDERE  
IL CIRCUITO, INSERIRE  
LA FORZA, ARRESTARE  
UN MACCHINARIO...  
SONO OPERAZIONI  
SCONTATE.

Ma quando sono le tonnellate  
di un treno che deve fermarsi  
o un macchinario in azione,  
la precisione e la certezza del  
comando sono fondamentali.

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## Links idea to actions

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SWITCH ON, CLOSE THE  
CIRCUIT, POWER UP,  
STOP A MACHINE...  
ARE ROUTINE  
OPERATIONS.

But when a train weighing  
tons or a machine in operation  
has to be stopped, the  
command accuracy and  
reliability are essential.

---



# E like Enea

## Un uomo che vede lontano

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INSEGUE UN'IDEA DI  
AZIENDA COSÌ PERFETTA  
CHE AL CONFRONTO  
LA PENTOLA D'ORO ALLA  
BASE DELL'ARCOBALENO  
È TROPPO FACILE  
DA RAGGIUNGERE.

È il presidente. Ma lo potete  
trovare anche seduto sul  
carrello elevatore se una nuova  
idea deve essere verificata.  
Personalmente. Come sempre.

---

## A man who is looking ahead

---

HE FOLLOWS A CONCEPT  
OF SUCH A PERFECT  
COMPANY THAT THE POT OF  
GOLD AT THE END  
OF THE RAINBOW  
SEEMS TOO EASY  
TO BE REACHED.

He is the President. But  
you can find him sitting on a  
forklift if a new  
idea has to be checked.

---

L'esperienza va condivisa e fatta crescere  
The experience has to be shared and increased



41

AVERAGE AGE  
OF EMPLOYEES

# E

## like Empathy

**L'energia  
senza  
simpatia  
non muove  
nulla**

**Energy  
without  
sympathy  
moves  
nothing**

---

**GIOVANI, BRILLANTI  
E DINAMICI.**

Sono i benvenuti per entrare  
nel vortice di questa azienda.

---

**YOUNG, BRILLANT, DYNAMIC  
PEOPLE.**

They are welcome to enter the  
vortex of this company.

---





NEW ELFIN - COMMAND AND CONTROL

Il 90% delle materie prime è di origine italiana  
90% of raw materials are originally italian



**100%**

CONTROL OVER  
OUR PRODUCTION  
PROCESSES



## La tecnologia corre, l'importante é non fermarsi mai

## Technology runs, never stopping that's important

URTI, GHIACCIO, CALORE,  
POLVERE E ACQUA  
SONO I BENVENUTI NEL  
NOSTRO LABORATORIO.  
EFFETTUIAMO IN CASA TUTTI  
I TEST PIÙ SEVERI PERCHÉ  
VOGLIAMO CHE I NOSTRI  
PRODOTTI RESISTANO  
ANCHE A VOI.

SHOCKS, ICE, HEAT, POWDER  
AND WATER ARE WELCOME  
IN OUR LABORATORY.  
WE RUN ALL  
THE MOST SEVERE  
TESTS IN HOUSE BECAUSE  
WE WANT  
OUR PRODUCTS TO  
WITHSTAND YOU AS WELL.

Usiamo i prodotti, li mettiamo  
alla prova, progettiamo e  
riprogettiamo. Li usiamo per  
i nostri cancelli e li inseriamo  
sui nostri macchinari.  
Non ci accontentiamo di  
risultati buoni, puntiamo  
alla perfezione. Ascoltiamo  
le vostre richieste perché li  
possiate usare esattamente  
come e dove volete.

We use and test the products,  
we design and re-design. We  
use them for our gates and fit  
them to our machines.  
We are not satisfied with  
good results, we aim at  
perfection. We listen to your  
requirements, so you can  
use the products exactly how  
and where you want.

## **Amiamo i nostri pulsanti**

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Questa non è un'azienda gestita da contabili, ma da chi ha lavorato in questo campo per anni. Ci siamo sporcati le mani, sappiamo quali possono essere i problemi, sappiamo come montare e smontare i nostri prodotti e quanto sia importante farlo velocemente ed in sicurezza. Per questo i nostri prodotti sono modulari e possono essere montati con utensili standard in pochissimo tempo.

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## **We love our push-buttons**

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This is not a company managed by accountants, but by people who have been working in this field of application for years. We have dirtied our hands, we know the problems we may experience, we know how to assemble and disassemble our products and how important it is to make it quickly and safely. That's why our products are modular and can be fitted using standard tools in short time.

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**Perfetti,**  
perchè in punta di dita  
la perfezione si sente...

---

**Perfect,**  
because the perfection  
is felt at fingertips...



**Armonici,**  
perchè il suono  
rivela la qualità  
che non si vede...

---

**Harmonious,**  
because the sound  
reveals the quality  
of what is concealed...



**Vanitosi,**  
perchè l'occhio  
vuole la sua parte  
di design...

---

**Vain,**  
because aesthetical  
look is always  
important...



NEW ELFIN - COMMAND AND CONTROL

13.000 prodotti codificati  
13.000 codified items



**5000**

ARTICLES READY  
FOR DISPATCH





## Agli ordini!

DISPONIAMO DI UN  
MAGAZZINO DI 7000 MQ,  
CON 13000 PRODOTTI  
CODIFICATI

Amiamo la velocità, forse per questo la nostra azienda è vicina ad uno dei più grandi aeroporti italiani. Il nostro magazzino completamente automatizzato lavora a ritmi incessanti per non farvi aspettare un minuto di più.

## Yes, Sir!

WE HAVE A 7000 SQ M  
WAREHOUSE WITH 13000  
CODED ITEMS.

We love speed, maybe it's because our company is close to one of the biggest Italian airports. Our fully automated warehouse operates at full speed, so you don't have to wait any longer than necessary.

## **Innovazione tecnologia e servizi al cliente**

---

**ALLA RICERCA DELL'AZIENDA PERFETTA, NELLE TECNOLOGIE E NEI SERVIZI AL CLIENTE, PER DIMOSTRARE COME I PRODOTTI ITALIANI SIANO COMPETITIVI ANCHE ALL'ESTERO.**

Guardiamo lontano, non ci fermiamo mai. Se nasce una buona intuizione la perseguiamo. La nostra squadra è affiatata, ma soprattutto abbiamo sempre l'umiltà di imparare dagli altri per cercare di migliorarci. Mettersi in discussione è la nostra chiave per crescere.

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## **Technological innovation and customer service**

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**IN SEARCH OF THE PERFECT COMPANY FOR TECHNOLOGY AND CUSTOMER SERVICE TO PROVE HOW THE ITALIAN PRODUCTS ARE COMPETITIVE EVEN ABROAD.**

We are looking ahead, we never stop. If a good idea comes up, we follow it. Our team is a close-knit team but first of all we have the hummility to learn from others in order to improve ourselves. Challenge ourselves is our key to growth.

---



**Forti,**  
per resistere anche  
ad usi estremi...

---

**Strong,**  
to stand extreme  
use too...



**Sicuri,**  
per gli utilizzi nei campi  
più pericolosi...

---

**Safe,**  
for use in the most  
dangerous fields of  
application...



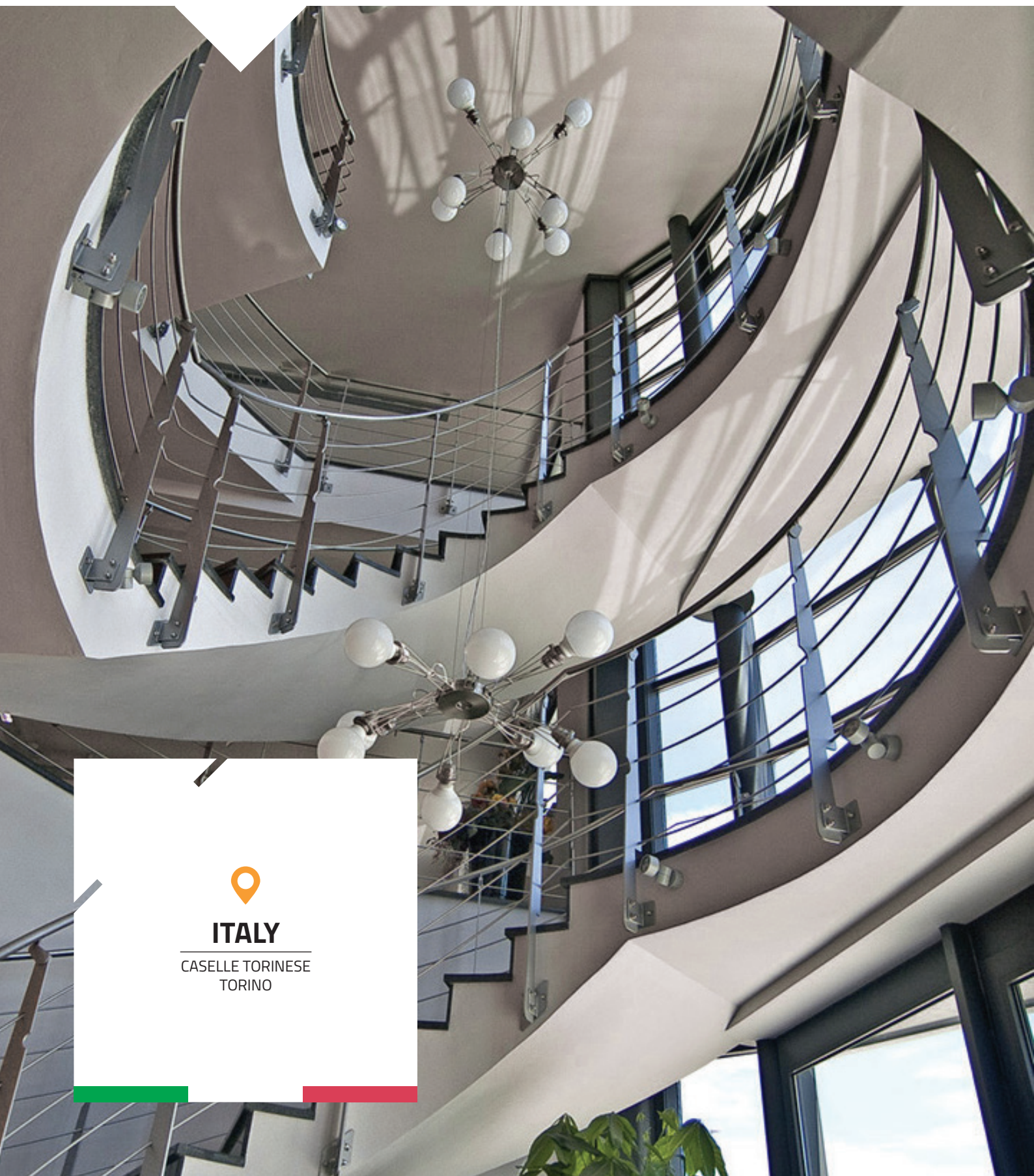
**Puliti,**  
perché non sempre  
l'ambiente lo è.

---

**Clean,**  
because the environment  
needs to be cleaned...

NEW ELFIN - COMMAND AND CONTROL

Esportiamo in 55 paesi  
55 countries export



**ITALY**

CASELLE TORINESE  
TORINO







## Più facile a farsi che a dirsi.

Il modo più semplice per scegliere il prodotto giusto. Il catalogo, chiaro e completo, è disponibile sul nostro sito **newelfin.com**

Resterai stupito dalla nostra rete vendita internazionale.

## Easier done than said.

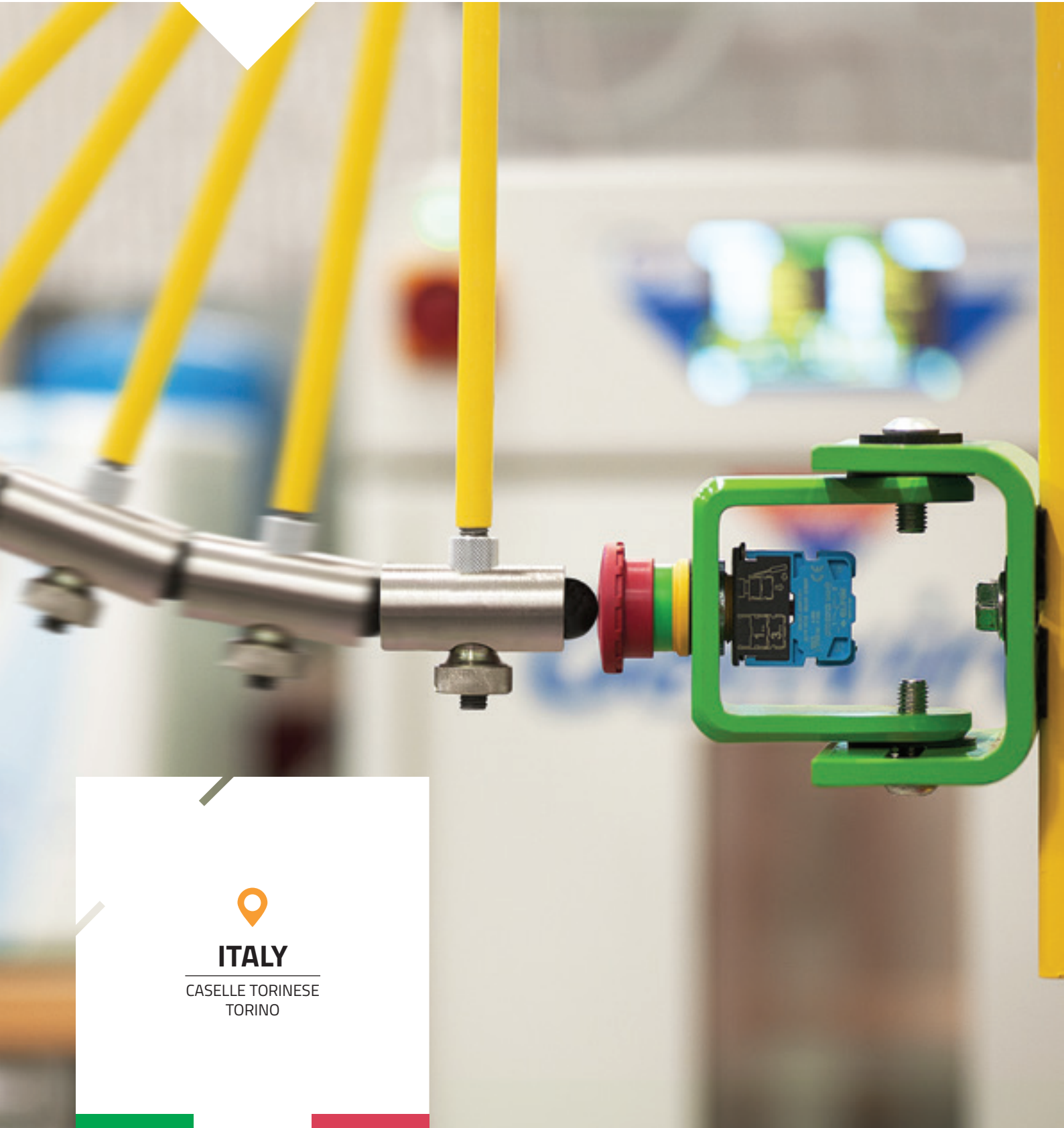
The most simple way to choose commands and controls. The easy and complete catalogue is ready to be discovered on our website **newelfin.com**

You will be gratified by our worldwide sales network.

NEW ELFIN - COMMAND AND CONTROL

Soddisfare esigenze sempre diverse è una sfida  
che abbiamo vinto tante volte

Meeting ever-changing requirements is a challenge we  
have won many times



**ITALY**

CASELLE TORINESE  
TORINO



## Amiamo il controllo

**SOTTO TUTTI I PUNTI  
DI VISTA. OGNI FASE DI  
LAVORO È ALL'INTERNO DEL  
NOSTRO STABILIMENTO.**

I nostri prodotti, ci siamo affezionati, li pensiamo, li progettiamo, li realizziamo, ma alla fine siamo anche disposti a personalizzarli per voi.

"ET" significa "Elettroforniture Torinesi". Per noi è il legame con il passato e con il saper fare italiano. Il rispetto delle normative è una prerogativa per tutti i nostri prodotti, anche quando non sono obbligatorie. Quante persone diverse affidano la sicurezza ad un pulsante luminoso? Dall'installazione alla pulizia teniamo conto di ogni momento dell'utilizzo già in fase di progettazione.

## We love control

**FROM ANY POINT OF VIEW.  
EVERY WORKING STEP IS  
PERFORMED IN-HOUSE.**

We thought out, design and manufacture our products, we are very fond of, but at the end we are even open to customise them for you.

"ET" means "Electrical supplies Turin". It is our relation to the past and to the Italian know-how. The compliance with standards is the main quality for all our products, even when we are not obliged to comply with. How many people do entrust the safety to an illuminated push-button? From the fitting to the cleaning we take into account every step of their use even during designing.

010

020

032

030

040

080

050

060

090





P. 54

LAMPADINE, PRESSACAVI ED ACCESSORI  
LAMPS, CABLE GLANDS AND ACCESSORIES

**010**

P. 54

COMANDO E SEGNALAZIONE SM2 Ø22  
COMMAND AND SIGNALLING SM2 Ø22

**020**

P. 54

COMANDO E SEGNALAZIONE FILO PANNELLO SM2 Ø30  
COMMAND AND SIGNALLING FLUSH-MOUNT SM2 Ø30

**032**

P. 54

COMANDO E SEGNALAZIONE EL-SG Ø30  
COMMAND AND SIGNALLING EL-SG Ø30

**030**

P. 54

SCATOLE E CASSETTE PULSANTIERE IN METALLO  
METAL PUSH-BUTTON BOXES, ENCLOSURE

**040**

P. 54

SCATOLE E CASSETTE PULSANTIERE IN TERMOPLASTICO  
THERMOPLASTIC PUSH-BUTTON BOXES, ENCLOSURE

**080**

P. 54

SEGNALAZIONE ED ILLUMINAZIONE QUADRI ELETTRICI  
CONTROL CABINET SIGNALLING AND LIGHTING

**050**

P. 54

DISPOSITIVI DI COMANDO DI SICUREZZA  
SAFETY CONTROL DEVICES

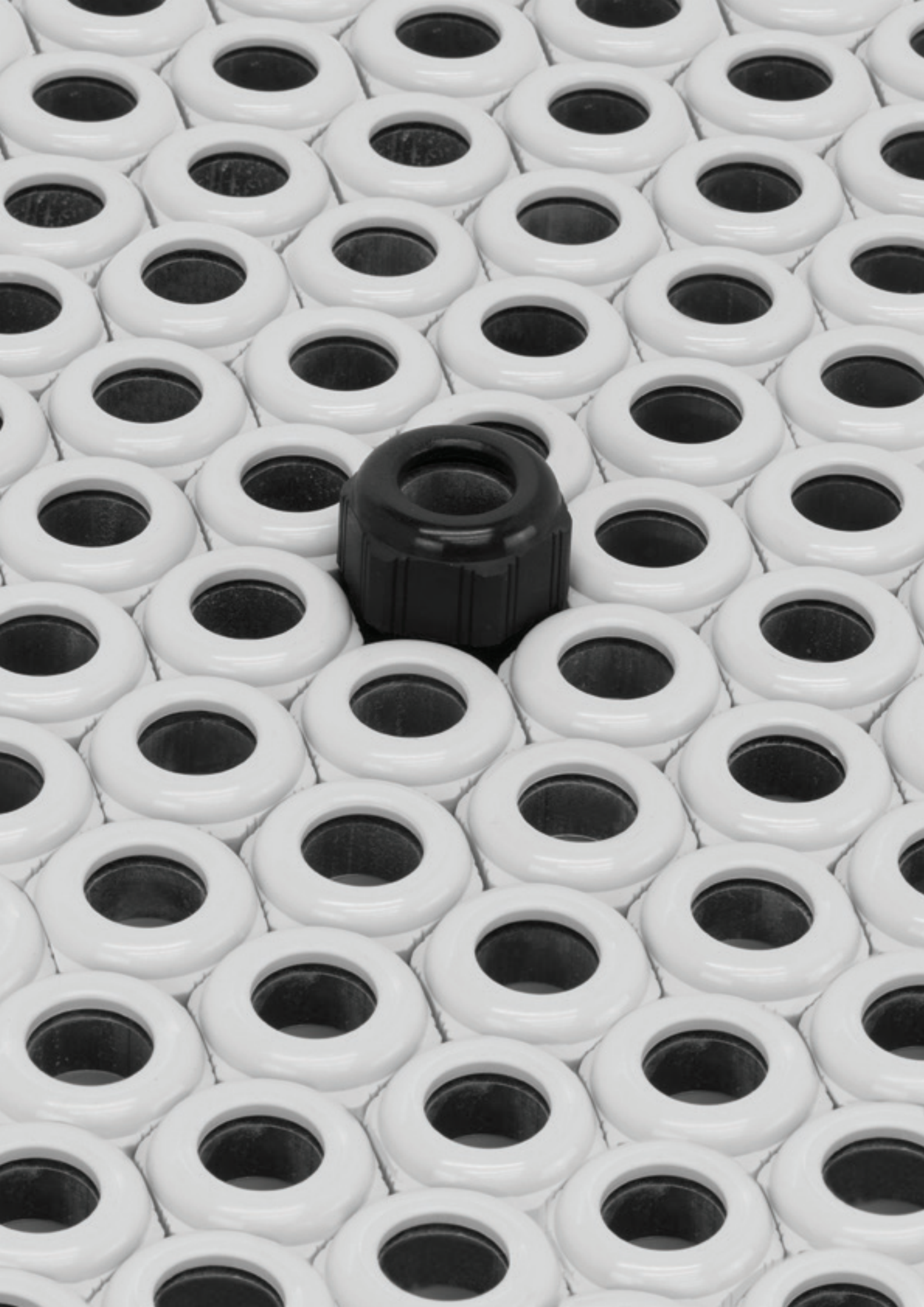
**060**

P. 54

CONTATTORI, RELÈ, INTERRUTTORI SALVAMOTORE  
CONTACTORS, RELAYS AND MOTOR CIRCUIT BREAKERS

**090**





# 010

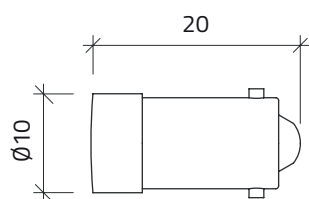
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**LAMPADINE, PRESSACAVI  
ED ACCESSORI**

**LAMPS, CABLE GLANDS AND  
ACCESSORIES**

# Lampadine Lamps

## BA9S Led luce fissa BA9S Steady light led lamps



### 6V AC-DC

|                   | g | n | cod         |
|-------------------|---|---|-------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR6  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG6  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV6  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL6 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB6  |

### 12V AC-DC

|                   |   |   |              |
|-------------------|---|---|--------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR12  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG12  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV12  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL12 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB12  |

### 24V AC-DC

|                   |   |   |              |
|-------------------|---|---|--------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR24  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG24  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV24  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL24 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB24  |

### 36V AC-DC

|                   |   |   |              |
|-------------------|---|---|--------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR36  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG36  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV36  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL36 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB36  |

### 48V AC-DC

|                   |   |   |              |
|-------------------|---|---|--------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR48  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG48  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV48  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL48 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB48  |

### 130V AC-DC

|                   |   |   |               |
|-------------------|---|---|---------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR110  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG110  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV110  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL110 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB110  |

### 240V AC-DC

|                   |   |   |               |
|-------------------|---|---|---------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR240  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG240  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV240  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL240 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB240  |

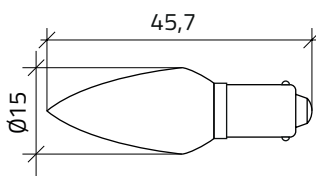
### 400V AC-DC

|                   |   |   |               |
|-------------------|---|---|---------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR400  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG400  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV400  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL400 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB400  |



# Lampadine Lamps

## BA9S Led luce fissa BA9S Steady light led lamps



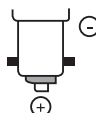
### 24V AC-DC

|                   |   |                     |
|-------------------|---|---------------------|
| ● Rosso / Red     | 2 | <b>010BA9ALR24</b>  |
| ● Giallo / Yellow | 2 | <b>010BA9ALG24</b>  |
| ● Verde / Green   | 2 | <b>010BA9ALV24</b>  |
| ● Blu / Blue      | 2 | <b>010BA9ALBL24</b> |
| ○ Bianco / White  | 2 | <b>010BA9SAB24</b>  |

### 240V AC-DC

|                   |   |                      |
|-------------------|---|----------------------|
| ● Rosso / Red     | 2 | <b>010BA9ALR220</b>  |
| ● Giallo / Yellow | 2 | <b>010BA9ALG220</b>  |
| ● Verde / Green   | 2 | <b>010BA9ALV220</b>  |
| ● Blu / Blue      | 2 | <b>010BA9ALBL220</b> |
| ○ Bianco / White  | 2 | <b>010BA9ALB220</b>  |

## Led <60V non polarizzati 110-240 V polarizzati Led lamps <60V non-polarized 110-240 V polarized



### Led luce lampeggiante / Flashing light led

Led ultraluminoso tensioni  $\pm 15\%$  non polarizzata / Ultra-bright led, voltage  $\pm 15\%$  non-polarized  
AC-DC 6 12 24 48 110 AC 220 mA 30 20 14 7 5 16

### 24V AC-DC

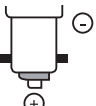
|               |   |                     |
|---------------|---|---------------------|
| ● Rosso / Red | 2 | <b>010BA9SLLR24</b> |
|---------------|---|---------------------|

### 130V AC-DC

|               |   |                      |
|---------------|---|----------------------|
| ● Rosso / Red | 2 | <b>010BA9SLLR110</b> |
|---------------|---|----------------------|

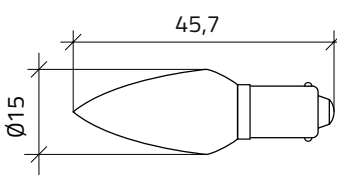
### 240V AC-DC

|               |   |                      |
|---------------|---|----------------------|
| ● Rosso / Red | 2 | <b>010BA9SLLR220</b> |
|---------------|---|----------------------|

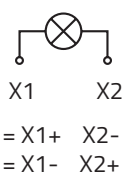


### 24V AC-DC

|               |   |                     |
|---------------|---|---------------------|
| ● Rosso / Red | 2 | <b>010BA9ALLR24</b> |
|---------------|---|---------------------|

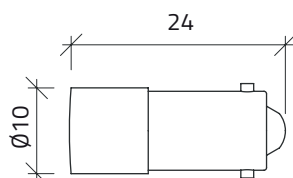


## Nuove lampade due colori , tecnologia led alta luminosità New bi-colour led lamps,high brightness

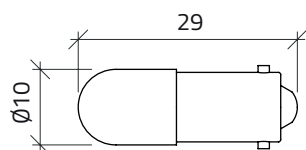


### 24V DC 15mA

|                                 |   |                      |
|---------------------------------|---|----------------------|
| 1 2                             |   |                      |
| ● Verde, rosso / Green, red     | 2 | <b>010BA9SLVR24</b>  |
| ● Verde, giallo / Green, yellow | 2 | <b>010BA9SLVG24</b>  |
| ● Blu, rosso / Blue, red        | 2 | <b>010BA9SLBLR24</b> |
| ● Blu, giallo / Blue, yellow    | 2 | <b>010BA9SLBLG24</b> |



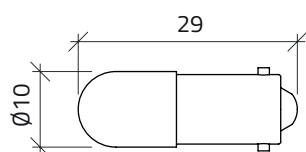
# Lampadine Lamps



## BA9S Lampadine ad incandescenza BA9S Incandescent lamps

|      |       |     | g  | n | cod                    |
|------|-------|-----|----|---|------------------------|
| 6V   | 0,6W  | 1,3 | 10 |   | <b>010BA9S6V-0.6W</b>  |
| 24V  | 1,2 W | 1,3 | 10 |   | <b>010BA9S24V-1.2W</b> |
| 24V  | 3W    | 1,3 | 10 |   | <b>010BA9S24V-3W</b>   |
| 30V  | 1,2W  | 1,3 | 10 |   | <b>010BA9S30V-1.2W</b> |
| 30V  | 3W    | 1,3 | 10 |   | <b>010BA9S30V-3W</b>   |
| 48V  | 1,2W  | 1,3 | 10 |   | <b>010BA9S48V-1.2W</b> |
| 60V  | 1,2 W | 1,3 | 10 |   | <b>010BA9S60V-1.2W</b> |
| 60V  | 3W    | 1,3 | 10 |   | <b>010BA9S60V-3W</b>   |
| 110V | 1,9W  | 1,3 | 10 |   | <b>010BA9S130V-1.9</b> |
| 220V | 2W    | 1,3 | 10 |   | <b>010BA9S220V-2W</b>  |

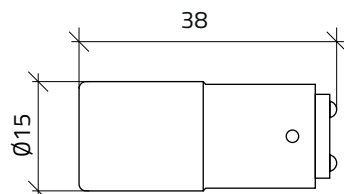
## BA9S Lampadine al neon / BA9S neon lamps



### Neon AC

|                    |      |       |     |    |                    |
|--------------------|------|-------|-----|----|--------------------|
| ● Arancio / Orange | 65V  | 0,05W | 2,3 | 10 | <b>010BA9SN65</b>  |
| ● Arancio / Orange | 130V | 0,1W  | 2,3 | 10 | <b>010BA9SN110</b> |
| ● Verde / Green    | 130V | 0,1W  | 2,3 | 10 | <b>010BA9NV110</b> |
| ● Arancio / Orange | 240V | 0,3W  | 2,3 | 10 | <b>010BA9SN220</b> |
| ● Verde / Green    | 240V | 0,3W  | 2,3 | 10 | <b>010BA9NV220</b> |
| ● Arancio / Orange | 400V | 0,5W  | 2,3 | 10 | <b>010BA9SN380</b> |
| ● Verde / Green    | 400V | 0,5W  | 2,3 | 10 | <b>010BA9NV380</b> |

## BA15D Lampadine led / BA15D led lamps



### 24V AC-DC

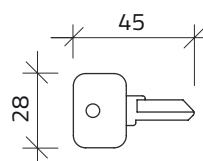
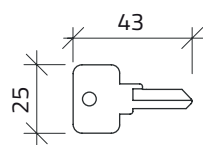
|                  |   |                     |
|------------------|---|---------------------|
| ○ Bianco / White | 2 | <b>010BA15DLB24</b> |
|------------------|---|---------------------|

### 230V AC-DC

|                  |   |                      |
|------------------|---|----------------------|
| ○ Bianco / White | 2 | <b>010BA15DLB220</b> |
|------------------|---|----------------------|

# Chiavi

## Keys



### Chiavi / Keys

| g  | c    | n | cod           |
|----|------|---|---------------|
| 11 | 3095 | 2 | <b>010K95</b> |
| 11 | 3353 | 2 | <b>010K53</b> |
| 11 | 9901 | 2 | <b>010K01</b> |
| 11 | 9902 | 2 | <b>010K02</b> |
| 11 | 9903 | 2 | <b>010K03</b> |
| 11 | 9904 | 2 | <b>010K04</b> |
| 11 | 9905 | 2 | <b>010K05</b> |
| 11 | 9910 | 2 | <b>010K10</b> |
| 11 | 9916 | 2 | <b>010K16</b> |
| 11 | 9919 | 2 | <b>010K19</b> |

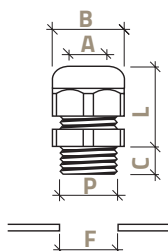
Versione secondo normativa FIAT / Version according to FIAT standards

|                    |    |       |   |               |
|--------------------|----|-------|---|---------------|
| ● Nero / Black     | 11 | 73034 | 2 | <b>010K34</b> |
| ● Rosso / Red      | 11 | 73037 | 2 | <b>010K37</b> |
| ● Giallo/ Yellow   | 11 | 73033 | 2 | <b>010K33</b> |
| ● Blu / Blue       | 11 | 73038 | 2 | <b>010K38</b> |
| ● Arancio / Orange | 11 | 73040 | 2 | <b>010K40</b> |

# Pressacavi in termoplastico

## Thermoplastic cable glands

### Pressacavi / Cable glands

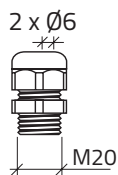


P g F A B C L cod

Poliamide PA6 autoestinguente cl. V2 (UL94) - Temperatura di impiego -20° ÷ +90°  
V2 (UL94) self-extinguishing PA6 polyamide - Operating temperature -20° ÷ +90°

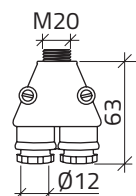
|           |    |      |       |    |      |       |                 |
|-----------|----|------|-------|----|------|-------|-----------------|
| M12 x 1,5 | 4  | 12,5 | 3-6,5 | 15 | 8    | 21    | <b>010NM12</b>  |
| M16 x 1,5 | 7  | 16,5 | 5-10  | 22 | 8    | 23-28 | <b>010NM16</b>  |
| M20 x 1,5 | 11 | 20,5 | 6-12  | 24 | 10   | 24-29 | <b>010NM20</b>  |
| M25 x 1,5 | 16 | 25,5 | 13-18 | 33 | 12   | 30-35 | <b>010NM25</b>  |
| M32 x 1,5 | 23 | 32,5 | 18-25 | 42 | 11   | 34-40 | <b>010NM32</b>  |
| PG7       | 4  | 12,5 | 3-5,5 | 15 | 8    | 18-22 | <b>010NPG7</b>  |
| PG9       | 6  | 15,5 | 4-8   | 19 | 8    | 22-26 | <b>010NPG9</b>  |
| PG11      | 9  | 19   | 5-10  | 22 | 8    | 23-28 | <b>010NPG11</b> |
| PG13,5    | 11 | 20,5 | 6-12  | 24 | 10   | 24-29 | <b>010NPG13</b> |
| PG16      | 13 | 22,5 | 9-14  | 27 | 10,5 | 26-31 | <b>010NPG16</b> |
| PG21      | 21 | 29   | 13-18 | 33 | 12   | 30-35 | <b>010NPG21</b> |

g cod



### Pressacavo 2 ingressi / 2-hole cable gland

10 **0102P20**



### Pressacavo 2 vie / Double entry cable gland

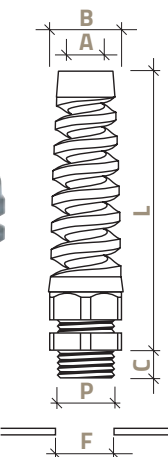
45 **010N2M20**

P g F A B C L cod

### Pressacavi con spirale / Spiral cable glands

Poliamide PA6 autoestinguente cl. V2 (UL94) - Temperatura di impiego -20° ÷ +90°  
V2 (UL94) self-extinguishing PA6 polyamide - Operating temperature -20° ÷ +90°

|           |    |       |       |    |      |     |                 |
|-----------|----|-------|-------|----|------|-----|-----------------|
| M12 x 1,5 | 7  | 126,5 | 3-6,5 | 15 | 8    | 54  | <b>010FM12</b>  |
| M16 x 1,5 | 10 | 16,5  | 5-10  | 22 | 8    | 80  | <b>010FM16</b>  |
| M20 x 1,5 | 19 | 20,5  | 6-12  | 24 | 10   | 90  | <b>010FM20</b>  |
| M25 x 1,5 | 33 | 25,5  | 13-18 | 33 | 12   | 112 | <b>010FM25</b>  |
| PG11      | 16 | 19    | 5-10  | 22 | 8    | 80  | <b>010FPG11</b> |
| PG13,5    | 19 | 20,5  | 6-12  | 24 | 10   | 90  | <b>010FPG13</b> |
| PG16      | 25 | 22,5  | 9-14  | 27 | 10,5 | 100 | <b>010FPG16</b> |
| PG21      | 25 | 29    | 13-18 | 33 | 11   | 111 | <b>010FPG21</b> |

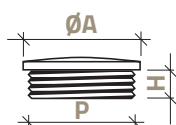




# Tappi e riduzioni in termoplastico

## Thermoplastic hole plugs and reducers

### Tappi di chiusura / Hole plugs

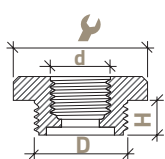


P — ØA — H — g — cod

Polistirene PS - Temperatura di impiego -20°/+60°  
PS Polystyrene - Operating temperature -20°/+60°

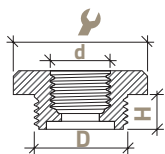
|           |    |    |     |                 |
|-----------|----|----|-----|-----------------|
| M12 x 1,5 | 15 | 6  | 1   | <b>010TM12</b>  |
| M16 x 1,5 | 22 | 6  | 2   | <b>010TM16</b>  |
| M20 x 1,5 | 24 | 7  | 2,4 | <b>010TM20</b>  |
| M25 x 1,5 | 33 | 9  | 4   | <b>010TM25</b>  |
| M32 x 1,5 | 38 | 11 | 42  | <b>010TM32</b>  |
| PG7       | 15 | 6  | 1   | <b>010TPG7</b>  |
| PG9       | 19 | 6  | 1,5 | <b>010TPG9</b>  |
| PG11      | 22 | 7  | 2   | <b>010TPG11</b> |
| PG13,5    | 25 | 7  | 2   | <b>010TPG13</b> |
| PG16      | 27 | 7  | 3   | <b>010TPG16</b> |
| PG21      | 33 | 9  | 5   | <b>010TPG21</b> |

### Riduzioni in plastica / Plastic reducers

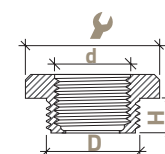


D — d — H — g — cod

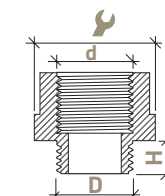
|     |     |    |    |   |                   |
|-----|-----|----|----|---|-------------------|
| M25 | M12 | 10 | 29 | 8 | <b>010RM25M12</b> |
|-----|-----|----|----|---|-------------------|



|     |     |    |    |   |                   |
|-----|-----|----|----|---|-------------------|
| M25 | M16 | 10 | 32 | 9 | <b>010RM25M16</b> |
|-----|-----|----|----|---|-------------------|

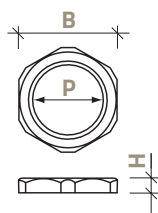


|     |     |    |    |     |                   |
|-----|-----|----|----|-----|-------------------|
| M25 | M20 | 10 | 32 | 7,8 | <b>010RM25M20</b> |
|-----|-----|----|----|-----|-------------------|



|     |     |    |    |     |                   |
|-----|-----|----|----|-----|-------------------|
| M20 | M25 | 10 | 32 | 6,8 | <b>010RM20M25</b> |
|-----|-----|----|----|-----|-------------------|

# Controdadi Locknuts



## Controdadi / Locknuts

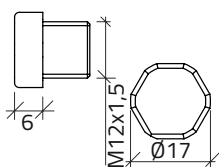
P B H g n cod

Poliammide PA6 autoestinguente cl. V2 (UL94) - Temperatura di impiego  $-20^{\circ}\text{C} \div +90^{\circ}\text{C}$   
V2 (UL94) self-extinguishing PA6 polyamide - Operating temperature  $-20^{\circ}\text{C} \div +90^{\circ}\text{C}$

|           |    |   |     |    |                 |
|-----------|----|---|-----|----|-----------------|
| M12 x 1,5 | 18 | 5 | 1   | 10 | <b>010DM12</b>  |
| M16 x 1,5 | 24 | 6 | 1,5 |    | <b>010DM16</b>  |
| M20 x 1,5 | 27 | 6 | 2   |    | <b>010DM20</b>  |
| M25 x 1,5 | 34 | 7 | 3   |    | <b>010DM25</b>  |
| M32 x 1,5 | 41 | 7 | 4   |    | <b>010DM32</b>  |
| PG7       | 19 | 5 | 1   |    | <b>010DPG7</b>  |
| PG9       | 22 | 5 | 2   |    | <b>010DPG9</b>  |
| PG11      | 24 | 5 | 2   |    | <b>010DPG11</b> |
| PG13,5    | 27 | 6 | 2,5 |    | <b>010DPG13</b> |
| PG16      | 30 | 6 | 3   |    | <b>010DPG16</b> |
| PG21      | 36 | 7 | 3,5 |    | <b>010DPG21</b> |

# Valvole di ventilazione anticondensa

## Ventilation plugs ( to prevent condensation)



Permeabilità all'aria / Air permeability 2lt./min. $\Delta p = 70\text{mbar}$   
 Pressione ingresso acqua / Water inlet pressure max 0,2 bar / 60 s

● Nero / Black

g

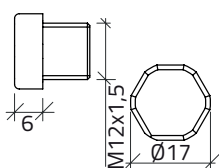
n

cod

1,5

10

010VV

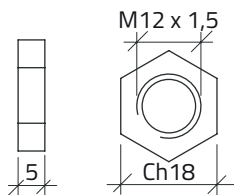


Permeabilità all'aria / Air permeability 0,4lt./min. $\Delta p = 70\text{mbar}$   
 Pressione ingresso acqua / Water inlet pressure max 0,6 bar / 60 s

● Grigio / Grey

1,5

010VV400

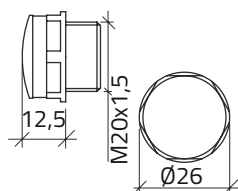


● Nero / Black

0,7

10

010DM12



Permeabilità all'aria / Permeability to air 12,5lt./min. $\Delta p = 70\text{mbar}$   
 Pressione ingresso acqua / Water inlet pressure max 0,1 bar / 60 s

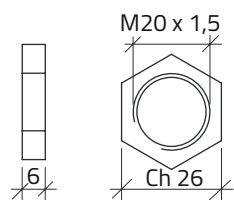
● Nero / Black

g

cod

6,0

010VV12500



● Nero / Black

2

010DM20

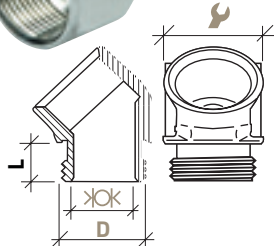
# Pressacavi e riduzioni in metallo OTTONE NICHELATO

## Metal cable glands and adapters NICKEL-PLATED BRASS



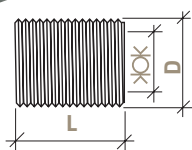
| g                                | D       |         |    | L  | cod             |
|----------------------------------|---------|---------|----|----|-----------------|
| <b>Pressacavi / Cable glands</b> |         |         |    |    |                 |
| 14                               | M16x1,5 | 5 ÷ 9   | 18 | 17 | <b>010POM16</b> |
| 20                               | M20x1,5 | 8 ÷ 12  | 22 | 22 | <b>010POM20</b> |
| 34                               | M25x1,5 | 11 ÷ 16 | 28 | 28 | <b>010POM25</b> |
| 50                               | M32x1,5 | 15 ÷ 21 | 35 | 35 | <b>010POM32</b> |

### Raccordo a gomito 45° / Elbow fittings to 45°



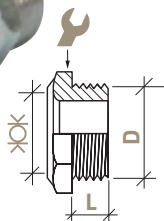
| g  | D       |      |    | L  | cod             |
|----|---------|------|----|----|-----------------|
| 26 | M16x1,5 | 11,5 | 19 | 10 | <b>010GIM16</b> |
| 38 | M20x1,5 | 15   | 23 | 10 | <b>010GIM20</b> |
| 55 | M25x1,5 | 20   | 28 | 10 | <b>010GIM25</b> |
| 90 | M32x1,5 | 27   | 36 | 10 | <b>010GIM32</b> |

### Nippli / Nipples



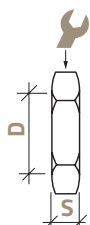
| g  | D       |    |      | L | cod             |
|----|---------|----|------|---|-----------------|
| 8  | M16x1,5 | 12 | 21   |   | <b>010NPM16</b> |
| 20 | M20x1,5 | 15 | 24,5 |   | <b>010NPM20</b> |
| 18 | M25x1,5 | 20 | 25   |   | <b>010NPM25</b> |
| 30 | M32x1,5 | 26 | 32   |   | <b>010NPM32</b> |

### Riduzioni / Adapters



| g  | D       |    |    | L  | cod            |
|----|---------|----|----|----|----------------|
| 18 | M16x1,5 | 12 | 22 | 12 | <b>010BM16</b> |
| 22 | M20x1,5 | 15 | 26 | 14 | <b>010BM20</b> |
| 20 | M25x1,5 | 21 | 30 | 14 | <b>010BM25</b> |
| 28 | M32x1,5 | 28 | 40 | 15 | <b>010BM32</b> |

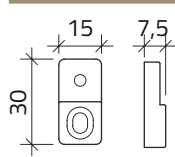
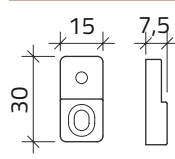
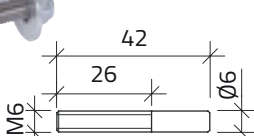
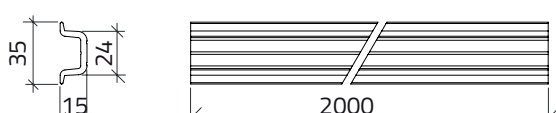
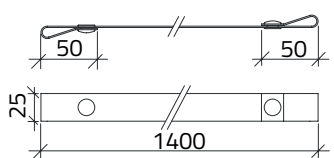
### Controdadi / Locknuts



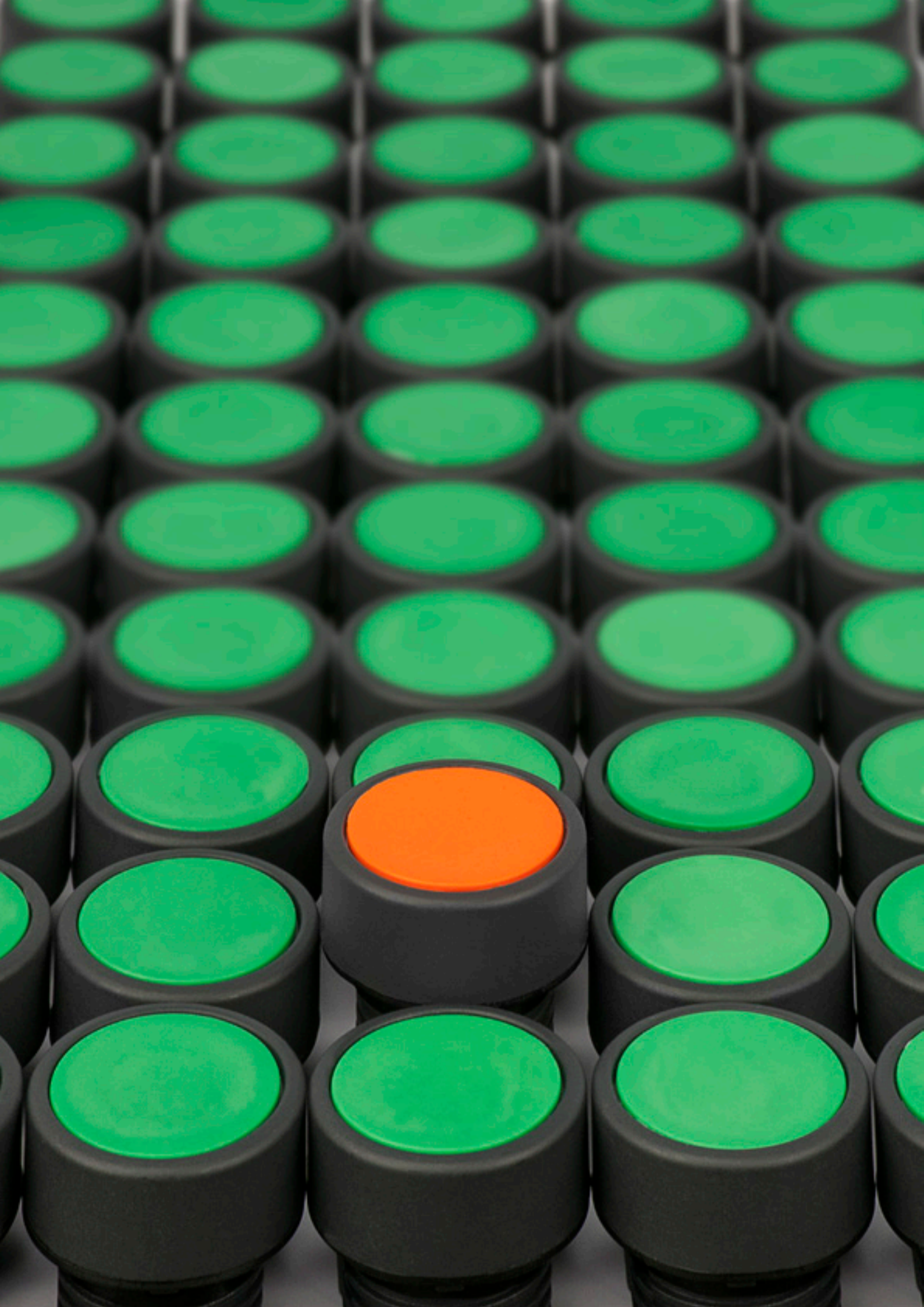
| g  | D       |    | S   | cod            |
|----|---------|----|-----|----------------|
| 4  | M16x1,5 | 19 | 3   | <b>010GM16</b> |
| 6  | M20x1,5 | 24 | 3,5 | <b>010GM20</b> |
| 12 | M25x1,5 | 30 | 3,5 | <b>010GM25</b> |
| 26 | M32x1,5 | 36 | 4,5 | <b>010GM32</b> |

# Accessori per scatole pulsantiere

## Accessories for push-button enclosures

|                                                                                                                                                                                                                                                            |                                                                                           | L    | g   | cod     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------|-----|---------|
|                                                                                          | <b>Kit di staffe di fissaggio 10 mm</b><br><b>Set of mounting brackets 10 mm</b>          |      | 28  | 010S10  |
|                                                                                          | <b>Kit di staffe di fissaggio 25mm</b><br><b>Set of mounting brackets 25 mm</b>           |      | 32  | 010S25  |
|    | <b>Kit di fissaggio con prigionieri (M4/M10)</b><br><b>Fixing kit with (M4/M10) studs</b> |      | 26  | 010SFP  |
|                                                                                      | <b>Guida / PVC Rail Ø 35</b>                                                              | 2000 | 760 | 010GDP  |
|                                                                                      | <b>Cinghia tracolla / Shoulder belt</b><br><b>25X1400 mm</b>                              |      | 46  | 010CT25 |





# 020

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**COMANDO  
E SEGNALAZIONE SM2 Ø22**

**COMMAND AND SIGNALLING  
SM2 Ø22**

# SISTEMA MODULARE 22

## MODULAR SYSTEM 22

### LA SERIE SM2

La serie SM2 "SISTEMA MODULARE 22" è progettata per un utilizzo sicuro, facile e intuitivo; le soluzioni adottate facilitano la realizzazione di varie combinazioni garantendo risparmio di tempo e risorse.

Le operazioni di montaggio e manutenzione possono essere svolte con normali utensili e con estrema accessibilità agli operatori.

### LA STRUTTURA

Tutti gli operatori possono essere fissati con ghiera metalliche. Il filetto a sezione trapezoidale e l'accoppiamento plastica / metallo garantisce serraggi sicuri e permanenti. L'ancoraggio tra operatori ed elementi di contatto o elementi portalamпада, è costruito con un profondo incasso poi trattato con una molla in acciaio inox.

La struttura degli elementi di contatto è realizzata con estrema robustezza e flessibilità. La componibilità del sistema permette di comporre gli elementi retro pannello in molteplici configurazioni.

La dimensionatura dei blocchi e le sezioni dei sistemi di serraggio garantiscono notevole resistenza alle tensioni da strappo. I contatti degli operatori New Elfin sono caratterizzati dalle grandi dimensioni delle superfici di contatto e dalla particolare conformazione che garantisce performance di efficienza operativa e di durata superiori alla media.

I nostri prodotti sono progettati e costruiti con tecnopolimeri Hi-tech. Gli spessori applicati e l'aggiunta di materiale di rinforzo conferiscono a tutte le parti grande robustezza e resistenza.

Le parti metalliche sono in acciaio inox o in acciaio trattato, mentre le guarnizioni in gomma resistono a tutte le condizioni climatiche. Queste caratteristiche consentono l'utilizzo in ambienti critici.

### DISPOSITIVI D'EMERGENZA

Tutti i sistemi di comando possono essere dotati di un esclusivo dispositivo di arresto d'emergenza, che difende i segnali di arresto di emergenza, mantenendoli coerenti ai requisiti per i quali sono stati progettati. Il dispositivo neutralizza fattori esterni non controllabili quali forti shock, corrosioni, errori di utilizzo, inadeguata manutenzione ecc.

### CAPSULA DI PROTEZIONE

La capsula di protezione è un particolare accessorio per la protezione degli elementi di contatto per l'utilizzo in situazioni ambientali particolarmente gravose. Garantisce una chiusura ermetica nella parte retropannello ed è particolarmente adatto per l'uso nei settori agricolo, marittimo, cementificio ecc.

### THE SM2 SERIES

The SM2 "MODULAR SYSTEM 22" series is designed for a safe, easy, intuitive use; the solutions adopted facilitate the execution of a range of combinations guaranteeing time and resources saving.

Assembly and maintenance can be performed by using standard tools and with easy access to the operators.

### STRUCTURE

All operators can be secured by metal locking rings.

The trapezoidal thread and the plastic / metal combination guarantee secure and permanent tightening.

The anchoring mechanism between operators and contact blocks or lampholders consists of a deep recess and a stainless steel spring holding the operator in place.

The structure of the contact blocks is extremely sturdy and flexible.

The modular system allows to compose the rear panel elements in multiple configurations.

The block size and the sections of the tightening systems guarantee considerable tear resistance.

The New Elfin operator contacts feature a large-sized contact surface and a special shape which guarantee above-average efficiency and life.

Our products are designed and manufactured using Hi-tech technopolymers.

The thickness applied and the addition of reinforcement material give all parts great sturdiness and resistance.

The metallic parts are in stainless or treated steel, while the rubber gaskets are resistant to all climatic conditions allowing their use in critical environments.

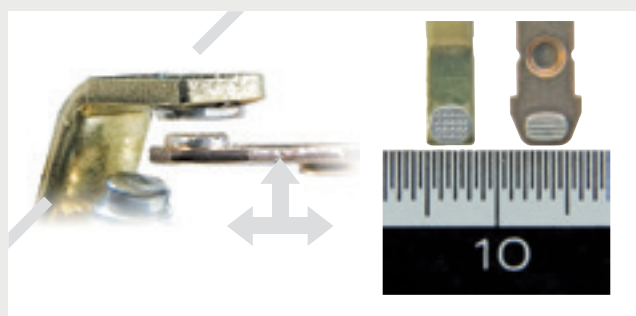
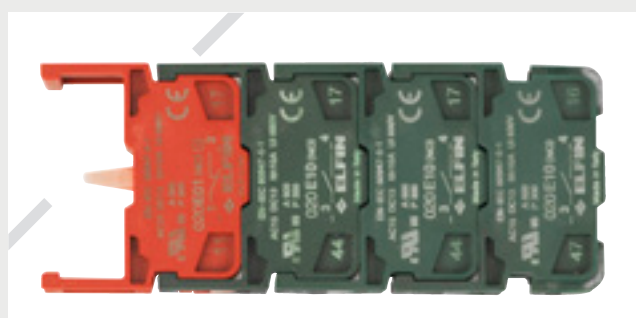
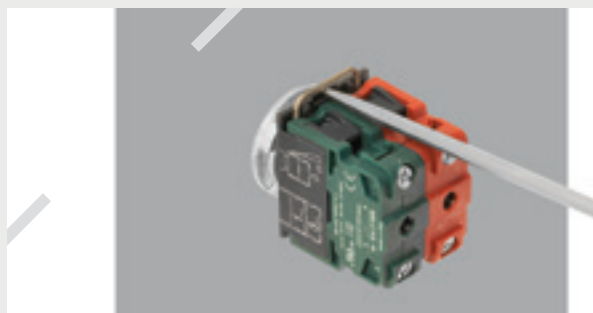
### EMERGENCY DEVICES

All command systems can be equipped with an exclusive emergency stop device, which protects the emergency stop signals, keeping them coherent to the design requirements. The device neutralizes external uncontrollable factors, such as strong shocks, corrosion, incorrect use, unsuitable maintenance, etc.

### PROTECTION CAP

The protection cap is a special accessory protecting the contact blocks for use under particularly severe environmental conditions. It guarantees a hermetic sealing in the rear panel area and it is suitable for use in the farming and maritime sectors, cement factories, etc.

# SISTEMA MODULARE 22 MODULAR SYSTEM 22

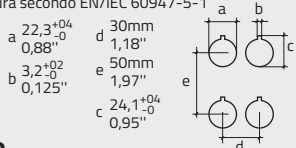




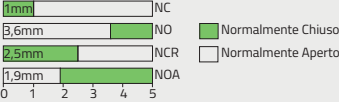
# Caratteristiche tecniche

## Technical data

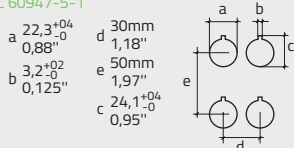
### Caratteristiche generali

|                                    |                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rispondenza alle norme             | EN/IEC 60947-1, EN/IEC 60947-5-1, EN/IEC-5-4, EN/IEC 60947-5-5, EN/ISO 13850, EN/IEC 60204-1, IEC 60364-5-53, UL 508 CSA C22-2 N° 14                                                                                                                                                                                                                         |
| Omologazioni                       | UL, CSA, RINA                                                                                                                                                                                                                                                                                                                                                |
| Protezioni climatiche              | In esecuzione normale T.C. tutti i climi (40° - UR35%)                                                                                                                                                                                                                                                                                                       |
| Limiti di temperatura              | <b>Serie "e":</b><br>Funzionamento $\geq -40^{\circ}\text{C}$ $\div$ $\leq +70^{\circ}\text{C}$<br>Stoccaggio $-45^{\circ}\text{C}$ $\div$ $+75^{\circ}\text{C}$<br><b>Serie "W":</b><br>Funzionamento $\geq -25^{\circ}\text{C}$ $\div$ $\leq +65^{\circ}\text{C}$<br>Stoccaggio $-35^{\circ}\text{C}$ $\div$ $+70^{\circ}\text{C}$                         |
| Posizione di funzionamento         |                                                                                                                                                                                                                                                                             |
| Protezione contro scossa elettrica | Classe II secondo IEC 61140                                                                                                                                                                                                                                                                                                                                  |
| Altitudine d'impiego               | $\leq 3.000$ m                                                                                                                                                                                                                                                                                                                                               |
| Grado di protezione                | <b>Serie "e":</b> IP66 pulsanti normali, doppi, luminosi, lampade, selettori. IP68 pulsanti con cappuccio in gomma e manipolatori.<br>Secondo norma EN/IEC 60529<br>IP69K secondo norma EN/IEC DIN 40050<br><b>Serie "W":</b><br>IP65 pulsanti normali, luminosi, lampade, selettori.<br>IP66 pulsanti con cappuccio in gomma.<br>Secondo norma EN/IEC 60529 |
| Dimensioni di montaggio            | Pannelli con spessore 1-6 mm<br>Foratura secondo EN/IEC 60947-5-1<br> <p>a 22,3<sup>+0,4</sup><sub>-0</sub> 0,88"<br/>b 3,2<sup>+0,2</sup><sub>-0</sub> 0,125"<br/>c 24,1<sup>+0,4</sup><sub>-0</sub> 0,95"<br/>d 30mm 1,18"<br/>e 50mm 1,97"</p>                         |

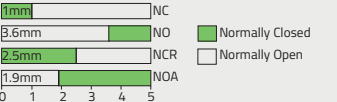
### Caratteristiche meccaniche

|                                      |                                                                                                                                                                                                                  |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Resistenza agli urti                 | 50g (durata: 11ms) mezza sinusoide secondo IEC 60068-2-7                                                                                                                                                         |
| Resistenza alle vibrazioni           | 16g 40-500 Hz secondo IEC 60068-2-6                                                                                                                                                                              |
| Coppia di serraggio                  | Ghiera di fissaggio operatori: 3÷3,5 Nm, Viti terminali: 0,8÷1,0 Nm                                                                                                                                              |
| Viti terminali                       | Testa combinata taglio e Phillips Ph2 in acciaio zincato o acciaio inox per versioni E10AU/E01AU<br>Capacità di chiusura: $\geq 1 \times 0,5$ mm / $\leq 2 \times 2,5$ mm<br>Capicorda a forcella "spring spade" |
| Forze di azionamento                 | Pulsante con contatto NO: 5N - selettore: 0,15 Nm<br>contatti NC: 1,5 N                                                                                                                                          |
| Funzionamento contatti               | NO/NC ad azione lenta con autopulitura a strisciamento- Contatti NC ad apertura positiva  secondo EN/IEC947-5-1 allegato K    |
| Corsa e commutazioni contatti        |  <p>1mm NC<br/>3,6mm NO<br/>2,5mm NCR<br/>1,9mm NOA</p> <p>0 1 2 3 4 5</p> <p>Normalmente Chiuso<br/>Normalmente Aperto</p>   |
| Forza di apertura positiva           | Pulsante normale: 5 N<br>Pulsante a fungo: 40 N                                                                                                                                                                  |
| Velocità di azionamento portalamпада | Min. 10 mm / sec<br>Max. 20mm / sec                                                                                                                                                                              |
| Durata meccanica                     | Pulsanti normali, luminosi: 3 milioni di manovre.<br>Selettori, manipolatori: 1 milione di manovre.<br>Emergenza fungo aggancio e stabili: 500.000 manovre                                                       |
| Grado di protezione                  | Morsetti IP2X secondo IEC60529                                                                                                                                                                                   |
| Identificazione morsetti             | 1° cifra: ordine di montaggio su flangia di connessione - 2° cifra: funzione contatto su elemento 1-2 NC / 3-4 NO                                                                                                |

### General features

|                             |                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards compliance        | EN/IEC 60947-1, EN/IEC 60947-5-1, EN/IEC-5-4, EN/IEC 60947-5-5, EN/ISO 13850, EN/IEC 60204-1, IEC 60364-5-53, UL 508 CSA C22-2 N° 14                                                                                                                                                                                                                                                       |
| Approvals                   | UL, CSA, RINA                                                                                                                                                                                                                                                                                                                                                                              |
| Climatic protection         | Normal operation for all climates (40° - RH35%)                                                                                                                                                                                                                                                                                                                                            |
| Temperature ranges          | <b>Series "e":</b><br>Operating $\geq -40^{\circ}\text{C}$ $\div$ $\leq +70^{\circ}\text{C}$<br>Storage $-45^{\circ}\text{C}$ $\div$ $+75^{\circ}\text{C}$<br><b>Series W:</b><br>Operating: $\geq -25^{\circ}\text{C}$ $\div$ $\leq +65^{\circ}\text{C}$<br>Storage $-35^{\circ}\text{C}$ $\div$ $+70^{\circ}\text{C}$                                                                    |
| Operating positions         |                                                                                                                                                                                                                                                                                                         |
| Electrical shock protection | Class II in compliance with IEC 61140                                                                                                                                                                                                                                                                                                                                                      |
| Operating altitude          | $\leq 3.000$ m                                                                                                                                                                                                                                                                                                                                                                             |
| Protection degree           | <b>Series "e":</b> IP66 normal, twin, illuminated push-buttons, lamps, selector switches.<br>IP68 push-buttons with rubber cap and joysticks.<br>In compliance with EN/IEC 60529<br>IP69K in compliance with EN/IEC DIN 40050<br><b>Series W:</b> IP65 normal, illuminated push buttons lamps, selector switches.<br>IP66 push-buttons with rubber cap<br>In compliance with EN/IEC 606529 |
| Mounting dimensions         | 1-6 mm panels. Drilling in compliance with EN/IEC 60947-5-1<br> <p>a 22,3<sup>+0,4</sup><sub>-0</sub> 0,88"<br/>b 3,2<sup>+0,2</sup><sub>-0</sub> 0,125"<br/>c 24,1<sup>+0,4</sup><sub>-0</sub> 0,95"<br/>d 30mm 1,18"<br/>e 50mm 1,97"</p>                                                           |

### Mechanical features

|                                     |                                                                                                                                                                                                             |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shock resistance                    | 50g (duration: 11ms) half sine wave in compliance with IEC 60068-2-27                                                                                                                                       |
| Vibration resistance                | 16g 40-500 Hz in compliance with IEC 60068-2-6                                                                                                                                                              |
| Tightening torque                   | Operator locking ring: 3÷3.5 Nm.<br>Terminal screws: 0.8÷1.0 Nm                                                                                                                                             |
| Terminal screws                     | Combined slot and Phillips Ph2 head, zinc plated or stainless steel for E10AU / E01AU.<br>Connection capacity: $\geq 1 \times 0,5$ mm / $\leq 2 \times 2,5$ mm<br>Fork spring spade terminals               |
| Operating forces                    | Push-button with NO contact: 5N - selector switch: 0.15 Nm, additional NO/NC contacts: 1.5 N                                                                                                                |
| Contact operation                   | NO/NC slow action with wiping, self-cleaning. NC contacts, positive opening  in compliance with EN/IEC947-5-1, annex K |
| Contact travel and switching points |  <p>1mm NC<br/>3,6mm NO<br/>2,5mm NCR<br/>1,9mm NOA</p> <p>0 1 2 3 4 5</p> <p>Normally Closed<br/>Normally Open</p>    |
| Positive opening force              | Normal push-button: 5 N<br>Mushroom push-button: 40 N                                                                                                                                                       |
| Operating speed lampholder          | Min. 10 mm / sec<br>Max. 20mm / sec                                                                                                                                                                         |
| Mechanical life                     | Normal, illuminated push-buttons: 3 million cycles.<br>Selector switches, joysticks: 1 million cycles.<br>Emergency stop mushroom push-buttons, latching or maintained: 500.000 cycles                      |
| Degree of protection                | Terminals IP2X in compliance with IEC60529                                                                                                                                                                  |
| Identification of terminals         | 1 <sup>st</sup> digit: assembling order on connection flange<br>2 <sup>nd</sup> digit: element contact function<br>1-2 NC / 3-4 NO                                                                          |





# Caratteristiche tecniche

## Technical data

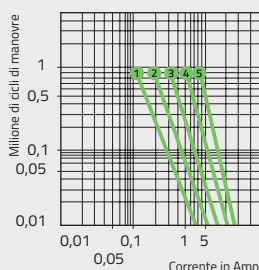
### Caratteristiche elettriche

|                                 |                                                                                                                                                                                                                                                                                                     |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tensione nominale isolamento    | Ui 690 V grado di inquinamento 3 secondo EN/IEC 60947-1                                                                                                                                                                                                                                             |
| Tensione di tenuta agli impulsi | Uimp 4kV secondo EN/IEC 60947-1                                                                                                                                                                                                                                                                     |
| Corrente nominale termica       | Ith10A secondo EN/IEC 60947-5-1                                                                                                                                                                                                                                                                     |
| Protezione corto circuito       | Fusibili DIAZED 10A classe d'intervento gLgG forma D II secondo IEC 60269-1                                                                                                                                                                                                                         |
| Materiale contatti              | Pastiglie di contatto in Ag 1000/1000 per versioni Au: Ag 1000/1000, dorati                                                                                                                                                                                                                         |
| Categorie nominali d'impiego    | Secondo EN/IEC 947-5-1<br>Cat AC15<br>Ue V    Ie A<br>24    10<br>48    8<br>60    6<br>110    6<br>220    3<br>380    2<br>400    1.5<br>500    1.5<br>600    1.2<br>(24, 110, 400 solo per serie "e")<br>Cat DC13<br>Ue V    Ie A<br>24    5<br>48    2.7<br>60    2<br>110    1.1<br>220    0.55 |

### Durata elettrica

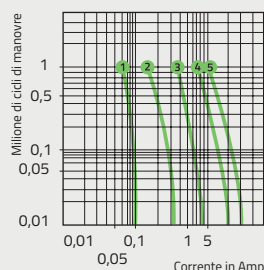
Secondo UL 508  
Corrente alternata 50÷60 Hz cat AC15

1 500 V    2 380 V    3 220 V  
4 127 V    5 12/48 V



Corrente continua cat DC 13

1 400 V    2 220 V    3 110 V  
4 48 V    5 24/12 V



### Affidabilità elettrica (percentuale di guasto)

Secondo EN/IEC 947-5-4  
Contatti 020 E10/E01 12V-5mA <10<sup>-8</sup>  
Contatti 020 E10AU/E01AU 5V-1mA <10<sup>-7</sup>

### Porta lampada operatori luminosi

Attacco BA9S: lampade incandescenza, neon, multiled. Potenze raccomandate: lampade 2,6 W pulsanti, selettori 1,2 W

### Durata lampade

Incandescenza ≤1000h-Neon ≤3000h  
Multiled ≥50.000h

### Configurazione contatti

Pulsanti normali, pulsanti luminosi, selettori  
Max N°8 CONTATTI (solo per serie "e")

Pulsanti doppi, manipolatori, emergenza ad aggancio  
Max N°4 CONTATTI

Pulsanti stabili, selettori luminosi  
Max N°2 CONTATTI



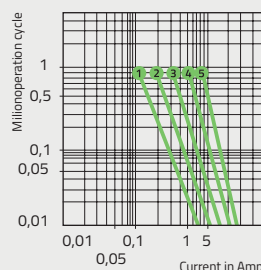
### Electrical features

|                           |                                                                                                                                                                                                                                                                                                                 |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated insulation voltage  | Ui 690 V pollution degree 3 in compliance with EN/IEC 60947-1                                                                                                                                                                                                                                                   |
| Impulse withstand voltage | Uimp 4kV in compliance with EN/IEC 60947-1                                                                                                                                                                                                                                                                      |
| Rated thermal current     | Ith10A in compliance with EN/IEC 60947-5-1                                                                                                                                                                                                                                                                      |
| Short circuit protection  | Fuses DIAZED 10 A operating class gLgG shape D II in conformity with IEC 60269-1                                                                                                                                                                                                                                |
| Contact material          | Contact pads on Ag 1000/1000 for models Au: Ag 1000/1000, gold plated                                                                                                                                                                                                                                           |
| Electrical ratings        | In compliance with EN/IEC 947-5-1<br>Cat AC15<br>Ue V    Ie A<br>24    10<br>48    8<br>60    6<br>110    6<br>220    3<br>380    2<br>400    1.5<br>500    1.5<br>600    1.2<br>(24, 110, 400 for series "e" only)<br>Cat DC13<br>Ue V    Ie A<br>24    5<br>48    2.7<br>60    2<br>110    1.1<br>220    0.55 |

### Electrical durability

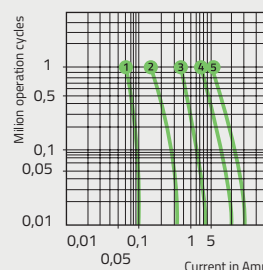
In compliance with UL 508  
Alternated current 50÷60 Hz cat AC15

1 500 V    2 380 V    3 220 V  
4 127 V    5 12/48 V



Direct current cat DC 13

1 400 V    2 220 V    3 110 V  
4 48 V    5 24/12 V



### Electrical reliability (failure percentage)

In compliance with EN/IEC 947-5-4  
Contact 020 E10/E01 12V-5mA <10<sup>-8</sup>  
Contact 020 E10AU/E01AU 5V-1mA <10<sup>-7</sup>

### Lampholder illuminated operators

BA9S socket: incandescent, neon, multiled lamps  
Recommended power: lamps 2.6W push-buttons, selector switches 1.2W

### Lamp life

Incandescent ≤1000h-Neon ≤3000h  
Multiled ≥50.000h

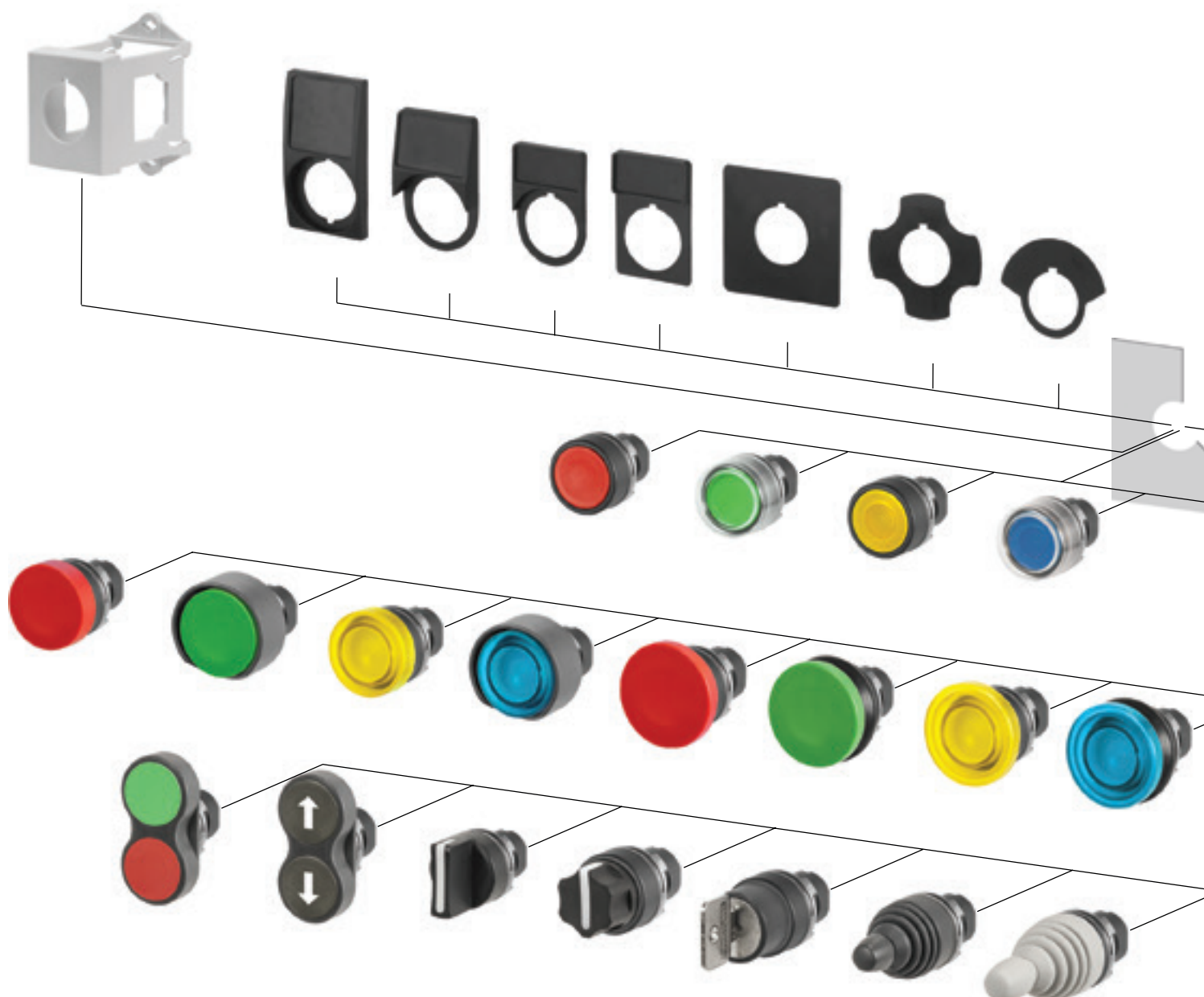
### Contact configuration

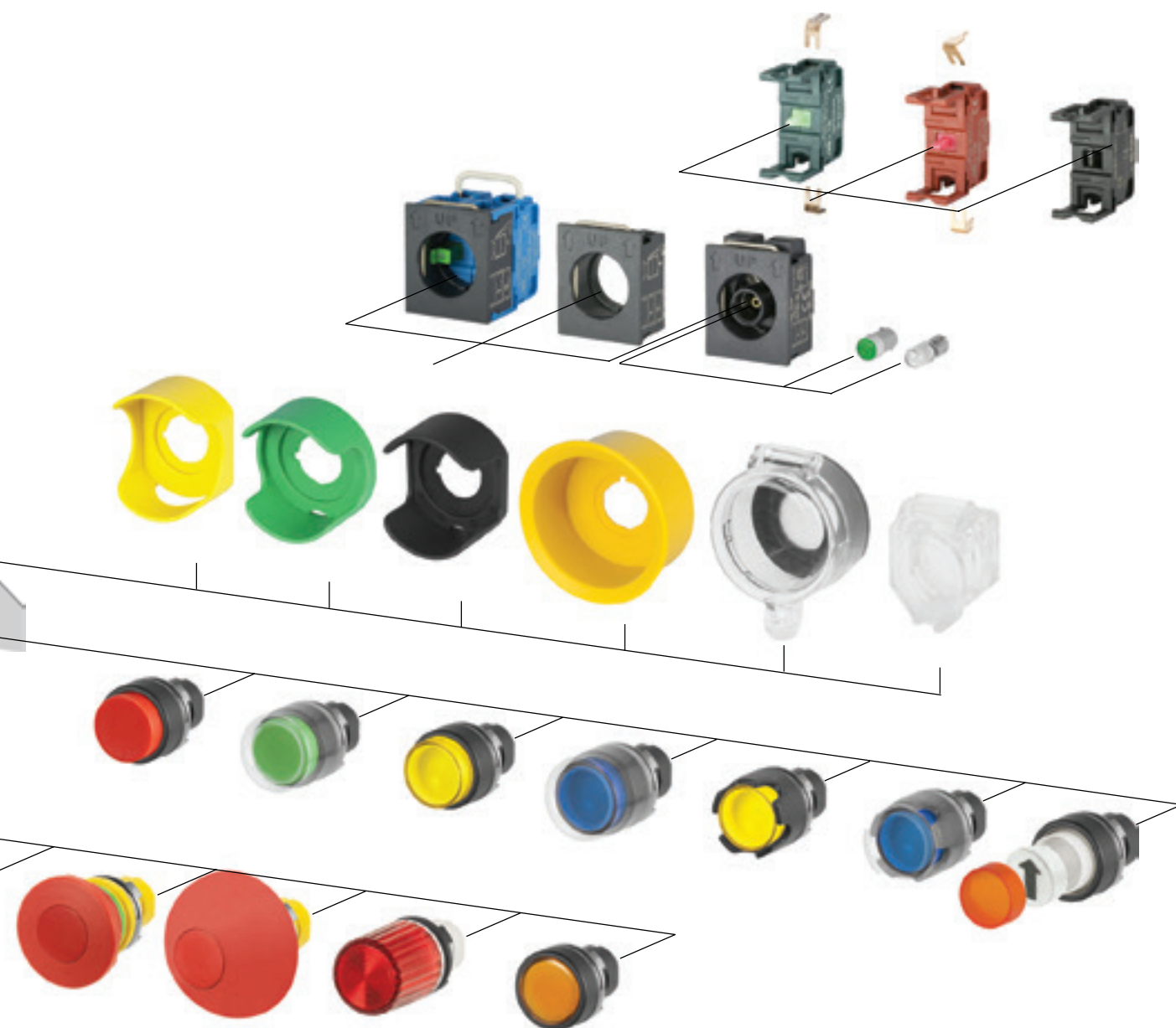
Normal, illuminated push-buttons, selector switches  
Max. no. 8 CONTACTS (for series "e" only)

Twin push-buttons, joysticks latching emergency push-buttons  
Max. no. 4 CONTACTS

Maintained push-buttons illuminated selector switches  
Max. no. 2 CONTACTS







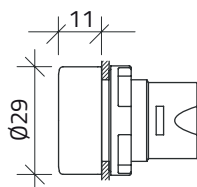
# Pulsanti normali Ø22

## Normal push-buttons Ø22

### Pulsanti normali / Normal push-buttons

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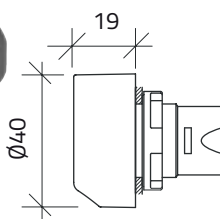
#### Pulsanti con guardia / Guarded push-buttons

Per marcatura consultare pag. 50 / For marking see page 50

|                    |    |         |
|--------------------|----|---------|
| ● Nero / Black     | 19 | 020PIN  |
| ● Rosso / Red      | 19 | 020PIR  |
| ● Verde / Green    | 19 | 020PIV  |
| ● Giallo / Yellow  | 19 | 020PIG  |
| ● Blu / Blue       | 19 | 020PIBL |
| ○ Bianco / White   | 19 | 020PIB  |
| ● Grigio / Grey    | 19 | 020PIGR |
| ● Arancio / Orange | 19 | 020PIA  |

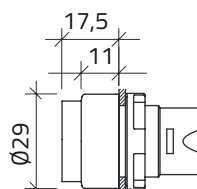
#### Stabili / Maintained

|                 |    |         |
|-----------------|----|---------|
| ● Nero / Black  | 19 | 020PPIN |
| ● Rosso / Red   | 19 | 020PPIR |
| ● Verde / Green | 19 | 020PPIV |



#### Pulsanti con guardia Ø32 / Guarded push-buttons Ø32

|                   |    |           |
|-------------------|----|-----------|
| ● Nero / Black    | 30 | 020PFG3N  |
| ● Rosso / Red     | 30 | 020PFG3R  |
| ● Verde / Green   | 30 | 020PFG3V  |
| ● Giallo / Yellow | 30 | 020PFG3G  |
| ● Blu / Blue      | 30 | 020PFG3BL |
| ● Grigio / Grey   | 30 | 020PFG3GR |

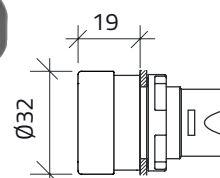


#### Pulsanti sporgenti / Projecting push-buttons

|                    |    |         |
|--------------------|----|---------|
| ● Nero / Black     | 22 | 020PSN  |
| ● Rosso / Red      | 22 | 020PSR  |
| ● Verde / Green    | 22 | 020PSV  |
| ● Giallo / Yellow  | 22 | 020PSG  |
| ● Blu / Blue       | 22 | 020PSBL |
| ○ Bianco / White   | 22 | 020PSB  |
| ● Grigio / Grey    | 22 | 020PSGR |
| ● Arancio / Orange | 22 | 020PSA  |

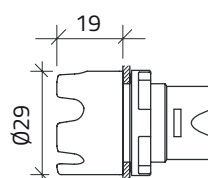
#### Stabili / Maintained

|                 |    |         |
|-----------------|----|---------|
| ● Nero / Black  | 22 | 020PPSN |
| ● Rosso / Red   | 22 | 020PPSR |
| ● Verde / Green | 22 | 020PPSV |



#### Pulsanti sporgenti Ø32 / Projecting push-buttons Ø32

|                   |    |          |
|-------------------|----|----------|
| ● Nero / Black    | 24 | 020PF3N  |
| ● Rosso / Red     | 24 | 020PF3R  |
| ● Verde / Green   | 24 | 020PF3V  |
| ● Giallo / Yellow | 24 | 020PF3G  |
| ● Blu / Blue      | 24 | 020PF3BL |
| ● Grigio / Grey   | 24 | 020PF3GR |



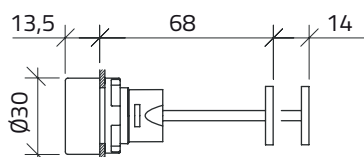
#### Pulsanti con guardia estesa / Push-buttons with extended guard

|                |    |         |
|----------------|----|---------|
| ● Nero / Black | 23 | 020PIPN |
| ● Rosso / Red  | 23 | 020PIPR |

# Pulsanti normali Ø22

## Normal push-buttons Ø22

### Pulsanti di riarmo / Reset push-buttons



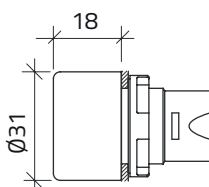
- Rosso / Red
- Verde / Green
- Blu / Blue

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|    |                  |
|----|------------------|
| 31 | <b>020RTAIR</b>  |
| 31 | <b>020RTAIV</b>  |
| 31 | <b>020RTAIBL</b> |

### Pulsanti con cappuccio in gomma Push-buttons with rubber cap



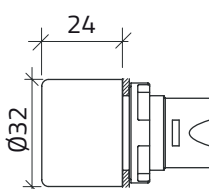
#### Pulsanti con guardia Guarded push-buttons

- Nero / Black
- Rosso / Red
- Verde / Green
- Giallo / Yellow
- Blu / Blue
- Bianco / White
- Grigio / Grey
- Arancio / Orange

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|    |                  |
|----|------------------|
| 21 | <b>020PICGN</b>  |
| 21 | <b>020PICGR</b>  |
| 21 | <b>020PICGV</b>  |
| 21 | <b>020PICGG</b>  |
| 21 | <b>020PICGBL</b> |
| 21 | <b>020PICGB</b>  |
| 21 | <b>020PICGGR</b> |
| 21 | <b>020PICGA</b>  |



#### Pulsanti sporgenti Projecting push-buttons

- Nero / Black
- Rosso / Red
- Verde / Green
- Giallo / Yellow
- Blu / Blue
- Bianco / White
- Grigio / Grey
- Arancio / Orange

21

**020PSCGN**

21

**020PSCGR**

21

**020PSCGV**

21

**020PSCGG**

21

**020PSCGBL**

21

**020PSCGB**

21

**020PSCGGR**

21

**020PSCGA**



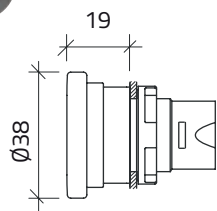
# Pulsanti normali Ø22

## Normal push-buttons Ø22

### Pulsanti a fungo momentanei Momentary mushroom push-buttons

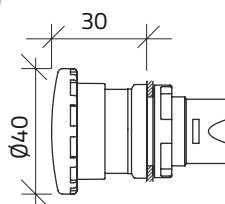
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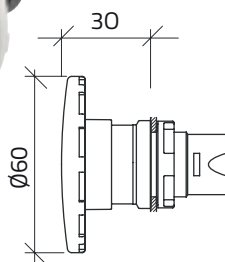
#### Pulsanti a fungo Ø40 / Mushroom push-buttons Ø40

|                   |    |        |
|-------------------|----|--------|
| ● Nero / Black    | 24 | 020PFN |
| ● Rosso / Red     | 24 | 020PFR |
| ● Verde / Green   | 24 | 020PFV |
| ● Giallo / Yellow | 24 | 020PFG |
| ● Blu / Blue      | 24 | 020PFB |
| ● Grigio / Grey   | 24 | 020PFG |



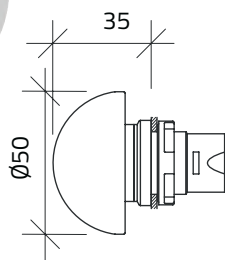
#### Pulsanti a fungo Ø40 / Mushroom push-buttons Ø40

|                   |    |         |
|-------------------|----|---------|
| ● Nero / Black    | 32 | 020PTFN |
| ● Verde / Green   | 32 | 020PTFV |
| ● Giallo / Yellow | 32 | 020PTFG |



#### Pulsanti a fungo Ø60 / Mushroom push-buttons Ø60

|                 |    |           |
|-----------------|----|-----------|
| ● Nero / Black  | 36 | 020PTFFN  |
| ● Grigio / Grey | 36 | 020PTFFGR |



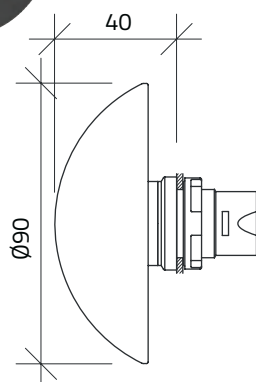
#### Pulsanti a fungo sferico Ø50 / Palm push-buttons Ø50

|                 |    |            |
|-----------------|----|------------|
| ● Nero / Black  | 38 | 020PTF5MN  |
| ● Grigio / Grey | 38 | 020PTF5MGR |

# Pulsanti normali Ø22

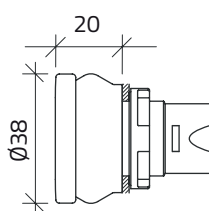
## Normal push-buttons Ø22

### Pulsanti a fungo momentanei Momentary mushroom push-buttons



#### Pulsanti a fungo sferico Ø90 / Palm push-buttons Ø90

|                 | g  | cod        |
|-----------------|----|------------|
| ● Nero / Black  | 55 | 020PTF9MN  |
| ● Grigio / Grey | 55 | 020PTF9MGR |



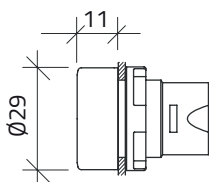
#### Pulsanti a fungo Ø40 con soffiETTO Mushroom push-buttons Ø40 with bellows

|                   |    |           |
|-------------------|----|-----------|
| ● Nero / Black    | 24 | 020PFSGN  |
| ● Rosso / Red     | 24 | 020PFSGR  |
| ● Verde / Green   | 24 | 020PFSGV  |
| ● Giallo / Yellow | 24 | 020PFSGG  |
| ● Blu / Blue      | 24 | 020PFSGBL |
| ○ Bianco / White  | 24 | 020PFSGB  |
| ● Grigio / Grey   | 24 | 020PFSGGR |

# Pulsanti luminosi Ø22

## Illuminated push-buttons Ø22

### Pulsanti luminosi Illuminated push-buttons



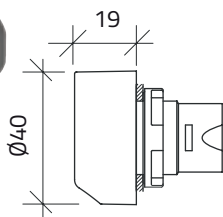
#### Pulsanti con guardia / Guarded push-buttons

Per marcatura consultare pag. 50 / For marking see page 50

|                    |    |          |
|--------------------|----|----------|
| ● Rosso / Red      | 19 | 020PLIR  |
| ● Verde / Green    | 19 | 020PLIV  |
| ● Giallo / Yellow  | 19 | 020PLIG  |
| ● Blu / Blue       | 19 | 020PLIBL |
| ○ Bianco / White   | 19 | 020PLIB  |
| ● Arancio / Orange | 19 | 020PLIA  |

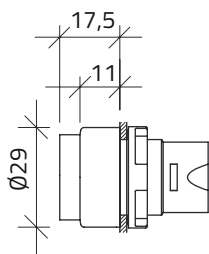
#### Stabili / Maintained

|                   |    |           |
|-------------------|----|-----------|
| ● Rosso / Red     | 19 | 020PPLIR  |
| ● Verde / Green   | 19 | 020PPLIV  |
| ● Giallo / Yellow | 19 | 020PPLIG  |
| ● Blu / Blue      | 19 | 020PPLIBL |



#### Pulsanti con guardia Ø32 / Guarded push-buttons Ø32

|                       |    |            |
|-----------------------|----|------------|
| ● Rosso / Red         | 30 | 020PFLG3R  |
| ● Verde / Green       | 30 | 020PFLG3V  |
| ● Giallo / Yellow     | 30 | 020PFLG3G  |
| ● Blu / Blue          | 30 | 020PFLG3BL |
| ○ Trasparente / Clear | 30 | 020PFLG3I  |

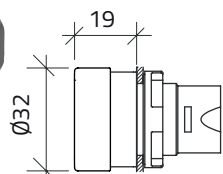


#### Pulsanti sporgenti / Projecting push-buttons

|                       |    |          |
|-----------------------|----|----------|
| ● Rosso / Red         | 22 | 020PLSR  |
| ● Verde / Green       | 22 | 020PLSV  |
| ● Giallo / Yellow     | 22 | 020PLSG  |
| ● Blu / Blue          | 22 | 020PLSBL |
| ○ Bianco / White      | 22 | 020PLSB  |
| ● Arancio / Orange    | 22 | 020PLSA  |
| ○ Trasparente / Clear | 22 | 020PLSI  |

#### Stabili / Maintained

|                   |    |           |
|-------------------|----|-----------|
| ● Rosso / Red     | 22 | 020PPLSR  |
| ● Verde / Green   | 22 | 020PPLSV  |
| ● Giallo / Yellow | 22 | 020PPLSG  |
| ● Blu / Blue      | 22 | 020PPLSBL |



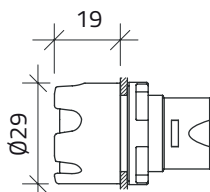
#### Pulsanti sporgenti Ø32 / Projecting push-buttons Ø32

|                       |    |           |
|-----------------------|----|-----------|
| ● Rosso / Red         | 24 | 020PFL3R  |
| ● Verde / Green       | 24 | 020PFL3V  |
| ● Giallo / Yellow     | 24 | 020PFL3G  |
| ● Blu / Blue          | 24 | 020PFL3BL |
| ○ Trasparente / Clear | 24 | 020PFL3I  |

# Pulsanti luminosi Ø22

## Illuminated push-buttons Ø22

### Pulsanti luminosi Illuminated push-buttons



#### Pulsanti con guardia completa / Push-buttons with full guard

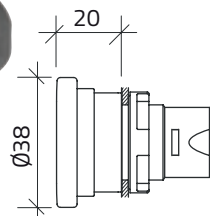
Per marcatura consultare pag. 50 / For marking see page 50

|                       |    |          |
|-----------------------|----|----------|
| ● Rosso / Red         | 23 | 020PLPR  |
| ● Verde / Green       | 23 | 020PLPV  |
| ● Giallo / Yellow     | 23 | 020PLPG  |
| ● Blu / Blue          | 23 | 020PLPBL |
| ○ Bianco / White      | 23 | 020PLPB  |
| ● Arancio / Orange    | 23 | 020PLPA  |
| ○ Trasparente / Clear | 23 | 020PLPI  |

#### Stabili / Maintained

|                   |    |           |
|-------------------|----|-----------|
| ● Rosso / Red     | 23 | 020PPLPR  |
| ● Verde / Green   | 23 | 020PPLPV  |
| ● Giallo / Yellow | 23 | 020PPLPG  |
| ● Blu / Blue      | 23 | 020PPLPBL |

### Pulsanti luminosi a fungo Illuminated mushroom push-buttons

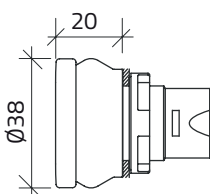


#### Pulsanti a fungo Ø40 / Mushroom push-buttons Ø40

|                       |    |          |
|-----------------------|----|----------|
| ● Rosso / Red         | 24 | 020PFLR  |
| ● Verde / Green       | 24 | 020PFLV  |
| ● Giallo / Yellow     | 24 | 020PFLG  |
| ● Blu / Blue          | 24 | 020PFLBL |
| ○ Trasparente / Clear | 24 | 020PFLI  |

#### Stabili / Maintained

|                   |    |           |
|-------------------|----|-----------|
| ● Rosso / Red     | 24 | 020PPFLR  |
| ● Verde / Green   | 24 | 020PPFLV  |
| ● Giallo / Yellow | 24 | 020PPFLG  |
| ● Blu / Blue      | 24 | 020PPFLBL |



#### Pulsanti a fungo Ø40 con soffiETTO Mushroom push-buttons Ø40 with bellow

|                       |    |            |
|-----------------------|----|------------|
| ● Rosso / Red         | 29 | 020PFLSGR  |
| ● Verde / Green       | 29 | 020PFLSGV  |
| ● Giallo / Yellow     | 29 | 020PFLSGG  |
| ● Blu / Blue          | 29 | 020PFLSGBL |
| ○ Bianco / White      | 29 | 020PFLSGB  |
| ○ Trasparente / Clear | 29 | 020PFLSGI  |

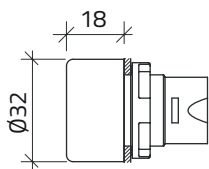
# Pulsanti luminosi Ø22

## Illuminated push-buttons Ø22

### Pulsanti luminosi con cappuccio in gomma Illuminated push-buttons with rubber cap

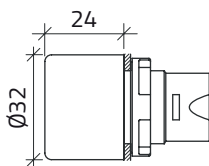
g

cod



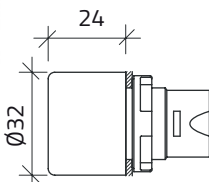
#### Pulsanti con guardia / Guarded push-buttons

|                    |    |            |
|--------------------|----|------------|
| ● Rosso / Red      | 21 | 020PLICGR  |
| ● Verde / Green    | 21 | 020PLICGV  |
| ● Giallo / Yellow  | 21 | 020PLICGG  |
| ● Blu / Blue       | 21 | 020PLICGBL |
| ○ Bianco / White   | 21 | 020PLICGB  |
| ● Arancio / Orange | 21 | 020PLICGA  |



#### Pulsanti con guardia completa / Push-buttons with full guard

|                       |    |            |
|-----------------------|----|------------|
| ● Rosso / Red         | 23 | 020PLPCGR  |
| ● Verde / Green       | 23 | 020PLPCGV  |
| ● Giallo / Yellow     | 23 | 020PLPCGG  |
| ● Blu / Blue          | 23 | 020PLPCGBL |
| ○ Bianco / White      | 23 | 020PLPCGB  |
| ○ Trasparente / Clear | 23 | 020PLPCGI  |
| ● Arancio / Orange    | 23 | 020PLPCGA  |



#### Pulsanti sporgenti / Projecting push-buttons

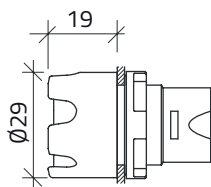
|                       |    |            |
|-----------------------|----|------------|
| ● Rosso / Red         | 24 | 020PLSCGR  |
| ● Verde / Green       | 24 | 020PLSCGV  |
| ● Giallo / Yellow     | 24 | 020PLSCGG  |
| ● Blu / Blue          | 24 | 020PLSCGBL |
| ○ Bianco / White      | 24 | 020PLSCGB  |
| ● Arancio / Orange    | 24 | 020PLSCGA  |
| ○ Trasparente / Clear | 24 | 020PLSCGI  |



# Pulsanti normali Ø22

## Normal push-buttons Ø22

### Pulsanti componibili Modular push-buttons



Pulsante con guardia / Guarded push-button

g

cod

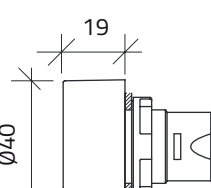
22

020PLP

Stabile / Maintained

22

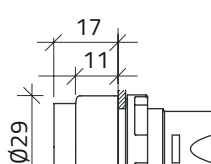
020PPLP



Pulsante con guardia / Guarded push-button

28

020PFLG3



Pulsante sporgente / Projecting push-button

20

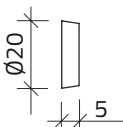
020PLS

Stabile / Maintained

20

020PPLS

### Diffusori con simbolo / Diffusers caps with symbol

Completa il codice con il suffisso del simbolo desiderato vedi pag 52  
Code to be completed with the suffix of the desired symbol, see page 52.

Per pulsanti / For push-buttons

g

n

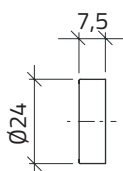
cod

1

10

020DI\*\*\*

### Gemme per pulsanti / Lenses for push-buttons



### Gemme per pulsanti sporgenti o con guardia completa Lenses for push-buttons with full guard or projecting

● Rosso / Red

2

5

020BPLR

● Verde / Green

2

5

020BPLV

● Giallo / Yellow

2

5

020BPLG

● Blu / Blue

2

5

020BPLBL

○ Bianco / White

2

5

020BPLB

● Arancio / Orange

2

5

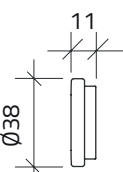
020BPLA

○ Trasparente / Clear

2

5

020BPLI



### Gemme per pulsanti a fungo / Lenses for mushroom push-buttons

● Rosso / Red

2

5

020BFLR

● Verde / Green

2

5

020BFLV

● Giallo / Yellow

2

5

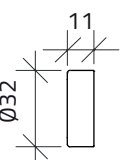
020BFLG

○ Trasparente / Clear

2

5

020BFLI



### Gemme per pulsanti con guardia / Lenses for guarded push-buttons

● Rosso / Red

4

5

020BFL3R

● Verde / Green

4

5

020BFL3V

● Giallo / Yellow

4

5

020BFL3G

○ Trasparente / Clear

4

5

020BFL3I



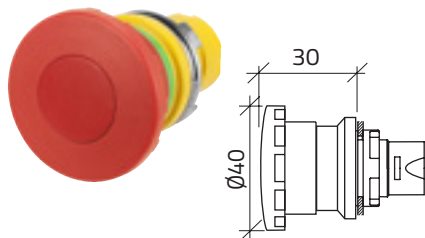
# Pulsanti d'emergenza Ø22

## Emergency stop push-buttons Ø22

## Momentanei / Momentary

g

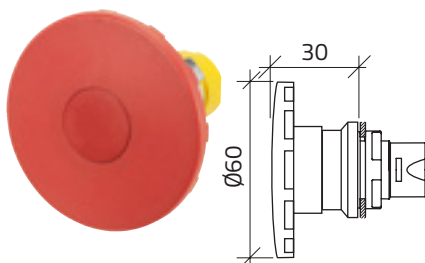
cod

**Pulsanti a fungo Ø 40 / Mushroom push-button Ø 40**

● Rosso / Red

32

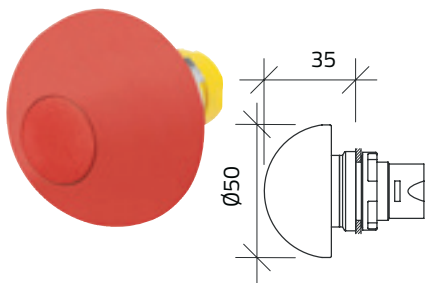
020PTFR

**Pulsanti a fungo Ø 60 / Mushroom push-button Ø 60**

● Rosso / Red

36

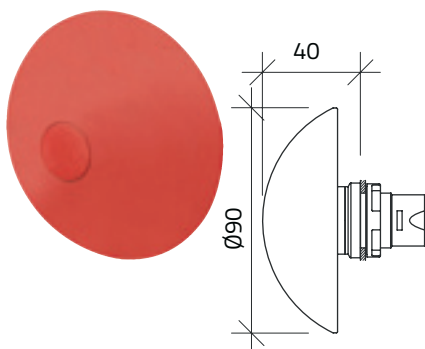
020PTFFR

**Pulsanti a fungo sferico Ø 50 / Palm push-button Ø 50**

● Rosso / Red

38

020PTF5MR

**Pulsanti a fungo sferico Ø 90 / Palm push-button Ø 90**

● Rosso / Red

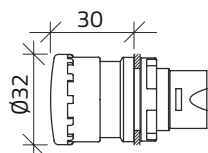
55

020PTF9MR

# Pulsanti d'emergenza Ø22

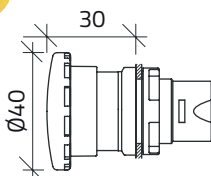
## Emergency stop push-buttons Ø22

### Pulsanti a fungo ad aggancio Latching mushroom push-buttons



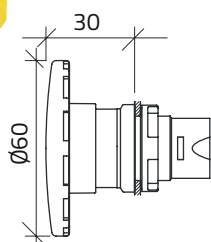
#### Pulsanti a fungo Ø 32, sgancio rotazione Mushroom push-button Ø 32, twist release

|                | g  | cod     |
|----------------|----|---------|
| ● Rosso / Red  | 30 | 020PTAR |
| ● Nero / Black | 30 | 020PTAN |



#### Pulsanti a fungo Ø 40, sgancio rotazione Mushroom push-button Ø 40, twist release

|                | g  |          |
|----------------|----|----------|
| ● Rosso / Red  | 35 | 020PTFAR |
| ● Nero / Black | 35 | 020PTFAN |



#### Pulsanti a fungo Ø 60, sgancio rotazione Mushroom push-button Ø 60, twist release

|               | g  |           |
|---------------|----|-----------|
| ● Rosso / Red | 39 | 020PTFFAR |

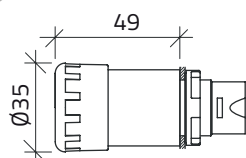
# Pulsanti d' emergenza Ø22

## Emergency stop push-buttons Ø22

### Pulsanti a fungo ad aggancio Latching mushroom push-buttons

g

cod

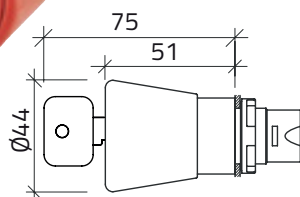


#### Pulsante a fungo Ø 35, sgancio rotazione Mushroom push-button Ø 35, twist release

● Rosso / Red

55

020PTFASRV



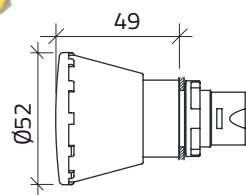
#### Pulsante a fungo Ø 44, sgancio a chiave Mushroom push-button Ø 44, key release

chiave 73037 con impugnatura colore rosso / key 73037 with red cap

● Rosso / Red

55

020PTHCSRK



#### Pulsante a fungo Ø 52, sgancio rotazione Mushroom push-button Ø 52, twist release

● Rosso / Red

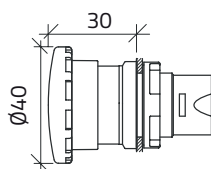
55

020PTAASRK

# Pulsanti d'emergenza Ø22

## Emergency stop push-buttons Ø22

### Pulsanti a fungo ad aggancio Latching mushroom push-buttons



#### Pulsante a fungo Ø 40 sgancio trazione Mushroom push-button Ø 40, pull release

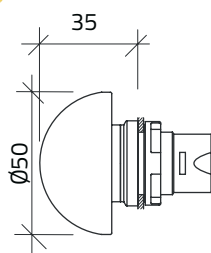
● Rosso / Red

g

cod

35

020PTFPTR



#### Pulsante a fungo sferico Ø 50 sgancio trazione Palm push-button Ø 50, pull release

● Rosso / Red

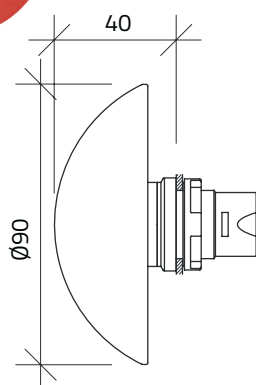
38

020PTF5PTR

● Nero / Black

38

020PTF5PTN



#### Pulsante a fungo Ø 90 sgancio trazione Palm push-button Ø 90, pull release

● Rosso / Red

55

020PTF9PTR

● Nero / Black

55

020PTF9PTN



# Pulsanti doppi Ø22

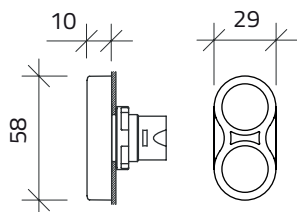
## Twin push-buttons Ø22

### Pulsanti a doppio comando

### Twin push-buttons

g

cod



76

020P2RV



76

020P2RVS



76

020P2RN



76

020P2RNS



76

020P2NBS



76

020P2NN



76

020P2NNS45



76

020P2NNS46



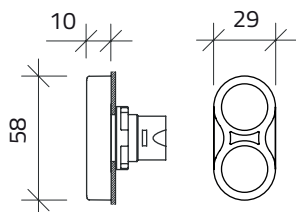
76

020P2NNS47

# Pulsanti doppi luminosi Ø22

## Illuminated twin push-buttons Ø22

### Pulsanti a doppio comando Twin push-buttons



g

cod

76

020P2LRV



76

020P2LRVS



76

020P2LRN



76

020P2LRNS



76

020P2LNBS



76

020P2LNN



76

020P2LNNS45



76

020P2LNNS46



76

020P2LNNS47



# Lampade spia Ø22

## Pilot lights Ø22

Per parti sciolte vedi accessori pag. 51 / For spare parts, see accessory on page. 51

### Lampada spia monoblocco BA9S

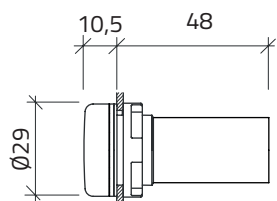
#### Monolithic pilot lights BA9S



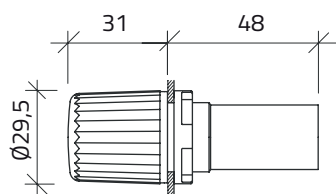
#### Alimentazione diretta / Direct supply

~ IP 67 - BA9S 380V.

3W max esclusa / excluded

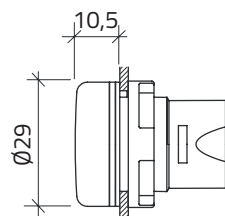


|                       |    |   |                |
|-----------------------|----|---|----------------|
| ● Rosso / Red         | 18 | 5 | <b>020LMR</b>  |
| ● Verde / Green       | 18 | 5 | <b>020LMV</b>  |
| ● Giallo / Yellow     | 18 | 5 | <b>020LMG</b>  |
| ● Blu / Blue          | 18 | 5 | <b>020LMBL</b> |
| ○ Bianco / White      | 18 | 5 | <b>020LMB</b>  |
| ○ Trasparente / Clear | 18 | 5 | <b>020LMI</b>  |
| ● Arancio / Orange    | 18 | 5 | <b>020LMA</b>  |

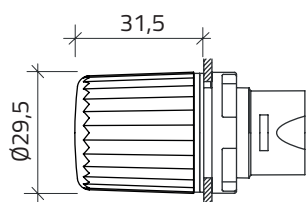


|                       |    |   |                 |
|-----------------------|----|---|-----------------|
| ● Rosso / Red         | 22 | 5 | <b>020LMAR</b>  |
| ● Verde / Green       | 22 | 5 | <b>020LMAV</b>  |
| ● Giallo / Yellow     | 22 | 5 | <b>020LMAG</b>  |
| ● Blu / Blue          | 22 | 5 | <b>020LMABL</b> |
| ○ Bianco / White      | 22 | 5 | <b>020LMAB</b>  |
| ○ Trasparente / Clear | 22 | 5 | <b>020LMAI</b>  |
| ● Arancio / Orange    | 22 | 5 | <b>020LMAA</b>  |

### Lampada spia modulare / Modular pilot lights

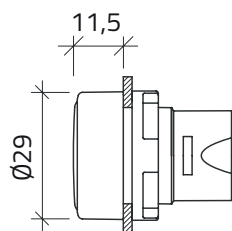


|                       |   |   |                |
|-----------------------|---|---|----------------|
| ● Rosso / Red         | 9 | 5 | <b>020ULR</b>  |
| ● Verde / Green       | 9 | 5 | <b>020ULV</b>  |
| ● Giallo / Yellow     | 9 | 5 | <b>020ULG</b>  |
| ● Blu / Blue          | 9 | 5 | <b>020ULBL</b> |
| ○ Bianco / White      | 9 | 5 | <b>020ULB</b>  |
| ○ Trasparente / Clear | 9 | 5 | <b>020ULI</b>  |
| ● Arancio / Orange    | 9 | 5 | <b>020ULA</b>  |



|                       |    |   |                 |
|-----------------------|----|---|-----------------|
| ● Rosso / Red         | 13 | 5 | <b>020ULAR</b>  |
| ● Verde / Green       | 13 | 5 | <b>020ULAV</b>  |
| ● Giallo / Yellow     | 13 | 5 | <b>020ULAG</b>  |
| ● Blu / Blue          | 13 | 5 | <b>020ULABL</b> |
| ○ Bianco / White      | 13 | 5 | <b>020ULAB</b>  |
| ○ Trasparente / Clear | 13 | 5 | <b>020ULAI</b>  |
| ● Arancio / Orange    | 13 | 5 | <b>020ULAA</b>  |

### Lampada spia inviolabili / Tamper-proof pilot lights



|                       |    |   |                 |
|-----------------------|----|---|-----------------|
| ● Rosso / Red         | 21 | 5 | <b>020ULPR</b>  |
| ● Verde / Green       | 21 | 5 | <b>020ULPV</b>  |
| ● Giallo / Yellow     | 21 | 5 | <b>020ULPG</b>  |
| ● Blu / Blue          | 21 | 5 | <b>020ULPBL</b> |
| ○ Bianco / White      | 21 | 5 | <b>020ULPB</b>  |
| ○ Trasparente / Clear | 21 | 5 | <b>020ULPI</b>  |
| ● Arancio / Orange    | 21 | 5 | <b>020ULPA</b>  |

# Segnalatore acustico e luminoso Ø22

## Buzzer with flashing led beacon Ø22

### Segnalatore acustico e luminoso Buzzer with flashing led beacon

g

cod

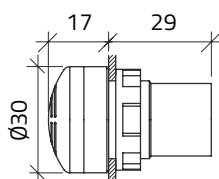


#### Con LED lampeggiante rosso With red flashing led beacon

Assorbimento : 20 mA / Current consumption : 20 mA

Intensità sonora : 80 db / Sound level : 80 db

Protezione IP40 / Protection IP40



|            |    |                 |
|------------|----|-----------------|
| 24V AC-DC  | 20 | <b>020SAL24</b> |
| 130V AC-DC | 20 | <b>020SAL13</b> |
| 230V AC    | 20 | <b>020SAL22</b> |

### Segnalatore acustico Buzzer

g

cod

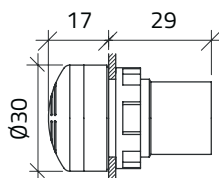


#### Solo sonoro / Only sound

Assorbimento : 20 mA / Current consumption : 20 mA

Intensità sonora : 80 db / Sound level : 80 db

Protezione IP40 / Protection IP40

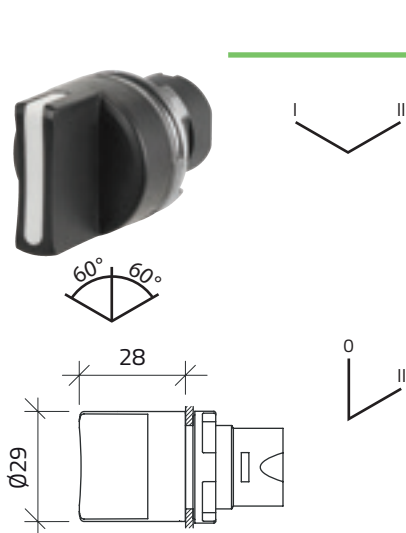


|            |    |                |
|------------|----|----------------|
| 24V AC-DC  | 20 | <b>020SA24</b> |
| 130V AC-DC | 20 | <b>020SA13</b> |
| 230V AC    | 20 | <b>020SA22</b> |

# Selettori a manopola Ø22

## Knob selector switches Ø22

Cercare la combinazione di schemi a pag. 31-32 / See diagram combination on page 31-32



## 2 posizioni / 2 positions

g

cod

## CAM A

|                   |      |                 |
|-------------------|------|-----------------|
| ○ Bianco / White  | 27,4 | <b>020SMAN</b>  |
| ● Rosso / Red     | 27,4 | <b>020SMAR</b>  |
| ● Verde / Green   | 27,4 | <b>020SMAV</b>  |
| ● Giallo / Yellow | 27,4 | <b>020SMAG</b>  |
| ● Blu / Blue      | 27,4 | <b>020SMABL</b> |

## CAM B

|                   |      |                 |
|-------------------|------|-----------------|
| ○ Bianco / White  | 27,4 | <b>020SMBN</b>  |
| ● Rosso / Red     | 27,4 | <b>020SMBR</b>  |
| ● Verde / Green   | 27,4 | <b>020SMBV</b>  |
| ● Giallo / Yellow | 27,4 | <b>020SMBG</b>  |
| ● Blu / Blue      | 27,4 | <b>020SMBBL</b> |

## CAM B

|                   |      |                  |
|-------------------|------|------------------|
| ○ Bianco / White  | 27,4 | <b>020SMBND</b>  |
| ● Rosso / Red     | 27,4 | <b>020SMBRD</b>  |
| ● Verde / Green   | 27,4 | <b>020SMBVD</b>  |
| ● Giallo / Yellow | 27,4 | <b>020SMBGD</b>  |
| ● Blu / Blue      | 27,4 | <b>020SMBBLD</b> |

## CAM C

|                   |      |                 |
|-------------------|------|-----------------|
| ○ Bianco / White  | 27,4 | <b>020SMCN</b>  |
| ● Rosso / Red     | 27,4 | <b>020SMCR</b>  |
| ● Verde / Green   | 27,4 | <b>020SMCV</b>  |
| ● Giallo / Yellow | 27,4 | <b>020SMCG</b>  |
| ● Blu / Blue      | 27,4 | <b>020SMCBL</b> |

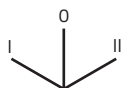
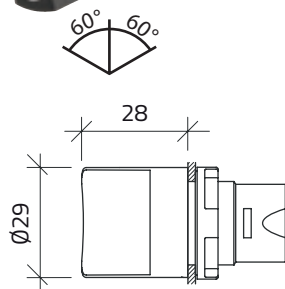
## CAM C

|                   |      |                  |
|-------------------|------|------------------|
| ○ Bianco / White  | 27,4 | <b>020SMCNS</b>  |
| ● Rosso / Red     | 27,4 | <b>020SMCRS</b>  |
| ● Verde / Green   | 27,4 | <b>020SMCVS</b>  |
| ● Giallo / Yellow | 27,4 | <b>020SMCGS</b>  |
| ● Blu / Blue      | 27,4 | <b>020SMCBLS</b> |

# Selettori a manopola Ø22

## Knob selector switches Ø22

Cercare la combinazione di schemi a pag. 31-32 / See diagram combination on page 31-32



## 3 posizioni / 3 positions

g

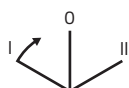
cod

## CAM O

|                   |      |          |
|-------------------|------|----------|
| ○ Bianco / White  | 27,4 | 020SMON  |
| ● Rosso / Red     | 27,4 | 020SMOR  |
| ● Verde / Green   | 27,4 | 020SMOV  |
| ● Giallo / Yellow | 27,4 | 020SMOG  |
| ● Blu / Blue      | 27,4 | 020SMOBL |

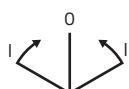
## CAM O

|                   |      |           |
|-------------------|------|-----------|
| ○ Bianco / White  | 27,4 | 020SMOND  |
| ● Rosso / Red     | 27,4 | 020SMORD  |
| ● Verde / Green   | 27,4 | 020SMOVD  |
| ● Giallo / Yellow | 27,4 | 020SMOGD  |
| ● Blu / Blue      | 27,4 | 020SMOBLD |



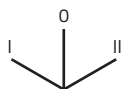
## CAM O

|                   |      |          |
|-------------------|------|----------|
| ○ Bianco / White  | 27,4 | 020SMONS |
| ● Rosso / Red     | 27,4 | 020SMORS |
| ● Verde / Green   | 27,4 | 020SMOVS |
| ● Giallo / Yellow | 27,4 | 020SMOGS |
| ● Blu / Blue      | 27,4 | 020SMOBS |



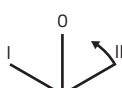
## CAM O

|                   |      |           |
|-------------------|------|-----------|
| ○ Bianco / White  | 27,4 | 020SMONC  |
| ● Rosso / Red     | 27,4 | 020SMORC  |
| ● Verde / Green   | 27,4 | 020SMOVC  |
| ● Giallo / Yellow | 27,4 | 020SMOGC  |
| ● Blu / Blue      | 27,4 | 020SMOBLC |



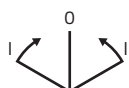
## CAM T

|                   |      |          |
|-------------------|------|----------|
| ○ Bianco / White  | 27,4 | 020SMTN  |
| ● Rosso / Red     | 27,4 | 020SMTTR |
| ● Verde / Green   | 27,4 | 020SMTV  |
| ● Giallo / Yellow | 27,4 | 020SMTG  |
| ● Blu / Blue      | 27,4 | 020SMTBL |



## CAM T

|                   |      |           |
|-------------------|------|-----------|
| ○ Bianco / White  | 27,4 | 020SMTND  |
| ● Rosso / Red     | 27,4 | 020SMTTRD |
| ● Verde / Green   | 27,4 | 020SMTVD  |
| ● Giallo / Yellow | 27,4 | 020SMTGD  |
| ● Blu / Blue      | 27,4 | 020SMTBLD |



## CAM T

|                   |      |           |
|-------------------|------|-----------|
| ○ Bianco / White  | 27,4 | 020SMTNC  |
| ● Rosso / Red     | 27,4 | 020SMTTRC |
| ● Verde / Green   | 27,4 | 020SMTVC  |
| ● Giallo / Yellow | 27,4 | 020SMTGC  |
| ● Blu / Blue      | 27,4 | 020SMTBLC |



# Selettori a manopola Ø22

## Knob selector switches Ø22

Cercare la combinazione di schemi a pag. 31-32 / See diagram combination on page 31-32

020

## 4 posizioni / 4 positions

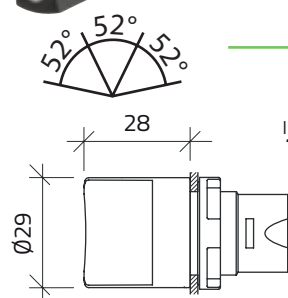
g

cod



## CAM Q

|                   |      |          |
|-------------------|------|----------|
| ○ Bianco / White  | 27,4 | 020SMQN  |
| ● Rosso / Red     | 27,4 | 020SMQR  |
| ● Verde / Green   | 27,4 | 020SMQV  |
| ● Giallo / Yellow | 27,4 | 020SMQG  |
| ● Blu / Blue      | 27,4 | 020SMQBL |



## CAM U

|                   |      |           |
|-------------------|------|-----------|
| ○ Bianco / White  | 27,4 | 020SMUND  |
| ● Rosso / Red     | 27,4 | 020SMURD  |
| ● Verde / Green   | 27,4 | 020SMUVD  |
| ● Giallo / Yellow | 27,4 | 020SMUGD  |
| ● Blu / Blue      | 27,4 | 020SMUBLD |

## 5 posizioni / 5 positions

g

cod



## CAM R

|                   |      |          |
|-------------------|------|----------|
| ○ Bianco / White  | 27,4 | 020SMRN  |
| ● Rosso / Red     | 27,4 | 020SMRR  |
| ● Verde / Green   | 27,4 | 020SMRV  |
| ● Giallo / Yellow | 27,4 | 020SMRG  |
| ● Blu / Blue      | 27,4 | 020SMRBL |



## CAM V

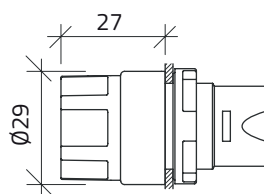
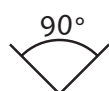
|                   |      |          |
|-------------------|------|----------|
| ○ Bianco / White  | 27,4 | 020SMVN  |
| ● Rosso / Red     | 27,4 | 020SMVR  |
| ● Verde / Green   | 27,4 | 020SMVV  |
| ● Giallo / Yellow | 27,4 | 020SMVG  |
| ● Blu / Blue      | 27,4 | 020SMVBL |

# Selettori luminosi a manopola Ø22

## Illuminated knob selector switches Ø22

Cercare la combinazione di schemi a pag. 31-32 / See diagram combination on page 31-32

Selettori luminosi utilizzare max. 2 elementi di contatto / For the illuminated selector switches, use max 2 contact blocks



### 2 posizioni / 2 positions

g

cod

#### CAM A

|                   |    |                 |
|-------------------|----|-----------------|
| ○ Bianco / White  | 27 | <b>020SMLAB</b> |
| ● Rosso / Red     | 27 | <b>020SMLAR</b> |
| ● Verde / Green   | 27 | <b>020SMLAV</b> |
| ● Giallo / Yellow | 27 | <b>020SMLAG</b> |



#### CAM A

|                   |    |                  |
|-------------------|----|------------------|
| ○ Bianco / White  | 27 | <b>020SMLABD</b> |
| ● Rosso / Red     | 27 | <b>020SMLARD</b> |
| ● Verde / Green   | 27 | <b>020SMLAVD</b> |
| ● Giallo / Yellow | 27 | <b>020SMLAGD</b> |



### 3 posizioni / 3 positions

g

cod

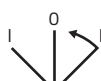
#### CAM O

|                   |    |                 |
|-------------------|----|-----------------|
| ○ Bianco / White  | 27 | <b>020SMLOB</b> |
| ● Rosso / Red     | 27 | <b>020SMLOR</b> |
| ● Verde / Green   | 27 | <b>020SMLOV</b> |
| ● Giallo / Yellow | 27 | <b>020SMLOG</b> |



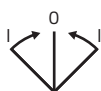
#### CAM O

|                   |    |                  |
|-------------------|----|------------------|
| ○ Bianco / White  | 27 | <b>020SMLOBD</b> |
| ● Rosso / Red     | 27 | <b>020SMLORD</b> |
| ● Verde / Green   | 27 | <b>020SMLOVD</b> |
| ● Giallo / Yellow | 27 | <b>020SMLOGD</b> |



#### CAM O

|                   |    |                  |
|-------------------|----|------------------|
| ○ Bianco / White  | 27 | <b>020SMLOBC</b> |
| ● Rosso / Red     | 27 | <b>020SMLORC</b> |
| ● Verde / Green   | 27 | <b>020SMLOVC</b> |
| ● Giallo / Yellow | 27 | <b>020SMLOGC</b> |





# Selettori a chiave Ø22

## Key selector switches Ø22

Cercare la combinazione di schemi a pag. 31-32 / See diagram combination on page 31-32

**4 posizioni  
4 positions**



**CAM Q**

Diagram: I, II, III, IV

76

**CAM U**

Diagram: I, II, III, IV

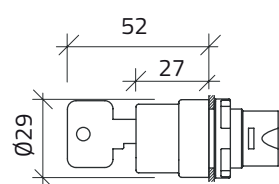
76

**020SCQ**

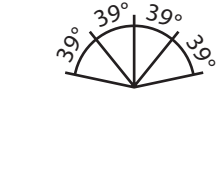
**020SCQ1**

**020SCUD**

Diagram: I, II, III, IV



**5 posizioni  
5 positions**



**CAM R**

Diagram: I, II, 0, IV, V

76

**CAM V**

Diagram: I, II, 0, IV, V

76

**020SCR**

**020SCRO**

**020SCV**

**020SCV1**

### Chiavi speciali Special keys



Chiave standard 3095, per chiavi speciali far seguire al codice del selettore il suffisso  
Standard key 3095, for special keys complete the selector code with the suffix

|                    |       |            |
|--------------------|-------|------------|
| ● Nero / Black     | 73034 | <b>K34</b> |
| ● Rosso / Red      | 73037 | <b>K37</b> |
| ● Giallo / Yellow  | 73033 | <b>K33</b> |
| ● Blu / Blue       | 73038 | <b>K38</b> |
| ● Arancio / Orange | 73040 | <b>K40</b> |

|      |            |
|------|------------|
| 3353 | <b>K53</b> |
| 9901 | <b>K01</b> |
| 9902 | <b>K02</b> |
| 9903 | <b>K03</b> |
| 9904 | <b>K04</b> |
| 9905 | <b>K05</b> |
| 9910 | <b>K10</b> |
| 9916 | <b>K16</b> |
| 9919 | <b>K19</b> |

# Combinazione di schemi

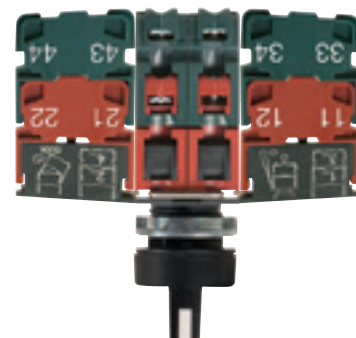
## Diagram combination

|  |              |                                          | Schema<br>Diagram        | Contatti flangiati<br>Flanged contacts |                                              |
|--|--------------|------------------------------------------|--------------------------|----------------------------------------|----------------------------------------------|
|  | <b>CAM A</b> | 13 — 14                                  | E10                      |                                        | 020G<br>020E10                               |
|  | <b>CAM A</b> | 13 — 14<br>21 — 22                       | E10<br>E01               |                                        | 020G<br>020E10<br>020E01                     |
|  | <b>CAM B</b> | 13 — 14<br>21 — 22                       | E10<br>E01               |                                        | 020G<br>020E10<br>020E01                     |
|  | <b>CAM C</b> | 13 — 14<br>21 — 22                       | E10<br>E01               |                                        | 020G<br>020E10<br>020E01                     |
|  | <b>CAM O</b> | 13 — 14<br>23 — 24                       | E10<br>E10               |                                        | 020G<br>020E10<br>020E10                     |
|  | <b>CAM O</b> | 13 — 14<br>21 — 21                       | E10<br>E01               |                                        | 020G<br>020E10<br>020E01                     |
|  | <b>CAM O</b> | 11 — 12<br>21 — 22<br>33 — 34<br>43 — 44 | E01<br>E01<br>E10<br>E10 |                                        | 020G<br>020E10<br>020E10<br>020E01<br>020E01 |
|  | <b>CAM T</b> | 13 — 14<br>21 — 22                       | E10<br>E01               |                                        | 020G<br>020E10<br>020E01                     |
|  | <b>CAM T</b> | 11 — 12<br>21 — 22<br>33 — 34<br>43 — 44 | E01<br>E01<br>E10<br>E10 |                                        | 020G<br>020E01<br>020E01<br>020E10<br>020E10 |

# Combinazione di schemi

## Diagram combination

|  |              |                                          | Schema<br>Diagram        | Contatti flangiati<br>Flanged contacts           |
|--|--------------|------------------------------------------|--------------------------|--------------------------------------------------|
|  | <b>CAM Q</b> | 11 — 12<br>21 — 22<br>33 — 34<br>43 — 44 | E01<br>E01<br>E10<br>E10 | <br>020G<br>020E01<br>020E01<br>020E10<br>020E10 |
|  | <b>CAM U</b> | 13 — 14<br>21 — 22<br>43 — 44            | E01<br>E10<br>E10<br>E10 | <br>020G<br>020E01<br>020E10<br>020E10           |
|  | <b>CAM R</b> | 11 — 12<br>21 — 22<br>33 — 34<br>43 — 44 | E01<br>E01<br>E10<br>E10 | <br>020G<br>020E01<br>020E01<br>020E10<br>020E10 |
|  | <b>CAM V</b> | 11 — 12<br>21 — 22<br>33 — 34<br>43 — 44 | E01<br>E01<br>E10<br>E10 | <br>020G<br>020E01<br>020E01<br>020E10<br>020E10 |

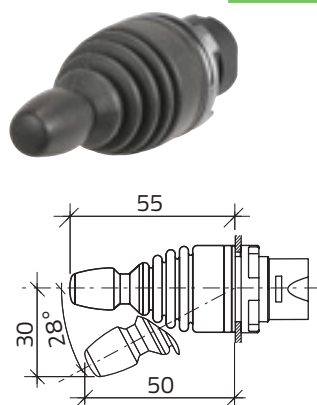




# Manipolatori H 55 Ø22

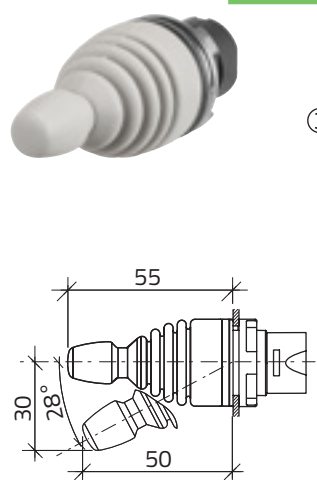
## Joysticks H 55 Ø22

### 2 posizioni 2 positions



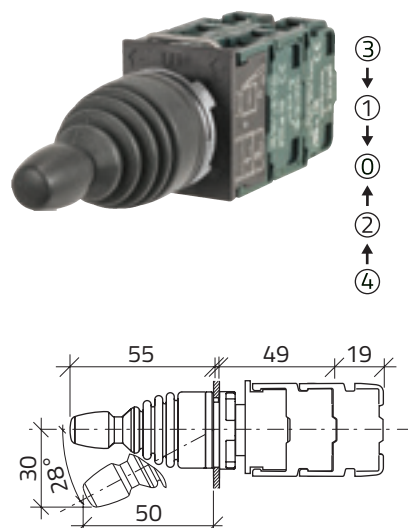
|   |            |        |                                                       | g  | cod                |
|---|------------|--------|-------------------------------------------------------|----|--------------------|
| ① | ● RAL 7016 | 1-2    | permanenti / maintained                               | 40 | <b>020MT2P</b>     |
| ① | ● RAL 7035 | 1-2    | permanenti / maintained                               | 40 | <b>020MT2PGR</b>   |
| ② | ● RAL 7016 | 1-2    | temporanee / spring return                            | 40 | <b>020MT2T</b>     |
| ② | ● RAL 7035 | 1-2    | temporanee / spring return                            | 40 | <b>020MT2TGR</b>   |
|   | ● RAL 7016 | 1<br>2 | permanente / maintained<br>temporanea / spring return | 40 | <b>020MT1P1T</b>   |
|   | ● RAL 7035 | 1<br>2 | permanente / maintained<br>temporanea / spring return | 40 | <b>020MT1P1TGR</b> |

### 4 posizioni 4 positions



|       |            |            |                                                       | g  | cod                |
|-------|------------|------------|-------------------------------------------------------|----|--------------------|
| ①     | ● RAL 7016 | 1-2-3-4    | permanenti / maintained                               | 40 | <b>020MT4P</b>     |
| ③ ① ④ | ● RAL 7035 | 1-2-3-4    | permanenti / maintained                               | 40 | <b>020MT4PGR</b>   |
| ②     | ● RAL 7016 | 1-2-3-4    | temporanee / spring return                            | 40 | <b>020MT4T</b>     |
| ②     | ● RAL 7035 | 1-2-3-4    | temporanee / spring return                            | 40 | <b>020MT4TGR</b>   |
|       | ● RAL 7016 | 1-2<br>3-4 | permanenti / maintained<br>temporanee / spring return | 40 | <b>020MT2P2T</b>   |
|       | ● RAL 7035 | 1-2<br>3-4 | permanenti / maintained<br>temporanee / spring return | 40 | <b>020MT2P2TGR</b> |

### Manipolatori speciali 4 posizioni Special joysticks 4 positions

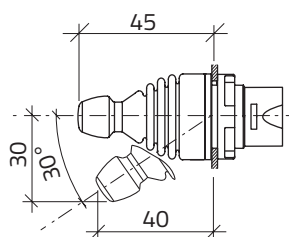


|                                           |            |         |                            | g  | cod                 |
|-------------------------------------------|------------|---------|----------------------------|----|---------------------|
| ③<br>↓<br>①<br>↓<br>④<br>↑<br>②<br>↑<br>④ | ● RAL 7016 | 1-2-3-4 | temporanee / spring return | 90 | <b>020MT4TL40AR</b> |

# Manipolatori H 45 Ø22

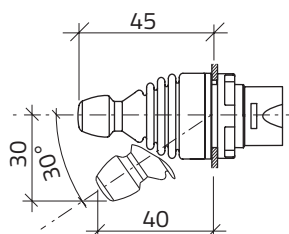
## Joysticks H 45 Ø22

### 2 posizioni 2 positions



|   |            |        |                                                                     |    |                     |
|---|------------|--------|---------------------------------------------------------------------|----|---------------------|
| ① | ● RAL 7016 | 1-2    | permanenti / <i>maintained</i>                                      | 40 | <b>020MTR2P</b>     |
| ① | ● RAL 7035 | 1-2    | permanenti / <i>maintained</i>                                      | 40 | <b>020MTR2PGR</b>   |
| ② | ● RAL 7016 | 1-2    | temporanee / <i>spring return</i>                                   | 40 | <b>020MTR2T</b>     |
|   | ● RAL 7035 | 1-2    | temporanee / <i>spring return</i>                                   | 40 | <b>020MTR2TGR</b>   |
|   | ● RAL 7016 | 1<br>2 | permanente / <i>maintained</i><br>temporanea / <i>spring return</i> | 40 | <b>020MTR1P1T</b>   |
|   | ● RAL 7035 | 1<br>2 | permanente / <i>maintained</i><br>temporanea / <i>spring return</i> | 40 | <b>020MTR1P1TGR</b> |

### 4 posizioni 4 positions



|       |            |            |                                                                     |    |                     |
|-------|------------|------------|---------------------------------------------------------------------|----|---------------------|
| ①     | ● RAL 7016 | 1-2-3-4    | permanenti / <i>maintained</i>                                      | 40 | <b>020MTR4P</b>     |
| ③ ① ④ | ● RAL 7035 | 1-2-3-4    | permanenti / <i>maintained</i>                                      | 40 | <b>020MTR4PGR</b>   |
| ②     | ● RAL 7016 | 1-2-3-4    | temporanee / <i>spring return</i>                                   | 40 | <b>020MTR4T</b>     |
|       | ● RAL 7035 | 1-2-3-4    | temporanee / <i>spring return</i>                                   | 40 | <b>020MTR4TGR</b>   |
|       | ● RAL 7016 | 1-2<br>3-4 | permanenti / <i>maintained</i><br>temporanee / <i>spring return</i> | 40 | <b>020MTR2P2T</b>   |
|       | ● RAL 7035 | 1-2<br>3-4 | permanenti / <i>maintained</i><br>temporanee / <i>spring return</i> | 40 | <b>020MTR2P2TGR</b> |

### Schema Diagram

### Contatti flangianti Flanged contacts

|       |         |           |     |  |                                              |
|-------|---------|-----------|-----|--|----------------------------------------------|
| ①     | 13 — 14 | 1 0 2     | E10 |  | 020G<br>020E10<br>020E10                     |
| ①     | 23 — 24 |           | E10 |  |                                              |
| ②     |         |           |     |  | 020G<br>020E01<br>020E01<br>020E10<br>020E10 |
| ①     | 11 — 12 | 1 2 0 3 4 | E01 |  |                                              |
| ③ ① ④ | 21 — 22 |           | E01 |  |                                              |
| ②     | 33 — 34 |           | E10 |  |                                              |
| ②     | 43 — 44 |           | E10 |  | 020G<br>020E10<br>020E10<br>020E10<br>020E10 |
| ③     | 13 — 14 | 3 1 0 2 4 | E10 |  |                                              |
| ①     | 23 — 24 |           | E10 |  |                                              |
| ①     | 33 — 34 |           | E10 |  |                                              |
| ②     | 43 — 44 |           | E10 |  |                                              |
| ④     |         |           | E10 |  |                                              |

# Portalampada BA9S

## Lampholders BA9S

### Portalampada / Lampholders

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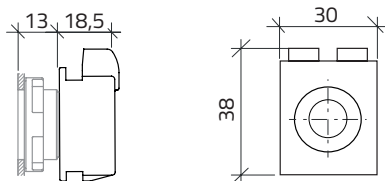


~ **Alimentazione diretta / Direct supply**

X1 — X2  
+ — -

IEC: BA9S 380V. max 2W esclusa / excluded  
Valori certificati IMQ / IMQ certified values

UL - CSA: BA9S 250V. max 2W esclusa / excluded



16

10

020PD9



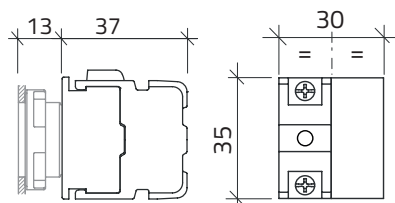
~ **Alimentazione diretta / Direct supply**

X1 — X2  
+ — -

IEC: BA9S 380V. max 2W esclusa / excluded  
Valori certificati IMQ / IMQ certified values

UL - CSA: BA9S 250V. max 2W esclusa / excluded

13 — 14 1 NO Aperto / Open



26

5

020PD910



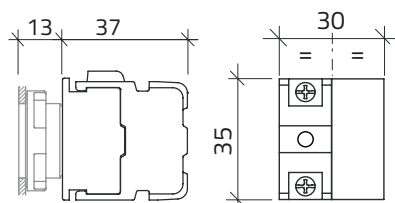
~ **Alimentazione diretta / Direct supply**

X1 — X2  
+ — -

IEC: BA9S 380V. max 2W esclusa / excluded  
Valori certificati IMQ / IMQ certified values

UL - CSA: BA9S 250V. max 2W esclusa / excluded

21 — 22 1 NC Chiuso / Closed



26

5

020PD901



~ **Alimentazione diretta / Direct supply**

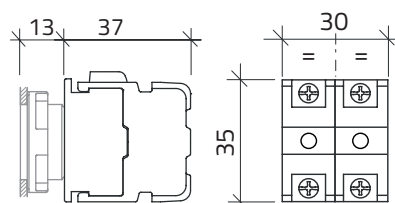
X1 — X2  
+ — -

IEC: BA9S 380V. max 2W esclusa / excluded  
Valori certificati IMQ / IMQ certified values

UL - CSA: BA9S 250V. max 2W esclusa / excluded

13 — 14 1 NO Aperto / Open

21 — 22 1 NC Chiuso / Closed



26

5

020PD911

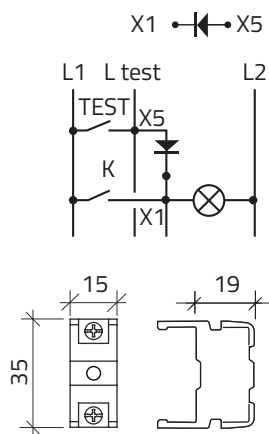
# Portalamпада BA9S

## Lampholders BA9S

### Portalamпада / Lampholders

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### Elemento prova lampada / Lamp test module

Per controllo di funzionamento lampade  
Checking lamps for good operation

16

020ET

# Elementi di contatto

## Contact blocks

### Elementi di contatto / Contact blocks

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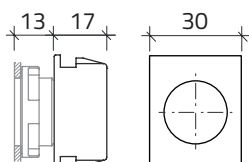
cod

8

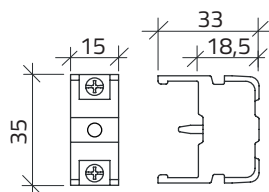
10

020G

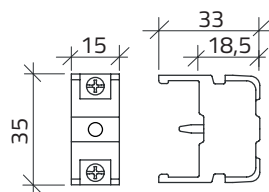
Flangia per contatti / Flange for contacts



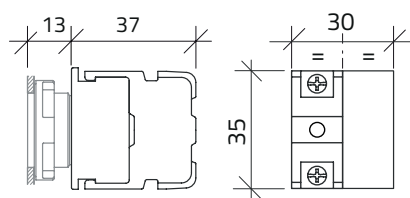
|   |   |                                                                                                                                                                                              |    |    |          |
|---|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----------|
| 3 | 4 | 1 NO                                                                                                                                                                                         | 10 | 10 | 020E10   |
| 3 | 4 | 1 NO Chiusura anticipata / 1 NO Early make                                                                                                                                                   | 10 | 5  | 020E10A  |
| 3 | 4 | 1 NO<br>Contatti dorati e viti terminali inox. Idoneo per ambienti con fenomeni di corrosione<br>Gold-plated contacts and stainless steel terminal screws suitable for corrosive environment | 10 | 5  | 020E10AU |



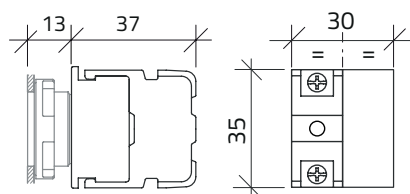
|   |   |                                                                                                                                                                                              |    |    |          |
|---|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----------|
| 1 | 2 | 1 NC                                                                                                                                                                                         | 10 | 10 | 020E01   |
| 1 | 2 | 1 NC Apertura ritardata / 1 NC Late break                                                                                                                                                    | 10 | 5  | 020E01R  |
| 1 | 2 | 1 NC<br>Contatti dorati e viti terminali inox. Idoneo per ambienti con fenomeni di corrosione<br>Gold-plated contacts and stainless steel terminal screws suitable for corrosive environment | 10 | 5  | 020E01AU |



|    |    |                                    |    |   |         |
|----|----|------------------------------------|----|---|---------|
| 13 | 14 | 1 NO con flangia / 1NO with flange | 19 | 5 | 020GE10 |
|----|----|------------------------------------|----|---|---------|



|    |    |                                    |    |   |         |
|----|----|------------------------------------|----|---|---------|
| 21 | 22 | 1 NC con flangia / 1NC with flange | 19 | 5 | 020GE01 |
|----|----|------------------------------------|----|---|---------|



# Elementi di contatto

## Contact blocks

## Elementi di contatto / Contact blocks



13 — 14 1 NO con flangia / 1NO with flange

21 — 22 1 NC con flangia / 1NC with flange

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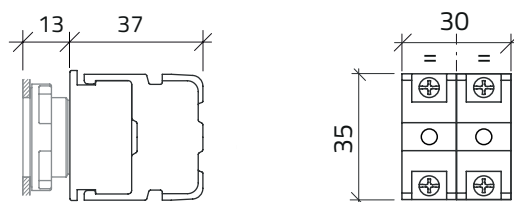
n

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19

5

020GE11



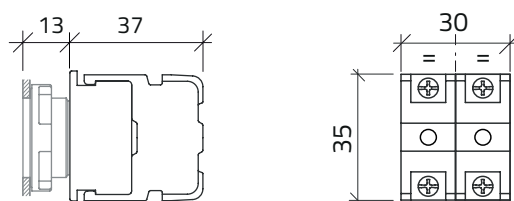
13 — 14 1 NO con flangia / 1NO with flange

23 — 24 1 NO con flangia / 1NC with flange

19

5

020GE20



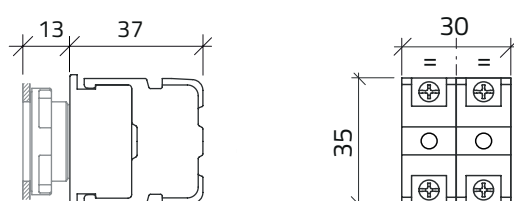
11 — 12 1 NC con flangia / 1NO with flange

21 — 22 1 NC con flangia / 1NC with flange

19

5

020GE02

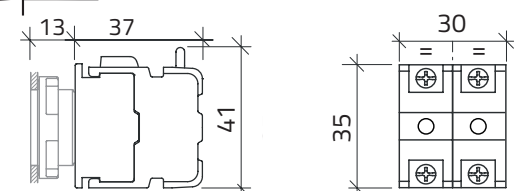


11 — 24 Elemento di contatto con automonitoraggio  
Contact block with self-monitoring

19

5

020GE01S

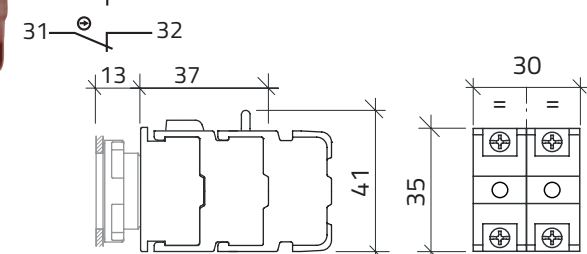


11 — 24 Elemento di contatto con automonitoraggio  
Contact block with self-monitoring

19

5

020GE02S

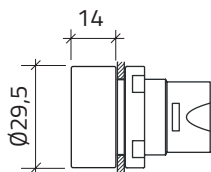




# Pulsanti normali Ø22 Ghiera in metallo

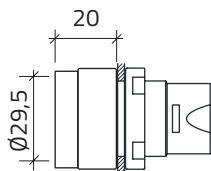
## Normal push-buttons Ø22 Metal bezel

### Pulsanti normali / Normal push-buttons



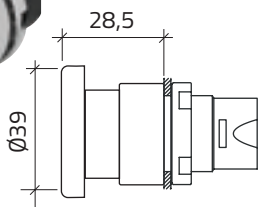
#### Pulsanti con guardia / Guarded push-buttons

|                    |    |            |
|--------------------|----|------------|
| ● Nero / Black     | 33 | 020PTAINW  |
| ● Rosso / Red      | 33 | 020PTAIRW  |
| ● Verde / Green    | 33 | 020PTAIVW  |
| ● Giallo / Yellow  | 33 | 020PTAIGW  |
| ● Blu / Blue       | 33 | 020PTAIBLW |
| ○ Bianco / White   | 33 | 020PTAIBW  |
| ● Grigio / Grey    | 33 | 020PTAIGRW |
| ● Arancio / Orange | 33 | 020PTAIAW  |



#### Pulsanti sporgenti / Projecting push-buttons

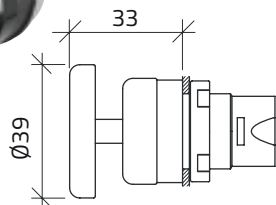
|                   |    |            |
|-------------------|----|------------|
| ● Nero / Black    | 34 | 020PTASNW  |
| ● Rosso / Red     | 34 | 020PTASRW  |
| ● Verde / Green   | 34 | 020PTASVW  |
| ● Giallo / Yellow | 34 | 020PTASGW  |
| ● Blu / Blue      | 34 | 020PTASBLW |
| ○ Bianco / White  | 34 | 020PTASBW  |
| ● Grigio / Grey   | 34 | 020PTASGRW |



#### Pulsanti a fungo Ø40 / Mushroom push-buttons Ø40

|                   |    |            |
|-------------------|----|------------|
| ● Nero / Black    | 44 | 020PTAFNW  |
| ● Rosso / Red     | 44 | 020PTAFRW  |
| ● Verde / Green   | 44 | 020PTAFVW  |
| ● Giallo / Yellow | 44 | 020PTAFGW  |
| ● Blu / Blue      | 44 | 020PTAFBLW |

#### Pulsanti a fungo oscillanti Ø40 Floating mushroom push-buttons Ø40



|                |    |            |
|----------------|----|------------|
| ● Nero / Black | 44 | 020PTAFONK |
| ● Rosso / Red  | 44 | 020PTAFORK |

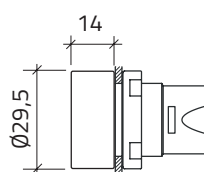
# Pulsanti luminosi Ø22 Ghiera in metallo

## Illuminated push-buttons Ø22 Metal bezel

### Pulsanti luminosi / Illuminated push-buttons

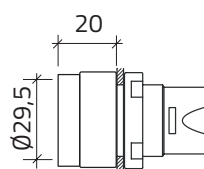
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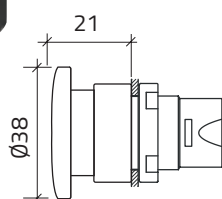
#### Pulsanti con guardia / Guarded push-buttons

|                       |    |             |
|-----------------------|----|-------------|
| ● Rosso / Red         | 33 | 020PTAILRW  |
| ● Verde / Green       | 33 | 020PTAILVW  |
| ● Giallo / Yellow     | 33 | 020PTAILGW  |
| ● Blu / Blue          | 33 | 020PTAILBLW |
| ○ Bianco / White      | 33 | 020PTAILBW  |
| ● Arancio / Orange    | 33 | 020PTAILAW  |
| ○ Trasparente / Clear | 33 | 020PTAILIW  |



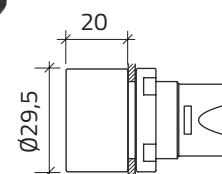
#### Pulsanti sporgenti / Projecting push-buttons

|                       |    |             |
|-----------------------|----|-------------|
| ● Rosso / Red         | 35 | 020PTASLRW  |
| ● Verde / Green       | 35 | 020PTASLVW  |
| ● Giallo / Yellow     | 35 | 020PTASLGW  |
| ● Blu / Blue          | 35 | 020PTASLBLW |
| ○ Bianco / White      | 35 | 020PTASLBW  |
| ● Arancio / Orange    | 35 | 020PTASLAW  |
| ○ Trasparente / Clear | 35 | 020PTASLIW  |



#### Pulsanti a fungo Ø38 / Mushroom push-buttons Ø38

|                   |    |            |
|-------------------|----|------------|
| ● Rosso / Red     | 36 | 020PTAFLRW |
| ● Verde / Green   | 36 | 020PTAFLVW |
| ● Giallo / Yellow | 36 | 020PTAFLGW |

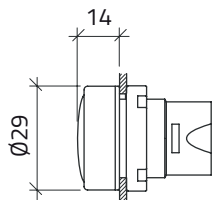


#### Pulsanti con guardia completa / Push-buttons with full guard

|                       |    |             |
|-----------------------|----|-------------|
| ● Rosso / Red         | 29 | 020PTSSLRW  |
| ● Verde / Green       | 29 | 020PTSSLVW  |
| ● Giallo / Yellow     | 29 | 020PTSSLGW  |
| ● Blu / Blue          | 29 | 020PTSSLBLW |
| ○ Bianco / White      | 29 | 020PTSSLBW  |
| ● Arancio / Orange    | 29 | 020PTSSLAW  |
| ○ Trasparente / Clear | 29 | 020PTSSLIW  |

# Lampade spia Ø22 Ghiera in metallo

## Pilot lights Ø22 Metal bezel



### Lampade spia inviolabile

### Tamper-proof pilot lights

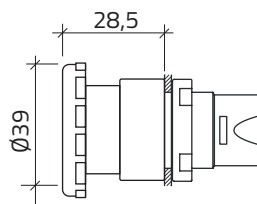
|                       | g  | cod               |
|-----------------------|----|-------------------|
| ● Rosso / Red         | 30 | <b>020LTBBRW</b>  |
| ● Verde / Green       | 30 | <b>020LTBBVW</b>  |
| ● Giallo / Yellow     | 30 | <b>020LTBBGW</b>  |
| ● Blu / Blue          | 30 | <b>020LTBBBLW</b> |
| ○ Bianco / White      | 30 | <b>020LTBBBW</b>  |
| ○ Trasparente / Clear | 30 | <b>020LTBBIW</b>  |
| ● Arancio / Orange    | 30 | <b>020LTBBAW</b>  |

# Pulsanti d'emergenza Ø22 Ghiera in metallo

## Emergency stop push-buttons Ø22 Metal bezel

### Pulsante a fungo ad aggancio Ø40

### Latching mushroom push-button Ø40



#### Sgancio rotazione / Twist realese

● Rosso / Red

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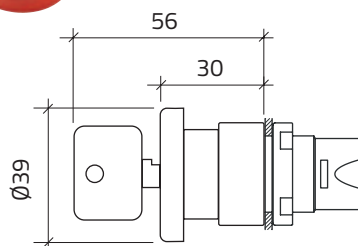
45

cod

020PTAARW

### Pulsante a fungo a chiave Ø40

### Key mushroom push-button Ø40



#### Sgancio a chiave / Key realese

chiave 73037 con impugnatura colore rosso / key 73037 with red cap

● Rosso / Red

g

94

cod

020PTHCRW

# Selettori a manopola Ø22 Ghiera in metallo

## Knob selector switches Ø22 Metal bezel

Cercare la combinazione di schemi a pag. 49-50 / See diagram combination on page 49-50

| 2 posizioni / 2 positions                                                         |                                                                                     | g            | cod          |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------|--------------|
|  |    | <b>CAM A</b> |              |
|                                                                                   | ● Nero / Black                                                                      | 38           | 020STAMANW   |
|                                                                                   | ● Rosso / Red                                                                       | 38           | 020STAMARW   |
|                                                                                   | ● Verde / Green                                                                     | 38           | 020STAMAVW   |
|                                                                                   | ● Giallo / Yellow                                                                   | 38           | 020STAMAGW   |
|                                                                                   | ● Blu / Blue                                                                        | 38           | 020STAMABLW  |
|                                                                                   |    | <b>CAM B</b> |              |
|                                                                                   | ● Nero / Black                                                                      | 38           | 020STAMBNW   |
|                                                                                   | ● Rosso / Red                                                                       | 38           | 020STAMBRW   |
|                                                                                   | ● Verde / Green                                                                     | 38           | 020STAMBVW   |
|                                                                                   | ● Giallo / Yellow                                                                   | 38           | 020STAMBGW   |
|                                                                                   | ● Blu / Blue                                                                        | 38           | 020STAMBBLW  |
|                                                                                   |   | <b>CAM B</b> |              |
|                                                                                   | ● Nero / Black                                                                      | 38           | 020STAMBNWD  |
|                                                                                   | ● Rosso / Red                                                                       | 38           | 020STAMBRWD  |
|                                                                                   | ● Verde / Green                                                                     | 38           | 020STAMBVWD  |
|                                                                                   | ● Giallo / Yellow                                                                   | 38           | 020STAMBGWD  |
|                                                                                   | ● Blu / Blue                                                                        | 38           | 020STAMBBLWD |
|                                                                                   |  | <b>CAM C</b> |              |
|                                                                                   | ● Nero / Black                                                                      | 38           | 020STAMCNW   |
|                                                                                   | ● Rosso / Red                                                                       | 38           | 020STAMCRW   |
|                                                                                   | ● Verde / Green                                                                     | 38           | 020STAMCVW   |
|                                                                                   | ● Giallo / Yellow                                                                   | 38           | 020STAMCGW   |
|                                                                                   | ● Blu / Blue                                                                        | 38           | 020STAMCBLW  |
|                                                                                   |  | <b>CAM C</b> |              |
|                                                                                   | ● Nero / Black                                                                      | 38           | 020STAMCNWS  |
|                                                                                   | ● Rosso / Red                                                                       | 38           | 020STAMCRWS  |
|                                                                                   | ● Verde / Green                                                                     | 38           | 020STAMCVWS  |
|                                                                                   | ● Giallo / Yellow                                                                   | 38           | 020STAMCGWS  |
|                                                                                   | ● Blu / Blue                                                                        | 38           | 020STAMCBLWS |

# Selettori a manopola Ø22 Ghiera in metallo

## Knob selector switches Ø22 Metal bezel

Cercare la combinazione di schemi a pag. 49-50 / See diagram combination on page 49-50



## 3 posizioni / 3 positions

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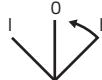
cod

## CAM O



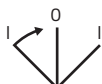
|                   |    |            |
|-------------------|----|------------|
| ● Nero / Black    | 38 | 020STAMONW |
| ● Rosso / Red     | 38 | 020STAMORW |
| ● Verde / Green   | 38 | 020STAMOVW |
| ● Giallo / Yellow | 38 | 020STAMOGW |
| ● Blu / Blue      | 38 | 020STAMOBW |

## CAM O



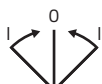
|                   |    |             |
|-------------------|----|-------------|
| ● Nero / Black    | 38 | 020STAMONWD |
| ● Rosso / Red     | 38 | 020STAMORWD |
| ● Verde / Green   | 38 | 020STAMOVWD |
| ● Giallo / Yellow | 38 | 020STAMOGWD |
| ● Blu / Blue      | 38 | 020STAMOBWD |

## CAM O



|                   |    |             |
|-------------------|----|-------------|
| ● Nero / Black    | 38 | 020STAMONWS |
| ● Rosso / Red     | 38 | 020STAMORWS |
| ● Verde / Green   | 38 | 020STAMOVWS |
| ● Giallo / Yellow | 38 | 020STAMOGWS |
| ● Blu / Blue      | 38 | 020STAMOBWS |

## CAM O



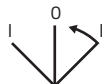
|                   |    |             |
|-------------------|----|-------------|
| ● Nero / Black    | 38 | 020STAMONWC |
| ● Rosso / Red     | 38 | 020STAMORWC |
| ● Verde / Green   | 38 | 020STAMOVWC |
| ● Giallo / Yellow | 38 | 020STAMOGWC |
| ● Blu / Blue      | 38 | 020STAMOBWC |

## CAM E



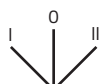
|                |    |            |
|----------------|----|------------|
| ● Nero / Black | 38 | 020STAMENW |
|----------------|----|------------|

## CAM E



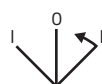
|                |    |             |
|----------------|----|-------------|
| ● Nero / Black | 38 | 020STAMENWD |
|----------------|----|-------------|

## CAM T



|                   |    |             |
|-------------------|----|-------------|
| ● Nero / Black    | 38 | 020STAMTNW  |
| ● Rosso / Red     | 38 | 020STAMTRW  |
| ● Verde / Green   | 38 | 020STAMTVW  |
| ● Giallo / Yellow | 38 | 020STAMTGW  |
| ● Blu / Blue      | 38 | 020STAMTBLW |

## CAM T



|                   |    |              |
|-------------------|----|--------------|
| ● Nero / Black    | 38 | 020STAMTNWD  |
| ● Rosso / Red     | 38 | 020STAMTRWD  |
| ● Verde / Green   | 38 | 020STAMTVWD  |
| ● Giallo / Yellow | 38 | 020STAMTGWD  |
| ● Blu / Blue      | 38 | 020STAMTBLWD |



# Selettori a manopola Ø22 Ghiera in metallo

## Knob selector switches Ø22 Metal bezel

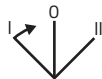
Cercare la combinazione di schemi a pag. 49-50 / See diagram combination on page 49-50

020

**3 posizioni / 3 positions**

g

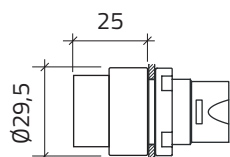
cod

**CAM T**

|                   |    |                     |
|-------------------|----|---------------------|
| ● Nero / Black    | 38 | <b>020STAMTNWS</b>  |
| ● Rosso / Red     | 38 | <b>020STAMTRWS</b>  |
| ● Verde / Green   | 38 | <b>020STAMTVWS</b>  |
| ● Giallo / Yellow | 38 | <b>020STAMTGWS</b>  |
| ● Blu / Blue      | 38 | <b>020STAMTBLWS</b> |

**CAM T**

|                   |    |                     |
|-------------------|----|---------------------|
| ● Nero / Black    | 38 | <b>020STAMTNWC</b>  |
| ● Rosso / Red     | 38 | <b>020STAMTRWC</b>  |
| ● Verde / Green   | 38 | <b>020STAMTVWC</b>  |
| ● Giallo / Yellow | 38 | <b>020STAMTGWC</b>  |
| ● Blu / Blue      | 38 | <b>020STAMTBLWC</b> |

**4 posizioni / 4 positions**

g

cod

**CAM Q**

|                   |    |                    |
|-------------------|----|--------------------|
| ● Nero / Black    | 38 | <b>020STAMQNW</b>  |
| ● Rosso / Red     | 38 | <b>020STAMQRW</b>  |
| ● Verde / Green   | 38 | <b>020STAMQVW</b>  |
| ● Giallo / Yellow | 38 | <b>020STAMQGW</b>  |
| ● Blu / Blue      | 38 | <b>020STAMQBLW</b> |

**CAM U**

|                |    |                   |
|----------------|----|-------------------|
| ● Nero / Black | 38 | <b>020STAMUNW</b> |
|----------------|----|-------------------|

**5 posizioni / 5 positions**

g

cod

**CAM R**

|                   |    |                    |
|-------------------|----|--------------------|
| ● Nero / Black    | 38 | <b>020STAMRNW</b>  |
| ● Rosso / Red     | 38 | <b>020STAMRRW</b>  |
| ● Verde / Green   | 38 | <b>020STAMRVW</b>  |
| ● Giallo / Yellow | 38 | <b>020STAMRGW</b>  |
| ● Blu / Blue      | 38 | <b>020STAMRBLW</b> |

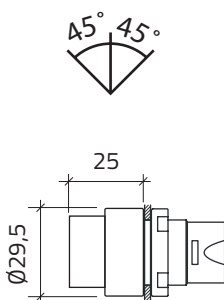
**CAM Z**

|                   |    |                    |
|-------------------|----|--------------------|
| ● Nero / Black    | 38 | <b>020STAMZNW</b>  |
| ● Rosso / Red     | 38 | <b>020STAMZRW</b>  |
| ● Verde / Green   | 38 | <b>020STAMZVW</b>  |
| ● Giallo / Yellow | 38 | <b>020STAMZGW</b>  |
| ● Blu / Blue      | 38 | <b>020STAMZBLW</b> |

# Selettori luminosi a manopola Ø22 Ghiera in metallo

## Illuminated knob selector switches Ø22 Metal bezel

Cercare la combinazione di schemi a pag. 49-50 / See diagram combination on page 49-50



### 2 posizioni / 2 positions

g

cod



#### CAM A

|                       |    |              |
|-----------------------|----|--------------|
| ● Rosso / Red         | 38 | 020STAMLARW  |
| ● Verde / Green       | 38 | 020STAMLAVW  |
| ● Giallo / Yellow     | 38 | 020STAMLAGW  |
| ● Blu / Blue          | 38 | 020STAMLABLW |
| ○ Bianco / White      | 38 | 020STAMLABW  |
| ● Arancione / Orange  | 38 | 020STAMLAOW  |
| ○ Trasparente / Clear | 38 | 020STAMLAIW  |



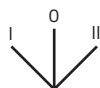
#### CAM A

|                       |    |               |
|-----------------------|----|---------------|
| ● Rosso / Red         | 38 | 020STAMLARWD  |
| ● Verde / Green       | 38 | 020STAMLAVWD  |
| ● Giallo / Yellow     | 38 | 020STAMLAGWD  |
| ● Blu / Blue          | 38 | 020STAMLABLWD |
| ○ Bianco / White      | 38 | 020STAMLABWD  |
| ● Arancione / Orange  | 38 | 020STAMLAOWD  |
| ○ Trasparente / Clear | 38 | 020STAMLAIWD  |

### 3 posizioni / 3 positions

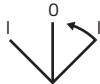
g

cod



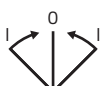
#### CAM O

|                       |    |              |
|-----------------------|----|--------------|
| ● Rosso / Red         | 38 | 020STAMLORW  |
| ● Verde / Green       | 38 | 020STAMLOVW  |
| ● Giallo / Yellow     | 38 | 020STAMLOGW  |
| ● Blu / Blue          | 38 | 020STAMLOBLW |
| ○ Bianco / White      | 38 | 020STAMLOBW  |
| ● Arancione / Orange  | 38 | 020STAMLOAW  |
| ○ Trasparente / Clear | 38 | 020STAMLOIW  |



#### CAM O

|                       |    |               |
|-----------------------|----|---------------|
| ● Rosso / Red         | 38 | 020STAMLORWD  |
| ● Verde / Green       | 38 | 020STAMLOVWD  |
| ● Giallo / Yellow     | 38 | 020STAMLOGWD  |
| ● Blu / Blue          | 38 | 020STAMLOBLWD |
| ○ Bianco / White      | 38 | 020STAMLOBWD  |
| ● Arancione / Orange  | 38 | 020STAMLOAWD  |
| ○ Trasparente / Clear | 38 | 020STAMLOIWD  |



#### CAM O

|                       |    |               |
|-----------------------|----|---------------|
| ● Rosso / Red         | 38 | 020STAMLORWC  |
| ● Verde / Green       | 38 | 020STAMLOVWC  |
| ● Giallo / Yellow     | 38 | 020STAMLOGWC  |
| ● Blu / Blue          | 38 | 020STAMLOBLWC |
| ○ Bianco / White      | 38 | 020STAMLOBWC  |
| ● Arancione / Orange  | 38 | 020STAMLOAWC  |
| ○ Trasparente / Clear | 38 | 020STAMLOIWC  |

# Selettori a chiave Ø22 Ghiera in metallo

## Key selector switches Ø22 Metal bezel

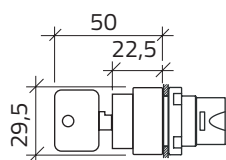
Cercare la combinazione di schemi a pag. 49-50 / See diagram combination on page 49-50

| 2 posizioni<br>2 positions                                                        |              | g  | k                                                                                   | cod               | k                                                                                     | cod               |
|-----------------------------------------------------------------------------------|--------------|----|-------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------|-------------------|
|  | <b>CAM A</b> | 95 |    | <b>020STACAW</b>  |    | <b>020STACAW2</b> |
|                                                                                   |              | 95 |    | <b>020STACAW4</b> |                                                                                       |                   |
|                                                                                   | <b>CAM B</b> | 95 |    | <b>020STACBW</b>  |    | <b>020STACBW2</b> |
|                                                                                   |              | 95 |    | <b>020STACBW4</b> |                                                                                       |                   |
|                                                                                   | <b>CAM B</b> | 95 |    | <b>020STACBWD</b> |                                                                                       |                   |
|                                                                                   | <b>CAM C</b> | 95 |  | <b>020STACCW</b>  |  | <b>020STACCW2</b> |
|                                                                                   |              | 95 |  | <b>020STACCW4</b> |                                                                                       |                   |
|                                                                                   | <b>CAM C</b> | 95 |  | <b>020STACCWS</b> |                                                                                       |                   |

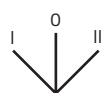
# Selettori a chiave Ø22 Ghiera in metallo

## Key selector switches Ø22 Metal bezel

Cercare la combinazione di schemi a pag. 49-50 / See diagram combination on page 49-50

3 posizioni  
3 positions

g k cod k cod



CAM O

76



020STACOW



020STACOW2

76



020STACOW3



020STACOW4

76



020STACOW5

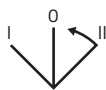


020STACOW6

76



020STACOW7



CAM O

95



020STACOWD

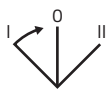


020STACOWD2

95



020STACOWD3



CAM O

95



020STACOWS

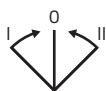


020STACOWS3

95



020STACOWS4

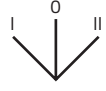


CAM O

95



020STACOWC



CAM T

95



020STACTW



020STACTW2

95



020STACTW3



020STACTW4

95



020STACTW5

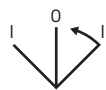


020STACTW6

95



020STACTW7



CAM T

95



020STACTWD

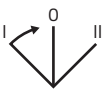


020STACTWD2

95



020STACTWD3



CAM T

95



020STACTWS

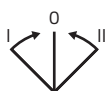


020STACTWS3

95



020STACTWS4



CAM T

95



020STACTWC

# Combinazione di schemi Ø22 Ghiera in metallo

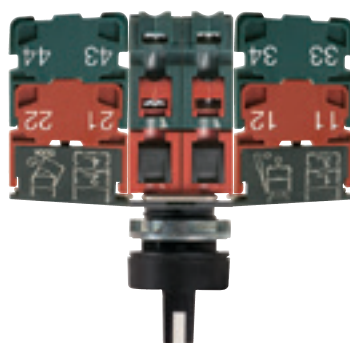
## Diagram combination Ø22 Metal bezel

|  |              |                                          | Schema<br>Diagram        | Contatti flangianti<br>Flanged contacts |                                              |
|--|--------------|------------------------------------------|--------------------------|-----------------------------------------|----------------------------------------------|
|  | <b>CAM A</b> | 13 — 14                                  | E10                      |                                         | 020G<br>020E10                               |
|  | <b>CAM A</b> | 13 — 14<br>21 — 22                       | E10<br>E01               |                                         | 020G<br>020E10<br>020E01                     |
|  | <b>CAM B</b> | 13 — 14<br>21 — 22                       | E10<br>E01               |                                         | 020G<br>020E10<br>020E01                     |
|  | <b>CAM C</b> | 13 — 14<br>21 — 22                       | E10<br>E01               |                                         | 020G<br>020E10<br>020E01                     |
|  | <b>CAM O</b> | 13 — 14<br>23 — 24                       | E10<br>E10               |                                         | 020G<br>020E10<br>020E10                     |
|  | <b>CAM O</b> | 13 — 14<br>21 — 22                       | E10<br>E01               |                                         | 020G<br>020E10<br>020E10                     |
|  | <b>CAM O</b> | 11 — 12<br>21 — 22<br>33 — 34<br>43 — 44 | E01<br>E01<br>E10<br>E10 |                                         | 020G<br>020E10<br>020E10<br>020E01<br>020E01 |
|  | <b>CAM E</b> | 13 — 14<br>21 — 22                       | E10<br>E01               |                                         | 020G<br>020E10<br>020E01                     |
|  | <b>CAM T</b> | 13 — 14<br>21 — 22                       | E10<br>E01               |                                         | 020G<br>020E10<br>020E01                     |

# Combinazione di schemi Ø22 Ghiera in metallo

## Diagram combination Ø22 Metal bezel

|  |              | Schema<br>Diagram | Contatti flangianti<br>Flanged contacts                 |
|--|--------------|-------------------|---------------------------------------------------------|
|  | <b>CAM T</b> |                   | <p>020G<br/>020E01<br/>020E01<br/>020E10<br/>020E10</p> |
|  | <b>CAM Q</b> |                   | <p>020G<br/>020E01<br/>020E01<br/>020E10<br/>020E10</p> |
|  | <b>CAM U</b> |                   | <p>020G<br/>020E01<br/>020E10<br/>020E10</p>            |
|  | <b>CAM R</b> |                   | <p>020G<br/>020E01<br/>020E01<br/>020E10<br/>020E10</p> |
|  | <b>CAM Z</b> |                   | <p>020G<br/>020E01<br/>020E01<br/>020E10<br/>020E10</p> |

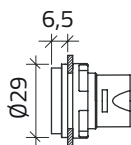




# Accessori Ø22

## Accessories Ø22

### Corpo per lampade spia / Pilot light body



Completare articolo con gemma ed eventuale diffusore con simbolo  
To be fitted with lens and possible diffuser with symbol

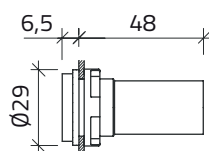
| g | n | cod   |
|---|---|-------|
| 6 | 5 | 020UL |

### Corpo per lampada spia monoblocco Monolithic pilot light body

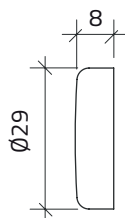


Completare articolo con gemma ed eventuale diffusore con simbolo  
To be fitted with lens and possible diffuser with symbol  
Alimentazione diretta / Direct supply

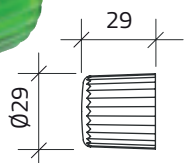
| g  | n | cod   |
|----|---|-------|
| 14 | 5 | 020LM |



### Gemme per lampade spia / Lenses for pilot lights

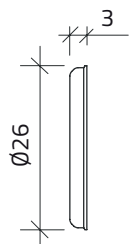


|                       | g | n | cod    |
|-----------------------|---|---|--------|
| ● Rosso / Red         | 3 | 5 | 020GR  |
| ● Verde / Green       | 3 | 5 | 020GV  |
| ● Giallo / Yellow     | 3 | 5 | 020GG  |
| ● Blu / Blue          | 3 | 5 | 020GBL |
| ○ Bianco / White      | 3 | 5 | 020GB  |
| ● Arancio / Orange    | 3 | 5 | 020GA  |
| ○ Trasparente / Clear | 3 | 5 | 020GI  |



|                       | g | n | cod     |
|-----------------------|---|---|---------|
| ● Rosso / Red         | 7 | 5 | 020GAR  |
| ● Verde / Green       | 7 | 5 | 020GAV  |
| ● Giallo / Yellow     | 7 | 5 | 020GAG  |
| ● Blu / Blue          | 7 | 5 | 020GABL |
| ○ Bianco / White      | 7 | 5 | 020GAB  |
| ● Arancio / Orange    | 7 | 5 | 020GAA  |
| ○ Trasparente / Clear | 7 | 5 | 020GAI  |

### Diffusori con simbolo / Diffusers caps with symbol



Completa il codice con il suffisso del simbolo desiderato vedi pag 52  
Code to be completed with the suffix of the desired symbol, see page 52.

Per lampade spia / For pilot lights

| g   | n  | cod      |
|-----|----|----------|
| 0,8 | 10 | 020DL*** |

# Simboli per operatore Ø22

## Symbols for operators Ø22

Far seguire al codice articolo il suffisso del simbolo desiderato / Complete the item code with the suffix of the desired symbol

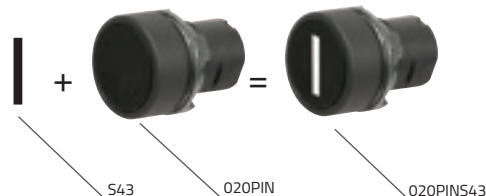
**Esempio per pulsanti luminosi  
sporgenti e a fungo**  
Example for illuminated push-button:  
projecting and mushroom



**Esempio per lampade spia**  
Example for pilot lights



**Esempio per marcatura pulsanti**  
Example for push-button marking

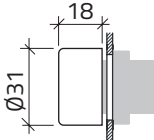
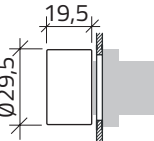
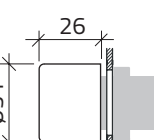
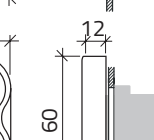
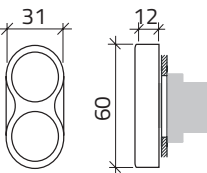


**Simboli per veicoli raccolta rifiuti**  
Symbols for waste collection vehicles

| SIMBOLO<br>SYMBOL | NORMA<br>STANDARD | SUFFISSO<br>SUFFIX | SIMBOLO<br>SYMBOL | NORMA<br>STANDARD | N°<br>N° | SUFFISSO<br>SUFFIX | SIMBOLO<br>SYMBOL | NORMA<br>STANDARD      | N°<br>N° | SUFFISSO<br>SUFFIX |
|-------------------|-------------------|--------------------|-------------------|-------------------|----------|--------------------|-------------------|------------------------|----------|--------------------|
| →                 | IEC 5022a         | S 47               |                   | UNI EN 1501-1     | 01       | S E01              |                   | UNI EN 1501-1          | 19       | S E19              |
| ↑                 | IEC 5022a         | S 46               |                   | UNI EN 1501-1     | 02       | S E02              |                   | UNI EN 1501-1          | 20       | S E20              |
| ←                 | IEC 5022a         | S 47S              |                   | UNI EN 1501-1     | 03       | S E03              |                   | UNI EN 1501-1          | 21       | S E21              |
| ↓                 | IEC 5022a         | S 46B              |                   | UNI EN 1501-1     | 04       | S E04              |                   | IEC 5007a<br>ISO 700   | 22       | S E22              |
| +                 | IEC 5005a         | S 44               |                   | UNI EN 1501-1     | 05       | S E05              | ○                 | IEC 5008a<br>ISO 700   | 23       | S E23              |
| -                 | IEC 5006a         | S 45               |                   | UNI EN 1501-1     | 06       | S E06              |                   | IEC 5013a<br>ISO 70001 | 24       | S E24              |
|                   | ISO 0096          | S 48               |                   | UNI EN 1501-1     | 07       | S E07              |                   | IEC 1141a<br>ISO 7000  | 25       | S E25              |
|                   | IEC 5007a         | S 43               |                   | UNI EN 1501-1     | 08       | S E07              |                   | UNI EN 1501-1          | 26       | S E26              |
| ○                 | IEC 5008a         | S 42               |                   | UNI EN 1501-1     | 09       | S E09              |                   | UNI EN 1501-1          | 27       | S E27              |
| ⊙                 | IEC 5010a         | S 67               |                   | UNI EN 1501-1     | 10a      | S E10a             |                   | UNI EN 1501-1          | 28       | S E28              |
| ⊕                 | IEC 5011a         | S 68               |                   | UNI EN 1501-1     | 10b      | S E10b             |                   | IEC 0004a<br>ISO 7000  | 29       | S E29              |
| ⚡                 | IEC 5036a         | S 72               |                   | UNI EN 1501-1     | 11       | S E11              |                   | IEC 0004a<br>ISO 7000  | 30       | S E30              |
| ⚠                 | ISO 0434          | S 73               |                   | UNI EN 1501-1     | 12       | S E12              |                   | UNI EN 1501-2          | 31       | S E31              |
|                   | IEC 5014a         | S 76               |                   | UNI EN 1501-1     | 13       | S E13              |                   | UNI EN 1501-2          | 32       | S E32              |
|                   | IEC 5012a         | S 78               |                   | UNI EN 1501-1     | 14       | S E14              |                   |                        |          | S E16M             |
| ⚠                 | ISO 0085          | S 38               |                   | UNI EN 1501-1     | 15       | S E15              |                   |                        |          | S E93M             |
| ⊙                 | IEC 5178a         | S 138              |                   | UNI EN 1501-1     | 16       | S E16              |                   |                        |          | S E98M             |
| ⊙                 | IEC 5638a         | S 144              |                   | UNI EN 1501-1     | 17       | S E17              |                   |                        |          | S E99M             |
|                   |                   |                    |                   | UNI EN 1501-1     | 18       | S E18              |                   |                        |          |                    |

# Accessori Ø22

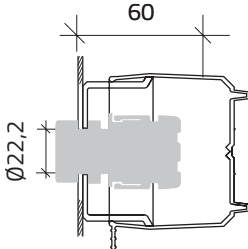
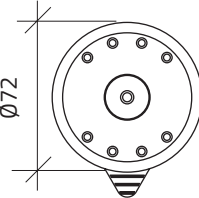
## Accessories Ø22

| Cappucci in gomma / Rubber caps                                                                                                                                                                                                   |     |   |         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---|---------|
|                                                                                                                                                                                                                                   | g   | n | cod     |
|   Silicone trasparente / Clear silicone                         |     |   |         |
|   Pulsanti con guardia / Guarded push-button                    | 3,5 | 5 | 020CS   |
|   Pulsanti con guardia metallica / Push-button with metal guard | 3,5 | 5 | 020CGS  |
|   Pulsanti sporgenti / Projecting push-button                 | 3,5 | 5 | 020CSGS |
|   Pulsanti doppi / Twin push-button                          | 3,5 | 5 | 020CGP2 |

### Soffietti di protezione per pulsanti a fungo Bellows for mushroom push-buttons

|                                                                                                       | g | n | cod      |
|-------------------------------------------------------------------------------------------------------|---|---|----------|
|  ● Nero / Black    | 3 | 5 | 020SGFN  |
|  ● Rosso / Red     | 3 | 5 | 020SGFR  |
|  ● Verde / Green   | 3 | 5 | 020SGFV  |
|  ● Giallo / Yellow | 3 | 5 | 020SGFG  |
|  ● Blu / Blue      | 3 | 5 | 020SGFBL |

### Cappucci di protezione contatti Protective caps for contacts

|                                                                                                                                                                                                                                                                                                                                                 | g  | cod      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------|
|     | 58 | 020CPC22 |

# Accessori Ø22

## Accessories Ø22

### Operatore potenziometrico / Potentiometer operator



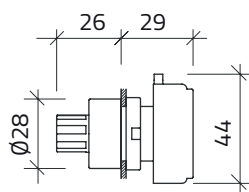
Per potenziometri con albero Ø6mm (non fornito)  
For potentiometers with Ø6mm shaft (not included)

g

cod

135

0200P



### Supporto operatore per guida DIN DIN rail mounting adapter for operator



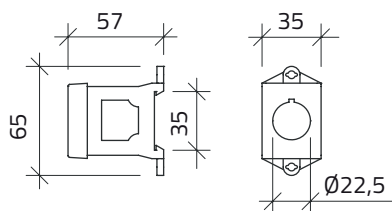
● RAL 7035

g

cod

16

02050GD



### Tappi di chiusura / Hole plugs



● RAL 7035

● Nero / Black

○ Trasparente / Clear

● RAL 7016

g

n

cod

5

10

020TTP

5

10

020TTPN

5

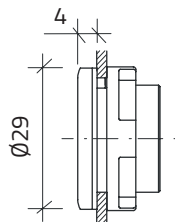
10

020TTPPT

5

10

020TTPGR

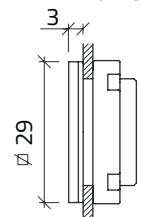


● Nero / Black

5

10

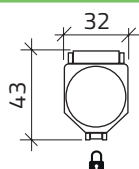
020QTPN



# Accessori Ø22

## Accessories Ø22

### Protezioni lucchettabili e piombabili Padlockable and sealable protective covers

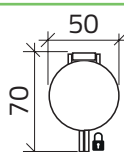
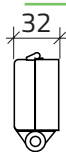


Piombabile / Sealable

g

cod

6

**020PTPP**

Lucchettabile / Padlockable

14

**020PTLO**

### Accessori di protezione / Protective guards



● RAL 7016

● Giallo/ Yellow

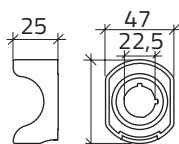
g

cod

16

**020PEO**

16

**020PEOG**

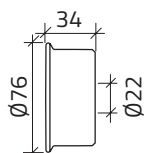
● RAL 7016

● Giallo/ Yellow

35

**020GP22**

35

**020GPG22**

# Accessori Ø22

## Accessories Ø22

### Accessori di protezione in termoplastica

### Thermoplastic protective guards

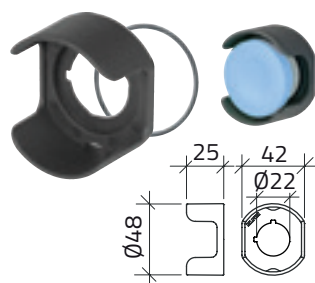


- RAL 7016
- Rosso / Red
- Verde / Green
- Giallo / Yellow
- Blu / Blue

g

cod

|    |          |
|----|----------|
| 13 | 020GPF   |
| 13 | 020GPFR  |
| 13 | 020GPFV  |
| 13 | 020GPFG  |
| 13 | 020GPFBL |



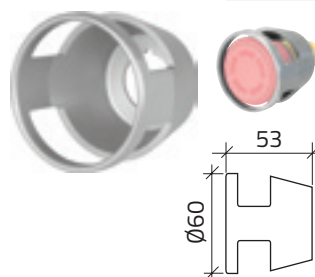
- RAL 7016

8

020GPF42

### Accessori di protezione in metallo

### Metal protective guards

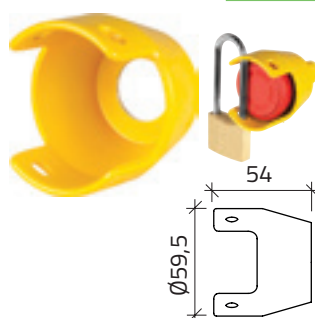


- Grigio / Grey

g

cod

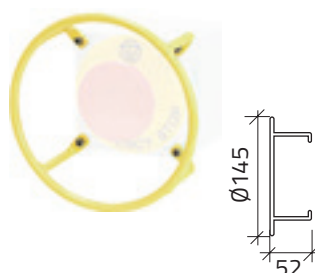
|     |        |
|-----|--------|
| 150 | 020GPE |
|-----|--------|



- Versione lucchettabile / Padlockable type
- Giallo / Yellow

63

020GPEL



- Giallo / Yellow

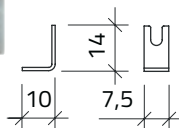
35

020SPE

# Accessori Ø22

## Accessories Ø22

### Terminali / Terminals



Collegamenti con elemento di comando e portalampada, compatibilità con spinotti  
1 x 6.3 / 2 x 2.8 mm tipo isolato / Connection with control element and lampholders  
1x6.3 / 2x2.8 mm pins, insulated type

Terminali Faston / Faston terminals

g

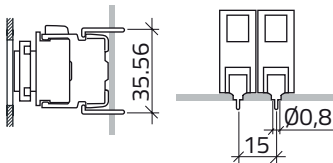
n

cod

35

10

020TF



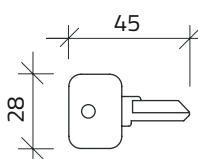
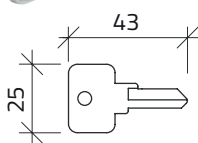
Terminali a saldare / Solder terminals

35

10

020TS

### Chiavi / Keys



g

c

n

cod

11

3095

2

010K95

11

3353

2

010K53

11

9901

2

010K01

11

9902

2

010K02

11

9903

2

010K03

11

9904

2

010K04

11

9905

2

010K05

11

9910

2

010K10

11

9916

2

010K16

11

9919

2

010K19

Versione secondo normativa FIAT / Version according to FIAT standards

● Nero / Black

11

73034

2

010K34

● Rosso / Red

11

73037

2

010K37

● Giallo / Yellow

11

73033

2

010K33

● Blu / Blue

11

73038

2

010K38

● Arancio / Orange

11

73040

2

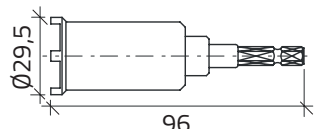
010K40



# Accessori Ø22

## Accessories Ø22

### Chavi di serraggio ghiera / Locking ring wrenches



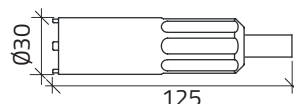
Chiave di serraggio acciaio, per avvitatore  $\frac{1}{4}$ "  
Steel locking ring wrench for screwdriver  $\frac{1}{4}$ "

g

100

cod

020CGA

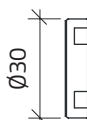


Chiave di serraggio plastica / Plastic locking ring wrench  
● Nero / Black

32

020CGN

### Ghiere di fissaggio operatori Locking rings for operators



Filettatura passo 2, metallo / Thread pitch 2, metal

g

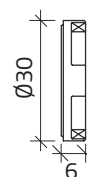
8

n

5

cod

020GF2



Per lampade spia e tappi / For pilot lights and plugs

Filettatura passo 2, plastica / Thread pitch 2, plastic

4

5

020GF2P



Per serie ghiera metallo e filo pannello / For metal bezel and flush-mount series

Filettatura passo 1, metallo / Thread pitch 1, metal

8

5

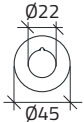
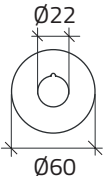
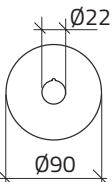
020GF

# Targhette Ø22

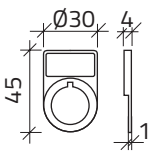
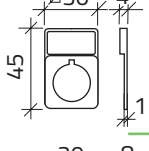
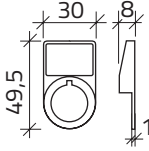
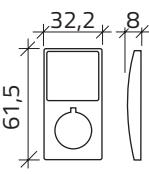
## Legend plates Ø22

### Targhette emergenza, secondo VDE 0113

#### Emergency stop legend plates, according to VDE 0113

|                                                                                                                                                                       |                     |     | g | cod     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----|---|---------|
|     | <b>Ø 45</b>         |     |   |         |
|                                                                                                                                                                       | Senza testo / Blank |     | 2 | 020D    |
|     | <b>Ø 60</b>         |     |   |         |
|                                                                                                                                                                       | Senza testo / Blank | 2   |   | 020D0   |
|                                                                                                                                                                       | ARRESTO EMERGENZA   | 2   |   | 020D21  |
|                                                                                                                                                                       | EMERGENCY STOP      | 2   |   | 020D23  |
|                                                                                                                                                                       | NOT-AUS             | 2   |   | 020D39  |
|                                                                                                                                                                       | ARRET D'URGENCE     | 2   |   | 020D36  |
|                                                                                                                                                                       | PARO EMERGENCIA     | 2   |   | 020D37  |
|                                                                                                                                                                       | NOOD UIT            | 2   |   | 020D91  |
|                                                                                                                                                                       | EMERGENCIA PARAGEM  | 2   |   | 020D95  |
|                                                                                                                                                                       | NOOD STOP           | 2   |   | 020D107 |
|                                                                                                                                                                       | NØD STOP            | 2   |   | 020D123 |
|   | <b>Ø 90</b>         |     |   |         |
|                                                                                                                                                                       | Senza testo / Blank | 5,3 |   | 020DD0  |
|                                                                                                                                                                       | ARRESTO EMERGENZA   | 5,3 |   | 020DD21 |
|                                                                                                                                                                       | EMERGENCY STOP      | 5,3 |   | 020DD23 |
|                                                                                                                                                                       | NOT-AUS             | 5,3 |   | 020DD39 |
|                                                                                                                                                                       | ARRET D'URGENCE     | 5,3 |   | 020DD36 |
|                                                                                                                                                                       | PARO EMERGENCIA     | 5,3 |   | 020DD37 |
|                                                                                                                                                                       | EMERGENCIA PARAGEM  | 5,3 |   | 020DD95 |

### Porta targhette / Legend plate holders

|                                                                                                                                                                         |                   |     | g  | n | cod       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----|----|---|-----------|
|   | <b>13x27</b>      |     |    |   |           |
|                                                                                                                                                                         | ● Nero / Black    | 2   | 10 |   | 020ST     |
|                                                                                                                                                                         | ● Giallo / Yellow | 2   | 10 |   | 020STG    |
|   | <b>13x27</b>      |     |    |   |           |
|                                                                                                                                                                         | ● Nero / Black    | 2   | 10 |   | 020SQ     |
|                                                                                                                                                                         | ● Giallo / Yellow | 2   | 10 |   | 020SQG    |
|   | <b>18x27</b>      |     |    |   |           |
|                                                                                                                                                                         | ● Nero / Black    | 2,5 | 10 |   | 020ST18   |
|                                                                                                                                                                         | ● Giallo / Yellow | 2,5 | 10 |   | 020ST18G  |
|   | <b>27x27</b>      |     |    |   |           |
|                                                                                                                                                                         | ● Nero / Black    | 3   | 10 |   | 020ST27N  |
|                                                                                                                                                                         | ● Giallo / Yellow | 3   | 10 |   | 020ST27G  |
|                                                                                                                                                                         | ● RAL 7016        | 3   | 10 |   | 020ST27GR |

# Targhette Ø22

## Legend plates Ø22

### Targhette adesive con diciture

#### Adhesive labels with texts



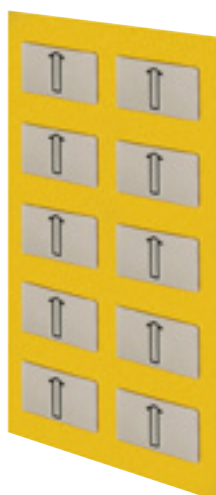
#### Dicitura / Texts

Quantità per confezione n° 10 / Pack quantity n° 10  
Colore alluminio, scritta nera / Silver colour, with black text

|                   |               |                   |               |                |                |
|-------------------|---------------|-------------------|---------------|----------------|----------------|
| Marcia            | <b>02001T</b> | Emergenza         | <b>02021T</b> | 1 0 2          | <b>02041T</b>  |
| Arresto           | <b>02002T</b> | Lavoro            | <b>02022T</b> | Reset          | <b>02055T</b>  |
| Avanti            | <b>02003T</b> | Stop              | <b>02023T</b> | Test           | <b>02056T</b>  |
| Indietro          | <b>02004T</b> | Arresto-Marcia    | <b>02024T</b> | Nood Uit       | <b>02091T</b>  |
| Salita            | <b>02005T</b> | Inser. Disinser.  | <b>02025T</b> | ON O Off       | <b>02092T</b>  |
| Discesa           | <b>02006T</b> | Start             | <b>02026T</b> | Manu O Auto    | <b>02093T</b>  |
| Destra            | <b>02007T</b> | Abbassa           | <b>02027T</b> | Danger         | <b>02094T</b>  |
| Sinistra          | <b>02008T</b> | Alza              | <b>02028T</b> | Order Spanning | <b>02095T</b>  |
| Apri              | <b>02009T</b> | Alt               | <b>02029T</b> | Sous Tension   | <b>02096T</b>  |
| Chiude            | <b>02010T</b> | Apri Chiude       | <b>02030T</b> | Hand O Auto    | <b>02097T</b>  |
| Lento             | <b>02011T</b> | Aut. Semiaut.     | <b>02031T</b> | Arret          | <b>02098T</b>  |
| Veloce            | <b>02012T</b> | Aut O Man         | <b>02032T</b> | Marche         | <b>02099T</b>  |
| Avviamento        | <b>02013T</b> | O 1               | <b>02033T</b> | Marcha         | <b>020100T</b> |
| Arresto Ciclo     | <b>02014T</b> | Tensione in linea | <b>02034T</b> | Arranque       | <b>020101T</b> |
| Ciclo Automatico  | <b>02016T</b> | Blocco            | <b>02035T</b> | Subir          | <b>020102T</b> |
| Ripristino Ciclo  | <b>02017T</b> | Arret d'Urgence   | <b>02036T</b> | Bajar          | <b>020103T</b> |
| Inserito          | <b>02018T</b> | Paro Emergencia   | <b>02037T</b> | Parada         | <b>020104T</b> |
| Corrente Inserita | <b>02019T</b> | Not Aus           | <b>02039T</b> |                |                |
| Disinserito       | <b>02020T</b> | O 1 2             | <b>02040T</b> |                |                |

### Targhette adesive con simboli

#### Adhesive labels with symbols



#### Simbolo / Symbol

Quantità per confezione n° 10 / Pack quantity n° 10  
Colore alluminio, scritta nera / Silver colour, with black symbol

|   |                |   |                |
|---|----------------|---|----------------|
| ↑ | <b>02046T</b>  | ○ | <b>02042T</b>  |
| → | <b>02047T</b>  | ◀ | <b>02076T</b>  |
| ✋ | <b>02048T</b>  | — | <b>02045T</b>  |
| Ⓣ | <b>02068T</b>  | Ⓢ | <b>02067T</b>  |
| ⚠ | <b>02038T</b>  | ⚡ | <b>02078T</b>  |
| ⚡ | <b>02043T</b>  | ⚡ | <b>020144T</b> |
| ⚡ | <b>02072T</b>  | ⚡ | <b>02073T</b>  |
| ⚡ | <b>020138T</b> |   |                |
| + | <b>02044T</b>  |   |                |

# Targhette Ø22

## Legend plates Ø22



### Rotoli etichette adesive in alluminio

### Aluminium adhesive labels rolls

|                          |                                     | g   | cod       |
|--------------------------|-------------------------------------|-----|-----------|
| 13x27 mm                 | rotolo da 1300 pz / roll of 1300 pc | 170 | 020RE     |
| 18x27 mm                 | rotolo da 1500 pz / roll of 1500 pc | 280 | 020RE18   |
| 27x27 mm                 | rotolo da 1300 pz / roll of 1300 pc | 240 | 020RE27   |
| 60x15 mm                 | rotolo da 1500 pz / roll of 1500 pc | 380 | 020RE615  |
| 60x40 mm                 | rotolo da 700 pz / roll of 700 pc   | 500 | 020RE640  |
| 60x60 mm                 | rotolo da 500 pz / roll of 500 pc   | 450 | 020RE660  |
| 60x60 mm foro / hole Ø22 | rotolo da 500 pz / roll of 500 pc   | 450 | 020RE660D |
| 60x80 mm                 | rotolo da 400 pz / roll of 400 pc   | 580 | 020RE680  |
| 60x110 mm                | rotolo da 300 pz / roll of 300 pc   | 580 | 020RE6110 |

### Etichette protettive adesive

### Adhesive protective labels

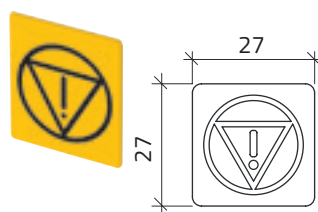


#### Pellicola trasparente / Protective film

|          | g | n  | cod     |
|----------|---|----|---------|
| 13x27 mm | 2 | 10 | 020PE   |
| 18x27 mm | 2 | 10 | 020PE18 |
| 27x27 mm | 2 | 10 | 020PE27 |

### Etichetta adesiva emergenza

### Adhesive emergency label



#### Targhetta adesiva / Adhesive label

|          | g   | cod       |
|----------|-----|-----------|
| 27x27 mm | 0,2 | 020144T27 |

# Targhette Ø22

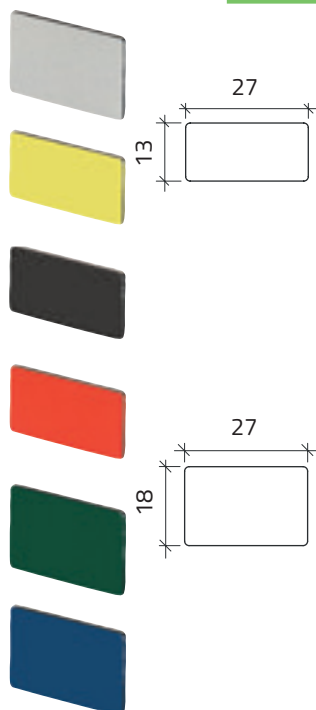
## Legend plates Ø22

### Etichette neutre adesive / Blank adhesive labels

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#### 13x27

Incisione meccanica / Mechanical engraving

|                                                  |     |    |                 |
|--------------------------------------------------|-----|----|-----------------|
| ● Silver-Incisione nera / Silver-Black engraving | 0,2 | 10 | <b>02000T</b>   |
| ○ Bianco-Incisione nera / White-Black engraving  | 0,2 | 10 | <b>02000TB</b>  |
| ● Giallo-Incisione nera / Yellow-Black engraving | 0,2 | 10 | <b>02000TG</b>  |
| ● Nero-Incisione bianca / Black-White engraving  | 0,2 | 10 | <b>02000TN</b>  |
| ● Rosso-Incisione bianca / Red-White engraving   | 0,2 | 10 | <b>02000TR</b>  |
| ● Verde-Incisione bianca / Green-White engraving | 0,2 | 10 | <b>02000TV</b>  |
| ● Blu-Incisione bianca / Blue-White engraving    | 0,2 | 10 | <b>02000TBL</b> |

#### 18x27

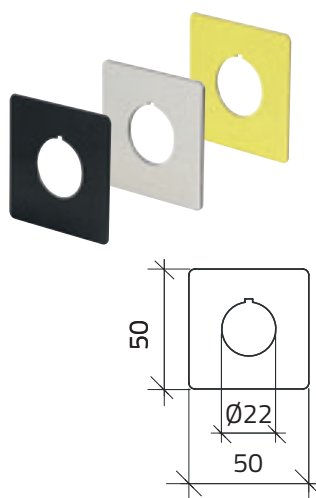
Incisione meccanica / Mechanical engraving

|                                                  |     |    |                   |
|--------------------------------------------------|-----|----|-------------------|
| ● Silver-Incisione nera / Silver-Black engraving | 0,2 | 10 | <b>02000T18</b>   |
| ○ Bianco-Incisione nera / White-Black engraving  | 0,2 | 10 | <b>02000TB18</b>  |
| ● Giallo-Incisione nera / Yellow-Black engraving | 0,2 | 10 | <b>02000TG18</b>  |
| ● Nero-Incisione bianca / Black-White engraving  | 0,2 | 10 | <b>02000TN18</b>  |
| ● Rosso-Incisione bianca / Red-White engraving   | 0,2 | 10 | <b>02000TR18</b>  |
| ● Verde-Incisione bianca / Green-White engraving | 0,2 | 10 | <b>02000TV18</b>  |
| ● Blu-Incisione bianca / Blue-White engraving    | 0,2 | 10 | <b>02000TBL18</b> |

### Etichette adesive Adhesive labels

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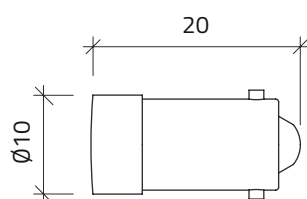
#### 50X50

|                                                  |     |                |
|--------------------------------------------------|-----|----------------|
| ● Silver-Incisione nera / Silver-Black engraving | 1,8 | <b>020T50</b>  |
| ● Giallo-Incisione nera / Yellow-Black engraving | 1,8 | <b>020T50G</b> |
| ● Nero-Incisione bianca / Black-White engraving  | 1,8 | <b>020T50N</b> |

# Lampadine

## Lamps

### BA9S Led luce fissa BA9S Steady light led lamps

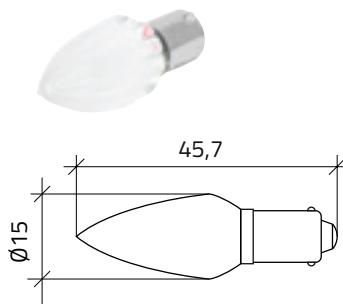


|                   | g | n | cod           |
|-------------------|---|---|---------------|
| <b>6V AC-DC</b>   |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR6    |
| ● Verde / Green   | 2 | 5 | 010BA9SLV6    |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG6    |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL6   |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB6    |
| <b>12V AC-DC</b>  |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR12   |
| ● Verde / Green   | 2 | 5 | 010BA9SLV12   |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG12   |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL12  |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB12   |
| <b>24V AC-DC</b>  |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR24   |
| ● Verde / Green   | 2 | 5 | 010BA9SLV24   |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG24   |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL24  |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB24   |
| <b>36V AC-DC</b>  |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR36   |
| ● Verde / Green   | 2 | 5 | 010BA9SLV36   |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG36   |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL36  |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB36   |
| <b>48V AC-DC</b>  |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR48   |
| ● Verde / Green   | 2 | 5 | 010BA9SLV48   |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG48   |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL48  |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB48   |
| <b>130V AC-DC</b> |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR110  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV110  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG110  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL110 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB110  |
| <b>240V AC-DC</b> |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR240  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV240  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG240  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL240 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB240  |
| <b>400V AC-DC</b> |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR400  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV400  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG400  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL400 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB400  |

# Lampadine

## Lamps

### BA9S Led luce fissa BA9S Steady light led lamps



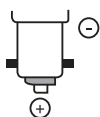
#### 24V AC-DC

|                   |   |              |
|-------------------|---|--------------|
| ● Rosso / Red     | 2 | 010BA9ALR24  |
| ● Verde / Green   | 2 | 010BA9ALV24  |
| ● Giallo / Yellow | 2 | 010BA9ALG24  |
| ● Blu / Blue      | 2 | 010BA9ALBL24 |
| ○ Bianco / White  | 2 | 010BA9ALB24  |

#### 240V AC-DC

|                   |   |               |
|-------------------|---|---------------|
| ● Rosso / Red     | 2 | 010BA9ALR220  |
| ● Verde / Green   | 2 | 010BA9ALV220  |
| ● Giallo / Yellow | 2 | 010BA9ALG220  |
| ● Blu / Blue      | 2 | 010BA9ALBL220 |
| ○ Bianco / White  | 2 | 010BA9ALB220  |

### Led <60V non polarizzati 110-240 V polarizzati Led lamps <60V non-polarized 110-240 V polarized



Led luce lampeggiante / Flashing light led

Led ultraluminoso tensioni  $\pm 15\%$  non polarizzata / Ultra-bright led, voltage  $\pm 15\%$  non-polarized  
AC-DC 6 12 24 48 110 AC 220 mA 30 20 14 7 5 16

#### 24V AC-DC

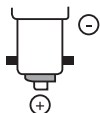
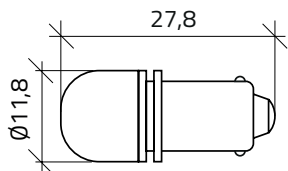
|               |   |              |
|---------------|---|--------------|
| ● Rosso / Red | 2 | 010BA9SLLR24 |
|---------------|---|--------------|

#### 130V AC-DC

|               |   |               |
|---------------|---|---------------|
| ● Rosso / Red | 2 | 010BA9SLLR110 |
|---------------|---|---------------|

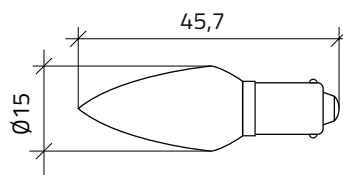
#### 240V AC-DC

|               |   |               |
|---------------|---|---------------|
| ● Rosso / Red | 2 | 010BA9SLLR220 |
|---------------|---|---------------|

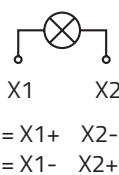


#### 24V AC-DC

|               |   |              |
|---------------|---|--------------|
| ● Rosso / Red | 2 | 010BA9ALLR24 |
|---------------|---|--------------|

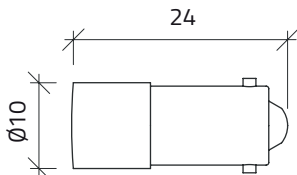


### Nuove lampade due colori , tecnologia led alta luminosità New bi-colour led lamps,high brightness



#### 24V DC 15mA

|                                   |   |               |
|-----------------------------------|---|---------------|
| 1 2                               |   |               |
| ● ● Verde, rosso / Green, red     | 2 | 010BA9SLVR24  |
| ● ● Verde, giallo / Green, yellow | 2 | 010BA9SLVG24  |
| ● ● Blu, rosso / Blue, red        | 2 | 010BA9SLBLR24 |
| ● ● Blu, giallo / Blue, yellow    | 2 | 010BA9SLBLG24 |





# Lampadine

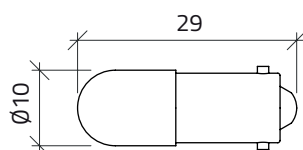
## Lamps

### BA9S Lampadine ad incandescenza BA9S Incandescent lamps

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#### Lampadine BA9S ad incandescenza / Incandescent bulbs BA9S

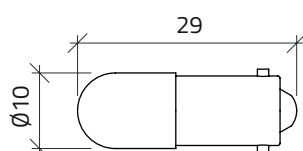
|      |       |     |    |                        |
|------|-------|-----|----|------------------------|
| 6V   | 0,6W  | 1,3 | 10 | <b>010BA9S6V-0.6W</b>  |
| 24V  | 1,2 w | 1,3 | 10 | <b>010BA9S24V-1.2W</b> |
| 24V  | 3W    | 1,3 | 10 | <b>010BA9S24V-3W</b>   |
| 30V  | 1,2W  | 1,3 | 10 | <b>010BA9S30V-1.2W</b> |
| 30V  | 3W    | 1,3 | 10 | <b>010BA9S30V-3W</b>   |
| 48V  | 1,2W  | 1,3 | 10 | <b>010BA9S48V-1.2W</b> |
| 60V  | 1,2 w | 1,3 | 10 | <b>010BA9S60V-1.2W</b> |
| 60V  | 3W    | 1,3 | 10 | <b>010BA9S60V-3W</b>   |
| 110V | 1,9W  | 1,3 | 10 | <b>010BA9S130V-1.9</b> |
| 220V | 2W    | 1,3 | 10 | <b>010BA9S220V-2W</b>  |

### BA9S Lampadine al neon / BA9S neon lamps

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#### Neon AC

|                    |      |       |     |    |                    |
|--------------------|------|-------|-----|----|--------------------|
| ● Arancio / Orange | 65V  | 0,05W | 2,3 | 10 | <b>010BA9SN65</b>  |
| ● Arancio / Orange | 130V | 0,1W  | 2,3 | 10 | <b>010BA9SN110</b> |
| ● Verde / Green    | 130V | 0,1W  | 2,3 | 10 | <b>010BA9NV110</b> |
| ● Arancio / Orange | 240V | 0,3W  | 2,3 | 10 | <b>010BA9SN220</b> |
| ● Verde / Green    | 240V | 0,3W  | 2,3 | 10 | <b>010BA9NV220</b> |
| ● Arancio / Orange | 400V | 0,5W  | 2,3 | 10 | <b>010BA9SN380</b> |
| ● Verde / Green    | 400V | 0,5W  | 2,3 | 10 | <b>010BA9NV380</b> |

# Stampante a trasferimento termico

## Thermal printer



Mod Toshiba B-EV4T-GS14 (200 dpi)  
Stampante / **Printer**

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**010ST-EV4T**

Nastro trasferimento termico 74m / **Thermal transfer ribbon,74m** 280

**010NR6374**

### Esempi di applicazione dell' etichetta

### Example of label application



Applicazione dell'etichetta / **Label application**



Applicazione della pellicola trasparente / **Application of protective film**

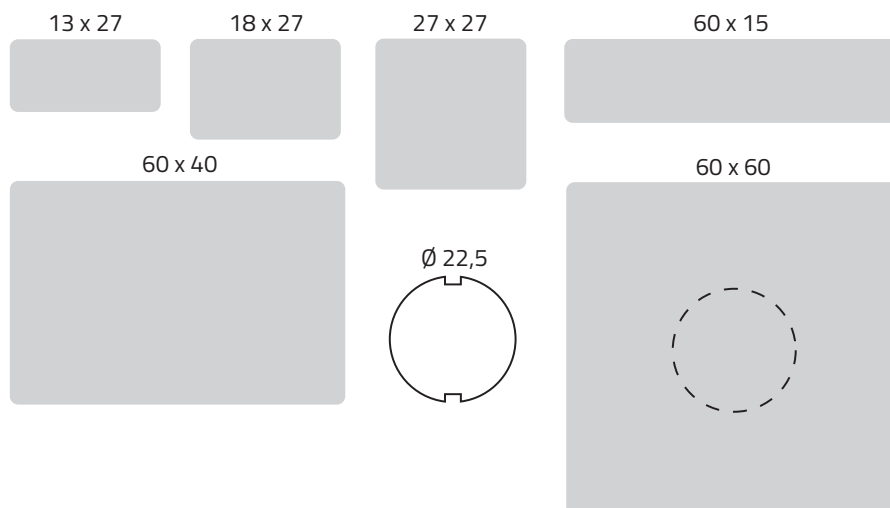


Applicazione su pannello / **Panel mounting**

Supporto / **Support**Pigmento / **Pigment**Protezione / **Protection**

### Dimensioni etichette

### Label dimensions





# 032

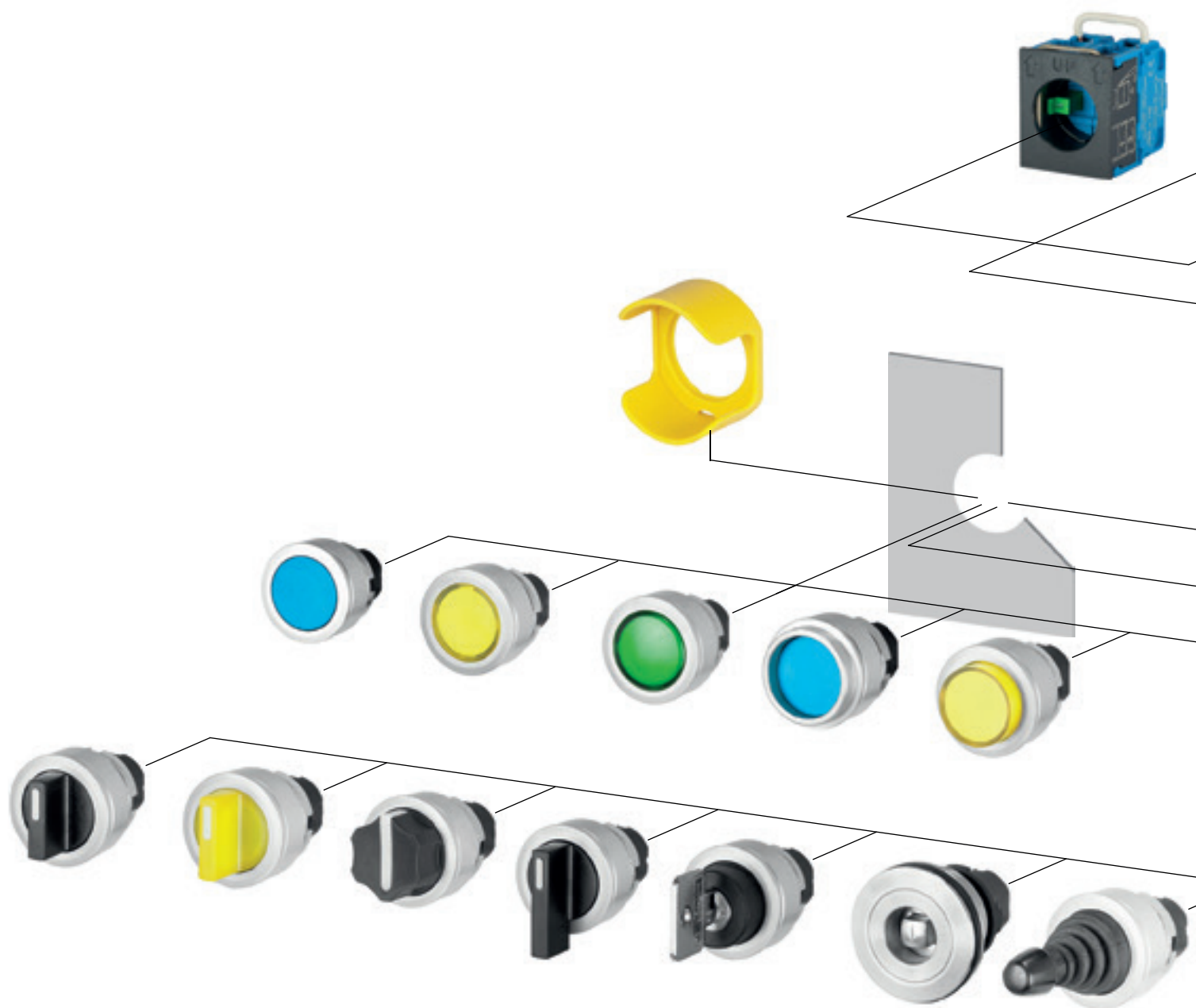
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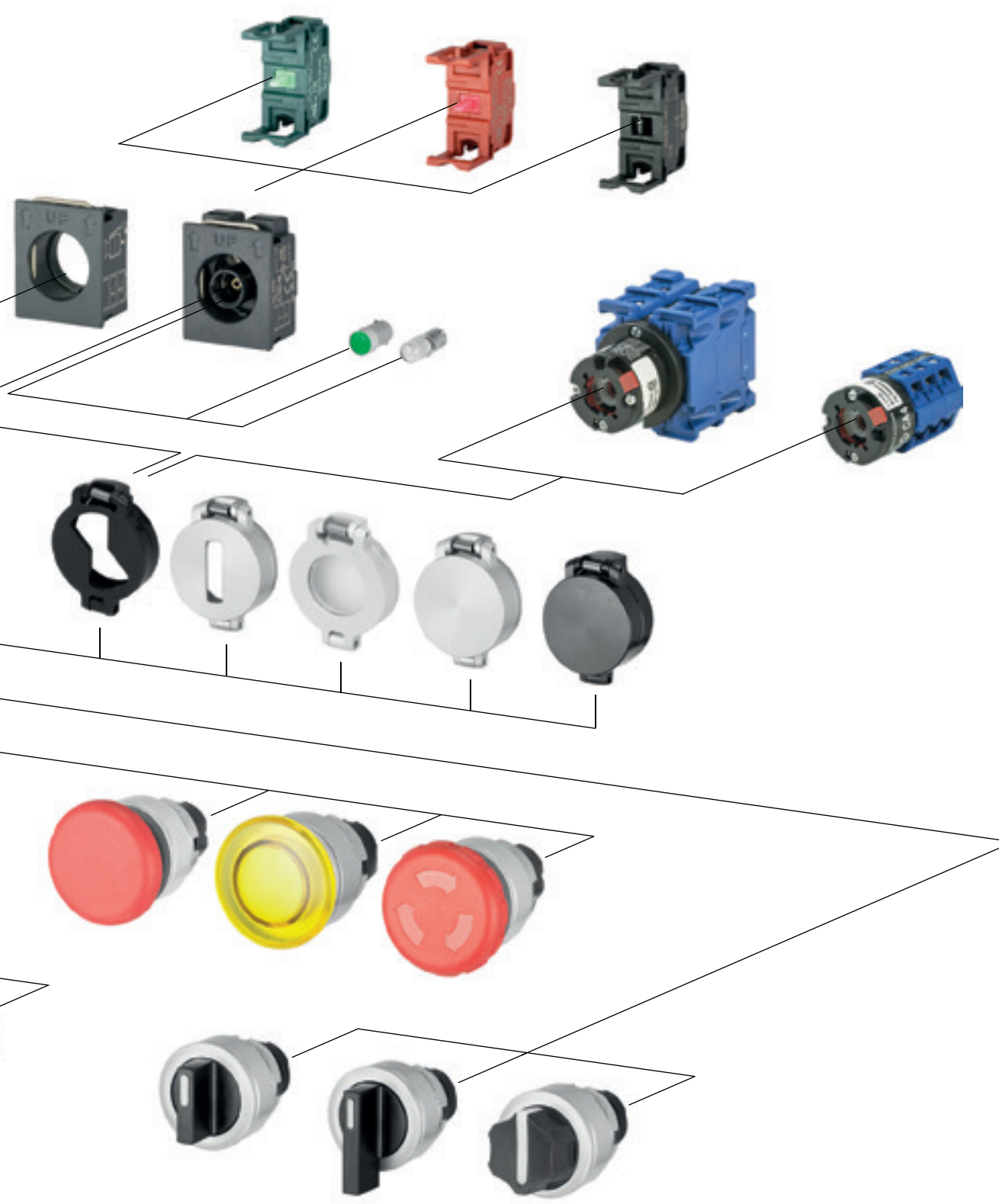
**COMANDO E SEGNALAZIONE  
FILO PANNELLO SM2 Ø30**

**COMMAND AND SIGNALLING  
FLUSH-MOUNT SM2 Ø30**

032







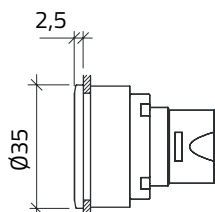
# Pulsanti normali Ø30

## Normal push-buttons Ø30

### Pulsanti normali / Normal push-buttons

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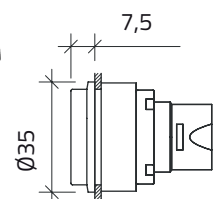


#### Pulsanti con guardia / Guarded push-buttons

|                   |    |          |
|-------------------|----|----------|
| ● Nero / Black    | 34 | 030PFIN  |
| ● Rosso / Red     | 34 | 030PFIR  |
| ● Verde / Green   | 34 | 030PFIV  |
| ● Giallo / Yellow | 34 | 030PFIG  |
| ● Blu / Blue      | 34 | 030PFIBL |
| ○ Bianco / White  | 34 | 030PFIB  |

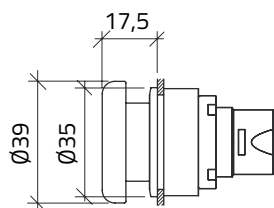
#### Stabili / Maintained

|                   |    |           |
|-------------------|----|-----------|
| ● Nero / Black    | 34 | 030PPFIN  |
| ● Rosso / Red     | 34 | 030PPFIR  |
| ● Verde / Green   | 34 | 030PPFIV  |
| ● Giallo / Yellow | 34 | 030PPFIG  |
| ● Blu / Blue      | 34 | 030PPFIBL |
| ○ Bianco / White  | 34 | 030PPFIB  |



#### Pulsanti con guardia estesa / Push-buttons with extended guard

|                   |    |           |
|-------------------|----|-----------|
| ● Nero / Black    | 37 | 030PFGN   |
| ● Rosso / Red     | 37 | 030PFGR   |
| ● Verde / Green   | 37 | 030PFGEV  |
| ● Giallo / Yellow | 37 | 030PFGEG  |
| ● Blu / Blue      | 37 | 030PFGEBL |
| ○ Bianco / White  | 37 | 030PFGEB  |



#### Pulsanti a fungo Ø40 / Mushroom push-buttons Ø40

|                   |    |           |
|-------------------|----|-----------|
| ● Nero / Black    | 48 | 030PFAFMN |
| ● Rosso / Red     | 48 | 030PFAFMR |
| ● Verde / Green   | 48 | 030PFAFMV |
| ● Giallo / Yellow | 48 | 030PFAFMG |



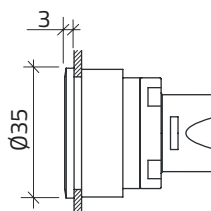
# Pulsanti luminosi Ø30

## Illuminated push-buttons Ø30

### Pulsanti luminosi / Illuminated push-buttons

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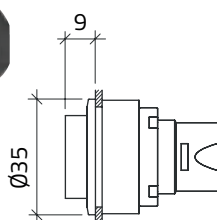


#### Pulsanti con guardia / Guarded push-buttons

|                   |    |                  |
|-------------------|----|------------------|
| ● Rosso / Red     | 34 | <b>030PFLIR</b>  |
| ● Verde / Green   | 34 | <b>030PFLIV</b>  |
| ● Giallo / Yellow | 34 | <b>030PFLIG</b>  |
| ● Blu / Blue      | 34 | <b>030PFLIBL</b> |
| ○ Bianco / White  | 34 | <b>030PFLIB</b>  |

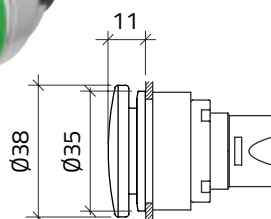
#### Stabili / Maintained

|                   |    |                   |
|-------------------|----|-------------------|
| ● Rosso / Red     | 34 | <b>030PPFLIR</b>  |
| ● Verde / Green   | 34 | <b>030PPFLIV</b>  |
| ● Giallo / Yellow | 34 | <b>030PPFLIG</b>  |
| ● Blu / Blue      | 34 | <b>030PPFLIBL</b> |
| ○ Bianco / White  | 34 | <b>030PPFLIB</b>  |



#### Pulsanti sporgenti / Projecting push-buttons

|                   |    |                  |
|-------------------|----|------------------|
| ● Rosso / Red     | 34 | <b>030PFLSR</b>  |
| ● Verde / Green   | 34 | <b>030PFLSV</b>  |
| ● Giallo / Yellow | 34 | <b>030PFLSG</b>  |
| ● Blu / Blue      | 34 | <b>030PFLSBL</b> |
| ○ Bianco / White  | 34 | <b>030PFLSB</b>  |



#### Pulsanti a fungo Ø38 / Mushroom push-buttons Ø38

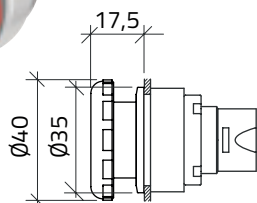
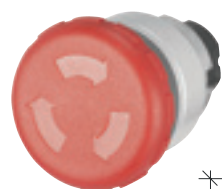
|                   |    |                  |
|-------------------|----|------------------|
| ● Rosso / Red     | 38 | <b>030PFAFLR</b> |
| ● Verde / Green   | 38 | <b>030PFAFLV</b> |
| ● Giallo / Yellow | 38 | <b>030PFAFLG</b> |

# Pulsanti di emergenza Ø30

## Emergency stop push-buttons Ø30

### Pulsanti di emergenza a fungo Ø40

### Emergency stop mushroom push-buttons Ø40



#### Aggancio rapido (sgancio rotazione)

#### Fast latching (rotation release)

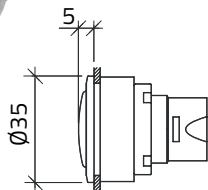
|                |    |                 |
|----------------|----|-----------------|
| ● Nero / Black | 49 | <b>030PFAAN</b> |
| ● Rosso / Red  | 49 | <b>030PFAAR</b> |

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# Lampade spia Ø30

## Pilot lights Ø30



### Lampade spia / Pilot lights

|                   | g  | cod      |
|-------------------|----|----------|
| ● Rosso / Red     | 33 | 030LFIR  |
| ● Verde / Green   | 33 | 030LFIV  |
| ● Giallo / Yellow | 33 | 030LFIG  |
| ● Blu / Blue      | 33 | 030LFIBL |
| ○ Bianco / White  | 33 | 030LFIB  |

# Selettori a manopola Ø30

## Knob selector switches Ø30

Cercare la combinazione di schemi a pag. 16 / See diagram combination on page 16



### 2 posizioni / 2 positions

#### CAM A



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030SFMAN

#### CAM B



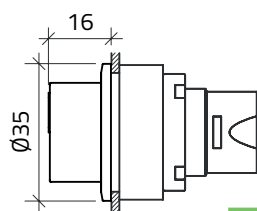
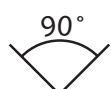
39

030SFMBN



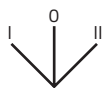
39

030SFMBND



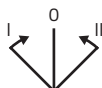
### 3 posizioni / 3 positions

#### CAM O



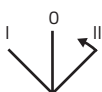
39

030SFMON



39

030SFMONC



39

030SFMOND

# Selettori luminosi a manopola Ø30

## Illuminated selector switches Ø30

Cercare la combinazione di schemi a pag. 16 / See diagram combination on page 16

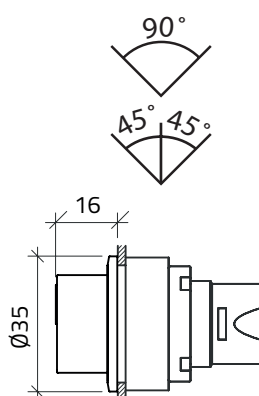
**CAM A**

- Bianco / White
- Rosso / Red
- Verde / Green
- Giallo / Yellow
- Blu / Blue

g

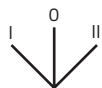
cod

|    |                   |
|----|-------------------|
| 36 | <b>030SFMLAB</b>  |
| 36 | <b>030SFMLAR</b>  |
| 36 | <b>030SFMLAV</b>  |
| 36 | <b>030SFMLAG</b>  |
| 36 | <b>030SFMLABL</b> |

**3 posizioni / 3 positions**

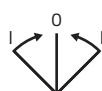
g

cod

**CAM O**

- Bianco / White
- Rosso / Red
- Verde / Green
- Giallo / Yellow
- Blu / Blue

|    |                   |
|----|-------------------|
| 36 | <b>030SFML0B</b>  |
| 36 | <b>030SFML0R</b>  |
| 36 | <b>030SFML0V</b>  |
| 36 | <b>030SFML0G</b>  |
| 36 | <b>030SFML0BL</b> |

**CAM O**

- Bianco / White
- Rosso / Red
- Verde / Green
- Giallo / Yellow
- Blu / Blue

|    |                    |
|----|--------------------|
| 36 | <b>030SFML0BC</b>  |
| 36 | <b>030SFML0RC</b>  |
| 36 | <b>030SFML0VC</b>  |
| 36 | <b>030SFML0GC</b>  |
| 36 | <b>030SFML0BLC</b> |

# Selettori luminosi a manopola Ø30

## Illuminated knob selector switches Ø30

Cercare la combinazione di schemi a pag. 16 / See diagram combination on page 16

## 2 posizioni / 2 positions

**CAM A**

○ Bianco / White

36

**030SFPLAB**

● Rosso / Red

36

**030SFPLAR**

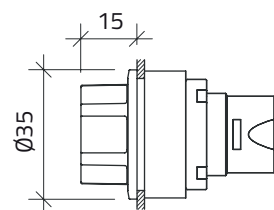
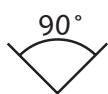
● Verde / Green

36

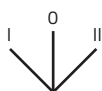
**030SFPLAV**

● Giallo / Yellow

36

**030SFPLAG**

## 3 posizioni / 3 positions

**CAM O**

○ Bianco / White

36

**030SFPL0B**

● Rosso / Red

36

**030SFPL0R**

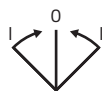
● Verde / Green

36

**030SFPL0V**

● Giallo / Yellow

36

**030SFPL0G****CAM O**

○ Bianco / White

36

**030SFPL0BC**

● Rosso / Red

36

**030SFPL0RC**

● Verde / Green

36

**030SFPL0VC**

● Giallo / Yellow

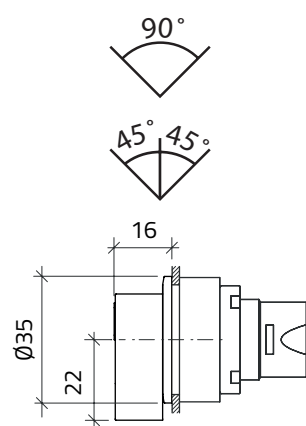
36

**030SFPL0GC**

# Selettori a leva Ø30

## Lever selector switches Ø30

Cercare la combinazione di schemi a pag. 16 / See diagram combination on page 16



### 2 posizioni / 2 positions



CAM A

g

cod

39

030SFLAN

CAM B



39

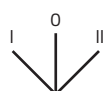
030SFLBN



39

030SFLBND

### 3 posizioni / 3 positions



CAM O

g

cod

39

030SFLON



# Commutatore rotativo 10A Ø30

## Rotary selector switches Ø30



**Commutatore rotativo a leva corta**  
**Short lever rotary selector switch**

Schema 401 / Diagram 401

g

59

cod

**030SFMNSC401**



**Commutatore rotativo a leva lunga**  
**Long lever rotary selector switch**

Schema 401 / Diagram 401

g

59

cod

**030SFLNSC401**



**Commutatore rotativo a manopola**  
**Knob rotary selector switch**

Schema 401 / Diagram 401

g

59

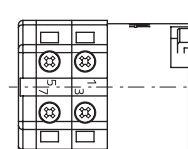
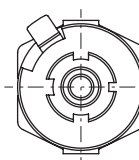
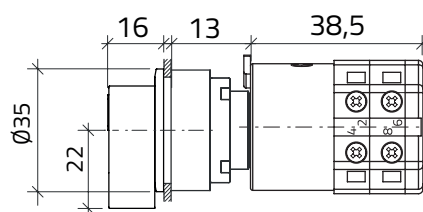
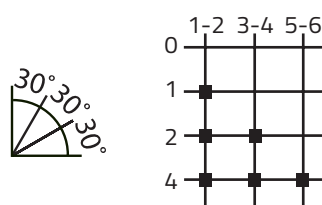
cod

**030SFPNSC401**

### ESEMPIO SCHEMA 401

### EXAMPLE DIAGRAM 401

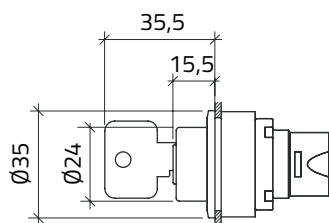
Per altri schemi consultare il nostro ufficio commerciale / For further diagram contact our commercial office



# Selettori a chiave Ø30

## Key selector switches Ø30

Cercare la combinazione di schemi a pag. 16 / See diagram combination on page 16



### 2 posizioni / 2 positions

| g            | k | cod             | k | cod             |
|--------------|---|-----------------|---|-----------------|
| <b>CAM A</b> |   |                 |   |                 |
| 82           |   | <b>030SFCA</b>  |   | <b>030SFCA2</b> |
| 82           |   | <b>030SFCA4</b> |   |                 |
| <b>CAM B</b> |   |                 |   |                 |
| 82           |   | <b>030SFCB</b>  |   | <b>030SFCB2</b> |
| 82           |   | <b>030SFCBD</b> |   |                 |

### 3 posizioni / 3 positions

| g            | k | cod             | k | cod             |
|--------------|---|-----------------|---|-----------------|
| <b>CAM O</b> |   |                 |   |                 |
| 82           |   | <b>030SFCO</b>  |   | <b>030SFCO2</b> |
| 82           |   | <b>030SFCO3</b> |   | <b>030SFCO4</b> |
| 82           |   | <b>030SFCOC</b> |   |                 |
| 82           |   | <b>030SFCOD</b> |   |                 |

### Chiavi speciali Special key



| c                                                                                                                                                                           | suf              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Chiave standard 3095, per chiavi speciali far seguire al codice del selettore il suffisso<br>Standard key 3095, for special keys complete the selector code with the suffix |                  |
| ● Nero / Black                                                                                                                                                              | 73034 <b>K34</b> |
| ● Rosso / Red                                                                                                                                                               | 73037 <b>K37</b> |
| ● Giallo / Yellow                                                                                                                                                           | 73033 <b>K33</b> |
| ● Blu / Blue                                                                                                                                                                | 73038 <b>K38</b> |
| ● Arancio / Orange                                                                                                                                                          | 73040 <b>K40</b> |
|                                                                                                                                                                             | 3353 <b>K53</b>  |
|                                                                                                                                                                             | 9901 <b>K01</b>  |
|                                                                                                                                                                             | 9902 <b>K02</b>  |
|                                                                                                                                                                             | 9903 <b>K03</b>  |
|                                                                                                                                                                             | 9904 <b>K04</b>  |
|                                                                                                                                                                             | 9905 <b>K05</b>  |
|                                                                                                                                                                             | 9910 <b>K10</b>  |
|                                                                                                                                                                             | 9916 <b>K16</b>  |
|                                                                                                                                                                             | 9919 <b>K19</b>  |



# Selettori a chiave quadra Ø30

## Square key selector switches Ø30

Cercare la combinazione di schemi a pag. 16 / See diagram combination on page 16

2 posizioni / 2 positions

g

cod



CAM B

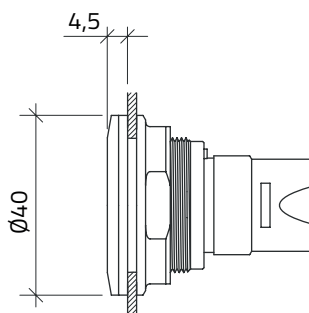
200

030SFCQB



39

030SFCQBD



# Combinazione di schemi Ø30

## Diagram combination Ø30

|  |              |  | Schema<br>Diagram |  | Contatti flangianti<br>Flanged contacts |
|--|--------------|--|-------------------|--|-----------------------------------------|
|  | <b>CAM A</b> |  |                   |  | 020G<br>020E10                          |
|  | <b>CAM A</b> |  |                   |  | 020G<br>020E10<br>020E01                |
|  | <b>CAM B</b> |  |                   |  | 020G<br>020E10<br>020E01                |
|  | <b>CAM O</b> |  |                   |  | 020G<br>020E10<br>020E10                |

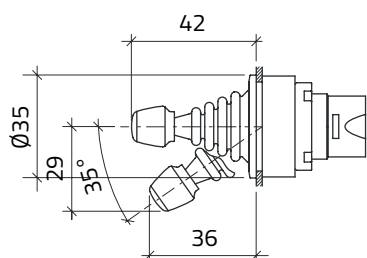
# Manipolatori Ø30

## Joysticks Ø30

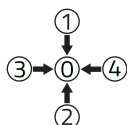
### 2 posizioni / 2 positions



|     |                        | g  | cod            |
|-----|------------------------|----|----------------|
| 1-2 | permanenti/maintained  | 40 | <b>030MF2P</b> |
| 1-2 | temporanee/spring back | 40 | <b>030MF2T</b> |



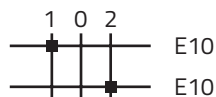
### 4 posizioni / 4 positions



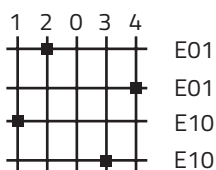
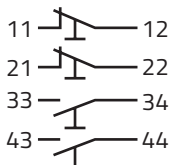
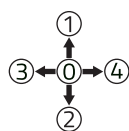
|         |                        | g  | cod            |
|---------|------------------------|----|----------------|
| 1-2-3-4 | permanenti/maintained  | 40 | <b>030MF4P</b> |
| 1-2-3-4 | temporanee/spring back | 40 | <b>030MF4T</b> |

### Schema Diagram

### Contatti flangianti Flanged contacts



020G  
020E10  
020E10



020G  
020E01  
020E01  
020E10  
020E10

# Accessori Ø30

## Accessories Ø30

### Protezioni in alluminio piombabili Sealable aluminum covers



|  |                                                                   | g  | cod                 |
|--|-------------------------------------------------------------------|----|---------------------|
|  | <b>Per pulsanti / For push-buttons</b>                            |    |                     |
|  | Alluminio / Aluminium                                             | 12 | <b>030PFPLPA</b>    |
|  | <b>Per pulsanti / For push-buttons</b>                            |    |                     |
|  | Alluminio / Aluminium                                             | 15 | <b>030PFPPA</b>     |
|  | ● Nero / Black                                                    | 15 | <b>030PFPP</b>      |
|  | <b>Per pulsanti sporgenti / For projecting push-buttons</b>       |    |                     |
|  | Alluminio / Aluminium                                             | 19 | <b>030PFPSPA</b>    |
|  | ● Nero / Black                                                    | 19 | <b>030PFPS</b>      |
|  | <b>Per selettori con blocco / For selector switches with lock</b> |    |                     |
|  | Alluminio / Aluminium                                             | 14 | <b>030PFPSBA</b>    |
|  | ● Nero / Black                                                    | 14 | <b>030PFPSB</b>     |
|  | Per abilitazione selettore a DX / For selector enable to RH       |    |                     |
|  | ● Nero / Black                                                    | 12 | <b>030PFPS2P-0D</b> |
|  | Per abilitazione selettore a SX / For selector enable to SH       |    |                     |
|  | ● Nero / Black                                                    | 12 | <b>030PFPS2P-S0</b> |
|  | <b>Ghiere di protezione pulsanti a fungo</b>                      |    |                     |
|  | ● Grigio / Grey                                                   |    | <b>030GPF42</b>     |
|  | ● Giallo / Yellow                                                 |    | <b>030GPF42G</b>    |

# Portalampada BA9S

## Lampholders BA9S

### Portalampada / Lampholders

g

n

cod



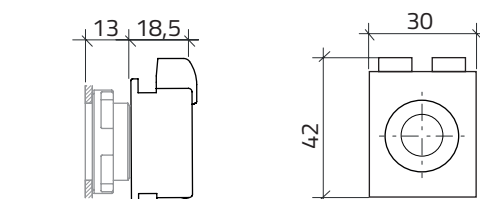
#### Alimentazione diretta / Direct supply

IEC: BA9S 380V. max 2W esclusa / excluded  
Valori certificati IMQ / IMQ certified values  
UL - CSA: BA9S 250V. max 2W esclusa / excluded

16

10

020PD9



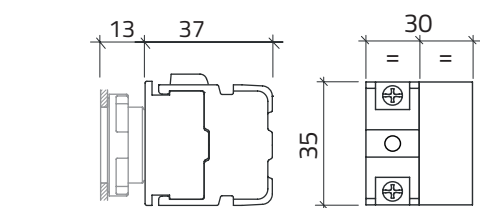
#### Alimentazione diretta / Direct supply

IEC: BA9S 380V. max 2W esclusa / excluded  
Valori certificati IMQ / IMQ certified values  
UL - CSA: BA9S 250V. max 2W esclusa / excluded  
1 NO Aperto / Open

26

5

020PD910



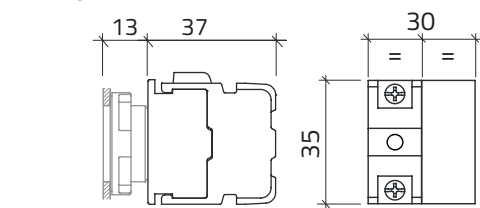
#### Alimentazione diretta / Direct supply

IEC: BA9S 380V. max 2W esclusa / excluded  
Valori certificati IMQ / IMQ certified values  
UL - CSA: BA9S 250V. max 2W esclusa / excluded  
1 NC Chiuso / Closed

26

5

020PD901



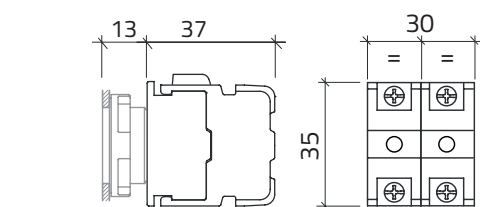
#### Alimentazione diretta / Direct supply

IEC: BA9S 380V. max 2W esclusa / excluded  
Valori certificati IMQ / IMQ certified values  
UL - CSA: BA9S 250V. max 2W esclusa / excluded  
1 NO Aperto / Open  
1 NC Chiuso / Closed

26

5

020PD911





# Portalamпада BA9S

## Lampholders BA9S

### Portalamпада / Lampholders

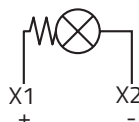
g

cod

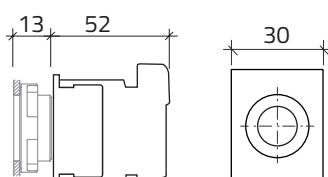


#### Resistore per led 48V Resistor for 48V led

Solo per impiego con unità luminose / Only for illuminated lens  
Abbinare led a luce fissa 48V del colore desiderato (p.23) / Fit 48V steady light led in the desired colour (page 23)

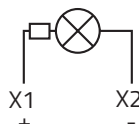


|                                              |    |          |
|----------------------------------------------|----|----------|
| 110÷125V. BA9SL 48V. 16mA esclusa / excluded | 16 | 020PR19L |
| 220÷240V. BA9SL 48V. 16mA esclusa / excluded | 16 | 020PR29L |

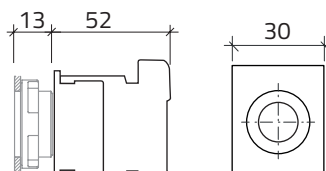


#### Lampeggiante alimentazione diretta / Flashing, direct supply

Solo per impiego con unità luminose / For illuminated lens only

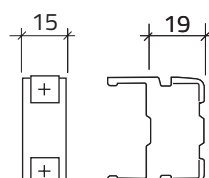
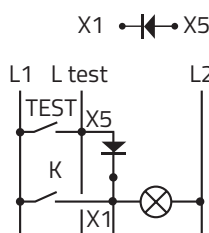


|                                                  |    |        |
|--------------------------------------------------|----|--------|
| 6-24V max 125 mA lampada esclusa / lamp excluded | 16 | 020PL9 |
|--------------------------------------------------|----|--------|



#### Elemento prova lampada / Lamp test module

Per controllo di funzionamento lampade  
Checking lamps for good operation



16

020ET

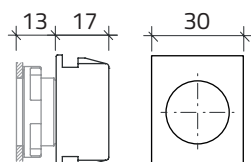
# Elementi di contatto

## Contact blocks

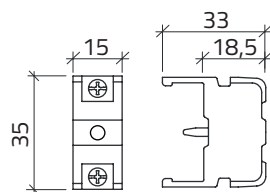
### Elementi di contatto / Contact blocks

| g | n  | cod  |
|---|----|------|
| 8 | 10 | 020G |

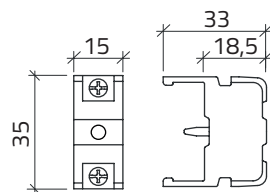
#### Flangia per contatti / Flange for contacts



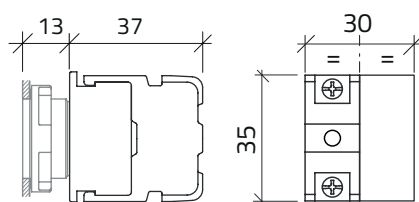
|       |                                                                                                                                                                                              |    |    |          |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----------|
| 3 — 4 | 1 NO                                                                                                                                                                                         | 10 | 10 | 020E10   |
| 3 — 4 | 1 NO Chiusura anticipata / 1 NO Early make                                                                                                                                                   | 10 | 5  | 020E10A  |
| 3 — 4 | 1 NO<br>Contatti dorati e viti terminali inox. Idoneo per ambienti con fenomeni di corrosione<br>Gold-plated contacts and stainless steel terminal screws suitable for corrosive environment | 10 | 5  | 020E10AU |



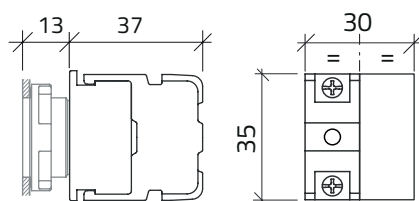
|       |                                                                                                                                                                                              |    |    |          |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----------|
| 1 — 2 | 1 NC                                                                                                                                                                                         | 10 | 10 | 020E01   |
| 1 — 2 | 1 NC Apertura ritardata / 1 NC Late break                                                                                                                                                    | 10 | 5  | 020E01R  |
| 1 — 2 | 1 NC<br>Contatti dorati e viti terminali inox. Idoneo per ambienti con fenomeni di corrosione<br>Gold-plated contacts and stainless steel terminal screws suitable for corrosive environment | 10 | 5  | 020E01AU |



|         |                                    |    |   |         |
|---------|------------------------------------|----|---|---------|
| 13 — 14 | 1 NO con flangia / 1NO with flange | 19 | 5 | 020GE10 |
|---------|------------------------------------|----|---|---------|



|         |                                    |    |   |         |
|---------|------------------------------------|----|---|---------|
| 21 — 22 | 1 NC con flangia / 1NC with flange | 19 | 5 | 020GE01 |
|---------|------------------------------------|----|---|---------|



# Elementi di contatto

## Contact blocks

### Elementi di contatto / Contact blocks



- 13 — 14 1 NO con flangia / 1NO with flange  
21 — 22 1 NC con flangia / 1NC with flange

g

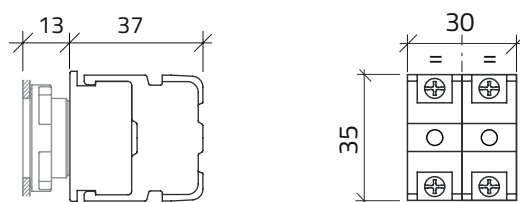
n

cod

19

5

020GE11

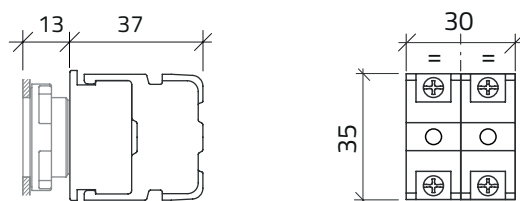


- 13 — 14 1 NO con flangia / 1NO with flange  
23 — 24 1 NO con flangia / 1NO with flange

19

5

020GE20

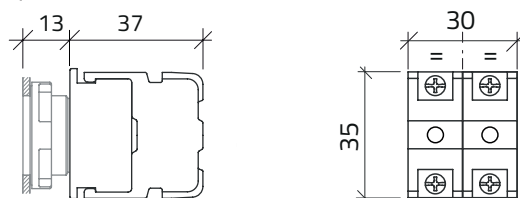


- 11 — 12 1 NC con flangia / 1NC with flange  
21 — 22 1 NC con flangia / 1NC with flange

19

5

020GE02

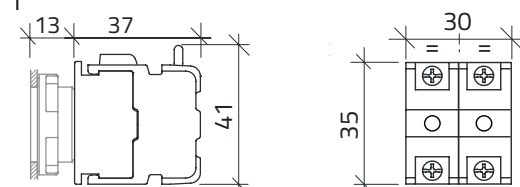


- 11 — 24 Elemento di contatto con automonitoraggio  
Contact block with self-monitoring

19

5

020GE01S

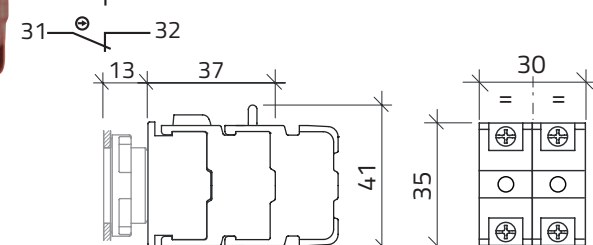


- 11 — 24 Elemento di contatto con automonitoraggio  
Contact block with self-monitoring

19

5

020GE02S



# Lampadine

## Lamps

### BA9S Led luce fissa BA9SLed fixed light

g n cod

#### 6V AC-DC

|                   |   |   |             |
|-------------------|---|---|-------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR6  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG6  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV6  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL6 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB6  |

#### 12V AC-DC

|                   |   |   |              |
|-------------------|---|---|--------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR12  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG12  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV12  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL12 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB12  |

#### 24V AC-DC

|                   |   |   |              |
|-------------------|---|---|--------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR24  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG24  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV24  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL24 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB24  |

#### 36V AC-DC

|                   |   |   |              |
|-------------------|---|---|--------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR36  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG36  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV36  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL36 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB36  |

#### 48V AC-DC

|                   |   |   |              |
|-------------------|---|---|--------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR48  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG48  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV48  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL48 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB48  |

#### 130V AC-DC

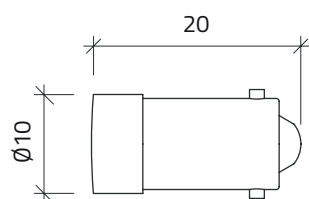
|                   |   |   |               |
|-------------------|---|---|---------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR110  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG110  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV110  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL110 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB110  |

#### 240V AC-DC

|                   |   |   |               |
|-------------------|---|---|---------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR240  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG240  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV240  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL240 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB240  |

#### 400V AC-DC

|                   |   |   |               |
|-------------------|---|---|---------------|
| ● Rosso / Red     | 2 | 5 | 010BA9SLR400  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG400  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV400  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL400 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB400  |

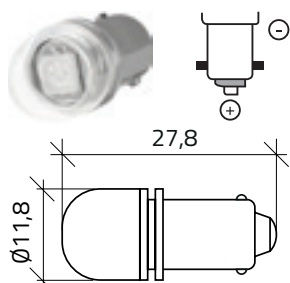


# Lampadine

## Lamps

### Led <60V non polarizzati 110-240 V polarizzati

### Led lamps <60V non polarized 110-240 V polarized



Led luce lampeggiante / Flashing light led

Led ultraluminoso tensioni  $\pm 15\%$  non polarizzata / Ultra-bright led voltages  $\pm 15\%$  non polarized

AC-DC 6 12 24 48 110 AC 220

g

cod

**24V AC-DC**

● Rosso / Red

2

**010BA9SLLR24****130V AC-DC**

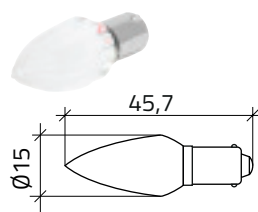
● Rosso / Red

2

**010BA9SLLR110****240V AC-DC**

● Rosso / Red

2

**010BA9SLLR220****24V AC-DC**

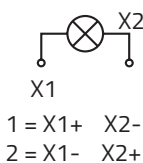
● Rosso / Red

2

**010BA9ALLR24**

### Nuove lampade due colori , tecnologia led alta luminosità

### New bi-colour led lamps, high brightness

**24V DC 15mA**

1 2

● ● Verde, rosso / Green, red

2

**010BA9SLVR24**

● ● Verde, giallo / Green, yellow

2

**010BA9SLVG24**

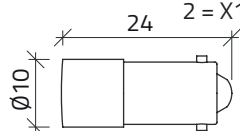
● ● Blu, rosso / Blue, red

2

**010BA9SLBLR24**

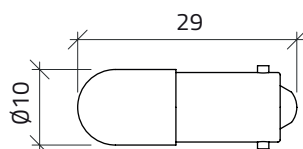
● ● Blu, giallo / Blue, yellow

2

**010BA9SLBLG24**

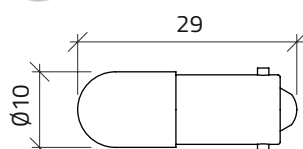
### BA9S lampadine ad incandescenza

### BA9S Incandescent lamps



|      |       | g   | n  | cod                    |
|------|-------|-----|----|------------------------|
| 6V   | 0,6W  | 1,3 | 10 | <b>010BA9S6V-0.6W</b>  |
| 24V  | 1,2 w | 1,3 | 10 | <b>010BA9S24V-1.2W</b> |
| 24V  | 3W    | 1,3 | 10 | <b>010BA9S24V-3W</b>   |
| 30V  | 1,2W  | 1,3 | 10 | <b>010BA9S30V-1.2W</b> |
| 30V  | 3W    | 1,3 | 10 | <b>010BA9S30V-3W</b>   |
| 48V  | 1,2W  | 1,3 | 10 | <b>010BA9S48V-1.2W</b> |
| 60V  | 1,2 w | 1,3 | 10 | <b>010BA9S60V-1.2W</b> |
| 60V  | 3W    | 1,3 | 10 | <b>010BA9S60V-3W</b>   |
| 110V | 1,9W  | 1,3 | 10 | <b>010BA9S130V-1.9</b> |
| 220V | 2W    | 1,3 | 10 | <b>010BA9S220V-2W</b>  |

### BA9S Lampadine al neon / BA9S neon lamps

**Neon AC**

● Arancio / Orange

65V 0,05W

2,3

10

**010BA9SN65**

● Arancio / Orange

130V 0,1W

2,3

10

**010BA9SN110**

● Verde / Green

130V 0,1W

2,3

10

**010BA9NV110**

● Arancio / Orange

240V 0,3W

2,3

10

**010BA9SN220**

● Verde / Green

240V 0,3W

2,3

10

**010BA9NV220**

● Arancio / Orange

400V 0,5W

2,3

10

**010BA9SN380**

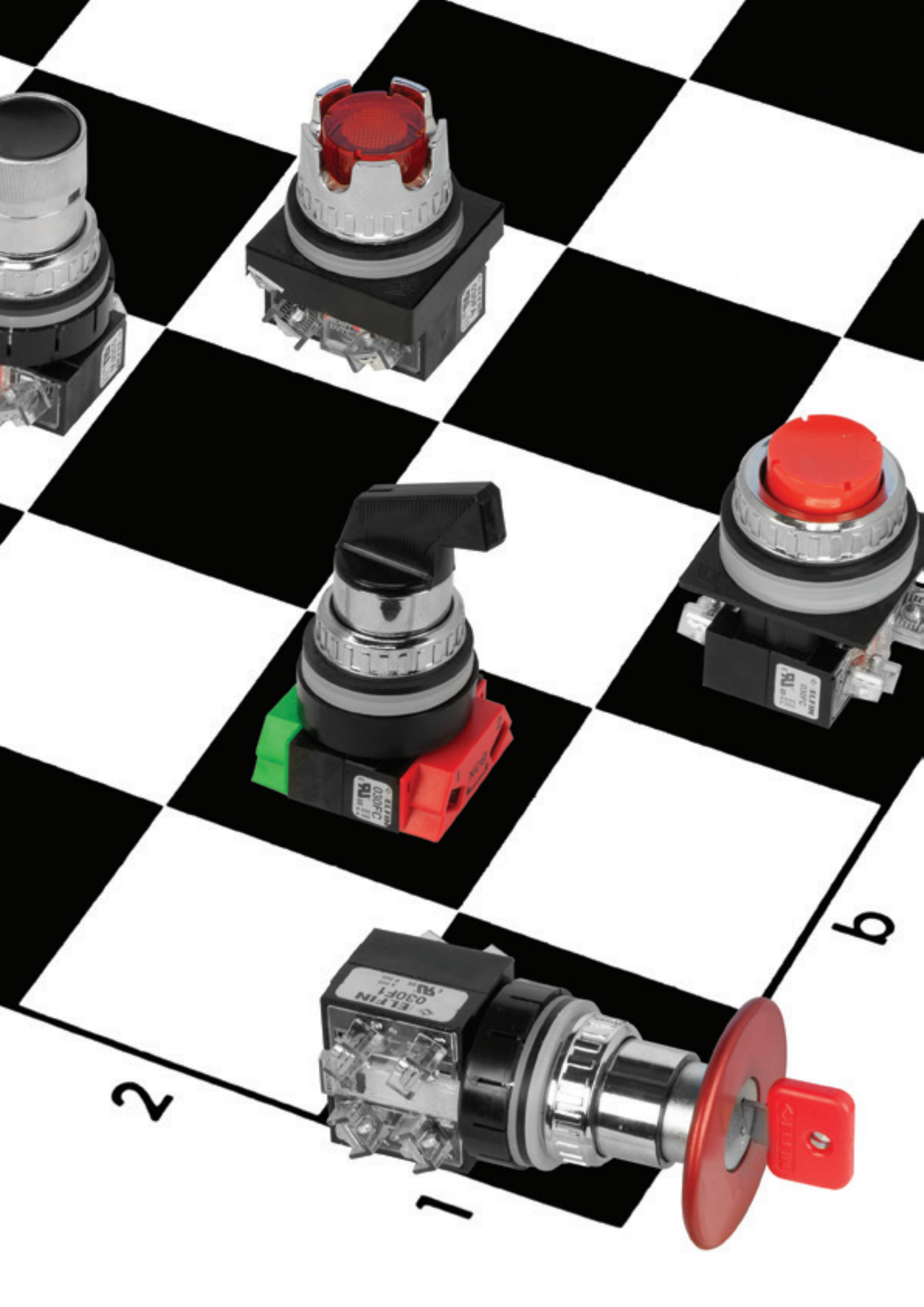
● Verde / Green

400V 0,5W

2,3

10

**010BA9NV380**



2

1

q



# 030

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**COMANDO  
E SEGNALE EL-SG Ø30**

**COMMAND AND SIGNALLING  
EL-SG Ø30**

030





# Pulsanteria Ø30

## Push-buttons Ø30

La pulsanteria Ø 30 trova impiego in settori particolarmente gravosi dal punto di vista della robustezza, dell'affidabilità e nella lunga vita operativa, là dove è necessaria precisione, certezza dell'esecuzione, duttilità nelle soluzioni tecniche, i nostri operatori trovano il loro ambiente operativo ideale.

Nella gamma Ø 30, grazie al know-how sviluppato in anni di ricerche e produzione, troviamo differenti soluzioni di operatori con diversi tipi di guardia. Soluzioni con corpi cromati o con superficie nera antiriflesso.

Differenti bottoni con ampia possibilità di configurazioni di elementi di contatto.

Questa serie è stata progettata per resistere e lavorare in situazioni gravose.

I pulsanti hanno un robusto soffietto per isolare completamente l'operatore.

Il sistema di fissaggio è sicuro e forte grazie alle robuste ghiera metalliche con speciale design che permette un serraggio manuale; le installazioni sono agevolate dagli anelli di riscontro.

I punti di forza di questa serie sono gli elementi di contatto che adottano particolari componenti in lega di ottone + nichel con pastiglie in argento 1000/1000 di elevate dimensioni.

Speciali viti consentono svariate configurazioni di blocchi di elementi di contatto aumentando la possibilità di esecuzioni con schemi speciali.



The Ø 30 push-buttons are used in particularly demanding sectors because of its sturdiness, reliability and long operating life.

Our operators find their ideal working environment where precision, certainty of execution and versatility in technical solutions are required.

In this range, thanks to the know-how developed over many years of research and production, there are different operator solutions with diverse types of guards.

Solutions with chromed bodies or with black anti-reflection surfaces.

Different buttons with a vast possibility of configurations of contact elements.

This series has been designed for durability and operation in demanding situations.

The buttons have robust bellows to insulate the operator completely.

The locking system is safe and strong thanks to the sturdy special design ring nuts in metal allowing manual tightening; installation are facilitated by backing rings.

The strong point of this range are the contact elements that use particular components in brass + nichel alloy with raised 1000/1000 silver pads.

Special screws allow different configurations of blocks of contact elements, increasing the possibilities of versions with special schemes.

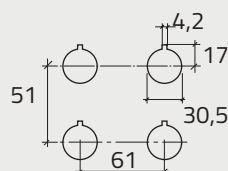


# Caratteristiche tecniche

## Technical data

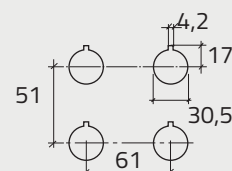
### Caratteristiche generali

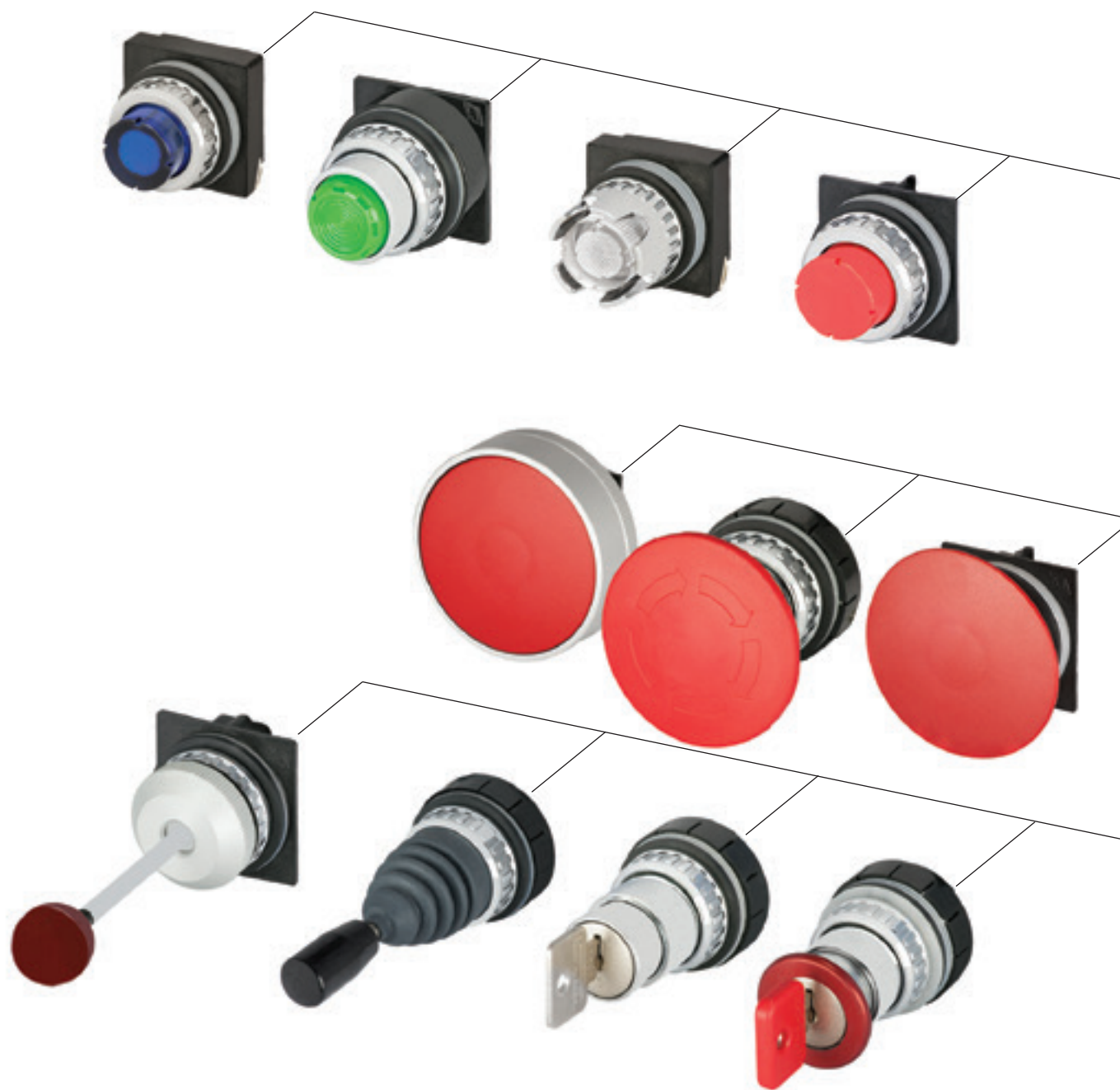
| Rispondenza alle norme           | IEC 947-5-1. VDE 0660 - NFC - CEI<br>EN60947.5.1 - UTE - BSI - CENELEC EN 50007                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------|----------------------------|--|------|------|------|------|----|----|----|---|----|----|----|-----|----|----|----|---|-----|---|-----|-----|-----|---|-----|-----|-----|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Omologazioni                     | UL (USA)-CSA CANADA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Protezioni climatiche            | Clima temperato cat 23/50 (DIN 50014)<br>Clima umido cat.23/83 (DIN 50015)<br>Clima caldo umido cat. 40/ 92 (DIN 50015)<br>Clima umido variabile cat. FW24 (DIN 50016)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Limiti di temperatura            | Funzionamento -25°C ÷ +70°C<br>Stoccaggio -40C° ÷ +70C°                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Grado di protezione operatori    | IP65 secondo EN60529<br>IP66 Pulsanti con cappuccio in gomma                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Grado di protezione terminali    | IP2X secondo EN60529<br>con protezione 030PFA / 030PFC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Tensione nominale d'isolamento   | Ui 690 V grado di inquinamento 3 secondo EN/IEC 60947-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Tensione di tenuta ad impulso    | 4kV secondo EN60947.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Categoria d'isolamento           | Gruppo C secondo VDE 0110                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Protezione da scossa elettrica   | Classe I secondo IEC536                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Protezione al corto circuito     | Fusibili da 10A gl secondo EN60947-5-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Funzionamento dei contatti       | Azionamento lento. Ag 1000/1000. Protezione trasparente per controllo visivo usura e movimento. Autopulenti. Apertura forzata del contatto NC. Doppia rottura oltre corsa per maggiore affidabilità.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Categorie nominali d'impiego     | Corrente nominale termica $i_{th} = 10 A$ - limiti d'impiego secondo EN60947-5-1<br><table><tr><th colspan="2">Cat AC15<br/>(UL-CSA: A600)</th><th colspan="2">Cat.DC13<br/>(UL-CSA: P300)</th></tr><tr><th>Ue V</th><th>Ie A</th><th>Ue V</th><th>Ie A</th></tr><tr><td>24</td><td>10</td><td>24</td><td>5</td></tr><tr><td>48</td><td>10</td><td>48</td><td>2.7</td></tr><tr><td>60</td><td>10</td><td>60</td><td>2</td></tr><tr><td>110</td><td>6</td><td>110</td><td>1.1</td></tr><tr><td>220</td><td>3</td><td>220</td><td>0.5</td></tr><tr><td>380</td><td>2</td><td>380</td><td>0.3</td></tr><tr><td>500</td><td>1.1</td><td>500</td><td>0.2</td></tr><tr><td>600</td><td>1.2</td><td>600</td><td>0.2</td></tr></table> | Cat AC15<br>(UL-CSA: A600) |      | Cat.DC13<br>(UL-CSA: P300) |  | Ue V | Ie A | Ue V | Ie A | 24 | 10 | 24 | 5 | 48 | 10 | 48 | 2.7 | 60 | 10 | 60 | 2 | 110 | 6 | 110 | 1.1 | 220 | 3 | 220 | 0.5 | 380 | 2 | 380 | 0.3 | 500 | 1.1 | 500 | 0.2 | 600 | 1.2 | 600 | 0.2 |
| Cat AC15<br>(UL-CSA: A600)       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Cat.DC13<br>(UL-CSA: P300) |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Ue V                             | Ie A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Ue V                       | Ie A |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| 24                               | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 24                         | 5    |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| 48                               | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 48                         | 2.7  |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| 60                               | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 60                         | 2    |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| 110                              | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 110                        | 1.1  |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| 220                              | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 220                        | 0.5  |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| 380                              | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 380                        | 0.3  |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| 500                              | 1.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 500                        | 0.2  |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| 600                              | 1.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 600                        | 0.2  |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Durata meccanica                 | Manipolatori, pulsanti a chiave, pulsanti a fungo ad aggancio: 500000 manovre<br>Selettori a manopola, selettori a leva, selettori a chiave, selettori luminosi: 1 milione di manovre<br>Pulsanti selettori, pulsanti luminosi: 1 milione di manovre<br>Pulsanti normali e a fungo momentanei: 3 milioni di manovre                                                                                                                                                                                                                                                                                                                                                                                                            |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Resistenza agli urti             | Pulsanti aggancio: 7g (20 ÷ 500 Hz)<br>IEC 60068-2-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Resistenza alle vibrazioni       | Pulsanti, selettori<br>Manipolatori: 15g (20 ÷ 500 Hz) IEC 60068-2-6<br>50g IEC 60068-2-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Viti terminali                   | Testa combinata taglio e Phillips Ph2 in acciaio zincato.<br>Capacità di chiusura : $\geq 1 \times 0,5 \text{ mm} / \leq 2 \times 2,5 \text{ mm}$<br>Capicorda a forcella "spring spade"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Porta lampada operatori luminosi | Attacco BA9S. Pulsanti e lampade spia: max 3W<br>Selettori potenza: max 2W.<br>Si raccomanda l' utilizzo di lampadine LED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Durata lampade                   | Incandescenza $\leq 1000h$ -Neon $\leq 3000h$<br>Multiled $\geq 50.000h$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |
| Dimensioni di montaggio          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |     |     |   |     |     |     |     |     |     |     |     |     |     |

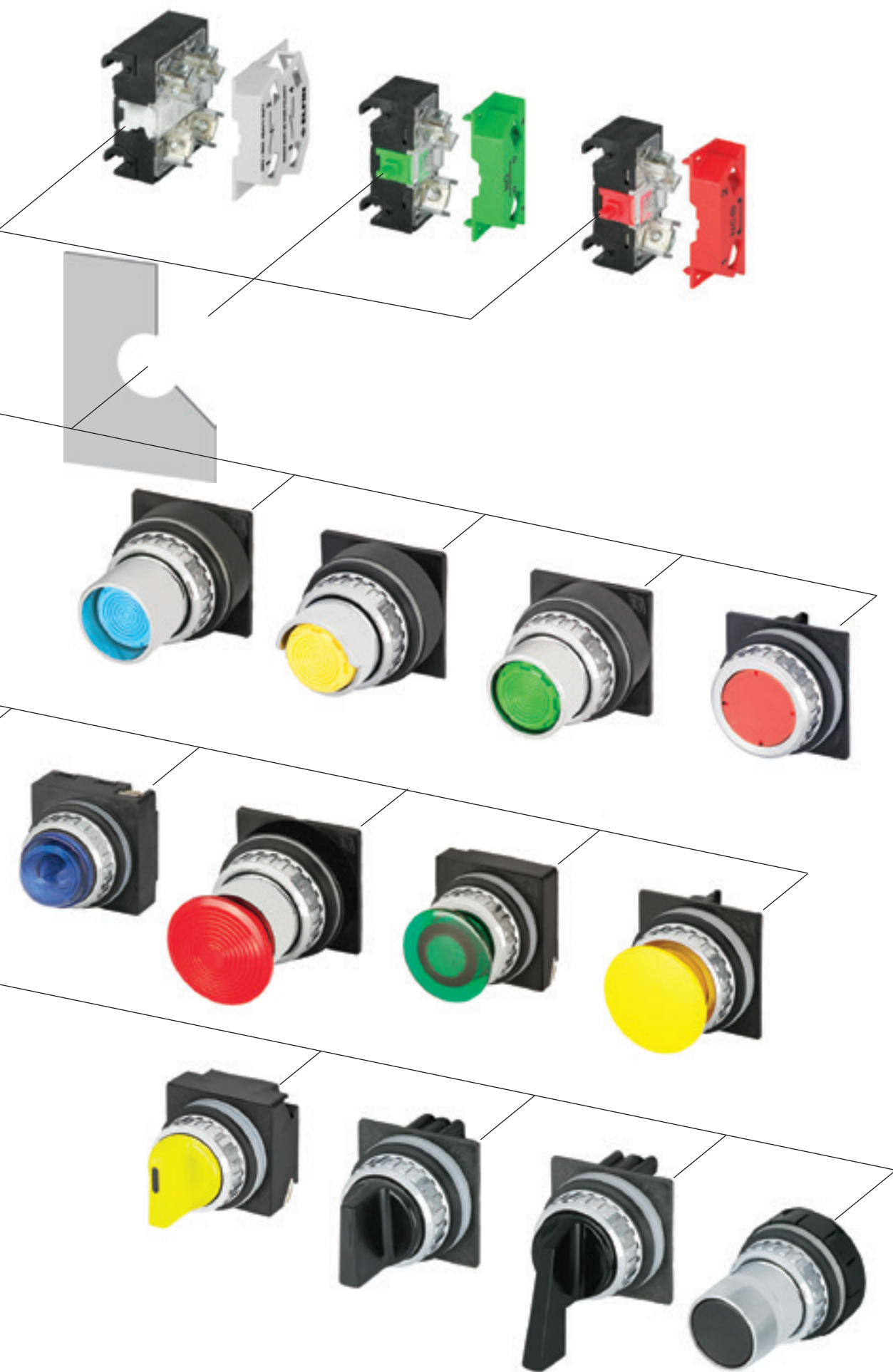


### General features

| Standards compliance             | IEC 947-5-1. VDE 0660 - NFC - CEI<br>EN60947.5.1 - UTE -BSI - CENELEC EN 50007                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------|----------------------------|--|------|------|------|------|----|----|----|---|----|----|----|-----|----|----|----|---|-----|---|-----|-----|-----|---|-----|------|-----|---|-----|-----|-----|-----|-----|------|-----|-----|-----|------|
| Approvals                        | UL (USA)-CSA CANADA)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Climatic protection              | Temperate climate cat 23/50 (DIN 50014)<br>Humid climate cat.23/83 (DIN 50015)<br>Hot-humid climate cat. 40/ 92 (DIN 50015)<br>Humid variable climate cat. FW24 (DIN 50016)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Temperature ranges               | Operating -25C° ÷ +70C°<br>Storage -40C° ÷ +70C°                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Protection degree operators      | IP65 in compliance with EN60529<br>IP66 Push-buttons with rubber cap                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Protection degree terminals      | IP2X in compliance with EN60529<br>with protection 030PFA / 030PFC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Rated insulation voltage         | Ui 690 V pollution degree 3 in compliance with EN/IEC 60947-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Impulse withstand voltage        | 4kV in compliance with EN60947.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Insulation class                 | C group in compliance with VDE 0110                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Electrical shock protection      | Class I in compliance with IEC536                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Short circuit protection         | 10A gl fuses in compliance with EN60947-5-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Contact operation                | Slow action Ag 1000/1000. Clear cover for visual inspection of wear and movement.<br>Self-cleaning. Forced opening of NC contact.<br>Double breakage for a higher reliability.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Electrical ratings               | Rated thermal current ith = 10 A - operating range in compliance with EN60947-5-1<br><table><tr><th colspan="2">Cat AC15<br/>(UL-CSA: A600)</th><th colspan="2">Cat.DC13<br/>(UL-CSA: P300)</th></tr><tr><th>Ue V</th><th>Ie A</th><th>Ue V</th><th>Ie A</th></tr><tr><td>24</td><td>10</td><td>24</td><td>5</td></tr><tr><td>48</td><td>10</td><td>48</td><td>2.7</td></tr><tr><td>60</td><td>10</td><td>60</td><td>2</td></tr><tr><td>110</td><td>6</td><td>110</td><td>1.1</td></tr><tr><td>220</td><td>3</td><td>220</td><td>0.55</td></tr><tr><td>380</td><td>2</td><td>380</td><td>0.3</td></tr><tr><td>500</td><td>1.1</td><td>500</td><td>0.22</td></tr><tr><td>600</td><td>1.2</td><td>600</td><td>0.22</td></tr></table> | Cat AC15<br>(UL-CSA: A600) |      | Cat.DC13<br>(UL-CSA: P300) |  | Ue V | Ie A | Ue V | Ie A | 24 | 10 | 24 | 5 | 48 | 10 | 48 | 2.7 | 60 | 10 | 60 | 2 | 110 | 6 | 110 | 1.1 | 220 | 3 | 220 | 0.55 | 380 | 2 | 380 | 0.3 | 500 | 1.1 | 500 | 0.22 | 600 | 1.2 | 600 | 0.22 |
| Cat AC15<br>(UL-CSA: A600)       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Cat.DC13<br>(UL-CSA: P300) |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Ue V                             | Ie A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Ue V                       | Ie A |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| 24                               | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 24                         | 5    |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| 48                               | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 48                         | 2.7  |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| 60                               | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 60                         | 2    |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| 110                              | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 110                        | 1.1  |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| 220                              | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 220                        | 0.55 |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| 380                              | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 380                        | 0.3  |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| 500                              | 1.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 500                        | 0.22 |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| 600                              | 1.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 600                        | 0.22 |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Mechanical life                  | Joysticks, key push-buttons, latching mushroom push-buttons: 500000 cycles<br>Knob, lever and key selector switches, illuminated selector switches: 1 million cycles<br>Push-button selector switches, illuminated push-buttons: 1 million cycles<br>Normal and mushroom push-buttons, momentary: 3 million cycles                                                                                                                                                                                                                                                                                                                                                                                                                 |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Shock resistance                 | Latching push-buttons: 7g (20-500 Hz)<br>IEC 60068-2-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Vibration resistance             | Push-buttons, selector switches<br>Joysticks: 15g (20 ÷500 Hz) IEC 60068-2-6<br>50g IEC 68-2-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Terminal screws                  | Combined slot and Phillips Ph2 head, zinc plated.<br>Connection capacity : ≥1 x 0.5 mm / ≤2x2.5 mm<br>Fork spring spade terminals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Lampholder illuminated operators | BA9S socket. Push-buttons and pilot lights: max 3W. Selector switches: max. 2W.<br>LED lamps are recommended                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Lamp life                        | Incandescent ≤1000h-Neon ≤3000h<br>Multiled≥50.000h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |
| Mounting dimensions              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                            |      |                            |  |      |      |      |      |    |    |    |   |    |    |    |     |    |    |    |   |     |   |     |     |     |   |     |      |     |   |     |     |     |     |     |      |     |     |     |      |







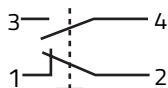
# Pulsanti normali Ø30

## Normal push-buttons Ø30

### Pulsanti normali / Normal push-buttons

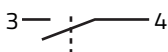
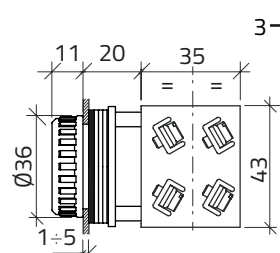
g

cod



#### Pulsanti con guardia / Guarded push-buttons

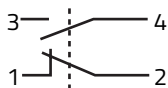
|                    |    |                  |
|--------------------|----|------------------|
| ● Nero / Black     | 84 | <b>030RINF1</b>  |
| ● Rosso / Red      | 84 | <b>030RIRF1</b>  |
| ● Verde / Green    | 84 | <b>030RIVF1</b>  |
| ● Giallo / Yellow  | 84 | <b>030RIGF1</b>  |
| ● Blu / Blue       | 84 | <b>030RIBLF1</b> |
| ● Arancio / Orange | 84 | <b>030RIAF1</b>  |



|                    |    |                  |
|--------------------|----|------------------|
| ● Nero / Black     | 66 | <b>030RINF1</b>  |
| ● Rosso / Red      | 66 | <b>030RIRF1</b>  |
| ● Verde / Green    | 66 | <b>030RIVF1</b>  |
| ● Giallo / Yellow  | 66 | <b>030RIGF1</b>  |
| ● Blu / Blue       | 66 | <b>030RIBLF1</b> |
| ● Arancio / Orange | 66 | <b>030RIAF1</b>  |



|                    |    |                  |
|--------------------|----|------------------|
| ● Nero / Black     | 66 | <b>030RINFC</b>  |
| ● Rosso / Red      | 66 | <b>030RIRFC</b>  |
| ● Verde / Green    | 66 | <b>030RIVFC</b>  |
| ● Giallo / Yellow  | 66 | <b>030RIGFC</b>  |
| ● Blu / Blue       | 66 | <b>030RIBLFC</b> |
| ● Arancio / Orange | 66 | <b>030RI AFC</b> |



#### Pulsanti sporgenti / Projecting push-button

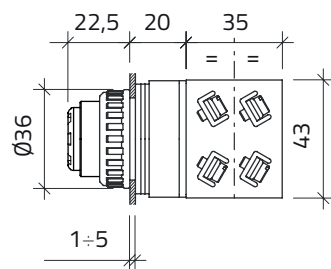
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|--------------------|----|------------------|
| ● Nero / Black     | 86 | <b>030RRNF1</b>  |
| ● Rosso / Red      | 86 | <b>030RRRF1</b>  |
| ● Verde / Green    | 86 | <b>030RRVF1</b>  |
| ● Giallo / Yellow  | 86 | <b>030RRGF1</b>  |
| ● Blu / Blue       | 86 | <b>030RRBLF1</b> |
| ● Arancio / Orange | 86 | <b>030RRAF1</b>  |



|                    |    |                  |
|--------------------|----|------------------|
| ● Nero / Black     | 68 | <b>030RRNF1</b>  |
| ● Rosso / Red      | 68 | <b>030RRRF1</b>  |
| ● Verde / Green    | 68 | <b>030RRVF1</b>  |
| ● Giallo / Yellow  | 68 | <b>030RRGF1</b>  |
| ● Blu / Blue       | 68 | <b>030RRBLF1</b> |
| ● Arancio / Orange | 68 | <b>030RRAF1</b>  |



|                    |    |                  |
|--------------------|----|------------------|
| ● Nero / Black     | 68 | <b>030RRNFC</b>  |
| ● Rosso / Red      | 68 | <b>030RRRFC</b>  |
| ● Verde / Green    | 68 | <b>030RRVFC</b>  |
| ● Giallo / Yellow  | 68 | <b>030RRGFC</b>  |
| ● Blu / Blue       | 68 | <b>030RRBLFC</b> |
| ● Arancio / Orange | 68 | <b>030RR AFC</b> |

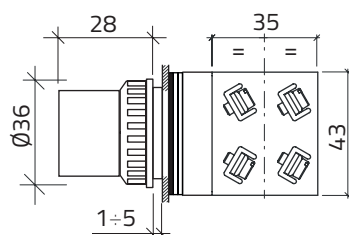
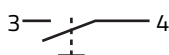
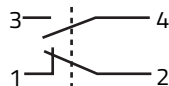




# Pulsanti normali Ø30

## Normal push-buttons Ø30

### Pulsanti normali / Normal push-buttons

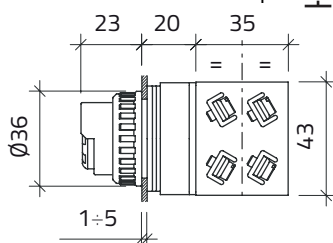
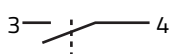
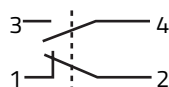


### Pulsanti con guardia intera / Push-buttons with full guard

|                    |    |                  |
|--------------------|----|------------------|
| ● Nero / Black     | 93 | <b>030PINF1</b>  |
| ● Rosso / Red      | 93 | <b>030PIRF1</b>  |
| ● Verde / Green    | 93 | <b>030PIVF1</b>  |
| ● Giallo / Yellow  | 93 | <b>030PIGF1</b>  |
| ● Blu / Blue       | 93 | <b>030PIBLF1</b> |
| ● Arancio / Orange | 93 | <b>030PIAF1</b>  |

|                    |    |                  |
|--------------------|----|------------------|
| ● Nero / Black     | 75 | <b>030PINFA</b>  |
| ● Rosso / Red      | 75 | <b>030PIRFA</b>  |
| ● Verde / Green    | 75 | <b>030PIVFA</b>  |
| ● Giallo / Yellow  | 75 | <b>030PIGFA</b>  |
| ● Blu / Blue       | 75 | <b>030PIBLFA</b> |
| ● Arancio / Orange | 75 | <b>030PIAFA</b>  |

|                    |    |                  |
|--------------------|----|------------------|
| ● Nero / Black     | 75 | <b>030PINFC</b>  |
| ● Rosso / Red      | 75 | <b>030PIRFC</b>  |
| ● Verde / Green    | 75 | <b>030PIVFC</b>  |
| ● Giallo / Yellow  | 75 | <b>030PIGFC</b>  |
| ● Blu / Blue       | 75 | <b>030PIBLFC</b> |
| ● Arancio / Orange | 75 | <b>030PIAFC</b>  |



### Pulsanti con mezza guardia Push-buttons with half guard

|                    |    |                  |
|--------------------|----|------------------|
| ● Nero / Black     | 91 | <b>030PNNF1</b>  |
| ● Rosso / Red      | 91 | <b>030PNRF1</b>  |
| ● Verde / Green    | 91 | <b>030PNVF1</b>  |
| ● Giallo / Yellow  | 91 | <b>030PNGF1</b>  |
| ● Blu / Blue       | 91 | <b>030PNBLF1</b> |
| ● Arancio / Orange | 91 | <b>030PNAF1</b>  |

|                    |    |                  |
|--------------------|----|------------------|
| ● Nero / Black     | 73 | <b>030PNNFA</b>  |
| ● Rosso / Red      | 73 | <b>030PNRFA</b>  |
| ● Verde / Green    | 73 | <b>030PNVFA</b>  |
| ● Giallo / Yellow  | 73 | <b>030PNGFA</b>  |
| ● Blu / Blue       | 73 | <b>030PNBLFA</b> |
| ● Arancio / Orange | 73 | <b>030PNAFA</b>  |

|                    |    |                  |
|--------------------|----|------------------|
| ● Nero / Black     | 73 | <b>030PNNFC</b>  |
| ● Rosso / Red      | 73 | <b>030PNRFC</b>  |
| ● Verde / Green    | 73 | <b>030PNVFC</b>  |
| ● Giallo / Yellow  | 73 | <b>030PNGFC</b>  |
| ● Blu / Blue       | 73 | <b>030PNBLFC</b> |
| ● Arancio / Orange | 73 | <b>030PNAFC</b>  |

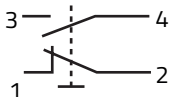
# Pulsanti normali Ø30

## Normal push-buttons Ø30

### Pulsanti normali / Normal push-buttons

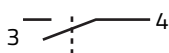
g

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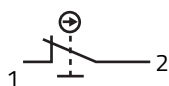


### Pulsanti sporgenti / Projecting push-button

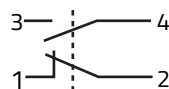
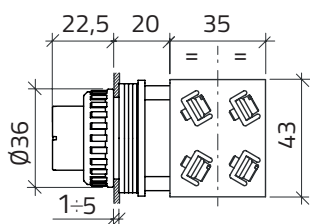
|                    |    |           |
|--------------------|----|-----------|
| ● Nero / Black     | 93 | 030PRNF1  |
| ● Rosso / Red      | 93 | 030PRRF1  |
| ● Verde / Green    | 93 | 030PRVF1  |
| ● Giallo / Yellow  | 93 | 030PRGF1  |
| ● Blu / Blue       | 93 | 030PRBLF1 |
| ● Arancio / Orange | 93 | 030PRAF1  |



|                    |    |           |
|--------------------|----|-----------|
| ● Nero / Black     | 75 | 030PRNFA  |
| ● Rosso / Red      | 75 | 030PRRFA  |
| ● Verde / Green    | 75 | 030PRVFA  |
| ● Giallo / Yellow  | 75 | 030PRGFA  |
| ● Blu / Blue       | 75 | 030PRBLFA |
| ● Arancio / Orange | 75 | 030PRAFA  |

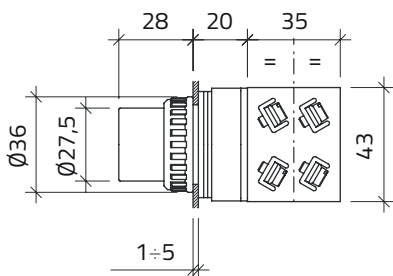


|                      |    |           |
|----------------------|----|-----------|
| ● Nero / Black       | 75 | 030PRNFC  |
| ● Rosso / Red        | 75 | 030PRRFC  |
| ● Verde / Green      | 75 | 030PRVFC  |
| ● Giallo / Yellow    | 75 | 030PRGFC  |
| ● Blu / Blue         | 75 | 030PRBLFC |
| ● Arancione / Orange | 75 | 030PRAFC  |



### Pulsanti con guardia estesa Push-buttons with extended guard

|                    |    |           |
|--------------------|----|-----------|
| ● Nero / Black     | 95 | 030PPNF1  |
| ● Rosso / Red      | 95 | 030PPRF1  |
| ● Verde / Green    | 95 | 030PPVF1  |
| ● Giallo / Yellow  | 95 | 030PPGF1  |
| ● Blu / Blue       | 95 | 030PPBLF1 |
| ● Arancio / Orange | 95 | 030PPAF1  |

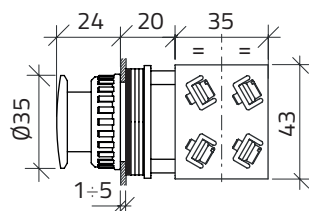
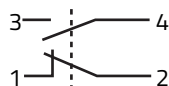




# Pulsanti normali Ø30

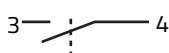
## Normal push-buttons Ø30

### Pulsanti a fungo momentanei Momentary mushroom push-buttons

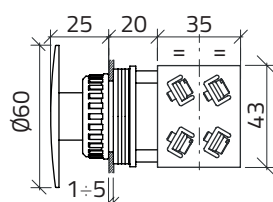
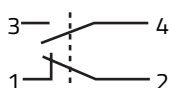


#### Pulsanti a fungo Ø 35 / Mushroom push-button Ø 35

|                   |     |                 |
|-------------------|-----|-----------------|
| ● Nero / Black    | 120 | <b>030RFNF1</b> |
| ● Verde / Green   | 120 | <b>030RFVF1</b> |
| ● Giallo / Yellow | 120 | <b>030RFGF1</b> |

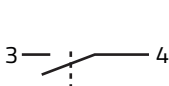


|                   |     |                 |
|-------------------|-----|-----------------|
| ● Nero / Black    | 100 | <b>030RFNFA</b> |
| ● Verde / Green   | 100 | <b>030RFVFA</b> |
| ● Giallo / Yellow | 100 | <b>030RFGFA</b> |



#### Pulsanti a fungo Ø 60 / Mushroom push-buttons Ø 60

|                   |     |                  |
|-------------------|-----|------------------|
| ● Nero / Black    | 130 | <b>030RFFNF1</b> |
| ● Verde / Green   | 130 | <b>030RFFVF1</b> |
| ● Giallo / Yellow | 130 | <b>030RFFGF1</b> |

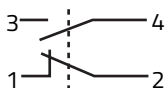


|                   |     |                  |
|-------------------|-----|------------------|
| ● Nero / Black    | 110 | <b>030RFFNFA</b> |
| ● Verde / Green   | 110 | <b>030RFFVFA</b> |
| ● Giallo / Yellow | 110 | <b>030RFFGFA</b> |

# Pulsanti normali Ø30

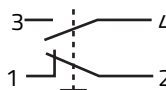
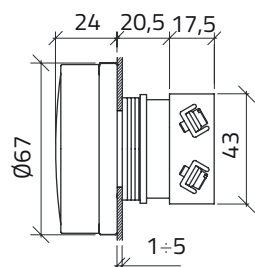
## Normal push-buttons Ø30

### Pulsanti a fungo momentanei Momentary mushroom push-buttons



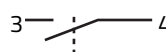
#### Pulsanti a fungo Ø 60 con guardia metallica Mushroom push-buttons with metal guard Ø 60

|                |     |                      |
|----------------|-----|----------------------|
| ● Nero / Black | 165 | <b>03ORFFPMNFAFC</b> |
| ● Rosso / Red  | 165 | <b>03ORFFPMRFAFC</b> |

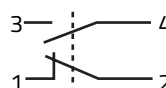
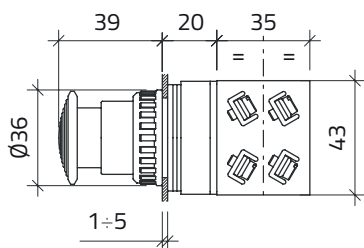


#### Pulsanti a fungo Ø 35 / Mushroom push-button Ø 35

|                   |     |                 |
|-------------------|-----|-----------------|
| ● Nero / Black    | 120 | <b>030PFNF1</b> |
| ● Verde / Green   | 120 | <b>030PFVF1</b> |
| ● Giallo / Yellow | 120 | <b>030PFGF1</b> |

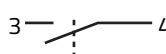


|                   |     |                 |
|-------------------|-----|-----------------|
| ● Nero / Black    | 100 | <b>030PFNFA</b> |
| ● Verde / Green   | 100 | <b>030PFVFA</b> |
| ● Giallo / Yellow | 100 | <b>030PFGFA</b> |

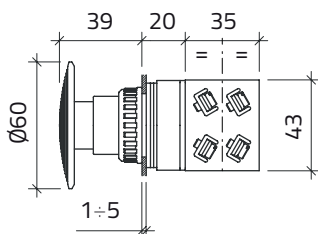


#### Pulsanti a fungo Ø 60 / Mushroom push-buttons Ø 60

|                   |     |                  |
|-------------------|-----|------------------|
| ● Nero / Black    | 130 | <b>030PFFNF1</b> |
| ● Verde / Green   | 130 | <b>030PFFVF1</b> |
| ● Giallo / Yellow | 130 | <b>030PFFGF1</b> |



|                   |     |                  |
|-------------------|-----|------------------|
| ● Nero / Black    | 110 | <b>030PFFNFA</b> |
| ● Verde / Green   | 110 | <b>030PFFVFA</b> |
| ● Giallo / Yellow | 110 | <b>030PFFGFA</b> |



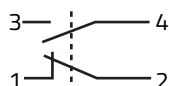
# Pulsanti luminosi Ø30

## Illuminated push-buttons Ø30

### Pulsanti luminosi Illuminated push-button

g

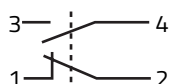
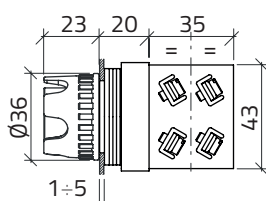
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#### Pulsanti con guardia Push-button with full guard

Alimentazione diretta 24V AC/DC / Direct supply 24V AC/DC  
Lampadina LED BA9S inclusa / BA9S LED lamp included

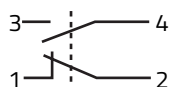
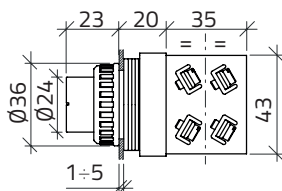
|                   |     |                 |
|-------------------|-----|-----------------|
| ● Rosso / Red     | 103 | 030RPLSRFAFC24  |
| ● Verde / Green   | 103 | 030RPLSVFAFC24  |
| ● Giallo / Yellow | 103 | 030RPLSGFAFC24  |
| ● Blu / Blue      | 103 | 030RPLSBLFAFC24 |
| ○ Bianco / White  | 103 | 030RPLSBFAFC24  |



#### Pulsanti sporgenti / Projecting push-buttons

Alimentazione diretta 24V AC/DC / Direct supply 24V AC/DC  
Lampadina LED BA9S inclusa / BA9S LED lamp included

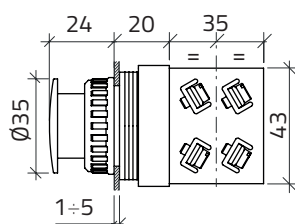
|                   |    |                |
|-------------------|----|----------------|
| ● Rosso / Red     | 97 | 030RPLRFAFC24  |
| ● Verde / Green   | 97 | 030RPLVFAFC24  |
| ● Giallo / Yellow | 97 | 030RPLGFAFC24  |
| ● Blu / Blue      | 97 | 030RPLBLFAFC24 |
| ○ Bianco / White  | 97 | 030RPLBFAFC24  |



#### Pulsanti a fungo momentanei Momentary mushroom push-buttons

Alimentazione diretta 24V AC/DC / Direct supply 24V AC/DC  
Lampadina LED BA9S inclusa / BA9S LED lamp included

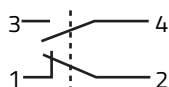
|                   |    |                |
|-------------------|----|----------------|
| ● Rosso / Red     | 98 | 030RFLRFAFC24  |
| ● Verde / Green   | 98 | 030RFLVFAFC24  |
| ● Giallo / Yellow | 98 | 030RFLGFAFC24  |
| ● Blu / Blue      | 98 | 030RFLBLFAFC24 |
| ○ Bianco / White  | 98 | 030RFLBFAFC24  |



# Pulsanti di emergenza Ø30

## Emergency stop push-buttons Ø30

### Pulsanti a fungo momentanei Momentary mushroom push-buttons

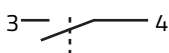


#### Pulsanti a fungo Ø 35 / Mushroom push-buttons Ø 35

● Rosso / Red

120

030RFRF1



● Rosso / Red

100

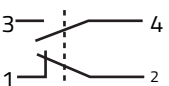
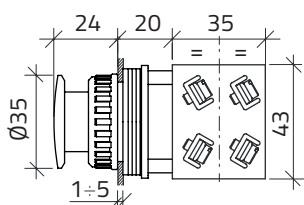
030RFRFA



● Rosso / Red

100

030RFRFC

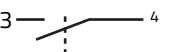


#### Pulsanti a fungo Ø 60 / Mushroom push-buttons Ø 60

● Rosso / Red

130

030RFRF1



● Rosso / Red

110

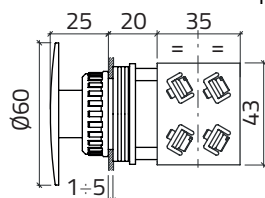
030RFRFA



● Rosso / Red

110

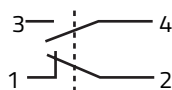
030RFRFC



# Pulsanti di emergenza Ø30

## Emergency stop push-buttons Ø30

### Pulsanti a fungo momentanei Momentary mushroom push-buttons

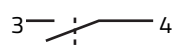


#### Pulsanti a fungo Ø 35 / Mushroom push-buttons Ø 35

● Rosso / Red

120

030PFRF1



● Rosso / Red

100

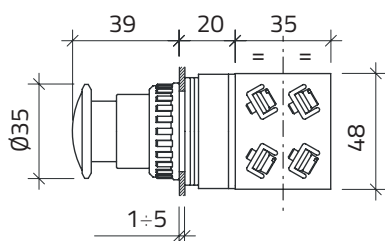
030PFRFA



● Rosso / Red

100

030PFRFC

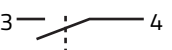


#### Pulsanti a fungo Ø 60 / Mushroom push-buttons Ø 60

● Rosso / Red

130

030PFRF1



● Rosso / Red

110

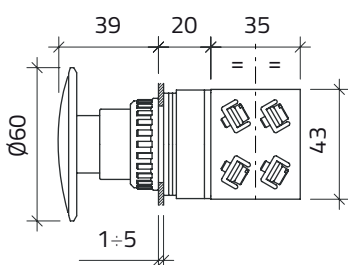
030PFRFA



● Rosso / Red

110

030PFRFC



# Pulsanti di emergenza Ø30

## Emergency stop push-buttons Ø30

### Pulsanti a fungo ad aggancio Latching mushroom push-buttons

g

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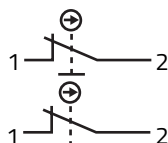


#### Pulsanti a fungo Ø 35, sgancio rotazione Mushroom push-buttons Ø 35, twist release

● Rosso / Red

100

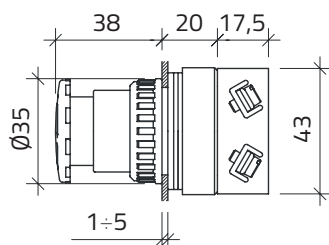
030PFARFC



● Rosso / Red

115

030PFAR2FC

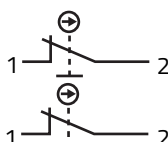


#### Pulsanti a fungo Ø 60, sgancio rotazione Mushroom push-buttons Ø 60, twist release

● Rosso / Red

110

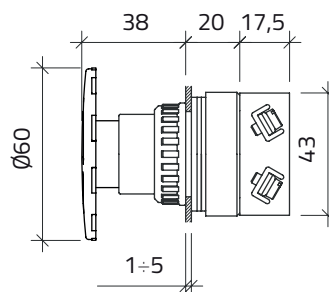
030PFFARFC



● Rosso / Red

125

030PFFAR2FC



# Pulsanti di emergenza Ø30

## Emergency stop push-buttons Ø30

### Pulsanti a fungo ad aggancio

### Latching mushroom push-buttons



#### Pulsanti a fungo Ø 35, sgancio a chiave

#### Mushroom push-buttons Ø 35, key release

Chiave 73037 / Key model

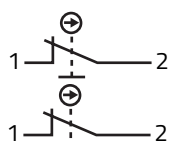
● Rosso / Red

g

cod

162

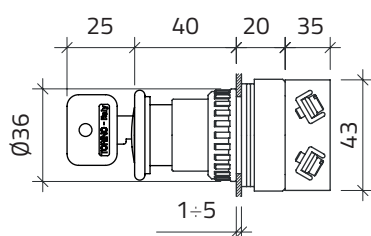
030PFBAFC



● Rosso / Red

176

030PFBA2FC



#### Pulsanti a fungo Ø 60, sgancio a chiave

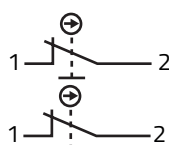
#### Mushroom push-buttons Ø 60 key release

Chiave 73037 / Key 73037

● Rosso / Red

172

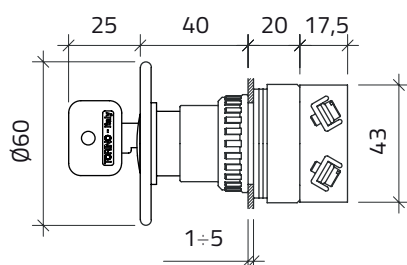
030PFBAFC



● Rosso / Red

186

030PFBA2FC



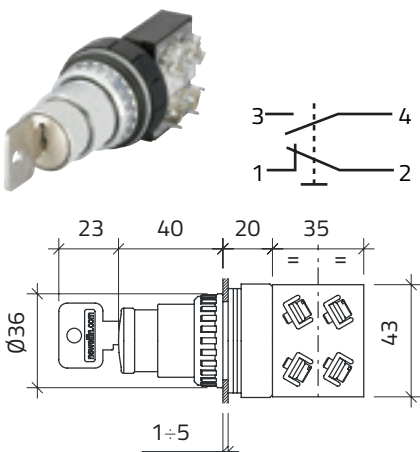


# Pulsanti a chiave Ø30

## Key push-buttons Ø30

### Pulsanti bloccabili con chiave

### Key lockable push-buttons



#### Chiave standard 3095

#### Standard key 3095

|    |     |                 |
|----|-----|-----------------|
| BA | 158 | <b>030PBAF1</b> |
| BB | 158 | <b>030PBBF1</b> |
| LB | 158 | <b>030PLBF1</b> |

g

cod



#### Caratteristiche tecniche

Le chiavi sono estraibili con azionatore sia libero che premuto.

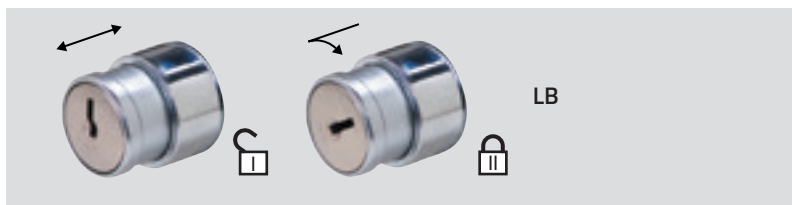
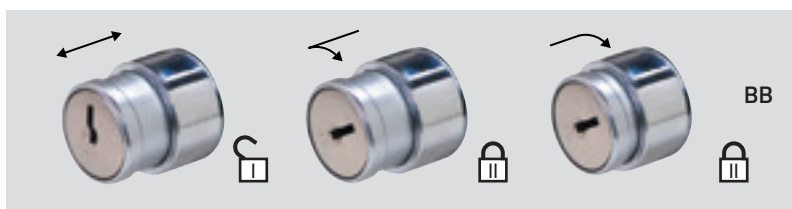
Si fornisce chiave standard

- BA agganciabile in posizione di premuto
- BB bloccabile in posizione di libero e premuto
- LB bloccabile in posizione di libero

#### Technical data

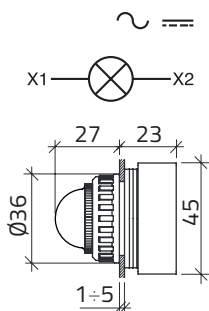
The keys can be removed with the actuator both free and depressed. A standard key is supplied.

- BA latched, key release to "free" position
- BB lockable in both positions (free and depressed)
- LB lockable in one position (free).



# Lampade spia Ø30

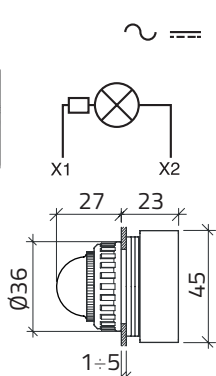
## Pilot lights Ø30



Alimentazione diretta / Direct supply

Lampadina LED BA9S non inclusa / BA9S LED lamp not included

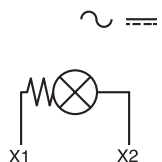
|                   |    |                |
|-------------------|----|----------------|
| ● Rosso / Red     | 61 | <b>030LSR</b>  |
| ● Verde / Green   | 61 | <b>030LSV</b>  |
| ● Giallo / Yellow | 61 | <b>030LSG</b>  |
| ● Blu / Blue      | 61 | <b>030LSBL</b> |
| ○ Bianco / White  | 61 | <b>030LSB</b>  |



Lampeggiante, alimentazione diretta / Flashing, direct supply

Lampadina LED BA9S 24V 150mA non inclusa / BA9S 24V 150 mA led not included

|               |    |               |
|---------------|----|---------------|
| ● Rosso / Red | 62 | <b>030LLR</b> |
|---------------|----|---------------|



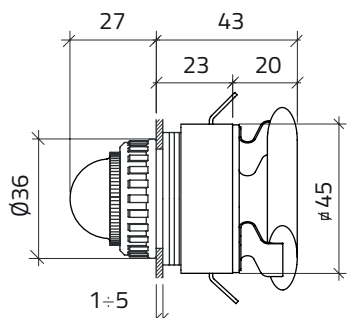
### Resistore per lampadine ad incandescenza

#### Resistor for incandescent lamps

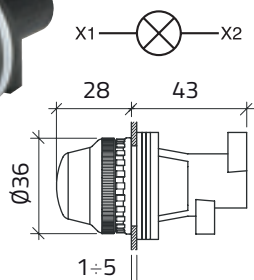
Lampadina BA9S 24V 3W inclusa / BA9S 24V 3W lamp included

**110 +125V**

|                  |    |                  |
|------------------|----|------------------|
| ○ Bianco / White | 87 | <b>030LRB110</b> |
|------------------|----|------------------|

**220 +240V**

|                  |    |                  |
|------------------|----|------------------|
| ○ Bianco / White | 87 | <b>030LRB230</b> |
|------------------|----|------------------|



Alimentazione diretta / Direct supply

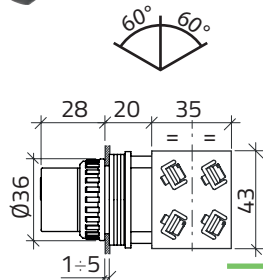
Lampadina E14 7W max non inclusa / Lamp E14 7W max not included

|                   |    |                  |
|-------------------|----|------------------|
| ● Rosso / Red     | 35 | <b>030LE14R</b>  |
| ● Verde / Green   | 35 | <b>030LE14V</b>  |
| ● Giallo / Yellow | 35 | <b>030LE14G</b>  |
| ● Blu / Blue      | 35 | <b>030LE14BL</b> |
| ○ Bianco / White  | 35 | <b>030LE14B</b>  |

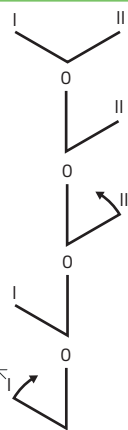
# Selettori a manopola Ø30

## Knob selector switches Ø30

Cercare la combinazione di schemi a pag. 26 / See the diagram combination on page 26

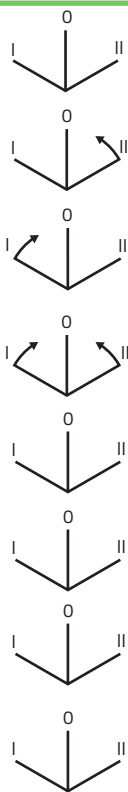


### 2 posizioni / 2 positions



|       | g  | cod                |
|-------|----|--------------------|
| CAM A | 85 | <b>030RSMNAF1</b>  |
| CAM B | 85 | <b>030RSMNBF1</b>  |
| CAM B | 85 | <b>030RSMNBF1D</b> |
| CAM C | 85 | <b>030RSMNCF1</b>  |
| CAM C | 85 | <b>030RSMNCF1S</b> |

### 3 posizioni / 3 positions



|       | g  | cod                 |
|-------|----|---------------------|
| CAM O | 85 | <b>030RSMNO2F1</b>  |
| CAM O | 85 | <b>030RSMNO2F1D</b> |
| CAM O | 85 | <b>030RSMNO2F1S</b> |
| CAM O | 85 | <b>030RSMNO2F1C</b> |
| CAM T | 85 | <b>030RSMNT2F1</b>  |
| CAM S | 85 | <b>030RSMNSF1</b>   |
| CAM P | 85 | <b>030RSMNPF1</b>   |
| CAM F | 85 | <b>030RSMNFF1</b>   |

### 4 posizioni / 4 positions



|       | g  | cod                |
|-------|----|--------------------|
| CAM Q | 85 | <b>030RSMNQ2F1</b> |

### 5 posizioni / 5 positions

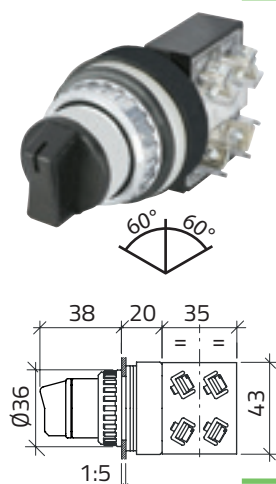


|       | g  | cod                |
|-------|----|--------------------|
| CAM R | 87 | <b>030RSMNR2F1</b> |
| CAM V | 87 | <b>030RSMNV2F1</b> |

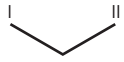
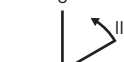
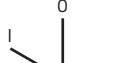
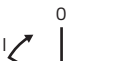
# Selettori a manopola Ø30

## Knob selector switches Ø30

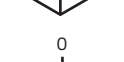
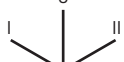
Cercare la combinazione di schemi a pag. 26 / See the diagram combination on page 26



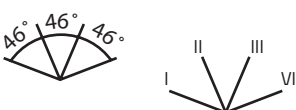
### 2 posizioni / 2 positions

|                                                                                         | g   | cod        |
|-----------------------------------------------------------------------------------------|-----|------------|
|  CAM A | 100 | 030SMNAF1  |
|  CAM B | 100 | 030SMNBF1  |
|  CAM B | 100 | 030SMNBF1D |
|  CAM C | 100 | 030SMNCF1  |
|  CAM C | 100 | 030SMNCF1S |

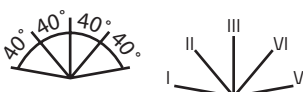
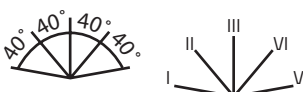
### 3 posizioni / 3 positions

|                                                                                           | g   | cod         |
|-------------------------------------------------------------------------------------------|-----|-------------|
|  CAM O   | 100 | 030SMNO2F1  |
|  CAM O | 100 | 030SMNO2F1D |
|  CAM O | 100 | 030SMNO2F1S |
|  CAM O | 100 | 030SMNO2F1C |
|  CAM T | 100 | 030SMNT2F1  |
|  CAM S | 100 | 030SMNSF1   |
|  CAM P | 100 | 030SMNPF1   |
|  CAM F | 100 | 030SMNFF1   |

### 4 posizioni / 4 positions

|                                                                                           | g   | cod        |
|-------------------------------------------------------------------------------------------|-----|------------|
|  CAM Q | 100 | 030SMNQ2F1 |

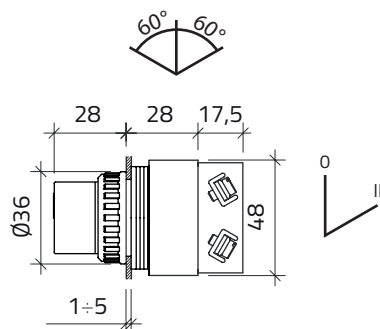
### 5 posizioni / 5 positions

|                                                                                           | g   | cod        |
|-------------------------------------------------------------------------------------------|-----|------------|
|  CAM R | 100 | 030SMNR2F1 |
|  CAM V | 100 | 030SMNV2F1 |

# Selettori luminosi a manopola Ø30

## Illuminated knob selector switches Ø30

Cercare la combinazione di schemi a pag. 26 / See the diagram combination on page 26



### 2 posizioni / 2 positions

g

cod

Alimentazione diretta 24V AC/DC

Direct supply 24V AC/DC

Lampadina LED BA9S inclusa / BA9S LED lamp included

#### CAM A

|                   |    |                |
|-------------------|----|----------------|
| ○ Bianco / White  | 96 | 030SMLABFAFC24 |
| ● Rosso / Red     | 96 | 030SMLARFAFC24 |
| ● Verde / Green   | 96 | 030SMLAVFAFC24 |
| ● Giallo / Yellow | 96 | 030SMLAGFAFC24 |
| ● Blu / Blue      | 96 | 030SMLBLFAFC24 |

#### CAM B

|                   |    |                 |
|-------------------|----|-----------------|
| ○ Bianco / White  | 96 | 030SMLBBFAFC24  |
| ● Rosso / Red     | 96 | 030SMLBRFAFC24  |
| ● Verde / Green   | 96 | 030SMLBVFAFC24  |
| ● Giallo / Yellow | 96 | 030SMLBGFAFC24  |
| ● Blu / Blue      | 96 | 030SMLBBLFAFC24 |

### 3 posizioni / 3 positions

g

cod

Alimentazione diretta 24V AC/DC

Direct supply 24V AC/DC

Lampadina LED BA9S inclusa / BA9S LED lamp included

#### CAM O

|                   |     |                |
|-------------------|-----|----------------|
| ○ Bianco / White  | 128 | 030SMLOB2FA24  |
| ● Rosso / Red     | 128 | 030SMLOR2FA24  |
| ● Verde / Green   | 128 | 030SMLOV2FA24  |
| ● Giallo / Yellow | 128 | 030SMLOG2FA24  |
| ● Blu / Blue      | 128 | 030SMLOBL2FA24 |

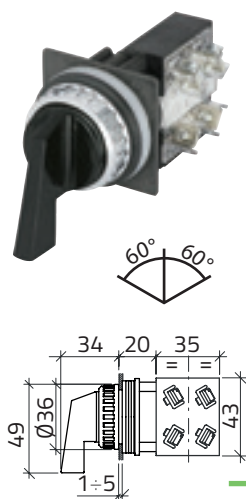
#### CAM O

|                   |     |                 |
|-------------------|-----|-----------------|
| ○ Bianco / White  | 128 | 030SMLOB2FAC24  |
| ● Rosso / Red     | 128 | 030SMLOR2FAC24  |
| ● Verde / Green   | 128 | 030SMLOV2FAC24  |
| ● Giallo / Yellow | 128 | 030SMLOG2FAC24  |
| ● Blu / Blue      | 128 | 030SMLOBL2FAC24 |

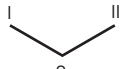
# Selettori a leva Ø30

## Lever selector switches Ø30

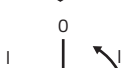
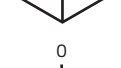
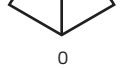
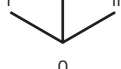
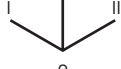
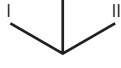
Cercare la combinazione di schemi a pag. 26 / See the diagram combination on page 26



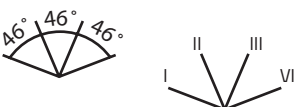
### 2 posizioni / 2 positions

|                                                                                         | g  | cod                |
|-----------------------------------------------------------------------------------------|----|--------------------|
|  CAM A | 87 | <b>030RSLNAF1</b>  |
|  CAM B | 87 | <b>030RSLNBF1</b>  |
|  CAM B | 87 | <b>030RSLNBF1D</b> |
|  CAM C | 87 | <b>030RSLNCF1</b>  |
|  CAM C | 87 | <b>030RSLNCF1S</b> |

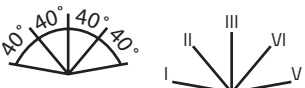
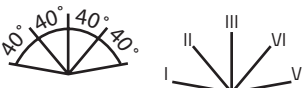
### 3 posizioni / 3 positions

|                                                                                           | g  | cod                 |
|-------------------------------------------------------------------------------------------|----|---------------------|
|  CAM O   | 87 | <b>030RSLN02F1</b>  |
|  CAM O | 87 | <b>030RSLN02F1D</b> |
|  CAM O | 87 | <b>030RSLN02F1S</b> |
|  CAM O | 87 | <b>030RSLN02F1C</b> |
|  CAM T | 87 | <b>030RSLNT2F1</b>  |
|  CAM S | 87 | <b>030RSLNSF1</b>   |
|  CAM P | 87 | <b>030RSLNPF1</b>   |
|  CAM F | 87 | <b>030RSLNFF1</b>   |

### 4 posizioni / 4 positions

|                                                                                           | g  | cod                |
|-------------------------------------------------------------------------------------------|----|--------------------|
|  CAM Q | 87 | <b>030RSLNQ2F1</b> |

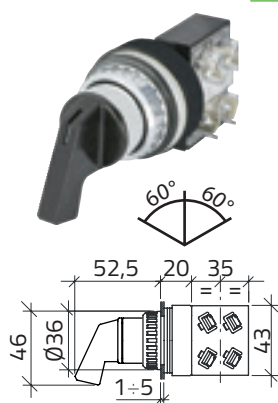
### 5 posizioni / 5 positions

|                                                                                           | g  | cod                |
|-------------------------------------------------------------------------------------------|----|--------------------|
|  CAM R | 87 | <b>030RSLNR2F1</b> |
|  CAM V | 87 | <b>030RSLNV2F1</b> |

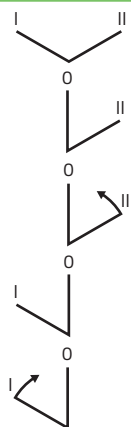
# Selettori a leva Ø30

## Lever selector switches Ø30

Cercare la combinazione di schemi a pag. 26 / See the diagram combination on page 26

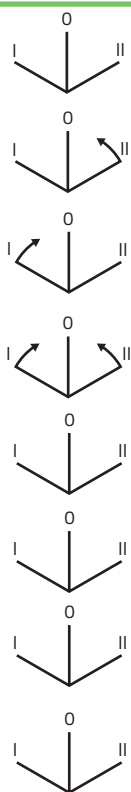


### 2 posizioni / 2 positions



|       | g   | cod               |
|-------|-----|-------------------|
| CAM A | 102 | <b>030SLNAF1</b>  |
| CAM B | 102 | <b>030SLNBF1</b>  |
| CAM B | 102 | <b>030SLNBF1D</b> |
| CAM C | 102 | <b>030SLNCF1</b>  |
| CAM C | 102 | <b>030SLNCF1S</b> |

### 3 posizioni / 3 positions



|       | g   | cod                |
|-------|-----|--------------------|
| CAM O | 102 | <b>030SLNO2F1</b>  |
| CAM O | 102 | <b>030SLNO2F1D</b> |
| CAM O | 102 | <b>030SLNO2F1S</b> |
| CAM O | 102 | <b>030SLNO2F1C</b> |
| CAM T | 102 | <b>030SLNT2F1</b>  |
| CAM S | 102 | <b>030SLNSF1</b>   |
| CAM P | 102 | <b>030SLNPF1</b>   |
| CAM F | 102 | <b>030SLNFF1</b>   |

### 4 posizioni / 4 positions



|       | g   | cod               |
|-------|-----|-------------------|
| CAM Q | 102 | <b>030SLNQ2F1</b> |

### 5 posizioni / 5 positions



|       | g   | cod               |
|-------|-----|-------------------|
| CAM R | 102 | <b>030SLNR2F1</b> |
| CAM V | 102 | <b>030SLNV2F1</b> |

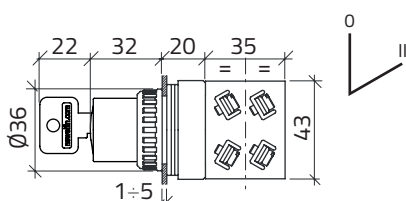


# Selettori a chiave Ø30

## Key selector switches Ø30

Cercare la combinazione di schemi a pag. 26 / See the diagram combination on page 26

## 2 posizioni / 2 positions



## CAM A

g

k

cod

k

cod

148



030SCAF1

148



030SCAF12

148



030SCAF14

## CAM B

148



030SCBF1



030SCBF1D

148



030SCBF14

148



030SCBF12

## CAM C

148



030SCCF1



030SCCF1S

148



030SCCF14

148



030SCCF12

## 3 posizioni / 3 positions

g

k

cod

k

cod

## CAM O

148



030SC02F1



030SC02F1C

148



030SC02F13



030SC02F1D

148



030SC02F15



030SC02F1D2

148



030SC02F17



030SC02F1D3

148



030SC02F12



030SC02F1S3

148



030SC02F14



030SC02F1S

148



030SC02F16



030SC02F1S4

## CAM T

148



030SCT2F1



030SCT2F1C

148



030SCT2F13



030SCT2F1D

148



030SCT2F15



030SCT2F1D3

148



030SCT2F17



030SCT2F1D2

148



030SCT2F14

148



030SCT2F16



# Selettori a chiave Ø30

## Key selector switches Ø30

Cercare la combinazione di schemi a pag. 26 / See the diagram combination on page 26

### Chiavi speciali Special key



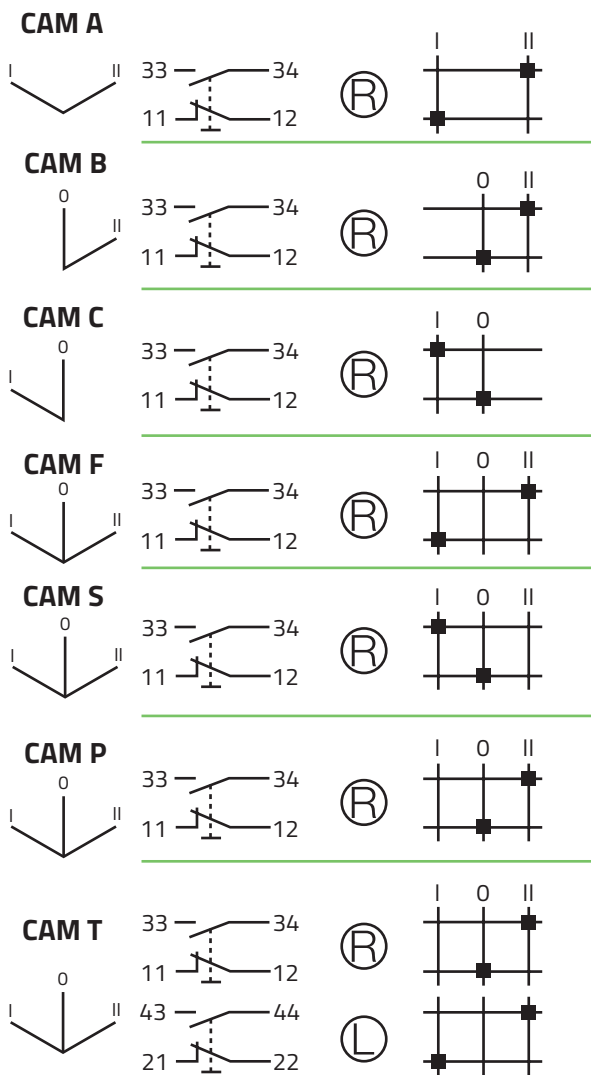
Chiave standard 3095, per chiavi speciali far seguire al codice del selettore il suffisso  
Standard key 3095, for special keys complete the selector code with the suffix

|                    | <b>c</b> | <b>suf</b> |
|--------------------|----------|------------|
| ● Nero / Black     | 73034    | <b>K34</b> |
| ● Rosso / Red      | 73037    | <b>K37</b> |
| ● Giallo / Yellow  | 73033    | <b>K33</b> |
| ● Blu / Blue       | 73038    | <b>K38</b> |
| ● Arancio / Orange | 73040    | <b>K40</b> |
|                    | 3353     | <b>K53</b> |
|                    | 9901     | <b>K01</b> |
|                    | 9902     | <b>K02</b> |
|                    | 9903     | <b>K03</b> |
|                    | 9904     | <b>K04</b> |
|                    | 9905     | <b>K05</b> |
|                    | 9910     | <b>K10</b> |
|                    | 9916     | <b>K16</b> |
|                    | 9919     | <b>K19</b> |

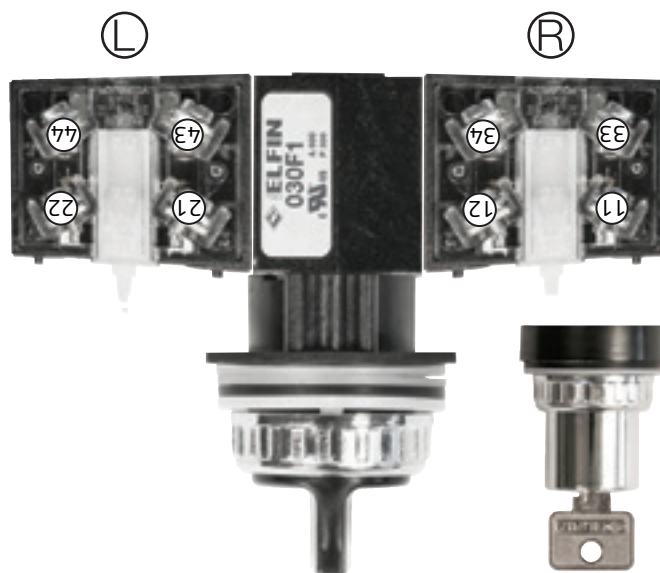
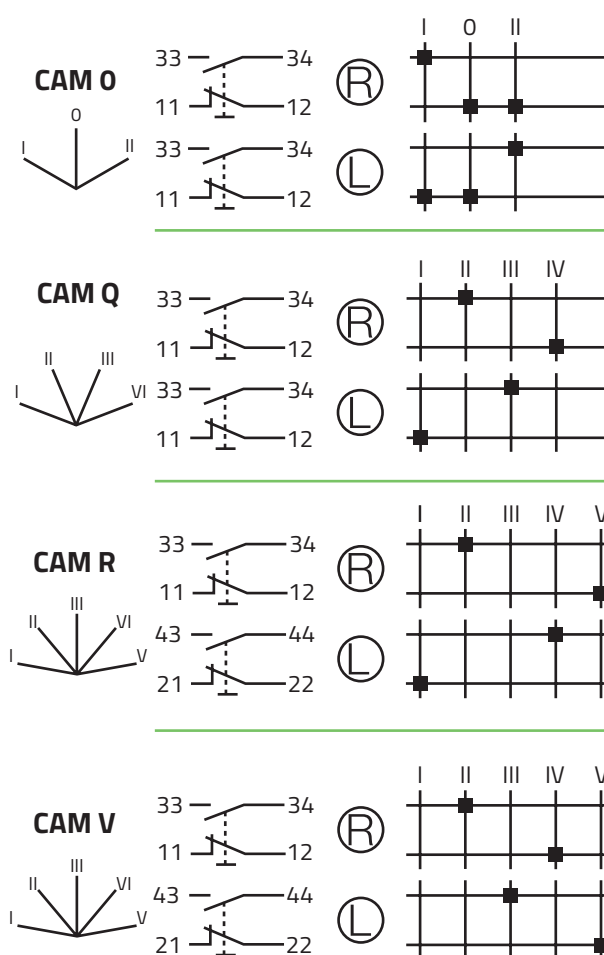
# Combinazione di schemi selettori

## Diagram combination for selector switches

### Selettori Selector switches



### Selettori Selector switches

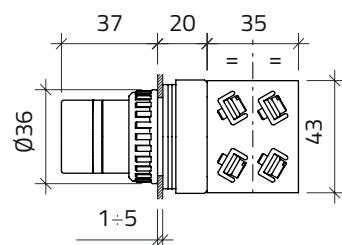
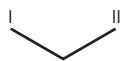


# Pulsanti selettori Ø30

## Push-button selector switches Ø30

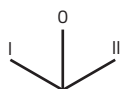
Vedi schemi a pag. 28/29 / See the diagram combination on page 28/29

### 2 posizioni / 2 positions



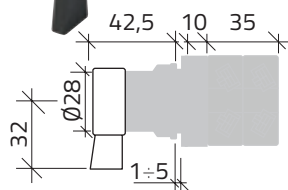
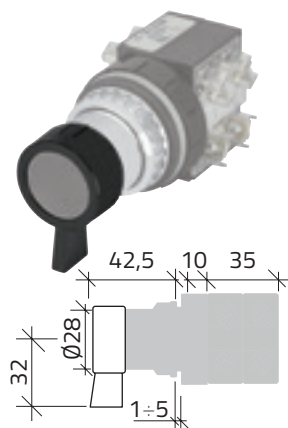
|        | g   | cod      |
|--------|-----|----------|
| CAM 01 | 166 | 030PSN01 |
| CAM 02 | 166 | 030PSN02 |
| CAM 03 | 166 | 030PSN03 |
| CAM 04 | 166 | 030PSN04 |
| CAM 05 | 166 | 030PSN05 |
| CAM 06 | 166 | 030PSN06 |
| CAM 11 | 166 | 030PSN11 |
| CAM 12 | 166 | 030PSN12 |
| CAM 13 | 166 | 030PSN13 |
| CAM 21 | 166 | 030PSN21 |
| CAM 22 | 166 | 030PSN22 |
| CAM 31 | 166 | 030PSN31 |
| CAM 32 | 166 | 030PSN32 |
| CAM 33 | 166 | 030PSN33 |
| CAM 34 | 166 | 030PSN34 |
| CAM 35 | 166 | 030PSN35 |
| CAM 36 | 166 | 030PSN36 |

### 3 posizioni / 3 positions



|        | g   | cod      |
|--------|-----|----------|
| CAM 51 | 166 | 030PSN51 |
| CAM 52 | 166 | 030PSN52 |
| CAM 53 | 166 | 030PSN53 |
| CAM 54 | 166 | 030PSN54 |
| CAM 55 | 166 | 030PSN55 |
| CAM 14 | 166 | 030PSN14 |
| CAM 15 | 166 | 030PSN15 |
| CAM 56 | 166 | 030PSN56 |
| CAM 57 | 166 | 030PSN57 |
| CAM 23 | 166 | 030PSN23 |
| CAM 25 | 166 | 030PSN25 |

### Leva per pulsante selettore Lever for push-button selector switch

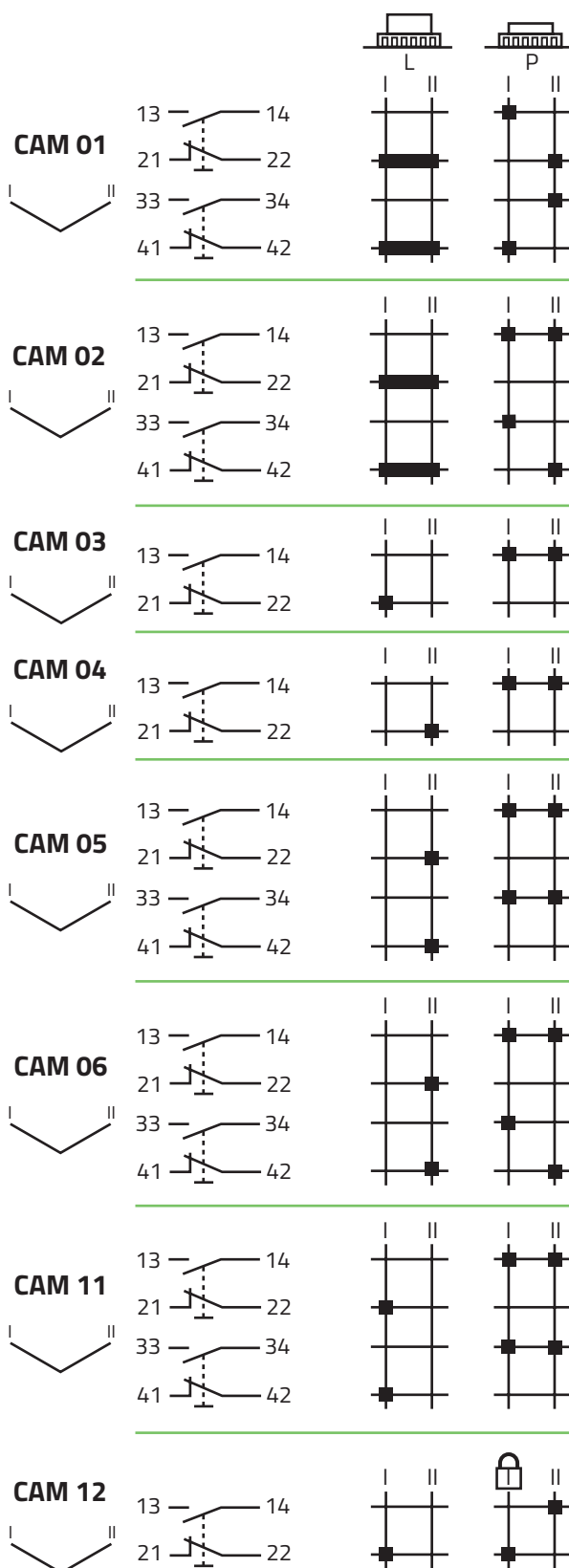


|  | g | cod    |
|--|---|--------|
|  | 6 | 030LPS |

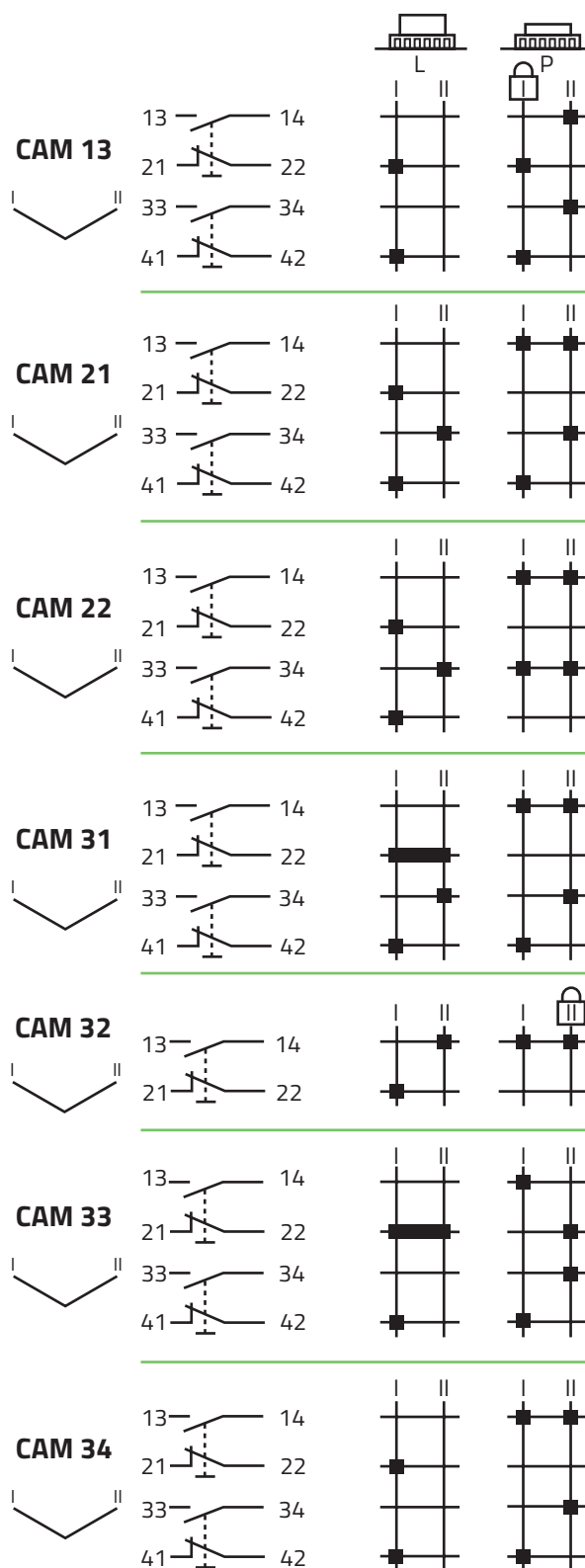
# Combinazione di schemi pulsanti selettori

## Diagram combination for push-button selector switches

### Pulsanti selettori Push-button selector switches



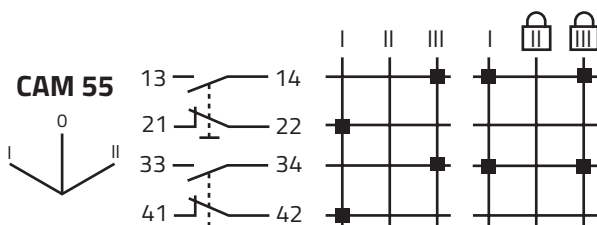
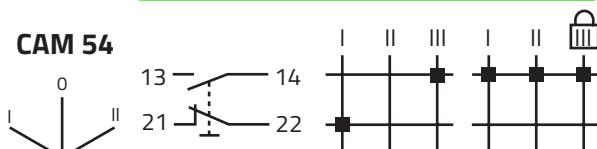
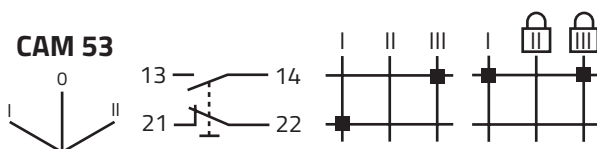
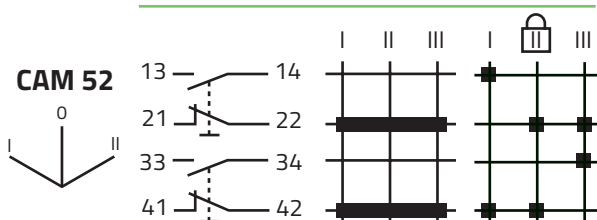
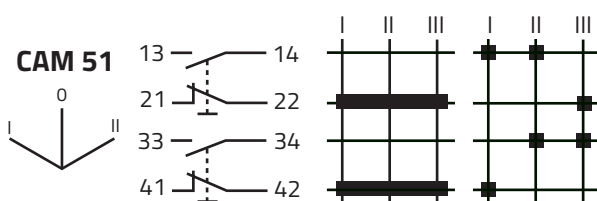
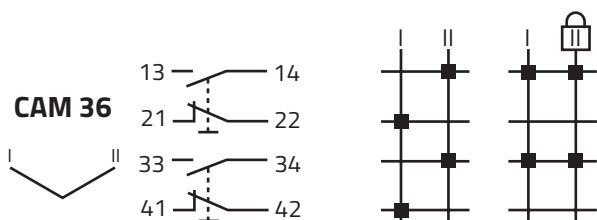
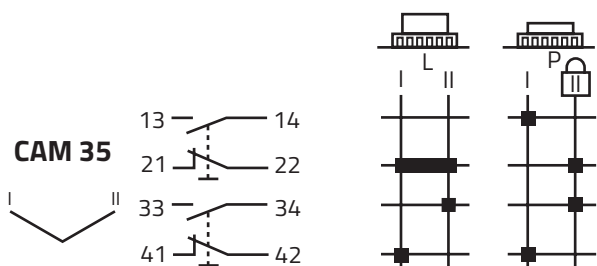
### Pulsanti selettori Push-button selector switches



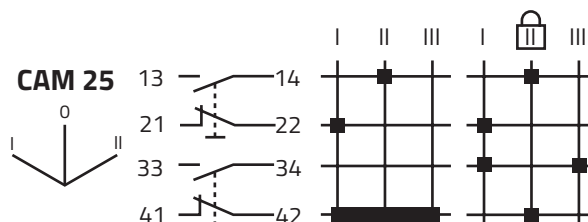
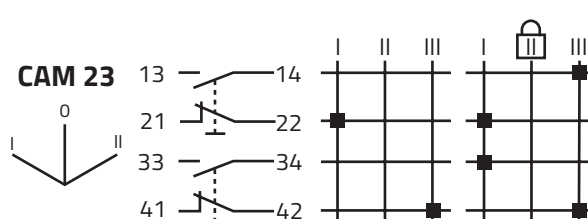
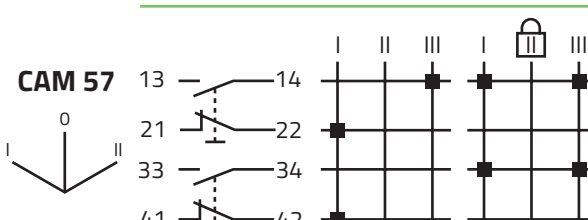
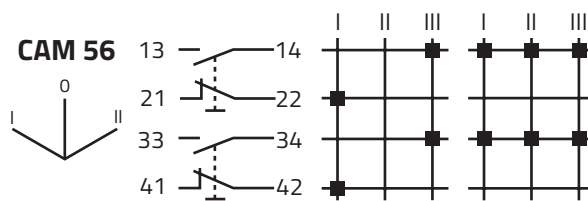
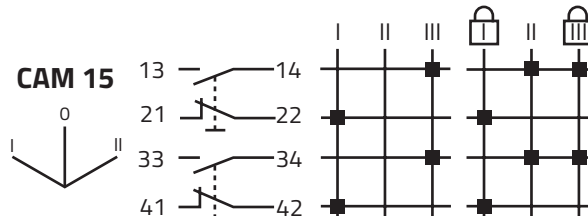
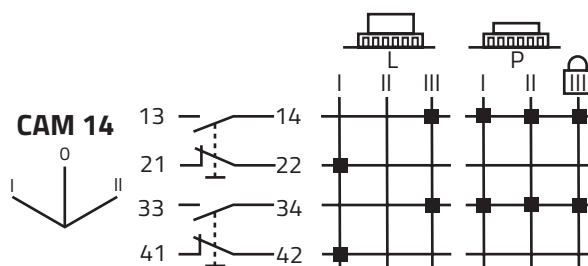
# Combinazione di schemi pulsanti selettori

## Diagram combination for push-button selector switches

### Pulsanti selettori Push-button selector switches



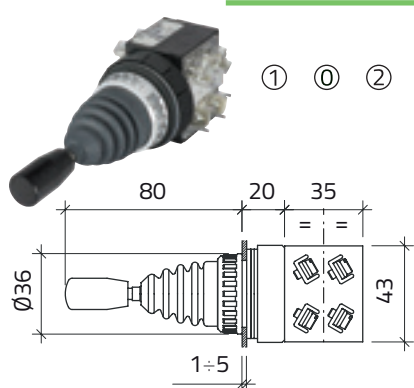
### Pulsanti selettori Push-button selector switches



# Manipolatori Ø30

## Joysticks Ø30

Vedi schemi a pag. 32 / See the diagram combination on page 32



### 2 posizioni / 2 positions

|   |   |     | g                          | cod |         |
|---|---|-----|----------------------------|-----|---------|
| ① | ② | 1-2 | permanenti / maintained    | 140 | 030MPPN |
|   |   | 1-2 | temporanea / spring return | 140 | 030MTTN |
|   |   | 1   | temporanea / spring return |     |         |
|   |   | 2   | permanente / maintained    | 140 | 030MTPN |

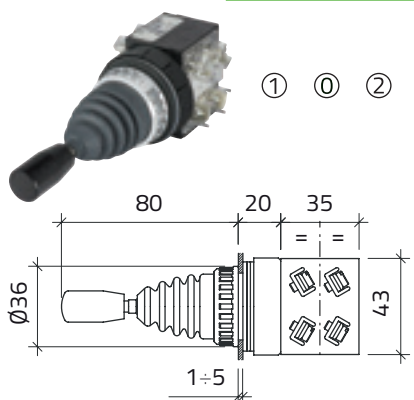
### 2 posizioni / 2 positions

| 2 posizioni / 2 positions |   |   |                            | g   | cod       |
|---------------------------|---|---|----------------------------|-----|-----------|
| ①                         | ② | 1 | permanente / maintained    |     |           |
|                           |   | 2 | permanente / maintained    | 140 | 030MPN2F1 |
|                           |   | 1 | permanente / maintained    |     |           |
|                           |   | 2 | temporanea / spring return | 140 | 030MTN2F1 |

### 4 posizioni / 4 positions

| 4 posizioni / 4 positions |   |         |                            | g   | cod       |
|---------------------------|---|---------|----------------------------|-----|-----------|
|                           | ③ | 1-2-3-4 | permanenti / maintained    | 140 | 030MPPPPN |
| ①                         | ② | 1-2-3-4 | temporanea / spring return | 140 | 030MTTTTN |
|                           | ④ | 1-2     | temporanea / spring return |     |           |
|                           |   | 3-4     | permanenti / maintained    | 140 | 030MPTTPN |
|                           |   | 1-3     | permanenti / maintained    |     |           |
|                           |   | 4-2     | temporanea / spring return | 140 | 030MPPTTN |
|                           |   | 1-2-3   | permanenti / maintained    |     |           |
|                           |   | 4       | temporanea / spring return | 40  | 030MPPPTN |
|                           |   | 3       | permanente / maintained    |     |           |
|                           |   | 1-4-2   | temporanea / spring return | 40  | 030MPTTTN |

### Manipolatori speciali a 2 posizioni Special joysticks, 2 positions



| Special joysticks, 2 positions |   |     |                            | g   | cod      |
|--------------------------------|---|-----|----------------------------|-----|----------|
| ①                              | ② | 1-2 | permanenti / maintained    | 140 | 030MPPRN |
|                                |   | 1-2 | temporanea / spring return | 140 | 030MTTRN |

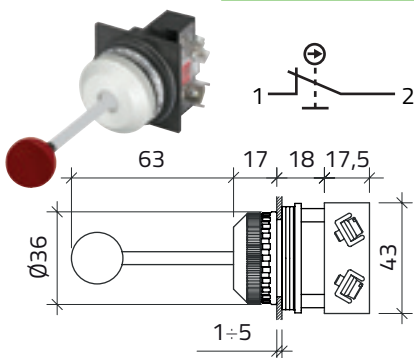


# Manipolatori Ø30

## Joysticks Ø30

### Manipolatori d'emergenza

### Emergency stop joysticks



Svolge la sua azione di comando in qualsiasi direzione venga manovrata la leva.  
It operates in any direction the lever is moved

● Rosso / Red

g

cod

100

030MERFC

2 posizioni temporanee

2 spring return



Microinterruttori 1 - 2

Microswitches 1-2

g

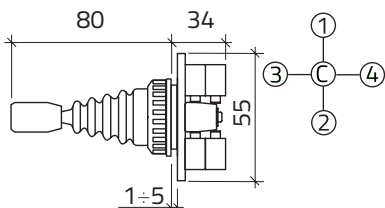
cod

190

030M2T22

4 posizioni temporanee

4 spring return



Microinterruttori 1 - 2 - 3 - 4

Microswitches 1-2 - 3 - 4

g

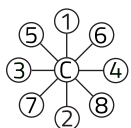
cod

208

030M4T44

8 posizioni temporanee

8 spring return



Microinterruttori 1 - 2 - 3 - 4

Microswitches 1-2 - 3 - 4

g

cod

208

030M8T44

### Microinterruttore aggiuntivo

### Additional microswitch



1 microinterruttore con viti lunghe

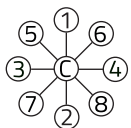
1 microswitch with long screws

g

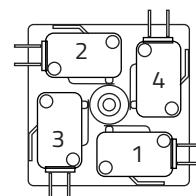
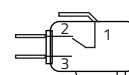
cod

10

030M11



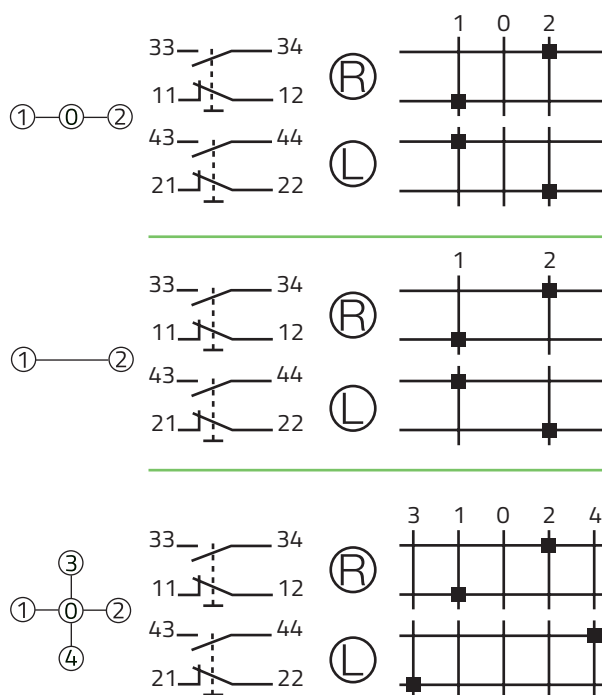
|   | 8 | 6 | 4 | 2 | 0 | 1 | 3 | 5 | 7 |
|---|---|---|---|---|---|---|---|---|---|
| 1 |   |   |   |   |   |   |   |   |   |
| 2 |   |   |   |   |   |   |   |   |   |
| 3 |   |   |   |   |   |   |   |   |   |
| 4 |   |   |   |   |   |   |   |   |   |



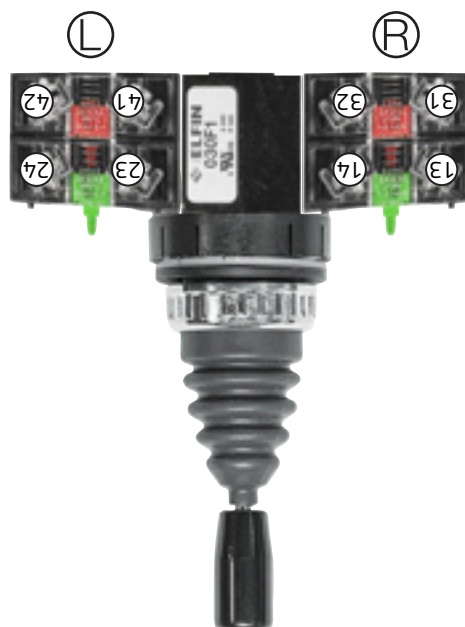
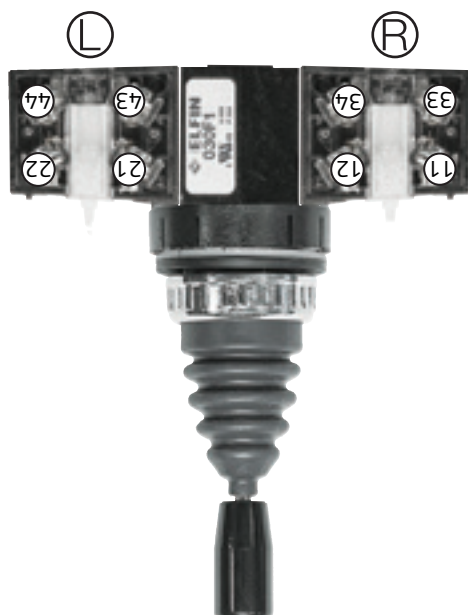
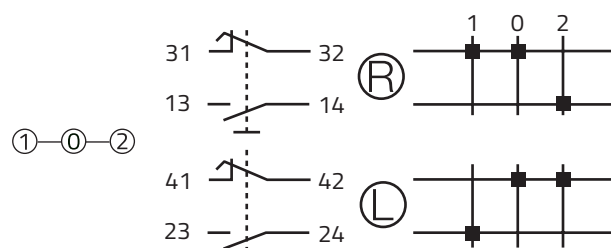
# Combinazione di schemi manipolatori

## Diagram combination

### Manipolatore Joystick



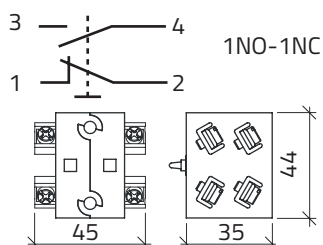
### Manipolatore schema speciale Joystick, special diagram



# Elementi di contatto

## Contact blocks

### Elementi di contatti / Contact blocks



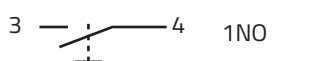
g

n

cod

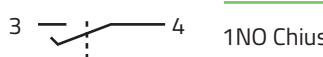
32

030F1



16

030FA



16

030FAA



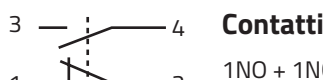
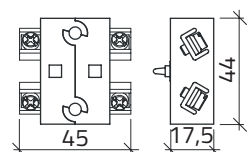
16

030FC



16

030FCR

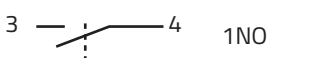
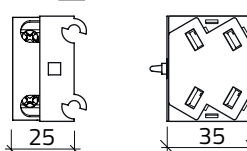


### Contatti con protezione / Contact block with protections

38

2

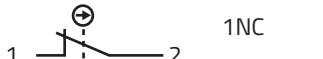
030F1P



23

2

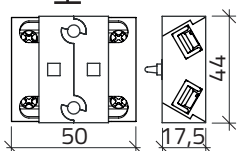
030FAP



23

2

030FCP



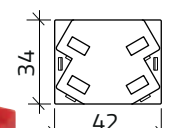
### Protezioni elementi di contatto

#### Contact block protections

g

n

cod

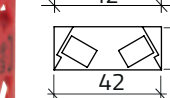


Coperchio protezione contatto NO + NC  
Cover for contact block NO + NC

6

10

030PF1



Coperchio protezione contatto NO  
Cover for contact block NO

4

10

030PFA



Coperchio protezione contatto NC  
Cover for contact block NC

4

10

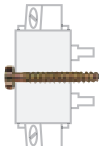
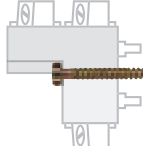
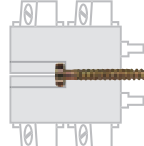
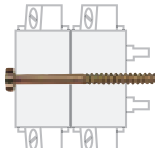
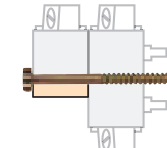
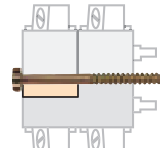
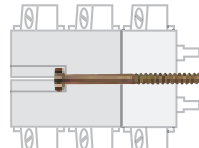
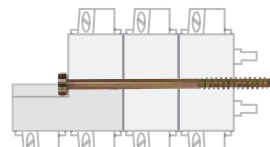
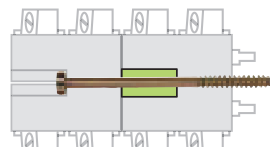
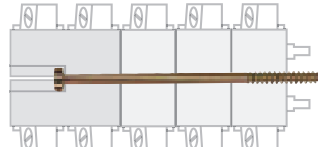
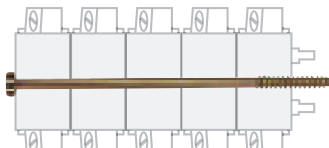
030PFC

# Elementi di contatto Ø30

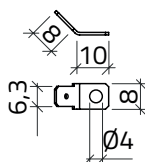
## Contact blocks Ø30

### Viti per elementi di contatto

### Screws for contact blocks

|                                                                                                                                                                                                                                                                                                                                         | g   | n  | cod           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|---------------|
|                                                                                      | 2,0 | 10 | <b>030V28</b> |
|     | 3,5 | 10 | <b>030V46</b> |
|                                                                                                                                                                     | 4,0 | 10 | <b>030V64</b> |
|                                                                                                                                                                   | 5,5 | 10 | <b>030V80</b> |
|                                                                                                                                                                   | 7,5 | 10 | <b>030V98</b> |
|  Elemento di contatto 030FA / FC<br>Contact block 030FA / FC                                                                                                                                                                                         | 0,5 | 10 | <b>030IC</b>  |
|  Elemento di contatto 030F1<br>Contact block 030F1                                                                                                                                                                                                   | 1,0 | 10 | <b>030IO</b>  |
|  Inserto tipo C<br>Insert type C                                                                                                                                                                                                                     |     |    |               |
|  Inserto tipo O<br>Insert type O                                                                                                                                                                                                                     |     |    |               |

### Terminale Faston / Faston terminal



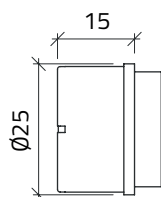
Per elementi di comando e portalampada.  
Idoneo per faston femmina 6,3 x 0,8  
For contact blocks and lampholders  
Suitable for female Faston terminals 6,3x0,8

| g | n  | cod          |
|---|----|--------------|
| 1 | 10 | <b>030TF</b> |

# Accessori Ø30

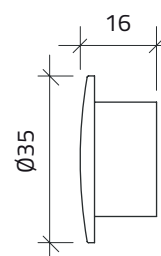
## Accessories Ø30

### Gemme Lenses



#### Gemme per pulsanti sporgenti luminosi Lenses for projecting illuminated push-buttons

|                             | g | cod      |
|-----------------------------|---|----------|
| ● Rosso / Red               | 5 | 030RLAR  |
| ● Verde / Green             | 5 | 030RLAV  |
| ● Giallo / Yellow           | 5 | 030RLAG  |
| ● Blu / Blue                | 5 | 030RLABL |
| ○ Bianco / White            | 5 | 030RLAB  |
| ○ Trasparente / Transparent | 5 | 030RLAI  |
| ● Arancio / Orange          | 5 | 030RLAA  |

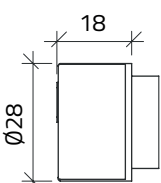


#### Gemme per pulsanti a fungo luminosi Ø35 Lenses for illuminated mushroom push-buttons Ø35

No su pulsante con guardia completa / Not suitable for push-button with full guard

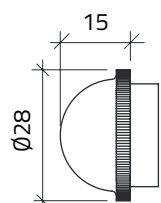
|                             | g | cod      |
|-----------------------------|---|----------|
| ● Rosso / Red               | 6 | 030RLFR  |
| ● Verde / Green             | 6 | 030RLFV  |
| ● Giallo / Yellow           | 6 | 030RLFG  |
| ● Blu / Blue                | 6 | 030RLFBL |
| ○ Bianco / White            | 6 | 030RLFB  |
| ○ Trasparente / Transparent | 6 | 030RLFI  |
| ● Arancio / Orange          | 6 | 030RLFAR |

#### Manopole per selettori luminosi Knobs for illuminated selector switches



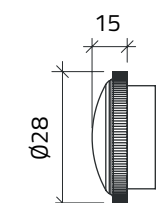
|                             | g | cod     |
|-----------------------------|---|---------|
| ● Rosso / Red               | 4 | 030GMR  |
| ● Verde / Green             | 4 | 030GMV  |
| ● Giallo / Yellow           | 4 | 030GMG  |
| ● Blu / Blue                | 4 | 030GMBL |
| ○ Bianco / White            | 4 | 030GMB  |
| ○ Trasparente / Transparent | 4 | 030GMI  |
| ● Arancio / Orange          | 4 | 030GMA  |

#### Gemme sferiche per lampade spia Dome lenses for pilot lights



|                             | g | cod      |
|-----------------------------|---|----------|
| ● Rosso / Red               | 7 | 030GLNR  |
| ● Verde / Green             | 7 | 030GLNV  |
| ● Giallo / Yellow           | 7 | 030GLNG  |
| ● Blu / Blue                | 7 | 030GLNBL |
| ○ Bianco / White            | 7 | 030GLNB  |
| ○ Trasparente / Transparent | 7 | 030GLNI  |
| ● Arancio / Orange          | 7 | 030GLNA  |

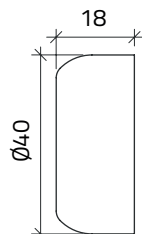
#### Gemme piatte con diffusore per lampade spia Flat lenses with diffuser for pilot lights



|                             | g | cod      |
|-----------------------------|---|----------|
| ● Rosso / Red               | 4 | 030GLSR  |
| ● Verde / Green             | 4 | 030GLSV  |
| ● Giallo / Yellow           | 4 | 030GLSG  |
| ● Blu / Blue                | 4 | 030GLSBL |
| ○ Bianco / White            | 4 | 030GLSB  |
| ○ Trasparente / Transparent | 4 | 030GLSI  |
| ● Arancio / Orange          | 4 | 030GLSA  |

# Accessori Ø30

## Accessories Ø30



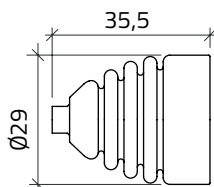
**Cappuccio protettivo per pulsanti tipo 030RI**  
**Protective cap for push-buttons type 030RI**

○ Trasparente / Clear

g

22

cod

**030CG**

**Soffietto per manipolatore**  
**Joystick bellow**

● RAL 7016

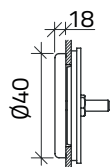
g

5

n

5

cod

**030SM**

**Tappo di chiusura / Hole plug**

● RAL 7035

● RAL 7016

g

38

38

cod

**030CP****030CP16**

# Accessori

## Accessories

### Accessori di protezione / Protective guards

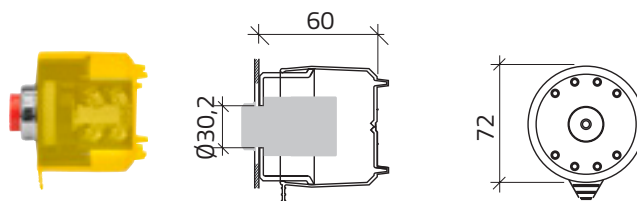


Cappuccio di protezione elementi di contatto Ø 30  
Protective cap for contact blocks Ø 30

g

cod

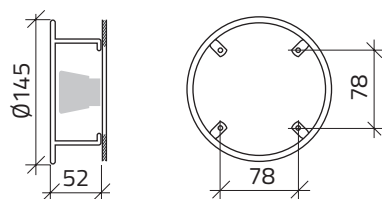
58

**030CPC30**

Contro l'azionamento accidentale senza impedire l'accessibilità dell'attuatore  
Against accidental operation without hindering the access to the push-button

● Giallo / Yellow

150

**020SPE**

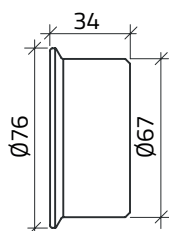
● Grigio / Grey

35

**030GP30**

● Giallo / Yellow

35

**030GPG30**

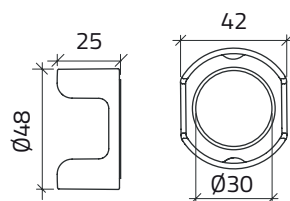
● Grigio / Grey

150

**030GPF42**

● Giallo / Yellow

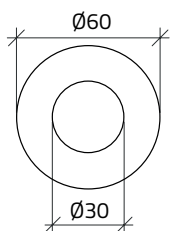
150

**030GPF42G**

# Targhette Ø30

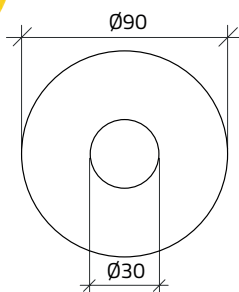
## Legend plates Ø30

### Targhette emergenza Emergency legend plates



#### Ø60

|                                  | g | cod    |
|----------------------------------|---|--------|
| Senza testo / Blank              | 2 | 030D0  |
| Arresto emergenza                | 2 | 030D21 |
| Emergency stop                   | 2 | 030D23 |
| Arresto emergenza Emergency stop | 2 | 030D32 |



#### Ø90

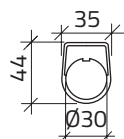
|                     |     |         |
|---------------------|-----|---------|
| Senza testo / Blank | 5,3 | 030DD0  |
| Arresto emergenza   | 5,3 | 030DD21 |
| Emergency stop      | 5,3 | 030DD23 |



# Targhette Ø30

## Legend plates Ø30

## Targhette neutre / Blank legend plates

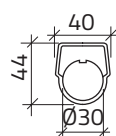


g

cod

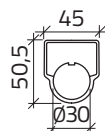
1

030TN1-0



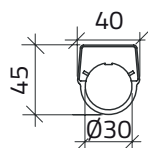
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030TN1A



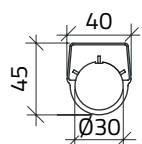
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030TN4-0



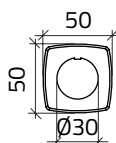
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030TN2-0



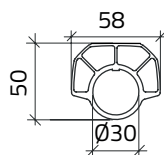
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030TN3-0



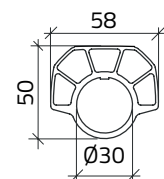
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030TN5-0



1

030TN8-0



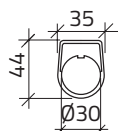
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030TN9-0

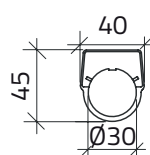
# Targhette Ø30

## Legend plates Ø30

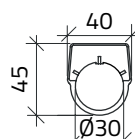
### Targhette con diciture Legend plates with texts



|                     | g | cod       |
|---------------------|---|-----------|
| Marcia              | 1 | 030TN1-1  |
| Arresto             | 1 | 030TN1-2  |
| Avanti              | 1 | 030TN1-3  |
| Indietro            | 1 | 030TN1-4  |
| Salita              | 1 | 030TN1-5  |
| Discesa             | 1 | 030TN1-6  |
| Destra              | 1 | 030TN1-7  |
| Sinistra            | 1 | 030TN1-8  |
| Apri                | 1 | 030TN1-9  |
| Chiudi              | 1 | 030TN1-10 |
| Lento               | 1 | 030TN1-11 |
| Veloce              | 1 | 030TN1-12 |
| Avviamento          | 1 | 030TN1-13 |
| Ciclo               | 1 | 030TN1-14 |
| Ciclo manuale       | 1 | 030TN1-15 |
| Arresto ciclo       | 1 | 030TN1-16 |
| Inizio ciclo        | 1 | 030TN1-17 |
| Ciclo automatico    | 1 | 030TN1-18 |
| Ripristino ciclo    | 1 | 030TN1-19 |
| Inserito            | 1 | 030TN1-20 |
| Corrente inserita   | 1 | 030TN1-21 |
| Disinserito         | 1 | 030TN1-22 |
| Emergenza           | 1 | 030TN1-23 |
| Lavoro              | 1 | 030TN1-24 |
| Tensione in linea   | 1 | 030TN1-25 |
| Arresto motore      | 1 | 030TN1-26 |
| Avviamento motore   | 1 | 030TN1-27 |
| Corr. alla macchina | 1 | 030TN1-28 |



|            |             |   |           |
|------------|-------------|---|-----------|
| Apri       | chiudi      | 1 | 030TN2-1  |
| Automatico | semiautom.  | 1 | 030TN2-2  |
| Automatico | manuale     | 1 | 030TN2-3  |
| Escluso    | incluso     | 1 | 030TN2-4  |
| Inserito   | disinserito | 1 | 030TN2-5  |
| 0          | 1           | 1 | 030TN2-6  |
| Ciclo      |             | 1 | 030TN2-7  |
| manuale    | autom.      | 1 | 030TN2-8  |
| Ciclo      |             | 1 | 030TN2-9  |
| automatico | semiautom.  | 1 | 030TN2-10 |
| Corrente   |             | 1 | 030TN2-11 |
| inserita   | disinserita | 1 | 030TN2-12 |
| Marcia     | arresto     | 1 | 030TN2-13 |



|         |   |        |   |          |
|---------|---|--------|---|----------|
| 0       | 1 | 2      | 1 | 030TN3-1 |
| 1       | 0 | 2      | 1 | 030TN3-2 |
| Ciclo   |   |        |   |          |
| manuale | 0 | autom. | 1 | 030TN3-3 |

# Lampadine

## Lamps

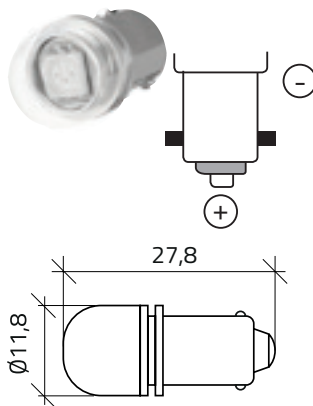
### BA9S Led luce fissa BA9S Steady light led lamps



|                   | g | n | cod           |
|-------------------|---|---|---------------|
| <b>6V AC-DC</b>   |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR6    |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG6    |
| ● Verde / Green   | 2 | 5 | 010BA9SLV6    |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL6   |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB6    |
| <b>12V AC-DC</b>  |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR12   |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG12   |
| ● Verde / Green   | 2 | 5 | 010BA9SLV12   |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL12  |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB12   |
| <b>24V AC-DC</b>  |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR24   |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG24   |
| ● Verde / Green   | 2 | 5 | 010BA9SLV24   |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL24  |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB24   |
| <b>36V AC-DC</b>  |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR36   |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG36   |
| ● Verde / Green   | 2 | 5 | 010BA9SLV36   |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL36  |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB36   |
| <b>48V AC-DC</b>  |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR48   |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG48   |
| ● Verde / Green   | 2 | 5 | 010BA9SLV48   |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL48  |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB48   |
| <b>130V AC-DC</b> |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR110  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG110  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV110  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL110 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB110  |
| <b>240V AC-DC</b> |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR240  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG240  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV240  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL240 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB240  |
| <b>400V AC-DC</b> |   |   |               |
| ● Rosso / Red     | 2 | 5 | 010BA9SLR400  |
| ● Giallo / Yellow | 2 | 5 | 010BA9SLG400  |
| ● Verde / Green   | 2 | 5 | 010BA9SLV400  |
| ● Blu / Blue      | 2 | 5 | 010BA9SLBL400 |
| ○ Bianco / White  | 2 | 5 | 010BA9SLB400  |

# Lampadine Lamps

## Led <60V non polarizzati 110-240 V polarizzati Led <60V non-polarized 110-240 V polarized



Led luce lampeggiante / Led flashing light

Led ultraluminoso tensioni  $\pm 15\%$  non polarizzata / Ultra-bright led voltages  $\pm 15\%$  non-polarized  
AC-DC 6 12 24 48 110 AC 220 mA 30 20 14 7 5 16**24V AC-DC**

● Rosso / Red

2

**010BA9SLLR24****130V AC-DC**

● Rosso / Red

2

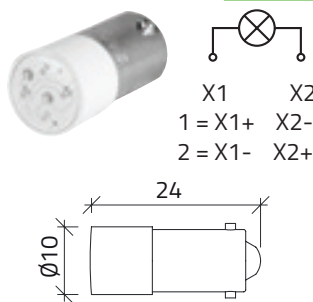
**010BA9SLLR110****240V AC-DC**

● Rosso / Red

2

**010BA9SLLR220**

## Nuove lampade due colori , tecnologia led alta luminosità New bi-colour led lamps, high brightness

**24V DC 15mA**

1 2

● Verde, rosso / Green, red

2

**010BA9SLVR24**

● Verde, giallo / Green, yellow

2

**010BA9SLVG24**

● Blu, rosso / Blue, red

2

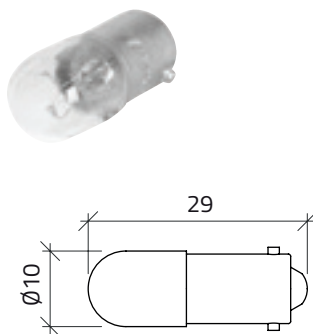
**010BA9SLBLR24**

● Blu, giallo / Blue, yellow

2

**010BA9SLBLG24**

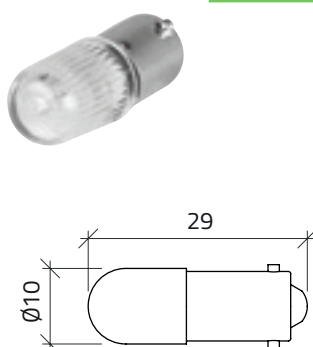
## BA9S Lampadine ad incandescenza BA9S Incandescent lamps



### Lampadine BA9S ad incandescenza / BA9S incandescent lamps

|      |       |     |    |                        |
|------|-------|-----|----|------------------------|
| 6V   | 0,6W  | 1,3 | 10 | <b>010BA9S6V-0.6W</b>  |
| 24V  | 1,2 w | 1,3 | 10 | <b>010BA9S24V-1.2W</b> |
| 24V  | 3W    | 1,3 | 10 | <b>010BA9S24V-3W</b>   |
| 30V  | 1,2W  | 1,3 | 10 | <b>010BA9S30V-1.2W</b> |
| 30V  | 3W    | 1,3 | 10 | <b>010BA9S30V-3W</b>   |
| 48V  | 1,2W  | 1,3 | 10 | <b>010BA9S48V-1.2W</b> |
| 60V  | 1,2 w | 1,3 | 10 | <b>010BA9S60V-1.2W</b> |
| 60V  | 3W    | 1,3 | 10 | <b>010BA9S60V-3W</b>   |
| 110V | 1,9W  | 1,3 | 10 | <b>010BA9S130V-1.9</b> |
| 220V | 2W    | 1,3 | 10 | <b>010BA9S220V-2W</b>  |

## BA9S Lampadine led / BA9S led lamps

**Neon AC**

● Arancio / Orange

65V 0,05W

2,3

10

**010BA9SN65**

● Arancio / Orange

130V 0,1W

2,3

10

**010BA9SN110**

● Verde / Green

130V 0,1W

2,3

10

**010BA9NV110**

● Arancio / Orange

240V 0,3W

2,3

10

**010BA9SN220**

● Verde / Green

240V 0,3W

2,3

10

**010BA9NV220**

● Arancio / Orange

400V 0,5W

2,3

10

**010BA9SN380**

● Verde / Green

400V 0,5W

2,3

10

**010BA9NV380**





# 040-080

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**CONTENITORI  
CARATTERISTICHE TECNICHE**

**ENCLOSURES  
TECHNICAL DATA**

080 040





## ESTETICA

La New Elfin nella realizzazione dei suoi progetti tiene in particolare conto, ovviamente oltre agli aspetti tecnici, il design e l'estetica, sempre in funzione della perfetta integrazione con le apparecchiature in cui i contenitori andranno ad essere installati. Inoltre ci sono grandi possibilità di personalizzazione dei prodotti su specifiche dei clienti.

## THE AESTHETICS

New Elfin, while projecting, obviously considers all the technical aspects but also the design and the aesthetics, so as to always perfectly integrate the equipment that the enclosure will house. Moreover, there are many possibilities to customize the products according to customer's specifications.

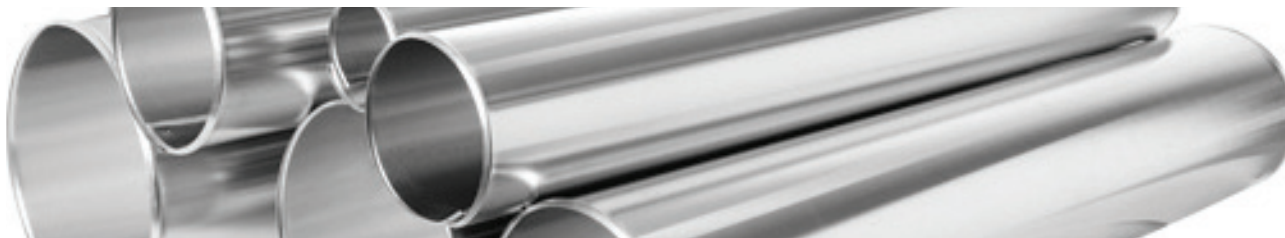


## ALLUMINIO

Contenitori robusti e leggeri adatti a tutte le applicazioni, si dividono in: **M4** collaudata serie di contenitori previsti in svariate realizzazioni. **M10** scatole dove robustezza, design, innovazione e versatilità ne caratterizzano il progetto. **M5** contenitori di grandi dimensioni, idonei per accogliere PC industriali, visualizzatori, pulpiti di comando, con spessori rilevanti, particolarmente adatti dove le caratteristiche meccaniche sono prioritarie. **Cassette di derivazione** una gamma esauriente e razionale di contenitori in grado di soddisfare gli installatori più esigenti.

## ALUMINIUM

Strong and lightweight enclosures, suitable for any use; they are divided into: **M4** a tested set of enclosures manufactured in different models. **M10** where strength, design, innovation and versatility characterise the project. **M5** Enclosures of big dimensions, suitable to accommodate industrial PCs, display devices, control panels, with significant thicknesses, are particularly used where mechanical properties are a priority. **Junction Boxes**: a complete and rational line of enclosures capable of satisfying the most exigent installers.



## ACCIAIO INOX

Una attenta analisi di applicazioni in situazioni speciali ha stimolato la New Elfin a realizzare la serie di contenitori in acciaio inox dal design particolarmente accattivante e hi-tech; questi prodotti sono particolarmente adatti all'uso nei settori alimentare, farmaceutico, chimico ecc, con caratteristiche altamente performanti.

## STAINLESS STEEL

A careful analysis of applications in special situations induced New Elfin to develop this line of enclosures in stainless steel with a particularly attractive and hi-tech design; these products are particularly suitable for use in the food and beverage, pharmaceutical and chemical sectors, where high performance characteristics are required.



## TERMOPLASTICO

Questa gamma prevede diversi tipi di materiale termoplastico, due tipi di altezze, una vasta scelta di formati comprendenti soluzioni con coperchi trasparenti, con operatori, e con diverse opzioni di foratura inoltre è possibile realizzare piccoli quadri per automazione con l'assistenza e la garanzia del nostro ufficio tecnico.

## THERMOPLASTIC

This line provides different types of thermoplastic materials, two different heights, a large variety of sizes, including models with transparent lids, with operators and various hole options. It is possible to carry out small enclosures for automation with the help and assistance of our technical department.





### CONDIZIONI AMBIENTALI

La prima considerazione da fare è in quali condizioni ambientali viene installata l'apparecchiatura, se in esterno o in interno, con la possibilità di operare in ambienti quali : industrie farmaceutiche, chimiche, alimentari, fonderie, navali, agricole, ecc.

### ENVIRONMENTAL CONDITIONS

The first factor to think about is what environmental conditions are going to be where the equipment will be installed: outside or inside, and what type of industry will it be used in: pharmaceutical, chemical, food, casting, naval, agricultural, etc.



### TIPOLOGIA E APPLICAZIONE

Scegliere un contenitore appropriato è una fase determinante nello sviluppo di un progetto. È necessario procedere con una indagine sistematica, valutare con metodo le variabili di applicazione: dove installiamo la nostra apparecchiatura? In quali condizioni ambientali? Quale grado di protezione deve avere? Qual'è lo spazio a disposizione? Come dovrà essere allestita? Elaborando queste informazioni si arriva a definire il prodotto più adatto alle esigenze del progetto.

### TYPE AND APPLICATION

Choosing a right product is fundamental in a project development. A systematic survey and evaluation of all the application variables are required, such as where are you going to install the equipment ? In which environmental conditions will it be fitted? What protection degree? What is the available space? How will it be equipped...



### DIMENSIONI

Altro passo fondamentale è stabilire in anticipo le dimensioni dello spazio disponibile all'inserimento del contenitore o dei componenti. E' evidentemente spiacevole scoprire troppo tardi che tutto il nostro lavoro è da rifare per non aver controllato con cura i dettagli del progetto.

### SIZES

Another fundamental step is to find out ahead of time the dimensions of the space where the enclosure will be inserted with its components. Obviously, it is unpleasant to discover too late that you have to repeat all your work because you didn't take all the project details into account.



### ACCESSORI

Stabilite le premesse fondamentali possiamo operare la nostra scelta fra le varie opzioni senza dimenticare gli accessori e i componenti che vanno ad integrarsi nel contenitore per la realizzazione del progetto.

### THE ACCESSORIES

After defining all these fundamental elements, you can examine and choose among the various options, but don't forget the accessories and the components that have to be integrated in the enclosure to complete the project.

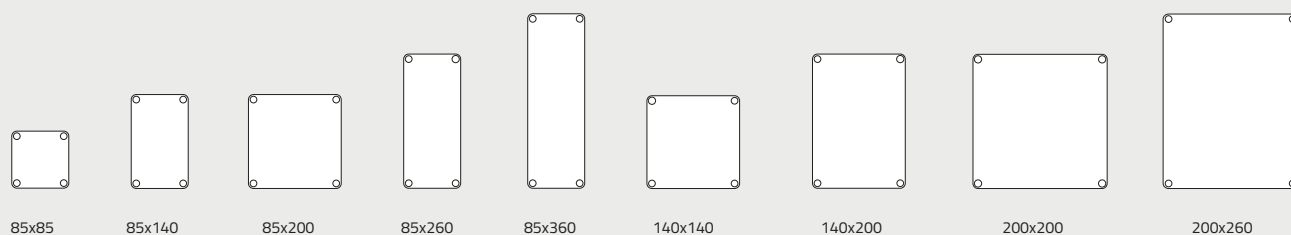


# Panorama dei formati

## Size overview

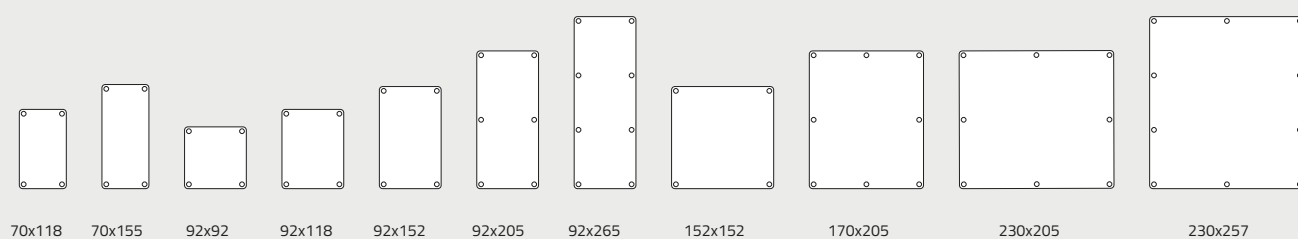
### Contenitori in alluminio M10- 8 formati - più di 100 modelli

#### Aluminium M10 enclosures - 8 sizes - more than 100 types



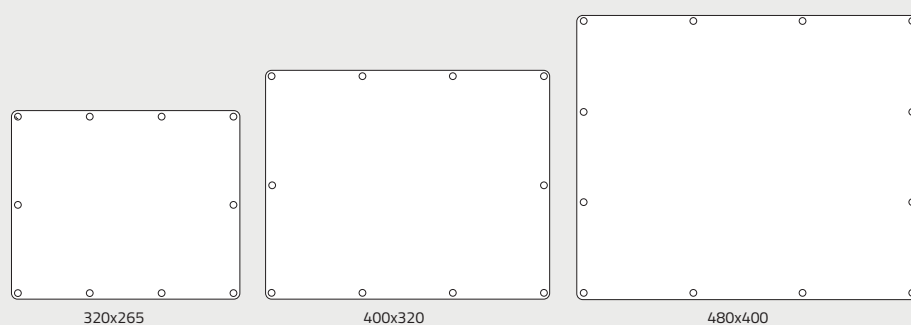
### Contenitori in alluminio M4 - 11 formati - più di 240 modelli

#### Aluminium M4 enclosures - 11 sizes - more than 240 types



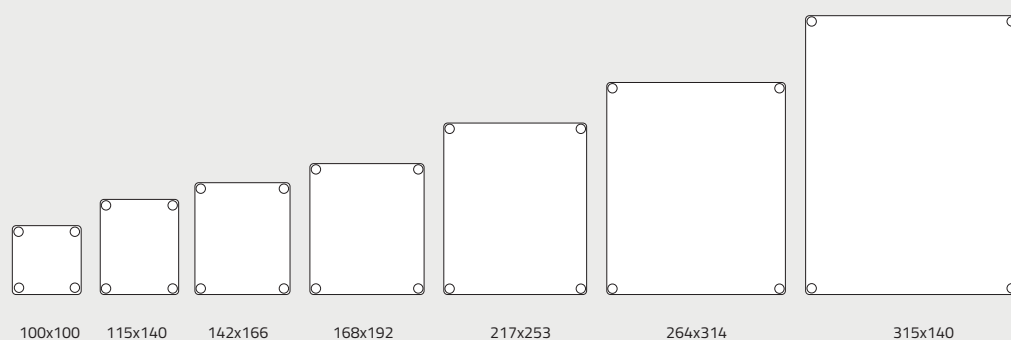
### Contenitori in alluminio M5 - 3 formati

#### Aluminium M5 enclosures - 3 sizes



### Scatole di derivazione alluminio - 7 formati - 7 modelli

#### Aluminium junction boxes - 7 sizes - 7 types

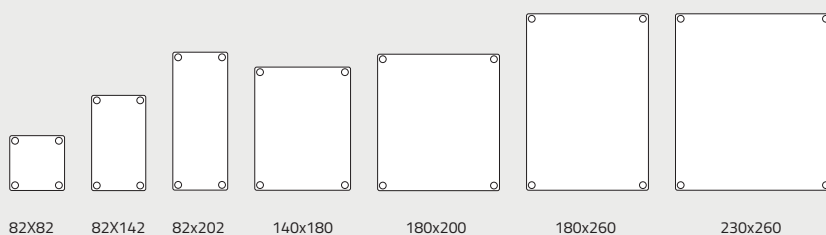


# Panorama dei formati

## Size overview

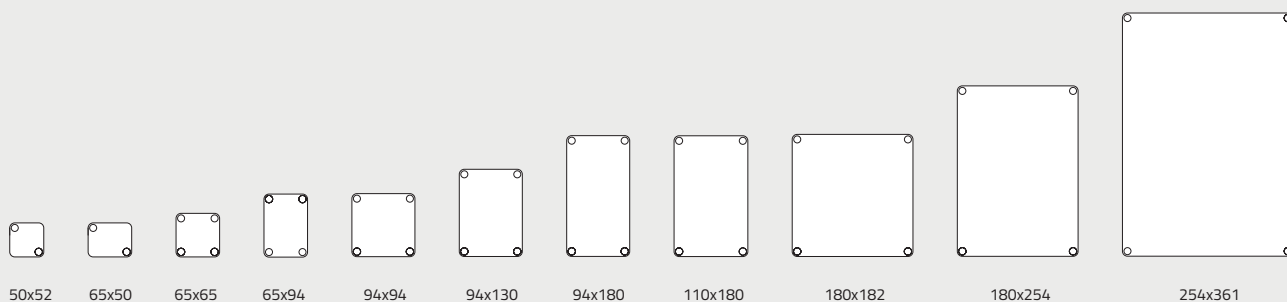
### Contenitori in acciaio inox- 7 formati - più di 20 modelli

#### Stainless steel enclosures - 7 sizes - more than 20 types



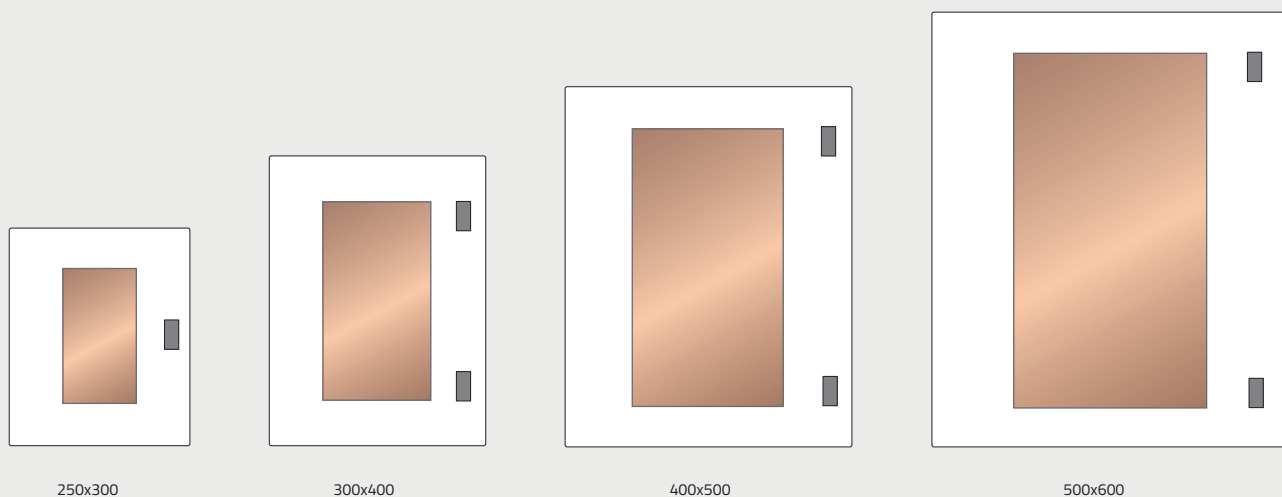
### Contenitori in termoplastico - 11 formati - più di 160 modelli

#### Thermoplastic enclosures - 11 sizes - more than 160 types



### Contenitori in Poliestere - 4 formati - 8 modelli

#### Polyester enclosures - 4 sizes - 8 types

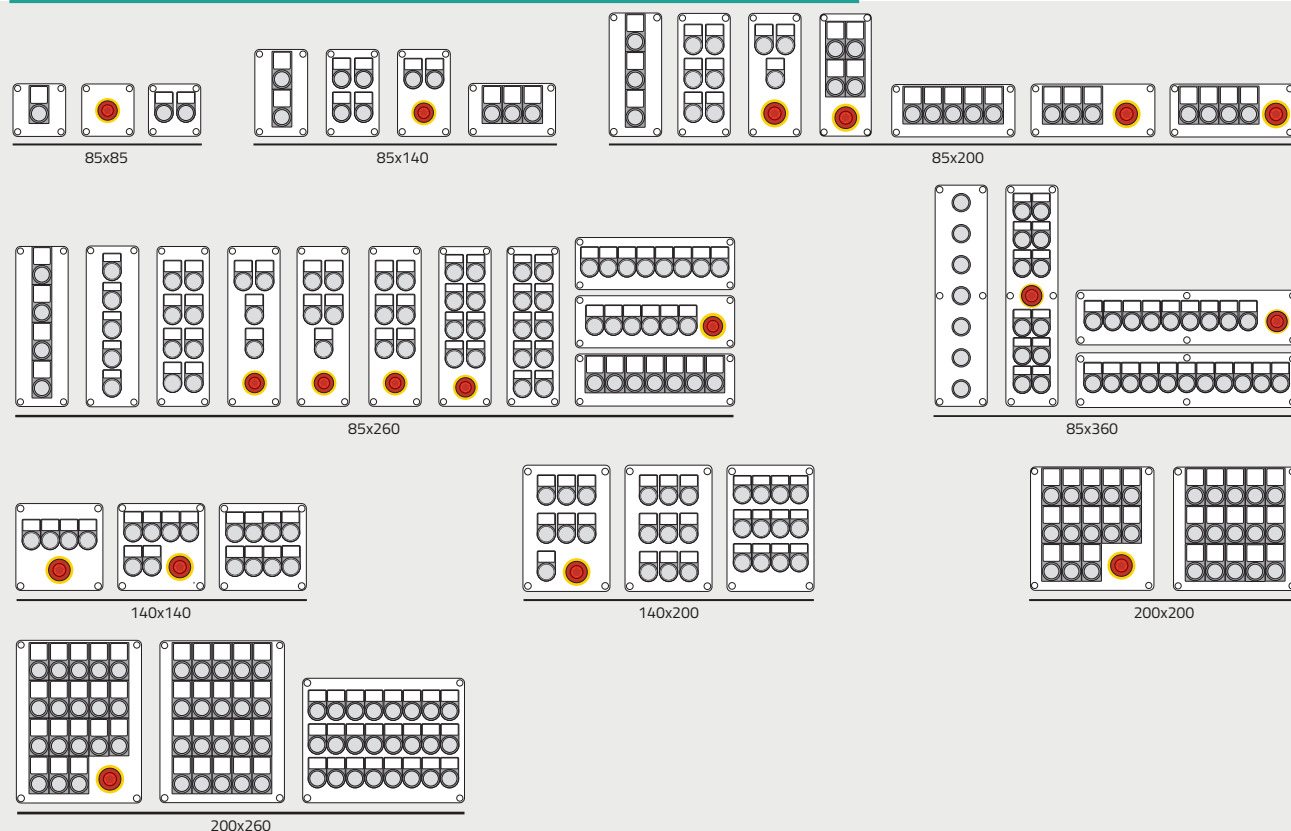


# Panorama forature dei coperchi

## Lid hole overview

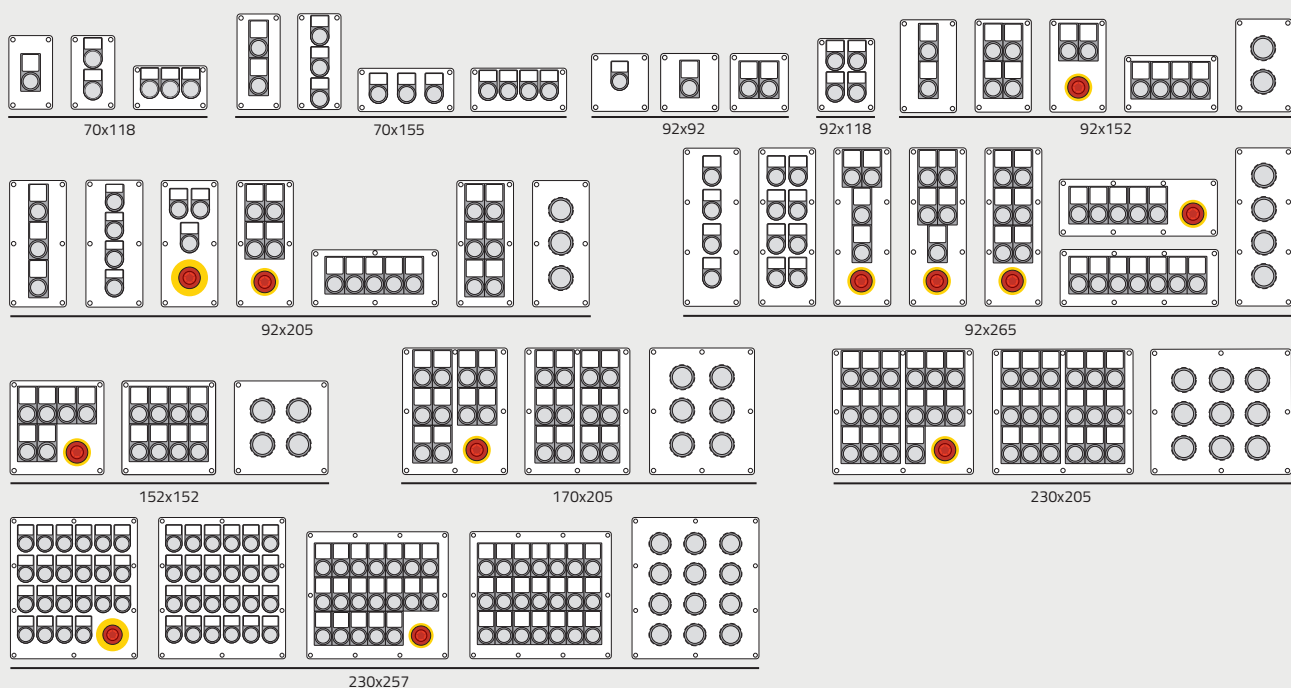
### Scatole pulsantiere in alluminio M10

#### Aluminium push-button enclosures M10



### Scatole pulsantiere in Alluminio M4

#### Aluminium push-button enclosures M4

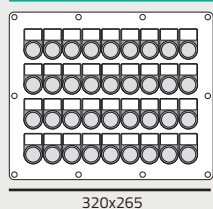


# Panorama forature dei coperchi

## Lid hole overview

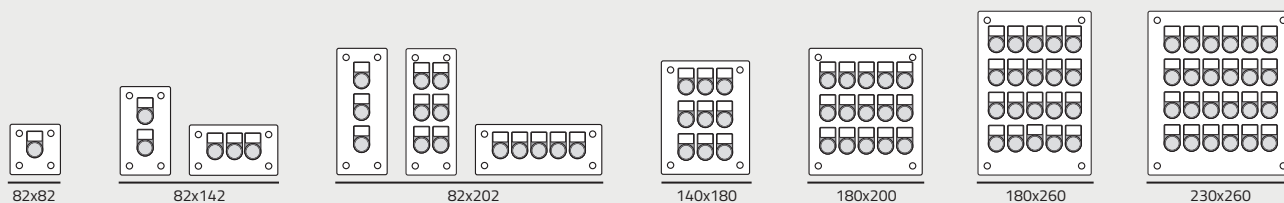
### Scatole pulsantiere in alluminio M5

#### Aluminium push-button enclosures M5



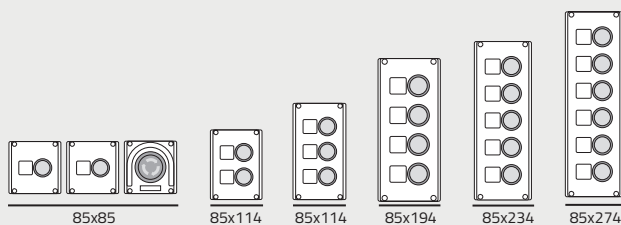
### Scatole pulsantiere in Acciaio inox

#### Stainless steel push-button enclosures



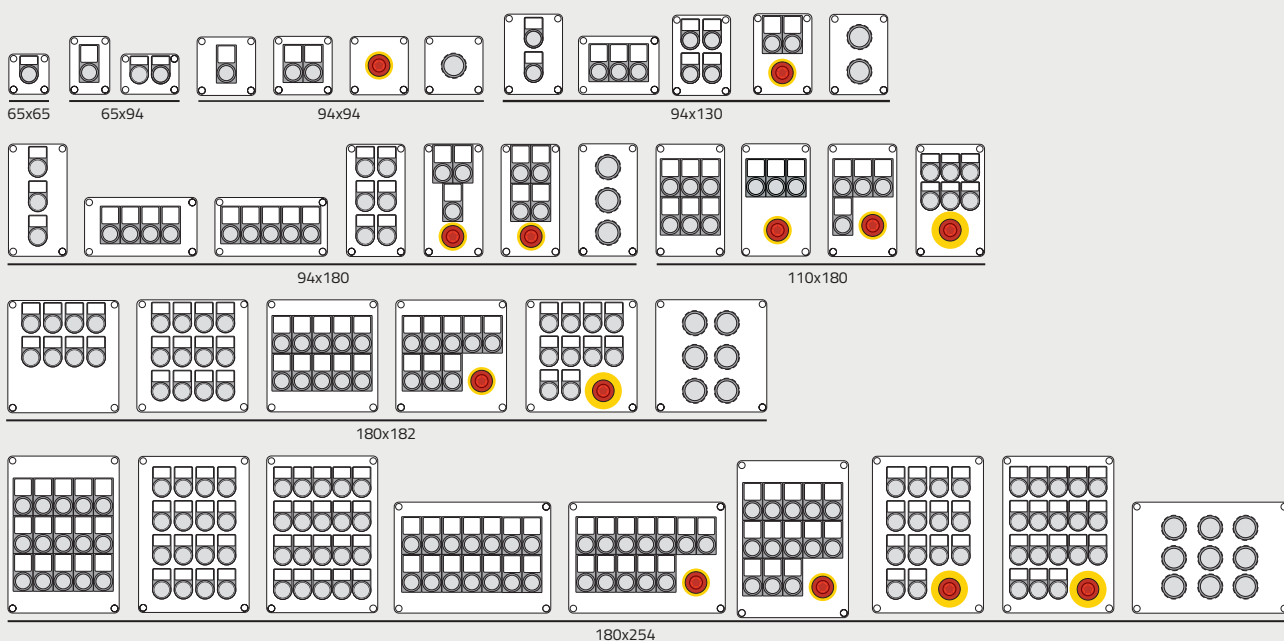
### Scatole pulsantiere in termoplastico

#### Thermoplastic push-button enclosures



### Scatole pulsantiere in termoplastico

#### Thermoplastic push-button enclosures



# Criteri di scelta del prodotto

## Product selecting method

Nel momento in cui si va a scegliere il prodotto da utilizzare occorre considerare tutta una serie di criteri che vanno a definire la scelta finale. Per aiutare l'utilizzatore a formulare la scelta ideale, riportiamo qui di seguito una serie di dati fondamentali per esprimere un giudizio corretto.

When choosing the product, a series of criteria is to be considered in order to define the final selection. To help the customer in making the right choice herewith following we list a series of data necessary for a correct selection.



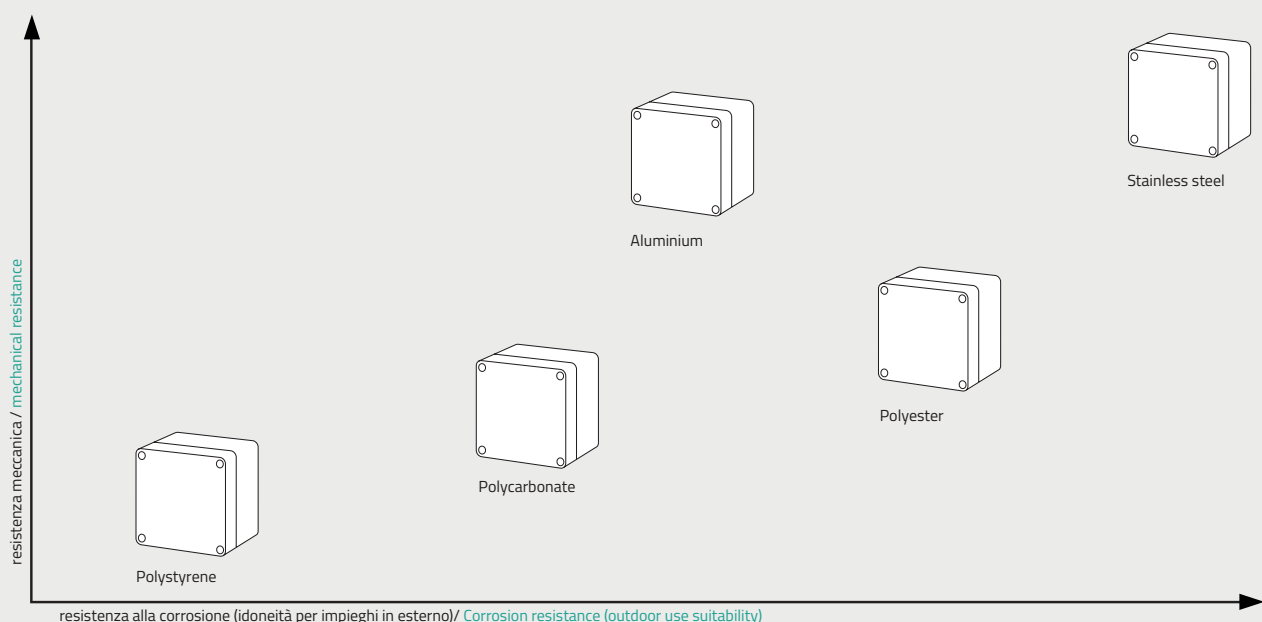
|                                 |           |                    |         |                   |                    |                    |
|---------------------------------|-----------|--------------------|---------|-------------------|--------------------|--------------------|
| densità                         | DIN 53479 | g/cm <sup>3</sup>  | 2.65    | 1.2               | 1.06               | 1.8                |
| resistenza all'urto             | DIN 53453 | ml/mm <sup>2</sup> | 150-300 | 65                | 60                 | 80                 |
| resistenza                      | DIN 53453 | ml/mm <sup>2</sup> | 90-200  | 20                | 10                 | 4                  |
| resistenza alla trazione        | DIN 53455 | N/mm <sup>2</sup>  | 180-300 | 65                | 43                 | 45                 |
| allungamento a rottura          | DIN 53455 | %                  | 60-90   | 90                | 20                 | 20                 |
| modulo E (prova di flessione)   | DIN 53457 | N/mm <sup>2</sup>  | 75.000  | 2.300             | 2.100              | 6.500              |
| sollecitazione max di flessione | DIN53452  | N/mm <sup>2</sup>  |         | 95                | 90                 | 100                |
| infiammabilità                  | UL 94     | Klasse             |         | V2                | HB                 | V0                 |
| resistenza lineare              | DIN 53482 | Ω x cm             |         | 10 <sup>15</sup>  | 10 <sup>13</sup>   | 3x10 <sup>14</sup> |
| resistenza superficiale         | DIN 53482 | Ω                  |         | ≥10 <sup>15</sup> | 2x10 <sup>14</sup> | >0 <sup>12</sup>   |
| rigidità dielettrica            | DIN53481  | kV/mm              |         | 25-40             | 24                 | 25-40              |
| conducibilità termica(20 °C)    | DIN 52612 | W/mK               | 120/160 | 0,21              | 0,18               | 0,25               |
| conducibilità elettrica         |           | m/Ωmm <sup>2</sup> | 15-22   |                   |                    |                    |

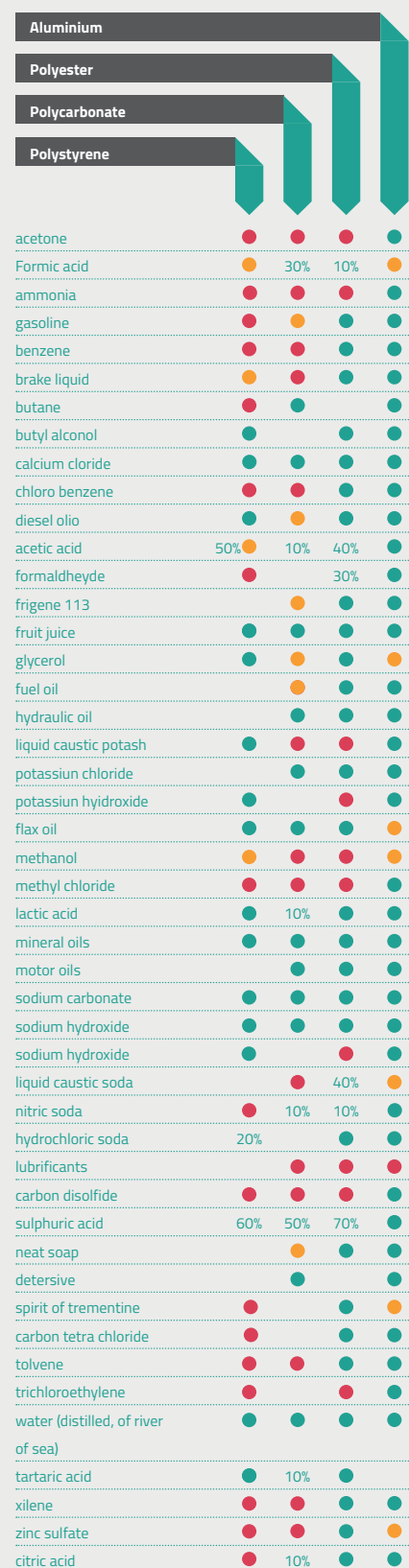
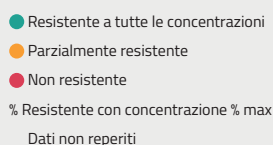


|                              |           |                    |         |                   |                    |                    |
|------------------------------|-----------|--------------------|---------|-------------------|--------------------|--------------------|
| density                      | DIN 53479 | g/cm <sup>3</sup>  | 2.65    | 1.2               | 1.06               | 1.8                |
| impact resistance            | DIN 53453 | ml/mm <sup>2</sup> | 150-300 | 65                | 60                 | 80                 |
| resistance                   | DIN 53453 | ml/mm <sup>2</sup> | 90-200  | 20                | 10                 | 4                  |
| traction resistance          | DIN 53455 | N/mm <sup>2</sup>  | 180-300 | 65                | 43                 | 45                 |
| ultimate elongation          | DIN 53455 | %                  | 60-90   | 90                | 20                 | 20                 |
| E modulus (bending test)     | DIN 53457 | N/mm <sup>2</sup>  | 75.000  | 2.300             | 2.100              | 6.500              |
| max sollicitation of bending | DIN53452  | N/mm <sup>2</sup>  |         | 95                | 90                 | 100                |
| flammability                 | UL 94     | Klasse             |         | V2                | HB                 | V0                 |
| linear resistance            | DIN 53482 | Ω x cm             |         | 10 <sup>15</sup>  | 10 <sup>13</sup>   | 3x10 <sup>14</sup> |
| superficial resistance       | DIN 53482 | Ω                  |         | ≥10 <sup>15</sup> | 2x10 <sup>14</sup> | >0 <sup>12</sup>   |
| dielectric strength          | DIN53481  | kV/mm              |         | 25-40             | 24                 | 25-40              |
| thermal conductivity(20 °C)  | DIN 52612 | W/mK               | 120/160 | 0,21              | 0,18               | 0,25               |
| electric conductivity        |           | m/Ωmm <sup>2</sup> | 15-22   |                   |                    |                    |

Nel grafico sottostante si ha una visione d'insieme delle possibilità di impiego dei vari materiali in funzione di sollecitazioni meccaniche e condizioni ambientali sfavorevoli.

The graph below shows a general overview of the materials that can be used depending on mechanical stresses and unfavourable environmental conditions.





# Gradi di protezione

## Protection ratings

GRADI DI PROTEZIONE IP (IEC 529, EN 60529-4, CEI 70-1 ed. 11/92)

La tabella indica i gradi di protezione secondo le norme CEI 70-1 ed 11/92.

I gradi sono identificati dalla sigla IP seguita da due cifre alle quali possono essere aggiunte due lettere indicanti il grado di protezione contro le persone o altre caratteristiche. Esiste una variazione nell'applicazione dei gradi 7 e 8 relativi alla penetrazione dei liquidi, infatti non sempre questi gradi sottointendono l'idoneità anche per i gradi inferiori (che si ha invece dal grado IP x 4 verso i livelli inferiori). GRADI DI PROTEZIONE CONTRO GLI IMPATTI (PROVA EH)

Questa classificazione dimostra il livello accettabile di robustezza, nell'ambito della stima della sicurezza di un prodotto, ed è destinata principalmente alle prove su prodotti elettromeccanici.



### 1ª CIFRA penetrazione dei solidi

|          |                                                                   |  |
|----------|-------------------------------------------------------------------|--|
| <b>0</b> | Non protetto                                                      |  |
| <b>1</b> | Protetto contro corpi solidi di dimensioni superiori a 50mm di Ø  |  |
| <b>2</b> | Protetto contro corpi solidi di dimensioni superiori a 12mm di Ø  |  |
| <b>3</b> | Protetto contro corpi solidi di dimensioni superiori a 2,5mm di Ø |  |
| <b>4</b> | Protetto contro corpi solidi di dimensioni superiori a 1mm di Ø   |  |
| <b>5</b> | Protetto contro la polvere                                        |  |
| <b>6</b> | Totalmente protetto contro la polvere                             |  |

### LETTERA AGGIUNTIVA

Lettera opzionale che descrive la protezione delle persone. Utilizzate solamente se la protezione contro l'accesso a parti pericolose è superiore a quella indicata dalla prima cifra, o se indica solo la protezione contro l'accesso a parti pericolose e la prima cifra è sostituita da una X.

|          |                                                      |
|----------|------------------------------------------------------|
| <b>A</b> | Protetto contro l'accesso contro il dorso della mano |
| <b>B</b> | Protetto contro l'accesso con dito                   |
| <b>C</b> | Protetto contro l'accesso con un attrezzo            |
| <b>D</b> | Protetto contro l'accesso con un filo                |

### 2ª CIFRA penetrazione dei liquidi

|          |                                                                            |  |
|----------|----------------------------------------------------------------------------|--|
| <b>0</b> | Non protetto                                                               |  |
| <b>1</b> | Protetto contro la caduta verticale di gocce d'acqua                       |  |
| <b>2</b> | Protetto contro la caduta di gocce d'acqua con inclinazione massima di 15° |  |
| <b>3</b> | Protetto contro la pioggia con inclinazione massima di 60°                 |  |
| <b>4</b> | Protetto contro gli spruzzi d'acqua                                        |  |
| <b>5</b> | Protetto contro i getti d'acqua con lanci da tutte le direzioni            |  |
| <b>6</b> | Protetto contro le ondate                                                  |  |
| <b>7</b> | Protetto contro gli effetti dell'immersione                                |  |
| <b>8</b> | Protetto contro gli effetti dell'immersione prolungata                     |  |

### Protezione contro gli impatti meccanici esterni

Secondo CEI EN 50102: 1996-05;  
CEI EN 60068-2-7-5: 1998-09 standards

|             |                                         |  |
|-------------|-----------------------------------------|--|
| <b>IK00</b> | Non protetto                            |  |
| <b>IK01</b> | Protetto contro l'energia d'urto 0,15 J |  |
| <b>IK03</b> | Protetto contro l'energia d'urto 0,35 J |  |
| <b>IK05</b> | Protetto contro l'energia d'urto 0,7 J  |  |
| <b>IK06</b> | Protetto contro l'energia d'urto 1 J    |  |
| <b>IK07</b> | Protetto contro l'energia d'urto 2 J    |  |
| <b>IK08</b> | Protetto contro l'energia d'urto 5 J    |  |
| <b>IK09</b> | Protetto contro l'energia d'urto 10 J   |  |
| <b>IK10</b> | Protetto contro l'energia d'urto 20 J   |  |





# Gradi di protezione

## Protection ratings

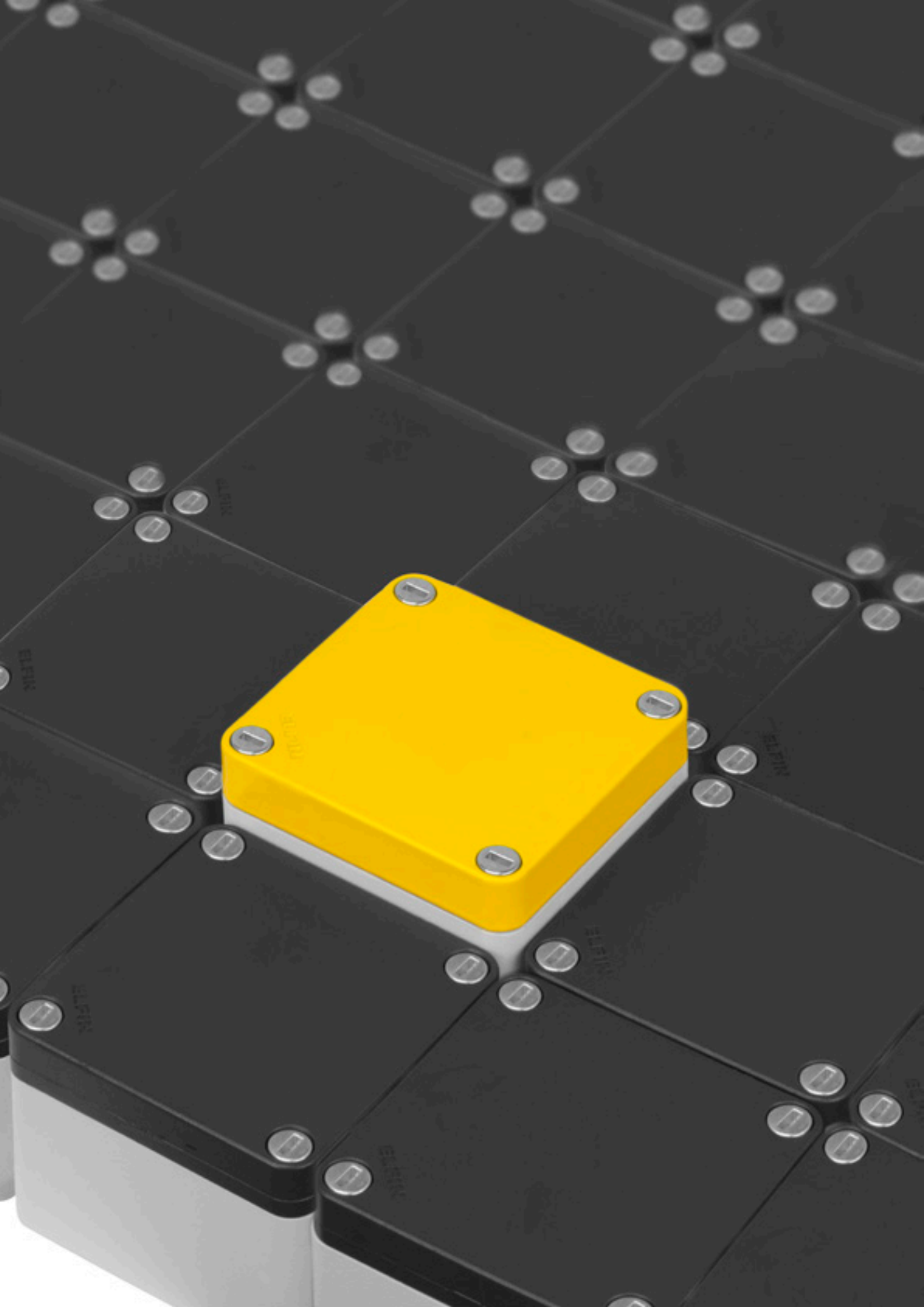
### IP PROTECTION RATINGS (IEC 529, EN 60529-4, CEI 70-1 ed. 11/92)

The table below shows Ingress protection ratings according to CEI-70-1 ed. 11/92 standards. The ratings are identified by the IP code followed by two digits to which two letters may be added indicating the protection rating against persons or other characteristics. There is a variation in application of rating 7 and 8 referring to penetration of liquids. These ratings do not always imply suitability also for lower ratings (which occurs from rating IP x 4 rating towards lower levels). **IMPACT PROTECTION RATING(EH TEST)**

These ratings indicate the acceptable sturdiness according to the product safety evaluation a product and apply in particular to tests run on electromechanical products.



| 1 <sup>st</sup> DIGIT<br>penetration of solids                                                                                                                                                                                                                                                                                             |                                                                     | 2 <sup>nd</sup> DIGIT<br>penetration of liquids |                                                                    | Protection<br>against impacts<br><small>According to CEI EN 50102: edition 1996-05;<br/>CEI EN 60068-2-7-5: edition 1998-09 standards</small> |                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| 0                                                                                                                                                                                                                                                                                                                                          | Not protected                                                       | 0                                               | Not protected                                                      | IK00                                                                                                                                          | Not protected                          |
| 1                                                                                                                                                                                                                                                                                                                                          | Protected against solid bodies with a diameter of more than 50 mmØ  | 1                                               | Protected against vertically falling drops                         | IK01                                                                                                                                          | Protected against impact energy 0,15 J |
| 2                                                                                                                                                                                                                                                                                                                                          | Protected against solid bodies with a diameter of more than 12mmØ   | 2                                               | Protected against drops at an angle of up to 15° from the vertical | IK03                                                                                                                                          | Protected against impact energy 0,35 J |
| 3                                                                                                                                                                                                                                                                                                                                          | Protected against solid bodies with a diameter of more than 2,5 mmØ | 3                                               | Protected against rain at angle of up to 60° from the vertical     | IK05                                                                                                                                          | Protected against impact energy 0,7 J  |
| 4                                                                                                                                                                                                                                                                                                                                          | Protected against solid bodies with a diameter of more than 1 mm Ø  | 4                                               | Protected against splashes of water                                | IK06                                                                                                                                          | Protected against impact energy 1 J    |
| 5                                                                                                                                                                                                                                                                                                                                          | Protected against dust                                              | 5                                               | Protected against jets of water from any direction                 | IK07                                                                                                                                          | Protected against impact energy 2 J    |
| 6                                                                                                                                                                                                                                                                                                                                          | Totally protected against dust                                      | 6                                               | Protected against waves                                            | IK08                                                                                                                                          | Protected against impact energy 5 J    |
| <b>ADDITIONAL LETTER</b><br><small>Optional letter indicating the protection rating against persons. To be used only if the protection against access to hazardous parts is above those indicated by the first digit or if only protection against access to hazardous parts is indicated and the first digit is replaced by an X.</small> |                                                                     | 7                                               | Protected against the effects of immersion                         | IK09                                                                                                                                          | Protected against impact energy 10 J   |
| A                                                                                                                                                                                                                                                                                                                                          | Protected against access with the back of the hand                  | 8                                               | Protected against the effects of long term immersion               | IK10                                                                                                                                          | Protected against impact energy 20 J   |
| B                                                                                                                                                                                                                                                                                                                                          | Protected against access with finger                                |                                                 |                                                                    |                                                                                                                                               |                                        |
| C                                                                                                                                                                                                                                                                                                                                          | Protected against access with tool                                  |                                                 |                                                                    |                                                                                                                                               |                                        |
| D                                                                                                                                                                                                                                                                                                                                          | Protected against access with a wire                                |                                                 |                                                                    |                                                                                                                                               |                                        |



040

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**SCATOLE E CASSETTE  
PULSANTIERE IN METALLO**

**METAL PUSH-BUTTON  
BOXES, ENCLOSURES**

# Contenitori in alluminio

## Aluminium enclosures

### Caratteristiche tecniche

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Materiale custodia</b>         | Fusione in lega di alluminio Al Si 11 CU 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Serraggi</b>                   | <p>Contenitori M10: chiusura coperchi viti M10, testa cilindrica cava cacciavite, lega pressofusa zincata</p> <p>Contenitori M4: chiusura coperchi viti M4 testa cilindrica impronta croce Phillips PH2, acciaio inox AISI 304</p> <p>Contenitori M5: chiusura coperchi viti M5 testa cilindrica esagono incassato, acciaio inox AISI 304<br/>Versione con piastra viti M4 testa bombata esagono incassato, acciaio AISI 304</p> <p>Scatole di derivazione: chiusura coperchi viti M5, testa svasata impronta croce, acciaio AISI 304</p> |
| <b>Guarnizioni</b>                | <p>Contenitori M10: gomma nitrilica stampata</p> <p>Contenitori M4/M5: gomma sughero</p> <p>Scatole di derivazione: gomma EPDM iniettata</p>                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Colorazioni</b>                | <p>Contenitori M10/M5:<br/>coperchio: grigio RAL 7016 testurizzato<br/>scatola: grigio RAL 7035 testurizzato</p> <p>Contenitori M4:<br/>coperchio: grigio RAL 7035<br/>scatola: grigio RAL 7035 testurizzato</p> <p>Scatole di derivazione:<br/>coperchio: grigio RAL 7040 goffrato<br/>scatola: grigio RAL 7040 goffrato</p>                                                                                                                                                                                                             |
| <b>Grado di protezione</b>        | IP66 - CEI EN 60529                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Limiti di temperatura</b>      | -40° ÷ +100° C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Resistenza alla corrosione</b> | La resistenza alla corrosione è influenzata dalla percentuale di rame contenuto nella lega di alluminio: a una minore percentuale di rame corrisponde una maggiore resistenza alla corrosione. I nostri contenitori sono prodotti con la lega Al Si 12, DIN 1725 e contiene lo 0,05 ÷ 0,1% di rame, quindi molto resistenti alla corrosione.                                                                                                                                                                                              |
| <b>Trattamenti di protezione</b>  | I nostri contenitori vengono trattati con sgrassatura e lavaggio con acqua ionizzata, cromatura a base di bagni galvanici di acido cromatico e verniciatura con vernici epossidiche poliuretaniche                                                                                                                                                                                                                                                                                                                                        |
| <b>Procedimenti di fusione</b>    | <p><b>PF</b>- Pressofusione:<br/>dal formato 70x118 al 152x152(M4) e dal formato 85x85 al 200x260 (M10) - superficie piana, grado di tolleranza dimensionale ± 0,35 DIN 1688, parte 4, spessori medi 2 ÷ 2,5mm.</p> <p><b>FC</b>- Fusione in conchiglia:<br/>dal formato 170x205 al 400x480 - superficie granulata leggermente ruvida, grado di tolleranza dimensionale ± 1,2 DIN 1688, parte 3, spessori medi 3,5 ÷ 4mm</p>                                                                                                              |

### Caratteristiche meccaniche

|                                         | GD-AISi11CU2<br>pressofusione | GK-AISi11CU2<br>fus. conchiglia |
|-----------------------------------------|-------------------------------|---------------------------------|
| Densità g/cm <sup>2</sup>               | 2,65                          | 2,65                            |
| Limite alla trazione N/mm <sup>2</sup>  | 120-180                       | 80-110                          |
| Res. alla trazione N/mm <sup>2</sup>    | 200-280                       | 180-240                         |
| Tensione di rottura %                   | 1-3                           | 6-12                            |
| Durezza Brinell HB                      | 60-80                         | 50-60                           |
| Modulo E 10 <sup>-6</sup> /K            | 20-23                         | 20-23                           |
| Resistenza elettrica m /mm <sup>2</sup> | 17-23                         | 17-27                           |
| Conducibilità termica W/mK              | 150-170                       | 150-170                         |
| Resistenza al calore °C                 | 300                           | 300                             |
| Resistenza al freddo °C                 | -100                          | -100                            |

### Technical data

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Housing material</b>      | Al Si 11 CU 2 aluminium alloy casting                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Fasteners</b>             | <p>M10 enclosures: lid closing with M10 screws, slotted cheese head, zinc alloy die-casting</p> <p>M4 enclosures: lid closing with M4 screws, Phillips PH2 cross recessed pan head, AISI 304 stainless steel</p> <p>M5 enclosures: lid closing with M5 screws, hexagon socket head cap AISI 304 stainless steel<br/>Model with plate: M4 screws, hexagon socket button head, AISI 304 steel</p> <p>Junction boxes: lid closing with M5 screws, Cross recessed countersunk head, AISI 304 steel</p> |
| <b>Gaskets</b>               | <p>M10 enclosures: nitrile rubber, molded</p> <p>M4/M5 enclosures: rubber cork</p> <p>Junction boxes: EPDM rubber, injection molded</p>                                                                                                                                                                                                                                                                                                                                                            |
| <b>Colours</b>               | <p>M10/M5 enclosures:<br/>lid: RAL 7016 grey, textured finish<br/>enclosure: RAL 7035 grey, textured finish</p> <p>M4 enclosures:<br/>lid: RAL 7035 grey<br/>enclosure: RAL 7035 grey, textured finish</p> <p>Junction boxes:<br/>lid: RAL 7040 grey, embossed finish<br/>enclosure: RAL 7040 grey, embossed finish</p>                                                                                                                                                                            |
| <b>Protection degree</b>     | IP66 - CEI EN 60529                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Temperature range</b>     | -40° ÷ +100° C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Corrosion resistance</b>  | The corrosion resistance is affected by the percentage of copper in the aluminium alloy: the less the copper percentage the higher its resistance to corrosion.<br>Our enclosures are made of Al Si 12 alloy, DIN 1725 and contain 0.05 ÷ 0.1% copper, thus extremely corrosion resistant.                                                                                                                                                                                                         |
| <b>Protective treatments</b> | Our enclosures are degreased and washed with ionized water, chrome-plated in galvanic baths of chromic acid and painted with epoxy polyurethane paints                                                                                                                                                                                                                                                                                                                                             |
| <b>Metal casting methods</b> | <p><b>PF</b>- Die casting:<br/>from size 70x118 to 152x152 (M4) and from size 85x85 to 200x260 (M10) - flat surface, dimensional tolerance ± 0.35 DIN 1688, part 4, average thickness 2÷2.5 mm</p> <p><b>FC</b>- Shell molding:<br/>from sizes 170x205 to 400x480 - coarse-grained surface, dimensional tolerance ±1.2 DIN 1688, part 3, average thickness 3.5÷ 4 mm.</p>                                                                                                                          |

### Mechanical features

|                                           | GD-AISi11CU2<br>die casting | GK-AISi11CU2<br>shell molding |
|-------------------------------------------|-----------------------------|-------------------------------|
| Density g/cm <sup>2</sup>                 | 2,65                        | 2,65                          |
| Tensile strength N/mm <sup>2</sup>        | 120-180                     | 80-110                        |
| Ult. tensile strength N/mm <sup>2</sup>   | 200-280                     | 180-240                       |
| Breaking strength                         | 1-3                         | 6-12                          |
| Brinell hardness HB                       | 60-80                       | 50-60                         |
| E modulus 10 <sup>-6</sup> /K             | 20-23                       | 20-23                         |
| Electrical resistivity m /mm <sup>2</sup> | 17-23                       | 17-27                         |
| Thermal conductivity                      | 150-170                     | 150-170                       |
| Heat resistance                           | 300                         | 300                           |
| Cold resistance                           | -100                        | -100                          |



# Esecuzioni speciali

## Special versions

### CONTENITORE IN VERSIONE NEUTRA

Per la serie alluminio vi è la possibilità di fornire diversi formati nella versione grezza per permettere agli utilizzatori di autogestire la realizzazione del contenitore sia per speciali applicazioni con lavorazioni a disegno, sia per verniciature personalizzate per integrare esteticamente e tecnicamente la cassetta nel complessivo della macchina dove va inserita.

### CONTENITORE IN VERSIONE LUCIDA

Questo speciale trattamento è realizzato tramite diverse fasi di lucidatura e pallinatura con sfere metalliche. Conferisce alla cassetta una superficie liscia e speculare, ideale per l' utilizzo in ambienti di produzione alimentare o farmaceutica, comunque in condizioni non corrosive per l'alluminio. In questa versione gli accessori di serie e le viti di serraggio sono in acciaio inox. Per richiedere questa versione è necessario inserire la lettera "B" al fondo del codice standard (solo per la serie alluminio M4 senza fori, per una esatta verifica della possibile realizzazione chiedere conferma alla nostra organizzazione di vendita).

### RICAMBI

Sono fornibili parti di ricambio dei contenitori quali coperchi, guarnizioni, fondelli e viti (solo per la serie alluminio M4, per una esatta verifica della possibile realizzazione chiedere conferma alla nostra organizzazione di vendita).

### VERNICIATURE SPECIALI

La nostra organizzazione commerciale può valutare richieste di contenitori con verniciature speciali, garantendo gli standard qualitativi di un normale prodotto di serie.

### UNPAINTED ENCLOSURES

Aluminium enclosures are available unpainted in different sizes to allow the users to carry out machinings on their own for special applications or for customized paintings so that the enclosure can match aesthetically and technically the machine it will be fitted to.

### MIRROR POLISHED ENCLOSURES

This special treatment includes various polishing and shot-blasting steps and provides the enclosure with a smooth reflective surface, ideal for the food or pharmaceutical manufacturing facilities, hence in non-corrosive conditions for the aluminium. For this model, the standard accessories and the clamping screws are made of stainless steel.

To request this model, the letter "B" is to be indicated at the end of any standard code (for the aluminium M4 sizes with no holes only contact our Sales Department to check for feasibility).

### SPARE PARTS

Spare parts such as lids, gaskets, boxes and screws are available (for the aluminium M4 size only contact our Sales Department to check for feasibility).

### SPECIAL PAINTINGS

Our Sales Department is able to assess requests for enclosures with special paintings, complying with the same high quality standards as a normal serial product.



## Scatole in alluminio M10 Aluminium enclosures M10



Modularità

Modularity



Disponibili in due altezze

Available in two heights



Esempi di personalizzazione

Examples of customization



Fornibile senza verniciatura

Available unpainted



Personalizzabile in diversi colori

Customizable in different colours

## Scatole in alluminio M10 Aluminium enclosures M10



Kit di viti imperdibili  
Set of captive screws



Lavorazioni personalizzate  
Customized machinings



Kit di fissaggio con prigionieri  
Fixing kit with studs



Kit di cerniere  
Set of hinges



Viti di serraggio  
Clamping screws



Kit di staffe di fissaggio  
Set of mounting brackets



Etichetta personalizzata  
plastificata  
Customized legend plate,  
plastic coated

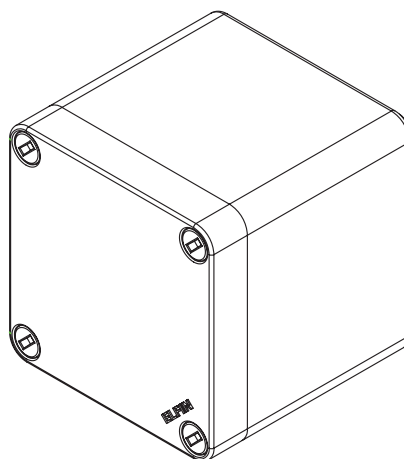
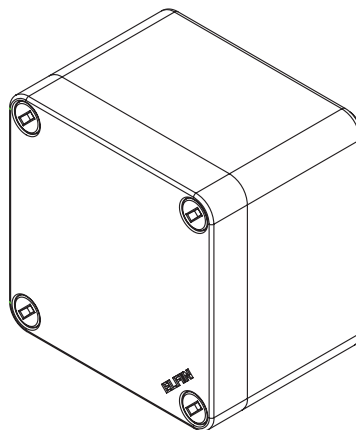
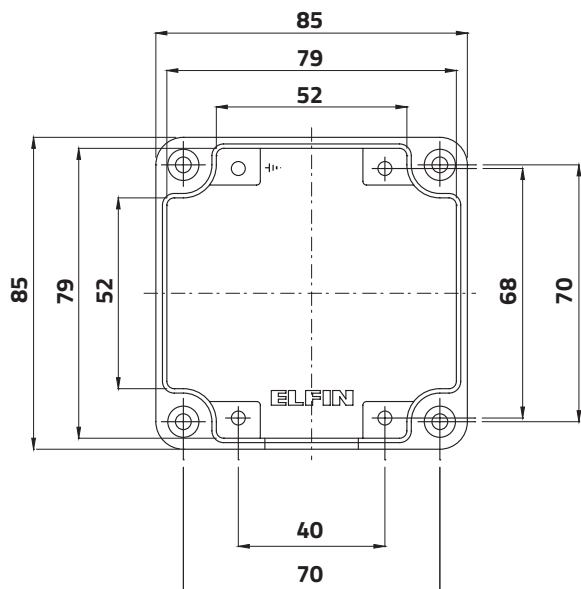
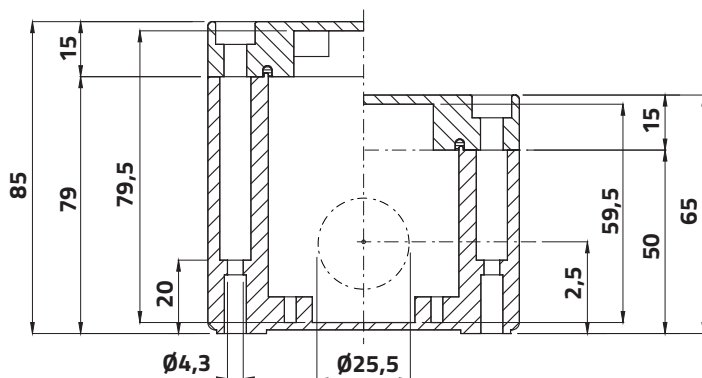
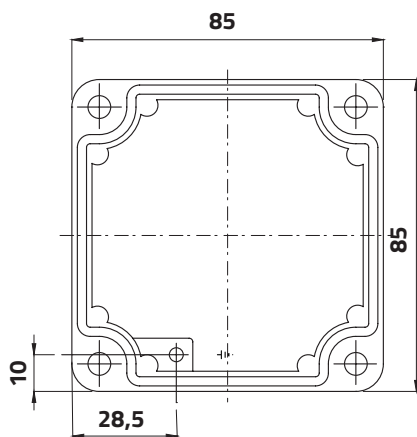


La guarnizione garantisce  
protezione IP66  
A sealing gasket assures  
IP66 protection



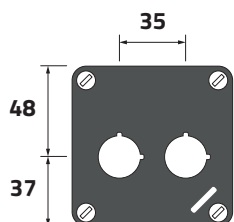
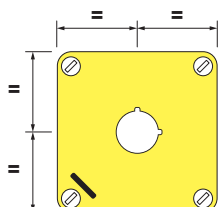
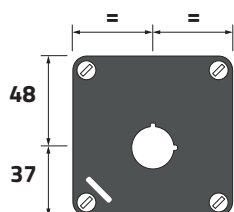
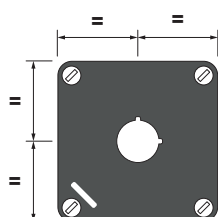
# Scatole in alluminio M10 85x85mm

## Aluminium enclosures M10 85x85mm



# Scatole in alluminio M10 85x85mm

## Aluminium enclosures M10 85x85mm



### Coperchio senza fori / Undrilled lid

|                                           |    |     |             |
|-------------------------------------------|----|-----|-------------|
| Senza entrata cavo / No cable entry       | 65 | 385 | 040C0808-6  |
| Senza entrata cavo / No cable entry       | 85 | 445 | 040C0808-8  |
| Con entrata cavo / With cable entry       | 65 | 381 | 040C0808-6E |
| Con entrata cavo / With cable entry       | 85 | 441 | 040C0808-8E |
| Grezza, cieca / Unpainted, no cable entry | 65 | 385 | 040C0808-6N |
| Grezza, cieca / Unpainted, no cable entry | 85 | 445 | 040C0808-8N |

### Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

|                                     |    |     |                |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 382 | 040C0808-6P1C  |
| Senza entrata cavo / No cable entry | 85 | 442 | 040C0808-8P1C  |
| Con entrata cavo / With cable entry | 65 | 378 | 040C0808-6EP1C |
| Con entrata cavo / With cable entry | 85 | 438 | 040C0808-8EP1C |

### Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

|                                     |    |     |               |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 65 | 382 | 040C0808-6P1  |
| Senza entrata cavo / No cable entry | 85 | 442 | 040C0808-8P1  |
| Con entrata cavo / With cable entry | 65 | 378 | 040C0808-6EP1 |
| Con entrata cavo / With cable entry | 85 | 438 | 040C0808-8EP1 |

### Coperchio giallo con 1 foro Ø 22mm / 1-hole yellow lid Ø 22mm

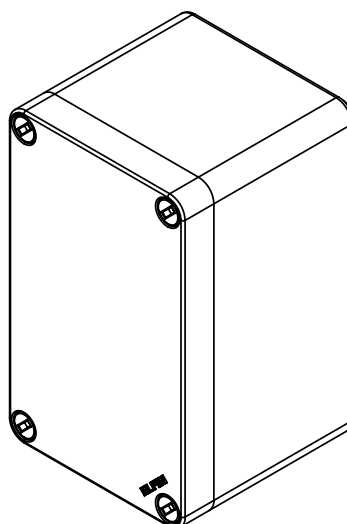
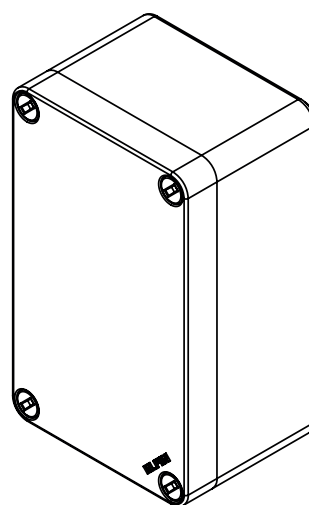
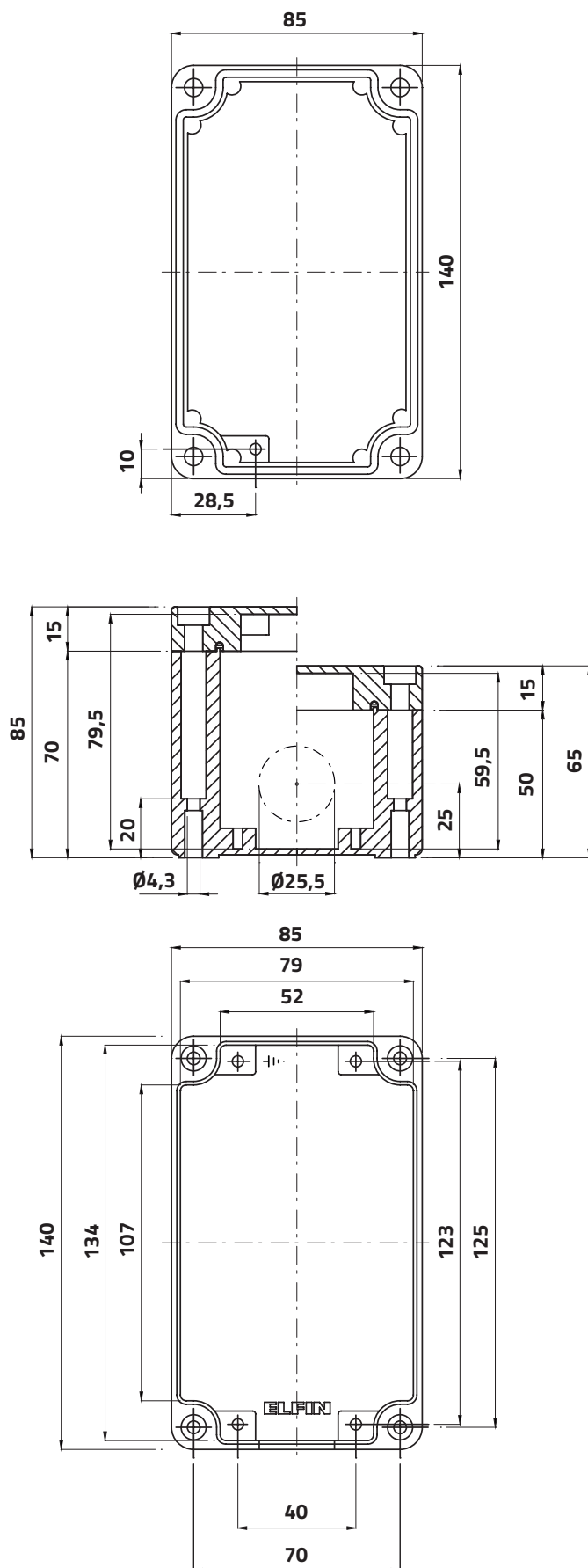
|                                     |    |     |                |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 382 | 040C0808-6GP1  |
| Senza entrata cavo / No cable entry | 85 | 442 | 040C0808-8GP1  |
| Con entrata cavo / With cable entry | 65 | 378 | 040C0808-6EGP1 |
| Con entrata cavo / With cable entry | 85 | 438 | 040C0808-8EGP1 |

### Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

|                                     |    |     |               |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 65 | 380 | 040C0808-6P2  |
| Senza entrata cavo / No cable entry | 85 | 440 | 040C0808-8P2  |
| Con entrata cavo / With cable entry | 65 | 376 | 040C0808-6EP2 |
| Con entrata cavo / With cable entry | 85 | 436 | 040C0808-8EP2 |

# Scatole in alluminio M10 85x140mm

## Aluminum enclosures M10 85x140mm



# Scatole in alluminio M10 85x140mm

## Aluminium enclosures M10 85x140mm



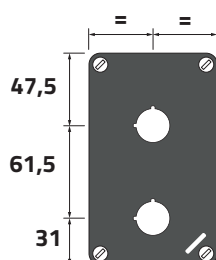
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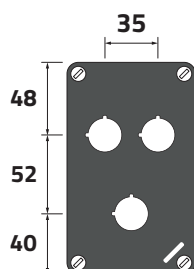
### Coperchio senza fori / Undrilled lid

|                                           |    |     |             |
|-------------------------------------------|----|-----|-------------|
| Senza entrata cavo / No cable entry       | 65 | 516 | 040C0814-6  |
| Senza entrata cavo / No cable entry       | 85 | 624 | 040C0814-8  |
| Con entrata cavo / With cable entry       | 65 | 512 | 040C0814-6E |
| Con entrata cavo / With cable entry       | 85 | 620 | 040C0814-8E |
| Grezza, cieca / Unpainted, no cable entry | 65 | 516 | 040C0814-6N |
| Grezza, cieca / Unpainted, no cable entry | 85 | 624 | 040C0814-8N |



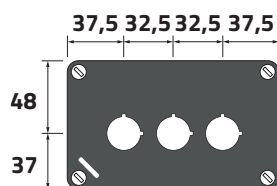
### Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

|                                     |    |     |               |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 65 | 511 | 040C0814-6P2  |
| Senza entrata cavo / No cable entry | 85 | 619 | 040C0814-8P2  |
| Con entrata cavo / With cable entry | 65 | 517 | 040C0814-6EP2 |
| Con entrata cavo / With cable entry | 85 | 615 | 040C0814-8EP2 |



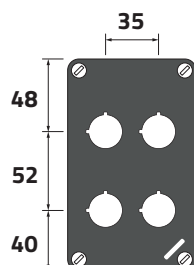
### Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

|                                     |    |     |                |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 508 | 040C0814-6P3C  |
| Senza entrata cavo / No cable entry | 85 | 616 | 040C0814-8P3C  |
| Con entrata cavo / With cable entry | 65 | 504 | 040C0814-6EP3C |
| Con entrata cavo / With cable entry | 85 | 612 | 040C0814-8EP3C |



### Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

|                                     |    |     |                |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 508 | 040C0814-6P3L  |
| Senza entrata cavo / No cable entry | 85 | 616 | 040C0814-8P3L  |
| Con entrata cavo / With cable entry | 65 | 504 | 040C0814-6EP3L |
| Con entrata cavo / With cable entry | 85 | 612 | 040C0814-8EP3L |

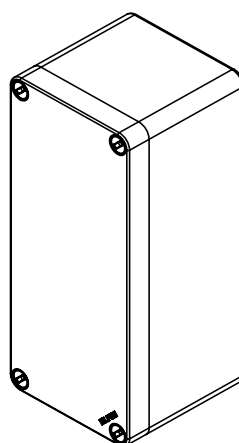
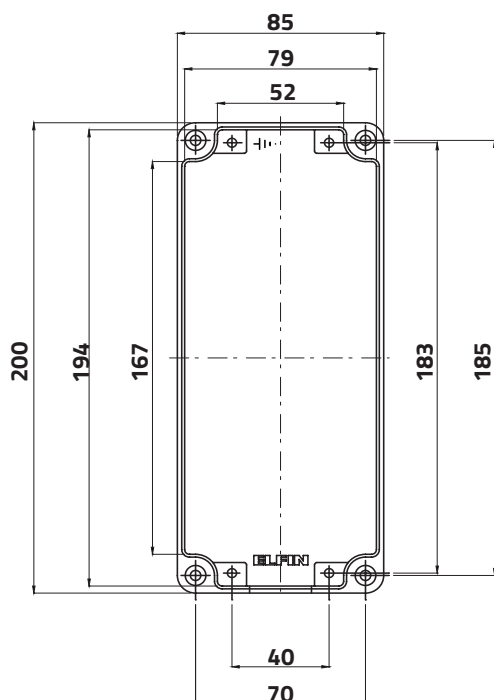
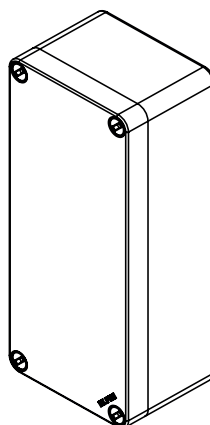
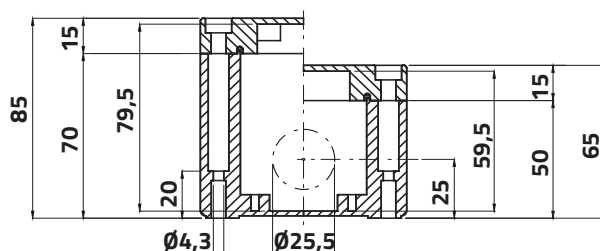
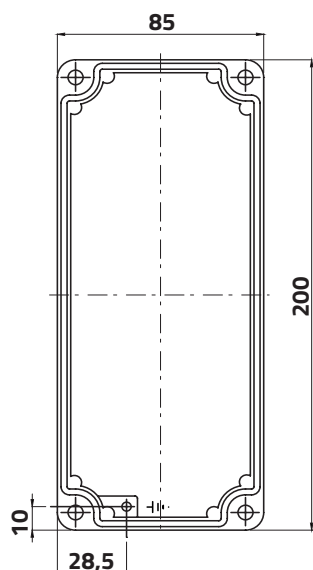


### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                                     |    |     |               |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 65 | 506 | 040C0814-6P4  |
| Senza entrata cavo / No cable entry | 85 | 614 | 040C0814-8P4  |
| Con entrata cavo / With cable entry | 65 | 502 | 040C0814-6EP4 |
| Con entrata cavo / With cable entry | 85 | 610 | 040C0814-8EP4 |

# Scatole in alluminio M10 85x200mm

## Aluminum enclosures M10 85x200mm



# Scatole in alluminio M10 85x200mm

## Aluminium enclosures M10 85x200mm



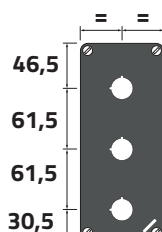
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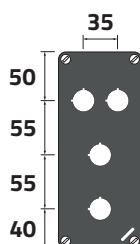
### Coperchio senza fori / Undrilled lid

|                                           |    |     |             |
|-------------------------------------------|----|-----|-------------|
| Senza entrata cavo / No cable entry       | 65 | 624 | 040C0820-6  |
| Senza entrata cavo / No cable entry       | 85 | 771 | 040C0820-8  |
| Con entrata cavo / With cable entry       | 65 | 620 | 040C0820-6E |
| Con entrata cavo / With cable entry       | 85 | 767 | 040C0820-8E |
| Grezza, cieca / Unpainted, no cable entry | 65 | 624 | 040C0820-6N |
| Grezza, cieca / Unpainted, no cable entry | 85 | 771 | 040C0820-8N |



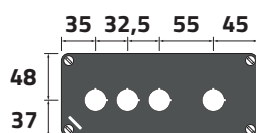
### Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

|                                     |    |     |               |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 65 | 616 | 040C0820-6P3  |
| Senza entrata cavo / No cable entry | 85 | 763 | 040C0820-8P3  |
| Con entrata cavo / With cable entry | 65 | 612 | 040C0820-6EP3 |
| Con entrata cavo / With cable entry | 85 | 759 | 040C0820-8EP3 |



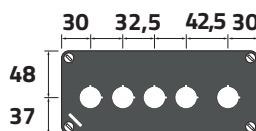
### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                                     |    |     |                |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 614 | 040C0820-6P4C  |
| Senza entrata cavo / No cable entry | 85 | 761 | 040C0820-8P4C  |
| Con entrata cavo / With cable entry | 65 | 610 | 040C0820-6EP4C |
| Con entrata cavo / With cable entry | 85 | 657 | 040C0820-8EP4C |



### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                                     |    |     |                 |
|-------------------------------------|----|-----|-----------------|
| Senza entrata cavo / No cable entry | 65 | 614 | 040C0820-6P4LC  |
| Senza entrata cavo / No cable entry | 85 | 761 | 040C0820-8P4LC  |
| Con entrata cavo / With cable entry | 65 | 610 | 040C0820-6EP4LC |
| Con entrata cavo / With cable entry | 85 | 757 | 040C0820-8EP4LC |

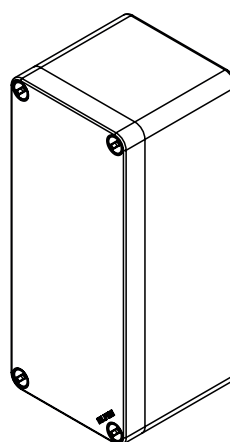
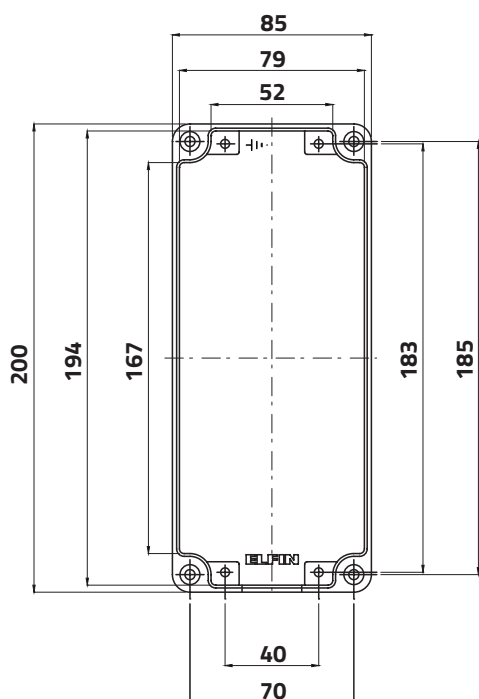
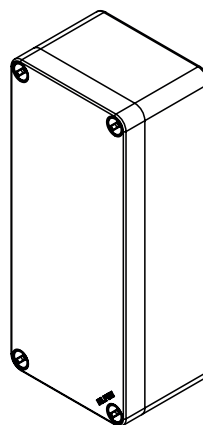
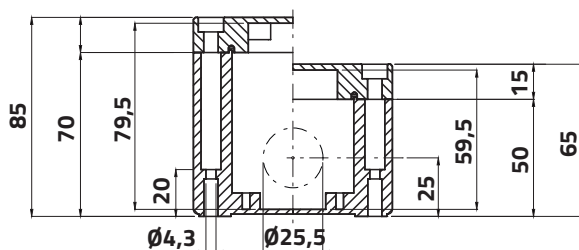
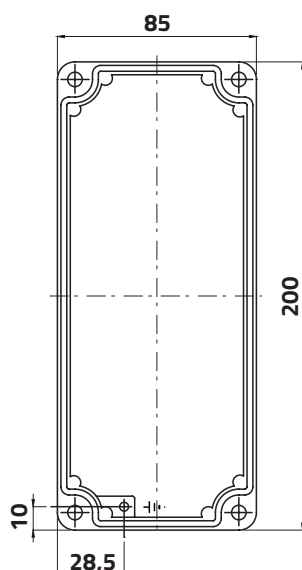


### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                                     |    |     |                 |
|-------------------------------------|----|-----|-----------------|
| Senza entrata cavo / No cable entry | 65 | 611 | 040C0820-6P5LC  |
| Senza entrata cavo / No cable entry | 85 | 758 | 040C0820-8P5LC  |
| Con entrata cavo / With cable entry | 65 | 607 | 040C0820-6EP5LC |
| Con entrata cavo / With cable entry | 85 | 754 | 040C0820-8EP5LC |

# Scatole in alluminio M10 85x200mm

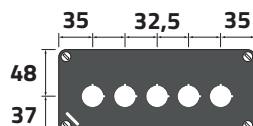
## Aluminum enclosures M10 85x200mm





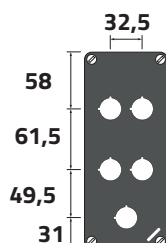
# Scatole in alluminio M10 85x200mm

## Aluminium enclosures M10 85x200mm



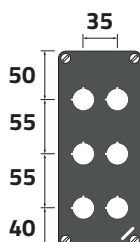
### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                                     | h  | g   | cod            |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 611 | 040C0820-6P5L  |
| Senza entrata cavo / No cable entry | 85 | 758 | 040C0820-8P5L  |
| Con entrata cavo / With cable entry | 65 | 607 | 040C0820-6EP5L |
| Con entrata cavo / With cable entry | 85 | 754 | 040C0820-8EP5L |



### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                                     |    |     |                |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 611 | 040C0820-6P5C  |
| Senza entrata cavo / No cable entry | 85 | 758 | 040C0820-8P5C  |
| Con entrata cavo / With cable entry | 65 | 607 | 040C0820-6EP5C |
| Con entrata cavo / With cable entry | 85 | 754 | 040C0820-8EP5C |

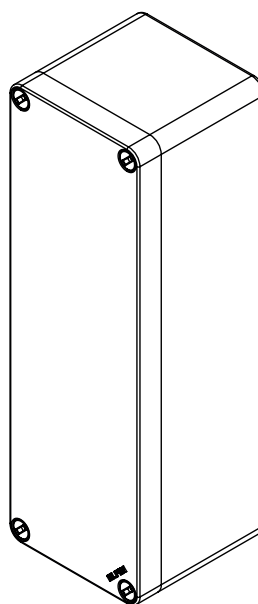
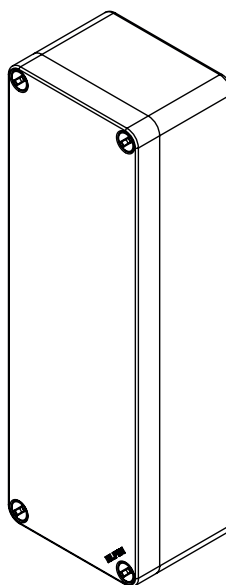
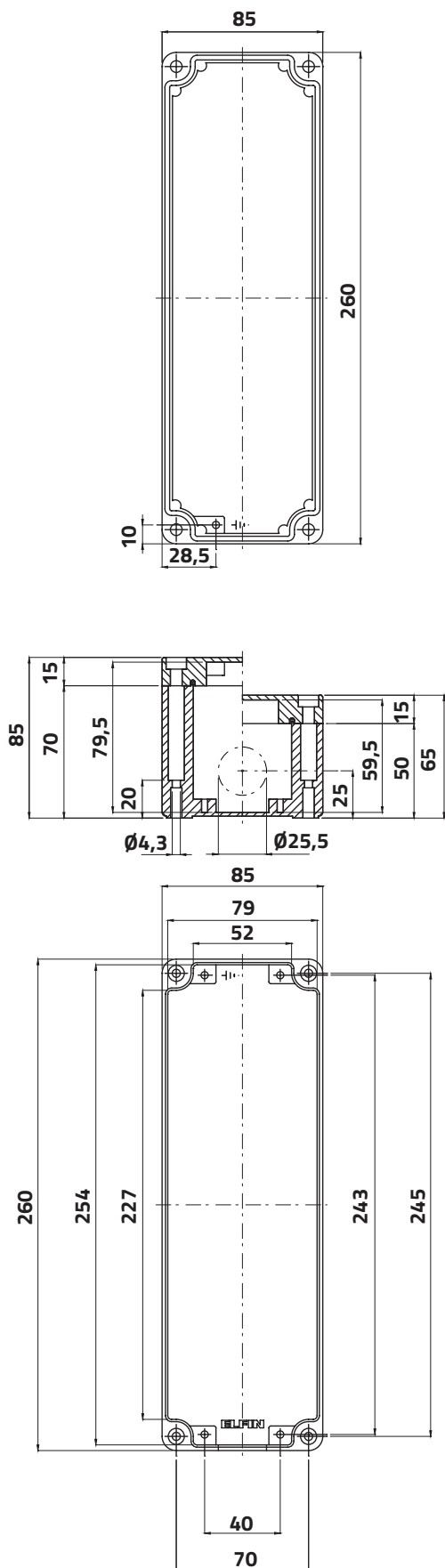


### Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 22mm

|                                     |    |     |               |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 65 | 608 | 040C0820-6P6  |
| Senza entrata cavo / No cable entry | 85 | 755 | 040C0820-8P6  |
| Con entrata cavo / With cable entry | 65 | 604 | 040C0820-6EP6 |
| Con entrata cavo / With cable entry | 85 | 751 | 040C0820-8EP6 |

# Scatole in alluminio M10 85x260mm

## Aluminium enclosures M10 85x260mm



# Scatole in alluminio M10 85x260mm

## Aluminium enclosures M10 85x260mm



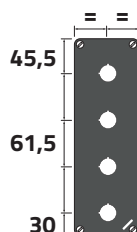
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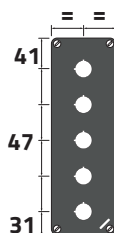
### Coperchio senza fori / Undrilled lid

|                                           |    |     |             |
|-------------------------------------------|----|-----|-------------|
| Senza entrata cavo / No cable entry       | 65 | 772 | 040C0826-6  |
| Senza entrata cavo / No cable entry       | 85 | 917 | 040C0826-8  |
| Con entrata cavo / With cable entry       | 65 | 768 | 040C0826-6E |
| Con entrata cavo / With cable entry       | 85 | 913 | 040C0826-8E |
| Grezza, cieca / Unpainted, no cable entry | 65 | 772 | 040C0826-6N |
| Grezza, cieca / Unpainted, no cable entry | 85 | 917 | 040C0826-8N |



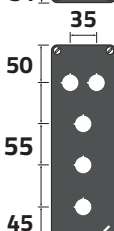
### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                                     |    |     |               |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 65 | 762 | 040C0826-6P4  |
| Senza entrata cavo / No cable entry | 85 | 907 | 040C0826-8P4  |
| Con entrata cavo / With cable entry | 65 | 758 | 040C0826-6EP4 |
| Con entrata cavo / With cable entry | 85 | 903 | 040C0826-8EP4 |



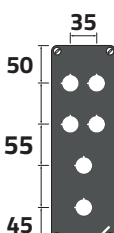
### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                                     |    |     |               |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 65 | 760 | 040C0826-6P5  |
| Senza entrata cavo / No cable entry | 85 | 905 | 040C0826-8P5  |
| Con entrata cavo / With cable entry | 65 | 756 | 040C0826-6EP5 |
| Con entrata cavo / With cable entry | 85 | 901 | 040C0826-8EP5 |



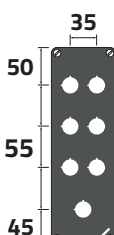
### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                                     |    |     |                |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 760 | 040C0826-6P5C  |
| Senza entrata cavo / No cable entry | 85 | 905 | 040C0826-8P5C  |
| Con entrata cavo / With cable entry | 65 | 756 | 040C0826-6EP5C |
| Con entrata cavo / With cable entry | 85 | 901 | 040C0826-8EP5C |



### Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 22mm

|                                     |    |     |                |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 756 | 040C0826-6P6C  |
| Senza entrata cavo / No cable entry | 85 | 901 | 040C0826-8P6C  |
| Con entrata cavo / With cable entry | 65 | 901 | 040C0826-6EP6C |
| Con entrata cavo / With cable entry | 85 | 901 | 040C0826-8EP6C |

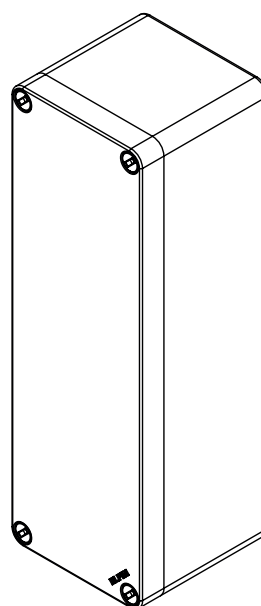
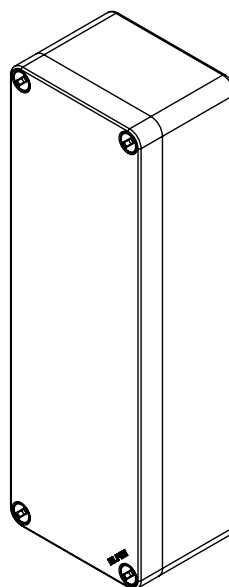
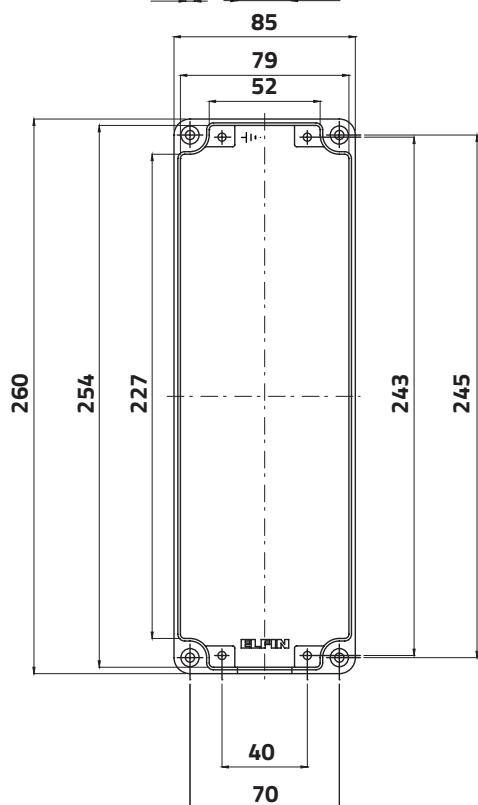
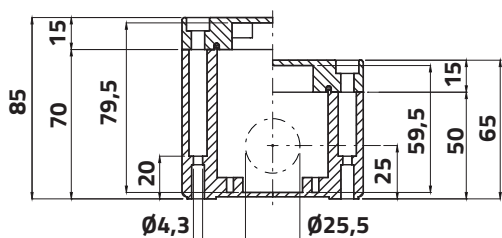
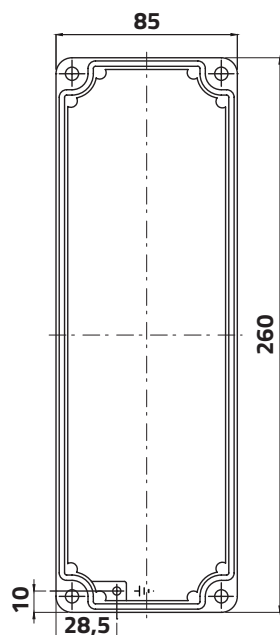


### Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

|                                     |    |     |                |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 753 | 040C0826-6P7C  |
| Senza entrata cavo / No cable entry | 85 | 898 | 040C0826-8P7C  |
| Con entrata cavo / With cable entry | 65 | 769 | 040C0826-6EP7C |
| Con entrata cavo / With cable entry | 85 | 894 | 040C0826-8EP7C |

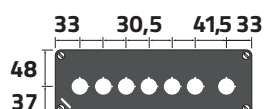
# Scatole in alluminio M10 85x260mm

## Aluminium enclosures M10 85x260mm



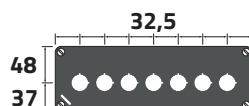
# Scatole in alluminio M10 85x260mm

## Aluminium enclosures M10 85x260mm



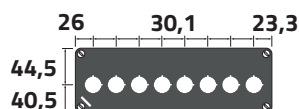
### Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

|                                     | h  | g   | cod             |
|-------------------------------------|----|-----|-----------------|
| Senza entrata cavo / No cable entry | 65 | 753 | 040C0826-6P7LC  |
| Senza entrata cavo / No cable entry | 85 | 898 | 040C0826-8P7LC  |
| Con entrata cavo / With cable entry | 65 | 749 | 040C0826-6EP7LC |
| Con entrata cavo / With cable entry | 85 | 894 | 040C0826-8EP7LC |



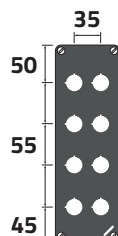
### Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

|                                     | h  | g   | cod            |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 753 | 040C0826-6P7L  |
| Senza entrata cavo / No cable entry | 85 | 898 | 040C0826-8P7L  |
| Con entrata cavo / With cable entry | 65 | 749 | 040C0826-6EP7L |
| Con entrata cavo / With cable entry | 85 | 894 | 040C0826-8EP7L |



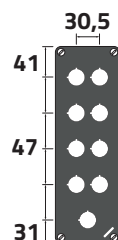
### Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

|                                     | h  | g   | cod            |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 750 | 040C0826-6P8L  |
| Senza entrata cavo / No cable entry | 85 | 895 | 040C0826-8P8L  |
| Con entrata cavo / With cable entry | 65 | 746 | 040C0826-6EP8L |
| Con entrata cavo / With cable entry | 85 | 891 | 040C0826-8EP8L |



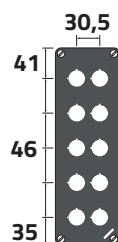
### Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

|                                     | h  | g   | cod           |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 65 | 750 | 040C0826-6P8  |
| Senza entrata cavo / No cable entry | 85 | 895 | 040C0826-8P8  |
| Con entrata cavo / With cable entry | 65 | 746 | 040C0826-6EP8 |
| Con entrata cavo / With cable entry | 85 | 891 | 040C0826-8EP8 |



### Coperchio con 9 fori Ø 22mm / 9-hole lid Ø 22mm

|                                     | h  | g   | cod            |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 748 | 040C0826-6P9C  |
| Senza entrata cavo / No cable entry | 85 | 893 | 040C0826-8P9C  |
| Con entrata cavo / With cable entry | 65 | 744 | 040C0826-6EP9C |
| Con entrata cavo / With cable entry | 85 | 889 | 040C0826-8EP9C |

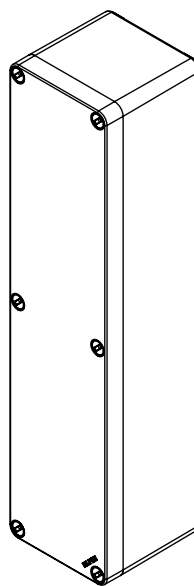
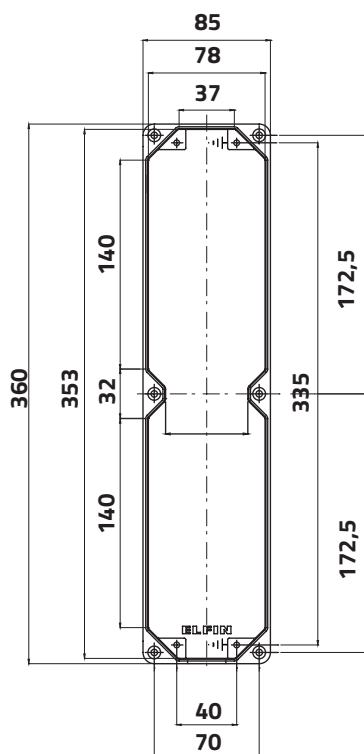
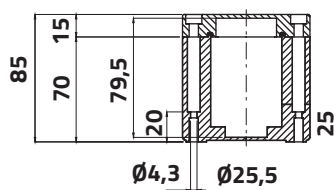
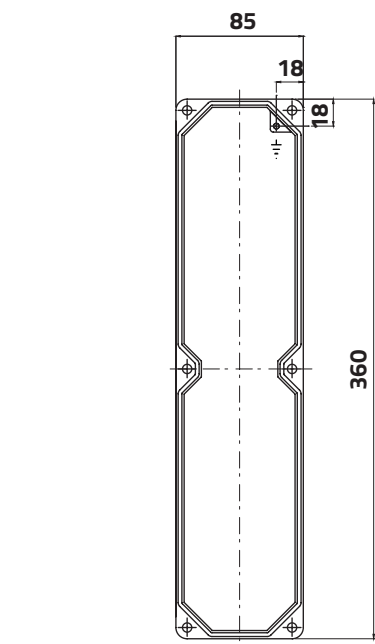


### Coperchio con 10 fori Ø 22mm / 10-hole lid Ø 22mm

|                                     | h  | g   | cod            |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 744 | 040C0826-6P10  |
| Senza entrata cavo / No cable entry | 85 | 889 | 040C0826-8P10  |
| Con entrata cavo / With cable entry | 65 | 740 | 040C0826-6EP10 |
| Con entrata cavo / With cable entry | 85 | 885 | 040C0826-8EP10 |

# Scatole in alluminio M10 85x360mm

## Aluminium enclosures M10 85x360mm



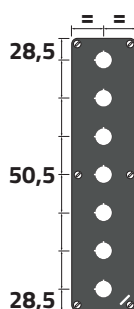
# Scatole in alluminio M10 85x360mm

## Aluminium enclosures M10 85x360mm



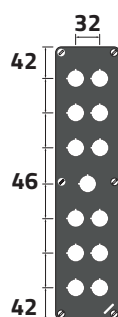
### Coperchio senza fori / Undrilled lid

|                                           | h  | g    | cod         |
|-------------------------------------------|----|------|-------------|
| Senza entrata cavo / No cable entry       | 85 | 1280 | 040C0836-8  |
| Grezza, cieca / Unpainted, no cable entry | 85 | 1280 | 040C0836-8N |



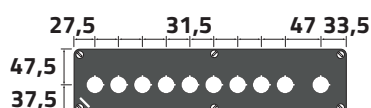
### Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

|                                     |    |      |              |
|-------------------------------------|----|------|--------------|
| Senza entrata cavo / No cable entry | 85 | 1269 | 040C0836-8P7 |
|-------------------------------------|----|------|--------------|



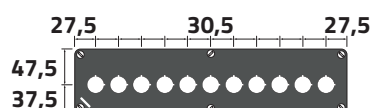
### Coperchio con 13 fori Ø 22mm / 13-hole lid Ø 22mm

|                                     |    |      |               |
|-------------------------------------|----|------|---------------|
| Senza entrata cavo / No cable entry | 85 | 1243 | 040C0836-8P13 |
|-------------------------------------|----|------|---------------|



### Coperchio con 10 fori Ø 22mm / 10-hole lid Ø 22mm

|                                     |    |      |                 |
|-------------------------------------|----|------|-----------------|
| Senza entrata cavo / No cable entry | 85 | 1256 | 040C0836-8P10LC |
|-------------------------------------|----|------|-----------------|



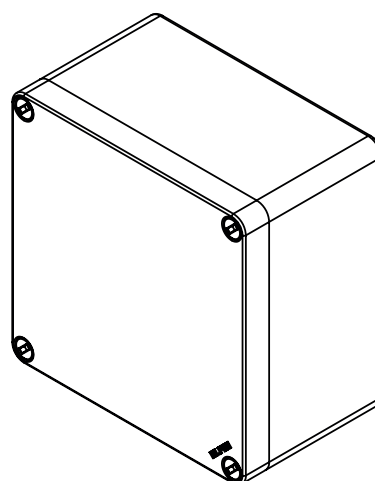
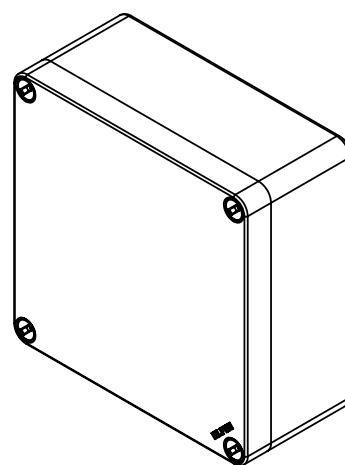
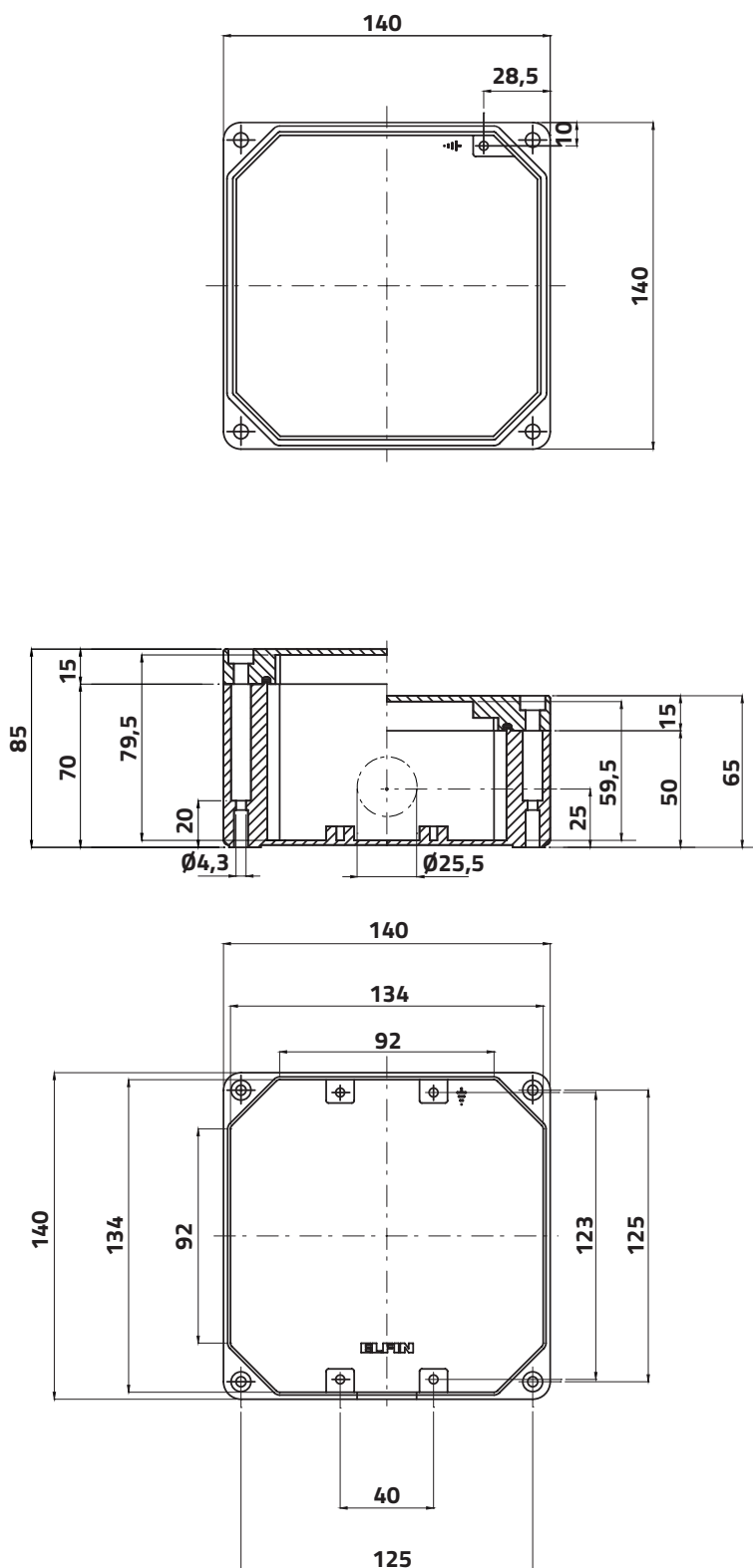
### Coperchio con 11 fori Ø 22mm / 11-hole lid Ø 22mm

|                                     |    |      |                |
|-------------------------------------|----|------|----------------|
| Senza entrata cavo / No cable entry | 85 | 1252 | 040C0836-8P11L |
|-------------------------------------|----|------|----------------|



# Scatole in alluminio M10 140x140mm

## Aluminium enclosures M10 140x140mm



# Scatole in alluminio M10 140x140mm

## Aluminium enclosures M10 140x140mm



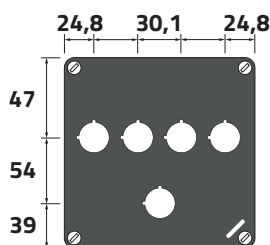
h

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cod

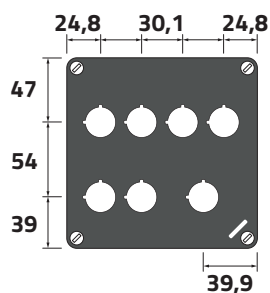
### Coperchio senza fori / Undrilled lid

|                                           |    |     |             |
|-------------------------------------------|----|-----|-------------|
| Senza entrata cavo / No cable entry       | 65 | 656 | 040C1414-6  |
| Senza entrata cavo / No cable entry       | 85 | 780 | 040C1414-8  |
| Con entrata cavo / With cable entry       | 65 | 652 | 040C1414-6E |
| Con entrata cavo / With cable entry       | 85 | 776 | 040C1414-8E |
| Grezza, cieca / Unpainted, no cable entry | 65 | 656 | 040C1414-6N |
| Grezza, cieca / Unpainted, no cable entry | 85 | 780 | 040C1414-8N |



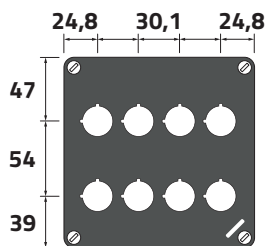
### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                                     |    |     |                |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 644 | 040C1414-6P5C  |
| Senza entrata cavo / No cable entry | 85 | 768 | 040C1414-8P5C  |
| Con entrata cavo / With cable entry | 65 | 640 | 040C1414-6EP5C |
| Con entrata cavo / With cable entry | 85 | 764 | 040C1414-8EP5C |



### Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

|                                     |    |     |                |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 65 | 639 | 040C1414-6P7C  |
| Senza entrata cavo / No cable entry | 85 | 763 | 040C1414-8P7C  |
| Con entrata cavo / With cable entry | 65 | 635 | 040C1414-6EP7C |
| Con entrata cavo / With cable entry | 85 | 759 | 040C1414-8EP7C |

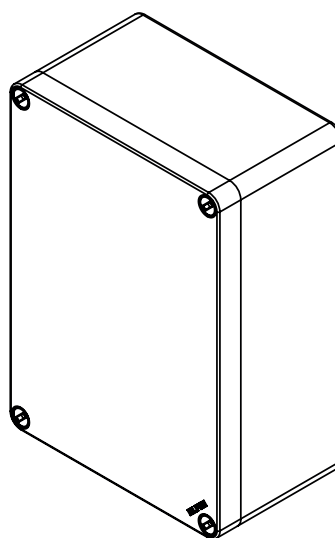
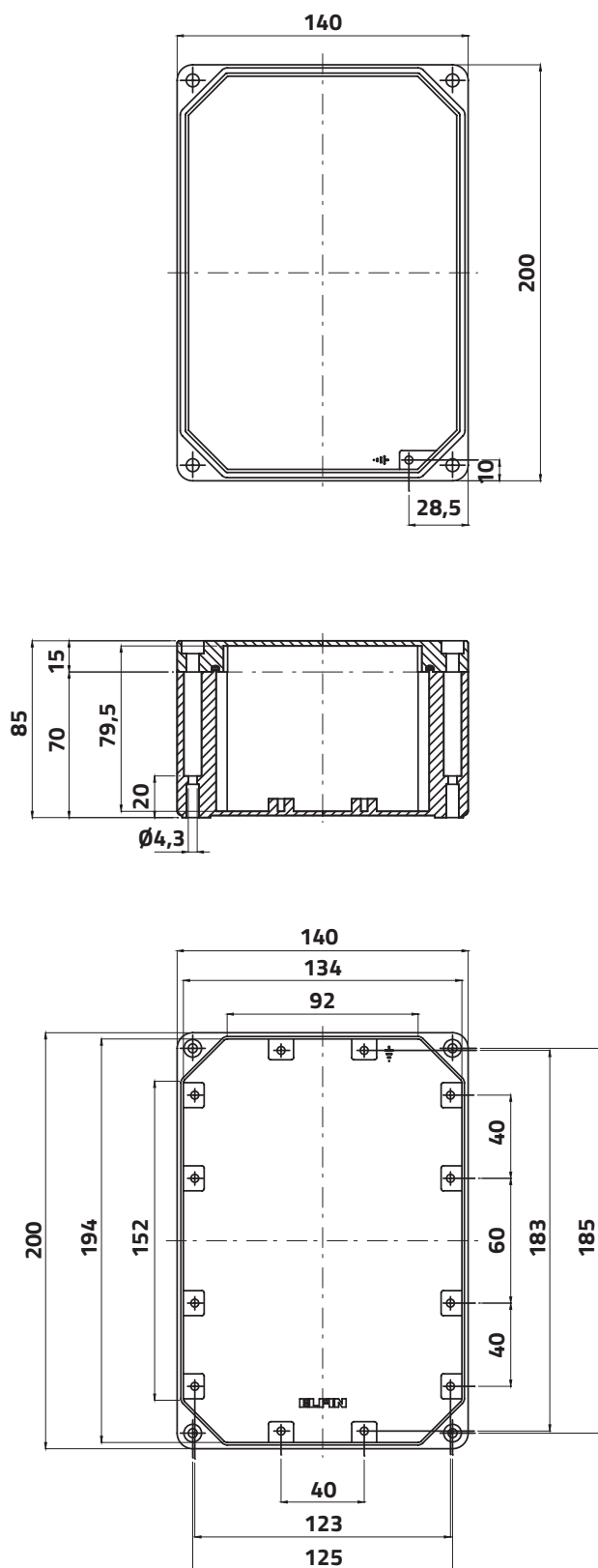


### Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

|                                     |    |     |               |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 65 | 636 | 040C1414-6P8  |
| Senza entrata cavo / No cable entry | 85 | 760 | 040C1414-8P8  |
| Con entrata cavo / With cable entry | 65 | 632 | 040C1414-6EP8 |
| Con entrata cavo / With cable entry | 85 | 756 | 040C1414-8EP8 |

# Scatole in alluminio M10 140x200mm

## Aluminium enclosures M10 140x200mm



# Scatole in alluminio M10 140x200mm

## Aluminium enclosures M10 140x200mm



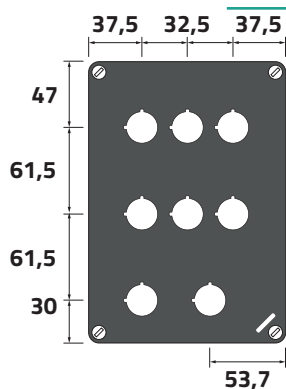
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g

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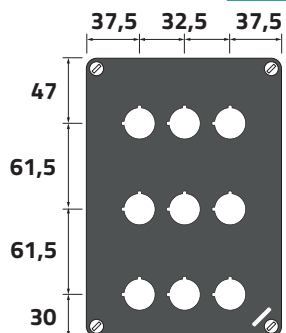
### Coperchio senza fori / Undrilled lid

|                                           |    |     |                    |
|-------------------------------------------|----|-----|--------------------|
| Senza entrata cavo / No cable entry       | 85 | 988 | <b>040C1420-8</b>  |
| Grezza, cieca / Unpainted, no cable entry | 85 | 988 | <b>040C1420-8N</b> |



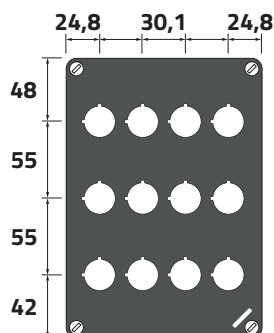
### Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

|                                     |    |     |                      |
|-------------------------------------|----|-----|----------------------|
| Senza entrata cavo / No cable entry | 85 | 968 | <b>040C1420-8P8C</b> |
|-------------------------------------|----|-----|----------------------|



### Coperchio con 9 fori Ø 22mm / 9-hole lid Ø 22mm

|                                     |    |     |                     |
|-------------------------------------|----|-----|---------------------|
| Senza entrata cavo / No cable entry | 85 | 966 | <b>040C1420-8P9</b> |
|-------------------------------------|----|-----|---------------------|

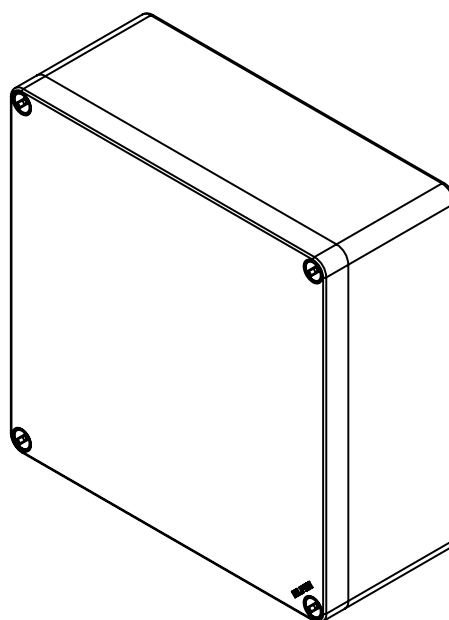
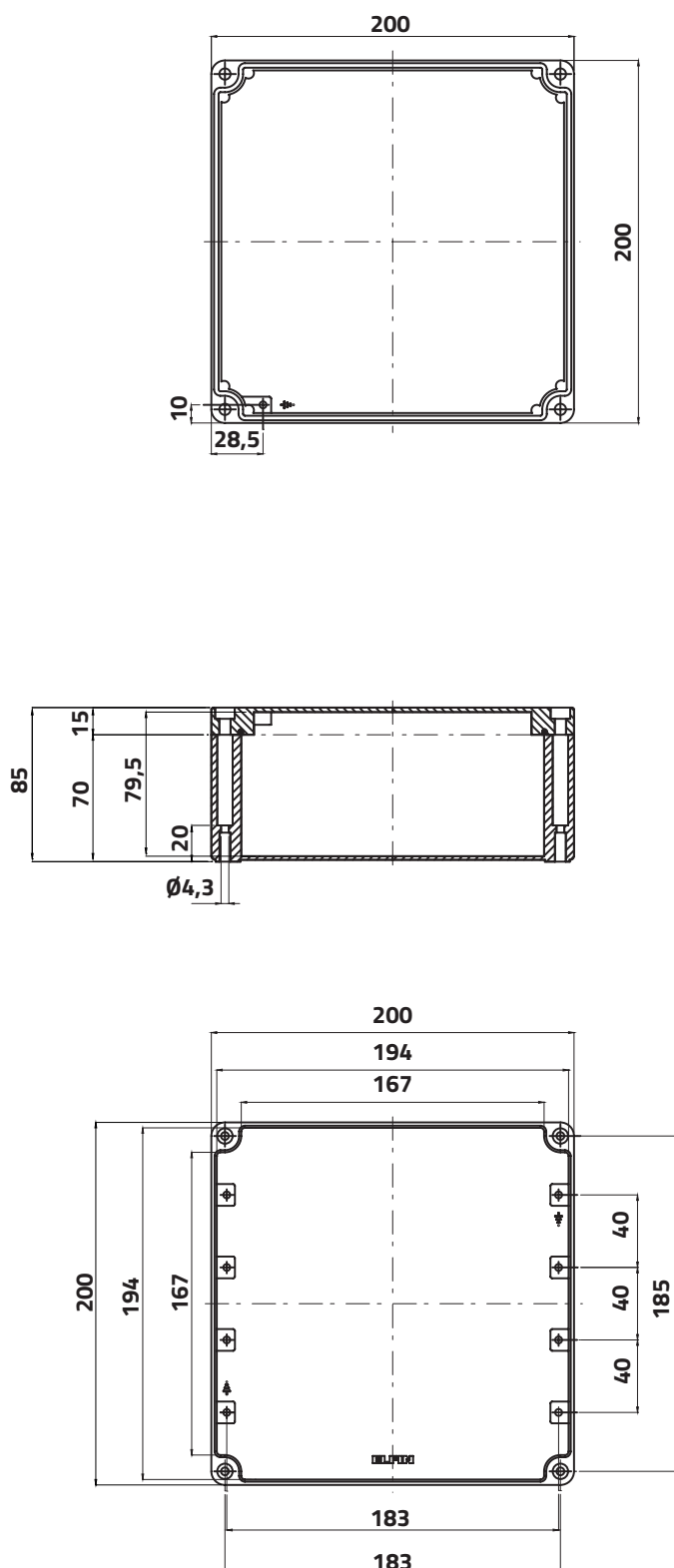


### Coperchio con 12 fori Ø 22mm / 12-hole lid Ø 22mm

|                                     |    |     |                      |
|-------------------------------------|----|-----|----------------------|
| Senza entrata cavo / No cable entry | 85 | 958 | <b>040C1420-8P12</b> |
|-------------------------------------|----|-----|----------------------|

# Scatole in alluminio M10 200x200mm

## Aluminium enclosures M10 200x200mm



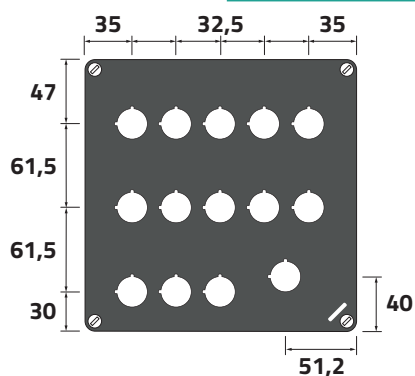
# Scatole in alluminio M10 200x200mm

## Aluminium enclosures M10 200x200mm



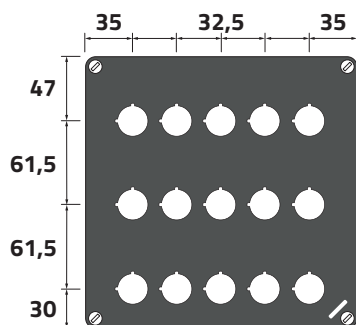
### Coperchio senza fori / Undrilled lid

|                                           | h  | g    | cod         |
|-------------------------------------------|----|------|-------------|
| Senza entrata cavo / No cable entry       | 85 | 1359 | 040C2020-8  |
| Grezza, cieca / Unpainted, no cable entry | 85 | 1359 | 040C2020-8N |



### Coperchio con 14 fori Ø 22mm / 14-hole lid Ø 22mm

|                                     |    |      |                |
|-------------------------------------|----|------|----------------|
| Senza entrata cavo / No cable entry | 85 | 1319 | 040C2020-8P14C |
|-------------------------------------|----|------|----------------|



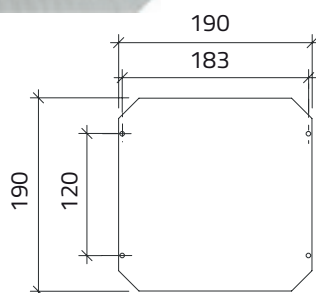
### Coperchio con 15 fori Ø 22mm / 15-hole lid Ø 22mm

|                                     |    |      |               |
|-------------------------------------|----|------|---------------|
| Senza entrata cavo / No cable entry | 85 | 1316 | 040C2020-8P15 |
|-------------------------------------|----|------|---------------|



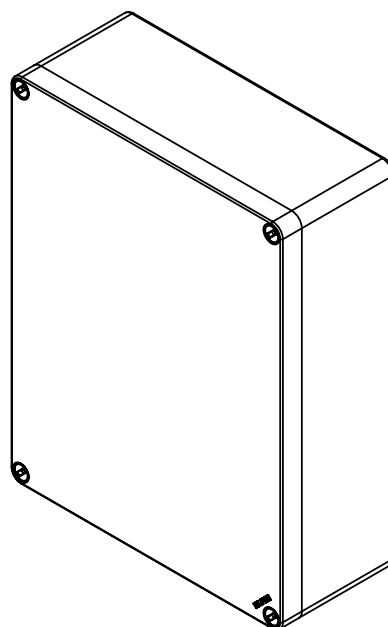
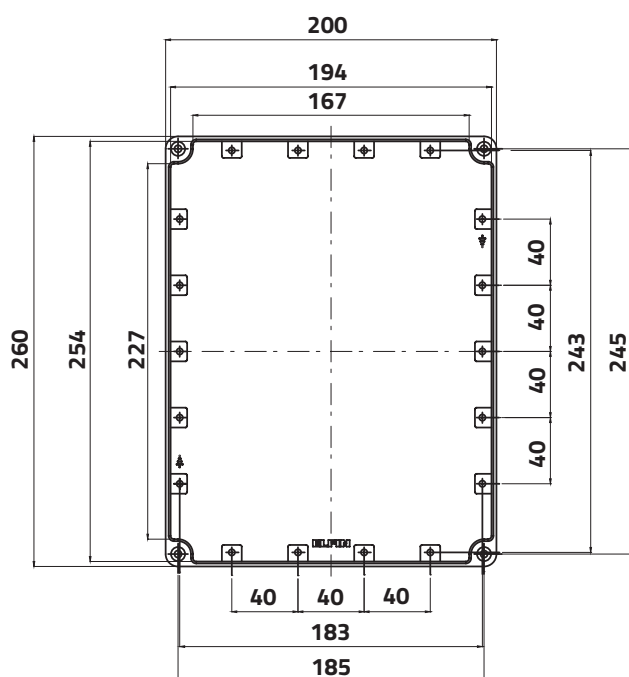
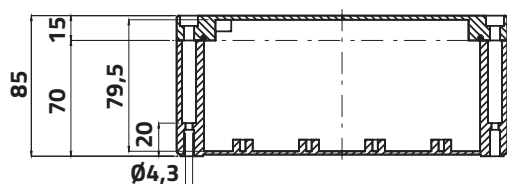
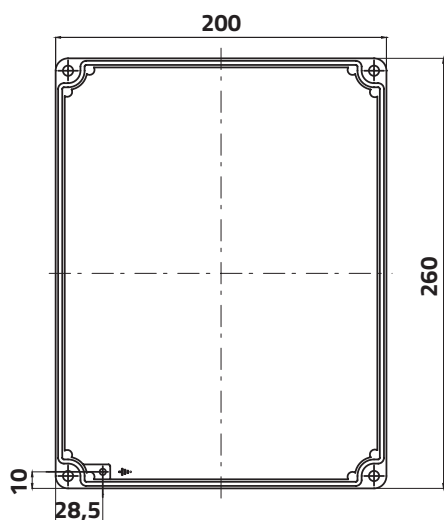
### Piastra di fondo / Mounting plate

|     |     |          |
|-----|-----|----------|
| 1,5 | 410 | 040P2020 |
|-----|-----|----------|



# Scatole in alluminio M10 200x260mm

## Aluminium enclosures M10 200x260mm





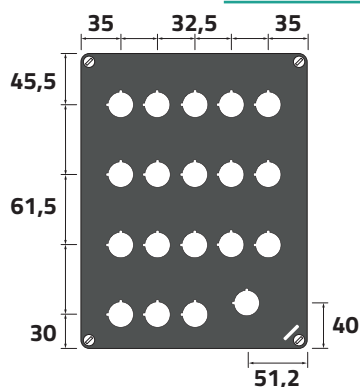
# Scatole in alluminio M10 200x260mm

## Aluminium enclosures M10 200x260mm



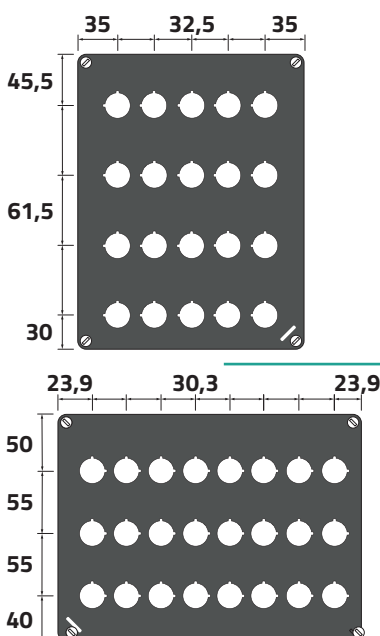
### Coperchio senza fori / Undrilled lid

|                                           |    |      |             |
|-------------------------------------------|----|------|-------------|
| Senza entrata cavo / No cable entry       | 85 | 1608 | 040C2026-8  |
| Grezza, cieca / Unpainted, no cable entry | 85 | 1608 | 040C2026-8N |



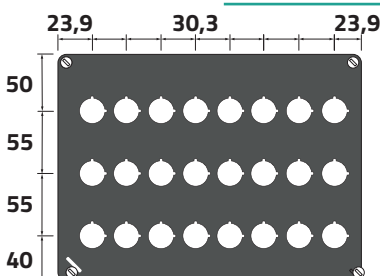
### Coperchio con 19 fori Ø 22mm / 19-hole lid Ø 22mm

|                                     |    |      |                |
|-------------------------------------|----|------|----------------|
| Senza entrata cavo / No cable entry | 85 | 1554 | 040C2026-8P19C |
|-------------------------------------|----|------|----------------|



### Coperchio con 20 fori Ø 22mm / 20-hole lid Ø 22mm

|                                     |    |      |               |
|-------------------------------------|----|------|---------------|
| Senza entrata cavo / No cable entry | 85 | 1552 | 040C2026-8P20 |
|-------------------------------------|----|------|---------------|



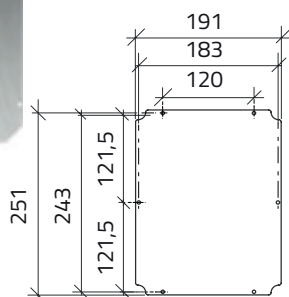
### Coperchio con 24 fori Ø 22mm / 24-hole lid Ø 22mm

|                                     |    |      |               |
|-------------------------------------|----|------|---------------|
| Senza entrata cavo / No cable entry | 85 | 1540 | 040C2026-8P24 |
|-------------------------------------|----|------|---------------|



### Piastra di fondo / Mounting plate

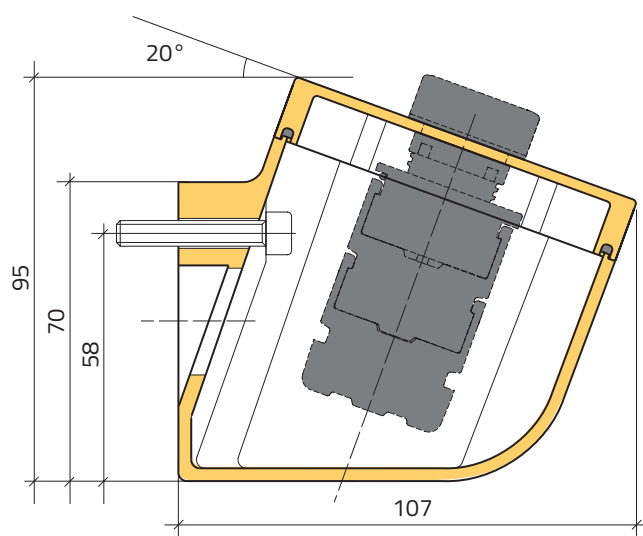
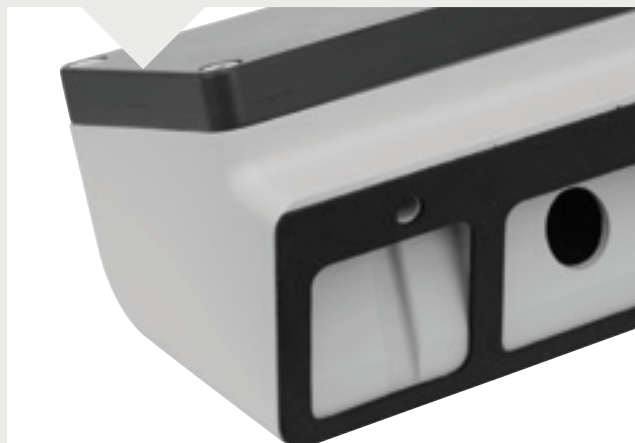
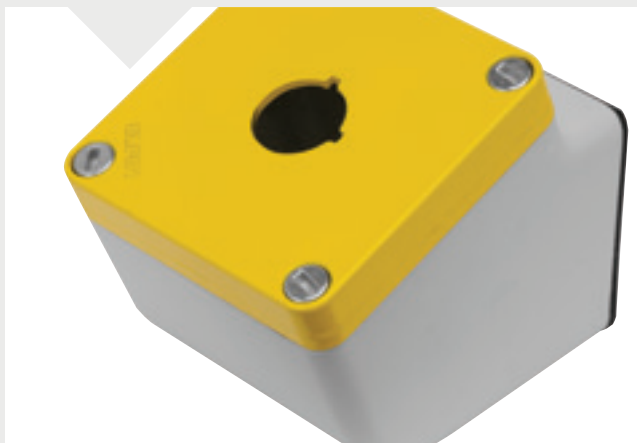
|     |     |          |
|-----|-----|----------|
| 1,5 | 540 | 040P2026 |
|-----|-----|----------|



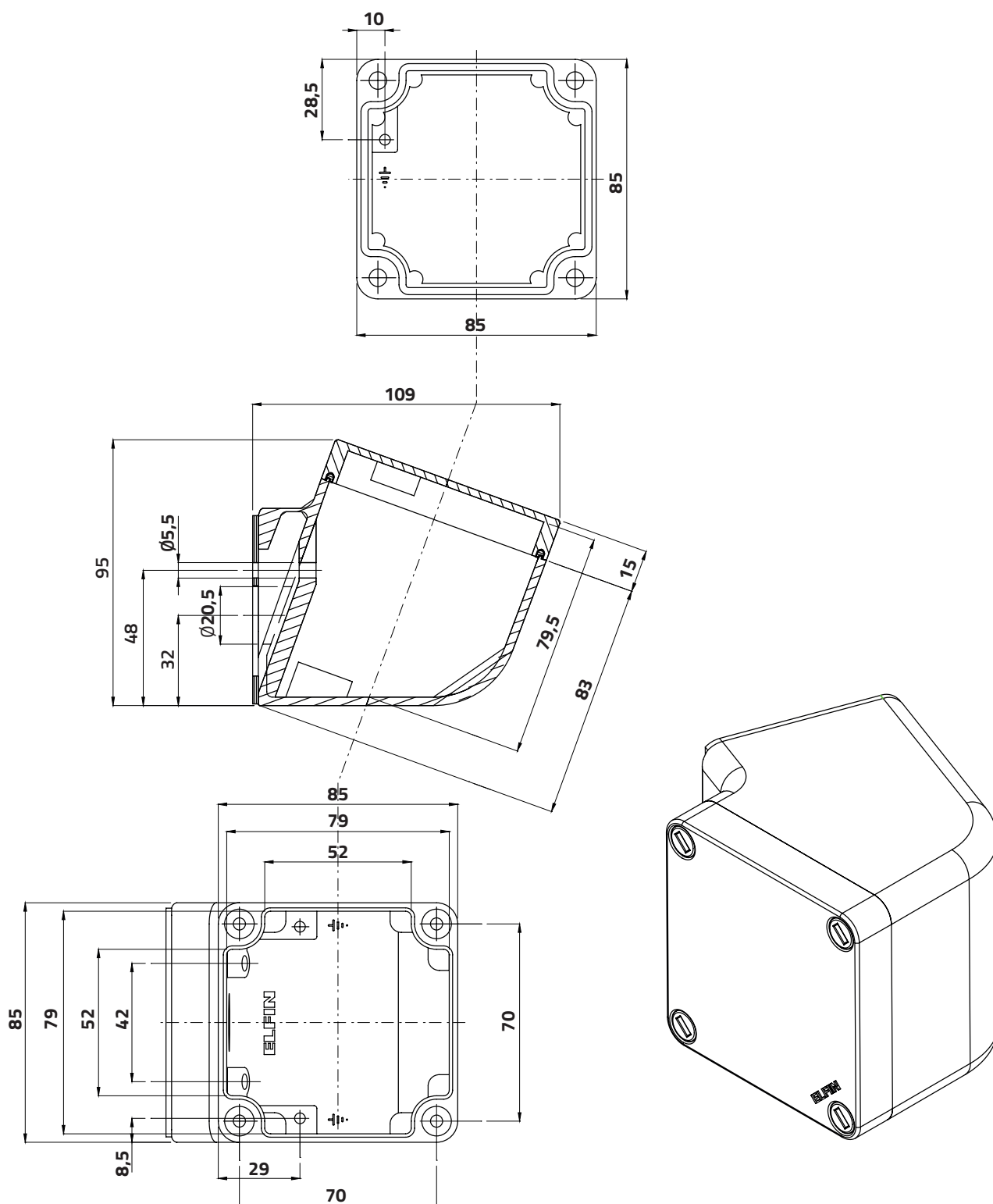
## Scatole inclinate in alluminio M10 Sloped aluminium enclosures M10



## Scatole inclinate in alluminio M10 Sloped aluminium enclosures M10

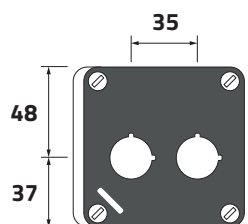
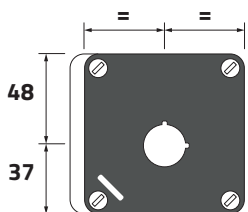
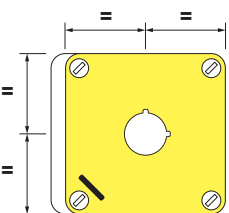
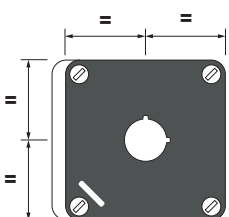


# Scatole inclinate in alluminio M10 85x85mm Sloped aluminium enclosures M10 85x85mm



# Scatole inclinate in alluminio M10 85x85mm

## Sloped aluminium enclosures M10 85x85mm



### Coperchio senza fori / Undrilled lid

|                                                        |     |              |
|--------------------------------------------------------|-----|--------------|
| Con entrata cavo / With cable entry                    | 545 | 040L0808-8E  |
| Grezza, con entrata cavo / Unpainted, with cable entry | 545 | 040L0808-8EN |

### Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

|                                     |     |                |
|-------------------------------------|-----|----------------|
| Con entrata cavo / With cable entry | 542 | 040L0808-8EP1C |
|-------------------------------------|-----|----------------|

### Coperchio giallo con 1 foro Ø 22mm / 1-hole yellow lid Ø 22mm

|                                     |     |                |
|-------------------------------------|-----|----------------|
| Con entrata cavo / With cable entry | 542 | 040L0808-8EGP1 |
|-------------------------------------|-----|----------------|

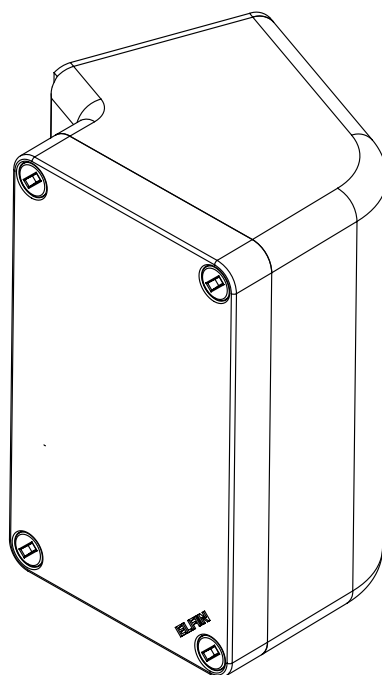
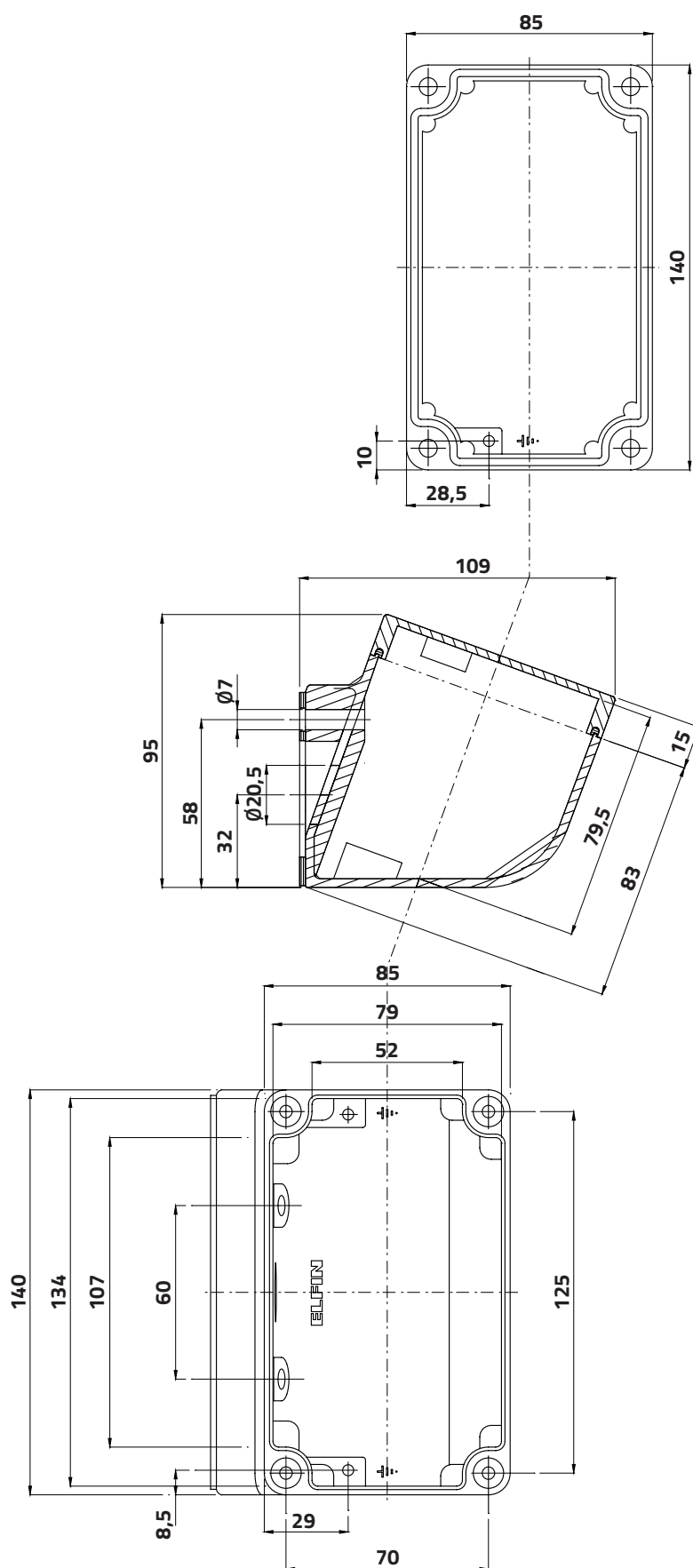
### Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

|                                     |     |               |
|-------------------------------------|-----|---------------|
| Con entrata cavo / With cable entry | 542 | 040L0808-8EP1 |
|-------------------------------------|-----|---------------|

### Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

|                                     |     |               |
|-------------------------------------|-----|---------------|
| Con entrata cavo / With cable entry | 539 | 040L0808-8EP2 |
|-------------------------------------|-----|---------------|

# Scatole inclinate in alluminio M10 85x140mm Sloped aluminium enclosures M10 85x140mm



# Scatole inclinate in alluminio M10 85x140mm

## Sloped aluminium enclosures M10 85x140mm

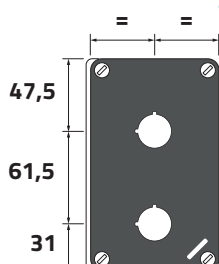


g

cod

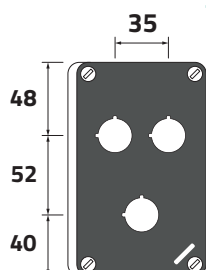
### Coperchio senza fori / Undrilled lid

|                                                        |     |              |
|--------------------------------------------------------|-----|--------------|
| Con entrata cavo / With cable entry                    | 750 | 040L0814-8E  |
| Grezza, con entrata cavo / Unpainted, with cable entry | 750 | 040L0814-8EN |



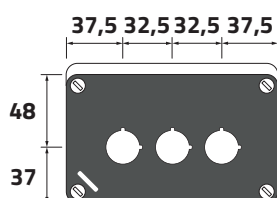
### Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

|                                     |     |               |
|-------------------------------------|-----|---------------|
| Con entrata cavo / With cable entry | 745 | 040L0814-8EP2 |
|-------------------------------------|-----|---------------|



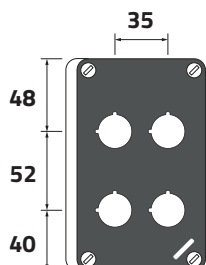
### Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

|                                     |     |                |
|-------------------------------------|-----|----------------|
| Con entrata cavo / With cable entry | 743 | 040L0814-8EP3C |
|-------------------------------------|-----|----------------|



### Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

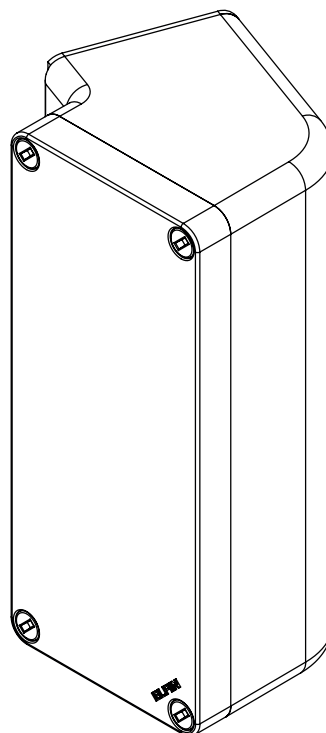
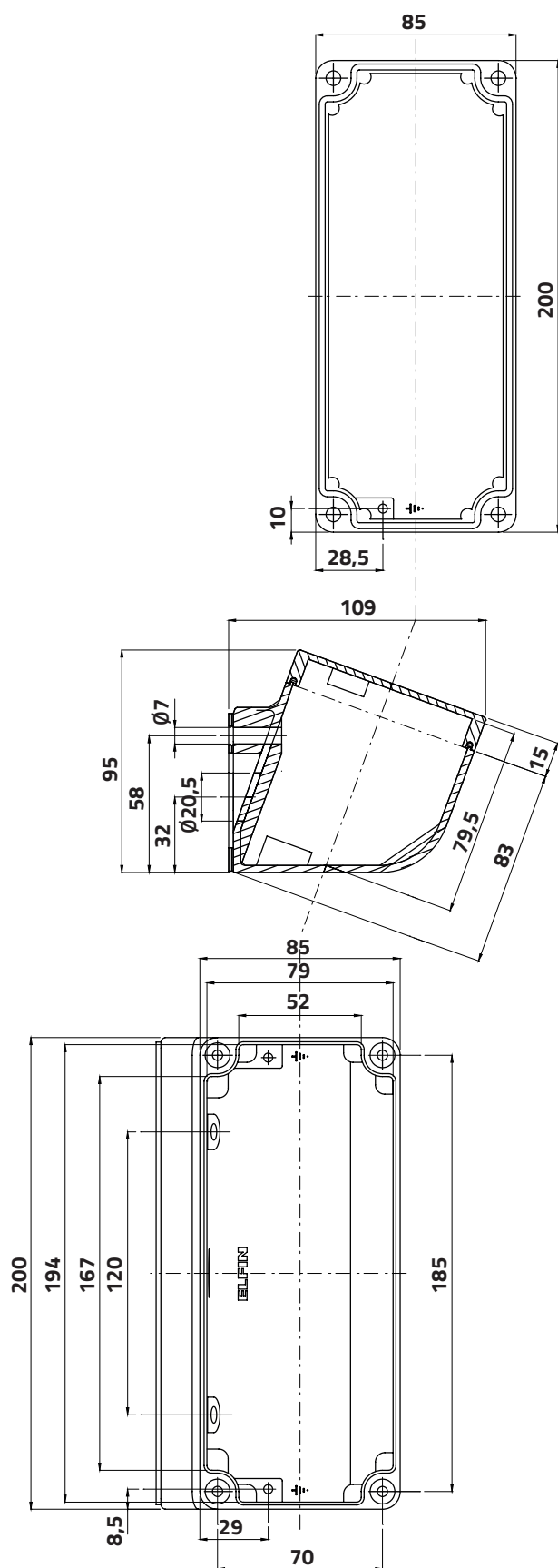
|                                     |     |                |
|-------------------------------------|-----|----------------|
| Con entrata cavo / With cable entry | 743 | 040L0814-8EP3L |
|-------------------------------------|-----|----------------|



### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                                     |     |               |
|-------------------------------------|-----|---------------|
| Con entrata cavo / With cable entry | 740 | 040L0814-8EP4 |
|-------------------------------------|-----|---------------|

# Scatole inclinate in alluminio M10 85x200mm Sloped aluminium enclosures M10 85x200mm





# Scatole inclinate in alluminio M10 85x200mm

## Sloped aluminium enclosures M10 85x200mm

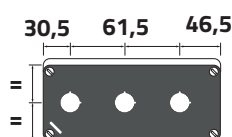


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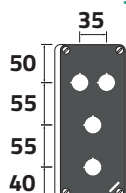
### Coperchio senza fori / Undrilled lid

|                                                        |     |              |
|--------------------------------------------------------|-----|--------------|
| Con entrata cavo / With cable entry                    | 980 | 040L0820-8E  |
| Grezza, con entrata cavo / Unpainted, with cable entry | 980 | 040L0820-8EN |



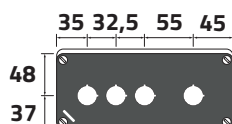
### Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

|                                     |     |               |
|-------------------------------------|-----|---------------|
| Con entrata cavo / With cable entry | 973 | 040L0820-8EP3 |
|-------------------------------------|-----|---------------|



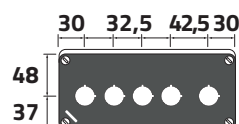
### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                                     |     |                |
|-------------------------------------|-----|----------------|
| Con entrata cavo / With cable entry | 970 | 040L0820-8EP4C |
|-------------------------------------|-----|----------------|



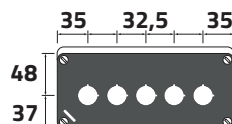
### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                                     |     |                 |
|-------------------------------------|-----|-----------------|
| Con entrata cavo / With cable entry | 970 | 040L0820-8EP4LC |
|-------------------------------------|-----|-----------------|



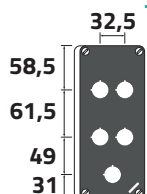
### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                                     |     |                 |
|-------------------------------------|-----|-----------------|
| Con entrata cavo / With cable entry | 968 | 040L0820-8EP5LC |
|-------------------------------------|-----|-----------------|



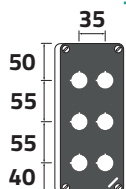
### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                                     |     |                |
|-------------------------------------|-----|----------------|
| Con entrata cavo / With cable entry | 968 | 040L0820-8EP5L |
|-------------------------------------|-----|----------------|



### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                                     |     |                |
|-------------------------------------|-----|----------------|
| Con entrata cavo / With cable entry | 968 | 040L0820-8EP5C |
|-------------------------------------|-----|----------------|

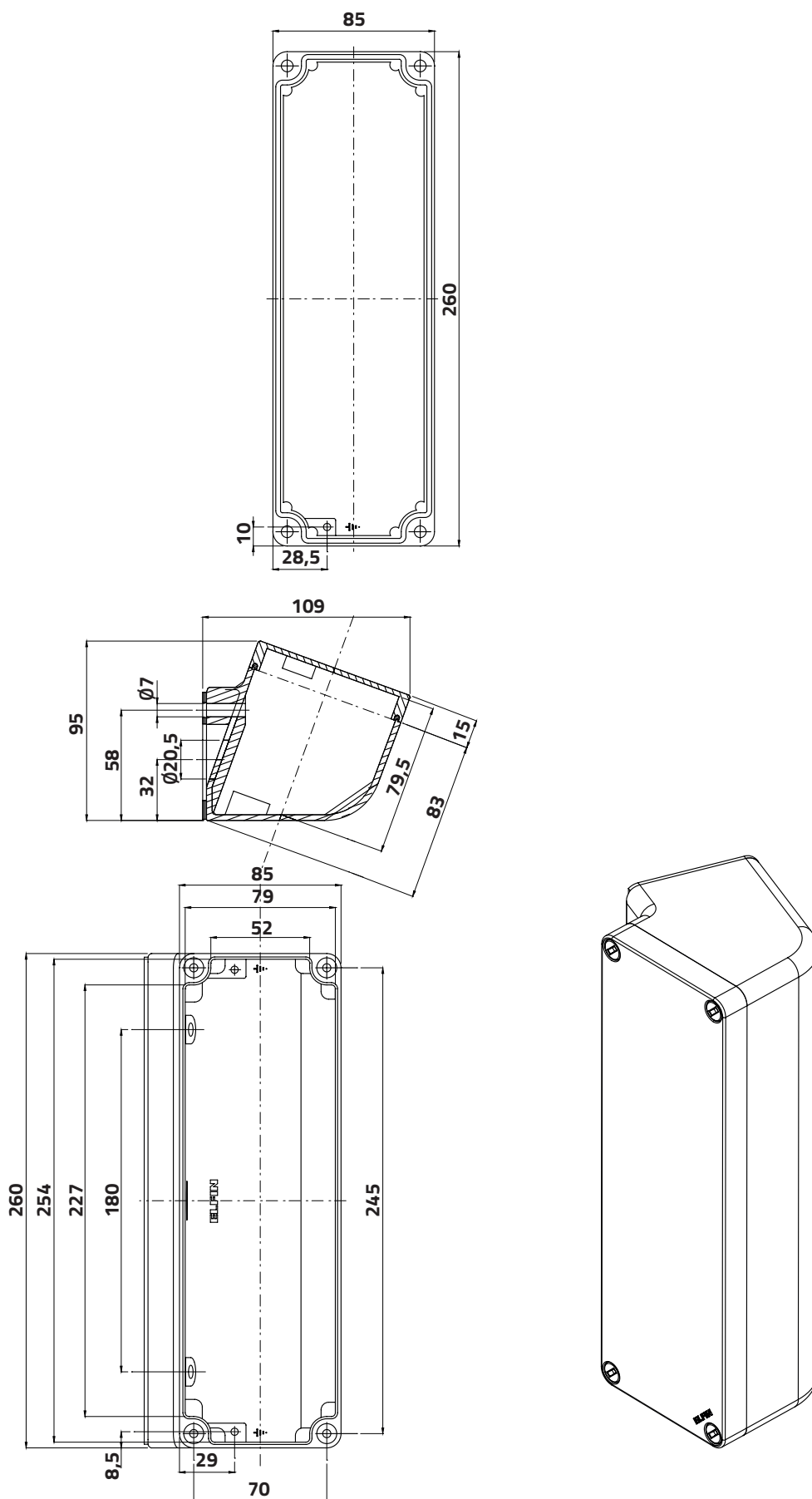


### Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 22mm

|                                     |     |               |
|-------------------------------------|-----|---------------|
| Con entrata cavo / With cable entry | 965 | 040L0820-8EP6 |
|-------------------------------------|-----|---------------|

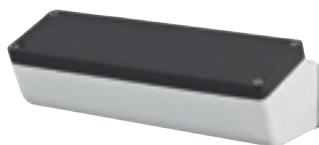


# Scatole inclinate in alluminio M10 85x260mm Sloped aluminium enclosures M10 85x260mm



# Scatole inclinate in alluminio M10 85x260mm

## Sloped aluminium enclosures M10 85x260mm



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### Coperchio senza fori / Undrilled lid

Con entrata cavo / With cable entry

1150

040L0826-8E

Grezza, con entrata cavo / Unpainted, with cable entry

1150

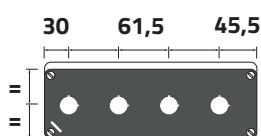
040L0826-8EN

### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

Con entrata cavo / With cable entry

1140

040L0826-8EP4

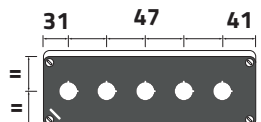


### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

Con entrata cavo / With cable entry

1138

040L0826-8EP5

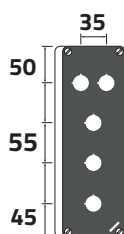


### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

Con entrata cavo / With cable entry

1138

040L0826-8EP5C

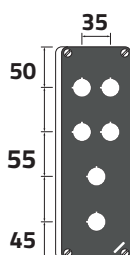


### Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 22mm

Con entrata cavo / With cable entry

1135

040L0826-8EP6C

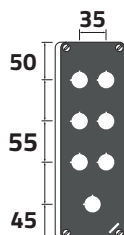


### Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

Con entrata cavo / With cable entry

1133

040L0826-8EP7C

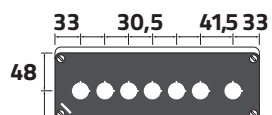


### Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

Con entrata cavo / With cable entry

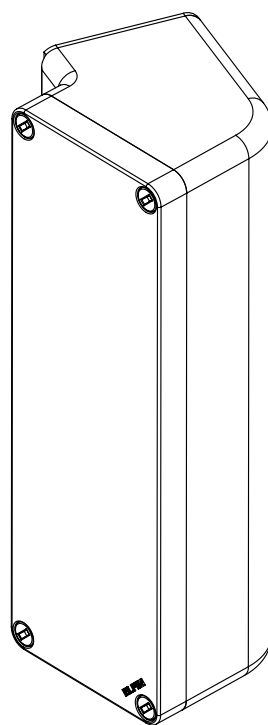
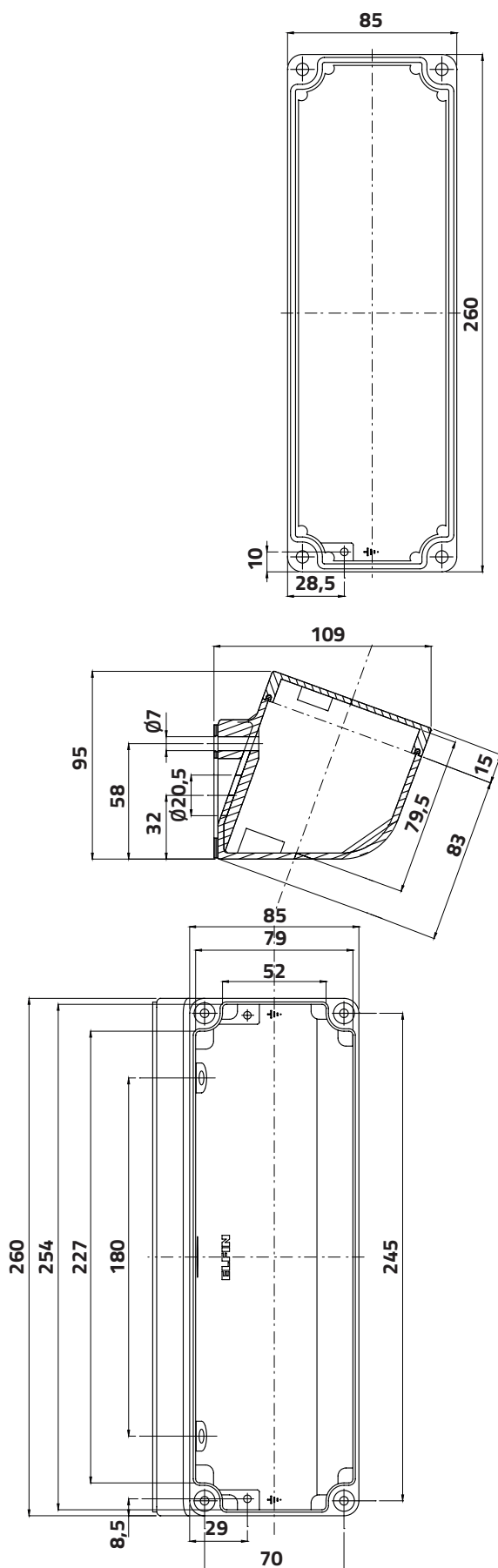
1133

040L0826-8EP7LC



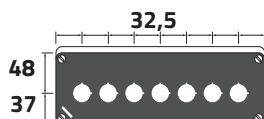
# Scatole inclinate in alluminio M10 85x260mm

## Sloped aluminium enclosures M10 85x260mm



# Scatole inclinate alluminio in M10 85x260mm

## Sloped aluminium enclosures M10 85x260mm

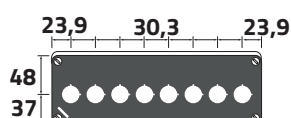


### Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

Con entrata cavo / With cable entry

1133

040L0826-8EP7L

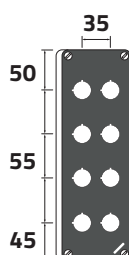


### Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

Con entrata cavo / With cable entry

1133

040L0826-8EP8L

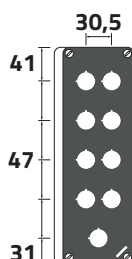


### Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

Con entrata cavo / With cable entry

1133

040L0826-8EP8

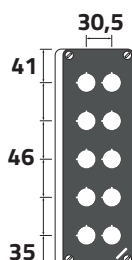


### Coperchio con 9 fori Ø 22mm / 9-hole lid Ø 22mm

Con entrata cavo / With cable entry

1133

040L0826-8EP9C

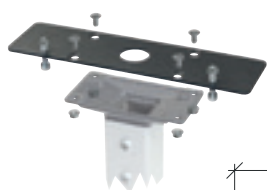


### Coperchio con 10 fori Ø 22mm / 10-hole lid Ø 22mm

VeCon entrata cavo / With cable entry

968

040L0826-8EP10



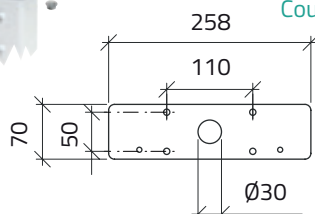
### Piastra / Plate

Per dettagli vedere sezione 060 / For details see section 060

Piastra accoppiamento per scatole inclinate  
Coupling plate for sloped enclosures

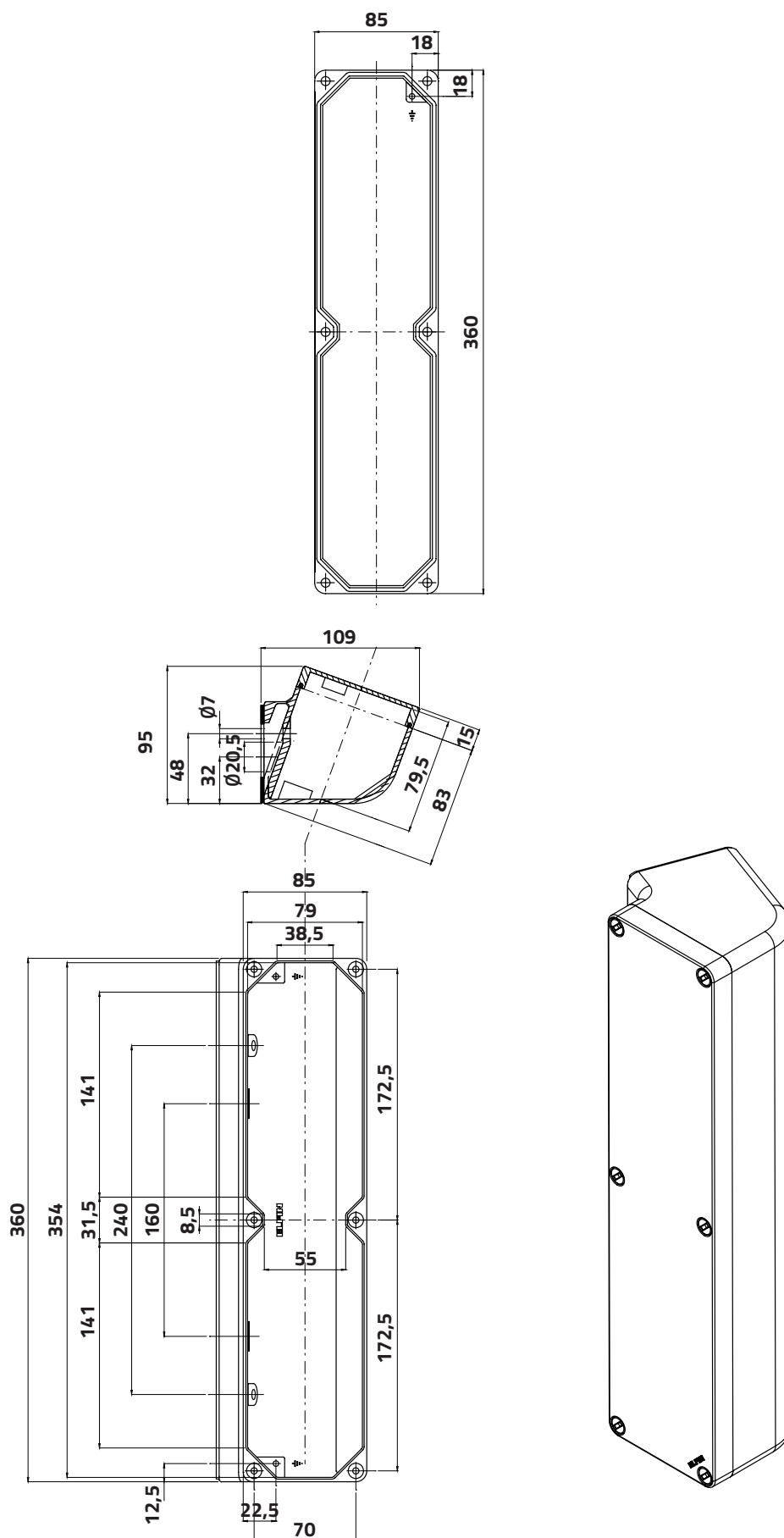
450

060PAP



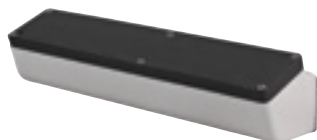
# Scatole inclinate in alluminio M10 85x360mm

## Sloped aluminium enclosures M10 85x360mm



# Scatole inclinate alluminio in M10 85x360mm

## Sloped aluminium enclosures M10 85x360mm

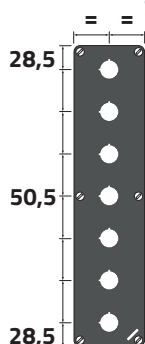


g

cod

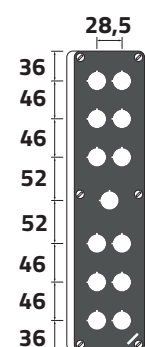
### Coperchio senza fori / Undrilled lid

|                                                        |      |              |
|--------------------------------------------------------|------|--------------|
| Con entrata cavo / With cable entry                    | 1424 | 040L0836-8E  |
| Grezza, con entrata cavo / Unpainted, with cable entry | 1424 | 040L0836-8EN |



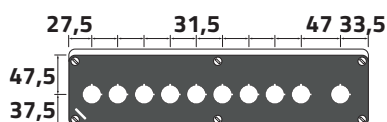
### Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

|                                     |      |               |
|-------------------------------------|------|---------------|
| Con entrata cavo / With cable entry | 1400 | 040L0836-8EP7 |
|-------------------------------------|------|---------------|



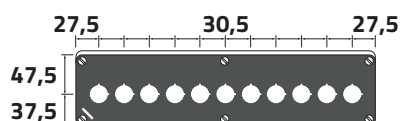
### Coperchio con 13 fori Ø 22mm / 13-hole lid Ø 22mm

|                                     |      |                |
|-------------------------------------|------|----------------|
| Con entrata cavo / With cable entry | 1385 | 040L0836-8EP13 |
|-------------------------------------|------|----------------|



### Coperchio con 10 fori Ø 22mm / 10-hole lid Ø 22mm

|                                     |      |                 |
|-------------------------------------|------|-----------------|
| Con entrata cavo / With cable entry | 1394 | 040L0836-8EP10L |
|-------------------------------------|------|-----------------|



### Coperchio con 11 fori Ø 22mm / 11-hole lid Ø 22mm

|                                     |      |                 |
|-------------------------------------|------|-----------------|
| Con entrata cavo / With cable entry | 1391 | 040L0836-8EP11L |
|-------------------------------------|------|-----------------|

## Scatole in alluminio M4 Aluminium enclosures M4



Disponibile in quattro altezze

Available in four heights



Fornibile senza verniciatura

Available unpainted



Personalizzabile in diversi colori

Customizable in different colours



Versione a lucidatura a specchio  
per ambienti alimentare e farmaceutico

Mirror polished version  
for food and pharmaceutical environments



## Scatole in alluminio M4 Aluminium enclosures M4



Viti di serraggio piastra  
Clamping screws for plate



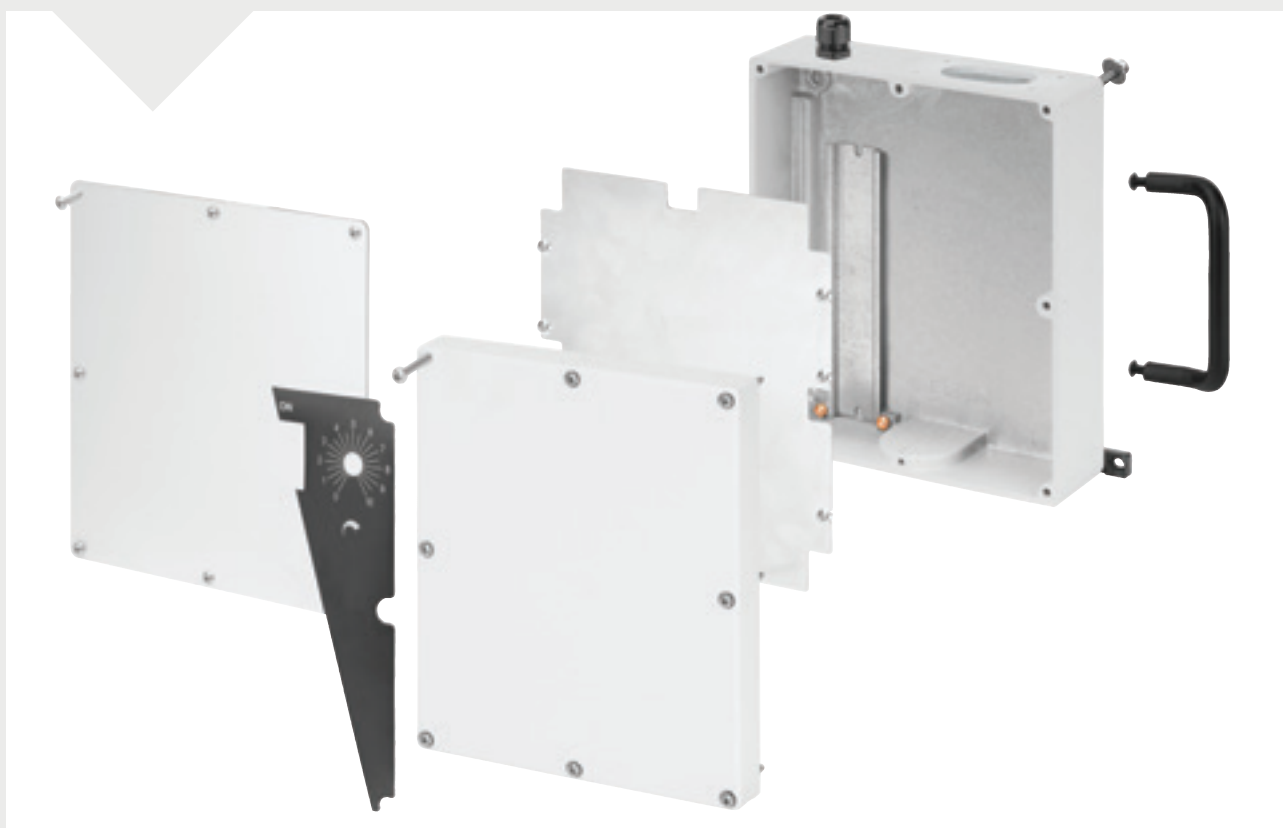
Viti di serraggio coperchio  
Clamping screws for lid



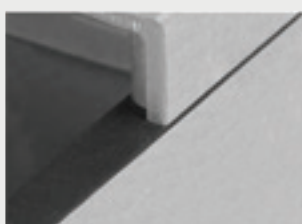
Lavorazioni personalizzate  
Customized machinings



Kit di fissaggio con prigionieri  
Fixing kit with studs



Etichetta personalizzata  
plastificata  
Customized plastic-coated  
legend plate



La guarnizione garantisce la  
protezione IP66  
A sealing gasket assures  
IP66 protection

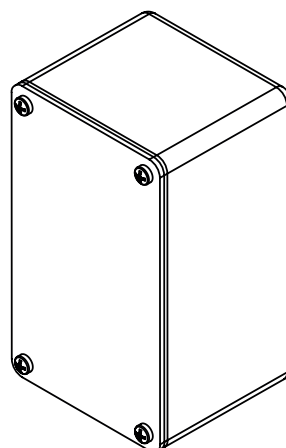
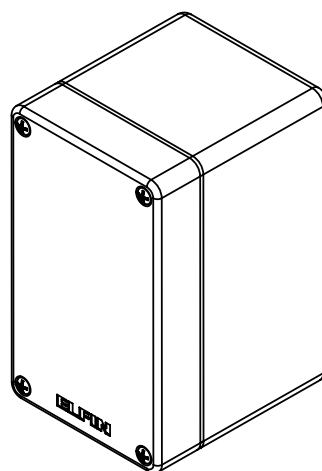
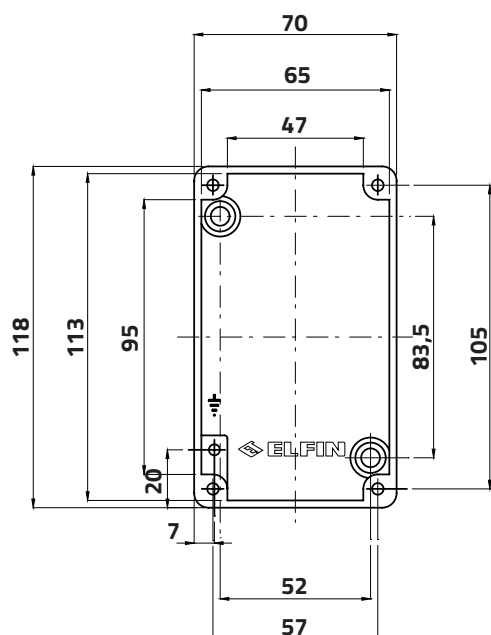
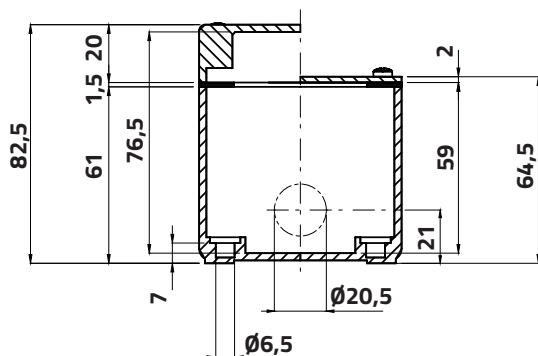
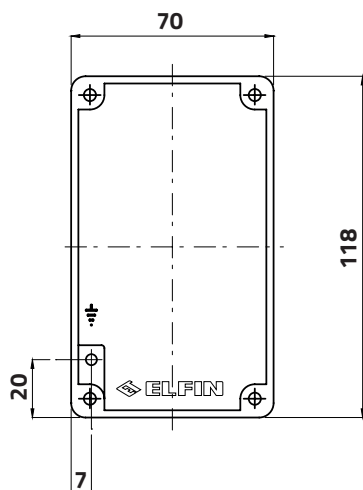


Kit di staffe di fissaggio  
Set of mounting brackets



# Scatole in alluminio M4 70x118mm

## Aluminium enclosures M4 70x118mm



# Scatole in alluminio M4 70x118mm

## Aluminium enclosures M4 70x118mm



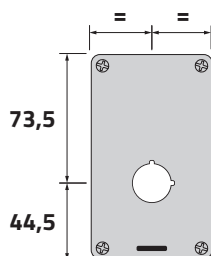
### Coperchio senza fori / Undrilled lid

|                                           | h  | g   | cod         |
|-------------------------------------------|----|-----|-------------|
| Senza entrata cavo / No cable entry       | 80 | 369 | 040C0711-8  |
| Con entrata cavo / With cable entry       | 80 | 365 | 040C0711-8E |
| Grezza, cieca / Unpainted, no cable entry | 80 | 369 | 040C0711-8N |



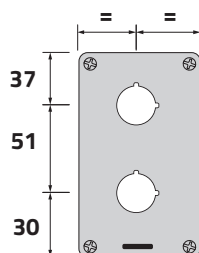
### Piastra in alluminio senza fori / Undrilled aluminium plate

|                                     |    |     |            |
|-------------------------------------|----|-----|------------|
| Senza entrata cavo / No cable entry | 62 | 281 | 040C0711-6 |
|-------------------------------------|----|-----|------------|



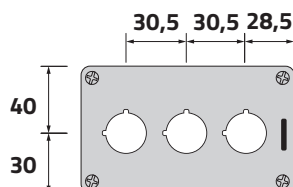
### Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

|                                     |    |     |               |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 80 | 366 | 040C0711-8P1  |
| Con entrata cavo / With cable entry | 80 | 362 | 040C0711-8EP1 |



### Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

|                                     |    |     |               |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 80 | 363 | 040C0711-8P2  |
| Con entrata cavo / With cable entry | 80 | 359 | 040C0711-8EP2 |

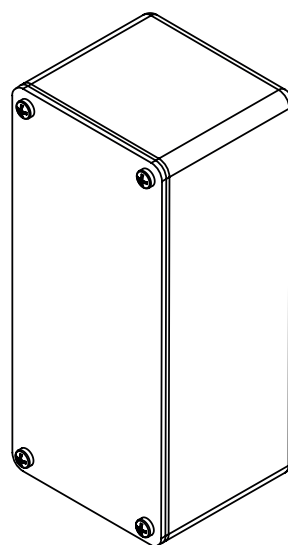
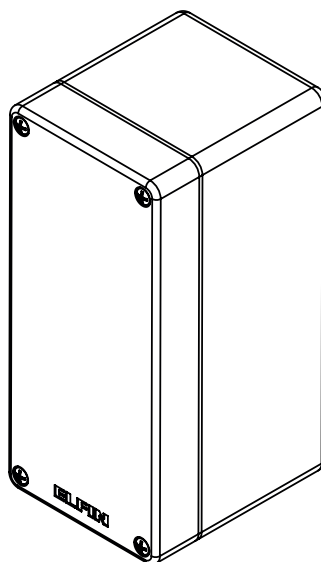
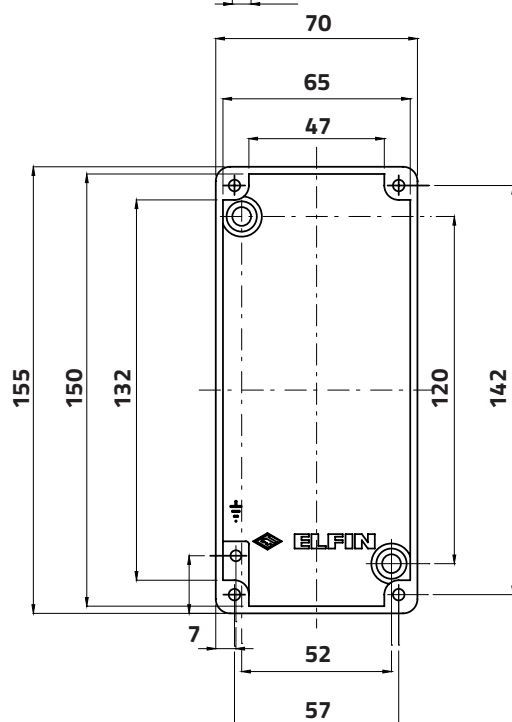
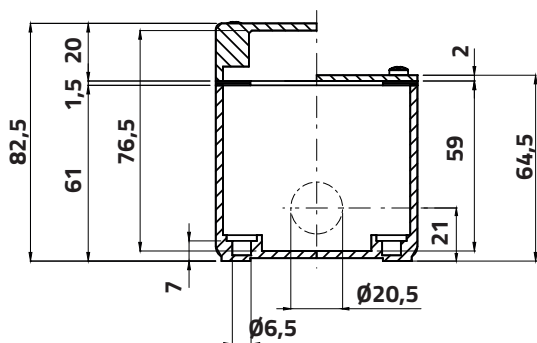
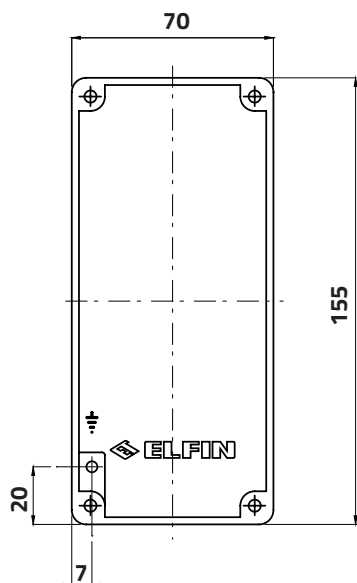


### Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

|                                     |    |     |               |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 80 | 360 | 040C0711-8P3  |
| Con entrata cavo / With cable entry | 80 | 356 | 040C0711-8EP3 |

# Scatole in alluminio M4 70x155mm

## Aluminium enclosures M4 70x155mm



# Scatole in alluminio M4 70x155mm

## Aluminium enclosures M4 70x155mm



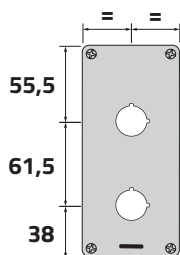
### Coperchio senza fori / Undrilled lid

|                                           | h  | g   | cod         |
|-------------------------------------------|----|-----|-------------|
| Senza entrata cavo / No cable entry       | 80 | 426 | 040C0715-8  |
| Con entrata cavo / With cable entry       | 80 | 422 | 040C0715-8E |
| Grezza, cieca / Unpainted, no cable entry | 80 | 426 | 040C0715-8N |



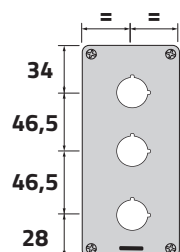
### Piastra in alluminio senza fori / Undrilled aluminium plate

|                                     |    |     |            |
|-------------------------------------|----|-----|------------|
| Senza entrata cavo / No cable entry | 62 | 328 | 040C0715-6 |
|-------------------------------------|----|-----|------------|



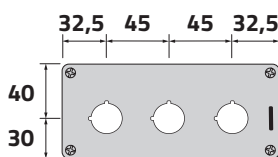
### Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

|                                     |    |     |               |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 80 | 417 | 040C0715-8P2  |
| Con entrata cavo / With cable entry | 80 | 413 | 040C0715-8EP2 |



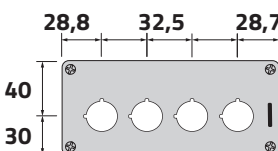
### Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

|                                     |    |     |               |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 80 | 417 | 040C0715-8P3  |
| Con entrata cavo / With cable entry | 80 | 413 | 040C0715-8EP3 |



### Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

|                                     |    |     |                |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 80 | 414 | 040C0715-8P3L  |
| Con entrata cavo / With cable entry | 80 | 410 | 040C0715-8EP3L |

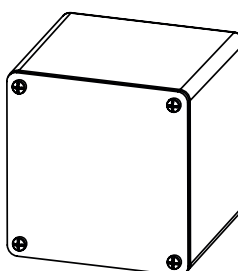
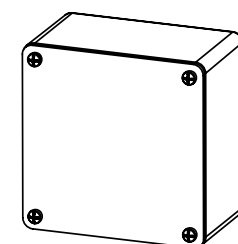
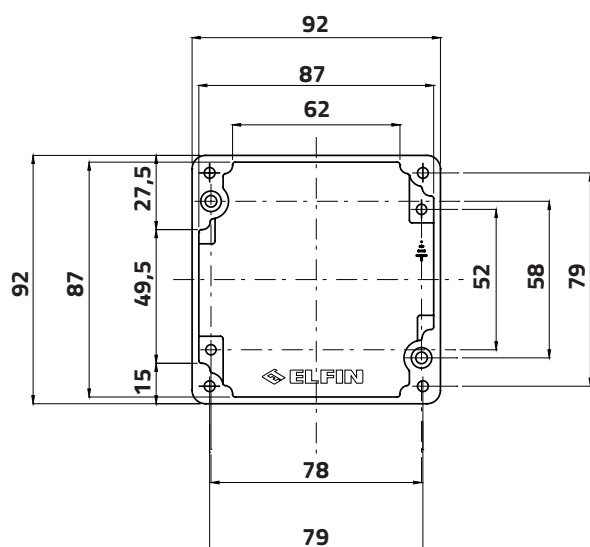
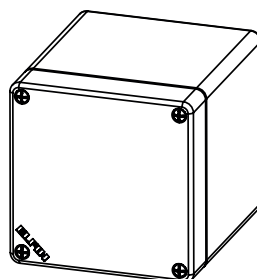
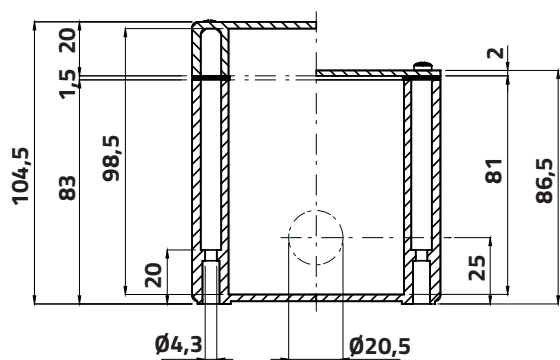
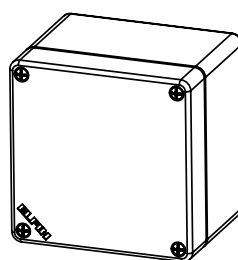
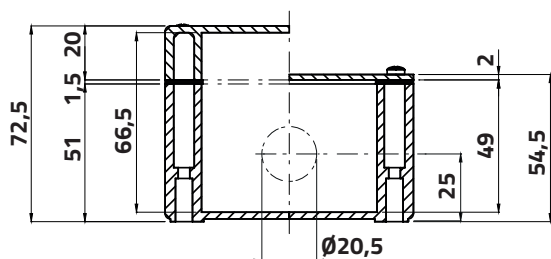
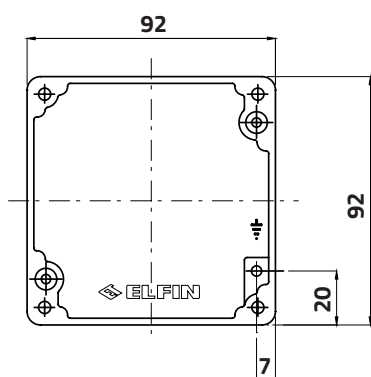


### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                                     |    |     |                |
|-------------------------------------|----|-----|----------------|
| Senza entrata cavo / No cable entry | 80 | 414 | 040C0715-8P4L  |
| Con entrata cavo / With cable entry | 80 | 410 | 040C0715-8EP4L |

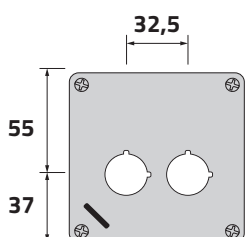
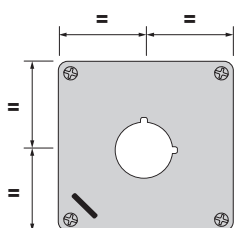
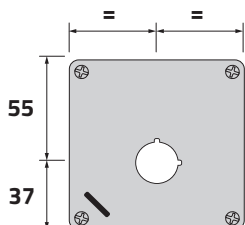
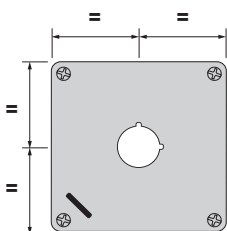
# Scatole in alluminio M4 92x92mm

## Aluminium enclosures M4 92x92mm



# Scatole in alluminio M4 92x92mm

## Aluminium enclosures M4 92x92mm



### Coperchio senza fori / Undrilled lid

|                                           | h   | g   | cod         |
|-------------------------------------------|-----|-----|-------------|
| Senza entrata cavo / No cable entry       | 70  | 302 | 040C0909-7  |
| Senza entrata cavo / No cable entry       | 100 | 426 | 040C0909-1  |
| Con entrata cavo / With cable entry       | 70  | 298 | 040C0909-7E |
| Con entrata cavo / With cable entry       | 100 | 422 | 040C0909-1E |
| Grezza, cieca / Unpainted, no cable entry | 70  | 302 | 040C0909-7N |
| Grezza, cieca / Unpainted, no cable entry | 100 | 426 | 040C0909-1N |

### Piastra in alluminio senza fori / Undrilled aluminium plate

|                                     |    |     |            |
|-------------------------------------|----|-----|------------|
| Senza entrata cavo / No cable entry | 52 | 328 | 040C0909-5 |
| Senza entrata cavo / No cable entry | 82 | 363 | 040C0909-8 |

### Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

|                                     |     |     |                |
|-------------------------------------|-----|-----|----------------|
| Senza entrata cavo / No cable entry | 70  | 299 | 040C0909-7P1C  |
| Senza entrata cavo / No cable entry | 100 | 423 | 040C0909-1P1C  |
| Con entrata cavo / With cable entry | 70  | 295 | 040C0909-7EP1C |
| Con entrata cavo / With cable entry | 100 | 419 | 040C0909-1EP1C |

### Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

|                                     |     |     |               |
|-------------------------------------|-----|-----|---------------|
| Senza entrata cavo / No cable entry | 70  | 299 | 040C0909-7P1  |
| Senza entrata cavo / No cable entry | 100 | 423 | 040C0909-1P1  |
| Con entrata cavo / With cable entry | 70  | 295 | 040C0909-7EP1 |
| Con entrata cavo / With cable entry | 100 | 419 | 040C0909-1EP1 |

### Coperchio con 1 foro Ø 30mm / 1-hole lid Ø 30mm

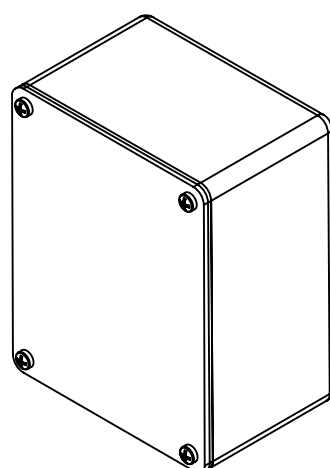
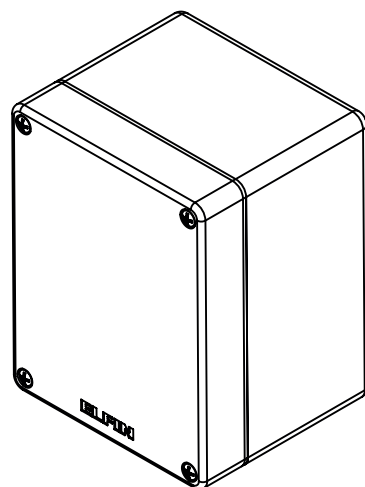
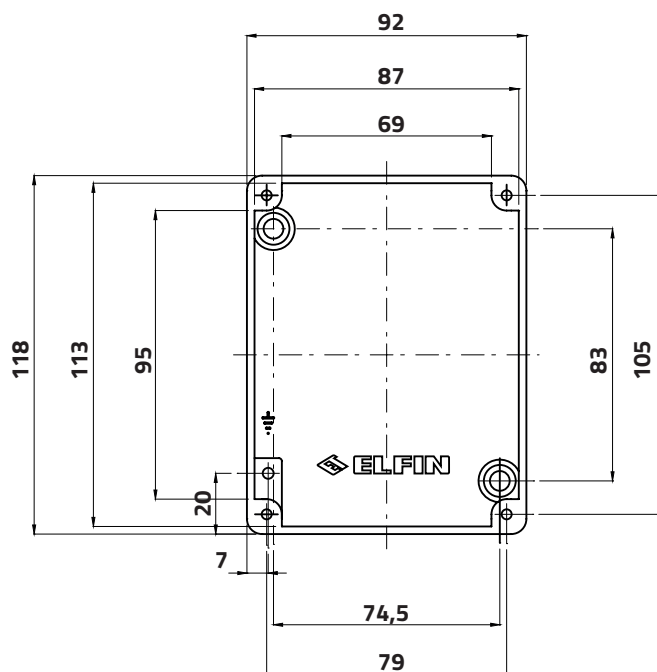
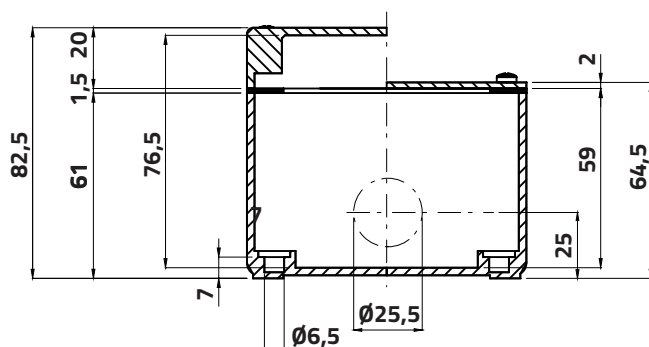
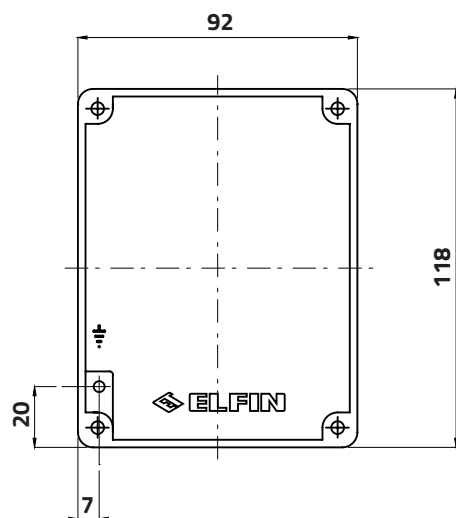
|                                     |     |     |               |
|-------------------------------------|-----|-----|---------------|
| Senza entrata cavo / No cable entry | 70  | 298 | 040C0909-7S1  |
| Senza entrata cavo / No cable entry | 100 | 422 | 040C0909-1S1  |
| Con entrata cavo / With cable entry | 70  | 294 | 040C0909-7ES1 |
| Con entrata cavo / With cable entry | 100 | 418 | 040C0909-1ES1 |

### Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

|                                     |     |     |               |
|-------------------------------------|-----|-----|---------------|
| Senza entrata cavo / No cable entry | 70  | 296 | 040C0909-7P2  |
| Senza entrata cavo / No cable entry | 100 | 420 | 040C0909-1P2  |
| Con entrata cavo / With cable entry | 70  | 292 | 040C0909-7EP2 |
| Con entrata cavo / With cable entry | 100 | 416 | 040C0909-1EP2 |

# Scatole in alluminio M4 92x118mm

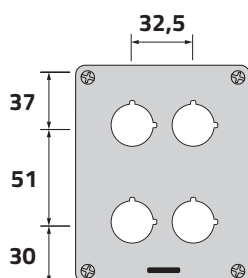
## Aluminium enclosures M4 92x118mm





# Scatole in alluminio M4 92x118mm

## Aluminium enclosures M4 92x118mm



### Coperchio senza fori / Undrilled lid

|                                           | h  | g   | cod         |
|-------------------------------------------|----|-----|-------------|
| Senza entrata cavo / No cable entry       | 80 | 404 | 040C0911-8  |
| Con entrata cavo / With cable entry       | 80 | 400 | 040C0911-8E |
| Grezza, cieca / Unpainted, no cable entry | 80 | 404 | 040C0911-8N |

### Piastra in alluminio senza fori / Undrilled aluminium plate

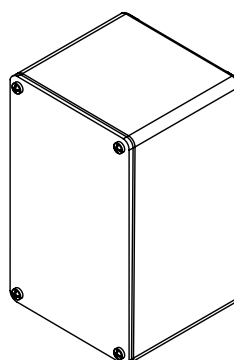
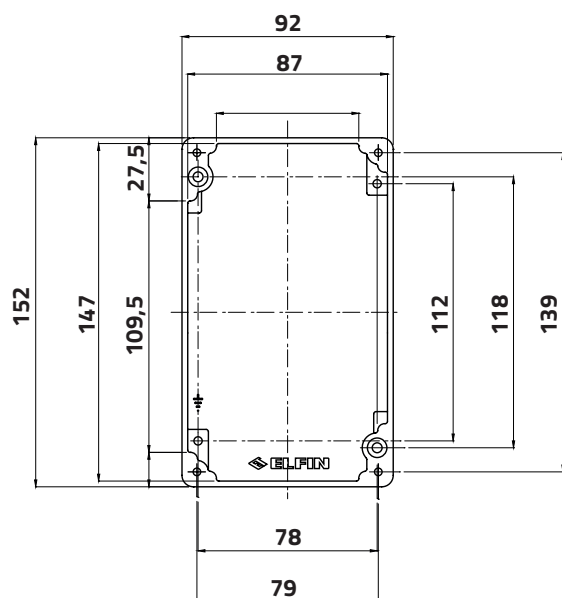
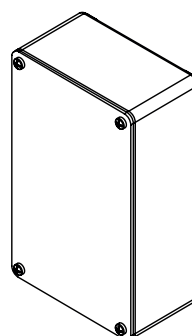
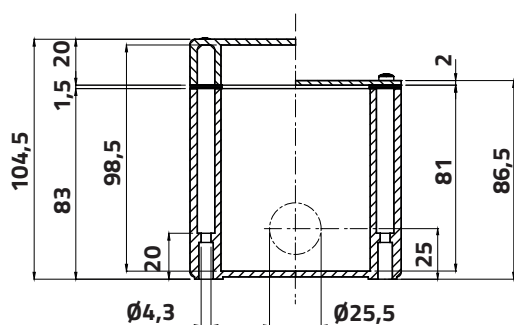
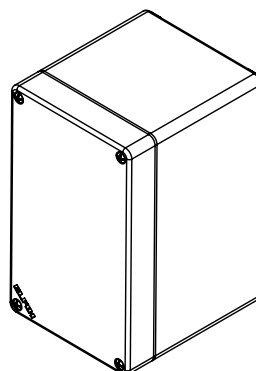
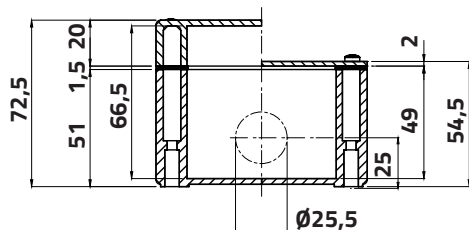
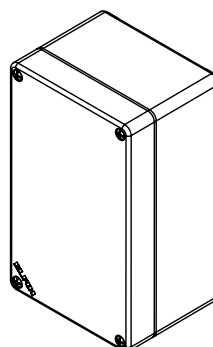
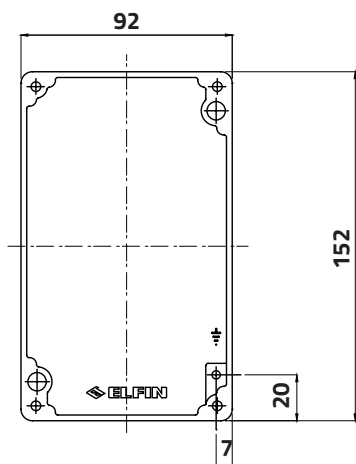
|                                     |    |     |            |
|-------------------------------------|----|-----|------------|
| Senza entrata cavo / No cable entry | 62 | 317 | 040C0911-6 |
|-------------------------------------|----|-----|------------|

### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                                     |    |     |               |
|-------------------------------------|----|-----|---------------|
| Senza entrata cavo / No cable entry | 80 | 392 | 040C0911-8P4  |
| Con entrata cavo / With cable entry | 80 | 388 | 040C0911-8EP4 |

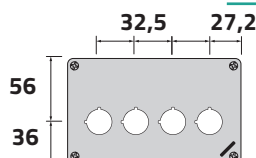
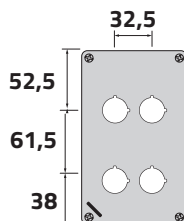
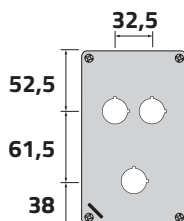
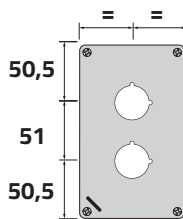
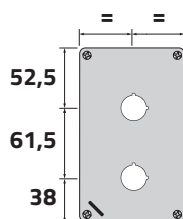
# Scatole in alluminio M4 92x152mm

## Aluminium enclosures M4 92x152mm



# Scatole in alluminio M4 92x152mm

## Aluminium enclosures M4 92x152mm



### Coperchio senza fori / Undrilled lid

|                                           | h   | g   | cod         |
|-------------------------------------------|-----|-----|-------------|
| Senza entrata cavo / No cable entry       | 70  | 436 | 040C0915-7  |
| Senza entrata cavo / No cable entry       | 100 | 564 | 040C0915-1  |
| Con entrata cavo / With cable entry       | 70  | 432 | 040C0915-7E |
| Con entrata cavo / With cable entry       | 100 | 560 | 040C0915-1E |
| Grezza, cieca / Unpainted, no cable entry | 70  | 436 | 040C0915-7N |
| Grezza, cieca / Unpainted, no cable entry | 100 | 564 | 040C0915-1N |

### Piastra in alluminio senza fori / Undrilled aluminium plate

|                                     |    |     |            |
|-------------------------------------|----|-----|------------|
| Senza entrata cavo / No cable entry | 50 | 342 | 040C0915-5 |
| Senza entrata cavo / No cable entry | 80 | 468 | 040C0915-8 |

### Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

|                                     |     |     |               |
|-------------------------------------|-----|-----|---------------|
| Senza entrata cavo / No cable entry | 70  | 430 | 040C0915-7P2  |
| Senza entrata cavo / No cable entry | 100 | 558 | 040C0915-1P2  |
| Con entrata cavo / With cable entry | 70  | 426 | 040C0915-7EP2 |
| Con entrata cavo / With cable entry | 100 | 554 | 040C0915-1EP2 |

### Coperchio con 2 fori Ø 30 / 2-hole lid Ø 30mm

|                                     |     |     |               |
|-------------------------------------|-----|-----|---------------|
| Senza entrata cavo / No cable entry | 70  | 428 | 040C0915-7S2  |
| Senza entrata cavo / No cable entry | 100 | 556 | 040C0915-1S2  |
| Con entrata cavo / With cable entry | 70  | 424 | 040C0915-7ES2 |
| Con entrata cavo / With cable entry | 100 | 552 | 040C0915-1ES2 |

### Coperchio con 3 fori Ø 20mm / 3-hole lid Ø 20mm

|                                     |     |     |                |
|-------------------------------------|-----|-----|----------------|
| Senza entrata cavo / No cable entry | 70  | 424 | 040C0915-7P3C  |
| Senza entrata cavo / No cable entry | 100 | 552 | 040C0915-1P3C  |
| Con entrata cavo / With cable entry | 70  | 420 | 040C0915-7EP3C |
| Con entrata cavo / With cable entry | 100 | 548 | 040C0915-1EP3C |

### Coperchio con 4 fori Ø 20mm / 4-hole lid Ø 20mm

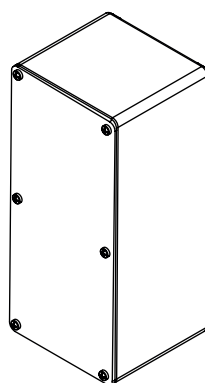
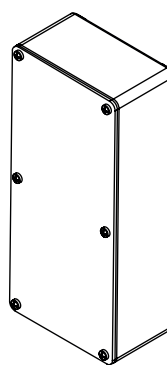
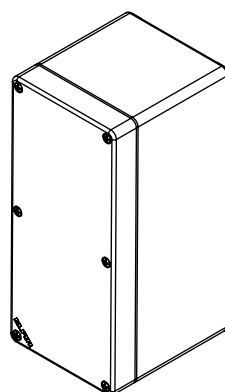
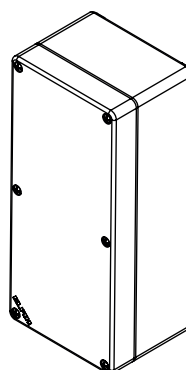
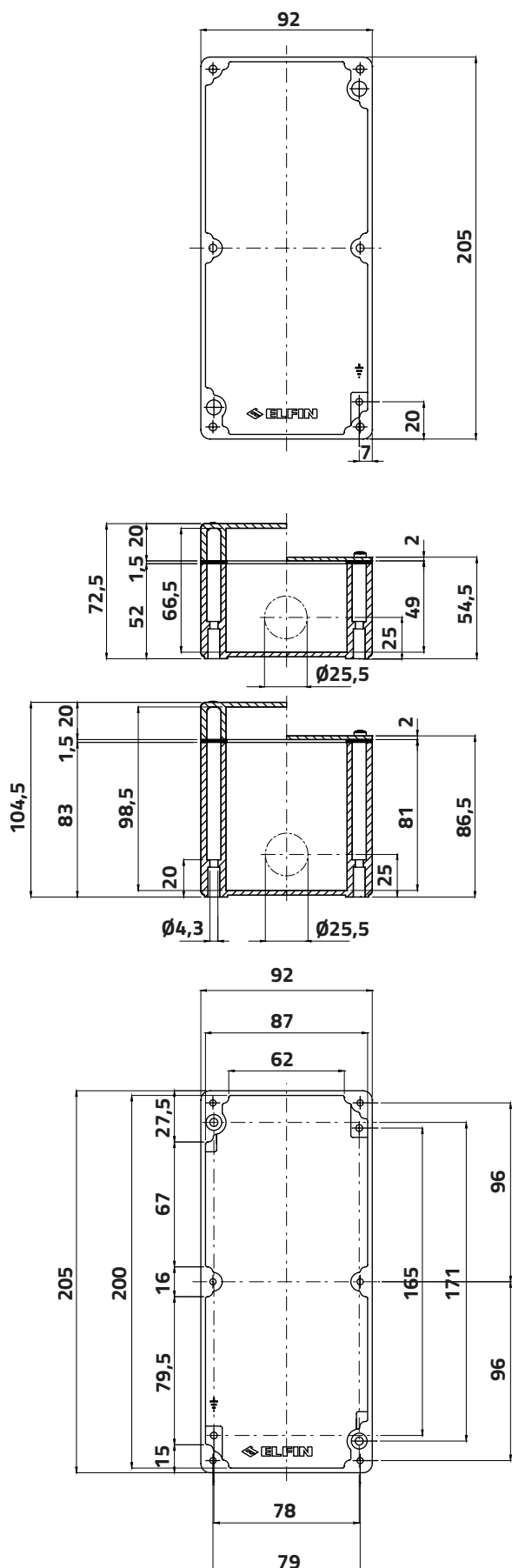
|                                     |     |     |               |
|-------------------------------------|-----|-----|---------------|
| Senza entrata cavo / No cable entry | 70  | 424 | 040C0915-7P4  |
| Senza entrata cavo / No cable entry | 100 | 552 | 040C0915-1P4  |
| Con entrata cavo / With cable entry | 70  | 420 | 040C0915-7EP4 |
| Con entrata cavo / With cable entry | 100 | 548 | 040C0915-1EP4 |

### Coperchio con 4 fori Ø 20mm / 4-hole lid Ø 20mm

|                                     |     |     |                |
|-------------------------------------|-----|-----|----------------|
| Senza entrata cavo / No cable entry | 70  | 428 | 040C0915-7P4L  |
| Senza entrata cavo / No cable entry | 100 | 552 | 040C0915-1P4L  |
| Con entrata cavo / With cable entry | 70  | 420 | 040C0915-7EP4L |
| Con entrata cavo / With cable entry | 100 | 548 | 040C0915-1EP4L |

# Scatole in alluminio M4 92x205mm

## Aluminium enclosures M4 92x205mm



# Scatole in alluminio M4 92x205mm

## Aluminium enclosures M4 92x205mm

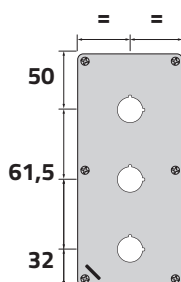


### Coperchio senza fori / Undrilled lid

|                                           | h   | g   | cod         |
|-------------------------------------------|-----|-----|-------------|
| Senza entrata cavo / No cable entry       | 70  | 580 | 040C0920-7  |
| Senza entrata cavo / No cable entry       | 100 | 762 | 040C0920-1  |
| Con entrata cavo / With cable entry       | 70  | 576 | 040C0920-7E |
| Con entrata cavo / With cable entry       | 100 | 758 | 040C0920-1E |
| Grezza, cieca / Unpainted, no cable entry | 70  | 580 | 040C0920-7N |
| Grezza, cieca / Unpainted, no cable entry | 100 | 762 | 040C0920-1N |

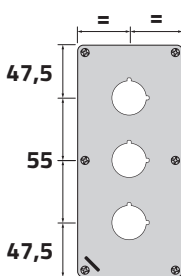
### Piastra in alluminio senza fori / Undrilled aluminium plate

|                                     |    |     |            |
|-------------------------------------|----|-----|------------|
| Senza entrata cavo / No cable entry | 50 | 466 | 040C0920-5 |
| Senza entrata cavo / No cable entry | 80 | 638 | 040C0920-8 |



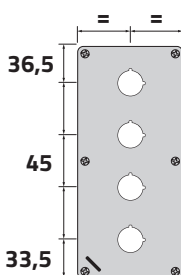
### Coperchio con 3 fori Ø 22mm / 2-hole lid Ø 22mm

|                                     |     |     |               |
|-------------------------------------|-----|-----|---------------|
| Senza entrata cavo / No cable entry | 70  | 571 | 040C0920-7P3  |
| Senza entrata cavo / No cable entry | 100 | 753 | 040C0920-1P3  |
| Con entrata cavo / With cable entry | 70  | 567 | 040C0920-7EP3 |
| Con entrata cavo / With cable entry | 100 | 749 | 040C0920-1EP3 |



### Coperchio con 3 fori Ø 30mm / 3-hole lid Ø 30mm

|                                     |     |     |               |
|-------------------------------------|-----|-----|---------------|
| Senza entrata cavo / No cable entry | 70  | 568 | 040C0920-7S3  |
| Senza entrata cavo / No cable entry | 100 | 750 | 040C0920-1S3  |
| Con entrata cavo / With cable entry | 70  | 564 | 040C0920-7ES3 |
| Con entrata cavo / With cable entry | 100 | 746 | 040C0920-1ES3 |

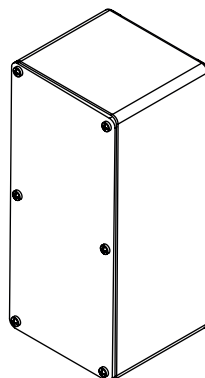
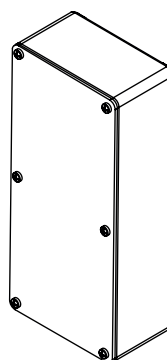
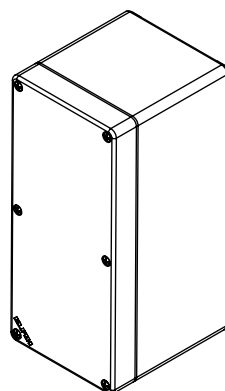
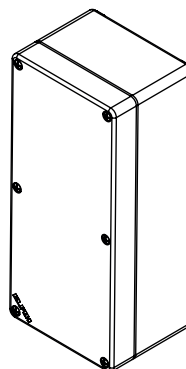
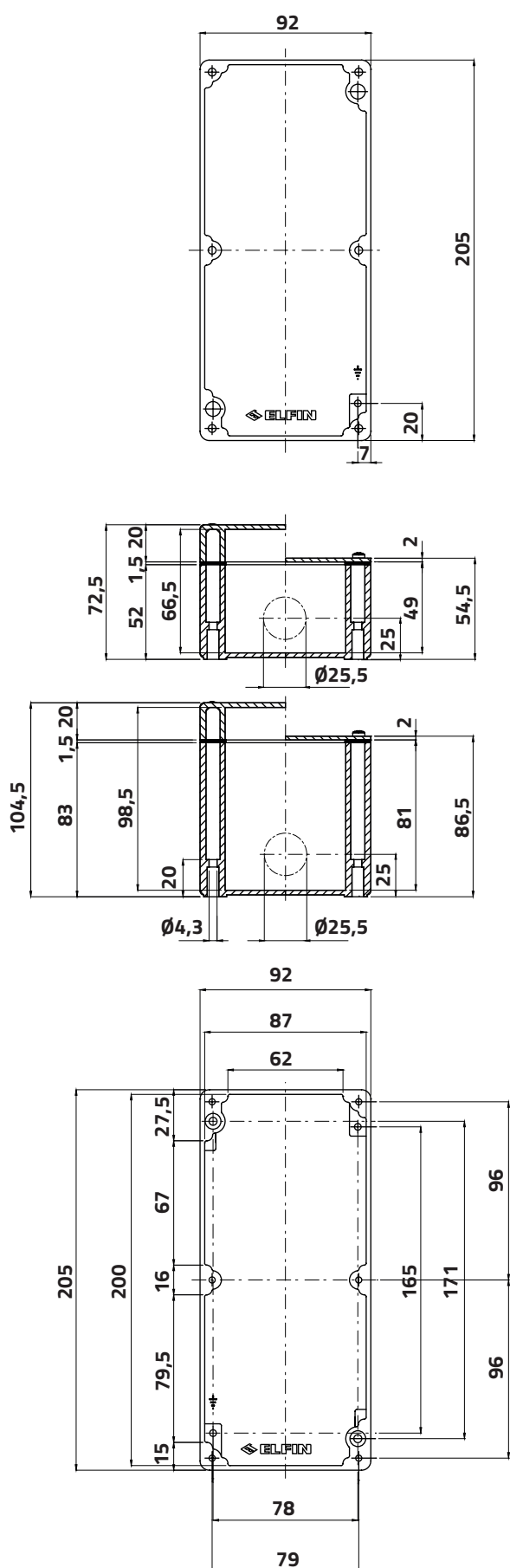


### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                                     |     |     |               |
|-------------------------------------|-----|-----|---------------|
| Senza entrata cavo / No cable entry | 70  | 568 | 040C0920-7P4  |
| Senza entrata cavo / No cable entry | 100 | 750 | 040C0920-1P4  |
| Con entrata cavo / With cable entry | 70  | 564 | 040C0920-7EP4 |
| Con entrata cavo / With cable entry | 100 | 764 | 040C0920-1EP4 |

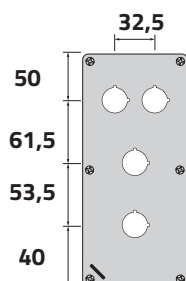
# Scatole in alluminio M4 92x205mm

## Aluminium enclosures M4 92x205mm



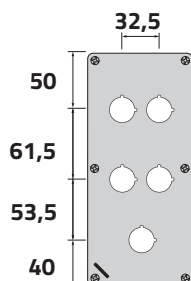
# Scatole in alluminio M4 92x205mm

## Aluminium enclosures M4 92x205mm



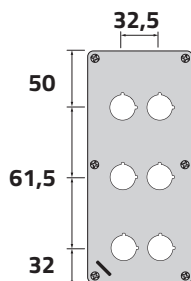
### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                                     | h   | g   | cod            |
|-------------------------------------|-----|-----|----------------|
| Senza entrata cavo / No cable entry | 70  | 568 | 040C0920-7P4C  |
| Senza entrata cavo / No cable entry | 100 | 750 | 040C0920-1P4C  |
| Con entrata cavo / With cable entry | 70  | 564 | 040C0920-7EP4C |
| Con entrata cavo / With cable entry | 100 | 764 | 040C0920-1EP4C |



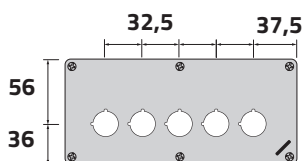
### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                                     | h   | g   | cod            |
|-------------------------------------|-----|-----|----------------|
| Senza entrata cavo / No cable entry | 70  | 565 | 040C0920-7P5C  |
| Senza entrata cavo / No cable entry | 100 | 747 | 040C0920-1P5C  |
| Con entrata cavo / With cable entry | 70  | 561 | 040C0920-7EP5C |
| Con entrata cavo / With cable entry | 100 | 743 | 040C0920-1EP5C |



### Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 30mm

|                                     | h   | g   | cod           |
|-------------------------------------|-----|-----|---------------|
| Senza entrata cavo / No cable entry | 70  | 562 | 040C0920-7P6  |
| Senza entrata cavo / No cable entry | 100 | 744 | 040C0920-1P6  |
| Con entrata cavo / With cable entry | 70  | 558 | 040C0920-7EP6 |
| Con entrata cavo / With cable entry | 100 | 740 | 040C0920-1EP6 |

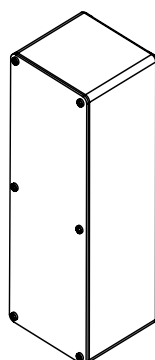
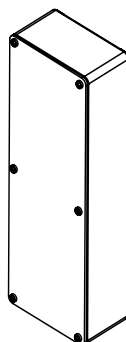
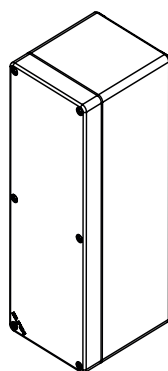
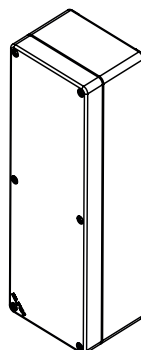
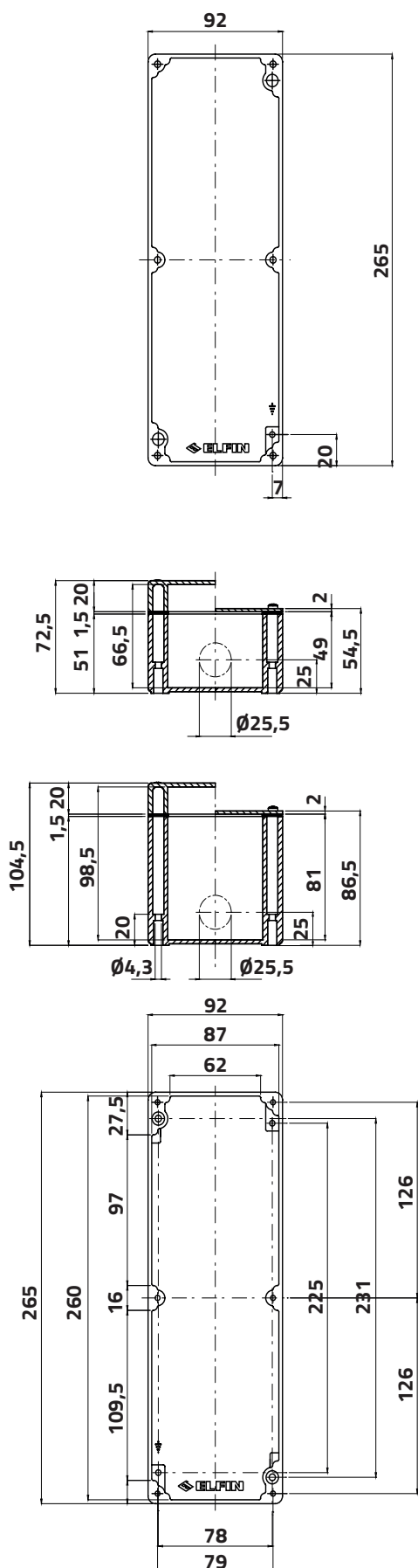


### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                                     | h   | g   | cod            |
|-------------------------------------|-----|-----|----------------|
| Senza entrata cavo / No cable entry | 70  | 565 | 040C0920-7P5L  |
| Senza entrata cavo / No cable entry | 100 | 747 | 040C0920-1P5L  |
| Con entrata cavo / With cable entry | 70  | 561 | 040C0920-7EP5L |
| Con entrata cavo / With cable entry | 100 | 743 | 040C0920-1EP5L |

# Scatole in alluminio M4 92x265mm

## Aluminium enclosures M4 92x265mm





# Scatole in alluminio M4 92x265mm

## Aluminium enclosures M4 92x265mm



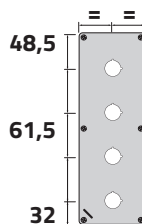
### Coperchio senza fori / Undrilled lid

|                                           | h   | g    | cod         |
|-------------------------------------------|-----|------|-------------|
| Senza entrata cavo / No cable entry       | 70  | 770  | 040C0926-7  |
| Senza entrata cavo / No cable entry       | 100 | 1020 | 040C0926-1  |
| Con entrata cavo / With cable entry       | 70  | 765  | 040C0926-7E |
| Con entrata cavo / With cable entry       | 100 | 1015 | 040C0926-1E |
| Grezza, cieca / Unpainted, no cable entry | 70  | 770  | 040C0926-7N |
| Grezza, cieca / Unpainted, no cable entry | 100 | 1020 | 040C0926-1N |



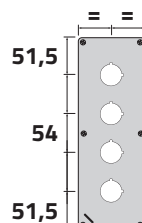
### Piastra in alluminio senza fori / Undrilled aluminium plate

|                                     |    |     |            |
|-------------------------------------|----|-----|------------|
| Senza entrata cavo / No cable entry | 50 | 500 | 040C0926-5 |
| Senza entrata cavo / No cable entry | 80 | 750 | 040C0926-8 |



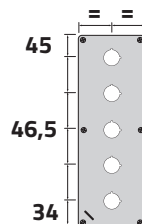
### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                                     |     |      |               |
|-------------------------------------|-----|------|---------------|
| Senza entrata cavo / No cable entry | 70  | 762  | 040C0926-7P4  |
| Senza entrata cavo / No cable entry | 100 | 1012 | 040C0926-1P4  |
| Con entrata cavo / With cable entry | 70  | 758  | 040C0926-7EP4 |
| Con entrata cavo / With cable entry | 100 | 1007 | 040C0926-1EP4 |



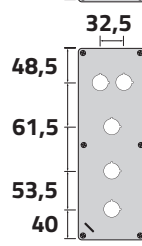
### Coperchio con 4 fori Ø 30mm / 4-hole lid Ø 30mm

|                                     |     |      |               |
|-------------------------------------|-----|------|---------------|
| Senza entrata cavo / No cable entry | 70  | 754  | 040C0926-7S4  |
| Senza entrata cavo / No cable entry | 100 | 1004 | 040C0926-1S4  |
| Con entrata cavo / With cable entry | 70  | 750  | 040C0926-7ES4 |
| Con entrata cavo / With cable entry | 100 | 1000 | 040C0926-1ES4 |



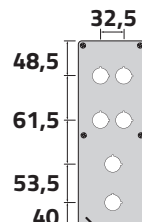
### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                                     |     |      |               |
|-------------------------------------|-----|------|---------------|
| Senza entrata cavo / No cable entry | 70  | 760  | 040C0926-7P5  |
| Senza entrata cavo / No cable entry | 100 | 1010 | 040C0926-1P5  |
| Con entrata cavo / With cable entry | 70  | 756  | 040C0926-7EP5 |
| Con entrata cavo / With cable entry | 100 | 1005 | 040C0926-1EP5 |



### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                                     |     |      |                |
|-------------------------------------|-----|------|----------------|
| Senza entrata cavo / No cable entry | 70  | 760  | 040C0926-7P5C  |
| Senza entrata cavo / No cable entry | 100 | 1010 | 040C0926-1P5C  |
| Con entrata cavo / With cable entry | 70  | 1010 | 040C0926-7EP5C |
| Con entrata cavo / With cable entry | 100 | 1005 | 040C0926-1EP5C |

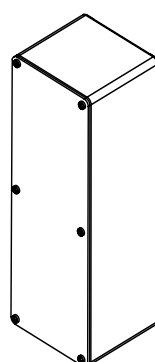
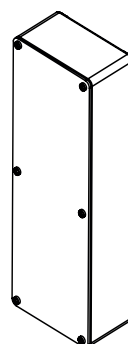
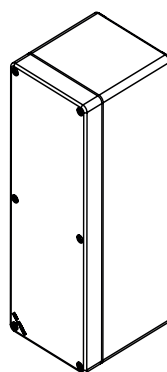
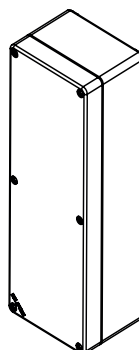
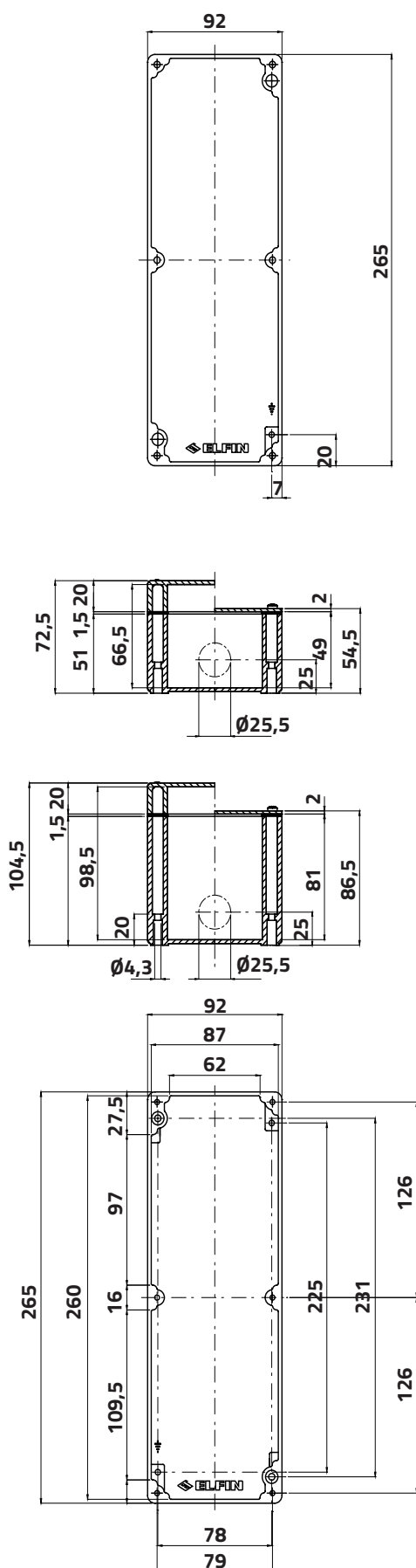


### Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 22mm

|                                     |     |      |                |
|-------------------------------------|-----|------|----------------|
| Senza entrata cavo / No cable entry | 70  | 758  | 040C0926-7P6C  |
| Senza entrata cavo / No cable entry | 100 | 1006 | 040C0926-1P6C  |
| Con entrata cavo / With cable entry | 70  | 754  | 040C0926-7EP6C |
| Con entrata cavo / With cable entry | 100 | 1003 | 040C0926-1EP6C |

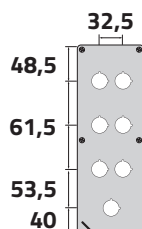
# Scatole in alluminio M4 92x265mm

## Aluminium enclosures M4 92x265mm



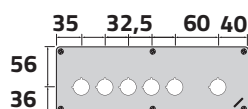
# Scatole in alluminio M4 92x265mm

## Aluminium enclosures M4 92x265mm



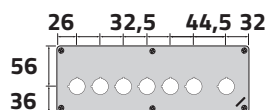
### Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

|                                     | h   | g    | cod            |
|-------------------------------------|-----|------|----------------|
| Senza entrata cavo / No cable entry | 70  | 756  | 040C0926-7P7C  |
| Senza entrata cavo / No cable entry | 100 | 1005 | 040C0926-1P7C  |
| Con entrata cavo / With cable entry | 70  | 752  | 040C0926-7EP7C |
| Con entrata cavo / With cable entry | 100 | 1001 | 040C0926-1EP7C |



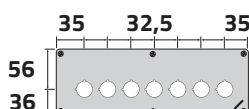
### Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 22mm

|                                     | h   | g    | cod             |
|-------------------------------------|-----|------|-----------------|
| Senza entrata cavo / No cable entry | 70  | 758  | 040C0926-7P6LC  |
| Senza entrata cavo / No cable entry | 100 | 1006 | 040C0926-1P6LC  |
| Con entrata cavo / With cable entry | 70  | 754  | 040C0926-7EP6LC |
| Con entrata cavo / With cable entry | 100 | 1003 | 040C0926-1EP6LC |



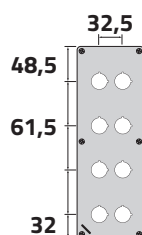
### Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

|                                     | h   | g    | cod             |
|-------------------------------------|-----|------|-----------------|
| Senza entrata cavo / No cable entry | 70  | 756  | 040C0926-7P7LC  |
| Senza entrata cavo / No cable entry | 100 | 1005 | 040C0926-1P7LC  |
| Con entrata cavo / With cable entry | 70  | 752  | 040C0926-7EP7LC |
| Con entrata cavo / With cable entry | 100 | 1001 | 040C0926-1EP7LC |



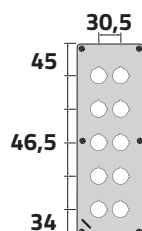
### Coperchio con 7 fori Ø 30mm / 7-hole lid Ø 30mm

|                                     | h   | g    | cod            |
|-------------------------------------|-----|------|----------------|
| Senza entrata cavo / No cable entry | 70  | 756  | 040C0926-7P7L  |
| Senza entrata cavo / No cable entry | 100 | 1005 | 040C0926-1P7L  |
| Con entrata cavo / With cable entry | 70  | 752  | 040C0926-7EP7L |
| Con entrata cavo / With cable entry | 100 | 1000 | 040C0926-1EP7L |



### Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

|                                     | h   | g    | cod           |
|-------------------------------------|-----|------|---------------|
| Senza entrata cavo / No cable entry | 70  | 754  | 040C0926-7P8  |
| Senza entrata cavo / No cable entry | 100 | 1004 | 040C0926-1P8  |
| Con entrata cavo / With cable entry | 70  | 750  | 040C0926-7EP8 |
| Con entrata cavo / With cable entry | 100 | 1000 | 040C0926-1EP8 |

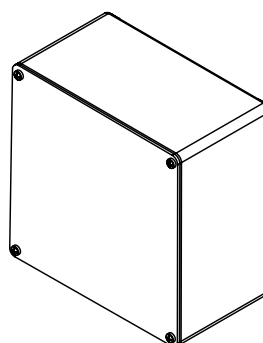
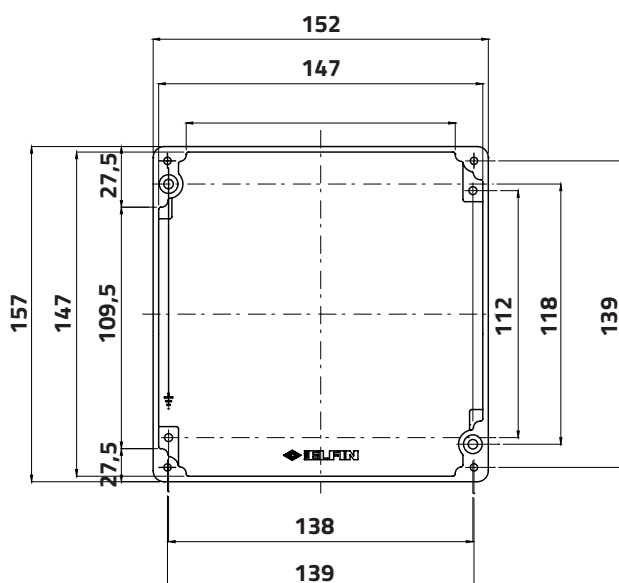
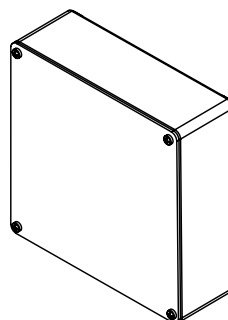
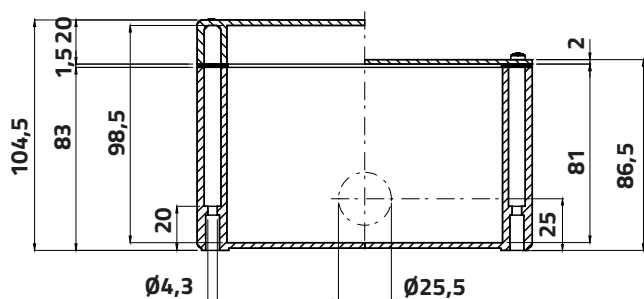
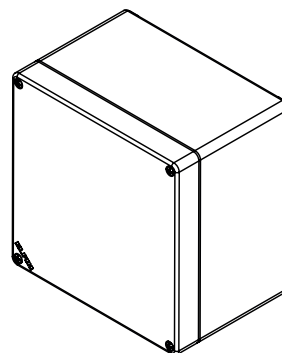
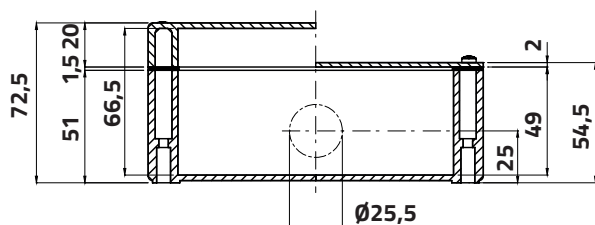
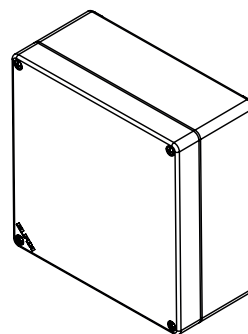
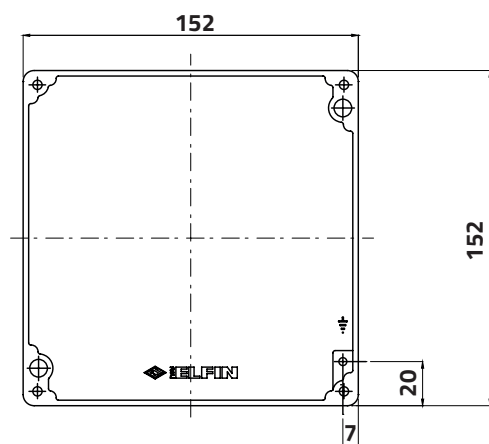


### Coperchio con 10 fori Ø 22mm / 10-hole lid Ø 22mm

|                                     | h   | g    | cod            |
|-------------------------------------|-----|------|----------------|
| Senza entrata cavo / No cable entry | 70  | 750  | 040C0926-7P10  |
| Senza entrata cavo / No cable entry | 100 | 1000 | 040C0926-1P10  |
| Con entrata cavo / With cable entry | 70  | 746  | 040C0926-7EP10 |
| Con entrata cavo / With cable entry | 100 | 995  | 040C0926-1EP10 |

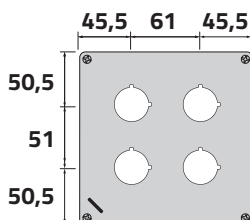
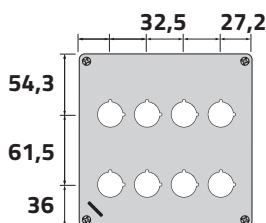
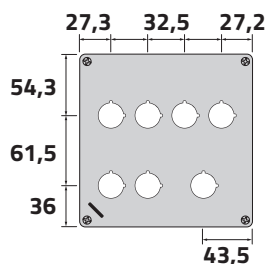
# Scatole in alluminio M4 152x152mm

## Aluminium enclosures M4 152x152mm



# Scatole in alluminio M4 152x152mm

## Aluminium enclosures M4 152x152mm



### Coperchio senza fori / Undrilled lid

|                                           | h   | g   | cod         |
|-------------------------------------------|-----|-----|-------------|
| Senza entrata cavo / No cable entry       | 70  | 594 | 040C1515-7  |
| Senza entrata cavo / No cable entry       | 100 | 754 | 040C1515-1  |
| Con entrata cavo / With cable entry       | 70  | 590 | 040C1515-7E |
| Con entrata cavo / With cable entry       | 100 | 750 | 040C1515-1E |
| Grezza, cieca / Unpainted, no cable entry | 70  | 594 | 040C1515-7N |
| Grezza, cieca / Unpainted, no cable entry | 100 | 754 | 040C1515-1N |

### Piastra in alluminio senza fori / Undrilled aluminium plate

|                                     |    |     |            |
|-------------------------------------|----|-----|------------|
| Senza entrata cavo / No cable entry | 50 | 513 | 040C1515-5 |
| Senza entrata cavo / No cable entry | 80 | 690 | 040C1515-8 |

### Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

|                                     |     |     |                |
|-------------------------------------|-----|-----|----------------|
| Senza entrata cavo / No cable entry | 70  | 570 | 040C1515-7P7C  |
| Senza entrata cavo / No cable entry | 100 | 730 | 040C1515-1P7C  |
| Con entrata cavo / With cable entry | 70  | 566 | 040C1515-7EP7C |
| Con entrata cavo / With cable entry | 100 | 726 | 040C1515-1EP7C |

### Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

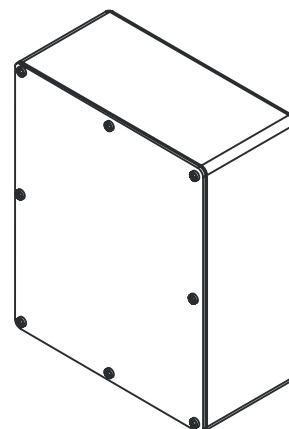
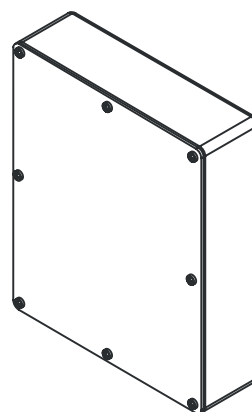
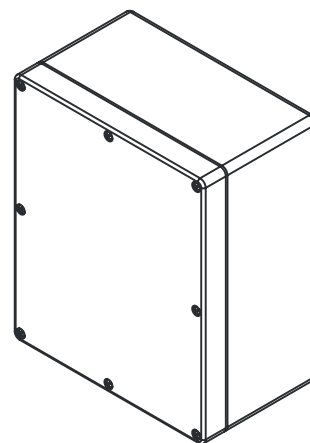
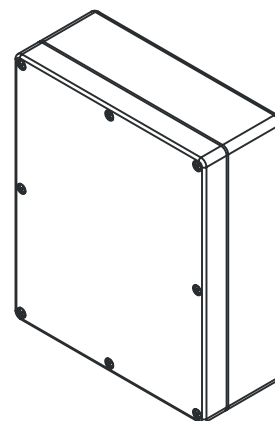
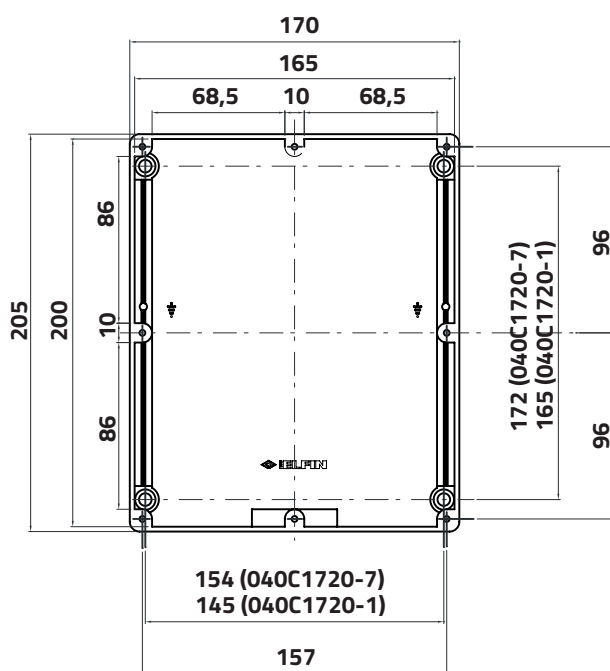
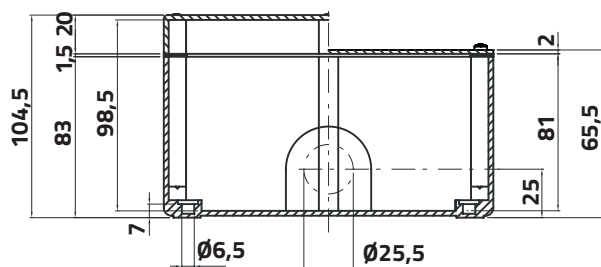
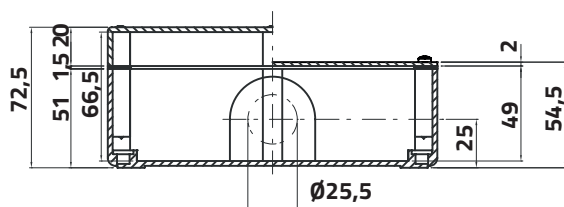
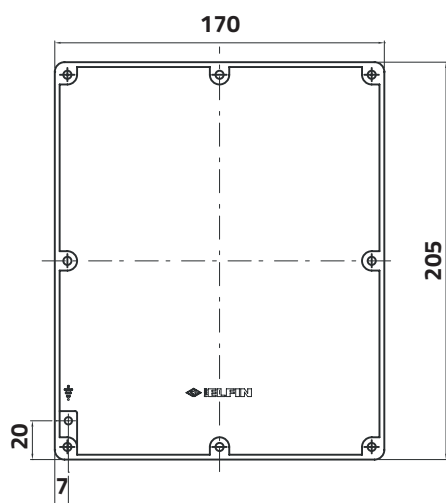
|                                     |     |     |               |
|-------------------------------------|-----|-----|---------------|
| Senza entrata cavo / No cable entry | 70  | 570 | 040C1515-7P8  |
| Senza entrata cavo / No cable entry | 100 | 730 | 040C1515-1P8  |
| Con entrata cavo / With cable entry | 70  | 566 | 040C1515-7EP8 |
| Con entrata cavo / With cable entry | 100 | 726 | 040C1515-1EP8 |

### Coperchio con 4 fori Ø 30mm / 4-hole lid Ø 30mm

|                                     |     |     |               |
|-------------------------------------|-----|-----|---------------|
| Senza entrata cavo / No cable entry | 70  | 578 | 040C1515-7S4  |
| Senza entrata cavo / No cable entry | 100 | 738 | 040C1515-1S4  |
| Con entrata cavo / With cable entry | 70  | 574 | 040C1515-7ES4 |
| Con entrata cavo / With cable entry | 100 | 734 | 040C1515-1ES4 |

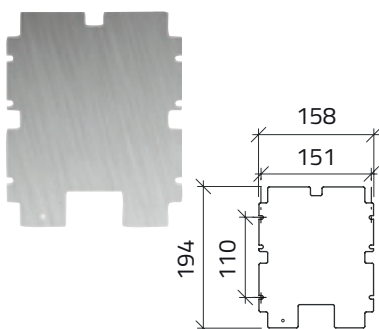
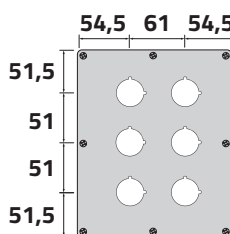
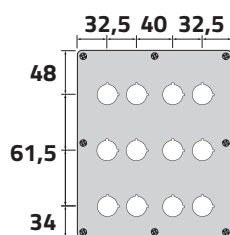
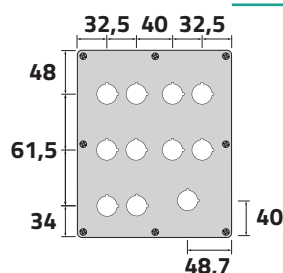
# Scatole in alluminio M4 170x205mm

## Aluminium enclosures M4 170x205mm



# Scatole in alluminio M4 170x205mm

## Aluminium enclosures M4 170x205mm



### Coperchio senza fori / Undrilled lid

|                                           | h   | g    | cod         |
|-------------------------------------------|-----|------|-------------|
| Senza entrata cavo / No cable entry       | 70  | 1276 | 040C1720-7  |
| Senza entrata cavo / No cable entry       | 100 | 1736 | 040C1720-1  |
| Con entrata cavo / With cable entry       | 70  | 1270 | 040C1720-7E |
| Con entrata cavo / With cable entry       | 100 | 1730 | 040C1720-1E |
| Grezza, cieca / Unpainted, no cable entry | 70  | 1276 | 040C1720-7N |
| Grezza, cieca / Unpainted, no cable entry | 100 | 1736 | 040C1720-1N |

### Piastra in alluminio senza fori / Undrilled aluminium plate

|                                     |    |      |            |
|-------------------------------------|----|------|------------|
| Senza entrata cavo / No cable entry | 50 | 1126 | 040C1720-5 |
| Senza entrata cavo / No cable entry | 80 | 1416 | 040C1720-8 |

### Coperchio con 11 fori Ø 22mm / 11-hole lid Ø 22mm

|                                     |     |      |                 |
|-------------------------------------|-----|------|-----------------|
| Senza entrata cavo / No cable entry | 70  | 1240 | 040C1720-7P11C  |
| Senza entrata cavo / No cable entry | 100 | 1700 | 040C1720-1P11C  |
| Con entrata cavo / With cable entry | 70  | 1234 | 040C1720-7EP11C |
| Con entrata cavo / With cable entry | 100 | 1694 | 040C1720-1EP11C |

### Coperchio con 12 fori Ø 22mm / 12-hole lid Ø 22mm

|                                     |     |      |                |
|-------------------------------------|-----|------|----------------|
| Senza entrata cavo / No cable entry | 70  | 1240 | 040C1720-7P12  |
| Senza entrata cavo / No cable entry | 100 | 1700 | 040C1720-1P12  |
| Con entrata cavo / With cable entry | 70  | 1234 | 040C1720-7EP12 |
| Con entrata cavo / With cable entry | 100 | 1694 | 040C1720-1EP12 |

### Coperchio con 6 fori Ø 30mm / 6-hole lid Ø 30mm

|                                     |     |      |               |
|-------------------------------------|-----|------|---------------|
| Senza entrata cavo / No cable entry | 70  | 1234 | 040C1720-7S6  |
| Senza entrata cavo / No cable entry | 100 | 1694 | 040C1720-1S6  |
| Con entrata cavo / With cable entry | 70  | 1240 | 040C1720-7ES6 |
| Con entrata cavo / With cable entry | 100 | 1700 | 040C1720-1ES6 |

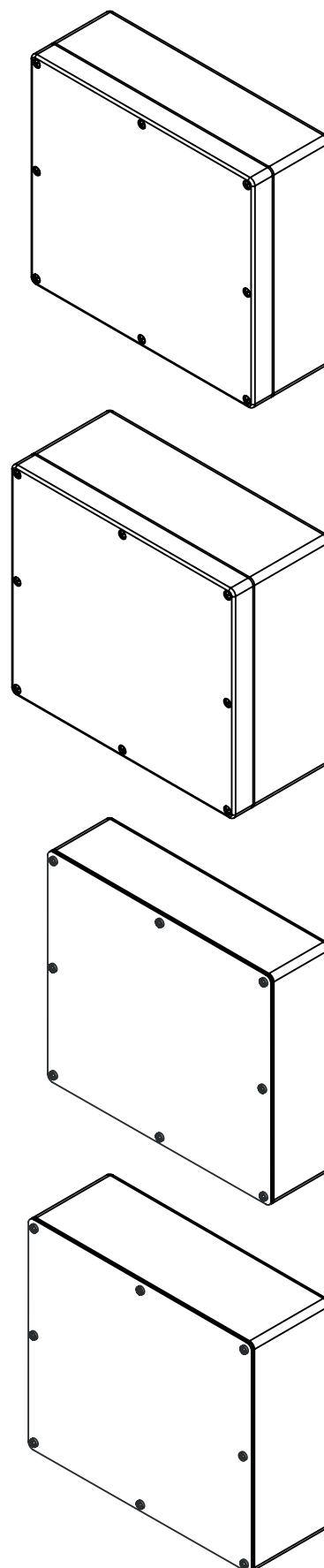
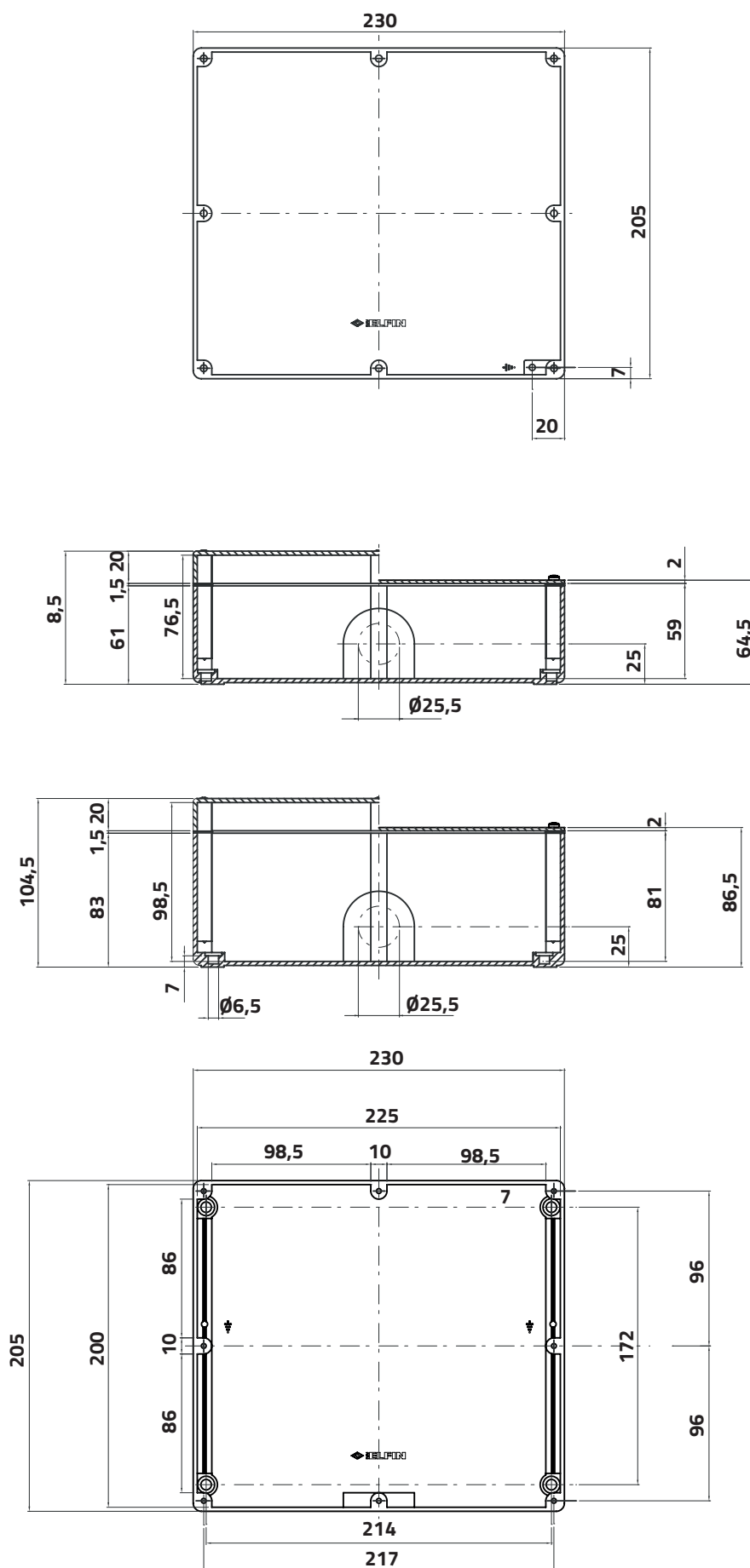
### Piastra di fondo / Mounting plate

|     |     |          |
|-----|-----|----------|
| 1,5 | 225 | 040P1720 |
|-----|-----|----------|



# Scatole in alluminio M4 230x205

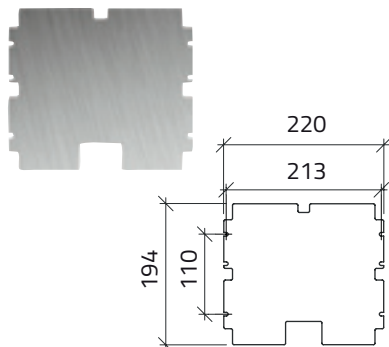
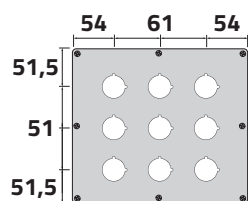
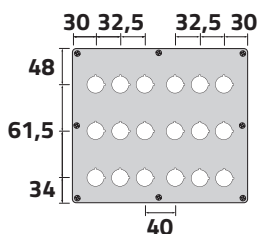
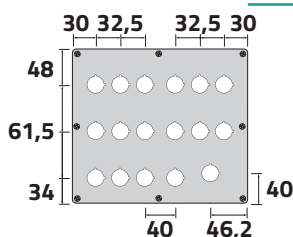
## Aluminium enclosures M4 230x205mm





# Scatole in alluminio M4 230x205

## Aluminium enclosures M4 230x205mm



### Coperchio senza fori / Undrilled lid

|                                           | h   | g    | cod         |
|-------------------------------------------|-----|------|-------------|
| Senza entrata cavo / No cable entry       | 80  | 1626 | 040C2320-8  |
| Senza entrata cavo / No cable entry       | 100 | 1900 | 040C2320-1  |
| Con entrata cavo / With cable entry       | 80  | 1620 | 040C2320-8E |
| Con entrata cavo / With cable entry       | 100 | 1895 | 040C2320-1E |
| Grezza, cieca / Unpainted, no cable entry | 80  | 1626 | 040C2320-8N |
| Grezza, cieca / Unpainted, no cable entry | 100 | 1900 | 040C2320-1N |

### Piastra in alluminio senza fori / Undrilled aluminium plate

|                                     |    |      |            |
|-------------------------------------|----|------|------------|
| Senza entrata cavo / No cable entry | 60 | 1396 | 040C2320-6 |
| Senza entrata cavo / No cable entry | 80 | 1676 | 040C2320-9 |

### Coperchio con 17 fori Ø 22mm / 17-hole lid Ø 22mm

|                                     |     |      |                 |
|-------------------------------------|-----|------|-----------------|
| Senza entrata cavo / No cable entry | 80  | 1572 | 040C2320-8P17C  |
| Senza entrata cavo / No cable entry | 100 | 1846 | 040C2320-1P17C  |
| Con entrata cavo / With cable entry | 80  | 1566 | 040C2320-8EP17C |
| Con entrata cavo / With cable entry | 100 | 1841 | 040C2320-1EP17C |

### Coperchio con 18 fori Ø 22mm / 18-hole lid Ø 22mm

|                                     |     |      |                |
|-------------------------------------|-----|------|----------------|
| Senza entrata cavo / No cable entry | 80  | 1572 | 040C2320-8P18  |
| Senza entrata cavo / No cable entry | 100 | 1846 | 040C2320-1P18  |
| Con entrata cavo / With cable entry | 80  | 1566 | 040C2320-8EP18 |
| Con entrata cavo / With cable entry | 100 | 1841 | 040C2320-1EP18 |

### Coperchio con 9 fori Ø 30mm / 9-hole lid Ø 30mm

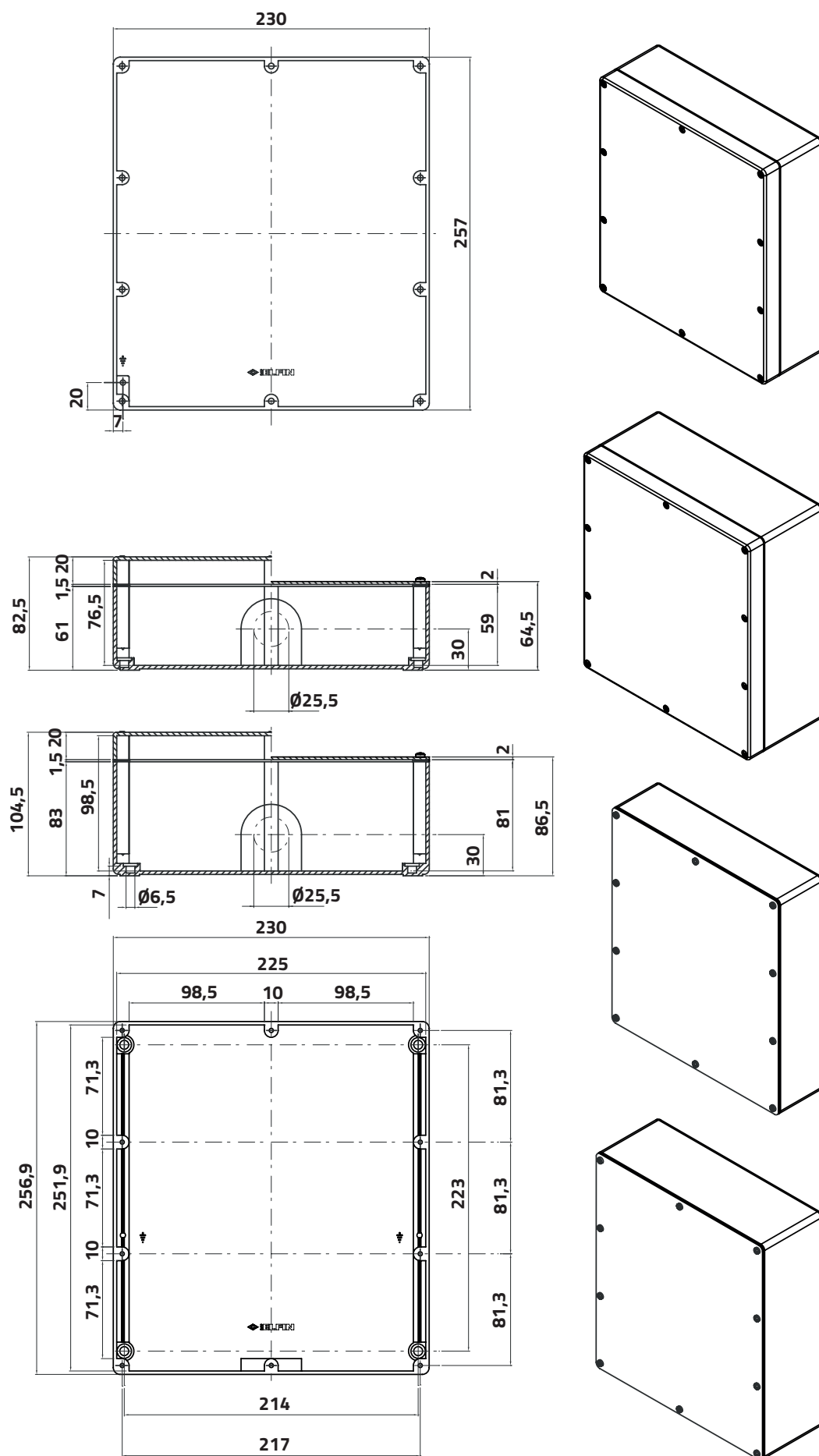
|                                     |     |      |               |
|-------------------------------------|-----|------|---------------|
| Senza entrata cavo / No cable entry | 80  | 1572 | 040C2320-8S9  |
| Senza entrata cavo / No cable entry | 100 | 1846 | 040C2320-1S9  |
| Con entrata cavo / With cable entry | 80  | 1566 | 040C2320-8ES9 |
| Con entrata cavo / With cable entry | 100 | 1841 | 040C2320-1ES9 |

### Piastra di fondo / Mounting plate

|     |     |          |
|-----|-----|----------|
| 1,5 | 320 | 040P2320 |
|-----|-----|----------|

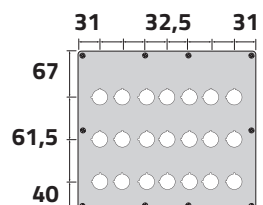
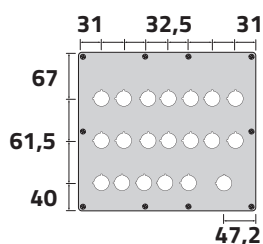
# Scatole in alluminio M4 230x257mm

## Aluminium enclosures M4 230x257mm



# Scatole in alluminio M4 230x257mm

## Aluminium enclosures M4 230x257mm



### Coperchio senza fori / Undrilled lid

|                                           | h   | g    | cod         |
|-------------------------------------------|-----|------|-------------|
| Senza entrata cavo / No cable entry       | 80  | 1912 | 040C2325-8  |
| Senza entrata cavo / No cable entry       | 100 | 2186 | 040C2325-1  |
| Con entrata cavo / With cable entry       | 80  | 1906 | 040C2325-8E |
| Con entrata cavo / With cable entry       | 100 | 2180 | 040C2325-1E |
| Grezza, cieca / Unpainted, no cable entry | 80  | 1912 | 040C2325-8N |
| Grezza, cieca / Unpainted, no cable entry | 100 | 2186 | 040C2325-1N |

### Piastra in alluminio senza fori / Undrilled aluminium plate

|                                     |    |      |            |
|-------------------------------------|----|------|------------|
| Senza entrata cavo / No cable entry | 60 | 1696 | 040C2325-6 |
| Senza entrata cavo / No cable entry | 80 | 1957 | 040C2325-9 |

### Coperchio con 20 fori Ø 22mm / 20-hole lid Ø 22mm

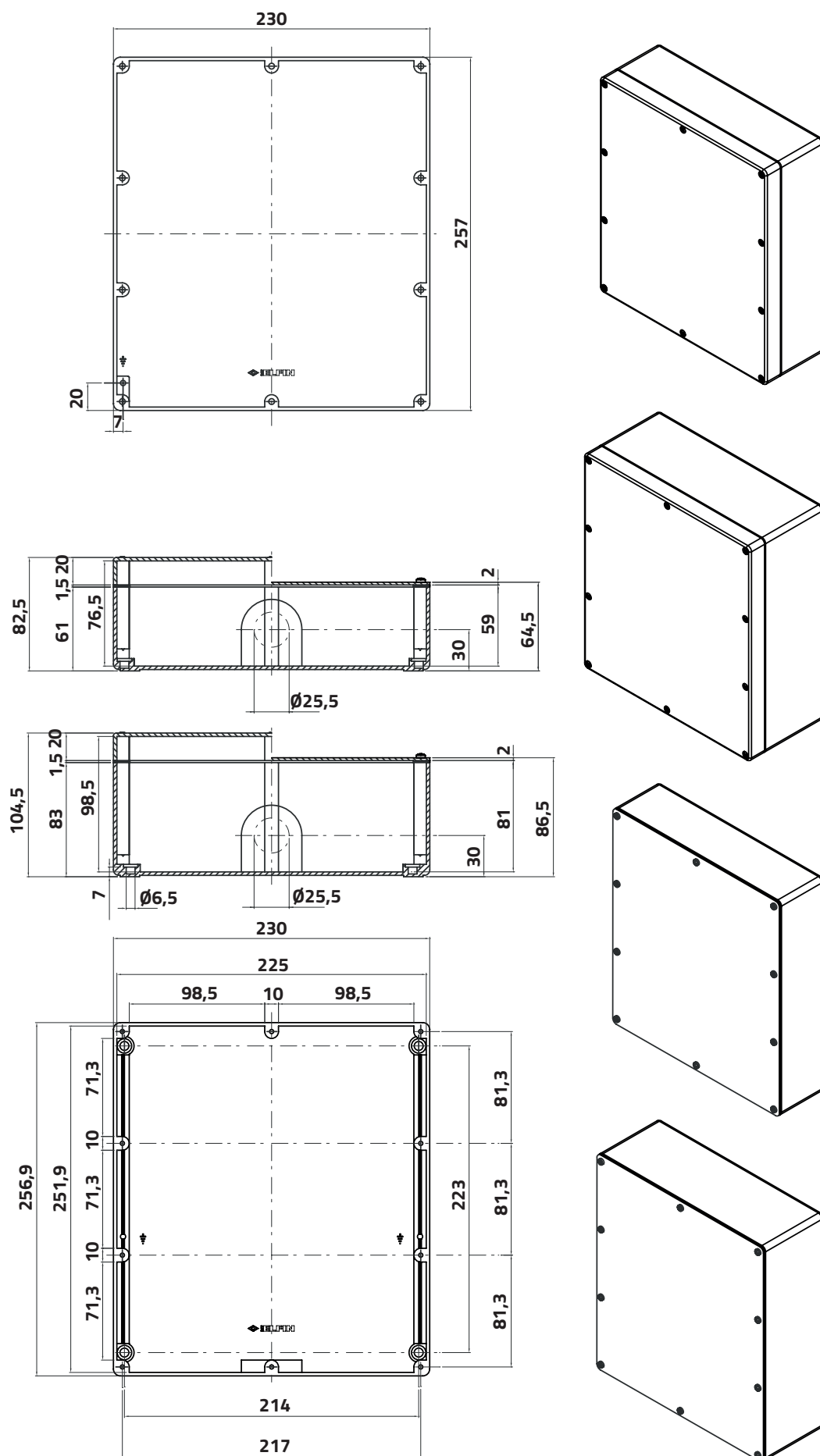
|                                     |     |      |                |
|-------------------------------------|-----|------|----------------|
| Senza entrata cavo / No cable entry | 80  | 1840 | 040C2325-8P20C |
| Senza entrata cavo / No cable entry | 100 | 2114 | 040C2325-1P20C |

### Coperchio con 21 fori Ø 22mm / 21-hole lid Ø 22 mm

|                                     |     |      |               |
|-------------------------------------|-----|------|---------------|
| Senza entrata cavo / No cable entry | 80  | 1840 | 040C2325-8P21 |
| Senza entrata cavo / No cable entry | 100 | 2114 | 040C2325-1P21 |

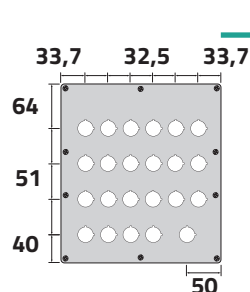
# Scatole in alluminio M4 230x257mm

## Aluminium enclosures M4 230x257mm



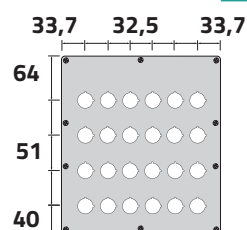
# Scatole in alluminio M4 230x257mm

## Aluminium enclosures M4 230x257mm



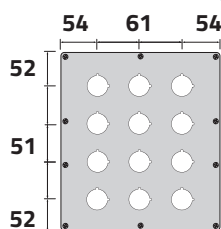
### Coperchio con 23 fori Ø 22mm / 23-hole lid Ø 22mm

|                                     |     |      |                        |
|-------------------------------------|-----|------|------------------------|
| Senza entrata cavo / No cable entry | 80  | 1840 | <b>040C2325-8P23C</b>  |
| Senza entrata cavo / No cable entry | 100 | 2114 | <b>040C2325-1P23C</b>  |
| Con entrata cavo / With cable entry | 80  | 1834 | <b>040C2325-8EP23C</b> |
| Con entrata cavo / With cable entry | 100 | 2108 | <b>040C2325-1EP23C</b> |



### Coperchio con 24 fori Ø 22mm / 24-hole lid Ø 22mm

|                                     |     |      |                       |
|-------------------------------------|-----|------|-----------------------|
| Senza entrata cavo / No cable entry | 80  | 1840 | <b>040C2325-8P24</b>  |
| Senza entrata cavo / No cable entry | 100 | 2114 | <b>040C2325-1P24</b>  |
| Con entrata cavo / With cable entry | 80  | 1834 | <b>040C2325-8EP24</b> |
| Con entrata cavo / With cable entry | 100 | 2108 | <b>040C2325-1EP24</b> |



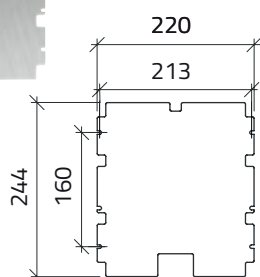
### Coperchio con 12 fori Ø 30mm / 12-hole lid Ø 30mm

|                                     |     |      |                       |
|-------------------------------------|-----|------|-----------------------|
| Senza entrata cavo / No cable entry | 80  | 1840 | <b>040C2325-8S12</b>  |
| Senza entrata cavo / No cable entry | 100 | 2114 | <b>040C2325-1S12</b>  |
| Con entrata cavo / With cable entry | 80  | 1834 | <b>040C2325-8ES12</b> |
| Con entrata cavo / With cable entry | 100 | 2108 | <b>040C2325-1ES12</b> |



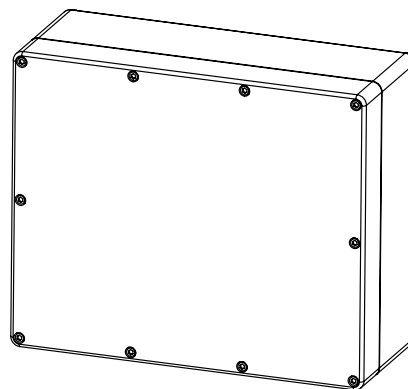
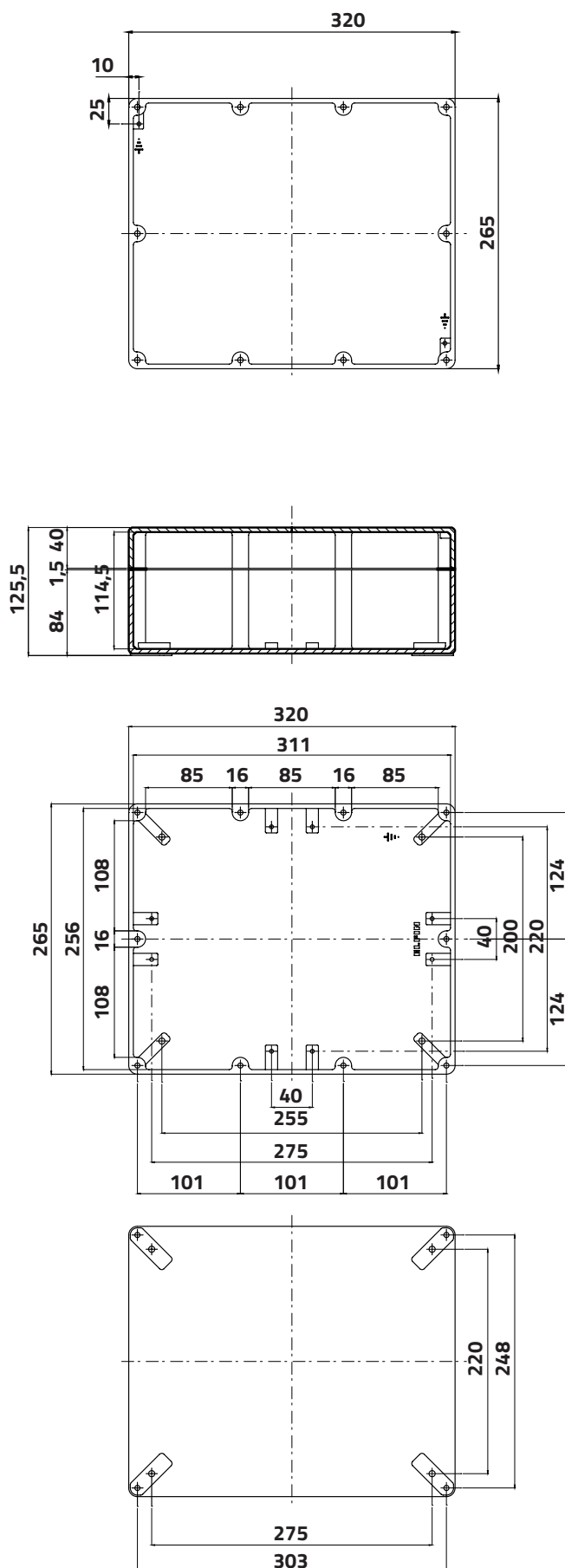
### Piastra di fondo / Mounting plate

|     |     |                 |
|-----|-----|-----------------|
| 1,5 | 400 | <b>040P2325</b> |
|-----|-----|-----------------|



# Scatole in alluminio M5 320x265mm

## Aluminium enclosures M5 320x265mm



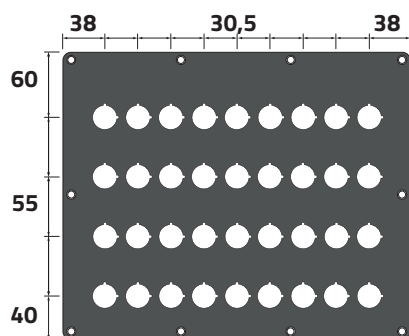
# Scatole in alluminio M5 320x265mm

## Aluminium enclosures M5 320x265mm



### Coperchio senza fori / Undrilled lid

|                                           | h   | g    | cod                 |
|-------------------------------------------|-----|------|---------------------|
| Senza entrata cavo / No cable entry       | 125 | 4060 | <b>040C3226-12</b>  |
| Grezza, cieca / Unpainted, no cable entry | 125 | 4060 | <b>040C3226-12N</b> |



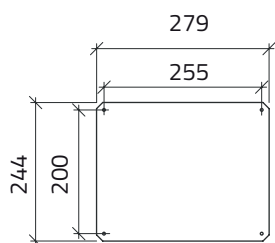
### Coperchio con 36 fori Ø 22mm / 36-holes lid Ø 22mm

|                                     |     |      |                       |
|-------------------------------------|-----|------|-----------------------|
| Senza entrata cavo / No cable entry | 125 | 4028 | <b>040C3226-12P36</b> |
|-------------------------------------|-----|------|-----------------------|



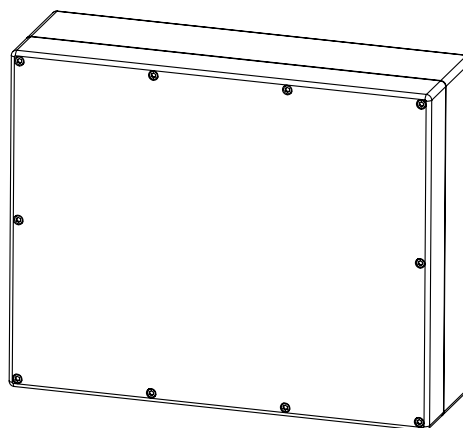
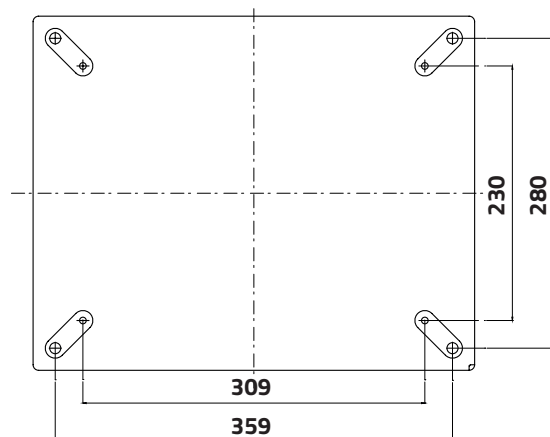
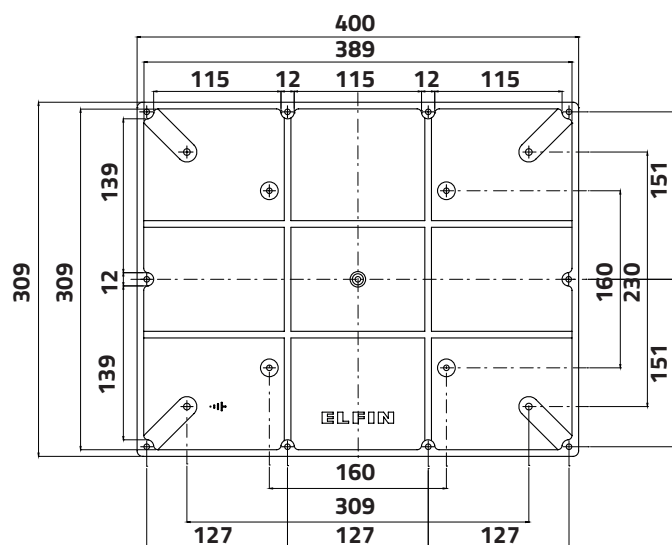
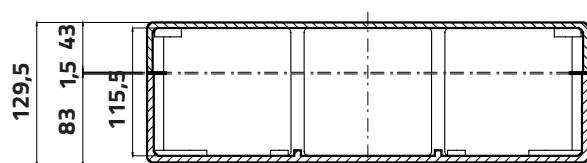
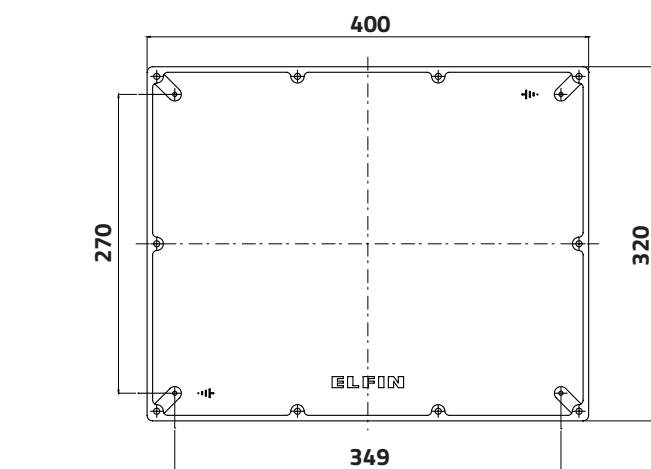
### Piastra di fondo / Mounting plate

|     |     |                 |
|-----|-----|-----------------|
| 1,5 | 900 | <b>040P3226</b> |
|-----|-----|-----------------|



# Scatole in alluminio M5 400x320mm

## Aluminium enclosures M5 400x320mm





# Scatole in alluminio M5 400x320mm

## Aluminium enclosures M5 400x320mm



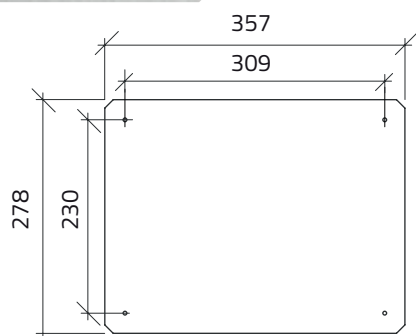
### Coperchio senza fori / Undrilled lid

|                                           | h   | g    | cod                 |
|-------------------------------------------|-----|------|---------------------|
| Senza entrata cavo / No cable entry       | 130 | 5350 | <b>040C4032-13</b>  |
| Grezza, cieca / Unpainted, no cable entry | 130 | 5350 | <b>040C4032-13N</b> |



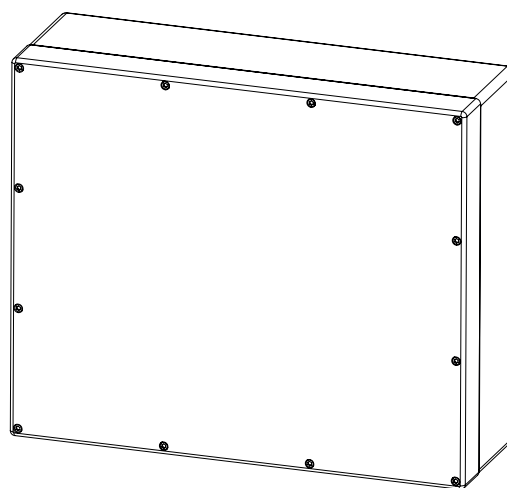
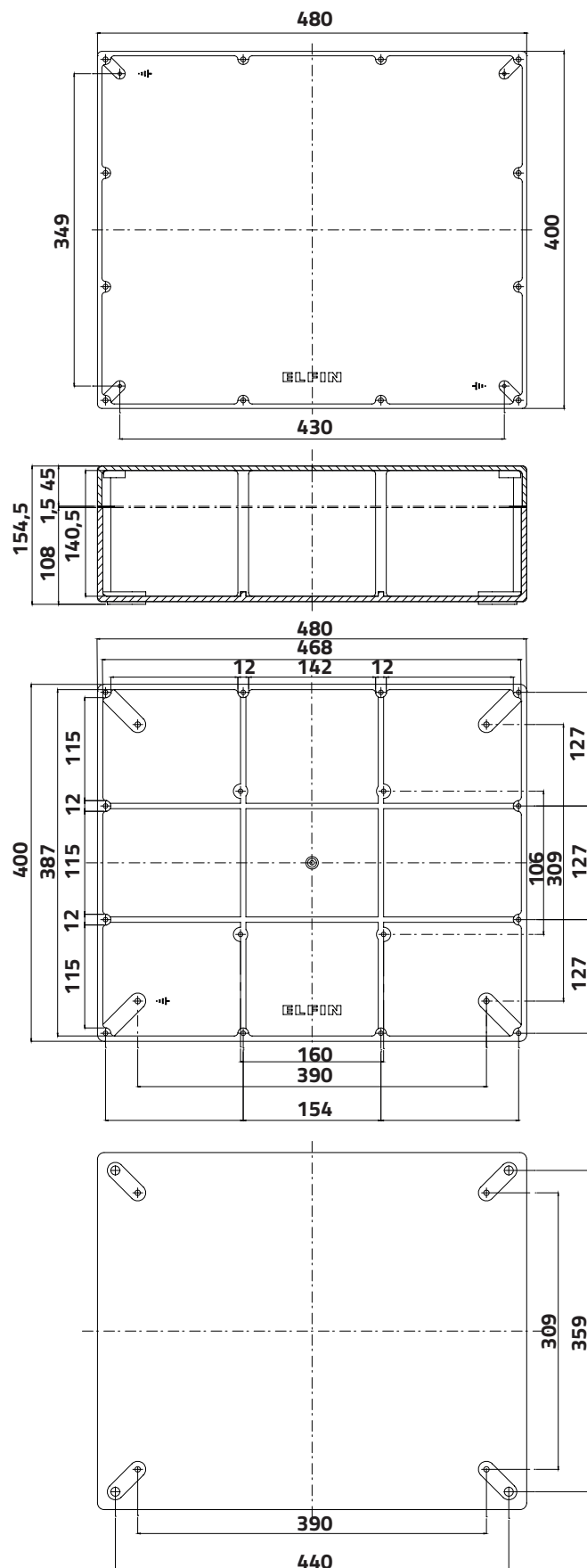
### Piastra di fondo / Mounting plate

|     |      |                 |
|-----|------|-----------------|
| 1,5 | 1206 | <b>040P4032</b> |
|-----|------|-----------------|



# Scatole in alluminio M5 480x400mm

## Aluminium enclosures M5 480x400mm



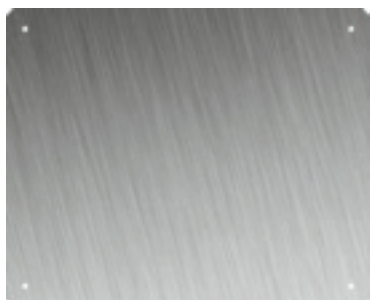
# Scatole in alluminio M5 480x400mm

## Aluminium enclosures M5 480x400mm



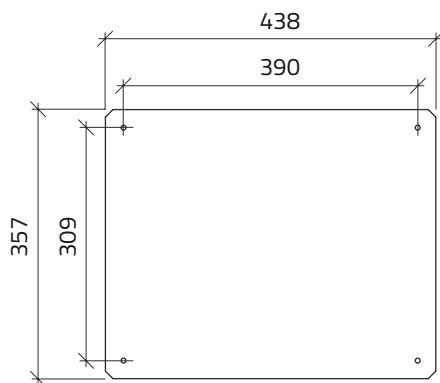
### Coperchio senza fori / Undrilled lid

|                                           | h   | g    | cod                 |
|-------------------------------------------|-----|------|---------------------|
| Senza entrata cavo / No cable entry       | 160 | 9000 | <b>040C4840-16</b>  |
| Grezza, cieca / Unpainted, no cable entry | 160 | 9000 | <b>040C4840-16N</b> |



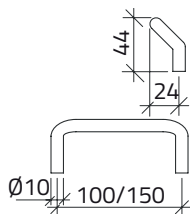
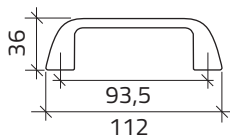
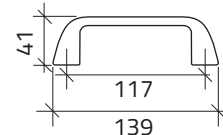
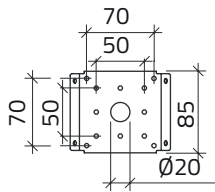
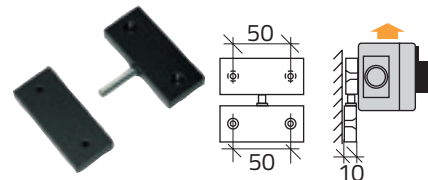
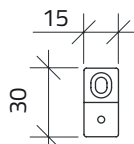
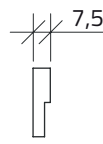
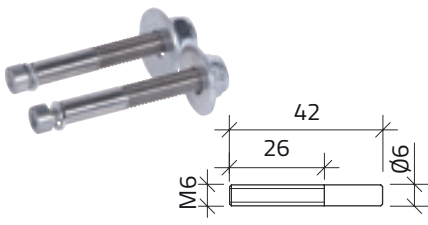
### Piastra di fondo / Mounting plate

|     |      |                 |
|-----|------|-----------------|
| 1,5 | 1900 | <b>040P4840</b> |
|-----|------|-----------------|



# Accessori

## Accessories

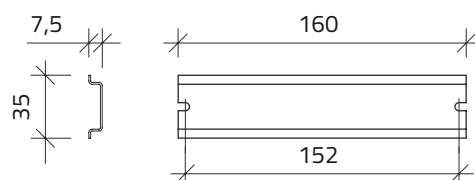
|                                                                                     |                                                                                     | g                                                                                                                | cod |                 |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----|-----------------|
|    |    | <b>Maniglia / Handle</b>                                                                                         | 112 | <b>040MM100</b> |
|                                                                                     |                                                                                     | <b>Maniglia / Handle</b>                                                                                         | 135 | <b>040MM150</b> |
|    |    | <b>Maniglia nera in plastica</b><br><b>Black plastic handle</b>                                                  | 42  | <b>080M112</b>  |
|                                                                                     |    | <b>Maniglia nera in plastica</b><br><b>Black plastic handle</b>                                                  | 58  | <b>080M139</b>  |
|  |  | <b>Staffa in acciaio inox</b><br><b>Stainless steel bracket</b>                                                  | 180 | <b>040FT</b>    |
|  |                                                                                     | <b>Kit di viti imperdibili M10</b><br><b>Set of M10 captive screws</b>                                           | 16  | <b>040KIV</b>   |
|  |                                                                                     | <b>Kit di fissaggio a parete per contenitori removibili</b><br><b>Wall-mounting kit for removable enclosures</b> | 124 | <b>080SP</b>    |
|  |  | <b>Kit di staffe di fissaggio</b><br><b>Set of mounting brackets</b>                                             | 28  | <b>010S10</b>   |
|                                                                                     |  |                                                                                                                  | 32  | <b>010S25</b>   |
|  |                                                                                     | <b>Kit di fissaggio con prigionieri (M4/M10)</b><br><b>Fixing kit with studs (M4/M10)</b>                        | 26  | <b>010SFP</b>   |

# Accessori

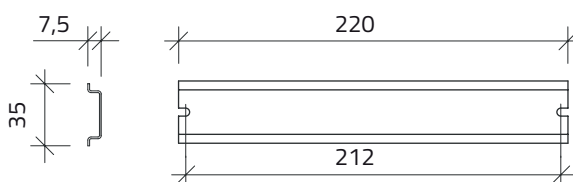
## Accessories

**Guida / Rail Ø 35**

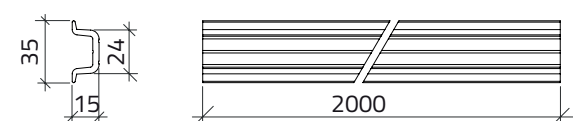
| L   | g  | cod      |
|-----|----|----------|
| 160 | 52 | 040G3516 |

**Guida / Rail Ø 35**

| L   | g  | cod      |
|-----|----|----------|
| 220 | 72 | 040G3522 |

**Guida / PVC Rail Ø 35**

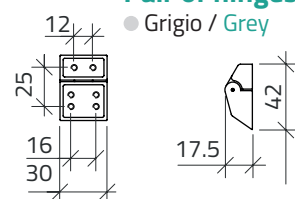
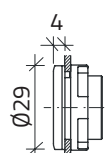
| L    | g   | cod    |
|------|-----|--------|
| 2000 | 760 | 010GDP |


**Coppia di cerniere per scatole pulsantiere**  
**Pair of hinges for push-button enclosures**

● Grigio / Grey

| g | cod |
|---|-----|
|---|-----|

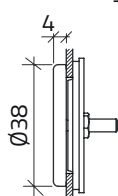
|    |       |
|----|-------|
| 57 | 040CF |
|----|-------|

**Tappi di chiusura / Hole plug**

- RAL 7035 Ø22
- Nero / Black Ø22
- RAL 7016

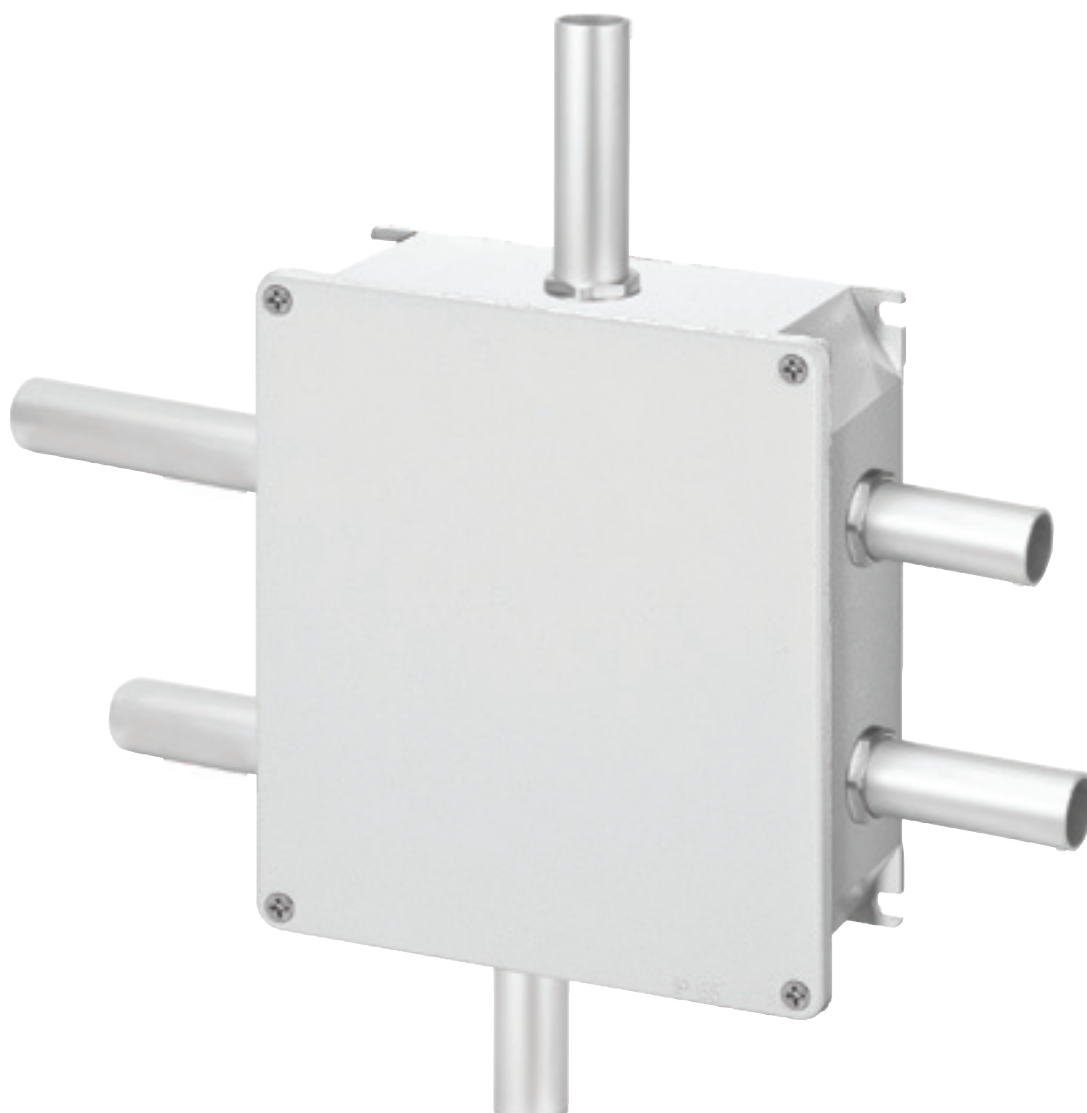
| g | n | cod |
|---|---|-----|
|---|---|-----|

|   |    |          |
|---|----|----------|
| 5 | 10 | 020TTP   |
| 5 | 10 | 020TTPN  |
| 5 | 10 | 020TTPGR |

**Tappo Ø30 / Plug Ø30**

|    |       |
|----|-------|
| 34 | 030CP |
|----|-------|

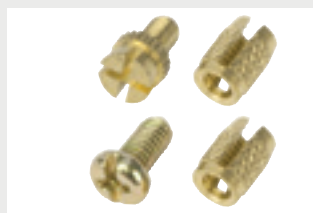
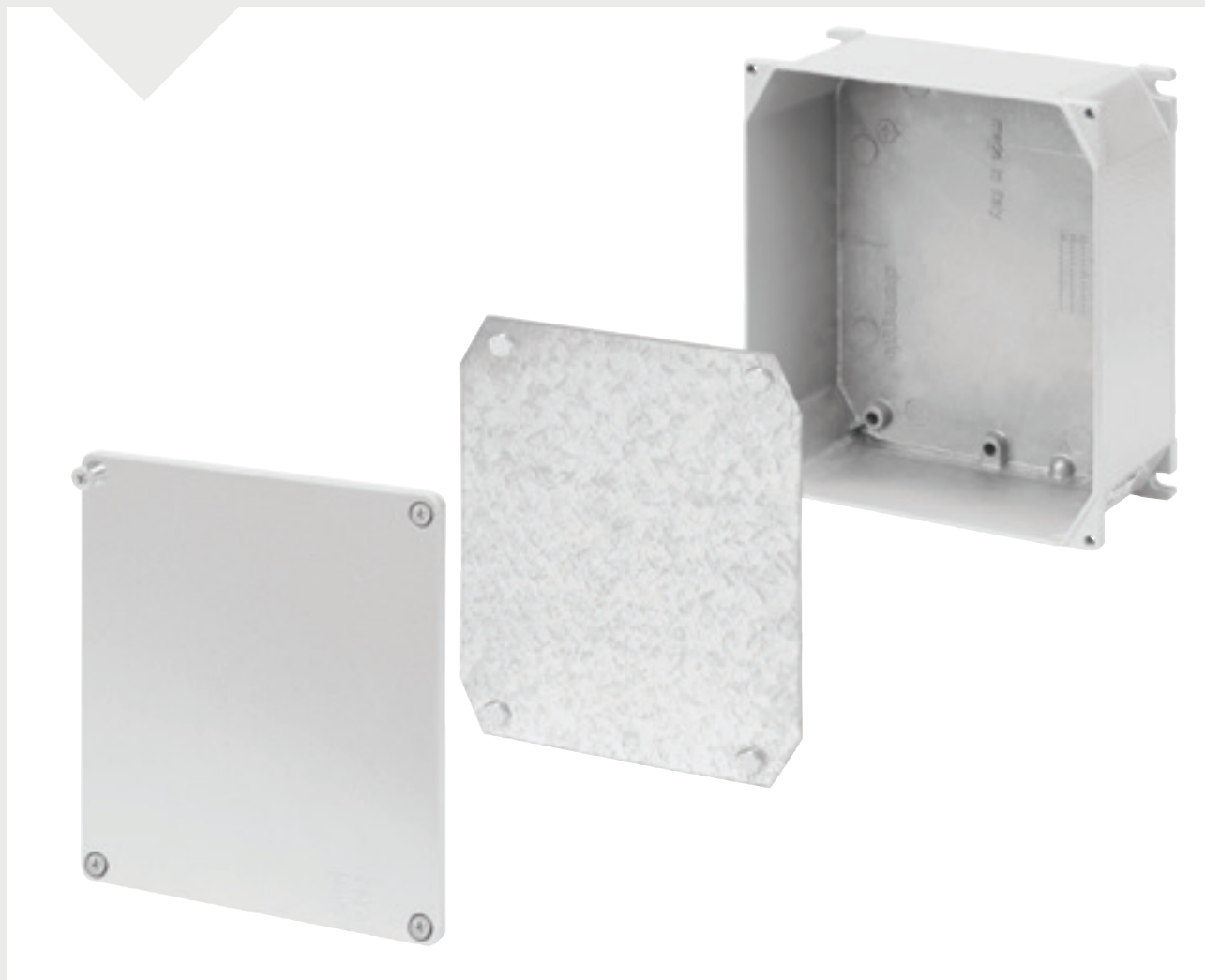
## Scatole di derivazione in alluminio Aluminium junction boxes



Esempio di realizzazione

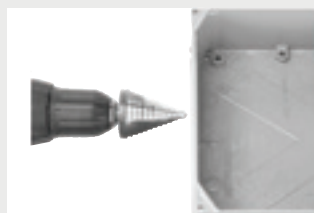
Example of execution

## Scatole di derivazione in alluminio Aluminium junction boxes



Viti interne per messa  
a terra

Inner grounding screws



Facili da forare

Easy to drill



Viti di seraggio

Clamping screws



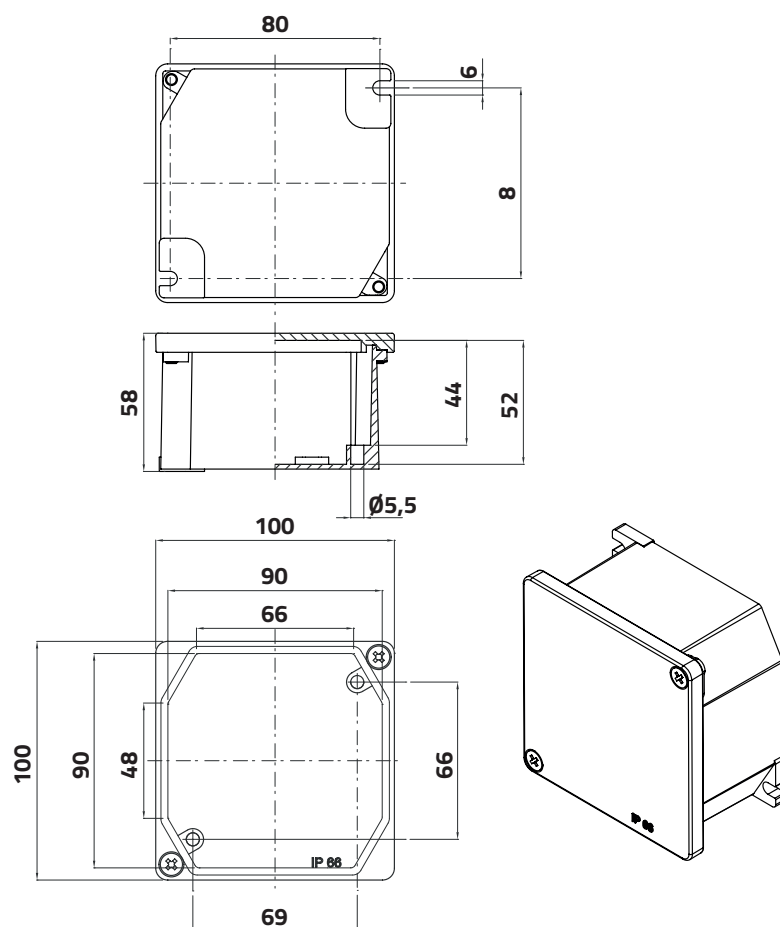
La guarnizione garantisce  
protezione IP66

A sealing gasket assures  
IP66 protection

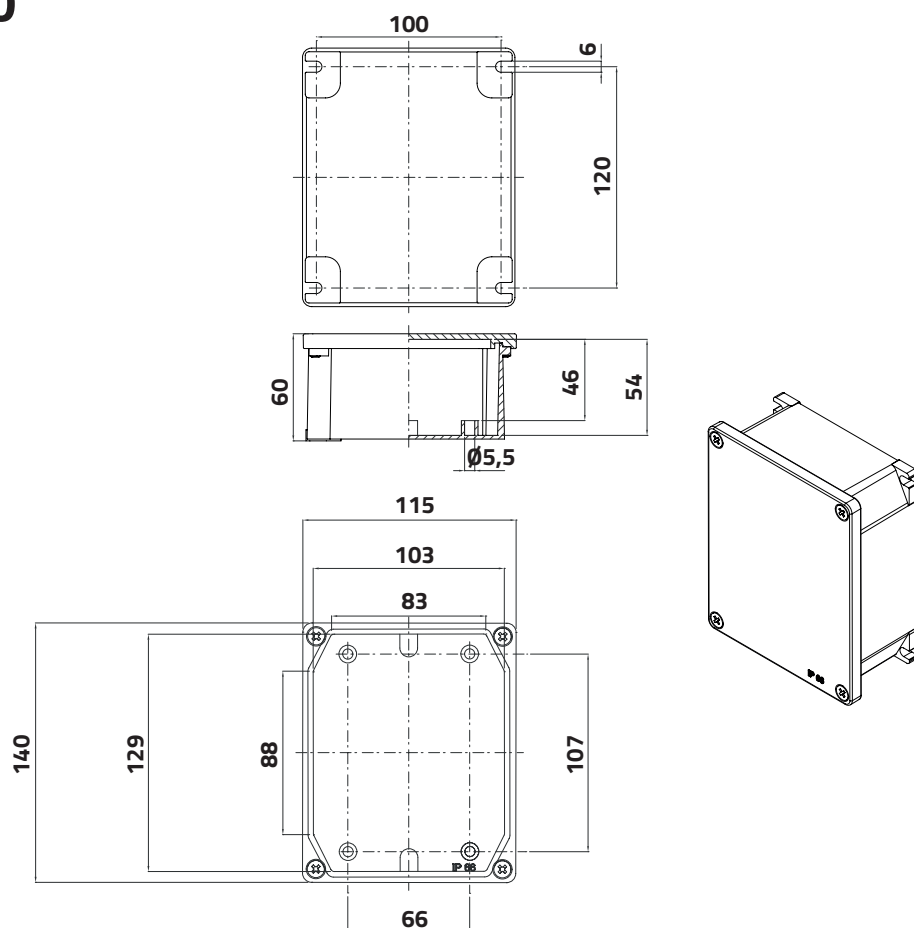
# Scatole di derivazione in alluminio

## Aluminium junction boxes

### 100X100



### 115X140





# Scatole di derivazione in alluminio

## Aluminium junction boxes

**100X100****h**

59

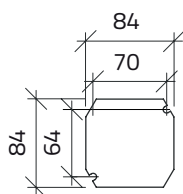
**g**

277

**cod****040D1010-6****Piastra di fondo / Mounting plate**

1,5

85

**040P1010****115X140****h**

60

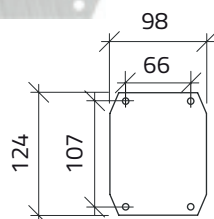
**g**

412

**cod****040D1214-6****Piastra di fondo / Mounting plate**

1,5

141

**040P1214**

# 142X166



# Scatole di derivazione in alluminio

## Aluminium junction boxes

**142X166****h**

64

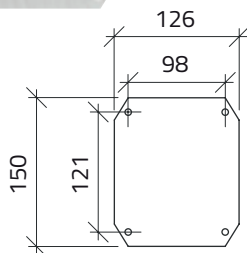
**g**

560

**cod****040D1416-6****Piastra di fondo / Mounting plate**

1,5

222

**040P1416****168X192****h**

80

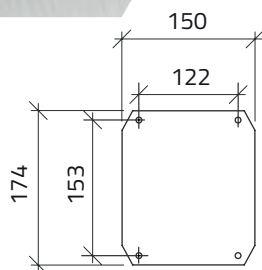
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773

**cod****040D1719-8****Piastra di fondo / Mounting plate**

1,5

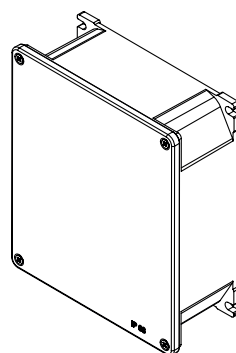
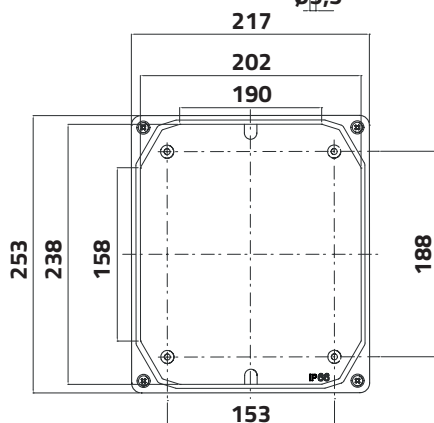
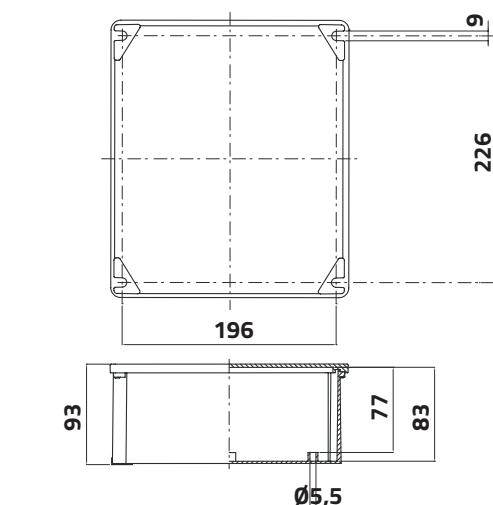
310

**040P1719**

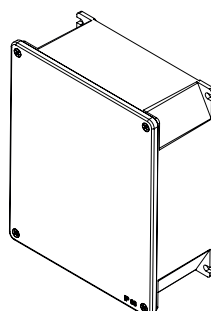
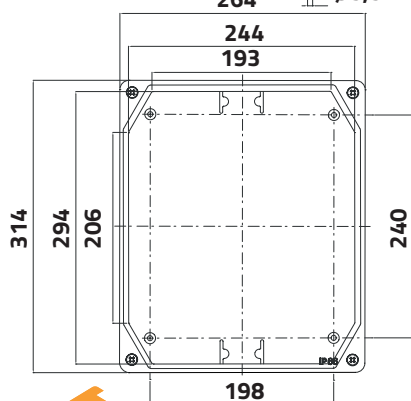
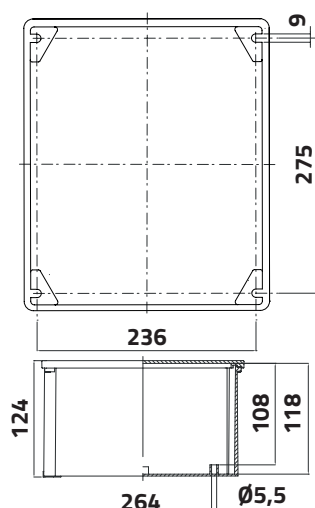
# Scatole di derivazione in alluminio

## Aluminium junction boxes

### 217X253



### 264X324



# Scatole di derivazione in alluminio

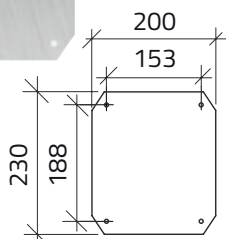
## Aluminium junction boxes

**217X253**

| h  | g    | cod        |
|----|------|------------|
| 93 | 1409 | 040D2225-9 |

**Piastra di fondo / Mounting plate**

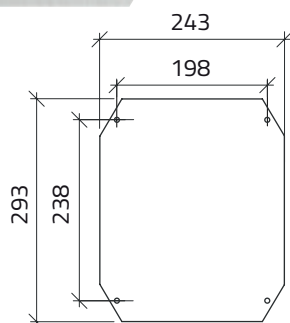
| h   | g   | cod      |
|-----|-----|----------|
| 1,5 | 538 | 040P2225 |

**264X314**

| h   | g    | cod         |
|-----|------|-------------|
| 122 | 2344 | 040D2631-12 |

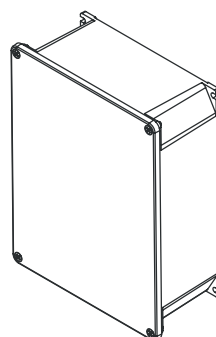
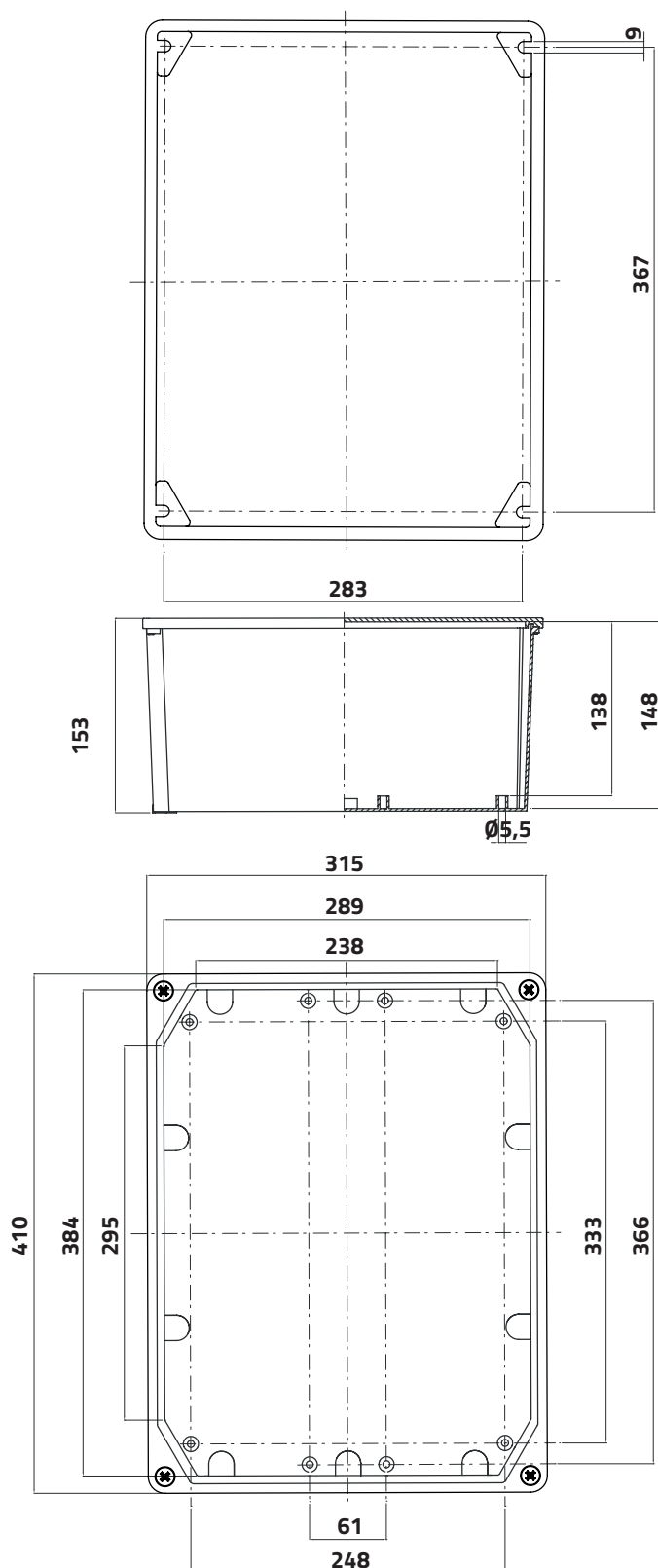
**Piastra di fondo / Mounting plate**

| h   | g   | cod      |
|-----|-----|----------|
| 1,5 | 840 | 040P2631 |



# Scatole di derivazione in alluminio

## Aluminium junction boxes



# Scatole di derivazione in alluminio

## Aluminium junction boxes



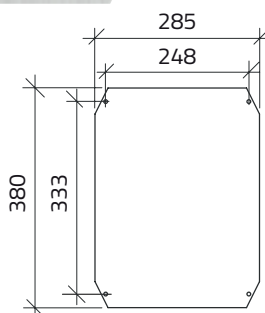
**315X410**

| h   | g    | cod         |
|-----|------|-------------|
| 153 | 3792 | 040D3141-15 |

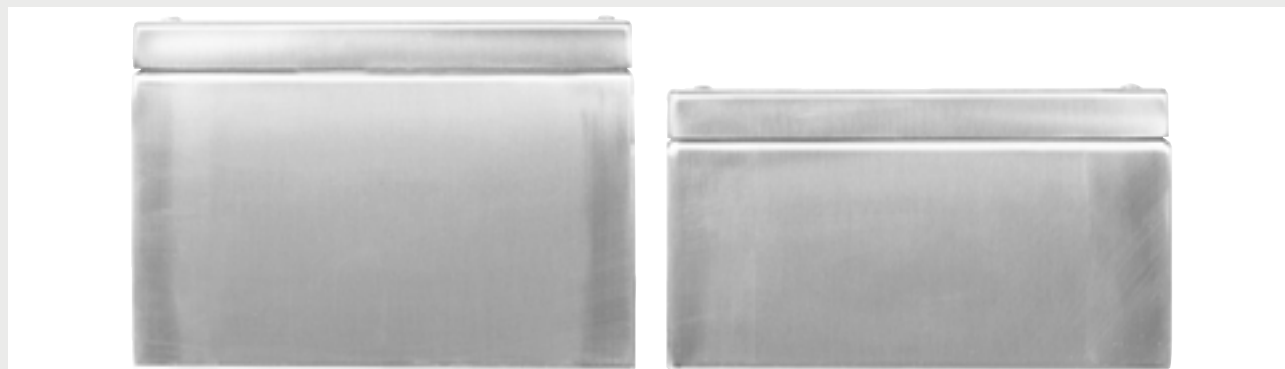


**Piastra di fondo / Mounting plate**

|     |      |          |
|-----|------|----------|
| 1,5 | 1315 | 040P3141 |
|-----|------|----------|



## Scatole acciaio inox Stainless steel enclosures



Disponibile in due altezze

Available in two heights



Coperchio basso formati da 82x82 a 82x202

Low lid for sizes from 82x82 to 82x802

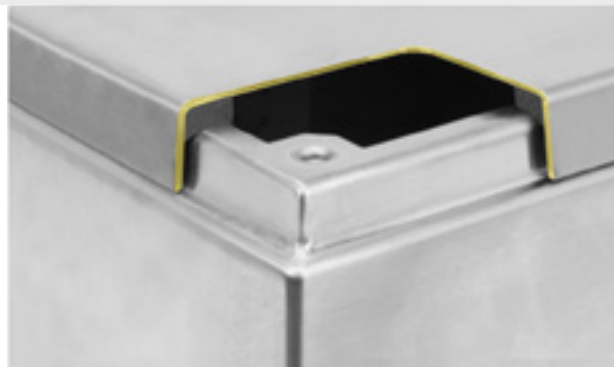
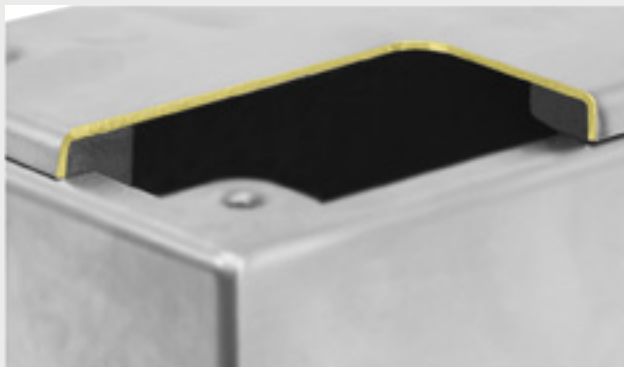


Coperchio alto formati da 140x180 a 230x260

High lid for sizes from 140x180 a 230x260



## Scatole acciaio inox Stainless steel enclosures



La guarnizione garantisce protezione IP66

A sealing gasket assures IP66 protection



Viti di seraggio  
Clamping screws



Scatola coperchio basso  
Enclosure with low lid



Scatola coperchio alto  
Enclosure with high lid



Kit di staffe di fissaggio  
Set of mounting brackets

# Resistenza dei contenitori alla corrosione

## Resistance of enclosures to corrosion

- Assenza di corrosione in condizioni ottimali di impiego a contatto con le sostanze considerate
- Possibilità di corrosione a contatto con le sostanze considerate
- Corrosione a contatto con le sostanze considerate
- Dati non reperiti

Dati provenienti da:

Corrosion Guide - E. Rabald  
Elsevier, Amsterdam, London, New York 1968Corrosion Data Survey - 4a ed.  
G. A. Nelson Nace, Houston 1967Corrosion Data Survey - 5a ed.  
N. E. Hammer Nace, Houston 1967

| austenitici al Cr-Ni-Mo del tipo 316      |   |   |   |   | austenitici al Cr-Ni-Mo del tipo 316      |   |   |   |   | austenitici al Cr-Ni-Mo del tipo 316      |   |   |   |   |
|-------------------------------------------|---|---|---|---|-------------------------------------------|---|---|---|---|-------------------------------------------|---|---|---|---|
| austenitici al Cr-Ni del tipo 302-304-305 |   |   |   |   | austenitici al Cr-Ni del tipo 302-304-305 |   |   |   |   | austenitici al Cr-Ni del tipo 302-304-305 |   |   |   |   |
| ferritici al Cr del tipo 430              |   |   |   |   | ferritici al Cr del tipo 430              |   |   |   |   | ferritici al Cr del tipo 430              |   |   |   |   |
| martensitici al Cr del tipo 410           |   |   |   |   | martensitici al Cr del tipo 410           |   |   |   |   | martensitici al Cr del tipo 410           |   |   |   |   |
| acetilene (commerciale)                   | ● | ● | ● | ● | benzolo a freddo e a caldo                | ● | ● | ● | ● | latte (fresco o acido)                    | ● | ● | ● | ● |
| aceto                                     | ● | ● | ● | ● | bicarbonato di sodio                      | ● | ● | ● | ● | lievito                                   | ● | ● | ● | ● |
| aceto (vapori)                            | ● | ● | ● | ● | (tutte le concentrazioni)                 | ● | ● | ● | ● | maionese                                  | ● | ● | ● | ● |
| acetone 100% a 100C                       | ● | ● | ● | ● | birra                                     | ● | ● | ● | ● | melassa                                   | ● | ● | ● | ● |
| acido acetico fino a 20%                  | ● | ● | ● | ● | bisolfato di sodio 15% a 85C              | ● | ● | ● | ● | mostarda                                  | ● | ● | ● | ● |
| acido bórico 5%                           | ● | ● | ● | ● | bisolfuro di carbonio 100%                | ● | ● | ● | ● | nitrato d'ammonio 10-50%                  | ● | ● | ● | ● |
| acido butirrico 5%                        | ● | ● | ● | ● | borace 5% caldo                           | ● | ● | ● | ● | nitrato di sodio 10-40%                   | ● | ● | ● | ● |
| acido cianidrico 100%                     | ● | ● | ● | ● | butano                                    | ● | ● | ● | ● | oli minerali a caldo e a freddo           | ● | ● | ● | ● |
| acido citrico 5%                          | ● | ● | ● | ● | caffè bollente                            | ● | ● | ● | ● | oli vegetali a caldo e a freddo           | ● | ● | ● | ● |
| acido cloridrico                          | ● | ● | ● | ● | candeggina satura                         | ● | ● | ● | ● | paraffina a caldo e a freddo              | ● | ● | ● | ● |
| (tutte le concentrazioni)                 | ● | ● | ● | ● | canfora                                   | ● | ● | ● | ● | perborato di sodio                        | ● | ● | ● | ● |
| acido cromatico 5%                        | ● | ● | ● | ● | carbonato di sodio 5% fino a 65C          | ● | ● | ● | ● | 10% fino a 100C                           | ● | ● | ● | ● |
| acido fluoridrico                         | ● | ● | ● | ● | citrato di sodio a freddo e a caldo       | ● | ● | ● | ● | perossido di idrogeno 10%                 | ● | ● | ● | ● |
| (tutte le concentrazioni)                 | ● | ● | ● | ● | cloroformio 100%                          | ● | ● | ● | ● | perossido di sodio                        | ● | ● | ● | ● |
| acido fosforico 5%                        | ● | ● | ● | ● | cloruro di ammonio 1%                     | ● | ● | ● | ● | 10% fino a 100C                           | ● | ● | ● | ● |
| acido lattico 5%                          | ● | ● | ● | ● | cloruro ferrico 5-50%                     | ● | ● | ● | ● | piombo fuso                               | ● | ● | ● | ● |
| acido linoleico 100% fino a 100C          | ● | ● | ● | ● | cloruro ferroso 10-20%                    | ● | ● | ● | ● | propano                                   | ● | ● | ● | ● |
| acido malico 10-40% fino a 50C            | ● | ● | ● | ● | cloruro di magnesio fino a 20%            | ● | ● | ● | ● | sapone                                    | ● | ● | ● | ● |
| acido muriatico (commerciale)             | ● | ● | ● | ● | cloruro di mercurio 10%                   | ● | ● | ● | ● | sciroppo di zucchero                      | ● | ● | ● | ● |
| acido nitrico fino a 10% a 80C            | ● | ● | ● | ● | cloruro di nichel 10-30%                  | ● | ● | ● | ● | a tutte le concentrazioni                 | ● | ● | ● | ● |
| acido oleico 100%                         | ● | ● | ● | ● | cloruro di potassio 1-5%                  | ● | ● | ● | ● | siero di latte                            | ● | ● | ● | ● |
| acido ossalico 5%                         | ● | ● | ● | ● | cloruro di sodio 5% (non agitato)         | ● | ● | ● | ● | silicato di sodio                         | ● | ● | ● | ● |
| acido picrico                             | ● | ● | ● | ● | cloruro di zinco 10%                      | ● | ● | ● | ● | fino a 100% fino a 100C                   | ● | ● | ● | ● |
| (tutte le concentrazioni)                 | ● | ● | ● | ● | cloruro di zolfo 100%                     | ● | ● | ● | ● | solfo d'alluminio 10%                     | ● | ● | ● | ● |
| acido solfidrico 100% umido               | ● | ● | ● | ● | a temperatura di ebollizione              | ● | ● | ● | ● | solfo di ammonio 10%                      | ● | ● | ● | ● |
| (idrogeno solforato)                      | ● | ● | ● | ● | coca cola (sciroppo puro)                 | ● | ● | ● | ● | solfo di nichel 10%                       | ● | ● | ● | ● |
| acido solforico 5% bollente               | ● | ● | ● | ● | etere 100%                                | ● | ● | ● | ● | solfo ferroso 10-40%                      | ● | ● | ● | ● |
| acido solforico fumante                   | ● | ● | ● | ● | formaldeide 100%                          | ● | ● | ● | ● | solfo di magnesio 10-40%                  | ● | ● | ● | ● |
| (oleum) 50C                               | ● | ● | ● | ● | fosfato d'ammonio 10%                     | ● | ● | ● | ● | solfo di zinco 10%                        | ● | ● | ● | ● |
| acido solforoso 100%                      | ● | ● | ● | ● | fosfato di sodio                          | ● | ● | ● | ● | solfo di sodio 10%                        | ● | ● | ● | ● |
| acido stearico 100% fino a 100C           | ● | ● | ● | ● | a tutte le concentrazioni                 | ● | ● | ● | ● | 10% fino a 100C                           | ● | ● | ● | ● |
| acido tartarico 10% a 100C                | ● | ● | ● | ● | furfurolo 100%                            | ● | ● | ● | ● | solfo di rame 10%                         | ● | ● | ● | ● |
| acqua dolce                               | ● | ● | ● | ● | a temperatura di ebollizione              | ● | ● | ● | ● | solfo di sodio 10%                        | ● | ● | ● | ● |
| acqua ossigenata 10-30%                   | ● | ● | ● | ● | gas di cloro umido                        | ● | ● | ● | ● | solfo di zinco 10%                        | ● | ● | ● | ● |
| acqua regia                               | ● | ● | ● | ● | gas di cokeria                            | ● | ● | ● | ● | solfo di sodio 10%                        | ● | ● | ● | ● |
| alcool etilico                            | ● | ● | ● | ● | gelatina                                  | ● | ● | ● | ● | solfo di sodio 10%                        | ● | ● | ● | ● |
| (tutte le concentrazioni)                 | ● | ● | ● | ● | glicerina a tutte le concentrazioni       | ● | ● | ● | ● | succhi di arancia concentrati             | ● | ● | ● | ● |
| alcool metilico 100%                      | ● | ● | ● | ● | glicole etilico 100%                      | ● | ● | ● | ● | succhi di limone concentrati              | ● | ● | ● | ● |
| alluminio fuso                            | ● | ● | ● | ● | glucosio                                  | ● | ● | ● | ● | tetracloruro di carbonio 10%              | ● | ● | ● | ● |
| ammoniaca 100% (secca)                    | ● | ● | ● | ● | gomma lacca                               | ● | ● | ● | ● | tiosolfato di sodio 10-60%                | ● | ● | ● | ● |
| anidride acetica 100%                     | ● | ● | ● | ● | idrossido d'ammonio fino al 40%           | ● | ● | ● | ● | fino a 100C                               | ● | ● | ● | ● |
| anidride carbonica 100% (secca)           | ● | ● | ● | ● | idrossido di calcio                       | ● | ● | ● | ● | toloulo                                   | ● | ● | ● | ● |
| anidride solforosa 90%                    | ● | ● | ● | ● | fino a 10% fino a 100C                    | ● | ● | ● | ● | tricloroetilene 100% (trielina)           | ● | ● | ● | ● |
| anilina 100%                              | ● | ● | ● | ● | idrossido di magnesio                     | ● | ● | ● | ● | fino a 100C                               | ● | ● | ● | ● |
| bagni di concia                           | ● | ● | ● | ● | 10% fino a 100C                           | ● | ● | ● | ● | vernici                                   | ● | ● | ● | ● |
| bagni di cromatura                        | ● | ● | ● | ● | idrossido di potassio fino a 50%          | ● | ● | ● | ● | vino                                      | ● | ● | ● | ● |
| bagni di fissaggio fotografico            | ● | ● | ● | ● | idrossido di sodio fino a 20%             | ● | ● | ● | ● | whisky                                    | ● | ● | ● | ● |
| bagni di sviluppo fotografico             | ● | ● | ● | ● | ipoclorito di calcio 100%                 | ● | ● | ● | ● | zincio fuso                               | ● | ● | ● | ● |
| benzina                                   | ● | ● | ● | ● | ipoclorito di sodio 100%                  | ● | ● | ● | ● | zolfo fuso                                | ● | ● | ● | ● |



# Resistenza dei contenitori alla corrosione

## Resistance of enclosures to corrosion

- No corrosion in optimal conditions of use in contact with the substances considered
- Possibility of corrosion when in contact with the substances considered
- Corrosion when in contact with the substances considered
- Data not available

Data taken from:  
**Corrosion Guide** - E. Rabald  
 Elsevier, Amsterdam, London, New York 1968  
**Corrosion Data Survey** - 4a ed.  
 G. A. Nelson Nace, Houston 1967  
**Corrosion Data Survey** - 5a ed.  
 N. E. Hammer Nace, Houston 1967

| 316 type austenitic Cr-Ni-Mo steel | 302-304-305 type austenitic Cr-Ni | 430 type ferritic Cr steel | 410 type martensitic Cr steel |   | 316 type austenitic Cr-Ni-Mo steel | 302-304-305 type austenitic Cr-Ni | 430 type ferritic Cr steel | 410 type martensitic Cr steel |   | 316 type austenitic Cr-Ni-Mo steel | 302-304-305 type austenitic Cr-Ni | 430 type ferritic Cr steel | 410 type martensitic Cr steel |   |
|------------------------------------|-----------------------------------|----------------------------|-------------------------------|---|------------------------------------|-----------------------------------|----------------------------|-------------------------------|---|------------------------------------|-----------------------------------|----------------------------|-------------------------------|---|
| acetylene (commercial)             | ●                                 | ●                          | ●                             | ● | cold and hot benzol                | ●                                 | ●                          | ●                             | ● | milk (fresh or acid)               | ●                                 | ●                          | ●                             | ● |
| vinegar                            | ●                                 | ●                          | ●                             | ● | sodium bicarbonate                 | ●                                 | ●                          | ●                             | ● | yeast                              | ●                                 | ●                          | ●                             | ● |
| vinegar (vapours)                  | ●                                 | ●                          | ●                             | ● | (all concentrations)               | ●                                 | ●                          | ●                             | ● | mayonnaise                         | ●                                 | ●                          | ●                             | ● |
| acetone 100% at 100°C              | ●                                 | ●                          | ●                             | ● | beer                               | ●                                 | ●                          | ●                             | ● | molasses                           | ●                                 | ●                          | ●                             | ● |
| acetic acid up to 20%              | ●                                 | ●                          | ●                             | ● | sodium disulphate 15% at 85°C      | ●                                 | ●                          | ●                             | ● | mustard                            | ●                                 | ●                          | ●                             | ● |
| boric acid 5%                      | ●                                 | ●                          | ●                             | ● | carbon bisulphide 100%             | ●                                 | ●                          | ●                             | ● | ammonium nitrate 10-50%            | ●                                 | ●                          | ●                             | ● |
| butyric acid 5%                    | ●                                 | ●                          | ●                             | ● | hot borax 5%                       | ●                                 | ●                          | ●                             | ● | sodium nitrate 10-40%              | ●                                 | ●                          | ●                             | ● |
| hydrocyanic acid 100%              | ●                                 | ●                          | ●                             | ● | butane                             | ●                                 | ●                          | ●                             | ● | hot and cold mineral oil           | ●                                 | ●                          | ●                             | ● |
| citric acid 5%                     | ●                                 | ●                          | ●                             | ● | boiling coffee                     | ●                                 | ●                          | ●                             | ● | hot and cold vegetable oil         | ●                                 | ●                          | ●                             | ● |
| hydrochloric acid                  | ●                                 | ●                          | ●                             | ● | saturated chlorine water           | ●                                 | ●                          | ●                             | ● | hot and cold paraffin              | ●                                 | ●                          | ●                             | ● |
| (all concentrations)               | ●                                 | ●                          | ●                             | ● | camphor                            | ●                                 | ●                          | ●                             | ● | sodium perborate                   | ●                                 | ●                          | ●                             | ● |
| chromic acid 5%                    | ●                                 | ●                          | ●                             | ● | sodium carbonate 5% up to 65°C     | ●                                 | ●                          | ●                             | ● | 10% up to 100°C                    | ●                                 | ●                          | ●                             | ● |
| hydrofluoric acid                  | ●                                 | ●                          | ●                             | ● | hot and cold sodium citrate        | ●                                 | ●                          | ●                             | ● | hydrogen peroxide 10%              | ●                                 | ●                          | ●                             | ● |
| (all concentrations)               | ●                                 | ●                          | ●                             | ● | chloroform 100%                    | ●                                 | ●                          | ●                             | ● | sodium peroxide 10%                | ●                                 | ●                          | ●                             | ● |
| phosphoric acid 5%                 | ●                                 | ●                          | ●                             | ● | ammonium chloride 1%               | ●                                 | ●                          | ●                             | ● | up to 100°C                        | ●                                 | ●                          | ●                             | ● |
| lactic acid 5%                     | ●                                 | ●                          | ●                             | ● | ferric chloride 5-50%              | ●                                 | ●                          | ●                             | ● | melted lead                        | ●                                 | ●                          | ●                             | ● |
| linoleic acid 100% up to 100°C     | ●                                 | ●                          | ●                             | ● | ferrous chloride 10-20%            | ●                                 | ●                          | ●                             | ● | propane                            | ●                                 | ●                          | ●                             | ● |
| malic acid 10-40% up to 50°C       | ●                                 | ●                          | ●                             | ● | magnesium chloride up to 20%       | ●                                 | ●                          | ●                             | ● | soap                               | ●                                 | ●                          | ●                             | ● |
| muriatic acid (commercial)         | ●                                 | ●                          | ●                             | ● | mercury chloride 10%               | ●                                 | ●                          | ●                             | ● | sugar syrup                        | ●                                 | ●                          | ●                             | ● |
| nitric acid up to 10% at 80°C      | ●                                 | ●                          | ●                             | ● | nickel chloride 10-30%             | ●                                 | ●                          | ●                             | ● | at all concentration               | ●                                 | ●                          | ●                             | ● |
| oleic acid 100%                    | ●                                 | ●                          | ●                             | ● | potassium chloride 1-5%            | ●                                 | ●                          | ●                             | ● | whey                               | ●                                 | ●                          | ●                             | ● |
| oxalic acid 5%                     | ●                                 | ●                          | ●                             | ● | sodium chloride 5% (not agitated)  | ●                                 | ●                          | ●                             | ● | sodium silicate                    | ●                                 | ●                          | ●                             | ● |
| picric acid                        | ●                                 | ●                          | ●                             | ● | zinc chloride                      | ●                                 | ●                          | ●                             | ● | up to 100% up to 100°C             | ●                                 | ●                          | ●                             | ● |
| (all concentrations)               | ●                                 | ●                          | ●                             | ● | sulphur chloride 100%              | ●                                 | ●                          | ●                             | ● | aluminium sulphate 10%             | ●                                 | ●                          | ●                             | ● |
| wet sulphuric acid 100%            | ●                                 | ●                          | ●                             | ● | at boiling temperature             | ●                                 | ●                          | ●                             | ● | ammonium sulphate 10%              | ●                                 | ●                          | ●                             | ● |
| (hydrogen sulphide)                | ●                                 | ●                          | ●                             | ● | coca cola (pure syrup)             | ●                                 | ●                          | ●                             | ● | ferric sulphate 10%                | ●                                 | ●                          | ●                             | ● |
| boiling sulphuric acid 5%          | ●                                 | ●                          | ●                             | ● | ether 100%                         | ●                                 | ●                          | ●                             | ● | ferrous sulphate 10-40%            | ●                                 | ●                          | ●                             | ● |
| fuming sulphuric acid              | ●                                 | ●                          | ●                             | ● | formaldehyde 100%                  | ●                                 | ●                          | ●                             | ● | magnesium sulphate 10-40%          | ●                                 | ●                          | ●                             | ● |
| (oleum) 50°C                       | ●                                 | ●                          | ●                             | ● | ammonium phosphate 10%             | ●                                 | ●                          | ●                             | ● | nickel sulphate 30%                | ●                                 | ●                          | ●                             | ● |
| sulphurous acid 100%               | ●                                 | ●                          | ●                             | ● | sodium phosphate                   | ●                                 | ●                          | ●                             | ● | potassium sulphate                 | ●                                 | ●                          | ●                             | ● |
| stearic acid 100% up to 100°C      | ●                                 | ●                          | ●                             | ● | at all concentrations              | ●                                 | ●                          | ●                             | ● | 10% up to 100°C                    | ●                                 | ●                          | ●                             | ● |
| tartaric acid 10% at 100°C         | ●                                 | ●                          | ●                             | ● | furfural 100%                      | ●                                 | ●                          | ●                             | ● | copper sulphate 10%                | ●                                 | ●                          | ●                             | ● |
| soft water                         | ●                                 | ●                          | ●                             | ● | at boiling temperature             | ●                                 | ●                          | ●                             | ● | sodium sulphate 10%                | ●                                 | ●                          | ●                             | ● |
| hydrogen dioxide 10-30%            | ●                                 | ●                          | ●                             | ● | wet chloride gas                   | ●                                 | ●                          | ●                             | ● | zinc sulphate 10%                  | ●                                 | ●                          | ●                             | ● |
| white spirit                       | ●                                 | ●                          | ●                             | ● | coke-oven gas                      | ●                                 | ●                          | ●                             | ● | sodium sulphide 10%                | ●                                 | ●                          | ●                             | ● |
| ethyl alcohol                      | ●                                 | ●                          | ●                             | ● | gelatine                           | ●                                 | ●                          | ●                             | ● | concentrated orange juice          | ●                                 | ●                          | ●                             | ● |
| (all concentrations)               | ●                                 | ●                          | ●                             | ● | glycerol at all concentrations     | ●                                 | ●                          | ●                             | ● | concentrated lemon juice           | ●                                 | ●                          | ●                             | ● |
| methyl alcohol 100%                | ●                                 | ●                          | ●                             | ● | ethyl glycol 100%                  | ●                                 | ●                          | ●                             | ● | carbon tetrachloride 10%           | ●                                 | ●                          | ●                             | ● |
| melted aluminium                   | ●                                 | ●                          | ●                             | ● | glucose                            | ●                                 | ●                          | ●                             | ● | sodium thiosulphate                | ●                                 | ●                          | ●                             | ● |
| ammonia 100% (dry)                 | ●                                 | ●                          | ●                             | ● | shellac                            | ●                                 | ●                          | ●                             | ● | 10-60% up to 100°C                 | ●                                 | ●                          | ●                             | ● |
| acetic anhydride 100%              | ●                                 | ●                          | ●                             | ● | ammonium hydroxide up to 40%       | ●                                 | ●                          | ●                             | ● | toluol                             | ●                                 | ●                          | ●                             | ● |
| carbon dioxide 100% (dry)          | ●                                 | ●                          | ●                             | ● | calcium hydroxide                  | ●                                 | ●                          | ●                             | ● | trichloroethylene                  | ●                                 | ●                          | ●                             | ● |
| sulphur dioxide 90%                | ●                                 | ●                          | ●                             | ● | up to 10% up to 100°C              | ●                                 | ●                          | ●                             | ● | 100% up to 100°C                   | ●                                 | ●                          | ●                             | ● |
| aniline 100%                       | ●                                 | ●                          | ●                             | ● | magnesium hydroxide                | ●                                 | ●                          | ●                             | ● | paints                             | ●                                 | ●                          | ●                             | ● |
| tanning bath                       | ●                                 | ●                          | ●                             | ● | 10% up to 100°C                    | ●                                 | ●                          | ●                             | ● | wine                               | ●                                 | ●                          | ●                             | ● |
| chromium plating bath              | ●                                 | ●                          | ●                             | ● | potassium hydroxide up to 50%      | ●                                 | ●                          | ●                             | ● | whisky                             | ●                                 | ●                          | ●                             | ● |
| fixing bath                        | ●                                 | ●                          | ●                             | ● | sodium hydroxide up to 20%         | ●                                 | ●                          | ●                             | ● | melted zinc                        | ●                                 | ●                          | ●                             | ● |
| developer bath                     | ●                                 | ●                          | ●                             | ● | calcium hypochlorite 100%          | ●                                 | ●                          | ●                             | ● | melted sulphur                     | ●                                 | ●                          | ●                             | ● |
| gasoline                           | ●                                 | ●                          | ●                             | ● | sodium hypochlorite 100%           | ●                                 | ●                          | ●                             | ● |                                    |                                   |                            |                               |   |



# Caratteristiche tecniche

## Technical data

### UN BREVE CENNO STORICO

Gli acciai inossidabili sono dei materiali entrati nella produzione industriale relativamente da poco tempo. Gli esperti fanno risalire al primo ventennio del novecento la loro prima comparsa in nuove applicazioni. Infatti alla fine del 1912 il metallurgista Pasel della Krupp, depositò in Germania due brevetti (che furono poi rilasciati nel 1918 con i numeri 304 126 e 304 159) in cui si parla di **acciai inossidabili austenitici** contenenti 18 parti di cromo e 8 parti di nichel. La prima colata industriale di acciaio mertensitico al solo cromo avvenne nel 1913 in Gran Bretagna; il prodotto di questa prima colata, che conteneva circa il 13% di cromo, servì a costruire lame di coltelli. Le prime applicazioni, oltre alla coltelleria già menzionata, avvennero nei motori a combustione interna durante la prima guerra mondiale, mentre la diffusione in tutti i settori d'impiego iniziò dopo gli anni 20 e lo sviluppo continua ancora oggi in settori avanzati e particolarmente "esigenti", come in quello della produzione petrolchimica, alimentare, farmaceutico, zootecnico ecc.

### A SHORT HISTORICAL BACKGROUND

The use of stainless steel in industrial production is fairly recent. The experts date the first appearance in new applications back to the first twenty years of the twentieth century. At the end of 1912, the metallurgist Pasel of Krupp filed two patents in Germany (which were then issued in 1918 with the numbers 304 126 and 304 159) which mention **austenitic stainless steels** containing 18 parts of chromium and 8 parts of nickel. Mertensitic steel with chromium was cast for the first time in Great Britain in 1913; the product of this first casting, which contained around 13% chromium, was used to manufacture knife blades. Apart from cutlery as mentioned above, it was first used for the internal combustion engines during the First World War and after the twenties it began to be employed on a large-scale basis in all fields of applications. It continues to be used today in the more advanced and particularly "demanding" fields of applications, such as the petrochemical, food and pharmaceutical industries, for animal husbandry, etc.

## 1913

LA PRIMA COLATA  
INDUSTRIALE  
FIRST  
INDUSTRIAL CASTING

### RESISTENZA ALLA CORROSIONE

G

Gli acciai inossidabili sono delle **leghe a base di ferro, di cromo, carbonio** e di altri elementi

quali nichel, molibdeno, manganese, silicio, titanio ecc., che li rendono **particolarmente resistenti ad alcuni tipi di corrosione**. La norma EN 10088 definisce acciai inossidabili quelle leghe ferrose che contengono cromo in ragione di almeno il 10,5%. La caratteristica di buona resistenza è dovuta alla proprietà di queste leghe di passivarsi in un ambiente sufficientemente ossidante (per esempio l'aria) tramite la formazione di una particolare **pellicola superficiale di ossigeno assorbito**. Quando è in queste condizioni l'acciaio inossidabile è allo stato **"passivo"**.

La pellicola passiva si riforma quando viene lacerata, naturalmente se l'ambiente è sufficientemente ossidante e se l'ossigeno può pervenire a contatto della lega. Essa protegge il materiale sottostante dall'attacco corrosivo.

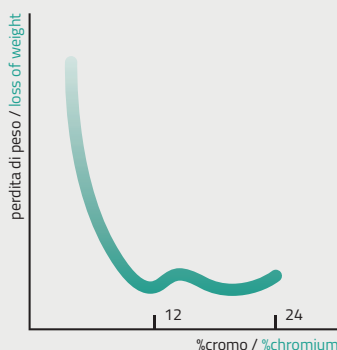
### RESISTANCE TO CORROSION

S

Stainless steels are **alloys based on iron, chromium, carbon** and other elements

such as nickel, molybdenum, silicon, titanium, etc. that make them **particularly resistant to certain types of corrosion**. The EN 10088 specification defines stainless steels as ferrous alloys containing at least 10.5% chromium. Their good corrosion resistance is due to the properties of these alloys to passivate in a sufficiently oxidising environment (for example air), thus forming a **particular surface film of adsorbed oxygen**. When in these conditions, stainless steel is in a **"passive"** state.

The passive film forms again when it is torn provided that obviously if the environment is sufficiently oxidising and the oxygen can come into contact with the alloy. It protects the underlying material against corrosive attack.



La curva mostra come la percentuale di cromo in lega determini il minimo della perdita di peso in ambiente corrosivo.

The curve shows how the percentage of chromium in the alloy determines the minimum weight loss in a corrosive environment.



# Caratteristiche tecniche

## Technical data

Da un punto di vista logico verrebbe fatto d'osservare che questi materiali dovrebbero essere denominati **"ossidabilissimi"** piuttosto che **"inossidabili"**, proprio in funzione del loro meccanismo di protezione contro la corrosione. L'aggettivo inossidabile è riferito all'acciaio soltanto negli anni '20 formando la dizione **"acciaio inossidabile"** oggi in uso. Anche altre lingue neolatine, ad esempio la francese con *inoxydable* e la spagnola con *inoxidable*, designano con il significato di **"non corrodibile"** questo tipo di materiale. Altre lingue d'origine non latine, essenzialmente pragmatiche e meno fantasiose, utilizzano altri termini per definire questo materiale. Il tedesco lo definisce **"rostfrei"** (libero da ruggine) oppure **"nichtrostender"** (non corrodibile), lo svedese **"rostfritt"** (libero da ruggine) e l'inglese **"stainless"** (senza macchia).



The Italian word "inossidabile" means literally "inoxidable". Logically, it could be said that these materials should be called **"highly oxydable"** rather than **"inoxidable"** because of their protection mechanism against corrosion. This adjective was used to refer to the steel only in the twenties forming the designation used today. The other Romance languages, for example French with *inoxydable* and Spanish with *inoxidable*, call this type of material **"not liable to corrosion"**. Other non-Romance languages, more pragmatic and less imaginative, use other terms to define this material. In German it is called **"rostfrei"** (free of rust) or **"nichtrostender"** (not liable to corrosion), in Swedish **"rostfritt"** (free of rust) and in English **"stainless"**.



### GUIDA AD UN CORRETTO UTILIZZO DEI CONTENITORI IN ACCIAIO INOX

La New Elfin fornisce tutti i Contenitori in acciaio inox rivestiti di un film plastico adesivo, originariamente applicato in fase di laminazione, per proteggere il materiale in tutti i cicli di lavorazione<sup>1</sup> necessari per costruire i contenitori. Questo strato protettivo continua la sua funzione protettiva presso la clientela sia nel primo immagazzinamento<sup>2</sup> che per le lavorazioni di allestimento. È però indispensabile che, a completamento del lavoro, la pellicola venga rimossa per attivare, al contatto con l'aria, il **processo di passivazione** che rende l'acciaio resistente alla corrosione. È quindi evidente che questa operazione deve essere compiuta prima di inserire i contenitori nell'ambiente di lavoro o comunque corrosivo.

È INDISPENSABILE  
CHE LA PELLICOLA  
VENGA RIMOSSA

THE FILM MUST  
BE REMOVED

1  
Stoccaggio, taglio laser, piegatura,  
saldatura, montaggio ecc.

2  
Non riporre su scaffalature con piani in metallo  
arrugginito o corrosi, si raccomandano piani  
in legno o rivestiti con carta oleata.

### GUIDE TO CORRECT USE OF STAINLESS STEEL ENCLOSURES

New Elfin supplies all stainless steel enclosures coated with an adhesive plastic film applied originally during the metal rolling operation to protect the material in all phases of the enclosure construction process<sup>1</sup>. This protective layer continues to perform its protective function at customer's site during both initial storage<sup>2</sup> and set-up processes. When all processes are over, the film must, however, be removed to get the passivation process started naturally thanks to the steel exposure to air, thus making the steel corrosion resistance. Obviously, this operation must be carried out before introducing the enclosures in the working or corrosive environments.

1  
Storing, laser cutting, bending,  
welding, assembly, etc.

2  
Do not store on shelves with rusted or corrosive  
metal surfaces; shelves made of wood or coated  
with oiled paper are recommended.



# Caratteristiche tecniche

## Technical data

### CLASSIFICAZIONE DEGLI ACCIAI INOSSIDABILI

Conoscere il metodo di classificazione internazionale adottato dall' AISI è necessario per fare riferimento alle sigle che troveremo nel prosieguo del catalogo.

-Acciai austenitici al cromo-manganese-nichel sono designati da un numero di tre cifre iniziante con la cifra 2, come ad esempio 2xx, dove la seconda coppia di cifre (qui indicate genericamente con xx) non ha nessun riferimento all' analisi del materiale, ma semplicemente serve a distinguere un tipo da un altro.

-Acciai austenitici al cromo-nichel sono designati da un numero di tre cifre iniziante con la cifra 3, come ad esempio 3xx, dove la seconda coppia di cifre (qui indicata genericamente con xx) non ha nessun riferimento all' analisi del materiale, ma semplicemente serve a distinguere un tipo da un altro.

-Acciai ferritici e martensitici al solo cromo sono designati da un numero di tre cifre iniziante con la cifra 4, come ad esempio 4xx, dove la seconda coppia di cifre (qui indicata genericamente con xx) non ha nessun riferimento all' analisi del materiale, ma semplicemente serve a distinguere un tipo da un altro.

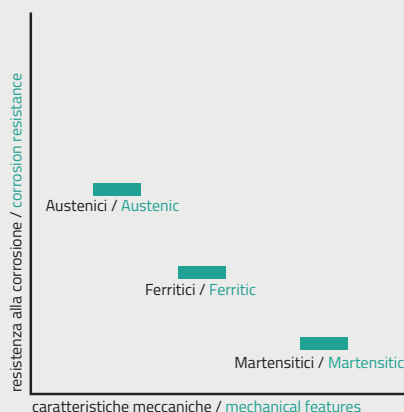
### CLASSIFICATION OF STAINLESS STEEL

Knowing the international classification method used by AISI is advisable to refer to the codes indicated on the following pages of the catalogue

-Chromium-manganese-nickel austenitic steels are identified by a 3-digit number starting with 2, such as 2xx, where the second set of digits (generally indicated with xx) makes no reference to the analysis of the material but is used simply to distinguish one type from another.

-Chromium-nickel austenitic steels are identified by a 3-digit number starting with 3, such as 3xx, where the second set of digits (generally indicated with xx) makes no reference to the analysis of the material but is used simply to distinguish one type from another.

-Ferritic and martensitic chromium-only steels are identified by a 3-digit number starting with 4, such as 4xx, where the second set of digits (generally indicated with xx) makes no reference to the analysis of the material but is simply used to distinguish one type from another.



Il diagramma illustra il comportamento degli acciai, ed evidenzia come sia inversamente proporzionale il rapporto tra le caratteristiche di resistenza alla corrosione e quelle meccaniche tra le classi degli austenitici e dei martensitici. La New Elfin ha realizzato i suoi contenitori utilizzando un acciaio austenitico AISI 316 conferendo al prodotto elevate caratteristiche di resistenza alla corrosione e grazie ad un attento progetto costruttivo, ha mantenuto alte caratteristiche meccaniche.

The diagram shows the behaviour of the steels and highlights how the relationship between the corrosion resistance and mechanical features is in inverse proportion between the classes of austenitic and martensitic steels. New Elfin has produced its enclosures using an AISI 316 austenitic steel, endowing the product with high-level corrosion resistance features and has maintained high level mechanical features through an attentive construction project.

# Caratteristiche tecniche

## Technical data

### Caratteristiche tecniche

|                            |                                                                                                                                                                                                                    |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Materiale contenitori      | Acciaio inox AISI 316                                                                                                                                                                                              |
| Materiale piastre di fondo | Acciaio zincato                                                                                                                                                                                                    |
| Serraggi                   | Chiusura coperchio con viti TSB 5MA imperdibili: morsetto di messa a terra inserto filettato 5ma su coperchio e fondo scatola, dado non fornito; dai formati 140 x 180 n.4 inserti per fissaggio piastre di fondo. |
| Guarnizione                | Gomma neoprenica espansa a cellule chiuse, antiolio e autoestinguente, realizzata in un unico pezzo privo di giunzioni.                                                                                            |
| Finitura                   | Scatole e coperchi satinati tipo Scotch-Brite privi di saldature a vista                                                                                                                                           |
| Grado di protezione        | IP66-CEI EN 60529                                                                                                                                                                                                  |
| Limiti di temperatura      | -40° ÷ + 100°C                                                                                                                                                                                                     |

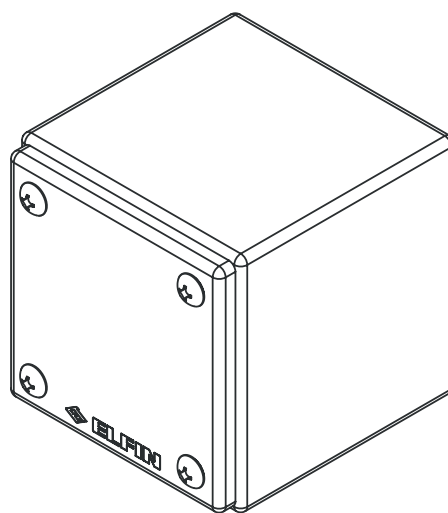
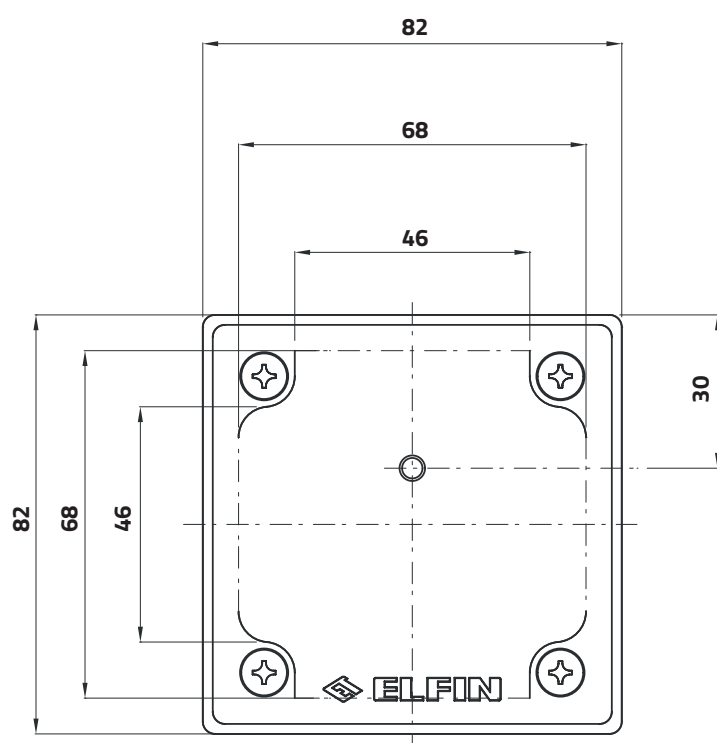
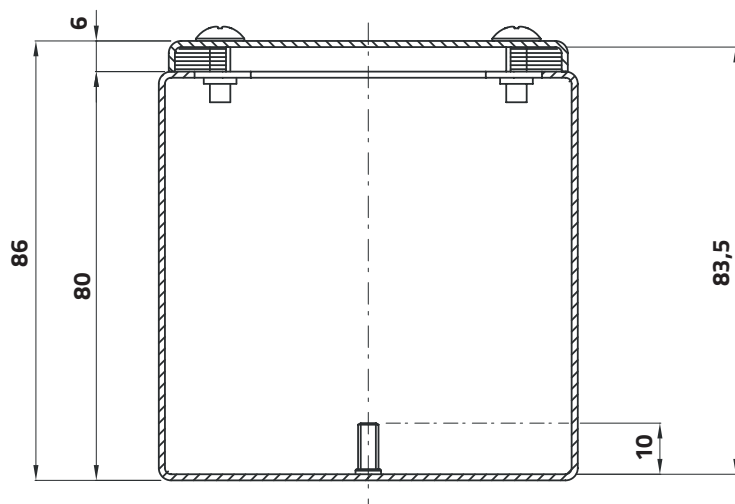
### Technical data

|                           |                                                                                                                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Material, enclosures      | AISI 316 stainless steel                                                                                                                                                          |
| Material, mounting plates | Zinc-plated steel                                                                                                                                                                 |
| Fasteners                 | Lid closing with TSB M5 captive screws; M5 threaded grounding stud on enclosure lid and bottom, nut not provided.<br>From sizes 140x180 no. 4 studs for mounting plate fastening. |
| Gasket                    | Closed cell, neoprene foam rubber, oil-resistant, self extinguishing, seamless, moulded in one piece.                                                                             |
| Surface finish            | Scotch-Brite satin finish enclosures and lids without weld in sights.                                                                                                             |
| Protection degree         | IP66-CEI EN 60529                                                                                                                                                                 |
| Temperature range         | -40° ÷ + 100°C                                                                                                                                                                    |



# Scatole acciaio inox 82x82

## Stainless steel enclosures 82x82





# Scatole acciaio inox 82x82

## Stainless steel enclosures 82x82



### Coperchio senza fori / Undrilled lid

Senza entrata cavo / No cable entry

h

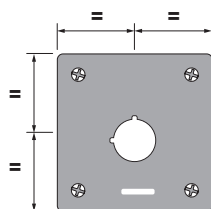
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cod

85

360

040X0808-8



### Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

Senza entrata cavo / No cable entry

85

357

040X0808-8P1



### Coperchio con operatore Ø 22mm Lid with operator Ø 22mm

Pulsante fungo rosso, sgancio rotazione Ø40  
Red mushroom push-button, twist release

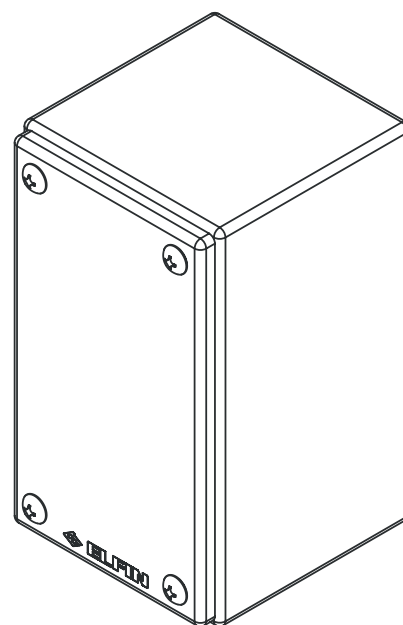
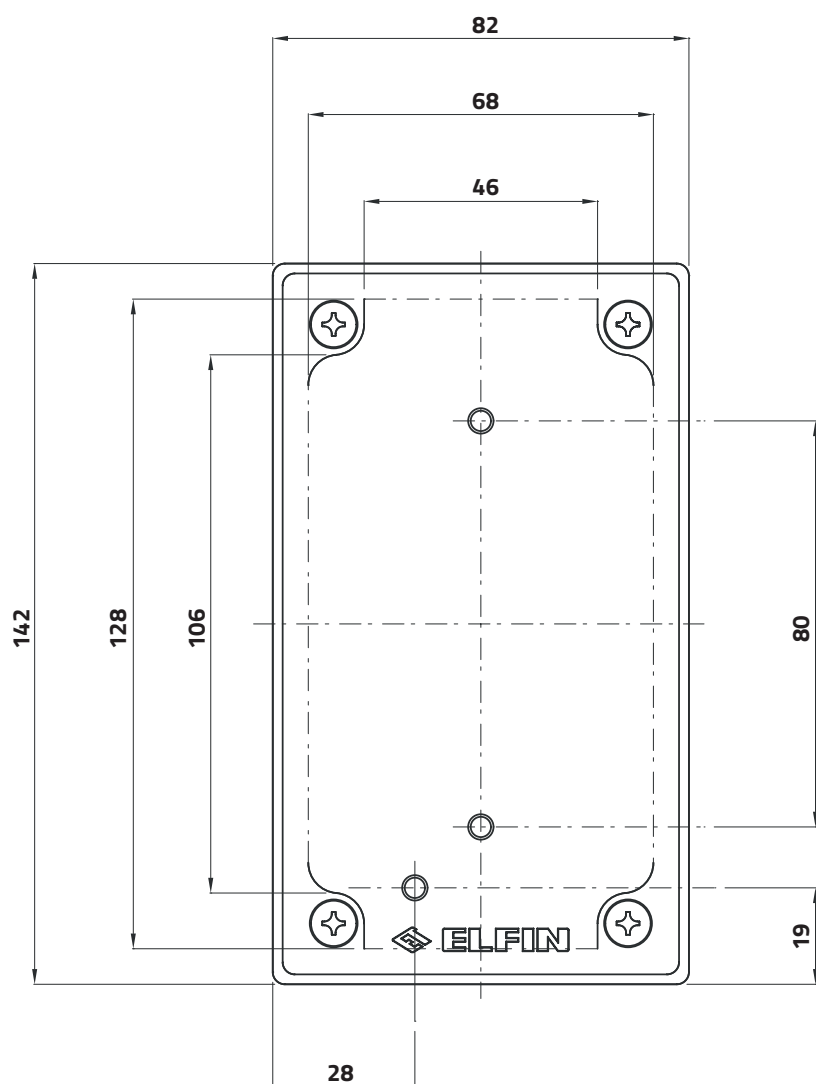
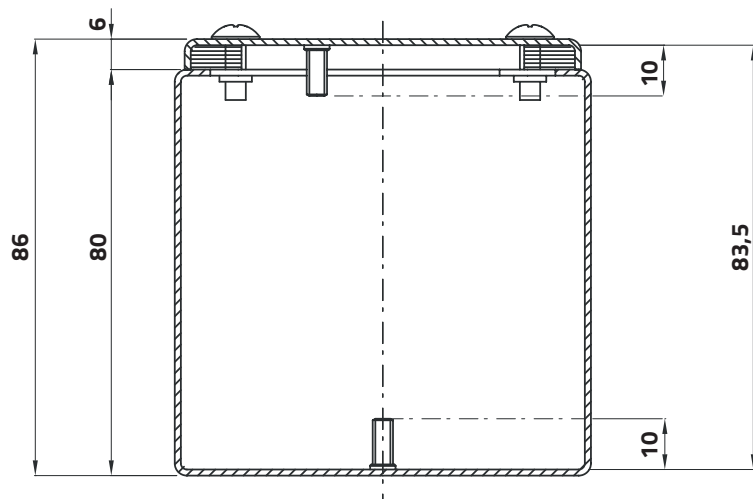
85

483

040X0808-8GA

# Scatole acciaio inox 82x142

## Stainless steel enclosures 82x142



# Scatole acciaio inox 82x142

## Stainless steel enclosures 82x142



### Coperchio senza fori / Undrilled lid

Senza entrata cavo / No cable entry

h

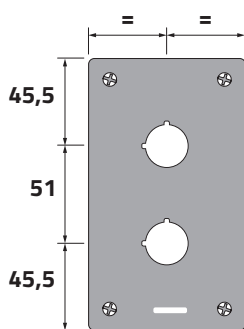
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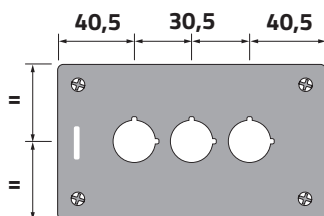
### Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

Senza entrata cavo / No cable entry

85

530

040X0814-8P2



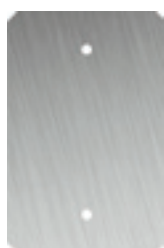
### Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

Senza entrata cavo / No cable entry

85

527

040X0814-8P3

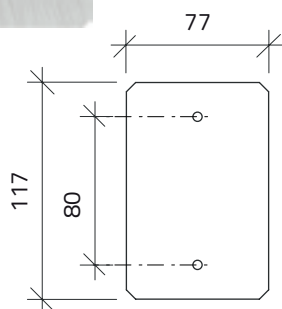


### Piastra di fondo / Mounting plate

1,5

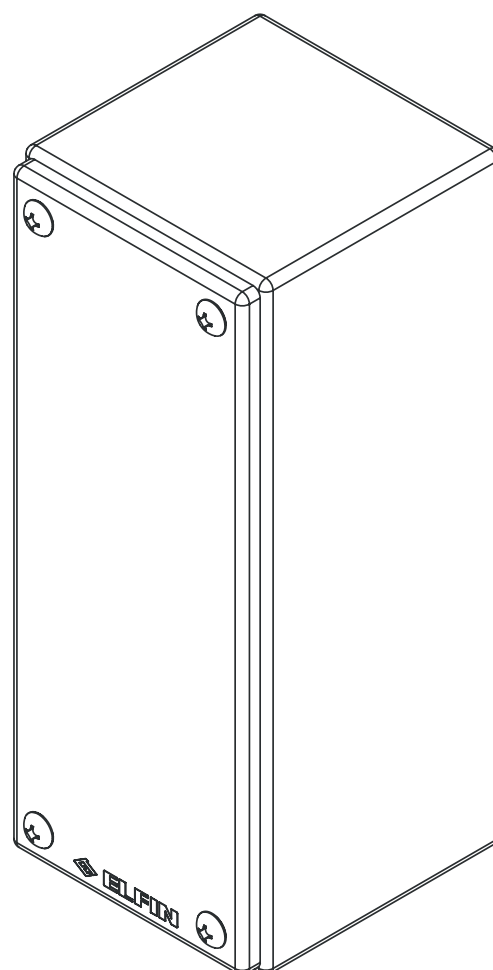
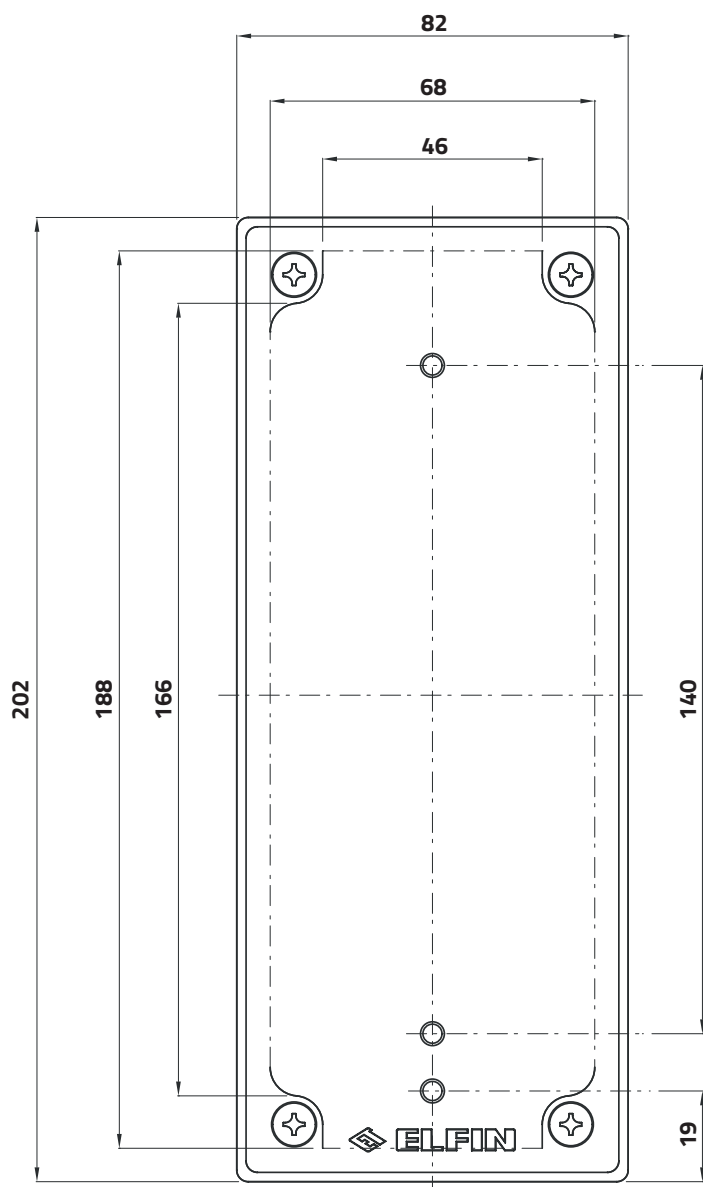
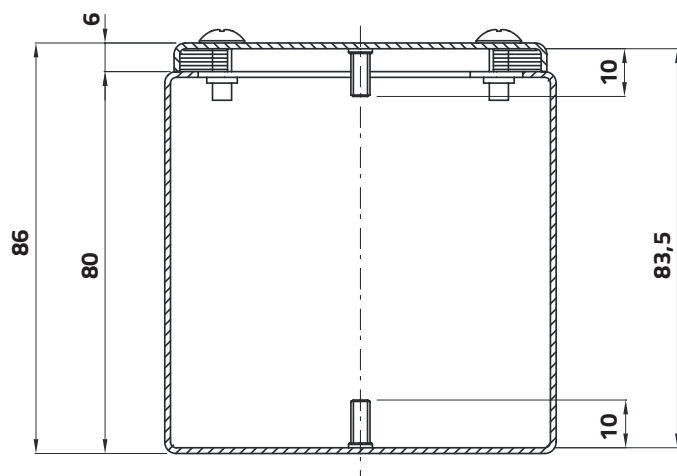
74

040P0814



# Scatole acciaio inox 82x202

## Stainless steel enclosures 82x202



# Scatole acciaio 82x202

## Stainless steel enclosures 82x202



### Coperchio senza fori / Undrilled lid

Senza entrata cavo / No cable entry

h

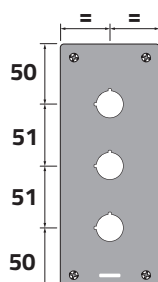
g

cod

85

826

040X0820-8



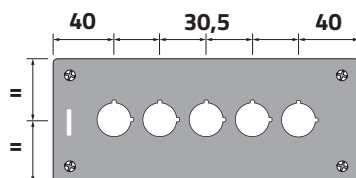
### Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

Senza entrata cavo / No cable entry

85

817

040X0820-8P3



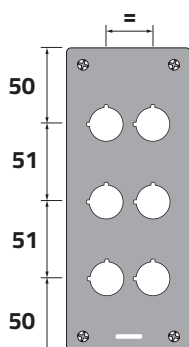
### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

Senza entrata cavo / No cable entry

85

811

040X0820-8P5L



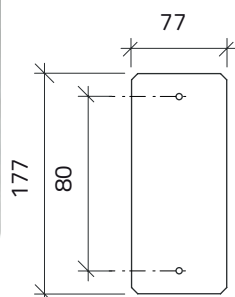
### Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 22mm

Senza entrata cavo / No cable entry

85

808

040X0820-8P6



### Piastra di fondo / Mounting plate

1,5

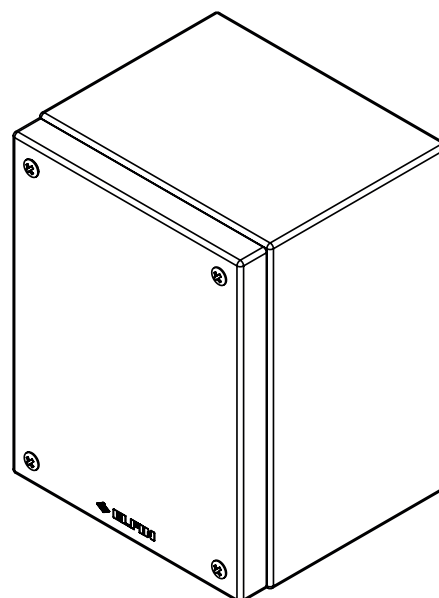
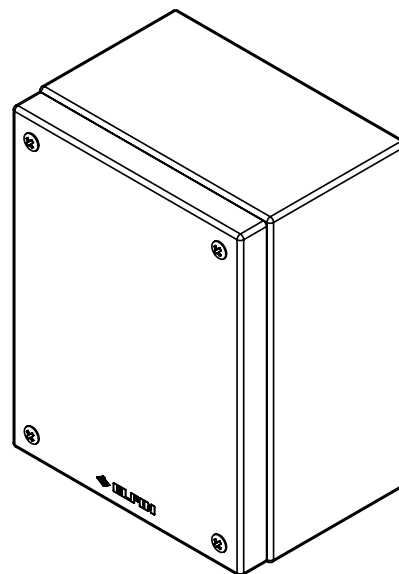
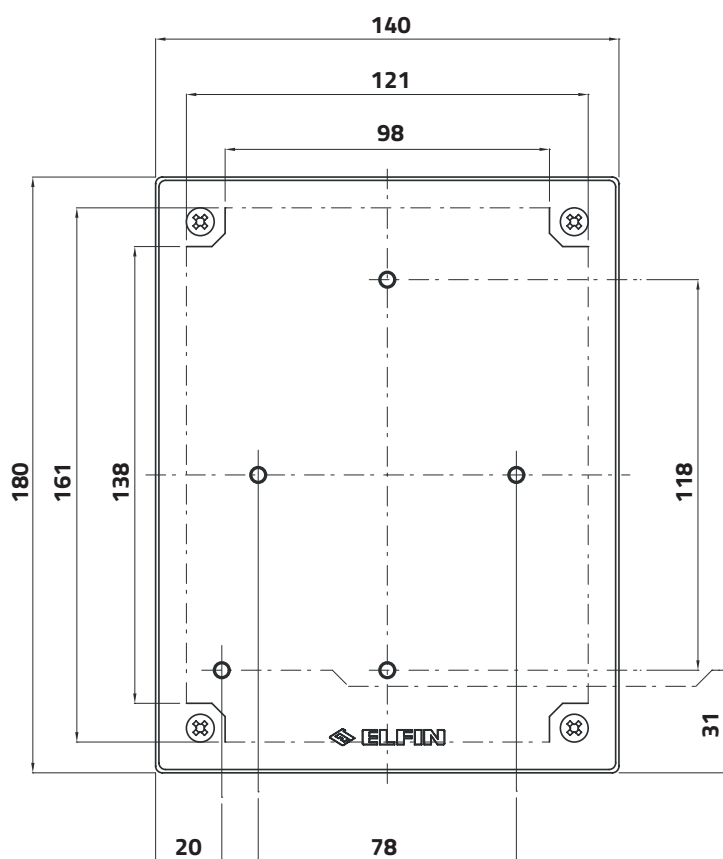
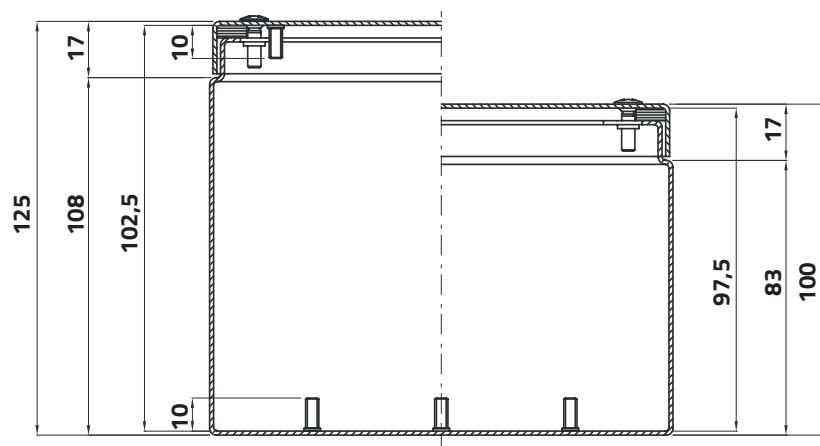
109

040P0820



# Scatole acciaio inox 140x180

## Stainless steel enclosures 140x180



# Scatole acciaio inox 140x180

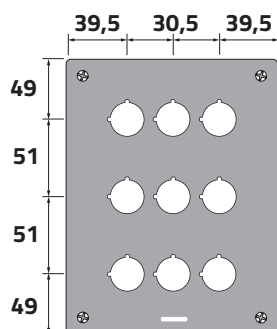
## Stainless steel enclosures 140x180



### Coperchio senza fori / Undrilled lid

Senza entrata cavo / No cable entry  
Senza entrata cavo / No cable entry

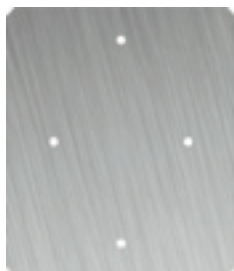
| h   | g    | cod                |
|-----|------|--------------------|
| 100 | 1190 | <b>040X1418-1</b>  |
| 125 | 1338 | <b>040X1418-12</b> |



### Coperchio con 9 fori Ø 22mm / 9-hole lid Ø 22mm

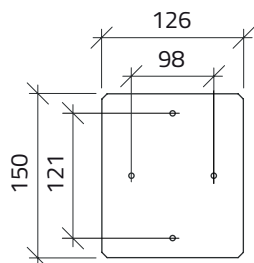
Senza entrata cavo / No cable entry

|     |      |                     |
|-----|------|---------------------|
| 100 | 1123 | <b>040X1418-1P9</b> |
|-----|------|---------------------|



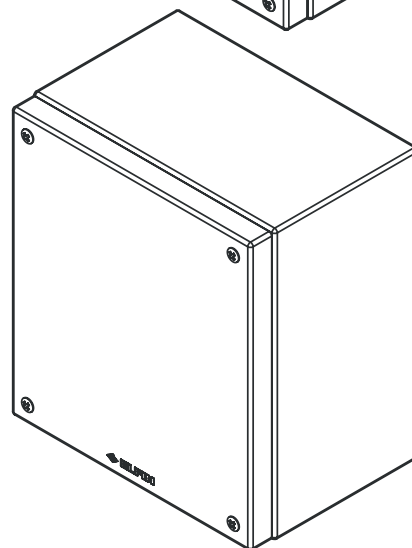
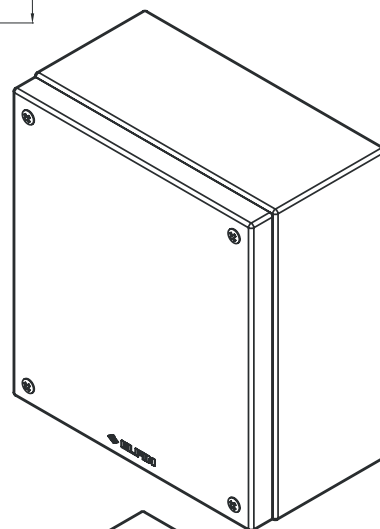
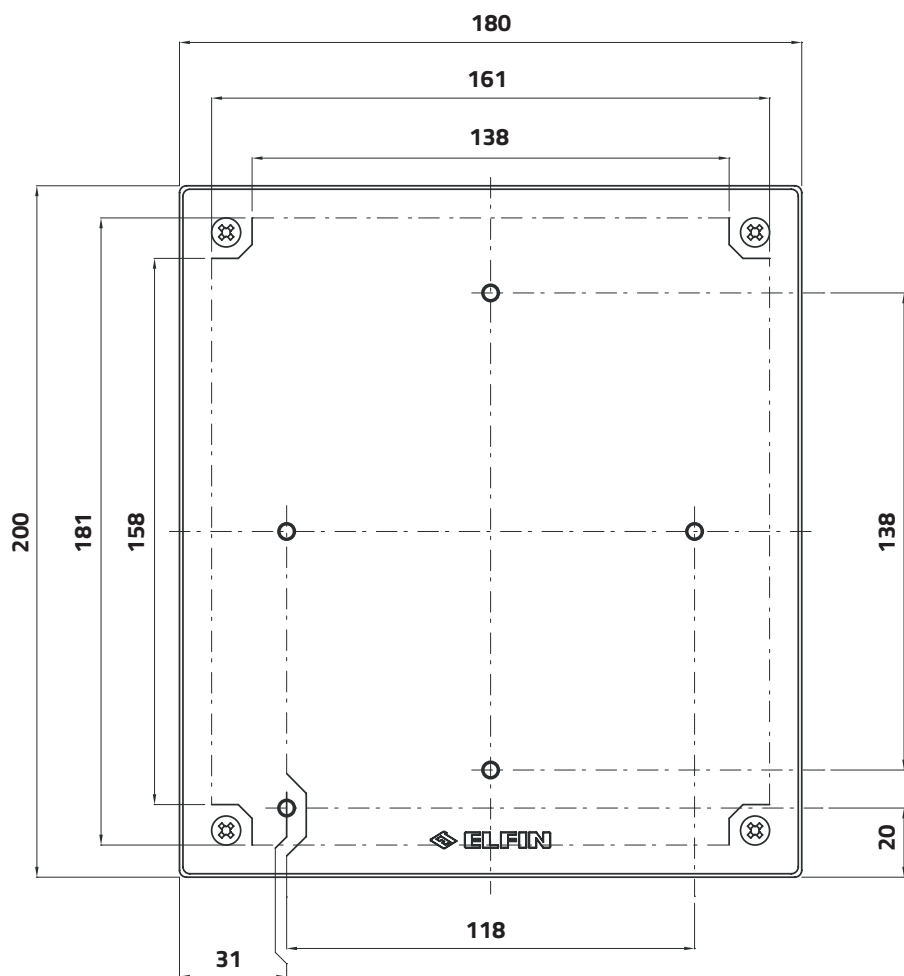
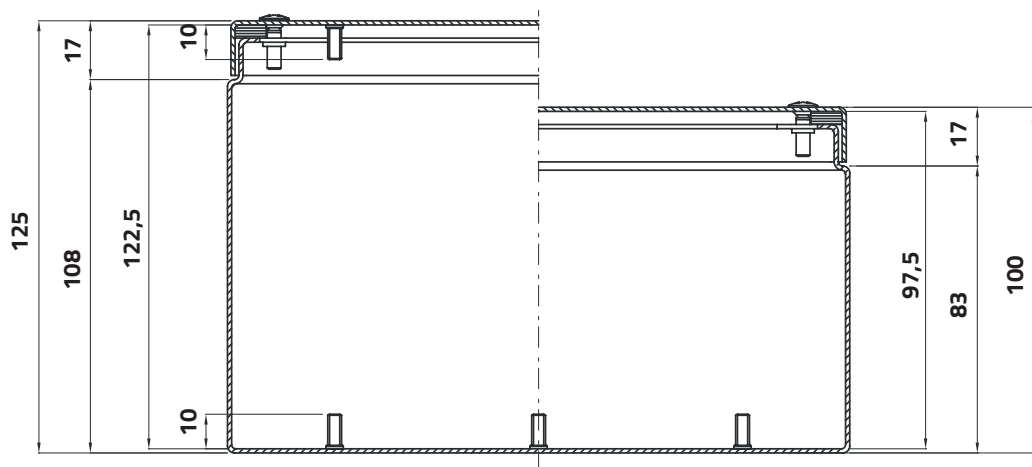
### Piastra di fondo / Mounting plate

|     |     |                 |
|-----|-----|-----------------|
| 1,5 | 162 | <b>040P1418</b> |
|-----|-----|-----------------|



# Scatole acciaio inox 180X200

## Stainless steel enclosures 180X200





# Scatole acciaio inox 180X200

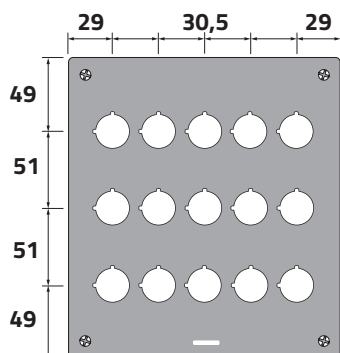
## Stainless steel enclosures 180X200



### Coperchio senza fori / Undrilled lid

Senza entrata cavo / No cable entry  
Senza entrata cavo / No cable entry

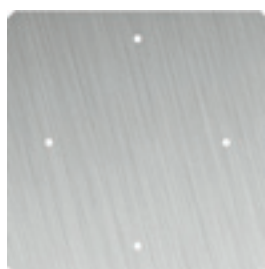
| h   | g    | cod                |
|-----|------|--------------------|
| 100 | 1530 | <b>040X1820-1</b>  |
| 125 | 1645 | <b>040X1820-12</b> |



### Coperchio con 15 fori Ø 22mm / 15-hole lid Ø 22mm

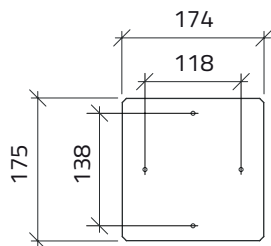
Senza entrata cavo / No cable entry

|     |      |                      |
|-----|------|----------------------|
| 100 | 1480 | <b>040X1820-1P15</b> |
|-----|------|----------------------|



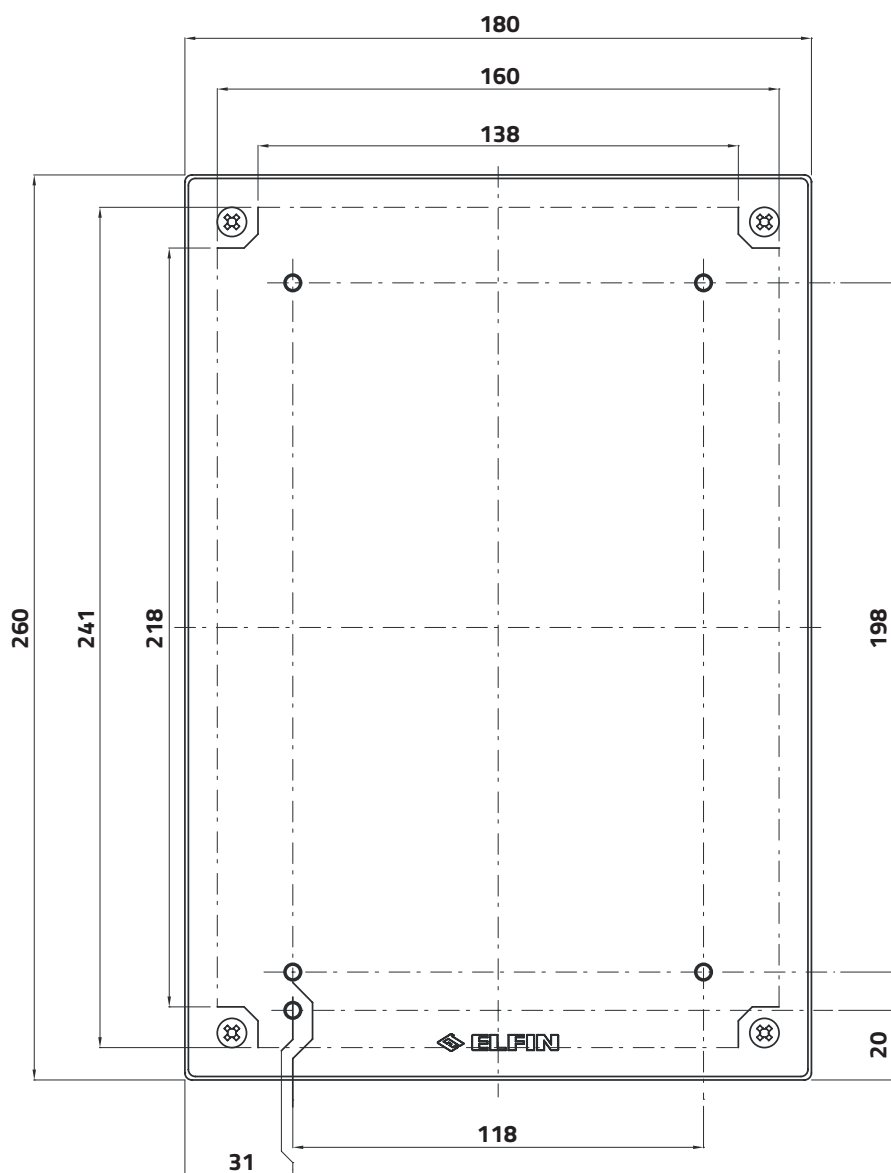
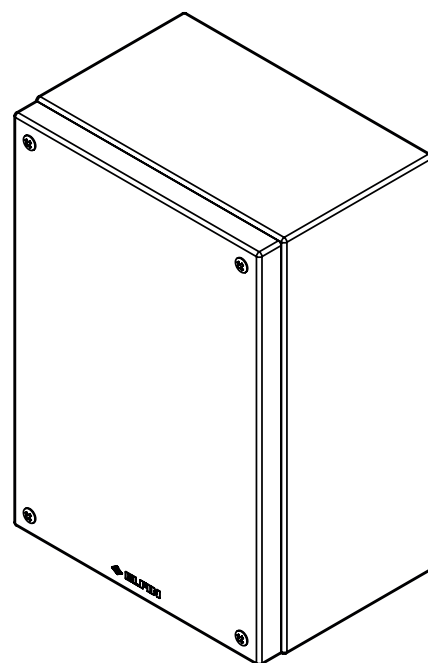
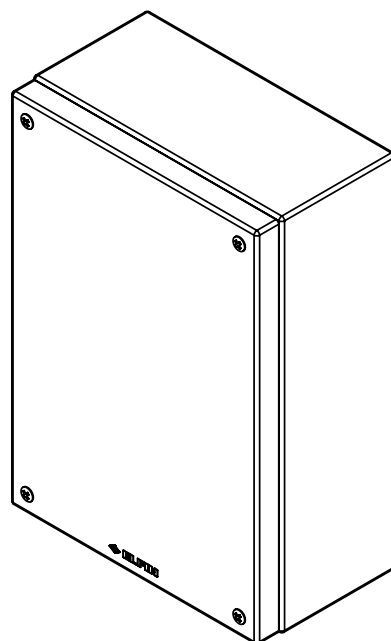
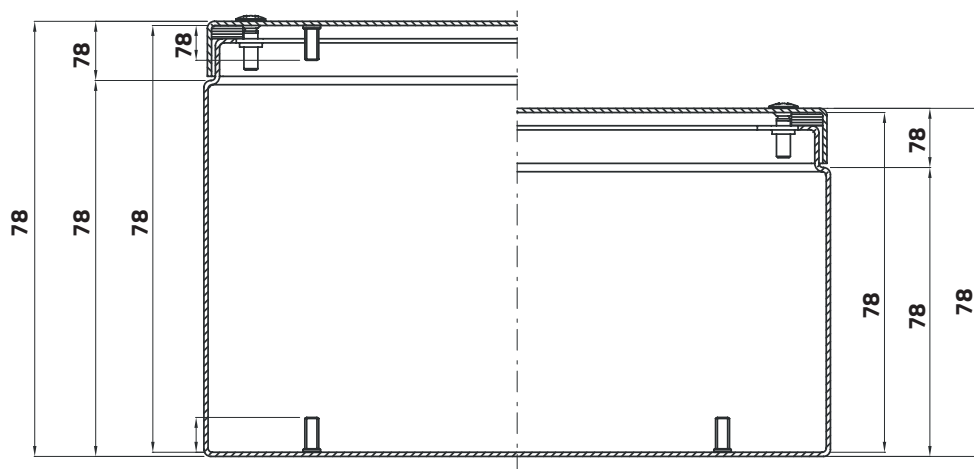
### Piastra di fondo / Mounting plate

|     |     |                 |
|-----|-----|-----------------|
| 1,5 | 235 | <b>040P1820</b> |
|-----|-----|-----------------|



# Scatole acciaio inox 180X260

## Stainless steel 180X260



# Scatole acciaio inox 180X260

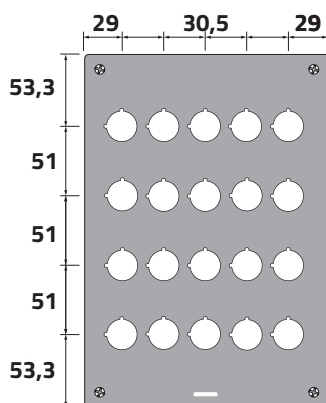
## Stainless steel enclosures 180X260



### Coperchio senza fori / Undrilled lid

Senza entrata cavo / No cable entry  
Senza entrata cavo / No cable entry

| h   | g    | cod                |
|-----|------|--------------------|
| 100 | 1900 | <b>040X1826-1</b>  |
| 125 | 2000 | <b>040X1826-12</b> |



### Coperchio con 20 fori Ø 22mm / 20-hole lid Ø 22mm

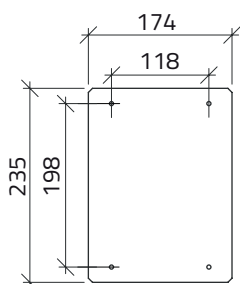
Senza entrata cavo / No cable entry

|     |      |                      |
|-----|------|----------------------|
| 100 | 1820 | <b>040X1826-1P20</b> |
|-----|------|----------------------|



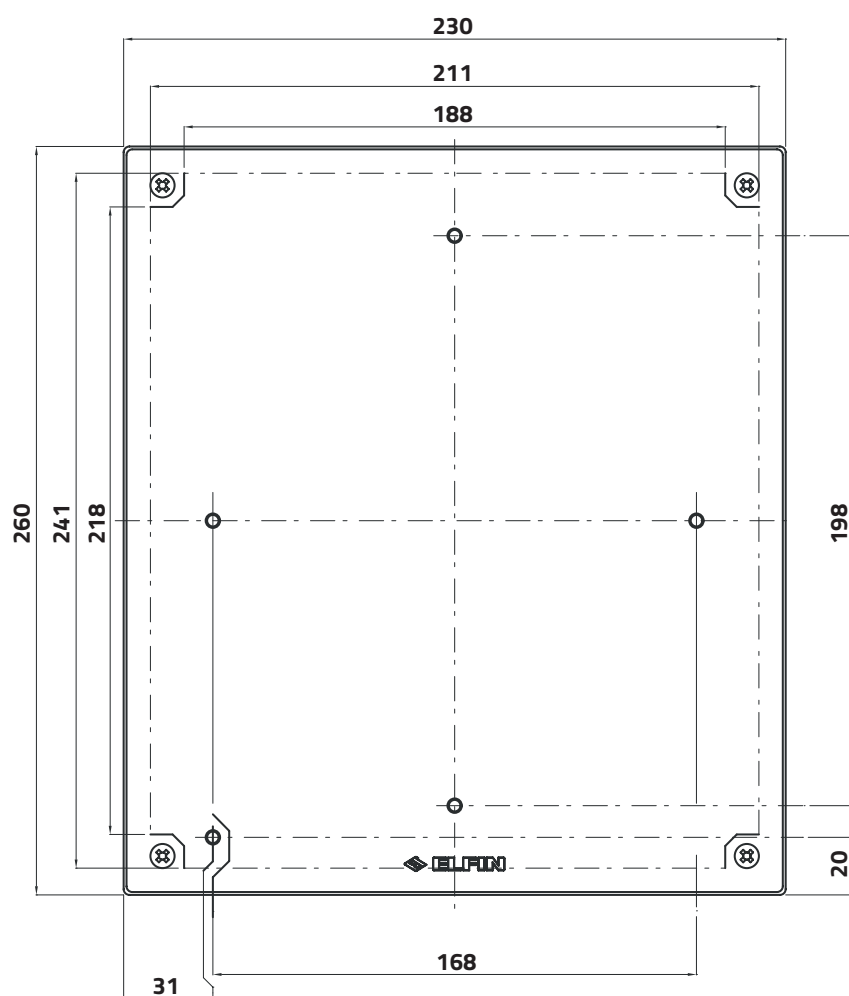
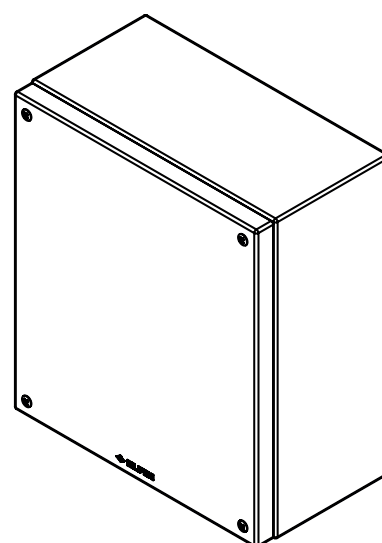
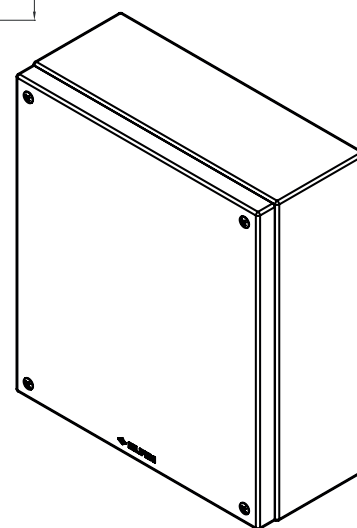
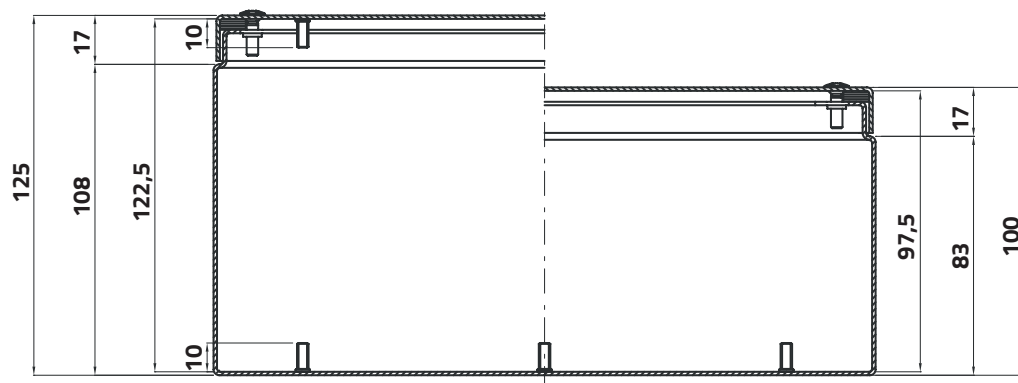
### Piastra di fondo / Mounting plate

|     |     |                 |
|-----|-----|-----------------|
| 1,5 | 318 | <b>040P1826</b> |
|-----|-----|-----------------|



# Scatole acciaio inox 230X260

## Stainless steel enclosures 230X260



# Scatole acciaio inox 230X260

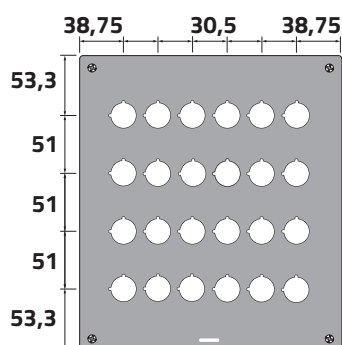
## Stainless steel enclosures 230X260



### Coperchio senza fori / Undrilled lid

Senza entrata cavo / No cable entry  
Senza entrata cavo / No cable entry

| h   | g    | cod         |
|-----|------|-------------|
| 100 | 2250 | 040X2326-1  |
| 125 | 2495 | 040X2326-12 |



### Coperchio con 24 fori Ø 22mm / 24-hole lid Ø 22mm

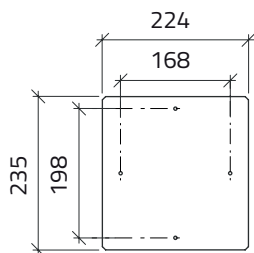
Senza entrata cavo / No cable entry

|     |      |               |
|-----|------|---------------|
| 100 | 2160 | 040X2326-1P24 |
|-----|------|---------------|

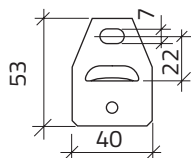


### Piastra di fondo / Mounting plate

|     |     |          |
|-----|-----|----------|
| 1,5 | 410 | 040P2326 |
|-----|-----|----------|



# Accessori Accessories



## Coppie staffe acciaio inox Couple of stainless steel brackets

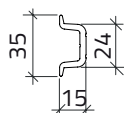
per montaggio a parete / for wall-mounting

g

cod

48

040XSP



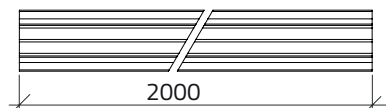
## Guida / PVC Rail Ø 35

L  
2000

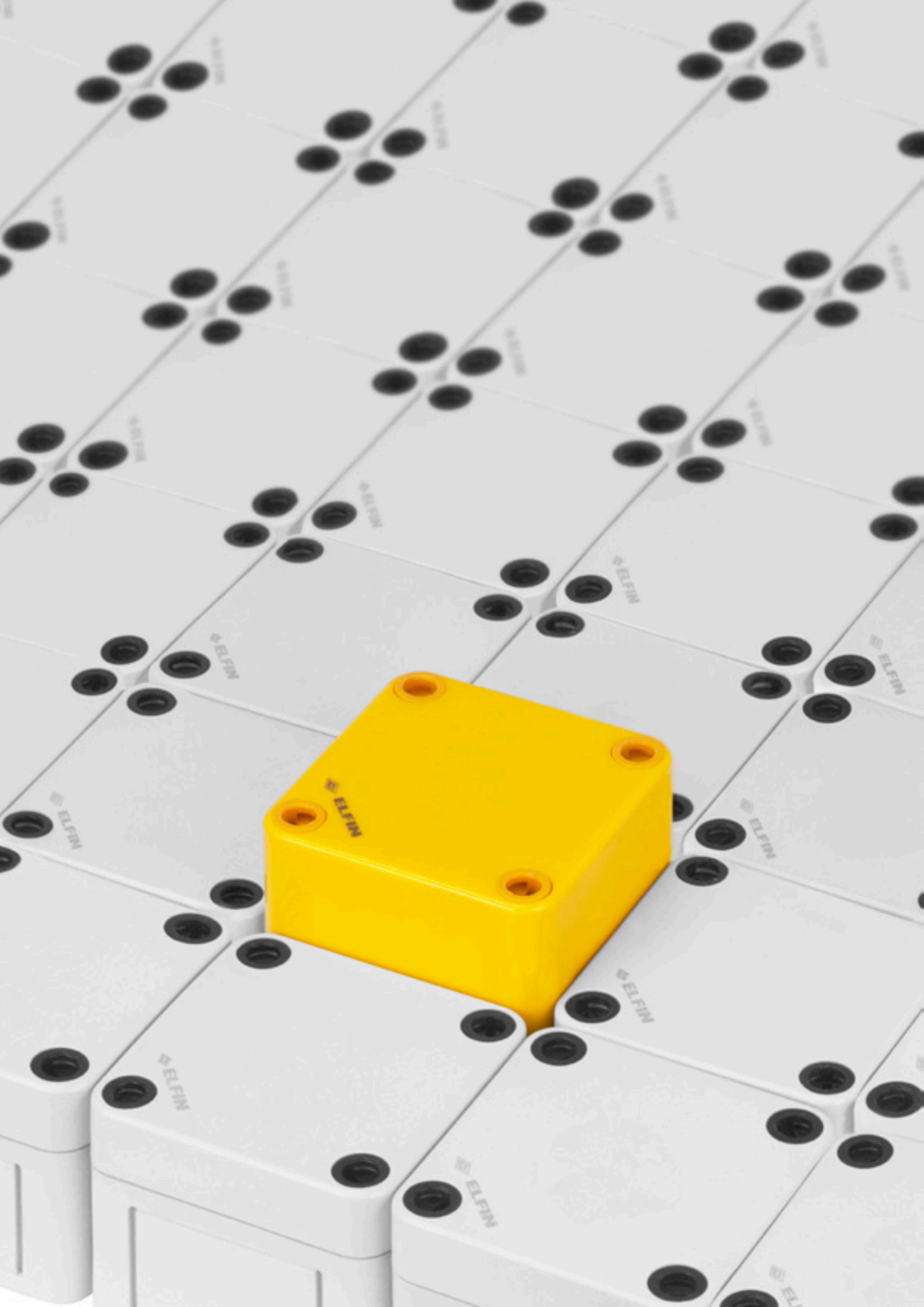
g  
760

cod

010GDP









# 080

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**SCATOLE E CASSETTE  
PULSANTIERE IN TERMOPLASTICO**

**THERMOPLASTIC PUSH-BUTTON  
BOXES, ENCLOSURES**

080



# Scatole pulsantiere in ABS

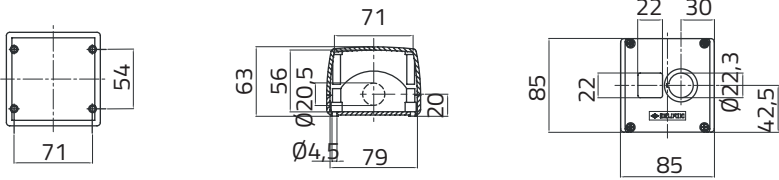
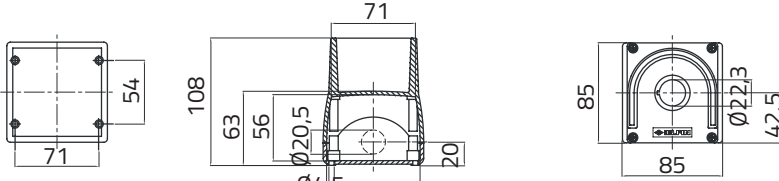
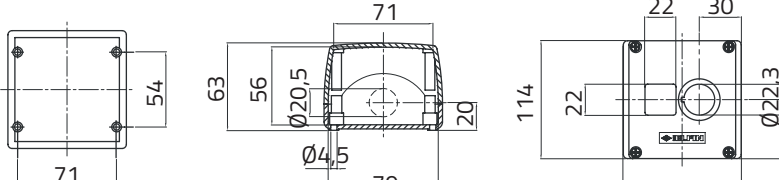
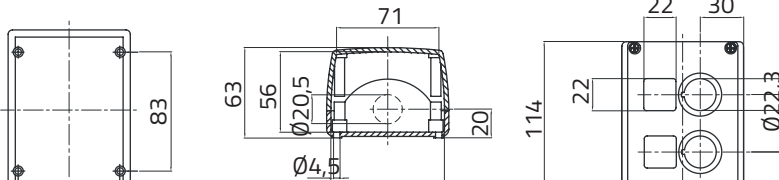
## ABS push-button enclosures

### Caratteristiche tecniche

|                       |                      |
|-----------------------|----------------------|
| Materiale scatola     | ABS RAL 7035         |
| Materiale coperchio   | ABS RAL 7016, giallo |
| Guarnizione           | Gomma silicone       |
| Viti                  | Acciaio              |
| Grado di protezione   | IP65 - EN/IEC 60529  |
| Temperatura d'impiego | -25° +50°            |

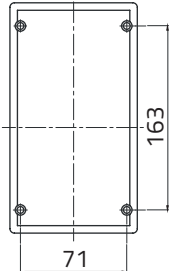
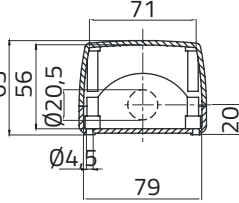
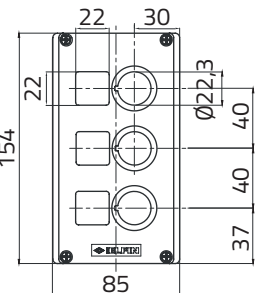
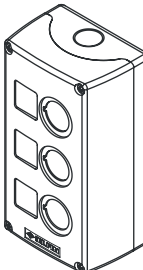
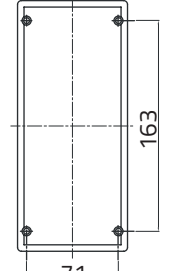
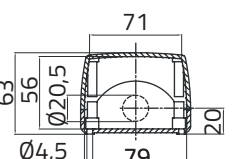
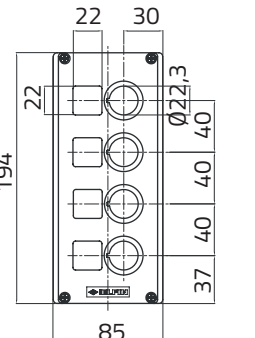
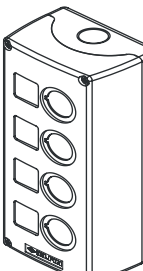
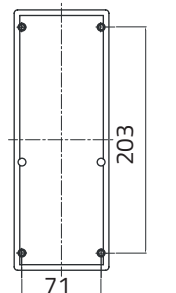
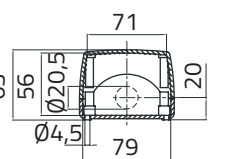
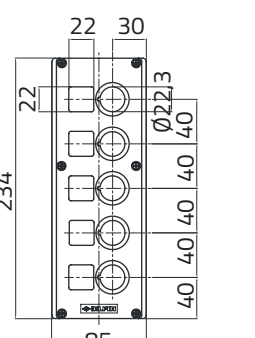
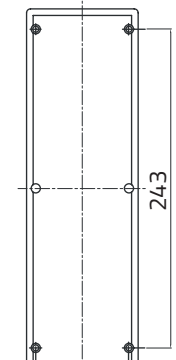
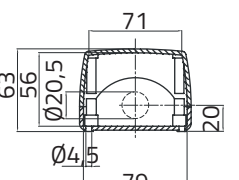
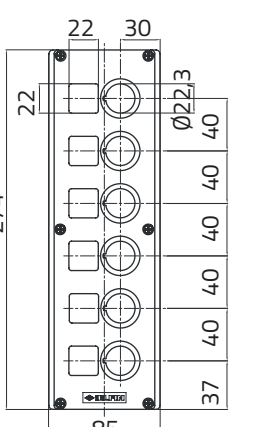
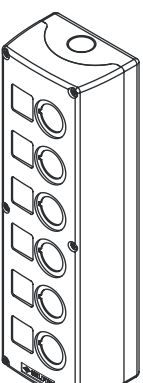
### Technical data

|                       |                      |
|-----------------------|----------------------|
| Material, enclosures  | ABS RAL 7035         |
| Material, lid         | ABS RAL 7016, yellow |
| Gasket                | Silicone rubber      |
| Screw                 | Steel                |
| Protection            | IP65 - EN/IEC 60529  |
| Operating temperature | -25° +50°            |

|                                                                                     |               |                                                                                      | h  | g   | cod                    |
|-------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------|----|-----|------------------------|
|    | <b>85X85</b>  |   | 62 | 112 | <b>080CA0808-6GP1</b>  |
|  | <b>85X85</b>  |  | 62 | 140 | <b>080CA0808-6GP1E</b> |
|  | <b>85X85</b>  |  | 62 | 112 | <b>080CA0808-6P1</b>   |
|  | <b>85X114</b> |  | 62 | 136 | <b>080CA0811-6P2</b>   |

# Scatole pulsantiere in ABS

## ABS push-button enclosures

|                                                                                     |                                                                                      |                                                                                       |          |          |                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------|----------|----------------------|
|    | <b>85X154</b>                                                                        |                                                                                       | <b>h</b> | <b>g</b> | <b>cod</b>           |
|                                                                                     |     |      | 62       | 168      | <b>080CA0815-6P3</b> |
|                                                                                     |    |    |          |          |                      |
|                                                                                     |                                                                                      |                                                                                       |          |          |                      |
|   | <b>85x194</b>                                                                        |                                                                                       | <b>h</b> | <b>g</b> | <b>cod</b>           |
|                                                                                     |    |     | 62       | 205      | <b>080CA0819-6P4</b> |
|                                                                                     |   |   |          |          |                      |
|                                                                                     |                                                                                      |                                                                                       |          |          |                      |
|  | <b>85X234</b>                                                                        |                                                                                       | <b>h</b> | <b>g</b> | <b>cod</b>           |
|                                                                                     |   |    | 62       | 263      | <b>080CA0823-6P5</b> |
|                                                                                     |  |  |          |          |                      |
|                                                                                     |                                                                                      |                                                                                       |          |          |                      |
|  | <b>85X274</b>                                                                        |                                                                                       | <b>h</b> | <b>g</b> | <b>cod</b>           |
|                                                                                     |   |    | 62       | 282      | <b>080CA0827-6P6</b> |
|                                                                                     |  |  |          |          |                      |
|                                                                                     |                                                                                      |                                                                                       |          |          |                      |



# Scatole pulsantiere complete in ABS 85x85

## ABS assembled push-button enclosures 85x85

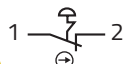
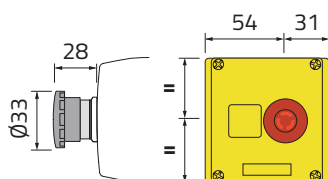


### Coperchio con operatore Ø 22mm / Lid with operator Ø 22mm

Pulsante fungo rosso sgancio a rotazione Ø40  
Red mushroom push-button, twist release Ø40

165

080CA0808-6GA

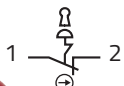
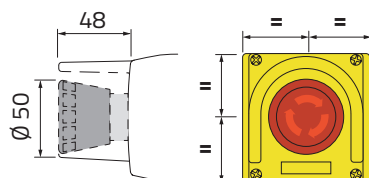


### Coperchio con operatore Ø 22mm / Lid with operator Ø 22mm

Pulsante fungo rosso sgancio a rotazione Ø50  
Red mushroom push-button, twist release Ø50

230

080CA0808-6GEAS

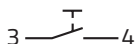
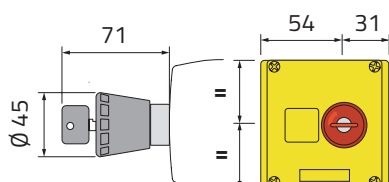


### Coperchio con operatore Ø 22mm / Lid with operator Ø 22mm

Pulsante fungo rosso sgancio chiave Ø45  
Red mushroom push-button, key release Ø45

200

080CA0808-6GFC

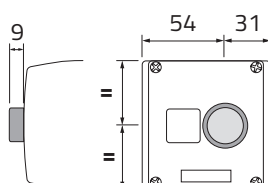


### Coperchio con operatore Ø 22mm / Lid with operator Ø 22mm

Pulsante guardia verde, blocco contatto 1NO  
Green guarded push-button, 1NO contact block

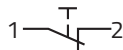
150

080CA0808-6PV



# Scatole in termoplastico complete in ABS 85x85

## ABS assembled push-button enclosures 85x85

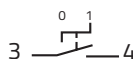
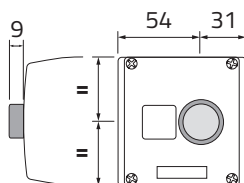


### Coperchio con operatore Ø 22mm / Lid with operator Ø 22mm

Pulsante guardia rosso  
blocco contatto 1NC  
Red guarded push-button  
1NC contact block

150

080CA0808-6PR

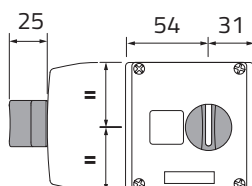


### Coperchio con operatore Ø 22mm / Lid with operator Ø 22mm

Selettore a manopola 2 posizioni  
blocco contatto 1NO  
2 position knob selector switch  
1NO contact block

157

080CA0808-6SMA



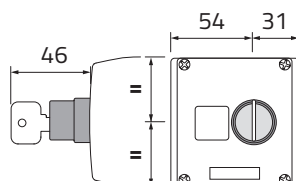
### Coperchio con operatore Ø 22mm / Lid with operator Ø 22mm

Selettore a chiave 2 posizioni  
blocco contatto 1NO  
2 position key selector switch  
1NO contact block



197

080CA0808-6SCA



### Targhette indicatrici adesive 22X22

#### Indication labels 22X22



0,2

020144T22



0,2

02042T22



0,2

02046T22



0,2

02043T22

# Termoplastico PRINCIPI COSTRUTTIVI APPLICATI

## Thermoplastic APPLIED CONSTRUCTION PRINCIPLES

### ■ AVVITAMENTO MANUALE

Le manopoline, fornite per l'avvitamento manuale, si incastrano sulla testa delle viti e sono la soluzione ideale per contenitori che devono essere aperti facilmente e comodamente.

### ■ GRADO DI PROTEZIONE IP66

La guarnizione in poliuretano espanso posta tra il coperchio e la scatola assicura un grado di protezione IP66.

### ■ FORI DI FISSAGGIO

I fori di fissaggio sono situati in cave in asse con le viti del coperchio e quindi esterne alla zona protetta dalla guarnizione; non possono essere manomessi dopo la chiusura del contenitore. Sulla parte esterna del fondo della contenitore sono stampigliate chiaramente le dimensioni di fissaggio per una corretta installazione. Sul fondo della scatola sono predisposti dei fori per fissaggio, alternativi agli altri sistemi; una volta serrate le viti, gli alloggiamenti delle stesse possono essere coperti con appositi tappi.

### ■ CERNIERE

Sono disponibili due versioni di cerniere, in funzione delle dimensioni del contenitore. La foratura per il montaggio è facilitata grazie ad una maschera che si incastra fermamente nel lato da forare e che viene fornita in dotazione alla confezione della cerniera.

### ■ MANUAL TIGHTENING

The knobs we provide for the manual tightening fit into the screw head and are the ideal solution for the enclosures requiring an easy, trouble-free opening.

### ■ IP66 - PROTECTION DEGREE

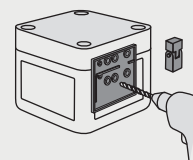
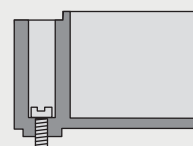
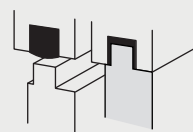
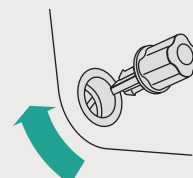
The polyurethane foam gasket placed between the lid and the enclosure assures a IP66 protection degree.

### ■ FASTENING HOLES

The mounting holes are located in hollows in line with the screws of the lid, therefore outside the area protected by the gasket. They cannot be tampered once the enclosure has been closed. On the outside of the enclosure bottom are clearly stamped the mounting dimensions for a correct assembly. Mounting holes for alternative systems are provided at the enclosure bottom. Once the screws have been tightened up, their housings can be covered with specific plugs.

### ■ HINGES

Two types of hinges are available depending on the dimensions of the enclosure. Drilling for assembly is facilitated by a template, which firmly fits into the side to be drilled, and is provided with the hinge kit.



# Termoplastico PRINCIPI COSTRUTTIVI APPLICATI

## Thermoplastic APPLIED CONSTRUCTION PRINCIPLES



### ■ FISSAGGIO A MURO

Il fissaggio a muro è possibile grazie all'adozione di apposite staffe in termoplastico di facile montaggio, o con staffe in metallo con uso di viti. Le zanche possono ruotare di 90° in modo da facilitare l'installazione.

### ■ PIASTRE O GUIDE DIN

Il fondo del contenitore è predisposto per l'inserimento di piastre o guide DIN per l'installazione di morsettiere ed altri componenti, e in alcuni modelli è possibile l'installazione di una piastra superiore per montaggio di apparecchi. Il fissaggio è realizzato con inserti in ottone.

### ■ TERMOPLASTICO

Le caratteristiche del materiale termoplastico, senza alogeni e quindi nessuna emissione di gas pericolosi, e l'elevato spessore delle pareti garantiscono l'utilizzo anche in casi dove il contenitore è sottoposto a situazioni esterne gravose. Classe di isolamento □

### ■ INGRESSO CAVO

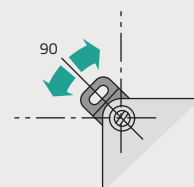
Su di un lato del contenitore, è stampata la dima per una possibile foratura di ingresso cavo, con centrino per il posizionamento dell'utensile. Sono indicate le diverse dimensioni per sistema PG o Metrico.

### ■ CONTENITORI REMOVIBILI

È disponibile un dispositivo per fissare a parete i contenitori removibili in modo semplice efficiente e sicuro. Sono applicabili maniglie per una presa sicura evitando azionamenti accidentali dei pulsanti.

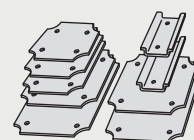
### ■ WALL-MOUNTING

Wall-mounting through purpose-designed easy-mount thermoplastic brackets, or through metal mounting brackets and screws. The mounting brackets can rotate by 90° for an easy installation.



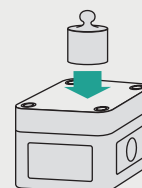
### ■ PLATES OR DIN RAILS

The bottom of the enclosure is pre-arranged to receive plates or DIN rails for installation of terminal boards and other components, and some models can receive an upper plate for equipment assembly. Fastening is made through brass inserts.



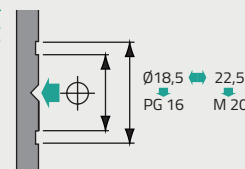
### ■ THERMOPLASTIC

The features of the thermoplastic material, without halogens, thus without any emissions of hazardous gases, and the remarkable wall thickness guarantee the use of enclosure even in case they are installed in particularly harsh environments. Insulation class □



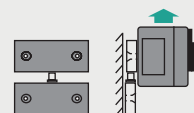
### ■ CABLE ENTRY

On one side of the enclosure it is impressed a drilling template for cable entry with a centre mark for tool positioning. The various dimensions for the PG or metric system are indicated.



### ■ REMOVABLE ENCLOSURES

A device is available for a trouble-free, safe and efficient wall-mounting of the removable enclosures. Handles can be fitted for a safe grip, thus avoiding activating the buttons accidentally.



# Caratteristiche tecniche

## Technical data

Il primo criterio di valutazione, quando si opera una scelta sui contenitori da utilizzare, è sicuramente la dimensione; ma successivamente è opportuno analizzare i comportamenti dei contenitori alle condizioni ambientali in cui devono operare, in sostanza i gradi di protezione e le caratteristiche del materiale.

In questo capitolo sono descritte le caratteristiche dei materiali utilizzati nella produzione dei contenitori serie 080 in modo da ricercare la qualità del prodotto e facilitare la scelta finale dell'utilizzatore in funzione della qualità richiesta.



When choosing an enclosure to be used, the first aspect to be considered is surely the size. However, subsequently it is advisable to analyse how the enclosures behave in the environmental conditions, in which they are required to operate in, i.e. protection ratings and features of the material. This chapter describes the features of the materials used to produce the enclosures of the 080 series in order to facilitate the user's final choice according to the required quality.



### Caratteristiche tecniche : Materiali

|                       |                                               |                 |
|-----------------------|-----------------------------------------------|-----------------|
| Contenitore           | Polycarbonato con fibra di vetro              | Grigio RAL 7035 |
| Coperchio giallo      | Polycarbonato                                 | Giallo RAL 1004 |
| Coperchio trasparente | Polycarbonato                                 | Fumè            |
| Guarnizione           | Poliuretano                                   | Stampato        |
| Viti                  | Poliammide                                    | Nero            |
| Cerniere              | Polycarbonato con fibra di vetro              | Grigio RAL 7035 |
| Manopole              | Poliammide                                    | Grigio RAL 7035 |
| Maniglie              | Poliammide                                    | Verde RAL 6010  |
| Pressacavi            | Poliammide                                    | Grigio RAL 7035 |
| Staffe                | Poliammide con fibre di vetro                 | Grigio RAL 7035 |
| Piastra superiore     | Alluminio                                     | Anodizzato      |
| Piastre               | Acciaio                                       | Zincato         |
| Guide                 | Acciaio                                       | Zincato         |
| Grado di protezione   | IP66- CEI EN 60529                            |                 |
| Limiti di temperatura | Polycarbonato -35°C ÷ +80°C                   |                 |
|                       | Polistirene -25°C ÷ +40°C                     |                 |
| Omologazioni          | Polycarbonato : UL type 4X e 12X              |                 |
|                       | (versione con coperchio trasparente solo 12X) |                 |

### Technical features : Materials

|                   |                                        |                |
|-------------------|----------------------------------------|----------------|
| Enclosure         | Glass fiber reinforced polycarbonate   | RAL 7035 Grey  |
| Yellow lid        | Polycarbonate                          | RAL 100 yellow |
| Transparent lid   | Polycarbonate                          | Smoky grey     |
| Gasket            | Polyurethane                           | Moulded        |
| Screws            | Poyammides                             | Black          |
| Hinges            | Glass fiber reinforced polycarbonate   | RAL 7035 Grey  |
| Knobs             | Polyamide                              | RAL 7035 Grey  |
| Handles           | Polyamide                              | RAL 6010 Green |
| Cable glands      | Polyamide                              | RAL 7035 Grey  |
| Brackets          | Glass fiber reinforced polycarbonate   | RAL 7035 Grey  |
| Upper plate       | Aluminium                              | Anodised       |
| Plates            | Steel                                  | Zinc-plated    |
| Rails             | Steel                                  | Zinc-plated    |
| Protection degree | IP66- CEI EN 60529                     |                |
| Temperature range | Polycarbonate -35°C ÷ +80°C            |                |
|                   | Polystyrene -25°C ÷ +40°C              |                |
| Approvals         | Polycarbonate : UL type 4X and 12X     |                |
|                   | (models with transparent lid 12X only) |                |





# Caratteristiche tecniche

## Technical data

### ■ TERMOPLASTICO POLICARBONATO

Il polycarbonato, per le sue qualità fisico-meccaniche, è il materiale ideale per la costruzione di contenitori e scatole in termoplastico.

Le caratteristiche fondamentali sono:

- Alta resistenza alle temperature
- Eccellenti proprietà isolanti anche in presenza di umidità
- Autoestinguente
- Alta resistenza agli shock grazie anche all'uso di fibre di vetro
- Forte resistenza agli agenti chimici
- Possibilità di realizzare prodotti con ottime finiture
- Esecuzione dei coperchi in versione trasparente
- Stabilità ai raggi ultravioletti (nei climi tropicali si sconsiglia l'uso dei coperchi trasparenti)
- Facilità di lavorazioni meccaniche (tranciature, forature, ecc.)
- Possibilità di verniciature, incollatura o saldatura

### ■ IL POLIURETANO

Fattore determinante per garantire la qualità di un contenitore è la scelta della guarnizione. Il tipo di materiale e la sua collocazione determinano l'ermeticità e la durata nel tempo del prodotto. I contenitori serie 080 utilizzano una guarnizione in poliuretano che, per la sua natura, è il materiale ideale per la protezione di un contenitore.

Le caratteristiche fondamentali sono:

- Residuo di compressione quasi nullo
- Il materiale si stampa direttamente nella scanalatura dei coperchi garantendo così immobilità e continuità
- Alta resistenza alle temperature (da -50°C a + 130°C)
- Alta resistenza agli agenti atmosferici

### ■ THERMOPLASTIC POLYCARBONATE

Its physical-mechanical properties make the polycarbonate the ideal material for the construction of thermoplastic enclosures and boxes.

Its main features are as follows:

- High resistance to temperatures
- Excellent insulating properties also in the presence of moisture
- Self-extinguishing
- High resistance to shocks thanks to the use of fiberglass
- Strong resistance to chemical agents
- Possibility of manufacturing products with excellent finish
- Possibility of making transparent lids
- Stability to ultraviolet radiation (use of transparent lids is not recommended in tropical climates)
- Ease of machining operations (shearing, drilling, etc.)
- Possibility of painting, glueing or welding

### ■ POLYURETHANE

The choice of gasket type is a major factor in guaranteeing the enclosure quality. Product sealing and life are closely tied to the type of material used and its position.

The enclosures of the 080 series are equipped with a polyurethane gasket, which is by nature the ideal material to protect an enclosure.

Its main features are as follows:

- Almost null residual compression
- The material is moulded directly in the groove of the lids, thus guaranteeing immobility and continuity
- High resistance to temperatures (from -50°C to + 130°C)
- High resistance to atmospheric agents

# Caratteristiche tecniche

## Technical data

### Caratteristiche dei materiali impiegati nella costruzione dei contenitori serie 080

Nelle tabelle seguenti sono indicate le caratteristiche di resistenza dei materiali impiegati nella produzione della serie 080. Nella valutazione di questi dati è opportuno tenere conto della concentrazione degli agenti chimici e della temperatura. In caso di miscele di prodotti chimici agenti sull' involucro è consigliabile effettuare un esame attento per valutare la resistenza effettiva.

#### Resistenza chimica dei termoplastici

|                        | Poliamide | Polycarbonato | Poliuretano |
|------------------------|-----------|---------------|-------------|
| acetone                | ●         | ●             | ●           |
| acido formico          | ●         | 30%           | ●           |
| benzina                | ●         | ●             | ●           |
| butano                 | ●         | ●             | ●           |
| butanolo               | ●         | ●             | ●           |
| cloruro di calcio      | ●         | ●             | ●           |
| olio diesel            | ●         | ●             | ●           |
| acido acetico          | ●         | 10%           | ●           |
| formaldeide            | ●         | ●             | ●           |
| frigerio 113           | ●         | ●             | ●           |
| succo di frutta        | ●         | ●             | ●           |
| glicerina              | ●         | ●             | ●           |
| olio combustibile      | ●         | ●             | ●           |
| olio idraulico         | ●         | ●             | ●           |
| cloruro di potassio    | ●         | ●             | ●           |
| olio di lino           | ●         | ●             | ●           |
| cloruro di etilene     | ●         | ●             | ●           |
| acido lattico          | ●         | 10%           | 10%         |
| olio minerale          | ●         | ●             | ●           |
| olio per motori        | ●         | ●             | ●           |
| carbonato di sodio     | ●         | ●             | ●           |
| cloruro di sodio       | ●         | ●             | 10%         |
| acido nitrico          | ●         | 10%           | ●           |
| acido cloridrico       | ●         | 20%           | ●           |
| lubrificante           | ●         | ●             | ●           |
| acido solforico        | ●         | 50%           | ●           |
| acqua saponata         | ●         | ●             | ●           |
| detergente             | ●         | ●             | ●           |
| acqua (dolce e salata) | ●         | ●             | ●           |
| acido tartarico        | ●         | 10%           | ●           |
| solfato di zinco       | ●         | ●             | ●           |
| acido citrico          | ●         | 10%           | 10%         |

#### Caratteristiche tecniche dei termoplastici

|                                                          | Polycarbonato    | Poliamide        |
|----------------------------------------------------------|------------------|------------------|
| Norma ASTM-D, unità                                      |                  |                  |
| MECCANICHE                                               |                  |                  |
| res. a trazione a rottura 23 °C                          | 77               | 60               |
| res. a trazione a rottura 70 °C                          | 41               | 48               |
| allung. allo snervamento/a rottura 23 °C                 | 30/300           | 7/115            |
| modulo a flessione 23 °C                                 | 1210             | 2170             |
| limite resist. a fatica, 10 <sup>6</sup> cicli, 23 °C    | 21               | 7                |
| res. all'urto Izod con intaglio 23 °C                    | 112              | 850              |
| res. all'urto Izod con intaglio -40 °C                   | 27               | 106              |
| TERMICHE                                                 |                  |                  |
| punto di fusione                                         | 255              | 220              |
| coeff. dilataz. termica lineare -40°+29°C                | 7                | 6,7              |
| temp. di distorsione 1,8MPa                              | 90               | 135              |
| temp. di distorsione 0,5MPa                              | 235              | 140              |
| otemp. max di funz. continuo (UL)                        | 100              | 125              |
| ELETTRICHE                                               |                  |                  |
| resistività trasv. 23°C, 0,2% acqua                      | 10 <sup>11</sup> | 10 <sup>14</sup> |
| resistività di superficie                                | 10 <sup>15</sup> | 257Ω             |
| costante dielettrica 10 <sup>2</sup> -10 <sup>6</sup> Hz | 8-4,6            | 2,9              |
| fattore di perdita dielettrica 10 <sup>6</sup> Hz        | 0,1              | 0,011            |
| rigidità diel. nel breve periodo(2,3mm)                  | 17               | 15               |
| resistenza all'arco                                      | 10               | 4955             |
| FISICHE                                                  |                  |                  |
| densità                                                  | 1,14             | 1,2              |
| assorb. d'acqua 24h saturaz.23 °C                        | 1,2              | 0,16             |
| durezza Rockwell M                                       | M59              | M74              |
| durezza Rockwell R (Shore D)                             | R108             | R120             |
| coeff. d'attrito/senza lubrificante                      | 0,4              | 0,45             |
| infiammabilità                                           | V2               | V1               |

#### Caratteristiche fisiche delle guarnizioni

|                            | Poliuretano            |
|----------------------------|------------------------|
| Unità                      |                        |
| stabilità alla temperatura | -50 +130 °C            |
| resistenza                 | 0,4 MPa                |
| tensione di rottura        | 110 %                  |
| durezza                    | 12 Shore A             |
| peso specifico             | 0,33 g/cm <sup>3</sup> |
| residuo di compressione    | 5 %                    |

- Resistente a tutte le concentrazioni
- Resistente a certe concentrazioni
- Non resistente
- % Resistente con concentrazione % max
- Dati non reperiti



# Caratteristiche tecniche

## Technical data

### Features of the material used to manufacture the 080 series

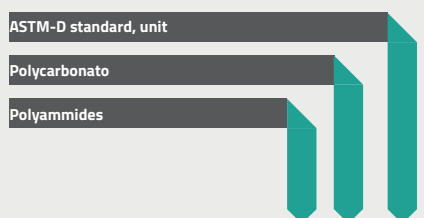
The resistance characteristics of the materials used to produce the 080 series are given in the tables below. When assessing these data, it is advisable to take into account the concentration of chemical agents and temperatures. If the casing is liable to be affected by a mix of chemicals, it is advisable to make a careful examination when assessing the effective resistance.

#### Chemical resistance of thermoplastics



|                        |   |     |     |
|------------------------|---|-----|-----|
| acetone                | ● | ●   | ●   |
| formic acid            | ● | 30% | ●   |
| gasoline               | ● | ●   | ●   |
| butane                 | ● | ●   | ●   |
| butyl alcohol          | ● | ●   | ●   |
| calcium chloride       | ● | ●   | ●   |
| diesel oil             | ● | ●   | ●   |
| acetic acid            | ● | 10% | ●   |
| formaldehyde           | ● | ●   | ●   |
| frigerio 113           | ● | ●   | ●   |
| fruit juice            | ● | ●   | ●   |
| glycerol               | ● | ●   | ●   |
| fuel oil               | ● | ●   | ●   |
| hydraulic oil          | ● | ●   | ●   |
| potassium chloride     | ● | ●   | ●   |
| linseed oil            | ● | ●   | ●   |
| ethylene chloride      | ● | ●   | ●   |
| lactic acid            | ● | 10% | 10% |
| mineral oil            | ● | ●   | ●   |
| engine oil             | ● | ●   | ●   |
| sodium carbonate       | ● | ●   | ●   |
| sodium chloride        | ● | ●   | 10% |
| nitric acid            | ● | 10% | ●   |
| hydrochloric acid      | ● | 20% | ●   |
| lubricant              | ● | ●   | ●   |
| sulphuric acid         | ● | 50% | ●   |
| soapy water            | ● | ●   | ●   |
| detergent              | ● | ●   | ●   |
| water (soft and salty) | ● | ●   | ●   |
| tartaric acid          | ● | 10% | ●   |
| zinc sulfate           | ● | ●   | ●   |
| citric acid            | ● | 10% | 10% |

#### Technical features of thermoplastic



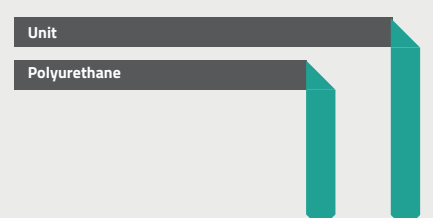
|                                                       |        |       |        |
|-------------------------------------------------------|--------|-------|--------|
| <b>MECHANICAL</b>                                     |        |       |        |
| ultimate tensile strenght at 23 °C                    | 77     | 60    | 638Mpa |
| ultimate tensile strenght at 70 °C                    | 41     | 48    | 638Mpa |
| yield elongation ultimate 23 °C                       | 30/300 | 7/115 | 638%   |
| bending modulus at 23 °C                              | 1210   | 2170  | 790Mpa |
| fatigue strenght limit, 10 <sup>6</sup> cycles, 23 °C | 21     | 7     | 671Mpa |
| Izod impact res. with shearing at 23 °C               | 112    | 850   | 256J/m |
| Izod impact res. with shearing at 40 °C               | 27     | 106   | 256J/m |

|                                          |     |     |                          |
|------------------------------------------|-----|-----|--------------------------|
| <b>THERMAL</b>                           |     |     |                          |
| melting point                            | 255 | 220 | 2133C                    |
| coeff. of linear thermal exp. -40°+29° C | 7   | 6,7 | 696 10 <sup>-3</sup> /°C |
| distortion temperature at 1,8MPa         | 90  | 135 | 638C                     |
| distortion temperature at 0,5MPa         | 235 | 140 | 638C                     |
| max. continuous operative temperat. (UL) | 100 | 125 | C                        |

|                                                         |                  |                  |         |
|---------------------------------------------------------|------------------|------------------|---------|
| <b>ELECTRIC</b>                                         |                  |                  |         |
| transverse resistivity 23 °C, 0,2% water                | 10 <sup>11</sup> | 10 <sup>14</sup> | 257Ωm   |
| surface resistivity                                     |                  | 10 <sup>15</sup> | 257Ω    |
| dielectric constant 10 <sup>2</sup> -10 <sup>6</sup> Hz | 8-4,6            | 2,9              | 150     |
| dielectric loss factor 10 <sup>6</sup> Hz               | 0,1              | 0,011            | 150     |
| diel. strenght over a short period(2,3mm)               | 17               | 15               | 149MV/m |
| arc resistance                                          | 10               |                  | 4955    |

|                                           |      |      |         |
|-------------------------------------------|------|------|---------|
| <b>PHYSICAL</b>                           |      |      |         |
| density                                   | 1,14 | 1,2  | 792g/cm |
| water absorption, 24h saturation at 23 °C | 1,2  | 0,16 | 570%    |
| Rockwell M hardness                       | M59  | M74  | 785     |
| Rockwell R hardness(Shore D)              | R108 | R120 | 785     |
| friction coeff./without lubricant         | 0,4  | 0,45 |         |
| flash point                               | V2   | V1   | UL      |

#### Physical properties of gaskets



|                       |          |                   |
|-----------------------|----------|-------------------|
| temperatura stability | -50 +130 | C                 |
| resistance            | 0,4      | MPa               |
| ultimate strenght     | 110      | %                 |
| hardness              | 12       | Shore A           |
| specific weight       | 0,33     | g/cm <sup>3</sup> |
| residual compression  | 5        | %                 |

- Resistant to all concentrations
- Resistant to certain concentrations
- Not resistant
- % Resistant to concentrations up to max %
- NO indication



## Scatole in termoplastico Thermoplastic enclosures



Coperchio disponibile in tre tipologie di colore :  
RAL7035, giallo e trasparente

Lid available in three colours :  
RAL7035, yellow and transparent



Disponibile in 4 altezze

Available in four heights

# Scatole in termoplastico

## Thermoplastic enclosures



Sistema di fissaggio a parete  
Wall-mounting system



Viti di serraggio  
Clampings screws



Piastra di fondo  
Mounting plate



Piastra superiore  
Upper plate



Staffe di fissaggio  
Mounting brackets



La guarnizione garantisce  
IP66  
A gasket assures  
IP66 protection



Cerniera piccola  
Cerniera grande  
Small hinge  
Big hinge



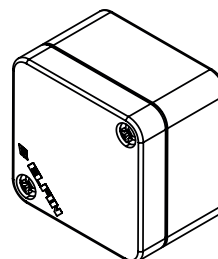
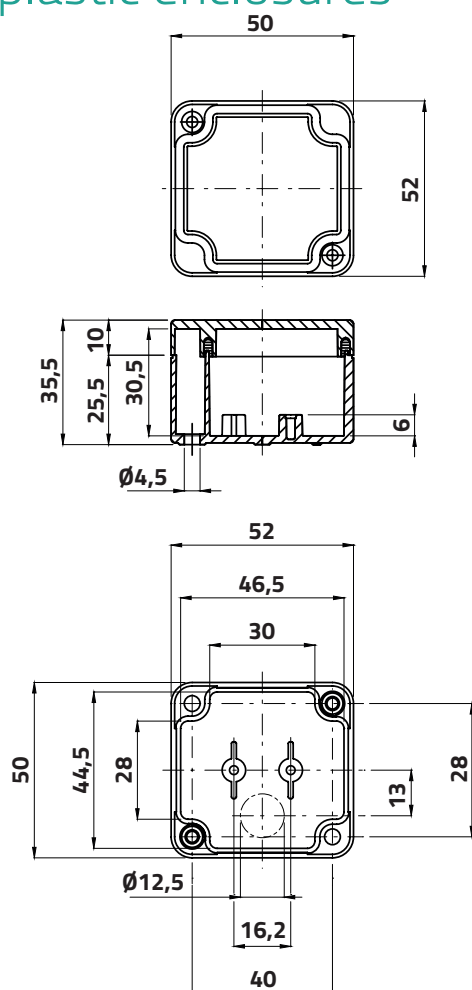
Manopola  
Knob



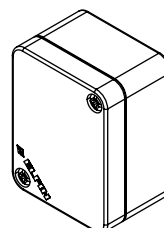
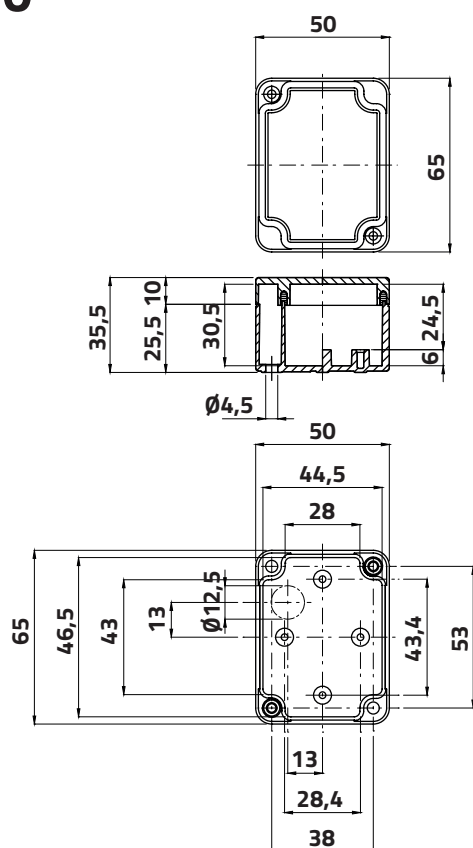
# Scatole in termoplastico

## Thermoplastic enclosures

### 50X52



### 65X50



# Scatole in termoplastico

## Thermoplastic enclosures

**50X52**

Policarbonato / Polycarbonate

h

g

cod

35,5

40

**080C0505-3****65X50**

Policarbonato / Polycarbonate

h

g

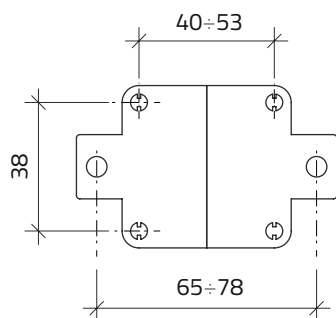
cod

35,5

50

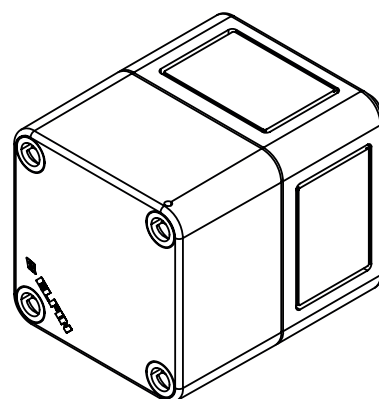
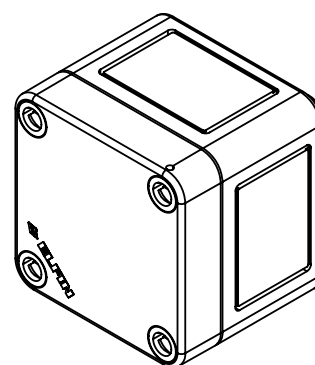
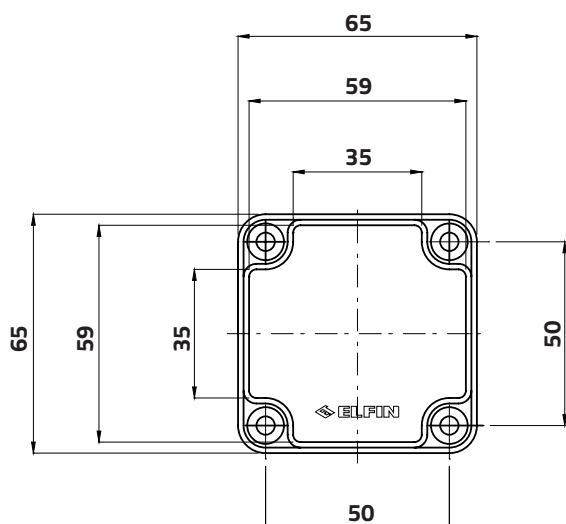
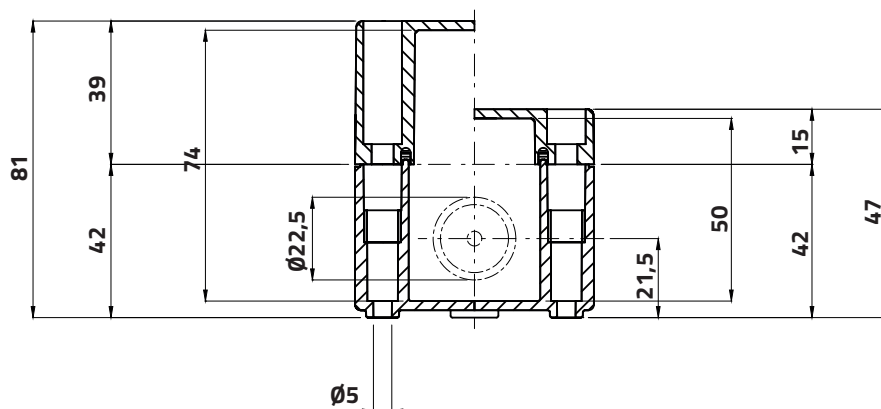
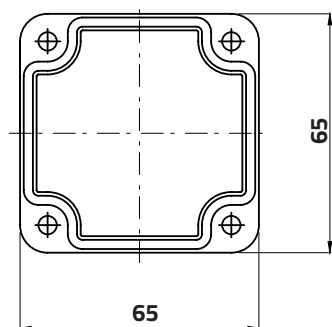
**080C0605-3**
**Piastra di fissaggio a parete regolabile**  
**Adjustable wall-mounting plate**

8

**080S5065**

# Scatole in termoplastico 65x65

## Thermoplastic enclosures 65x65





# Scatole in termoplastico 65x65

## Thermoplastic enclosures 65x65



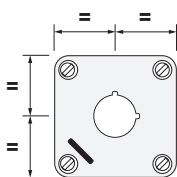
### Coperchio senza fori / Undrilled lid

|                              | h  | g   | cod         |
|------------------------------|----|-----|-------------|
| Polistirene / Polystyrene    | 57 | 76  | 080CS0606-5 |
| Polistirene / Polystyrene    | 81 | 110 | 080CS0606-8 |
| Policarbonato/ Polycarbonate | 57 | 90  | 080C0606-5  |
| Policarbonato/ Polycarbonate | 81 | 130 | 080C0606-8  |



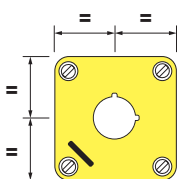
### Coperchio trasparente senza fori / Transparent Undrilled lid

|                              |    |     |             |
|------------------------------|----|-----|-------------|
| Policarbonato/ Polycarbonate | 57 | 85  | 080C0606-5T |
| Policarbonato/ Polycarbonate | 81 | 125 | 080C0606-8T |



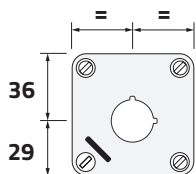
### Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

|                              |    |     |                |
|------------------------------|----|-----|----------------|
| Polistirene / Polystyrene    | 57 | 72  | 080CS0606-5P1C |
| Polistirene / Polystyrene    | 81 | 106 | 080CS0606-8P1C |
| Policarbonato/ Polycarbonate | 57 | 85  | 080C0606-5P1C  |
| Policarbonato/ Polycarbonate | 81 | 125 | 080C0606-8P1C  |



### Coperchio giallo con 1 foro Ø 22mm / 1-hole yellow lid Ø 22mm

|                              |    |     |                |
|------------------------------|----|-----|----------------|
| Polistirene / Polystyrene    | 57 | 72  | 080CS0606-5GP1 |
| Polistirene / Polystyrene    | 81 | 106 | 080CS0606-8GP1 |
| Policarbonato/ Polycarbonate | 57 | 85  | 080C0606-5GP1  |
| Policarbonato/ Polycarbonate | 81 | 125 | 080C0606-8GP1  |

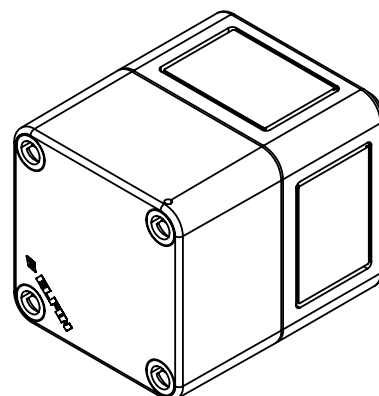
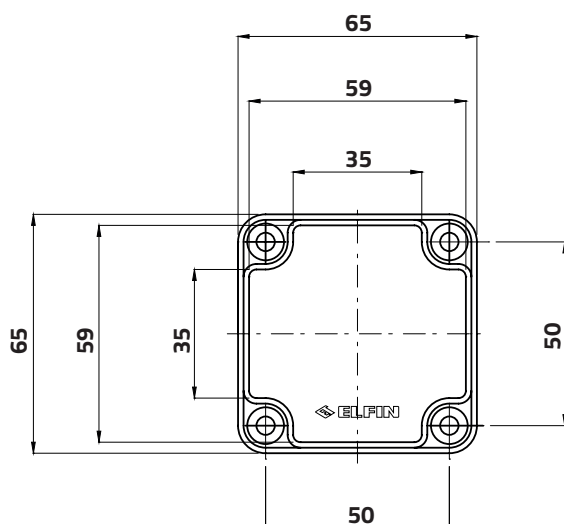
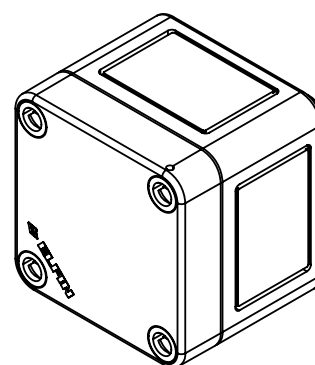
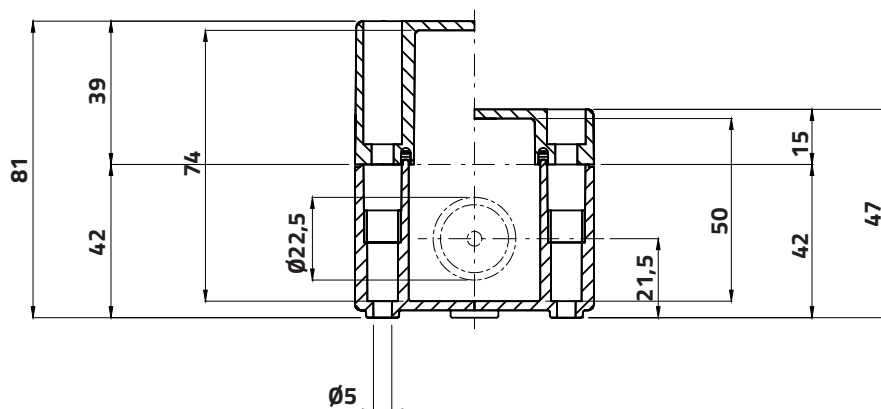
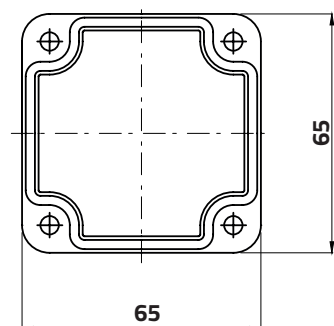


### Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

|                              |    |     |               |
|------------------------------|----|-----|---------------|
| Polistirene / Polystyrene    | 57 | 72  | 080CS0606-5P1 |
| Polistirene / Polystyrene    | 81 | 106 | 080CS0606-8P1 |
| Policarbonato/ Polycarbonate | 57 | 85  | 080C0606-5P1  |
| Policarbonato/ Polycarbonate | 81 | 125 | 080C0606-8P1  |

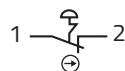
# Scatole pulsantiere complete 65x65

## Assembled push-button enclosures 65x65



# Scatole pulsantiere complete 65x65

## Assembled push-button enclosures 65x65



### Coperchio con pulsante a fungo rosso Ø32

#### Lid with red mushroom push-button Ø32

sgancio rotazione / twist release

Polistirene / Polystyrene

57

132

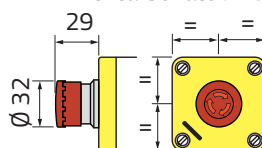
080CS0606-5GA

Policarbonato / Polycarbonate

57

145

080C0606-5GA



### Coperchio con pulsante a fungo rosso Ø40

#### Lid with red mushroom push-button Ø40

sgancio rotazione / twist release

Polistirene / Polystyrene

57

137

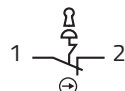
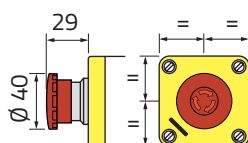
080CS0606-5GFA

Policarbonato / Polycarbonate

57

150

080C0606-5GFA



### Coperchio con pulsante a fungo rosso Ø44

#### Lid with red mushroom push-button Ø44

sgancio con chiave / key release

Polistirene / Polystyrene

57

177

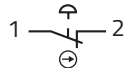
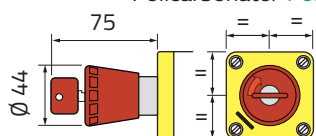
080CS0606-5GFC

Policarbonato / Polycarbonate

57

190

080C0606-5GFC



### Coperchio con pulsante a fungo sferico rosso Ø50

#### Lid with red palm push-button Ø50

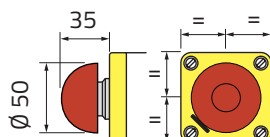
momentaneo / momentary

Policarbonato / Polycarbonate

57

125

080C0606-5GF5M



### Coperchio con pulsante a fungo sferico rosso Ø50

#### Lid with red palm push-button Ø50

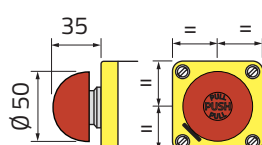
sgancio trazione / pull release

Policarbonato / Polycarbonate

57

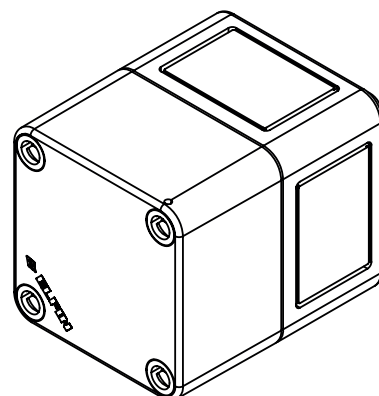
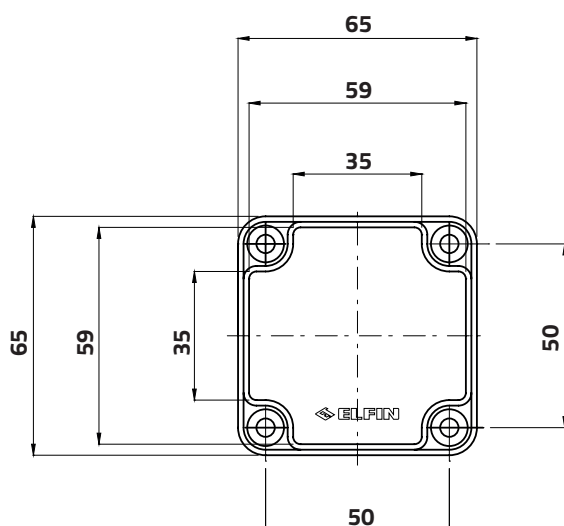
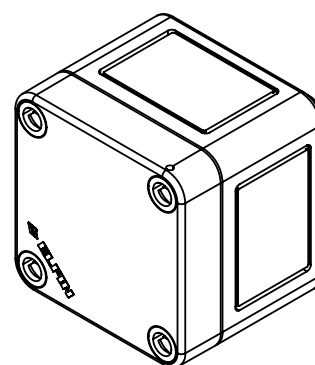
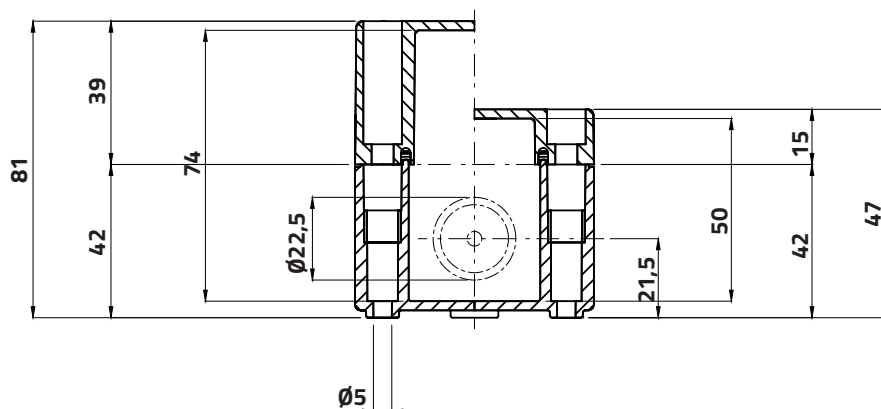
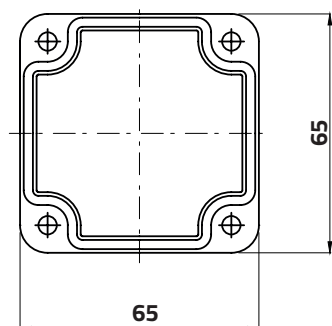
125

080C0606-5GF5T



# Scatole pulsantiere complete 65x65

## Assembled push-button enclosures 65x65



# Scatole pulsantiere complete 65x65

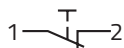
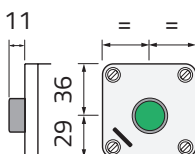
## Assembled push-button enclosures 65x65



### Coperchio con pulsante guardia verde

#### Lid with green guarded push-button

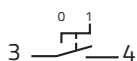
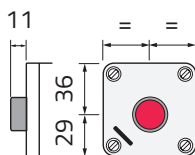
|                              |    |     |               |
|------------------------------|----|-----|---------------|
| Polistirene / Polystyrene    | 57 | 117 | 080CS0606-5PV |
| Policarbonato/ Polycarbonate | 57 | 130 | 080C0606-5PV  |



### Coperchio con pulsante guardia rosso

#### Lid with red guarded push-button

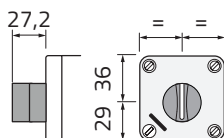
|                              |    |     |               |
|------------------------------|----|-----|---------------|
| Polistirene / Polystyrene    | 57 | 171 | 080CS0606-5PR |
| Policarbonato/ Polycarbonate | 57 | 130 | 080C0606-5PR  |



### Coperchio con selettore a manopola nera 2 posizioni

#### Lid with 2-position black selector switch

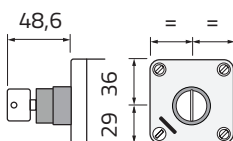
|                              |    |     |               |
|------------------------------|----|-----|---------------|
| Polistirene / Polystyrene    | 57 | 122 | 080CS0606-5SM |
| Policarbonato/ Polycarbonate | 57 | 135 | 080C0606-5SM  |



### Coperchio con selettore a chiave 2 posizioni

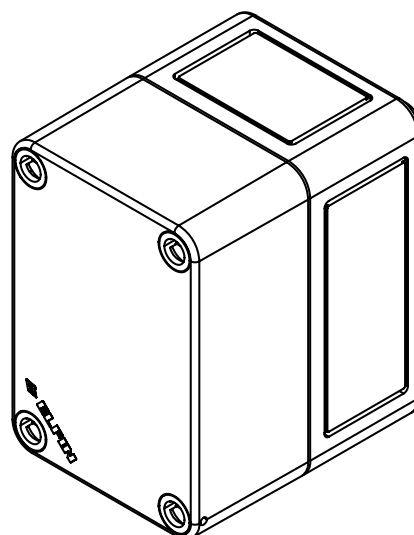
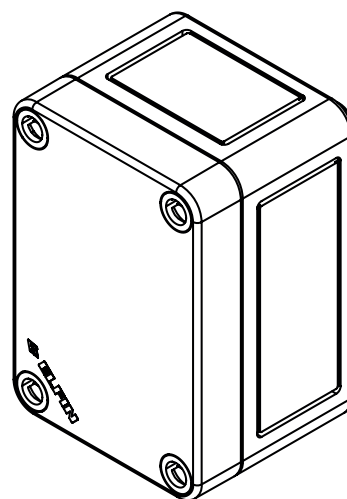
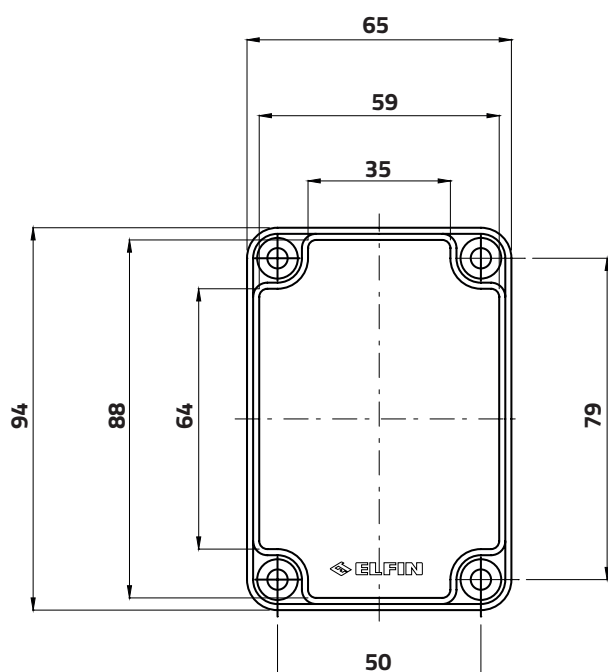
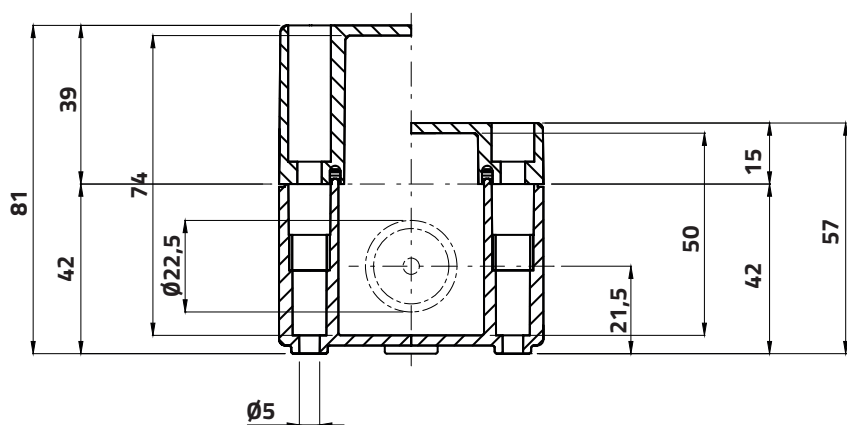
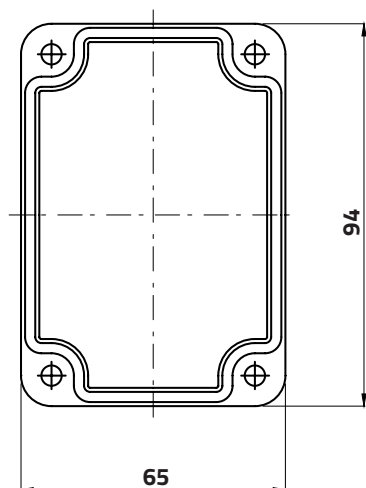
#### Lid with 2-position key selector switch

|                              |    |     |               |
|------------------------------|----|-----|---------------|
| Polistirene / Polystyrene    | 57 | 181 | 080CS0606-5SC |
| Policarbonato/ Polycarbonate | 57 | 194 | 080C0606-5SC  |



# Scatole in termoplastico 65x94

## Thermoplastic enclosures 65x94



# Scatole in termoplastico 65x94

## Thermoplastic enclosures 65x94



### Coperchio senza fori / Undrilled lid

|                              | h  | g   | cod         |
|------------------------------|----|-----|-------------|
| Polistirene / Polystyrene    | 57 | 96  | 080CS0609-5 |
| Polistirene / Polystyrene    | 81 | 135 | 080CS0609-8 |
| Policarbonato/ Polycarbonate | 57 | 115 | 080C0609-5  |
| Policarbonato/ Polycarbonate | 81 | 160 | 080C0609-8  |



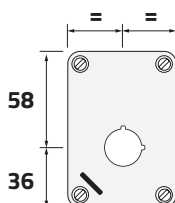
### Coperchio trasparente senza fori / Transparent Undrilled lid

|                              |    |     |             |
|------------------------------|----|-----|-------------|
| Policarbonato/ Polycarbonate | 57 | 110 | 080C0609-5T |
| Policarbonato/ Polycarbonate | 81 | 110 | 080C0609-8T |



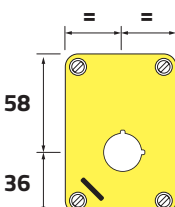
### Coperchio giallo senza fori / Undrilled yellow lid

|                              |    |     |              |
|------------------------------|----|-----|--------------|
| Polistirene / Polystyrene    | 57 | 96  | 080CS0609-5G |
| Polistirene / Polystyrene    | 81 | 135 | 080CS0609-8G |
| Policarbonato/ Polycarbonate | 57 | 115 | 080C0609-5G  |
| Policarbonato/ Polycarbonate | 81 | 160 | 080C0609-8G  |



### Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

|                              |    |     |               |
|------------------------------|----|-----|---------------|
| Polistirene / Polystyrene    | 57 | 92  | 080CS0609-5P1 |
| Polistirene / Polystyrene    | 81 | 131 | 080CS0609-8P1 |
| Policarbonato/ Polycarbonate | 57 | 110 | 080C0609-5P1  |
| Policarbonato/ Polycarbonate | 81 | 155 | 080C0609-8P1  |

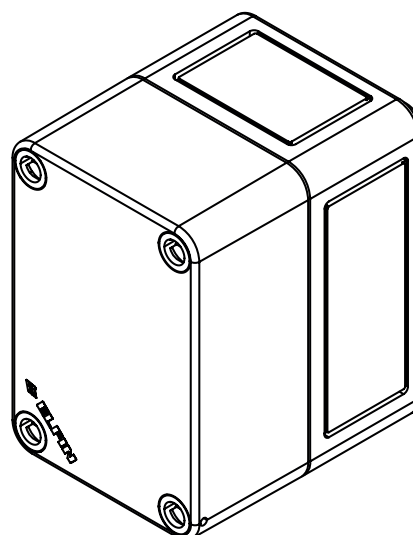
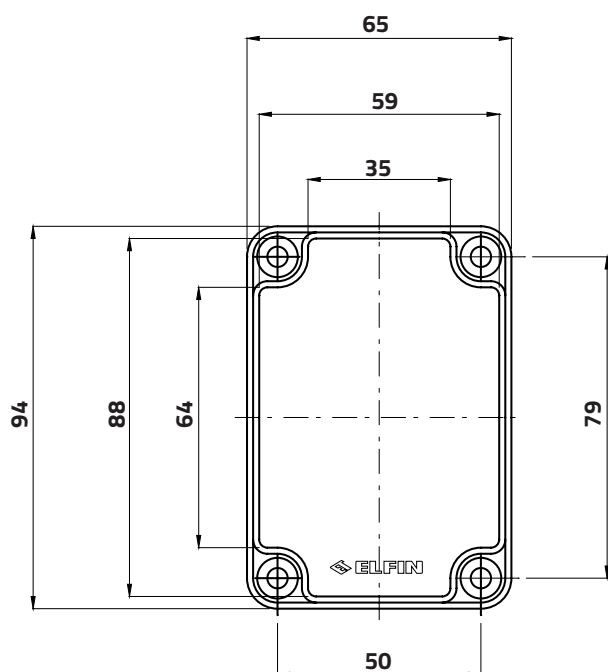
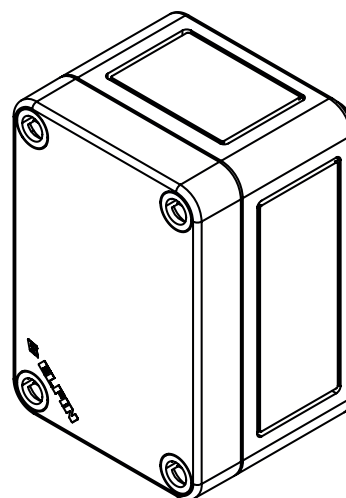
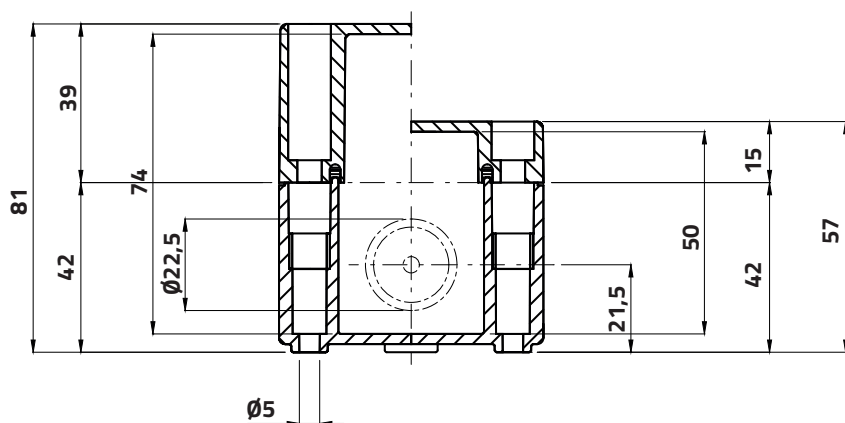
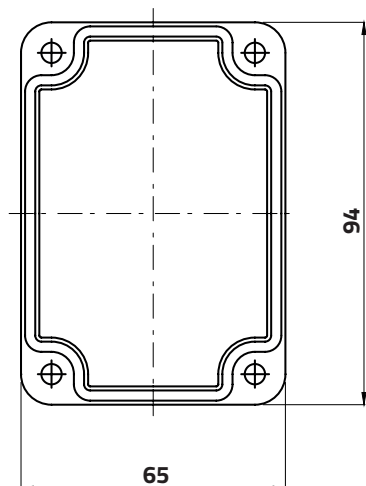


### Coperchio giallo con 1 foro Ø 22mm / 1-hole yellow lid Ø 22mm

|                              |    |     |                |
|------------------------------|----|-----|----------------|
| Polistirene / Polystyrene    | 57 | 92  | 080CS0609-5GP1 |
| Polistirene / Polystyrene    | 81 | 131 | 080CS0609-8GP1 |
| Policarbonato/ Polycarbonate | 57 | 110 | 080C0609-5GP1  |
| Policarbonato/ Polycarbonate | 81 | 155 | 080C0609-8GP1  |

# Scatole in termoplastico 65x94

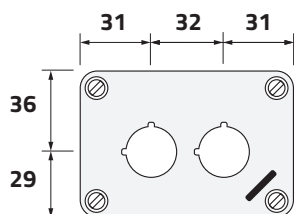
## Thermoplastic enclosures 65x94





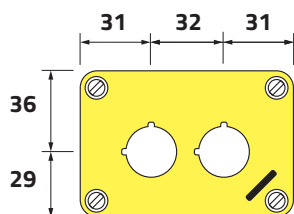
# Scatole in termoplastico 65x94

## Thermoplastic enclosures 65x94



### Coperchio con 2 fori Ø 22mm / 2 hole lid Ø 22mm

|                              | h  | g   | cod           |
|------------------------------|----|-----|---------------|
| Polistirene / Polystyrene    | 57 | 92  | 080CS0609-5P2 |
| Polistirene / Polystyrene    | 81 | 131 | 080CS0609-8P2 |
| Policarbonato/ Polycarbonate | 57 | 110 | 080C0609-5P2  |
| Policarbonato/ Polycarbonate | 81 | 155 | 080C0609-8P2  |



### Coperchio giallo con 2 fori Ø 22mm / 2-hole yellow lid Ø 22mm

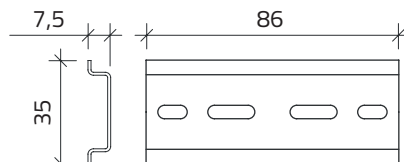
|                              |    |     |                |
|------------------------------|----|-----|----------------|
| Polistirene / Polystyrene    | 57 | 92  | 080CS0609-5GP2 |
| Polistirene / Polystyrene    | 81 | 131 | 080CS0609-8GP2 |
| Policarbonato/ Polycarbonate | 57 | 110 | 080C0609-5GP2  |
| Policarbonato/ Polycarbonate | 81 | 155 | 080C0609-8GP2  |



### Guida / Rail

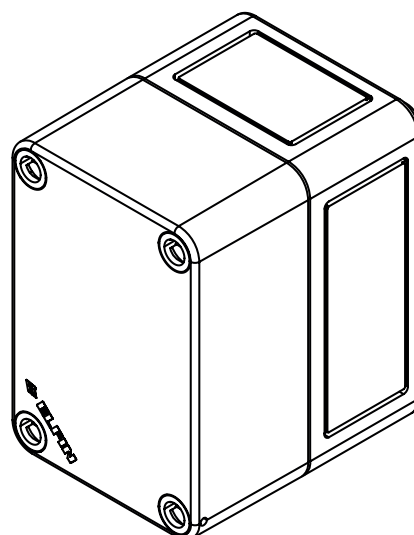
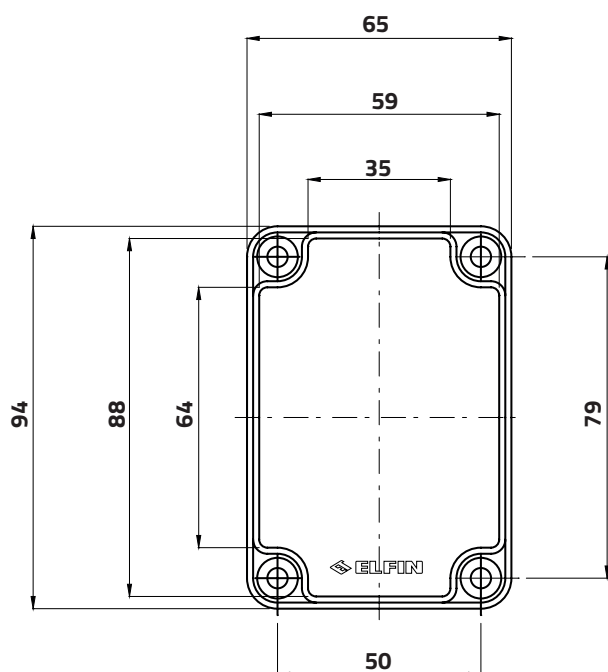
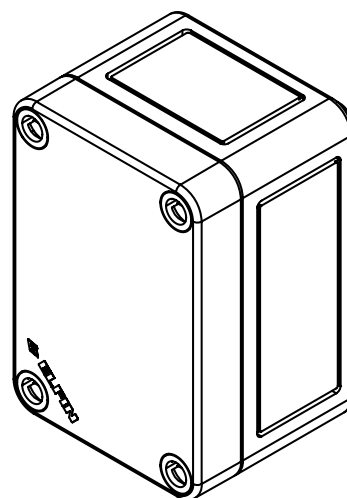
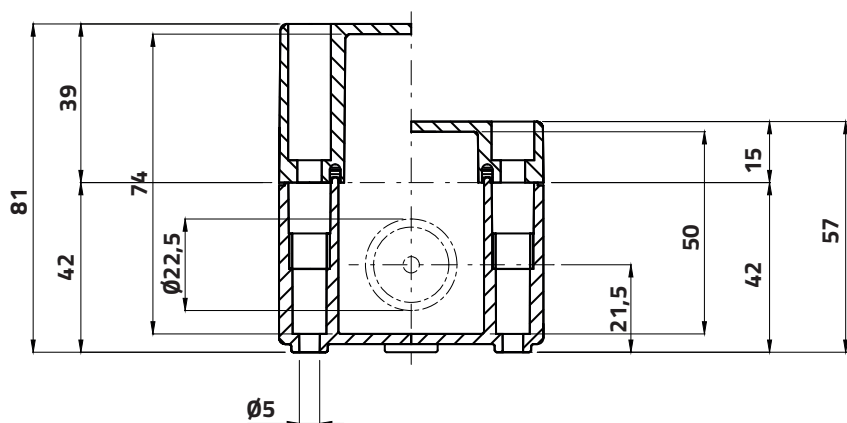
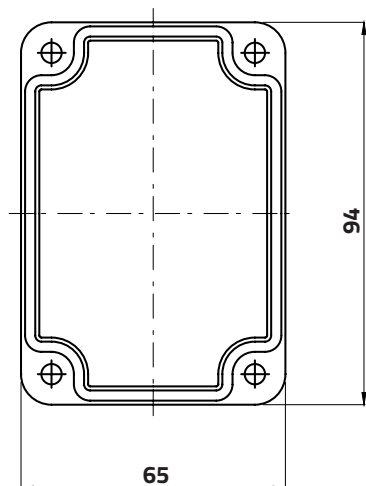
30

080G3508



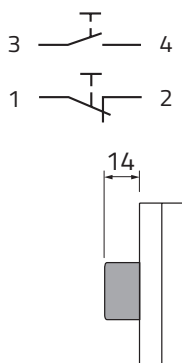
# Scatole pulsantiere complete 65x94

## Assembled push-button enclosures 65x94



# Scatole in termoplastico complete 65x94

## Assembled push-button enclosures 65x94



### Coperchio con due operatori / Lid with two operators

Pulsanti con guardia, I/O / Guarded push-button, I/O

Polistirene / Polystyrene

57

172

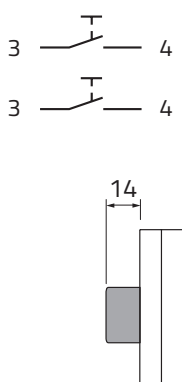
080CS0609-5IO

Policarbonato/ Polycarbonate

57

190

080C0609-5IO



### Coperchio con due operatori / Lid with two operators

Pulsanti con guardia, frecce / Guarded push-button, arrows

Polistirene / Polystyrene

57

172

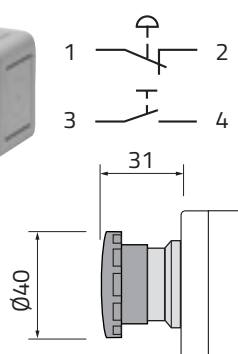
080CS0609-5S47

Policarbonato/ Polycarbonate

57

190

080C0609-5S47



### Coperchio con due operatori / Lid with two operators

Pulsante emergenza Ø40, sgancio rotazione e pulsante con cappuccio in gomma  
Emergency push-button Ø40, twist release and push-button with rubber cap

Polistirene / Polystyrene

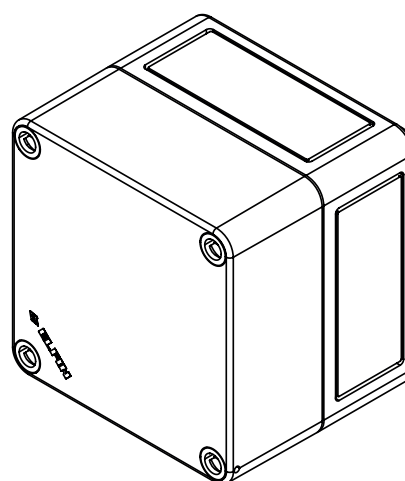
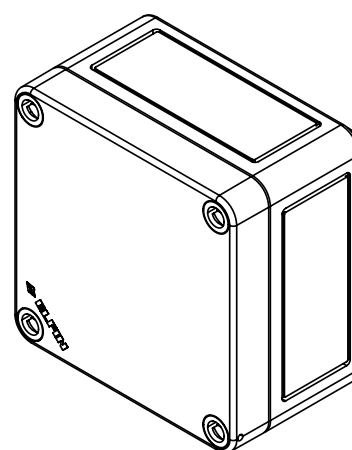
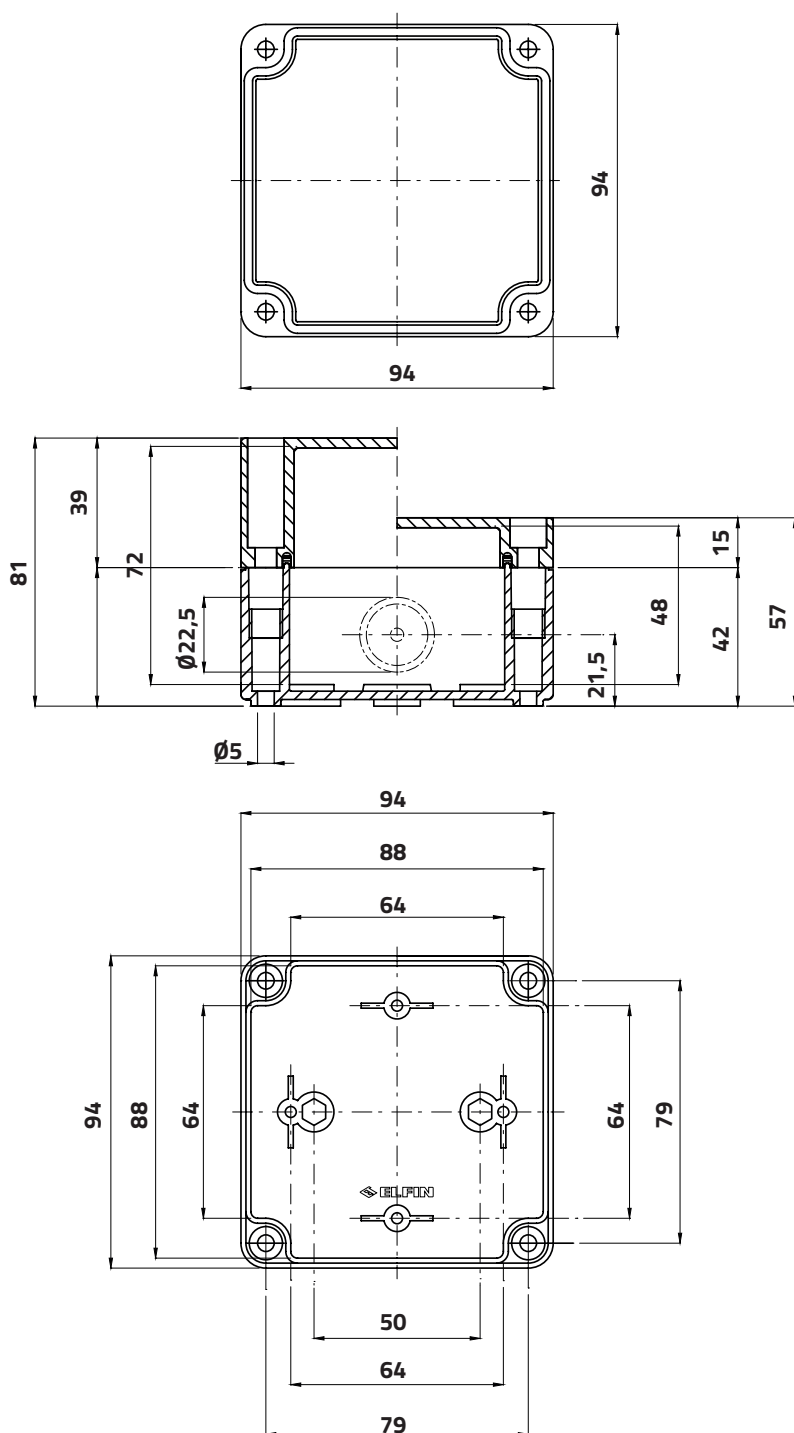
57

172

080CS0609-5PE

# Scatole in termoplastico 94x94

## Thermoplastic enclosures 94x94



# Scatole in termoplastico 94x94

## Thermoplastic enclosures 94x94



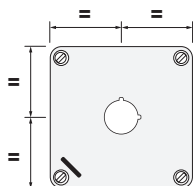
### Coperchio senza fori / Undrilled lid

|                              | h  | g   | cod          |
|------------------------------|----|-----|--------------|
| Polistirene / Polystyrene    | 57 | 123 | 080CS0909 -5 |
| Polistirene / Polystyrene    | 81 | 172 | 080CS0909-8  |
| Policarbonato/ Polycarbonate | 57 | 147 | 080C0909-5   |
| Policarbonato/ Polycarbonate | 81 | 204 | 080C0909-8   |



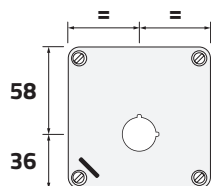
### Coperchio trasparente senza fori / Transparent Undrilled lid

|                              |    |     |             |
|------------------------------|----|-----|-------------|
| Policarbonato/ Polycarbonate | 57 | 142 | 080C0909-5T |
| Policarbonato/ Polycarbonate | 81 | 196 | 080C0909-8T |



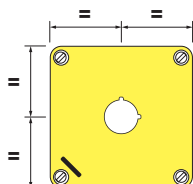
### Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

|                              |    |     |                |
|------------------------------|----|-----|----------------|
| Polistirene / Polystyrene    | 57 | 121 | 080CS0909-5P1C |
| Polistirene / Polystyrene    | 81 | 170 | 080CS0909-8P1C |
| Policarbonato/ Polycarbonate | 57 | 145 | 080C0909-5P1C  |
| Policarbonato/ Polycarbonate | 81 | 202 | 080C0909-8P1C  |



### Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

|                              |    |     |               |
|------------------------------|----|-----|---------------|
| Polistirene / Polystyrene    | 57 | 121 | 080CS0909-5P1 |
| Polistirene / Polystyrene    | 81 | 170 | 080CS0909-8P1 |
| Policarbonato/ Polycarbonate | 57 | 145 | 080C0909-5P1  |
| Policarbonato/ Polycarbonate | 81 | 202 | 080C0909-8P1  |

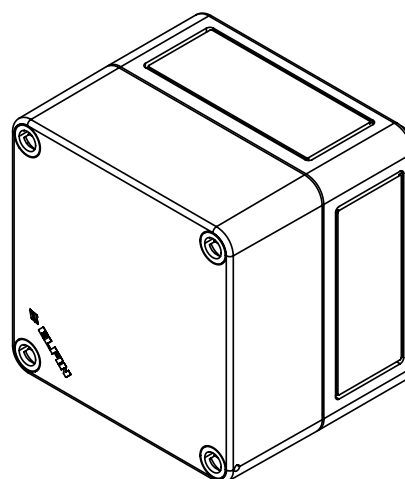
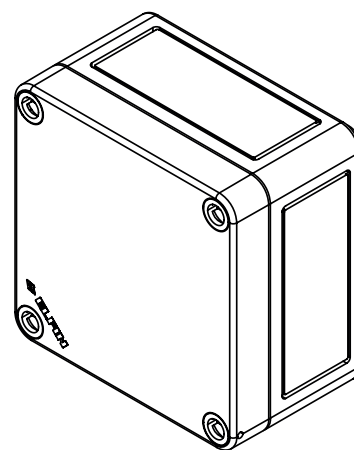
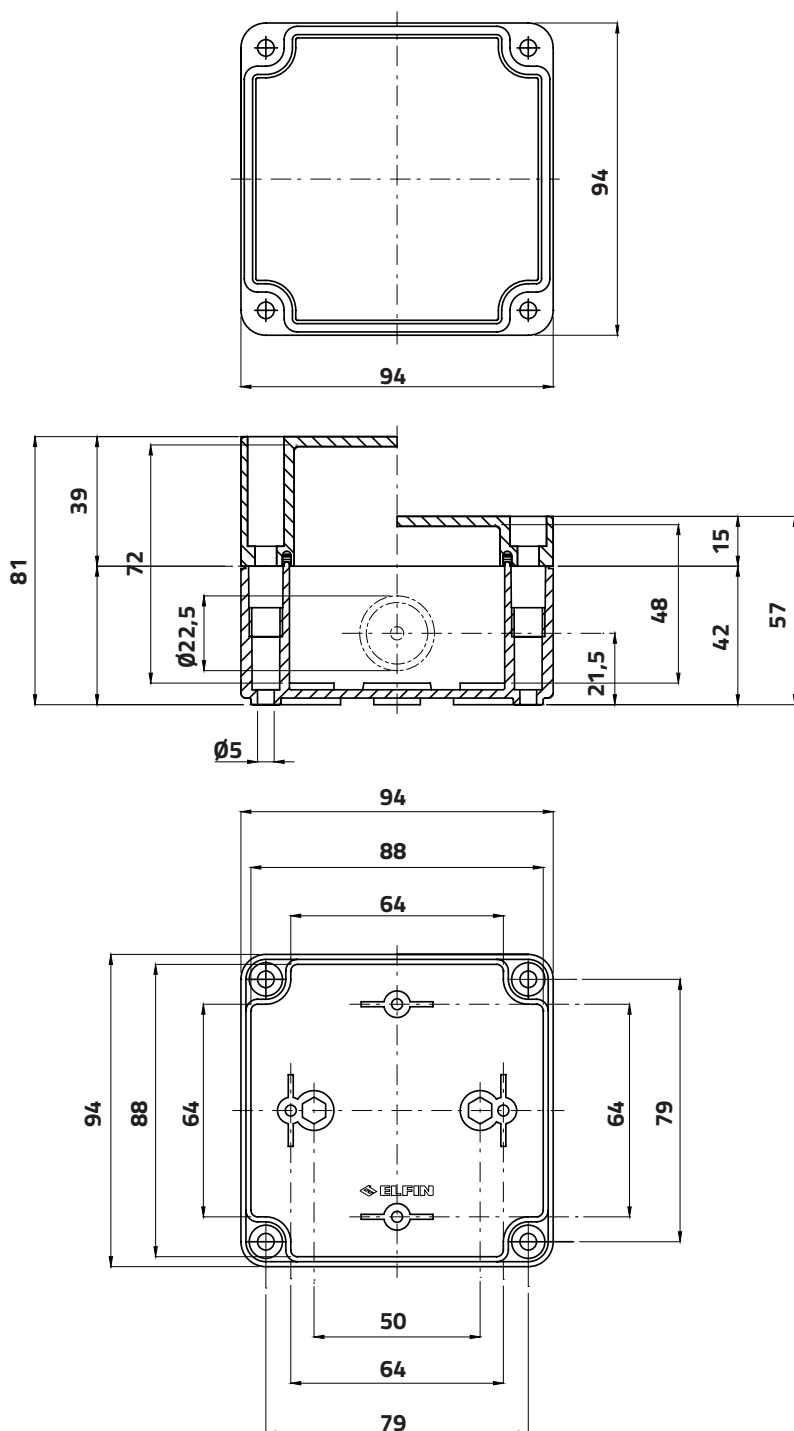


### Coperchio giallo con 1 foro Ø 22mm / 1-hole yellow lid Ø 22mm

|                              |    |     |                |
|------------------------------|----|-----|----------------|
| Polistirene / Polystyrene    | 57 | 121 | 080CS0909-5GP1 |
| Polistirene / Polystyrene    | 81 | 170 | 080CS0909-8GP1 |
| Policarbonato/ Polycarbonate | 57 | 145 | 080C0909-5GP1  |
| Policarbonato/ Polycarbonate | 81 | 202 | 080C0909-8GP1  |

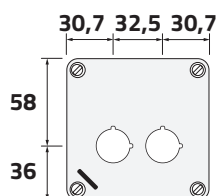
# Scatole in termoplastico 94x94

## Thermoplastic enclosures 94x94



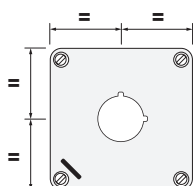
# Scatole in termoplastico 94x94

## Thermoplastic enclosures 94x94



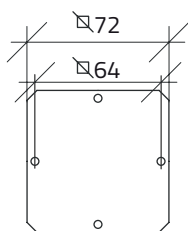
### Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

|                               | h  | g   | cod           |
|-------------------------------|----|-----|---------------|
| Polistirene / Polystyrene     | 57 | 119 | 080CS0909-5P2 |
| Polistirene / Polystyrene     | 81 | 168 | 080CS0909-8P2 |
| Policarbonato / Polycarbonate | 57 | 143 | 080C0909-5P2  |
| Policarbonato / Polycarbonate | 81 | 200 | 080C0909-8P2  |



### Coperchio con 1 foro Ø 30mm / 1-hole lid Ø 30mm

|                               | h  | g   | cod           |
|-------------------------------|----|-----|---------------|
| Polistirene / Polystyrene     | 81 | 168 | 080CS0909-8S1 |
| Policarbonato / Polycarbonate | 81 | 200 | 080C0909-8S1  |



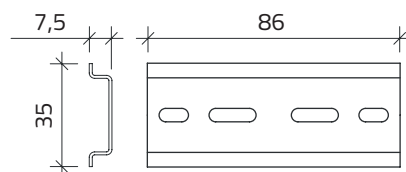
### Accessori adattabili / Adaptable accessories

|                                   |   |     |          |
|-----------------------------------|---|-----|----------|
| Piastra di fondo / Mounting plate | 1 | 100 | 080P0909 |
|-----------------------------------|---|-----|----------|

### Guida / Rail

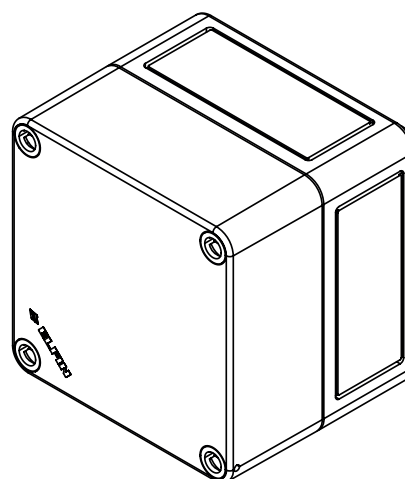
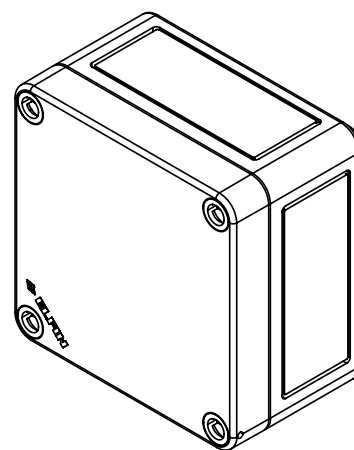
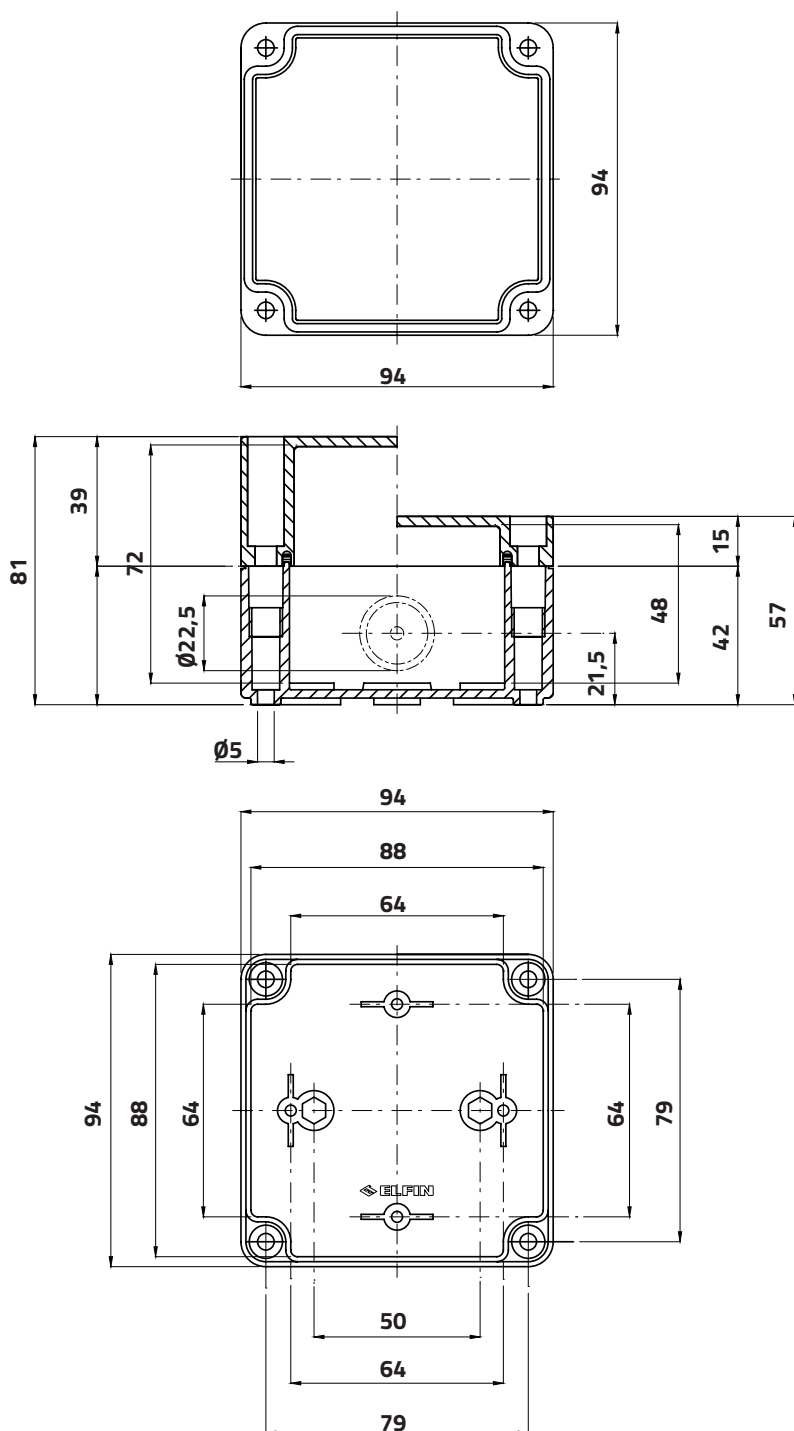
30

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# Scatole pulsantiera complete 94x94

## Assembled push-button enclosures 94x94





# Scatole pulsantiere complete 94x94

## Assembled push-button enclosures 94x94



### Coperchio con pulsante rosso a fungo Ø60

#### Lid with red mushroom push-button Ø60

sgancio rotazione / twist release

Polistirene / Polystyrene

57

166

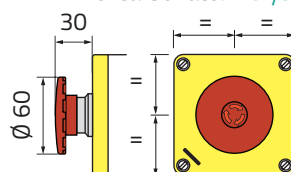
080CS0909-5GFFA

Policarbonato/ Polycarbonate

57

179

080C0909-5GFFA



### Coperchio con pulsante rosso a fungo sferico Ø90

#### Lid with red palm push-button Ø90

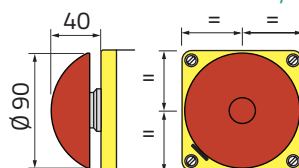
momentaneo / momentary

Policarbonato/ Polycarbonate

57

202

080C0909-5GF9M



### Coperchio con pulsante rosso a fungo sferico Ø90

#### Lid with red palm push-button Ø90

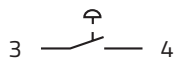
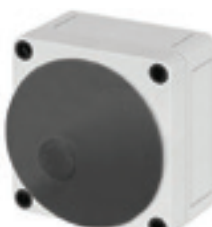
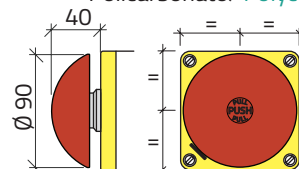
sgancio trazione / pull release

Policarbonato/ Polycarbonate

57

202

080C0909-5GF9T



### Coperchio con pulsante nero a fungo sferico Ø90

#### Lid with black palm push-button Ø90

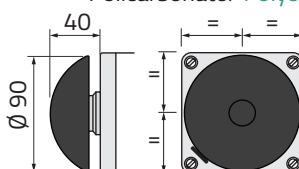
momentaneo / momentary

Policarbonato/ Polycarbonate

57

202

080C0909-5F9M



### Coperchio con pulsante nero a fungo sferico Ø90

#### Lid with black palm push-button Ø90

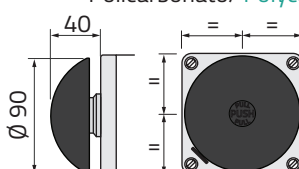
sgancio trazione / pull release

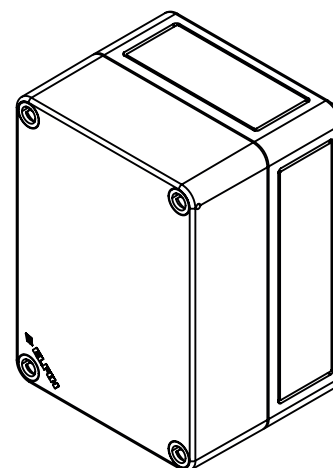
Policarbonato/ Polycarbonate

57

202

080C0909-5F9T



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# Scatole in termoplastico 94x130

## Thermoplastic enclosures 94x130



### Coperchio senza fori / Undrilled lid

|                              | h  | g   | cod         |
|------------------------------|----|-----|-------------|
| Polistirene / Polystyrene    | 57 | 152 | 080CS0913-5 |
| Polistirene / Polystyrene    | 81 | 213 | 080CS0913-8 |
| Policarbonato/ Polycarbonate | 57 | 181 | 080C0913-5  |
| Policarbonato/ Polycarbonate | 81 | 254 | 080C0913-8  |



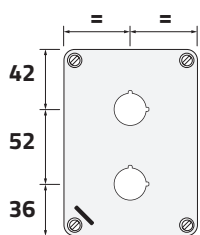
### Coperchio giallo senza fori / Undrilled yellow lid

|                              |    |     |              |
|------------------------------|----|-----|--------------|
| Polistirene / Polystyrene    | 57 | 152 | 080CS0913-5G |
| Polistirene / Polystyrene    | 81 | 213 | 080CS0913-8G |
| Policarbonato/ Polycarbonate | 57 | 181 | 080C0913-5G  |
| Policarbonato/ Polycarbonate | 81 | 254 | 080C0913-8G  |



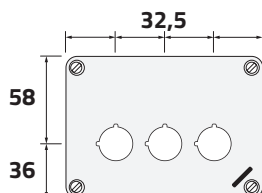
### Coperchio trasparente senza fori / Transparent Undrilled lid

|                              |    |     |             |
|------------------------------|----|-----|-------------|
| Policarbonato/ Polycarbonate | 57 | 166 | 080C0913-5T |
| Policarbonato/ Polycarbonate | 81 | 240 | 080C0913-8T |



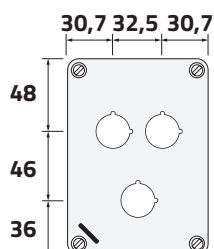
### Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

|                              |    |     |               |
|------------------------------|----|-----|---------------|
| Polistirene / Polystyrene    | 57 | 149 | 080CS0913-5P2 |
| Polistirene / Polystyrene    | 81 | 210 | 080CS0913-8P2 |
| Policarbonato/ Polycarbonate | 57 | 177 | 080C0913-5P2  |
| Policarbonato/ Polycarbonate | 81 | 250 | 080C0913-8P2  |



### Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

|                              |    |     |                |
|------------------------------|----|-----|----------------|
| Polistirene / Polystyrene    | 57 | 147 | 080CS0913-5P3L |
| Polistirene / Polystyrene    | 81 | 208 | 080CS0913-8P3L |
| Policarbonato/ Polycarbonate | 57 | 175 | 080C0913-5P3L  |
| Policarbonato/ Polycarbonate | 81 | 248 | 080C0913-8P3L  |

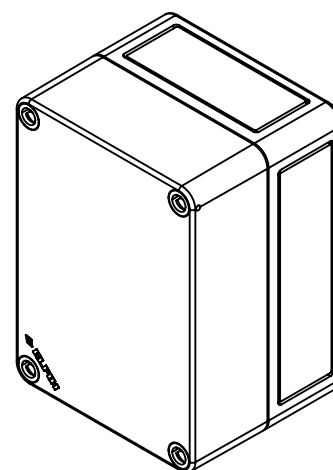
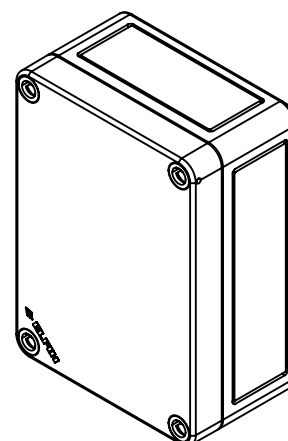
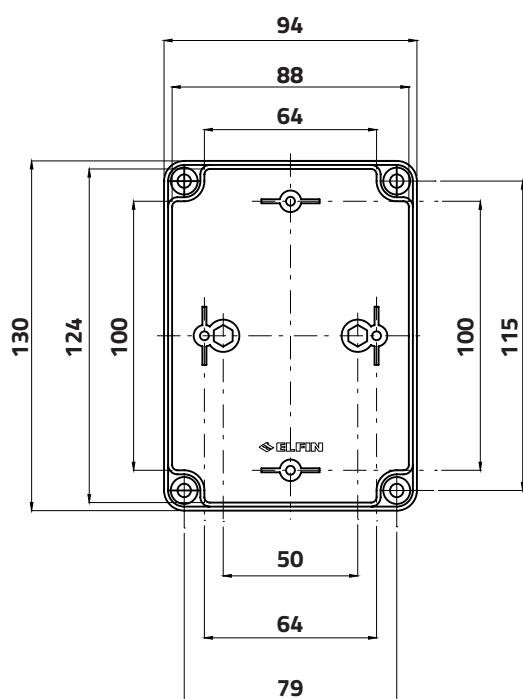
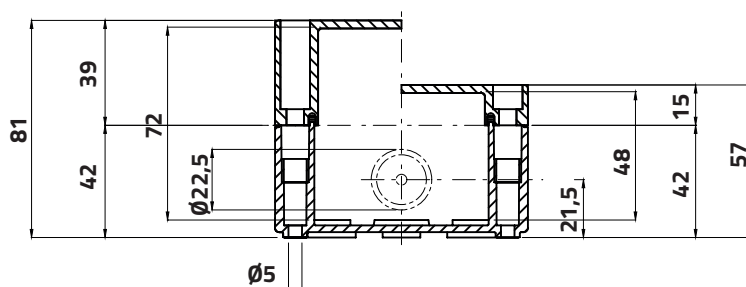
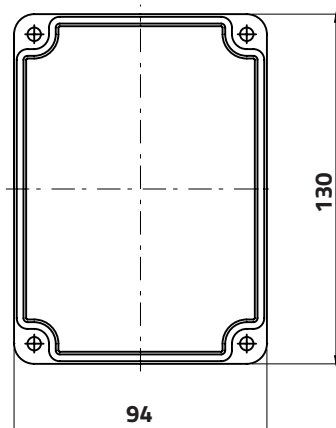


### Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

|                              |    |     |                |
|------------------------------|----|-----|----------------|
| Polistirene / Polystyrene    | 57 | 147 | 080CS0913-5P3C |
| Polistirene / Polystyrene    | 81 | 208 | 080CS0913-8P3C |
| Policarbonato/ Polycarbonate | 57 | 175 | 080C0913-5P3C  |
| Policarbonato/ Polycarbonate | 81 | 248 | 080C0913-8P3C  |

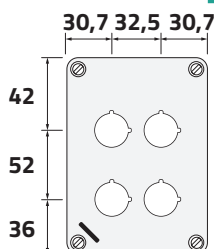
# Scatole in termoplastico 94x130

## Thermoplastic enclosures 94x130



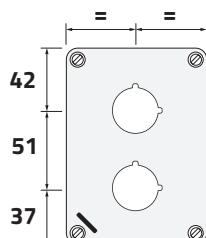
# Scatole in termoplastico 94x130

## Thermoplastic enclosures 94x130



### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                               | h  | g   | cod           |
|-------------------------------|----|-----|---------------|
| Polistirene / Polystyrene     | 57 | 145 | 080CS0913-5P4 |
| Polistirene / Polystyrene     | 81 | 206 | 080CS0913-8P4 |
| Policarbonato / Polycarbonate | 57 | 173 | 080C0913-5P4  |
| Policarbonato / Polycarbonate | 81 | 246 | 080C0913-8P4  |



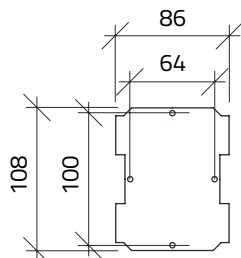
### Coperchio con 2 fori Ø 30mm / 2-hole lid Ø 30mm

|                               |    |     |               |
|-------------------------------|----|-----|---------------|
| Polistirene / Polystyrene     | 81 | 206 | 080CS0913-8S2 |
| Policarbonato / Polycarbonate | 81 | 246 | 080C0913-8S2  |



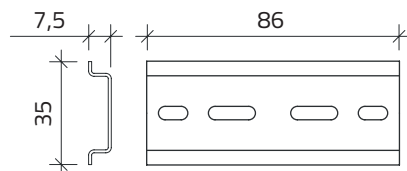
### Piastra di fondo / Mounting plate

|   |     |          |
|---|-----|----------|
| 1 | 148 | 080P0913 |
|---|-----|----------|



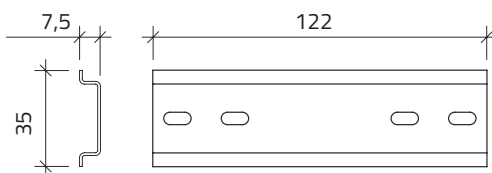
### Guida / Rail

|    |          |
|----|----------|
| 30 | 080G3508 |
|----|----------|



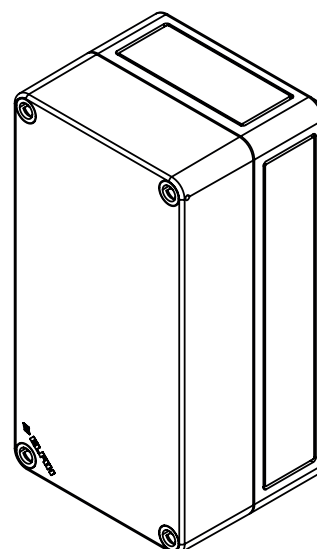
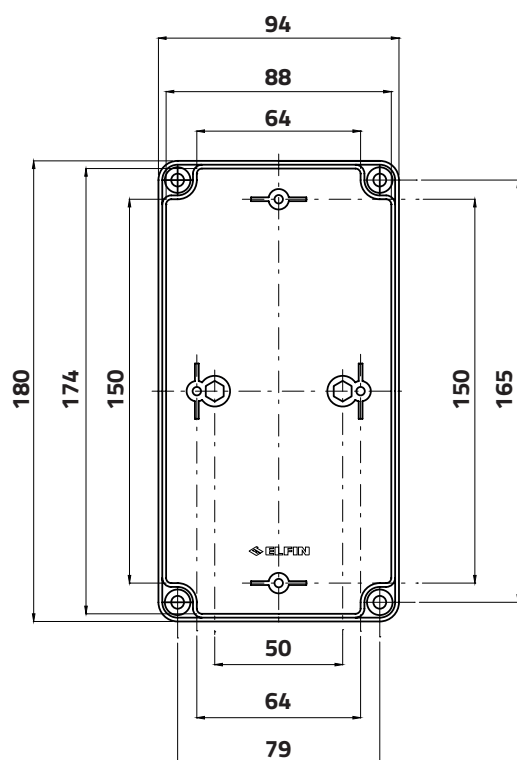
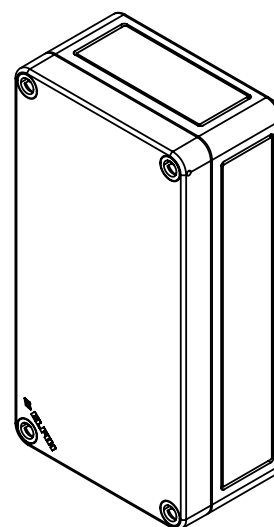
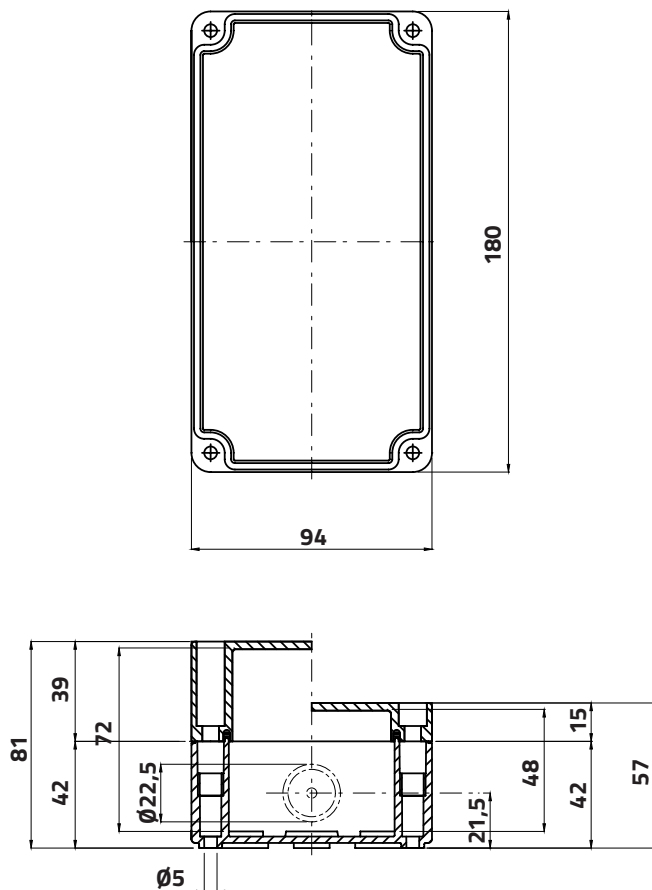
### Guida / Rail

|    |          |
|----|----------|
| 42 | 080G3512 |
|----|----------|



# Scatole in termoplastico 94x180

## Thermoplastic enclosures 94x180



# Scatole in termoplastico 94x180

## Thermoplastic enclosures 94x180



### Coperchio senza fori / Undrilled lid

|                              | h  | g   | cod         |
|------------------------------|----|-----|-------------|
| Polistirene / Polystyrene    | 57 | 201 | 080CS0918-5 |
| Polistirene / Polystyrene    | 81 | 263 | 080CS0918-8 |
| Policarbonato/ Polycarbonate | 57 | 241 | 080C0918-5  |
| Policarbonato/ Polycarbonate | 81 | 314 | 080C0918-8  |



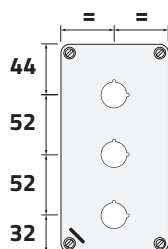
### Coperchio giallo senza fori / Undrilled yellow lid

|                              |    |     |              |
|------------------------------|----|-----|--------------|
| Polistirene / Polystyrene    | 57 | 201 | 080CS0918-5G |
| Polistirene / Polystyrene    | 81 | 263 | 080CS0918-8G |
| Policarbonato/ Polycarbonate | 57 | 241 | 080C0918-5G  |
| Policarbonato/ Polycarbonate | 81 | 314 | 080C0918-8G  |



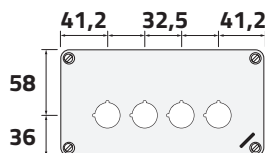
### Coperchio trasparente senza fori / Transparent Undrilled lid

|                              |    |     |             |
|------------------------------|----|-----|-------------|
| Policarbonato/ Polycarbonate | 57 | 228 | 080C0918-5T |
| Policarbonato/ Polycarbonate | 81 | 300 | 080C0918-8T |



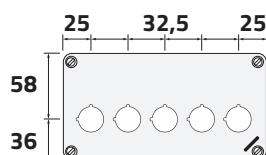
### Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

|                              |    |     |               |
|------------------------------|----|-----|---------------|
| Polistirene / Polystyrene    | 57 | 197 | 080CS0918-5P3 |
| Polistirene / Polystyrene    | 81 | 259 | 080CS0918-8P3 |
| Policarbonato/ Polycarbonate | 57 | 235 | 080C0918-5P3  |
| Policarbonato/ Polycarbonate | 81 | 308 | 080C0918-8P3  |



### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                              |    |     |                |
|------------------------------|----|-----|----------------|
| Polistirene / Polystyrene    | 57 | 195 | 080CS0918-5P4L |
| Polistirene / Polystyrene    | 81 | 257 | 080CS0918-8P4L |
| Policarbonato/ Polycarbonate | 57 | 233 | 080C0918-5P4L  |
| Policarbonato/ Polycarbonate | 81 | 306 | 080C0918-8P4L  |

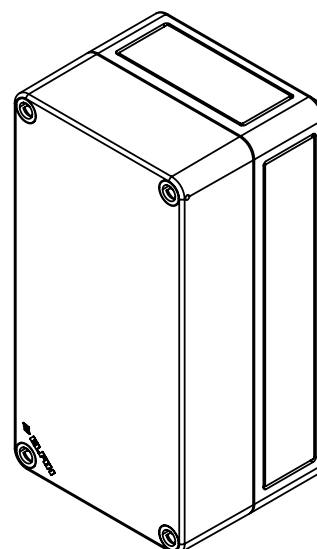
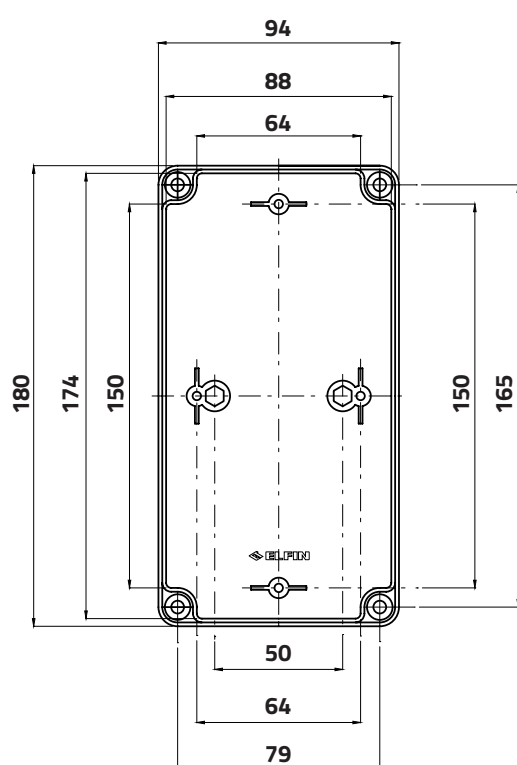
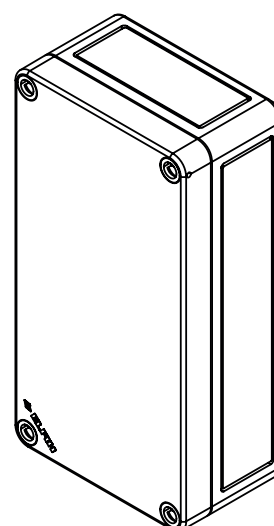
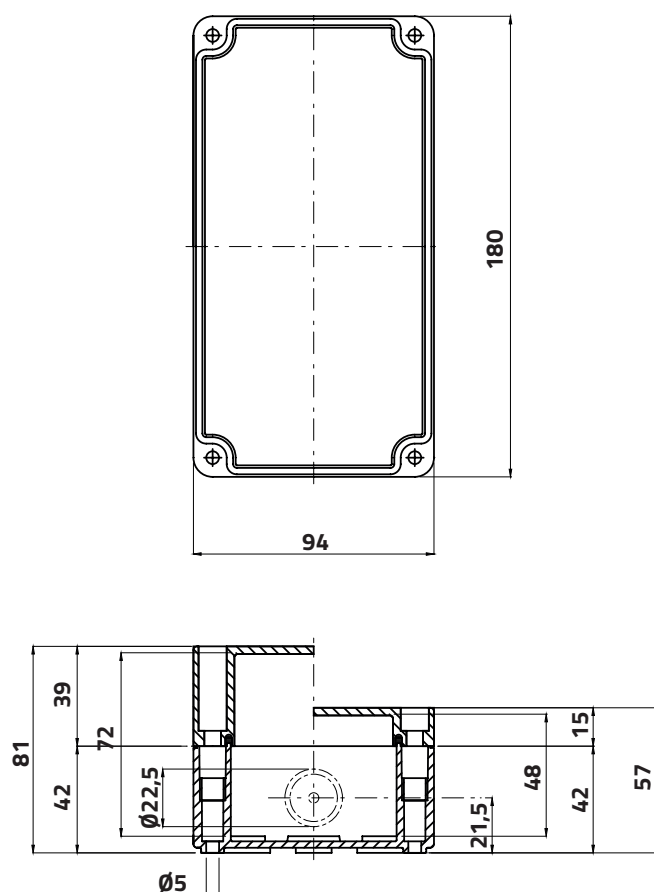


### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                              |    |     |                |
|------------------------------|----|-----|----------------|
| Polistirene / Polystyrene    | 57 | 193 | 080CS0918-5P5L |
| Polistirene / Polystyrene    | 81 | 255 | 080CS0918-8P5L |
| Policarbonato/ Polycarbonate | 57 | 231 | 080C0918-5P5L  |
| Policarbonato/ Polycarbonate | 81 | 304 | 080C0918-8P5L  |

# Scatole in termoplastico 94x180

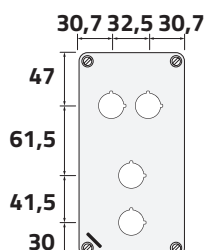
## Thermoplastic enclosures 94x180





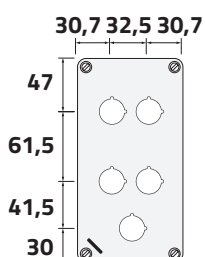
# Scatole in termoplastico 94x180

## Thermoplastic enclosures 94x180



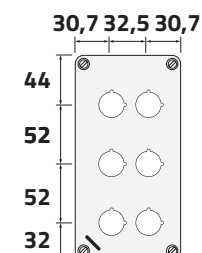
### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                              | h  | g   | cod            |
|------------------------------|----|-----|----------------|
| Polistirene / Polystyrene    | 57 | 193 | 080CS0918-5P4C |
| Polistirene / Polystyrene    | 81 | 255 | 080CS0918-8P4C |
| Policarbonato/ Polycarbonate | 57 | 231 | 080C0918-5P4C  |
| Policarbonato/ Polycarbonate | 81 | 304 | 080C0918-8P4C  |



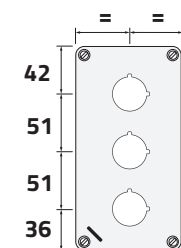
### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                              | h  | g   | cod            |
|------------------------------|----|-----|----------------|
| Polistirene / Polystyrene    | 57 | 193 | 080CS0918-5P5C |
| Polistirene / Polystyrene    | 81 | 255 | 080CS0918-8P5C |
| Policarbonato/ Polycarbonate | 57 | 231 | 080C0918-5P5C  |
| Policarbonato/ Polycarbonate | 81 | 304 | 080C0918-8P5C  |



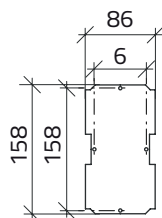
### Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 22mm

|                              | h  | g   | cod           |
|------------------------------|----|-----|---------------|
| Polistirene / Polystyrene    | 57 | 191 | 080CS0918-5P6 |
| Polistirene / Polystyrene    | 81 | 253 | 080CS0918-8P6 |
| Policarbonato/ Polycarbonate | 57 | 229 | 080C0918-5P6  |
| Policarbonato/ Polycarbonate | 81 | 302 | 080C0918-8P6  |



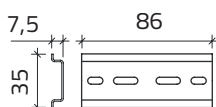
### Coperchio con 3 fori Ø 30mm / 3-hole lid Ø 30mm

|                              | h  | g   | cod           |
|------------------------------|----|-----|---------------|
| Polistirene / Polystyrene    | 81 | 308 | 080CS0918-8S3 |
| Policarbonato/ Polycarbonate | 81 | 308 | 080C0918-8S3  |



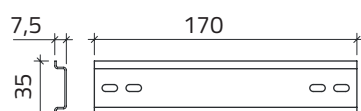
### Piastra di fondo / Mounting plate

|  | h | g   | cod      |
|--|---|-----|----------|
|  | 1 | 210 | 080P0918 |



### Guida / Rail

|  | h  | g | cod      |
|--|----|---|----------|
|  | 30 |   | 080G3508 |



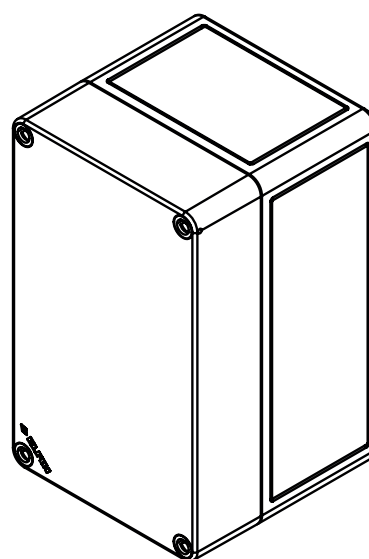
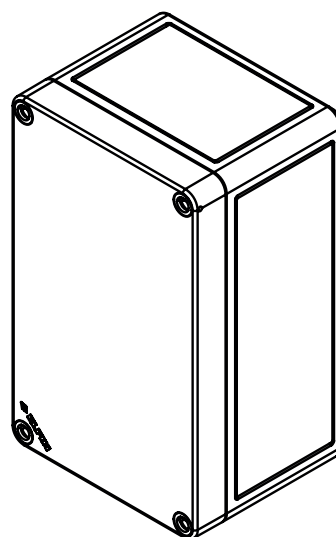
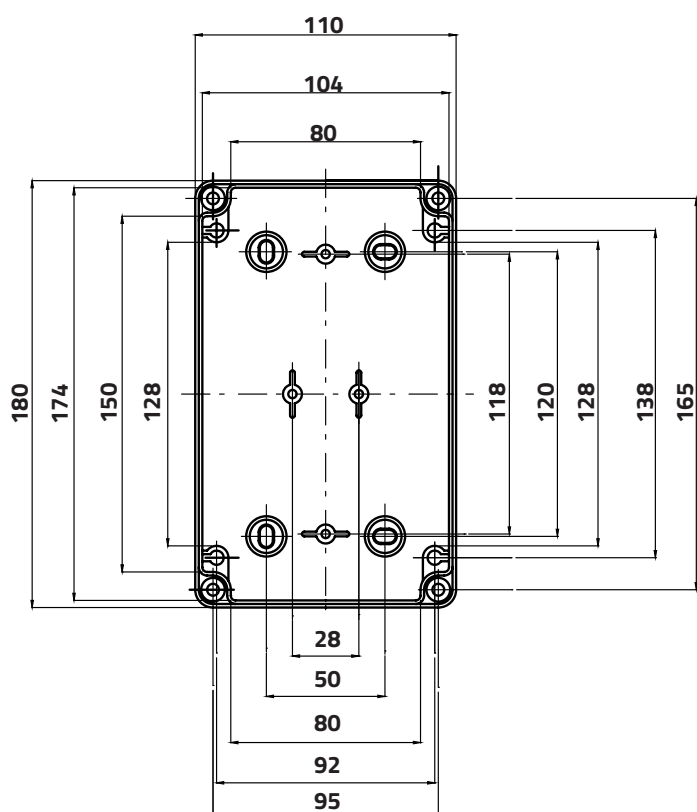
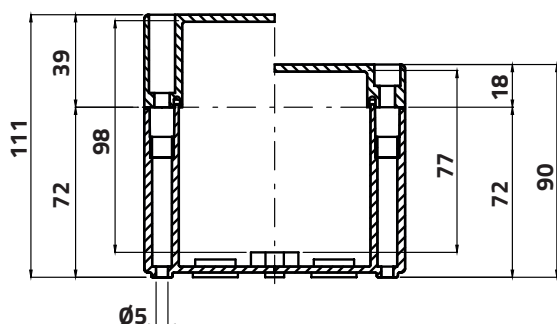
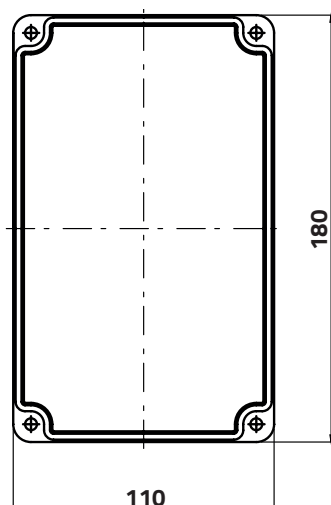
### Guida / Rail

|  | h  | g | cod      |
|--|----|---|----------|
|  | 59 |   | 080G3517 |



# Scatole in termoplastico 110x180

## Thermoplastic enclosures 110x180



# Scatole in termoplastico 110x180

## Thermoplastic enclosures 110x180



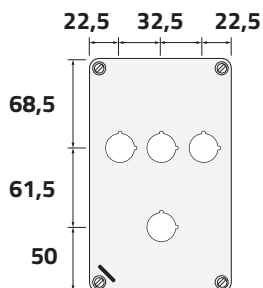
### Coperchio senza fori / Undrilled lid

|                              | h   | g   | cod          |
|------------------------------|-----|-----|--------------|
| Polistirene / Polystyrene    | 90  | 380 | 080CS1118-9  |
| Polistirene / Polystyrene    | 111 | 360 | 080CS1118-11 |
| Policarbonato/ Polycarbonate | 90  | 380 | 080C1118-9   |
| Policarbonato/ Polycarbonate | 111 | 430 | 080C1118-11  |



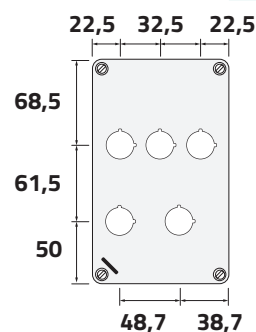
### Coperchio trasparente senza fori / Transparent Undrilled lid

|                              |     |     |              |
|------------------------------|-----|-----|--------------|
| Policarbonato/ Polycarbonate | 90  | 374 | 080C1118-9T  |
| Policarbonato/ Polycarbonate | 111 | 426 | 080C1118-11T |



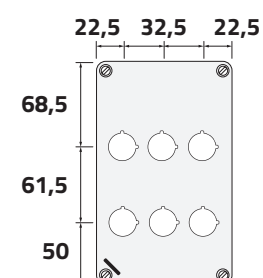
### Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

|                              |    |     |                |
|------------------------------|----|-----|----------------|
| Polistirene / Polystyrene    | 90 | 314 | 080CS1118-9P4C |
| Policarbonato/ Polycarbonate | 90 | 376 | 080C1118-9P4C  |



### Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

|                              |    |     |                |
|------------------------------|----|-----|----------------|
| Polistirene / Polystyrene    | 90 | 314 | 080CS1118-9P5C |
| Policarbonato/ Polycarbonate | 90 | 376 | 080C1118-9P5C  |

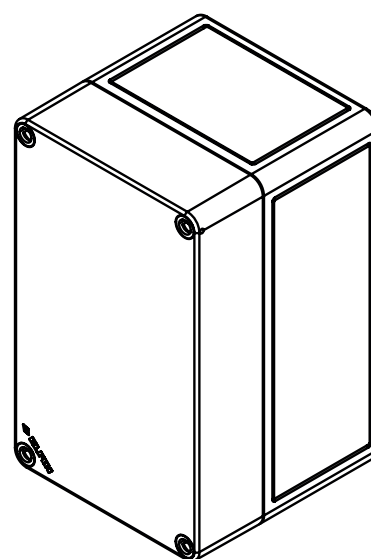
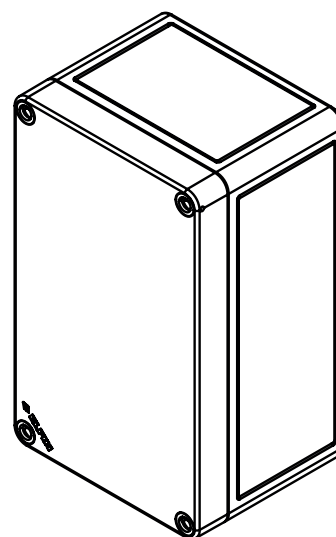
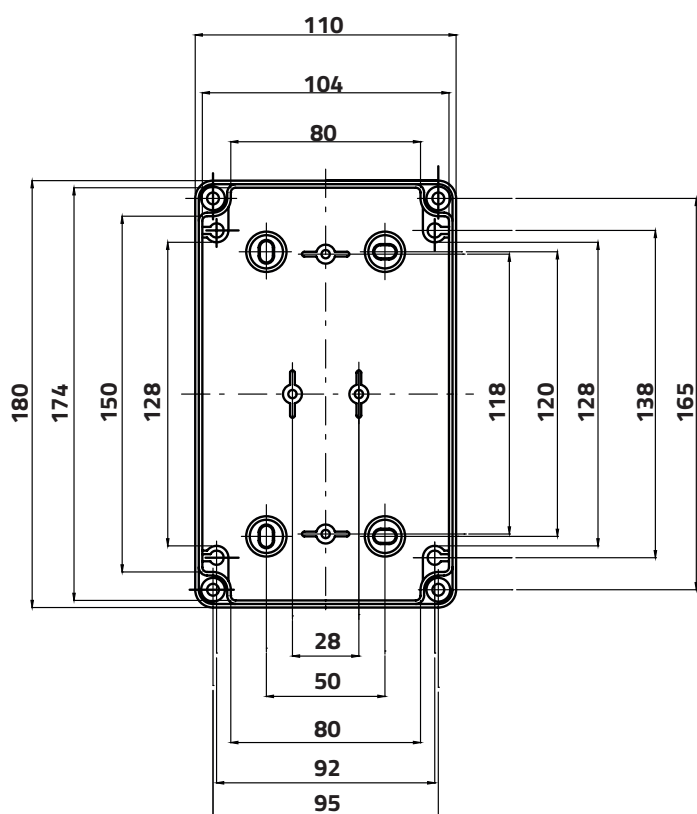
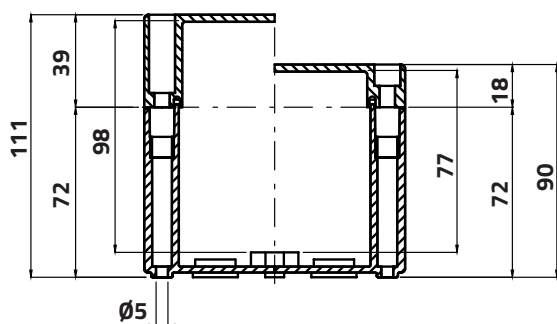
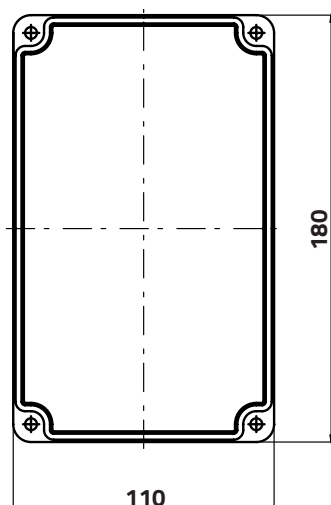


### Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 22mm

|                              |    |     |               |
|------------------------------|----|-----|---------------|
| Polistirene / Polystyrene    | 90 | 314 | 080CS1118-9P6 |
| Policarbonato/ Polycarbonate | 90 | 376 | 080C1118-9P6  |

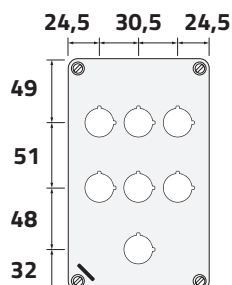
# Scatole in termoplastico 110x180

## Thermoplastic enclosures 110x180



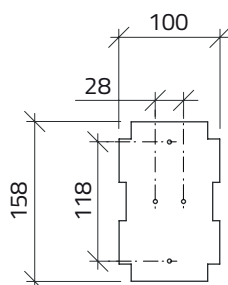
# Scatole in termoplastico 110x180

## Thermoplastic enclosures 110x180



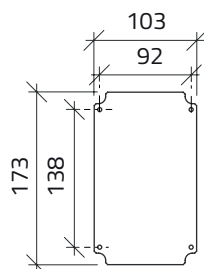
### Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

|                              |    |     |                       |
|------------------------------|----|-----|-----------------------|
| Polistirene / Polystyrene    | 90 | 314 | <b>080CS1118-9P7C</b> |
| Policarbonato/ Polycarbonate | 90 | 376 | <b>080C1118-9P7C</b>  |



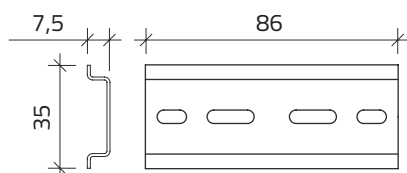
### Piastra di fondo / Mounting plate

|   |     |                 |
|---|-----|-----------------|
| 1 | 270 | <b>080P1118</b> |
|---|-----|-----------------|



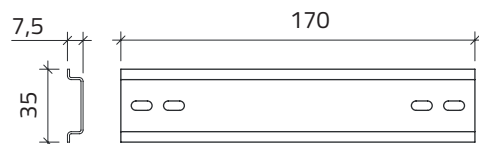
### Piastra superiore / Upper plate

|   |     |                  |
|---|-----|------------------|
| 2 | 285 | <b>080PS1118</b> |
|---|-----|------------------|



### Guida / Rail

|    |                 |
|----|-----------------|
| 85 | <b>080G3508</b> |
|----|-----------------|

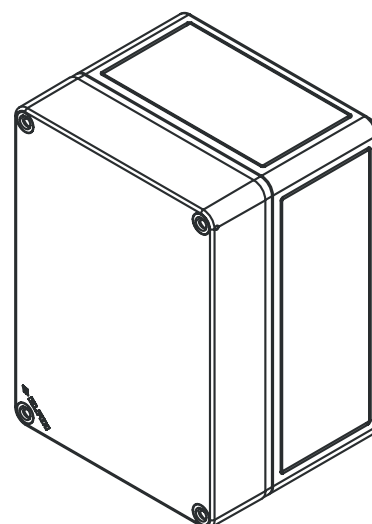
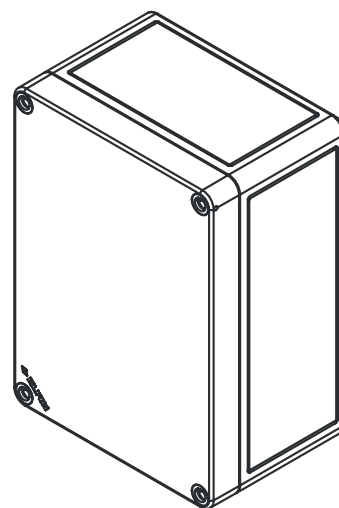
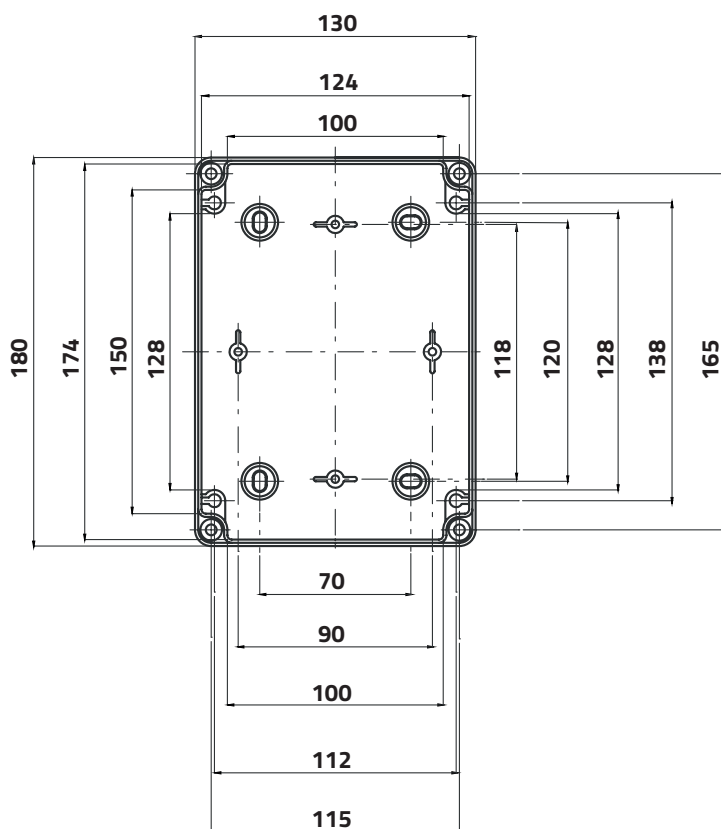
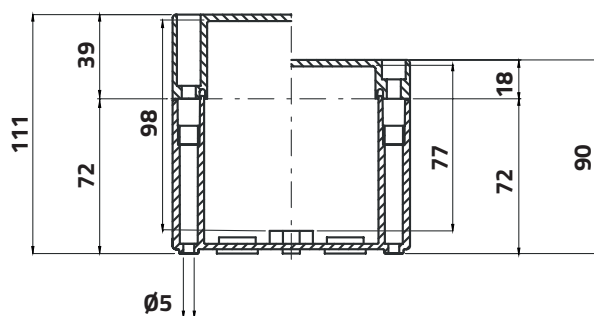
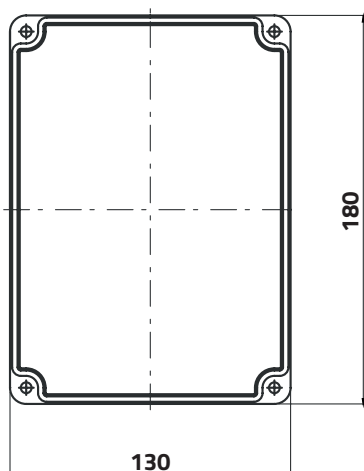


### Guida / Rail

|    |                 |
|----|-----------------|
| 59 | <b>080G3517</b> |
|----|-----------------|

# Scatole in termoplastico 130x180

## Thermoplastic enclosures 130x180



# Scatole in termoplastico 130x180

## Thermoplastic enclosures 130x180



### Coperchio senza fori / Undrilled lid

|                              | h   | g   | cod                 |
|------------------------------|-----|-----|---------------------|
| Polistirene / Polystyrene    | 90  | 380 | <b>080CS1318-9</b>  |
| Polistirene / Polystyrene    | 111 | 360 | <b>080CS1318-11</b> |
| Policarbonato/ Polycarbonate | 90  | 380 | <b>080C1318-9</b>   |
| Policarbonato/ Polycarbonate | 111 | 430 | <b>080C1318-11</b>  |

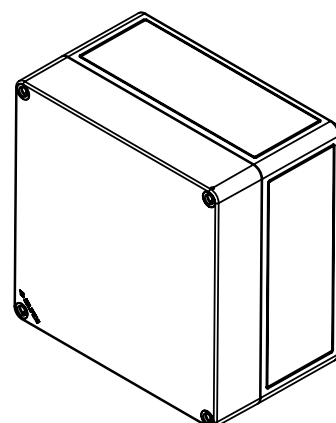
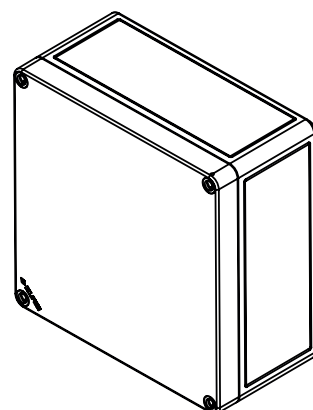
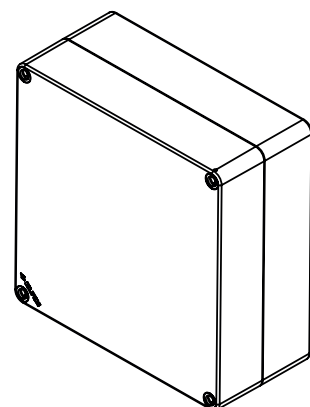
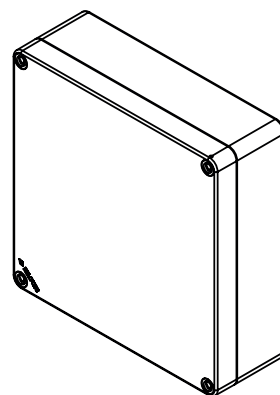
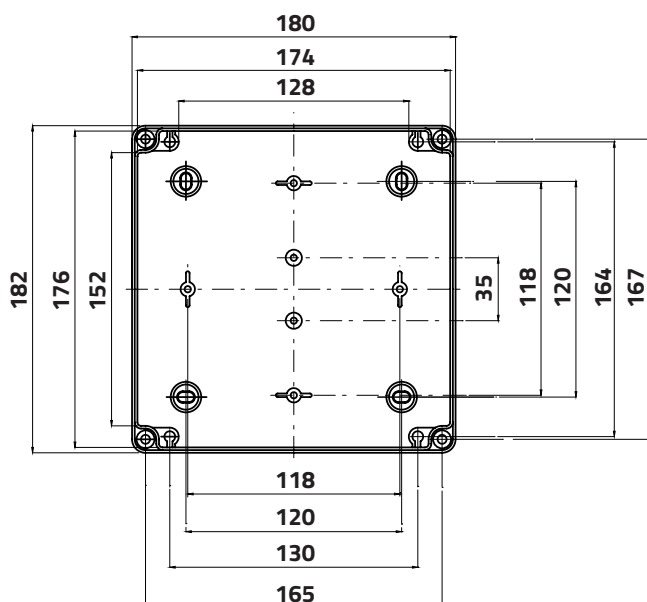
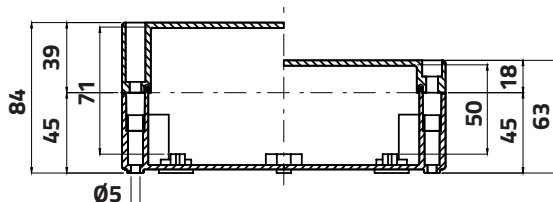
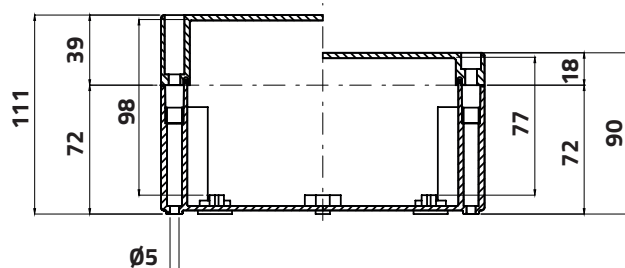
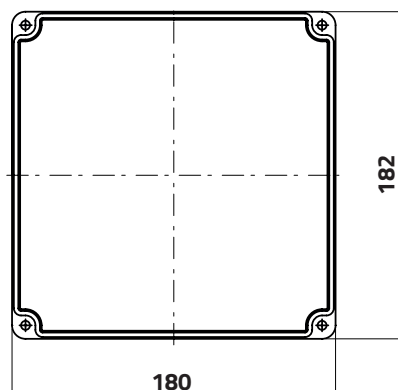


### Coperchio trasparente senza fori / Transparent Undrilled lid

|                              |     |     |                     |
|------------------------------|-----|-----|---------------------|
| Policarbonato/ Polycarbonate | 90  | 374 | <b>080C1318-9T</b>  |
| Policarbonato/ Polycarbonate | 111 | 426 | <b>080C1318-11T</b> |

# Scatole in termoplastico 180x182

## Thermoplastic enclosures 180x182





# Scatole in termoplastico 180x182

## Thermoplastic enclosures 180x182

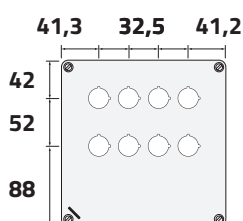


### Coperchio senza fori / Undrilled lid

|                              | h   | g   | cod          |
|------------------------------|-----|-----|--------------|
| Polistirene / Polystyrene    | 90  | 452 | 080CS1818-9  |
| Polistirene / Polystyrene    | 111 | 500 | 080CS1818-11 |
| Policarbonato/ Polycarbonate | 63  | 480 | 080C1818-6   |
| Policarbonato/ Polycarbonate | 84  | 550 | 080C1818-8   |
| Policarbonato/ Polycarbonate | 90  | 545 | 080C1818-9   |
| Policarbonato/ Polycarbonate | 111 | 600 | 080C1818-11  |

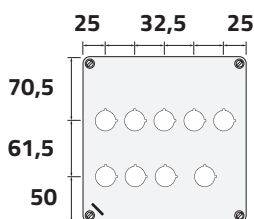
### Coperchio trasparente senza fori / Transparent Undrilled lid

|                              |     |     |              |
|------------------------------|-----|-----|--------------|
| Policarbonato/ Polycarbonate | 63  | 465 | 080C1818-6T  |
| Policarbonato/ Polycarbonate | 84  | 520 | 080C1818-8T  |
| Policarbonato/ Polycarbonate | 90  | 530 | 080C1818-9T  |
| Policarbonato/ Polycarbonate | 111 | 569 | 080C1818-11T |



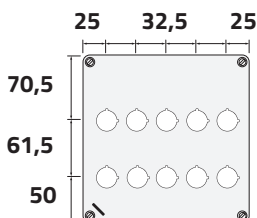
### Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

|                              |    |     |              |
|------------------------------|----|-----|--------------|
| Policarbonato/ Polycarbonate | 90 | 520 | 080C1818-9P8 |
|------------------------------|----|-----|--------------|



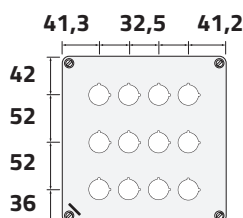
### Coperchio con 9 fori Ø 22mm / 9-hole lid Ø 22mm

|                              |    |     |               |
|------------------------------|----|-----|---------------|
| Policarbonato/ Polycarbonate | 90 | 515 | 080C1818-9P9C |
|------------------------------|----|-----|---------------|



### Coperchio con 10 fori Ø 22mm / 10-hole lid Ø 22mm

|                              |    |     |               |
|------------------------------|----|-----|---------------|
| Policarbonato/ Polycarbonate | 90 | 515 | 080C1818-9P10 |
|------------------------------|----|-----|---------------|

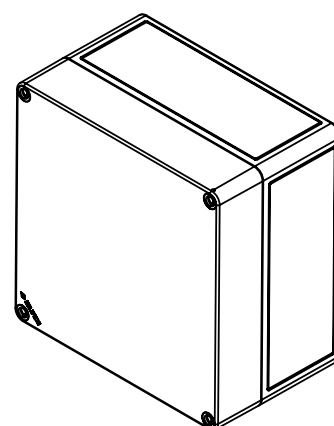
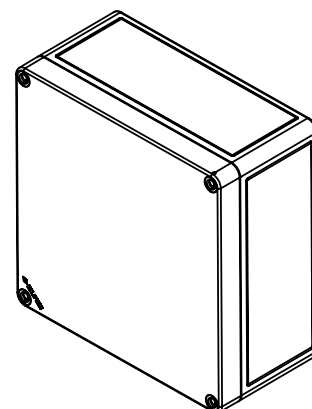
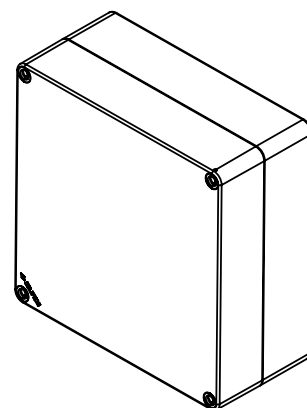
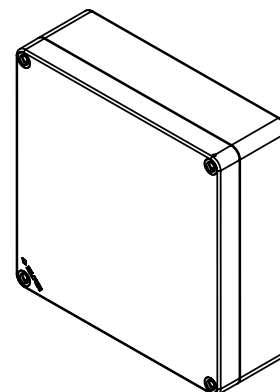
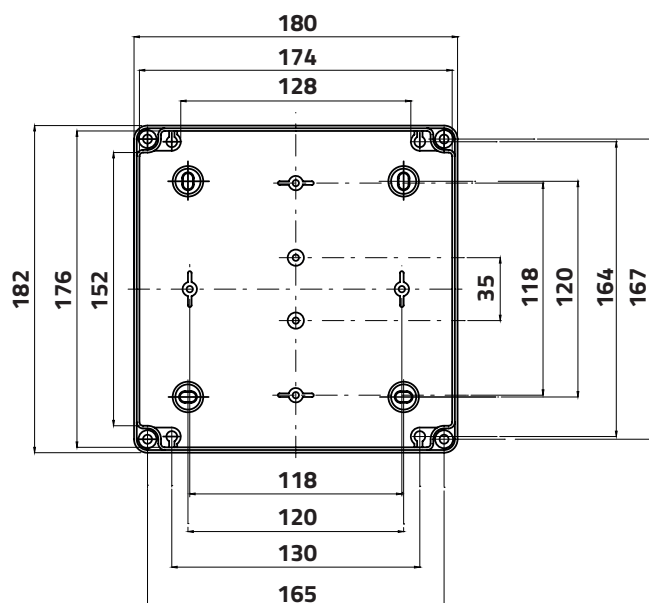
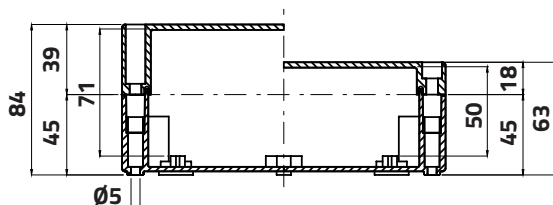
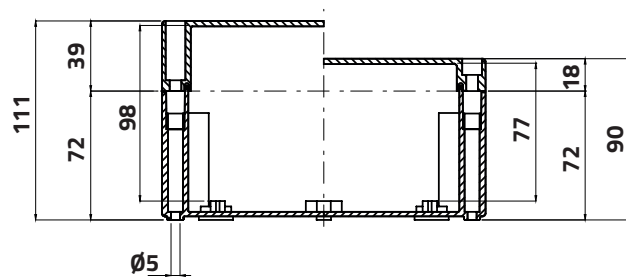
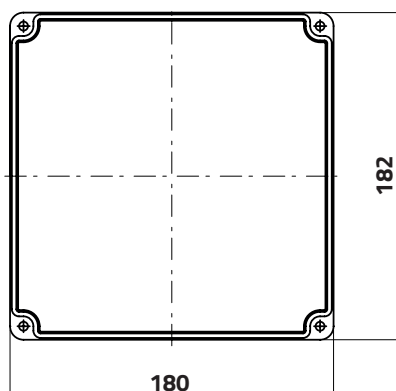


### Coperchio con 12 fori Ø 22mm / 12-hole lid Ø 22mm

|                              |    |     |               |
|------------------------------|----|-----|---------------|
| Policarbonato/ Polycarbonate | 90 | 515 | 080C1818-9P12 |
|------------------------------|----|-----|---------------|

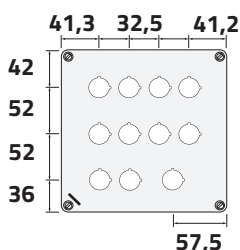
# Scatole in termoplastico 180x182

## Thermoplastic enclosures 180x182



# Scatole in termoplastico 180x182

## Thermoplastic enclosures 180x182



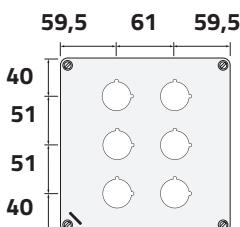
### Coperchio con 11 fori Ø 22mm / 11-hole lid Ø 22mm

Policarbonato/ Polycarbonate

90

515

080C1818-9P11C



### Coperchio con 6 fori Ø 30mm / 6-hole lid Ø 30mm

Policarbonato/ Polycarbonate

90

515

080C1818-9S6

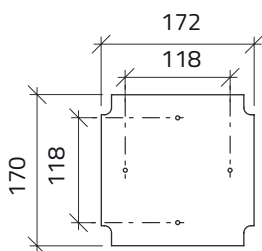


### Piastra di fondo / Mounting plate

1,5

425

080P1818

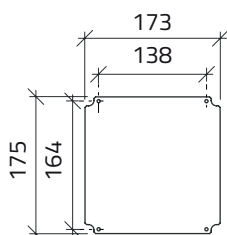


### Piastra superiore / Upper plate

2

185

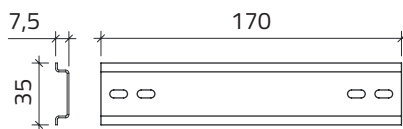
080PS1818



### Guida / Rail

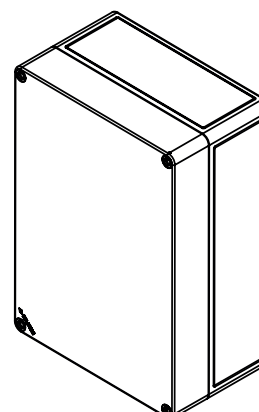
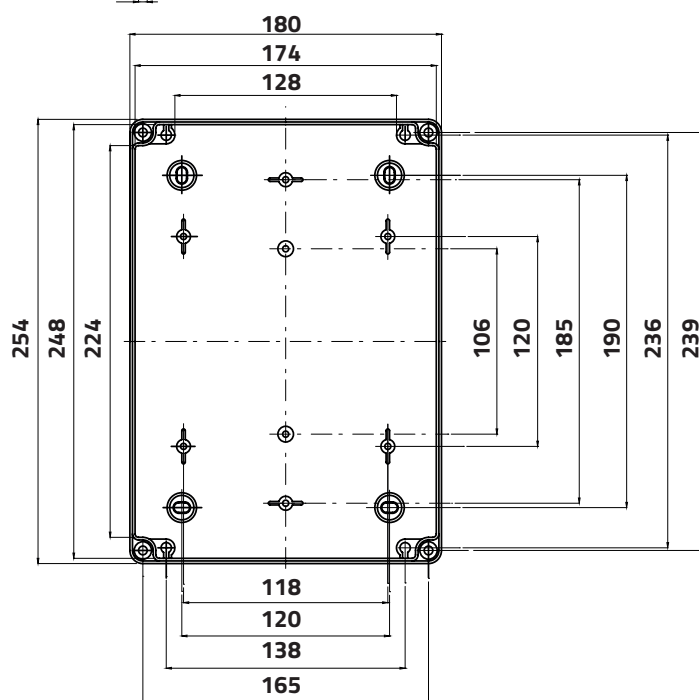
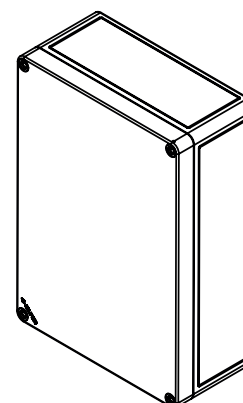
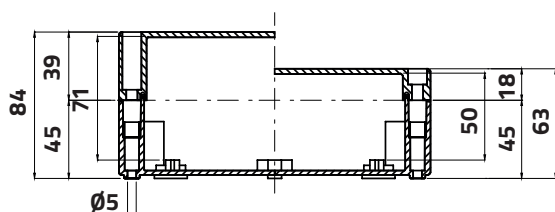
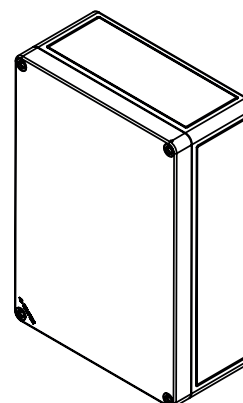
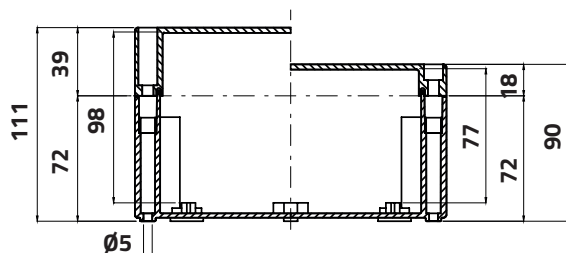
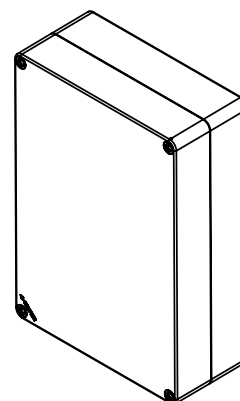
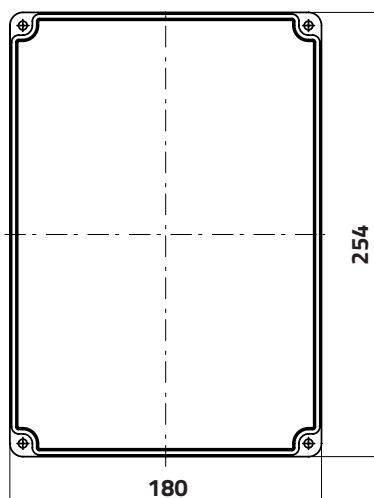
59

080G3517



# Scatole in termoplastico 180x254

## Thermoplastic enclosures 180x254



# Scatole in termoplastico 180x254

## Thermoplastic enclosures 180x254

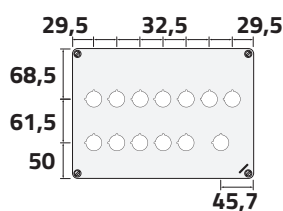


### Coperchio senza fori / Undrilled lid

|                              | h   | g   | cod          |
|------------------------------|-----|-----|--------------|
| Polistirene / Polystyrene    | 90  | 595 | 080CS1825-9  |
| Polistirene / Polystyrene    | 111 | 694 | 080CS1825-11 |
| Policarbonato/ Polycarbonate | 63  | 615 | 080C1825-6   |
| Policarbonato/ Polycarbonate | 84  | 670 | 080C1825-8   |
| Policarbonato/ Polycarbonate | 90  | 720 | 080C1825-9   |
| Policarbonato/ Polycarbonate | 111 | 775 | 080C1825-11  |

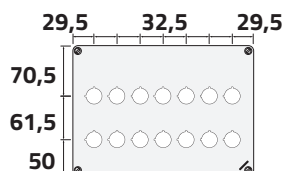
### Coperchio trasparente senza fori / Transparent Undrilled lid

|                              |     |     |              |
|------------------------------|-----|-----|--------------|
| Policarbonato/ Polycarbonate | 63  | 590 | 080C1825-6T  |
| Policarbonato/ Polycarbonate | 84  | 640 | 080C1825-8T  |
| Policarbonato/ Polycarbonate | 90  | 695 | 080C1825-9T  |
| Policarbonato/ Polycarbonate | 111 | 745 | 080C1825-11T |



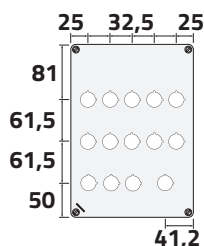
### Coperchio con 13 fori Ø 22mm / 13-hole lid Ø 22mm

|                              |    |     |                |
|------------------------------|----|-----|----------------|
| Policarbonato/ Polycarbonate | 90 | 694 | 080C1825-9P13C |
|------------------------------|----|-----|----------------|



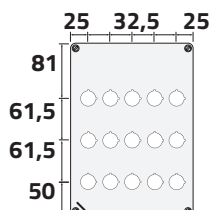
### Coperchio con 14 fori Ø 22mm / 14-hole lid Ø 22mm

|                              |    |     |               |
|------------------------------|----|-----|---------------|
| Policarbonato/ Polycarbonate | 90 | 694 | 080C1825-9P14 |
|------------------------------|----|-----|---------------|



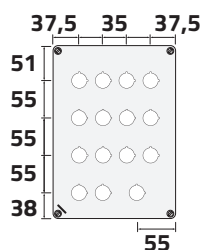
### Coperchio con 14 fori Ø 22mm / 14-hole lid Ø 22mm

|                              |    |     |                |
|------------------------------|----|-----|----------------|
| Policarbonato/ Polycarbonate | 90 | 694 | 080C1825-9P14C |
|------------------------------|----|-----|----------------|



### Coperchio con 15 fori Ø 22mm / 15-hole lid Ø 22mm

|                              |    |     |               |
|------------------------------|----|-----|---------------|
| Policarbonato/ Polycarbonate | 90 | 694 | 080C1825-9P15 |
|------------------------------|----|-----|---------------|



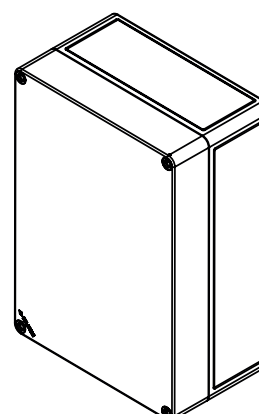
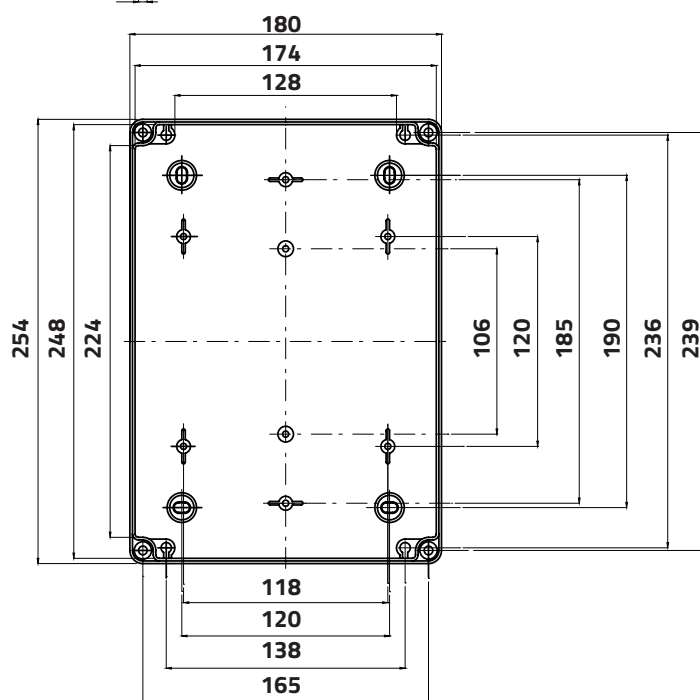
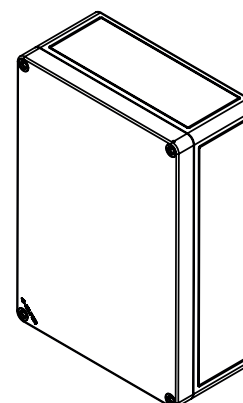
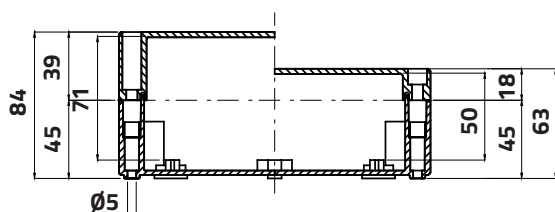
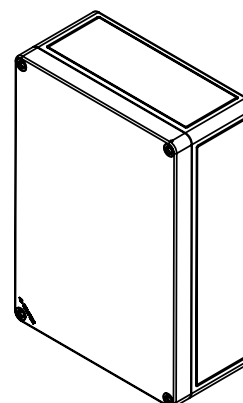
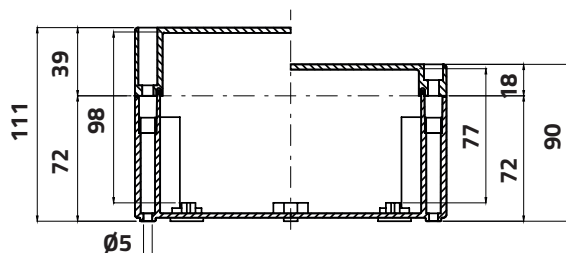
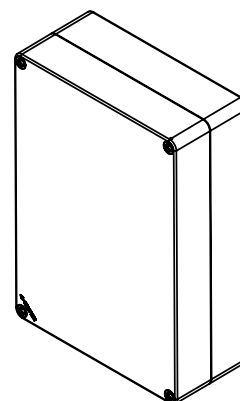
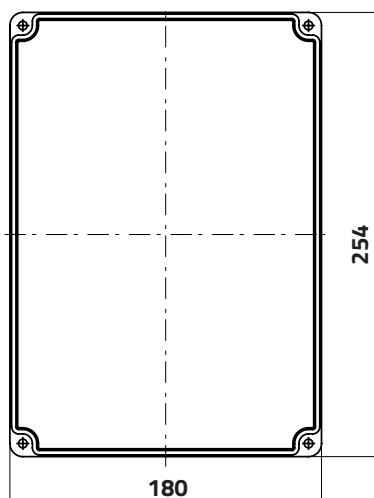
### Coperchio con 15 fori Ø 22mm / 15-hole lid Ø 22mm

|                              |    |     |                |
|------------------------------|----|-----|----------------|
| Policarbonato/ Polycarbonate | 90 | 694 | 080C1825-9P15C |
|------------------------------|----|-----|----------------|



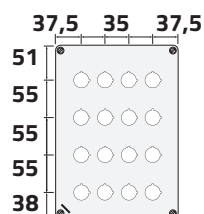
# Scatole in termoplastico 180x254

## Thermoplastic enclosures 180x254



# Scatole in termoplastico 180x254

## Thermoplastic enclosures 180x254



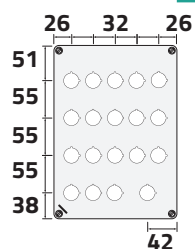
### Coperchio con 16 fori Ø 22mm / 16-hole lid Ø 22mm

Policarbonato/ Polycarbonate

90

694

080C1825-9P16



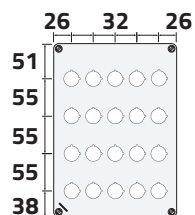
### Coperchio con 19 fori Ø 22mm / 19-hole lid Ø 22mm

Policarbonato/ Polycarbonate

90

686

080C1825-9P19C



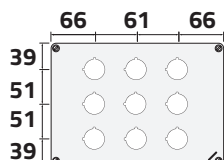
### Coperchio con 20 fori Ø 22mm / 20-hole lid Ø 22mm

Policarbonato/ Polycarbonate

90

686

080C1825-9P20



### Coperchio con 9 fori Ø 30mm / 9-hole lid Ø 30mm

Policarbonato/ Polycarbonate

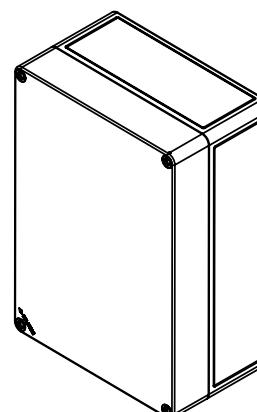
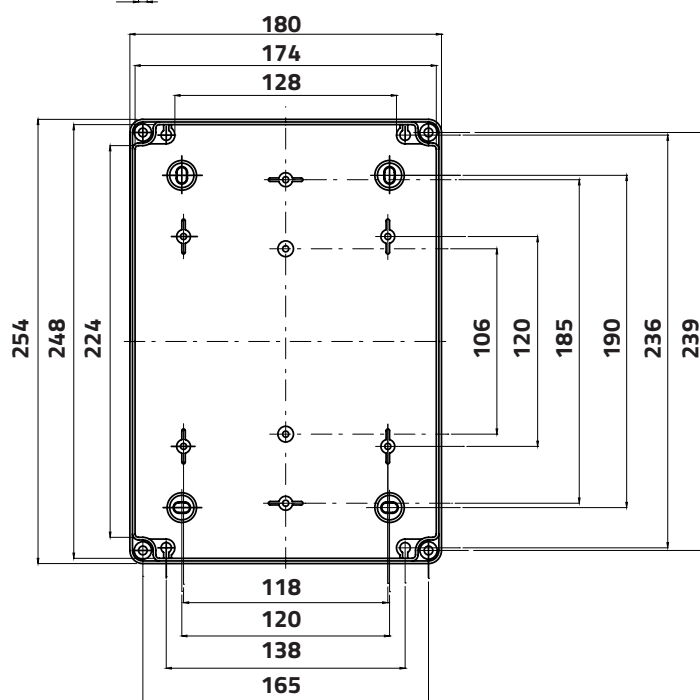
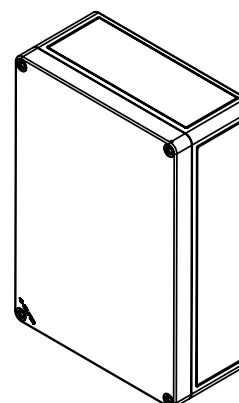
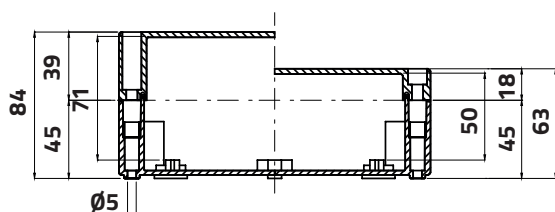
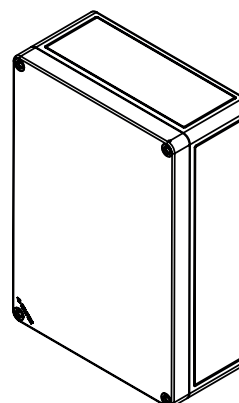
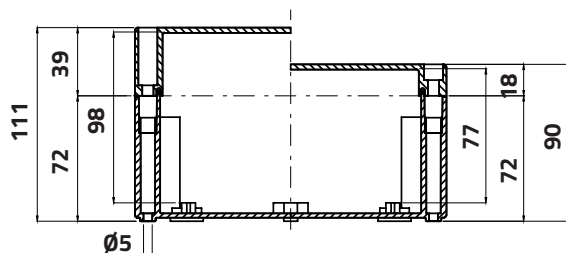
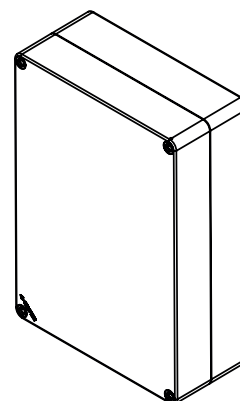
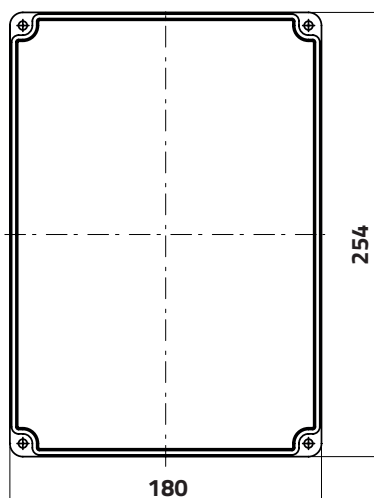
90

691

080C1825-9S9

# Scatole in termoplastico 180x254

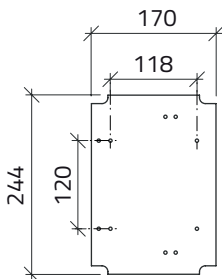
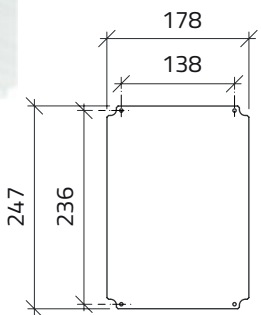
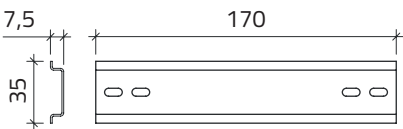
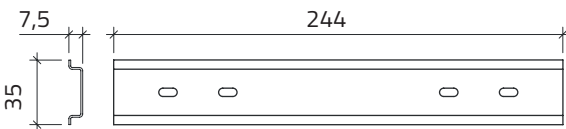
## Thermoplastic enclosures 180x254





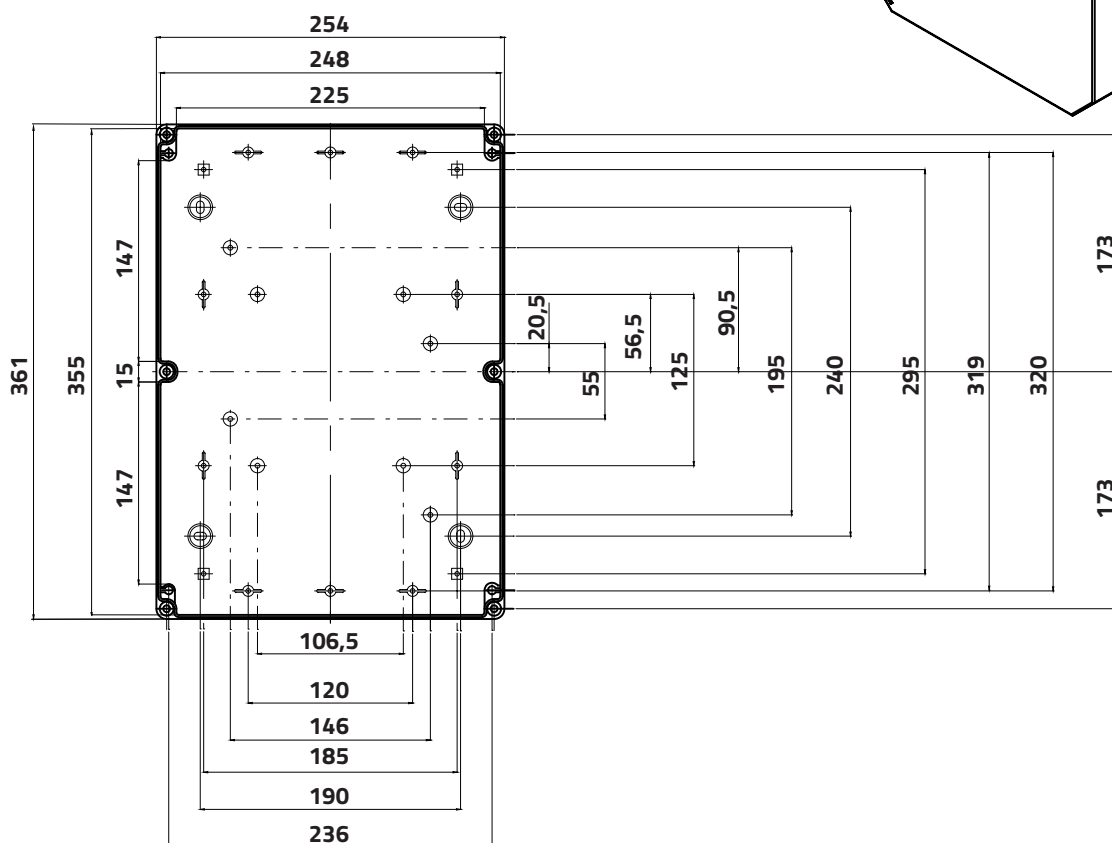
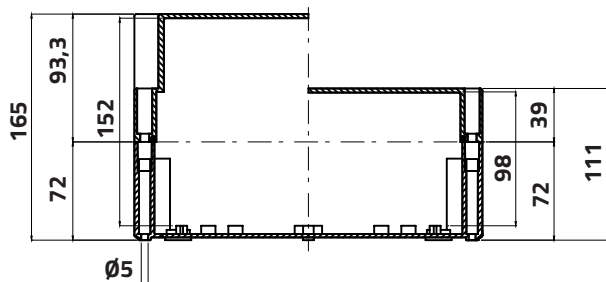
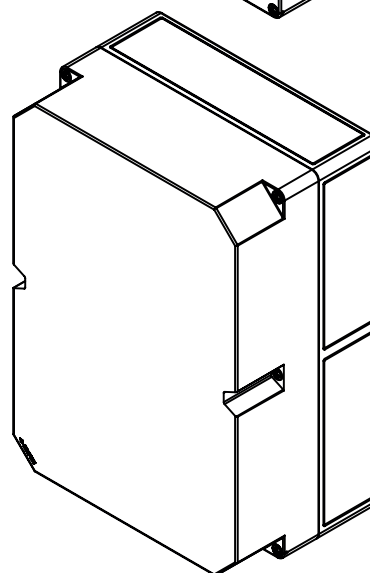
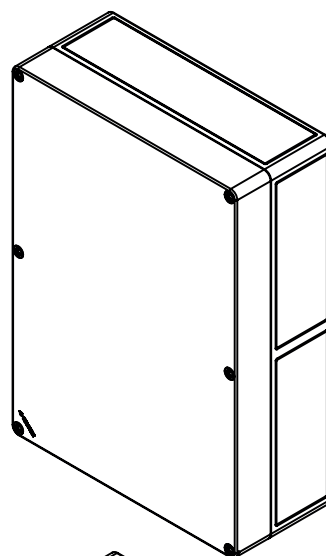
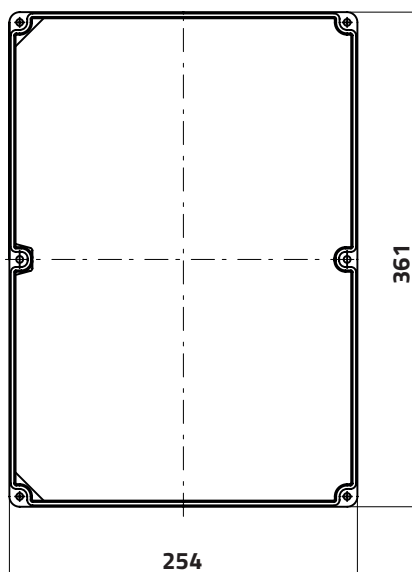
# Scatole in termoplastico 180x254

## Thermoplastic enclosures 180x254

|                                                                                                                                                                                                                     | h   | g   | cod              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|------------------|
| <br><br><b>Piastra di fondo / Plate</b>           | 1,5 | 613 | <b>080P1825</b>  |
| <br><br><b>Piastra superiore / Upper plate</b> | 2   | 185 | <b>080PS1825</b> |
| <br><br><b>Guida / Rail</b>                   | 59  |     | <b>080G3517</b>  |
| <br><br><b>Guida / Rail</b>                  | 77  |     | <b>080G3522</b>  |

# Scatole in termoplastico 254x361

## Thermoplastic enclosures 254x361



# Scatole in termoplastico 254x361

## Thermoplastic enclosures 254x361



### Coperchio senza fori / Undrilled lid

|                              | h   | g    | cod          |
|------------------------------|-----|------|--------------|
| Polistirene / Polystyrene    | 111 | 1140 | 080CS2536-11 |
| Polistirene / Polystyrene    | 165 | 1140 | 080CS2536-16 |
| Policarbonato/ Polycarbonate | 111 | 1390 | 080C2536-11  |
| Policarbonato/ Polycarbonate | 165 | 1720 | 080C2536-16  |



### Coperchio trasparente senza fori / Transparent Undrilled lid

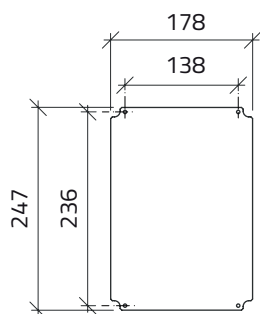
|                              |     |      |              |
|------------------------------|-----|------|--------------|
| Policarbonato/ Polycarbonate | 111 | 1330 | 080C2536-11T |
| Policarbonato/ Polycarbonate | 165 | 1640 | 080C2536-16T |



### Piastra di fondo / Mounting plate

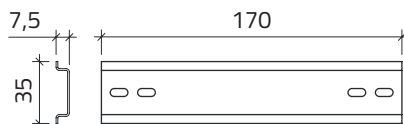
|     |     |          |
|-----|-----|----------|
| 1,5 | 613 | 080P1825 |
|-----|-----|----------|

(Utilizzare 2 piastre 080P1825 / No. 2 plates 080P1825 are to be fitted)



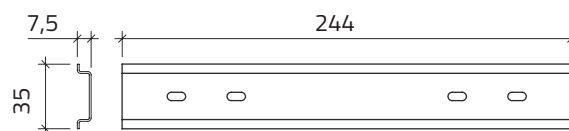
### Guida / Rail

|    |          |
|----|----------|
| 59 | 080G3517 |
|----|----------|



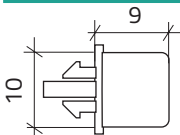
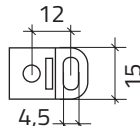
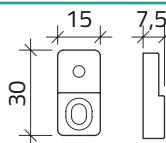
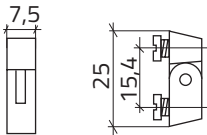
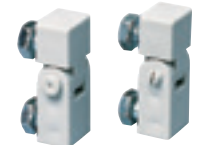
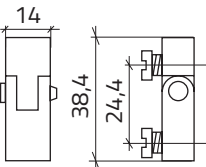
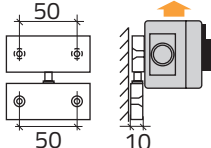
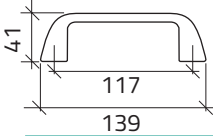
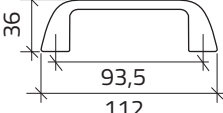
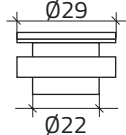
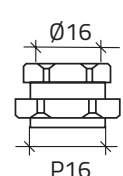
### Guida / Rail

|    |          |
|----|----------|
| 77 | 080G3522 |
|----|----------|



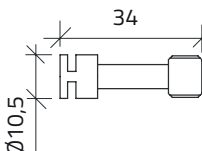
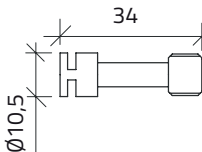
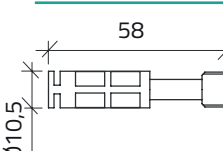
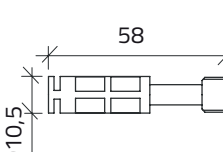
# Accessori

## Accessories

|                                                                                     |                                                                                     | g                                                                                                  | n | cod |     |    |          |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---|-----|-----|----|----------|
|    |    | Manopola / Knob                                                                                    |   |     | 1   | 10 | 080M     |
|    |    | Kit staffe (4x) / Brackets kit (4x)                                                                |   |     | 1   |    | 080S     |
|    |    | Kit staffe (2x) / Brackets kit (2x)                                                                |   |     | 30  |    | 010S10   |
|   |   | Coppia di cerniere per scatole fino a 94x180<br>Pair of small hinges for enclosures up to 94x180   |   |     | 7   |    | 080CP    |
| Con maschera di foratura / With drilling template                                   |                                                                                     |                                                                                                    |   |     |     |    |          |
|  |  | Coppia di cerniere per scatole da 110x180<br>Pair of big hinges for enclosures from 110x180        |   |     | 27  |    | 080CG    |
| Con maschera di foratura / With drilling template                                   |                                                                                     |                                                                                                    |   |     |     |    |          |
|  |  | Kit di fissaggio a parete per contenitori removibili<br>Wall-mounting kit for removable enclosures |   |     | 124 |    | 080SP    |
|  |  | Maniglia in plastica / Plastic handle                                                              |   |     | 58  |    | 080M139  |
|  |  | Maniglia in plastica / Plastic handle                                                              |   |     | 42  |    | 080M112  |
|  |  | Tappo di chiusura RAL7035<br>RAL7035 hole plug                                                     |   |     | 5   | 10 | 020TTP   |
| Tappo di chiusura nero / Black hole plug                                            |                                                                                     |                                                                                                    |   |     | 5   | 10 | 020TTPN  |
|  |  | Manicotto di giunzione / Coupling kit                                                              |   |     | 7   |    | 080MPG16 |

# Accessori

## Accessories

|                                                                                     |                                                                                     | g                                 | n   | cod |        |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------|-----|-----|--------|
|    |    | <b>Vite nera / Black screw</b>    | 1,5 | 4   | 080VB  |
|    |    | <b>Vite gialla / Yellow screw</b> | 1,5 | 4   | 080VBG |
|    |    | <b>Vite nera / Black screw</b>    | 3   | 4   | 080VA  |
|  |  | <b>Vite gialla / Yellow screw</b> | 3   | 4   | 080VAG |

# Accessori

## Accessories

h

g

cod

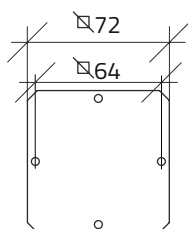


Piastra di fondo / Mounting plate

1

100

080P0909

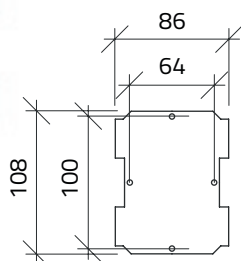


Piastra di fondo / Mounting plate

1

148

080P0913

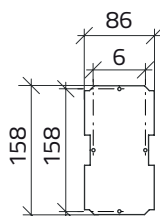


Piastra di fondo / Mounting plate

1

210

080P0918

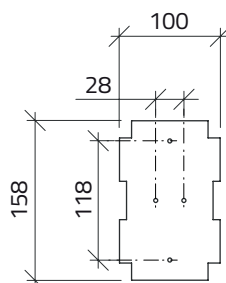


Piastra di fondo / Mounting plate

1

270

080P1118

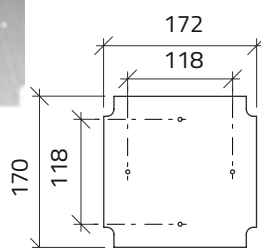


Piastra di fondo / Mounting plate

1,5

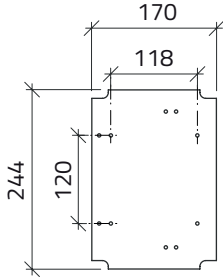
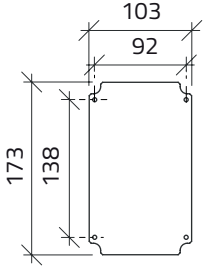
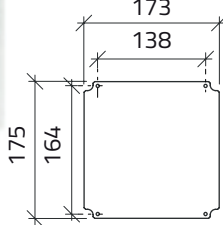
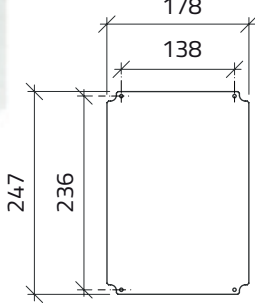
425

080P1818



# Accessori

## Accessories

|                                                                                     |                                                                                     | h   | g   | cod       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----|-----|-----------|
|    |    | 1,5 | 613 | 080P1825  |
|   |   | 2   | 285 | 080PS1118 |
|  |  | 2   | 130 | 080PS1818 |
|  |  | 2   | 185 | 080PS1825 |

# Principi costruttivi quadri poliestere

## Construction principles of polyester enclosures



Formato 250X300, una chiusura ad aletta

Size 250X300 , one wing lock



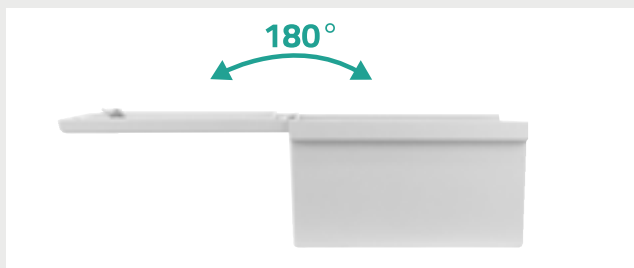
Da formato 300X400, due chiusure ad aletta

From size 300X400, two wing locks



Versione porta con finestra

Door with window



Apertura a 180°

180° opening

Istruzioni di montaggio / Mounting instructions



Inserire gli inserti metallici nelle apposite sedi laterali

Find the metal insert into the suitable lateral housings



Applicare le guide con le viti negli inserti metallici

Fasten the rails using screws into the metal inserts



Applicare le staffe alla piastra di fondo utilizzando i bulloni, le rondelle e i dadi

Fasten the brackets to the mounting plate using bolts, washer and nuts



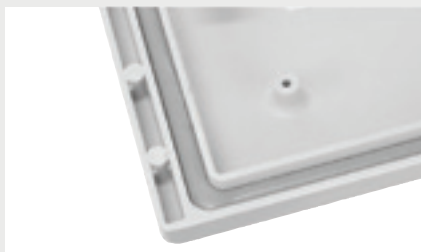
Inserire la piastra con le staffe montate e regolarle sulle guide con le viti e i dadi

Fit the mounting plate provided with the brackets and adjust it on the rails using screws and nuts



# Principi costruttivi quadri poliestere

## Construction principles of polyester enclosures



La guarnizione garantisce protezione IP65

A sealing gasket assures IP65 protection



Chiave di chiusura

Locking key



Kit di staffe di fissaggio

Set of mounting brackets



### Caratteristiche tecniche

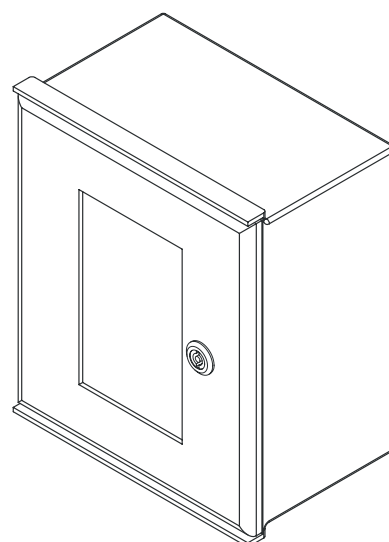
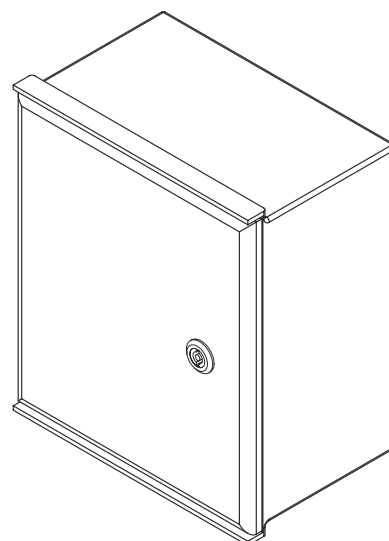
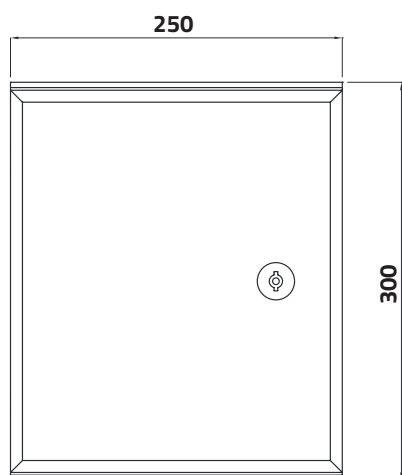
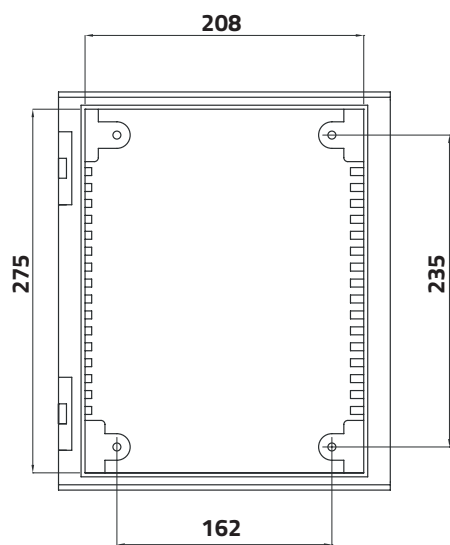
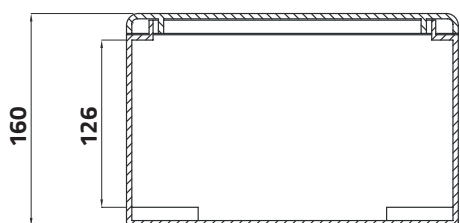
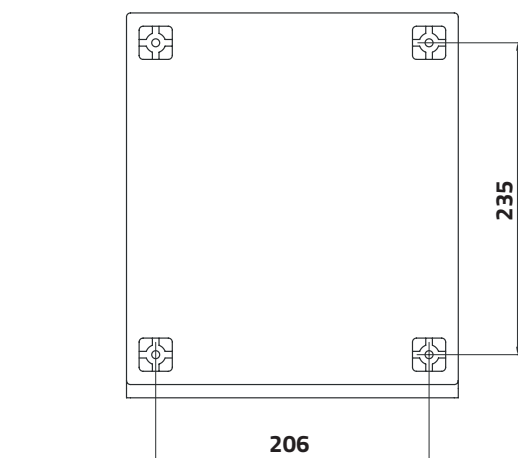
|                                    |                                          |                 |
|------------------------------------|------------------------------------------|-----------------|
| Materiale quadro                   | Poliestere con fibre di vetro            | Grigio RAL 7035 |
| Materiale chiusure                 | Poliammide con fibre di vetro            | Nero RAL 9005   |
| Materiale cerniere                 | Fusione in lega di alluminio             |                 |
| Resistenza alla fiamma             | Autoestinguente                          |                 |
| Grado di protezione                | IP65 CEI EN 60529                        |                 |
| Protezione agli agenti atmosferici | Basso assorbimento di acqua              |                 |
| Limiti di temperatura              | Resistente agli agenti chimici corrosivi |                 |
| Protezione contro gli impatti      | -30 °C ÷ +120 °C                         |                 |
|                                    | IK 09 EN 50102                           |                 |

### Technical data

|                                       |                                            |                |
|---------------------------------------|--------------------------------------------|----------------|
| Material, enclosure                   | Glass fiber reinforced polyester           | RAL 7035 Grey  |
| Material, locks                       | Glass fiber reinforced polyamide           | RAL 9005 Black |
| Material, hinges                      | Aluminum alloy casting                     |                |
| Fire strength                         | Self-extinguishing V0                      |                |
| Protection degree                     | IP65 CEI EN 60529                          |                |
| Protection against atmospheric agents | Low water absorption                       |                |
| Temperature range                     | Resistant to chemical and corrosion agents |                |
| Protection against impact             | -30 °C ÷ +120 °C                           |                |
|                                       | IK 09 EN 50102                             |                |

# Quadri in poliestere 250x300mm

## Polyester enclosures 250x300mm



# Quadri in poliestere 250x300mm

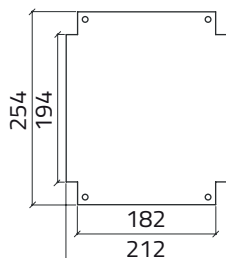
## Polyester enclosures 250x300mm


**Porta piena / Plain door**

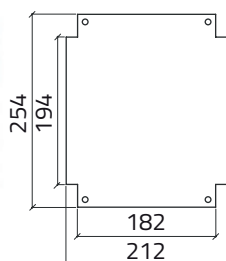
| h   | g    | cod         |
|-----|------|-------------|
| 160 | 3600 | 080Q2530-16 |


**Porta con finestra  
Door with window**

|     |      |              |
|-----|------|--------------|
| 160 | 3500 | 080Q2530-16F |
|-----|------|--------------|


**Piastra di fondo plastica  
Plastic mounting plate**

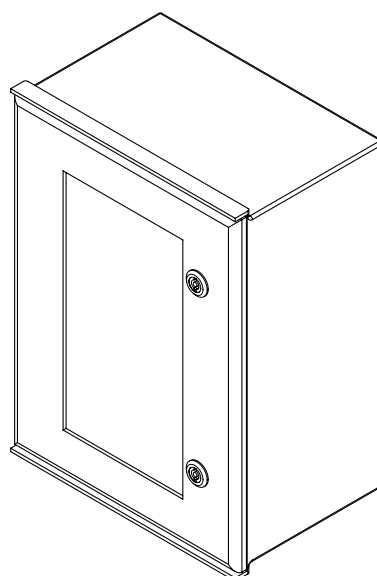
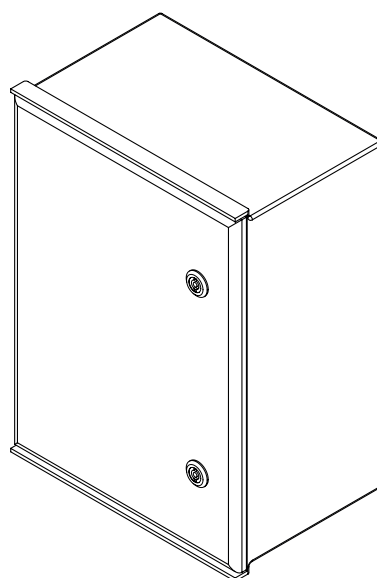
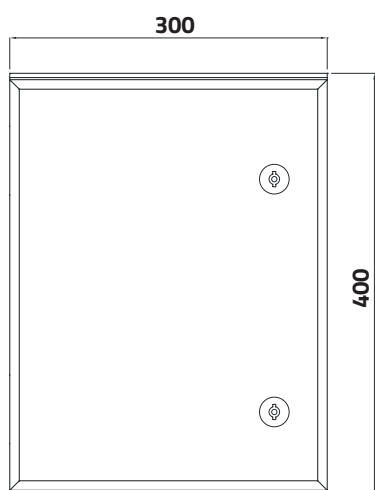
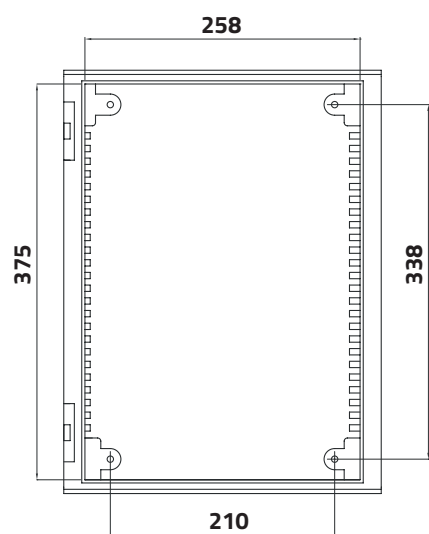
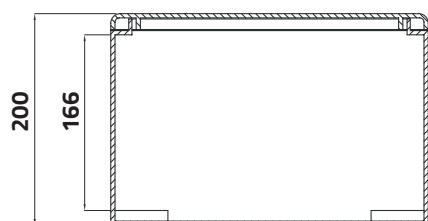
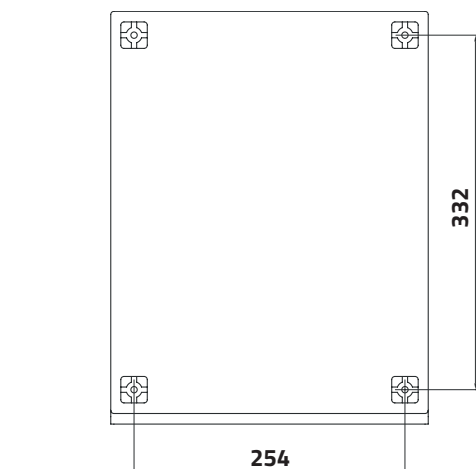
|     |      |           |
|-----|------|-----------|
| 2,8 | 1800 | 080PP2530 |
|-----|------|-----------|


**Piastra di fondo metallo  
Metal mounting plate**

|   |      |           |
|---|------|-----------|
| 2 | 1200 | 080PM2530 |
|---|------|-----------|

# Quadri in poliestere 300x400mm

## Polyester enclosures 300x400mm



# Quadri in poliestere 300x400mm

## Polyester enclosures 300x400mm


**Porta piena / Plain door**

h

200

g

4900

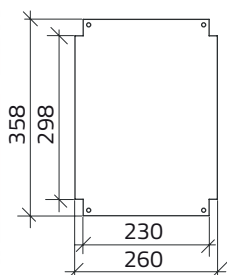
cod

080Q3040-20


**Porta con finestra  
Door with window**

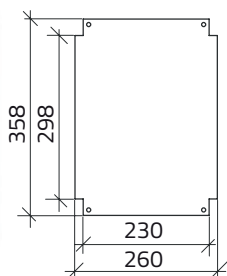
200 4700

080Q3040-20F


**Piastra di fondo plastica  
Plastic mounting plate**

2,8 2700

080PP3040


**Piastra di fondo metallo  
Metal mounting plate**

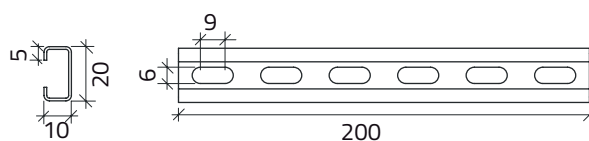
2 3200

080PM3040


**Guida perforata di regolazione  
Adjustable perforated rail**

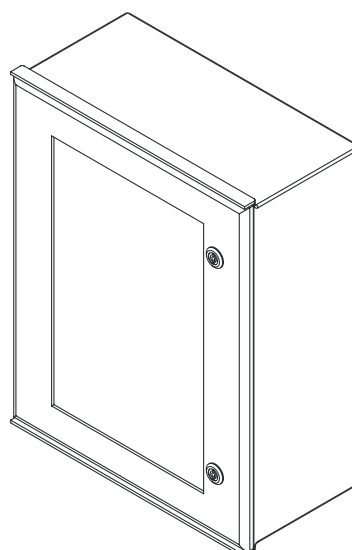
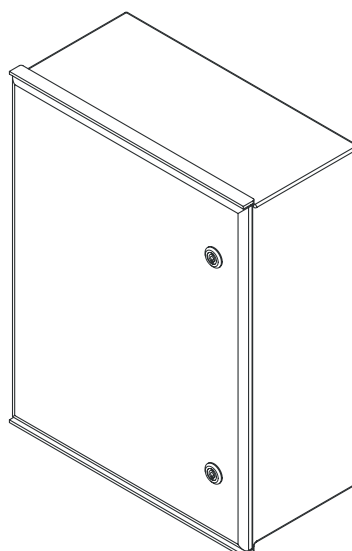
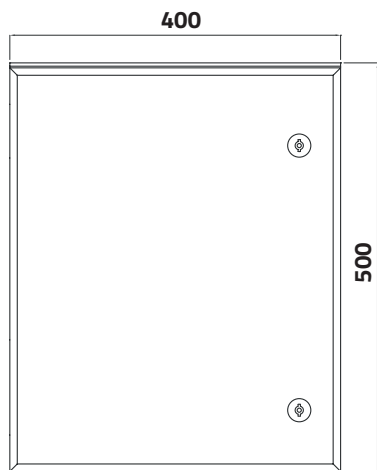
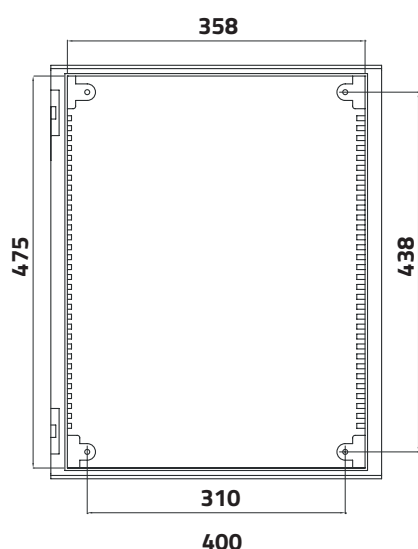
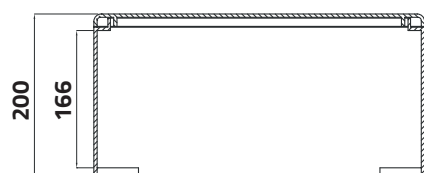
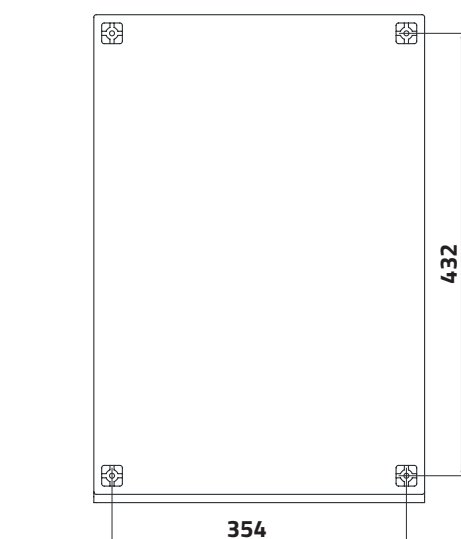
380

080GR200



# Quadri in poliestere 400x500mm

## Polyester enclosures 400x500mm



# Quadri in poliestere 400x500mm

## Polyester enclosures 400x500mm


**Porta piena / Plain door**

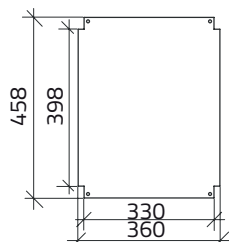
| h   | g    | cod         |
|-----|------|-------------|
| 200 | 6300 | 080Q4050-20 |


**Porta con finestra  
Door with window**

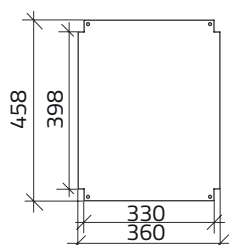
|     |      |              |
|-----|------|--------------|
| 200 | 6100 | 080Q4050-20F |
|-----|------|--------------|


**Piastra di fondo plastica  
Plastic mounting plate**

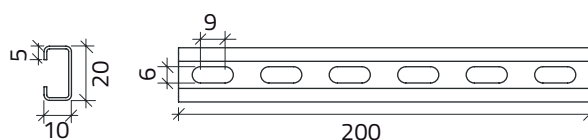
|     |      |           |
|-----|------|-----------|
| 2,8 | 3600 | 080PP4050 |
|-----|------|-----------|


**Piastra di fondo metallo  
Metal mounting plate**

|   |      |           |
|---|------|-----------|
| 2 | 4300 | 080PM4050 |
|---|------|-----------|

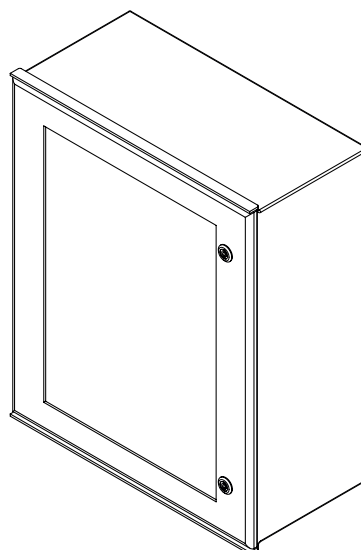
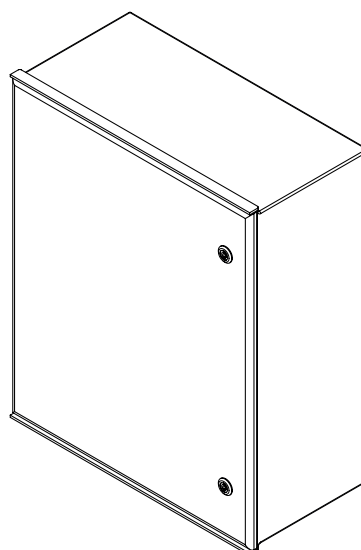
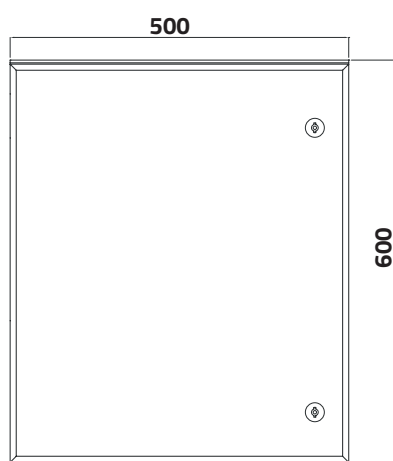
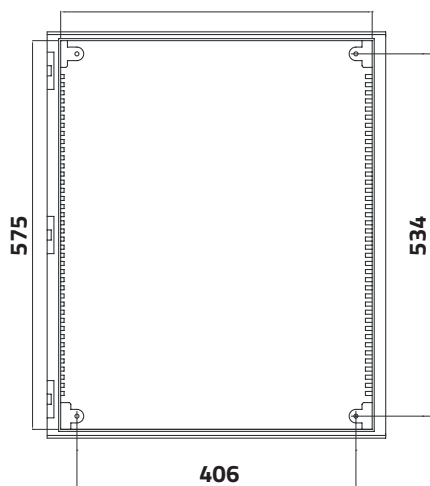
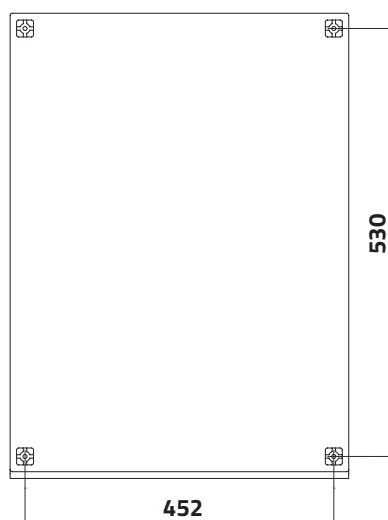

**Guida perforata di regolazione  
Adjustable perforated rail**

|     |          |
|-----|----------|
| 380 | 080GR200 |
|-----|----------|



# Quadri in poliestere 500x600mm

## Polyester enclosures 500x600mm





# Quadri in poliestere 500x600mm

## Polyester enclosures 500x600mm


**Porta piena / Plain door**

h

250

g

7900

cod

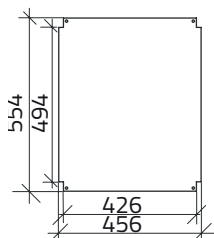
080Q5060-25


**Porta con finestra  
Door with window**

250

7700

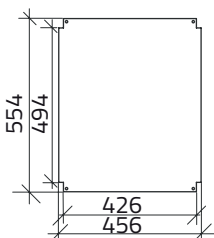
080Q5060-25F


**Piastra di fondo plastica  
Plastic mounting plate**

2,8

4700

080PP5060


**Piastra di fondo metallo  
Metal mounting plate**

2

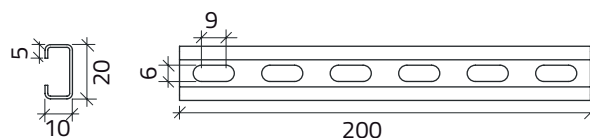
5300

080PM5060


**Guida perforata di regolazione  
Adjustable perforated rail**

380

080GR200



# Accessori

## Accessories



**Kit di staffe per fissaggio a parete**  
**Set of wall-mounting brackets**

g

cod

110

080SE



**Guida perforata di regolazione**  
**Adjustable perforated rail**

L

g

cod

150

380

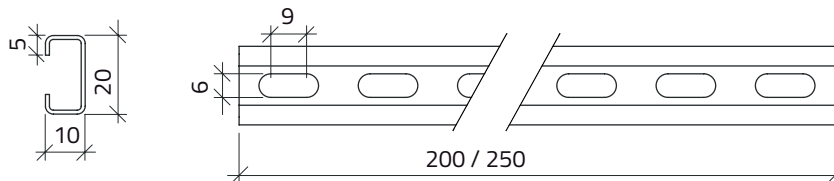
080GR200

**Guida perforata di regolazione**  
**Adjustable perforated rail**

200

450

080GR250



**Guida / Rail Q 35**

2000

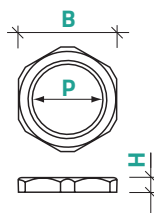
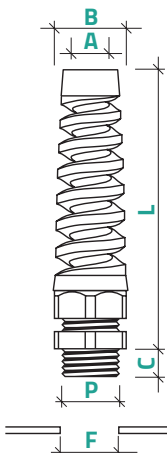
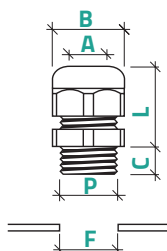
760

010GDP



# Accessori in plastica

## Plastic accessories



P

g

F

A

B

C

L

cod

### Pressacavi / Cable glands

Poliammide PA6 autoestinguente cl. V2 (UL94) - Temperatura di impiego -20°÷+90°  
V2 (UL94) self-extinguishing PA6 polyamide - Operating temperature -20°÷+90°

|           |    |      |       |    |      |       |          |
|-----------|----|------|-------|----|------|-------|----------|
| M12 x 1,5 | 4  | 12,5 | 3-6,5 | 15 | 8    | 21    | 010NM12  |
| M16 x 1,5 | 7  | 16,5 | 5-10  | 22 | 8    | 23-28 | 010NM16  |
| M20 x 1,5 | 11 | 20,5 | 6-12  | 24 | 10   | 24-29 | 010NM20  |
| M25 x 1,5 | 16 | 25,5 | 13-18 | 33 | 12   | 30-35 | 010NM25  |
| M32 x 1,5 | 23 | 32,5 | 18-25 | 42 | 11   | 34-40 | 010NM32  |
| PG7       | 4  | 12,5 | 3-5,5 | 15 | 8    | 18-22 | 010NPG7  |
| PG9       | 6  | 15,5 | 4-8   | 19 | 8    | 22-26 | 010NPG9  |
| PG11      | 9  | 19   | 5-10  | 22 | 8    | 23-28 | 010NPG11 |
| PG13,5    | 11 | 20,5 | 6-12  | 24 | 10   | 24-29 | 010NPG13 |
| PG16      | 13 | 22,5 | 9-14  | 27 | 10,5 | 26-31 | 010NPG16 |
| PG21      | 21 | 29   | 13-18 | 33 | 12   | 30-35 | 010NPG21 |

### Pressacavi con spirale / Spiral cable glands

Poliammide PA6 autoestinguente cl. V2 (UL94) - Temperatura di impiego -20°÷+90°  
V2 (UL94) self-extinguishing PA6 polyamide - Operating temperature -20°÷+90°

|           |    |       |       |    |      |     |          |
|-----------|----|-------|-------|----|------|-----|----------|
| M12 x 1,5 | 7  | 126,5 | 3-6,5 | 15 | 8    | 54  | 010FM12  |
| M16 x 1,5 | 10 | 16,5  | 5-10  | 22 | 8    | 80  | 010FM16  |
| M20 x 1,5 | 19 | 20,5  | 6-12  | 24 | 10   | 90  | 010FM20  |
| M25 x 1,5 | 33 | 25,5  | 13-18 | 33 | 12   | 112 | 010FM25  |
| PG11      | 16 | 19    | 5-10  | 22 | 8    | 80  | 010FPG11 |
| PG13,5    | 19 | 20,5  | 6-12  | 24 | 10   | 90  | 010FPG13 |
| PG16      | 25 | 22,5  | 9-14  | 27 | 10,5 | 100 | 010FPG16 |
| PG21      | 25 | 29    | 13-18 | 33 | 11   | 111 | 010FPG21 |

P

B

H

g

n

cod

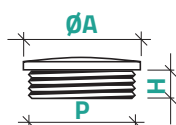
### Controdadi / Locknuts

Poliammide PA6 autoestinguente cl. V2 (UL94) - Temperatura di impiego -20°÷+90°  
V2 (UL94) self-extinguishing PA6 polyamide - Operating temperature -20°÷+90°

|           |    |   |     |    |          |
|-----------|----|---|-----|----|----------|
| M12 x 1,5 | 18 | 5 | 1   | 10 | 010DM12  |
| M16 x 1,5 | 24 | 6 | 1,5 |    | 010DM16  |
| M20 x 1,5 | 27 | 6 | 2   |    | 010DM20  |
| M25 x 1,5 | 34 | 7 | 3   |    | 010DM25  |
| M32 x 1,5 | 41 | 7 | 4   |    | 010DM32  |
| PG7       | 19 | 5 | 1   |    | 010DPG7  |
| PG9       | 22 | 5 | 2   |    | 010DPG9  |
| PG11      | 24 | 5 | 2   |    | 010DPG11 |
| PG13,5    | 27 | 6 | 2,5 |    | 010DPG13 |
| PG16      | 30 | 6 | 3   |    | 010DPG16 |
| PG21      | 36 | 7 | 3,5 |    | 010DPG21 |

# Accessori in plastica

## Plastic accessories

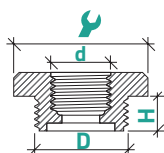


P      ØA      H      g      cod

### Tappi di chiusura / Hole plugs

Polistirene PS - Temperatura di impiego -20°/+60°  
PS Polystyrene - Operating temperature -20°/+60°

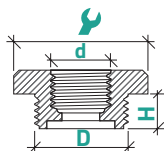
|           |    |    |     |          |
|-----------|----|----|-----|----------|
| M12 x 1,5 | 15 | 6  | 1   | 010TM12  |
| M16 x 1,5 | 22 | 6  | 2   | 010TM16  |
| M20 x 1,5 | 24 | 7  | 2,4 | 010TM20  |
| M25 x 1,5 | 33 | 9  | 4   | 010TM25  |
| M32 x 1,5 | 38 | 11 | 42  | 010TM32  |
| PG7       | 15 | 6  | 1   | 010TPG7  |
| PG9       | 19 | 6  | 1,5 | 010TPG9  |
| PG11      | 22 | 7  | 2   | 010TPG11 |
| PG13,5    | 25 | 7  | 2   | 010TPG13 |
| PG16      | 27 | 7  | 3   | 010TPG16 |
| PG21      | 33 | 9  | 5   | 010TPG21 |



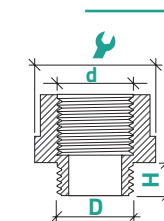
D      d      H      g      cod

### Riduzioni in plastica / Plastic reducers

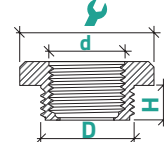
|     |     |    |    |   |            |
|-----|-----|----|----|---|------------|
| M25 | M12 | 10 | 29 | 8 | 010RM25M12 |
|-----|-----|----|----|---|------------|



|     |     |    |    |   |            |
|-----|-----|----|----|---|------------|
| M25 | M16 | 10 | 32 | 9 | 010RM25M16 |
|-----|-----|----|----|---|------------|



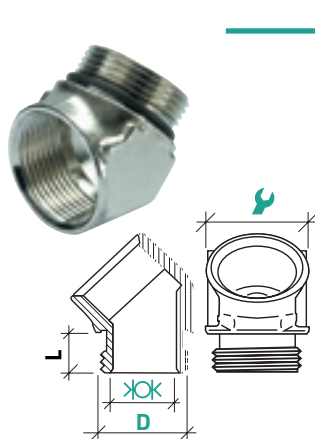
|     |     |    |    |     |            |
|-----|-----|----|----|-----|------------|
| M25 | M20 | 10 | 32 | 7,8 | 010RM25M20 |
|-----|-----|----|----|-----|------------|



|     |     |    |    |     |            |
|-----|-----|----|----|-----|------------|
| M20 | M25 | 10 | 32 | 6,8 | 010RM20M25 |
|-----|-----|----|----|-----|------------|

# Accessori in metallo

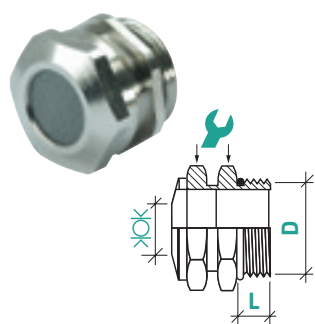
## Metal accessories



**g** **D** **L** **cod**

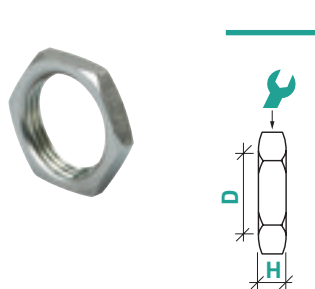
### Raccordo a gomito a 45° / 45° Elbow fittings

|     |         |      |    |    |                 |
|-----|---------|------|----|----|-----------------|
| P26 | M16x1,5 | 11,5 | 19 | 10 | <b>010GIM16</b> |
| 38  | M20x1,5 | 15   | 23 | 10 | <b>010GIM20</b> |
| 55  | M25x1,5 | 20   | 28 | 10 | <b>010GIM25</b> |
| 90  | M32x1,5 | 27   | 36 | 10 | <b>010GIM32</b> |



### Pressacavi / Cable glands

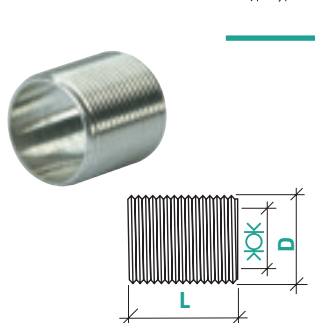
|    |         |         |    |    |                 |
|----|---------|---------|----|----|-----------------|
| 14 | M16x1,5 | 5 ÷ 9   | 18 | 17 | <b>010POM16</b> |
| 20 | M20x1,5 | 8 ÷ 12  | 22 | 22 | <b>010POM20</b> |
| 34 | M25x1,5 | 11 ÷ 16 | 28 | 28 | <b>010POM25</b> |
| 50 | M32x1,5 | 15 ÷ 21 | 35 | 35 | <b>010POM32</b> |



**g** **D** **S** **cod**

### Controdadi / Locknuts

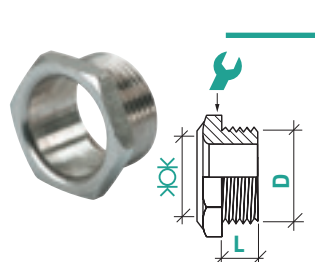
|    |         |    |     |                |
|----|---------|----|-----|----------------|
| 4  | M16x1,5 | 19 | 3   | <b>010GM16</b> |
| 6  | M20x1,5 | 24 | 3,5 | <b>010GM20</b> |
| 12 | M25x1,5 | 30 | 3,5 | <b>010GM25</b> |
| 26 | M32x1,5 | 36 | 4,5 | <b>010GM32</b> |



**g** **D** **L** **cod**

### Nippli / Reducers

|    |         |    |      |                 |
|----|---------|----|------|-----------------|
| 8  | M16x1,5 | 12 | 21   | <b>010NPM16</b> |
| 20 | M20x1,5 | 15 | 24,5 | <b>010NPM20</b> |
| 18 | M25x1,5 | 20 | 25   | <b>010NPM25</b> |
| 30 | M32x1,5 | 26 | 32   | <b>010NPM32</b> |



**g** **D** **L** **cod**

### Riduzioni / Adaptors

|    |         |    |    |    |                |
|----|---------|----|----|----|----------------|
| 18 | M16x1,5 | 12 | 22 | 12 | <b>010BM16</b> |
| 22 | M20x1,5 | 15 | 26 | 14 | <b>010BM20</b> |
| 20 | M25x1,5 | 21 | 30 | 14 | <b>010BM25</b> |
| 28 | M32x1,5 | 28 | 40 | 15 | <b>010BM32</b> |

# Valvole di ventilazione anticondensa

## Ventilation plugs (to prevent condensation)

### ■ VALVOLA ANTICONDENSA

La valvola anticondensa è la soluzione ideale per risolvere i problemi di compensazione di pressione e protezione dall'umidità che si possono creare nelle cassette pulsantiere poste in condizioni ambientali critiche. La particolare struttura a membrana permette la circolazione dell'aria e impedisce l'entrata di liquidi all'interno del contenitore grazie anche alla guarnizione O-ring.

La valvola trova applicazioni ottimali in pannelli di controllo, telai di motori, cassette, pompe, luci sotterranee, lucispot, ecc.

### ■ CARATTERISTICHE

Permeabile all'aria e resistente all'acqua in entrambe le direzioni.

- Repellente all'olio : 010VV - 010VV400
  - Grado di protezione : IP67
  - Temperatura di lavoro : -40°C / + 105°C
- L'applicazione orizzontale non è consigliata

### ■ VENTILATION PLUG

The ventilation plug is the ideal solution to solve pressure compensation and humidity problems that could arise with push-button enclosures exposed to critical environmental conditions. Its special membrane structure and the O-ring allow the air to circulate and prevent liquids entering the enclosures. This valve can be ideally used for control panels, motor frames, boxes, pumps, underground lighting spot, lights, etc.

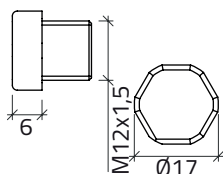
### ■ FEATURES

Air permeable and water resistant in both directions.

- Oil repellent : 010VV - 010VV400
  - Protection degree: IP67
  - Operating temperature: -40°C / +105°C
- It is not recommended to fit it horizontally.

# Valvole di ventilazione anticondensa

## Ventilation plugs (to prevent condensation)



Permeabilità all'aria / Air permeability 2lt./min.  $\Delta p = 70\text{mbar}$   
 Pressione ingresso acqua / Water inlet pressure max 0,2 bar / 60 s

● Nero / Black

g

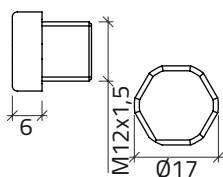
n

cod

1,5

10

010VV

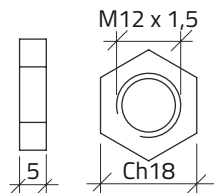


Permeabilità all'aria / Air permeability 0,4lt./min.  $\Delta p = 70\text{mbar}$   
 Pressione ingresso acqua / Water inlet pressure max 0,6 bar / 60 s

● Nero / Black

1,5

010VV400

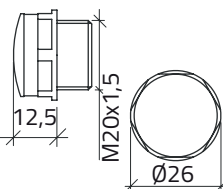


● Nero / Black

0,7

10

010DM12



Permeabilità all'aria / Permeability to air 12,5lt./min.  $\Delta p = 70\text{mbar}$   
 Pressione ingresso acqua / Water inlet pressure max 0,1 bar / 60 s

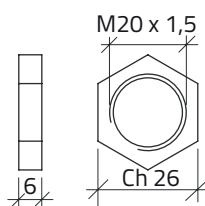
● Nero / Black

g

cod

6,0

010VV12500



● Nero / Black

2

010DM20







# 050

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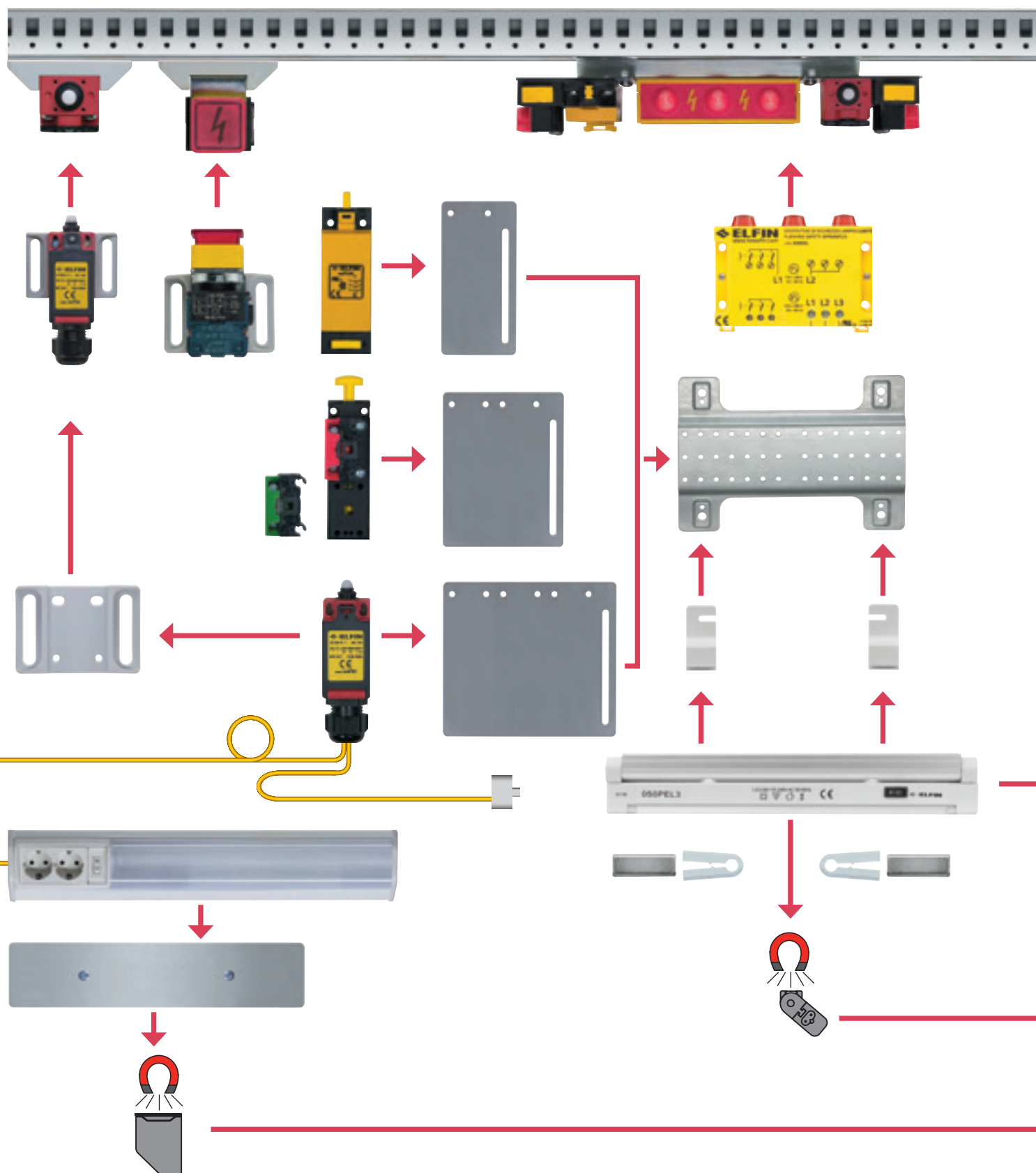
**SEGNALAZIONE ED  
ILLUMINAZIONE  
DEI QUADRI ELETTRICI**

**CONTROL CABINET  
SIGNALLING AND LIGHTING**

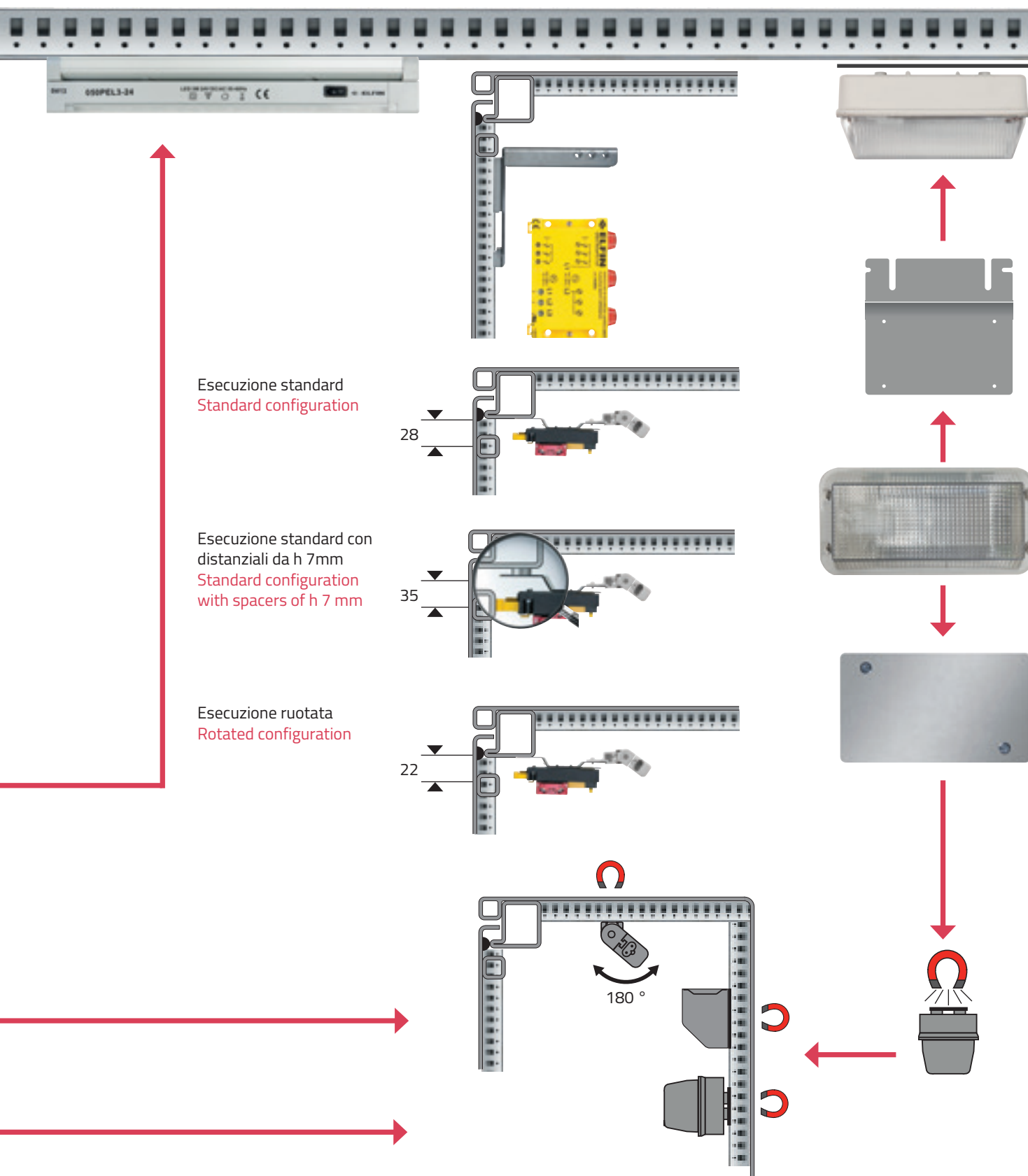
050



# Layout componibilità Application layout



# Layout componibilità Application layout



## Illuminazione quadri elettrici

### Control cabinet lighting

#### LE NOSTRE LAMPADE PER ILLUMINAZIONE QUADRI

Il design da alle lampade una linea compatta e lineare facilitando il posizionamento e il fissaggio.

Le versioni LED sono dotate di chips luminosi con dimensioni maggiorate per garantire molta luminosità, mantenendo un basso consumo energetico.

Le lampade a LED e fluorescenti permettono un orientamento della luce fino a 180°.

Adottando l'accessorio magnetico il fissaggio della lampada può essere fatto in pochi secondi.

#### OUR LAMPS FOR POWER PANELS

The design of the lamps and a compact shape facilitate the positioning and fixing.

The LED versions are equipped with bigger chips to ensure high brightness, maintaining a low energy consumption.

The LED lamps and fluorescent light allow to an orientation of 180°.

Using the magnetic accessory the lamp can be fastened in few seconds.



## low consumption

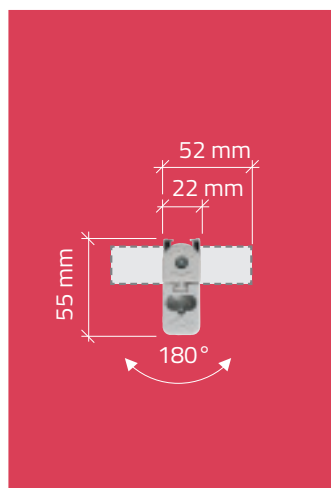


## Illuminazione quadri elettrici

### Control cabinet lighting



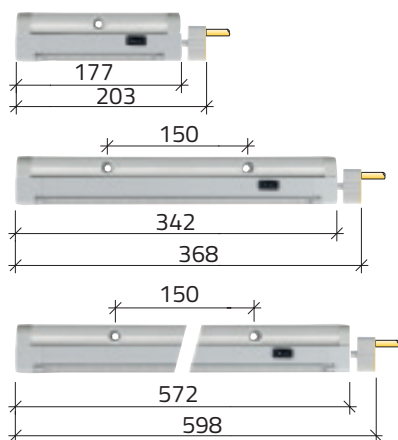
# Illuminazione quadri elettrici Control cabinet lighting



## Plafoniere lineari a led Linear led lamps

g Lux W cod

Connettore 050C7V2 incluso / 050C7V2 connector included



|                          |     |      |     |                    |
|--------------------------|-----|------|-----|--------------------|
| 24V DC / AC 50 ÷ 60 Hz   | 170 | 550  | 2,5 | <b>050PEL1C-24</b> |
| 110 ÷ 240V AC 50 ÷ 60 Hz | 170 | 550  | 2,5 | <b>050PEL1C</b>    |
| 24V DC / AC 50 ÷ 60 Hz   | 340 | 1300 | 6   | <b>050PEL3C-24</b> |
| 110 ÷ 240V AC 50 ÷ 60 Hz | 340 | 1300 | 6   | <b>050PEL3C</b>    |
| 24V DC / AC 50 ÷ 60 Hz   | 520 | 2000 | 10  | <b>050PEL5C-24</b> |
| 110 ÷ 240V AC 50 ÷ 60 Hz | 520 | 2000 | 10  | <b>050PEL5C</b>    |

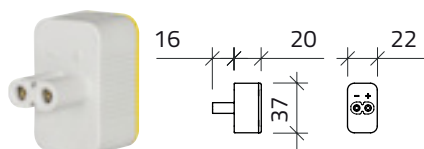


## Accessori / Accessories

g cod

Kit per fissaggio magnetico / Magnetic mounting kit

14 **050KFM**



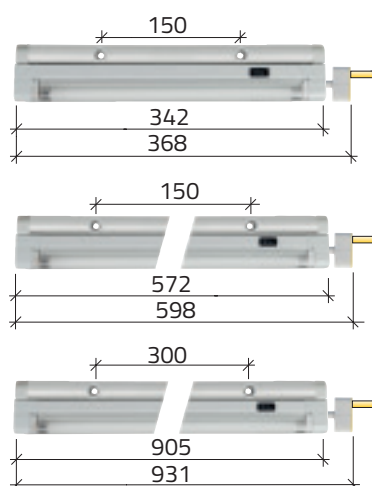
Connettore bipolare femmina  
Two-pole female connector

14 **050C7V2**

# Illuminazione quadri elettrici Control cabinet lighting



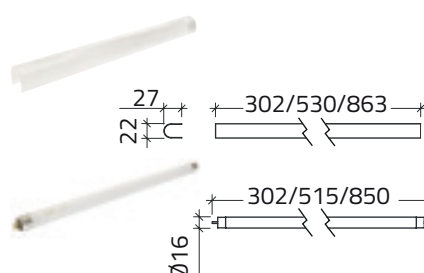
## Plafoniere lineari fluorescenti Linear fluorescent lamps



Connettore 050C7V2 incluso / 050C7V2 connector included

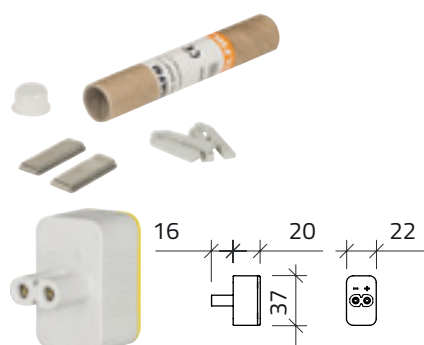
|                                                                                                                                       | g   | Lux  | W  | cod              |
|---------------------------------------------------------------------------------------------------------------------------------------|-----|------|----|------------------|
| 110 ÷ 130V AC 50 ÷ 60 Hz                                                                                                              | 380 | 400  | 8  | <b>050PE86C</b>  |
| 220 ÷ 240V AC 50 ÷ 60 Hz                                                                                                              | 380 | 400  | 8  | <b>050PE8C</b>   |
| Omologazione INTERTEK - ETL per il mercato Nordamericano (USA - CND)<br>INTERTEK - ETL approval for North American market (USA - CND) |     |      |    |                  |
| 110 ÷ 130V AC 50 ÷ 60 Hz                                                                                                              | 560 | 1300 | 13 | <b>050PE136C</b> |
| 220 ÷ 240V AC 50 ÷ 60 Hz                                                                                                              | 560 | 1300 | 13 | <b>050PE13C</b>  |
| Omologazione INTERTEK - ETL per il mercato nordamericano (USA - CND)<br>INTERTEK - ETL approval for north american market (USA - CND) |     |      |    |                  |
| 220 ÷ 240V AC 50 ÷ 60 Hz                                                                                                              | 860 | 2000 | 21 | <b>050PE21C</b>  |

## Ricambi / Spare parts



|                                                                                | g  | cod             |
|--------------------------------------------------------------------------------|----|-----------------|
| Diffusori per plafoniere fluorescenti / Diffusers for linear fluorescent lamps |    |                 |
| 050PE86C, 050PE8C                                                              | 26 | <b>050DE8</b>   |
| 050PE136C, 050PE13C                                                            | 48 | <b>050DE13</b>  |
| 050PE21C                                                                       | 70 | <b>050DE21</b>  |
| Neon per plafoniere fluorescenti / Neon for linear fluorescent lamps           |    |                 |
| 050PE86C, 050PE8C                                                              | 32 | <b>050TNE8</b>  |
| 050PE136C, 050PE13C                                                            | 50 | <b>050TNE13</b> |
| 050PE21C                                                                       | 80 | <b>050TNE21</b> |

## Accessori / Accessories



|                                                         | g  | cod            |
|---------------------------------------------------------|----|----------------|
| Kit per fissaggio magnetico / Magnetic mounting kit     | 14 | <b>050KFM</b>  |
| Connettore bipolare femmina / Two-pole female connector | 14 | <b>050C7V2</b> |





# Illuminazione quadri elettrici Control cabinet lighting

## Caratteristiche tecniche Plafoniere lineari a LED

## Technical data Linear LED lamps

| Versioni / Models | Tens di esercizio / Rated oper. voltage | Potenza / Power | Luminosità / Brightness | Dimensioni / Dimensions |
|-------------------|-----------------------------------------|-----------------|-------------------------|-------------------------|
| 050PEL1C          | 110÷240VAC 50/60Hz                      | 2,5W            | 550 Lux                 | 170x55x22mm             |
| 050PEL3C          | 110÷240VAC 50/60Hz                      | 6W              | 1300 Lux                | 342x55x22mm             |
| 050PEL5C          | 110÷240VAC 50/60Hz                      | 10W             | 2000 Lux                | 572x55x22mm             |
| 050PEL1C-24       | 24V DC-AC 50/60Hz                       | 2,5W            | 550 Lux                 | 170x55x22mm             |
| 050PEL3C-24       | 24V DC-AC 50/60Hz                       | 6W              | 1300 Lux                | 342x55x22mm             |
| 050PEL5C-24       | 24V DC-AC 50/60Hz                       | 10W             | 2000 Lux                | 572x55x22mm             |

|                             |                                                                                                                         |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Temperatura di esercizio    | -40°C - +70°C                                                                                                           |
| Tensione di isolamento      | Ui 300V AC                                                                                                              |
| Materiale corpo e diffusore | PC - Policarbonato (senza alogeni)                                                                                      |
| Colore                      | Involucro RAL 7035 - Diffusore trasparente                                                                              |
| Protezione elettrica        | Classe II (doppio isolamento) EN 61140                                                                                  |
| Temperatura colore          | 6000°K                                                                                                                  |
| Durata elettrica            | 50.000 h                                                                                                                |
| Grado di protezione         | IP30 - EN 60529                                                                                                         |
| Protezione agli impatti     | IK06 - EN 62262                                                                                                         |
| Direzione luce              | Orientabile su 180°                                                                                                     |
| Interruttore ON / OFF       | Incluso                                                                                                                 |
| Connettore alimentazione    | 050C7V2 incluso, idoneo per collegamento singolo e per collegamento in sequenza (max n° 5 plafoniere)                   |
| Possibilità di fissaggio    | A vite (incluse) idoneità al passo metrico 25mm<br>Magnetico con Kit aggiuntivo 050KFM                                  |
| Possibilità di accensione   | Tramite fincorsa di posizione sulla porta - 050F025                                                                     |
| Omologazioni                | CE                                                                                                                      |
| Conformità alle direttive   | 2014/35/UE direttiva bassa tensione<br>2014/30/UE direttiva compatibilità elettromagnetica<br>2011/65/UE direttiva RoHS |
| Rispondenza alle norme      | EN 60598-1, EN 60598-2-1, EN 61547, EN 61347-1,<br>EN 61347-2-13, EN 55015, EN 61000-3-2,<br>EN 61000-3-3, EN 62471     |

|                            |                                                                                                                     |
|----------------------------|---------------------------------------------------------------------------------------------------------------------|
| Operating temperature      | -40°C - +70°C                                                                                                       |
| Rated insulation voltage   | Ui 300V AC                                                                                                          |
| Housing, diffuser material | PC - Polycarbonate (halogen free)                                                                                   |
| Color                      | Housing RAL 7035 - Diffuser clear                                                                                   |
| Overvoltage category       | Class II (double insulation) EN 61140                                                                               |
| Color temperature          | 6000°K                                                                                                              |
| Electrical life            | 50.000 h                                                                                                            |
| Protection degree          | IP30 - EN 60529                                                                                                     |
| Protection against impact  | IK06 - EN 62262                                                                                                     |
| Light distribution         | 180° adjustable                                                                                                     |
| Switch ON / OFF            | Included                                                                                                            |
| Power supply connector     | 050C7V2 included, suitable for wiring the single lamp, or sequential (max n° 5 lamps)                               |
| Installation possibilities | With screws (included) suitable for metric bore pitch 25mm - Magnetic with additional Kit 050KFM                    |
| Light up possibility       | Trough door limit switch - 050F025                                                                                  |
| Approvals                  | CE                                                                                                                  |
| Compliance with directives | 2014/35/UE low voltage directive<br>2014/30/UE EMC directive<br>2011/65/UE RoHS directive                           |
| Standard compliance        | EN 60598-1, EN 60598-2-1, EN 61547, EN 61347-1,<br>EN 61347-2-13, EN 55015, EN 61000-3-2,<br>EN 61000-3-3, EN 62471 |

## Caratteristiche tecniche Plafoniere lineari fluorescenti

## Technical data Linear fluorescent lamps

| Versioni / Models | Tens di esercizio / Rated oper. voltage | Potenza / Power | Luminosità / Brightness | Dimensioni / Dimensions |
|-------------------|-----------------------------------------|-----------------|-------------------------|-------------------------|
| 050PE8C           | 220÷240VAC 50/60Hz                      | 8W              | 400 Lux                 | 342x55x22mm             |
| 050PE13C          | 220÷240VAC 50/60Hz                      | 13W             | 600 Lux                 | 572x55x22mm             |
| 050PE21C          | 220÷240VAC 50/60Hz                      | 21W             | 900 Lux                 | 905x55x22mm             |
| 050PE86C          | 110÷130VAC 50/60Hz                      | 8W              | 400 Lux                 | 342x55x22mm             |
| 050PE136C         | 110÷130VAC 50/60Hz                      | 13W             | 600 Lux                 | 572x55x22mm             |

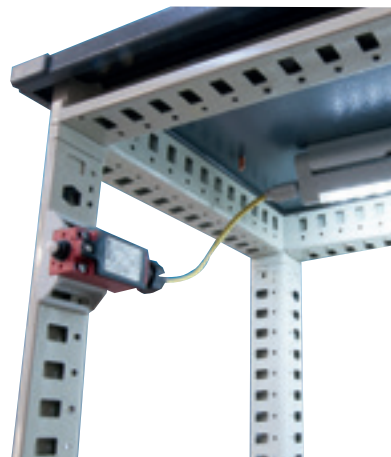
|                             |                                                                                                                                                          |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Temperatura di esercizio    | -10°C - +50°C                                                                                                                                            |
| Tensione di isolamento      | Ui 300V AC                                                                                                                                               |
| Materiale corpo e diffusore | PC - Policarbonato (senza alogeni)                                                                                                                       |
| Colore                      | Involucro RAL 7035 - Diffusore trasparente                                                                                                               |
| Protezione elettrica        | Classe II (doppio isolamento) EN 61140                                                                                                                   |
| Temperatura colore          | 6400°K                                                                                                                                                   |
| Durata elettrica            | Tubo fluorescente 8.000 h                                                                                                                                |
| Grado di protezione         | IP30 - EN 60529                                                                                                                                          |
| Protezione agli impatti     | IK03 - EN 62262                                                                                                                                          |
| Direzione luce              | Orientabile su 180°                                                                                                                                      |
| Interruttore ON / OFF       | Incluso                                                                                                                                                  |
| Connettore alimentazione    | 050C7V2 incluso, idoneo per collegamento singolo e per collegamento in sequenza (max n° 5 plafoniere)                                                    |
| Possibilità di fissaggio    | A vite (incluse) idoneità al passo metrico 25mm<br>Magnetico con Kit aggiuntivo 050KFM                                                                   |
| Possibilità di accensione   | Tramite fincorsa di posizione sulla porta - 050F025                                                                                                      |
| Omologazioni                | CE, INTERNET ETL (USA-CND)                                                                                                                               |
| Conformità alle direttive   | 2014/35/UE direttiva bassa tensione<br>2014/30/UE direttiva compatibilità elettromagnetica<br>2011/65/UE direttiva RoHS                                  |
| Rispondenza alle norme      | EN 60598-1, EN 60598-2-1, EN 61547, EN 61347-1,<br>EN 61347-2-13, EN 55015, EN 61000-3-2,<br>EN 61000-3-3, EN 60400, EN 60320-1, EN 6030-2-2<br>EN 60799 |

|                            |                                                                                                                                                          |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating temperature      | -10°C - +50°C                                                                                                                                            |
| Rated insulation voltage   | Ui 300V AC                                                                                                                                               |
| Housing, diffuser material | PC - Polycarbonate (halogen free)                                                                                                                        |
| Color                      | Housing RAL 7035 - Diffuser clear                                                                                                                        |
| Overvoltage category       | Class II (double insulation) EN 61140                                                                                                                    |
| Color temperature          | 6400°K                                                                                                                                                   |
| Electrical life            | Fluorescent tube 8.000 h                                                                                                                                 |
| Protection degree          | IP30 - EN 60529                                                                                                                                          |
| Protection against impact  | IK03 - EN 62262                                                                                                                                          |
| Light distribution         | 180° adjustable                                                                                                                                          |
| Switch ON / OFF            | Included                                                                                                                                                 |
| Power supply connector     | 050C7V2 included, suitable for wiring a simple lamp, or sequential (max n° 5 lamps)                                                                      |
| Installation possibilities | With screws (included) suitable for metric bore pitch 25mm - Magnetic with additional Kit 050KFM                                                         |
| Light up possibility       | Trough door limit switch - 050F025                                                                                                                       |
| Approvals                  | CE, INTERNET ETL (USA-CND)                                                                                                                               |
| Compliance with directives | 2014/35/UE low voltage directive<br>2014/30/UE EMC directive<br>2011/65/UE RoHS directive                                                                |
| Standard compliance        | EN 60598-1, EN 60598-2-1, EN 61547, EN 61347-1,<br>EN 61347-2-13, EN 55015, EN 61000-3-2,<br>EN 61000-3-3, EN 60400, EN 60320-1, EN 6030-2-2<br>EN 60799 |





# Illuminazione quadri elettrici Control cabinet lighting



## Finecorsa alimentazione plafoniera Limit switches for lamps supply

Finecorsa 2NC su staffa e pressacavo  
 Limit switch 2NC on bracket with cable gland

g

cod

140

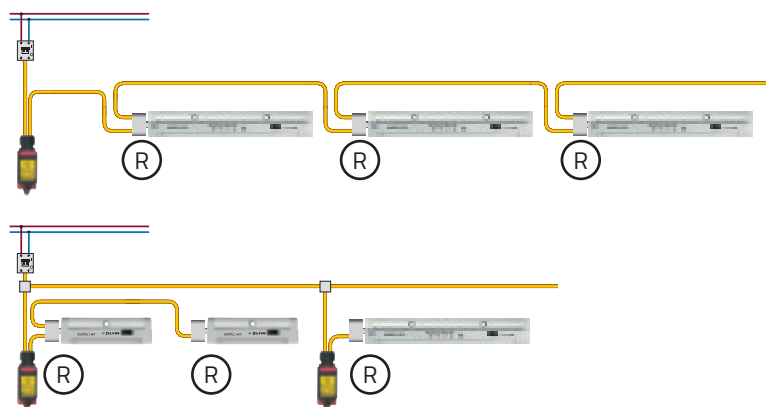
050F02S

Finecorsa 2NC su staffa e pressacavo con cablaggio  
 Limit switch 2NC on bracket  
 with cable gland and wiring

150

050F02SC

## Esempi di installazione Mounting examples



Max 5 unità / Max 5 sequential units

# Illuminazione quadri elettrici Control cabinet lighting



## Lampada fluorescente con presa VDE Fluorescent lamps with VDE socket

|              | g    | W  | cod       |
|--------------|------|----|-----------|
| 230V / 50 Hz | 1050 | 11 | 050LQPVDE |

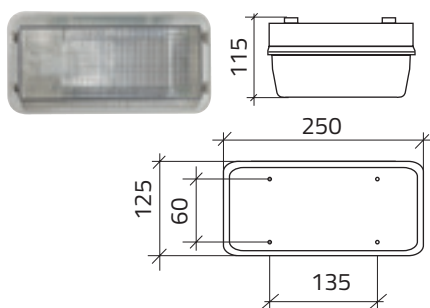


### Caratteristiche tecniche

|                      |                                                    |
|----------------------|----------------------------------------------------|
| Alimentazione        | 230V/50Hz                                          |
| Lampada              | Fluorescente a risp. energetico 11W                |
| Luminosità           | 900 Lm                                             |
| Durata               | 5.000 h                                            |
| Interferenze Radio   | A Norme Vde 0712 Iec 82                            |
| Presenza Di Corrente | Incorporata 250V Ac/16A                            |
| Installazione        | Con piastra magnetica inclusa o guida Din 080G3508 |
| Materiale            | Termoplastico                                      |
| Grado di protezione  | IP20                                               |
| Norme                | VDE                                                |

### Technical data

|                      |                                             |
|----------------------|---------------------------------------------|
| Power supply         | 230V/50Hz                                   |
| Bulb                 | Energy saving fluorescent 11W               |
| Brightness           | 900 Lm                                      |
| Life                 | 5.000 h                                     |
| Radio interference   | Complying with Vde 0712 Iec 82              |
| Socket               | Incorporated 250V Ac/16A                    |
| Installation         | With magnetic plate or DIN bracket 080G3508 |
| Material             | Thermoplastic                               |
| Degree of protection | IP20                                        |
| Standards            | VDE                                         |

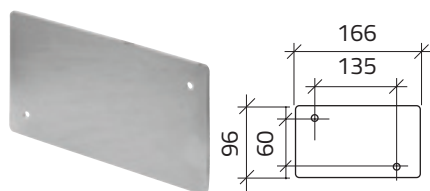


## Plafoniere per lampadine E27 Bulkhead lamps for E27 bulbs

Porta lampada E 27. Classe IP44.  
Resistente alla fiamma ed all'accensione secondo norme IEC 695-2-1 e CEI 50-11.  
Diffusore in policarbonato. Idonea per accogliere lampade a basso consumo.

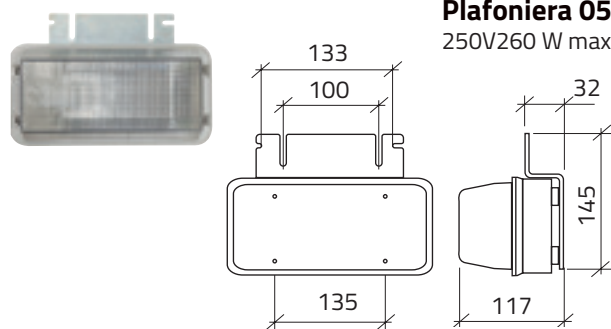
Lampholder E 27 Class IP44.  
Flame and ignition resistant according to IEC 695-2-1 and CEI 50-11  
Polycarbonate diffuser. Suitable for energy saver bulbs.

|                                                         |     |         |
|---------------------------------------------------------|-----|---------|
| 250V/260 W max Tensione di alimentazione / Power Supply | 530 | 050PL60 |
|---------------------------------------------------------|-----|---------|



per plafoniera 050PL60 / for bulkhead lamps 050PL60

|                                    |     |         |
|------------------------------------|-----|---------|
| Piastra magnetica / Magnetic plate | 235 | 050S020 |
|------------------------------------|-----|---------|

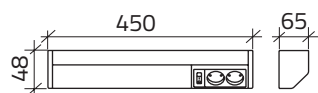


## Plafoniera 050PL60 con staffa / Bulkhead with bracket

|                |      |          |
|----------------|------|----------|
| 250V/260 W max | 1200 | 050SPL60 |
|----------------|------|----------|

# Illuminazione quadri elettrici Control cabinet lighting

## Plafoniere lineari fluorescenti con prese VDE Fluorescent linear lamps with VDE sockets



220/240 50÷60 Hz

g

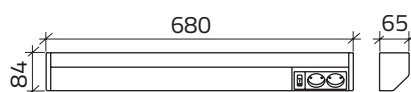
650

W

8

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050PPE8



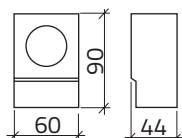
220/240 50÷60 Hz

750

13

050PPE13

## Accessori Accessories



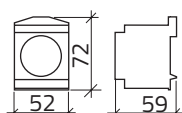
Presa VDE con fusibile / VDE Socket with fuse  
250V AC - 50-60Hz fusibile / fuse

g

113

cod

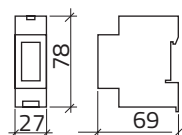
050PFVDE



Presa VDE / VDE Socket 250V AC - 16A

68

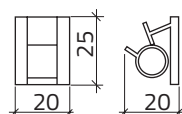
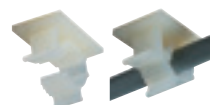
050PVDE



Presa CEI / CEI Socket 250V AC - 10/16A

55

050PCEI



Clip per bloccaggio cavo / Cable clamp

2

050CLIP

Grazie a una comoda leva è possibile liberare il cavo per un eventuale uso manuale della lampada.  
The cable can be released for the hand-held use of the lamp using a handy lever.



SEGNALAZIONE E ILLUMINAZIONE DEI QUADRI ELETTRICI

# Segnalazione quadri elettrici

## Control cabinet signalling



UN SISTEMA FLESSIBILE E MODULABILE  
A FLEXIBLE MODULAR SYSTEM

# Segnalazione quadri elettrici

## Control cabinet signalling

La realizzazione di un prodotto ad alto contenuto tecnologico non può fare solamente affidamento alla creatività progettuale o all'ottimizzazione dei costi, ma, se vuole entrare in una logica di mercato evoluto, deve rispettare alcune fondamentali richieste di una società sempre più sofisticata:

- attento adempimento della legislazione vigente;
- ottimizzazione dei processi produttivi e logistici;
- rispetto ambientale e risparmio energetico.

New Elfin, che opera da anni nel settore dei componenti per l'automazione, ha progettato e costruito un nuovo sistema modulare per l'illuminazione e la segnalazione di sicurezza di apparecchiature elettriche. La progettazione di questo nuovo sistema di sicurezza è partita da una attenta lettura delle recenti disposizioni europee; dalla direttiva macchine 89/392 CEE e successive integrazioni, recepita dal D.P.R. 24 - 7 - 96 n° 459, dalle legislazioni vigenti D.P.R. 547/55, D. Lgs 626/94, D. Lgs 242/96, che evidenziano alcuni parametri fondamentali da rispettare. Qui di seguito tenteremo di indicare i principali obiettivi da raggiungere.



A high tech product cannot be created simply by relying on inspired design or optimisation of costs but must meet certain basic requirements of an ever more sophisticated and demanding society if it is to secure a place on a highly developed market:

- unswerving compliance with current legislation;
- optimisation of production and logistic processes;
- low environmental impact and energy saving.

Drawing on its long-term experience in the automation components sector, New Elfin has designed and constructed a new modular system for lighting and safety signalling of electric equipment.

This new safety system has been designed paying particular attention to recent European regulations taken from Machinery Directive 89/392/EEC and subsequent amendments, enacted by Presidential Decree No. 459 of July 24 1996, from current legislation Presidential Decree 547/55, Decree Law 626/94, Decree Law 242/96 which specify certain important parameters that must be complied with. Below, we will try to establish the main objectives to be achieved.



### **VOLONTARIETA' ALLE NORME**

**La conformità alle norme non è obbligatoria, bensì volontaria**, ciò non di meno chi segue le indicazioni e le prescrizioni normative gode di una presunzione di conformità ai requisiti essenziali di sicurezza, garantendo al prodotto i requisiti necessari per soddisfare le richieste di un mercato moderno. Nel caso dei dispositivi di illuminazione e segnalazione di sicurezza è utile ricordare che si opera nell'ambito delle barriere di sicurezza passiva che, al contrario di quelle attive, hanno il compito di interpretare, segnalare, monitorare e prevenire eventuali situazioni di pericolo.

### **VOLUNTARY COMPLIANCE WITH REGULATIONS**

**Compliance with regulations is not mandatory but voluntary.** Nonetheless, it is assumed that whoever follows the indications and normative prescriptions complies with essential safety requirements, guaranteeing that the product has the necessary prerequisites to measure up to the demands of a modern market. In the case of safety lighting and signalling devices, it is worth remembering that passive safety barriers are used which, as opposed to active safety barriers, must be able to interpret, highlight, monitor and prevent hazardous situations.



# Segnalazione quadri elettrici

## Control cabinet signalling

TIPI DI BARRIERE / TYPES OF BARRIERS

|                                                             |                                                                                                                                  |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| barriera di inaccessibilità<br>barrier restricting access   | carter, ripari mobili, armadi, distanziamento<br>covers, movable guards, segregation cabinets                                    |
| barriera di contenimento<br>containment barrier             | serbatoio, tubazione, condotto a tenuta<br>tank, pipe, sealed duct                                                               |
| barriera di limitazione danno<br>damage restriction barrier | comando di arresto d'emergenza<br>emergency stop control                                                                         |
| barriera di riduzione della dose<br>dose reduction barrier  | aspiratori gas e fumi, protettori, auricolari,<br>insonorizzazione<br>gas and fume extractors, ear protectors,<br>sound-proofing |
| barriera comportamentale<br>behaviour type barrier          | informazione e formazione del personale<br>information and personnel training                                                    |
| barriera di avviso<br>warning barrier                       | segnaletica di sicurezza<br>safety signalling                                                                                    |
| barriera di allarme<br>alarm barrier                        | sistemi automatici di allarme e preallarme<br>automatic alarm and pre-alarm systems                                              |
| barriera preventiva<br>preventive barrier                   | procedure di manutenzione preventiva<br>e/o su condizione<br>preventive and/or on condition type<br>maintenance procedures       |

APPLICAZIONI / APPLICATIONS

### INTERFACCIA UOMO - MACCHINA

Ogni operatore umano, nel momento in cui la macchina è destinata ad essere utilizzata anche da lui, ha l'esigenza ed il diritto di trovarsi nelle migliori condizioni, ad esempio, interfacce trasparenti (vale a dire interpretabili facilmente ed inequivocabilmente), istruzioni esaurienti per ogni operazione (messa a punto, conduzione, manutenzione, pulizia, ecc.), principi ergonomici (buona luminosità, comfort, comandi e meccanismi accessibili, ecc.). Con il termine generico di operatore la Direttiva Macchine e le Norme Tecniche identificano un insieme di persone con differenti livelli di cultura, preparazione e modo di approcciarsi alla macchina<sup>1</sup>.

### MAN- MACHINE INTERFACE

At the moment in which he prepares to use the machine, the operator needs and has the right to be in the best conditions which implies, for example, transparent interfaces (i.e. easy to understand and unambiguous), complete instructions for each operation (setting, operation, maintenance, cleaning, etc.), compliance with human engineering principles (good lighting, comfort, accessible controls and mechanisms, etc.). The Machinery Directive and Technical Regulations establish that the general term "operator" means a set of people with different levels of culture, knowledge and method of approaching the machine<sup>1</sup>.



# Segnalazione quadri elettrici

## Control cabinet signalling

### FATTORI DI RISCHIO - PRECAUZIONI SUPPLEMENTARI

Ogni costruttore certifica il raggiungimento di tutti i livelli di sicurezza a progetto finito, cioè quando la macchina è pronta per la vendita, dopo un attento assemblaggio e un collaudo severo. Occorre ricordare, però che durante queste fasi, per motivi contingenti di industrializzazione, non tutti i dispositivi di sicurezza sono operativi, esponendo gli operatori a imprevedibili fattori di rischio.

### FACTOR OF RISK - ADDITIONAL PRECAUTIONS

Each manufacturer certifies that all levels of safety have been achieved at the end of the project, i.e. when the machine is ready to be sold after attentive assembly and searching inspection. It must be remembered however that, for unavoidable reasons of industrialisation, not all the safety devices are working in these phases and the operators are therefore exposed to unforeseeable factors of risk.

### FATTORI DI RISCHIO ESPOSIZIONE AL PERICOLO

L'esposizione al pericolo è in funzione del tempo durante il quale una persona rimane appunto esposta alla possibilità di un coinvolgimento da parte della fonte di pericolo, oppure è in funzione della frequenza con cui la persona accede alla zona pericolosa della macchina. In ogni caso, esiste una motivazione in ragione della quale l'esposizione si verifica. Questa motivazione può dipendere dal metodo di lavorazione della macchina, oppure dalla necessità d'effettuare interventi di messa a punto e manutenzione.

### FACTOR OF RISK EXPOSURE TO HAZARD

Exposure to hazard depends on the time during which a person remains exposed to the possibility of being involved in a source of hazard or according to the frequency with which the person accesses the machine danger zone. In each case, there is a reason why this exposure occurs which may depend on the method of operation of the machine or on the need for setting and maintenance.

#### TIPI DI BARRIERE TYPES OF BARRIERS

necessità di messa a punto  
setting requirements

necessità di produzione (carico/ scarico)  
production requirements

necessità di manutenzione (riparazione)  
maintenance requirements (repair)

necessità di pulizia  
cleaning requirements

eventi accidentali  
accidental events

# Manomissibilità dei dispositivi di sicurezza

## The possibility of tampering with safety devices

Su ogni macchina esiste anche il rischio che i dispositivi di sicurezza possano venire manomessi o addirittura asportati. Nel panorama delle ragioni nessuna "scusabile", emergono difetti di progettazione o di costruzione della macchina. Errori nella scelta della macchina (non adatta a svolgere le lavorazioni per le quali era stata acquistata, adattamenti impropri da parte dell'utente, abitudini sconsiderate invalse fra gli operatori e gravi dimenticanze in fase manutentiva.



On any machine, there is also the risk that the safety devices may be defeated or even removed. The reasons for these actions (none of which can be excused) include machine design and construction defects; errors in selection the machine (not suitable for the processes for which it has been acquired); improper adaptations by the user; bad habits that are ingrained in operators and serious shortcomings in the maintenance phase



MOTIVAZIONI CHE PORTANO ALLA MANOMISSIONE  
DEI DISPOSITIVI DI SICUREZZA / REASONS WHY SAFETY  
DEVICES ARE TAMPERED WITH ADDITIONAL  
PRECAUTION IN EMERGENCIES

interferenza marcata fra i dispositivi di sicurezza e lo svolgimento del normale ciclo produttivo  
evident interference between safety devices and running of the normal production cycle

guasti frequenti sui dispositivi di sicurezza che producono indisponibilità o difficoltà di impiego della macchina  
frequent failure of safety devices that results in unavailability or difficulty in using the machine

difficoltà di messa a punto della macchina per impossibilità di accesso alle parti mobili  
difficulty in setting the machine due to inaccessibility of mobile parts

impiego della macchina: difforme da quello previsto dal costruttore  
use of the machine other than that intended by the manufacturer

modifiche apportate sulla macchina che ne hanno reso impossibile l'impiego con dispositivi di sicurezza attivi  
modifications to the machine that have made it impossible to use this with the safety devices working

comportamento sconsiderato degli operatori addetti alla macchina  
irresponsible behaviour of the machine operator

mancato ripristino dei dispositivi di sicurezza dopo un intervento manutentivo che ne ha richiesto l'esclusione o l'asportazione  
failure to reset the safety devices after maintenance operations involving bypassing or removal of these



# Manomissibilità dei dispositivi di sicurezza

## The possibility of tampering with safety devices

L'installazione del dispositivo di sicurezza lampeggiante permette di prevenire eventuali incidenti avvertendo, con il lampeggiamento, l'operatore della presenza di tensione nell'impianto elettrico. I dispositivi lampeggianti DSL vengono installati in posizione estremamente visibile all'apertura delle ante del quadro elettrico, collegati direttamente a valle dell'interruttore principale. Il lampeggiare delle tre lampade rosse mette in evidenza la condizione di pericolo per la presenza di tensione. I dispositivi DSL sono idonei al collegamento sia a linee trifasi con o senza neutro, che a linee monofasi. La realizzazione a tre lampade rosse lampeggianti e la simbologia a saetta gialla su fondo rosso rendono il messaggio evidente e comprensibile al di là delle barriere linguistiche o culturali.



Installation of the Flashing Safety Devices makes it possible to prevent accidents by alerting the operator, with the flashing, that the electrical system is live. DSL flashing safety devices are installed in a position where they are immediately visible on opening the door of the cabinet and are connected directly downstream of the main circuit breaker. Flashing of the three red light highlights the power on hazard condition. The DSL devices are suitable for connection to three-phase lines with or without neutral and to single-phase lines. Use of three red flashing lights and the yellow lightning symbol on a red background ensure that the message is conveyed immediately and is readily understood, thus overcoming possible linguistic or cultural barriers.



# Manomissibilità dei dispositivi di sicurezza

## The possibility of tampering with safety devices

Agevolazioni manutentive in termini di :

- accessibilità alle parti interne
- facilità di movimentazione in base alle capacità umane
- scelta adeguata dei posti di lavoro
- a limitazione del numero degli utensili e delle attrezzature speciali
- facilità di sorveglianza

Facilitate maintenance as regards :

- accessibility to inside parts
- ease of movement according to human capacity
- appropriate selection of working position
- restriction of the number of tools and of special equipment
- ease of supervision

Isolamento delle fonti di energia e dissipazione dell' energia immagazzinata :

- isolando la macchina da qualsiasi fonte d' energia o da altri servizi; l' isolamento deve essere visibile (interruzione visibile delle continuità dell'alimentazione di energia) o garantito attraverso il controllo della posizione dell' organo di comando dell' apparecchio d' isolamento e deve essere chiaro quali zone della macchina sono state isolate
- bloccando se necessario (su grandi macchine o impianti), gli apparecchi d'isolamento nella posizione di circuito "isolato"
- adottando misure per garantire, a valle dei punti d'isolamento, quali l'assenza di energia cinetica e l'assenza di energia potenziale
- verificando il risultato delle misure mediante un sistema sicuro di lavoro

Isolation of energy sources and dissipation of energy stored :

- isolating the machine from all sources of energy and from other services; the isolation must be visible (visible interruption of continuity of energy supply) or guaranteed through control of the position of the control device of the isolator with clear indication of which areas of the machine have been isolated
- locking if necessary (e.g. on large machines or installations, isolators in the circuits "isolated" position)
- taking steps to guarantee, downstream of the isolation point absence of potential energy , absence of kinetic energy
- checking the effects of the measures applied through a safe working procedure

Adozioni di accorgimenti che rendano sicura la movimentazione della macchina e delle sue parti pesanti quali:

- organi normalizzati di sollevamento con brache, ganci, golfari o fori filettati per il fissaggio di tali organi
- organi che consentono la presa automatica per mezzo di un gancio di sollevamento , quando il punto d' aggancio non è accessibile da terra
- sedi di forcolamento per le macchine che devono essere trasportate con un carrello a forche
- indicazioni sulla macchina , o su alcune delle sue parti che possono essere rimosse, del valore della loro massa espresso in chilogrammi
- apparecchi di sollevamento ed attrezzi integrati nella macchina

Application of measures that ensure safe handling of the machine and of heavy parts of this such as :

- use of standard attachments for lifting gear with slings, hooks, eyebolts or threaded holes for fastening of these attachments
- lifting gear that permits automatic attachment using a lifting hook when the attachment point is not accessible from the ground
- fork insertion compartments for machines that must be transported using fork-lift trucks
- indication on the machine or on some of its parts that cannot be removed of their weight in kilograms
- lifting gear and equipment integrated in the machine

Accorgimenti destinati a rendere sicuro l' accesso per la messa a punto e la manutenzione (piattaforme scale antiscivolo, corrimani, ecc.)

Measures intended to guarantee safe access for setting and maintenance (platforms- non-slip ladders, handrails, etc.)

Sistemi di auto diagnosi o comunque di assistenza per l' individuazione dei guasti e del pericolo  
Self-test systems or assistance in locating faults and hazards

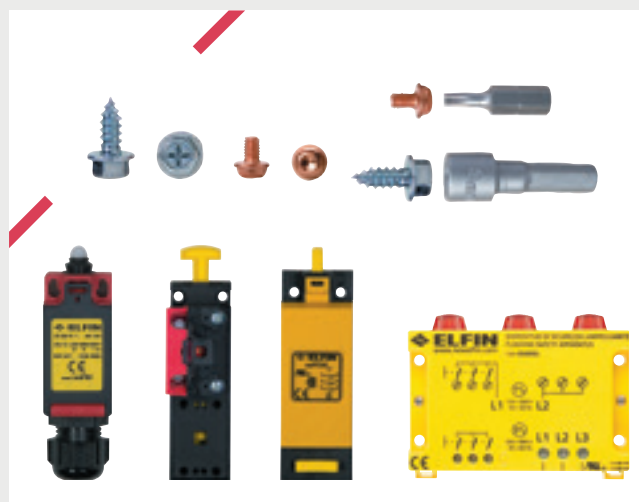
Misure atte a garantire la stabilità statica e dinamica della macchina  
Measures intended to guarantee static and dynamic stability of the machine

# Dispositivi di sicurezza lampeggianti

## Flashing safety devices

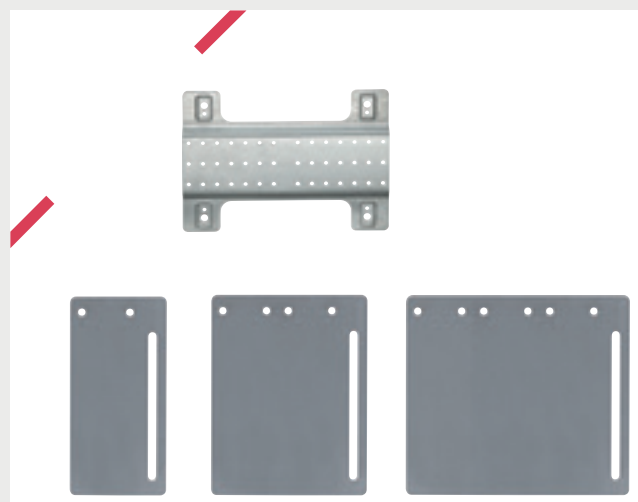
### FACILITÀ DI MONTAGGIO

Tutti i prodotti adottano sistemi di fissaggio rapido. L'installazione degli apparecchi e delle plafoniere sui quadri elettrici, è realizzabile tramite speciali viti Ø 5,5 mm autoformanti. L'applicazione delle plafoniere sugli apparecchi è possibile tramite viti automaschianti M4. Le viti sono state realizzate con speciali teste che permettono una facile avvitatura in posizioni di montaggio difficili. Sia gli apparecchi che le staffe accessorie vengono forniti con viti incluse.

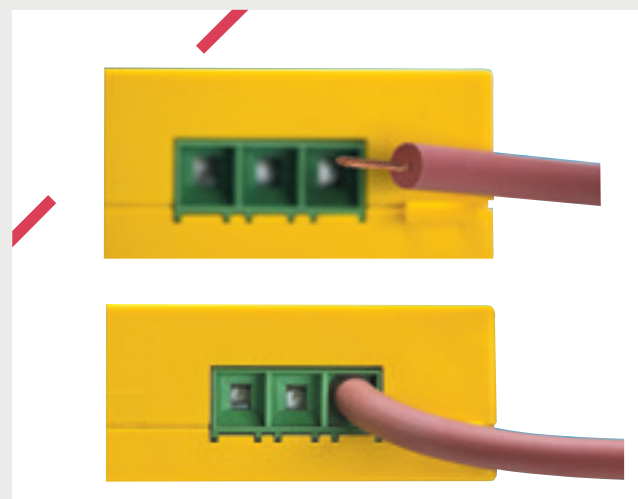
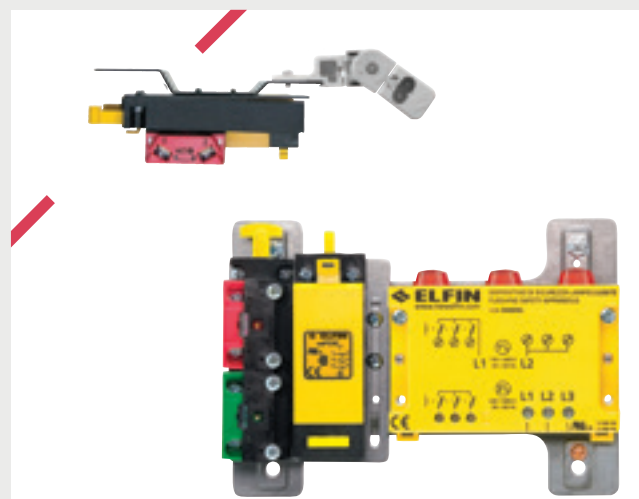


### EASY MOUNTING

All products adopt a fasteners system for a fast mounting. The installation of devices and ceiling lights on electric panels is possible thanks to special selfbaking screws Ø5,5mm. The application of ceiling lights on devices is possible through selfthreading M4 screws. All the screws were made with special heads that permit an easy screwing in difficult mounting positions. Devices and brackets are supplied with screws included.



## easy mounting



# Dispositivi di sicurezza lampeggianti Flashing safety devices



## Dispositivo di sicurezza cablato Safety device, wired

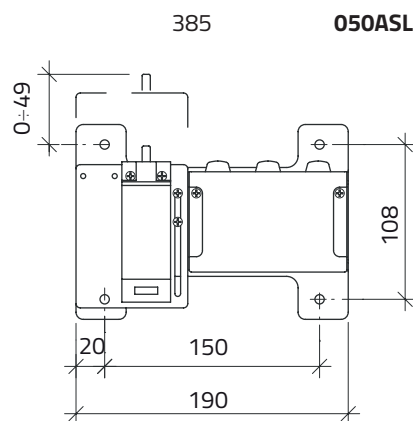
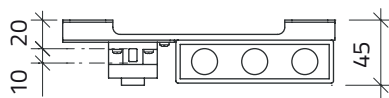
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Finecorsa tripolare cablato al lampeggiante. Si inserisce solo quando le porte dell'armadio sono aperte  
Three-pole limit switch wired to the flashing device. It is on only when the cabinet doors are open

- ③V 220÷690 V. 50÷60 Hz Tensione di alimentazione / Power Supply
- ①V 110÷400 V. 50÷60 Hz Tensione di alimentazione / Power Supply

Configurazione con finecorsa  
Configuration with limit switch



## Dispositivi di sicurezza con finecorsa interblocco, cablati Safety devices with interlock limit switch, wired

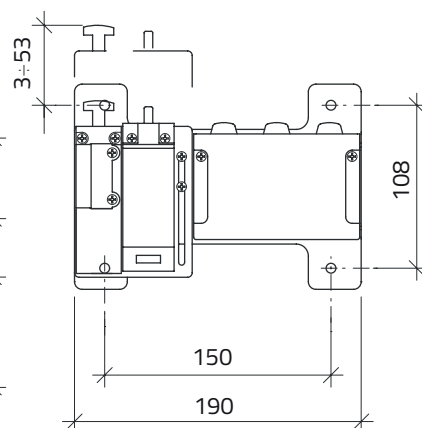
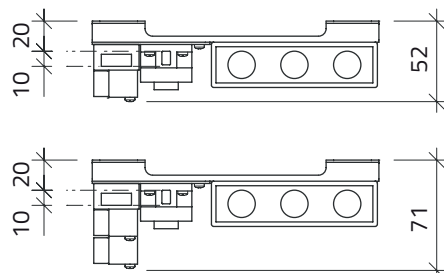
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Normalmente utilizzati per l'inserzione dell'illuminazione e per lo spegnimento di ventole o condizionatori.  
Normally used to switch lighting on and fans or conditioners off

- ③V 220÷690 V. 50÷60 Hz Tensione di alimentazione / Power Supply
- ①V 110÷400 V. 50÷60 Hz Tensione di alimentazione / Power Supply

|                                                  |     |            |
|--------------------------------------------------|-----|------------|
| Interblocco con 1NC / Interlock with 1NC         | 535 | 050ASLFI01 |
| Interblocco con 1NO / Interlock with 1NO         | 535 | 050ASLFI10 |
| Interblocco con 1NC+2NC / Interlock with 1NC+2NC | 535 | 050ASLFI03 |
| Interblocco con 1NO+2NC / Interlock with 1NO+2NC | 535 | 050ASLFI12 |



# Dispositivi di sicurezza lampeggianti

## Flashing safety devices

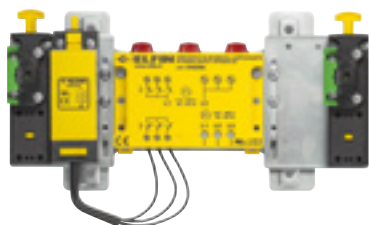
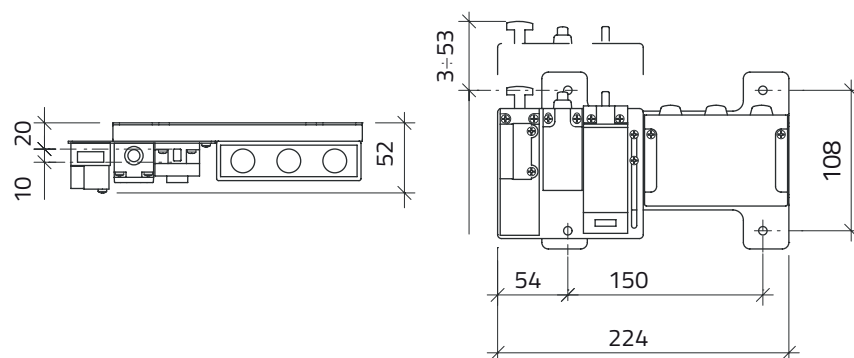


### Dispositivi di sicurezza con finecorsa e micro, cablati

### Safety devices with limit switch and microswitch, wired

- 3~ 220÷690 V. 50÷60 Hz Tensione di alimentazione / Power Supply  
 1~ 110÷400 V. 50÷60 Hz Tensione di alimentazione / Power Supply

|                                          |     |                  |
|------------------------------------------|-----|------------------|
| Interblocco con 1NC / Interlock with 1NC | 730 | <b>050AS01FC</b> |
| Interblocco con 1NO / Interlock with 1NO | 730 | <b>050AS10FC</b> |



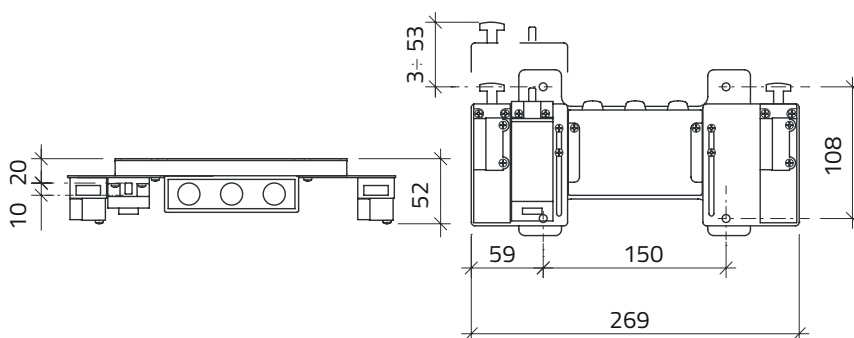
### Dispositivo di sicurezza con finecorsa interblocco, cablato

### Safety device with interlock limit switch, wired

#### Per due porte / For two doors

- 3~ 220÷690 V. 50÷60 Hz Tensione di alimentazione / Power Supply  
 1~ 110÷400 V. 50÷60 Hz Tensione di alimentazione / Power Supply

|                                          |     |                     |
|------------------------------------------|-----|---------------------|
| Interblocco con 1NO / Interlock with 1NO | 764 | <b>050ASL2PFI10</b> |
|------------------------------------------|-----|---------------------|



# Dispositivi di sicurezza lampeggianti Flashing safety devices



## Dispositivo di sicurezza cablato Safety device, wired

### Configurazione con finecorsa / Configuration with limit switch

Finecorsa tripolare cablato al lampeggiante. Determina l'inserimento solo quando le porte dell'armadio sono aperte  
Three-pole limit switch wired to the flashing device. It is on only when the cabinet doors are open.

3~

220÷690 V. 50÷60 Hz Tensione di alimentazione / Power Supply

1~

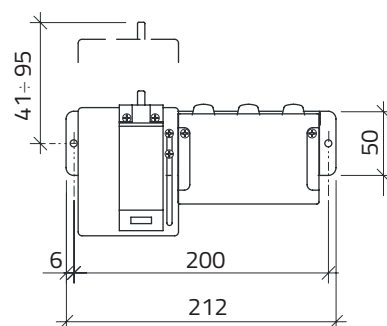
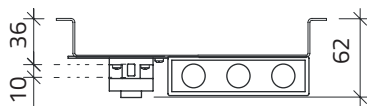
110÷400 V. 50÷60 Hz Tensione di alimentazione / Power Supply

g

cod

430

050ASL3



## Dispositivi di sicurezza con finecorsa interblocco, cablati Safety devices with limit switch and microswitch, wired

3~

220÷690 V. 50÷60 Hz Tensione di alimentazione / Power Supply

Interblocco con 1NC / Interlock with 1NC

g

cod

490

050ASL3FI01

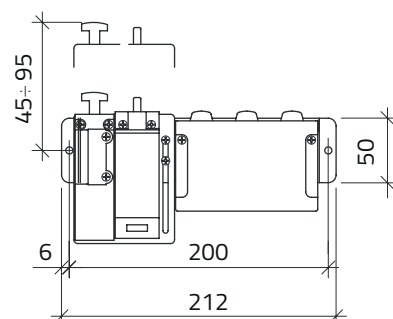
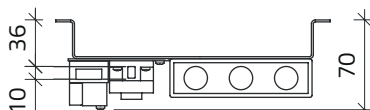
1~

110÷400 V. 50÷60 Hz Tensione di alimentazione / Power Supply

Interblocco con 1NO / Interlock with 1NO

490

050ASL3FI10





# Dispositivi di sicurezza lampeggianti

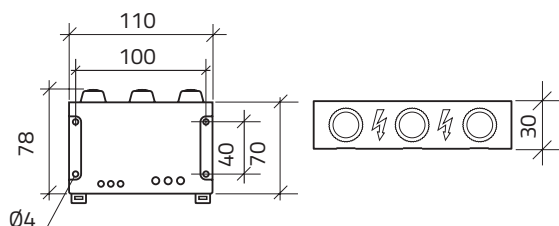
## Flashing safety devices



### Dispositivo di sicurezza lampeggiante

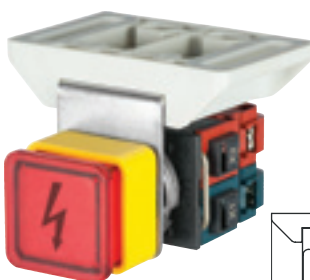
#### Flashing safety device

|    |                                                              |    |        |
|----|--------------------------------------------------------------|----|--------|
| 3~ | 220÷690 V. 50÷60 Hz Tensione di alimentazione / Power Supply |    |        |
| 1~ | DC*/AC 110÷400V 50÷60 Hz non polarizzato / not polarized     | 90 | 050DSL |



### Dispositivi di sicurezza monofase lampeggianti

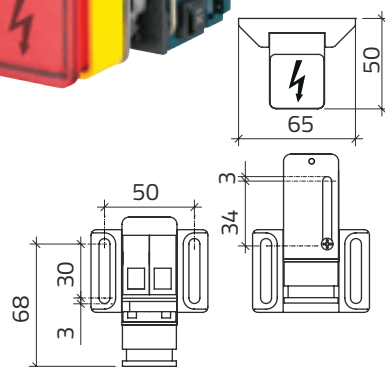
#### Single-phase flashing safety devices



#### Alimentazione diretta 24V con led lampeggiante rosso

#### 24V direct power supply with flashing red led

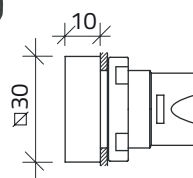
|            |     |            |
|------------|-----|------------|
| 1NO + 1 NC | 167 | 050ASPLD11 |
| 1NC        | 167 | 050ASPLD01 |
| 1NO        | 167 | 050ASPLD10 |



#### Dispositivo di sicurezza monofase senza led

#### Single-phase safety device without led

|            |     |           |
|------------|-----|-----------|
| 1NO + 1 NC | 167 | 050ASPD11 |
|------------|-----|-----------|

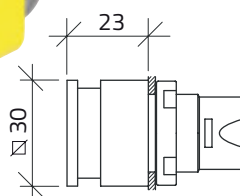


### Unità luminosa di sicurezza

#### Illuminated safety unit

Per altri tipi di operatori e portalampe, vedi sezione 020  
For other types of operators and lampholders, see section 020.

|    |              |
|----|--------------|
| 21 | 020LQBIRKS72 |
|----|--------------|



### Pulsante di sicurezza luminoso

#### Illuminated safety push-button

Per altri tipi di operatori e portalampe, vedi sezione 020  
For other types of operators and lampholders, see section 020.

|    |               |
|----|---------------|
| 25 | 020PQAFLRKS72 |
|----|---------------|

# Dispositivi di sicurezza lampeggianti

## Flashing safety devices

### Caratteristiche tecniche

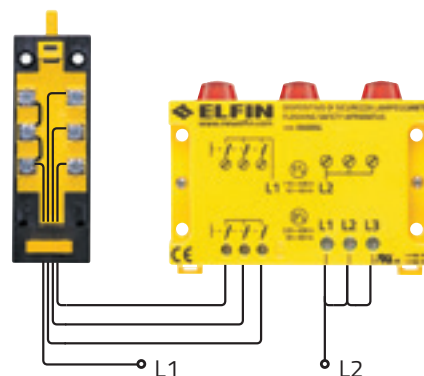
|                                    |                                                                                                                                                                                                                                                                                                     |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rispondenza alle norme             | IEC 947-5-1, CEI 7.45 VDE - UTE - BSI<br>CENELEC, EN 60947.5.1                                                                                                                                                                                                                                      |
| Omologazioni                       | (USA - CANADA)                                                                                                                                                                                                                                                                                      |
| Protezioni climatiche              | In esecuzione normale T.C. tutti i climi                                                                                                                                                                                                                                                            |
| Limiti di temperatura              | Funzionamento -25°C ÷ +65°C<br>Stoccaggio -35°C ÷ +70°C                                                                                                                                                                                                                                             |
| Protezione alla scossa elettrica   | Classe II doppio isolamento secondo IEC 536                                                                                                                                                                                                                                                         |
| Tensione nominale di isolamento    | Ui 690 A.C.                                                                                                                                                                                                                                                                                         |
| Grado di inquinamento              | Classe 3 secondo DIN VDE 0110                                                                                                                                                                                                                                                                       |
| Morsetti                           | <b>Fase L1 - L2- L3</b><br>↻ Coppia max 1Nm<br>Ø vite a taglio 5mm<br>max 1 conduttore / 4mm <sup>2</sup> / 10AWG<br><b>Ausiliari</b><br>↻ Coppia max 0,5Nm<br>Ø vite a taglio 3,5mm<br>max 1 conduttore / 2,5mm <sup>2</sup> / 12AWG<br><b>Grado di protezione morsetti</b><br>P2X secondo IEC 529 |
| Conformità alle direttive emc/rohs | EN 50014-1, EN 50082-2,<br>EN 55022, EN 61000-4-2÷11,<br>EN 61000-6-2÷31. Immunità alle ESD.<br>Immunità di BURST.<br>Direttive: EMC EC 2004/108 - RoHS EC 2002/95                                                                                                                                  |
| Assorbimento max                   | 10mA                                                                                                                                                                                                                                                                                                |

### Technical data

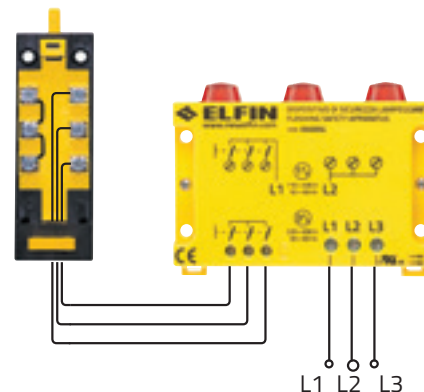
|                                     |                                                                                                                                                                                                                                                                                         |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conforming to standards             | IEC 947-5-1, CEI 7.45 VDE - UTE - BSI<br>CENELEC, EN 60947.5.1                                                                                                                                                                                                                          |
| Approvals                           | (USA - CANADA)                                                                                                                                                                                                                                                                          |
| Protective treatment                | Standard version: "TC"                                                                                                                                                                                                                                                                  |
| Ambient temperature                 | Operation -25°C ÷ +65°C<br>Storage -35°C ÷ +70°C                                                                                                                                                                                                                                        |
| Ambient temperature protection      | Class II double insulation conforming to IEC 536                                                                                                                                                                                                                                        |
| Rated insulation voltage            | Ui 690 A.C.                                                                                                                                                                                                                                                                             |
| Level of pollution                  | Class 3 conforming to DIN VDE 0110                                                                                                                                                                                                                                                      |
| Terminals                           | <b>Phase L1 - L2- L3</b><br>↻ Torque max 1Nm<br>Ø vite a taglio 5mm<br>max 1 conductor / 4mm <sup>2</sup> / 10AWG<br><b>Aux</b><br>↻ Torque max 0,5Nm<br>Ø vite a taglio 3,5mm<br>max 1 conductor / 2,5mm <sup>2</sup> / 12AWG<br><b>Protection degree</b><br>P2X conforming to IEC 529 |
| Compliance with emc/rohs directives | EN 50014-1, EN 50082-2,<br>EN 55022, EN 61000-4-2÷11,<br>EN 61000-6-2÷31. Immunity to ESD.<br>Immunity to BURSTS.<br>Directives: EMC EC 2004/108 - RoHS EC 2002/95                                                                                                                      |
| Max consupcion                      | 10mA                                                                                                                                                                                                                                                                                    |

### Collegamenti / Connections

Ⓜ Monofase / Single-phase



Ⓜ Trifase / Three-phase





# Dispositivi di sicurezza lampeggianti

## Flashing safety devices

### ■ FINE CORSA INTERBLOCCO PER CIRCUITI AUSILIARI E DI SERVIZIO

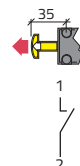
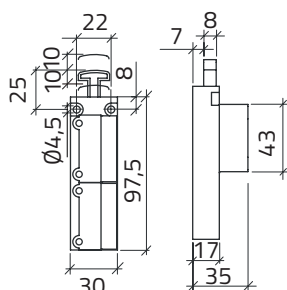
Il finecorsa interblocco è un dispositivo che viene azionato direttamente da ogni porta dell'armadio elettrico. Di norma vengono collegati sul primo elemento di contatto (unico su cui può intervenire il dispositivo d' interblocco) i circuiti ausiliari degli apparecchi di manovra. I restanti contatti montati posteriormente vengono utilizzati per i circuiti di servizio, quali ad esempio : accensione luce armadio, inserimento ventole, condizionatore, segnalatori acustici, colonnine luminose. A porte aperte può essere commutato manualmente mediante una comoda ancoretta, contrassegnata da una freccia , realizzando svariate funzioni (per combinazioni diverse, acquistare elementi di contatto separati). Il ripristino delle condizioni normali avviene ad ogni chiusura della porta dell'armadio

### ■ INTERLOCK LIMIT SWITCHES FOR AUXILIARY AND SERVICE CIRCUITS

This device is activated directly by each door of the cabinet. The auxiliary circuits of the switchgear are usually connected on the first contact element (the only one on which the interlock device can act). The remaining contacts mounted to the rear are used for the service circuits such as, for example : switching on off the cabinet light, activation of fans, conditioner, audible signals, beacons. With the doors open, it can be activated manually using a handy button marked by an arrow, performing various functions (for different combinations, purchase separate contact elements). Normal conditions are reset each time the door of the cabinet is closed

# Dispositivi di sicurezza lampeggianti Flashing safety devices

## Finecorsa interblocco Interlock limit switches

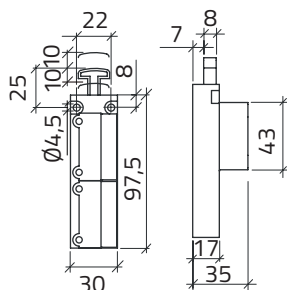


g

cod

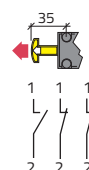
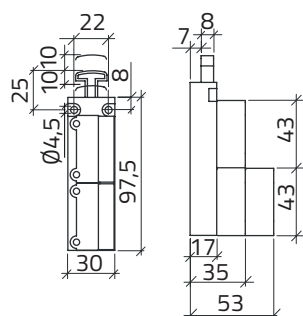
57

050FI01



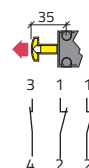
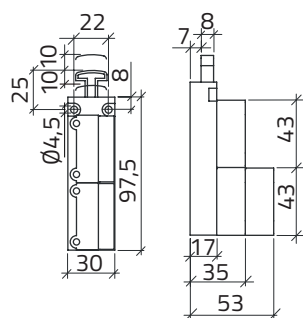
57

050FI10



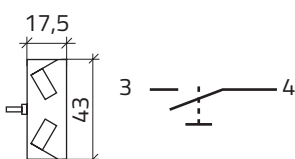
103

050FI03



103

050FI12



## Contatti con protezione / Contact block with protections

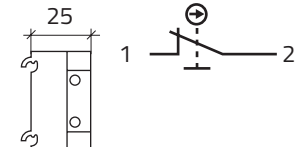
per finecorsa interblocco / for interlock limit switches

1NO

23

2

030FAP



1NC

23

2

030FCP

# Dispositivi di sicurezza lampeggianti

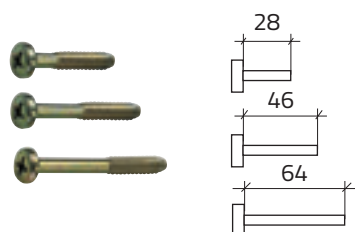
## Flashing safety devices

### Caratteristiche tecniche

| Rispondenza alle norme             | IEC 947-5-1 VDE 0660 -UTE- BSI CENELEC                                                                                                                                                                                                                                                      |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|----|----|-----|---|-----|---|-----|---|-----|-----|-----|-----|
| Omologazioni                       | CSA(CANADA)-UL(USA)                                                                                                                                                                                                                                                                         |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| Grado protezione morsetti          | IP2X secondo IEC 529                                                                                                                                                                                                                                                                        |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| Momento torcente morsetti          | 1,5 Nm, vite M4 serrafilo autosollevante<br>imperdibile $\geq 3 \text{ mm}^2 \leq 2 \times 2,5 \text{ mm}^2$                                                                                                                                                                                |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| Tensione nominale d' isolamento Ui | 690 V secondo IEC 947-5-1                                                                                                                                                                                                                                                                   |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| Corrente nominale termico Ith      | 10A                                                                                                                                                                                                                                                                                         |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| Potenze nominali d' impiego        | Secondo IEC 947-5-1<br>CatAC15<br><table> <tr> <th>Ue V</th><th>Ie A</th></tr> <tr><td>60</td><td>10</td></tr> <tr><td>110</td><td>6</td></tr> <tr><td>220</td><td>3</td></tr> <tr><td>380</td><td>2</td></tr> <tr><td>500</td><td>1,5</td></tr> <tr><td>600</td><td>1,2</td></tr> </table> | Ue V | Ie A | 60 | 10 | 110 | 6 | 220 | 3 | 380 | 2 | 500 | 1,5 | 600 | 1,2 |
| Ue V                               | Ie A                                                                                                                                                                                                                                                                                        |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| 60                                 | 10                                                                                                                                                                                                                                                                                          |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| 110                                | 6                                                                                                                                                                                                                                                                                           |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| 220                                | 3                                                                                                                                                                                                                                                                                           |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| 380                                | 2                                                                                                                                                                                                                                                                                           |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| 500                                | 1,5                                                                                                                                                                                                                                                                                         |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| 600                                | 1,2                                                                                                                                                                                                                                                                                         |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| Funzionamento contatti             | Azionamento lento con NC azione positiva <br>velocità di azionamento 0,05 - 2m/sec                                                                                                                         |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| Durata                             | Meccanica 1.0x10 <sup>6</sup> manovre<br>Elettrica 5.0x10 <sup>5</sup> manovre                                                                                                                                                                                                              |      |      |    |    |     |   |     |   |     |   |     |     |     |     |

### Technical data

| Conforming to standards       | IEC 947-5-1 VDE 0660 - UTE - BSI CENELEC                                                                                                                                                                                                                                                          |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|----|----|-----|---|-----|---|-----|---|-----|-----|-----|-----|
| Approvals                     | CSA(CANADA)-UL(USA)                                                                                                                                                                                                                                                                               |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| Terminal degree of protection | IP 2X conforming to IEC 529                                                                                                                                                                                                                                                                       |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| Terminal torque               | 1,5Nm, screw M4 self-lifting<br>captive cable clamp $\geq 3 \text{ mm}^2 \leq 2 \times 2,5 \text{ mm}^2$                                                                                                                                                                                          |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| Rated unsulation voltage Ui   | 690 V conforming to IEC 947-5-1                                                                                                                                                                                                                                                                   |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| Rated thermal current Ith     | 10A                                                                                                                                                                                                                                                                                               |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| Rated operational power       | Conforming to IEC 947-5-1<br>CatAC15<br><table> <tr> <th>Ue V</th><th>Ie A</th></tr> <tr><td>60</td><td>10</td></tr> <tr><td>110</td><td>6</td></tr> <tr><td>220</td><td>3</td></tr> <tr><td>380</td><td>2</td></tr> <tr><td>500</td><td>1,5</td></tr> <tr><td>600</td><td>1,2</td></tr> </table> | Ue V | Ie A | 60 | 10 | 110 | 6 | 220 | 3 | 380 | 2 | 500 | 1,5 | 600 | 1,2 |
| Ue V                          | Ie A                                                                                                                                                                                                                                                                                              |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| 60                            | 10                                                                                                                                                                                                                                                                                                |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| 110                           | 6                                                                                                                                                                                                                                                                                                 |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| 220                           | 3                                                                                                                                                                                                                                                                                                 |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| 380                           | 2                                                                                                                                                                                                                                                                                                 |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| 500                           | 1,5                                                                                                                                                                                                                                                                                               |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| 600                           | 1,2                                                                                                                                                                                                                                                                                               |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| Contact operation             | Slow break with positive action<br>on NC contact                                                                                                                                                               |      |      |    |    |     |   |     |   |     |   |     |     |     |     |
| Durability                    | Operating speed 0,05 - 2 m/sec<br>Mechanical 1.0x10 <sup>6</sup> operations<br>Electrical 5.0x10 <sup>5</sup> operations                                                                                                                                                                          |      |      |    |    |     |   |     |   |     |   |     |     |     |     |



### Viti di fissaggio elementi di contatto

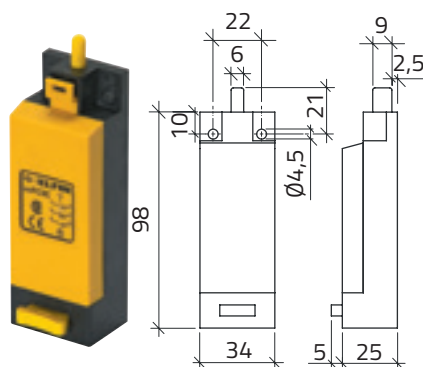
#### Fixing screws for contact blocks

Montaggio di : / Mounting of :

|                                                     | g | n  | cod           |
|-----------------------------------------------------|---|----|---------------|
| 1 elemento / 1 contact block                        | 2 | 10 | <b>030V28</b> |
| 2 elementi sovrapposti/ 2 overlapped contact blocks | 3 | 10 | <b>030V46</b> |
| 3 elementi sovrapposti/3 overlapped contact blocks  | 4 | 10 | <b>030V64</b> |

# Dispositivi di sicurezza lampeggianti

## Flashing safety devices



### Finecorsa tripolari

### Three-pole limit switches

g

cod

Corsa e commutazioni / Contact travel and switching points

|           |                   |  |    |                |
|-----------|-------------------|--|----|----------------|
| 3NC       | 1-2<br>3-4<br>5-6 |  | 62 | <b>050FC3C</b> |
|           |                   |  |    |                |
|           |                   |  |    |                |
|           |                   |  |    |                |
| 2NC + 1NO | 1-2<br>3-4<br>5-6 |  | 62 | <b>050FC2C</b> |
|           |                   |  |    |                |
|           |                   |  |    |                |
|           |                   |  |    |                |
| 1NC+2NO   | 1-2<br>3-4<br>5-6 |  | 62 | <b>050FC1C</b> |
|           |                   |  |    |                |
|           |                   |  |    |                |
|           |                   |  |    |                |
| 3NO       | 1-2<br>3-4<br>5-6 |  | 62 | <b>050FC0C</b> |
|           |                   |  |    |                |
|           |                   |  |    |                |
|           |                   |  |    |                |

### Caratteristiche tecniche

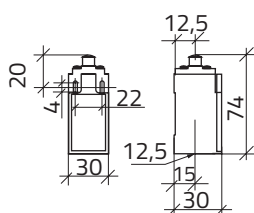
|                                   |                                                                                                                                                                                                                                                                  |      |      |     |   |     |   |     |   |     |     |     |     |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|-----|---|-----|---|-----|---|-----|-----|-----|-----|
| Rispondenza alle norme            | IEC 947-5-1                                                                                                                                                                                                                                                      |      |      |     |   |     |   |     |   |     |     |     |     |
| Omologazioni                      | CSA(CANADA)-UL(USA) solo versione 050FC3C                                                                                                                                                                                                                        |      |      |     |   |     |   |     |   |     |     |     |     |
| Grado protezione morsetti         | IP40 secondo IEC 529                                                                                                                                                                                                                                             |      |      |     |   |     |   |     |   |     |     |     |     |
| Momento torcente morsetti         | $\curvearrowright$ max 0,5Nm, vite/screw M3,5, serrafilo<br>autosollevante, testa combinata DIN 7962<br>31x0,05mm <sup>2</sup> , $\pm$ 2x2,5mm <sup>2</sup>                                                                                                      |      |      |     |   |     |   |     |   |     |     |     |     |
| Tensione nominale d'isolamento Ui | 690 V                                                                                                                                                                                                                                                            |      |      |     |   |     |   |     |   |     |     |     |     |
| Corrente nominale termico Ith     | 10A                                                                                                                                                                                                                                                              |      |      |     |   |     |   |     |   |     |     |     |     |
| Potenze nominali d'impiego        | Secondo IEC 947-5-1<br>CatAC15<br><table> <tr> <td>Ue V</td><td>Ie A</td></tr> <tr> <td>110</td><td>6</td></tr> <tr> <td>220</td><td>3</td></tr> <tr> <td>380</td><td>2</td></tr> <tr> <td>500</td><td>1,5</td></tr> <tr> <td>600</td><td>1,2</td></tr> </table> | Ue V | Ie A | 110 | 6 | 220 | 3 | 380 | 2 | 500 | 1,5 | 600 | 1,2 |
| Ue V                              | Ie A                                                                                                                                                                                                                                                             |      |      |     |   |     |   |     |   |     |     |     |     |
| 110                               | 6                                                                                                                                                                                                                                                                |      |      |     |   |     |   |     |   |     |     |     |     |
| 220                               | 3                                                                                                                                                                                                                                                                |      |      |     |   |     |   |     |   |     |     |     |     |
| 380                               | 2                                                                                                                                                                                                                                                                |      |      |     |   |     |   |     |   |     |     |     |     |
| 500                               | 1,5                                                                                                                                                                                                                                                              |      |      |     |   |     |   |     |   |     |     |     |     |
| 600                               | 1,2                                                                                                                                                                                                                                                              |      |      |     |   |     |   |     |   |     |     |     |     |
| Funzionamento contatti            | Azionamento lento autopulenti a strisciamento<br>NC azione positiva                                                                                                                                                                                              |      |      |     |   |     |   |     |   |     |     |     |     |

### Technical data

|                               |                                                                                                                                                                                                                                                                        |      |      |     |   |     |   |     |   |     |     |     |     |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|-----|---|-----|---|-----|---|-----|-----|-----|-----|
| Conforming to standards       | IEC 947-5-1                                                                                                                                                                                                                                                            |      |      |     |   |     |   |     |   |     |     |     |     |
| Approvals                     | CSA(CANADA)-UL(USA) version 050FC3C only                                                                                                                                                                                                                               |      |      |     |   |     |   |     |   |     |     |     |     |
| Terminal degree of protection | IP40 conforming to IEC 529                                                                                                                                                                                                                                             |      |      |     |   |     |   |     |   |     |     |     |     |
| Terminal torque               | $\curvearrowright$ max 0,5Nm, screw M3,5, self-lifting<br>captive cable clamp, combined head DIN 7962<br>31x0,05mm <sup>2</sup> , $\pm$ 2x2,5mm <sup>2</sup>                                                                                                           |      |      |     |   |     |   |     |   |     |     |     |     |
| Rated unsulation voltage Ui   | 690 V                                                                                                                                                                                                                                                                  |      |      |     |   |     |   |     |   |     |     |     |     |
| Rated thermal current Ith     | 10A                                                                                                                                                                                                                                                                    |      |      |     |   |     |   |     |   |     |     |     |     |
| Rated operational power       | Conforming to IEC 947-5-1<br>CatAC15<br><table> <tr> <td>Ue V</td><td>Ie A</td></tr> <tr> <td>110</td><td>6</td></tr> <tr> <td>220</td><td>3</td></tr> <tr> <td>380</td><td>2</td></tr> <tr> <td>500</td><td>1,5</td></tr> <tr> <td>600</td><td>1,2</td></tr> </table> | Ue V | Ie A | 110 | 6 | 220 | 3 | 380 | 2 | 500 | 1,5 | 600 | 1,2 |
| Ue V                          | Ie A                                                                                                                                                                                                                                                                   |      |      |     |   |     |   |     |   |     |     |     |     |
| 110                           | 6                                                                                                                                                                                                                                                                      |      |      |     |   |     |   |     |   |     |     |     |     |
| 220                           | 3                                                                                                                                                                                                                                                                      |      |      |     |   |     |   |     |   |     |     |     |     |
| 380                           | 2                                                                                                                                                                                                                                                                      |      |      |     |   |     |   |     |   |     |     |     |     |
| 500                           | 1,5                                                                                                                                                                                                                                                                    |      |      |     |   |     |   |     |   |     |     |     |     |
| 600                           | 1,2                                                                                                                                                                                                                                                                    |      |      |     |   |     |   |     |   |     |     |     |     |
| Contact operation             | Slow break, self-cleaning sliding activation<br>NC positive action                                                                                                                                                                                                     |      |      |     |   |     |   |     |   |     |     |     |     |

# Dispositivi di sicurezza lampeggianti

## Flashing safety devices



### Finecorsa bipolari

#### Two-pole limit switches

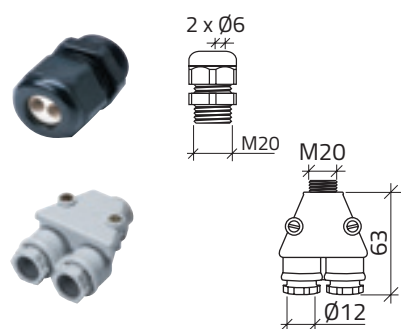
|                                | g  | cod    |
|--------------------------------|----|--------|
| 1NC+1NO finecorsa/limit switch | 60 | 050F11 |
| 2NC finecorsa/limit switch     | 60 | 050F02 |
| 2NO finecorsa/limit switch     | 60 | 050F20 |

### Caratteristiche tecniche

|                                   |                                          |
|-----------------------------------|------------------------------------------|
| Rispondenza alle norme            | EN 50047                                 |
| Omologazioni                      | Nr. E224315 (UL-CSA)                     |
| Grado protezione morsetti         | IP65 secondo IEC 529                     |
| Temperatura di utilizzo           | -10÷+80°C                                |
| Tensione nominale d'isolamento Ui | Ui 690 V secondo IEC 947-5-1             |
| Corrente nominale termica         | 10A                                      |
| Potenze nominali d'impiego        | Secondo IEC 947-5-1 / UL508              |
|                                   | AC15-A600 DC13-Q300                      |
|                                   | UE V le A UE V le A                      |
|                                   | 24 10 24 2,5                             |
|                                   | 110 6 110 0,6                            |
|                                   | 220 3 230 0,3                            |
|                                   | 400 1,5                                  |
|                                   | 600 1,2                                  |
| Funzionamento contatti            | Azionamento lento con NC azione positiva |
|                                   | velocità di azionamento 0,05-2m/sec      |
| Durata                            | Meccanica 1.0x10 <sup>7</sup> manovre    |
|                                   | Elettrica 5.0 x 10 <sup>5</sup> manovre  |

### Technical data

|                               |                                               |
|-------------------------------|-----------------------------------------------|
| Conforming to standards       | EN 50047                                      |
| Approvals                     | Nr. E224315 (UL-CSA)                          |
| Terminal degree of protection | IP65 conforming to IEC 529                    |
| Operating temperature         | -10 ÷ +80°C                                   |
| Rated unsulation voltage Ui   | Ui 690V according to IEC947-5-1               |
| Rated thermal current         | 10A                                           |
| Rated operational power       | According to IEC 947-5-1 / UL 508             |
|                               | AC15-A600 DC13-Q300                           |
|                               | UE V le A UE V le A                           |
|                               | 24 10 24 2,5                                  |
|                               | 110 6 110 0,6                                 |
|                               | 220 3 230 0,3                                 |
|                               | 400 1,5                                       |
|                               | 600 1,2                                       |
| Contact operation             | Slow break with positive action on NC contact |
|                               | Operating speed 0,05-2m/sec                   |
| Durability                    | Mechanical 1.0x10 <sup>7</sup> operations     |
|                               | Electrical 5.0 x 10 <sup>5</sup> operation    |

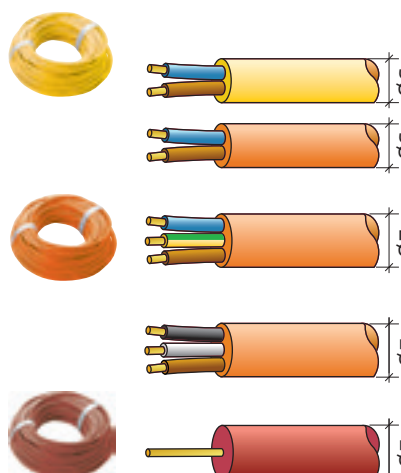


### Pressacavi /Cable glands

|                                             | g  | cod      |
|---------------------------------------------|----|----------|
| Pressacavo 2 ingressi / 2-hole cable gland  | 10 | 0102P20  |
| Pressacavo 2 vie / Double cable entry gland | 45 | 010N2M20 |

### Accessori

#### Accessories



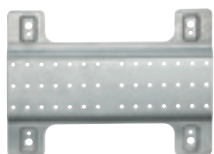
|                                                                                                                                                                                                                                                                                      | g    | cod       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| matassa cavo mt 100 - norme CEI 20-22 II - tensione 300-500V cavo bipolare FROR NPI 2x0,75mm <sup>2</sup><br>cable bundle mt 100 - standards CEI 20-22 II-voltage 300-500V~ two-pole cable FROR NPI 2x0,75mm <sup>2</sup>                                                            |      |           |
| ● Giallo / Yellow                                                                                                                                                                                                                                                                    | 4300 | 050CB075G |
| ● Arancione / Orange                                                                                                                                                                                                                                                                 | 4300 | 050CB075A |
| matassa cavo mt 100 - norme CEI 20-22 II - tensione 300-500V cavo bipolare con terra FROR NPI 2x15mm <sup>2</sup> -1X15mm <sup>2</sup><br>cable bundle mt 100 - standards CEI 20-22 II-voltage 300-500V~ two-pole cable with earth FROR NPI 2x15mm <sup>2</sup> -1X15mm <sup>2</sup> |      |           |
| ● Arancione / Orange                                                                                                                                                                                                                                                                 | 4300 | 050CBG1A  |
| matassa cavo mt 100 - norme CEI 20-22 II - tensione 300-500V cavo bipolare FROR NPI 3x15mm <sup>2</sup><br>cable bundle mt 100 - standards CEI 20-22 II-voltage 300-500V~ two-pole cable FROR NPI 3x15mm <sup>2</sup>                                                                |      |           |
| ● Arancione / Orange                                                                                                                                                                                                                                                                 | 4300 | 050CCT1A  |
| matassa cavo unipolare 1x1mm <sup>2</sup> - L 25 m - guaina ad alto isolamento<br>single-pole cable bundle 1x1mm <sup>2</sup> - L 25 m - high-insulating silicone sheath                                                                                                             |      |           |
| ● Rosso / Red                                                                                                                                                                                                                                                                        | 1470 | 050CS1R   |



# Accessori Accessories

## Staffe Brackets

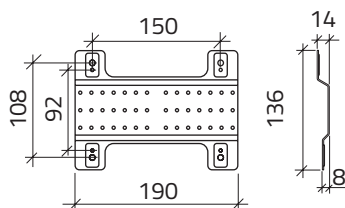
g n cod



L'utilizzo di questi componenti, unitamente ai componenti ed accessori elencati nei precedenti capitoli, permette di configurare l'apparecchio secondo le proprie esigenze.

Viti di fissaggio incluse.

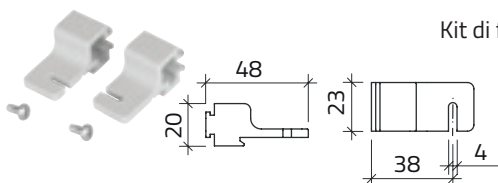
The use of these components together with the devices and the accessories listed on the previous page makes it possible to configure the devices according to specific requirements.  
Fixing screws included



Staffa di fissaggio reversibile / Reversible mounting bracket  
Passo / pitch DIN 50

230

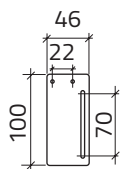
050S030



Kit di fissaggio lampade 050PE / 050PEL / Mounting kit for lamps

20

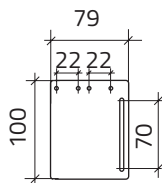
050KFL



Staffa di fissaggio regolabile per 1 elemento  
Adjustable mounting bracket for 1 component

48

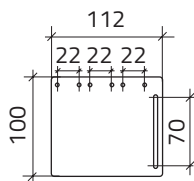
050S031



Staffa di fissaggio regolabile per 2 elementi  
Adjustable mounting bracket for 2 components

86

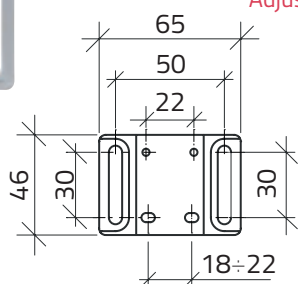
050S032



Staffa di fissaggio regolabile per 3 elementi  
Adjustable mounting bracket for 3 components

125

050S033

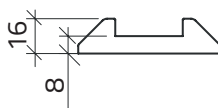


Staffa di fissaggio regolabile  
Adjustable mounting bracket

23

2

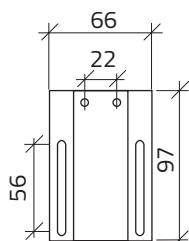
050S003



# Accessori

## Accessories

### Staffe Brackets



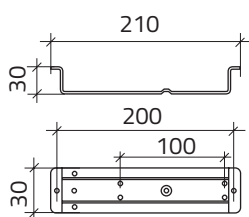
Staffa di fissaggio regolabile  
Adjustable mounting bracket

g

cod

23

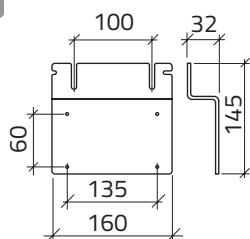
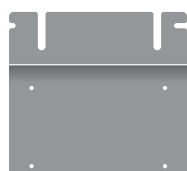
050S003M



Staffa di fissaggio H 30 / Mounting bracket H30

150

050S001

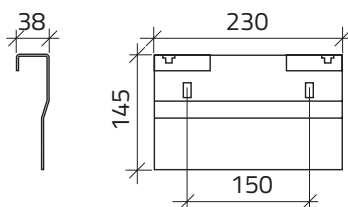


Staffa di fissaggio regolabile  
Adjustable mounting bracket

per plafoniera 050PL60  
for luminaires 050PL60

670

050S017



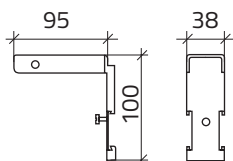
Staffa adattatrice / Adaptor bracket

708

050SA005

# Accessori

## Accessories



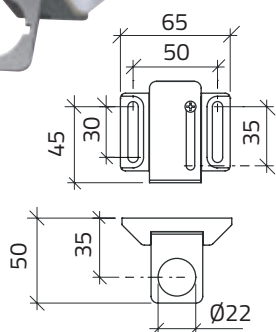
Staffa guida omega / **Omega rail bracket**  
DIN 35mm

**g**

**cod**

128

**050S013**



Staffa per operatori / **Bracket for operators**

104

**050S015**

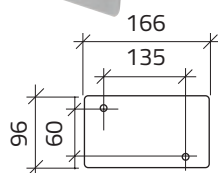
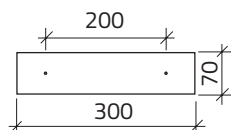


Piastra magnetica / **Magnetic plate**

314

**050S019**

per plafoniere tipo 050PPE8-050PPE13  
for luminaires type 050PPE8-050PPE13



Piastra magnetica / **Magnetic plate**

235

**050S020**

per plafoniera 050PL60  
for bulkhead lamp 050PL60



# Climatizzazione quadri elettrici

## Control cabinet climatisation



### Riscaldatore anticondensa Anti-condensation heater

g

cod

Potenza termica / Heating capacity 50W  
Corrente accensione max / Max inrush current 2,5 A  
Temperatura aria in uscita / Air outlet temperature +86°C

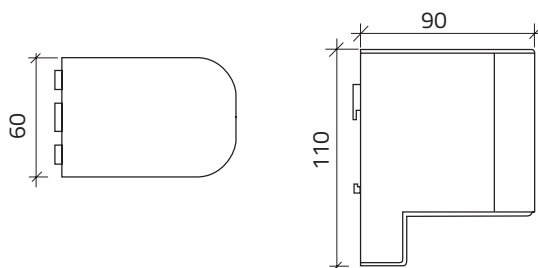
290

050RA50

Potenza termica / Heating capacity 100W  
Corrente accensione max / Max inrush current 4,5 A  
Temperatura aria in uscita / Air outlet temperature +120°C

300

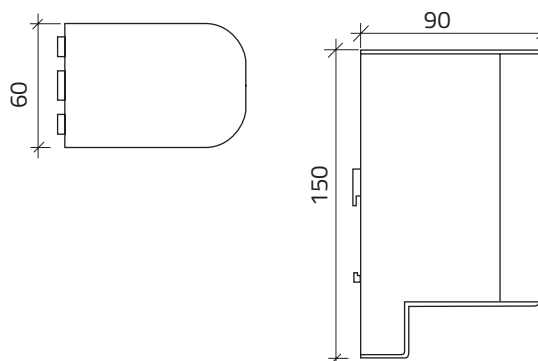
050RA100



Potenza termica / Heating capacity 150W  
Corrente accensione max / Max inrush current 8 A  
Temperatura aria in uscita / Air outlet temperature +145°C

440

050RA150



### Caratteristiche tecniche

|                              |                                                                |
|------------------------------|----------------------------------------------------------------|
| Tensione normale             | 120-250V AC/DC                                                 |
| Elemento termico             | Conduttore a freddo (PTC) autoregolante                        |
| Temperatura della superficie | <+80°C                                                         |
| Connessione                  | 4 morsetti 2,5mm <sup>2</sup><br>coppia max di serraggio 0,8Nm |
| Fissaggio                    | Barra DIN 35 mm EN 50022                                       |
| Alloggiamento                | Plastica UL94 V-0 nera                                         |
| Posizione di montaggio       | Verticale                                                      |
| Limiti di temperatura        | -45° ÷ +70°C Funzionamento e stoccaggio                        |
| Grado di protezione          | IP20                                                           |
| Classe di protezione         | il Doppio isolamento                                           |
| Norme                        | VDE                                                            |

### Technical data

|                      |                                                               |
|----------------------|---------------------------------------------------------------|
| Power supply voltage | 120-250V CA/DC                                                |
| Heating element      | PTC resistor self regulating                                  |
| Surface temperature  | <+80°C                                                        |
| Connection           | 4 terminals 2,5 mm <sup>2</sup><br>max clamping torque 0,8 Nm |
| Mounting             | 35 mm DIN rail EN 50022                                       |
| Housing              | Plastic according UL94 V-0 black                              |
| Fitting position     | Vertical                                                      |
| Temperature limits   | -45° ÷ +70°C functioning and stocking                         |
| Protection degree    | IP20                                                          |
| Protection class     | Double insulated                                              |
| Standards            | VDE                                                           |

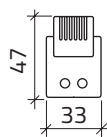
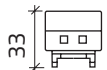


# Climatizzazione quadri elettrici

## Control cabinet climatisation

### Termostati ad impostazione fissa

#### Fixed temperature thermostats



Contatto di apertura NC / **Contact breaker NC** +15°C  
Temperatura spegnimento / **Switch off temperature** +5°

g

cod

23

**050TNC5**

Contatto di apertura NC / **Contact breaker NC** +25°C  
Temperatura spegnimento / **Switch off temperature** +15°

23

**050TNC15**

Contatto di chiusura NO / **Contact maker NO** +35°C  
Temperatura accensione / **Switch on temperature** +25°

23

**050TN035**

Contatto di chiusura NO / **Contact maker NO** +50°C  
Temperatura accensione / **Switch on temperature** +40°

23

**050TN050**

Contatto di chiusura NO / **Contact maker NO** +60°C  
Temperatura accensione / **Switch on temperature** +50°

23

**050TN060**

### Caratteristiche tecniche

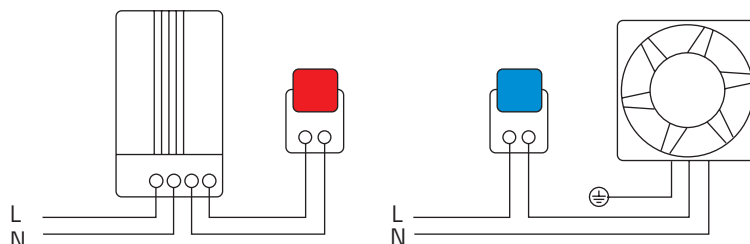
|                            |                                                                    |
|----------------------------|--------------------------------------------------------------------|
| Sonda                      | A termostato                                                       |
| Tipo di contatto           | A scatto                                                           |
| Resistenza di contatto     | <20 mΩ                                                             |
| Durata utile               | >100.000 cicli                                                     |
| Potere di apertura Max     | 240 VAC 5 (1,6) A DC 30W                                           |
| Corrente di accensione Max | AC 10 A                                                            |
| Emc                        | Secondo EN 55014-1-2, EN 61000-3-2<br>EN61000-3-3                  |
| Connessione                | 2 morsetti 2,5 mm <sup>2</sup> ,<br>coppia max di serraggio 0,8 Nm |
| Fissaggio                  | Barra DIN 35 mm EN 50022                                           |
| Alloggiamento              | Plastica UL94 V-0 grigio luminoso                                  |
| Posizione di montaggio     | Qualsiasi                                                          |
| Limiti di temperatura      | -20°C ÷ +80°C funzionamento<br>-45°C ÷ +80°C stoccaggio            |
| Grado di protezione        | IP20                                                               |
| Norme                      | VDE                                                                |

### Technical data

|                        |                                                                 |
|------------------------|-----------------------------------------------------------------|
| Sensor element         | Thermostat                                                      |
| Contact type           | Snap-Action                                                     |
| Contact resistance     | <20 mΩ                                                          |
| Service life           | >100.000 cycles                                                 |
| Max switching capacity | 240 VAC 5 (1,6) A DC 30W                                        |
| Max inrush current     | AC10 A                                                          |
| EMC                    | In according to EN 55014-1-2, EN61000-3-2<br>EN 61000-3-3       |
| Connection             | 2 terminals 2,5 mm <sup>2</sup> ,<br>max clamping torque 0,8 Nm |
| Mounting               | 35 mm DIN rail EN 50022                                         |
| Housing                | Plastic according to UL94 V-0 light grey                        |
| Mounting position      | Anyone                                                          |
| Temperature limits     | -20°C ÷ +80°C functioning<br>-45°C ÷ +80°C stocking             |
| Protection degree      | IP20                                                            |
| Standards              | VDE                                                             |

### Esempi d'installazione

#### Mounting examples





# Colonne luminose componibili

## Modular signal towers

### FACILITÀ DI MONTAGGIO

Gli attacchi a baionetta permettono un veloce montaggio della colonna, si posizionano gli elementi con le tacche, presenti sul corpo, allineate e si ruota l' anello di serraggio; i moduli così assemblati sono solidali fra di loro e non necessitano di cablaggi grazie ai connettori presenti nei moduli.

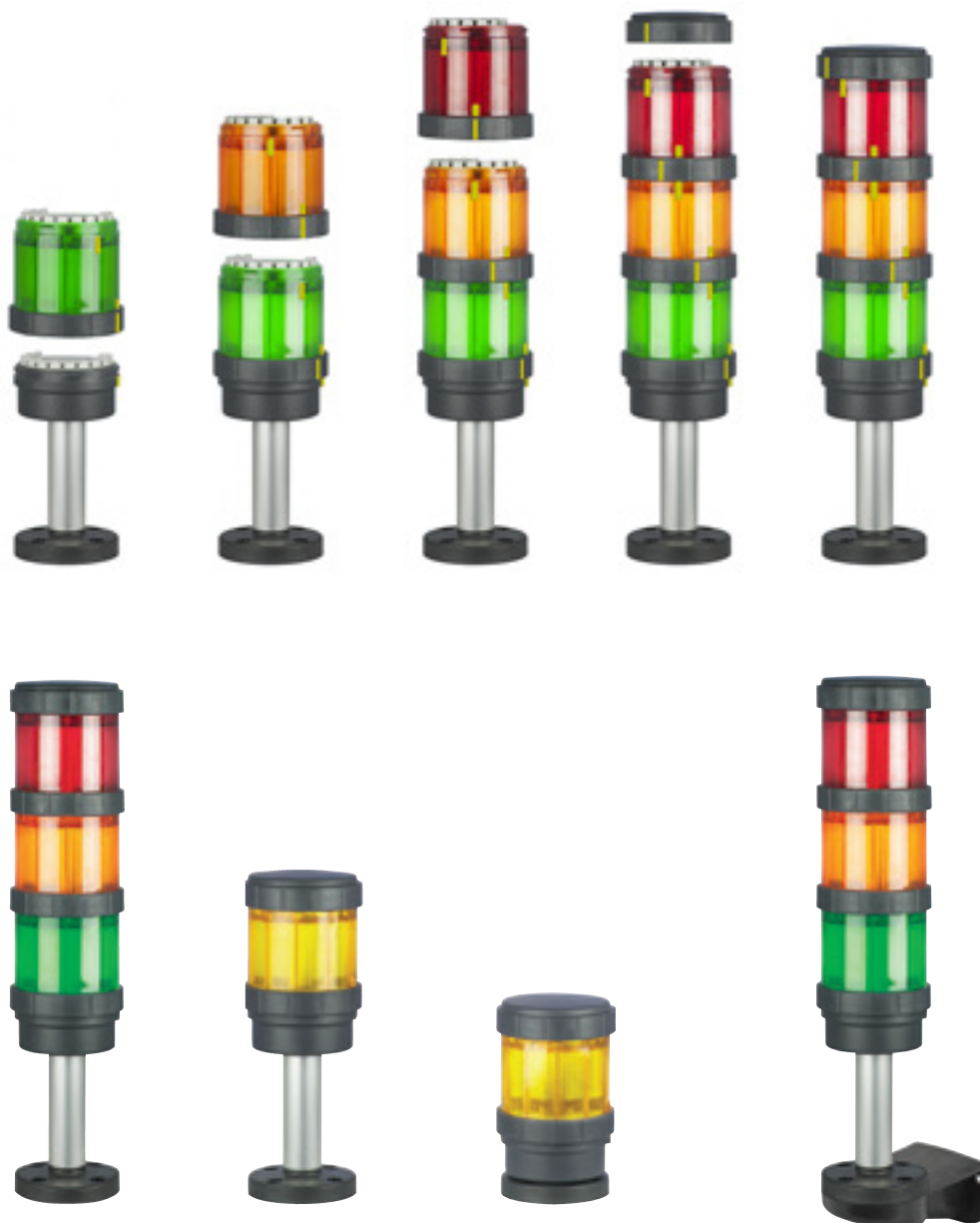
La lampadina posizionata con l' attacco in alto si trova al centro del modulo così da distribuire la luce in modo uniforme ed essere visibile dal basso.

### EASY MOUNTING

The coloured modules can be joined together with easy and fast movements, due to the bayonet connection system.

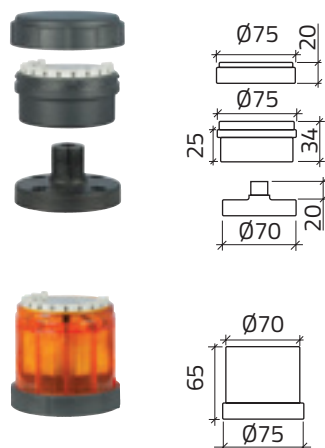
All the elements have reference marks, wich must be aligned each other, and subsequently the fixing ring rotation block the parts definitively. The assembled modules do not need other wiring operations because there are internal connectors to transmit the signls from a module to others.

The bulb is positioned in the centre of the module with the base on top, so as to have a perfect evenly light distribution and an excellent visibility from below levels.



# Colonne luminose componibili

## Modular signal towers



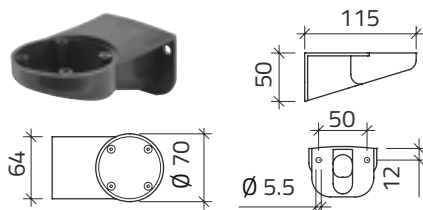
### Modulo di connessione / Connection module

Completo di base, connettore e coperchio  
Provided with base, connector and cover

| g   | cod    |
|-----|--------|
| 126 | 050TBA |

### Moduli a luce fissa / Steady light modules

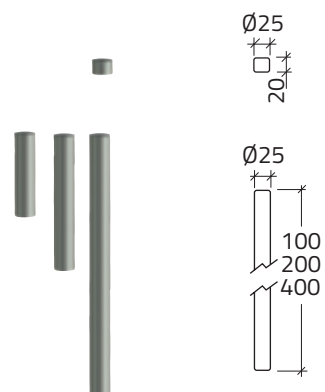
| g                           | cod         |
|-----------------------------|-------------|
| ● Rosso / Red               | 130 050TMR  |
| ● Verde / Green             | 130 050TMV  |
| ● Giallo / Yellow           | 130 050TMG  |
| ● Arancione / Orange        | 130 050TMA  |
| ● Blu / Blue                | 130 050TMBL |
| ○ Trasparente / Transparent | 130 050TMI  |



### Mensola per fissaggio a parete Wall mounting bracket

● RAL 7016

| g  | cod    |
|----|--------|
| 63 | 050MFP |

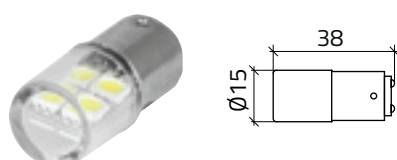


### Tubi di prolunga / Extension poles

Anello di fissaggio / Fixing ring

| g | cod   |
|---|-------|
| 6 | 050TA |

|                                 |     |          |
|---------------------------------|-----|----------|
| Elemento da 100mm / Pole 100 mm | 30  | 050TP100 |
| Elemento da 200mm / Pole 200 mm | 60  | 050TP200 |
| Elemento da 400mm / Pole 400 mm | 120 | 050TP400 |



### Lampadine led BA15D / BA15D led lamps

| g                              | cod             |
|--------------------------------|-----------------|
| 24V AC-DC<br>○ Bianco / White  | 2 010BA15DLB24  |
| 230V AC-DC<br>○ Bianco / White | 2 010BA15DLB220 |

### Caratteristiche tecniche

|                              |                              |
|------------------------------|------------------------------|
| Tensione di alimentazione    | Max 250 V 50-60 Hz - 130V CC |
| Lampadina BA 15D             | Max 10W                      |
| Grado protezione             | IP44                         |
| Classe d'isolamento          | II                           |
| Autoestinguenza              | V0                           |
| Temperature di funzionamento | 0° ÷ + 60°C                  |

### Technical data

|                          |                              |
|--------------------------|------------------------------|
| Power supply voltage     | Max 250 V 50-60 Hz - 130V CC |
| Bulb BA 15D              | Max 10W                      |
| Protection degree        | IP44                         |
| Insulation class         | II                           |
| self extinguishing class | V0                           |
| Temperature range        | 0° ÷ + 60°C                  |





# 060

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**DISPOSITIVI DI COMANDO  
DI SICUREZZA**

**SAFETY CONTROL DEVICES**

060





# Pulsantiera a due mani

## Two-hand control device

### ■ SISTEMA MODULARE PER PULSANTIERE

Il nuovo sistema modulare per pulsantiera di comando che la New Elfin ha realizzato pensando alle esigenze del mercato e del tuo lavoro trova impiego nel settore dell'automazione industriale, è dotato di una serie di componenti che permettono di configurare svariate strutture ottimizzate per essere integrate con le macchine utensili con cui dovranno interagire come presse, piegatrici, saldatrici laser ecc.

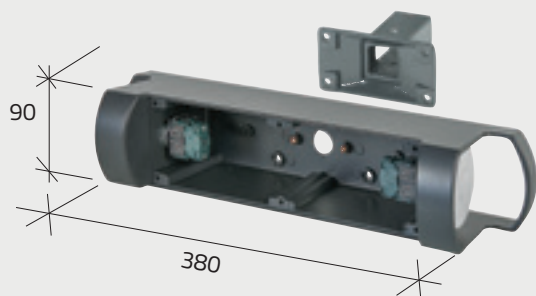
### ■ COLORAZIONE

La scelta delle colorazioni in toni di grigio e dell'alluminio satinato permettono l'armonizzazione estetica con gli apparati di destinazione; la colorazione in toni neutri evita un eccessivo impatto cromatico che può andare anche a discapito della concentrazione degli operatori alle macchine.

### ■ DIMENSIONI E FORMA

Nel progettare il nuovo comando a due mani è stata valutata la necessità di installazione in spazi ridotti e quindi ne è nato un prodotto con dimensioni 380 x 90 x 90 mm e con un notevole volume interno.

La forma ergonomica del nuovo comando a due mani conferisce un notevole comfort durante l'utilizzo; la dimensione della sezione di appoggio del palmo permette una contrapposizione tra il pollice e le altre dita facilitando l'azionamento dei pulsanti.



### ■ MODULAR SYSTEM FOR P/B PANELS

The new modular system for push-button panels, specifically designed by New Elfin to meet specific market and working needs. This modular system for industrial automation applications offers several components that enable you to configure many of the frames designed for machine-tools, like presses, folding machines, laser welding machines, etc.

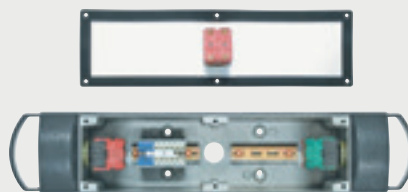
### ■ COLORATION

The range of colours available, from grey to satin aluminium, enhance the aesthetic integration with existing equipment, while the use of neutral shades reduces the chromatic impact that could distract machine operators during work.

### ■ DIMENSIONS AND SHAPE

The new two-hand control, device designed to be installed in small areas, has dimensions of 380 x 90 x 90 mm and very large internal volume.

Its ergonomic shape enhances comfort during use, while the size of the palm resting area enables operators to easily grasp the buttons between the thumb and fingers.





# Pulsantiera a due mani

## Two-hand control device

### ■ SISTEMA MODULARE PER PULSANTIERE

L'estrema modularità del sistema permette di configurare anche soluzioni a braccio di sostegno dove è possibile applicare diversi componenti specifici.

La forma particolare dei giunti garantisce solidità e rigidità alla struttura, e le dimensioni ridotte permettono di allestire svariate versioni con la maggior parte dei contenitori.

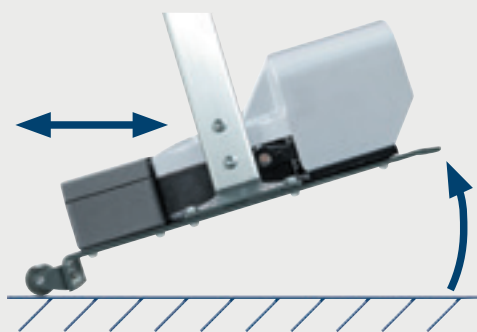
L'asola del giunto ortogonale permette il suo inserimento nella colonna anche dopo una eventuale posa di cavi elettrici.

### ■ KIT DI RUOTE

Il kit di ruote risolve razionalmente il problema della mobilità senza compromettere la solidità di appoggio della base. La base è predisposta per ricevere tutte le possibili configurazioni di applicazioni fisse o mobili.

### ■ KIT DI CONNESSIONE

Il kit di connessione risolve efficacemente tutti i problemi di cablaggio tra i numerosi possibili componenti.



### ■ MODULAR SYSTEM FOR P/B PANELS

Being highly modular, the system can also be fitted with a supporting bracket, which can be used to hold a wide range of specific components.

The truncated conical shape of the coupling confers solidity and rigidity to the frame. The system can in fact be easily combined with most of containers.

The straight coupling slot enables the system to be inserted into a column even after the cable laying.

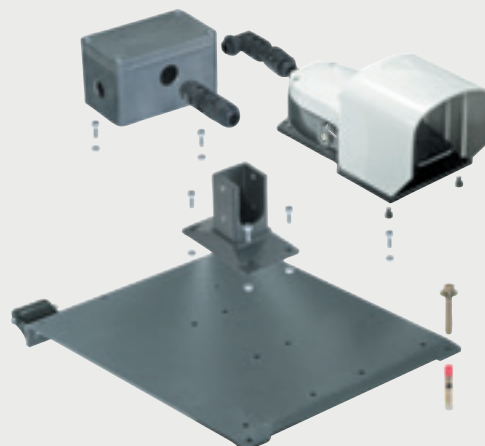
### ■ CASTOR KIT

The castor kit offers a rational solution to the problem of mobility without affecting the overall stability of the base.

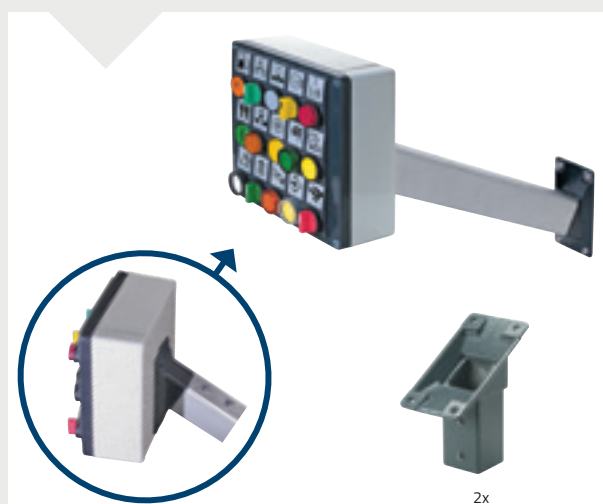
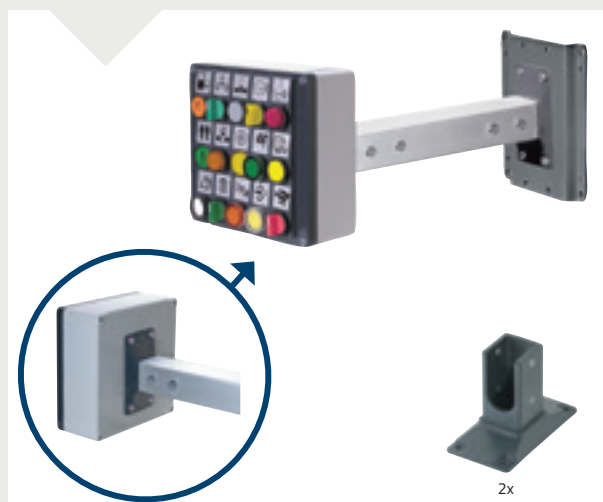
The base can also be joined to several fixed or mobile elements in an unlimited range of configurations.

### ■ CONNECTION KIT

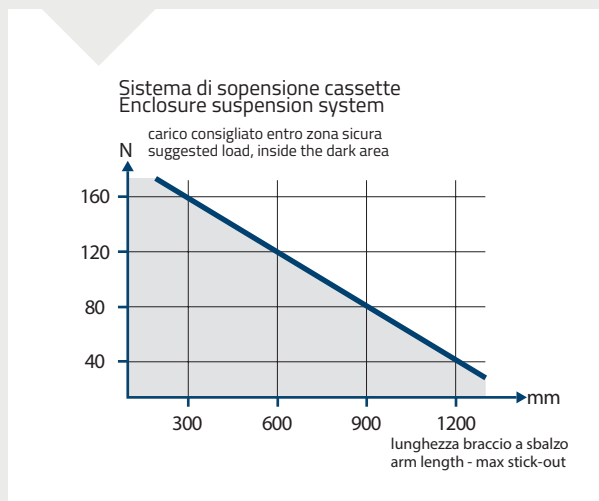
The exclusive connection kit helps you to effectively wire up all the components installed on the base.



# Esempi di realizzazione Mounting examples



# Esempi di realizzazione Mounting examples

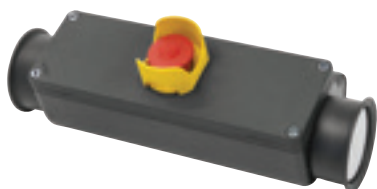


# Dispositivi di comando a due mani

## Two-hand control devices

### Pulsantiera ergonomica a due mani in alluminio

### Ergonomic aluminium two-hand control device



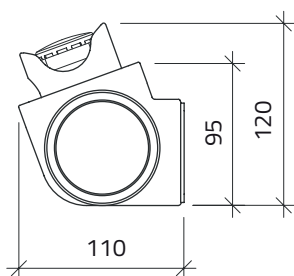
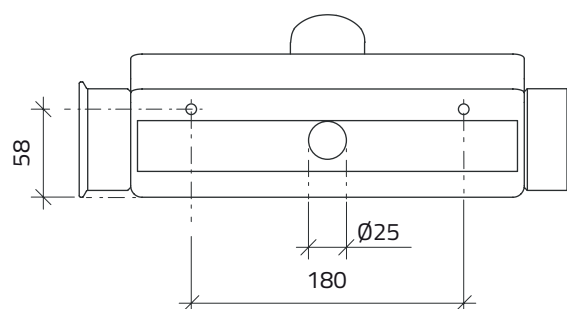
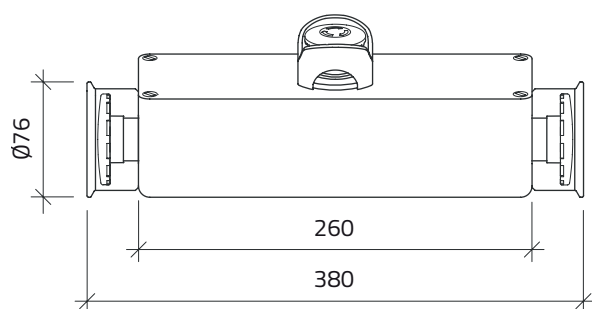
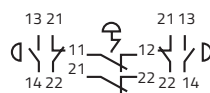
● RAL 7016

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1461

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060CL2MA

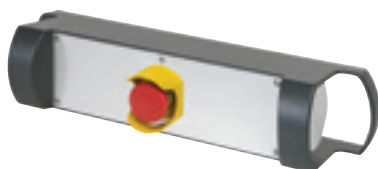


# Dispositivi di comando a due mani

## Two-hand control devices

### Pulsantiera a due mani in alluminio

### Aluminium two-hand control device



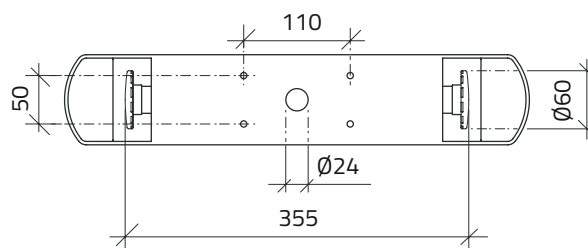
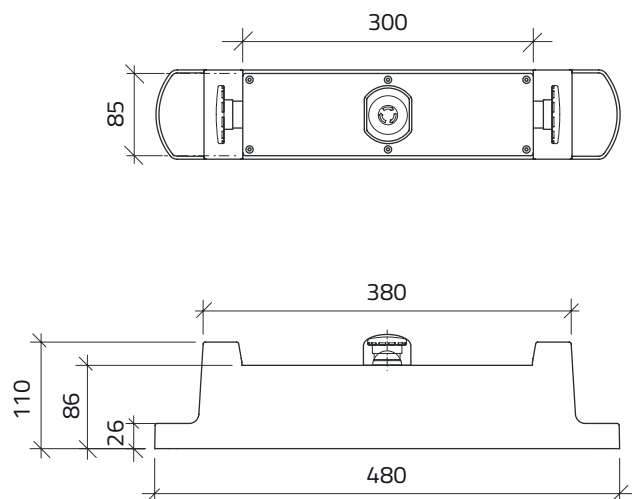
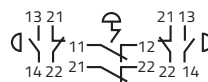
● RAL 7016

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060C2MA



# Dispositivi di comando a due mani

## Two-hand control devices

### Pulsantiera a due mani in alluminio

### Aluminium two-hand control device



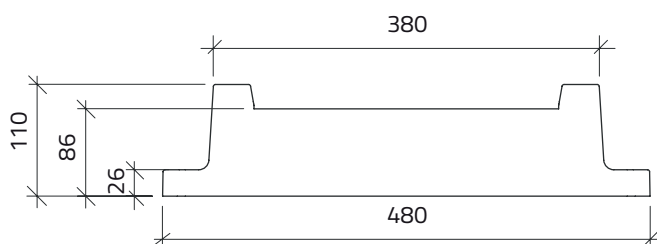
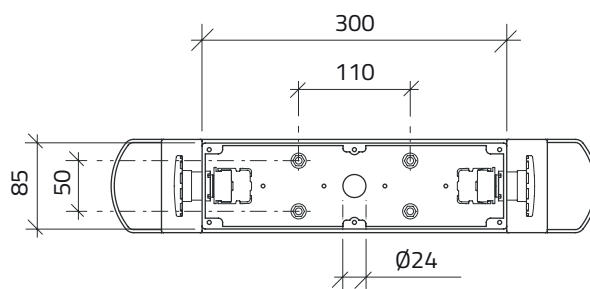
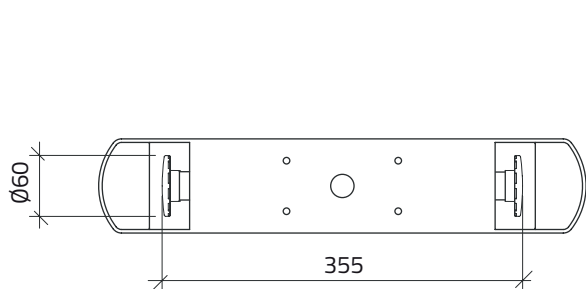
#### Involucro in alluminio con pulsanti

#### Aluminium enclosure with push-buttons

● RAL 7016

4454

060C2MGR

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 $\frac{13}{14}$ 


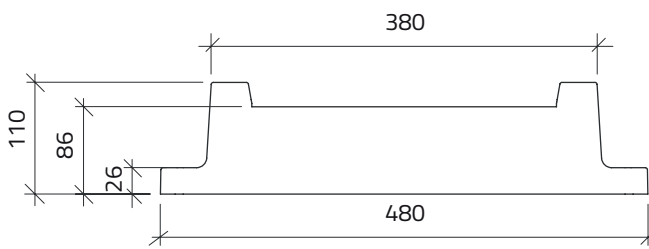
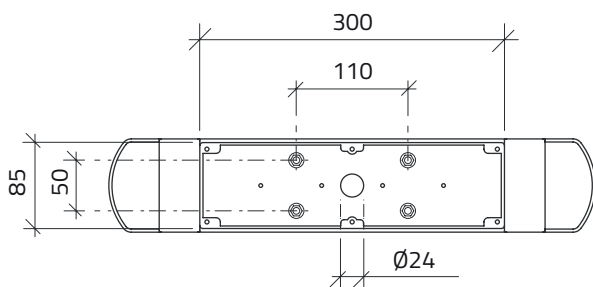
#### Involucro vuoto in alluminio

#### Empty enclosure, aluminium

● RAL 7016

1730

060C2M



# Dispositivi di comando a due mani

## Two-hand control devices

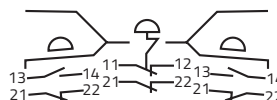
### Pulsantiera a due mani

### Two-hand control device



Per personalizzazioni con altri operatori ed elementi di contatto  
vedi sezione "020 Comando e segnalazione SM2 Ø22".  
For customization with other operators or contact blocks,  
refer to section 020 "Command and signalling SM2 Ø22".

● RAL 7016



g

cod

4650

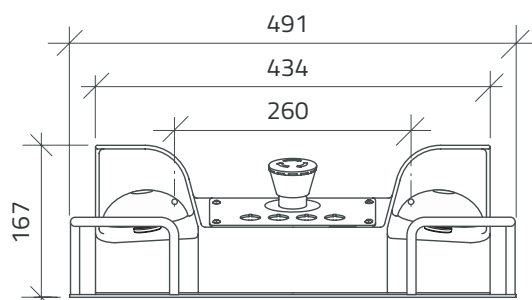
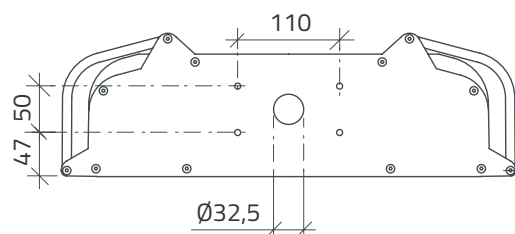
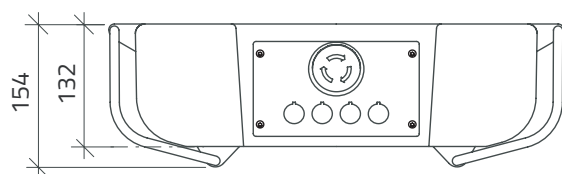
060P2MA



Viti chiusura ermetica / Sealing screws

0,3

060VCE



# Dispositivi di comando a due mani

## Two-hand control devices

### Pulsantiera a due mani

### Two-hand control device



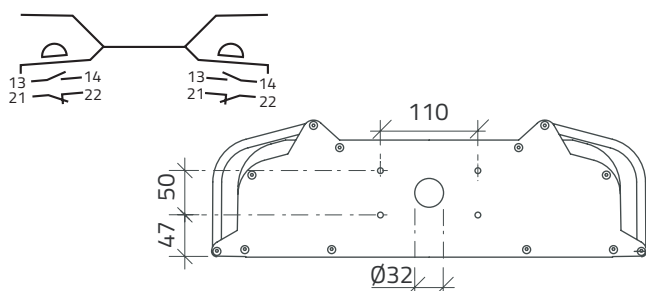
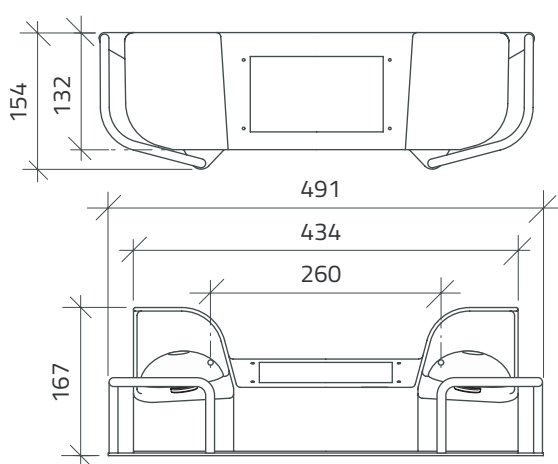
#### Involucro in alluminio con pulsanti

#### Aluminium enclosure with push-buttons

● RAL 7016

4,98

060P2MGR



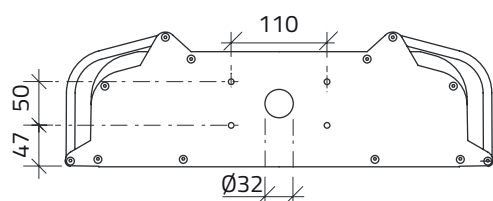
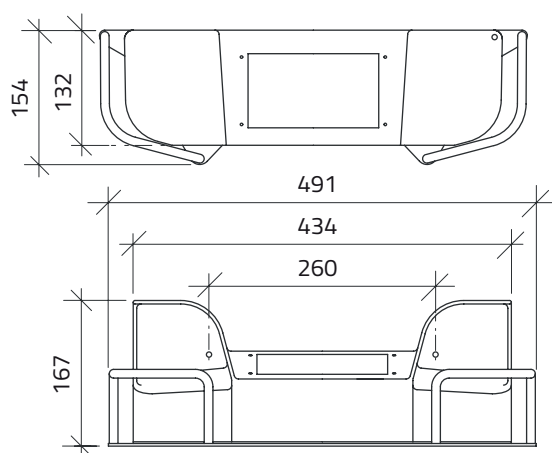
#### Involucro vuoto in alluminio

#### Empty enclosure, aluminium

● RAL 7016

4364

060P2M





# Dispositivi di comando a due mani

## Two-hand control devices

### Piastra superiore / Upper plate



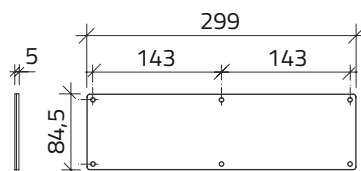
Per articolo 060C2MGR / For item code 060C2MGR

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150

060PC



### Piastra superiore / Upper plate



Per articolo 060P2MGR / For item code 060P2MGR

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cod

Piastra forata / Drilled plate

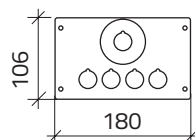
95

060PP2MF

Piastra non forata / Undrilled plate

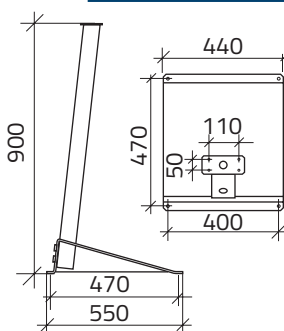
100

060PP2MN



### Stativo per comando bimanuale

#### Stand for two-hand control devices



Per articolo 060CL2MA - 060C2MA - 060P2MA

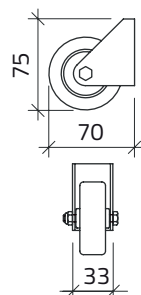
For item code 060CL2MA - 060C2MA - 060P2MA

g

cod

11,85

060SP2M



Kit ruote per stativo / Castor kit for stand

290

060SMS

### Pulsantiera singola per comando a due mani

#### Single push-button for two-hand control unit



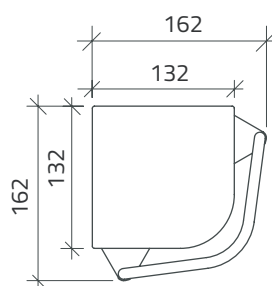
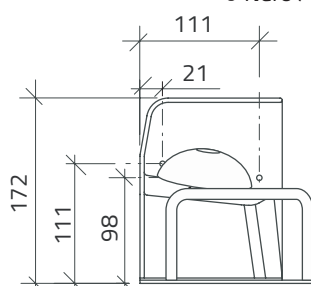
● Nero / Black

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cod

1,6

060MP2GR



# Dispositivi di comando a due mani

## Two-hand control devices

### DEFINIZIONE DI COMANDO A DUE MANI (UNI EN 292/1 PUNTO 3.23.4)

#### 3.23.4

Comando a due mani: comando ad azione mantenuta che richiede almeno l'azionamento simultaneo dei due comandi manuali (attuatori) per avviare e mantenere il funzionamento della macchina o degli elementi di quest'ultima, assicurando così protezione alla persona che li aziona.

### CLASSIFICAZIONE DEI COMANDI A DUE MANI (CEI EN 60204.1 PUNTO 9.2.5.7)

#### 9.2.5.7

Comandi a due mani: esistono tre tipi di comandi a due mani, la cui selezione dipende dalla valutazione dei rischi. Essi devono avere le caratteristiche seguenti:

**TIPO 1:** questo tipo richiede:

- la fornitura di due dispositivi di comando dell'attivazione che necessitano l'uso contemporaneo delle due mani;
- l'attivazione continua durante le situazioni pericolose;
- l'interruzione dell'attivazione della macchina al rilascio di uno qualsiasi dei dispositivi di comando dell'attivazione, se le condizioni rimangono pericolose.

**TIPO 2:** comando di tipo 1 che richiede il rilascio di entrambi i dispositivi di comando dell'attivazione, prima che il funzionamento della macchina possa ripartire.

**TIPO 3:** comando di tipo 2 che richiede un'attivazione contemporanea dei dispositivi di comando dell'attivazione come segue:

- deve essere necessario fare funzionare i dispositivi di comando dell'attivazione entro un determinato tempo limite minore o uguale a 0,5 s (Appendice B); e
- quando viene superato il tempo limite, entrambi i dispositivi di comando dell'attivazione devono essere rilasciati prima che possa essere iniziata una nuova operazione.

### DEFINITION OF TWO HAND CONTROL (UNI EN 292/1 ITEM 3.23.4)

#### 3.23.4

Two hand control: maintained action control which requires at least the simultaneous activation of the two manual controls (actuators) to start up and continue running the machine and its elements, thus ensuring that operators are protected.

### CLASSIFICATION OF TWO HAND CONTROLS (CEI EN 60204.1 ITEM 9.2.5.7)

#### 9.2.5.7

Two hand controls: there are three types of two hand control, the selection of which depends on risk assessment. They must have the following features:

**TYPE 1:** this type must have:

- the supply of two activation control devices which require the simultaneous use of both hands;
- constant activation during dangerous situations;
- machine cut-off when any activation control is released, if conditions continue to be dangerous.

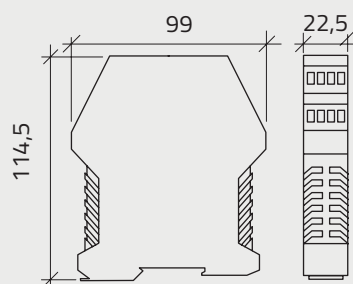
**TYPE 2:** type 1 control which requires the release of both activation control devices for the machine to start running again.

**TYPE 3:** type 2 control which requires the simultaneous activation of the activation control devices as follows:

- it must be possible to engage the activation control devices within a set time equal to or less than 0.5 seconds (Appendix B); and
- when the time limit is up, both activation control devices must be released before a new operation can begin.

# Modulo di contemporaneità

## Simultaneous action controller



### Modulo di contemporaneità / Simultaneous action controller

Modulo / Controller

295

060MCP2M

Il modulo di contemporaneità 060MCP2M è un componente di sicurezza adibito al controllo della simultaneità di due operatori, protetti da azioni involontarie, utilizzati congiuntamente.

Il modulo di contemporaneità 060MCP2M rientra nella categoria di Tipo III C, poiché oltre che a rispondere ai requisiti della norma UNI EN 574, ha un circuito di retroazione, che attribuisce al modulo una funzione di autocontrollo (categoria 4) delle eventuali anomalie (cortocircuiti o inceppamenti) sia degli attuatori e, se collegati in serie, dei contatti ausiliari di apparecchi di manovra.

The 060MCP2M relay is a safety device for controlling the simultaneous action of two operators, protected from accidental actions, used together. The 060MCP2M relay belongs to category III C, due to the fact that, as well as satisfying UNI EN 574, it has a retroaction circuit which attributes a self-control function to the module (category 4) for any faults with the actuators (short circuits or jamming) and, if connected in series, with the auxiliary contacts of manoeuvring equipment.

### Caratteristiche tecniche

|                                                            |                                                                                                |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Peso                                                       | 190 g                                                                                          |
| Temperatura di funzionamento                               | 0...+55 °C                                                                                     |
| Temperatura di stoccaggio                                  | -25...+70                                                                                      |
| Grado di protezione (IEC60529)                             | IP20                                                                                           |
| Grado di contaminazione                                    | 2                                                                                              |
| Montaggio                                                  | Guida DIN Standard 35mm                                                                        |
| Tipo di connessione                                        | Terminali a vite                                                                               |
| Tensione di alimentazione                                  | 24±10% (AC 50 - 60 Hz) V AC/DC                                                                 |
| Potenza assorbita                                          | 2 VA / 2W                                                                                      |
| Sincronizzazione tra gli ingressi                          | < 500 ms                                                                                       |
| Terminali uscite sicure                                    | 13-14, 23-24, 31-32                                                                            |
| Tensione sulle uscite sicure                               | 250 V AC                                                                                       |
| Corrente sulle uscite sicure                               | 6 A (MAX)                                                                                      |
| Potenza sulle uscite sicure                                | 1500 VA                                                                                        |
| Fusibili esterni sulle uscite                              | 6 A rapido                                                                                     |
| Categoria di utilizzo (uscite sicure) secondo EN 60947-5-1 | AC-1 3A, 250V / AC-15 1A, 250V / AC-1 3A, 24V / AC-15 1A, 24V DC-13 1,8A, 24V                  |
| Resistenza alle vibrazioni                                 | in accordo con EN 60068-2-6                                                                    |
| Vita elettrica                                             | 1 x 10 <sup>6</sup> (2 A, 24 V DC)                                                             |
| Vita meccanica                                             | 10 <sup>7</sup>                                                                                |
| Conformità EMC categoria                                   | CEI EN 61000-6-2, CEI EN 61000-6-3, CEI EN 55011:1999                                          |
| Conformità alle norme                                      | EN 574, EN 60204-1, EN954-1, CEI EN 50178:1999                                                 |
| Categoria di sicurezza                                     | cat. 4, PL "E" secondo norma EN ISO 13849-1: 2008<br>cat. III c secondo EN 574:1999 + A1 :2008 |
| Omologazioni                                               | c UL us Listed                                                                                 |

### Technical data

|                                                                  |                                                                                                             |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Weight                                                           | 206,5 g                                                                                                     |
| Operation temperature                                            | 0...+55 °C                                                                                                  |
| Storage temperature                                              | -25...+70                                                                                                   |
| Degree of protection (IEC60529)                                  | IP20                                                                                                        |
| Degree of pollution                                              | 2                                                                                                           |
| Mounting                                                         | Standard DIN rail 35mm                                                                                      |
| Connections type                                                 | With screw                                                                                                  |
| Power supply                                                     | 24±10% (AC 50 - 60 Hz) V AC/DC                                                                              |
| Power consumption                                                | 2 VA / 2W                                                                                                   |
| Button contemporaneity                                           | < 500 ms                                                                                                    |
| Safe outputs terminals                                           | 13-14, 23-24, 31-32                                                                                         |
| Safe outputs voltage                                             | 250 V AC                                                                                                    |
| Safe outputs current                                             | 6 A (MAX)                                                                                                   |
| Safe outputs power                                               | 1500 VA                                                                                                     |
| Output external fuses                                            | 6 A fast-blow                                                                                               |
| Utilization category (safe outputs) in according to EN 60947-5-1 | AC-1 3A, 250V / AC-15 1A, 250V / AC-1 3A, 24V / AC-15 1A, 24V DC-13 1,8A, 24V                               |
| Vibration resistance                                             | in according with EN 60068-2-6                                                                              |
| Electrical life                                                  | 1 x 10 <sup>6</sup> (2 A, 24 V DC)                                                                          |
| Mechanical life                                                  | 10 <sup>7</sup>                                                                                             |
| EMC conformity in according to                                   | CEI EN 61000-6-2, CEI EN 61000-6-3, CEI EN 55011:1999                                                       |
| Compliance with standards                                        | EN 574, EN 60204-1, EN954-1, CEI EN 50178:1999                                                              |
| Safety category                                                  | cat. 4, PL "E" according to standard EN ISO 13849-1: 2008<br>cat. III c according to EN 574:1999 + A1 :2008 |
| Approval                                                         | c UL us Listed                                                                                              |

# Interruttori a pedale

## Foot switches

### Interruttori a pedale in termoplastico

### Thermoplastic foot switches

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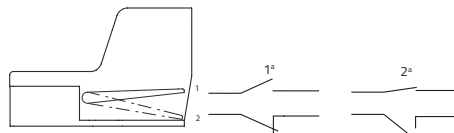
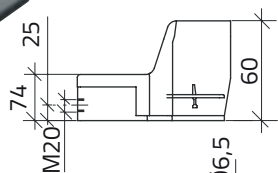


2 posizioni (1 microinterruttore) con leva di sicurezza  
2 positions (1 microswitch) with safety lever

● Grigio / Grey

900

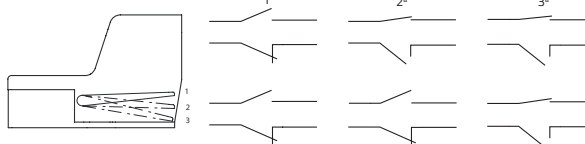
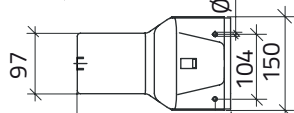
060PPLT11



3 posizioni (2 micro interruttori)  
3 positions (2 microswitches)

1000

060PP3PT22



Senza coperchio / Without cover

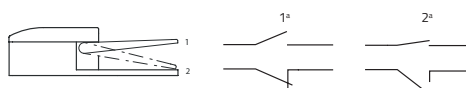
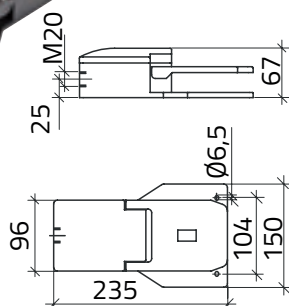
2 posizioni (1 microinterruttore)

2 positions (1 microswitch)

● Rosso/ Red

800

060PT11



### Interruttori a pedale in alluminio / Aluminium foot switches

g

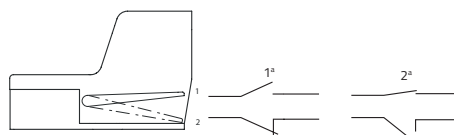
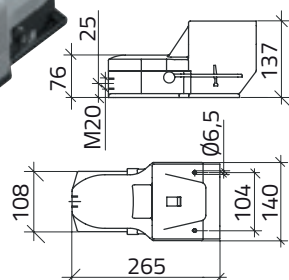
cod



2 posizioni (1 microinterruttore) con leva di sicurezza  
2 positions (1 microswitch) with safety lever

1705

060PLA11



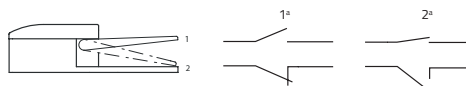
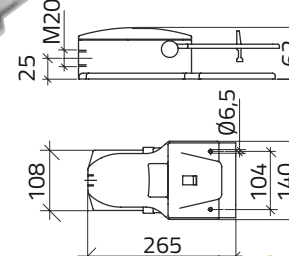
Senza coperchio / Without cover

2 posizioni (1 microinterruttore) con leva di sicurezza

2 positions (1 microswitch) with safety lever

1400

060PA11



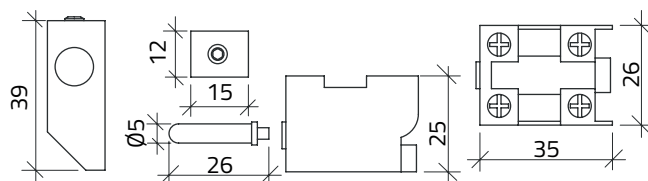
# Interruttori a pedale

## Foot switches



### Accessori per comando a pedale / Foot switch accessories

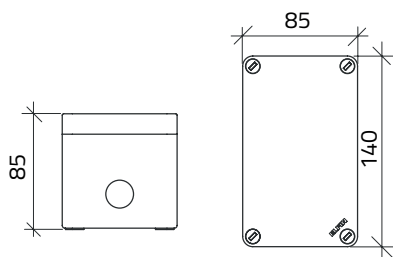
|                                        |    |                |
|----------------------------------------|----|----------------|
| Kit 2° micro / Kit for 2nd microswitch | 40 | <b>060KM11</b> |
| Ricambio micro / Spare microswitch     | 20 | <b>060M11</b>  |



### Kit di connessione interruttori a pedale

#### Foot switch connection kit

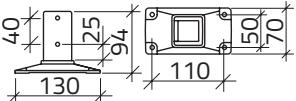
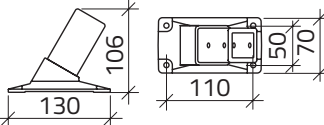
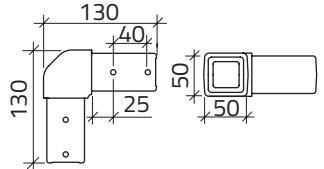
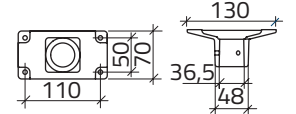
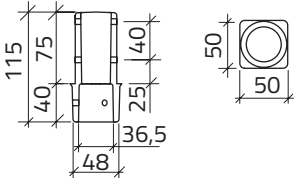
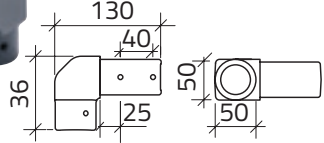
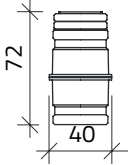
|                                   |     |              |
|-----------------------------------|-----|--------------|
| Contenitore / Enclosure 85x140 mm | 780 | <b>060KC</b> |
|-----------------------------------|-----|--------------|



# Sistema di sospensione modulare per automazione

## Modular suspension system for enclosures

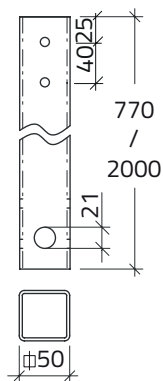
### Giunti / Joints

|                                                                                     |                                                                                                                                                                    | g   | cod           |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------|
|    |  <p>Ortagonale / <i>Orthogonal</i></p>                                            | 315 | <b>060GCO</b> |
|    |  <p>Inclinato / <i>Oblique</i></p>                                                | 410 | <b>060GCI</b> |
|    |  <p>Angolare 90° / <i>Angle 90°</i></p>                                          | 550 | <b>060GCA</b> |
|  |  <p>Girevole / <i>Swivel</i></p>                                                | 480 | <b>060GRO</b> |
|  |  <p>Girevole assiale / <i>Swivel, axial</i></p>                                 | 280 | <b>060GRD</b> |
|  |  <p>Girevole 90° / <i>Swivel 90°</i></p>                                        | 480 | <b>060GRA</b> |
|  |  <p>Bussola girevole interno foro Ø 23<br/><i>Swivel bushing, bore Ø 23</i></p> | 280 | <b>060GSR</b> |

# Sistema di sospensione modulare per automazione

## Modular suspension system for enclosures

### Colonne / Columns



Lunghezza / Length mm 770

g

cod

1185

060C8

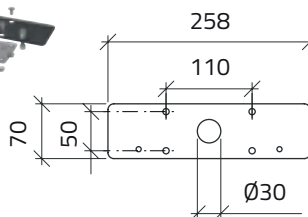
Lunghezza / Length mm 2000

senza fori / without holes

2790

060C2000

### Piastre / Plates

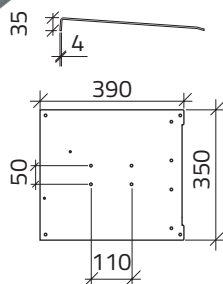
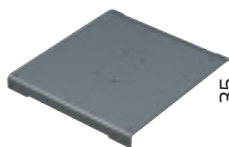
Piastra accoppiamento pulsantiera ergonomica  
Coupling plate for ergonomic control panel

g

cod

450

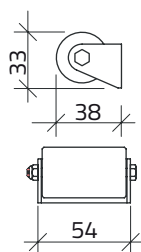
060PAP



Piastra base colonna / Column base plate

4600

060BC

Kit di ruote per piastra base colonna  
Castor kit for column base plate

200

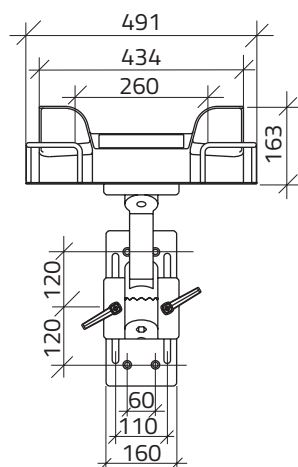
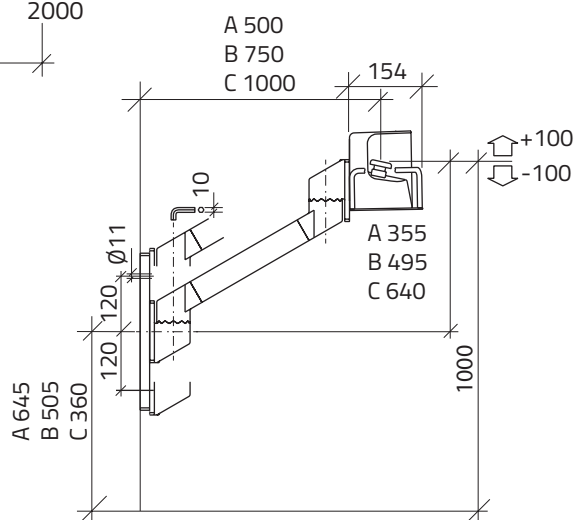
060KR

## 19

Technical drawing of a stepped shaft. The shaft has a total length of 2000 units. It consists of a main section with a diameter of 260 units and a stepped section with a diameter of 550 units. The stepped section has a length of 840 units. The main section has a length of 4025 units. The drawing shows the shaft in two views: a side view and a cross-sectional view.



50



Technical drawing of a mechanical part. The front view (left) shows a cylindrical part with a total height of 135. The base has an outer diameter of 110 and an inner hole of diameter 70. A smaller hole of diameter 13 is located 65 units from the top. A side view (right) shows the part is 50 units wide at the base and has a 30-degree taper on the top surface. A 10-unit thick flange is at the base.



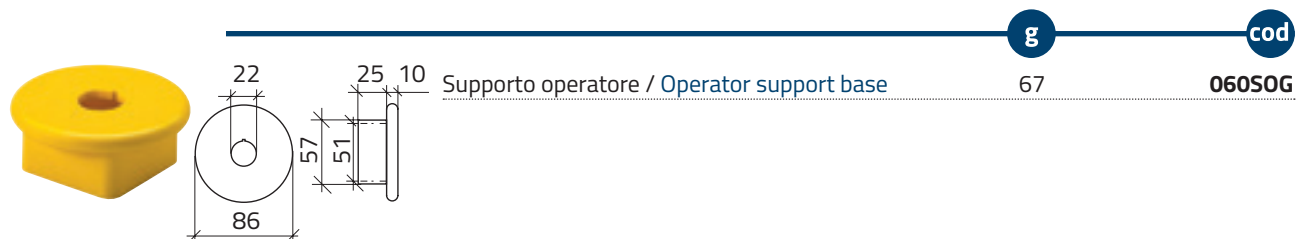
Technical drawing of a rectangular plate. The main view shows a rectangle with overall dimensions of 320 (height) by 150 (width). There are two vertical slots, each 220 units long. Each slot contains a vertical bar with a circular feature at its top. There are also two circular features on the left side of the plate. A detail view of the top corner shows a fillet with a radius of 76 and a base thickness of 20.



# Pulpito di emergenza

## Emergency stand

Per selezione componenti aggiuntivi vedi pagina 17-18 / For additional components see pages 17-18



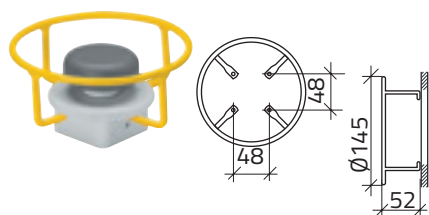
Supporto operatore / Operator support base

g

67

cod

060SOG



Protezione ad anello / Ring-shaped protection

150

020SE

### Colonne per supporto operatore

### Columns for operator support



Lunghezza / Length mm 650

g

905

cod

060C6

Lunghezza / Length mm 770

905

060C8E



### Piastra / Plate



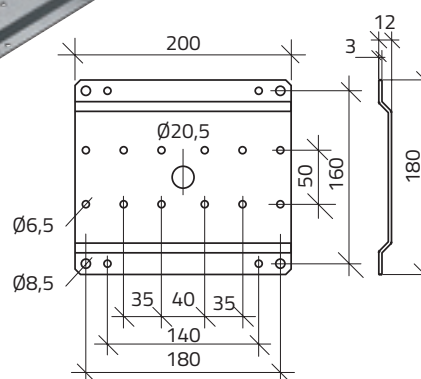
Piastra base colonna / Column base plate

g

836

cod

060PAC



# Pulsanti a palmo

## Palm switches

G

Gli azionatori a palmo, per il comando e controllo di circuiti elettrici alimentati sia in CC che in CA, sono progettati per **utilizzi energici o d'urgenza**.

Il **design particolarmente accurato ed ergonomico** ne permette l'utilizzo anche avendo guanti da lavoro oppure con altre parti del corpo quali: gomito, spalla, ginocchio, piede. Inoltre la **linearità senza soluzione di continuità** evita che vi si possano impigliare indumenti, capelli, o elementi estranei. Realizzati in **resina termoplastica antiurto**, con componenti metallici in acciaio inox, possono essere installati in ambienti con atmosfera particolarmente umida o corrosiva e dove sussiste il pericolo di scariche elettrostatiche. Nella **versione luminosa** la lampada è posta su ammortizzatori per salvarla in caso di utilizzi particolarmente gravosi e con forti vibrazioni. Disponibile in due varianti: con tasto bombato o a fungo avvolgente, luminoso o no, con funzionamento momentaneo o ad aggancio.

In fine la grande superficie dei tasti consente di stampare complesse informazioni.

P

Palm switches for the command and control of both DC and AC circuits are designed for **energetic or emergency use**.

The particularly **careful and ergonomic design** allows them to be pushed even when wearing work gloves or using other parts of the body such as elbow, shoulder, knee and foot.

Moreover its **dome shape** prevents clothing, hair or other elements from being caught up. Made from **shockproof thermoplastic resin**, with stainless steel parts, they can be installed in particularly damp or corrosive atmospheric environments where there is the risk of electrostatic discharge. The **illuminated palm switches** are provided with a lamp fitted onto shock absorbers to safeguard it when used in particularly severe environments or with strong vibrations.

They are available in two models: with dome or mushroom buttons, normal or illuminated, momentary or latching. Furthermore the big button surface allows complex symbols to be printed on.



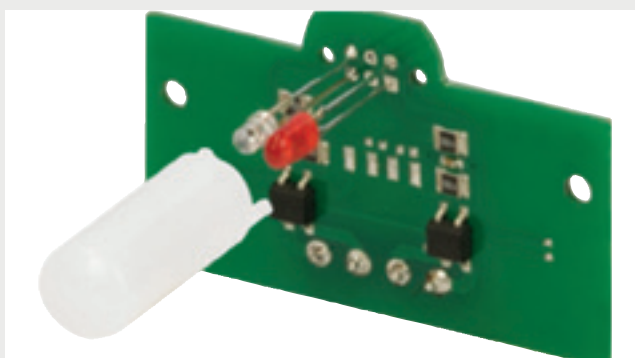
## Pulsanti a palmo Palm switches



Versione ad aggancio meccanico con leva di sgancio  
Model with latch and unlocking lever



Custodia luminosa con superficie riflettente  
Illuminated enclosure with reflecting surface



Sorgente luminosa a led con diverse colorazioni  
Led light source in different colours



Tasto a fungo  
Mushroom button



Guarnizione in silicone  
Silicone gasket



Tasto bombato, inviolabile, senza soluzione di continuità  
Tamper-proof dome button

## Pulsanti a palmo Palm switches



# Pulsanti a palmo

## Palm switches

### Caratteristiche tecniche

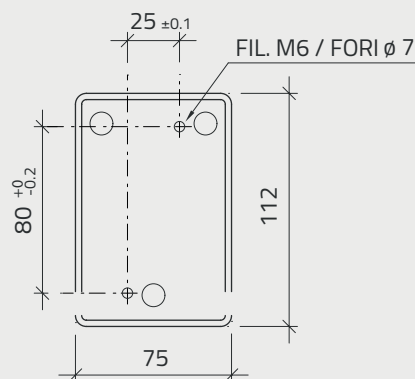
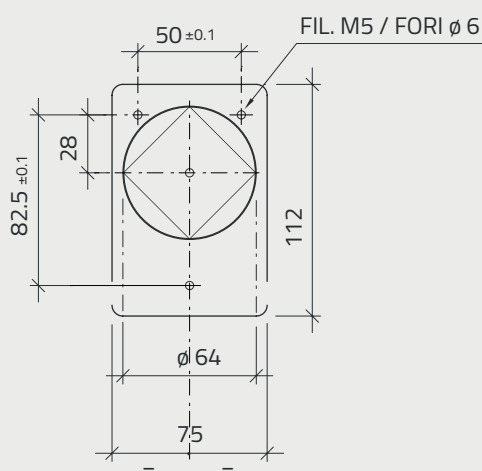
| Rispondenza alle norme          | EN-IEC60947-1, EN-IEC60947-5-1<br>UNI EN 13850, UNI EN ISO 12100<br>EN-IEC60947-5-5                                                                                                                                                                                                                                                                                                          |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--|------|------|----|----|-----|---|-----|---|----|--|------|------|----|---|-----|-----|-----|------|
| Omologazioni                    | CE, (UL, CSA solo elementi di contatto<br>030FA-030FAA / 030FC-030FCF)                                                                                                                                                                                                                                                                                                                       |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Limiti di temperatura           | Funzionamento $\geq -30^{\circ}\text{C} \div \leq +120^{\circ}\text{C}$<br>Stoccaggio $\geq -40^{\circ}\text{C} \div \leq +125^{\circ}\text{C}$                                                                                                                                                                                                                                              |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Grado di protezione             | IP66-IP69K (EN-IEC60529-DIN40050)                                                                                                                                                                                                                                                                                                                                                            |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Protezione contro gli impatti   | IK08 (EN-IEC62262)                                                                                                                                                                                                                                                                                                                                                                           |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Materiale custodia              | PA Poliammide V0                                                                                                                                                                                                                                                                                                                                                                             |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Materiale guarnizione           | Gomma-sughero                                                                                                                                                                                                                                                                                                                                                                                |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Materiale viti custodia         | Acciaio inox AISI 304                                                                                                                                                                                                                                                                                                                                                                        |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Coppia di serraggio             | Viti custodia<br>1 - 2,5 Nm (8,8 ÷ 22,1 Lb-in)<br>Viti terminali<br>0,8 ÷ 1,2 Nm (7,1 ÷ 10,6 Lb-in)                                                                                                                                                                                                                                                                                          |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Durata meccanica                | 3 milioni di manovre                                                                                                                                                                                                                                                                                                                                                                         |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Elementi di contatto            | NO-NC inclusi<br>apertura positiva del contatto NC<br>secondo EN, IEC 60947-5-1                                                                                                                                                                                                                                                                                                              |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Funzionamento contatti          | Azionamento lento con autopulitura e<br>strisciamento delle pastiglie                                                                                                                                                                                                                                                                                                                        |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Materiale contatti              | Pastiglie in Ag 1000 / 1000                                                                                                                                                                                                                                                                                                                                                                  |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Tensione nominale di isolamento | 690 V secondo : EN-IEC 60947-1                                                                                                                                                                                                                                                                                                                                                               |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Corrente nominale termica       | Ith 10A                                                                                                                                                                                                                                                                                                                                                                                      |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Categorie nominali di impiego   | AC15-DC13<br>secondo EN-IEC60947-5-1<br>A600 - P300 secondo UL508                                                                                                                                                                                                                                                                                                                            |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
|                                 | <table> <tr> <th colspan="2">AC</th></tr> <tr> <td>Ue V</td><td>Ie A</td></tr> <tr> <td>24</td><td>10</td></tr> <tr> <td>110</td><td>6</td></tr> <tr> <td>230</td><td>3</td></tr> </table><br><table> <tr> <th colspan="2">DC</th></tr> <tr> <td>Ue V</td><td>Ie A</td></tr> <tr> <td>24</td><td>5</td></tr> <tr> <td>110</td><td>1,1</td></tr> <tr> <td>230</td><td>0,55</td></tr> </table> | AC |  | Ue V | Ie A | 24 | 10 | 110 | 6 | 230 | 3 | DC |  | Ue V | Ie A | 24 | 5 | 110 | 1,1 | 230 | 0,55 |
| AC                              |                                                                                                                                                                                                                                                                                                                                                                                              |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Ue V                            | Ie A                                                                                                                                                                                                                                                                                                                                                                                         |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| 24                              | 10                                                                                                                                                                                                                                                                                                                                                                                           |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| 110                             | 6                                                                                                                                                                                                                                                                                                                                                                                            |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| 230                             | 3                                                                                                                                                                                                                                                                                                                                                                                            |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| DC                              |                                                                                                                                                                                                                                                                                                                                                                                              |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Ue V                            | Ie A                                                                                                                                                                                                                                                                                                                                                                                         |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| 24                              | 5                                                                                                                                                                                                                                                                                                                                                                                            |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| 110                             | 1,1                                                                                                                                                                                                                                                                                                                                                                                          |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| 230                             | 0,55                                                                                                                                                                                                                                                                                                                                                                                         |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Versioni luminose               | Led incluso con alimentazione 24AC-DC                                                                                                                                                                                                                                                                                                                                                        |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |

### Technical data

| Compliance with Standards | EN-IEC60947-1, EN-IEC60947-5-1<br>UNI EN 13850, UNI EN ISO 12100<br>EN-IEC60947-5-5                                                                                                                                                                                                                                                                                                          |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--|------|------|----|----|-----|---|-----|---|----|--|------|------|----|---|-----|-----|-----|------|
| Approvals                 | CE, (UL, CSA only for contacts blocks<br>030FA-030FAA / 030FC-030FCF)                                                                                                                                                                                                                                                                                                                        |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Temperature ranges        | Working $\geq -30^{\circ}\text{C} \div \leq +120^{\circ}\text{C}$<br>Storage $\geq -40^{\circ}\text{C} \div \leq +125^{\circ}\text{C}$                                                                                                                                                                                                                                                       |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Protection degree         | IP66-IP69K (EN-IEC60529-DIN40050)                                                                                                                                                                                                                                                                                                                                                            |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Protection against impact | IK08 (EN-IEC62262)                                                                                                                                                                                                                                                                                                                                                                           |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Housing material          | PA Polyamide V0                                                                                                                                                                                                                                                                                                                                                                              |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Gasket material           | Cork-rubber                                                                                                                                                                                                                                                                                                                                                                                  |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Screws material           | Stainless steel AISI 304                                                                                                                                                                                                                                                                                                                                                                     |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Tightening torque         | Cover screws<br>1 - 2,5 Nm (8,8 ÷ 22,1 Lb-in)<br>Terminal screws<br>0,8 ÷ 1,2 Nm (7,1 ÷ 10,6 Lb-in)                                                                                                                                                                                                                                                                                          |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Mechanical durability     | 3 millions operation                                                                                                                                                                                                                                                                                                                                                                         |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Contacts blocks           | NO-NC included<br>positive opening on NC<br>contact according to EN, IEC 60947-5-1                                                                                                                                                                                                                                                                                                           |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Contact actuation         | Slow action with self cleaning<br>by pads creeping                                                                                                                                                                                                                                                                                                                                           |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Contacts material         | Pads in Ag 1000 / 1000                                                                                                                                                                                                                                                                                                                                                                       |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Rated insulation voltage  | 690 V according to : EN-IEC60947-1                                                                                                                                                                                                                                                                                                                                                           |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Rated thermal current     | Ith 10A                                                                                                                                                                                                                                                                                                                                                                                      |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Electrical ratings        | AC15-DC13<br>according to EN-IEC60947-5-1<br>A600 - P300 according to UL508                                                                                                                                                                                                                                                                                                                  |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
|                           | <table> <tr> <th colspan="2">AC</th></tr> <tr> <td>Ue V</td><td>Ie A</td></tr> <tr> <td>24</td><td>10</td></tr> <tr> <td>110</td><td>6</td></tr> <tr> <td>230</td><td>3</td></tr> </table><br><table> <tr> <th colspan="2">DC</th></tr> <tr> <td>Ue V</td><td>Ie A</td></tr> <tr> <td>24</td><td>5</td></tr> <tr> <td>110</td><td>1,1</td></tr> <tr> <td>230</td><td>0,55</td></tr> </table> | AC |  | Ue V | Ie A | 24 | 10 | 110 | 6 | 230 | 3 | DC |  | Ue V | Ie A | 24 | 5 | 110 | 1,1 | 230 | 0,55 |
| AC                        |                                                                                                                                                                                                                                                                                                                                                                                              |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Ue V                      | Ie A                                                                                                                                                                                                                                                                                                                                                                                         |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| 24                        | 10                                                                                                                                                                                                                                                                                                                                                                                           |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| 110                       | 6                                                                                                                                                                                                                                                                                                                                                                                            |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| 230                       | 3                                                                                                                                                                                                                                                                                                                                                                                            |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| DC                        |                                                                                                                                                                                                                                                                                                                                                                                              |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Ue V                      | Ie A                                                                                                                                                                                                                                                                                                                                                                                         |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| 24                        | 5                                                                                                                                                                                                                                                                                                                                                                                            |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| 110                       | 1,1                                                                                                                                                                                                                                                                                                                                                                                          |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| 230                       | 0,55                                                                                                                                                                                                                                                                                                                                                                                         |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |
| Illuminated models        | Led 24AC-DC included                                                                                                                                                                                                                                                                                                                                                                         |    |  |      |      |    |    |     |   |     |   |    |  |      |      |    |   |     |     |     |      |

### Dima di foratura per fissaggio ad incasso

### Drilling template for flush mounting



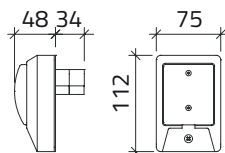
# Pulsanti a palmo normali

## Normal palm switches

### Pulsanti normali Normal push-buttons

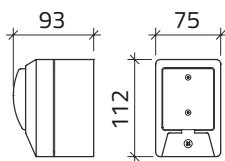
g

cod



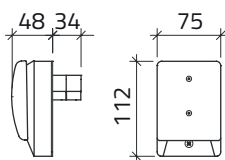
#### Tasto bombato senza custodia / Dome button without enclosure

|                   |     |          |
|-------------------|-----|----------|
| ● Nero / Black    | 204 | 060APTN  |
| ● Verde / Green   | 204 | 060APTV  |
| ● Giallo / Yellow | 204 | 060APTG  |
| ● Blu / Blue      | 204 | 060APTBL |



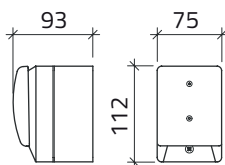
#### Tasto bombato con custodia / Dome button with enclosure

|                   |     |          |
|-------------------|-----|----------|
| ● Nero / Black    | 319 | 060APTNC |
| ● Verde / Green   | 319 | 060APTVC |
| ● Giallo / Yellow | 319 | 060APTGC |
| ● Blu / Blue      | 319 | 060APTBL |



#### Tasto a fungo senza custodia / Mushroom button without enclosure

|                   |     |          |
|-------------------|-----|----------|
| ● Nero / Black    | 216 | 060APFN  |
| ● Verde / Green   | 216 | 060APFV  |
| ● Giallo / Yellow | 216 | 060APFG  |
| ● Blu / Blue      | 216 | 060APFBL |



#### Tasto a fungo con custodia / Mushroom button with enclosure

|                   |     |          |
|-------------------|-----|----------|
| ● Nero / Black    | 331 | 060APFNC |
| ● Verde / Green   | 331 | 060APFVC |
| ● Giallo / Yellow | 331 | 060APFGC |
| ● Blu / Blue      | 331 | 060APFBL |



# Pulsanti a palmo luminosi

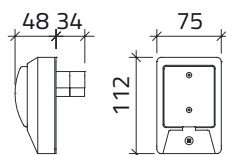
## Illuminated palm switches

### Pulsanti a palmo luminosi

### Illuminated palm switches

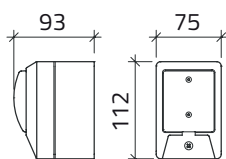
g

cod



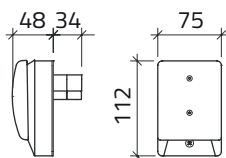
#### Tasto bombato senza custodia / Dome button without enclosure

|                           |     |                  |
|---------------------------|-----|------------------|
| ● Verde / Green           | 204 | <b>060APTLV</b>  |
| ● Giallo / Yellow         | 204 | <b>060APTLG</b>  |
| ● Blu / Blue              | 204 | <b>060APTLBL</b> |
| ○ Bianco / White          | 204 | <b>060APTLB</b>  |
| ● Rosso-verde / Red-green | 204 | <b>060APTLRV</b> |



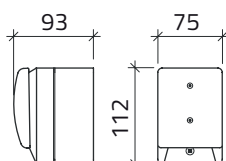
#### Tasto bombato con custodia / Dome button with enclosure

|                           |     |                   |
|---------------------------|-----|-------------------|
| ● Verde / Green           | 319 | <b>060APTLVC</b>  |
| ● Giallo / Yellow         | 319 | <b>060APTLGC</b>  |
| ● Blu / Blue              | 319 | <b>060APTLBLC</b> |
| ○ Bianco / White          | 319 | <b>060APTLBC</b>  |
| ● Rosso-verde / Red-green | 319 | <b>060APTLRVC</b> |



#### Tasto a fungo senza custodia / Mushroom button without enclosure

|                           |     |                  |
|---------------------------|-----|------------------|
| ● Verde / Green           | 216 | <b>060APFLV</b>  |
| ● Giallo / Yellow         | 216 | <b>060APFLG</b>  |
| ● Blu / Blue              | 216 | <b>060APFLBL</b> |
| ○ Bianco / White          | 216 | <b>060APFLB</b>  |
| ● Rosso-verde / Red-green | 216 | <b>060APFLRV</b> |



#### Tasto a fungo con custodia / Mushroom button with enclosure

|                           |     |                   |
|---------------------------|-----|-------------------|
| ● Verde / Green           | 331 | <b>060APFLVC</b>  |
| ● Giallo / Yellow         | 331 | <b>060APFLGC</b>  |
| ● Blu / Blue              | 331 | <b>060APFLBLC</b> |
| ○ Bianco / White          | 331 | <b>060APFLBC</b>  |
| ● Rosso-verde / Red-green | 331 | <b>060APFLRVC</b> |

# Pulsanti di emergenza a palmo normali

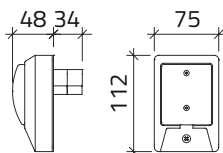
## Normal emergency stop palm switches

### Pulsanti di emergenza momentanei normali

### Normal momentary emergency stop push-buttons

g

cod

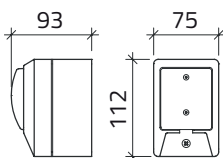


#### Tasto bombato senza custodia / Dome button without enclosure

● Rosso / Red

204

060APTR

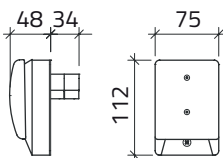


#### Tasto bombato con custodia / Dome button with enclosure

● Rosso / Red

319

060APTRC

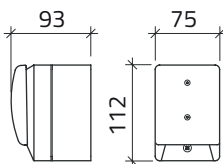


#### Tasto a fungo senza custodia / Mushroom button without enclosure

● Rosso / Red

216

060APFR



#### Tasto a fungo con custodia / Mushroom button with enclosure

● Rosso / Red

331

060APFRC

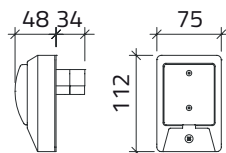


# Pulsanti di emergenza a palmo luminosi

## Illuminated emergency stop palm switches

### Pulsanti di emergenza a palmo luminosi

#### Illuminated emergency stop palm switches

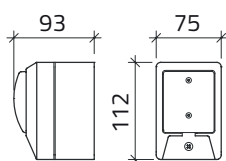


#### Tasto bombato senza custodia / Dome button without enclosure

● Rosso / Red

204

060APTLR

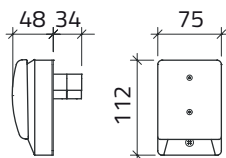


#### Tasto bombato con custodia / Dome button with enclosure

● Rosso / Red

319

060APTLRC

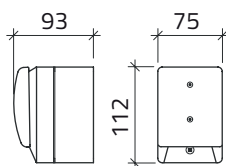


#### Tasto a fungo con custodia / Mushroom button without enclosure

● Rosso / Red

216

060APFLR



#### Tasto a fungo con custodia / Mushroom button with enclosure

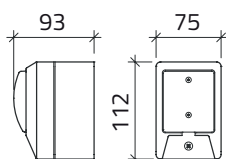
● Rosso / Red

331

060APFLRC

### Pulsanti di emergenza momentanei luminosi

#### Illuminated momentary emergency stop push-buttons



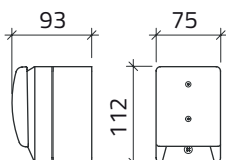
#### Tasto bombato con custodia luminosa

#### Dome button with illuminated enclosure

● Rosso / Red

319

060APTLRCL



#### Tasto a fungo con custodia luminosa

#### Mushroom button with illuminated enclosure

● Rosso / Red

331

060APFLRCL

# Pulsanti di emergenza a palmo ad aggancio

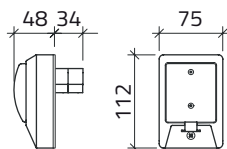
## Latching emergency stop palm switches

### Pulsanti di emergenza ad aggancio

### Latching emergency stop push-buttons

g

cod

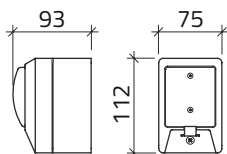


#### Tasto bombato senza custodia / Dome button without enclosure

● Rosso / Red

229

060APATR

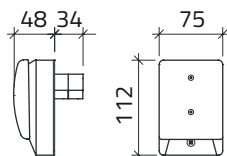


#### Tasto bombato con custodia / Dome button with enclosure

● Rosso / Red

344

060APATRC

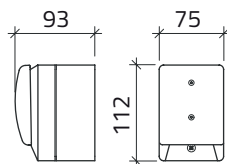


#### Tasto a fungo senza custodia / Mushroom button without enclosure

● Rosso / Red

240

060APAFR



#### Tasto a fungo con custodia / Mushroom button with enclosure

● Rosso / Red

356

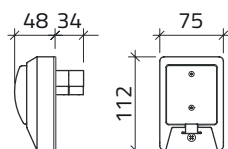
060APAFRC

# Pulsanti di emergenza a palmo ad aggancio luminosi

## Illuminated latching emergency stop palm switches

### Pulsanti di emergenza a palmo ad aggancio luminosi

#### Illuminated latching emergency stop palm switches

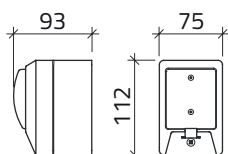


#### Tasto bombato senza custodia/ Dome button without enclosure

● Rosso / Red

229

060APATLR

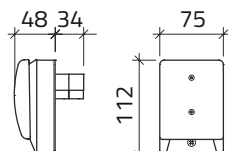


#### Tasto bombato con custodia / Dome button with enclosure

● Rosso / Red

344

060APATLRC

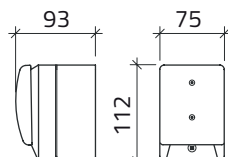


#### Tasto a fungo senza custodia/ Mushroom button without enclosure

● Rosso / Red

240

060APAFRLR



#### Tasto a fungo con custodia/ Mushroom button with enclosure

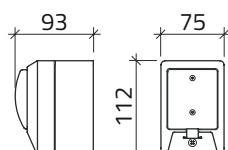
● Rosso / Red

356

060APAFRLRC

### Pulsanti di emergenza ad aggancio luminosi

#### Illuminated latching emergency stop push-buttons



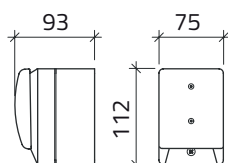
#### Tasto bombato con custodia luminosa

##### Dome button with illuminated enclosure

● Rosso / Red

344

060APATLRCL



#### Tasto a fungo con custodia luminosa

##### Mushroom button with illuminated enclosure

● Rosso / Red

356

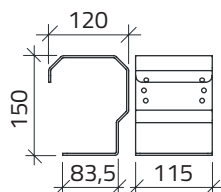
060APAFRLCL

# Accessori

## Accessories

### Elemento di protezione per pulsante a palmo

### Protective shroud for palm switch

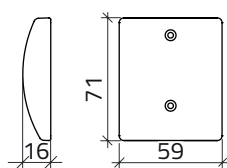


Acciaio / Steel

| g     | cod    |
|-------|--------|
| 1,145 | 060SEP |

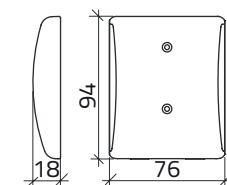
### Tasti per pulsanti a palmo normale

### Buttons for normal palm switches



#### Tasto bombato / Dome button

|                   |    |        |
|-------------------|----|--------|
| ● Nero / Black    | 25 | 060TBN |
| ● Rosso / Red     | 25 | 060TBR |
| ● Verde / Green   | 25 | 060TBV |
| ● Giallo / Yellow | 25 | 060TBG |
| ● Blu / Blue      | 25 | 060TBL |

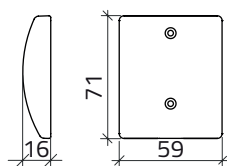


#### Tasto a fungo / Mushroom button

|                   |    |         |
|-------------------|----|---------|
| ● Nero / Black    | 36 | 060TFN  |
| ● Rosso / Red     | 36 | 060TFR  |
| ● Verde / Green   | 36 | 060TFV  |
| ● Giallo / Yellow | 36 | 060TFG  |
| ● Blu / Blue      | 36 | 060TFBL |

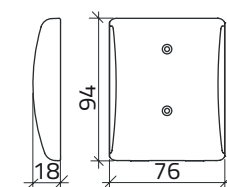
### Tasti per pulsante a palmo luminosi

### Buttons for illuminated palm switches



#### Tasto bombato / Dome button

|                   |    |          |
|-------------------|----|----------|
| ● Rosso / Red     | 25 | 060TBLR  |
| ● Verde / Green   | 25 | 060TBLV  |
| ● Giallo / Yellow | 25 | 060TBLG  |
| ● Blu / Blue      | 25 | 060TBLBL |
| ○ Bianco / White  | 25 | 060TBLB  |

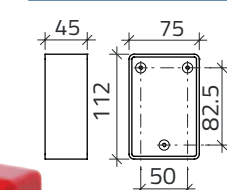


#### Tasto a fungo / Mushroom button

|                   |    |          |
|-------------------|----|----------|
| ● Rosso / Red     | 36 | 060TFLR  |
| ● Verde / Green   | 36 | 060TFLV  |
| ● Giallo / Yellow | 36 | 060TFLG  |
| ● Blu / Blue      | 36 | 060TFLBL |
| ○ Bianco / White  | 36 | 060TFLB  |

### Custodia per azionatore a palmo

### Palm switch enclosures



#### Custodia non luminosa / Not illuminated enclosure

|                 |     |        |
|-----------------|-----|--------|
| ● Grigio / Grey | 115 | 060SGR |
|-----------------|-----|--------|

#### Custodia luminosa / Illuminated enclosure

|               |     |        |
|---------------|-----|--------|
| ● Rosso / Red | 115 | 060SRT |
|---------------|-----|--------|



# Accessori

## Accessories

### Suffissi per stampa simboli su tasti

### Suffixes for printing symbols on buttons

cod

Far seguire al codice del prodotto il suffisso del simbolo desiderato

Item code is to be followed by the suffix of the required symbol

SIMBOLO / SYMBOL

SUFFISSO / SUFFIX



S48



S148



S55



S152



S153



S144



S154



S159

# Pulsantiera mobile

## Hand-held push-button control unit

### PULSANTIERA MOBILE

L'unità portatile è stata progettata per rispondere ai requisiti di ergonomia, sicurezza ed affidabilità. Questo tipo di apparecchiature trova un utilizzo ideale nei settori dei sistemi di automazione a controllo numerico e nelle applicazioni con robot industriali. Le caratteristiche dimensionali della parte superiore permettono di realizzare svariate configurazioni di operatori, mentre nella parte inferiore, usata come impugnatura, è possibile allestire tastiere a membrana; nei lati è prevista la possibilità d'installare pulsanti di abilitazione a 3 posizioni con funzione antipanico. La caratteristica forma della pulsantiera è stata progettata per proteggere gli operatori (anche nel caso di selettori con chiave inserita) da eventuali urti o shock.

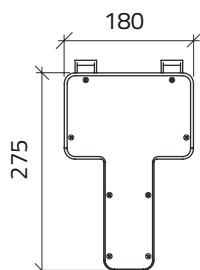
### MODULAR SYSTEM FOR PUSH-BUTTON

The hand-held unit has been designed to meet ergonomic and safety requirements and to offer reliability. This type of equipment is ideal for usage in numeric control automation systems and applications which use industrial robots. The size of the upper part makes it possible to create various operator configurations, while the lower part, used to grip the unit, can be equipped with 3 positions enabling switch, with antipanic function. The characteristic shape of the button board is designed to protect operators (also when the key selector is inserted) from collision or shock.



# Pulsantiera mobile

## Hand-held push-button control unit



### Scatola pulsantiera in resina termoplastica Push-button enclosure made of thermoplastic resin

Completa di piastra in alluminio, senza forature.

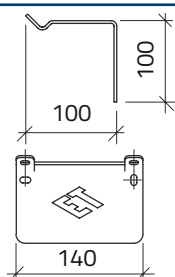
Per richieste speciali contattare la nostra organizzazione commerciale.

Provided with aluminium undrilled plate.

For special requirements get in touch with our commercial department.

Grado di protezione : IP66/ Protection degree : IP66 560

060PMG

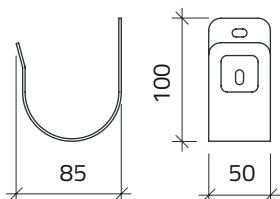


### Staffa fissaggio parete / Wall-mounting bracket

Acciaio / Steel

455

060SFP

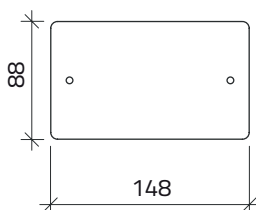


### Staffa di fissaggio cavo / Cable bracket

Acciaio / Steel

360

060SFC

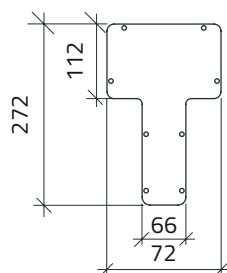


### Piastra di fissaggio magnetica / Magnetic mounting plate

Acciaio / Steel

200

060PFM

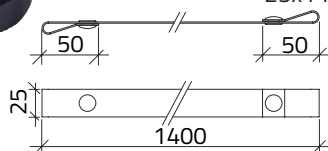


### Piastra non forata ( ricambio ) / Undrilled plate ( spare part )

Alluminio anodizzato / Anodised aluminium

160

060PPM



### Cinghia tracolla / Shoulder belt

25x1400 mm

46

010CT25

# Pulsantiera pensili

## Pendant push-button stations

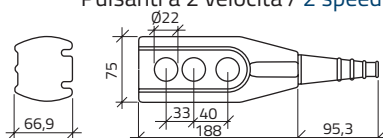
### Con operatore / With operator

g

cod

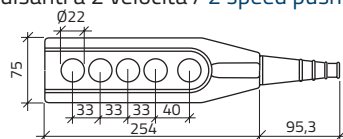
#### 2 operatori + emergenza 1NC / 2 operators + emergency 1NC

|                                              |     |                 |
|----------------------------------------------|-----|-----------------|
| Pulsanti a 1 velocità / 1 speed push-buttons | 390 | <b>060PM2S1</b> |
| Pulsanti a 2 velocità / 2 speed push-buttons | 390 | <b>060PM2S2</b> |



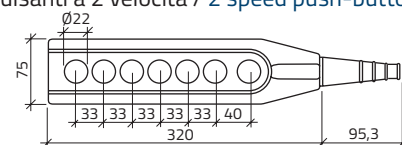
#### 4 operatori + emergenza 1NC / 4 operators + emergency 1NC

|                                              |     |                 |
|----------------------------------------------|-----|-----------------|
| Pulsanti a 1 velocità / 1 speed push-buttons | 550 | <b>060PM4S1</b> |
| Pulsanti a 2 velocità / 2 speed push-buttons | 550 | <b>060PM4S2</b> |



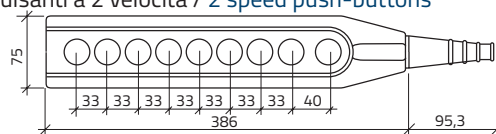
#### 6 operatori + emergenza 1NC / 6 operators + emergency 1NC

|                                              |     |                 |
|----------------------------------------------|-----|-----------------|
| Pulsanti a 1 velocità / 1 speed push-buttons | 960 | <b>060PM6S1</b> |
| Pulsanti a 2 velocità / 2 speed push-buttons | 960 | <b>060PM6S2</b> |



#### 8 operatori + emergenza 1NC / 8 operators + emergency 1NC

|                                              |      |                 |
|----------------------------------------------|------|-----------------|
| Pulsanti a 1 velocità / 1 speed push-buttons | 1070 | <b>060PM8S1</b> |
| Pulsanti a 2 velocità / 2 speed push-buttons | 1070 | <b>060PM8S2</b> |



### Senza operatore / Without operator

g

cod

|                  |     |               |
|------------------|-----|---------------|
| 3 fori / 3 holes | 240 | <b>060PM3</b> |
| 5 fori / 6 holes | 290 | <b>060PM5</b> |
| 7 fori / 7 holes | 400 | <b>060PM7</b> |

### Caratteristiche tecniche

### Technical data

### Caratteristiche pulsanti

### Push-button performance

|                          |                       |                                                         |                                      |                                               |                                |
|--------------------------|-----------------------|---------------------------------------------------------|--------------------------------------|-----------------------------------------------|--------------------------------|
| Involucro                | Body                  | Durata meccanica                                        | 5 x 10 <sup>5</sup> cicli di manovra | Mechanical durability                         | 5 x 10 <sup>5</sup> operations |
| ABS                      | ABS                   | Durata elettrica                                        | 1 x 10 <sup>5</sup> cicli di manovra | Electrical durability                         | 1 x 10 <sup>5</sup> operations |
| Grado di protezione      | Degree of protection  | Tensione nominale Ue                                    | 250v AC                              | Rating operating voltage Ue                   | 250v AC                        |
| IP65                     | IP65                  | Corrente nominale Ia                                    | 4 A                                  | Rating operating current Ia                   | 4 A                            |
| Temperatura di esercizio | Operating temperature | Potenze nominali di impiego in AC 15 secondo IEC947-5-1 | 1000 VA                              | Rated switching power according to IEC947-5-1 | 1000 VA                        |
| -5°C +125°C              | -5°C +125°C           | Tensione di isolamento UI                               | 300V Uimp 2,5 Kv                     | Insulation Voltage UI                         | 300V Uimp 2,5 Kv               |





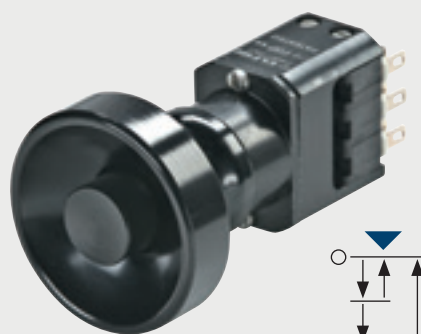
# Pulsanti di abilitazione a 3 posizioni Ø16

## 3-position enabling switches Ø16

**I** Il pulsante di abilitazione a 3 posizioni antipánico é un comando manuale utilizzato nelle aree di pericolo dei sistemi di automazione industriale. Questo dispositivo supplementare è usato in combinazione con un comando di avviamento che, solo se attivato ed in modo mantenuto, consente alla macchina di funzionare.

Il pulsante di abilitazione può essere usato per la messa a punto, l'apprendimento, il cambio di lavorazione, la ricerca guasti, la pulizia e/o manutenzione della macchina, ovvero dove è necessario spostare o rimuovere le protezioni o escludere i dispositivi di sicurezza tradizionali. Per effettuare queste operazioni è necessario che la macchina possa essere avviata anche in situazioni pericolose mantenendo la sicurezza dell'operatore al livello più alto possibile. Azionando il dispositivo di comando solo in una determinata posizione vengono autorizzati i funzionamenti dei meccanismi potenzialmente pericolosi. Per mantenere controllata e sicura tutta l'azione è necessario che tutto l'apparecchio sia controllato in condizioni di ridondanza con un relè di sicurezza a doppia catena ad un arresto in categoria 0 o 1.

Nel montaggio evitare qualsiasi pressione nella parte centrale in modo da non bloccare il meccanismo



**T** The 3-position enabling device is a manual control used in the tool machine danger zone in industrial automatic systems. This supplementary device is used in conjunction with a start control which, only when activated and maintained in the active position, it enables the operation of the machine.

The engagement button can be used for tuning, training, changing the working process, searching for faults, cleaning and maintaining the machine, and in all cases where it is necessary to move or remove safety guards or disconnected traditional safety devices. To carry out these operations it must be possible to start up the machine in dangerous situations, maintaining safe working conditions at the highest possible level. By activating the control in a specific position, potentially dangerous mechanisms can be activated. To ensure that the whole action is safe and under control, the equipment must be checked while idle with a double chain safety relay with stoppage in category 0 or 1.

During assembly avoid placing pressure on the central point as this could block the mechanism.

Il pulsante di abilitazione può essere fornito fino ad una combinazione di quattro contatti NO+NC a camere separate permettendo così di controllare in retroazione l'efficienza dei vari elementi.

- **posizione 1:** interruttore in funzione di messa fuori tensione (attuatore non attivato)
- **posizione 2:** funzione di consenso (attuatore attivato nella sua posizione intermedia)
- **posizione 3:** interruttore in funzione di messa fuori tensione (attuatore attivato al di là della posizione intermedia)

Quando si torna alla posizione 1 dalla posizione 3 il funzionamento non deve essere consentito. La NEW ELFIN fornisce questo dispositivo di abilitazione con estrema attenzione ai principi ergonomici; la dimensione miniaturizzata permette l'installazione in diverse complesse applicazioni. Le distanze di posizione e il differenziale d'intervento danno un funzionamento certo ed intuitivo.

The enabling device can be supplied in a combination of up to four NO+NC components in separate chambers, thus enabling retroactive check of the efficiency of the various elements.

- **position 1:** off (actuator not engaged)
- **position 2:** enabled (actuator engaged in the intermediate position)
- **position 3:** off (actuator engaged beyond the intermediate position)

When returning to position 1 from position 3, operation must not be allowed.

NEW ELFIN supplies this enabling device paying extreme attention to ergonomic principles; its small size enables installation in various complex applications. The positioning distances and operating differential make operation sure and intuitive.

### Caratteristiche tecniche

|                        |                                                                                                                                                                                                                                                  |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rispondenza alle norme | IEC EN 60947-5-8 / CEI EN 60204-1<br>CEI EN 11161 / UNI 10218-1                                                                                                                                                                                  |
| Temperatura tollerata  | Temperatura di funzionamento -30°C / + 70°C                                                                                                                                                                                                      |
| Grado di protezione    | IP40 / IP66 con cappuccio in gomma                                                                                                                                                                                                               |
| Forze di azionamento   | Posizione 1 > 2 : 10N, posizione 2 > 3 : 25N                                                                                                                                                                                                     |
| Durata meccanica       | 3 x 10 <sup>5</sup> operazioni<br>UNI EN ISO 1349-1 B10d = 100.000 Operazioni                                                                                                                                                                    |
| Microinterruttori      | Commutazione contatti a scatto rapido a doppia rottura<br>Vn: 250V ac/dc max<br>In: 5A max<br>Ith: 10A<br>Ui: 300V<br>Durata elettrica: 2x10 <sup>4</sup> cicli di manovre (250V-5A-cosφ 0,8)<br>Terminali: faston clip 2,8 x 0,5 - T7 a saldare |
| Omologazioni           | UL - CSA (switch)                                                                                                                                                                                                                                |

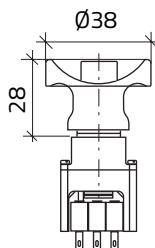
### Technical data

|                         |                                                                                                                                                                                                                       |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Compliance to standards | IEC EN 60947-5-8 / CEI EN 60204-1<br>CEI EN 11161 / UNI 10218-1                                                                                                                                                       |
| Tolerated temperature   | Working temperatures -30°C / + 70°C                                                                                                                                                                                   |
| Degree of protection    | IP40 / IP66 with rubber cap                                                                                                                                                                                           |
| Actuating forces        | Position 1 > 2 : 10N, position 2 > 3 : 25N                                                                                                                                                                            |
| Mechanical durability   | 3 x 10 <sup>5</sup> operations<br>UNI EN ISO 1349-1 B10d = 100.000 operations                                                                                                                                         |
| Microswitches           | Snap action double break switch<br>Vn: 250V ac/dc max<br>In: 5A max<br>Ith: 10A<br>Ui: 300V<br>Electrical durability: 2x10 <sup>4</sup> operations (250V-5A-cosφ 0,8)<br>Terminals: faston clip 2,8 x 0,5 - T7 solder |
| Approvals               | UL - CSA (switch)                                                                                                                                                                                                     |



# Pulsanti di abilitazione a 3 posizioni Ø16

## 3-position enabling switches Ø16

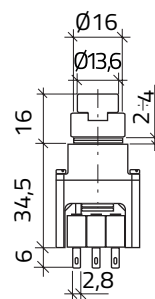
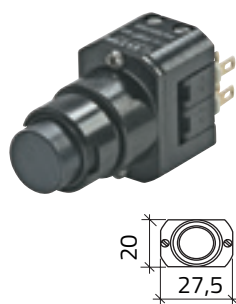


### Pulsante 3 posizioni con impugnatura ergonomica

#### 3-position push-button with ergonomic handle

Microinterruttori con terminali faston 2,8 x 0,5  
Microswitches with faston terminals 2.8 x 0.5

|           |    |                   |
|-----------|----|-------------------|
| 2NO + 2NC | 70 | <b>016P3PE22F</b> |
| 3NO + 3NC | 70 | <b>016P3PE33F</b> |

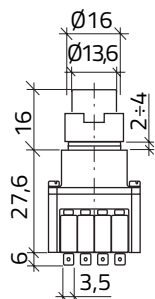


### Pulsante 3 posizioni

#### 3-position push-button

Microinterruttori con terminali faston 2,8 x 0,5  
Microswitches with faston terminals 2.8 x 0.5

|           |    |                  |
|-----------|----|------------------|
| 2NO + 2NC | 44 | <b>016P3P22F</b> |
| 3NO + 3NC | 70 | <b>016P3P33F</b> |



Microinterruttori con terminali T7 a saldare  
Microswitches with T7 solder terminals

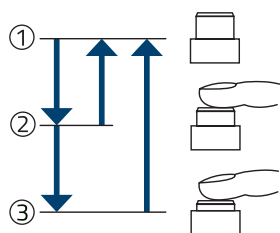
|           |    |                 |
|-----------|----|-----------------|
| 2NO + 2NC | 30 | <b>016P3P22</b> |
| 3NO + 3NC | 31 | <b>016P3P33</b> |
| 4NO + 4NC | 32 | <b>016P3P44</b> |

### Schema elettrico microinterruttori

#### Microswitch electrical diagram



1-2 contatto NC / 3-4 contatto NA  
1-2 Nc contact / 3-4 NO contact

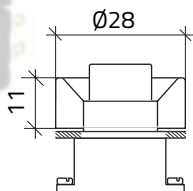


|            |            |          |          |
|------------|------------|----------|----------|
| 016P3P22   | 016P3P33F  | 016P3P33 | 016P3P44 |
| 016P3P22F  | 016P3PE33F |          |          |
| 016P3PE22F |            |          |          |
|            |            |          |          |
|            |            |          |          |
|            |            |          |          |

Contatto NC di controllo posizione ③  
NC contact for position control ③

# Accessori

## Accessories

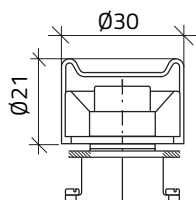


**Ghiera di riduzione Ø 22,5/ Ø 16**  
**Reduction ring Ø 22,5 / Ø 16**

**g** **n** **cod**

12,8

016GP28

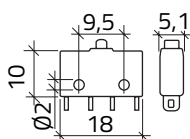
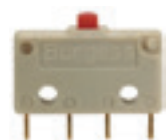


**Cappuccio in gomma / Rubber cap**

3,5

5

020CGS

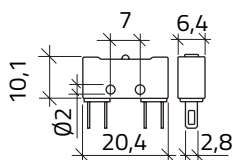
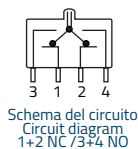


**Contatto / Contact block**

Microinterruttori con terminali T7 a saldare  
 Microswitches with T7 solder terminals  
 1NO + 1 NC

1,3

016E11

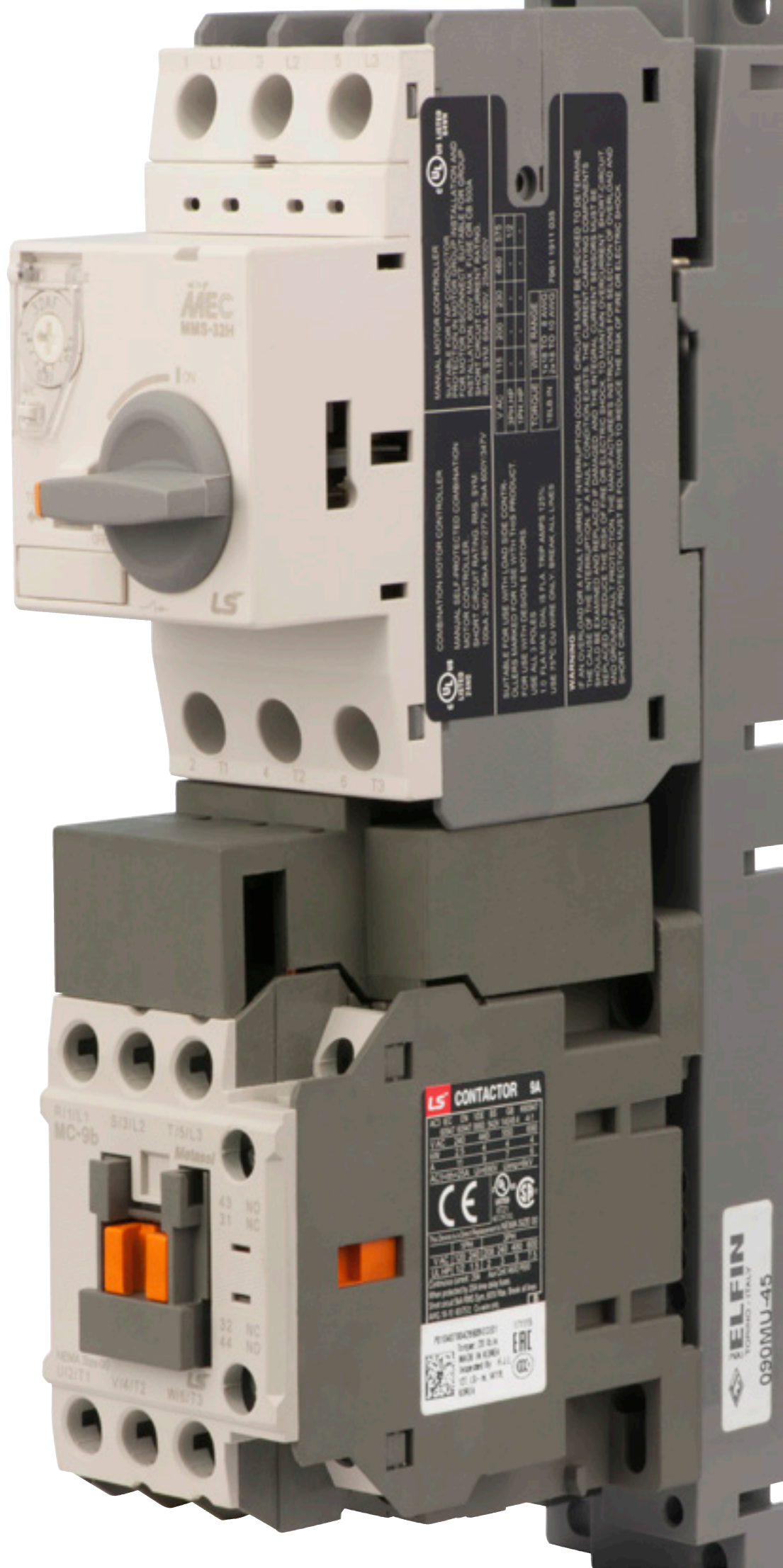


**Contatto / Contact**

Microinterruttori con terminali faston 2,8 x 0,5  
 Microswitches with faston terminals 2.8x0-5  
 1NO + 1 NC faston

1,3

016E11F



# 090

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**CONTATTORI, RELÈ TERMICI,  
MINI CONTATTORI,  
INTERRUTTORI SALVAMOTORE**

**CONTACTORS, THERMAL O/L  
RELAYS, MINICONTACTORS,  
MANUAL MOTOR STARTERS**



# Nuova linea di contattori

## New line of contactors



**L** La NEW ELFIN propone una nuova linea di contattori caratterizzati da una estrema modularità. L'ampia gamma di accessori in comune alle differenti taglie di potenza permette di gestire il lavoro in modo più funzionale e ottimizzare i costi al contrario di quanto l'offerta del mercato può mantenere.

**N** NEW ELFIN proposes a new line of contactors, characterized by an exceptional modularity. The wide range of accessories in common among different power sizes, allow you to work in a more functional way optimizing costs and time.

### SENZA UTENSILI

L'installazione dei contattori e la sostituzione della bobina sono estremamente semplici e non necessitano di **utensili** per il montaggio.

### NO TOOLS

The contactors installation and the coils replacement are very easy operations and do not requires special **tools**.

### DIMENSIONI

Le **dimensioni** estremamente compatte dei contattori offrono una maggiore facilità di installazione anche in situazioni particolarmente difficili. L'installatore troverà quindi indubbi vantaggi sia in fase di progettazione che realizzazione.

### DIMENSIONS

Thanks to the very compact **dimensions** of the contactors installation procedure is very easy, even in particularly difficult situations. The operator responsible for their installation will gain huge benefits during both design and implementation phases.

### PESO

Contrariamente a quanto è richiesto ad altre tipologie di prodotti, per i contattori il **peso** è una qualità determinante. Infatti a maggior peso corrisponde una migliore efficienza e una garanzia di lunga operatività nel tempo.

### WEIGHT

Unlike what is required by other types of products, **weight** is an important aspect for contactors, with greater weight corresponding to increased efficiency and long operational life.

### PREZZO

A parità di serie i relè hanno un prezzo comune per favorire una più snella gestione degli acquisti. Una opportunità da non sottovalutare facendo riferimento in particolare al range di prezzi offerti attualmente dal mercato.

### PRICE

Relays in series of the same level cost the same, in order to streamline the management of purchases. This is an opportunity to be taken into serious consideration, making particular reference to the price range currently offered by the market.

### DURATA

La **durata** nel tempo è fondamentale per garantire un flusso di lavoro costante ed un'ottimizzazione dell'investimento: i contattori NEW ELFIN garantiscono una media di 25 milioni di cicli come vita meccanica e 2,5 milioni come vita elettrica, queste caratteristiche pongono i nostri contattori al top della produzione mondiale.

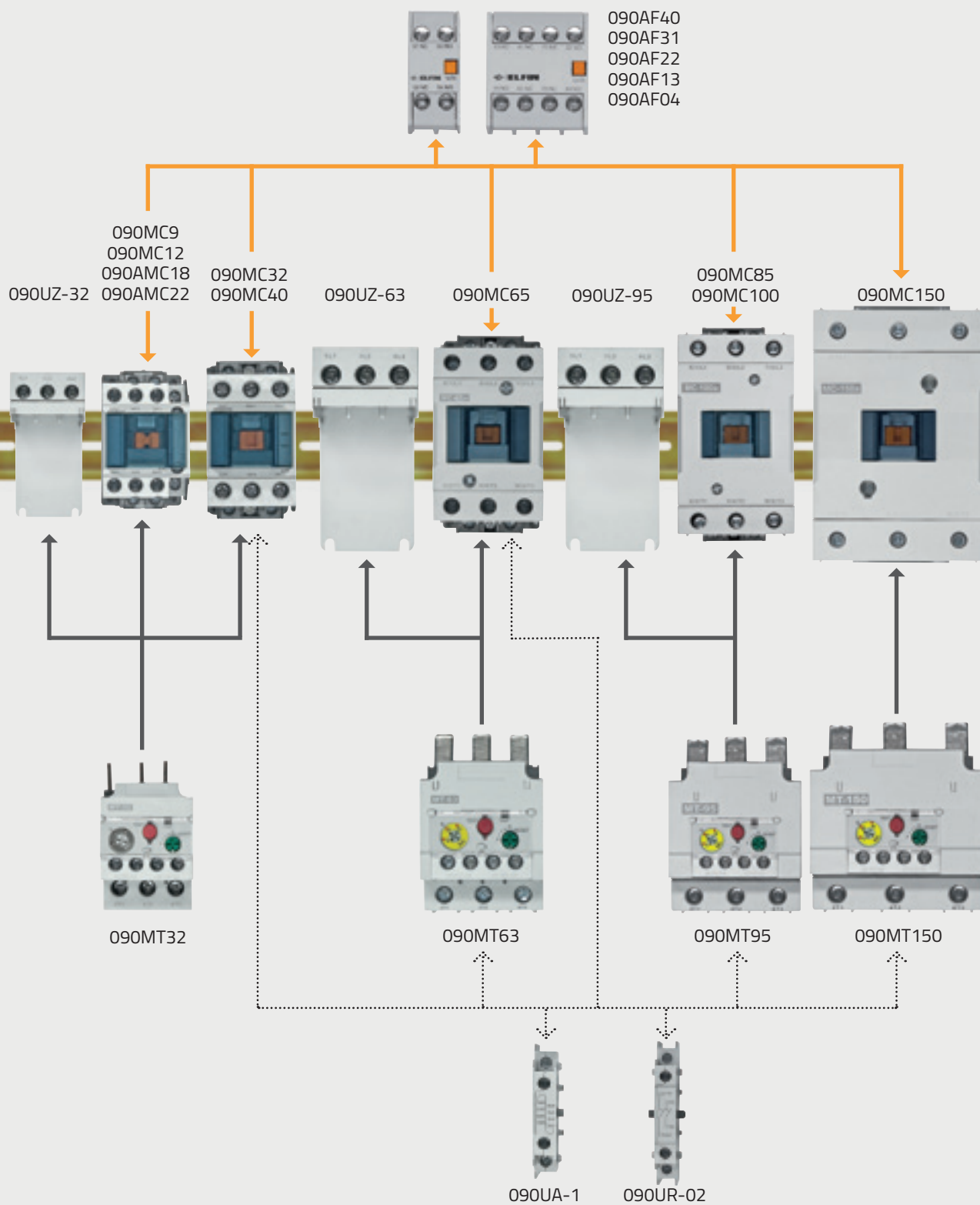
### DURATION

**Duration** is fundamental in order to guarantee a constant work flow and optimise the investment: NEW ELFIN contactors guarantee an average of 25,000,000 cycles of mechanical life and 2,500,000 cycles of electrical life. These characteristics place our contactors at the top of the international production.

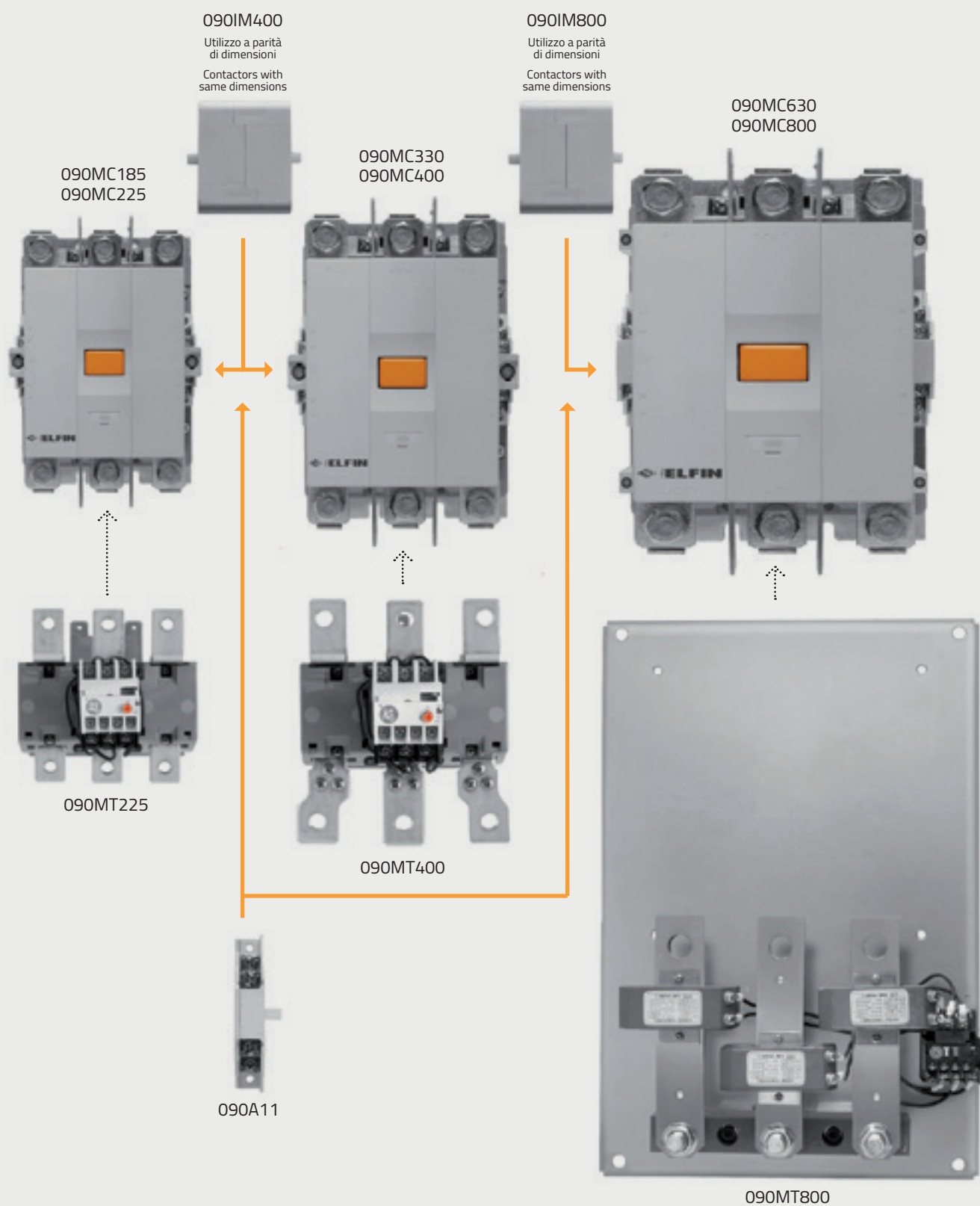


# Layout

## Layout



# Layout Layout





# Introduzione

## Introduction

La norma definisce il contattore come un dispositivo elettromeccanico di manovra, generalmente previsto per un numero elevato di manovre, avente una sola posizione di riposo, ad azionamento non manuale, in grado di stabilire, portare e interrompere correnti in condizioni normali del circuito, incluse le condizioni di sovraccarico e manovra. La forza per la chiusura dei contatti principali normalmente aperti o per l'apertura dei contatti normalmente chiusi è fornita da un elettromagnete. Nelle pagine a seguire trovate una serie di informazioni utili per ottimizzare la scelta del contattore necessario a risolvere il problema specifico di impiego.



The standard describes the contactor as an electromechanical manoeuvring device, generally designed for a high number of operations, with just one idle position which is non-manually activated, capable of making carrying and breaking currents under normal circuit conditions, including overloading and operating conditions. The force required to close the main contacts which are normally open or to open contacts which are normally closed is supplied by an electromagnet. On the following pages you will find a series of useful information for choosing the best contactor for your specific requirements



### COME DIMENSIONARE UN CONTATTORE

Per effettuare il corretto dimensionamento di un contattore occorre tenere conto di alcuni fattori:

- categorie di utilizzazione che identificano la tipologia del carico
- della vita elettrica
- del numero di manovre / ora

### HOW TO DIMENSION A CONTACTOR

In order to correctly dimension a contactor, several factors have to be considered:

- the categories of use which identify the type of load
- the electrical life
- the number of operations per hour

# Categorie d'impiego

## Utilization categories

La normativa stabilisce delle categorie di utilizzazione riferite ad impieghi ben precisi dei contattori. Tali categorie sono riportate nella tabella seguente.

The standard establishes several categories of use referred to precise uses of contactors. These categories are listed in the following table.

| Contattori / Contactors                  |                                                                                                                                                                | Contattori / Contactors                                                                                                                 |      |                                                                                                                                                                                                                      |                                                                                                                                                                  |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CORRENTE ALTERNATA / ALTERNATING CURRENT | AC-1                                                                                                                                                           | Carichi non induttivi o debolmente induttivi, forni a resistenza<br>Non inductive or slightly inductive loads, resistance furnaces      | DC-1 | Carichi non induttivi o debolmente induttivi, forni a resistenza<br>Non inductive or slightly inductive loads, resistance furnaces                                                                                   |                                                                                                                                                                  |
|                                          | AC-2                                                                                                                                                           | Motori ad anelli: avviamento, arresto<br>Slip-ring motors: starting and switching off                                                   | DC-3 | Motori in derivazione: avviamento, frenatura in controcorrente, manovre a impulsi. Frenatura dinamica di motori in corrente continua<br>Shunt-motors: starting - plugging - inching. Dynamic breaking of D.C. motors |                                                                                                                                                                  |
|                                          | AC-3                                                                                                                                                           | Motori a gabbia: avviamento, arresto del motore durante la marcia<br>Squirrel cage motors: starting switching off motors during running |      |                                                                                                                                                                                                                      |                                                                                                                                                                  |
|                                          | AC-4                                                                                                                                                           | Motori a gabbia: avviamento, frenatura in controcorrente, manovra a impulsi<br>Squirrel cage motors: starting plugging - inching        |      |                                                                                                                                                                                                                      |                                                                                                                                                                  |
|                                          | AC-5a                                                                                                                                                          | Comando di lampade a scarica<br>Switching of electric discharge lamp controls                                                           | DC-5 | Motori in serie: avviamento, frenatura in controcorrente, manovre a impulsi. Frenatura dinamica di motori in corrente continua<br>Series motors: starting - plugging - inching. Dynamic braking of D.C. motors       |                                                                                                                                                                  |
|                                          | AC-5b                                                                                                                                                          | Comando di lampade ad incandescenza<br>Switching of incandescent lamps                                                                  |      |                                                                                                                                                                                                                      |                                                                                                                                                                  |
|                                          | AC-6a                                                                                                                                                          | Comando di trasformatori<br>Switching of transformers                                                                                   |      |                                                                                                                                                                                                                      |                                                                                                                                                                  |
| AC-6b                                    | Comando di batterie di condensatori<br>Switching of capacitors banks                                                                                           | CORRENTE CONTINUA / DIRECT CURRENT                                                                                                      |      |                                                                                                                                                                                                                      |                                                                                                                                                                  |
| Circuiti ausiliari / Switching elements  |                                                                                                                                                                |                                                                                                                                         |      |                                                                                                                                                                                                                      |                                                                                                                                                                  |
| AC-12                                    | Comando di carichi ohmici e semiconduttori con opto separazione<br>Control of resistive loads and solid state loads with isolation by opto couples             |                                                                                                                                         |      | DC-12                                                                                                                                                                                                                | Comando di carichi ohmici e semiconduttori con opto separazione<br>Control of resistive loads isolation by opto couples                                          |
| AC-13                                    | Comando di semiconduttori con trasformatore di separazione<br>Control of solid state loads with transformer isolation                                          |                                                                                                                                         |      | DC-13                                                                                                                                                                                                                | Comando di elettromagneti<br>Electromagnet control                                                                                                               |
| AC-14                                    | Comando di piccoli carichi elettromagnetici (max 72 VA), quali bobine di piccoli conduttori o elettrovalvole<br>Control of small electromagnetic loads (<72VA) |                                                                                                                                         |      | DC-14                                                                                                                                                                                                                | Comando di carichi elettromagnetici con resistenza di risparmio sul circuito ausiliario<br>Control of electromagnetic loads having economic resistors in circuit |
| AC-15                                    | Comando di carichi elettromagnetici (oltre 72VA)<br>Control of electromagnetic loads (>72VA)                                                                   |                                                                                                                                         |      |                                                                                                                                                                                                                      |                                                                                                                                                                  |

# Categorie d'impiego

## Utilization categories

### Categoria Category

### Minimi (50 cicli) Minimum (50 cycles)

### Ordinari (6000 cicli) Standard (6000 cycles)

|              | Inserzione / Making  | Interruzione / Making | Inserzione / Making  | Interruzione / Making |
|--------------|----------------------|-----------------------|----------------------|-----------------------|
| <b>AC-1</b>  | 1,5 x I <sub>n</sub> | 1,5 x I <sub>n</sub>  | 1 x I <sub>n</sub>   | 1 x I <sub>n</sub>    |
| <b>AC-2</b>  | 4 x I <sub>n</sub>   | 4 x I <sub>n</sub>    | 2 x I <sub>n</sub>   | 2 x I <sub>n</sub>    |
| <b>AC-3</b>  | 10 x I <sub>n</sub>  | 8 x I <sub>n</sub>    | 2 x I <sub>n</sub>   | 2 x I <sub>n</sub>    |
| <b>AC-4</b>  | 12 x I <sub>n</sub>  | 10 x I <sub>n</sub>   | 6 x I <sub>n</sub>   | 6 x I <sub>n</sub>    |
| <b>AC-5a</b> | 3 x I <sub>n</sub>   | 3 x I <sub>n</sub>    | 2 x I <sub>n</sub>   | 2 x I <sub>n</sub>    |
| <b>AC-5b</b> | 1,5                  | 1,5 x I <sub>n</sub>  | 1 x I <sub>n</sub>   | 1 x I <sub>n</sub>    |
| <b>AC-6a</b> | -                    | -                     | -                    | -                     |
| <b>AC-6b</b> | -                    | -                     | -                    | -                     |
| <b>DC-1</b>  | 1,5 x I <sub>n</sub> | 1,5 x I <sub>n</sub>  | 1 x I <sub>n</sub>   | 1 x I <sub>n</sub>    |
| <b>DC-3</b>  | 4 x I <sub>n</sub>   | 4 x I <sub>n</sub>    | 2,5 x I <sub>n</sub> | 2,5 x I <sub>n</sub>  |
| <b>DC-5</b>  | 4 x I <sub>n</sub>   | 4 x I <sub>n</sub>    | 2,5 x I <sub>n</sub> | 2,5 x I <sub>n</sub>  |



AC-1

Questa categoria prevede inserzione, mantenimento e disinserzione di una data corrente nominale. Quindi oltre al comando di carichi ohmici, questa categoria può essere utilizzata per carichi elettricamente equivalenti quali softstarters ed inverter (contattore di linea manovra a vuoto) e nella distribuzione di energia.

This category provides for make, maintenance and break of a given nominal current. Therefore, in addition to the control of resistive loads, this category can be used for electrically equivalent loads, such as softstarters and inverters (no-load operation for line contactor) and to distribute power.



AC-2

AC-3

I contattori classificati in AC-3 possono essere utilizzati per occasionali manovre a impulso e/o frenature in controcorrente per brevi periodi (max. 5 op./min. e minore di 10 op./in 10min).

AC-3 Contactors classified in AC-3 can be used for occasional inching operations and/or plugging for short periods of time (max. 5 op./min. and less than 10 op./in 10 min.).

AC-4

È la categoria più gravosa in assoluto, infatti il contattore risulta estremamente sollecitato perché oltre a inserire la corrente di spunto deve anche interromperla.

This is the most stressful category of all. The contactor undergoes tremendous stress as it is used both to make the initial current and to break it.

SEZIONI / SECTIONS

|     | AC-1               |          |          | AC-2     |          |          | AC-3     |          |          |          | AC-4 |  |
|-----|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------|--|
|     | (I <sub>th</sub> ) | 200-220V | 380-440V | 500-550V | 200-220V | 380-440V | 500-550V | 690V     | 200-200V | 380-440V |      |  |
|     | [A]                | [kW] [A] | [kW] [A] | [kW] [A] | [kW] [A] | [kW] [A] | [kW] [A] | [kW] [A] | [kW] [A] | [kW] [A] |      |  |
| 9   | 20                 | 2.5 11   | 4 9      | 4 7      | 2.5 11   | 4 9      | 4 7      | 4 5      | 1.5 8    | 2.2 6    |      |  |
| 12  | 20                 | 3.5 13   | 5.5 12   | 7.5 12   | 3.5 13   | 5.5 12   | 7.5 12   | 7.5 9    | 2.2 11   | 4 9      |      |  |
| 18  | 25                 | 4.5 18   | 7.5 18   | 7.5 13   | 4.5 18   | 7.5 18   | 7.5 13   | 7.5 9    | 3.7 18   | 4 9      |      |  |
| 22  | 32                 | 5.5 22   | 11 22    | 15 22    | 5.5 22   | 11 22    | 15 22    | 15 18    | 3.7 18   | 5.5 13   |      |  |
| 32  | 50                 | 7.5 32   | 15 32    | 18.5 28  | 7.5 32   | 15 32    | 18.5 28  | 18.5 20  | 4.5 20   | 7.5 17   |      |  |
| 40  | 60                 | 11 40    | 18.5 40  | 22 32    | 11 40    | 18.5 40  | 22 32    | 22 23    | 5.5 25   | 11 24    |      |  |
| 50  | 80                 | 15 55    | 22 50    | 30 43    | 15 55    | 22 50    | 30 43    | 30 28    | 7.5 35   | 15 32    |      |  |
| 65  | 100                | 18.5 65  | 30 65    | 37 60    | 18.5 65  | 30 65    | 33 60    | 33 35    | 11 50    | 22 47    |      |  |
| 75  | 110                | 22 75    | 37 75    | 45 64    | 22 75    | 37 75    | 37 64    | 37 42    | 13 55    | 25 52    |      |  |
| 85  | 135                | 25 85    | 45 85    | 45 75    | 25 85    | 45 85    | 45 75    | 45 45    | 15 65    | 30 62    |      |  |
| 100 | 150                | 30 105   | 55 105   | 55 85    | 30 105   | 55 105   | 55 85    | 55 65    | 19 80    | 37 75    |      |  |
| 125 | 150                | 37 125   | 60 120   | 60 90    | 37 125   | 60 120   | 60 90    | 60 70    | 22 93    | 45 90    |      |  |
| 150 | 200                | 45 150   | 75 150   | 90 140   | 45 150   | 75 150   | 90 140   | 90 100   | 30 125   | 55 110   |      |  |
| 180 | 230                | 55 180   | 90 180   | 110 180  | 55 180   | 90 180   | 110 180  | 110 120  | 37 150   | 75 150   |      |  |
| 220 | 260                | 75 220   | 132 220  | 132 200  | 75 250   | 132 250  | 132 200  | 132 150  | 45 180   | 90 180   |      |  |
| 300 | 350                | 90 300   | 160 300  | 160 250  | 90 300   | 160 300  | 160 250  | 200 220  | 55 220   | 110 220  |      |  |
| 400 | 420                | 125 400  | 220 400  | 225 350  | 125 400  | 220 400  | 225 350  | 250 300  | 75 300   | 150 300  |      |  |
| 600 | 660                | 190 630  | 330 630  | 330 500  | 190 630  | 330 630  | 330 500  | 330 420  | 110 400  | 200 400  |      |  |
| 800 | 800                | 220 800  | 440 800  | 500 720  | 220 800  | 440 800  | 500 720  | 500 630  | 160 630  | 300 630  |      |  |



# Categorie d'impiego

## Utilization categories



AC-5a

### COMANDO LAMPADE A FLUORESCENZA

Nelle lampade a fluorescenza non rifasate la corrente d'inserzione è circa due volte la corrente nominale del circuito con tempi di accensione fino a 10s. Il contattore va scelto con  $I_{nom}$  in AC 1 moltiplicata per un fattore pari a 1,3 o 1,4. Nelle lampade a fluorescenza rifasate la presenza del condensatore riduce il tempo di accensione a pochi secondi ma si ha una corrente d'inserzione pari a 20 volte la corrente nominale del circuito a causa della carica del condensatore: il contattore deve essere pertanto scelto con una  $I_{nom}$  in AC1  $\leq$  a  $20 \times I_{nom}$  del circuito. Se la lampada è dotata di alimentatore elettronico per l'accensione la corrente d'inserzione è pari a 10 volte la corrente nominale del circuito con tempi d'accensione intorno a qualche secondo. Il contattore va scelto con  $I_{nom}$  in AC 1 moltiplicata per un fattore pari a 1.2 o 1.3.

### FLUORESCENT LAMP CONTROL

With fluorescent lamps where the power factor has not been corrected, the making current is about twice the nominal current of the circuit with starting times up to 10s. The contactor must be chosen with  $I_{nom}$  in AC 1, multiplied by a factor of 1.3 or 1.4. With fluorescent lamps where the power factor has been corrected the presence of the capacitors reduces the starting time to a few seconds but has a making current which is 20 times the nominal current of the circuit due to the charge of the capacitors. The contactor must be  $\leq$  than  $20 \times I_{nom}$  circuit. If the lamp has an electronic feeder for starting up, the start current is 10 times the nominal current of the circuit with starting times of a few seconds. The contactor must be chosen with  $I_{nom}$  in AC 1, multiplied by a factor of 1.2 or 1.3.

Corrente nominale  
Nominal current

100V

200V

| Potenza / Power [W]         |    | 40        |         | 60   |      | 80   |     | 110 |           | 220        |      | 40   |      | 60  |      | 80  |   | 110 |   | 220 |   |
|-----------------------------|----|-----------|---------|------|------|------|-----|-----|-----------|------------|------|------|------|-----|------|-----|---|-----|---|-----|---|
| N. di lampade / No. of lamp |    | 1         | 2       | 1    | 1    | 1    | 2   | 1   | 1         | 1          | 2    | 1    | 1    | 2   | 1    | 1   | 2 | 1   | 2 | 1   | 1 |
| Start current (A)           |    | 0.95(1.2) | 0.96(1) | 0.92 | 1.17 | 1.55 | 2.5 | 2.7 | 0.29(0.6) | 0.48(0.55) | 0.46 | 0.58 | 0.78 | 1.3 | 1.38 | 2.5 |   |     |   |     |   |
| SEZIONI / SECTIONS          | 9  | 18(9)     | 11(10)  | 12   | 9    | 7    | 4   | 4   | 37(18)    | 22(20)     | 23   | 19   | 14   | 8   | 8    | 4   |   |     |   |     |   |
|                             | 12 | 22(10)    | 13(11)  | 14   | 11   | 8    | 5   | 4   | 44(21)    | 27(23)     | 28   | 22   | 16   | 10  | 9    | 5   |   |     |   |     |   |
|                             | 18 | 30(15)    | 18(16)  | 19   | 15   | 11   | 7   | 6   | 62(30)    | 37(32)     | 39   | 31   | 23   | 13  | 13   | 7   |   |     |   |     |   |
|                             | 22 | 32(15)    | 19(17)  | 20   | 16   | 12   | 7   | 7   | 65(31)    | 39(34)     | 41   | 32   | 24   | 14  | 14   | 7   |   |     |   |     |   |
|                             | 32 | 44(21)    | 27(23)  | 28   | 22   | 16   | 10  | 9   | 89(43)    | 54(47)     | 56   | 44   | 33   | 20  | 19   | 10  |   |     |   |     |   |
|                             | 40 | 59(29)    | 36(31)  | 38   | 29   | 22   | 14  | 13  | 120(58)   | 72(63)     | 76   | 60   | 44   | 26  | 25   | 14  |   |     |   |     |   |
| SEZIONI / SECTIONS          | 50 | 84(41)    | 52(45)  | 54   | 42   | 32   | 20  | 18  | 172(83)   | 104(90)    | 108  | 86   | 64   | 38  | 37   | 20  |   |     |   |     |   |
|                             | 65 | 110(54)   | 67(59)  | 70   | 55   | 41   | 26  | 24  | 224(108)  | 135(118)   | 141  | 112  | 83   | 50  | 48   | 26  |   |     |   |     |   |

### COMANDO LAMPADE A VAPORI DI MERCURIO

Nelle lampade non rifasate la corrente d'inserzione è circa due volte la corrente nominale del circuito con tempi di accensione fino a 5min. Il contattore va scelto con  $I_{nom}$  in AC 1 pari alla corrente d'inserzione. Nelle lampade rifasate si ha una corrente d'inserzione pari a 20 volte la corrente nominale del circuito e i tempi di accensione ridotti. Il contattore va scelto con  $I_{nom}$  in AC 1 tenendo conto che il potere di chiusura deve essere  $\geq$  a  $20 \times I_{nom}$  circuito.

### MERCURY VOPOUR LAMP CONTROL

With lamps where the power factor has not been corrected, the making current is about twice the nominal current of the circuit with starting times up to 5 minutes. The contactor must be chosen with  $I_{nom}$  in AC 1, equal to the making current. With lamps where the power factor has been corrected, the start current is 20 times the nominal current of the circuit with reduced starting times. The contactor must be chosen with  $I_{nom}$  in AC 1 considering that the closing power must be  $\geq$  than  $20 \times I_{nom}$  circuit.



AC-5a

# Categorie d'impiego

## Utilization categories

Corrente nominale  
Nominal current

**100V Lampada con basso/alto cos**  
**100V Lamp with low/high cos**

**200V Lampada con basso/alto cos**  
**200V Lamp with low/high cos**

| Potenza / Power [W] | 40     | 100     | 200    | 250    | 300    | 400    | 700   | 1000 | 40   | 100    | 200     | 250    | 300    | 400    | 700    | 1000   |
|---------------------|--------|---------|--------|--------|--------|--------|-------|------|------|--------|---------|--------|--------|--------|--------|--------|
| Start current (A)   | 1.25   | 2.6     | 4.6    | 5.1    | 6.0    | 8.0    | 14.5  | 21   | 0.53 | 1.0    | 1.9     | 2.1    | 2.5    | 3.3    | 5.9    | 8.5    |
|                     | (0.55) | (1.4)   | (2.6)  | (3.0)  | (3.7)  | (4.9)  | (8.5) | (12) | (-)  | (0.65) | (1.2)   | (1.5)  | (1.8)  | (2.3)  | (4.1)  | (5.8)  |
| SEZIONI / SECTIONS  | 9      | 8(20)   | 4(7)   | 2(4)   | 2(3)   | 1(2)   | 1(1)  | -(-) | -(-) | 20(-)  | 11(16)  | 5(9)   | 5(7)   | 4(6)   | 3(4)   | 1(2)   |
|                     | 12     | 10(23)  | 5(9)   | 2(5)   | 2(4)   | 2(3)   | 1(1)  | -(-) | -(-) | 24(-)  | 13(20)  | 6(10)  | 6(8)   | 5(7)   | 3(5)   | 2(3)   |
|                     | 18     | 14(32)  | 6(12)  | 3(6)   | 3(6)   | 3(4)   | 2(3)  | 1(2) | -(-) | 33(-)  | 18(27)  | 9(15)  | 8(12)  | 7(10)  | 5(7)   | 3(3)   |
|                     | 22     | 15(34)  | 7(13)  | 4(7)   | 3(6)   | 3(5)   | 2(3)  | 1(2) | -(-) | 35(-)  | 19(29)  | 10(15) | 9(12)  | 7(10)  | 5(8)   | 3(4)   |
|                     | 32     | 20(47)  | 10(18) | 5(10)  | 5(8)   | 4(7)   | 3(5)  | 1(3) | 1(2) | 49(-)  | 26(40)  | 13(21) | 12(17) | 10(14) | 7(11)  | 4(6)   |
|                     | 40     | 28(63)  | 13(25) | 7(13)  | 6(11)  | 5(9)   | 4(7)  | 2(4) | 1(2) | 66(-)  | 35(53)  | 18(29) | 16(23) | 14(19) | 10(15) | 5(8)   |
|                     | 50     | 40(90)  | 19(35) | 10(19) | 9(16)  | 8(13)  | 6(10) | 3(5) | 2(4) | 94(-)  | 50(76)  | 26(41) | 23(33) | 20(27) | 15(21) | 8(12)  |
|                     | 65     | 52(118) | 25(46) | 14(25) | 12(21) | 10(17) | 8(13) | 4(7) | 3(5) | 122(-) | 65(100) | 34(54) | 30(43) | 26(36) | 19(28) | 11(15) |

### COMANDO LAMPADE A VAPORI DI SODIO



AC-5a

Sono lampade con tempi di accensione fino a 5 min. con una corrente d'inserzione pari a 1.7-2.2 volte la corrente nominale del circuito. Il contattore va scelto in AC 1 pari alla corrente d'inserzione. Es.:

$I_m \text{ circ.} = 20A$

$I \text{ contattore} = 20A * 2.2 = 44A$

090C32 con 50A AC-1

### SODIUM VOPOUR LAMP CONTROL

These are lamps with starting times f up to 5 min. with a start current of 1.7 - 2.2 times the nominal current of the circuit. The contactor must be chosen with inom. in AC 1, equal to the start current. Es.:

$I_m \text{ circ.} = 20A$

$I \text{ contactor} = 20A * 2.2 = 44A$

090C32 with 50A AC-1

### COMANDO LAMPADE AD INCANDESCENZA



AC-5b

Queste lampade hanno una corrente d'inserzione di circa 15 volte la corrente nominale del circuito che si annulla dopo pochi millisecondi. Il picco è dovuto al brusco passaggio del filamento da freddo con altissima resistenza a caldo con bassissima resistenza. Il contattore va scelto con  $I_{nom}$  in AC 1 e tenendo conto che il potere d'interruzione deve essere  $\geq$  alla corrente d'inserzione.

### INCANDESCENT LAMP CONTROL

These lamps have a making current which is about 15 times the nominal current of the circuit and which is cancelled after a few milliseconds. The peak is due to the sharp passage of the filament from cold with very high resistance to hot with very low resistance. The contactor must be chosen with inom. in AC 1 and taking into account that the breaking capacity must be  $\geq$  than the making current.

Corrente d'impiego  
Rated operational  
current [A]

**100V (n. di lampade)**  
**100V (n. lamps)**

**200V (n. di lampade)**  
**200V (n. lamps)**

| Potenza / Power [W] | 100 | 150 | 200 | 250 | 300 | 500 | 1000 | 1500 | 100 | 150 | 200 | 250 | 300 | 500 | 1000 | 1500 |
|---------------------|-----|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|-----|-----|------|------|
| SEZIONI / SECTIONS  | 9   | 11  | 7   | 5   | 4   | 3   | 2    | 1    | -   | 22  | 14  | 11  | 8   | 7   | 4    | 2    |
|                     | 12  | 13  | 8   | 6   | 5   | 4   | 2    | 1    | -   | 26  | 17  | 13  | 10  | 8   | 5    | 2    |
|                     | 18  | 18  | 12  | 9   | 7   | 6   | 3    | 1    | 1   | 36  | 24  | 18  | 14  | 12  | 7    | 3    |
|                     | 22  | 19  | 12  | 9   | 7   | 6   | 3    | 1    | 1   | 38  | 25  | 19  | 15  | 12  | 7    | 3    |
|                     | 32  | 26  | 17  | 13  | 10  | 8   | 5    | 2    | 1   | 52  | 34  | 26  | 20  | 17  | 10   | 5    |
|                     | 40  | 35  | 23  | 17  | 14  | 11  | 7    | 3    | 2   | 70  | 46  | 35  | 28  | 23  | 14   | 7    |
|                     | 50  | 50  | 33  | 25  | 20  | 15  | 10   | 5    | 3   | 100 | 66  | 50  | 40  | 33  | 20   | 10   |
|                     | 65  | 65  | 42  | 32  | 26  | 19  | 13   | 6    | 4   | 130 | 85  | 65  | 52  | 42  | 26   | 13   |

# Categorie d'impiego

## Utilization categories



AC-6a

### COMANDO DI TRASFORMATORI

L'inserzione di trasformatori è contraddistinta da un picco d'inserzione che può arrivare fino a  $30 \times I_n$  dovuto ad un elevato assorbimento di correnti magnetizzanti. Ovviamente nel dimensionamento del contattore occorre che il potere d'interruzione sia  $\geq$  alla corrente d'inserzione. Questa tabella è applicabile quando la corrente d'inserzione è inferiore a  $20 I_n$  in circuito.

### TRASFORMER CONTROL

The connection of transformers is distinguished by a start peak which can reach  $30 \times I_n$  due to high absorption of magnetising current. Obviously when dimensioning the contactor it is necessary for the breaking capacity to be  $\geq$  than the making current.

### Monofase Mono phase

### Trifase Tri phase

SEZIONI / SECTIONS

|     | 220V  |     | 440V  |     | 220V  |     | 440V  |     |
|-----|-------|-----|-------|-----|-------|-----|-------|-----|
|     | [kVA] | [A] | [kVA] | [A] | [kVA] | [A] | [kVA] | [A] |
| 9   | 1     | 5   | 1.5   | 3   | 2     | 5   | 2.5   | 3   |
| 12  | 1.5   | 7.5 | 2     | 5   | 3     | 7.5 | 4     | 5   |
| 18  | 2     | 9   | 3     | 7   | 3.5   | 9   | 5     | 7   |
| 22  | 2.5   | 10  | 4     | 9.5 | 4     | 10  | 7.5   | 9.5 |
| 32  | 3     | 13  | 5     | 12  | 5     | 13  | 10    | 12  |
| 40  | 4     | 17  | 7.5   | 16  | 6.5   | 17  | 12    | 16  |
| 50  | 5     | 25  | 10    | 24  | 10    | 25  | 18    | 24  |
| 65  | 7     | 32  | 15    | 32  | 12    | 32  | 25    | 32  |
| 75  | 8     | 35  | 17    | 35  | 13    | 35  | 27    | 35  |
| 85  | 9     | 40  | 18    | 40  | 15    | 40  | 30    | 40  |
| 100 | 10    | 46  | 20    | 45  | 18    | 46  | 35    | 45  |
| 125 | 15    | 62  | 25    | 55  | 25    | 62  | 42    | 55  |
| 150 | 17    | 75  | 33    | 75  | 30    | 75  | 60    | 75  |
| 180 | 20    | 90  | 40    | 90  | 35    | 90  | 70    | 90  |
| 220 | 25    | 110 | 50    | 110 | 42    | 110 | 85    | 110 |
| 300 | 33    | 150 | 57    | 130 | 57    | 150 | 100   | 130 |
| 400 | 44    | 200 | 90    | 200 | 75    | 200 | 150   | 200 |
| 600 | 65    | 300 | 130   | 300 | 110   | 300 | 250   | 300 |
| 800 | 90    | 400 | 175   | 400 | 150   | 400 | 300   | 400 |

# Categorie d'impiego

## Utilization categories



AC-6b

### COMANDO DI CONDENSATORI

L'utilizzo dei condensatori negli impianti di rifasamento è caratterizzato da picchi di corrente che il carico capacitivo impone alla rete all'atto dell'inserzione. Si possono comandare condensatori singoli o batterie. Nel caso di più di una batteria di condensatori i singoli gradini vengono inseriti in parallelo uno con l'altro, si ha così una sorgente addizionale di energia dovuta al trasferimento di energia della batteria sotto tensione a quella messa in servizio. Questo rappresenta un carico supplementare per il contattore. Occorre prevedere quindi l'utilizzo di induttanze e resistenze per aumentare il carico ammissibile al contattore. Le induttanze smorzano le sollecitazioni che nascono quando si inseriscono dei condensatori in parallelo ad altri già collegati in rete e carichi (inserimento a gradini). Le resistenze proteggono i contatti di potenza del contattore durante l'inserzione del condensatore garantendo la vita elettrica dei circuiti. I contattori per comando di condensatori hanno una vita elettrica inferiore a quelli per il comando dei motori a causa del maggior consumo dei contatti di potenza dovuto all'interruzione di corrente altamente sfasata con  $\cos\phi$  tendenti a zero. Occorre quindi fare attenzione al picco di corrente durante l'inserzione.

### CAPACITORS CONTROL

The use of capacitors in power factor correction systems is characterised by peaks of current which the capacitive charge imposes on the network when power is started. It is possible to control single capacitors or batteries of capacitors. In the case of more than one battery of capacitors to be connected separately, an additional source of power is created due to the transfer of power from the empowered battery to the one placed into service.

This represents a supplementary charge for the contactor, and it is therefore necessary to provide for the use of impedances and resistances to increase the contactor's admissible charge.

The impedances reduce the stress generated when condensers are connected parallel to others already connected to the network and charges (connected in steps). The resistances protect the contactor's power contacts during connection of the condenser, guaranteeing the electrical life of the circuits.

Comando condensatori  
Capacitors control

### Monofase Mono phase

### Trifase Tri phase

SEZIONI / SECTIONS

|     | 200-220V |     | 400-440V |     | 200-220V |     | 400-440V |     | 500-550V |     |
|-----|----------|-----|----------|-----|----------|-----|----------|-----|----------|-----|
|     | [Kvar]   | [A] | [Kvar]   | [A] | [Kvar]   | [A] | [Kvar]   | [A] | [Kvar]   | [A] |
| 9   | 1,2      | 6   | 1,7      | 4,3 | 2        | 6   | 3        | 4,3 | 3        | 3,5 |
| 12  | 1,8      | 9   | 2,4      | 6   | 3        | 9   | 4        | 6   | 5        | 6   |
| 18  | 2,4      | 12  | 3,6      | 9   | 4        | 12  | 6        | 9   | 7        | 10  |
| 22  | 3        | 15  | 6        | 15  | 5        | 15  | 10       | 15  | 10       | 16  |
| 32  | 5        | 25  | 9,6      | 24  | 9        | 25  | 16       | 24  | 15       | 22  |
| 40  | 6,4      | 32  | 12       | 30  | 11       | 32  | 20       | 30  | 20       | 25  |
| 50  | 9        | 45  | 16       | 40  | 15       | 45  | 27       | 40  | 25       | 37  |
| 65  | 10       | 50  | 20       | 50  | 17       | 50  | 34       | 50  | 30       | 46  |
| 75  | 13       | 58  | 24       | 58  | 20       | 58  | 40       | 58  | 40       | 52  |
| 85  | 15       | 60  | 30       | 60  | 22       | 60  | 45       | 60  | 45       | 56  |
| 100 |          |     |          |     | 24       | 64  | 48       | 64  |          |     |
| 125 |          |     |          |     | 29       | 76  | 58       | 76  |          |     |
| 150 |          |     |          |     | 35       | 91  | 70       | 92  |          |     |
| 180 |          |     |          |     | 42       | 109 | 84       | 110 |          |     |
| 220 |          |     |          |     | 58       | 152 | 115      | 152 |          |     |
| 300 |          |     |          |     | 69       | 182 | 139      | 182 |          |     |
| 400 |          |     |          |     | 92       | 242 | 185      | 242 |          |     |
| 600 |          |     |          |     | 145      | 382 | 291      | 382 |          |     |
| 800 |          |     |          |     | 185      | 485 | 369      | 485 |          |     |



# Categorie d'impiego

## Utilization categories

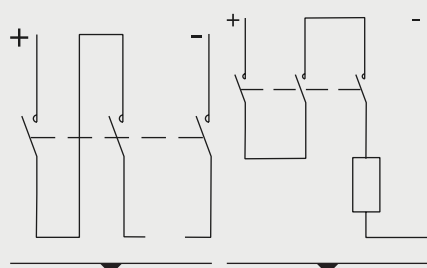


DC-1

DC-3  
DC-5

SEZIONI / SECTIONS

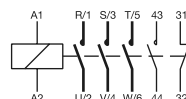
|     |   | Corrente impiego<br>Rated operational current<br>Ie [A] DC-1 |     |      |      | Corrente impiego<br>Rated operational current<br>Ie [A] DC-3 / DC-5 |     |      |      |
|-----|---|--------------------------------------------------------------|-----|------|------|---------------------------------------------------------------------|-----|------|------|
|     |   | 24V                                                          | 48V | 110V | 220V | 24V                                                                 | 48V | 110V | 220V |
| 9   | 2 | 10                                                           | 10  | 6    | 3    | 8                                                                   | 4   | 2,5  | 0,8  |
| 9   | 3 | 10                                                           | 10  | 8    | 8    | 8                                                                   | 6   | 4    | 2    |
| 12  | 2 | 12                                                           | 12  | 10   | 7    | 12                                                                  | 6   | 4    | 1,2  |
| 12  | 3 | 12                                                           | 12  | 12   | 12   | 12                                                                  | 10  | 8    | 4    |
| 18  | 2 | 18                                                           | 18  | 13   | 8    | 12                                                                  | 6   | 4    | 1,2  |
| 18  | 3 | 18                                                           | 18  | 18   | 18   | 12                                                                  | 10  | 8    | 4    |
| 22  | 2 | 20                                                           | 20  | 15   | 10   | 20                                                                  | 15  | 8    | 2    |
| 22  | 3 | 20                                                           | 20  | 20   | 20   | 20                                                                  | 20  | 15   | 8    |
| 32  | 2 | 25                                                           | 25  | 25   | 12   | 25                                                                  | 20  | 10   | 3    |
| 32  | 3 | 25                                                           | 25  | 25   | 22   | 25                                                                  | 25  | 20   | 10   |
| 40  | 2 | 35                                                           | 35  | 25   | 12   | 35                                                                  | 20  | 10   | 3    |
| 40  | 3 | 35                                                           | 35  | 35   | 30   | 35                                                                  | 30  | 20   | 10   |
| 50  | 2 | 50                                                           | 40  | 35   | 15   | 45                                                                  | 25  | 15   | 3,5  |
| 50  | 3 | 50                                                           | 50  | 50   | 40   | 50                                                                  | 35  | 30   | 12   |
| 65  | 2 | 50                                                           | 40  | 35   | 15   | 45                                                                  | 25  | 15   | 3,5  |
| 65  | 3 | 65                                                           | 65  | 65   | 50   | 50                                                                  | 35  | 30   | 12   |
| 75  | 2 | 75                                                           | 65  | 50   | 20   | 65                                                                  | 40  | 20   | 5    |
| 75  | 3 | 75                                                           | 75  | 75   | 55   | 80                                                                  | 60  | 50   | 20   |
| 85  | 2 | 80                                                           | 65  | 50   | 20   | 65                                                                  | 40  | 20   | 5    |
| 85  | 3 | 80                                                           | 80  | 80   | 60   | 80                                                                  | 60  | 50   | 20   |
| 100 | 2 | 100                                                          | 100 | 80   | 50   | 100                                                                 | 60  | 40   | 30   |
| 100 | 3 | 100                                                          | 100 | 100  | 80   | 100                                                                 | 90  | 80   | 50   |
| 125 | 2 | 120                                                          | 100 | 80   | 50   | 120                                                                 | 60  | 40   | 30   |
| 125 | 3 | 120                                                          | 120 | 100  | 80   | 120                                                                 | 90  | 80   | 50   |
| 150 | 2 | 150                                                          | 150 | 150  | 150  | 150                                                                 | 130 | 120  | 80   |
| 150 | 3 | 80                                                           | 80  | 80   | 60   | 80                                                                  | 60  | 50   | 20   |
| 180 | 2 | 180                                                          | 180 | 150  | 150  | 180                                                                 | 150 | 120  | 80   |
| 180 | 3 | 180                                                          | 180 | 180  | 180  | 180                                                                 | 180 | 150  | 100  |
| 220 | 2 | 220                                                          | 180 | 150  | 150  | 220                                                                 | 150 | 120  | 80   |
| 220 | 3 | 220                                                          | 220 | 220  | 220  | 220                                                                 | 220 | 150  | 100  |
| 300 | 2 | 300                                                          | 240 | 200  | 200  | 300                                                                 | 200 | 150  | 90   |
| 300 | 3 | 300                                                          | 300 | 300  | 300  | 300                                                                 | 280 | 200  | 150  |
| 400 | 2 | 400                                                          | 240 | 200  | 200  | 400                                                                 | 200 | 150  | 90   |
| 400 | 3 | 400                                                          | 400 | 400  | 300  | 400                                                                 | 280 | 200  | 150  |
| 600 | 2 | 630                                                          | 630 | 630  | 630  | 630                                                                 | 630 | 630  | 630  |
| 600 | 3 | 630                                                          | 630 | 630  | 630  | 630                                                                 | 630 | 630  | 630  |
| 800 | 2 | 800                                                          | 800 | 630  | 630  | 800                                                                 | 630 | 630  | 630  |
| 800 | 3 | 800                                                          | 800 | 800  | 800  | 800                                                                 | 630 | 630  | 630  |

2 poli in serie  
2 poles in series3 poli in serie  
3 poles in series



# Sezioni 9-12-18-22

## 9-12-18-22 sections



### Contattore / Contactor

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Contatto ausiliario 1NO + 1NC integrato nel contattore / Auxiliary contact 1NO - 1NC integrated in the contactor

#### Sezione 9A / 9A Section

|                                                    |      |                    |
|----------------------------------------------------|------|--------------------|
| 24V - 50/60 Hz Tensioni di comando / Coil voltage  | 0,34 | <b>090MC9B-24</b>  |
| 230V - 50/60 Hz Tensioni di comando / Coil voltage | 0,34 | <b>090MC9B-230</b> |
| 400V - 50/60 Hz Tensioni di comando / Coil voltage | 0,34 | <b>090MC9B-400</b> |

Prestazioni secondo IEC-60947  
Performance in accordance with IEC-60947

|     |                 |             |           |
|-----|-----------------|-------------|-----------|
| AC1 |                 |             | 25A       |
| AC3 | 200-240V        | 2,5 kW      | 11A       |
|     | <b>380-440V</b> | <b>4 kW</b> | <b>9A</b> |
|     | 500-550V        | 4 kW        | 7A        |
|     | 690V            | 4 kW        | 6A        |

Prestazioni secondo UL/CSA  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                       |      |        |
|-----------------------|------|--------|
| Ith                   |      | 25A    |
| Monofase / Mono-phase | 115V | 0,5 HP |
|                       | 230V | 1 HP   |
| Trifase / Tri-phase   | 200V | 2 HP   |
|                       | 230V | 3 HP   |
|                       | 460V | 5 HP   |
|                       | 575V | 7,5 HP |

#### Sezione 12A / 12A Section

|                                                    |      |                     |
|----------------------------------------------------|------|---------------------|
| 24V - 50/60 Hz Tensioni di comando / Coil voltage  | 0,34 | <b>090MC12B-24</b>  |
| 230V - 50/60 Hz Tensioni di comando / Coil voltage | 0,34 | <b>090MC12B-230</b> |
| 400V - 50/60 Hz Tensioni di comando / Coil voltage | 0,34 | <b>090MC12B-400</b> |

Prestazioni secondo IEC-60947  
Performance in accordance with IEC-60947

|     |                 |               |            |
|-----|-----------------|---------------|------------|
| AC1 |                 |               | 25A        |
| AC3 | 200-240V        | 3 kW          | 13A        |
|     | <b>380-440V</b> | <b>5,5 kW</b> | <b>12A</b> |
|     | 500-550V        | 7,5 kW        | 12A        |
|     | 690V            | 7,5 kW        | 9A         |

Prestazioni secondo UL/CSA  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                       |      |         |
|-----------------------|------|---------|
| Ith                   |      | 25A     |
| Monofase / Mono-phase | 115V | 0,75 HP |
|                       | 230V | 2 HP    |
| Trifase / Tri-phase   | 200V | 3 HP    |
|                       | 230V | 5 HP    |
|                       | 460V | 7,5 HP  |
|                       | 575V | 10 HP   |

#### Sezione 18A / 18A Section

|                                                    |      |                     |
|----------------------------------------------------|------|---------------------|
| 24V - 50/60 Hz Tensioni di comando / Coil voltage  | 0,34 | <b>090MC18B-24</b>  |
| 230V - 50/60 Hz Tensioni di comando / Coil voltage | 0,34 | <b>090MC18B-230</b> |
| 400V - 50/60 Hz Tensioni di comando / Coil voltage | 0,34 | <b>090MC18B-400</b> |

Prestazioni secondo IEC-60947  
Performance in accordance with IEC-60947

|     |                 |               |            |
|-----|-----------------|---------------|------------|
| AC1 |                 |               | 32A        |
| AC3 | 200-240V        | 4,5 kW        | 18A        |
|     | <b>380-440V</b> | <b>7,5 kW</b> | <b>18A</b> |
|     | 500-550V        | 7,5 kW        | 13A        |
|     | 690V            | 7,5 kW        | 9A         |

Prestazioni secondo UL/CSA  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                       |      |       |
|-----------------------|------|-------|
| Ith                   |      | 40A   |
| Monofase / Mono-phase | 115V | 1 HP  |
|                       | 230V | 3 HP  |
| Trifase / Tri-phase   | 200V | 5 HP  |
|                       | 230V | 5 HP  |
|                       | 460V | 10 HP |
|                       | 575V | 15 HP |

#### Sezione 22A / 22A Section

|                                                    |      |                     |
|----------------------------------------------------|------|---------------------|
| 24V - 50/60 Hz Tensioni di comando / Coil voltage  | 0,34 | <b>090MC22B-24</b>  |
| 230V - 50/60 Hz Tensioni di comando / Coil voltage | 0,34 | <b>090MC22B-230</b> |
| 400V - 50/60 Hz Tensioni di comando / Coil voltage | 0,34 | <b>090MC22B-400</b> |

Prestazioni secondo IEC-60947  
Performance in accordance with IEC-60947

|     |                 |              |            |
|-----|-----------------|--------------|------------|
| AC1 |                 |              | 40A        |
| AC3 | 200-240V        | 5,5 kW       | 22A        |
|     | <b>380-440V</b> | <b>11 kW</b> | <b>22A</b> |
|     | 500-550V        | 15 kW        | 20A        |
|     | 690V            | 15 kW        | 18A        |

Prestazioni secondo UL/CSA  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                       |      |        |
|-----------------------|------|--------|
| Ith                   |      | 40A    |
| Monofase / Mono-phase | 115V | 2 HP   |
|                       | 230V | 3 HP   |
| Trifase / Tri-phase   | 200V | 7,5 HP |
|                       | 230V | 10 HP  |
|                       | 460V | 15 HP  |
|                       | 575V | 20 HP  |



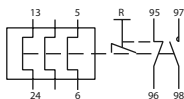
# Sezioni 9-12-18-22

## 9-12-18-22 sections

### Relè termico differenziale / Thermal O/L relay

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Classe d'intervento 10A / Trip class 10A

### Sezioni 9A-12A-18A-22A / 9A-12A-18A-22A Sections

|                                             |      |                    |
|---------------------------------------------|------|--------------------|
| 0.25 ÷ 0.4 Taratura (A) / Setting range (A) | 0,17 | <b>090MT32-04</b>  |
| 0.4 ÷ 0.63 Taratura (A) / Setting range (A) | 0,17 | <b>090MT32-063</b> |
| 0.63 ÷ 1 Taratura (A) / Setting range (A)   | 0,17 | <b>090MT32-1</b>   |
| 1 ÷ 1.6 Taratura (A) / Setting range (A)    | 0,17 | <b>090MT32-1V6</b> |
| 1.6 ÷ 2.5 Taratura (A) / Setting range (A)  | 0,17 | <b>090MT32-2V5</b> |
| 2.5 ÷ 4 Taratura (A) / Setting range (A)    | 0,17 | <b>090MT32-4</b>   |
| 4 ÷ 6 Taratura (A) / Setting range (A)      | 0,17 | <b>090MT32-6</b>   |
| 6 ÷ 9 Taratura (A) / Setting range (A)      | 0,17 | <b>090MT32-9</b>   |
| 9 ÷ 13 Taratura (A) / Setting range (A)     | 0,17 | <b>090MT32-13</b>  |
| 12 ÷ 18 Taratura (A) / Setting range (A)    | 0,17 | <b>090MT32-18</b>  |

### Sistema di montaggio separato Separate mounting system

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Adattatore montaggio barra DIN 35  
Bar mounting adapter DIN 35

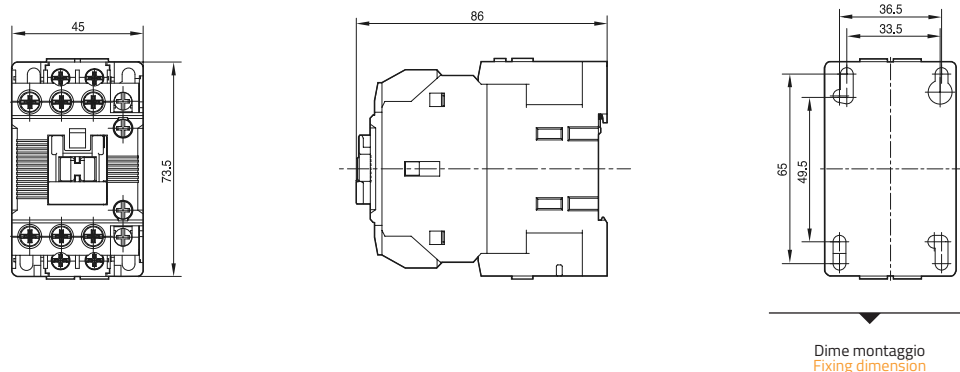
38

**090UZ-32**

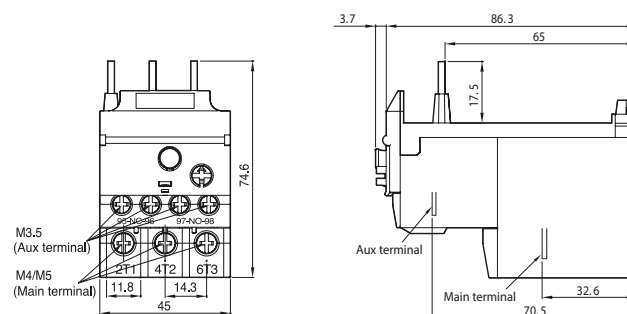
# Sezioni 9-12-18-22

## 9-12-18-22 sections

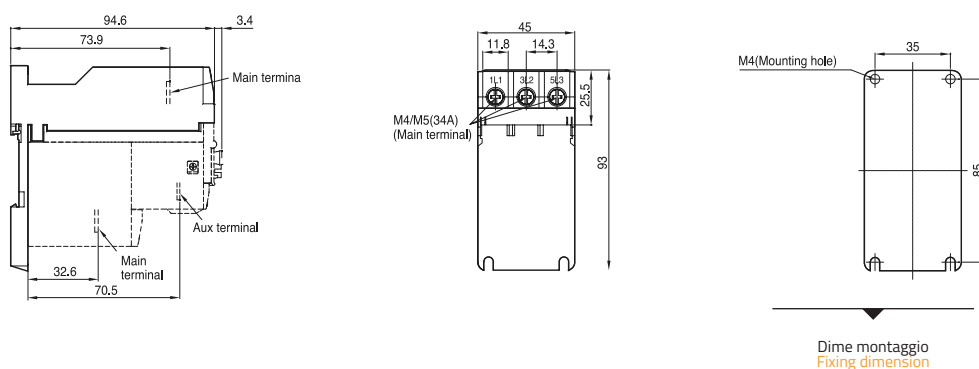
### Contattore / Contactor



### Relè termico differenziale / Thermal O/L relay



### Sistema di montaggio separato / Separate mounting system



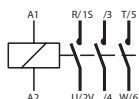
### Interblocco meccanico (vedi accessori) / Mechanical interlock (see accessories)



# Sezioni 32 - 40

## 32 - 40 sections

### Contattore / Contactor



Classe d'intervento 10A / Trip class 10A

#### Sezione 32A / 32A Section

|                                                    |      |                     |
|----------------------------------------------------|------|---------------------|
| 24V - 50/60 Hz Tensioni di comando / Coil voltage  | 0,55 | <b>090MC32A-24</b>  |
| 230V - 50/60 Hz Tensioni di comando / Coil voltage | 0,55 | <b>090MC32A-230</b> |
| 400V - 50/60 Hz Tensioni di comando / Coil voltage | 0,55 | <b>090MC32A-400</b> |

Prestazioni secondo IEC-60947  
Performance in accordance with IEC-60947

|     |                                                 |                                              |                                 |
|-----|-------------------------------------------------|----------------------------------------------|---------------------------------|
| AC1 |                                                 |                                              | 50A                             |
| AC3 | 200-240V<br><b>380-440V</b><br>500-550V<br>690V | 7,5 kW<br><b>15 kW</b><br>18,5 kW<br>18,5 kW | 32A<br><b>32A</b><br>28A<br>20A |

Prestazioni secondo UL/CSA  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                       |                              |                                   |
|-----------------------|------------------------------|-----------------------------------|
| Ith                   |                              | 50A                               |
| Monofase / Mono-phase | 115V<br>230V                 | 2 HP<br>3 HP                      |
| Trifase / Tri-phase   | 200V<br>230V<br>460V<br>575V | 7,5 HP<br>10 HP<br>20 HP<br>25 HP |

#### Sezione 40A / 40A Section

|                                                    |      |                     |
|----------------------------------------------------|------|---------------------|
| 24V - 50/60 Hz Tensioni di comando / Coil voltage  | 0,55 | <b>090MC40A-24</b>  |
| 230V - 50/60 Hz Tensioni di comando / Coil voltage | 0,55 | <b>090MC40A-230</b> |
| 400V - 50/60 Hz Tensioni di comando / Coil voltage | 0,55 | <b>090MC40A-400</b> |

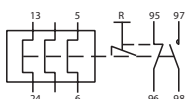
Prestazioni secondo IEC-60947  
Performance in accordance with IEC-60947

|     |                                                 |                                         |                                 |
|-----|-------------------------------------------------|-----------------------------------------|---------------------------------|
| AC1 |                                                 |                                         | 60A                             |
| AC3 | 200-240V<br><b>380-440V</b><br>500-550V<br>690V | 11 kW<br><b>18 kW</b><br>22 kW<br>22 kW | 40A<br><b>40A</b><br>32A<br>32A |

Prestazioni secondo UL/CSA  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                       |                              |                                  |
|-----------------------|------------------------------|----------------------------------|
| Ith                   |                              | 60A                              |
| Monofase / Mono-phase | 115V<br>230V                 | 3 HP<br>27,5 HP                  |
| Trifase / Tri-phase   | 200V<br>230V<br>460V<br>575V | 15 HP<br>15 HP<br>30 HP<br>30 HP |

### Relè termico differenziale / Thermal O/L relay



Classe d'intervento 10A / Trip class 10A

#### Sezioni 32A-40A / 32A-40A Sections

|                                          |      |                   |
|------------------------------------------|------|-------------------|
| 18 ÷ 25 Taratura (A) / Setting range (A) | 0,17 | <b>090MT32-25</b> |
| 24 ÷ 32 Taratura (A) / Setting range (A) | 0,17 | <b>090MT32-32</b> |
| 28 ÷ 40 Taratura (A) / Setting range (A) | 0,17 | <b>090MT32-40</b> |

### Sistema di montaggio separato Separate mounting system



Adattatore montaggio barra DIN 35  
Bar mounting adapter DIN 35

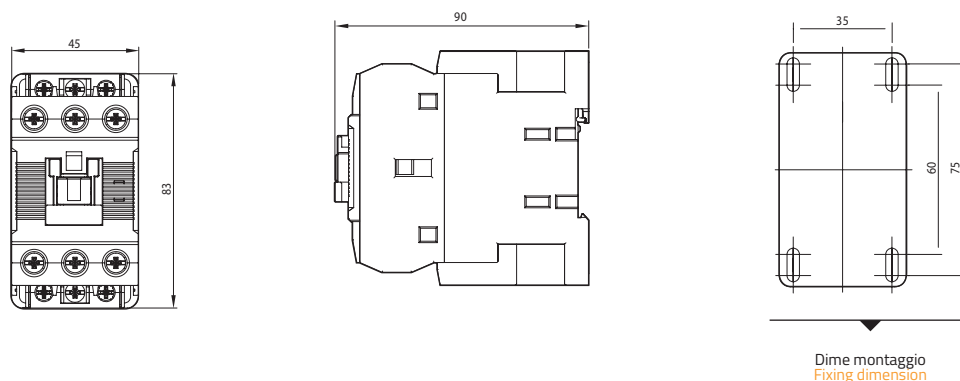
38

**090UZ-32**

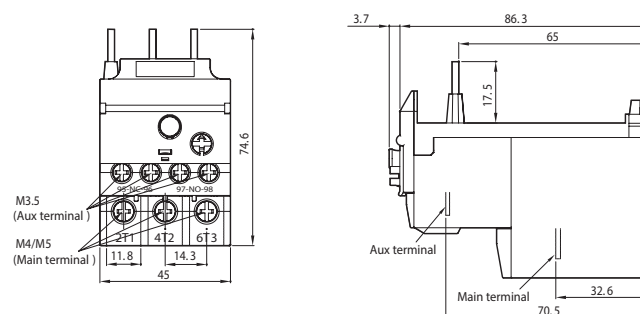
# Sezioni 32 - 40

## 32 - 40 sections

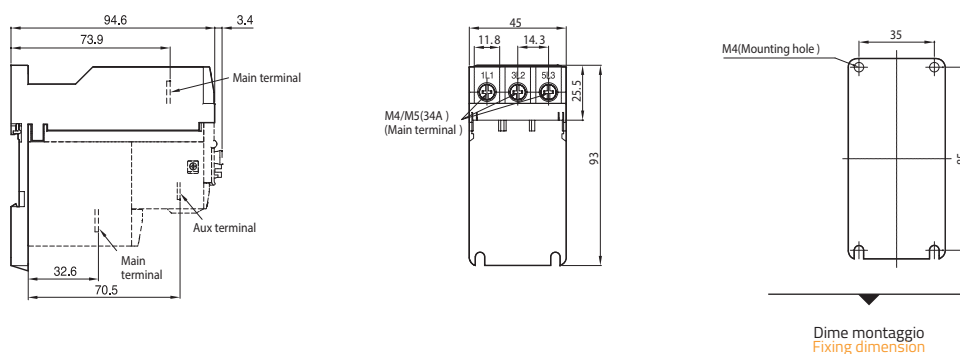
### Contattore / Contactor



### Relè termico differenziale / Thermal O/L relay



### Sistema di montaggio separato / Separate mounting system



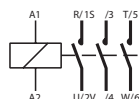
### Interblocco meccanico (vedi accessori) / Mechanical interlock (see accessories)



# Sezione 65

## 65 section

### Contattore / Contactor



|                                                           |      |                     |
|-----------------------------------------------------------|------|---------------------|
| 24V - 50/60 Hz Tensioni di comando / <b>Coil voltage</b>  | 1,05 | <b>090MC65A-24</b>  |
| 230V - 50/60 Hz Tensioni di comando / <b>Coil voltage</b> | 1,05 | <b>090MC65A-230</b> |
| 400V - 50/60 Hz Tensioni di comando / <b>Coil voltage</b> | 1,05 | <b>090MC65A-400</b> |

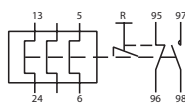
**Prestazioni secondo IEC-60947**  
Performance in accordance with IEC-60947

|            |                 |              |            |
|------------|-----------------|--------------|------------|
| <b>AC1</b> |                 |              | 100A       |
| <b>AC3</b> | 200-240V        | 18,5 kW      | 65A        |
|            | <b>380-440V</b> | <b>30 kW</b> | <b>65A</b> |
|            | 500-550V        | 33 kW        | 60A        |
|            | 690V            | 33 kW        | 35A        |

**Prestazioni secondo UL/CSA**  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                              |      |       |
|------------------------------|------|-------|
| <b>Ith</b>                   |      | 100A  |
| <b>Monofase / Mono-phase</b> | 115V | 5 HP  |
|                              | 230V | 15 HP |
| <b>Trifase / Tri-phase</b>   | 200V | 25 HP |
|                              | 230V | 30 HP |
|                              | 460V | 50 HP |
|                              | 575V | 60 HP |

### Relè termico differenziale / Thermal O/L relay



Classe d'intervento 20 / Trip class 20

|                                                 |      |                   |
|-------------------------------------------------|------|-------------------|
| 34 ÷ 50 Taratura (A) / <b>Setting range (A)</b> | 0,32 | <b>090MT63-50</b> |
| 45 ÷ 65 Taratura (A) / <b>Setting range (A)</b> | 0,32 | <b>090MT63-65</b> |

### Sistema di montaggio separato Separate mounting system

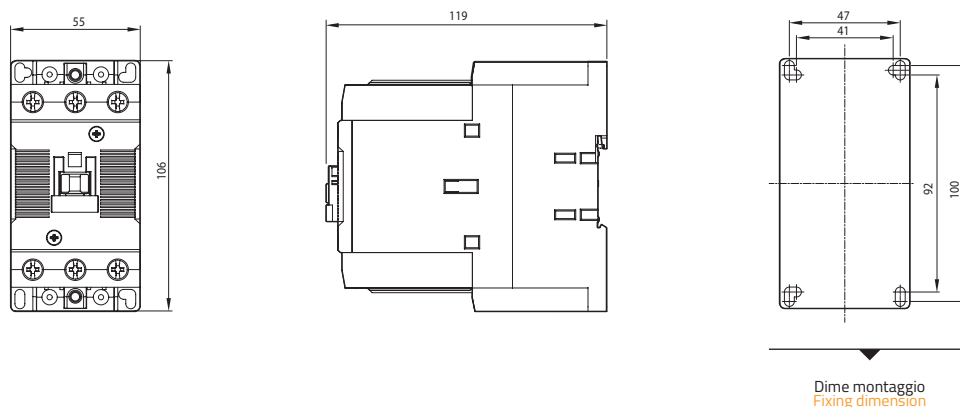


Adattatore montaggio barra DIN 35  
Bar mounting adapter DIN 35

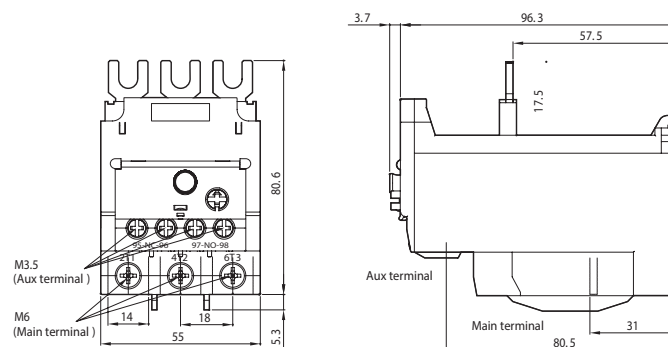
|    |                 |
|----|-----------------|
| 38 | <b>090UZ-65</b> |
|----|-----------------|

## Sezione 65 65 section

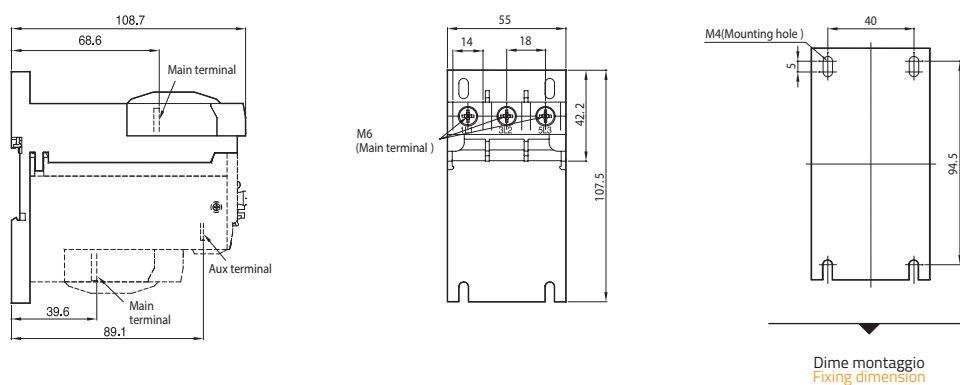
### Contattore / Contactor



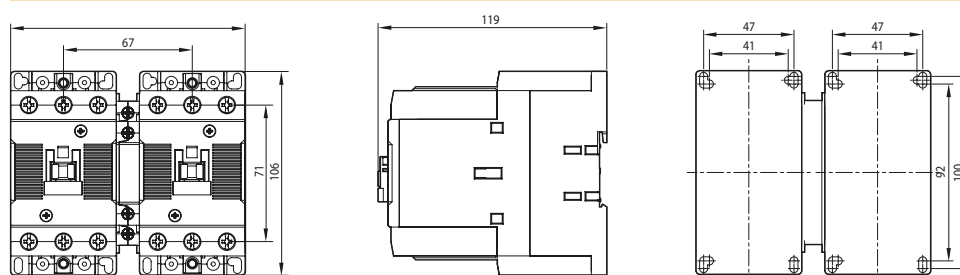
### Relè termico differenziale / Thermal O/L relay



### Sistema di montaggio separato / Separate mounting system

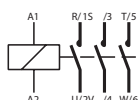


### Interblocco meccanico (vedi accessori) / Mechanical interlock (see accessories)



# Sezioni 85 - 100

## 85 - 100 sections



### Contattore / Contactor

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#### Sezione 85A / 85A Section

|                                                    |      |                     |
|----------------------------------------------------|------|---------------------|
| 24V - 50/60 Hz Tensioni di comando / Coil voltage  | 1,05 | <b>090MC85A-24</b>  |
| 230V - 50/60 Hz Tensioni di comando / Coil voltage | 1,05 | <b>090MC85A-230</b> |
| 400V - 50/60 Hz Tensioni di comando / Coil voltage | 1,05 | <b>090MC85A-400</b> |

Prestazioni secondo IEC-60947  
Performance in accordance with IEC-60947

|     |                                          |                                  |                          |
|-----|------------------------------------------|----------------------------------|--------------------------|
| AC1 |                                          |                                  | 135A                     |
| AC3 | 200-240V<br>380-440V<br>500-550V<br>690V | 11 kW<br>18 kW<br>22 kW<br>22 kW | 85A<br>85A<br>75A<br>45A |

Prestazioni secondo UL/CSA  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                       |                              |                                  |
|-----------------------|------------------------------|----------------------------------|
| Ith                   |                              | 135A                             |
| Monofase / Mono-phase | 115V<br>230V                 | 7,5 HP<br>15 HP                  |
| Trifase / Tri-phase   | 200V<br>230V<br>460V<br>575V | 40 HP<br>40 HP<br>60 HP<br>75 HP |

#### Sezione 100A / 100A Section

|                                                    |     |                      |
|----------------------------------------------------|-----|----------------------|
| 24V - 50/60 Hz Tensioni di comando / Coil voltage  | 2,0 | <b>090MC100A-24</b>  |
| 230V - 50/60 Hz Tensioni di comando / Coil voltage | 2,0 | <b>090MC100A-230</b> |
| 400V - 50/60 Hz Tensioni di comando / Coil voltage | 2,0 | <b>090MC100A-400</b> |

Prestazioni secondo IEC-60947  
Performance in accordance with IEC-60947

|     |                                          |                                  |                            |
|-----|------------------------------------------|----------------------------------|----------------------------|
| AC1 |                                          |                                  | 160A                       |
| AC3 | 200-240V<br>380-440V<br>500-550V<br>690V | 30 kW<br>55 kW<br>55 kW<br>45 kW | 105A<br>105A<br>85A<br>65A |

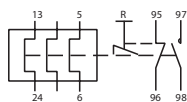
Prestazioni secondo UL/CSA  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                       |                              |                                  |
|-----------------------|------------------------------|----------------------------------|
| Ith                   |                              | 160A                             |
| Monofase / Mono-phase | 115V<br>230V                 | 10 HP<br>20 HP                   |
| Trifase / Tri-phase   | 200V<br>230V<br>460V<br>575V | 30 HP<br>40 HP<br>75 HP<br>75 HP |

### Relè termico differenziale / Thermal O/L relay

g

cod



Classe d'intervento 20 / Trip class 20

#### Sezioni 85A-100A / 85A-100A Sections

|                                           |      |                    |
|-------------------------------------------|------|--------------------|
| 54 ÷ 75 Taratura (A) / Setting range (A)  | 0,50 | <b>090MT95-75</b>  |
| 63 ÷ 85 Taratura (A) / Setting range (A)  | 0,50 | <b>090MT95-85</b>  |
| 80 ÷ 100 Taratura (A) / Setting range (A) | 0,50 | <b>090MT95-100</b> |

### Sistema di montaggio separato Separate mounting system

g

cod



Adattatore montaggio barra DIN 35  
Bar mounting adapter DIN 35

38

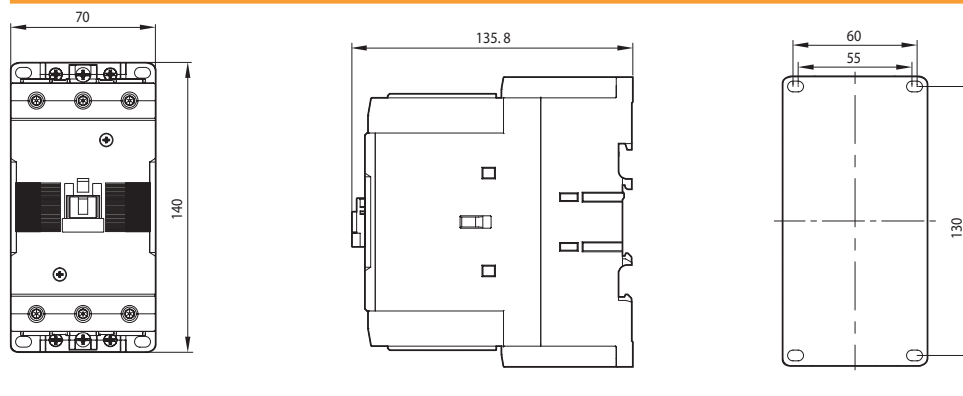
**090UZ-95**



# Sezioni 85 - 100

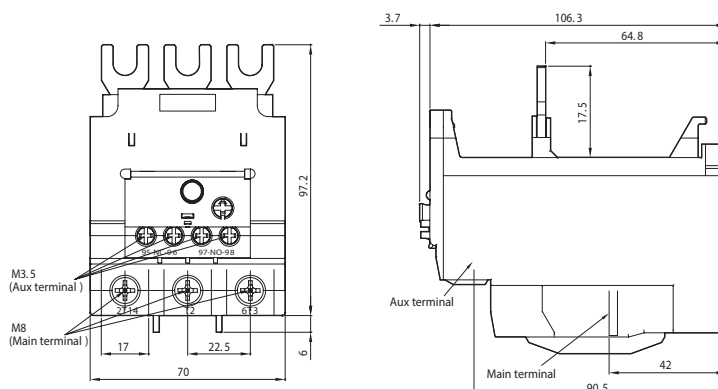
## 85 - 100 sections

### Contattore / Contactor

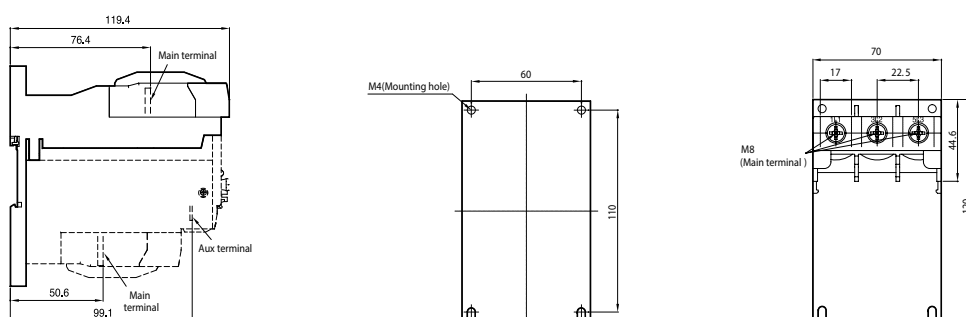


Dime montaggio  
Fixing dimension

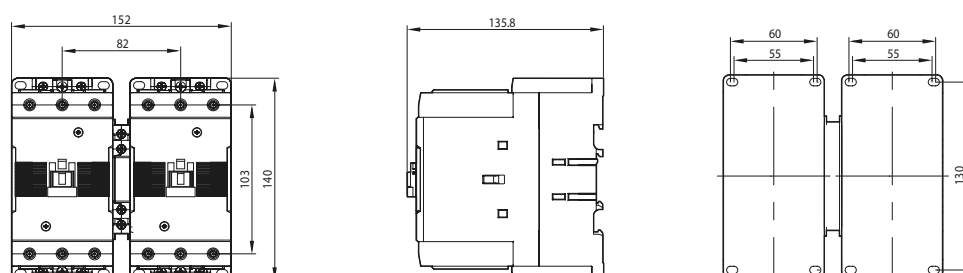
### Relè termico differenziale / Thermal O/L relay



### Sistema di montaggio separato / Separate mounting system



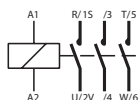
### Interblocco meccanico (vedi accessori) / Mechanical interlock (see accessories)



# Sezione 150

## 150 section

### Contattore / Contactor



|                                                           |     |                      |
|-----------------------------------------------------------|-----|----------------------|
| 24V - 50/60 Hz Tensioni di comando / <b>Coil voltage</b>  | 2,4 | <b>090MC150A-24</b>  |
| 230V - 50/60 Hz Tensioni di comando / <b>Coil voltage</b> | 2,4 | <b>090MC150A-100</b> |
| 400V - 50/60 Hz Tensioni di comando / <b>Coil voltage</b> | 2,4 | <b>090MC150A-400</b> |

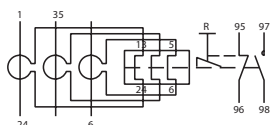
Prestazioni secondo IEC-60947  
Performance in accordance with IEC-60947

|     |                                          |                                  |
|-----|------------------------------------------|----------------------------------|
| AC1 |                                          | 210A                             |
| AC3 | 200-240V<br>380-440V<br>500-550V<br>690V | 45 kW<br>75 kW<br>70 kW<br>55 kW |
|     |                                          | 150A<br>150A<br>100A<br>60A      |

Prestazioni secondo UL/CSA  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                              |                              |                                   |
|------------------------------|------------------------------|-----------------------------------|
| Ith                          |                              | 160A                              |
| Monofase / <b>Mono-phase</b> | 115V<br>230V                 | 15 HP<br>25 HP                    |
| Trifase / <b>Tri-phase</b>   | 200V<br>230V<br>460V<br>575V | 40 HP<br>50 HP<br>100 HP<br>75 HP |

### Relè termico differenziale / Thermal O/L relay



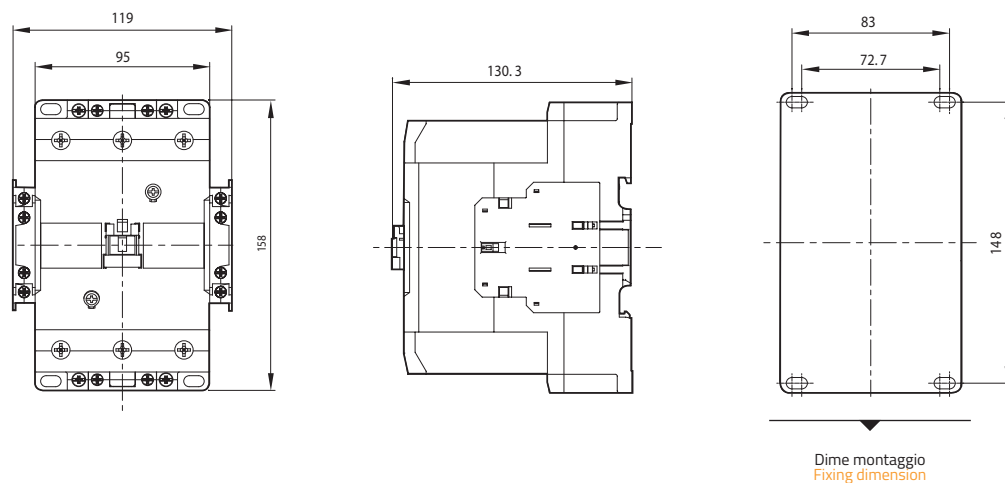
Classe d'intervento 20 / **Trip class 20**

|                                                   |     |                     |
|---------------------------------------------------|-----|---------------------|
| 65 ÷ 130 Taratura (A) / <b>Setting range (A)</b>  | 2,5 | <b>090MT150-130</b> |
| 110 ÷ 150 Taratura (A) / <b>Setting range (A)</b> | 2,5 | <b>090MT150-150</b> |

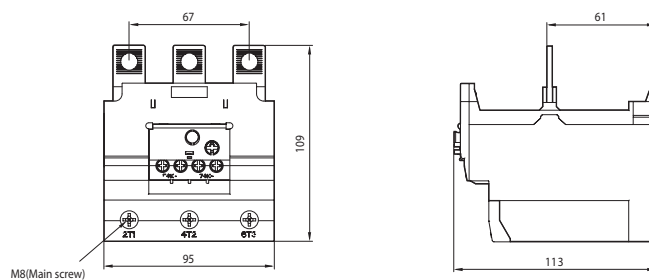
# Sezione 150

## 150 section

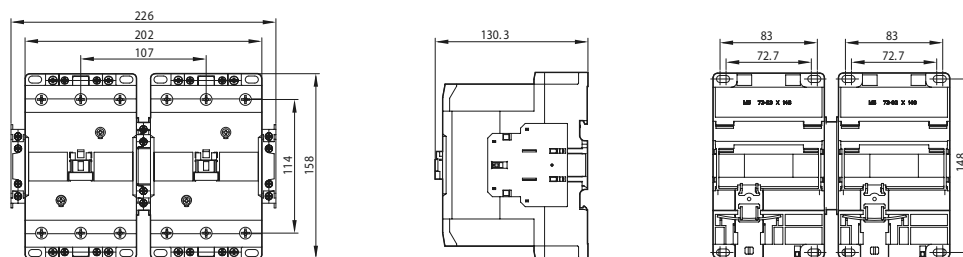
### Contattore / Contactor



### Relè termico differenziale / Thermal O/L relay



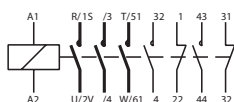
### Interblocco meccanico (vedi accessori) / Mechanical interlock (see accessories)



# Sezioni 185 - 225

## 185 - 225 sections

### Contattore / Contactor



Completo di n.2 090A11 / Complete with n. 2 090A11

#### Sezione 185A / 185A Section

|                                                          |     |                      |
|----------------------------------------------------------|-----|----------------------|
| 24V - 50/60 Hz 24VCC Tensioni di comando / Coil voltage  | 5,4 | <b>090MC185A-24</b>  |
| 110 - 240V - 50/60 Hz Tensioni di comando / Coil voltage | 5,4 | <b>090MC185A-240</b> |
| 400V - 50/60 Hz Tensioni di comando / Coil voltage       | 5,4 | <b>090MC185A-400</b> |

Prestazioni secondo IEC-60947  
Performance in accordance with IEC-60947

|     |                                          |                                    |                              |
|-----|------------------------------------------|------------------------------------|------------------------------|
| AC1 |                                          |                                    | 230A                         |
| AC3 | 200-240V<br>380-440V<br>500-550V<br>690V | 55 kW<br>90 kW<br>110 kW<br>110 kW | 185A<br>185A<br>180A<br>180A |

Prestazioni secondo UL/CSA  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                       |                              |                                    |
|-----------------------|------------------------------|------------------------------------|
| Ith                   |                              | 160A                               |
| Monofase / Mono-phase | 115V<br>230V                 | 15 HP<br>30 HP                     |
| Trifase / Tri-phase   | 200V<br>230V<br>460V<br>575V | 60 HP<br>60 HP<br>125 HP<br>125 HP |

Completo di n.2 090A11 / Complete with n. 2 090A11

#### Sezione 225A / 225A Section

|                                                          |     |                      |
|----------------------------------------------------------|-----|----------------------|
| 24V - 50/60 Hz 24VCC Tensioni di comando / Coil voltage  | 5,4 | <b>090MC225A-24</b>  |
| 110 - 240V - 50/60 Hz Tensioni di comando / Coil voltage | 5,4 | <b>090MC225A-240</b> |
| 400V - 50/60 Hz Tensioni di comando / Coil voltage       | 5,4 | <b>090MC225A-400</b> |

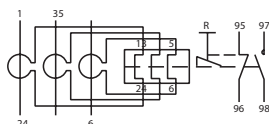
Prestazioni secondo IEC-60947  
Performance in accordance with IEC-60947

|     |                                          |                                     |                              |
|-----|------------------------------------------|-------------------------------------|------------------------------|
| AC1 |                                          |                                     | 275A                         |
| AC3 | 200-240V<br>380-440V<br>500-550V<br>690V | 75 kW<br>132 kW<br>132 kW<br>140 kW | 225A<br>225A<br>200A<br>150A |

Prestazioni secondo UL/CSA  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                       |                              |                                    |
|-----------------------|------------------------------|------------------------------------|
| Ith                   |                              | 210A                               |
| Monofase / Mono-phase | 115V<br>230V                 | 15 HP<br>25 HP                     |
| Trifase / Tri-phase   | 200V<br>230V<br>460V<br>575V | 60 HP<br>75 HP<br>150 HP<br>150 HP |

### Relè termico differenziale / Thermal O/L relay



Classe d'intervento 20 / Trip class 20

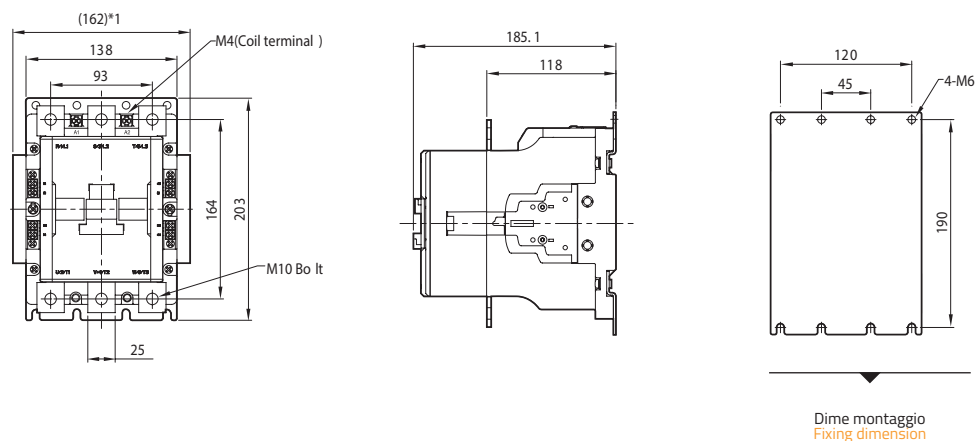
#### Sezioni 185A-225A / 185A-225A Sections

|                                            |     |                     |
|--------------------------------------------|-----|---------------------|
| 120 ÷ 185 Taratura (A) / Setting range (A) | 2,6 | <b>090MT225-185</b> |
| 160 ÷ 240 Taratura (A) / Setting range (A) | 2,6 | <b>090MT225-240</b> |

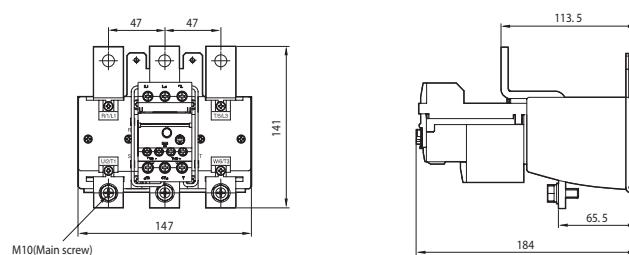
# Sezioni 185 - 225

## 185 - 225 sections

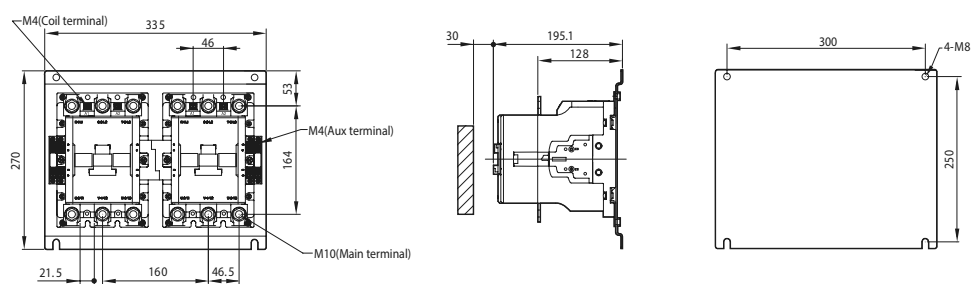
### Contattore / Contactor



### Relè termico differenziale / Thermal O/L relay



### Interblocco meccanico (vedi accessori) / Mechanical interlock (see accessories)



# Sezioni 330 - 400

## 330 - 400 sections

### Contattore / Contactor

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Completo di n.2 090A11 / Complete with n. 2 090A11

#### Sezione 330A / 330A Section

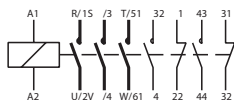
|                                                       |     |                      |
|-------------------------------------------------------|-----|----------------------|
| 110 ÷ 240V - AC/DC Tensioni di comando / Coil voltage | 9,2 | <b>090MC330A-240</b> |
| 400V - 50/60 Hz Tensioni di comando / Coil voltage    | 9,2 | <b>090MC330A-400</b> |

Prestazioni secondo IEC-60947  
Performance in accordance with IEC-60947

|     |                                                 |                                            |                                     |
|-----|-------------------------------------------------|--------------------------------------------|-------------------------------------|
| AC1 |                                                 |                                            | 350A                                |
| AC3 | 200-240V<br><b>380-440V</b><br>500-550V<br>690V | 90 kW<br><b>160 kW</b><br>160 kW<br>200 kW | 330A<br><b>330A</b><br>280A<br>225A |

Prestazioni secondo UL/CSA  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                     |                              |                                      |
|---------------------|------------------------------|--------------------------------------|
| Ith                 |                              | 30A                                  |
| Trifase / Tri-phase | 200V<br>230V<br>460V<br>575V | 100 HP<br>125 HP<br>250 HP<br>250 HP |



Completo di n.2 090A11 / Complete with n. 2 090A11

#### Sezione 400A / 400A Section

|                                                       |     |                      |
|-------------------------------------------------------|-----|----------------------|
| 110 ÷ 240V - AC/DC Tensioni di comando / Coil voltage | 9,2 | <b>090MC400A-240</b> |
| 400V - 50/60 Hz Tensioni di comando / Coil voltage    | 9,2 | <b>090MC400A-400</b> |

Prestazioni secondo IEC-60947  
Performance in accordance with IEC-60947

|     |                                                 |                                             |                                     |
|-----|-------------------------------------------------|---------------------------------------------|-------------------------------------|
| AC1 |                                                 |                                             | 450A                                |
| AC3 | 200-240V<br><b>380-440V</b><br>500-550V<br>690V | 125 kW<br><b>222 kW</b><br>225 kW<br>250 kW | 400A<br><b>400A</b><br>350A<br>300A |

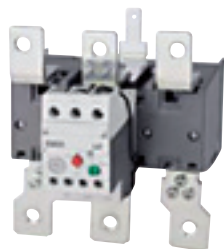
Prestazioni secondo UL/CSA  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                     |                              |                                      |
|---------------------|------------------------------|--------------------------------------|
| Ith                 |                              | 450A                                 |
| Trifase / Tri-phase | 200V<br>230V<br>460V<br>575V | 125 HP<br>150 HP<br>300 HP<br>300 HP |

### Relè termico differenziale / Thermal O/L relay

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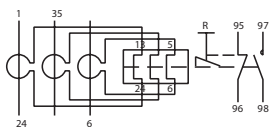
cod



Classe d'intervento 20 / Trip class 20

#### Sezioni 330A-400A / 330A-400A Sections

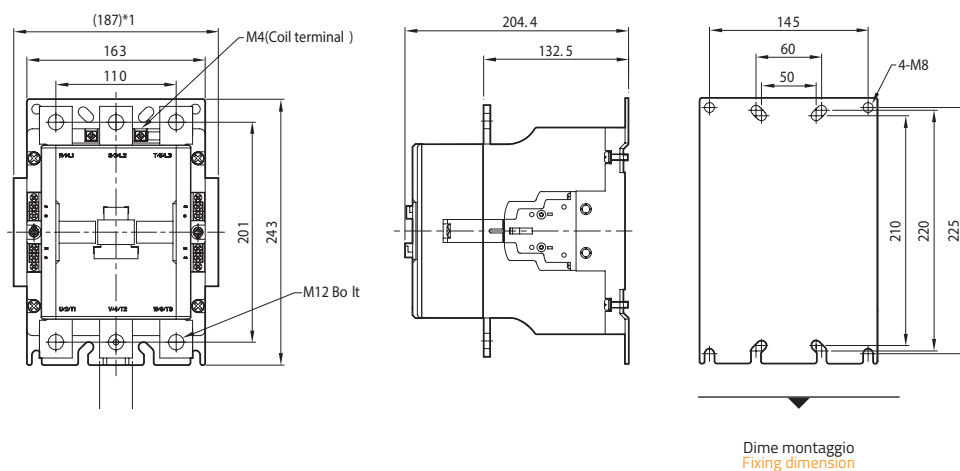
|                                            |     |                     |
|--------------------------------------------|-----|---------------------|
| 200 ÷ 300 Taratura (A) / Setting range (A) | 2,5 | <b>090MT400-330</b> |
| 260 ÷ 400 Taratura (A) / Setting range (A) | 2,5 | <b>090MT400-400</b> |



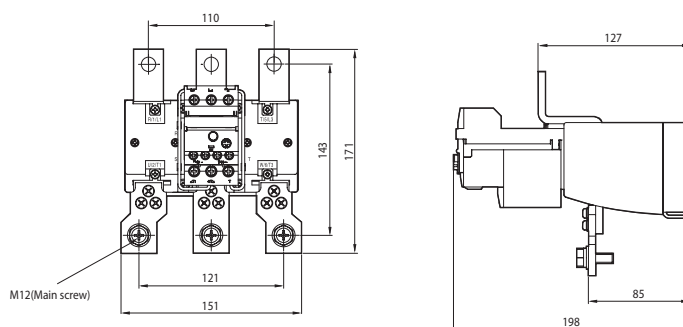
## Sezioni 330 - 400

### 330 - 400 sections

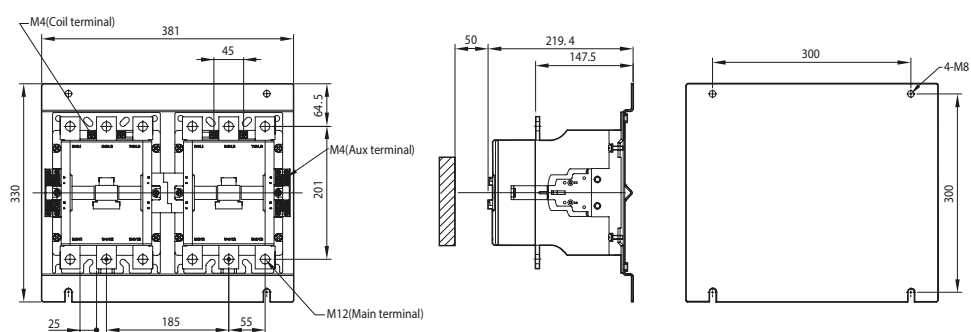
#### Contattore / Contactor



#### Relè termico differenziale / Thermal O/L relay



#### Interblocco meccanico (vedi accessori) / Mechanical interlock (see accessories)



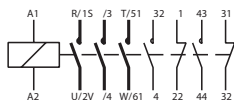
# Sezioni 630 - 800

## 630 - 800 sections

### Contattore / Contactor

g

cod



Completo di n.2 090A11 / Complete with n. 2 090A11

#### Sezion 630A / 630A Section

|                                                       |     |                      |
|-------------------------------------------------------|-----|----------------------|
| 110 ÷ 240V - AC/DC Tensioni di comando / Coil voltage | 9,2 | <b>090MC630A-240</b> |
| 400V - 50/60 Hz Tensioni di comando / Coil voltage    | 9,2 | <b>090MC630A-400</b> |

Prestazioni secondo IEC-60947  
Performance in accordance with IEC-60947

|     |                                                 |                                             |                                     |
|-----|-------------------------------------------------|---------------------------------------------|-------------------------------------|
| AC1 |                                                 |                                             | 660A                                |
| AC3 | 200-240V<br><b>380-440V</b><br>500-550V<br>690V | 190 kW<br><b>330 kW</b><br>330 kW<br>400 kW | 630A<br><b>630A</b><br>500A<br>420A |

Prestazioni secondo UL/CSA  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                     |                              |                                      |
|---------------------|------------------------------|--------------------------------------|
| Ith                 |                              | 660A                                 |
| Trifase / Tri-phase | 200V<br>230V<br>460V<br>575V | 200 HP<br>250 HP<br>500 HP<br>500 HP |

Completo di n.2 090A11 / Complete with n. 2 090A11

#### Sezione 800A / 800A Section

|                                                       |     |                      |
|-------------------------------------------------------|-----|----------------------|
| 110 ÷ 240V - AC/DC Tensioni di comando / Coil voltage | 9,2 | <b>090MC800A-240</b> |
| 400V - 50/60 Hz Tensioni di comando / Coil voltage    | 9,2 | <b>090MC800A-400</b> |

Prestazioni secondo IEC-60947  
Performance in accordance with IEC-60947

|     |                                                 |                                            |                                      |
|-----|-------------------------------------------------|--------------------------------------------|--------------------------------------|
| AC1 |                                                 |                                            | 900A                                 |
| AC3 | 200-240V<br><b>380-440V</b><br>500-550V<br>690V | 220 kW<br><b>440 kW</b><br>500kW<br>500 kW | 4800A<br><b>800A</b><br>500A<br>500A |

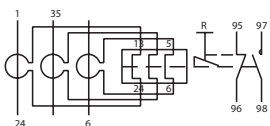
Prestazioni secondo UL/CSA  
Performance in accordance with UL/CSA  
Potenza nominale massima / Maximum nominal power

|                     |                              |                                      |
|---------------------|------------------------------|--------------------------------------|
| Ith                 |                              | 900A                                 |
| Trifase / Tri-phase | 200V<br>230V<br>460V<br>575V | 200 HP<br>300 HP<br>600 HP<br>600 HP |

### Relè termico differenziale / Thermal O/L relay

g

cod



Classe d'intervento 20 / Trip class 20

#### Sezioni 630A- 800A / 630A-800A Sections

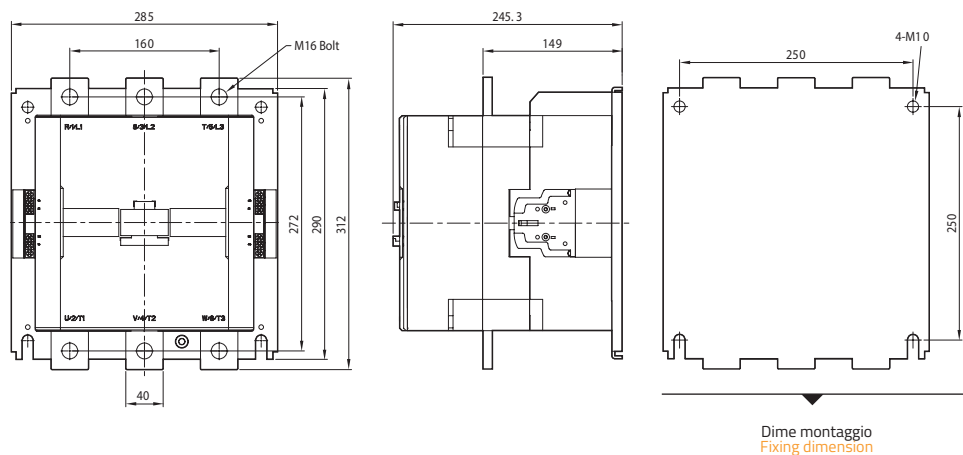
|                                            |      |                     |
|--------------------------------------------|------|---------------------|
| 400 ÷ 630 Taratura (A) / Setting range (A) | 11,5 | <b>090MT800-630</b> |
| 520 ÷ 800 Taratura (A) / Setting range (A) | 11,5 | <b>090MT800-800</b> |



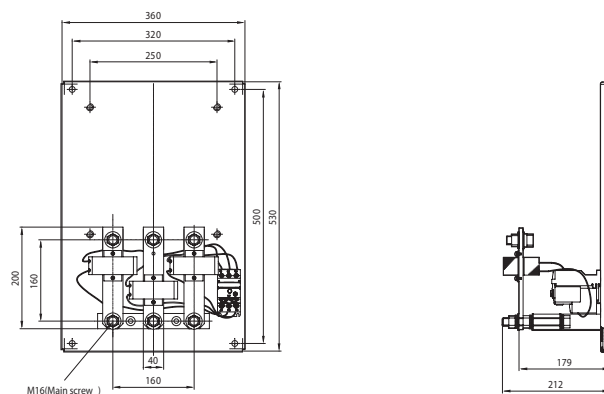
# Sezioni 630 - 800

## 630 - 800 sections

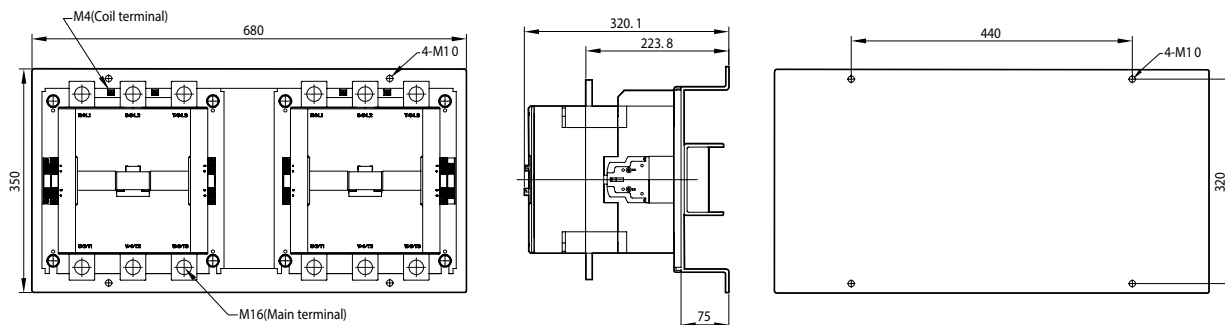
### Contattore / Contactor



### Relè termico differenziale / Thermal O/L relay



### Interblocco meccanico (vedi accessori) / Mechanical interlock (see accessories)

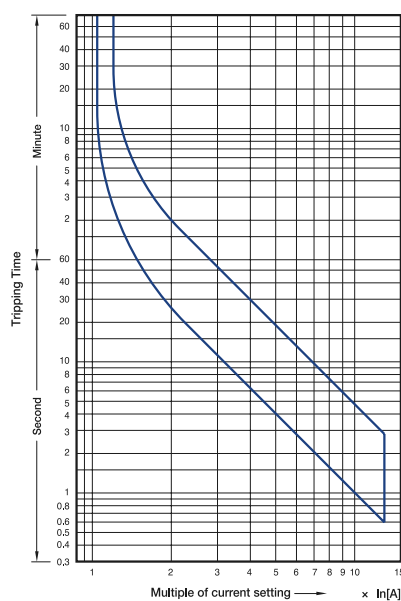


# Curve caratteristiche relè Relay curve characteristics

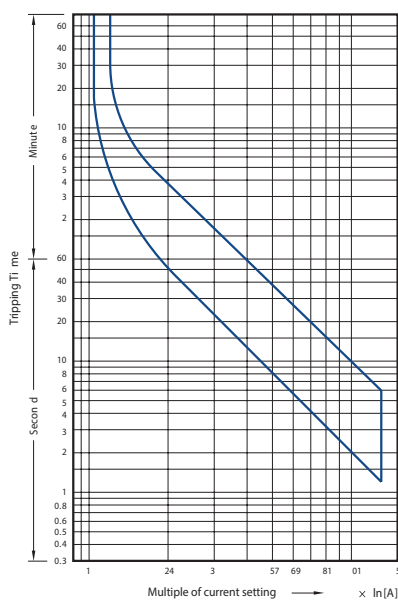
9-12-18-22-32-40

65

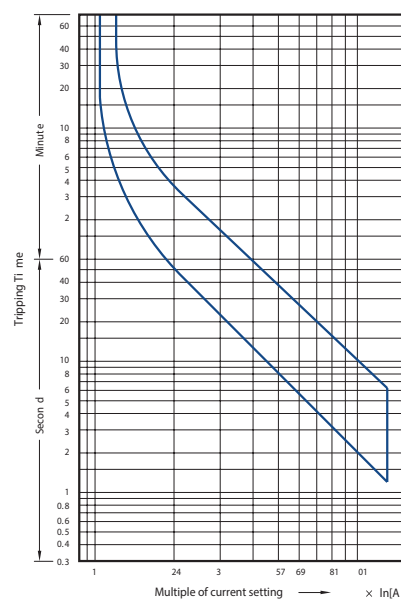
85-100



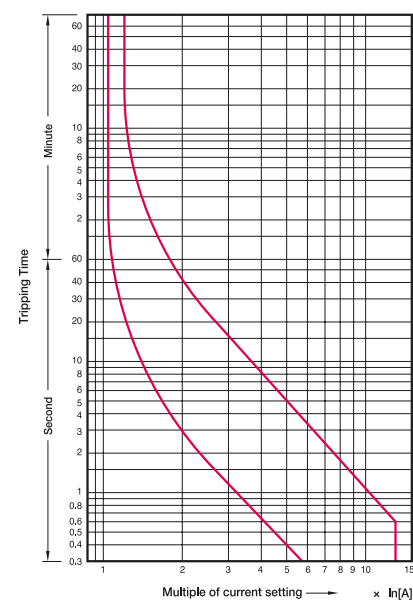
Avviamento a freddo  
Cold starting



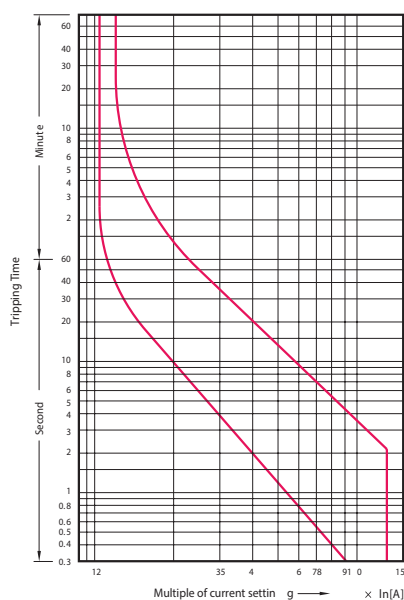
Avviamento a freddo  
Cold starting



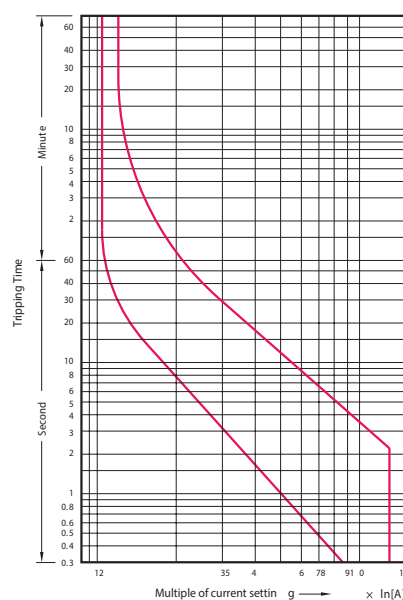
Avviamento a freddo  
Cold starting



Avviamento a caldo  
Hot starting



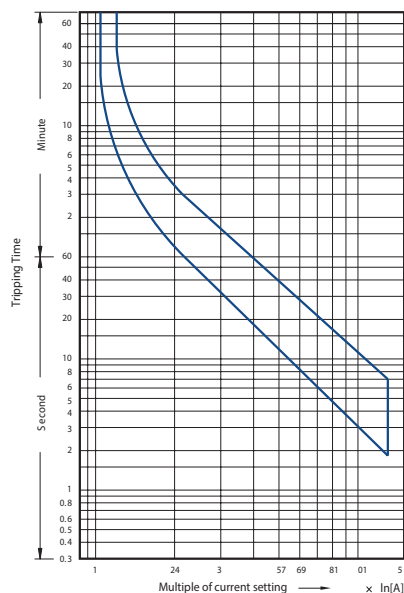
Avviamento a caldo  
Hot starting



Avviamento a caldo  
Hot starting

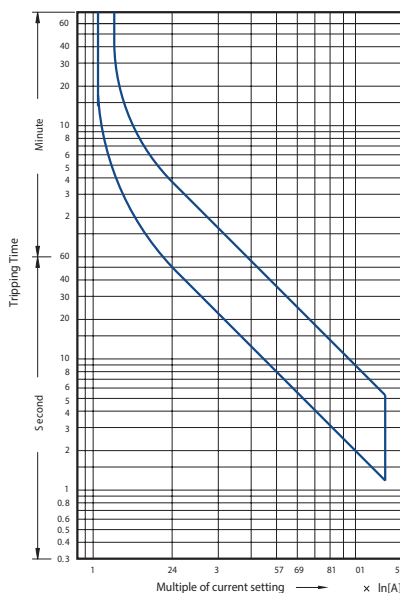
# Curve caratteristiche relè Relay curve characteristics

150



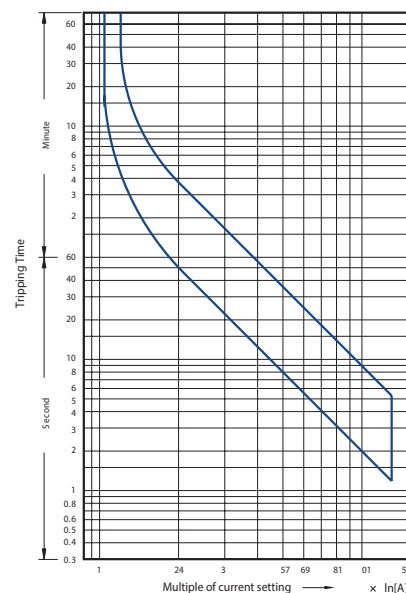
Avviamento a freddo  
Cold starting

185-225-330-400

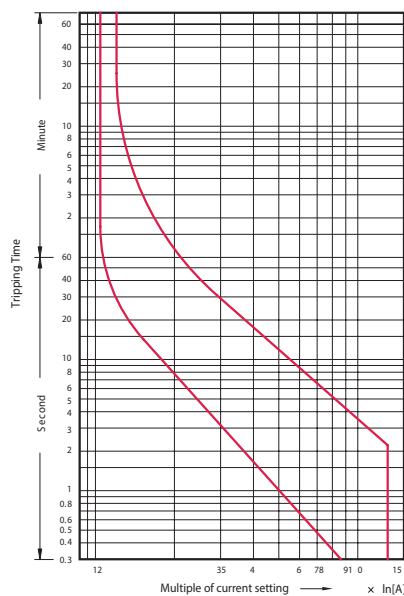


Avviamento a freddo  
Cold starting

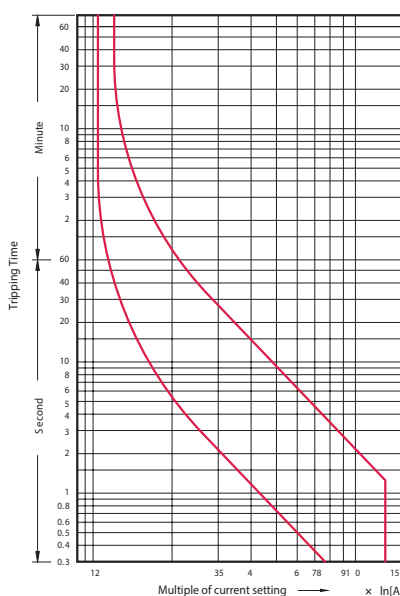
630-800



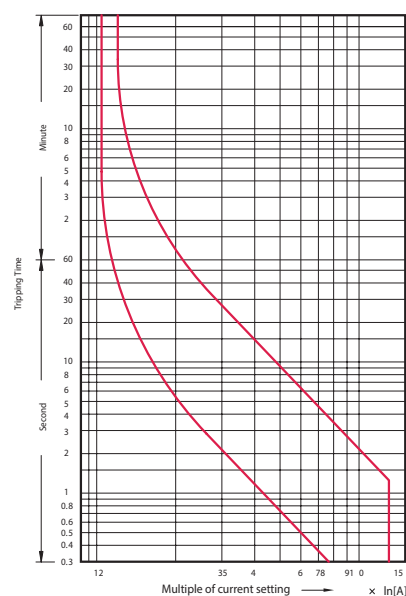
Avviamento a freddo  
Cold starting



Avviamento a caldo  
Hot starting



Avviamento a caldo  
Hot starting

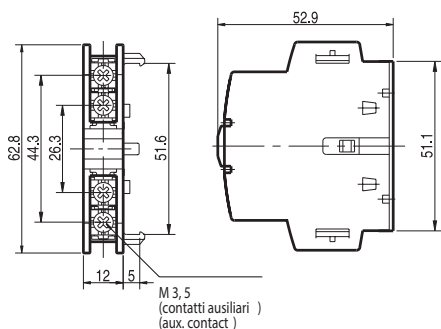


Avviamento a caldo  
Hot starting

# Contatti ausiliari

## Auxiliary contacts

Sezioni / Sections  
9-12-18-22-32  
40-65-85-100-150



### Montaggio laterale / Side mounting

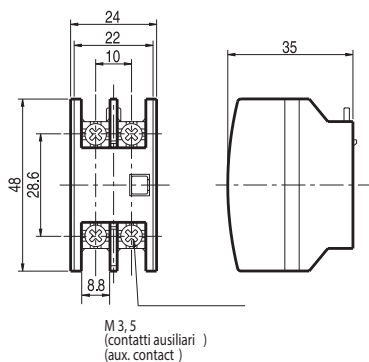
1NO + 1NC

g

cod

33

090UA-1



### Montaggio frontale / Top mounting

1NO + 1NC

28

090AF11

2NO

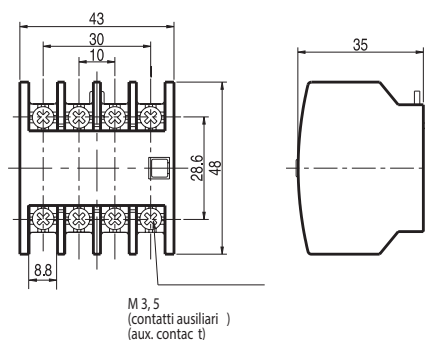
28

090AF20

2NC

28

090AF02



### Montaggio frontale / Top mounting

4NO

50

090AF40

3NO + 1NC

50

090AF31

2NO + 2NC

50

090AF22

1NO + 2NC

50

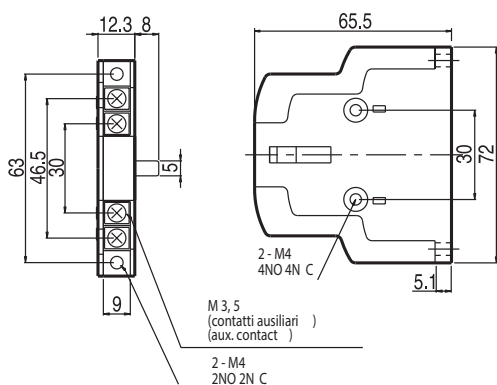
090AF13

4NC

50

090AF04

Sezioni / Sections  
185-225-330-400-630-800



### Montaggio laterale / Side mounting

1NO + 1NC

g

cod

45

090A11

# Caratteristiche ausiliari

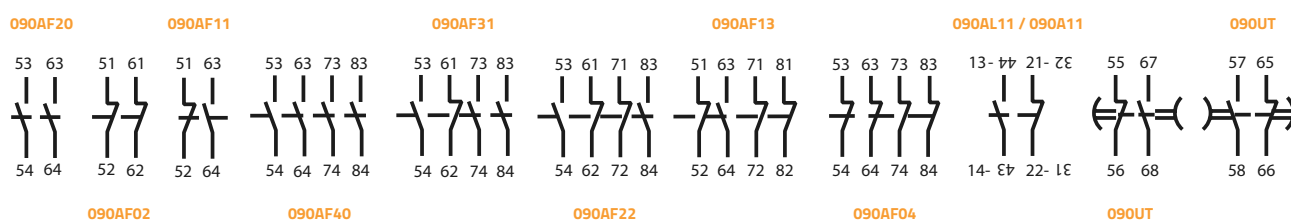
## Auxiliary characteristics

| Assorbimento<br>Coil consumption [VA] |                   |                    |                                 | Limite tensione bobina<br>Coil operating limit [V] |                      | Tempo di funzionamento<br>Operating time [ms] |                       |                     |
|---------------------------------------|-------------------|--------------------|---------------------------------|----------------------------------------------------|----------------------|-----------------------------------------------|-----------------------|---------------------|
| 220V<br>(50Hz)                        | Spunto<br>Pick-up | Ritenuta<br>Sealed | Dissipazione<br>Dissipation [W] | Attrazione<br>Pick-up                              | Rilascio<br>Drop-out | Corrente bobina<br>Coil current [mA]          | Attrazione<br>Pick-up | Rilascio<br>Dropout |
| 9-12-18-22                            | 58                | 9                  | 2                               | 85÷110% Un                                         | 30÷60% Un            | 41                                            | 12÷22                 | 4÷15                |
| 32-40                                 | 53                | 12                 | 2                               | 85÷110% Un                                         | 30÷60% Un            | 54                                            | 12÷22                 | 4÷15                |
| 65                                    | 110               | 13                 | 5                               | 85÷110% Un                                         | 30÷60% Un            | 59                                            | 12÷22                 | 4÷15                |
| 85-100                                | 230               | 17                 | 4,4                             | 85÷110% Un                                         | 30÷60% Un            | 77                                            | 15÷30                 | 10÷30               |
| 150                                   | 108               | 18                 | 4,4                             | 85÷110% Un                                         | 30÷60% Un            | 82                                            | 20÷40                 | 60÷70               |
| 185-225                               | 380               | 11.6               | 4.7                             | 85÷110% Un                                         | 30÷60% Un            | 53                                            | 70                    | 70                  |
| 330-400                               | 571               | 14                 | 5                               | 85÷110% Un                                         | 30÷60% Un            | 64                                            | 55                    | 55                  |
| 630-800                               | 1000              | 29                 | 7.8                             | 85÷110% Un                                         | 30÷60% Un            | 132                                           | 75                    | 75                  |

| Corrente nominale<br>Nominal current |    |       |      |      |      |       |      |      |      | Vita elettrica [op x 10.000]<br>Electrical life |                                   |             |             |
|--------------------------------------|----|-------|------|------|------|-------|------|------|------|-------------------------------------------------|-----------------------------------|-------------|-------------|
|                                      |    |       |      |      |      |       |      |      |      | N. manovre/ora<br>Operation per hour            | Vita meccanica<br>Mechanical life |             |             |
| Ith                                  |    | AC-15 |      |      |      | DC-13 |      |      |      |                                                 |                                   | AC-15       | DC-13       |
| AC-1                                 |    | 120V  | 240V | 480V | 600V | 125V  | 250V | 440V | 600V |                                                 |                                   | 220V-440V   | 24-220V     |
| [A]                                  |    | [A]   | [A]  | [A]  | [A]  | [A]   | [A]  | [A]  | [A]  | [man/ora]                                       | [mil/cicli]                       | [mil/cicli] | [mil/cicli] |
| 090UA                                | 10 | 6     | 3    | 1.5  | 1.2  | 1.1   | 0.55 | 0.31 | 0.2  | 1800                                            | 20                                | 0.5         | 0.5         |
| 090AF                                | 16 | 6     | 3    | 1.5  | 1.2  | 1.1   | 0.55 | 0.31 | 0.2  | 1800                                            | 20                                | 0.5         | 0.5         |
| 090A                                 | 16 | 6     | 3    | 1.5  | 1.2  | 1.1   | 0.55 | 0.31 | 0.2  | 1800                                            | 20                                | 0.5         | 0.5         |
| 090UR                                | 10 | 6     | 3    | 1.5  | 1.2  | 0.55  | 0.27 | -    | -    | 1800                                            | 20                                | 0.5         | 0.5         |

## Numerazione contatti ausiliari

### Auxiliary contacts



# Accessori

## Accessories



### Kit teleinversione / Reversing kit

|          | g  | cod             |
|----------|----|-----------------|
| 9 ÷ 22   | 30 | <b>090UW-22</b> |
| 32 ÷ 40  | 30 | <b>090UW-32</b> |
| 65       | 30 | <b>090UW-65</b> |
| 85 ÷ 100 | 30 | <b>090UW-95</b> |



### Filtro soppressore / Surge suppressor RC unit

|                  | g   | cod             |
|------------------|-----|-----------------|
| 24 ÷ 48V AC/DC   | 150 | <b>090US-11</b> |
| 200 ÷ 240V AC/DC | 150 | <b>090US-13</b> |
| 360 ÷ 440V AC/DC | 150 | <b>090US-14</b> |



### Interblocco meccanico / Mechanical interlock

|                                                                     | g  | cod             |
|---------------------------------------------------------------------|----|-----------------|
| <b>Sezioni / Sections:</b><br><b>9-12-18-22-32-40-65-85-100-150</b> |    |                 |
| 2NC                                                                 | 30 | <b>090UR-02</b> |



### Sezioni / Sections: 185-225-330-400

90 **090IM400**



### Sezioni / Sections: 630-800

90 **090IM800**

# Caratteristiche generali

## General characteristics

### Caratteristiche generali

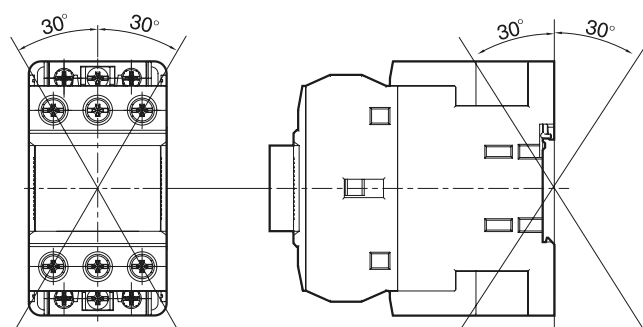
|                                              |                                                                                                                                            |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Rispondenza alle norme                       | IEC EN 60947-1, IEC EN 60947-4-1, UL500                                                                                                    |
| Omologazioni                                 | UL, CSA                                                                                                                                    |
| Limiti di temperatura                        | Funzionamento $\geq -50^{\circ}\text{C}$ $\div$ $+80^{\circ}\text{C}$<br>Stoccaggio $\geq -5^{\circ}\text{C}$ $\div$ $+60^{\circ}\text{C}$ |
| Altitudine d'impiego                         | 3.000 m                                                                                                                                    |
| Grado di protezione                          | IP 20 (IEC EN 60529)                                                                                                                       |
| Durata meccanica [mil ciclo]                 | 9 $\div$ 22A 15ML/32 $\div$ 100A 12ML/150 $\div$ 300<br>5ML/400 $\div$ 800 2,5ML                                                           |
| Vita elettrica [mil ciclo]                   | 9 $\div$ 22A 2,5ML/32 $\div$ 100A 2ML/150 $\div$ 300<br>1ML/400 $\div$ 800 0,5ML                                                           |
| Numero di manovre ora in AC-3 [n° ciclo]     | 9 $\div$ 100A 1800 / 160 $\div$ 800A 1200                                                                                                  |
| Resistenza agli shock                        | Aperto: 8g<br>Chiuso: 10g<br>(1/2 sinusoide = 11mS)                                                                                        |
| Resistenza alle vibrazioni                   | Aperto: 2g<br>Chiuso: 4g<br>5 $\div$ 300 (IEC 60-2-6)                                                                                      |
| Resistenza alla fiamma                       | VO (UL94)<br>960° (IEC 695-2-1)                                                                                                            |
| Numero poli                                  | 3                                                                                                                                          |
| Tensione nominale d'isolamento UI contattori | 690V                                                                                                                                       |
| Tensione nominale ad impulso                 | UIMP 8 kV                                                                                                                                  |
| Potere di chiusura massimo                   | 10 X Ie in cat. AC-3                                                                                                                       |
| Potere di interruzione massimo               | 8 X Ie in cat. AC-3                                                                                                                        |
| Campo di funzionamento della bobina          | -15% - +10% Uc<br>(Tensione nominale comando)                                                                                              |
| Tensione nominale d'isolamento UI relè       | 690 V                                                                                                                                      |
| Classe d'intervento relè secondo IEC-947-4-1 | 10A / 20                                                                                                                                   |
| Contatti ausiliari relè                      | 1NO + 1NC                                                                                                                                  |
| Riarmo relè                                  | Manuale o automatico selezionabile                                                                                                         |



### General characteristics



|                                               |                                                                                                                                            |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Accordance to standards                       | IEC EN 60947-1, IEC EN 60947-4-1, UL500                                                                                                    |
| Approvals                                     | UL, CSA                                                                                                                                    |
| Temperature limits                            | Funzionamento $\geq -50^{\circ}\text{C}$ $\div$ $+80^{\circ}\text{C}$<br>Stoccaggio $\geq -5^{\circ}\text{C}$ $\div$ $+60^{\circ}\text{C}$ |
| Usage altitudes                               | 3.000 m                                                                                                                                    |
| Protection degree                             | IP 20 (IEC EN 60529)                                                                                                                       |
| Mechanical durability [mil cycles]            | 9 $\div$ 22A 15ML/32 $\div$ 100A 12ML/150 $\div$ 300<br>5ML/400 $\div$ 800 2,5ML                                                           |
| Electrical life [mil cycles]                  | 9 $\div$ 22A 2,5ML/32 $\div$ 100A 2ML/150 $\div$ 300<br>1ML/400 $\div$ 800 0,5ML                                                           |
| N. of operations per hour in AC-3 [n. cycles] | 9 $\div$ 100A 1800 / 160 $\div$ 800A 1200                                                                                                  |
| Shock resistance                              | Opened: 8g<br>Closed: 10g<br>(1/2 sine wave = 11mS)                                                                                        |
| Vibration resistance                          | Opened: 2g<br>Closed: 4g<br>5 $\div$ 300 (IEC 60-2-6)                                                                                      |
| Flame resistance                              | VO (UL94)<br>960° (IEC 695-2-1)                                                                                                            |
| Number of poles                               | 3                                                                                                                                          |
| Rated insulation voltage UI                   | 690V                                                                                                                                       |
| Rated impulse with stand voltage              | UIMP 8 kV                                                                                                                                  |
| Maximum making capacity                       | 10 X Ie in cat. AC-3                                                                                                                       |
| Maximum breaking capacity                     | 8 X Ie in cat. AC-3                                                                                                                        |
| Coil operating limits                         | -15% - +10% Uc<br>(Rated voltage)                                                                                                          |
| Rated insulation voltage UI relay             | 690 V                                                                                                                                      |
| Relay tripping class with IEC-947-4-1         | 10A / 20                                                                                                                                   |
| Relay auxiliary contacts                      | 1NO + 1NC                                                                                                                                  |
| Relay reset type                              | Manual or automatic reset                                                                                                                  |



Posizione di funzionamento  
Mounting position



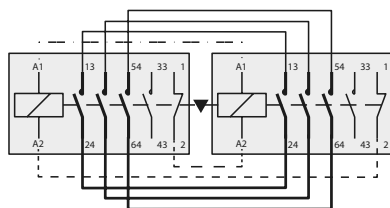
# Caratteristiche generali

## General characteristics

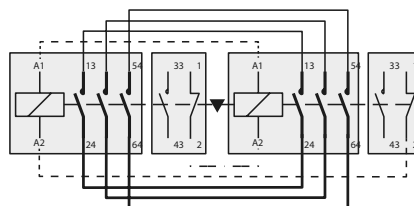
### Schemi di collegamento interblocco meccanico

### Mechanical interlock circuit diagram

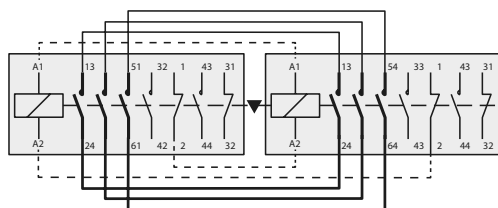
9-12-18-22



32-40-65-100-150



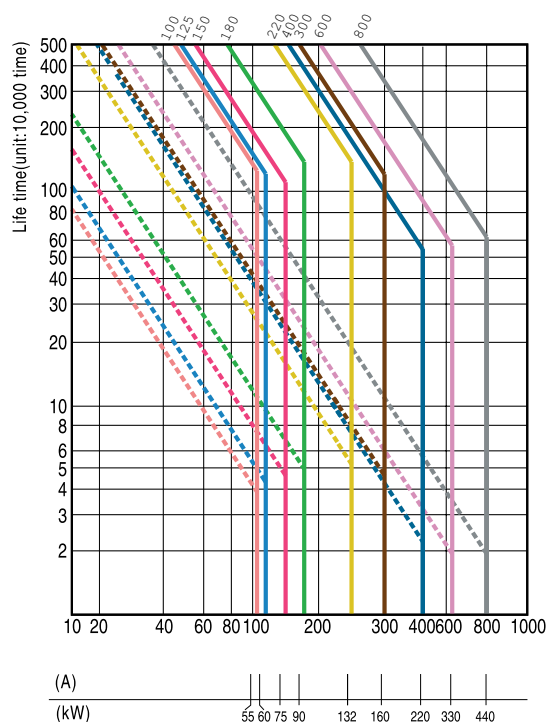
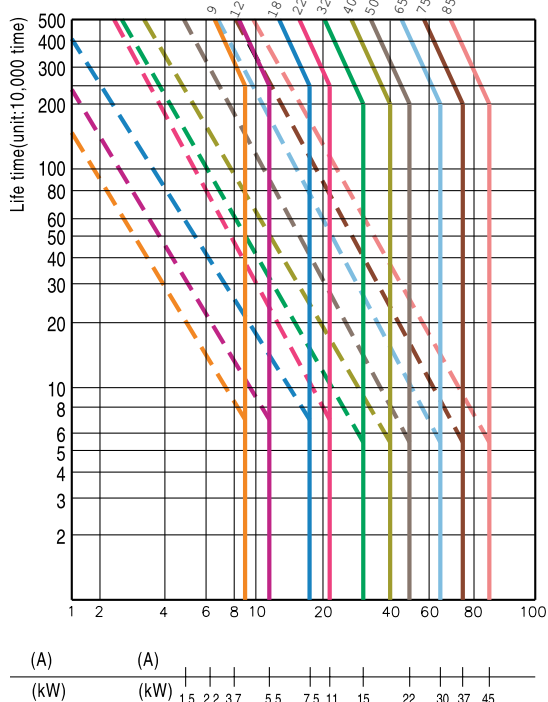
185-225-330-400-630-800



3Ø AC380-440V

3Ø AC380-440V

— AC-3  
- - AC-4

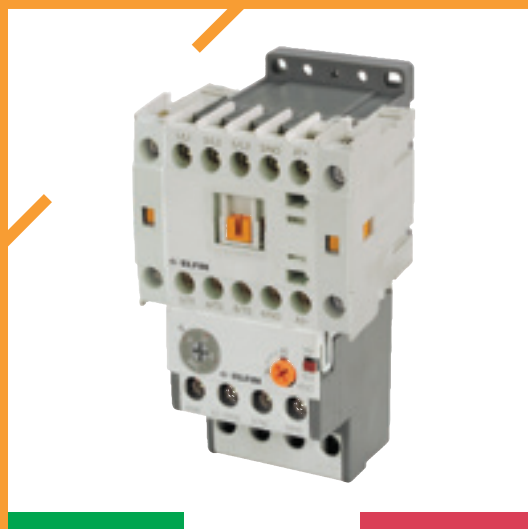




CONTATTORI, RELÈ TERMICI, MINI CONTATTORI, INTERRUTTORI SALVAMOTORE

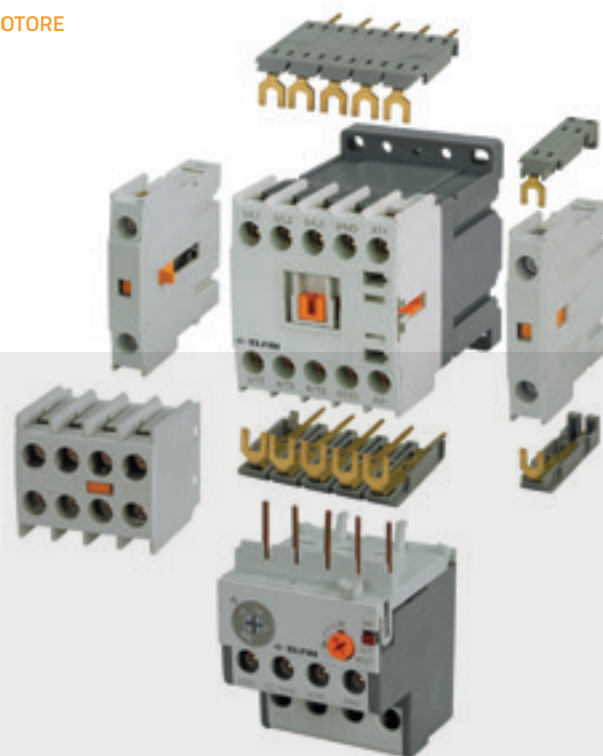
# Minicontattori

## Minicontactors



# Minicontattori

## Minicontactors



### TRIPOLARI DI BASE

I minicontattori New Elfin vengono forniti con tre contatti di potenza ed un contatto ausiliario normalmente aperto (NO).

### QUATTRO TIPOLOGIE DI CONNESSIONE

I minicontattori sono disponibili con attacchi vite-serrafilo e pin a saldare per circuito stampato. Su richiesta sono disponibili cersioni con attacchi fast-on a cage-clamp.

### VERSATILITÀ DI IMPIEGO

È possibile trasformare un minicontattore standard in un circuito stampato con apposito kit accessorio. La stessa operazione è possibile anche per il contatto ausiliario laterale. E' inoltre possibile montare sul minicontattore per circuito stampato tutti gli accessori della versione standard (contatti ausiliari laterali e frontali, temporizzatore, interblocco meccanico, filtro RC e relè termico.)

### BOBINE DI ALIMENTAZIONE

Nella nuova gamma di minicontattori New Elfin è possibile gestire le bobine di alimentazione c.a. e c.c. come ricambio.

### TECNOLOGIA INNOVATIVA

La traslazione dei contatti di potenza è verticale. Questa tecnologia permette di avere una distanza maggiore tra contatti fissi e mobili rispetto ad una soluzione standard orizzontale aumentando potere d'interruzione e vita elettrica.

### GAMMA ESTESA

La gamma di minicontattori si estende fino a 16A 7.5Kw AC-3.

### STANDARD THREE POLE

New Elfin minicontactors are supplied as standard with three main pole and an auxiliary contact normally open (NO).

### FOUR TYPE OF CONNECTIONS

Minicontactors are available with various connections screw, solder pins, fast-on and cage clamps (on request).

### VERSATILITY UTILIZATION

Customer can change a standard minicontactor into a solder pins version with a special kit. The same operation is possible for the side mounting auxiliary contact. Customer can fit on solder pin minicontactor all the accessories of standard version (auxiliary contacts, timer mechanical interlock, RC unit thermal O/L relay).

### COILS

In our new range of minicontactors we can supply ac/dc coils as spare parts.

### INNOVATIVE TECNOLOGY

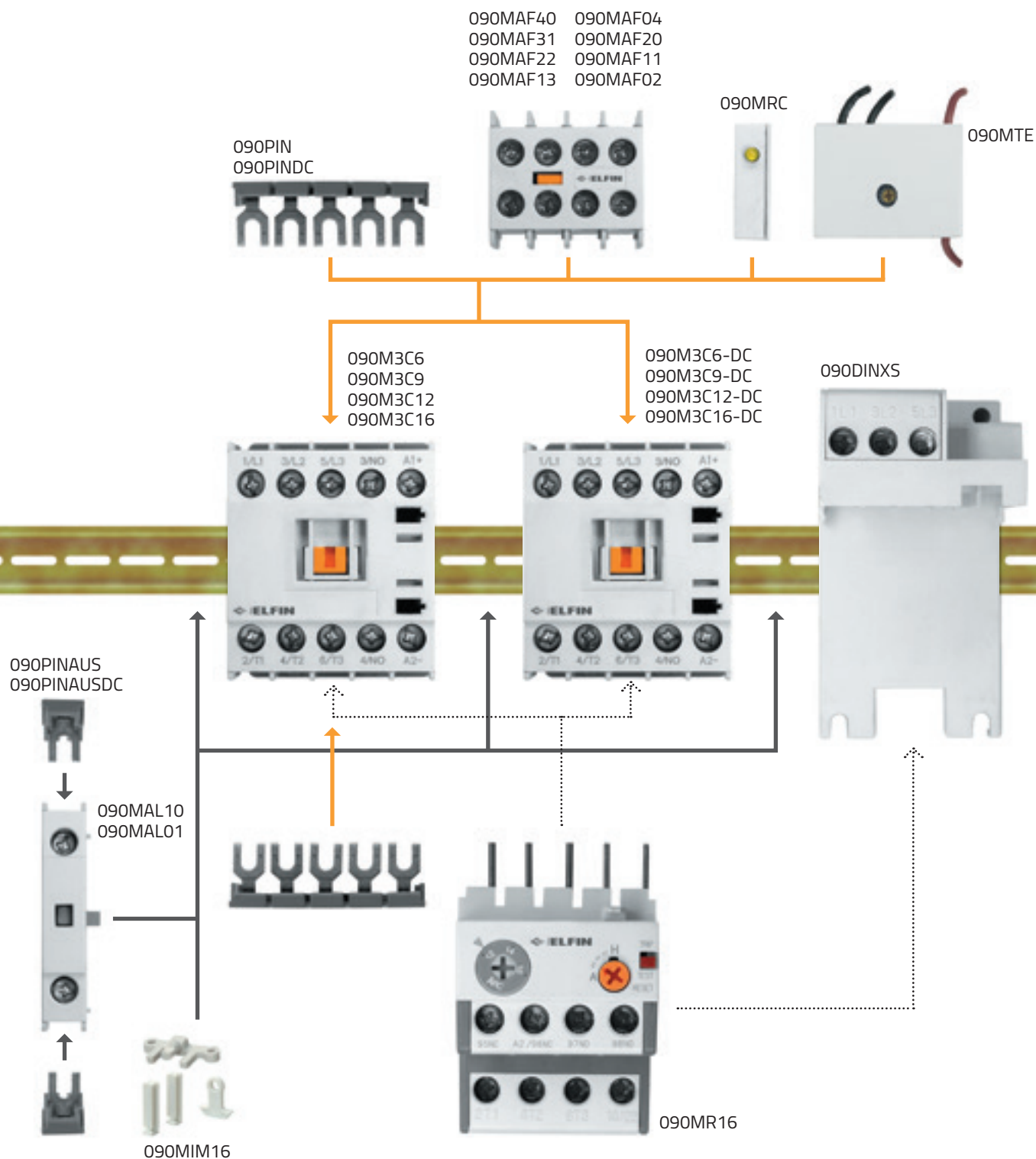
The translation of main contacts is vertical. With this solutions minicontactors have a longer distance between fixed and moving contacts respect to a standard solution with horizontal translation. Making and breaking capacity and electrical life are longer than competitors.

### WIDE RANGE

Our range of minicontactors arrive up to 16A 7.5Kw AC-3.

# Lay-out serie xsmall

## Xsmall series lay-out



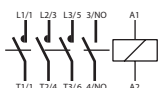
# Sezioni 6-9-12-16

## 6-9-12-16 sections

### Minicontattore / Minicontactor

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#### Sezione 6A / 6A Section

|                                                        |      |                      |
|--------------------------------------------------------|------|----------------------|
| 24V - 50/60 Hz Tensioni di comando / Coil voltage      | 0,17 | <b>090M3C6-24</b>    |
| 48V - 50/60 Hz Tensioni di comando / Coil voltage      | 0,17 | <b>090M3C6-48</b>    |
| 110V - 50/60 Hz Tensioni di comando / Coil voltage     | 0,17 | <b>090M3C6-110</b>   |
| 230/240V - 50/60 Hz Tensioni di comando / Coil voltage | 0,17 | <b>090M3C6-240</b>   |
| 380/400V - 50/60 Hz Tensioni di comando / Coil voltage | 0,17 | <b>090M3C6-400</b>   |
| 12V DC Tensioni di comando / Coil voltage              | 0,23 | <b>090M3C6-12DC</b>  |
| 24V DC Tensioni di comando / Coil voltage              | 0,23 | <b>090M3C6-24DC</b>  |
| 48V DC Tensioni di comando / Coil voltage              | 0,23 | <b>090M3C6-48DC</b>  |
| 110V DC Tensioni di comando / Coil voltage             | 0,23 | <b>090M3C6-110DC</b> |

#### Prestazioni secondo IEC-60947 Performance in accordance with IEC-60947

|                                      |                                                 |                                                                                                                                                                                                                                 |                                            |
|--------------------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| <b>AC1</b>                           |                                                 |                                                                                                                                                                                                                                 | 20A                                        |
| <b>AC3</b>                           | 200-240V<br><b>380-440V</b><br>500-550V<br>690V | 1,5 kW<br><b>2,2 kW</b><br>3 kW<br>3 kW                                                                                                                                                                                         | 7A<br><b>6A</b><br>5A<br>4A                |
| <b>DC1</b><br><b>L/R&lt;1ms</b>      | 24V<br><br>48V<br><br>110V                      | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series<br><br>1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series<br><br>1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 9A<br>12A<br><br>8A<br>10A<br><br>3A<br>6A |
| <b>DC3/DC5</b><br><b>L/R&lt;10ms</b> | 24V<br><br>48V<br><br>110V                      | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series<br><br>1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series<br><br>1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 6A<br>7A<br><br>5A<br>7A<br><br>1A<br>3A   |

#### Prestazioni secondo UL/CSA Performance in accordance with UL/CSA Potenza nominale massima / Maximum nominal power

|                              |                              |                                |
|------------------------------|------------------------------|--------------------------------|
| <b>Ith</b>                   |                              | 20A                            |
| <b>Monofase / Mono-phase</b> | 115V<br>230V                 | 0,5 HP<br>1 HP                 |
| <b>Trifase / Tri-phase</b>   | 200V<br>230V<br>460V<br>575V | 2 HP<br>2 HP<br>5 HP<br>7,5 HP |

#### Sezione 9A / 9A Section

|                                                        |      |                      |
|--------------------------------------------------------|------|----------------------|
| 24V - 50/60 Hz Tensioni di comando / Coil voltage      | 0,17 | <b>090M3C9-24</b>    |
| 48V - 50/60 Hz Tensioni di comando / Coil voltage      | 0,17 | <b>090M3C9-48</b>    |
| 110V - 50/60 Hz Tensioni di comando / Coil voltage     | 0,17 | <b>090M3C9-110</b>   |
| 230/240V - 50/60 Hz Tensioni di comando / Coil voltage | 0,17 | <b>090M3C9-240</b>   |
| 380/400V - 50/60 Hz Tensioni di comando / Coil voltage | 0,17 | <b>090M3C9-400</b>   |
| 12V DC Tensioni di comando / Coil voltage              | 0,23 | <b>090M3C9-12DC</b>  |
| 24V DC Tensioni di comando / Coil voltage              | 0,23 | <b>090M3C9-24DC</b>  |
| 48V DC Tensioni di comando / Coil voltage              | 0,23 | <b>090M3C9-48DC</b>  |
| 110V DC Tensioni di comando / Coil voltage             | 0,23 | <b>090M3C9-110DC</b> |

#### Prestazioni secondo IEC-60947 Performance in accordance with IEC-60947

|                                      |                                                 |                                                                                                                                                                                                                                 |                                              |
|--------------------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| <b>AC1</b>                           |                                                 |                                                                                                                                                                                                                                 | 20A                                          |
| <b>AC3</b>                           | 200-240V<br><b>380-440V</b><br>500-550V<br>690V | 2,2 kW<br><b>4 kW</b><br>3,7 kW<br>4 kW                                                                                                                                                                                         | 9A<br><b>9A</b><br>5A<br>5A                  |
| <b>DC1</b><br><b>L/R&lt;1ms</b>      | 24V<br><br>48V<br><br>110V                      | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series<br><br>1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series<br><br>1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 10A<br>13A<br><br>10A<br>12A<br><br>3A<br>7A |
| <b>DC3/DC5</b><br><b>L/R&lt;10ms</b> | 24V<br><br>48V<br><br>110V                      | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series<br><br>1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series<br><br>1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 7A<br>9A<br><br>6A<br>8A<br><br>1A<br>4A     |

#### Prestazioni secondo UL/CSA Performance in accordance with UL/CSA Potenza nominale massima / Maximum nominal power

|                              |                              |                                 |
|------------------------------|------------------------------|---------------------------------|
| <b>Ith</b>                   |                              | 25A                             |
| <b>Monofase / Mono-phase</b> | 115V<br>230V                 | 0,5 HP<br>1 HP                  |
| <b>Trifase / Tri-phase</b>   | 200V<br>230V<br>460V<br>575V | 3 HP<br>3 HP<br>7,5 HP<br>10 HP |

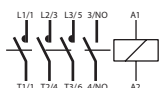
# Sezioni 6-9-12-16

## 6-9-12-16 sections

### Minicontattore / Minicontactor

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#### Sezione 12A / 12A Section

|                                                        |      |                       |
|--------------------------------------------------------|------|-----------------------|
| 24V - 50/60 Hz Tensioni di comando / Coil voltage      | 0,17 | <b>090M3C12-24</b>    |
| 48V - 50/60 Hz Tensioni di comando / Coil voltage      | 0,17 | <b>090M3C12-48</b>    |
| 110V - 50/60 Hz Tensioni di comando / Coil voltage     | 0,17 | <b>090M3C12-110</b>   |
| 230/240V - 50/60 Hz Tensioni di comando / Coil voltage | 0,17 | <b>090M3C12-240</b>   |
| 380/400V - 50/60 Hz Tensioni di comando / Coil voltage | 0,17 | <b>090M3C12-400</b>   |
| 12V DC Tensioni di comando / Coil voltage              | 0,23 | <b>090M3C12-12DC</b>  |
| 24V DC Tensioni di comando / Coil voltage              | 0,23 | <b>090M3C12-24DC</b>  |
| 48V DC Tensioni di comando / Coil voltage              | 0,23 | <b>090M3C12-48DC</b>  |
| 110V DC Tensioni di comando / Coil voltage             | 0,23 | <b>090M3C12-110DC</b> |

#### Prestazioni secondo IEC-60947 Performance in accordance with IEC-60947

| AC1                 |                 |                                                                       | 20A        |
|---------------------|-----------------|-----------------------------------------------------------------------|------------|
| AC3                 | 200-240V        | 3 kW                                                                  | 12A        |
|                     | <b>380-440V</b> | <b>5,5 kW</b>                                                         | <b>12A</b> |
|                     | 500-550V        | 4 kW                                                                  | 7A         |
|                     | 690V            | 4 kW                                                                  | 5A         |
| DC1<br>L/R<1ms      | 24V             | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 12A<br>15A |
|                     | 48V             | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 11A<br>14A |
|                     | 110V            | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 4A<br>8A   |
| DC3/DC5<br>L/R<10ms | 24V             | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 9A<br>12A  |
|                     | 48V             | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 8A<br>10A  |
|                     | 110V            | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 1A<br>5A   |

#### Prestazioni secondo UL/CSA Performance in accordance with UL/CSA Potenza nominale massima / Maximum nominal power

| Ith                   |              | 30A            |
|-----------------------|--------------|----------------|
| Monofase / Mono-phase | 115V         | 1 HP           |
|                       | 230V         | 3 HP           |
| Trifase / Tri-phase   | 200V         | 5 HP           |
|                       | 230V         | 5 HP           |
|                       | 460V<br>575V | 10 HP<br>15 HP |

#### Sezione 16A / 16A Section

|                                                        |      |                       |
|--------------------------------------------------------|------|-----------------------|
| 24V - 50/60 Hz Tensioni di comando / Coil voltage      | 0,17 | <b>090M3C16-24</b>    |
| 48V - 50/60 Hz Tensioni di comando / Coil voltage      | 0,17 | <b>090M3C16-48</b>    |
| 110V - 50/60 Hz Tensioni di comando / Coil voltage     | 0,17 | <b>090M3C16-110</b>   |
| 230/240V - 50/60 Hz Tensioni di comando / Coil voltage | 0,17 | <b>090M3C16-240</b>   |
| 380/400V - 50/60 Hz Tensioni di comando / Coil voltage | 0,17 | <b>090M3C16-400</b>   |
| 12V DC Tensioni di comando / Coil voltage              | 0,23 | <b>090M3C16-12DC</b>  |
| 24V DC Tensioni di comando / Coil voltage              | 0,23 | <b>090M3C16-24DC</b>  |
| 48V DC Tensioni di comando / Coil voltage              | 0,23 | <b>090M3C16-48DC</b>  |
| 110V DC Tensioni di comando / Coil voltage             | 0,23 | <b>090M3C16-110DC</b> |

#### Prestazioni secondo IEC-60947 Performance in accordance with IEC-60947

| AC1                 |                 |                                                                       | 20A        |
|---------------------|-----------------|-----------------------------------------------------------------------|------------|
| AC3                 | 200-240V        | 2,2 kW                                                                | 16A        |
|                     | <b>380-440V</b> | <b>4 kW</b>                                                           | <b>16A</b> |
|                     | 500-550V        | 3,7 kW                                                                | 9A         |
|                     | 690V            | 4 kW                                                                  | 5A         |
| DC1<br>L/R<1ms      | 24V             | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 16A<br>20A |
|                     | 48V             | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 14A<br>17A |
|                     | 110V            | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 5A<br>9A   |
| DC3/DC5<br>L/R<10ms | 24V             | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 12A<br>15A |
|                     | 48V             | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 10A<br>13A |
|                     | 110V            | 1 polo in serie/1 pole in series<br>2 poli in serie/2 poles in series | 2A<br>6A   |

#### Prestazioni secondo UL/CSA Performance in accordance with UL/CSA Potenza nominale massima / Maximum nominal power

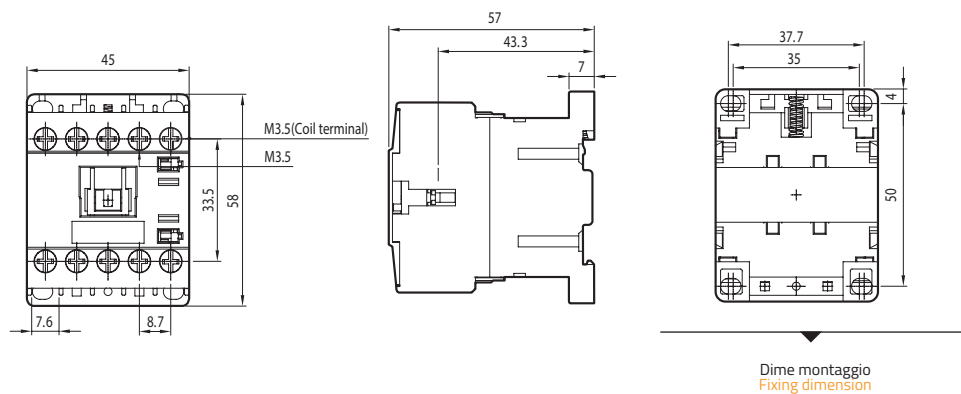
| Ith                   |              | 32A            |
|-----------------------|--------------|----------------|
| Monofase / Mono-phase | 115V         | 2 HP           |
|                       | 230V         | 3 HP           |
| Trifase / Tri-phase   | 200V         | 7 HP           |
|                       | 230V         | 7,5 HP         |
|                       | 460V<br>575V | 10 HP<br>15 HP |



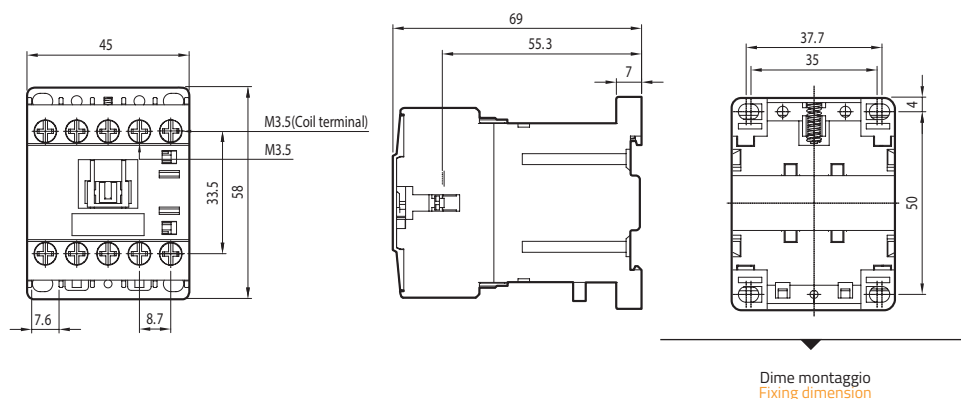
# Sezioni 6-9-12-16

## 6-9-12-16 sections

### Minicontattore C.A. / A.C. minicontactors

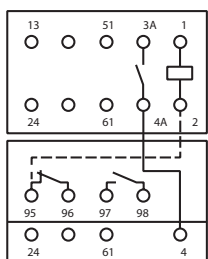


### Minicontattore C.C. / D.C. minicontactors



# Sezioni 6-9-12-16

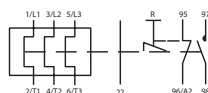
## 6-9-12-16 sections



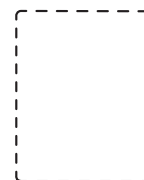
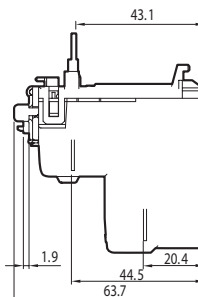
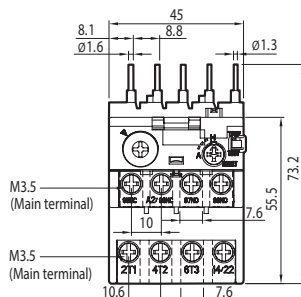
Schema per cablaggio diretto  
contattore-relè  
Direct mounting of T.O.R.  
to minicontactor diagram  
of prewiring

### Relè termico differenziale / Thermal O/L relay

| g                                            | cod                   |
|----------------------------------------------|-----------------------|
| 0,1 ÷ 0,16 Taratura (A) / Setting range (A)  | 0,1 <b>09MR16-016</b> |
| 0,16 ÷ 0,25 Taratura (A) / Setting range (A) | 0,1 <b>09MR16-025</b> |
| 0,25 ÷ 0,4 Taratura (A) / Setting range (A)  | 0,1 <b>09MR16-04</b>  |
| 0,4 ÷ 0,65 Taratura (A) / Setting range (A)  | 0,1 <b>09MR16-065</b> |
| 0,63 ÷ 1 Taratura (A) / Setting range (A)    | 0,1 <b>09MR16-1</b>   |
| 1 ÷ 1,6 Taratura (A) / Setting range (A)     | 0,1 <b>09MR16-1V6</b> |
| 1,6 ÷ 2,5 Taratura (A) / Setting range (A)   | 0,1 <b>09MR16-2V5</b> |
| 2,5 ÷ 4 Taratura (A) / Setting range (A)     | 0,1 <b>09MR16-4</b>   |
| 4 ÷ 6 Taratura (A) / Setting range (A)       | 0,1 <b>09MR16-6</b>   |
| 5 ÷ 8 Taratura (A) / Setting range (A)       | 0,1 <b>09MR16-8</b>   |
| 6 ÷ 9 Taratura (A) / Setting range (A)       | 0,1 <b>09MR16-9</b>   |
| 7 ÷ 10 Taratura (A) / Setting range (A)      | 0,1 <b>09MR16-010</b> |
| 9 ÷ 13 Taratura (A) / Setting range (A)      | 0,1 <b>09MR16-013</b> |
| 12 ÷ 16 Taratura (A) / Setting range (A)     | 0,1 <b>09MR16-16</b>  |

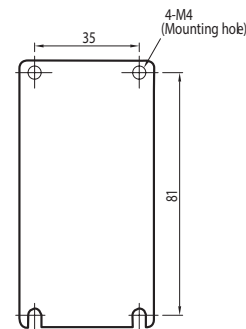
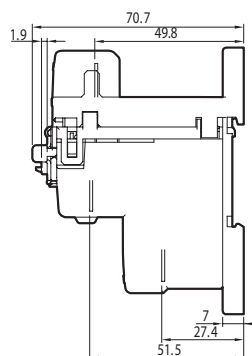
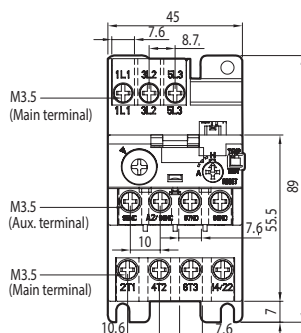


### Minirelè / T.O.R.



Dime montaggio  
Fixing dimension

### Minirelè montaggio su accessorio separato T.O.R. with separate mounting adaptor



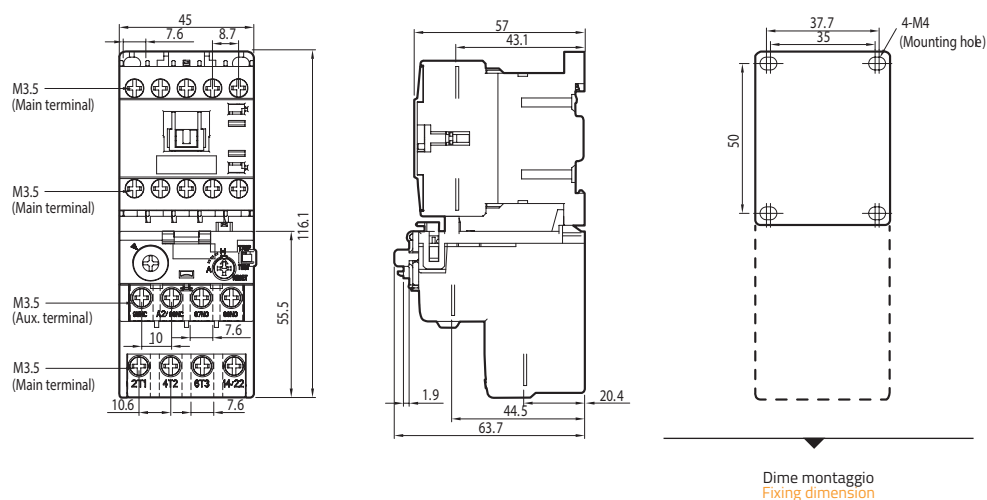
Dime montaggio  
Fixing dimension



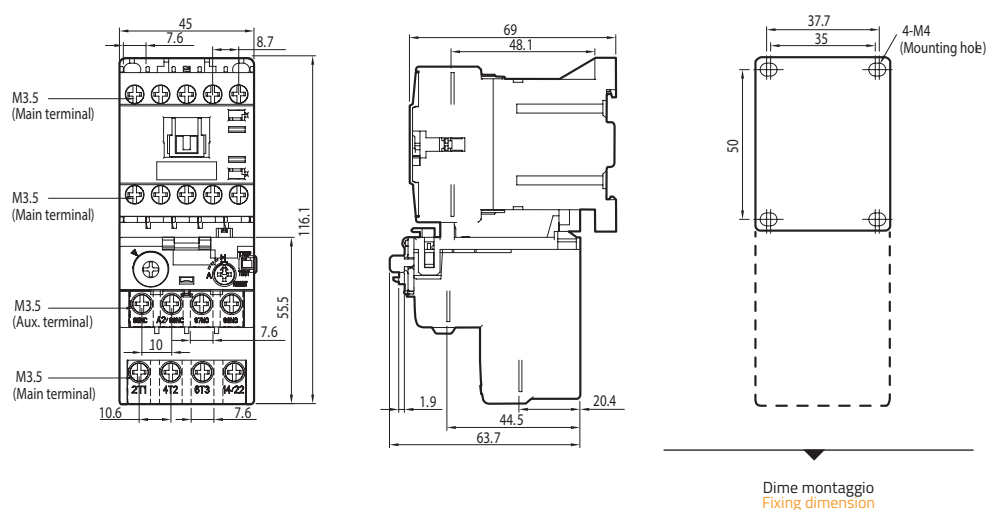
# Sezioni 6-9-12-16

## 6-9-12-16 sections

### Minirelè montaggio diretto su minicontattore C.A. T.O.R. direct mounting on A.C. minicontactor



### Minirelè montaggio diretto su minicontattore C.C. T.O.R. direct mounting on D.C. minicontactor



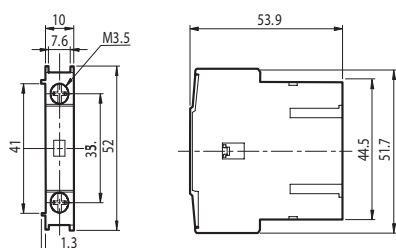


# Contatti ausiliari

## Auxiliary contacts

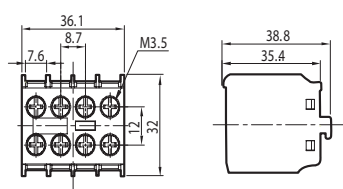
### Contatti ausiliari

### Auxiliary contacts



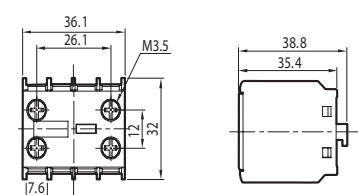
#### Montaggio laterale / Side mounting

|     |    |                 |
|-----|----|-----------------|
| 1NO | 20 | <b>090MAL10</b> |
| 1NC | 20 | <b>090MAL01</b> |



#### Montaggio frontale / Top mounting

|           |    |                 |
|-----------|----|-----------------|
| 4NO       | 40 | <b>090MAF40</b> |
| 3NO + 1NC | 40 | <b>090MAF31</b> |
| 2NO + 2NC | 40 | <b>090MAF22</b> |
| 1NO + 3NC | 40 | <b>090MAF13</b> |
| 4NC       | 40 | <b>090MAF04</b> |

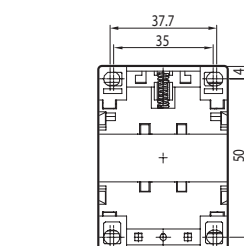
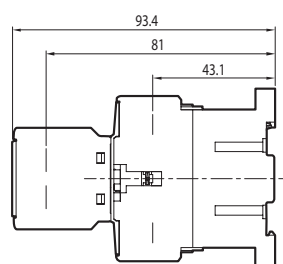
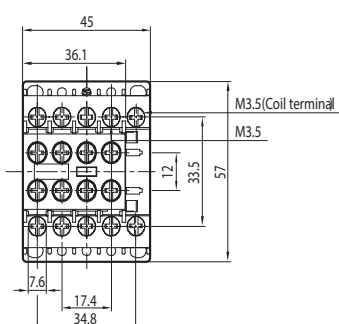


#### Montaggio frontale / Top mounting

|           |    |                 |
|-----------|----|-----------------|
| 2NO       | 30 | <b>090MAF20</b> |
| 1NO + 1NC | 30 | <b>090MAF11</b> |
| 2NC       | 30 | <b>090MAF02</b> |

### Minicontattore con ausiliario frontale

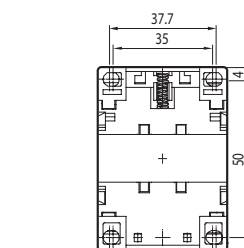
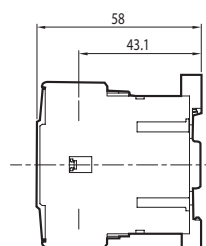
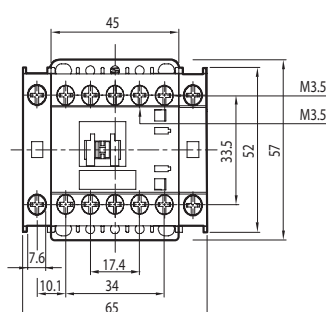
### Minicontactor with top mounting contact



Dime montaggio  
Fixing dimension

### Minicontattore con ausiliario frontale

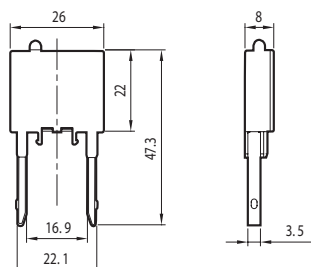
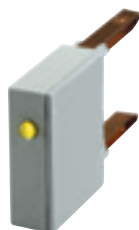
### Minicontactor with top mounting contact



Dime montaggio  
Fixing dimension

# Accessori

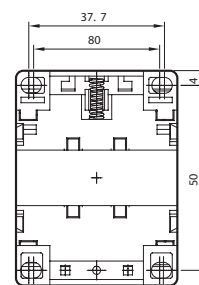
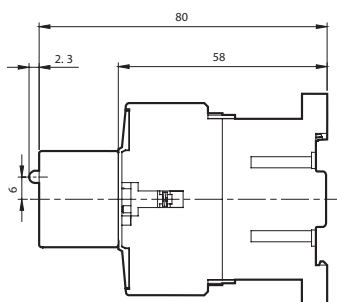
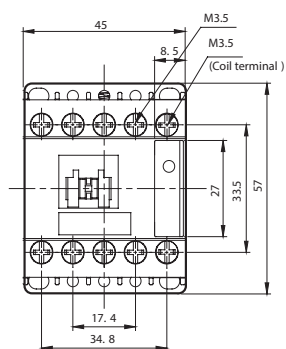
## Accessories



### Filtro soppressore Surge suppressor unit

|             | g     | cod               |
|-------------|-------|-------------------|
| 24-48V CA   | 0,005 | <b>090MRC48</b>   |
| 60-127V CA  | 0,005 | <b>090MRC110</b>  |
| 200-240V CA | 0,005 | <b>090MRC240</b>  |
| 17-24V CC   | 0,005 | <b>090MRC24DC</b> |
| 36-72V CC   | 0,005 | <b>090MRC72DC</b> |

### Minicontattore con filtro RC Minicontactor with surge suppressor unit



Dime montaggio  
Fixing dimension

## Accessori Accessories



### Interblocco meccanico Mechanical interlock

Interblocco meccanico  
Mechanical interlock

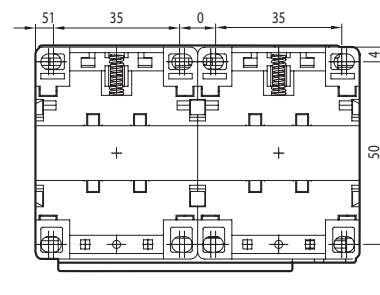
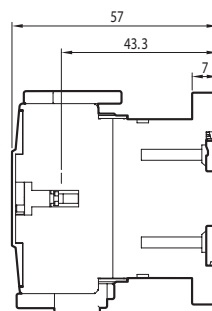
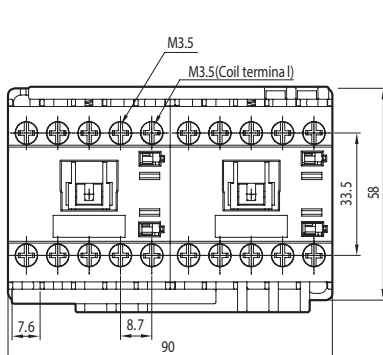
g

0,005

cod

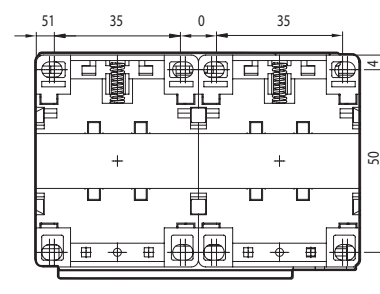
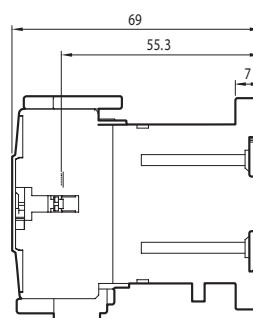
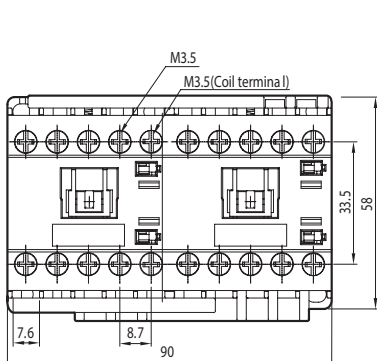
090MIM16

### Minicontattori C.A. interbloccati A.C. minicontactors interlocked



Dime montaggio  
Fixing dimension

### Minicontattori C.C. interbloccati D.C. minicontactors interlocked



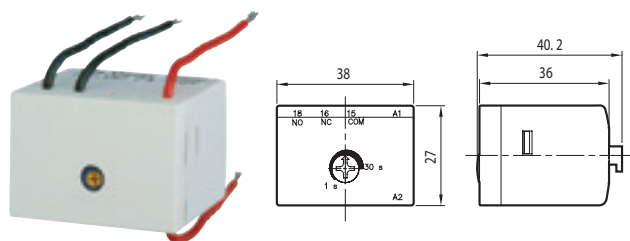
Dime montaggio  
Fixing dimension

# Accessori

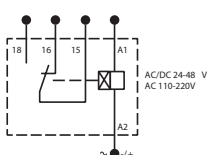
## Accessories

### Unità elettronica temporizzata

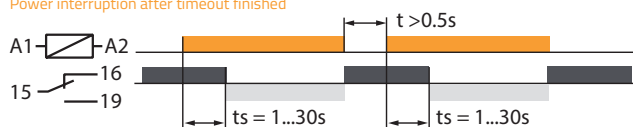
### Electric timer unit



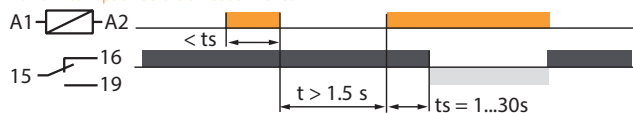
|                                 |    |                     |
|---------------------------------|----|---------------------|
| 24-48V CA/CC delay ON 1-30 s    | 40 | <b>090MTEON48</b>   |
| 100-220V CA/CC delay ON 1-30 s  | 40 | <b>090MTEON220</b>  |
| 24-48V CA/CC delay OFF 1-30 s   | 40 | <b>090MTEOFF48</b>  |
| 100-220V CA/CC delay OFF 1-30 s | 40 | <b>090MTEOFF220</b> |



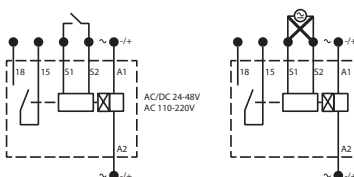
Interruzione alimentazione dopo il termine del tempo ts  
Power interruption after timeout finished



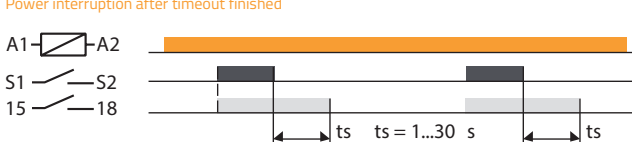
Interruzione alimentazione prima del termine del tempo ts  
Power interruption before timeout finished



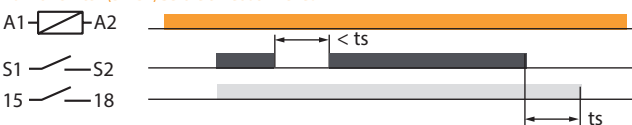
Senza tensione / De-energized  
Sotto tensione / Energized



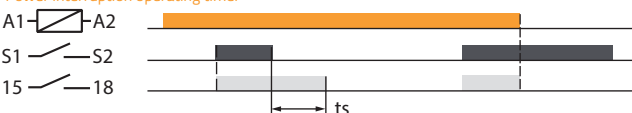
Interruzione alimentazione dopo il termine del tempo ts  
Power interruption after timeout finished



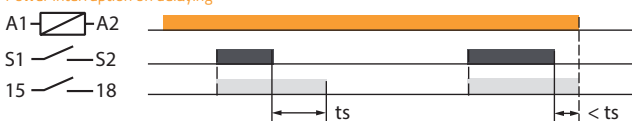
Apertura S1-S2 prima del termine del tempo ts  
Turn on switch (S1-S2) before timeout finished



Interruzione alimentazione durante funzionamento timer  
Power interruption operating timer

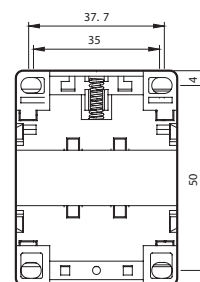
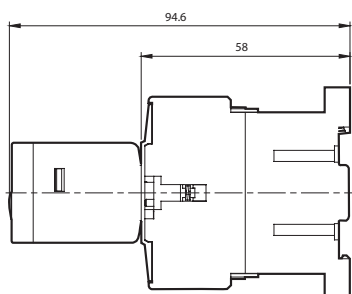
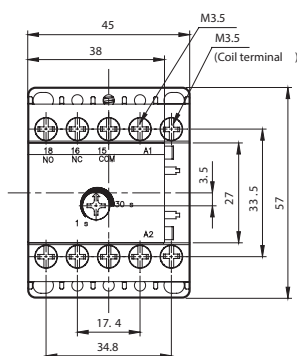


Interruzione alimentazione prima del termine del tempo ts  
Power interruption on delaying



### Minicontattore con temporizzatore elettronico

### Minicontactor with electronic timer



Dime montaggio  
Fixing dimension

# Accessori e ricambi

## Accessories and spare parts



### Sistema di montaggio separato Separate mounting system

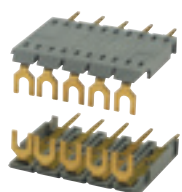
Adattatore montaggio barra DIN 35  
Bar mounting adapter DIN 35

g

cod

0,3

090DINXS



### Pettini / Solder pin terminal

#### Per contattori/ For contactors

Pettini corti A.C. / A.C. short  
Pettini lunghi D.C. / D.C. long

g

cod

20

090PIN

20

090PINDC



#### Per contatti ausiliari / For auxiliary contacts

Pettini corti A.C. / A.C. short  
Pettini lunghi D.C. / D.C. long

10

090PINAUS

10

090PINASDC



### Bobine / Coils

g

cod

|                                                        |      |               |
|--------------------------------------------------------|------|---------------|
| 24V - 50/60 Hz Tensioni di comando / Coil voltage      | 0,07 | 090B16-24     |
| 48V - 50/60 Hz Tensioni di comando / Coil voltage      | 0,07 | 090B16-48     |
| 110V - 50/60 Hz Tensioni di comando / Coil voltage     | 0,07 | 090B16-110    |
| 230/240V - 50/60 Hz Tensioni di comando / Coil voltage | 0,07 | 090B16-220    |
| 380/400V - 50/60 Hz Tensioni di comando / Coil voltage | 0,07 | 090B16-380    |
| 12V CC Basso assorbimento / Low consumption            | 0,08 | 090B16-12DCL  |
| 24V CC Basso assorbimento / Low consumption            | 0,08 | 090B16-24DCL  |
| 48V CC Basso assorbimento / Low consumption            | 0,08 | 090B16-48DCL  |
| 110V CC Basso assorbimento / Low consumption           | 0,08 | 090B16-110DCL |

## Caratteristiche ausiliari

### Auxiliary characteristics

| Assorbimento<br>Coil consumption [VA] |                   |                    | Limite tensione bobina<br>Coil operating limit [V] |                       |                      | Tempo di funzionamento<br>Operating time [ms] |                     |
|---------------------------------------|-------------------|--------------------|----------------------------------------------------|-----------------------|----------------------|-----------------------------------------------|---------------------|
| 60Hz<br>(50Hz)                        | Spunto<br>Pick-up | Ritenuta<br>Sealed | Dissipazione<br>Dissipation [W]                    | Attrazione<br>Pick-up | Rilascio<br>Drop-out | Attrazione<br>Pick-up                         | Rilascio<br>Dropout |
| 6-9-12-16                             | 32                | 6                  | 2                                                  | 80÷110%               | 30÷40%               | 10÷20                                         | 4÷15                |
| 6-9-12-16                             | 1.2               | 1.2                | 1.2                                                | 80÷125%               | 10÷30%               | 40÷50                                         | 35÷45               |

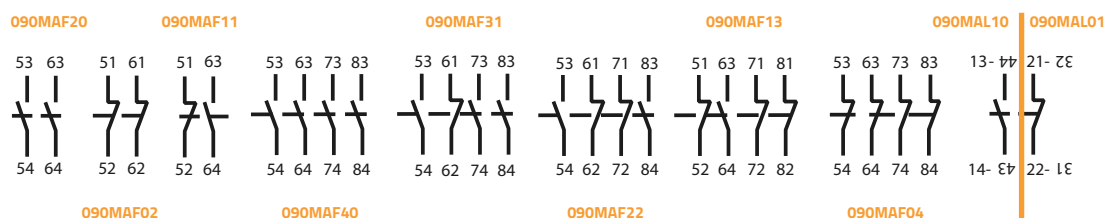
### Caratteristiche elettriche ausiliari relè Auxiliary contact relays electrical characteristics

| Ith    | AC11/AC-15 |         |       |       | DC11/DC13 |      |
|--------|------------|---------|-------|-------|-----------|------|
|        | AC1        | 110V    | 220V  | 550V  | 110V      | 220V |
|        | [A]        | [A]     | [A]   | [A]   | [A]       | [A]  |
| 090R16 | 16         | 0.3/2.5 | 0.3/2 | 0.3/1 | 0.28      | 0.14 |

### Caratteristiche elettriche ausiliari Auxiliary contact electrical characteristics

| Ith       | CORRENTE NOMINALE / NOMINAL CURRENT |      |      |      |      |      |      |      |      | N. manovre/ora<br>Operation per hour | Vita meccanica<br>Mechanical life | Vita elettrica [op x 10.000]<br>Electrical life |
|-----------|-------------------------------------|------|------|------|------|------|------|------|------|--------------------------------------|-----------------------------------|-------------------------------------------------|
|           | AC-1                                | 120V | 240V | 480V | 600V | 125V | 250V | 440V | 600V |                                      |                                   |                                                 |
|           | [A]                                 | [A]  | [A]  | [A]  | [A]  | [A]  | [A]  | [A]  | [A]  |                                      |                                   |                                                 |
| 090MAF... | 16                                  | 6    | 3    | 1.5  | 1.2  | 1.1  | 0.55 | 0.31 | 0.2  | 1800                                 | 1200                              | 100                                             |
| 090MAL... | 16                                  | 6    | 3    | 1.5  | 1.2  | 1.1  | 0.55 | 0.31 | 0.2  | 1800                                 | 1200                              | 100                                             |

### Numerazione contatti ausiliari Auxiliary contacts

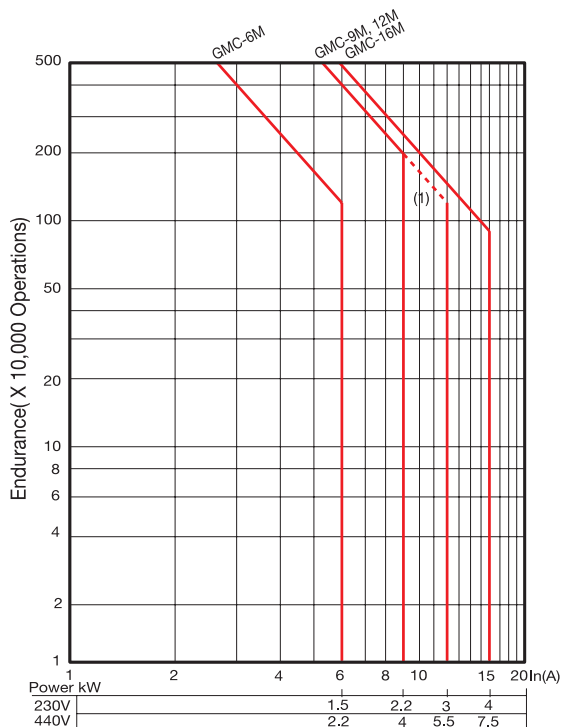


# Caratteristiche generali

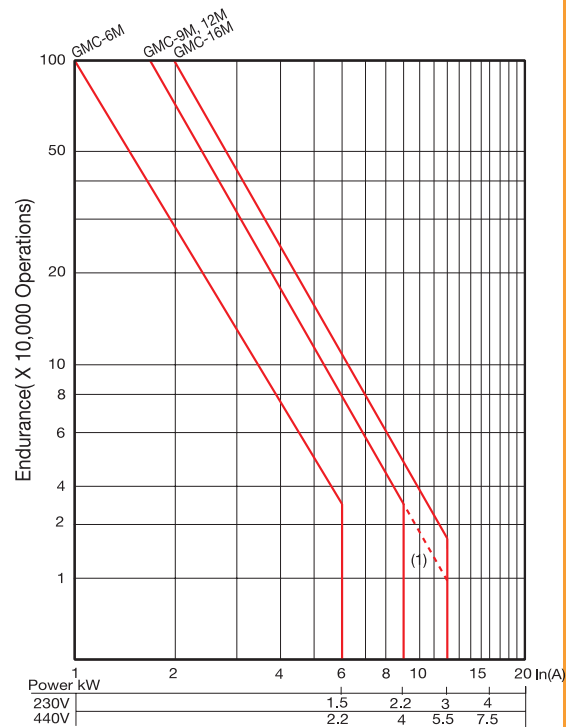
## General characteristics

### Vita elettrica / Electrical life time

#### AC-3 UE 380-440V

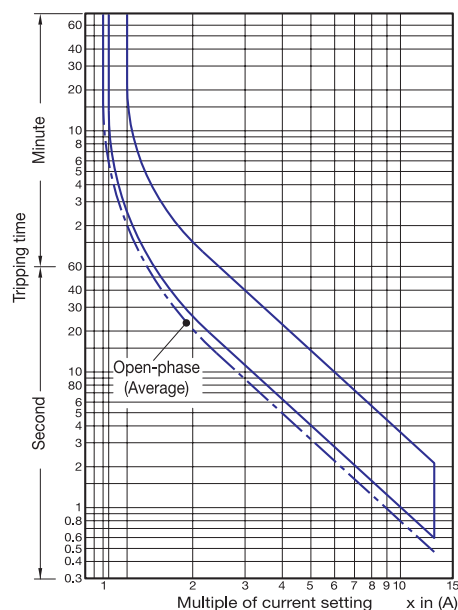


#### AC-4 UE 380-440V

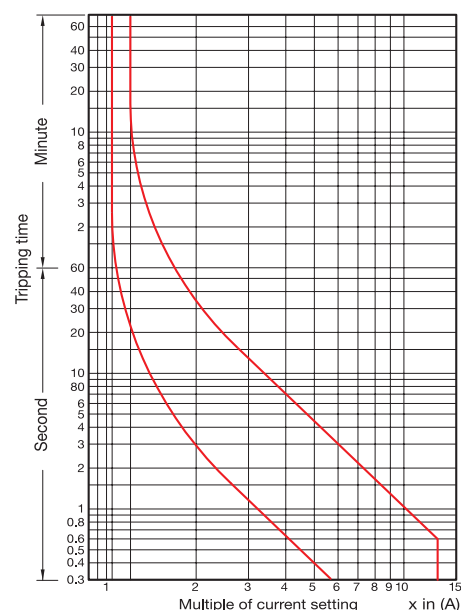


### Curve caratteristiche relè / Relay curve characteristics

#### Avviamento a freddo / Cold start



#### Avviamento a caldo / Warm start



CONTATTORI, RELÈ TERMICI, MINI CONTATTORI, INTERRUTTORI SALVAMOTORE

# Interruttori automatici

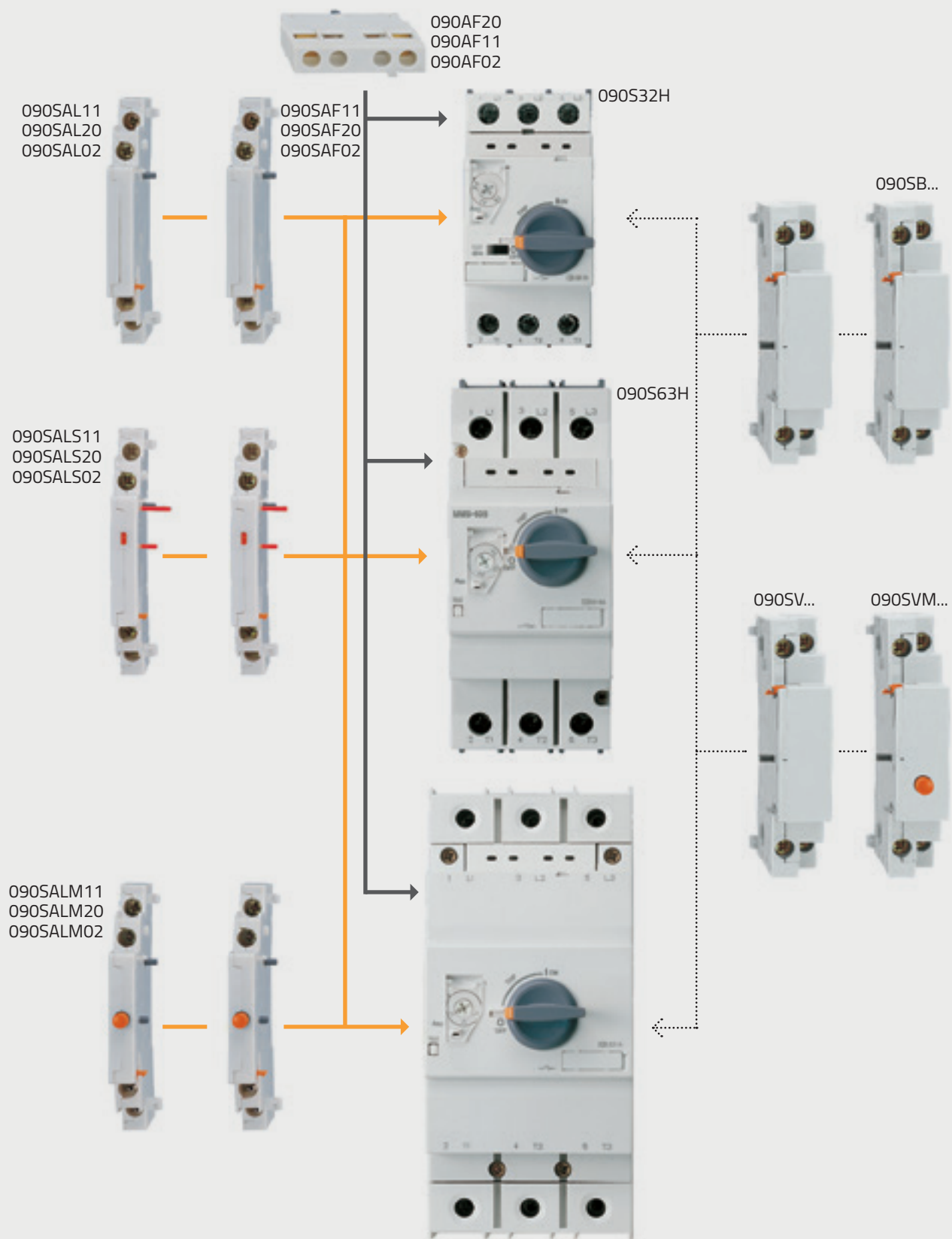
## Manual motor starters





## Lay-out interruttori automatici

### Manual motor starters lay-out



# Caratteristiche generali

## General characteristics

### CARATTERISTICHE GENERALI

|                                    |
|------------------------------------|
| Intervento termico regolabile      |
| Intervento magnetico 13X IE max    |
| Classe d'intervento 10             |
| Compensazione temperatura ambiente |
| Funzioni di protezione:            |
| ▪ mancanza fase                    |
| ▪ corto circuito                   |
| ▪ sovraccarico                     |

### GENERAL CHARACTERISTICS

|                                  |
|----------------------------------|
| Adjustable thermal release       |
| Magnetic release 13X IE max      |
| Trip class 10                    |
| Ambient temperature compensation |
| Protective functions:            |
| ▪ phase failure                  |
| ▪ short circuit                  |
| ▪ over load                      |

### Caratteristiche generali



### General characteristics



|                                       |                                                                   |
|---------------------------------------|-------------------------------------------------------------------|
| Numero di poli                        | 3                                                                 |
| Tensione nominale (UE)                | fino a 690V                                                       |
| Frequenza nominale                    | 50/60 Hz                                                          |
| Tensione nominale di isolamento       | Ui 690V / Uimp. 6kV                                               |
| Categoria d'impiego                   | IEC 60947-2 (interruttore): CAT.A<br>IEC 60947-4 (avviatore): AC3 |
| Durata meccanica                      | S32H 100.000 oper.<br>S63H - S100H 50.000 oper.                   |
| Durata elettrica                      | S32H 100.000 oper.<br>S63H - S100H 25.000 oper.                   |
| Numero di manovre ora                 | 25 oper. / hour                                                   |
| Compensazione temperatura             | -20 ÷ +60 °C                                                      |
| Sgancio istantaneo per corto circuito | 13 x Ie                                                           |

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Number of poles                     | 3                                                                |
| Rated voltage (UE)                  | up to 690V                                                       |
| Rated frequency                     | 50/60 Hz                                                         |
| Rated insulation voltage            | Ui 690V / Uimp. 6kV                                              |
| Utilization category                | IEC 60947-2 (breaker): CAT.A<br>IEC 60947-4 (motor starter): AC3 |
| Mechanical endurance                | S32H 100.000 oper.<br>S63H - S100H 50.000 oper.                  |
| Electrical endurance                | S32H 100.000 oper.<br>S63H - S100H 25.000 oper.                  |
| Max operating frequency             | 25 oper. / hour                                                  |
| Temperature compensation            | -20 ÷ +60 °C                                                     |
| Instantaneous short circuit release | 13 x Ie                                                          |

# Caratteristiche generali

## General characteristics

| Type                      | Rated<br>operational<br>current<br>range [A] | Thermal<br>release<br>adjustment<br>range [A] | Magnetic<br>release<br>operating<br>current [A] | Switching of 3 phase AC motors, AC-2, AC-3 |      |      |                   |      |      | 400/415V |          |
|---------------------------|----------------------------------------------|-----------------------------------------------|-------------------------------------------------|--------------------------------------------|------|------|-------------------|------|------|----------|----------|
|                           |                                              |                                               |                                                 | 3-phase [kW] (50/60Hz)                     |      |      | 3-phase[HP](60Hz) |      |      | Icu [kA] | Ics [kA] |
|                           |                                              |                                               |                                                 | 230V                                       | 400V | 690V | 230V              | 460V | 575V |          |          |
|                           |                                              |                                               |                                                 |                                            |      |      |                   |      |      |          |          |
| SEZIONE 32 / 32 SECTION   | 0.16                                         | 0.1...0.16                                    | 2.1                                             | -                                          | 0.02 | -    | -                 | -    | -    | 100      | 100      |
|                           | 0.25                                         | 0.16...0.25                                   | 3.3                                             | 0.03                                       | 0.06 | -    | -                 | -    | -    | 100      | 100      |
|                           | 0.4                                          | 0.25...0.4                                    | 5.2                                             | 0.06                                       | 0.09 | -    | -                 | -    | -    | 100      | 100      |
|                           | 0.63                                         | 0.4...0.63                                    | 8.2                                             | 0.09                                       | 0.12 | 0.25 | -                 | -    | -    | 100      | 100      |
|                           | 1                                            | 0.63...1.0                                    | 13                                              | 0.12                                       | 0.25 | 0.55 | -                 | 1/2  | 1/2  | 100      | 100      |
|                           | 1.6                                          | 1.0...1.6                                     | 20.8                                            | 0.25                                       | 0.55 | 1.1  | 1/3               | 3/4  | 1    | 100      | 100      |
|                           | 2.5                                          | 1.6...2.5                                     | 32.5                                            | 0.37                                       | 0.75 | 1.5  | 1/2               | 1½   | 1½   | 100      | 100      |
|                           | 4                                            | 2.5...4.0                                     | 52                                              | 0.75                                       | 1.5  | 3    | 1                 | 2    | 3    | 100      | 100      |
|                           | 6                                            | 4...6                                         | 78                                              | 1.5                                        | 2.2  | 4    | 1½                | 5    | 5    | 100      | 100      |
|                           | 8                                            | 5...8                                         | 104                                             | 1.5                                        | 3    | 5.5  | 2                 | 5    | 5    | 100      | 100      |
|                           | 10                                           | 6...10                                        | 130                                             | 3                                          | 4    | 7.5  | 3                 | 7½   | 10   | 100      | 100      |
|                           | 13                                           | 9...13                                        | 169                                             | 3                                          | 5.5  | 11   | 3                 | 7½   | 10   | 100      | 100      |
|                           | 17                                           | 11...17                                       | 221                                             | 4                                          | 7.5  | 11   | 5                 | 10   | 15   | 50       | 38       |
|                           | 22                                           | 14...22                                       | 286                                             | 4                                          | 7.5  | 15   | 7½                | 15   | 20   | 50       | 38       |
|                           | 26                                           | 18...26                                       | 338                                             | 5.5                                        | 11   | 18.5 | 7½                | 15   | 20   | 50       | 38       |
|                           | 32                                           | 22...32                                       | 416                                             | 7.5                                        | 15   | 22   | 10                | 20   | 30   | 50       | 38       |
|                           | 40                                           | 28-40                                         | 520                                             | 7.5                                        | 18.5 | 30   | 15                | 30   | 40   | 40       | 30       |
|                           | 10                                           | 6-10                                          | 130                                             | 3                                          | 4    | 7.5  | 3                 | 7½   | 10   | 100      | 100      |
|                           | 13                                           | 9-13                                          | 169                                             | 3                                          | 5.5  | 11   | 3                 | 7½   | 10   | 100      | 100      |
|                           | 17                                           | 11-17                                         | 221                                             | 4                                          | 7.5  | 11   | 5                 | 10   | 15   | 50       | 50       |
| SEZIONE 63 / 63 SECTION   | 22                                           | 14-22                                         | 286                                             | 4                                          | 7.5  | 15   | 7½                | 15   | 20   | 50       | 50       |
|                           | 26                                           | 18-26                                         | 338                                             | 5.5                                        | 11   | 18.5 | 10                | 20   | 25   | 50       | 50       |
|                           | 32                                           | 22-32                                         | 416                                             | 7.5                                        | 15   | 22   | 10                | 25   | 30   | 50       | 50       |
|                           | 40                                           | 28-40                                         | 520                                             | 7.5                                        | 18.5 | 30   | 15                | 30   | 40   | 50       | 50       |
|                           | 50                                           | 34-50                                         | 650                                             | 11                                         | 22   | 45   | 15                | 40   | 50   | 50       | 50       |
|                           | 63                                           | 45-63                                         | 819                                             | 15                                         | 30   | 55   | 20                | 50   | 60   | 50       | 50       |
|                           | 65                                           | 47-65                                         | 845                                             | 15                                         | 30   | 55   | 20                | 50   | 60   | 35       | 27       |
|                           | 17                                           | 11-17                                         | 221                                             | 4                                          | 7.5  | 11   | 5                 | 10   | 15   | 100      | 100      |
|                           | 22                                           | 14-22                                         | 286                                             | 4                                          | 7.5  | 15   | 7½                | 15   | 20   | 100      | 50       |
|                           | 26                                           | 18-26                                         | 338                                             | 5.5                                        | 11   | 18.5 | 10                | 20   | 25   | 100      | 50       |
|                           | 32                                           | 22-32                                         | 416                                             | 7.5                                        | 15   | 22   | 10                | 25   | 30   | 100      | 50       |
|                           | 40                                           | 28-40                                         | 520                                             | 7.5                                        | 18.5 | 30   | 15                | 30   | 40   | 100      | 50       |
|                           | 50                                           | 34-50                                         | 650                                             | 11                                         | 22   | 45   | 15                | 40   | 50   | 100      | 50       |
|                           | 63                                           | 45-63                                         | 819                                             | 15                                         | 30   | 55   | 20                | 50   | 60   | 100      | 50       |
|                           | 75                                           | 55-75                                         | 975                                             | 22                                         | 37   | 63   | 25                | 60   | 75   | 75       | 50       |
|                           | 90                                           | 70-90                                         | 1170                                            | 30                                         | 45   | 75   | 30                | 75   | 100  | 75       | 50       |
|                           | 100                                          | 80-100                                        | 1300                                            | 30                                         | 45   | 90   | 40                | 75   | 100  | 75       | 50       |
| SEZIONE 100 / 100 SECTION |                                              |                                               |                                                 |                                            |      |      |                   |      |      |          |          |
|                           |                                              |                                               |                                                 |                                            |      |      |                   |      |      |          |          |
|                           |                                              |                                               |                                                 |                                            |      |      |                   |      |      |          |          |
|                           |                                              |                                               |                                                 |                                            |      |      |                   |      |      |          |          |
|                           |                                              |                                               |                                                 |                                            |      |      |                   |      |      |          |          |
|                           |                                              |                                               |                                                 |                                            |      |      |                   |      |      |          |          |
|                           |                                              |                                               |                                                 |                                            |      |      |                   |      |      |          |          |
|                           |                                              |                                               |                                                 |                                            |      |      |                   |      |      |          |          |



|                                               |      |             |
|-----------------------------------------------|------|-------------|
| 0,1-0,16 Taratura / Setting range [A] 100 KA  | 0,36 | 090S32H-016 |
| 0,16-0,25 Taratura / Setting range [A] 100 KA | 0,36 | 090S32H-025 |
| 0,25-0,4 Taratura / Setting range [A] 100 KA  | 0,36 | 090S32H-04  |
| 0,4-0,63 Taratura / Setting range [A] 100 KA  | 0,36 | 090S32H-063 |
| 0,63-1 Taratura / Setting range [A] 100 KA    | 0,36 | 090S32H-01  |
| 1-1,6 Taratura / Setting range [A] 100 KA     | 0,36 | 090S32H-1V6 |
| 1,6-2,5 Taratura / Setting range [A] 100 KA   | 0,36 | 090S32H-2V5 |
| 2,5-4 Taratura / Setting range [A] 100 KA     | 0,36 | 090S32H-4   |
| 4-6 Taratura / Setting range [A] 100 KA       | 0,36 | 090S32H-6   |
| 5-8 Taratura / Setting range [A] 100 KA       | 0,36 | 090S32H-8   |
| 6-10 Taratura / Setting range [A] 100 KA      | 0,36 | 090S32H-10  |
| 9-13 Taratura / Setting range [A] 100 KA      | 0,36 | 090S32H-13  |
| 11-17 Taratura / Setting range [A] 100 KA     | 0,36 | 090S32H-17  |
| 14-22 Taratura / Setting range [A] 50 KA      | 0,36 | 090S32H-22  |
| 18-26 Taratura / Setting range [A] 50 KA      | 0,36 | 090S32H-26  |
| 22-32 Taratura / Setting range [A] 50 KA      | 0,36 | 090S32H-32  |

|                                          |      |            |
|------------------------------------------|------|------------|
| 28-40 Taratura / Setting range [A] 50 KA | 1,00 | 090S63H-40 |
| 34-50 Taratura / Setting range [A] 50 KA | 1,00 | 090S63H-50 |
| 45-63 Taratura / Setting range [A] 50 KA | 1,00 | 090S63H-63 |

|                                            |      |              |
|--------------------------------------------|------|--------------|
| 55-75 Taratura / Setting range [A] 100 KA  | 2,20 | 090S100H-75  |
| 70-90 Taratura / Setting range [A] 100 KA  | 2,20 | 090S100H-90  |
| 80-100 Taratura / Setting range [A] 100 KA | 2,20 | 090S100H-100 |

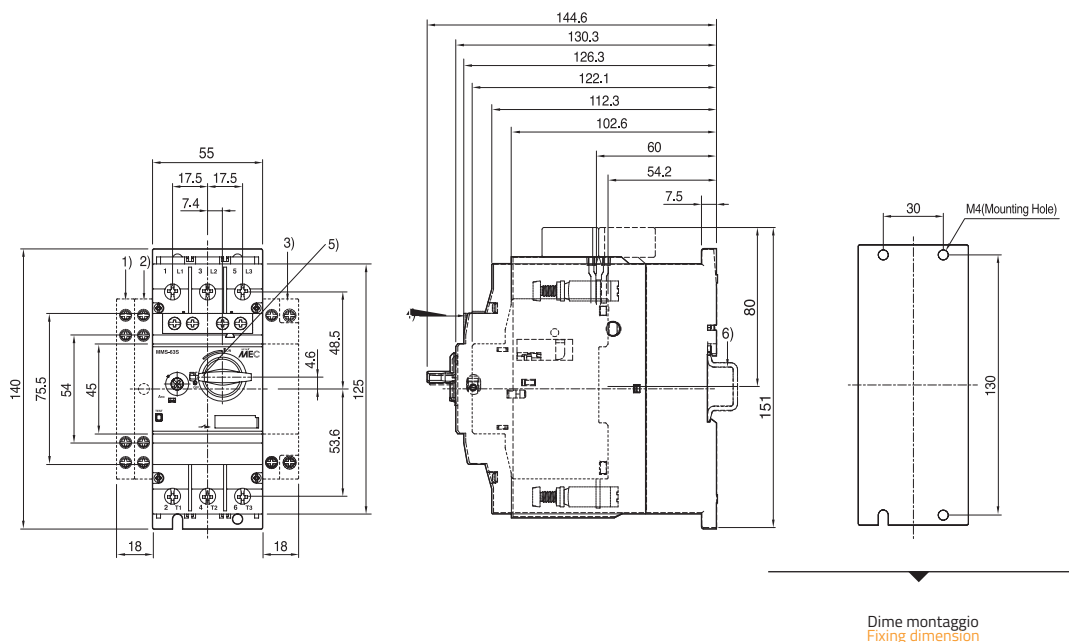
[illegible]

57

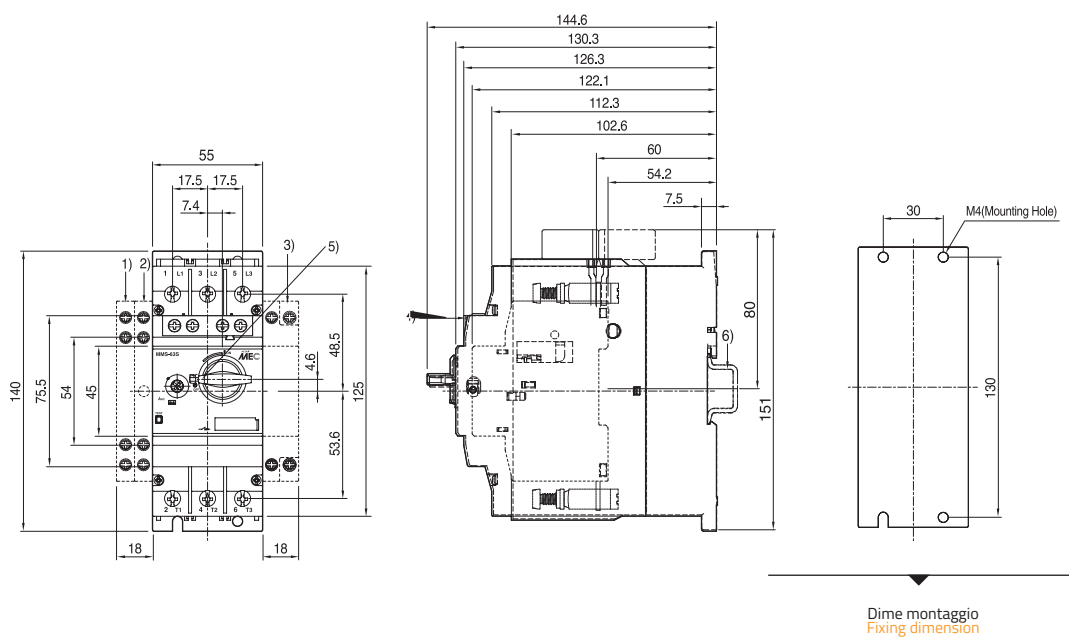
# Sezioni 32-63-100

## 32-63-100 sections

### 63H



### 100H



# Accessori

## Accessories



### Sezioni 32A-63A-100A / 32A-63A-100A Sections

g

cod

#### Contatto ausiliario frontale / Front mounting auxiliary contact

|         |       |                 |
|---------|-------|-----------------|
| 1NO+1NC | 0,018 | <b>090SAF11</b> |
| 2NO     | 0,018 | <b>090SAF20</b> |
| 2NC     | 0,018 | <b>090SAF02</b> |

#### Contatto ausiliario laterale / Side mounting auxiliary contact

|                                                          |       |                 |
|----------------------------------------------------------|-------|-----------------|
| 1NO+1NC Montaggio a sinistra / Side mounting on the left | 0,030 | <b>090SAL11</b> |
| 2NO Montaggio a sinistra / Side mounting on the left     | 0,030 | <b>090SAL20</b> |
| 2NC Montaggio a sinistra / Side mounting on the left     | 0,030 | <b>090SAL02</b> |

#### Contatto ausiliario laterale di segnalazione d'intervento magnetico e/o termico / Side mounting auxiliary contact alarm contact (any trip)

|                                                          |       |                  |
|----------------------------------------------------------|-------|------------------|
| 1NO+1NC Montaggio a sinistra / Side mounting on the left | 0,040 | <b>090SALS11</b> |
| 2NO / Side mounting on the left                          | 0,040 | <b>090SALS20</b> |
| 2NO / Side mounting on the left                          | 0,040 | <b>090SALS02</b> |

#### Contatto ausiliario laterale di segnalazione d'intervento magnetico / Side mounting alarm contact (magnetic trip)

|                                                          |       |                  |
|----------------------------------------------------------|-------|------------------|
| 1NO+1NC Montaggio a sinistra / Side mounting on the left | 0,040 | <b>090SALM11</b> |
| 2NO Montaggio a sinistra / Side mounting on the left     | 0,040 | <b>090SALM20</b> |
| 2NC Montaggio a sinistra / Side mounting on the left     | 0,040 | <b>090SALM02</b> |

# Accessori

## Accessories

### Sezioni 32A-63A-100A / 32A-63A-100A Sections

g

cod



#### Bobina di sgancio a distanza / Shunt release

Montaggio a destra / Side mounting on the right

|                                    |       |                 |
|------------------------------------|-------|-----------------|
| 24V 50HZ / 28V 60 Hz               | 0,110 | <b>090SB24</b>  |
| 110...127V 50HZ / 120V 60 Hz       | 0,110 | <b>090SB110</b> |
| 220...230V 50HZ / 240...260V 60 Hz | 0,110 | <b>090SB230</b> |
| 240V 50HZ / 277V 60 Hz             | 0,110 | <b>090SB240</b> |
| 380...400V 50HZ / 440...480V 60 Hz | 0,110 | <b>090SB400</b> |
| 415...440V 50HZ / 460...480V 60 Hz | 0,110 | <b>090SB440</b> |



#### Bobina di minima tensione / Undervoltage release

Montaggio a destra / Side mounting on the right

|                                    |       |                 |
|------------------------------------|-------|-----------------|
| 24V 50HZ / 28V 60 Hz               | 0,110 | <b>090SV24</b>  |
| 110...127V 50HZ / 120V 60 Hz       | 0,110 | <b>090SV110</b> |
| 220...230V 50HZ / 240...260V 60 Hz | 0,110 | <b>090SV230</b> |
| 240V 50HZ / 277V 60 Hz             | 0,110 | <b>090SV240</b> |
| 380...400V 50HZ / 440...480V 60 Hz | 0,110 | <b>090SV400</b> |
| 415...440V 50HZ / 460...480V 60 Hz | 0,110 | <b>090SV440</b> |



#### Bobina di minima tensione con contatti ausiliari anticipati 2NO / Undervoltage release with switch with 2NO advanced auxiliary contacts

Montaggio a destra / Side mounting on the right

Montaggio solo su interruttore con manopola rotativa / Mounting only rotary handle

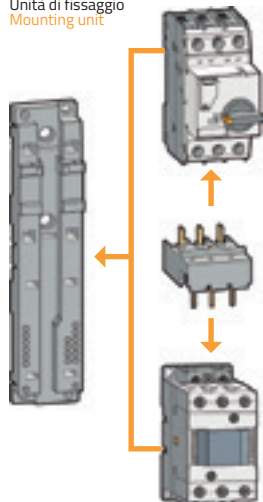
|                                    |       |                  |
|------------------------------------|-------|------------------|
| 24V 50HZ / 28V 60 Hz               | 0,110 | <b>090SVA24</b>  |
| 110...127V 50HZ / 120V 60 Hz       | 0,110 | <b>090SVA110</b> |
| 220...230V 50HZ / 240...260V 60 Hz | 0,110 | <b>090SVA230</b> |
| 240V 50HZ / 277V 60 Hz             | 0,110 | <b>090SVA240</b> |
| 380...400V 50HZ / 440...480V 60 Hz | 0,110 | <b>090SVA400</b> |
| 415...440V 50HZ / 460...480V 60 Hz | 0,110 | <b>090SVA440</b> |

# Combinazione di interruttore automatico e contattore

## Combination manual motor starters and contactors

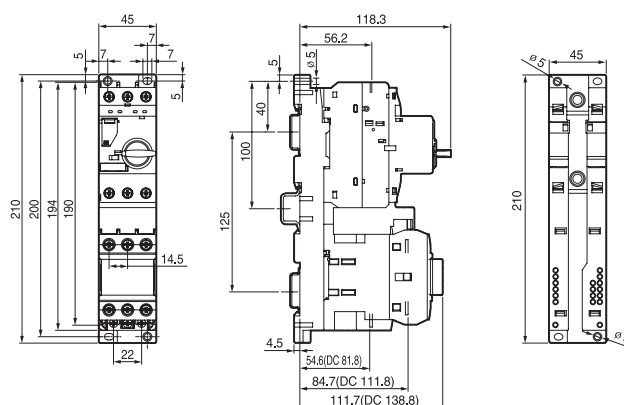
|          | Unità di<br>congiunzione | Unità di<br>fissaggio | Interruttore | Contattore           |
|----------|--------------------------|-----------------------|--------------|----------------------|
| <b>g</b> |                          |                       |              |                      |
| 1        | 090DA-16HA               | 090MU-45              | 090S32H      | 090M3C6-090M3C16     |
| 1        | 090DA-16HD               | 090MU-45              | 090S32H      | 090M3C6DC-090M3C16DC |
| 1,2      | 090DA-22HA               | 090MU-45              | 090S32H      | 090MC9B-090MC22B     |
| 1,2      | 090DA-32HA               | 090MU-45              | 090S32H      | 090MC32A-090MC40A    |
| 2,3      | 090DA-63A                | 090MU-55              | 090S63H      | 090MC65A             |
| 4,6      | 090DA-95A                | 090MU-70              | 090S100H     | 090MC85A-090MC100A   |

Unità di fissaggio  
Mounting unit



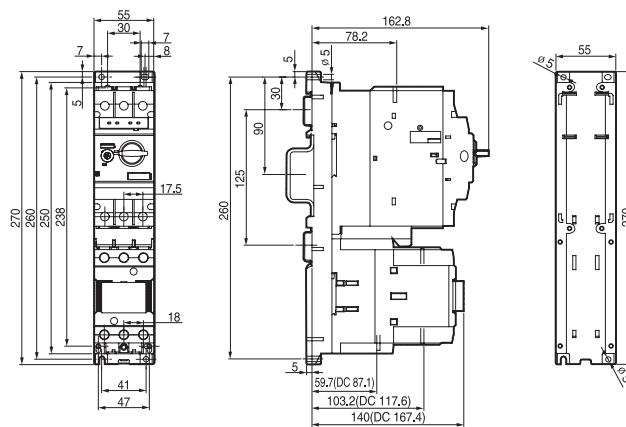
Unità di giunzione  
Connection unit

### 090S32H + 090MC40A





## 090S63H + 090MC65A



## 090S100H + 090MC100A

