



on - off



per trasformare un pensiero
in un'azione serve un dito

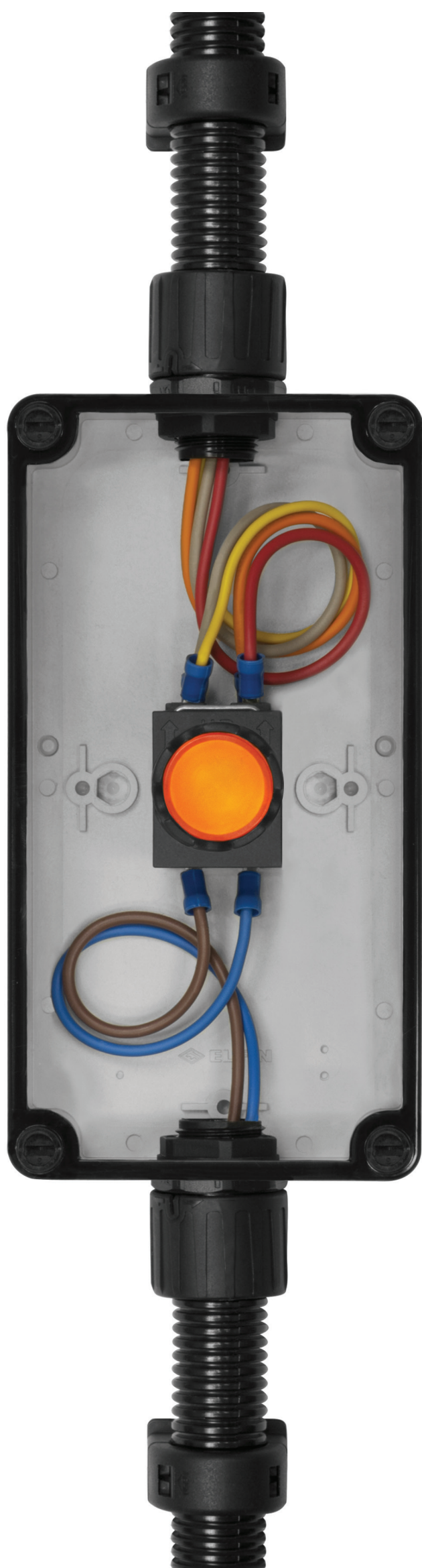
per trasformare un'azione
in un comando serve un dispositivo

noi li chiamiamo
pulsante

to turn a thought into
action you need a finger

to turn an action
into a command you need a device

we call it
push-button



Catalogo generale IV EDIZIONE General catalogue IV EDITION

Benvenuti nella nuova
edizione del catalogo
generale New Elfin.
Vi ricordiamo di visitare
costantemente
il nostro sito
www.newelfin.com

Welcome to the
latest edition of the
New Elfin catalogue.
Visit our website
regularly
www.newelfin.com
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the latest news.

010

016

020

032

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LAMPADINE, PRESSACAVI ED ACCESSORI
LAMPS, CABLE GLANDS AND ACCESSORIES

010

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016

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020

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030

SCATOLE E CASSETTE PULSANTIERE IN METALLO
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040

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

080

SEGNALAZIONE ED ILLUMINAZIONE QUADRI ELETTRICI
CONTROL CABINET SIGNALLING AND LIGHTING

050

DISPOSITIVI DI COMANDO DI SICUREZZA
SAFETY CONTROL DEVICES

060

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

090

NEW ELFIN - COMMAND AND CONTROL

Pulsanteria d'eccellenza Top-class push-buttons



25.000

COMMANDS AND
CONTROLS DAILY
PRODUCED



Made in Italy dal 1967

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

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

Made in Italy since 1967

Design, construction
of equipment, moulding
of raw materials,
automated assemblies,
testing and deliveries.

**COSTANT INVESTMENTS
IN RESEARCH AND
DEVELOPMENT.**

E like Elfin

New Elfin per essere precisi

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

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

New Elfin to be precise

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

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

E

like Elected

Qualità e creatività italiana

**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.

Italian quality & creativity

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

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

E like Energy

Collega pensieri e azioni

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.

Links ideas to actions

SWITCHING ON, CLOSE THE
CIRCUIT, POWERING UP,
STOPPING A MACHINE...
ARE ROUTINE
OPERATIONS.

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

E like Enea

Un uomo che vede lontano

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.

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.

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.

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

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.

We love our push-buttons

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.



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.

Technological innovation and customer service

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 humility to learn from others in order to improve ourselves. Challenging 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
applications...



Puliti,
perché non sempre
l'ambiente lo è.

Clean,
because the environment
needs to be clean...

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.

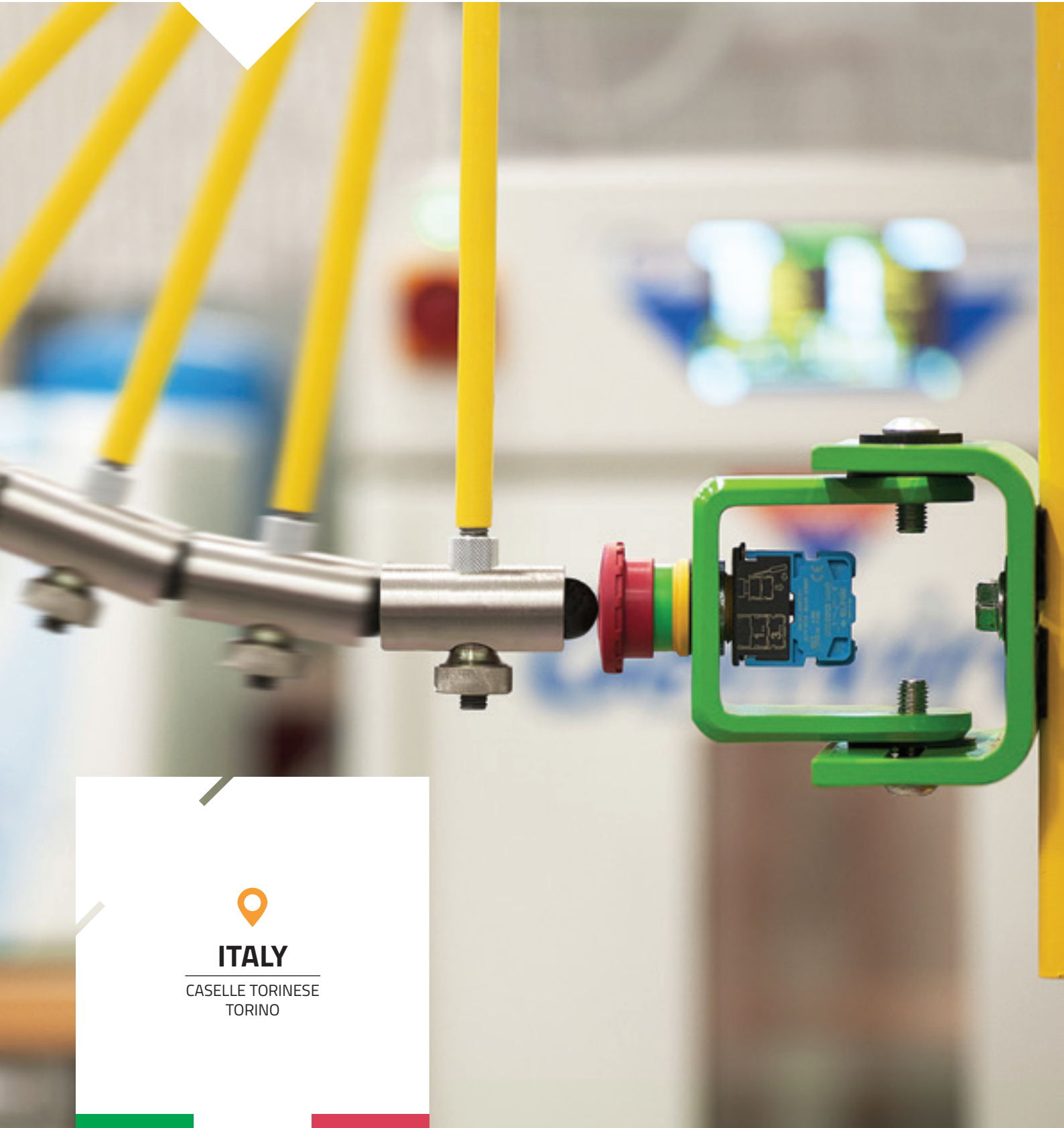
The most simple way to choose commands and controls. The easy and complete catalogue is ready to be discovered on our website **newelfin.com**

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

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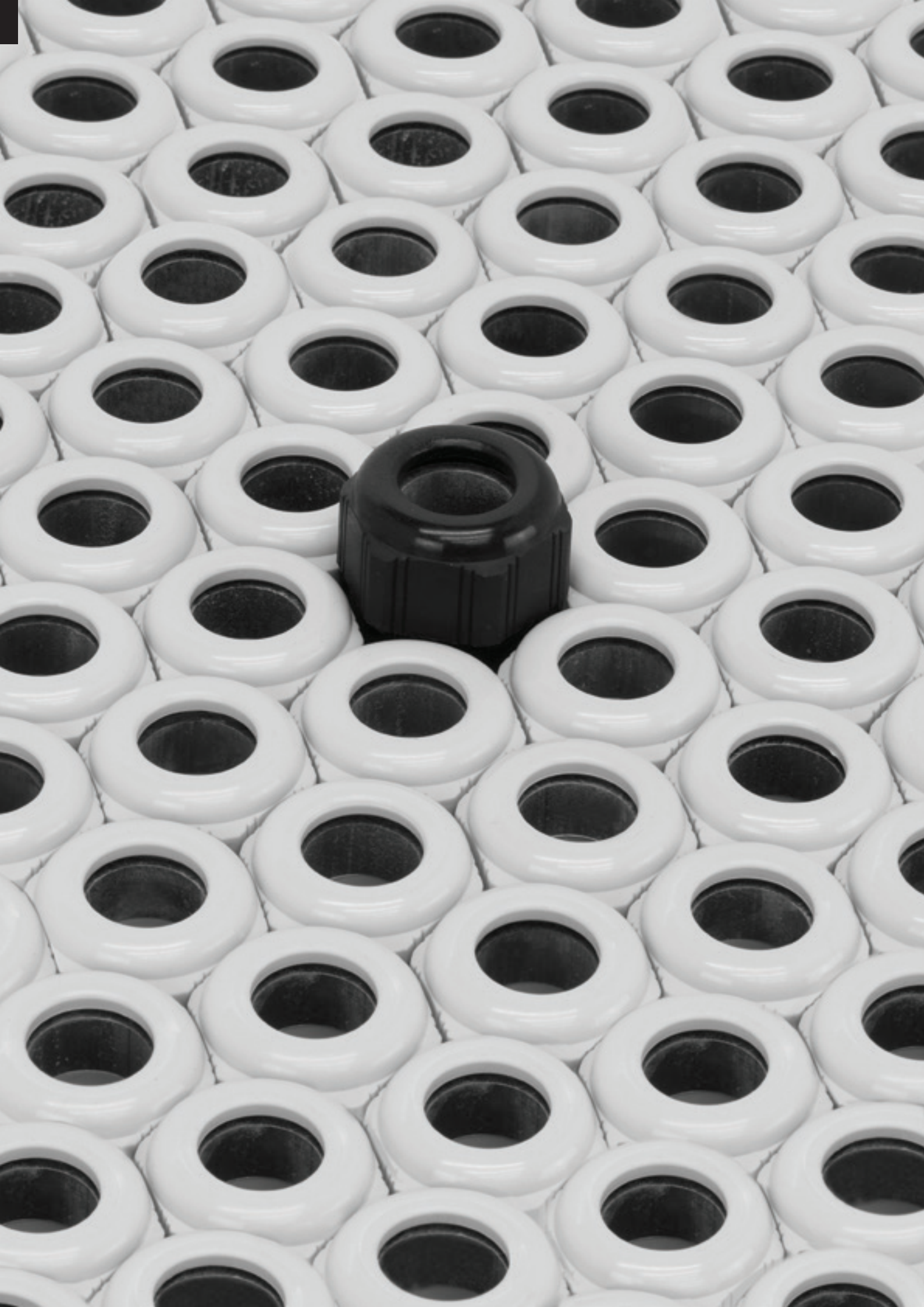


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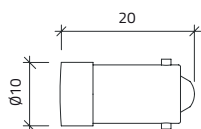
010

**LAMPADINE, PRESSACAVI
ED ACCESSORI**

**LAMPS, CABLE GLANDS AND
ACCESSORIES**

Lampadine Lamps

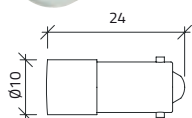
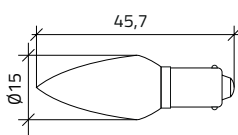
BA9S Led luce fissa BA9S Steady light led lamps



	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

BA9S Led luce fissa BA9S Steady light led lamps



24÷30V AC-DC con Diodo Zener integrato / 24÷30V AC-DC with integrated Zener Diode

○ Bianco / White

g

2

cod

010BA9SZLB30

24V AC-DC

● Rosso / Red

2

010BA9ALR24

● Giallo / Yellow

2

010BA9ALG24

● Verde / Green

2

010BA9ALV24

● Blu / Blue

2

010BA9ALBL24

○ Bianco / White

2

010BA9ALB24

240V AC-DC

● Rosso / Red

2

010BA9ALR220

● Giallo / Yellow

2

010BA9ALG220

● Verde / Green

2

010BA9ALV220

● Blu / Blue

2

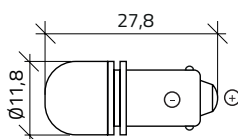
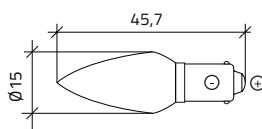
010BA9ALBL220

○ 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 ±15% non polarizzata / Ultra-bright led, voltage ±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

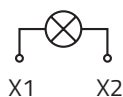
● Rosso / Red

2

010BA9ALLR24

Lampadine Lamps

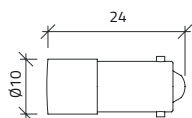
Nuove lampade due colori, tecnologia led alta luminosità New bi-colour led lamp, high brightness



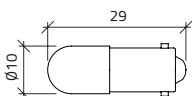
1 = X1+ X2-
2 = X1- X2+

24V DC 15mA

	g	n	cod
● ● Verde, rosso / Green, red	2		010BA9SLVR24
● ● Verde, giallo / Green, yellow	2		010BA9SLVG24
● ● Blu, rosso / Blue, red	2		010BA9SLBLR24
● ● Blu, giallo / Blue, yellow	2		010BA9SLBLG2

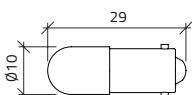


BA9S Lampadine ad incandescenza BA9S Incandescent lamps



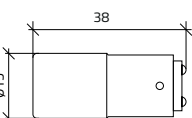
	g	n	cod
6V 0,6W 1,3	10		010BA9S6V-0.6W
24V 1,2 W 1,3	10		010BA9S24V-1.2W
24V 3W 1,3	10		010BA9S24V-3W
30V 1,2W 1,3	10		010BA9S30V-1.2W
30V 3W 1,3	10		010BA9S30V-3W
48V 1,2W 1,3	10		010BA9S48V-1.2W
60V 1,2 W 1,3	10		010BA9S60V-1.2W
60V 3W 1,3	10		010BA9S60V-3W
110V 1,9W 1,3	10		010BA9S130V-1.9
220V 2W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

BA9S Lampadine al neon / BA9S neon lamps



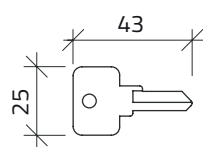
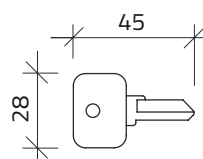
	g	n	cod
Neon AC			
● Arancio / Orange 65V 0,05W 2,3	10		010BA9SN65
● Arancio / Orange 130V 0,1W 2,3	10		010BA9SN110
● Verde / Green 130V 0,1W 2,3	10		010BA9NV110
● Arancio / Orange 240V 0,3W 2,3	10		010BA9SN220
● Verde / Green 240V 0,3W 2,3	10		010BA9NV220
● Arancio / Orange 400V 0,5W 2,3	10		010BA9SN380
● Verde / Green 400V 0,5W 2,3	10		010BA9NV380

BA15D Lampadine led / BA15D led lamps



	g	n	cod
24V AC-DC			
○ Bianco / White 2			010BA15DLB24
230V AC-DC			
○ Bianco / White 2			010BA15DLB220

Chiavi Keys



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

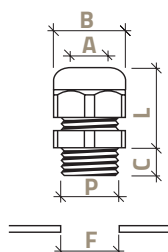
Versione secondo normativa FIAT / Version according to FIAT standards

● 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

Pressacavi in termoplastico

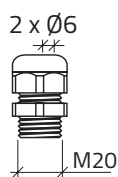
Thermoplastic cable glands

Pressacavi / Cable glands



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

	P	g	F	A	B	C	L	cod
● Nero / Black	M12 x 1,5	4	12,5	3-6,5	15	8	25	010NM12
● Nero / Black	M16 x 1,5	7	16,5	5-10	22	10	32	010NM16
● Nero / Black	M20 x 1,5	11	20,5	6-12	24	10	32	010NM20
● Nero / Black	M20 x 1,5	11	20,5	10-14	27	10	32	010NM20A
● Nero / Black	M25 x 1,5	16	25,5	13-18	33	10	38	010NM25
● Nero / Black	M32 x 1,5	23	32,5	18-25	42	15	43	010NM32
● Nero / Black	PG7	4	12,5	3-6,5	15	8	25	010NPG7
● Nero / Black	PG9	6	15,5	4-8	19	8	27	010NPG9
● Nero / Black	PG11	9	19	5-10	22	8	32	010NPG11
● Nero / Black	PG11	9	19	4-7	22	8	32	010NPG11R
● Nero / Black	PG13,5	11	20,5	6-12	24	10	32	010NPG13
● Nero / Black	PG16	13	22,5	10-14	27	10	32	010NPG16
● Nero / Black	PG21	21	29	13-18	33	12	38	010NPG21
○ Bianco / White	PG29	27	38	18-25	42	11	35-40	010NPG29



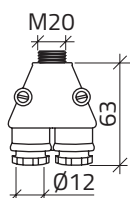
Pressacavo 2 ingressi / 2-hole cable gland

g

cod

10

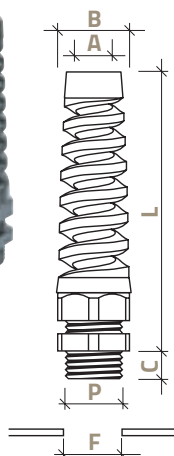
0102P20



Pressacavo 2 vie / Double entry cable gland

45

010N2M20



Pressacavi con spirale / Spiral cable glands

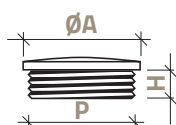
Poliammide PA6 autoestinguente cl. V2 (UL94) - Temperatura di impiego -20°/+90°
V2 (UL94) self-extinguishing PA6 polyamide - Operating temperature -20°/+90°

M12 x 1,5	7	12,5	3-6,5	15	8	58	010FM12
M16 x 1,5	10	16,5	5-10	22	10	83	010FM16
M20 x 1,5	19	20,5	6-12	24	10	96	010FM20
M20 x 1,5	19	20,5	10-14	27	10	96	010FM20A
M25 x 1,5	33	25,5	13-18	33	10	119	010FM25
PG11	16	19	5-10	22	8	83	010FPG11
PG13,5	19	20,5	6-12	24	10	96	010FPG13
PG16	25	22,5	10-14	27	10	106	010FPG16
PG21	25	29	13-18	33	11	119	010FPG21

Tappi, riduzioni e controdadi in termoplastico

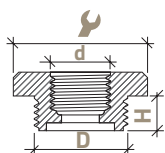
Thermoplastic hole plugs, reducers and locknuts

Tappi di chiusura / Hole plugs

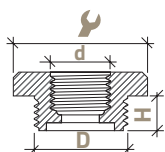


P	ØA	H	g	cod
Polistirene PS - Temperatura di impiego -20°÷+60° PS Polystyrene - Operating temperature -20°÷+60°				
M12 x 1,5	15	10	1	010TM12
M16 x 1,5	19,5	10	2	010TM16
M20 x 1,5	25	10	2,4	010TM20
M25 x 1,5	30	10	4	010TM25
M32 x 1,5	37	10	4,2	010TM32
PG7	15	10	1	010TPG7
PG9	19,5	10	1,5	010TPG9
PG11	22	10	2	010TPG11
PG13,5	25	10	2	010TPG13
PG16	27	10	3	010TPG16
PG21	33	10	4	010TPG21

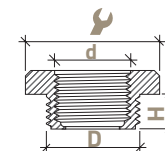
Riduzioni in plastica / Plastic reducers



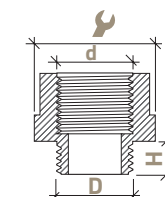
D	d	H	g	cod
M25	M12	10	29	010RM25M12



M25	M16	10	32	9	010RM25M16
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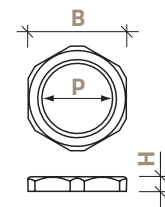


M25	M20	10	32	7,8	010RM25M20
-----	-----	----	----	-----	------------



M20	M25	10	32	6,8	010RM20M25
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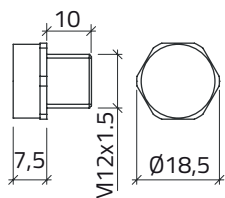
Controdadi / Locknuts



P	B	H	g	n	cod
Poliammide PA6 autoestinguente cl. V2 (UL94) - Temperatura di impiego -20°÷+90° V2 (UL94) self-extinguishing PA6 polyamide - Operating temperature -20°÷+90°					
● Nero / Black	M12 x 1,5	18	5	10	010DM12
● Nero / Black	M16 x 1,5	24	6	1,5	010DM16
● Nero / Black	M20 x 1,5	27	6	2	010DM20
● Nero / Black	M25 x 1,5	34	7	3	010DM25
● Nero / Black	M32 x 1,5	41	7	4	010DM32
● Nero / Black	PG7	19	5	1	010DPG7
● Nero / Black	PG9	22	5	2	010DPG9
● Nero / Black	PG11	24	5	2	010DPG11
● Nero / Black	PG13,5	27	6	2,5	010DPG13
● Nero / Black	PG16	30	6	3	010DPG16
● Nero / Black	PG21	36	7	3,5	010DPG21
○ Bianco / White	PG29	46	7,5	5	010DPG29

Valvole di ventilazione anticondensa

Ventilation plugs (to prevent condensation)



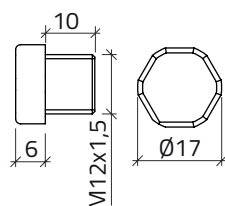
Permeabilità all'aria / Air permeability 2lt./min. $\Delta p = 70\text{mbar}$
 Pressione ingresso acqua / Water inlet pressure max 0,2 bar / 60 s

● Nero / Black

1,5

10

010VV

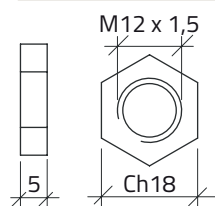


Permeabilità all'aria / Air permeability 0,4lt./min. $\Delta p = 70\text{mbar}$
 Pressione ingresso acqua / Water inlet pressure max 0,6 bar / 60 s

● Grigio / Grey

1,5

010VV400

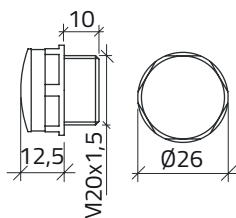


● Nero / Black

0,7

10

010DM12

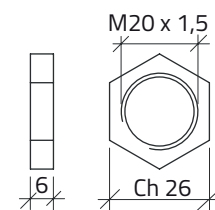


Permeabilità all'aria / Permeability to air 12,5lt./min. $\Delta p = 70\text{mbar}$
 Pressione ingresso acqua / Water inlet pressure max 0,1 bar / 60 s

● Nero / Black

6,0

010VV12500



● Nero / Black

2

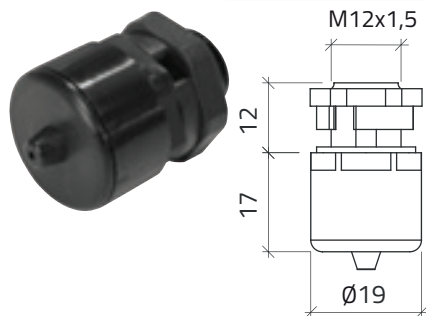
010DM20

Valvole di drenaggio

Drain plugs

Valvola di drenaggio

Drain plugs

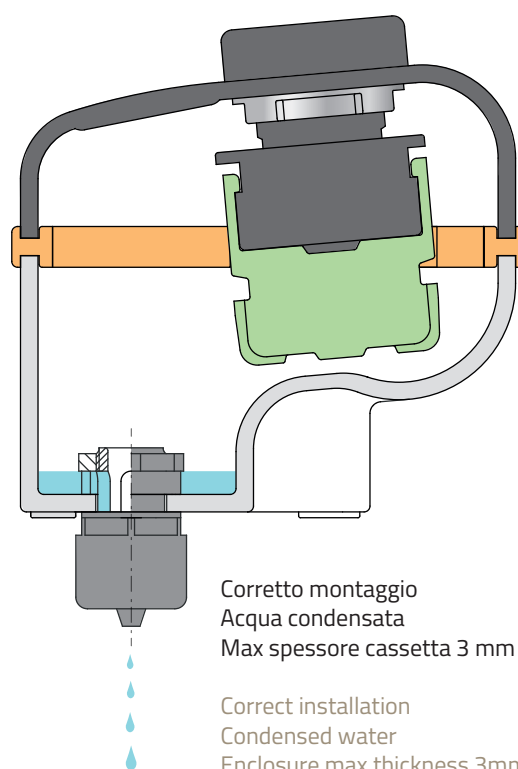


Valvola con dado / Plugs and special lock nut
Poliammide / Polyamide

● Nero / Black

5

010VD



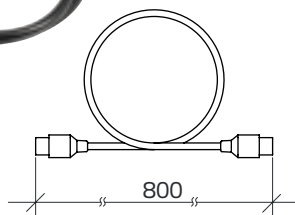
Corretto montaggio
Acqua condensata
Max spessore cassetta 3 mm

Correct installation
Condensed water
Enclosure max thickness 3mm

Cavi USB

USB cables

Cavo mt 0,8
Cable mt 0,8



Tipo M-M (maschio-maschio)
Type M-M (male-male)

● Nero / Black

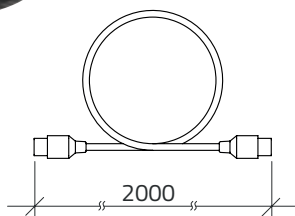
g

cod

37

010CUSBMM8

Cavo mt 2
Cable mt 2



Tipo M-M (maschio-maschio)
Type M-M (male-male)

● Nero / Black

g

cod

77

010CUSBMM20

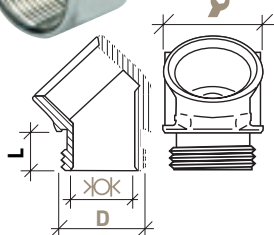
Pressacavi e riduzioni in metallo OTTONE NICHELATO

Metal cable glands and adapters NICKEL-PLATED BRASS



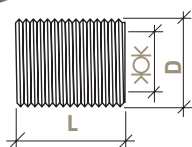
Pressacavi / Cable glands

g	D			L	cod
14	M16x1,5	5 ÷ 9	18	17	010POM16
20	M20x1,5	8 ÷ 12	22	22	010POM20
34	M25x1,5	11 ÷ 16	28	28	010POM25
50	M32x1,5	15 ÷ 21	35	35	010POM32



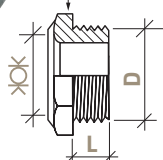
Raccordo a gomito 45° / Elbow fittings to 45°

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



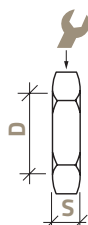
Nippli / Nipples

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



Riduzioni / Adapters

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



Controdadi / Locknuts

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

Accessori per scatole pulsantiere

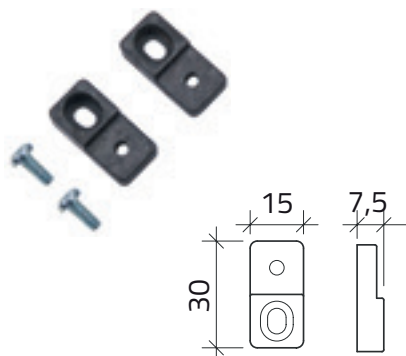
Accessories for push-button enclosures

L g cod

Kit di staffe di fissaggio 10 mm
Set of mounting brackets 10 mm

28

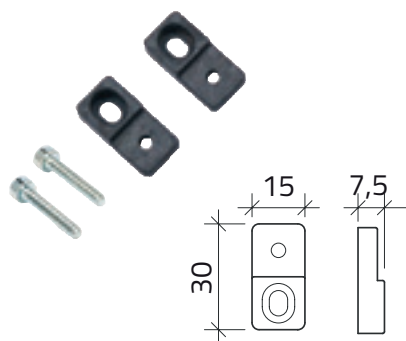
010S10



Kit di staffe di fissaggio 25 mm
Set of mounting brackets 25 mm

32

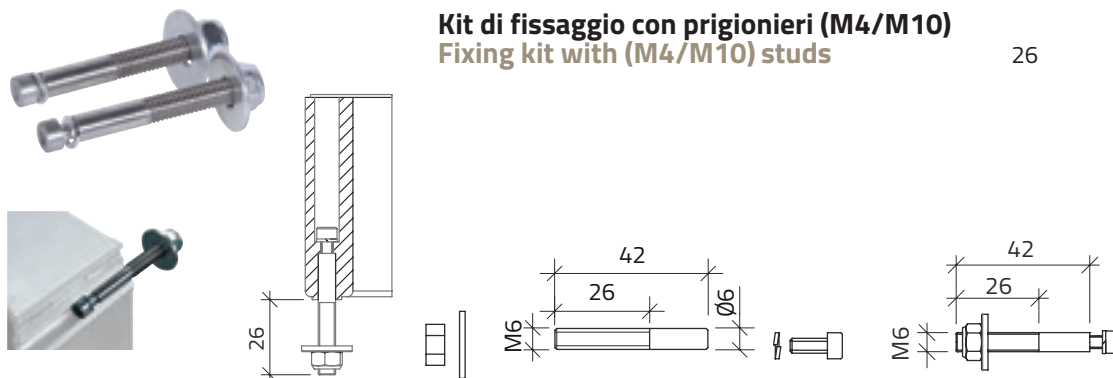
010S25



Kit di fissaggio con prigionieri (M4/M10)
Fixing kit with (M4/M10) studs

26

010SFP

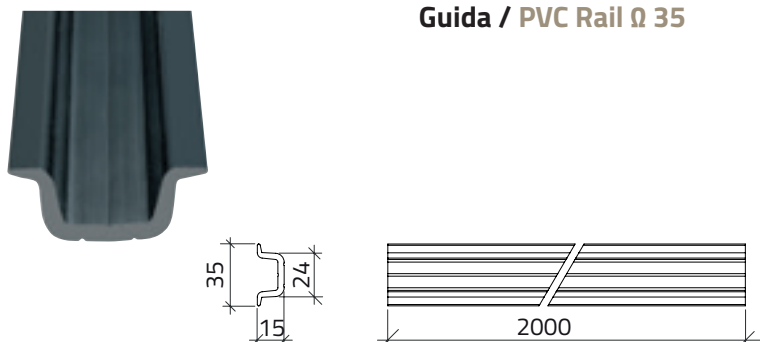


Guida / PVC Rail Ø 35

2000

760

010GDP





Cinghia tracolla / Shoulder belt
25X1400 mm

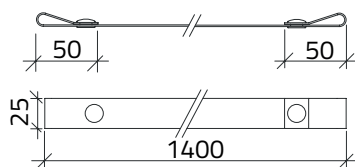
L

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cod

46

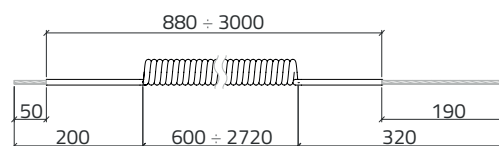
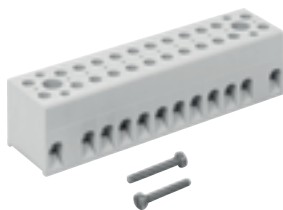
010CT25



Cavo Spiralato / Spiral cable
12x0,5 mm²

700

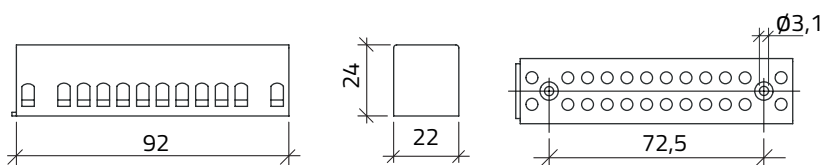
010CSN12X05-4



Morsettiera 12 poli
Terminal block 12 poles

86

010M12





ELFIN
TORINO - ITALY
016 P3P xx
PATENTED

ELFIN
TORINO - ITALY
016 P3P xx
PATENTED

ELFIN
TORINO - ITALY
016 P3P xx
PATENTED

ELFIN
TORINO - ITALY
016 P3P xx
PATENTED

016

**PULSANTI DI ABILITAZIONE
ED ACCESSORI**

**ENABLING SWITCHES
AND ACCESSORIES**

Pulsanti di abilitazione a 3 posizioni Ø16

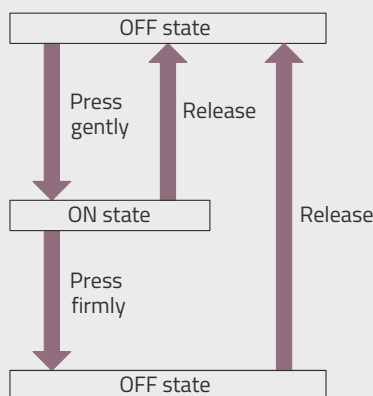
3-position enabling switches Ø16

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.

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.

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



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.

Pulsanti di abilitazione a 3 posizioni Ø16

3-position enabling switches Ø16

Caratteristiche tecniche

Rispondenza alle norme	IEC EN 60947-5-8 / CEI EN 60204-1 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 ⁵ operazioni UNI EN ISO 1349-1 B10d = 100.000 Operazioni
Microinterruttori	Commutazione contatti a scatto rapido a doppia rottura Vn: 250V ac/dc max In: 5A max Ith: 10A Ui: 300V Durata elettrica: 2x10 ⁴ cicli di manovre (250v-5A-cosφ 0,8) Terminali: faston clip 2,8 x 0,5 - T7 a saldare
Omologazioni	UL - CSA (switch)

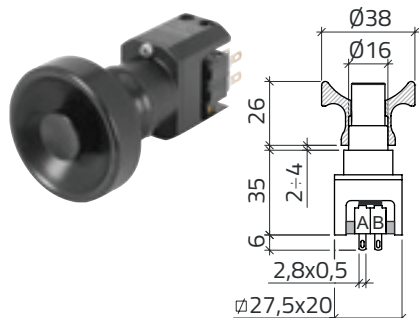
Technical data

Compliance to standards	IEC EN 60947-5-8 / CEI EN 60204-1 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 ⁵ operations UNI EN ISO 1349-1 B10d = 100.000 operations
Microswitches	Snap action double break switch Vn: 250V ac/dc max In: 5A max Ith: 10A Ui: 300V Electrical durability: 2x10 ⁴ operations (250v-5A-cosφ 0,8) 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

Terminali Faston Faston terminals



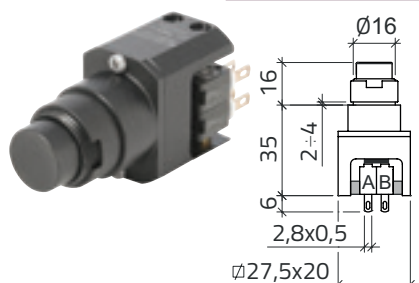
Pulsante 3 posizioni con impugnatura ergonomica 3-position push-button with ergonomic handle

Microinterruttori con terminali faston 2,8 x 0,5
Microswitches with faston terminals 2.8 x 0.5

2NO + 2NC A+B

70

016P3PE22F



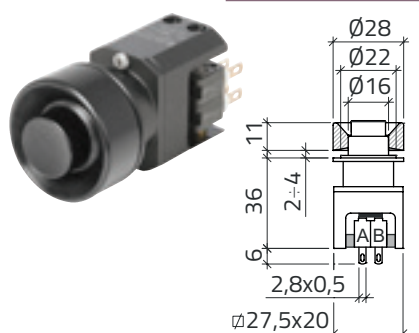
Pulsante 3 posizioni senza guardia 3-position push-button without guard

Microinterruttori con terminali faston 2,8 x 0,5
Microswitches with faston terminals 2.8 x 0.5

2NO + 2NC A+B

44

016P3P22F



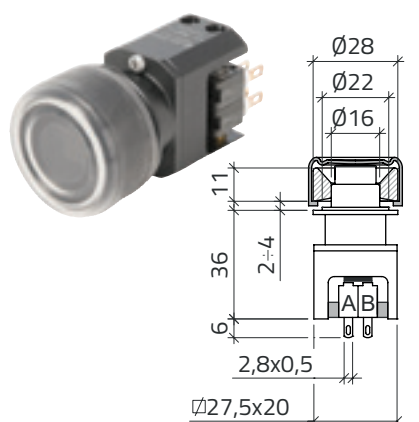
Pulsante 3 posizioni con guardia 3-position push-button with guard

Microinterruttori con terminali faston 2,8 x 0,5
Microswitches with faston terminals 2.8 x 0.5

2NO + 2NC A+B

30

016P3PG22F



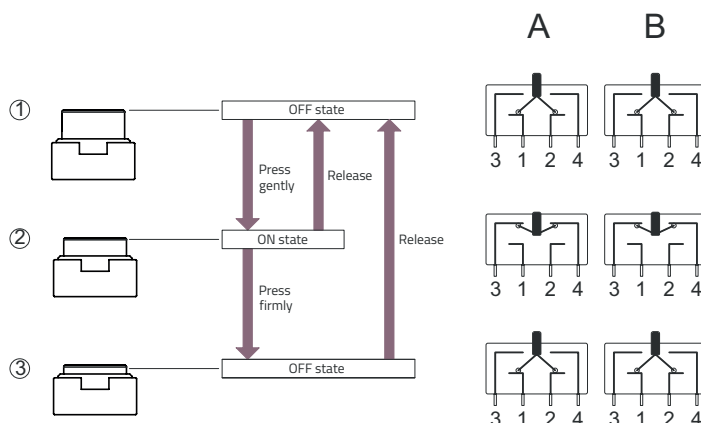
Pulsante 3 posizioni con cappuccio in gomma 3-position push-button with rubber cap

Microinterruttori con terminali faston 2,8 x 0,5
Microswitches with faston terminals 2.8 x 0.5

2NO + 2NC A+B

48

016P3PCG22F



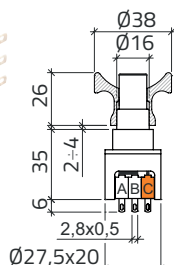
Pulsanti di abilitazione a 3 posizioni Ø16

3-position enabling switches Ø16

Terminali Faston con controllo di posizione
Faston terminals with position control

g

cod



Pulsante 3 posizioni con impugnatura ergonomica

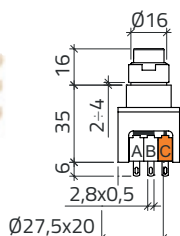
3-position push-button with ergonomic handle

Microinterruttori con terminali faston 2,8 x 0,5
 Microswitches with faston terminals 2.8 x 0.5

3NO + 3NC A+B+C

70

016P3PE33F



Pulsante 3 posizioni senza guardia

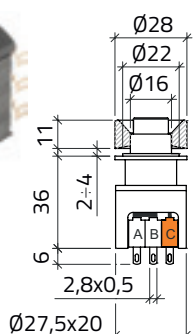
3-position push-button without guard

Microinterruttori con terminali faston 2,8 x 0,5
 Microswitches with faston terminals 2.8 x 0.5

3NO + 3NC A+B+C

70

016P3P33F



Pulsante 3 posizioni con guardia

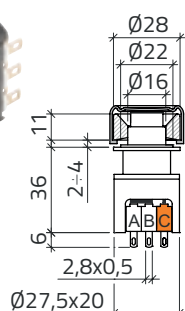
3-position push-button with guard

Microinterruttori con terminali faston 2,8 x 0,5
 Microswitches with faston terminals 2.8 x 0.5

3NO + 3NC A+B+C

70

016P3PG33F



Pulsante 3 posizioni con cappuccio in gomma

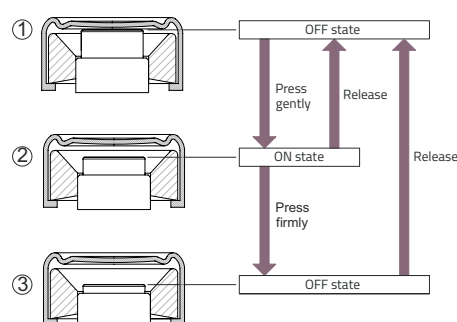
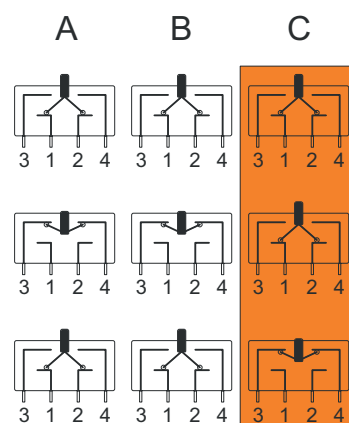
3-position push-button with rubber cap

Microinterruttori con terminali faston 2,8 x 0,5
 Microswitches with faston terminals 2.8 x 0.5

3NO + 3NC A+B+C

49

016P3PG33F



1-2 contatto NC / 3-4 contatto NA
 1-2 NC contact / 3-4 NO contact

www.newelfin.com | 016

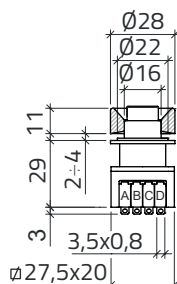
Pulsanti di abilitazione a 3 posizioni Ø16

3-position enabling switches Ø16

Terminali a saldare T7
T7 solder terminals

g

cod

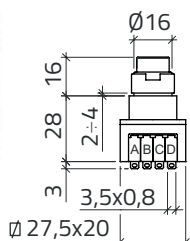


Pulsante 3 posizioni con guardia

3-position guarded push-button

Microinterruttori con terminali T7 a saldare
Microswitches with T7 solder terminals

2NO + 2NC	A+B	42	016P3PG22
3NO + 3NC	A+B+C	44	016P3PG33
4NO + 4NC	A+B+C+D	45	016P3PG44

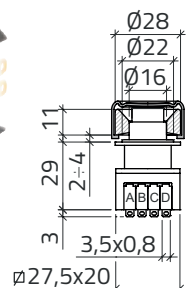


Pulsante 3 posizioni senza guardia

3-position push-button without guard

Microinterruttori con terminali T7 a saldare
Microswitches with T7 solder terminals

2NO + 2NC	A+B	30	016P3P22
3NO + 3NC	A+B+C	31	016P3P33
4NO + 4NC	A+B+C+D	32	016P3P44

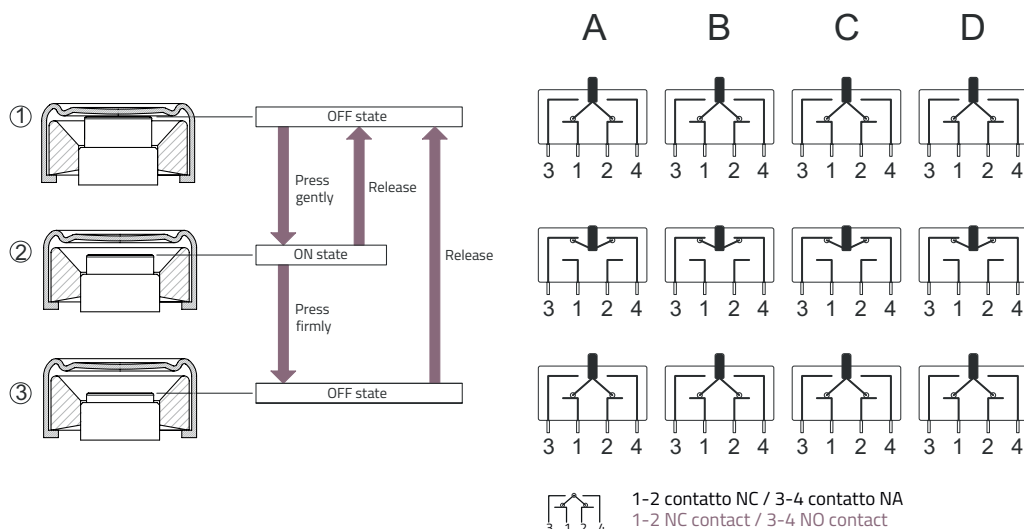


Pulsante 3 posizioni con cappuccio in gomma

3-position push-button with rubber cap

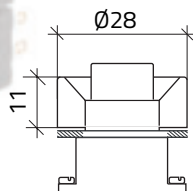
Microinterruttori con terminali T7 a saldare
Microswitches with T7 solder terminals

2NO + 2NC	A+B	46	016P3PCG22
3NO + 3NC	A+B+C	47	016P3PCG33
4NO + 4NC	A+B+C+D	48	016P3PCG44



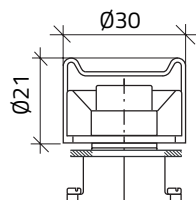
Accessori

Accessories



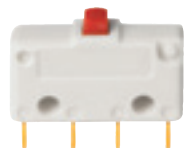
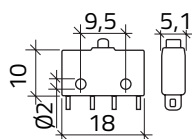
Ghiera di riduzione Ø 22,5/ Ø 16
Reduction ring Ø 22,5 / Ø 16

g	n	cod
12,8		016GP28



Cappuccio in gomma / Rubber cap

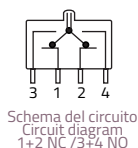
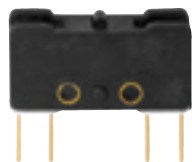
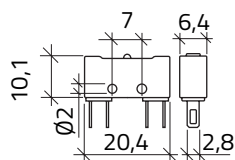
3,5	5	020CGS
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Contatto / Contact block

Microinterruttori con terminali T7 a saldare
Microswitches with T7 solder terminals
1NO + 1 NC

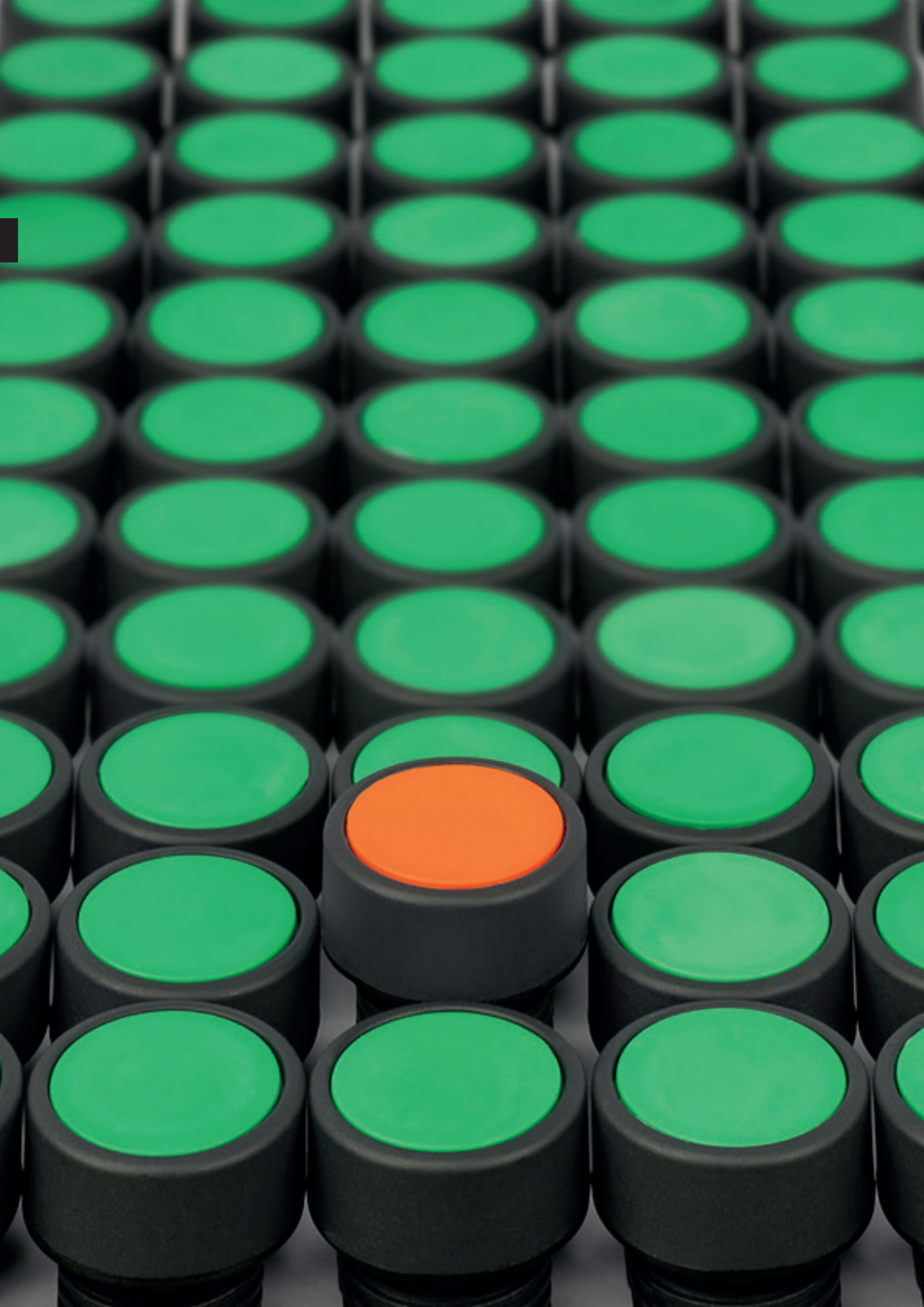
1,3	016E11
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Contatto / Contact

Microinterruttori con terminali faston 2,8 x 0,5
Microswitches with faston terminals 2.8x0-5
1NO + 1 NC faston

1,3	016E11F
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020

**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.

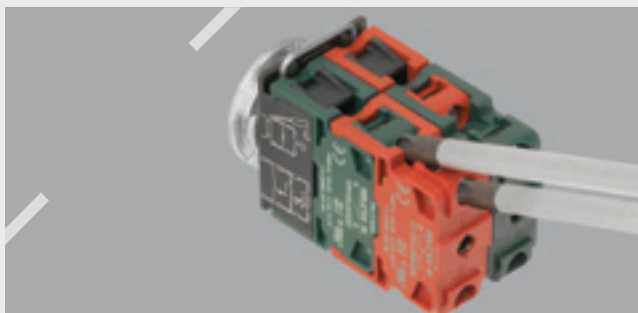
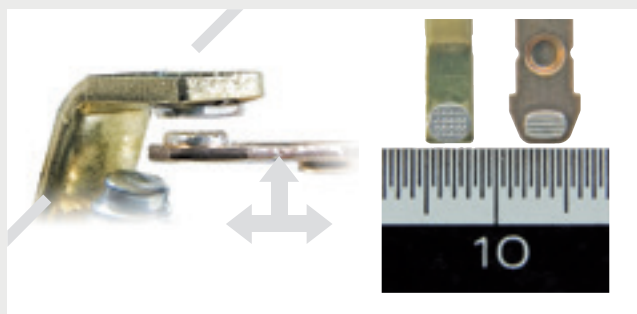
EMERGENCY DEVICES

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

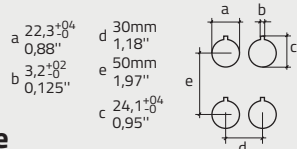


Caratteristiche tecniche

Technical data

Caratteristiche generali

Rispondenza alle norme	UNI CEI EN 45545-2 CEI EN 61373 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	Funzionamento $\geq -40^{\circ}\text{C}$ $\leq +70^{\circ}\text{C}$ Stoccaggio -45°C $+75^{\circ}\text{C}$ Serie con ghiera in metallo Funzionamento : $\geq -25^{\circ}\text{C}$ $\leq +65^{\circ}\text{C}$ Stoccaggio -35°C $+70^{\circ}\text{C}$
Posizione di funzionamento	←→↑↓
Protezione contro scossa elettrica	Classe II secondo IEC 61140
Altitudine d' impiego	$\leq 3.000\text{ m}$
Grado di protezione	IP66 pulsanti normali, luminosi, lampade, selettori. IP68 pulsanti con cappuccio in gomma e manipolatori. Secondo norma EN/IEC 60529 IP69K secondo norma EN/IEC DIN 40050 Serie con ghiera in metallo IP65 pulsanti normali, luminosi, lampade, selettori. IP66 pulsanti con cappuccio in gomma. Secondo norma EN/IEC 60529
Dimensioni di montaggio	Pannelli con spessore 1-6 mm Foratura secondo EN/IEC 60947-5-1

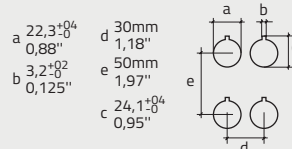


Caratteristiche meccaniche

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: 2÷ 3 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 Capacità di chiusura : ≥ 1 x 0,5 mm / ≤ 2x2,5 mm Capicorda a forcilla "spring spade"
Forze di azionamento	Pulsante con contatto NO: 5N - selettore: 0,15 Nm contatti aggiuntivi NO /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	<div><div><div><div><div></div><div>1mm</div></div><div></div><div>NC</div></div><div><div><div></div><div>3,6mm</div></div><div></div><div>NO</div></div><div><div><div></div><div>2,5mm</div></div><div></div><div>NCR</div></div><div><div><div></div><div>1,9mm</div></div><div></div><div>NOA</div></div></div><div><div><div></div><div>0</div></div><div><div></div><div>1</div></div><div><div></div><div>2</div></div><div><div></div><div>3</div></div><div><div></div><div>4</div></div><div><div></div><div>5</div></div></div><div><div>Normalmente Chiuso</div><div>Normalmente Aperto</div></div></div>
Forza di apertura positiva	Pulsante normale: 5 N Pulsante a fungo: 40 N
Velocità di azionamento	Min. 10 mm / sec Max. 20mm / sec
Durata meccanica	Pulsanti normali, luminosi: 3 milioni di manovre. Selettori, manipolatori: 1 milione di manovre. Emergenza fungo aggancio e stabili: 500.000 manovre
Grado di protezione	Morsetti IP20 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	UNI CEI EN 45545-2 CEI EN 61373 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	Operating $\geq -40^{\circ}\text{C}$ $\leq +70^{\circ}\text{C}$ Storage -45°C $+75^{\circ}\text{C}$ Metal bezel series Operating: $\geq -25^{\circ}\text{C}$ $\leq +65^{\circ}\text{C}$ Storage -35°C $+70^{\circ}\text{C}$
Operating positions	←→↑↓
Electrical shock protection	Class II in compliance with IEC 61140
Operating altitude	$\leq 3.000\text{ m}$
Protection degree	IP66 normal, twin, illuminated push-buttons, lamps, selector switches. IP68 push-buttons with rubber cap and joysticks. In compliance with EN/IEC 60529 IP69K in compliance with EN/IEC DIN 40050 Metal bezel series: IP65 normal, illuminated push buttons, lamps, selector switches . IP66 push-buttons with rubber cap In compliance with EN/IEC 60529
Mounting dimensions	1-6 mm panels. Drilling in compliance with EN/IEC 60947-5-1



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: 2 ÷ 3 Nm. Terminal screws: 0.8-1.0 Nm												
Terminal screws	Combined slot and Phillips Ph2 head, zinc plated or stainless steel for E10AU /E01AU. Connection capacity : ≥1 x 0.5 mm /≤2x2.5 mm 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	<table><tr><td>1mm</td><td>NC</td><td rowspan="4"><div><div></div> Normally Closed</div><div><div></div> Normally Open</div></td></tr><tr><td>3.6mm</td><td>NO</td></tr><tr><td>2.5mm</td><td>NCR</td></tr><tr><td>1.9mm</td><td>NOA</td></tr><tr><td colspan="2"><div><div></div>0<div></div>1<div></div>2<div></div>3<div></div>4<div></div>5</div></td><td></td></tr></table>	1mm	NC	<div><div></div> Normally Closed</div> <div><div></div> Normally Open</div>	3.6mm	NO	2.5mm	NCR	1.9mm	NOA	<div><div></div>0<div></div>1<div></div>2<div></div>3<div></div>4<div></div>5</div>		
1mm	NC	<div><div></div> Normally Closed</div> <div><div></div> Normally Open</div>											
3.6mm	NO												
2.5mm	NCR												
1.9mm	NOA												
<div><div></div>0<div></div>1<div></div>2<div></div>3<div></div>4<div></div>5</div>													
Positive opening force	Normal push-button: 5 N Mushroom push-button: 40 N												
Operating speed lampholder	Min. 10 mm / sec Max. 20mm / sec												
Mechanical life	Normal, illuminated push-buttons: 3 million cycles. Selector switches, joysticks: 1 million cycles. Emergency stop mushroom push-buttons, latching or maintained: 500.000 cycles												
Degree of protection	Terminals IP20 in compliance with IEC60529												
Identification of terminals	1 st digit: assembling order on connection flange 2 nd digit: element contact function 1-2 NC / 3-4 NO												



Caratteristiche tecniche

Technical data

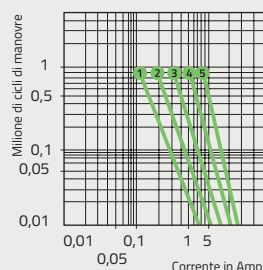
Caratteristiche elettriche

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 gL/gG 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	<table><tr><td colspan="2">Secondo EN/IEC 947-5-1 / UL 508</td></tr><tr><td>Cat AC15 / A600</td><td>Cat.DC13 / P300</td></tr><tr><td>Ue V</td><td>Ie A</td><td>Ue V</td><td>Ie A</td></tr><tr><td>24</td><td>10</td><td>24</td><td>5</td></tr><tr><td>48</td><td>8</td><td>48</td><td>2.7</td></tr><tr><td>60</td><td>6</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></td><td></td></tr><tr><td>400</td><td>1.5</td><td></td><td></td></tr><tr><td>500</td><td>1.5</td><td></td><td></td></tr><tr><td>600</td><td>1.2</td><td></td><td></td></tr></table>	Secondo EN/IEC 947-5-1 / UL 508		Cat AC15 / A600	Cat.DC13 / P300	Ue V	Ie A	Ue V	Ie A	24	10	24	5	48	8	48	2.7	60	6	60	2	110	6	110	1.1	220	3	220	0.55	380	2			400	1.5			500	1.5			600	1.2		
Secondo EN/IEC 947-5-1 / UL 508																																													
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Durata elettrica

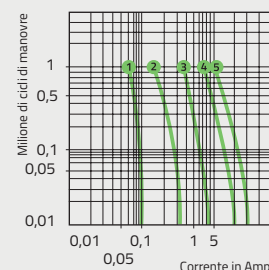
Corrente alternata 50+60 Hz cat AC15

- 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



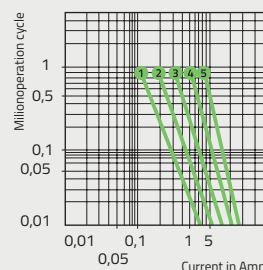
Electrical features

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	<table><tr><td colspan="2">In compliance with EN/IEC 947-5-1 / UL 508</td></tr><tr><td>Cat AC15 / A600</td><td>Cat.DC13 / P300</td></tr><tr><td>Ue V</td><td>Ie A</td><td>Ue V</td><td>Ie A</td></tr><tr><td>24</td><td>10</td><td>24</td><td>5</td></tr><tr><td>48</td><td>8</td><td>48</td><td>2.7</td></tr><tr><td>60</td><td>6</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></td><td></td></tr><tr><td>400</td><td>1.5</td><td></td><td></td></tr><tr><td>500</td><td>1.5</td><td></td><td></td></tr><tr><td>600</td><td>1.2</td><td></td><td></td></tr></table>	In compliance with EN/IEC 947-5-1 / UL 508		Cat AC15 / A600	Cat.DC13 / P300	Ue V	Ie A	Ue V	Ie A	24	10	24	5	48	8	48	2.7	60	6	60	2	110	6	110	1.1	220	3	220	0.55	380	2			400	1.5			500	1.5			600	1.2		
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400	1.5																																												
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Electrical durability

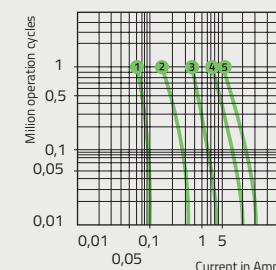
Alternated current 50+60 Hz cat AC15

- 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



Affidabilità elettrica (percentuale di guasto)

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

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

Electrical reliability (failure percentage)

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

Lamp holder 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



Max N°2 CONTATTI
 Selettori luminosi.

Anche per serie ghiera metallica.



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

Anche per serie ghiera metallica.



Max 6 CONTATTI
 Pulsanti a fungo momentanei.

Serie ghiera metallica:
 Pulsanti non luminosi, pulsanti luminosi, pulsanti a fungo momentanei, selettori



Max 8 CONTATTI
 Pulsanti non luminosi, pulsanti luminosi, selettori.

Non applicabile alla serie ghiera metallica.



Max 2 CONTACTS
 Illuminated selector switches.

Also for Metal bezel series.



Max 4 CONTACTS
 Maintained push-buttons, twin push-buttons, joysticks latching emergency push-buttons.

Also for Metal bezel series.



Max 6 CONTACTS
 Momentary mushroom push-buttons.

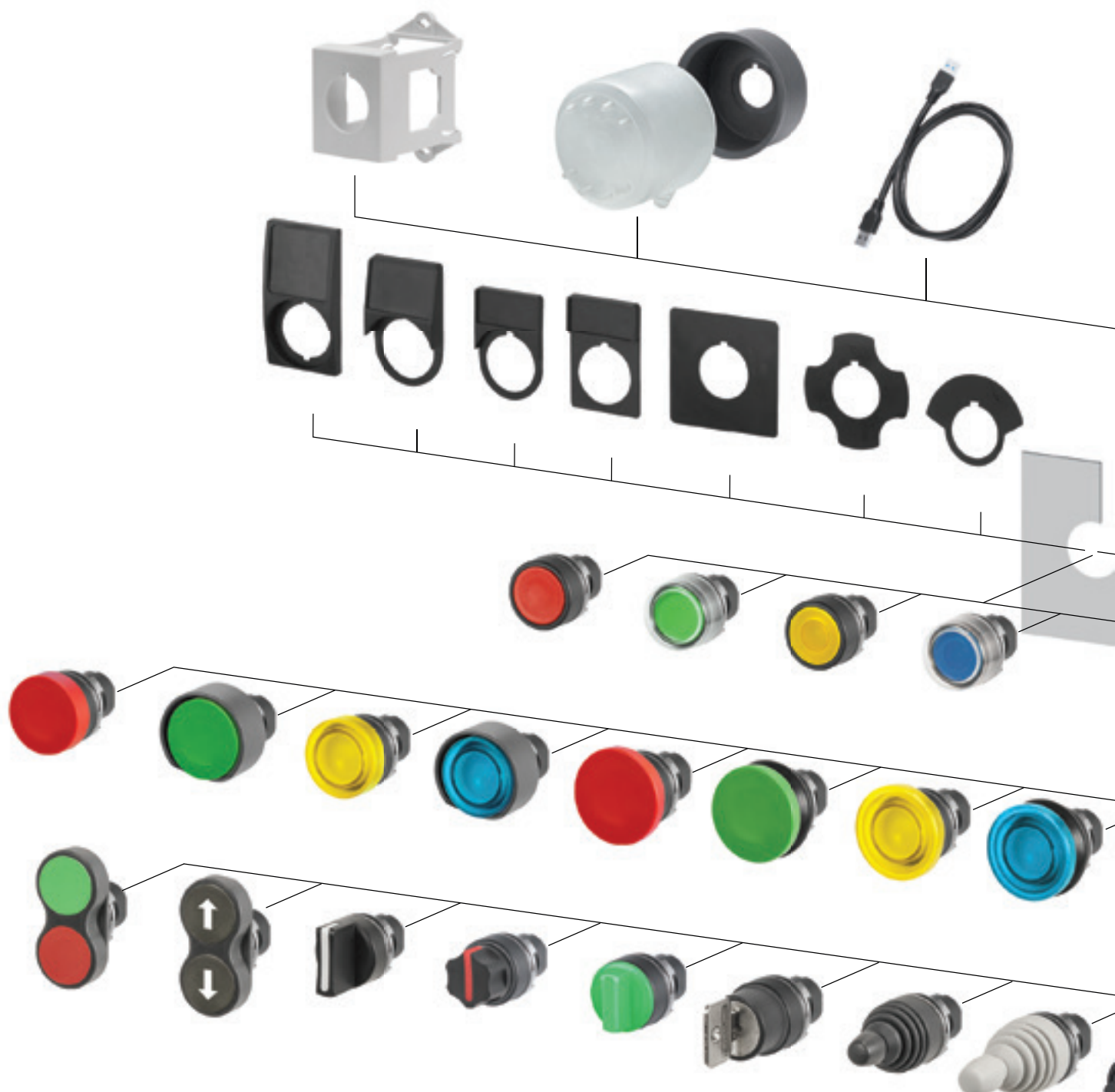
Metal bezel series:
 Non-illuminated push-buttons, momentary mushroom push-buttons, selector switches.



Max 8 CONTACTS
 Non-illuminated push-buttons, illuminated push-buttons, selector switches.

Not applicable to Metal bezel series.







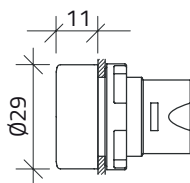
Pulsanti normali Ø22

Normal push-buttons Ø22

Pulsanti normali / Normal push-buttons

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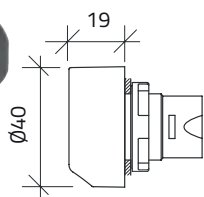
Pulsanti con guardia / Guarded push-buttons

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
● Blu di prussia / Dark blue	19	020PIBP
○ Bianco / White	19	020PIB
● Grigio / Grey	19	020PIGR
● Arancio / Orange	19	020PIA

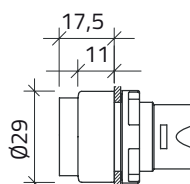
Stabili / Maintained

● 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
● Blu di prussia / Dark blue	30	020PFG3BP
● Grigio / Grey	30	020PFG3GR

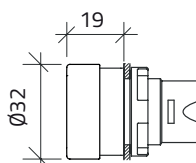


Pulsanti sporgenti / Projecting push-buttons

● 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

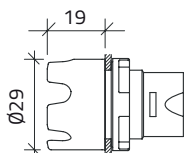
Stabili / Maintained

● 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
● Blu di prussia / Dark blue	24	020PF3BP
● Grigio / Grey	24	020PF3GR



Pulsanti con guardia estesa / Push-buttons with extended guard

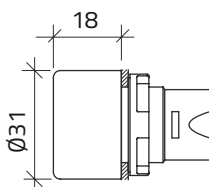
● Nero / Black	23	020PIPN
● Rosso / Red	23	020PIPR

Pulsanti normali Ø22

Normal push-buttons Ø22

Pulsanti con cappuccio in gomma

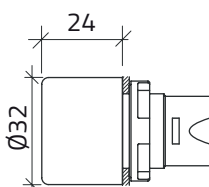
Push-buttons with rubber cap



Pulsanti con guardia

Guarded push-buttons

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● Nero / Black	21	020PICGN
● Rosso / Red	21	020PICGR
● Verde / Green	21	020PICGV
● Giallo / Yellow	21	020PICGG
● Blu / Blue	21	020PICGBL
● Blu di prussia / Dark blue	21	020PICGBP
○ Bianco / White	21	020PICGB
● Grigio / Grey	21	020PICGGR
● Arancio / Orange	21	020PICGA

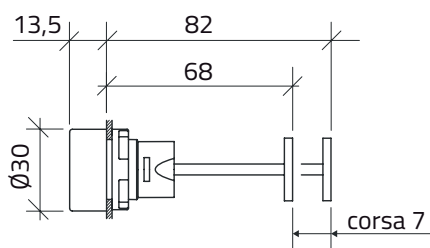


Pulsanti sporgenti

Projecting push-buttons

● Nero / Black	21	020PSCGN
● Rosso / Red	21	020PSCGR
● Verde / Green	21	020PSCGV
● Giallo / Yellow	21	020PSCGG
● Blu / Blue	21	020PSCGBL
○ Bianco / White	21	020PSCGB
● Grigio / Grey	21	020PSCGGR
● Arancio / Orange	21	020PSCGA

Pulsanti di riarmo / Reset push-buttons



● Rosso / Red	31	020RTAIR
● Verde / Green	31	020RTAIV
● Blu / Blue	31	020RTAIBL

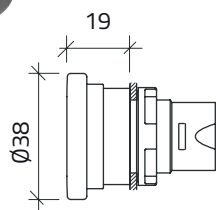
Pulsanti normali Ø22

Normal push-buttons Ø22

Pulsanti a fungo momentanei Momentary mushroom push-buttons

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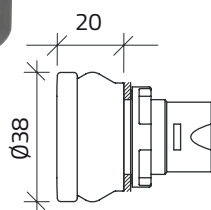


Pulsanti a fungo Ø38 / Mushroom push-buttons Ø40

● Nero / Black	24	020PFN
● Rosso / Red	24	020PFR
● Verde / Green	24	020PFV
● Giallo / Yellow	24	020PFG
● Blu / Blue	24	020PFB
● Blu di prussia / Dark blue	24	020PFBP
● Grigio / Grey	24	020PFG

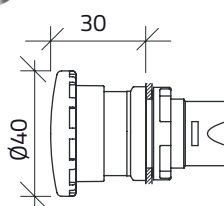
Stabili / Maintained

● Nero / Black	24	020PPFN
● Rosso / Red	24	020PPFR
● Verde / Green	24	020PPFV
● Giallo / Yellow	24	020PPFG



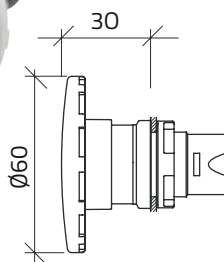
Pulsanti a fungo Ø38 con soffietto Mushroom push-buttons Ø38 with bellows

● Nero / Black	24	020PFSGN
● Rosso / Red	24	020PFSGR
● Verde / Green	24	020PFSGV
● Giallo / Yellow	24	020PFSGG
● Blu / Blue	24	020PFSGBL
● Blu di prussia / Dark blue	24	020PFSGBP
● Grigio / Grey	24	020PFSGGR



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
● Verde / Green	36	020PTFFV

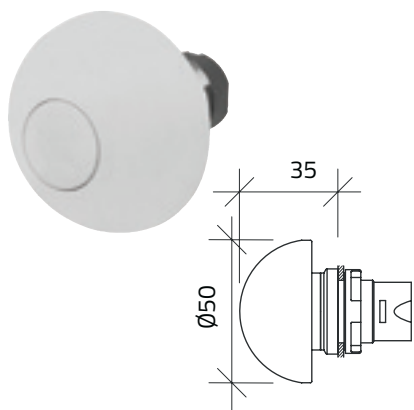
Pulsanti normali Ø22

Normal push-buttons Ø22

Pulsanti a fungo momentanei Momentary mushroom push-buttons

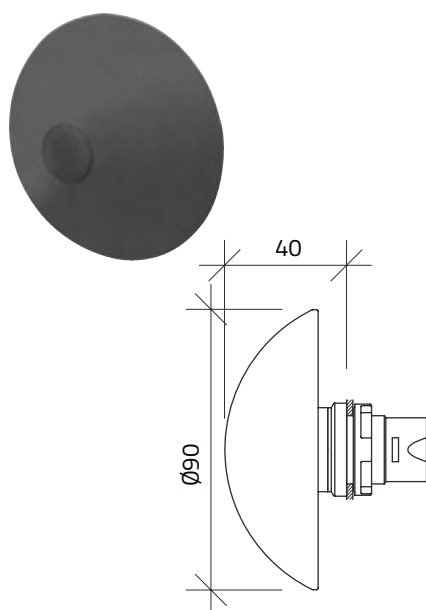
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Pulsanti a fungo sferico Ø50 / Palm push-buttons Ø50

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



Pulsanti a fungo sferico Ø90 / Palm push-buttons Ø90

● Nero / Black	55	020PTF9MN
● Giallo / Yellow	55	020PTF9MG
● Grigio / Grey	55	020PTF9MGR

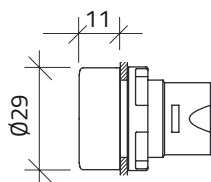
Pulsanti luminosi Ø22

Illuminated push-buttons Ø22

Pulsanti luminosi Illuminated push-buttons

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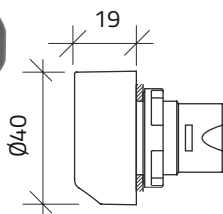
Pulsanti con guardia / Guarded push-buttons

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

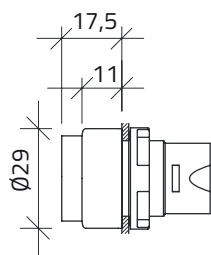
Stabili / Maintained

● Rosso / Red	19	020PPLIR
● Verde / Green	19	020PPLIV
● Giallo / Yellow	19	020PPLIG
● Blu / Blue	19	020PPLIBL
○ Bianco / White	19	020PPLIB



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

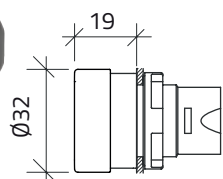


Pulsanti sporgenti / Projecting push-buttons

● 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
○ Trasparente / Clear	22	020PPLSI



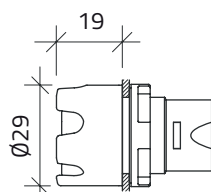
Pulsanti sporgenti Ø32 / Projecting push-buttons Ø32

● 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

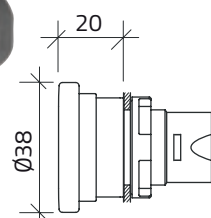
Per marcatura consultare pag. 50 / For marking see page 50

● 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
○ Trasparente / Clear	23	020PPLPI

Pulsanti luminosi a fungo Illuminated mushroom push-buttons

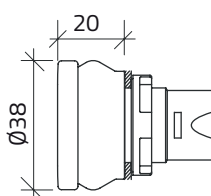


Pulsanti a fungo Ø38 / Mushroom push-buttons Ø40

● 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 Ø38 con soffiETTO Mushroom push-buttons Ø30 with bellows

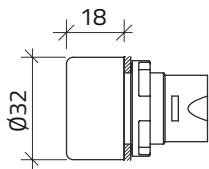
● Rosso / Red	29	020PFLSGR
● Verde / Green	29	020PFLSGV
● Giallo / Yellow	29	020PFLSGG
● Blu / Blue	29	020PFLSGBL
○ Trasparente / Clear	29	020PFLSGI

Pulsanti luminosi Ø22

Illuminated push-buttons Ø22

Pulsanti luminosi con cappuccio in gomma

Illuminated push-buttons with rubber cap

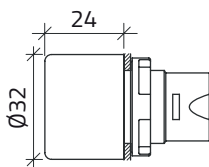


Pulsanti con guardia / Guarded push-buttons

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

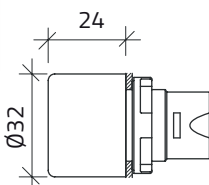
Stabili / Maintained

● Rosso / Red	21	020PPLICGR
● Verde / Green	21	020PPLICGV
● Giallo / Yellow	21	020PPLICGG
● Blu / Blue	21	020PPLICGBL



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
● Arancio / Orange	23	020PLPCGA
○ Trasparente / Clear	23	020PLPCGI



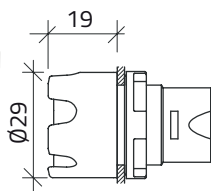
Pulsanti sporgenti / Projecting push-buttons

● 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 componibili Ø22

Modular push-buttons Ø22

Pulsanti componibili Modular push-buttons



Pulsante con guardia / Guarded push-button

g

cod

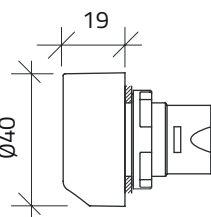
22

020PLP

Stabile / Maintained

22

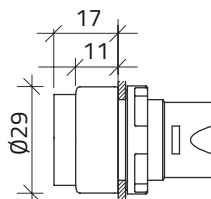
020PPLP



Pulsante con guardia / Guarded push-button

28

020PFLG3



Pulsante sporgente / Projecting push-button

20

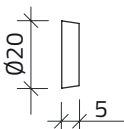
020PLS

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

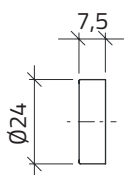
cod

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

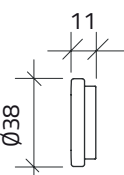
020BPLA

○ 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

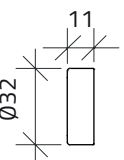
020BFLG

○ 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 non luminosi Ø22

Non-illuminated emergency stop push-buttons Ø 22

Momentanei / Momentary

g

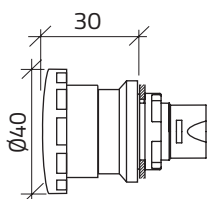
cod

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

● Rosso / Red

32

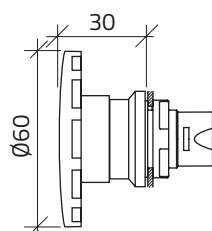
020PTFR

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

● Rosso / Red

36

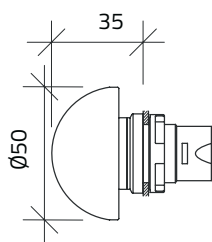
020PTFFR

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

● Rosso / Red

38

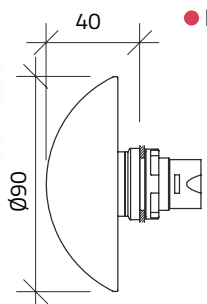
020PTF5MR

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

● Rosso / Red

55

020PTF9MR



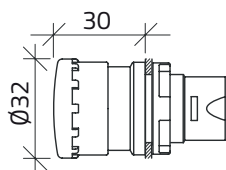
Pulsanti d'emergenza non luminosi Ø22

Non-illuminated emergency stop push-buttons Ø 22

Pulsanti a fungo ad aggancio Latching mushroom push-buttons

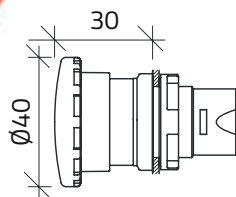
g

cod



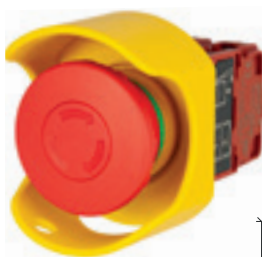
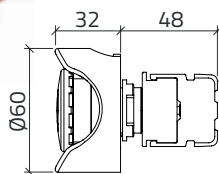
Pulsanti a fungo Ø 32, sgancio rotazione Mushroom push-button Ø 32, twist release

● Rosso / Red	30	020PTAR
● Nero / Black	30	020PTAN
● Giallo / Yellow	30	020PTAG



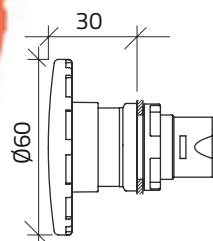
Pulsanti a fungo Ø 40, sgancio rotazione Mushroom push-button Ø 40, twist release

● Rosso / Red	35	020PTFAR
● Nero / Black	35	020PTFAN
● Giallo / Yellow	30	020PTFAG



Pulsanti a fungo Ø 40, sgancio rotazione, ghiera lucchettabile Mushroom push-button Ø 40, twist release, padlockable guard

● Rosso / Red	36	020PTFARP02
---------------	----	--------------------



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

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

Pulsanti d' emergenza non luminosi Ø22

Non-illuminated emergency stop push-buttons Ø 22

Pulsanti a fungo ad aggancio Latching mushroom push-buttons

g

cod

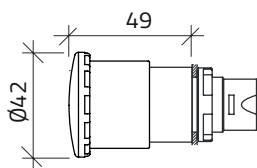


Pulsante a fungo Ø 42, sgancio rotazione Mushroom push-button Ø 42, twist release

● Rosso / Red

55

020PTFASRV

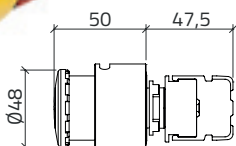


Pulsante a fungo Ø 42, sgancio rotazione, ghiera lucchettabile telescopica Mushroom push-button Ø 42, twist release, telescopic padlockable guard

● Rosso / Red

106

020PTFASRVPO2



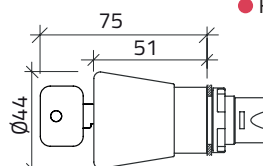
Pulsante a fungo Ø 44, sgancio a chiave Mushroom push-button Ø 44, key release

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

● Rosso / Red

55

020PTHCSRK

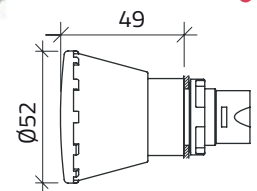
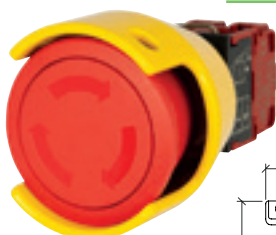


Pulsante a fungo Ø 52, sgancio rotazione Mushroom push-button Ø 52, twist release

● Rosso / Red

55

020PTAASRK

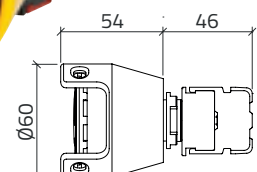


Pulsante a fungo Ø 52, sgancio rotazione, ghiera lucchettabile Mushroom push-button Ø 52, twist release, padlockable guard

● Rosso / Red

74

020PTAASRKPO2

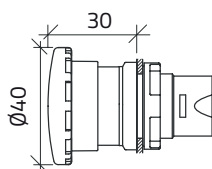


Pulsanti d'emergenza non luminosi Ø22

Non-illuminated emergency stop push-buttons Ø 22

Pulsanti a fungo ad aggancio

Latching mushroom push-buttons



Pulsante a fungo Ø 40, sgancio trazione

Mushroom push-button Ø 40, pull release

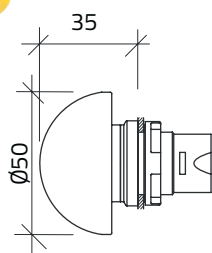
● Rosso / Red

g

cod

35

020PTFPTR



Pulsante a fungo sferico Ø 50, sgancio trazione

Palm push-button Ø 50, pull release

● Rosso / Red

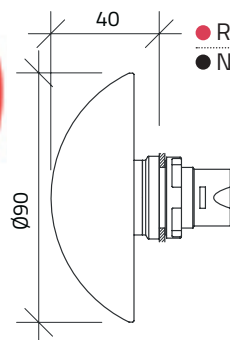
● Nero / Black

38

020PTF5PTR

38

020PTF5PTN



Pulsante a fungo sferico Ø 90, sgancio trazione

Palm push-button Ø 90, pull release

● Rosso / Red

● Nero / Black

55

020PTF9PTR

55

020PTF9PTN

Pulsanti d' emergenza luminosi Ø22

Illuminated emergency stop push-buttons Ø 22

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

g

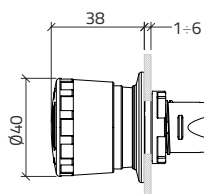
cod

Pulsante luminoso a fungo Ø 40, sgancio rotazione-trazione
Illuminated mushroom push-button Ø 40, twist-pull release

● Rosso / Red

36

020PTFALR



Pulsanti d' emergenza luminosi Ø22

Illuminated emergency stop push-buttons Ø 22

Pulsante a fungo Ø 40, sgancio rotazione-trazione, con disco
Mushroom push-button Ø 40, twist-pull release, yellow disc

g

cod

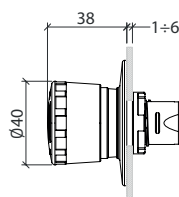


Pulsante a fungo Ø 42, sgancio rotazione-trazione,
disco giallo Ø 45
Illuminated mushroom push-button Ø 40, twist-pull release,
yellow disc Ø 45

● Rosso / Red

42

020PTFALR4

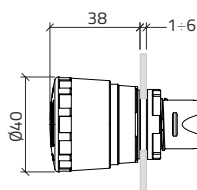


Pulsante a fungo Ø 42, sgancio rotazione-trazione,
disco giallo Ø 60
Illuminated mushroom push-button Ø 40, twist-pull release,
yellow disc Ø 60

● Rosso / Red

44

020PTFALR6



Pulsanti doppi Ø22

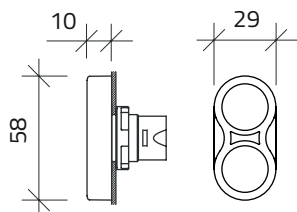
Twin push-buttons Ø22

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



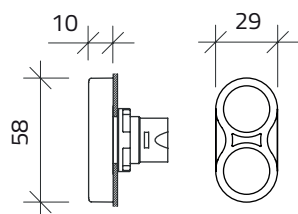
76

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. 58 / For spare parts, see accessory on page. 58

Lampada spia monoblocco BA9S

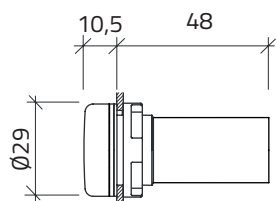
Monolithic pilot lights BA9S



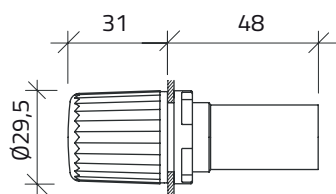
Alimentazione diretta / Direct supply

~ IP 67 - BA9S 380V.

3W max esclusa / excluded

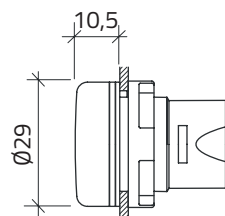


● Rosso / Red	18	5	020LMR
● Verde / Green	18	5	020LMV
● Giallo / Yellow	18	5	020LMG
● Blu / Blue	18	5	020LMBL
○ Bianco / White	18	5	020LMB
○ Trasparente / Clear	18	5	020LMI
● Arancio / Orange	18	5	020LMA

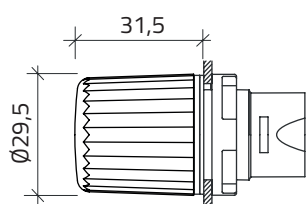


● Rosso / Red	22	5	020LMAR
● Verde / Green	22	5	020LMAV
● Giallo / Yellow	22	5	020LMAG
● Blu / Blue	22	5	020LMABL
○ Bianco / White	22	5	020LMAB
○ Trasparente / Clear	22	5	020LMAI
● Arancio / Orange	22	5	020LMAA

Lampada spia modulare / Modular pilot lights

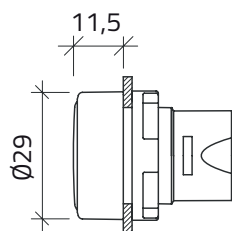


● Rosso / Red	9	5	020ULR
● Verde / Green	9	5	020ULV
● Giallo / Yellow	9	5	020ULG
● Blu / Blue	9	5	020ULBL
○ Bianco / White	9	5	020ULB
○ Trasparente / Clear	9	5	020ULI
● Arancio / Orange	9	5	020ULA



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

Lampade spia inviolabili / Tamper-proof pilot lights



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

Segnalatore acustico e luminoso Ø22

Buzzer with flashing led beacon Ø22

Segnalatore acustico e luminoso Buzzer with flashing led beacon

g

cod

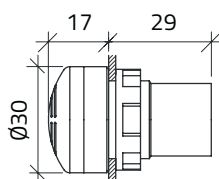


Con LED lampeggiante rosso With red flashing led beacon

Assorbimento : 20 mA / Current consumption : 20 mA

Intensità sonora : 80 db / Sound level : 80 db

Protezione IP44 / Protection IP44



24V AC-DC	20	020SAL24
130V AC-DC	20	020SAL13
230V AC	20	020SAL22

Segnalatore acustico Buzzer

g

cod

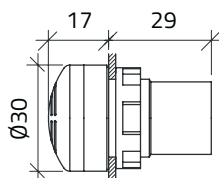


Solo sonoro / Only sound

Assorbimento : 20 mA / Current consumption : 20 mA

Intensità sonora : 80 db / Sound level : 80 db

Protezione IP44 / Protection IP44

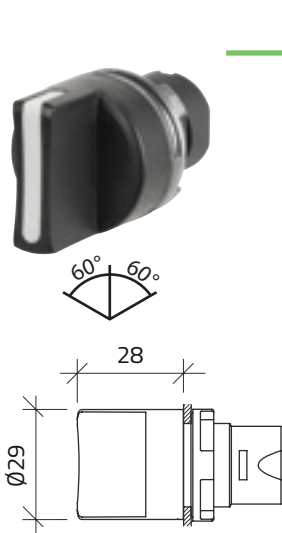


24V AC-DC	20	020SA24
130V AC-DC	20	020SA13
230V AC	20	020SA22

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	020SMAN
● Rosso / Red	27,4	020SMAR
● Verde / Green	27,4	020SMAR
● Giallo / Yellow	27,4	020SMAG
● Blu / Blue	27,4	020SMABL

CAM B

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

CAM B

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

CAM C

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

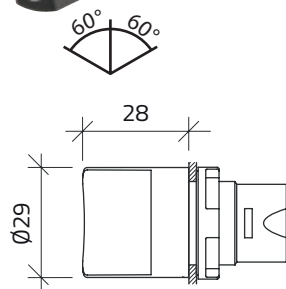
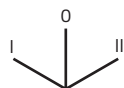
CAM C

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

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

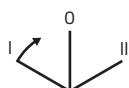
cod

CAM O

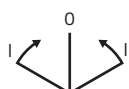
○ Bianco / White	27,4	020SMON
● Rosso / Red	27,4	020SMOR
● Verde / Green	27,4	020SMOV
● Giallo / Yellow	27,4	020SMOG
● Blu / Blue	27,4	020SMOBL

CAM O

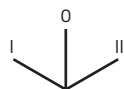
○ Bianco / White	27,4	020SMOND
● Rosso / Red	27,4	020SMORD
● Verde / Green	27,4	020SMOVD
● Giallo / Yellow	27,4	020SMOGD
● Blu / Blue	27,4	020SMOBLD

**CAM O**

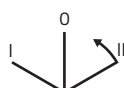
○ Bianco / White	27,4	020SMONS
● Rosso / Red	27,4	020SMORS
● Verde / Green	27,4	020SMOVS
● Giallo / Yellow	27,4	020SMOGS
● Blu / Blue	27,4	020SMOBS

**CAM O**

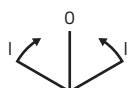
○ Bianco / White	27,4	020SMONC
● Rosso / Red	27,4	020SMORC
● Verde / Green	27,4	020SMOVC
● Giallo / Yellow	27,4	020SMOGC
● Blu / Blue	27,4	020SMOBLC

**CAM T**

○ Bianco / White	27,4	020SMTN
● Rosso / Red	27,4	020SMTR
● 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	020SMTRD
● Verde / Green	27,4	020SMTVD
● Giallo / Yellow	27,4	020SMTGD
● Blu / Blue	27,4	020SMTBLD

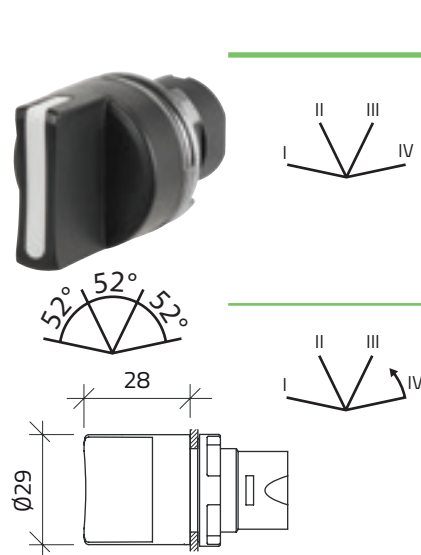
**CAM T**

○ Bianco / White	27,4	020SMTNC
● Rosso / Red	27,4	020SMTRC
● 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

**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

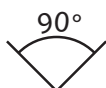
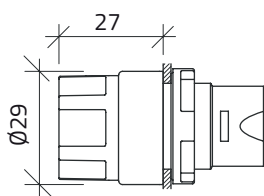
○ Bianco / White	27,4	020SMVN
● Rosso / Red	27,4	020SMVR
● Verde / Green	27,4	020SMVV
● Giallo / Yellow	27,4	020SMVG
● Blu / Blue	27,4	020SMVBL

Selettori luminosi a manopola Ø22

Illuminated knob selector switches Ø22

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

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	020SMLAB
● Rosso / Red	27	020SMLAR
● Verde / Green	27	020SMLAV
● Giallo / Yellow	27	020SMLAG
● Blu / Blue	27	020SMLABL
● Arancio / Orange	27	020SMLAA



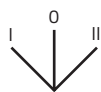
CAM A

○ Bianco / White	27	020SMLABD
● Rosso / Red	27	020SMLARD
● Verde / Green	27	020SMLAVD
● Giallo / Yellow	27	020SMLAGD
● Blu / Blue	27	020SMLABLD
● Arancio / Orange	27	020SMLAAD

3 posizioni / 3 positions

g

cod



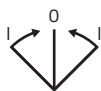
CAM O

○ Bianco / White	27	020SMLOB
● Rosso / Red	27	020SMLOR
● Verde / Green	27	020SMLOV
● Giallo / Yellow	27	020SMLOG
● Blu / Blue	27	020SMLOBL
● Arancio / Orange	27	020SMLOA



CAM O

○ Bianco / White	27	020SMLOBD
● Rosso / Red	27	020SMLORD
● Verde / Green	27	020SMLOVD
● Giallo / Yellow	27	020SMLOGD
● Blu / Blue	27	020SMLOBLD
● Arancio / Orange	27	020SMLOAD



CAM O

○ Bianco / White	27	020SMLOBC
● Rosso / Red	27	020SMLORC
● Verde / Green	27	020SMLOVC
● Giallo / Yellow	27	020SMLOGC
● Blu / Blue	27	020SMLOBLC
● Arancio / Orange	27	020SMLOAC

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

**2 posizioni / 2 positions**

g

cod

**CAM A**

○ Bianco / White	38	020SMTLAB
● Rosso / Red	38	020SMTLAR
● Verde / Green	38	020SMTLAV
● Giallo / Yellow	38	020SMTLAG
● Blu / Blue	38	020SMTLABL
● Arancio / Orange	38	020SMTLAA

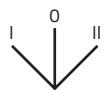
**CAM A**

○ Bianco / White	38	020SMTLABD
● Rosso / Red	38	020SMTLARD
● Verde / Green	38	020SMTLAVD
● Giallo / Yellow	38	020SMTLAGD
● Blu / Blue	38	020SMTLABLD
● Arancio / Orange	38	020SMTLAAD

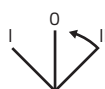
3 posizioni / 3 positions

g

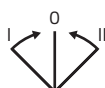
cod

**CAM O**

○ Bianco / White	38	020SMTLOB
● Rosso / Red	38	020SMTLOR
● Verde / Green	38	020SMTLOV
● Giallo / Yellow	38	020SMTLOG
● Blu / Blue	38	020SMTLOBL
● Arancio / Orange	38	020SMTLOA

**CAM O**

○ Bianco / White	38	020SMTLOBD
● Rosso / Red	38	020SMTLORD
● Verde / Green	38	020SMTLOVD
● Giallo / Yellow	38	020SMTLOGD
● Blu / Blue	38	020SMTLOBLD
● Arancio / Orange	38	020SMTLOAD

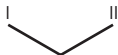
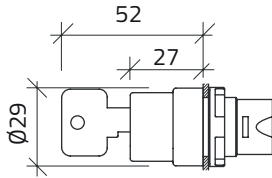
**CAM O**

○ Bianco / White	38	020SMTLOBC
● Rosso / Red	38	020SMTLORC
● Verde / Green	38	020SMTLOVC
● Giallo / Yellow	38	020SMTLOGC
● Blu / Blue	38	020SMTLOBLC
● Arancio / Orange	38	020SMTLOAC

Selettori a chiave Ø22

Key selector switches Ø22

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

		2 posizioni 2 positions				
		CAM A				
		g	k	cod	k	cod
		76		020SCA		
	76		020SCA2			
		76		020SCA1		
		CAM B				
		76		020SCB		020SCBD
76			020SCB2			
76			020SCB0			
		CAM C				
		76		020SCC		020SCCS
		76		020SCC0		
			76		020SCC1	
		CAM O				
		g	k	cod	k	cod
	76		020SCO		020SCOC	
	76		020SCO0		020SCOD	
	76		020SCO10		020SCOD1	
	76		020SCO02		020SCOD0	
	76		020SCO1		020SCOS	
	76		020SCO2		020SCOS2	
		76		020SCO12		020SCOS0
		CAM T				
		76		020SCT		020SCTC
76			020SCT0		020SCTD	
76			020SCT10		020SCTD0	
76			020SCT02		020SCTD1	
76			020SCT1			
76			020SCT2			
		76		020SCT12		



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

76

020SCQ

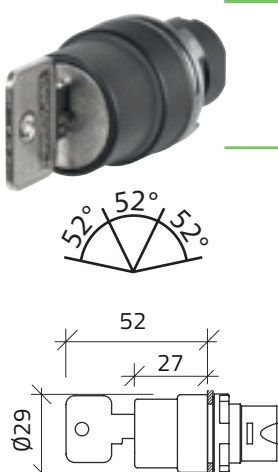
020SCQ1

CAM U

76

020SCUD

020SCUD1



5 posizioni
5 positions

CAM R

76

020SCR

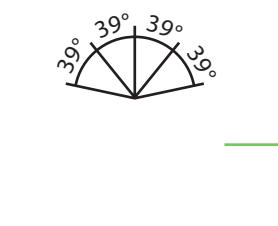
020SCR0

CAM V

76

020SCV

020SCV1



Chiavi speciali
Special keys

Standard key 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	K34
● Rosso / Red	73037	K37
● Giallo / Yellow	73033	K33
● Blu / Blue	73038	K38
● Arancio / Orange	73040	K40



	3353	K53
	9901	K01
	9902	K02
	9903	K03
	9904	K04
	9905	K05
	9910	K10
	9916	K16
	9919	K19



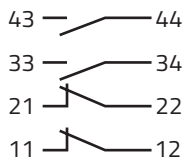
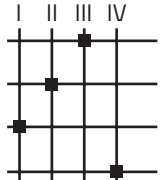
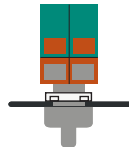
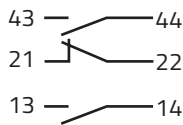
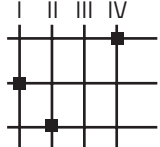
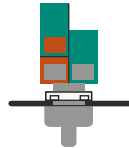
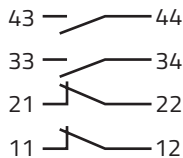
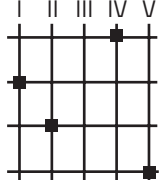
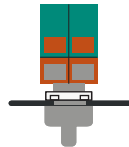
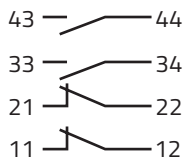
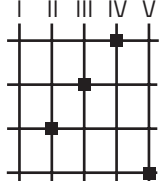
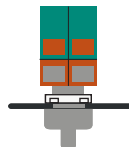
Combinazione di schemi

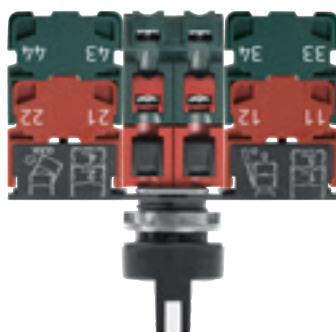
Diagram combination

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

Combinazione di schemi

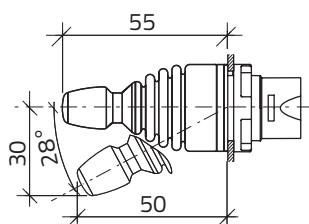
Diagram combination

		Schema Diagram	Contatti flangiati Flanged contacts				
	CAM Q				020E10 020E10 020E01 020E01 020G		
		CAM U				020E10 020E10 020E01 020G	
			CAM R				020E10 020E10 020E01 020E01 020G
				CAM V			



Manipolatori H 55 Ø22

Joysticks H 55 Ø22



2 posizioni 2 positions

					g	cod
①	● RAL 7016	1-2	permanenti / maintained	40		020MT2P
②	● RAL 7016	1-2	temporanee / spring return	40		020MT2T
③	● RAL 7016	1	permanente / maintained			
		2	temporanea / spring return	40		020MT1P1T
	● RAL 7035	1	permanente / maintained			
		2	temporanea / spring return	40		020MT1P1TGR

3 posizioni 3 positions



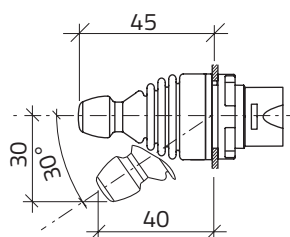
					g	cod
①	● RAL 7016	1-2-3	permanenti / maintained	40		020MT3P
②	● RAL 7016	1-2-3	temporanee / spring return	40		020MT3T
③	● RAL 7016	1	permanente / maintained			
		2	temporanea / spring return	40		
		3	temporanea / spring return	40		

4 posizioni 4 positions

					g	cod
①	● RAL 7016	1-2-3-4	permanenti / maintained	40		020MT4P
②	● RAL 7016	1-2-3-4	temporanee / spring return	40		020MT4T
③	● RAL 7016	1	permanente / maintained			
		2	temporanea / spring return	40		
		3	temporanea / spring return	40		
		4	temporanea / spring return	40		
④	● RAL 7016	1-2	permanente / maintained			
		3	temporanea / spring return	40		
	● RAL 7035	1-2-3-4	permanenti / maintained	40		020MT4PGR
	● RAL 7035	1-2-3-4	temporanee / spring return	40		020MT4TGR
	● RAL 7035	1	permanente / maintained			
		2	temporanea / spring return	40		020MT1P3T
	● RAL 7035	1	permanente / maintained			
		2	temporanea / spring return	40		020MT1P3TGR
	● RAL 7016	1-2	permanente / maintained			
		3	temporanea / spring return	40		020MT2P2T
	● RAL 7035	1-2	permanente / maintained			
		3	temporanea / spring return	40		020MT2P2TGR
	● RAL 7016	1-2-3	permanente / maintained			
		4	temporanea / spring return	40		020MT1P3T
	● RAL 7035	1-2-3	permanente / maintained			
		4	temporanea / spring return	40		020MT1P3TGR

Manipolatori H 45 Ø22

Joysticks H 45 Ø22



2 posizioni 2 positions

					g	cod
①	● RAL 7016	1-2	permanenti / maintained	40		020MTR2P
①	● RAL 7035	1-2	permanenti / maintained	40		020MTR2PGR
②	● RAL 7016	1-2	temporanee / spring return	40		020MTR2T
	● RAL 7035	1-2	temporanee / spring return	40		020MTR2TGR
	● RAL 7016	1 2	permanente / maintained temporanea / spring return	40		020MTR1P1T
	● RAL 7035	1 2	permanente / maintained temporanea / spring return	40		020MTR1P1TGR

4 posizioni 4 positions



					g	cod
①	● RAL 7016	1-2-3	permanenti / maintained	40		020MTR3P
② ③	● RAL 7035	1-2-3	permanenti / maintained	40		020MTR3PGR
	● RAL 7016	1-2-3	temporanee / spring return	40		020MTR3T
	● RAL 7035	1-2-3	temporanee / spring return	40		020MTR3TGR

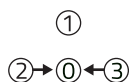
4 posizioni 4 positions

					g	cod
①	● RAL 7016	1-2-3-4	permanenti / maintained	40		020MTR4P
③ ④	● RAL 7035	1-2-3-4	permanenti / maintained	40		020MTR4PGR
②	● RAL 7016	1-2-3-4	temporanee / spring return	40		020MTR4T
	● RAL 7035	1-2-3-4	temporanee / spring return	40		020MTR4TGR
	● RAL 7016	1 2-3-4	permanenti / maintained temporanea / spring return	40		020MTR1P3T
	● RAL 7035	1 2-3-4	permanenti / maintained temporanea / spring return	40		020MTR1P3TGR
	● RAL 7016	1-2 3-4	permanenti / maintained temporanea / spring return	40		020MTR2P2T
	● RAL 7035	1-2 3-4	permanenti / maintained temporanea / spring return	40		020MTR2P2TGR
	● RAL 7016	1-2-3 4	permanenti / maintained temporanea / spring return	40		020MTR1T3P
	● RAL 7035	1-2-3 4	permanenti / maintained temporanea / spring return	40		020MTR1T3PGR

Manipolatori H 45 Ø22

Joysticks H 45 Ø22

Manipolatori speciali 3 posizioni Special joysticks 3 positions

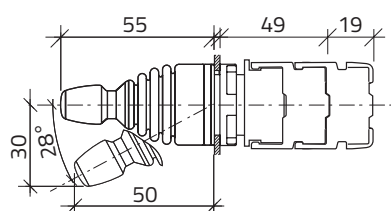


● RAL 7016

1-2-3 permanenti / **maintained**

g

cod

90 **020MT1P2T21A**

Manipolatori speciali 4 posizioni Special joysticks 4 positions

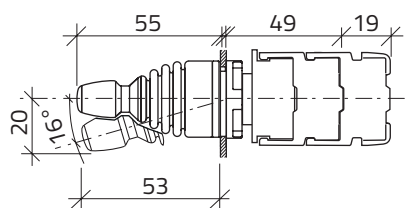
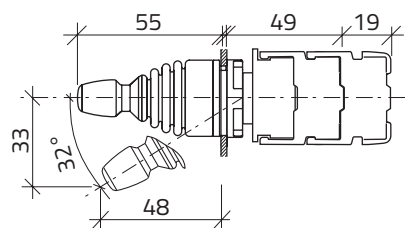


● RAL 7016

1-2-3-4 temporanee / **spring return**

g

cod

90 **020MT4TL40AR**

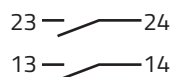
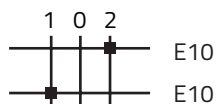
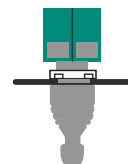
Combinazione di schemi

Diagram combination

Schema Diagram

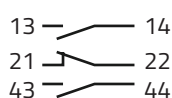
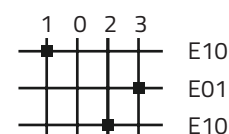
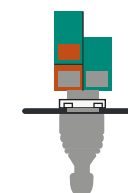
Contatti flangiati Flanged contacts

①
②



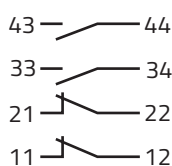
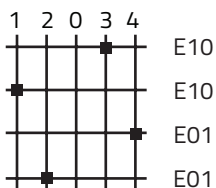
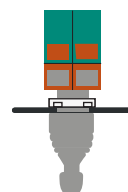
020E10
020E10
020G

①
② ③



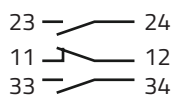
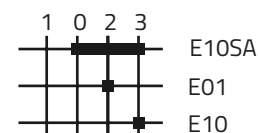
020E10
020E10
020E01
020G

③ ④
①
②



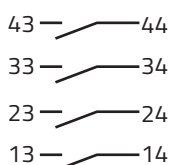
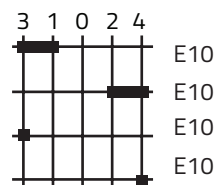
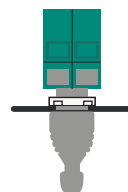
020E10
020E10
020E01
020E01
020G

①
② → ① ← ③



020E10SA
020E10
020E01
020G

③
↓
①
↓
②
↑
④



020E10
020E10
020E10
020E10
020G

Portalampana BA9S

Lampholders BA9S

Portalampana / Lampholders

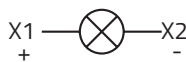
g

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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

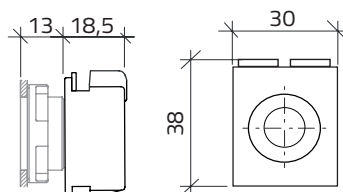
020PD9

UL - CSA: BA9S 250V. max 2W terminali ad occhiello / ring lug

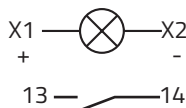
16

10

020PD9TO



Alimentazione diretta / Direct supply



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

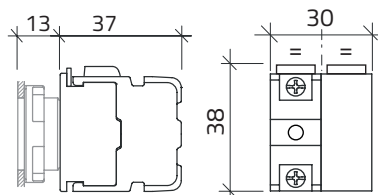
UL - CSA: BA9S 250V. max 2W esclusa / excluded

1 NO Aperto / Open

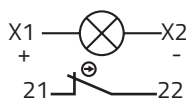
26

5

020PD910



Alimentazione diretta / Direct supply



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

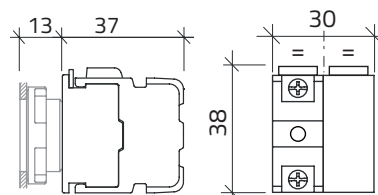
UL - CSA: BA9S 250V. max 2W esclusa / excluded

1 NC Chiuso / Closed

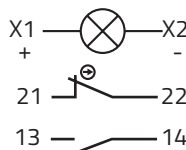
26

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

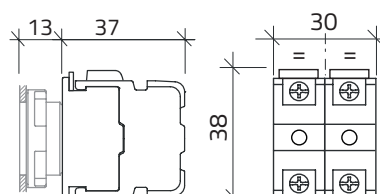
1 NC Chiuso / Closed

1 NO Aperto / Open

26

5

020PD911



Portalamпада BA9S

Lampholders BA9S

Portalamпада / Lampholders

g

n

cod



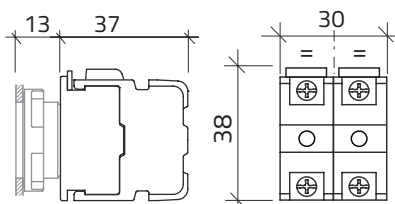
~ = Alimentazione diretta / Direct supply

X1 — X2
+ — -

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

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

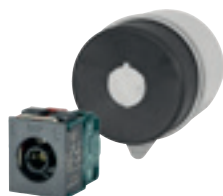
23 — 24 1 NO Aperto / Open
13 — 14 1 NO Aperto / Open



37

5

020PD920



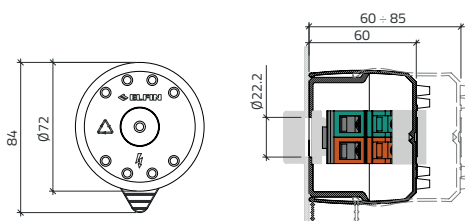
~ = Alimentazione diretta / Direct supply

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
13 — 14 1 NO Aperto / Open



95

020PD911CP



X1 — X5

L1 L test L2

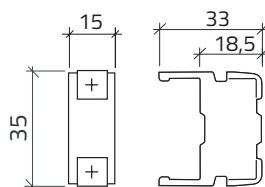
TEST X5

K

X1

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

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cod

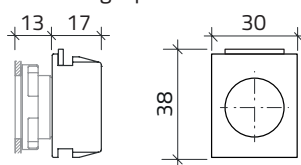
8

10

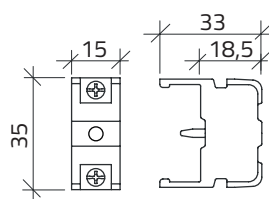
020G



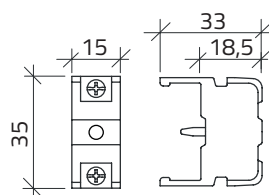
Flangia per contatti / Flange for contacts



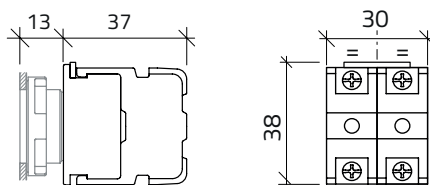
3 — 4	1 NO	10	10	020E10
3 — 4	1 NO Chiusura anticipata / 1 NO Early make	10	5	020E10A
3 — 4	1 NO Contatti dorati e viti terminali inox. Idoneo per ambienti con fenomeni di corrosione Gold-plated contacts and stainless steel terminal screws suitable for corrosive environment	10	5	020E10AU
3 — 4	1 NO Terminale ad occhiello / Ring lug	10	5	020E10TO



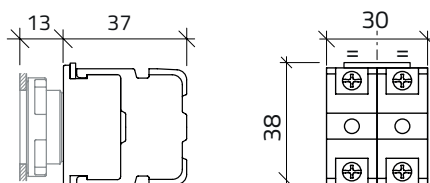
1 — 2	1 NC	10	10	020E01
1 — 2	1 NC Apertura ritardata / 1 NC Late break	10	5	020E01R
1 — 2	1 NC Contatti dorati e viti terminali inox. Idoneo per ambienti con fenomeni di corrosione Gold-plated contacts and stainless steel terminal screws suitable for corrosive environment	10	5	020E01AU
1 — 2	1 NC Terminale ad occhiello / 1 NC Ring lug	10	5	020E01TO



13 — 14	1 NO con flangia / 1NO with flange	19	5	020GE10
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21 — 22	1 NC con flangia / 1NC with flange	19	5	020GE01
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Elementi di contatto

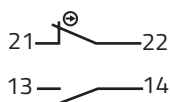
Contact blocks

Elementi di contatto / Contact blocks

g

n

cod



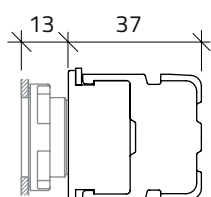
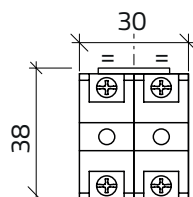
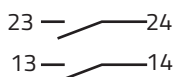
1 NC con flangia / 1NC with flange

1 NO con flangia / 1NO with flange

19

5

020GE11



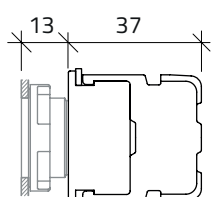
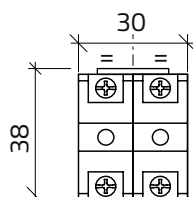
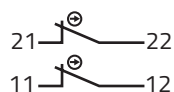
1 NO con flangia / 1NO with flange

1 NO con flangia / 1NO with flange

19

5

020GE20



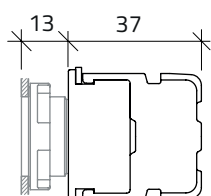
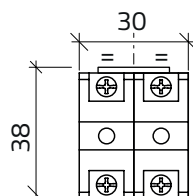
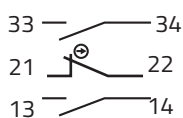
1 NC con flangia / 1NC with flange

1 NC con flangia / 1NC with flange

19

5

020GE02



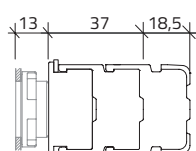
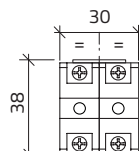
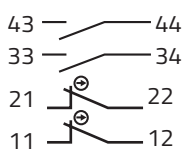
2 NO con flangia / 2NO with flange

1 NC con flangia / 1 NC with flange

50

5

020GE21



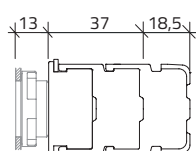
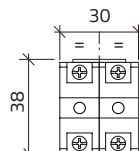
2 NO con flangia / 2NO with flange

2 NC con flangia / 2 NC with flange

50

5

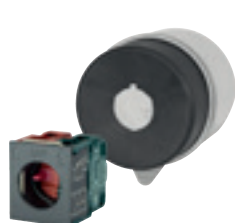
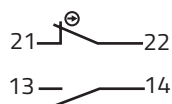
020GE22



Elementi di contatto

Contact blocks

Elementi di contatto / Contact blocks

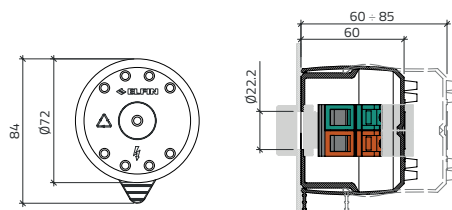
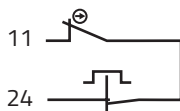


1 NC con flangia, con cappuccio di protezione / 1NC with flange, with protective cap
1 NO con flangia con cappuccio di protezione / 1NO with flange with protective cap

88

5

020GE11CP

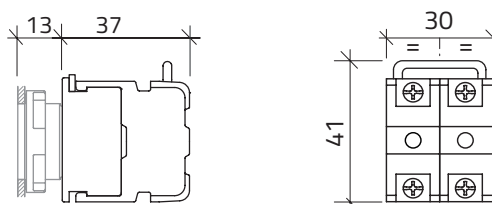
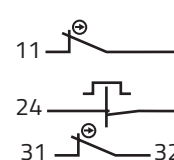


Elemento di contatto con automonitoraggio
Contact block with self-monitoring

19

5

020GE01S

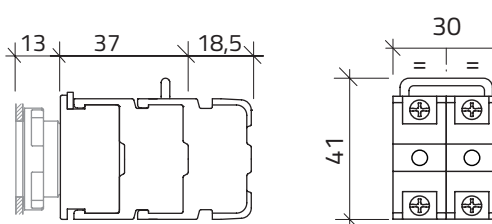


Elemento di contatto con automonitoraggio
Contact block with self-monitoring

19

5

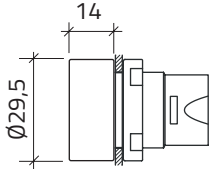
020GE02S



Pulsanti normali Ø22 Ghiera in metallo

Normal push-buttons Ø22 Metal bezel





Pulsanti normali / Normal push-buttons

g

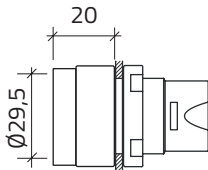
cod

Pulsanti con guardia / Guarded push-buttons

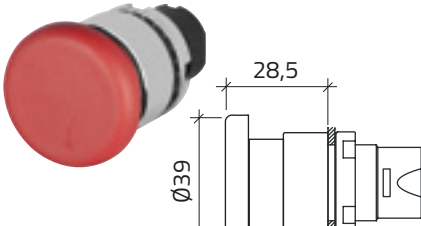
● Nero / Black	33	020PTAINW
● Rosso / Red	33	020PTAIRW
● Verde / Green	33	020PTAIVW
● Giallo / Yellow	33	020PTAIGW
● Blu / Blue	33	020PTAIBLW
○ Bianco / White	33	020PTAIBW
● Grigio / Grey	33	020PTAIGRW
● Arancio / Orange	33	020PTAIAW

Stabili / Maintained

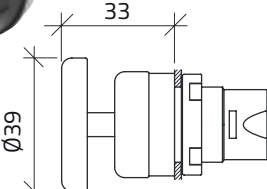
● Nero / Black	33	020PPTAINW
● Rosso / Red	33	020PPTAIRW
● Verde / Green	33	020PPTAIVW



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
Stabili / Maintained		
● Nero / Black	34	020PPTASNW
● Rosso / Red	34	020PPTASRW
● Verde / Green	34	020PPTASVW



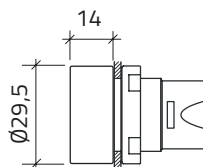
Pulsanti a fungo Ø40 / Mushroom push-buttons Ø40		
● Nero / Black	44	020PTAFNW
● Rosso / Red	44	020PTAFRW
● Verde / Green	44	020PTAFVW
● Giallo / Yellow	44	020PTAFGW
● Blu / Blue	44	020PTAFBLW
Stabili / Maintained		
● Verde / Green	44	020PPTAFVW
● Giallo / Yellow	44	020PPTAFGW

		Pulsanti a fungo oscillanti Ø40 Floating mushroom push-buttons Ø40		g	cod
		● 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

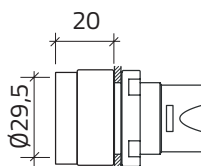


Pulsanti con guardia / Guarded push-buttons

● 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

Stabili / Maintained

● Rosso / Red	33	020PPTAILRW
● Verde / Green	33	020PPTAILVW
● Giallo / Yellow	33	020PPTAILGW

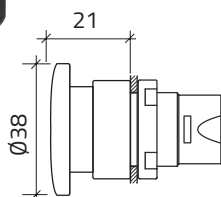


Pulsanti sporgenti / Projecting push-buttons

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

Stabili / Maintained

● Rosso / Red	35	020PPTASLRW
● Verde / Green	35	020PPTASLVW
● Giallo / Yellow	35	020PPTASLGW

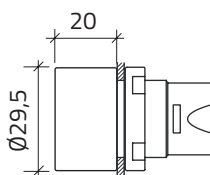


Pulsanti a fungo Ø38 / Mushroom push-buttons Ø38

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

Stabili / Maintained

● Rosso / Red	36	020PPTAFLRW
● Giallo / Yellow	36	020PPTAFLGW

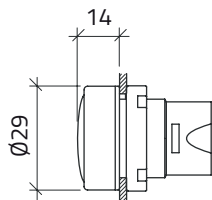


Pulsanti con guardia completa / Push-buttons with full guard

● 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

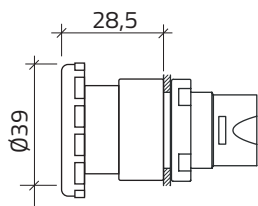
	g	cod
● Rosso / Red	30	020LTBBRW
● Verde / Green	30	020LTBBVW
● Giallo / Yellow	30	020LTBBGW
● Blu / Blue	30	020LTBBBLW
○ Bianco / White	30	020LTBBBW
○ Trasparente / Clear	30	020LTBBIW
● Arancio / Orange	30	020LTBBAW

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

g

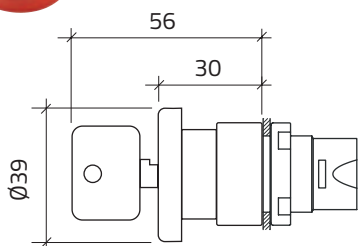
45

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
	 CAM A	● Nero / Black 38 ● Rosso / Red 38 ● Verde / Green 38 ● Giallo / Yellow 38 ● Blu / Blue 38	020STAMANW 020STAMARW 020STAMAVW 020STAMAGW 020STAMABLW
	 CAM B	● Nero / Black 38 ● Rosso / Red 38 ● Verde / Green 38 ● Giallo / Yellow 38 ● Blu / Blue 38	020STAMBNW 020STAMBRW 020STAMBVW 020STAMBGW 020STAMBBLW
	 CAM B	● Nero / Black 38 ● Rosso / Red 38 ● Verde / Green 38 ● Giallo / Yellow 38 ● Blu / Blue 38	020STAMBNWD 020STAMBRWD 020STAMBVWD 020STAMBGWD 020STAMBBLWD
	 CAM C	● Nero / Black 38 ● Rosso / Red 38 ● Verde / Green 38 ● Giallo / Yellow 38 ● Blu / Blue 38	020STAMCNW 020STAMCRW 020STAMCVW 020STAMCGW 020STAMCBLW
	 CAM C	● Nero / Black 38 ● Rosso / Red 38 ● Verde / Green 38 ● Giallo / Yellow 38 ● Blu / Blue 38	020STAMCNWS 020STAMCRWS 020STAMCVWS 020STAMCGWS 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

g

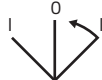
cod

CAM O



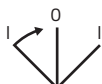
● Nero / Black	38	020STAMONW
● Rosso / Red	38	020STAMORW
● Verde / Green	38	020STAMOVW
● Giallo / Yellow	38	020STAMOGW
● Blu / Blue	38	020STAMBLW

CAM O



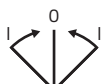
● Nero / Black	38	020STAMONWD
● Rosso / Red	38	020STAMORWD
● Verde / Green	38	020STAMOVWD
● Giallo / Yellow	38	020STAMOGWD
● Blu / Blue	38	020STAMBLWD

CAM O



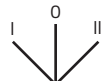
● Nero / Black	38	020STAMONWS
● Rosso / Red	38	020STAMORWS
● Verde / Green	38	020STAMOVWS
● Giallo / Yellow	38	020STAMOGWS
● Blu / Blue	38	020STAMBLWS

CAM O



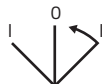
● Nero / Black	38	020STAMONWC
● Rosso / Red	38	020STAMORWC
● Verde / Green	38	020STAMOVWC
● Giallo / Yellow	38	020STAMOGWC
● Blu / Blue	38	020STAMBLWC

CAM E



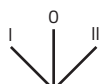
● Nero / Black	38	020STAMENW
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CAM E



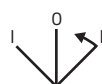
● Nero / Black	38	020STAMENWD
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CAM T



● 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

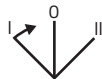
Selettori a manopola Ø22 Ghiera in metallo

Knob selector switches Ø22 Metal bezel

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

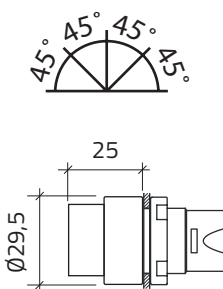
020

3 posizioni / 3 positions



CAM T

● Nero / Black	38	020STAMTNWS
● Rosso / Red	38	020STAMTRWS
● Verde / Green	38	020STAMTVWS
● Giallo / Yellow	38	020STAMTGWS
● Blu / Blue	38	020STAMTBLWS



CAM T

● Nero / Black	38	020STAMTNWC
● Rosso / Red	38	020STAMTRWC
● Verde / Green	38	020STAMTVWC
● Giallo / Yellow	38	020STAMTGWC
● Blu / Blue	38	020STAMTBLWC

4 posizioni / 4 positions



CAM Q

● Nero / Black	38	020STAMQNW
● Rosso / Red	38	020STAMQRW
● Verde / Green	38	020STAMQVW
● Giallo / Yellow	38	020STAMQGW
● Blu / Blue	38	020STAMQBLW



CAM U

● Nero / Black	38	020STAMUNW
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5 posizioni / 5 positions



CAM R

● Nero / Black	38	020STAMRNW
● Rosso / Red	38	020STAMRRW
● Verde / Green	38	020STAMRVW
● Giallo / Yellow	38	020STAMRGW
● Blu / Blue	38	020STAMRBLW



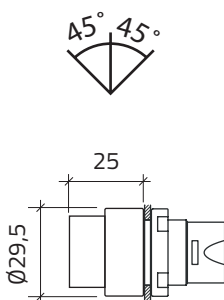
CAM Z

● Nero / Black	38	020STAMZNW
● Rosso / Red	38	020STAMZRW
● Verde / Green	38	020STAMZVW
● Giallo / Yellow	38	020STAMZGW
● Blu / Blue	38	020STAMZBLW

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



CAM A

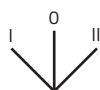
● Rosso / Red	38	020STAMLARW
● Verde / Green	38	020STAMLAVW
● Giallo / Yellow	38	020STAMLAGW
● Blu / Blue	38	020STAMLABLW
○ Bianco / White	38	020STAMLABW
● Arancione / Orange	38	020STAMLAOW
○ Trasparente / Clear	38	020STAMLAIW



CAM A

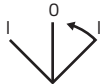
● Rosso / Red	38	020STAMLARWD
● Verde / Green	38	020STAMLAVWD
● Giallo / Yellow	38	020STAMLAGWD
● Blu / Blue	38	020STAMLABLWD
○ Bianco / White	38	020STAMLABWD
● Arancione / Orange	38	020STAMLAOWD
○ Trasparente / Clear	38	020STAMLAIWD

3 posizioni / 3 positions



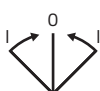
CAM O

● 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

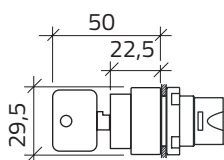
Cercare la combinazione di schemi a pag. 49-50 / See diagram combination on page 49-50

2 posizioni 2 positions		g	k	cod	k	cod
	CAM A	95		020STACAW		020STACAW2
		95		020STACAW4		
	CAM B	95		020STACBW		020STACBW2
		95		020STACBW4		
	CAM B	95		020STACBWD		
	CAM C	95		020STACCW		020STACCW2
		95		020STACCW4		
	CAM C	95		020STACCWS		

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

3 positions		g	k	cod	k	cod
 CAM O	95	020STACOW	020STACOW2			
	95	020STACOW3	020STACOW4			
	95	020STACOW5	020STACOW6			
	95	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

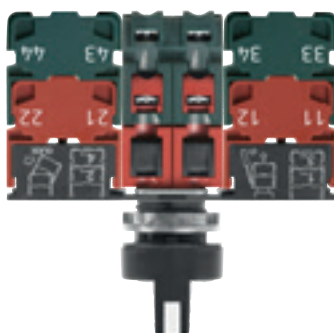
Diagram combination Ø22 Metal bezel

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

Combinazione di schemi Ø22 Ghiera in metallo

Diagram combination Ø22 Metal bezel

		Schema Diagram	Contatti flangianti Flanged contacts	
	CAM T	 E10 E10 E01 E01		020E10 020E10 020E01 020E01 020G
	CAM Q	 E10 E10 E01 E01		020E10 020E10 020E01 020E01 020G
	CAM U	 E10 E01 E10		020E10 020E10 020E01 020G
	CAM R	 E10 E10 E01 E01		020E10 020E10 020E01 020E01 020G
	CAM Z	 E10 E10 E01 E01		020E10 020E10 020E01 020E01 020G



Presse USB 3.0 Ø22

3.0 USB socket Ø22

Presse USB 3.0
3.0 USB socket

g

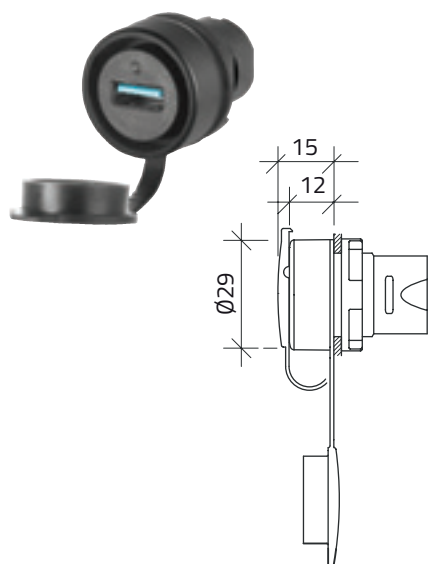
cod

Tipo A-A (femmina-femmina)
A-A type (female-female)

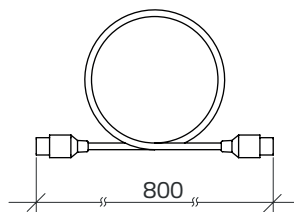
● Nero / Black

24

020PUSB



Cavo USB USB cable



Cavo mt 0,8
Cable mt 0,8

Tipo M-M (maschio-maschio)
Type M-M (male-male)

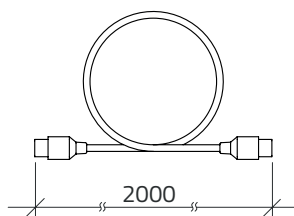
● Nero / Black

g

37

cod

010CUSBMM8



Cavo mt 2
Cable mt 2

Tipo M-M (maschio-maschio)
Type M-M (male-male)

● Nero / Black

g

77

cod

010CUSBMM20

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

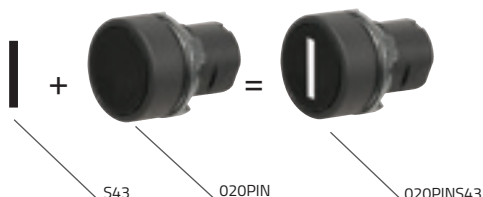
Esempio per pulsanti luminosi sporgenti e a fungo
Example for illuminated push-button: projecting and mushroom



Esempio per lampade spia
Example for pilot lights



Esempio per marcatura pulsanti
Example for push-button marking



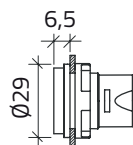
Simboli per veicoli raccolta rifiuti
Symbols for waste collection vehicles

SIMBOLO SYMBOL	NORMA STANDARD	SUFFISSO SUFFIX	SIMBOLO SYMBOL	NORMA STANDARD	N° N°	SUFFISSO SUFFIX	SIMBOLO SYMBOL	NORMA STANDARD	N° N°	SUFFISSO 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 475		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 ISO 700	22	S E22
+	IEC 5005a	S 44		UNI EN 1501-1	05	S E05	○	IEC 5008a ISO 700	23	S E23
—	IEC 5006a	S 45		UNI EN 1501-1	06	S E06		IEC 5013a ISO 70001	24	S E24
	ISO 0096	S 48		UNI EN 1501-1	07	S E07		IEC 1141a ISO 7000	25	S E25
	IEC 5007a	S 43		UNI EN 1501-1	08	S E08		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 ISO 7000	29	S E29
⚡	IEC 5036a	S 72		UNI EN 1501-1	11	S E11		IEC 0004a 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

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

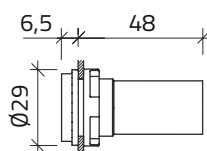
Corpo per lampada spia monoblocco Monolithic pilot light body



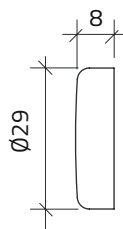
Completare articolo con gemma ed eventuale diffusore con simbolo
To be fitted with lens and possible diffuser with symbol

Alimentazione diretta / Direct supply

g	n	cod
14	5	020LM

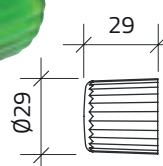


Gemme per lampade spia / Lenses for pilot lights



- Rosso / Red
- Verde / Green
- Giallo / Yellow
- Blu / Blue
- Bianco / White
- Arancio / Orange
- Trasparente / Clear

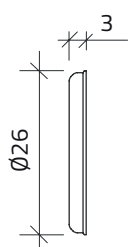
g	n	cod
3	5	020GR
3	5	020GV
3	5	020GG
3	5	020GBL
3	5	020GB
3	5	020GA
3	5	020GI



- Rosso / Red
- Verde / Green
- Giallo / Yellow
- Blu / Blue
- Bianco / White
- Arancio / Orange
- Trasparente / Clear

7	5	020GAR
7	5	020GAV
7	5	020GAG
7	5	020GABL
7	5	020GAB
7	5	020GAA
7	5	020GAI

Diffusori con simbolo / Diffusers caps with symbol



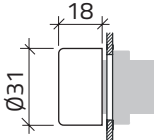
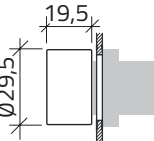
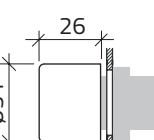
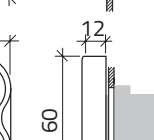
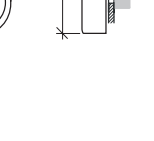
Completa il codice con il suffisso del simbolo desiderato vedi pag 52.
Code to be completed with the suffix of the desired symbol, see page 52.

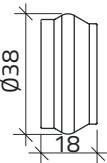
Per lampade spia / For pilot lights

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

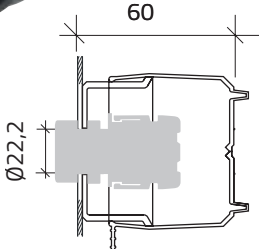
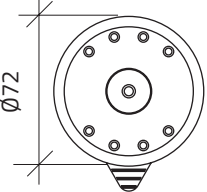
Accessori Ø22

Accessories Ø22

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

Soffietti di protezione per pulsanti a fungo Bellows for mushroom push-buttons			
	g	n	cod
  <p>● Nero / Black</p>	3	5	020SGFN
● Rosso / Red	3	5	020SGFR
● Verde / Green	3	5	020SGFV
● Giallo / Yellow	3	5	020SGFG
● Blu / Blue	3	5	020SGFBL



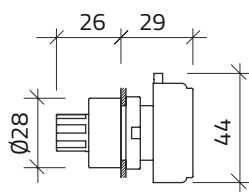
Cappucci di protezione contatti Protective caps for contacts			
	g		cod
  	58		020CPC22



Accessori Ø22

Accessories Ø22

Operatore potenziometrico / Potentiometer operator



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

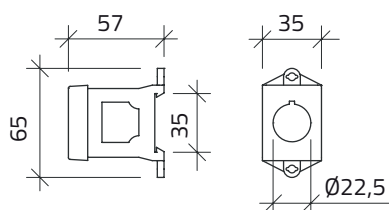
g

cod

135

0200P

Supporto operatore per guida DIN DIN rail mounting adapter for operator



● RAL 7035

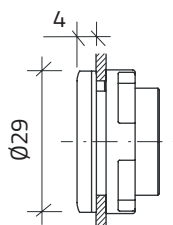
g

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

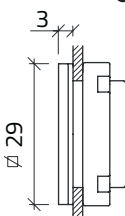
10

020TTPT

5

10

020TTPGR



● Nero / Black

5

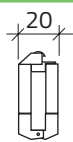
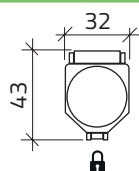
10

020QTPN

Accessori Ø22

Accessories Ø22

Protezioni lucchettabili e piombabili Padlockable and sealable protective covers



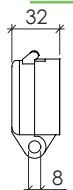
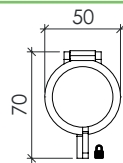
Piombabile / Sealable

g

cod

6

020PTPP



Lucchettabile / Padlockable

14

020PTLO

Accessori di protezione / Protective guards



● RAL 7016

● Giallo/ Yellow

g

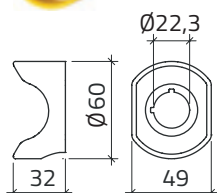
cod

16

020PEO

16

020PEOG

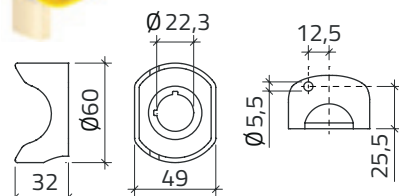


Versione lucchettabile / Padlockable type

● Giallo/ Yellow

15

020PEOGL



● RAL 7016

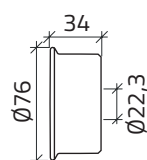
● Giallo/ Yellow

35

020GP22

35

020GPG22

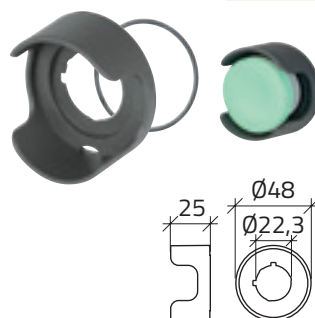


Accessori Ø22

Accessories Ø22

Accessori di protezione in termoplastica

Thermoplastic protective guards

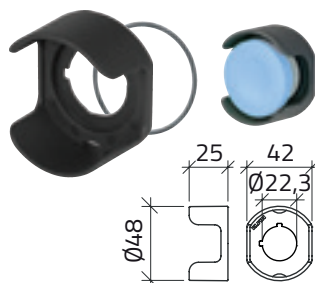


- RAL 7016
- Rosso / Red
- Verde / Green
- Giallo/ Yellow
- Blu / Blue

g

cod

13	020GPF
13	020GPFR
13	020GPFV
13	020GPFG
13	020GPFBL



- RAL 7016

8

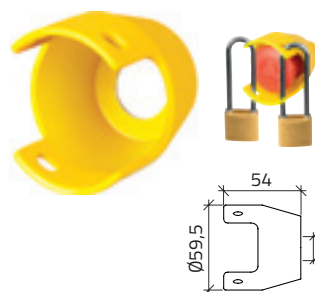
020GPF42

Accessori di protezione in metallo

Metal protective guards

g

cod



- Versione lucchettabile / Padlockable type
- Giallo/ Yellow

63

020GPEL



- Giallo/ Yellow

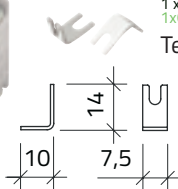
35

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

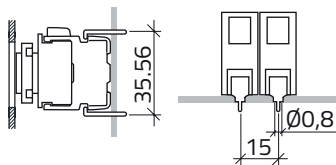
n

cod

35

10

020TF



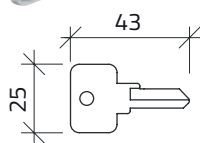
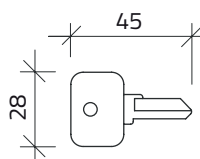
Terminali a saldare / Solder terminals

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

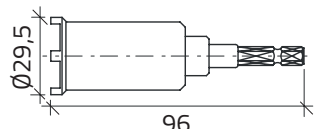
2

010K40

Accessori Ø22

Accessories Ø22

Chavi di serraggio ghiera / Locking ring wrenches



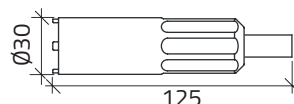
Chiave di serraggio acciaio, per avvitatore $\frac{1}{4}$ "
Steel locking ring wrench for screwdriver $\frac{1}{4}$ "

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

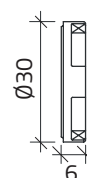
8

n

5

cod

020GF2

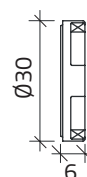


Per lampade spia e tappi / For pilot lights and plugs
Filettatura passo 2, plastica / Thread pitch 2, plastic

4

5

020GF2P

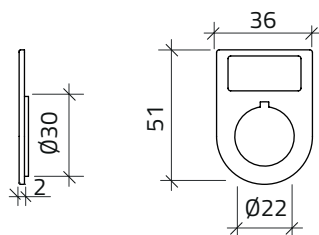


Per serie ghiera metallo e filo pannello / For metal bezel and flush-mount series
Filettatura passo 1, metallo / Thread pitch 1, metal

8

5

020GF



Con supporto targhetta / With label support
Flangia di riduzione da Ø30 a Ø22
Reductive flange from Ø30 to Ø22

8

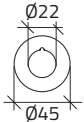
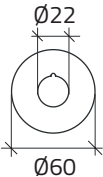
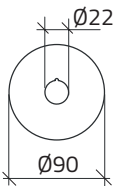
020FR

Targhette Ø22

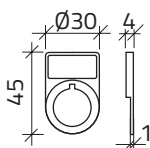
Legend plates Ø22

Targhette emergenza, secondo VDE 0113

Emergency stop legend plates, according to VDE 0113

			g	cod
 	Ø 45			
	Senza testo / Blank		2	020D
 	Ø 60			
	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
 	Ø 90			
	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



13x27

● Nero / Black

● Giallo / Yellow

● RAL 7016

2

2

2

10

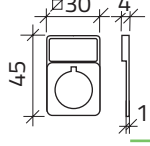
10

10

020ST

020STG

020STGR



13x27

● Nero / Black

● Giallo / Yellow

2

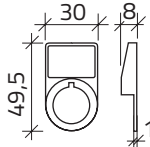
2

10

10

020SQ

020SQG



18x27

● Nero / Black

● Giallo / Yellow

● RAL 7016

2,5

2,5

2,5

10

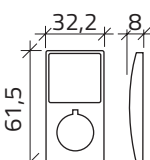
10

10

020ST18

020ST18G

020ST18GR



27x27

● Nero / Black

● Giallo / Yellow

● RAL 7016

3

3

3

10

10

10

020ST27N

020ST27G

020ST27GR

Targhette Ø22

Legend plates Ø22

Targhette adesive con diciture

Adhesive labels with texts



cod

cod

cod

Dicitura / Texts

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

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

Targhette adesive con simboli

Adhesive labels with symbols



cod

cod

Simbolo / Symbol

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

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

Targhette Ø22

Legend plates Ø22

Rotoli etichette adesive in alluminio

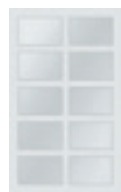
Aluminium adhesive labels rolls



		g	cod
13x27 mm	rotolo da 1500 pz / roll of 1500 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

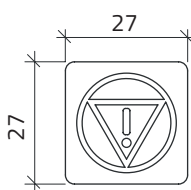


Pellicola trasparente / Protective film

	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

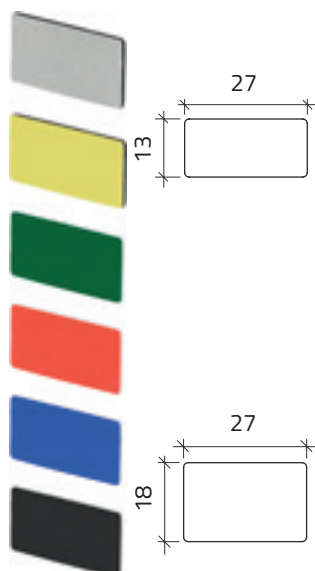
Legend plates Ø22

Etichette neutre adesive / Blank adhesive labels

g

n

cod



13x27

Incisione meccanica / Mechanical engraving

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

18x27

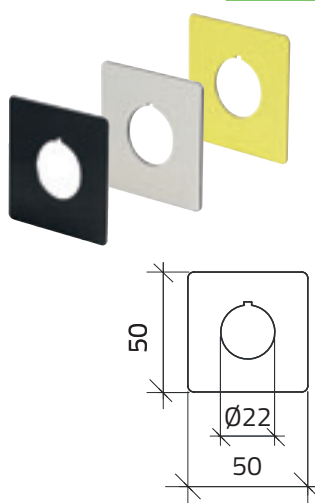
Incisione meccanica / Mechanical engraving

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

Etichette adesive Adhesive labels

g

cod

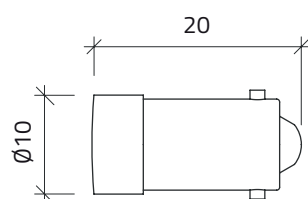


50X50

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

Lampadine

Lamps



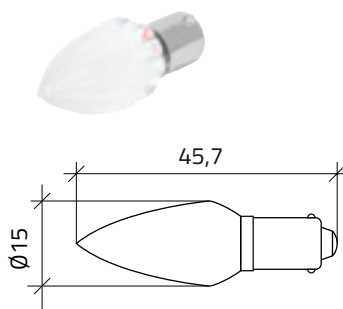
BA9S Led luce fissa BA9S Steady light led lamps

	g	n	cod
6V AC-DC			
● 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
12V AC-DC			
● 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
24V AC-DC			
● 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
36V AC-DC			
● 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
48V AC-DC			
● 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
130V AC-DC			
● 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
240V AC-DC			
● 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
400V AC-DC			
● 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



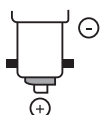
24V AC-DC

● 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

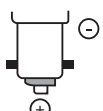
● Rosso / Red	2	010BA9SLLR24
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130V AC-DC

● Rosso / Red	2	010BA9SLLR110
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240V AC-DC

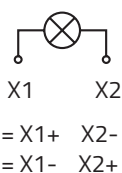
● Rosso / Red	2	010BA9SLLR220
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24V AC-DC

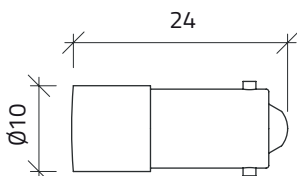
● Rosso / Red	2	010BA9ALLR24
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Nuove lampade due colori , tecnologia led alta luminosità New bi-colour led lamps,high brightness



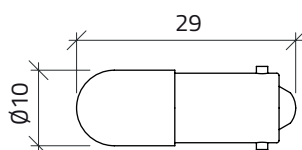
24V DC 15mA

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

g

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Lampadine BA9S ad incandescenza / Incandescent bulbs BA9S

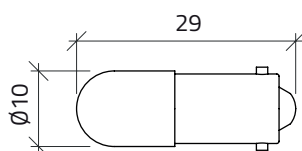
6V	0,6W	1,3	10	010BA9S6V-0.6W
24V	1,2 w	1,3	10	010BA9S24V-1.2W
24V	3W	1,3	10	010BA9S24V-3W
30V	1,2W	1,3	10	010BA9S30V-1.2W
30V	3W	1,3	10	010BA9S30V-3W
48V	1,2W	1,3	10	010BA9S48V-1.2W
60V	1,2 w	1,3	10	010BA9S60V-1.2W
60V	3W	1,3	10	010BA9S60V-3W
110V	1,9W	1,3	10	010BA9S130V-1.9
220V	2W	1,3	10	010BA9S220V-2W

BA9S Lampadine al neon / BA9S neon lamps

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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

Stampante a trasferimento termico

Thermal printer



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

g

1400

cod**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**

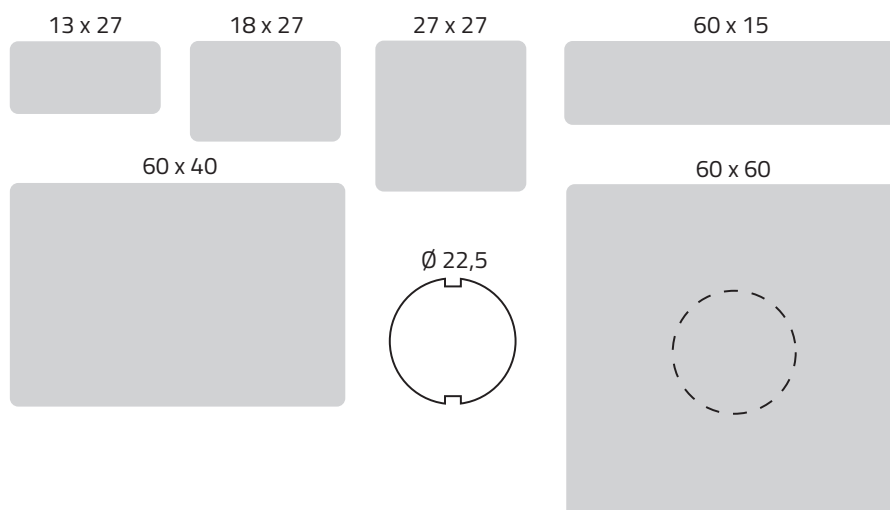


Applicazione su pannello / **Panel mounting**

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

Dimensioni etichette

Label dimensions





032

**COMANDO E SEGNALAZIONE
FILO PANNELLO SM2 Ø30**

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

032



SISTEMA MODULARE 30

MODULAR SYSTEM 30

LA SERIE 032

La serie 032 "SISTEMA MODULARE 30" è progettata per un utilizzo sicuro, facile e intuitivo; le soluzioni adottate facilitano la realizzazione di varie combinazioni garantendo risparmio di tempo e risorse. Il corpo in alluminio anodizzato permette il montaggio a filo pannello, donando eleganza e funzionalità al quadro di comando.

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. L'accoppiamento plastica / metallo garantisce serraggi sicuri e permanenti. L'ancoraggio tra operatori ed elementi di contatto o elementi portalampada, è costruito con un profondo incasso poi trattenuto 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 interne sono in acciaio inox o in acciaio trattato, mentre le guarnizioni in gomma resistono a tutte le condizioni climatiche.

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.

THE 032 SERIES

The 032 "MODULAR SYSTEM 30" 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.

The body in anodized aluminum allows a flush mount, giving elegance and functionality to the control panel.

STRUCTURE

All operators can be secured by metal locking rings.

The plastic / metal combination guarantees 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 internal metallic parts are in stainless or treated steel, while the rubber gaskets are resistant to all climatic conditions.

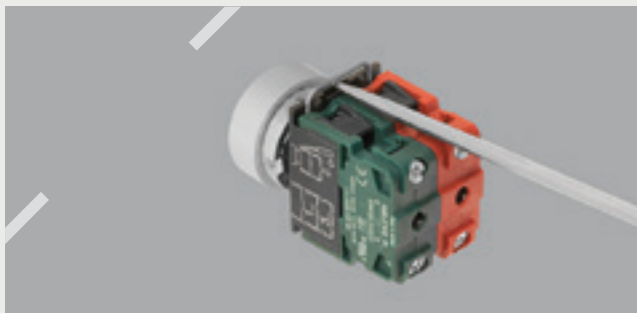
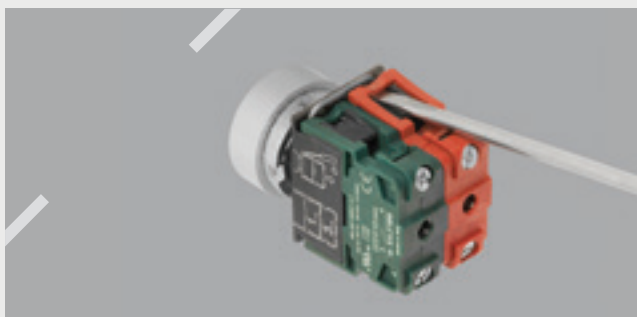
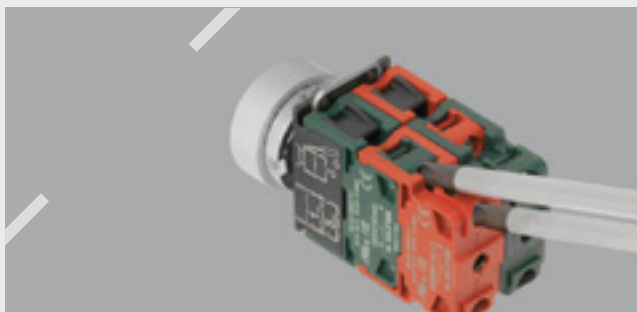
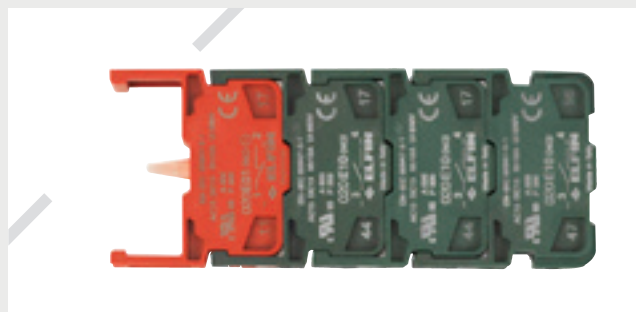
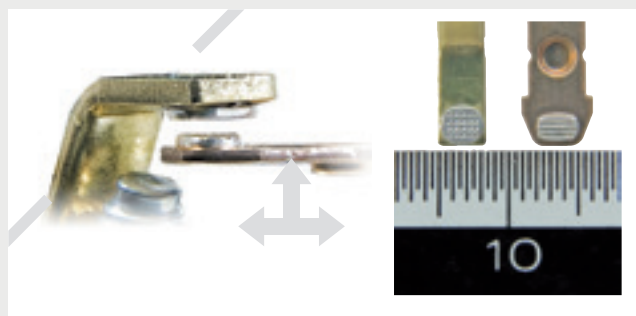
EMERGENCY DEVICES

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.

SISTEMA MODULARE 30

MODULAR SYSTEM 30

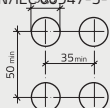


Caratteristiche tecniche

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, UNI CEI EN45545-2, CEI EN61373, EN60077-2
Omologazioni	UL, CSA, EAC
Protezioni climatiche	In esecuzione normale T.C. tutti i climi (40° - UR35%)
Limiti di temperatura	Funzionamento : $\geq -25^{\circ}\text{C}$ / $\leq +65^{\circ}\text{C}$ Stoccaggio -35°C / $+70^{\circ}\text{C}$
Posizione di funzionamento	
Protezione contro scossa elettrica	Classe II secondo IEC 61140
Altitudine d'impiego	≤ 3.000 m
Grado di protezione	IP65 pulsanti normali, luminosi, lampade, selettori, manipolatori.
Dimensioni di montaggio	Pannelli con spessore 1-6 mm Foratura secondo EN/IEC 60947-5-1

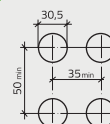


Caratteristiche meccaniche

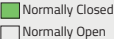
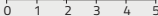
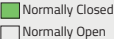
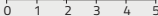
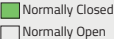
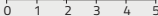
Resistenza agli urti	50g (durata: 11ms) mezza sinusoide secondo IEC 60068-2-7												
Resistenza alle vibrazioni	16g 40- 500 Hz secondo IEC 60068-2-6												
Coppia di serraggio	Ghiera di fissaggio operatori: 2÷3 Nm, Viti terminali: 0.8÷ 1,0 Nm												
Viti terminali	Testa combinata taglio e Phillips Ph2 in acciaio zincato o acciaio inox per versioni E10AU/E01AU Capacità di chiusura : ≥1 x 0,5 mm / ≤2x2,5 mm Capicorda a forcella "spring spade"												
Forze di azionamento	Pulsante con contatto NO: 5N – selettore: 0,15 Nm contatti aggiuntivi NO /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	<table border="1"><thead><tr><th>Contatto</th><th>Corsa (mm)</th><th>Stato Normale</th></tr></thead><tbody><tr><td>NO</td><td>3.6</td><td>Normalmente Chiuso</td></tr><tr><td>NCR</td><td>2.5</td><td>Normalmente Chiuso</td></tr><tr><td>NOA</td><td>1.9</td><td>Normalmente Aperto</td></tr></tbody></table>	Contatto	Corsa (mm)	Stato Normale	NO	3.6	Normalmente Chiuso	NCR	2.5	Normalmente Chiuso	NOA	1.9	Normalmente Aperto
Contatto	Corsa (mm)	Stato Normale											
NO	3.6	Normalmente Chiuso											
NCR	2.5	Normalmente Chiuso											
NOA	1.9	Normalmente Aperto											
Forza di apertura positiva	Pulsante normale: 5 N Pulsante a fungo: 40 N												
Velocità di azionamento	Min. 10 mm / sec Max. 20mm / sec												
Durata meccanica	Pulsanti normali, luminosi: 3 milioni di manovre. Selettori, manipolatori: 1 milione di manovre. Emergenza fungo aggancio e stabili: 500.000 manovre												
Grado di protezione	Morsetti IP20 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, UNI CEI EN45545-2, CEI EN61373, EN60077-2
Approvals	UL, CSA, EAC
Climatic protection	Normal operation for all climates (40° - RH35%)
Temperature ranges	Operating: $\geq -25^{\circ}\text{C}$ / $\leq +65^{\circ}\text{C}$ Storage -35°C / $+70^{\circ}\text{C}$
Operating positions	
Electrical shock protection	Class II in compliance with IEC 61140
Operating altitude	≤ 3.000 m
Protection degree	IP65 normal, illuminated push buttons, lamps, selector switches, joysticks.
Mounting dimensions	1-6 mm panels. Drilling in compliance with EN/IEC 60947-5-1



Mechanical features

Shock resistance	50g (duration: 11ms) half sine wave in compliance with IEC 60068-2-7												
Vibration resistance	16g 40- 500 Hz in compliance with IEC 60068-2-6												
Tightening torque	Operator locking ring: 2÷3 Nm. Terminal screws: 0.8÷ 1.0 Nm												
Terminal screws	Combined slot and Phillips Ph2 head, zinc plated or stainless steel for E10AU / E01AU. Connection capacity : ≥1 x 0.5 mm / ≤2x2.5 mm 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	<table><tr><td>1mm</td><td>NC</td><td rowspan="4"></td></tr><tr><td>3.6mm</td><td>NO</td></tr><tr><td>2.5mm</td><td>NCR</td></tr><tr><td>1.9mm</td><td>NOA</td></tr><tr><td colspan="2"></td><td></td></tr></table>	1mm	NC		3.6mm	NO	2.5mm	NCR	1.9mm	NOA			
1mm	NC												
3.6mm	NO												
2.5mm	NCR												
1.9mm	NOA												
													
Positive opening force	Normal push-button: 5 N Mushroom push-button: 40 N												
Operating speed	Min. 10 mm / sec Max. 20mm / sec												
Mechanical life	Normal, illuminated push-buttons: 3 million cycles. Selector switches, joysticks: 1 million cycles. Emergency stop mushroom push-buttons, latching or maintained: 500.000 cycles												
Degree of protection	Terminals IP20 in compliance with IEC60529												
Identification of terminals	1st digit: assembling order on connection flange 2nd digit: element contact function 1-2 NC / 3-4 NO												

Caratteristiche tecniche

Technical data

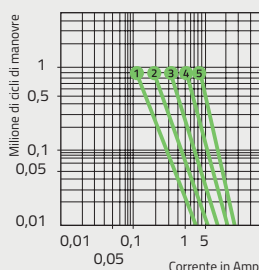
Caratteristiche elettriche

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 gL/gG 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 / UL 508 <table><tr><th colspan="2">Cat AC15 / A600</th><th colspan="2">Cat.DC13 / 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>8</td><td>48</td><td>2.7</td></tr><tr><td>60</td><td>6</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></td><td></td></tr><tr><td>400</td><td>1.5</td><td></td><td></td></tr><tr><td>500</td><td>1.5</td><td></td><td></td></tr><tr><td>600</td><td>1.2</td><td></td><td></td></tr></table>	Cat AC15 / A600		Cat.DC13 / P300		Ue V	Ie A	Ue V	Ie A	24	10	24	5	48	8	48	2.7	60	6	60	2	110	6	110	1.1	220	3	220	0.55	380	2			400	1.5			500	1.5			600	1.2		
Cat AC15 / A600		Cat.DC13 / P300																																											
Ue V	Ie A	Ue V	Ie A																																										
24	10	24	5																																										
48	8	48	2.7																																										
60	6	60	2																																										
110	6	110	1.1																																										
220	3	220	0.55																																										
380	2																																												
400	1.5																																												
500	1.5																																												
600	1.2																																												

Durata elettrica

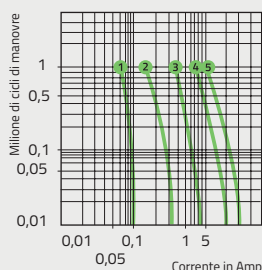
Corrente alternata 50-60 Hz cat AC15

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 <10⁻⁸
 Contatti 020 E10AU/E01AU 5V-1mA <10⁻⁷

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



Max N° 2 CONTATTI
Selettori luminosi.



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



Max 6 CONTATTI
Pulsanti non luminosi, pulsanti luminosi, pulsanti a fungo momentanei, selettori



Max 2 CONTATTI
Illuminated selector switches.



Max 4 CONTATTI
Maintained push-buttons, twin push-buttons, joysticks latching emergency push-buttons.



Max 6 CONTATTI
Metal bezel series: Non-illuminated push-buttons, momentary mushroom push-buttons, selector switches.

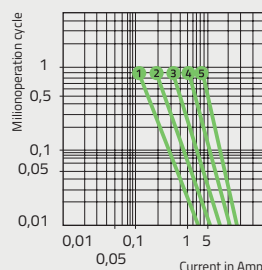
Electrical features

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	<div>In compliance with EN/IEC 947-5-1 / UL 508</div> <table><tr><th colspan="2">Cat AC15 / A600</th><th colspan="2">Cat DC13 / 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>8</td><td>48</td><td>2.7</td></tr><tr><td>60</td><td>6</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></td><td></td></tr><tr><td>400</td><td>1.5</td><td></td><td></td></tr><tr><td>500</td><td>1.5</td><td></td><td></td></tr><tr><td>600</td><td>1.2</td><td></td><td></td></tr></table>	Cat AC15 / A600		Cat DC13 / P300		Ue V	Ie A	Ue V	Ie A	24	10	24	5	48	8	48	2.7	60	6	60	2	110	6	110	1.1	220	3	220	0.55	380	2			400	1.5			500	1.5			600	1.2		
Cat AC15 / A600		Cat DC13 / P300																																											
Ue V	Ie A	Ue V	Ie A																																										
24	10	24	5																																										
48	8	48	2.7																																										
60	6	60	2																																										
110	6	110	1.1																																										
220	3	220	0.55																																										
380	2																																												
400	1.5																																												
500	1.5																																												
600	1.2																																												

Electrical durability

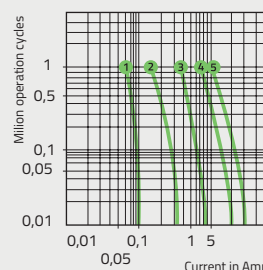
Alternated current 50-60 Hz cat AC15

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 <10⁻⁸
 Contact 020 E10AU/E01AU 5V-1mA <10⁻⁷

Lampholder illuminated operators

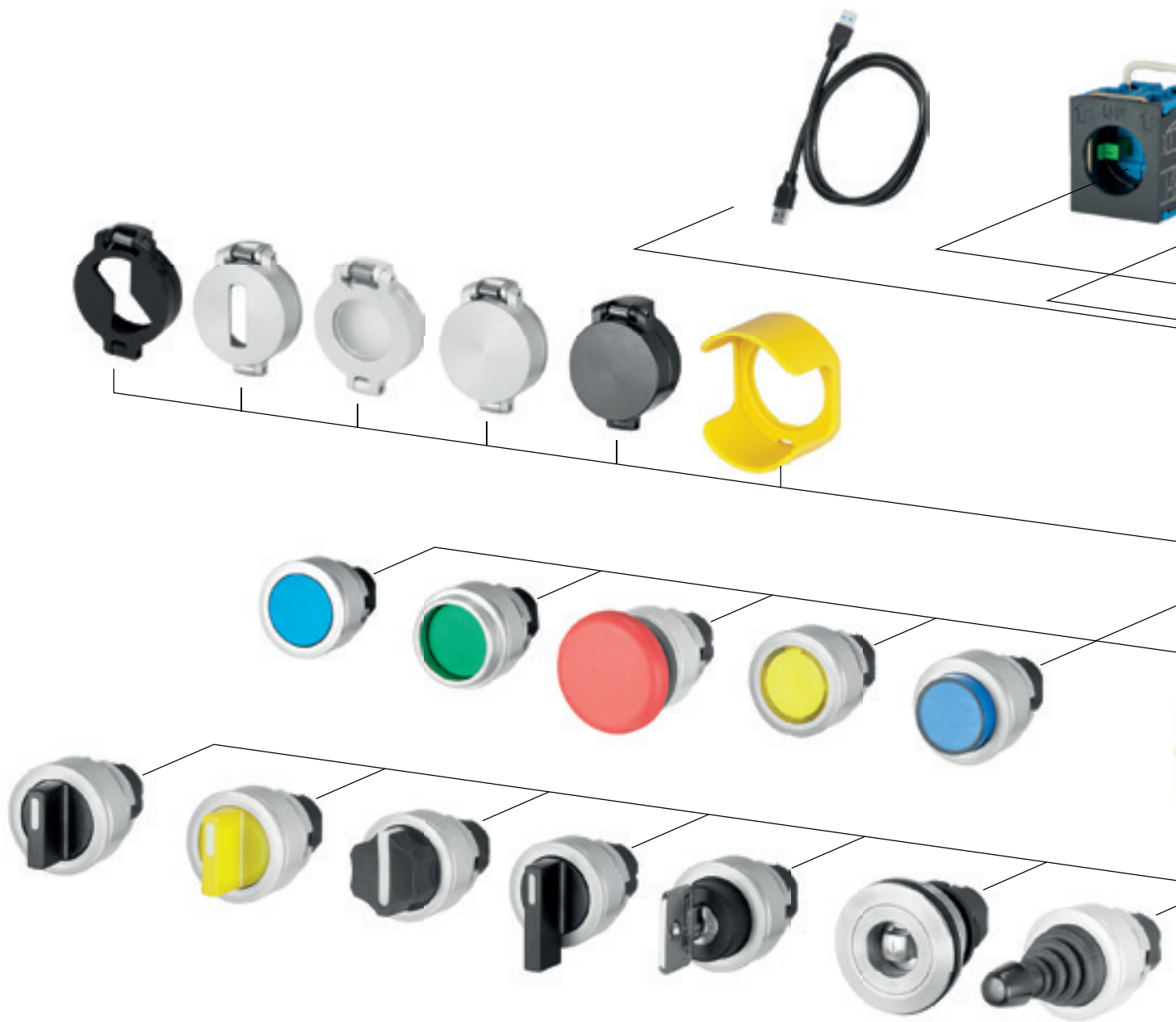
BA9S socket: incandescent, neon, multiled lamps
 Recommended power: lamps 2.6W push-buttons, selector switches 1.2W

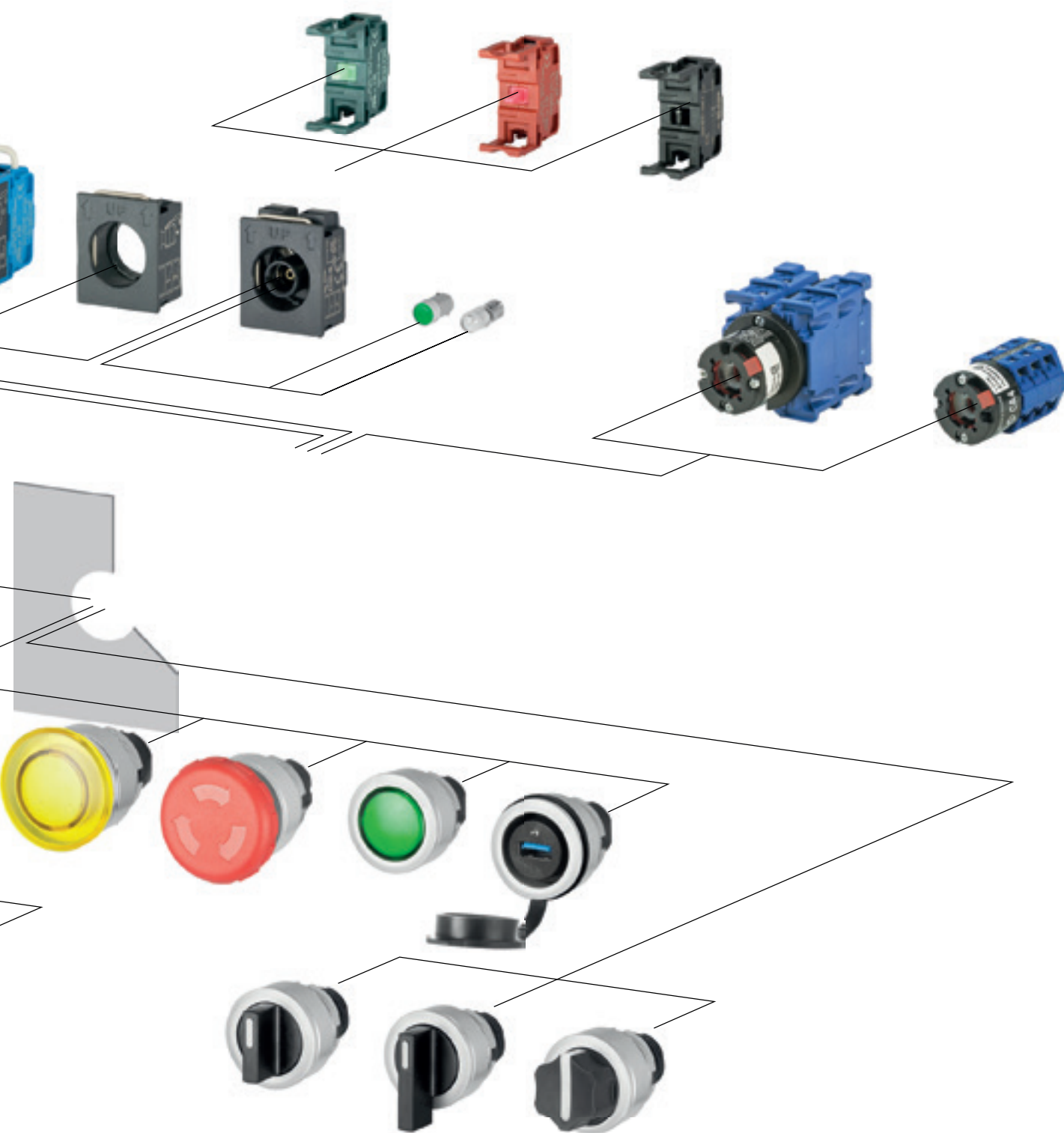
Lamp life

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

Contact configuration







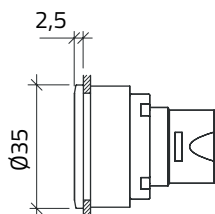
Pulsanti normali Ø30

Normal push-buttons Ø30

Pulsanti normali / Normal push-buttons

g

cod

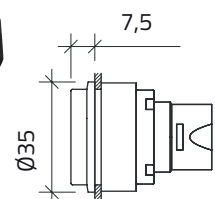


Pulsanti con guardia / Guarded push-buttons

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

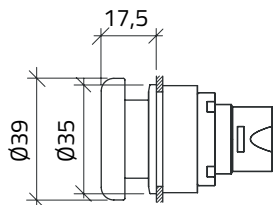
Stabili / Maintained

● 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	030PFGEN
● Rosso / Red	37	030PFGER
● 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

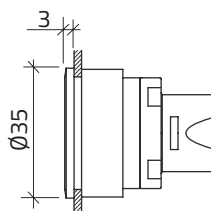
Pulsanti luminosi Ø30

Illuminated push-buttons Ø30

Pulsanti luminosi / Illuminated push-buttons

g

cod

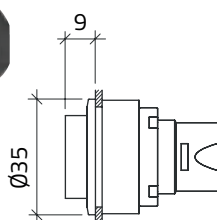


Pulsanti con guardia / Guarded push-buttons

● Rosso / Red	34	030PFLIR
● Verde / Green	34	030PFLIV
● Giallo / Yellow	34	030PFLIG
● Blu / Blue	34	030PFLIBL
○ Trasparente / Clear	34	030PFLII

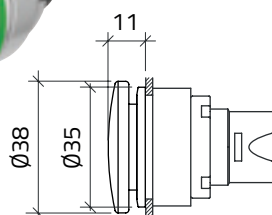
Stabili / Maintained

● Rosso / Red	34	030PPFLIR
● Verde / Green	34	030PPFLIV
● Giallo / Yellow	34	030PPFLIG
● Blu / Blue	34	030PPFLIBL
○ Trasparente / Clear	34	030PPFLII



Pulsanti sporgenti / Projecting push-buttons

● Rosso / Red	34	030PFLSR
● Verde / Green	34	030PFLSV
● Giallo / Yellow	34	030PFLSG
● Blu / Blue	34	030PFLSBL
○ Trasparente / Clear	34	030PFLSI



Pulsanti a fungo Ø38 / Mushroom push-buttons Ø38

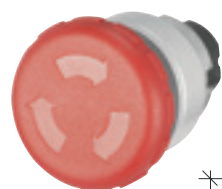
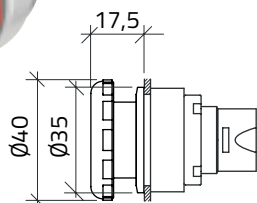
● Rosso / Red	38	030PFAFLR
● Verde / Green	38	030PFAFLV
● Giallo / Yellow	38	030PFAFLG

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)

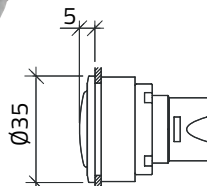
● Nero / Black	49	030PFAAN
● Rosso / Red	49	030PFAAR

g

cod

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
● Arancio / Orange	33	030LFIA

Selettori a manopola Ø30

Knob selector switches Ø30

Cercare la combinazione di schemi a pag. 20 / See diagram combination on page 20



2 posizioni / 2 positions

CAM A



g

cod

39

030SFMAN

CAM B



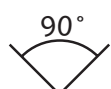
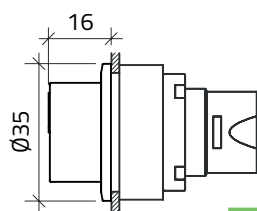
39

030SFMBN



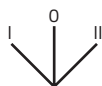
39

030SFMBND



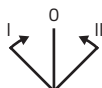
3 posizioni / 3 positions

CAM O



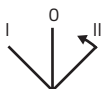
39

030SFMON



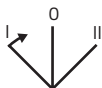
39

030SFMONC



39

030SFMOND



39

030SFMONS

Selettori luminosi a manopola Ø30

Illuminated selector switches Ø30

Cercare la combinazione di schemi a pag. 20 / See diagram combination on page 20

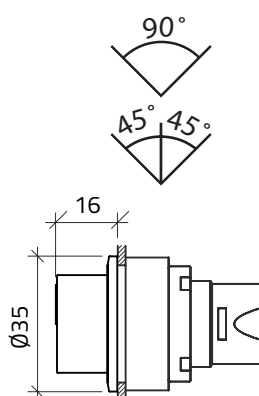
**CAM A**

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

g

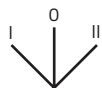
cod

36	030SFMLAB
36	030SFMLAR
36	030SFMLAV
36	030SFMLAG
36	030SFMLABL

**3 posizioni / 3 positions**

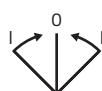
g

cod

**CAM O**

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

36	030SFML0B
36	030SFML0R
36	030SFML0V
36	030SFML0G
36	030SFML0BL

**CAM O**

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

36	030SFML0BC
36	030SFML0RC
36	030SFML0VC
36	030SFML0GC
36	030SFML0BLC

Selettori luminosi a manopola Ø30

Illuminated knob selector switches Ø30

Cercare la combinazione di schemi a pag. 20 / See diagram combination on page 20

2 posizioni / 2 positions

**CAM A**

○ Bianco / White

36

030SFPLAB

● Rosso / Red

36

030SFPLAR

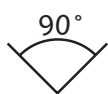
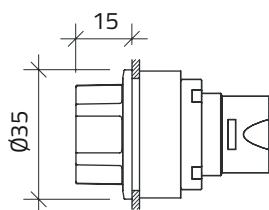
● Verde / Green

36

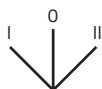
030SFPLAV

● Giallo / Yellow

36

030SFPLAG

3 posizioni / 3 positions

**CAM O**

○ Bianco / White

36

030SFPL0B

● Rosso / Red

36

030SFPL0R

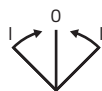
● Verde / Green

36

030SFPL0V

● Giallo / Yellow

36

030SFPL0G**CAM O**

○ Bianco / White

36

030SFPL0BC

● Rosso / Red

36

030SFPL0RC

● Verde / Green

36

030SFPL0VC

● Giallo / Yellow

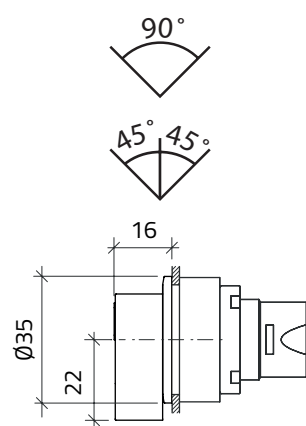
36

030SFPL0GC

Selettori a leva Ø30

Lever selector switches Ø30

Cercare la combinazione di schemi a pag. 20 / See diagram combination on page 20



2 posizioni / 2 positions



CAM A

g

cod

39

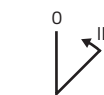
030SFLAN



CAM B

39

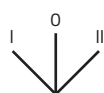
030SFLBN



39

030SFLBND

3 posizioni / 3 positions



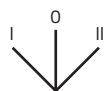
CAM O

g

cod

39

030SFLON



CAM T

39

030SFLTN

Commutatore rotativo 10A Ø30

Rotary selector switches 10A Ø30



Commutatore rotativo a leva corta
Short lever rotary selector switch

Schema 401 / Diagram 401

g

cod

59

030SFMNSC401



Commutatore rotativo a leva lunga
Long lever rotary selector switch

Schema 401 / Diagram 401

g

cod

59

030SFLNSC401



Commutatore rotativo a manopola
Knob rotary selector switch

Schema 401 / Diagram 401

g

cod

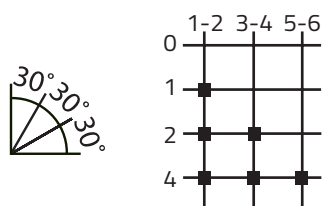
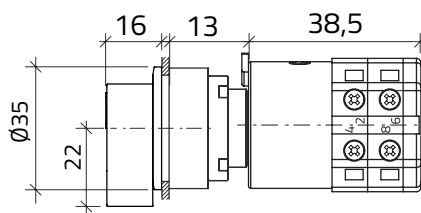
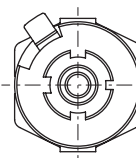
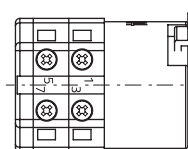
59

030SFPNSC401

ESEMPIO SCHEMA 401

EXAMPLE DIAGRAM 401

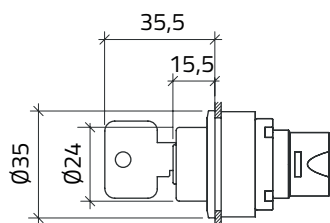
Per altri schemi consultare il nostro ufficio commerciale / For further diagram contact our commercial office



Selettori a chiave Ø30

Key selector switches Ø30

Cercare la combinazione di schemi a pag. 20 / See diagram combination on page 20



2 posizioni / 2 positions

g	k	cod	k	cod
CAM A				
82		030SFCA		030SFCA2
82		030SFCA4		
CAM B				
82		030SFCB		030SFCB2
82		030SFCBD		

3 posizioni / 3 positions

g	k	cod	k	cod
CAM O				
82		030SFCO		030SFCO2
82		030SFCO3		030SFCO4
82		030SFCOC		
82		030SFCOD		

Chiavi speciali Special key



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



Selettori a chiave quadra Ø30

Square key selector switches Ø30

Cercare la combinazione di schemi a pag. 20 / See diagram combination on page 20

2 posizioni / 2 positions

g

cod



CAM B

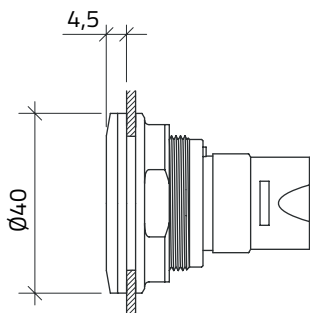
170

030SFKQB



200

030SFKQBD



Combinazione di schemi Ø30

Diagram combination Ø30

			Schema Diagram	Contatti flangianti Flanged contacts
	CAM A	13 — 14	E10	020E10 020G
	CAM A	21 — 22 13 — 14	E01 E10	020E01 020E10 020G
	CAM B	21 — 22 13 — 14	E01 E10	020E01 020E10 020G
	CAM O	23 — 24 13 — 14	E10 E10	020E10 020E10 020G
	CAM T	21 — 22 13 — 14	E01 E10	020E01 020E10 020G

Presa USB filopannello 3.0 Ø30 3.0 flushmount USB socket Ø30

Presa USB 3.0
3.0 USB socket

g

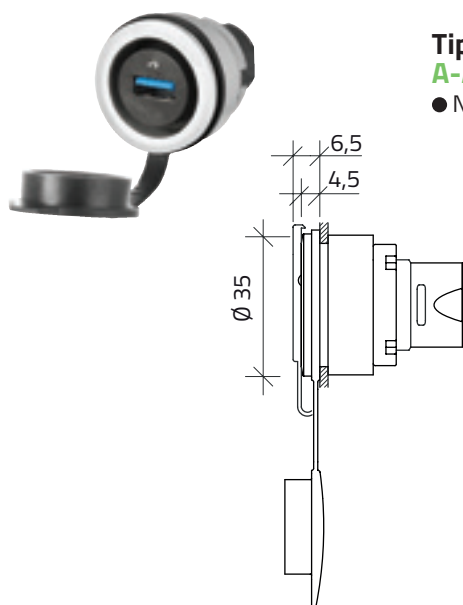
cod

Tipo A-A (femmina-femmina)
A-A type (female-female)

● Nero / Black

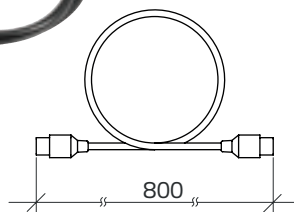
39

030PFUSB



Cavo USB USB cable

Cavo mt 0,8
Cable mt 0,8



Tipo M-M (maschio-maschio)
Type M-M (male-male)

● Nero / Black

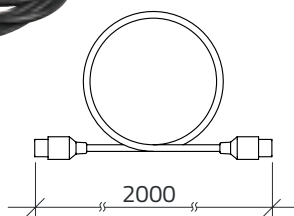
g

37

cod

010CUSBMM8

Cavo mt 2
Cable mt 2



Tipo M-M (maschio-maschio)
Type M-M (male-male)

● Nero / Black

g

77

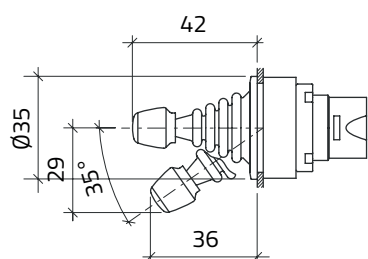
cod

010CUSBMM20

Manipolatori Ø30

Joysticks Ø30

2 posizioni / 2 positions



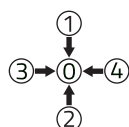
g

cod

1-2	permanenti/maintained	40	030MF2P
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1-2	temporanee/spring return	40	030MF2T
-----	--------------------------	----	----------------

4 posizioni / 4 positions



g

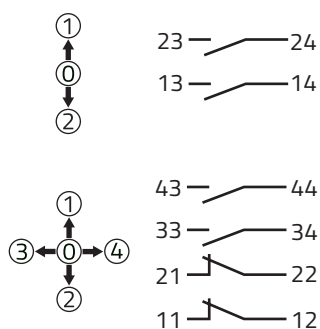
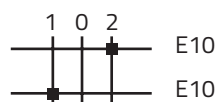
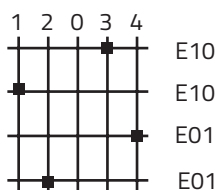
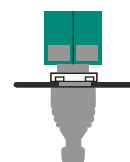
cod

1-2-3-4	permanenti/maintained	40	030MF4P
---------	-----------------------	----	----------------

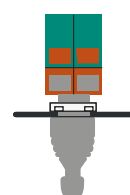
1-2-3-4	temporanee/spring return	40	030MF4T
---------	--------------------------	----	----------------

Schema Diagram

Contatti flangianti Flanged contacts



020E10
020E10
020G

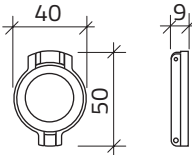
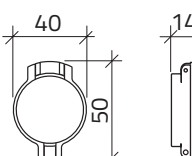
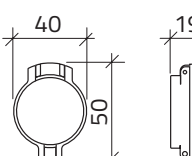
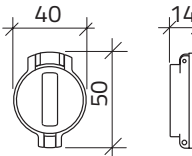
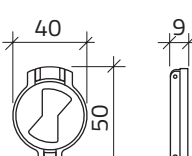
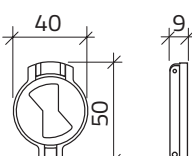
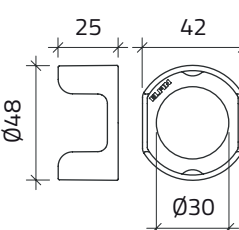


020E10
020E10
020E01
020E01
020G

Accessori Ø30

Accessories Ø30

Protezioni in alluminio piombabili Sealable aluminum covers

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

Portalampada BA9S

Lampholders BA9S

Portalampada / Lampholders

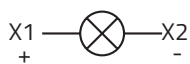
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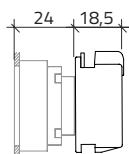
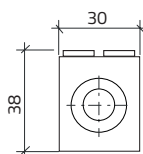
cod



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



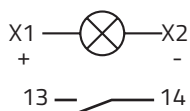
16

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020PD9

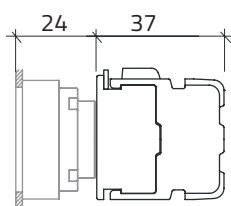
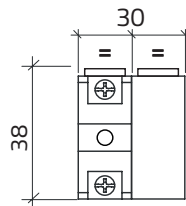


Alimentazione diretta / Direct supply

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



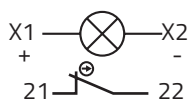
26

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020PD910

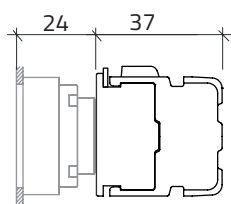
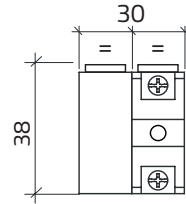


Alimentazione diretta / Direct supply

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



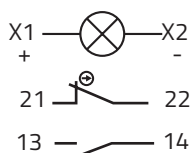
26

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020PD901



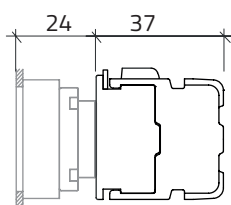
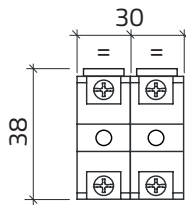
Alimentazione diretta / Direct supply

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

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

1 NC Chiuso / Closed

1 NO Aperto / Open



26

5

020PD911

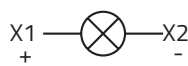
Portalamпада BA9S

Lampholders BA9S

Portalamпада / Lampholders

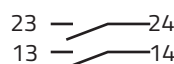


Alimentazione diretta / Direct supply



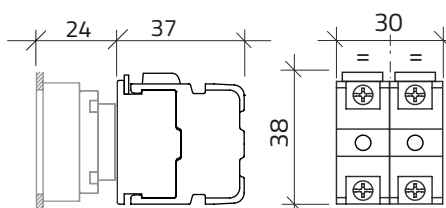
IEC: BA9S 380V. max 2W esclusa / excluded
Valori certificati IMQ / IMQ certified values

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



1 NO Aperto / Open

1 NO Aperto / Open



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cod

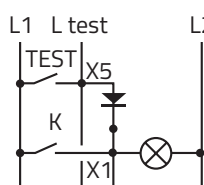
37

5

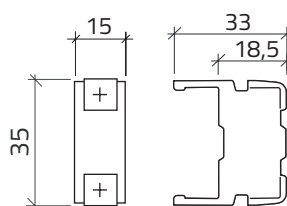
020PD920



Elemento prova lampada / Lamp test module



Per controllo di funzionamento lampade
Checking lamps for good operation



16

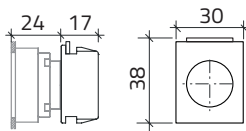
020ET

Elementi di contatto

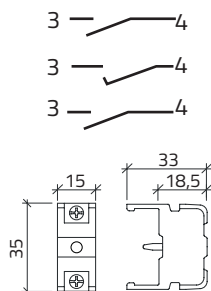
Contact blocks

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

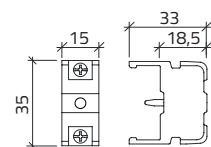
1 NO

10

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020E10AU

Contatti dorati e viti terminali inox. Idoneo per ambienti con fenomeni di corrosione.
Gold-plated contacts and stainless steel terminal screws suitable for corrosive environment



1 — 2

1 NC

10

10

020E01

1 — 2

1 NC Apertura ritardata / 1 NC Late break

10

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020E01R

1 — 2

1 NC

10

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020E01AU

Contatti dorati e viti terminali inox. Idoneo per ambienti con fenomeni di corrosione.
Gold-plated contacts and stainless steel terminal screws suitable for corrosive environment



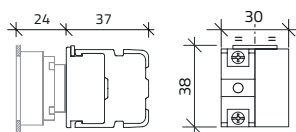
13 — 14

1 NO con flangia / 1NO with flange

19

5

020GE10



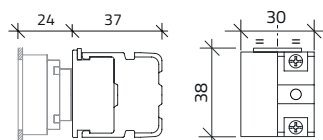
21 — 22

1 NC con flangia / 1NC with flange

19

5

020GE01



1 NO con flangia / 1NO with flange

50

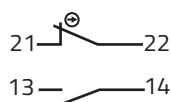
020GE22

1 NC con flangia / 1NC with flange

Elementi di contatto

Contact blocks

Elementi di contatto / Contact blocks



1 NC con flangia / 1NC with flange

1 NO con flangia / 1NO with flange

g

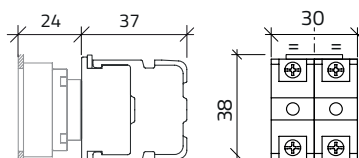
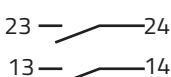
n

cod

19

5

020GE11



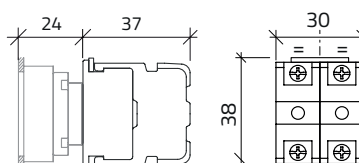
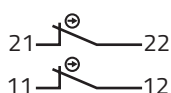
1 NO con flangia / 1NO with flange

1 NO con flangia / 1NO with flange

19

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020GE20



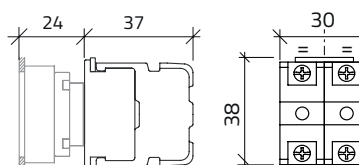
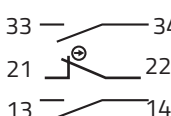
1 NC con flangia / 1NC with flange

1 NC con flangia / 1NC with flange

19

5

020GE02

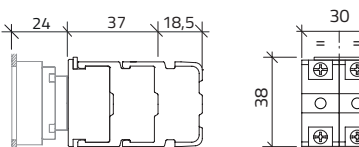
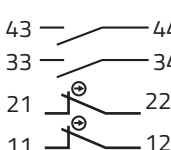


2 NO con flangia / 2NO with flange

1 NC con flangia / 1NC with flange

50

020GE21

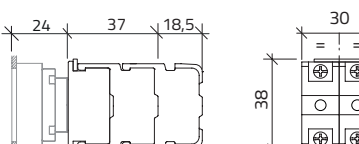


2 NO con flangia / 2NO with flange

2 NC con flangia / 2NC with flange

50

020GE22

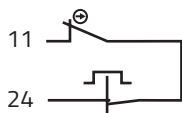


Elementi di contatto / Contact blocks

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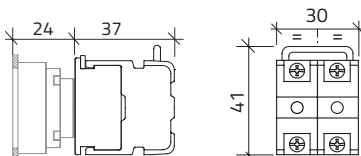
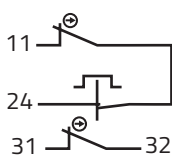
cod



Elemento di contatto con automonitoraggio
Contact block with self-monitoring

19

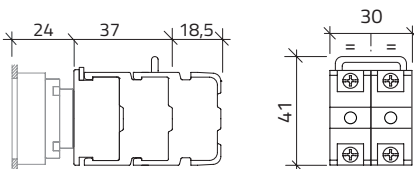
5

020GE01S

Elemento di contatto con automonitoraggio
Contact block with self-monitoring

19

5

020GE02S

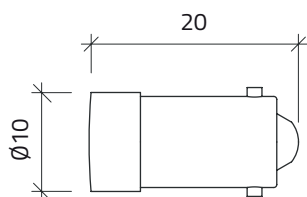
Lampadine

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

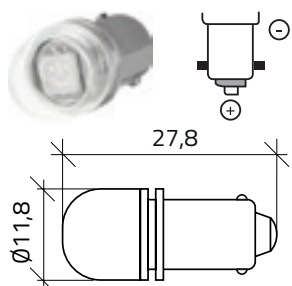


Lampadine

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 mA 30 20 14 7 5 16

24V AC-DC

● Rosso / Red

2

010BA9SLLR24**130V AC-DC**

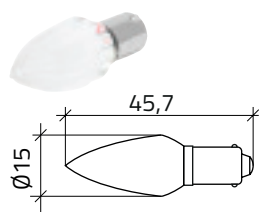
● Rosso / Red

2

010BA9SLLR110**240V AC-DC**

● Rosso / Red

2

010BA9SLLR220**24V AC-DC**

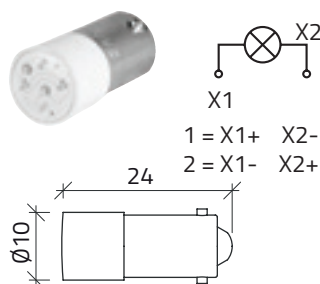
● Rosso / Red

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

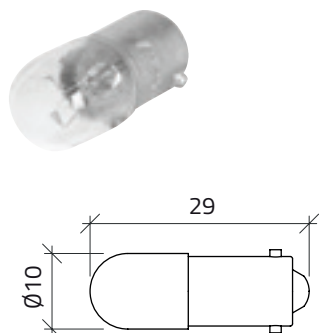
● Blu, giallo / Blue, yellow

2

010BA9SLBLG24

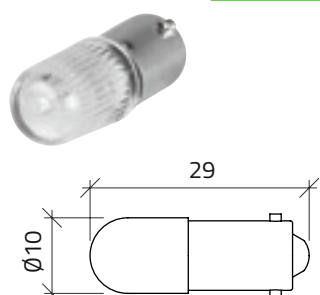
BA9S lampadine ad incandescenza

BA9S Incandescent lamps



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

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

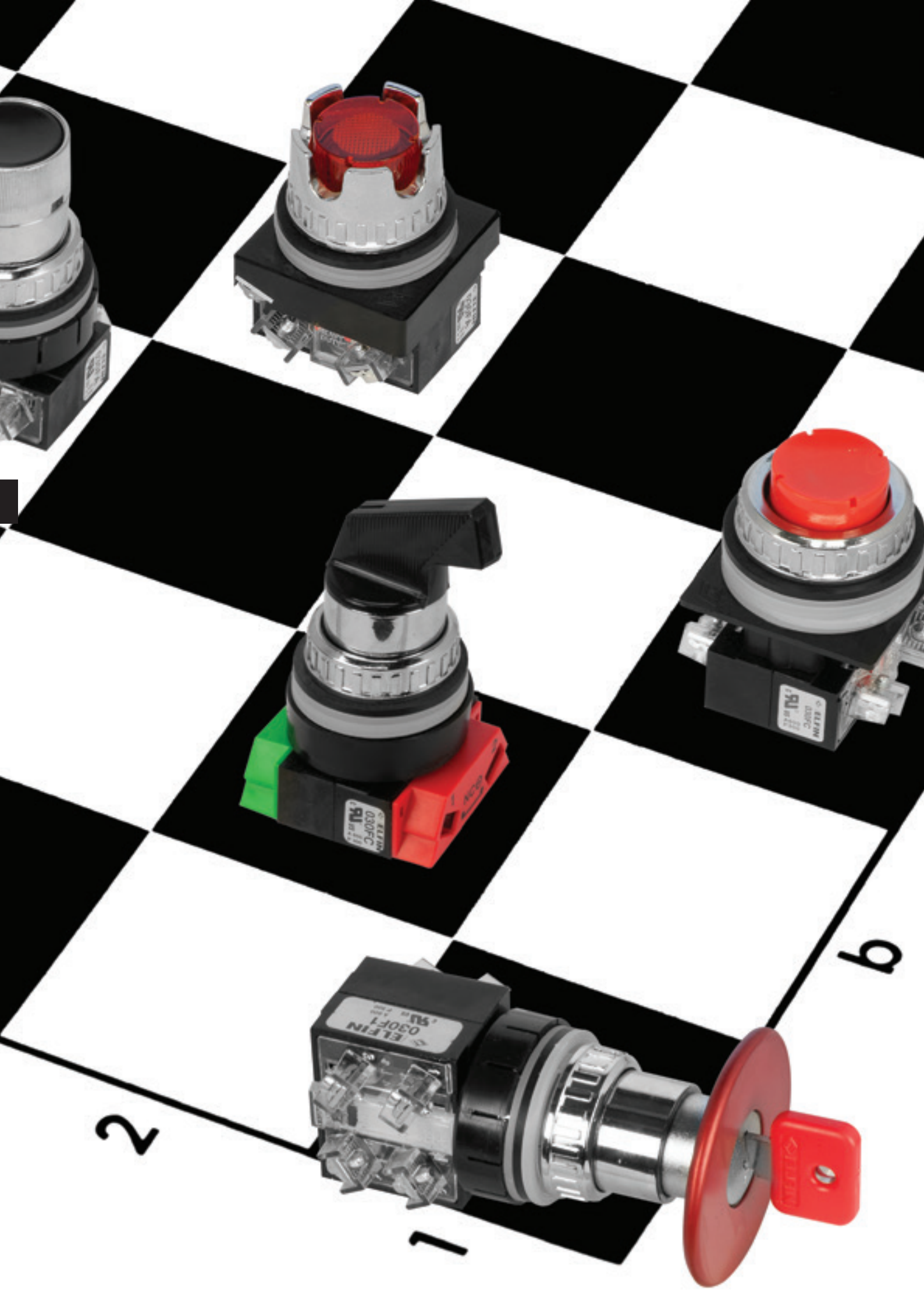
240V 0,3W 2,3 10 **010BA9NV220**

● Arancio / Orange

400V 0,5W 2,3 10 **010BA9SN380**

● Verde / Green

400V 0,5W 2,3 10 **010BA9NV380**



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030

**COMANDO
E SEGNALAZIONE 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.



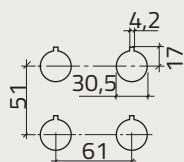
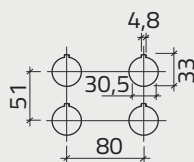
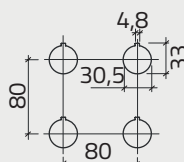
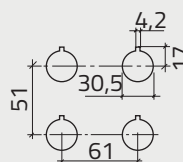
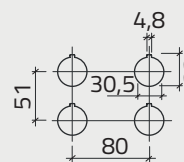
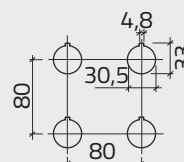
Caratteristiche tecniche

Technical data

Caratteristiche generali

Rispondenza alle norme	IEC 947-5-1, VDE 0660 - NFC - CEI EN60947.5.1 - UTE - BSI - CENELEC EN 50007																																								
Omologazioni	UL (USA)-CSA CANADA																																								
Protezioni climatiche	Clima temperato cat 23/50 (DIN 50014) Clima umido cat.23/83 (DIN 50015) Clima caldo umido cat. 40/ 92 (DIN 50015) Clima umido variabile cat. FW24 (DIN 50016)																																								
Limiti di temperatura	Funzionamento -25°C ÷ +70°C Stoccaggio -40C° ÷ +70C°																																								
Grado di protezione operatori	IP65 secondo EN60529 IP66 Pulsanti con cappuccio in gomma																																								
Grado di protezione terminali	IP2X secondo EN60529 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 <table><tr><th colspan="2">Cat AC15 (UL-CSA: A600)</th><th colspan="2">Cat.DC13 (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 (UL-CSA: A600)		Cat.DC13 (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 (UL-CSA: A600)		Cat.DC13 (UL-CSA: P300)																																							
Ue V	Ie A	Ue V	Ie A																																						
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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 Selettori a manopola, selettori a leva, selettori a chiave, selettori luminosi: 1 milione di manovre Pulsanti selettori, pulsanti luminosi: 1 milione di manovre Pulsanti normali e a fungo momentanei: 3 milioni di manovre
Resistenza agli urti	Pulsanti aggancio: 7g (20 ÷ 500 Hz) IEC 60068-2-6
Resistenza alle vibrazioni	Pulsanti, selettori Manipolatori: 15g (20 ÷ 500 Hz) IEC 60068-2-6 50g IEC 60068-2-27
Viti terminali	Testa combinata taglio e Phillips Ph2 in acciaio zincato. Capacità di chiusura : $\geq 1 \times 0,5$ mm / $\leq 2 \times 2,5$ mm. Capicorda a forcina "spring spade"
Porta lampada operatori luminosi	Attacco BA9S. Pulsanti e lampade spia: max 3W Selettori potenza: max 2W. Si raccomanda l'uso di lampadine LED
Durata lampade	Incandescenza ≤ 1000 h - Neon ≤ 3000 h Multiled ≥ 50.000 h
Dimensioni di montaggio	Pannelli con spessore 1 ÷ 6mm. Foratura secondo EN/IEC 60947-5-1

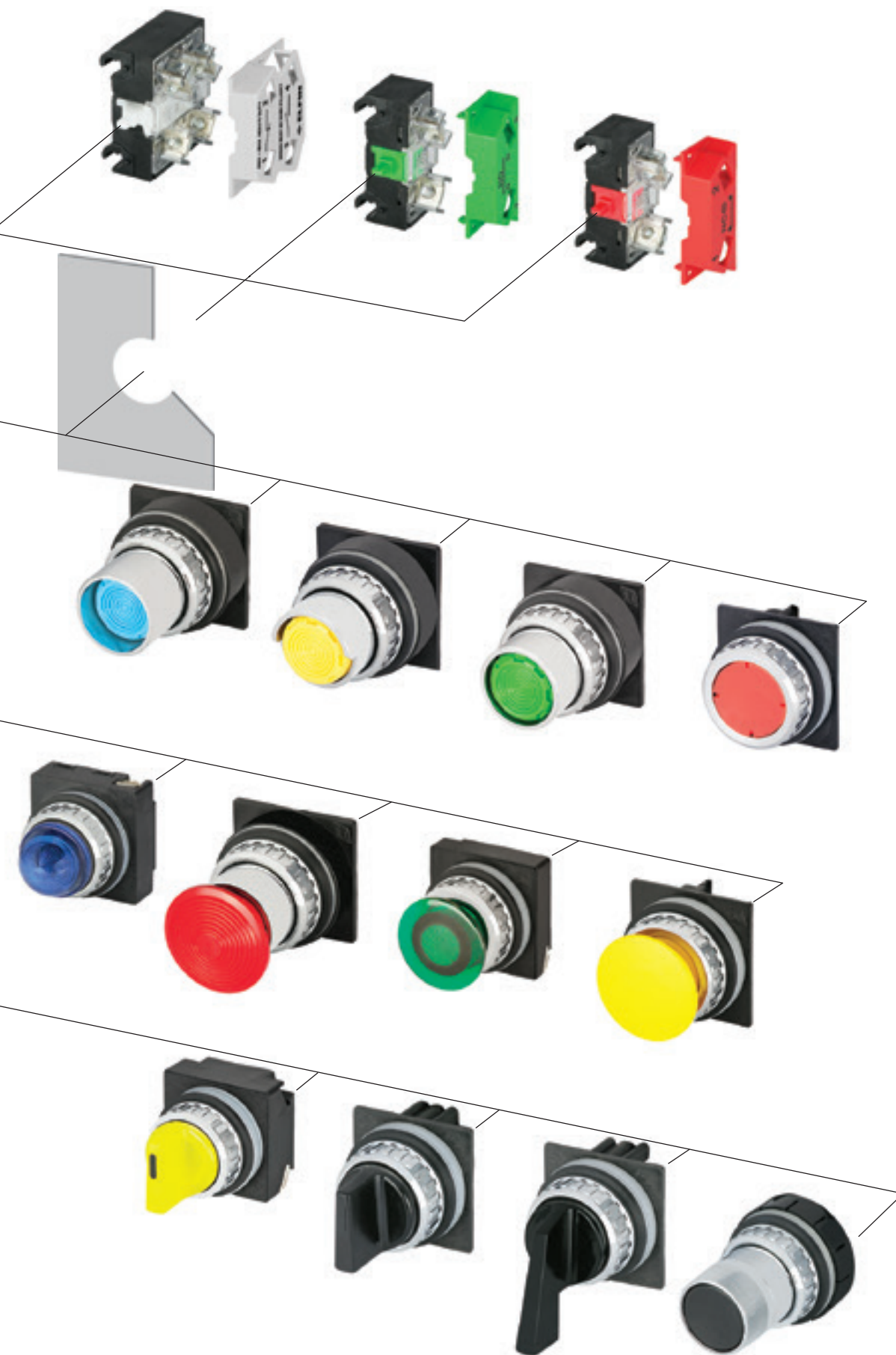


General features

Standards compliance	IEC 947-5-1, VDE 0660 - NFC - CEI EN60947.5.1 - UTE - BSI - CENELEC EN 50007																																								
Approvals	UL (USA)-CSA CANADA																																								
Climatic protection	Temperate climate cat 23/50 (DIN 50014) Humid climate cat.23/83 (DIN 50015) Hot-humid climate cat. 40/ 92 (DIN 50015) Humid variable climate cat. FW24 (DIN 50016)																																								
Temperature ranges	Operating -25C° ÷ +70C° Storage -40C° ÷ +70C°																																								
Protection degree operators	IP65 in compliance with EN60529 IP66 Push-buttons with rubber cap																																								
Protection degree terminals	IP2X in compliance with EN60529 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. Self-cleaning. Forced opening of NC contact. Double breakage for a higher reliability.																																								
Electrical ratings	Rated thermal current ith = 10 A - operating range in compliance with EN60947-5-1 <table><tr><th colspan="2">Cat AC15 (UL-CSA: A600)</th><th colspan="2">Cat.DC13 (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 (UL-CSA: A600)		Cat.DC13 (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
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600	1.2	600	0.22																																						
Mechanical life	Joysticks, key push-buttons, latching mushroom push-buttons: 500000 cycles Knob, lever and key selector switches, illuminated selector switches: 1 million cycles Push-button selector switches, illuminated push-buttons: 1 million cycles Normal and mushroom push-buttons, momentary: 3 million cycles																																								
Shock resistance	Latching push-buttons: 7g (20÷500 Hz) IEC 60068-2-6																																								
Vibration resistance	Push-buttons, selector switches Joysticks: 15g (20 ÷500 Hz) IEC 60068-2-6 50g IEC 68-2-27																																								
Terminal screws	Combined slot and Phillips Ph2 head, zinc plated. Connection capacity : ≥1 x 0.5 mm /≤2x2.5 mm Fork spring spade terminals																																								
Lampholder illuminated operators	BA9S socket. Push-buttons and pilot lights: max 3W. Selector switches: max. 2W. LED lamps are recommended																																								
Lamp life	Incandescent ≤1000h-Neon ≤3000h Multiled≥50,000h																																								
Mounting dimensions	1÷6mm panels. Drilling in compliance with EN/IEC 60947-5-1																																								







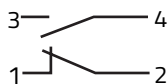
Pulsanti normali Ø30

Normal push-buttons Ø30

Pulsanti normali / Normal push-buttons

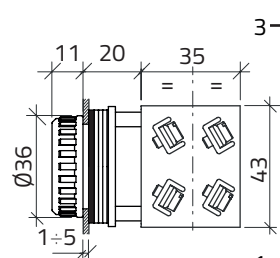
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Pulsanti con guardia / Guarded push-buttons

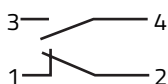
● Nero / Black	84	030RINF1
● Rosso / Red	84	030RIRF1
● Verde / Green	84	030RIVF1
● Giallo / Yellow	84	030RIGF1
● Blu / Blue	84	030RIBLF1
● Arancio / Orange	84	030RIAF1



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



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



Pulsanti sporgenti / Projecting push-button

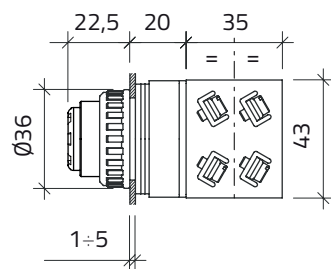
● Nero / Black	86	030RRNF1
● Rosso / Red	86	030RRRF1
● Verde / Green	86	030RRVF1
● Giallo / Yellow	86	030RRGF1
● Blu / Blue	86	030RRBLF1
● Arancio / Orange	86	030RRAF1



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



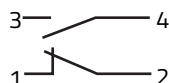
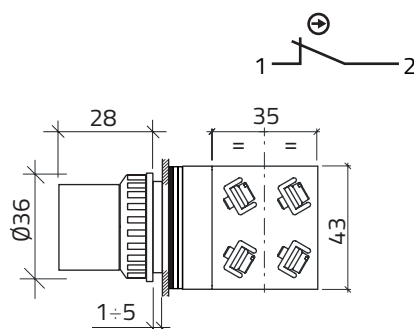
● Nero / Black	68	030RRNFC
● Rosso / Red	68	030RRRFC
● Verde / Green	68	030RRVFC
● Giallo / Yellow	68	030RRGFC
● Blu / Blue	68	030RRBLFC
● Arancio / Orange	68	030RR AFC



Pulsanti normali Ø30

Normal push-buttons Ø30

Pulsanti normali / Normal push-buttons



Pulsanti con guardia intera / Push-buttons with full guard

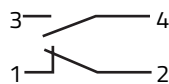
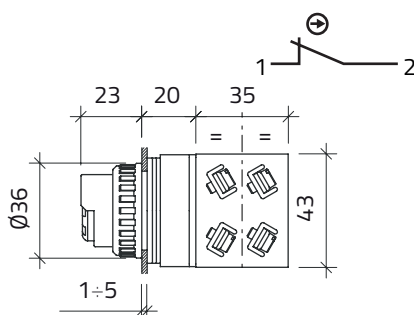
● Nero / Black	93	030PINF1
● Rosso / Red	93	030PIRF1
● Verde / Green	93	030PIVF1
● Giallo / Yellow	93	030PIGF1
● Blu / Blue	93	030PIBLF1
● Arancio / Orange	93	030PIAF1



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



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



Pulsanti con mezza guardia Push-buttons with half guard

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



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



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

Pulsanti normali Ø30

Normal push-buttons Ø30

Pulsanti normali / Normal push-buttons

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Senza guardia / Without guard

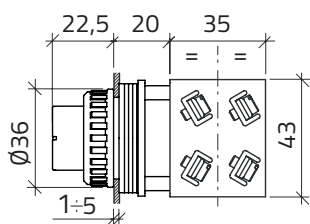
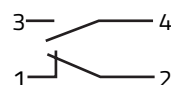
● Nero / Black	93	030PRNF1
● Rosso / Red	93	030PRRF1
● Verde / Green	93	030PRVF1
● Giallo / Yellow	93	030PRGF1
● Blu / Blue	93	030PRBLF1
● Arancio / Orange	93	030PRAF1



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

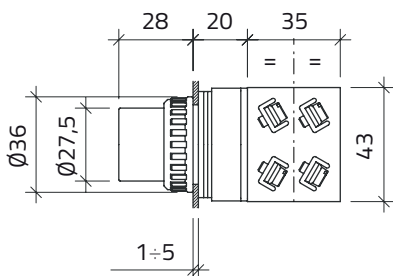


● Nero / Black	75	030PRNFC
● Rosso / Red	75	030PRRFC
● Verde / Green	75	030PRVFC
● Giallo / Yellow	75	030PRGFC
● Blu / Blue	75	030PRBLFC
● Arancio / Orange	75	030PRAFC



Pulsanti con guardia estesa Push-buttons with extended guard

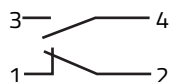
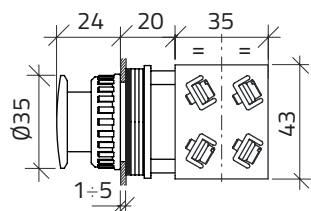
● Nero / Black	95	030PPNF1
● Rosso / Red	95	030PPRF1
● Verde / Green	95	030PPVF1
● Giallo / Yellow	95	030PPGF1
● Blu / Blue	95	030PPBLF1
● Arancio / Orange	95	030PPAF1



Pulsanti normali Ø30

Normal push-buttons Ø30

Pulsanti a fungo momentanei Momentary mushroom push-buttons

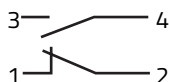
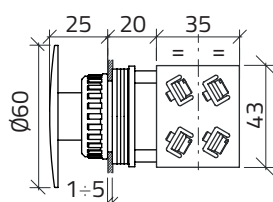


Pulsanti a fungo Ø 35 / Mushroom push-button Ø 35

● Nero / Black	120	030RFNF1
● Verde / Green	120	030RFVF1
● Giallo / Yellow	120	030RFGF1



● Nero / Black	100	030RFNFA
● Verde / Green	100	030RFVFA
● Giallo / Yellow	100	030RFGFA



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

● Nero / Black	130	030RFFNF1
● Verde / Green	130	030RFFVF1
● Giallo / Yellow	130	030RFFGF1

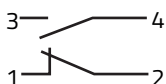


● Nero / Black	110	030RFFNFA
● Verde / Green	110	030RFFVFA
● Giallo / Yellow	110	030RFFGFA

Pulsanti normali Ø30

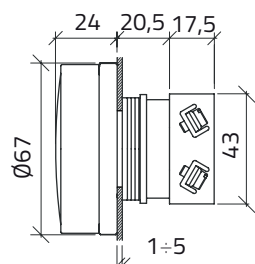
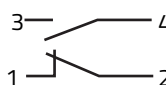
Normal push-buttons Ø30

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	03ORFFPMNFAFC
● Rosso / Red	165	03ORFFPMRFAFC

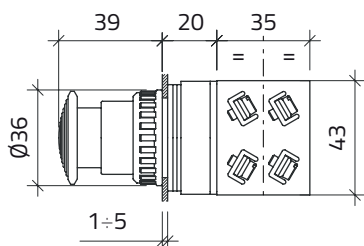
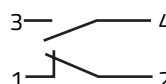


Pulsanti a fungo Ø 35 / Mushroom push-button Ø 35

● Nero / Black	120	030PFNF1
● Verde / Green	120	030PFVF1
● Giallo / Yellow	120	030PFGF1



● Nero / Black	100	030PFNF1
● Verde / Green	100	030PFVF1
● Giallo / Yellow	100	030PFGF1

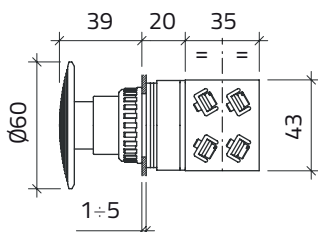


Pulsanti a fungo Ø 60 / Mushroom push-buttons Ø 60

● Nero / Black	130	030PFFNF1
● Verde / Green	130	030PFFVF1
● Giallo / Yellow	130	030PFFGF1



● Nero / Black	110	030PFFNF1
● Verde / Green	110	030PFFVF1
● Giallo / Yellow	110	030PFFGF1



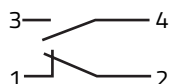
Pulsanti luminosi Ø30

Illuminated push-buttons Ø30

Pulsanti luminosi Illuminated push-button

g

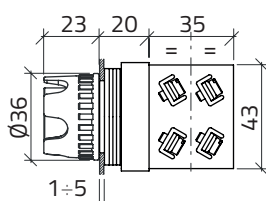
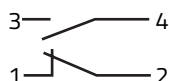
cod



Pulsanti con guardia completa Push-button with full guard

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

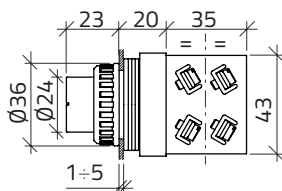
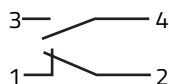
● Rosso / Red	103	030RPLSRFAFC24
● Verde / Green	103	030RPLSVFAFC24
● Giallo / Yellow	103	030RPLSGFAFC24
● Blu / Blue	103	030RPLSBLFAFC24
○ Bianco / White	103	030RPLSBFAFC24



Pulsanti sporgenti / Projecting push-buttons

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

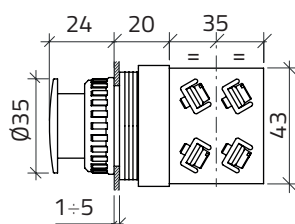
● Rosso / Red	97	030RPLRFAFC24
● Verde / Green	97	030RPLVFAFC24
● Giallo / Yellow	97	030RPLGFAFC24
● Blu / Blue	97	030RPLBLFAFC24
○ Bianco / White	97	030RPLBFAFC24



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

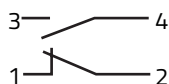
● Rosso / Red	98	030RFLRFAFC24
● Verde / Green	98	030RFLVFAFC24
● Giallo / Yellow	98	030RFLGFAFC24
● Blu / Blue	98	030RFLBLFAFC24
○ Bianco / White	98	030RFLBFAFC24



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

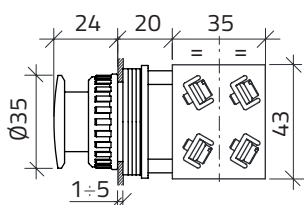
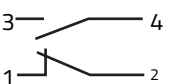
030RFRFA



● Rosso / Red

100

030RFRFC



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

● Rosso / Red

130

030RFRF1



● Rosso / Red

110

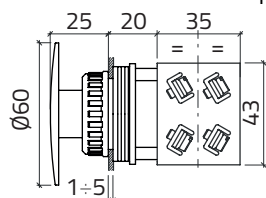
030RFRFA



● 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

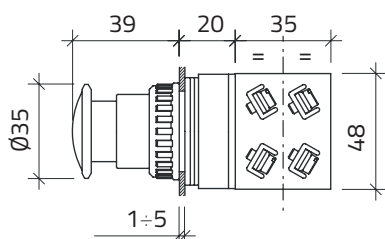
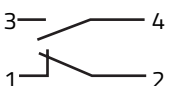
030PFRFA



● Rosso / Red

100

030PFRFC



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

● Rosso / Red

130

030PFRF1



● Rosso / Red

110

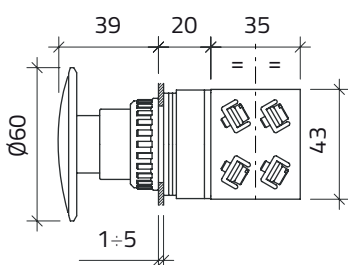
030PFRFA



● Rosso / Red

110

030PFRFC



Pulsanti di emergenza Ø30

Emergency stop push-buttons Ø30

Pulsanti a fungo ad aggancio Latching mushroom push-buttons

g

cod

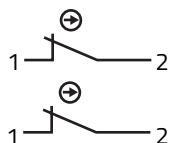


Pulsanti a fungo Ø 35, sgancio rotazione Mushroom push-buttons Ø 35, twist release

● Rosso / Red

100

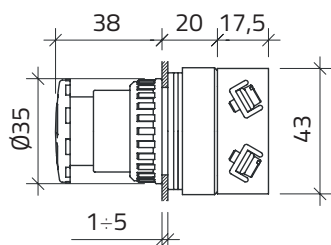
030PFARFC



● Rosso / Red

115

030PFAR2FC

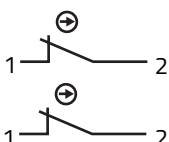


Pulsanti a fungo Ø 60, sgancio rotazione Mushroom push-buttons Ø 60, twist release

● Rosso / Red

110

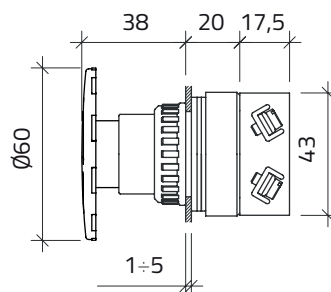
030PFFARFC



● 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

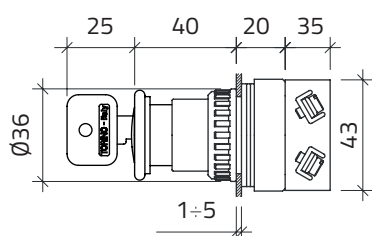
030PFBAFC



● 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

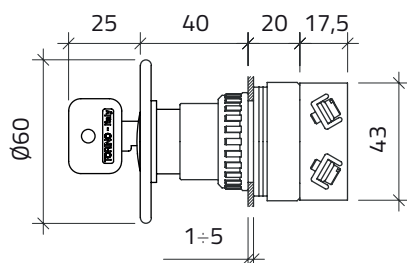
030PFFBAFC



● Rosso / Red

186

030PFFBA2FC

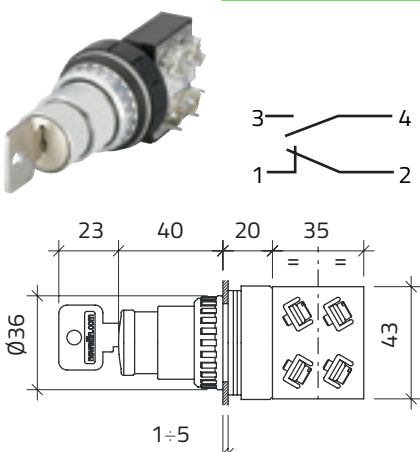


Pulsanti a chiave Ø30

Key push-buttons Ø30

Pulsanti bloccabili con chiave

Key lockable push-buttons



Chiave standard 3095

Standard key 3095

BA	158	030PBAF1
BB	158	030PBBF1
LB	158	030PLBF1

g

cod



Caratteristiche tecniche

Le chiavi sono estraibili con azionatore sia libero che premuto.

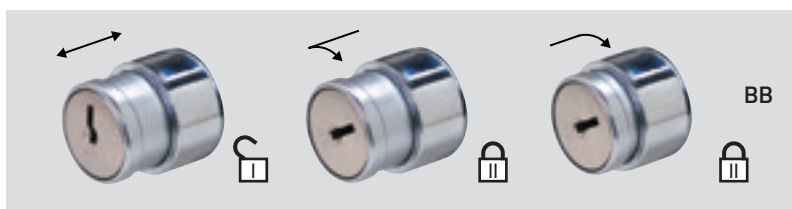
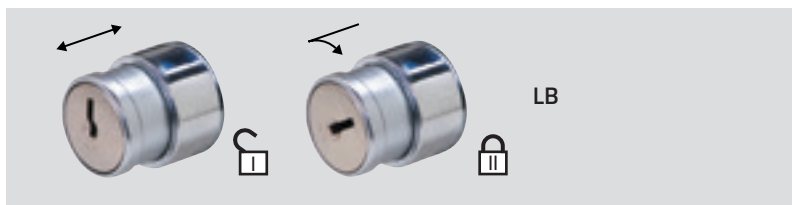
Si fornisce chiave standard

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

Technical data

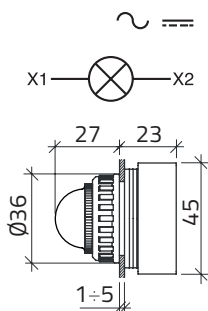
The keys can be removed with the actuator both free and depressed. A standard key is supplied.

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



Lampade spia Ø30

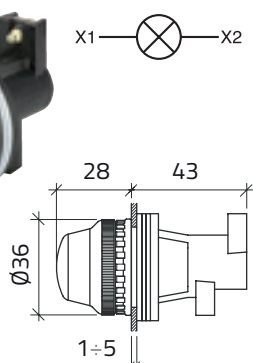
Pilot lights Ø30



Alimentazione diretta / Direct supply

Lampadina LED BA9S non inclusa / BA9S LED lamp not included

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



Alimentazione diretta / Direct supply

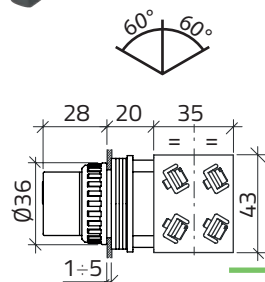
Lampadina E14 7W max non inclusa / Lamp E14 7W max not included

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

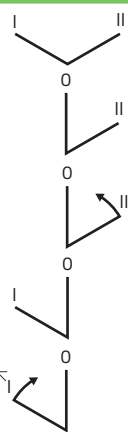
Selettori a manopola Ø30

Knob selector switches Ø30

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



2 posizioni / 2 positions



CAM A

g

cod

85

030RSMNAF1

CAM B

85

030RSMNBF1

CAM B

85

030RSMNBF1D

CAM C

85

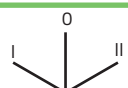
030RSMNCF1

CAM C

85

030RSMNCF1S

3 posizioni / 3 positions



CAM O

g

cod

85

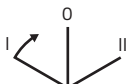
030RSMNO2F1



CAM O

85

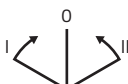
030RSMNO2F1D



CAM O

85

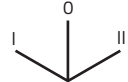
030RSMNO2F1S



CAM O

85

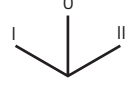
030RSMNO2F1C



CAM T

85

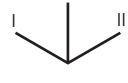
030RSMNT2F1



CAM S

85

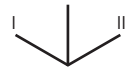
030RSMNSF1



CAM P

85

030RSMNPF1



CAM F

85

030RSMNFF1

4 posizioni / 4 positions



CAM Q

g

cod

85

030RSMNQ2F1

5 posizioni / 5 positions



CAM R

g

cod

87

030RSMNR2F1

CAM V

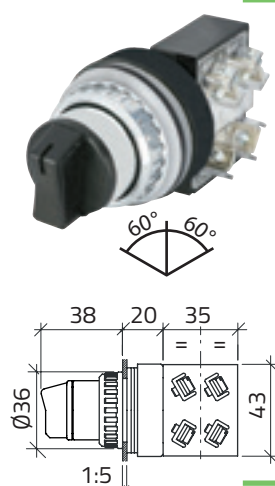
87

030RSMNV2F1

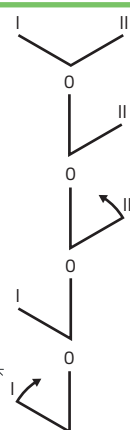
Selettori a manopola Ø30

Knob selector switches Ø30

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



2 posizioni / 2 positions



CAM A

g

cod

100

030SMNAF1

CAM B

100

030SMNBF1

CAM B

100

030SMNBF1D

CAM C

100

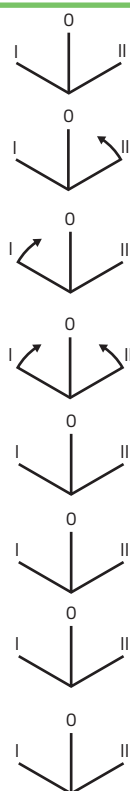
030SMNCF1

CAM C

100

030SMNCF1S

3 posizioni / 3 positions



CAM O

g

cod

100

030SMN02F1

CAM O

100

030SMN02F1D

CAM O

100

030SMN02F1S

CAM O

100

030SMN02F1C

CAM T

100

030SMNT2F1

CAM S

100

030SMNSF1

CAM P

100

030SMNPF1

CAM F

100

030SMNFF1

4 posizioni / 4 positions



CAM Q

g

cod

100

030SMNQ2F1

5 posizioni / 5 positions



CAM R

g

cod

100

030SMNR2F1

CAM V

100

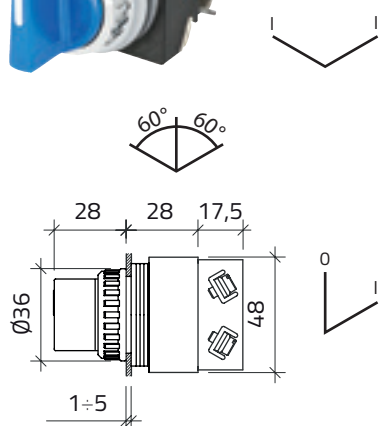
030SMNV2F1



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

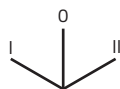
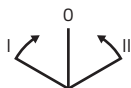
Lampadina LED BA9S inclusa / BA9S LED lamp included

CAM O

○ Bianco / White	128	030SML0B2FA24
● Rosso / Red	128	030SML0R2FA24
● Verde / Green	128	030SML0V2FA24
● Giallo / Yellow	128	030SML0G2FA24
● Blu / Blue	128	030SML0BL2FA24

CAM O

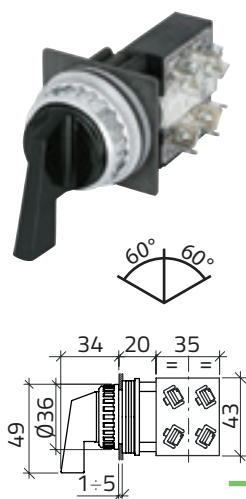
○ Bianco / White	128	030SML0B2FAC24
● Rosso / Red	128	030SML0R2FAC24
● Verde / Green	128	030SML0V2FAC24
● Giallo / Yellow	128	030SML0G2FAC24
● Blu / Blue	128	030SML0BL2FAC24



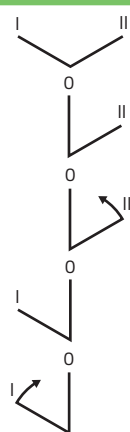
Selettori a leva Ø30

Lever selector switches Ø30

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



2 posizioni / 2 positions



CAM A

g

cod

87

030RSLNAF1

CAM B

87

030RSLNBF1

CAM B

87

030RSLNBF1D

CAM C

87

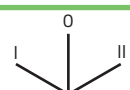
030RSLNCF1

CAM C

87

030RSLNCF1S

3 posizioni / 3 positions



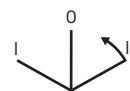
CAM O

g

cod

87

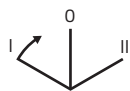
030RSLN02F1



CAM O

87

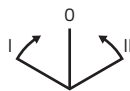
030RSLN02F1D



CAM O

87

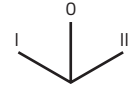
030RSLN02F1S



CAM O

87

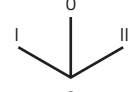
030RSLN02F1C



CAM T

87

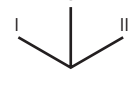
030RSLNT2F1



CAM S

87

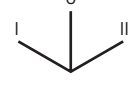
030RSLNSF1



CAM P

87

030RSLNPF1

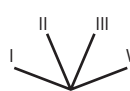


CAM F

87

030RSLNFF1

4 posizioni / 4 positions



CAM Q

g

cod

87

030RSLNQ2F1

5 posizioni / 5 positions



CAM R

g

cod

87

030RSLNR2F1

CAM V

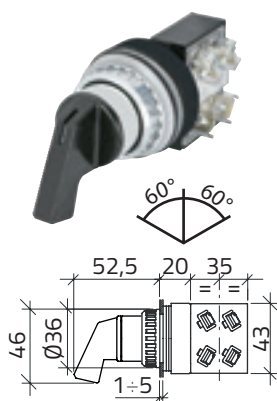
87

030RSLNV2F1

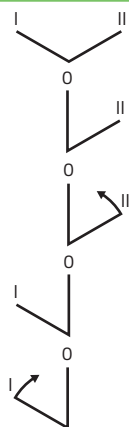
Selettori a leva Ø30

Lever selector switches Ø30

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



2 posizioni / 2 positions



CAM A

g

102

cod

030SLNAF1

CAM B

102

030SLNBF1

CAM B

102

030SLNBF1D

CAM C

102

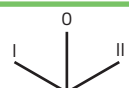
030SLNCF1

CAM C

102

030SLNCF1S

3 posizioni / 3 positions



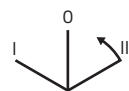
CAM O

g

102

cod

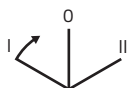
030SLNO2F1



CAM O

102

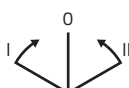
030SLNO2F1D



CAM O

102

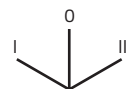
030SLNO2F1S



CAM O

102

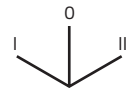
030SLNO2F1C



CAM T

102

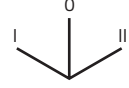
030SLNT2F1



CAM S

102

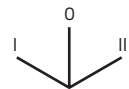
030SLNSF1



CAM P

102

030SLNPF1



CAM F

102

030SLNFF1

4 posizioni / 4 positions



CAM Q

g

102

cod

030SLNQ2F1

5 posizioni / 5 positions



CAM R

g

102

cod

030SLNR2F1

CAM V

102

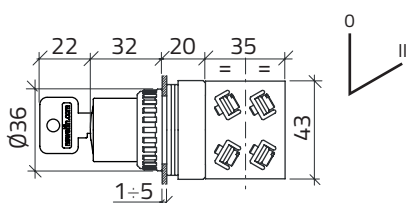
030SLNV2F1

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

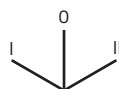
k

cod

k

cod

CAM O



148



030SC02F1



030SC02F1C

148



030SC02F13



030SC02F1D

148



030SC02F15



030SC02F1D2

148



030SC02F17



030SC02F1D3

148



030SC02F12



030SC02F1S3

148



030SC02F14



030SC02F1S

148

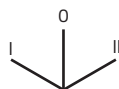


030SC02F16



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



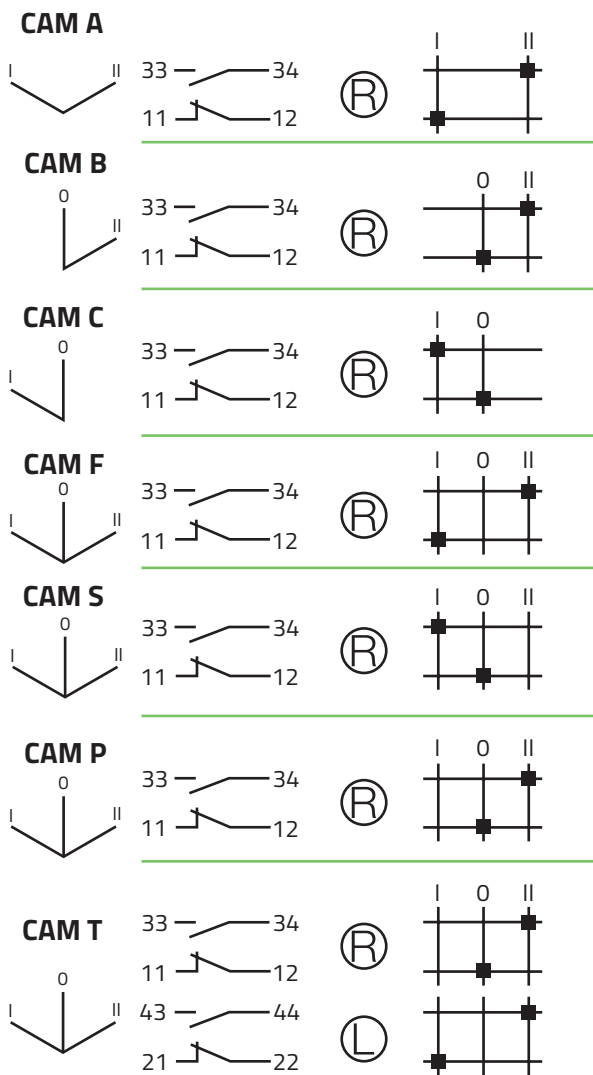
Chiave standard 3095, per chiavi speciali far seguire al codice del selettore il suffisso
Standard key 3095, for special keys complete the selector code with the suffix

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

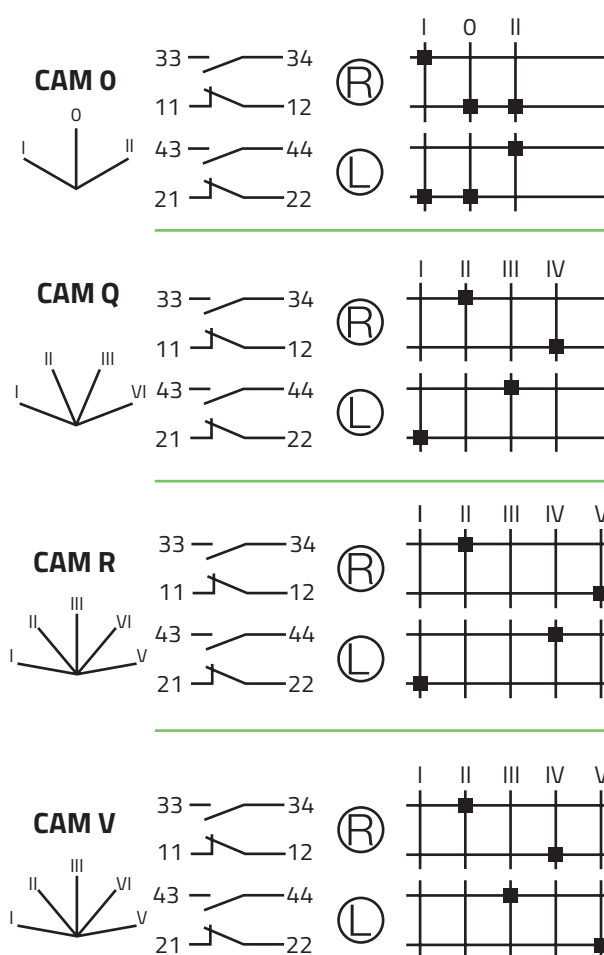
Combinazione di schemi selettori

Diagram combination for selector switches

Selettori Selector switches



Selettori Selector switches

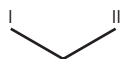
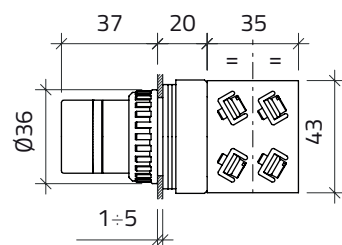


Pulsanti selettori Ø30

Push-button selector switches Ø30

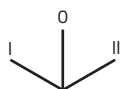
Vedi schemi a pag. 28-29 / See the diagram combination on page 28-29

2 posizioni / 2 positions



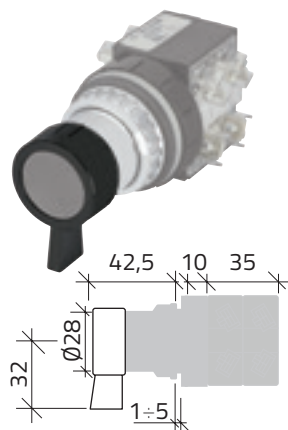
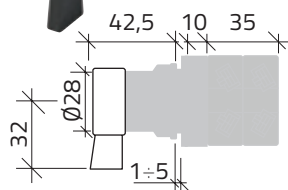
	g	cod
CAM 01	166	030PSN01
CAM 02	166	030PSN02
CAM 03	166	030PSN03
CAM 04	166	030PSN04
CAM 05	166	030PSN05
CAM 06	166	030PSN06
CAM 11	166	030PSN11
CAM 12	166	030PSN12
CAM 13	166	030PSN13
CAM 21	166	030PSN21
CAM 22	166	030PSN22
CAM 31	166	030PSN31
CAM 32	166	030PSN32
CAM 33	166	030PSN33
CAM 34	166	030PSN34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

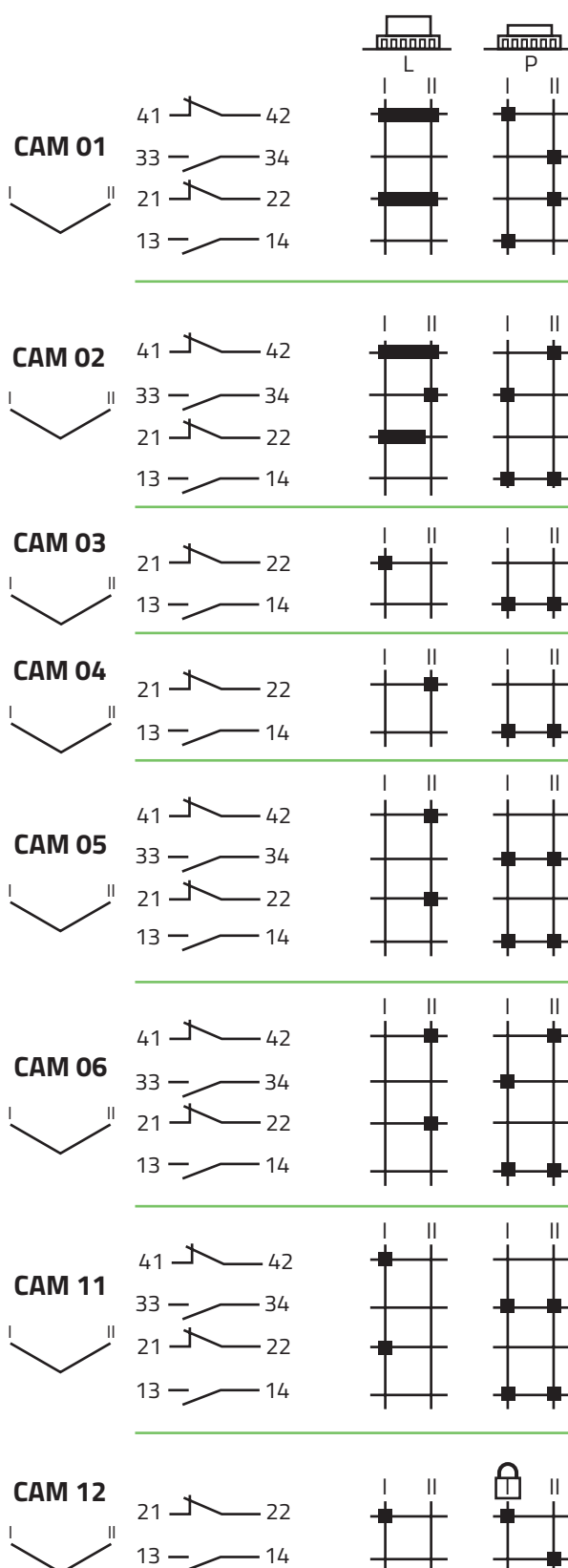


	g	cod
	6	030LPS

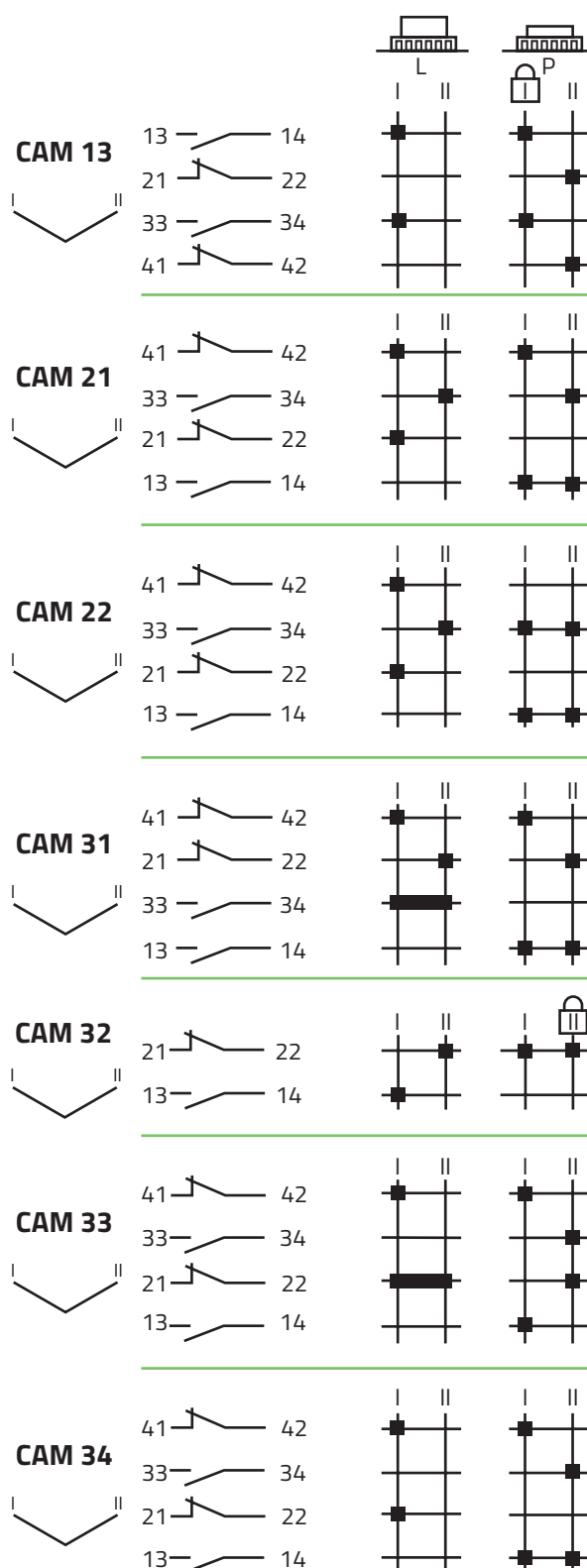
Combinazione di schemi pulsanti selettori

Diagram combination for push-button selector switches

Pulsanti selettori Push-button selector switches



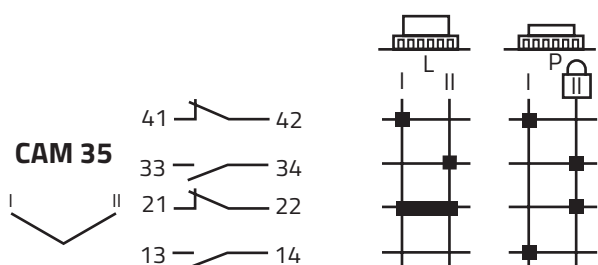
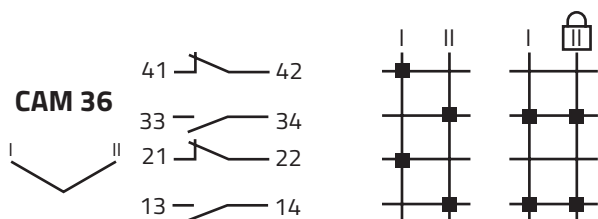
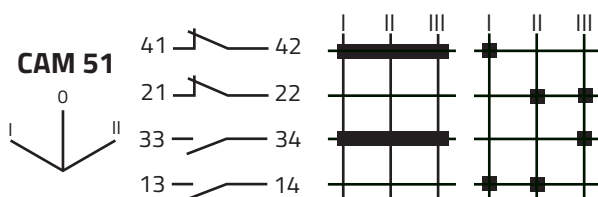
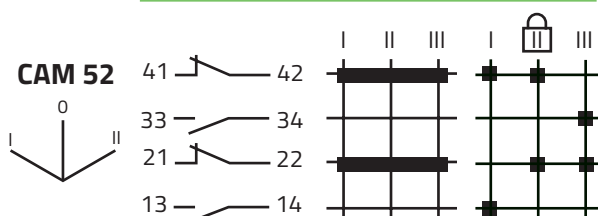
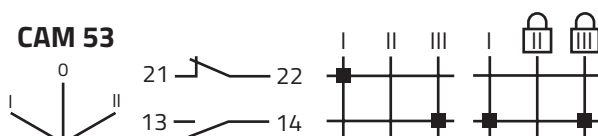
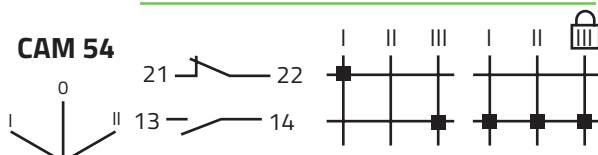
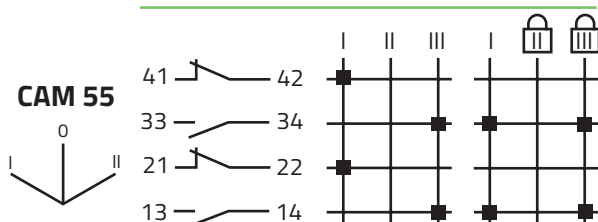
Pulsanti selettori Push-button selector switches



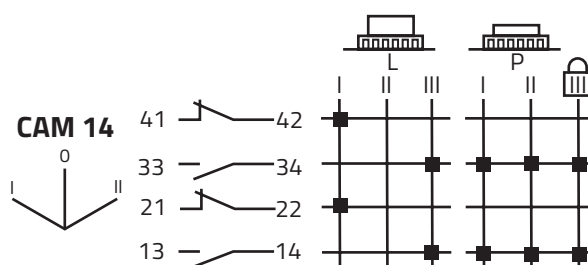
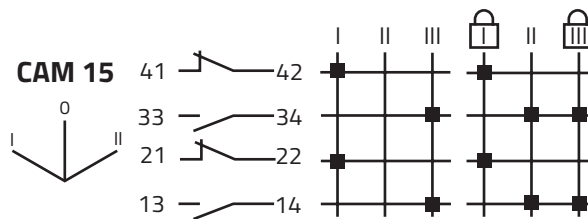
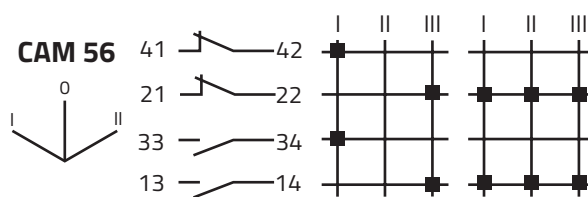
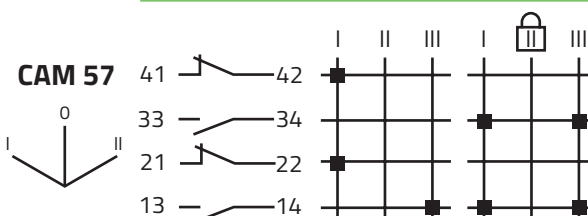
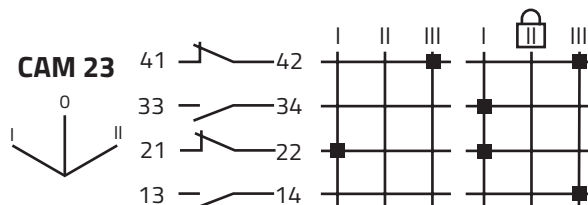
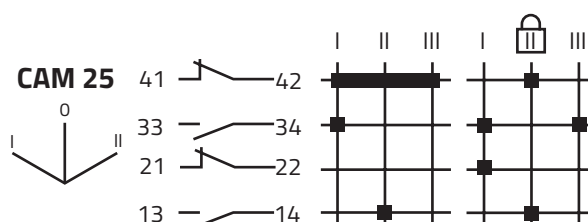
Combinazione di schemi pulsanti selettori

Diagram combination for push-button selector switches

Pulsanti selettori Push-button selector switches



Pulsanti selettori Push-button selector switches



Manipolatori Ø30

Joysticks Ø30

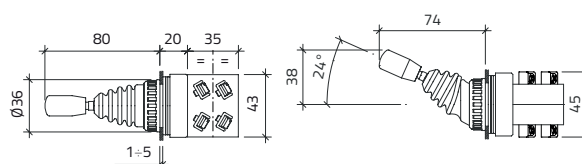
Vedi schemi a pag. 34 / See the diagram combination on page 34

2 posizioni / 2 positions



① ②

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

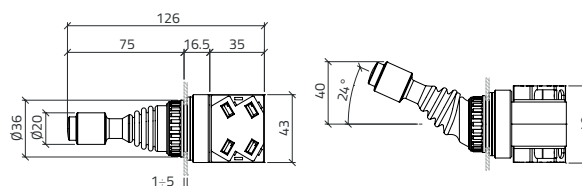


2 posizioni con blocco di sicurezza / 2 positions with safety interlock



① ②

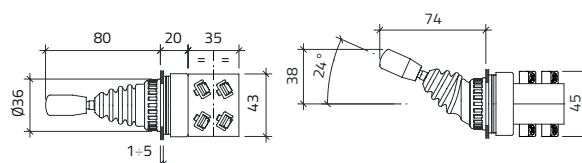
		g	cod
1-2	permanenti / maintained	165	030MPPNB
1-2	temporanee / spring return	165	030MTTNB



4 posizioni / 4 positions

③
① ②
④

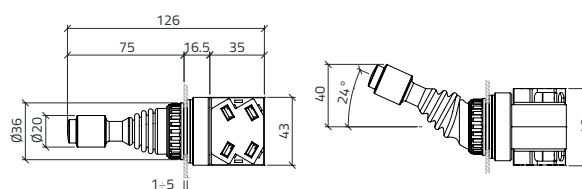
		g	cod
1-2-3-4	permanenti / maintained	140	030MPPPPN
1-2-3-4	temporanee / spring return	140	030MTTTTN
1-2	temporanee / spring return		
3-4	permanenti / maintained	140	030MPPTPN
1-3	permanenti / maintained		
4-2	temporanee / spring return	140	030MPPTTN
1-2-3	permanenti / maintained		
4	temporanea / spring return	40	030MPPPTN
3	permanente / maintained		
1-4-2	temporanee / spring return	40	030MPTTTN



4 posizioni con blocco di sicurezza / 4 positions with safety interlock

③
① ②
④

		g	cod
1-2-3-4	permanenti / maintained	165	030MPPPPNB
1-2-3-4	temporanee / spring return	165	030MTTTTNB



Manipolatori Ø30

Joysticks Ø30

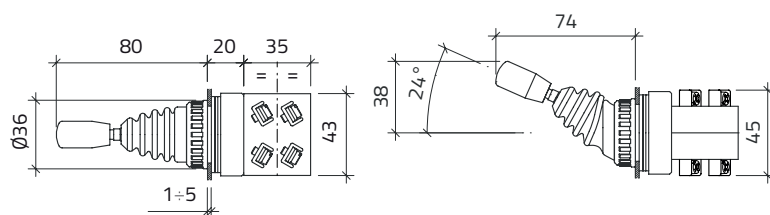
Vedi schemi a pag. 34 / See the diagram combination on page 34

Manipolatori a 2 posizioni speciali Special joysticks, 2 positions



① ②

g	cod
1-2 permanenti / maintained	140 030MPPRN
1-2 temporanee / spring return	140 030MTTRN
1 temporanea / spring return	
2 permanente / maintained	140 030MTPRN

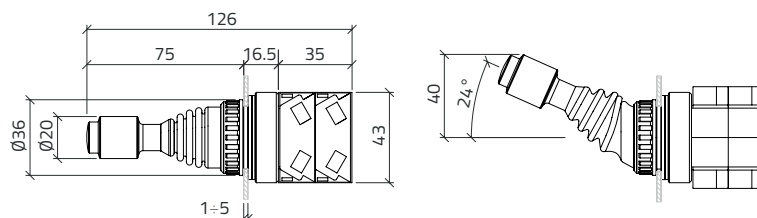


2 posizioni, schema speciale con blocco di sicurezza 2-position, special diagram with safety interlock



① ②

g	cod
2 permanenti / maintained	165 030MPPRNB
2 temporanee / spring return	165 030MTTRNB

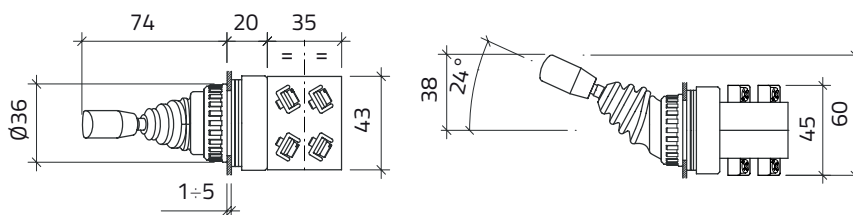


2 posizioni opposte / 2 opposite positions



① ②

g	cod
1 permanente / maintained	
2 permanente / maintained	140 030MPN2F1
1 permanente / maintained	
2 temporanea / spring return	140 030MTN2F1

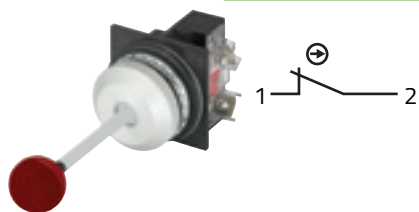


Manipolatori Ø30

Joysticks Ø30

Vedi schemi a pag. 34 / See the diagram combination on page 34

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

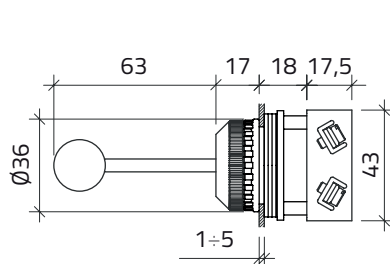
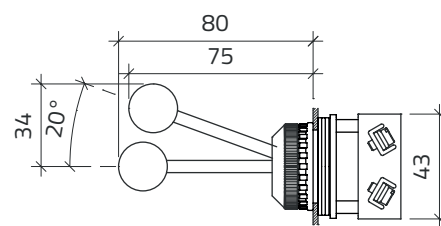
● Rosso / Red

g

cod

100

030MERFC



Manipolatori Ø30

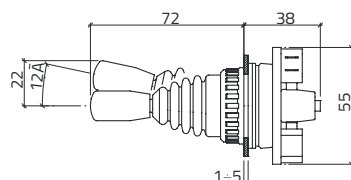
Joysticks Ø30

2 posizioni temporanee 2 spring return



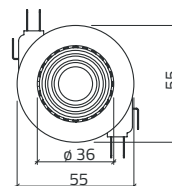
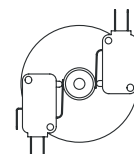
① ▶ C ◀ ②

Microinterruttori 1 - 2
Microswitches 1-2



190

030M2T22

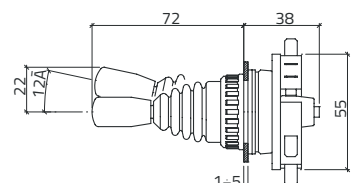


4 posizioni temporanee 4 spring return



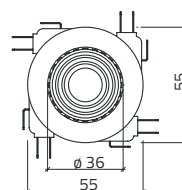
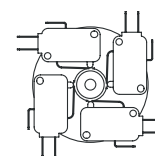
③
① ▶ C ◀ ②
④

Microinterruttori 1 - 2 - 3 - 4
Microswitches 1-2 - 3 - 4



208

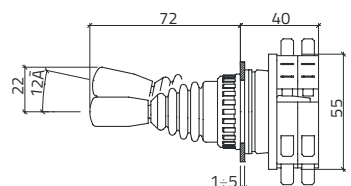
030M4T44



8 posizioni temporanee 8 spring return

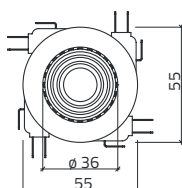
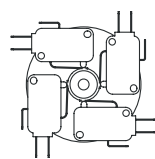
⑤ ③ ⑧
① ▶ C ◀ ②
⑦ ④ ⑥

Microinterruttori 1 - 2 - 3 - 4
Microswitches 1-2 - 3 - 4



208

030M8T44



Microinterruttore aggiuntivo Additional microswitch

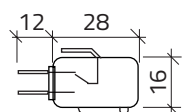


⑤ ③ ⑧
① ▶ C ◀ ②
⑦ ④ ⑥

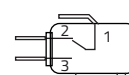
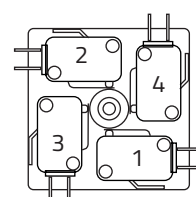
1 microinterruttore con viti lunghe
1 microswitch with long screws

10

030M11



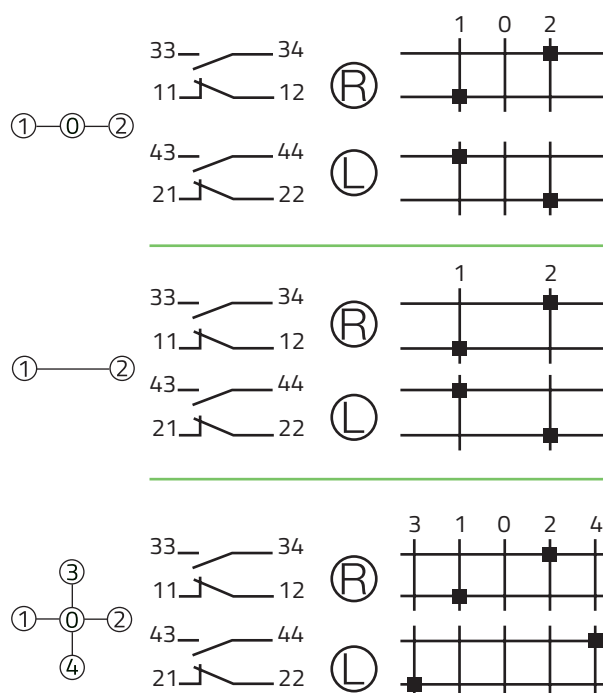
		8	6	4	2	0	1	3	5	7
MICROINTERRUTTORE MICROSWITCHES	1									
	2									
	3									
	4									



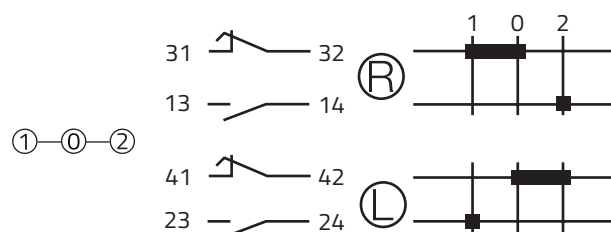
Combinazione di schemi manipolatori

Diagram combination

Manipolatore Joystick



Manipolatore schema speciale Joystick, special diagram



Elementi di contatto

Contact blocks

Elementi di contatti / Contact blocks



		g	n	cod
3	4			
1	2	1NO-1NC	32	030F1
		1NO-NC, contatti dorati / gold-plated contacts	32	030F1AU



3	4	1NO	16	030FA
3	4	1NO Chiusura anticipata / 1NO Early make	16	030FAA
1	2	1NC	16	030FC



1	2	1NC Apertura ritardata / 1NC Late-break	16	030FCR



		Contatti con protezione / Contact block with protections			
3	4	1NO + 1NC	38	2	030F1P
1	2				

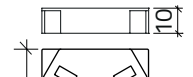
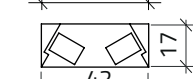


3	4	1NO	23	2	030FAP
		1NC	23	2	030FCP
1	2				

Protezioni elementi di contatto

Contact block protections



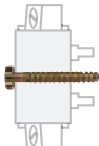
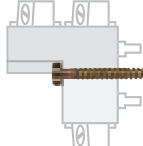
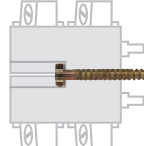
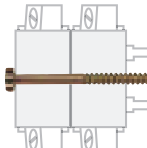
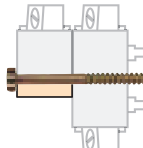
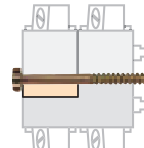
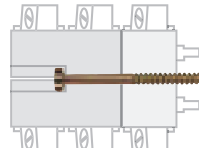
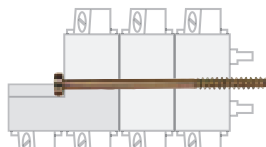
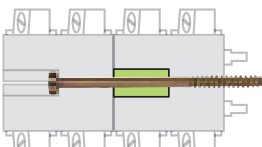
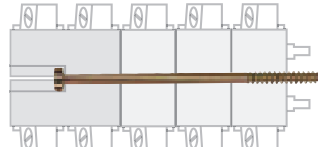
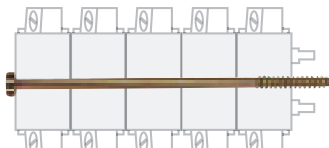
		g	n	cod
	Coperchio protezione contatto NO + NC Cover for contact block NO + NC	6	10	030PF1
	Coperchio protezione contatto NO Cover for contact block NO	4	10	030PFA
	Coperchio protezione contatto NC Cover for contact block NC	4	10	030PFC

Elementi di contatto Ø30

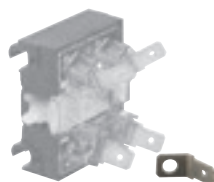
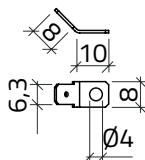
Contact blocks Ø30

Viti per elementi di contatto

Screws for contact blocks

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

Terminale Faston / Faston terminal



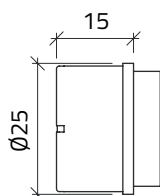
Per elementi di comando e portalamпада.
Idoneo per faston femmina 6,3 x 0,8
For contact blocks and lampholders
Suitable for female Faston terminals 6,3x0,8

g	n	cod
1	10	030TF

Accessori Ø30

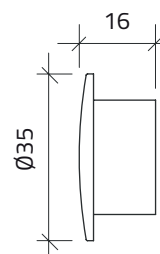
Accessories Ø30

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

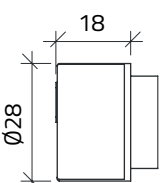


Gemme per pulsanti a fungo luminosi Ø35 Lenses for illuminated mushroom push-buttons Ø35

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

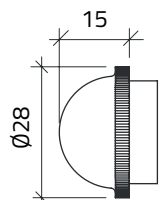
	g	cod
● Rosso / Red	6	030RLFR
● Verde / Green	6	030RLFV
● Giallo / Yellow	6	030RLFG
● Blu / Blue	6	030RLFBL
○ Bianco / White	6	030RLFB
○ Trasparente / Transparent	6	030RLFI
● Arancio / Orange	6	030RLFAR

Manopole per selettori luminosi Knobs for illuminated selector switches



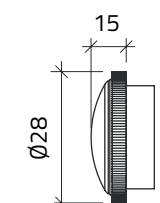
	g	cod
● Rosso / Red	4	030GMR
● Verde / Green	4	030GMV
● Giallo / Yellow	4	030GMG
● Blu / Blue	4	030GMBL
○ Bianco / White	4	030GMB
○ Trasparente / Transparent	4	030GMI
● Arancio / Orange	4	030GMA

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

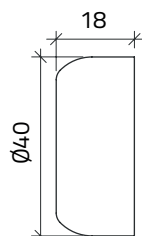
Gemme piatte con diffusore per lampade spia Flat lenses with diffuser for pilot lights



	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



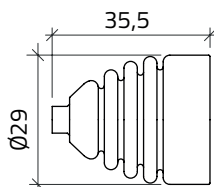
Cappuccio protettivo per pulsanti tipo 030RI
Protective cap for push-buttons type 030RI

○ Trasparente / Clear

g

22

cod

030CG

Soffietto per manipolatore
Joystick bellows

● RAL 7016

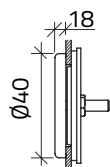
g

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



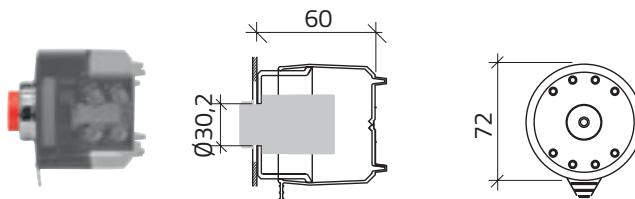
Cappuccio di protezione elementi di contatto Ø 30
Protective cap for contact blocks Ø 30

g

cod

58

030CPC30

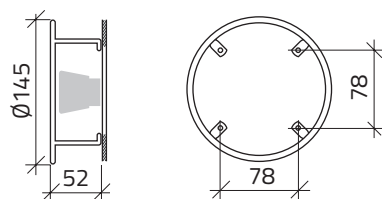
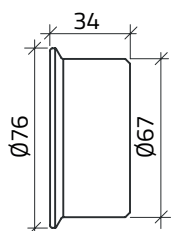


Contro l'azionamento accidentale senza impedire l'accessibilità dell'attuatore
Against accidental operation without hindering the access to the push-button

● Giallo / Yellow

150

020SPE



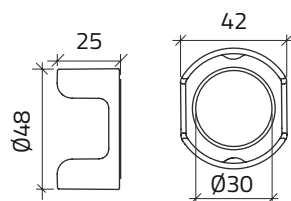
● Grigio / Grey
● Giallo / Yellow

35

030GP30

35

030GPG30



● Grigio / Grey
● Giallo / Yellow

150

030GPF42

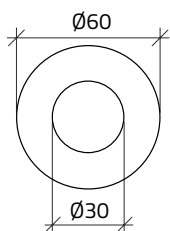
150

030GPF42G

Targhette Ø30

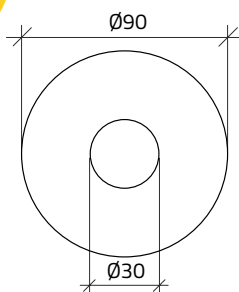
Legend plates Ø30

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



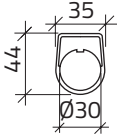
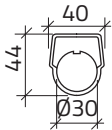
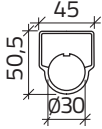
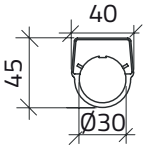
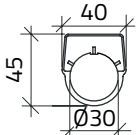
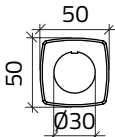
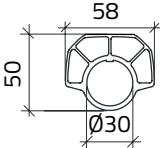
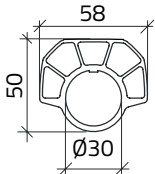
Ø90

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

Targhette Ø30

Legend plates Ø30

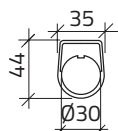
Targhette neutre / Blank legend plates

		g	cod
		1	030TN1-0
		1	030TN1A
		1	030TN4-0
		1	030TN2-0
		1	030TN3-0
		1	030TN5-0
		1	030TN8-0
		1	030TN9-0

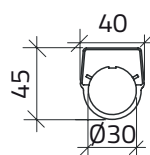
Targhette Ø30

Legend plates Ø30

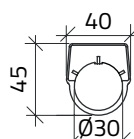
Targhette con diciture Legend plates with texts



	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

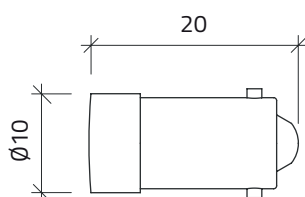


0	1	2	1	030TN3-1
1	0	2	1	030TN3-2
Ciclo				
manuale	0	autom.	1	030TN3-3

Lampadine

Lamps

BA9S Led luce fissa BA9S Steady light led lamps



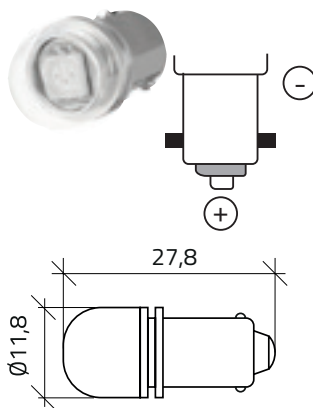
	g	n	cod
6V AC-DC			
● Rosso / Red	2	5	010BA9SLR6
● Giallo / Yellow	2	5	010BA9SLG6
● Verde / Green	2	5	010BA9SLV6
● Blu / Blue	2	5	010BA9SLBL6
○ Bianco / White	2	5	010BA9SLB6
12V AC-DC			
● Rosso / Red	2	5	010BA9SLR12
● Giallo / Yellow	2	5	010BA9SLG12
● Verde / Green	2	5	010BA9SLV12
● Blu / Blue	2	5	010BA9SLBL12
○ 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 <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

g

cod

24V AC-DC

● Rosso / Red

2

010BA9SLLR24**130V AC-DC**

● Rosso / Red

2

010BA9SLLR110**240V AC-DC**

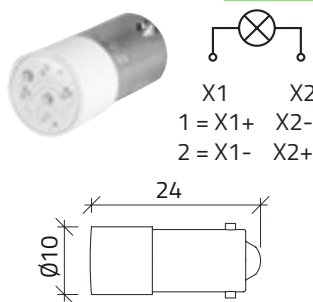
● Rosso / Red

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

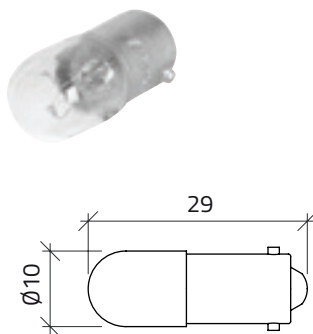
● Blu, giallo / Blue, yellow

2

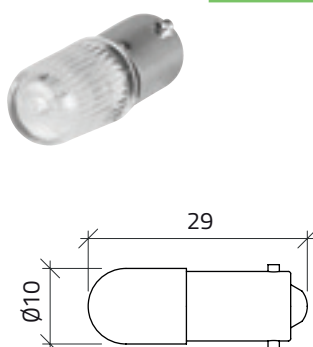
010BA9SLBLG24

BA9S Lampadine ad incandescenza

BA9S Incandescent lamps

**Lampadine BA9S ad incandescenza / BA9S incandescent lamps**

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

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

010BA9SNV110

● Arancio / Orange

240V 0,3W

2,3

10

010BA9SN220

● Verde / Green

240V 0,3W

2,3

10

010BA9SNV220

● Arancio / Orange

400V 0,5W

2,3

10

010BA9SN380

● Verde / Green

400V 0,5W

2,3

10

010BA9SNV380



040-080

**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, ideali 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, 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

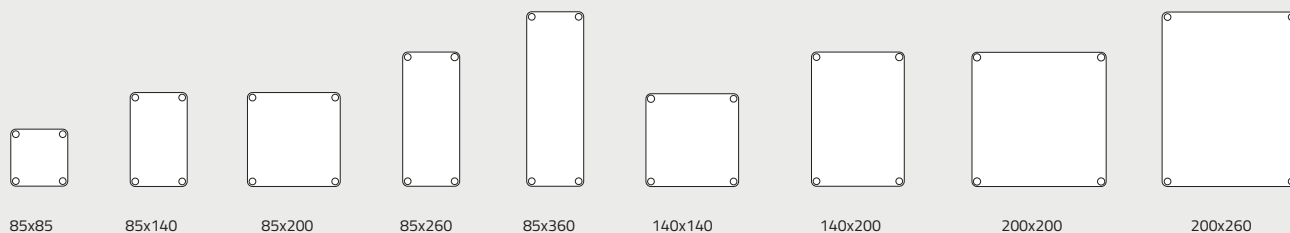
After defining all these fundamental elements, you can examine and choose among the various options, but don't forget the accessories and the components that have to be integrated in the enclosure to complete the project.

Panorama dei formati

Size overview

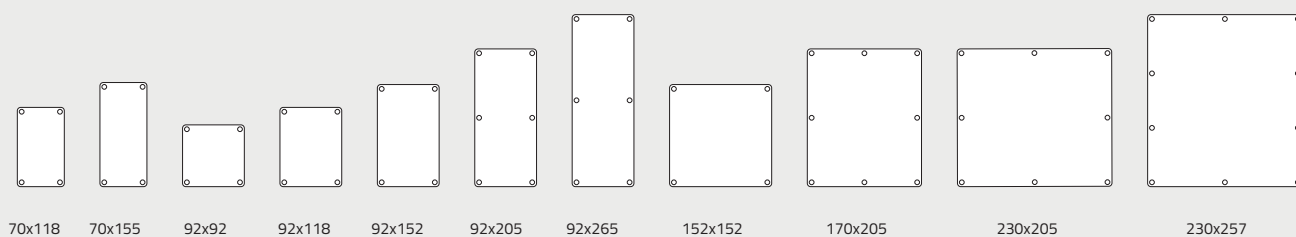
Contenitori in alluminio M10- 8 formati - più di 100 modelli

Aluminium M10 enclosures - 8 sizes - more than 100 types



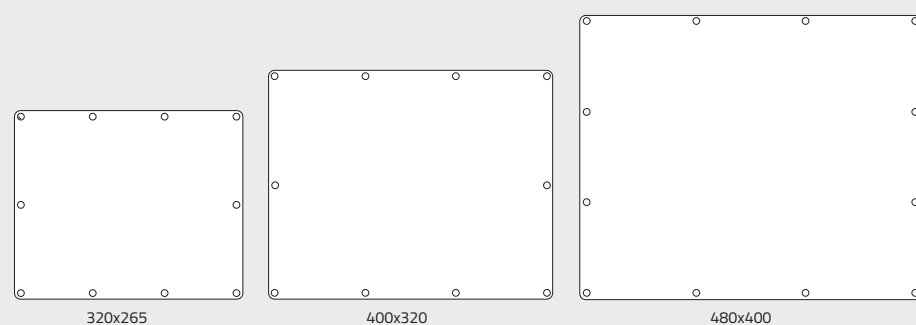
Contenitori in alluminio M4 - 11 formati - più di 240 modelli

Aluminium M4 enclosures - 11 sizes - more than 240 types



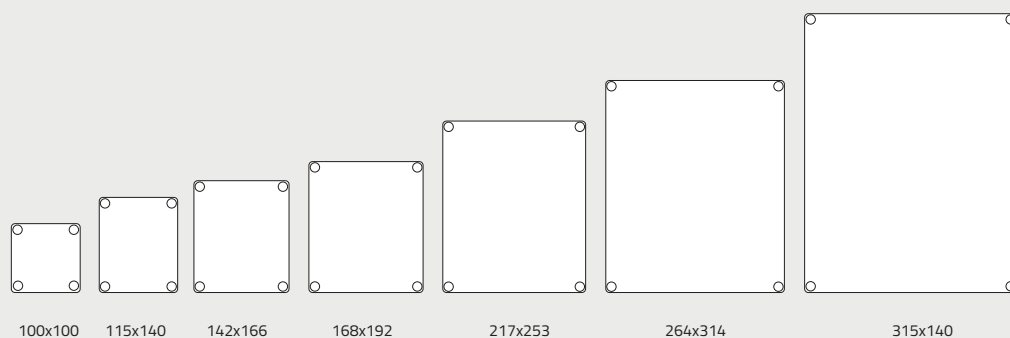
Contenitori in alluminio M5 - 3 formati

Aluminium M5 enclosures - 3 sizes



Scatole di derivazione alluminio - 7 formati - 7 modelli

Aluminium junction boxes - 7 sizes - 7 types

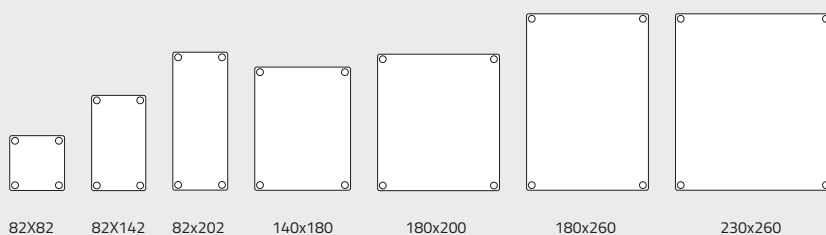


Panorama dei formati

Size overview

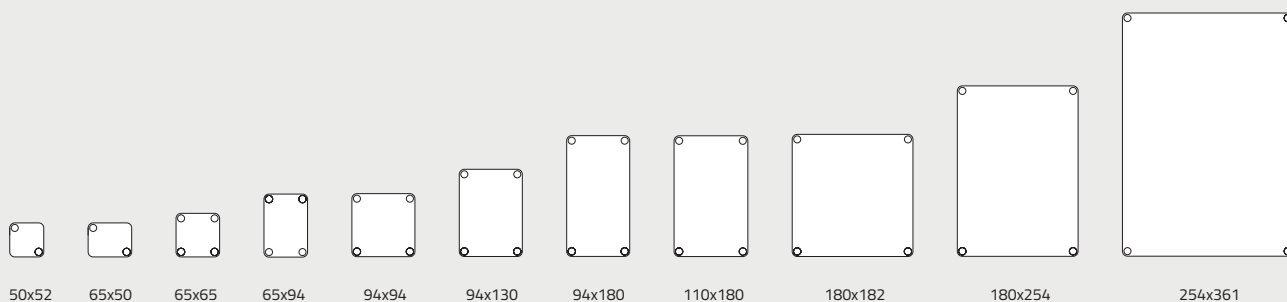
Contenitori in acciaio inox- 7 formati - più di 20 modelli

Stainless steel enclosures - 7 sizes - more than 20 types



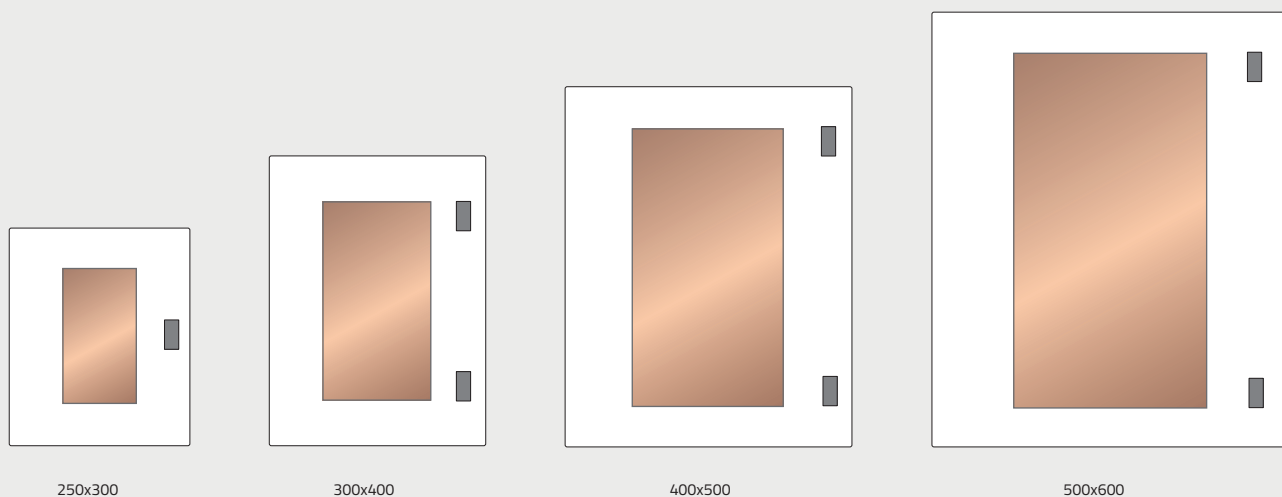
Contenitori in termoplastico - 11 formati - più di 160 modelli

Thermoplastic enclosures - 11 sizes - more than 160 types



Contenitori in Poliestere - 4 formati - 8 modelli

Polyester enclosures - 4 sizes - 8 types

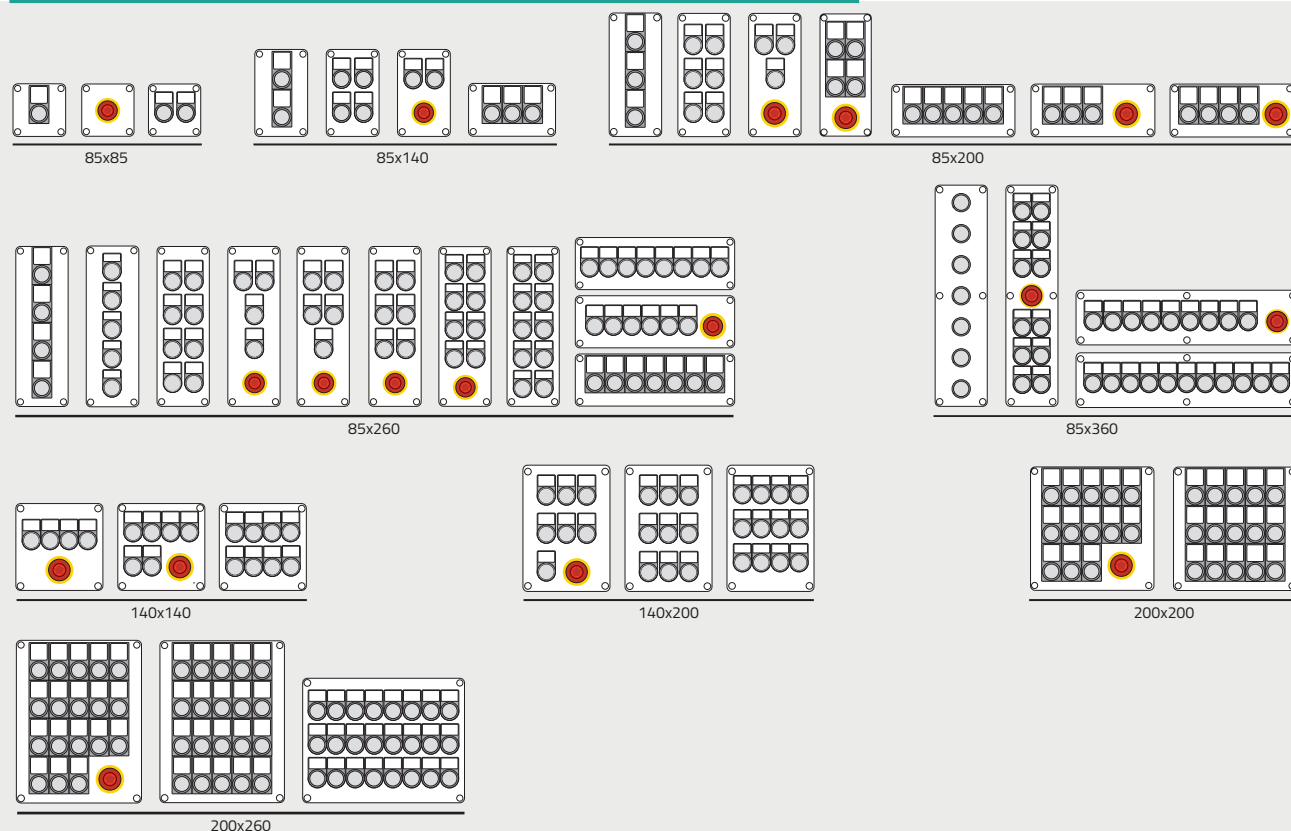


Panorama forature dei coperchi

Lid hole overview

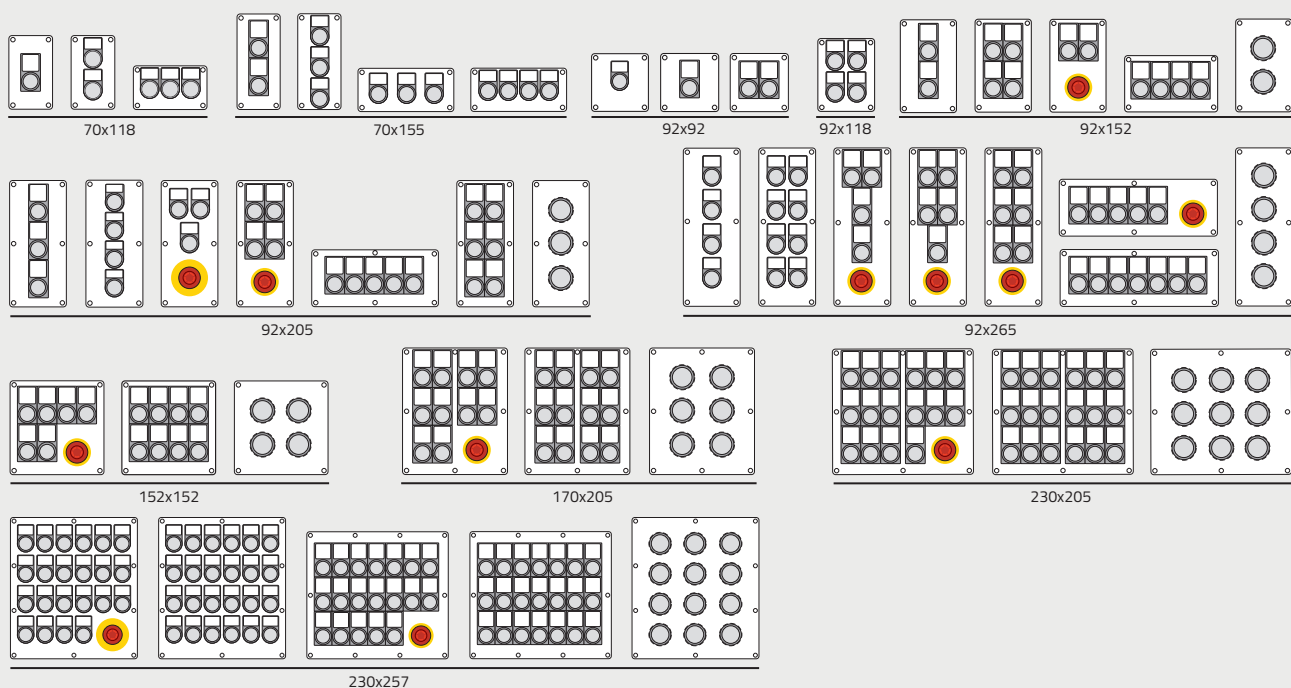
Scatole pulsantiere in alluminio M10

Aluminium push-button enclosures M10



Scatole pulsantiere in Alluminio M4

Aluminium push-button enclosures M4

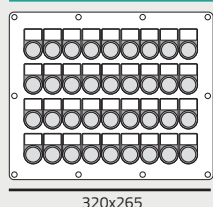


Panorama forature dei coperchi

Lid hole overview

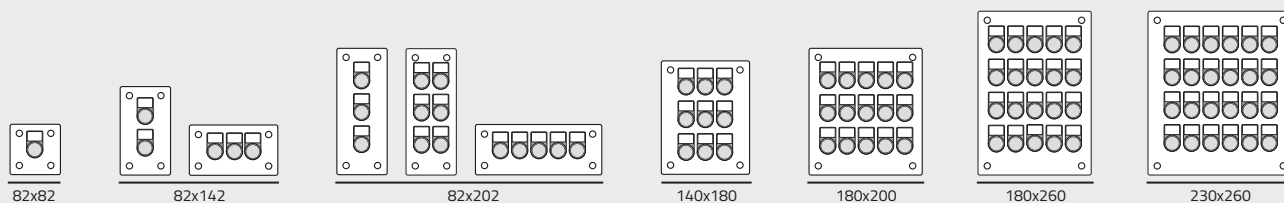
Scatole pulsantiere in alluminio M5

Aluminium push-button enclosures M5



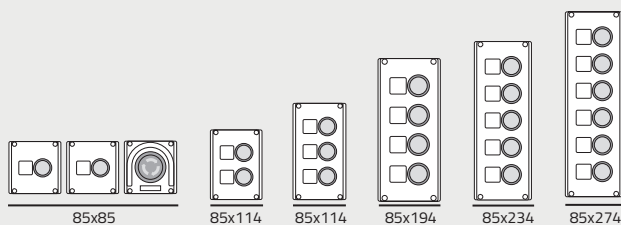
Scatole pulsantiere in Acciaio inox

Stainless steel push-button enclosures



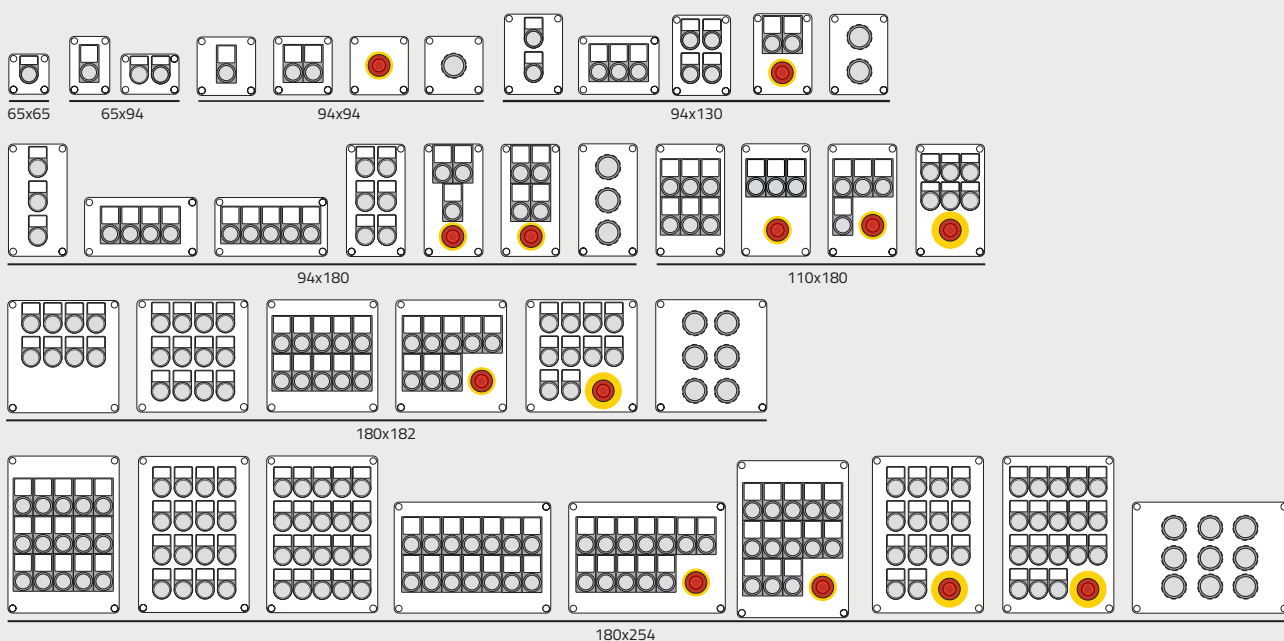
Scatole pulsantiere in termoplastico

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.



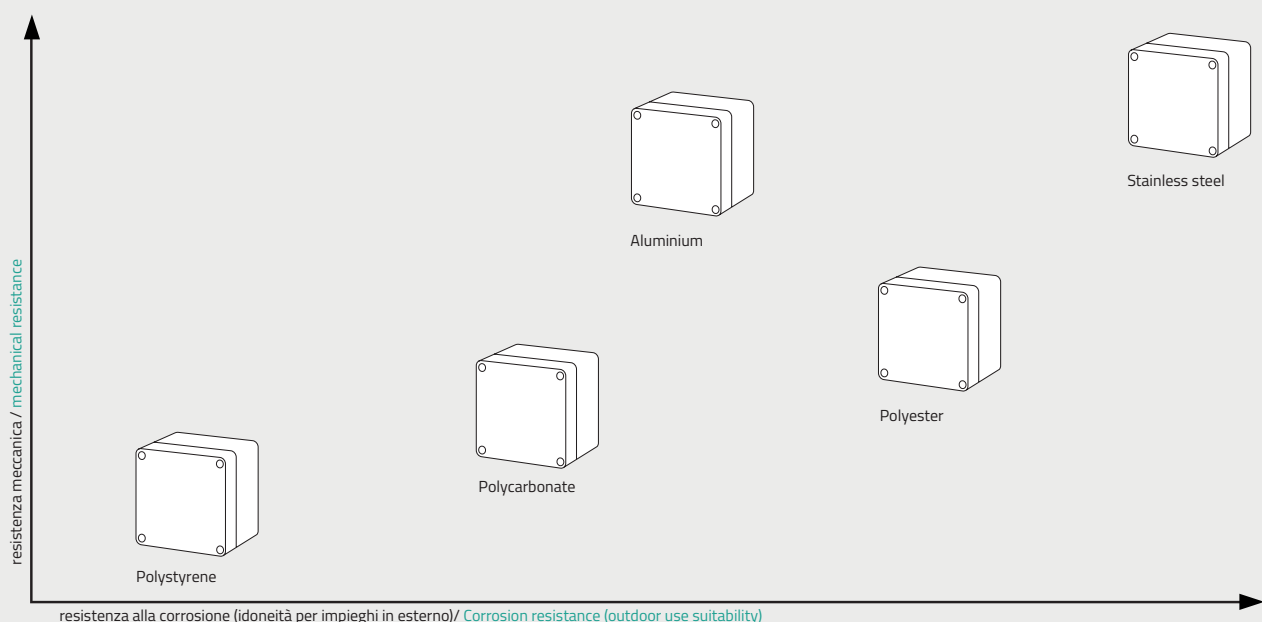
densità	DIN 53479	g/cm ³	2.65	1.2	1.06	1.8
resistenza all'urto	DIN 53453	ml/mm ²	150-300	65	60	80
resistenza	DIN 53453	ml/mm ²	90-200	20	10	4
resistenza alla trazione	DIN 53455	N/mm ²	180-300	65	43	45
allungamento a rottura	DIN 53455	%	60-90	90	20	20
modulo E (prova di flessione)	DIN 53457	N/mm ²	75.000	2.300	2.100	6.500
sollecitazione max di flessione	DIN53452	N/mm ²		95	90	100
infiammabilità	UL 94	Klasse		V2	HB	V0
resistenza lineare	DIN 53482	Ω x cm		10 ¹⁵	10 ¹³	3x10 ¹⁴
resistenza superficiale	DIN 53482	Ω		≥10 ¹⁵	2x10 ¹⁴	>0 ¹²
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 ²	15-22			

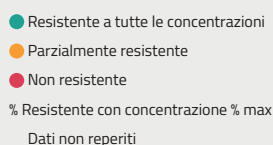
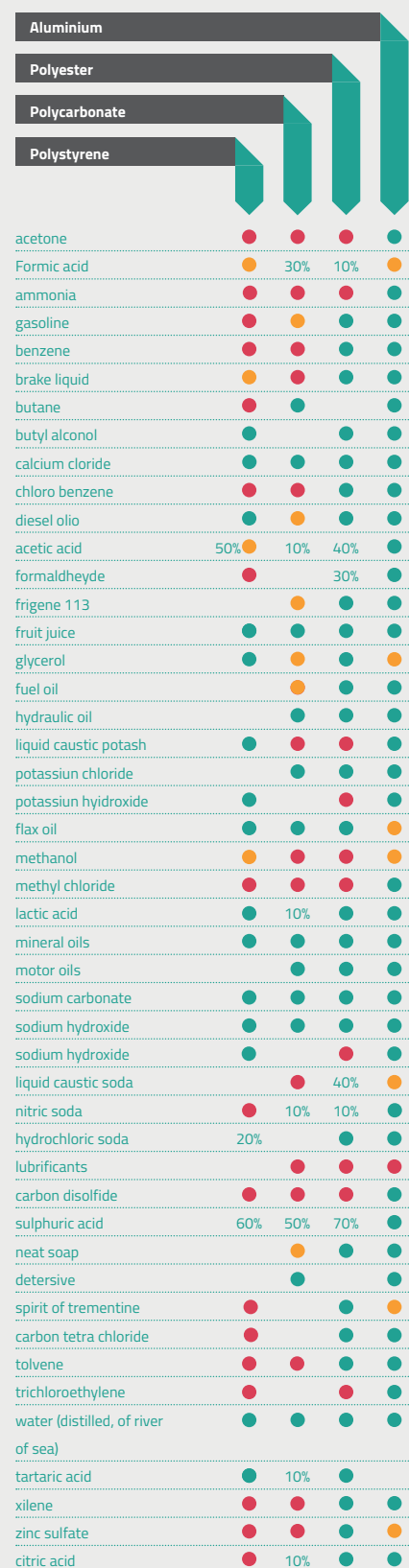


density	DIN 53479	g/cm ³	2.65	1.2	1.06	1.8
impact resistance	DIN 53453	ml/mm ²	150-300	65	60	80
resistance	DIN 53453	ml/mm ²	90-200	20	10	4
traction resistance	DIN 53455	N/mm ²	180-300	65	43	45
ultimate elongation	DIN 53455	%	60-90	90	20	20
E modulus (bending test)	DIN 53457	N/mm ²	75.000	2.300	2.100	6.500
max sollicitation of bending	DIN53452	N/mm ²		95	90	100
flammability	UL 94	Klasse		V2	HB	V0
linear resistance	DIN 53482	Ω x cm		10 ¹⁵	10 ¹³	3x10 ¹⁴
superficial resistance	DIN 53482	Ω		≥10 ¹⁵	2x10 ¹⁴	>0 ¹²
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 ²	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

0	Non protetto	
1	Protetto contro corpi solidi di dimensioni superiori a 50mm di Ø	
2	Protetto contro corpi solidi di dimensioni superiori a 12mm di Ø	
3	Protetto contro corpi solidi di dimensioni superiori a 2,5mm di Ø	
4	Protetto contro corpi solidi di dimensioni superiori a 1mm di Ø	
5	Protetto contro la polvere	
6	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.

A	Protetto contro l'accesso contro il dorso della mano
B	Protetto contro l'accesso con dito
C	Protetto contro l'accesso con un attrezzo
D	Protetto contro l'accesso con un filo

2ª CIFRA penetrazione dei liquidi

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

IK00	Non protetto	
IK01	Protetto contro l'energia d'urto 0,15 J	
IK03	Protetto contro l'energia d'urto 0,35 J	
IK05	Protetto contro l'energia d'urto 0,7 J	
IK06	Protetto contro l'energia d'urto 1 J	
IK07	Protetto contro l'energia d'urto 2 J	
IK08	Protetto contro l'energia d'urto 5 J	
IK09	Protetto contro l'energia d'urto 10 J	
IK10	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 x4 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 st DIGIT penetration of solids		2 nd DIGIT penetration of liquids		Protection against impacts <small>According to CEI EN 50102: edition 1996-05; 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
ADDITIONAL LETTER 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.		7	Protected against the effects of immersion	IK09	Protected against impact energy 10 J
		8	Protected against the effects of long term immersion	IK10	Protected against impact energy 20 J
A	Protected against access with the back of the hand				
B	Protected against access with finger				
C	Protected against access with tool				
D	Protected against access with a wire				



040-080

**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, 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

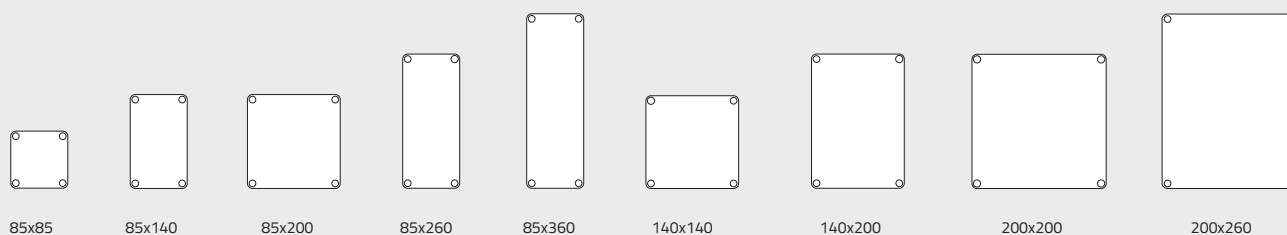
After defining all these fundamental elements, you can examine and choose among the various options, but don't forget the accessories and the components that have to be integrated in the enclosure to complete the project.

Panorama dei formati

Size overview

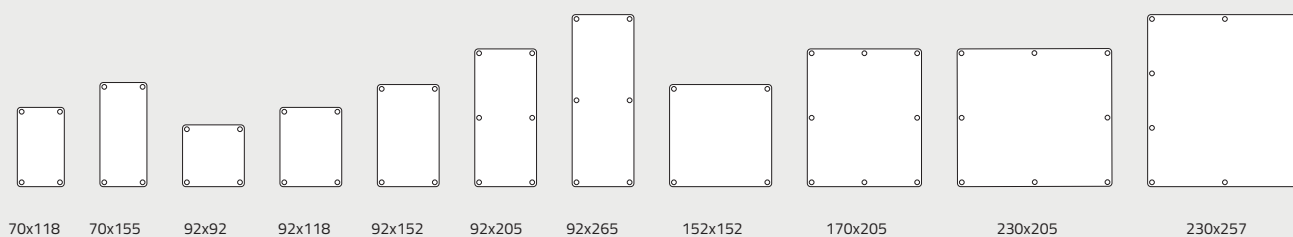
Contenitori in alluminio M10- 8 formati - più di 100 modelli

Aluminium M10 enclosures - 8 sizes - more than 100 types



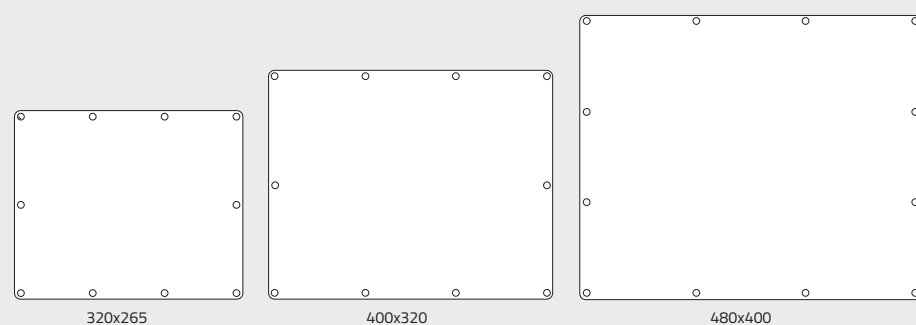
Contenitori in alluminio M4 - 11 formati - più di 240 modelli

Aluminium M4 enclosures - 11 sizes - more than 240 types



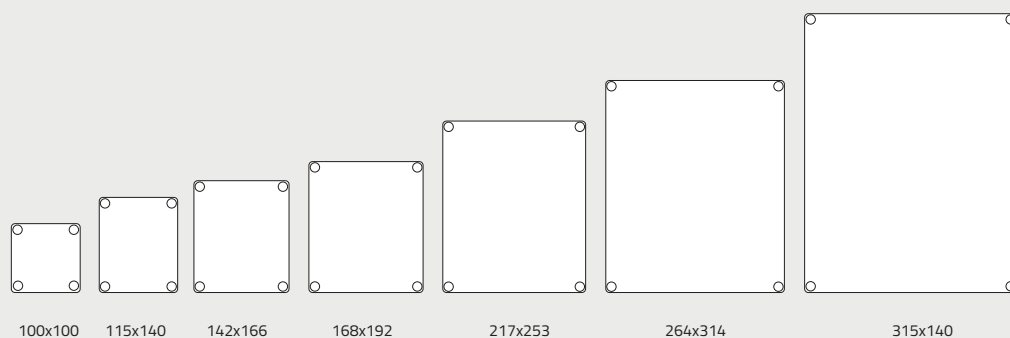
Contenitori in alluminio M5 - 3 formati

Aluminium M5 enclosures - 3 sizes



Scatole di derivazione alluminio - 7 formati - 7 modelli

Aluminium junction boxes - 7 sizes - 7 types

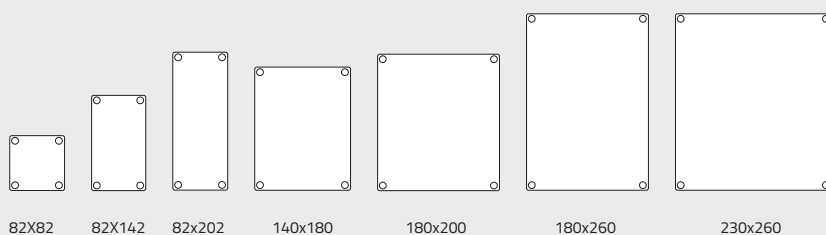


Panorama dei formati

Size overview

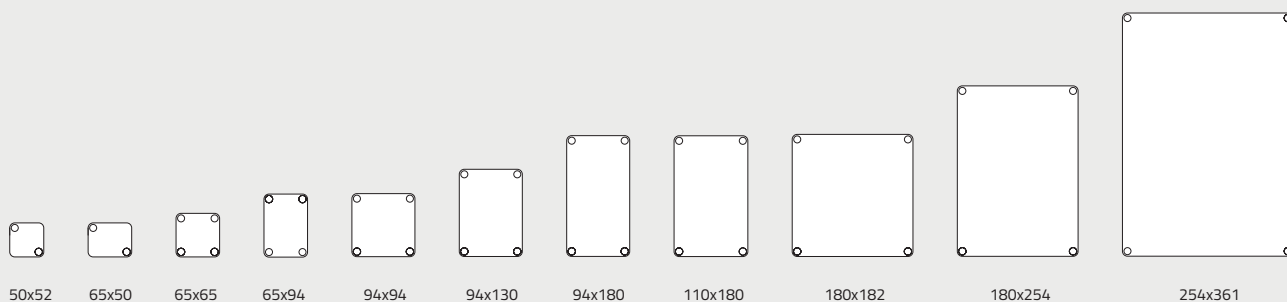
Contenitori in acciaio inox- 7 formati - più di 20 modelli

Stainless steel enclosures - 7 sizes - more than 20 types



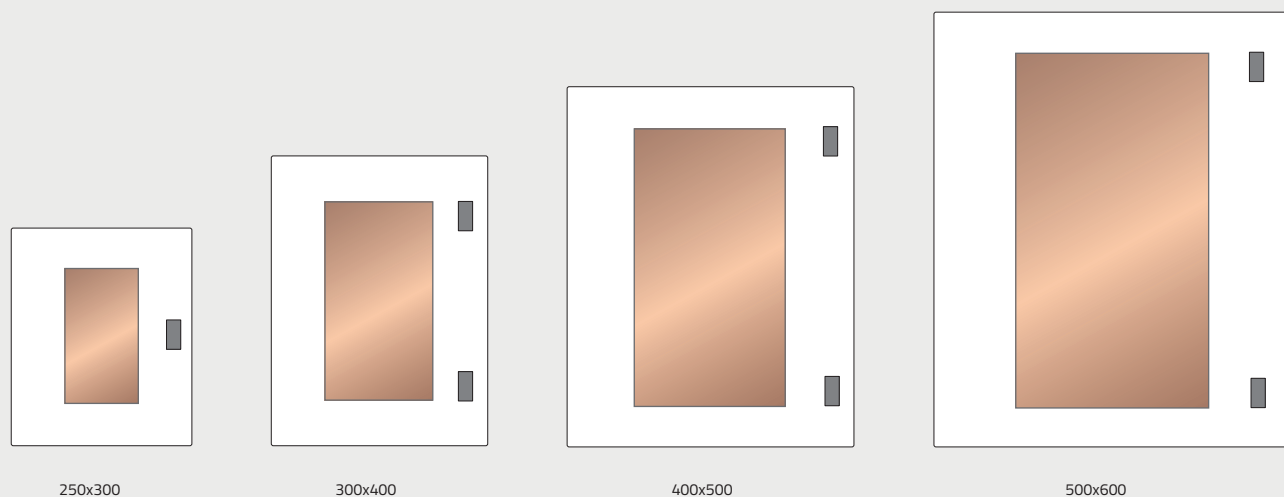
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Contenitori in Poliestere - 4 formati - 8 modelli

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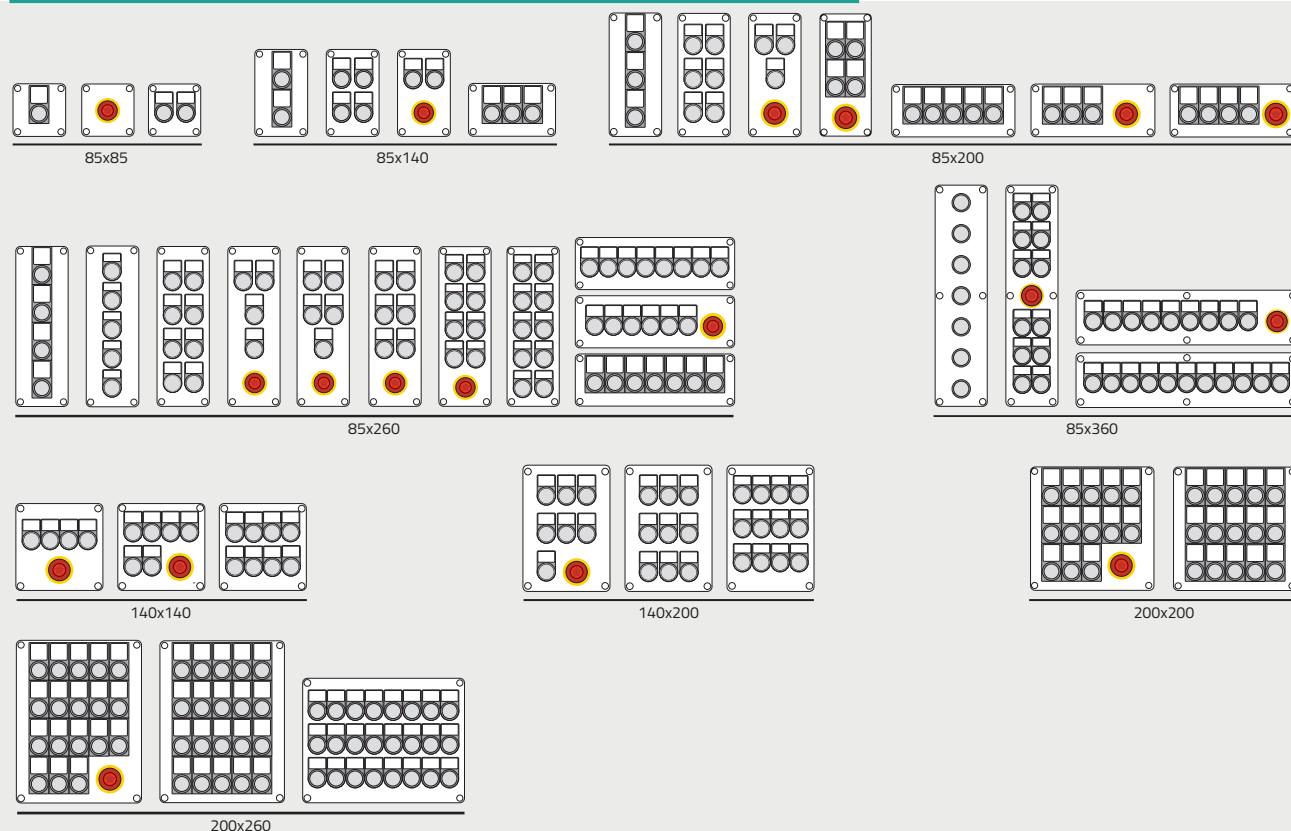


Panorama forature dei coperchi

Lid hole overview

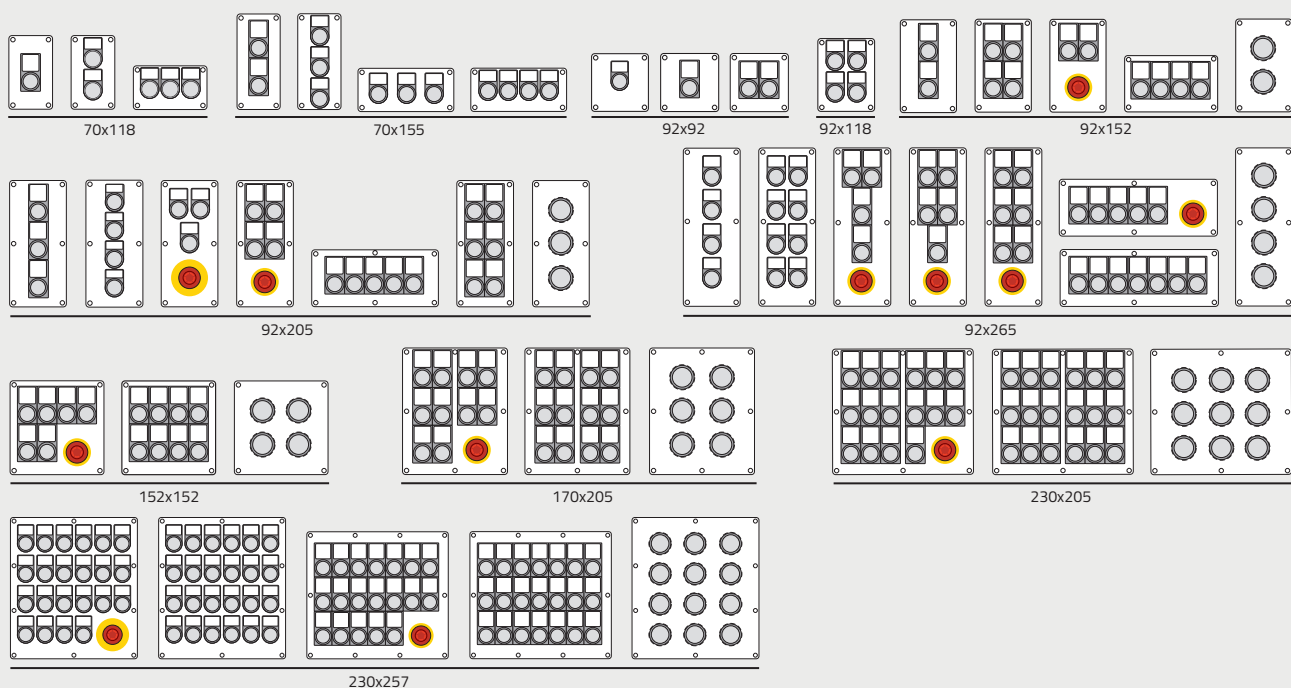
Scatole pulsantiere in alluminio M10

Aluminium push-button enclosures M10



Scatole pulsantiere in Alluminio M4

Aluminium push-button enclosures M4

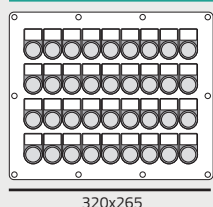


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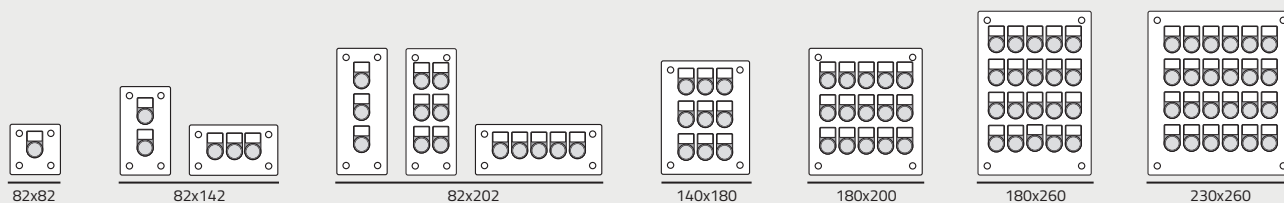
Scatole pulsantiere in alluminio M5

Aluminium push-button enclosures M5



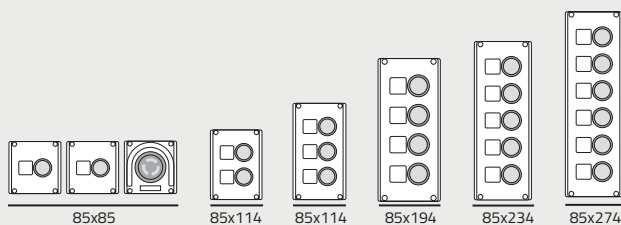
Scatole pulsantiere in Acciaio inox

Stainless steel push-button enclosures



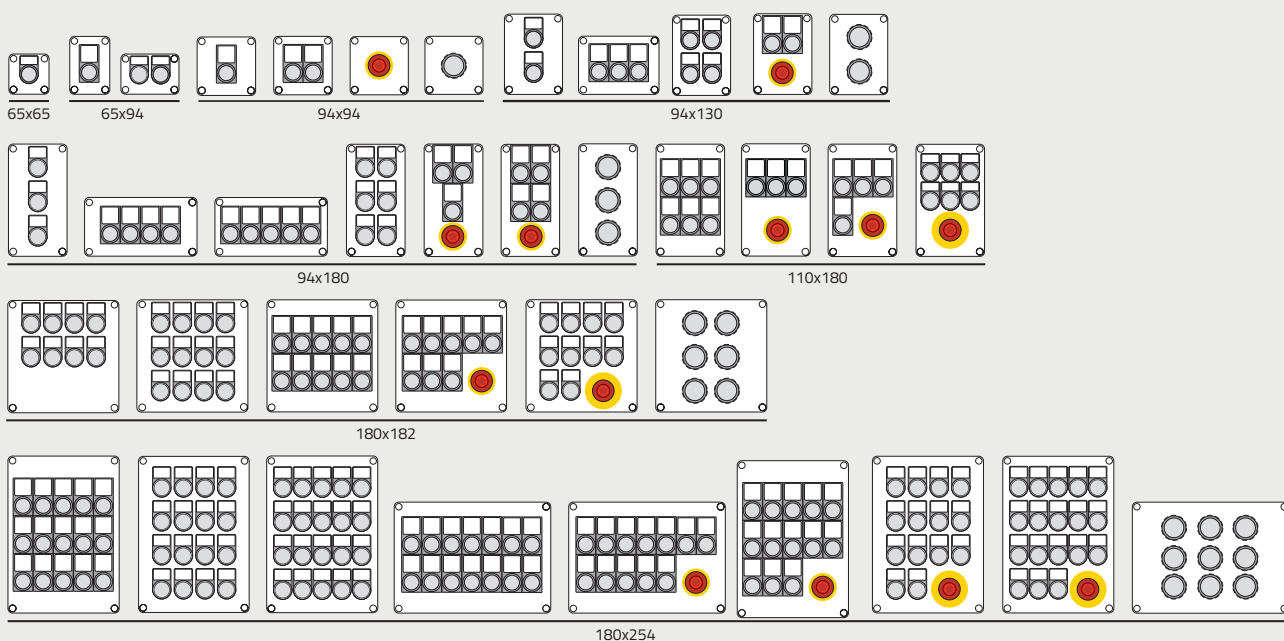
Scatole pulsantiere in termoplastico

Thermoplastic push-button enclosures



Scatole pulsantiere in termoplastico

Thermoplastic push-button enclosures



Criteri di scelta del prodotto

Product selecting method

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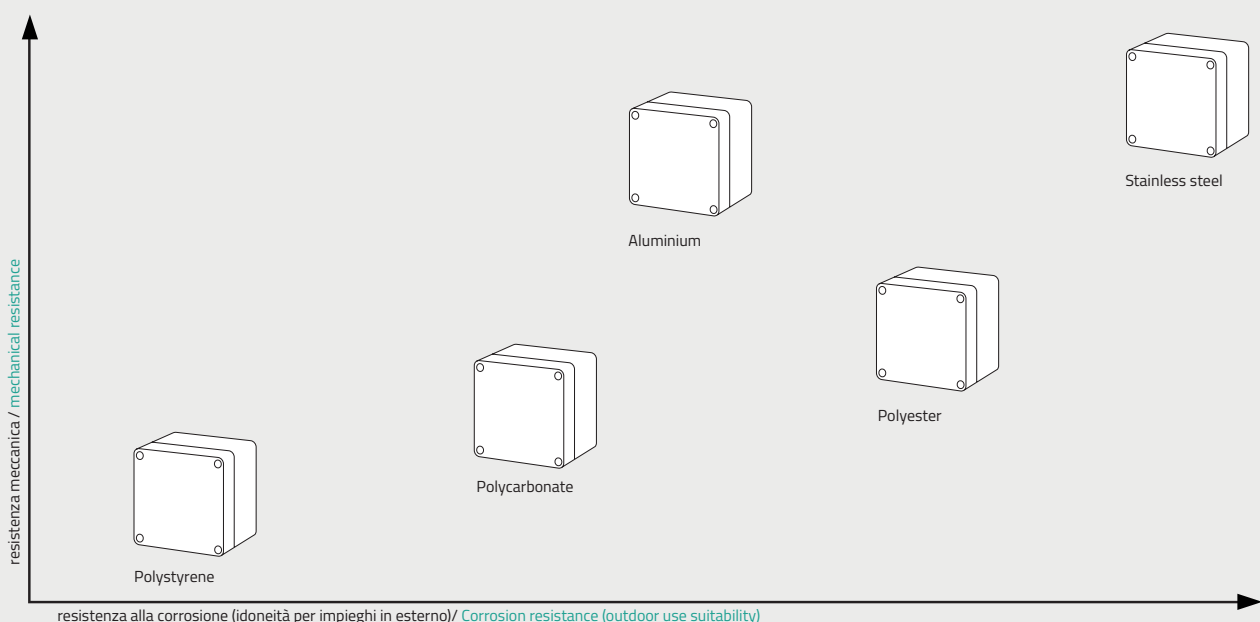
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infiammabilità	UL 94	Klasse		V2	HB	V0
resistenza lineare	DIN 53482	Ω x cm		10 ¹⁵	10 ¹³	3x10 ¹⁴
resistenza superficiale	DIN 53482	Ω		≥10 ¹⁵	2x10 ¹⁴	>0 ¹²
rigidità dielettrica	DIN53481	kV/mm		25-40	24	25-40
conducibilità termica(20 °C)	DIN 52612	W/mK	120/160	0,21	0,18	0,25
conducibilità elettrica		m/Ωmm ²	15-22			

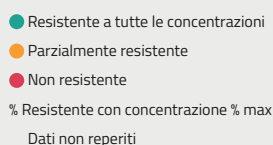
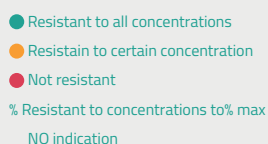
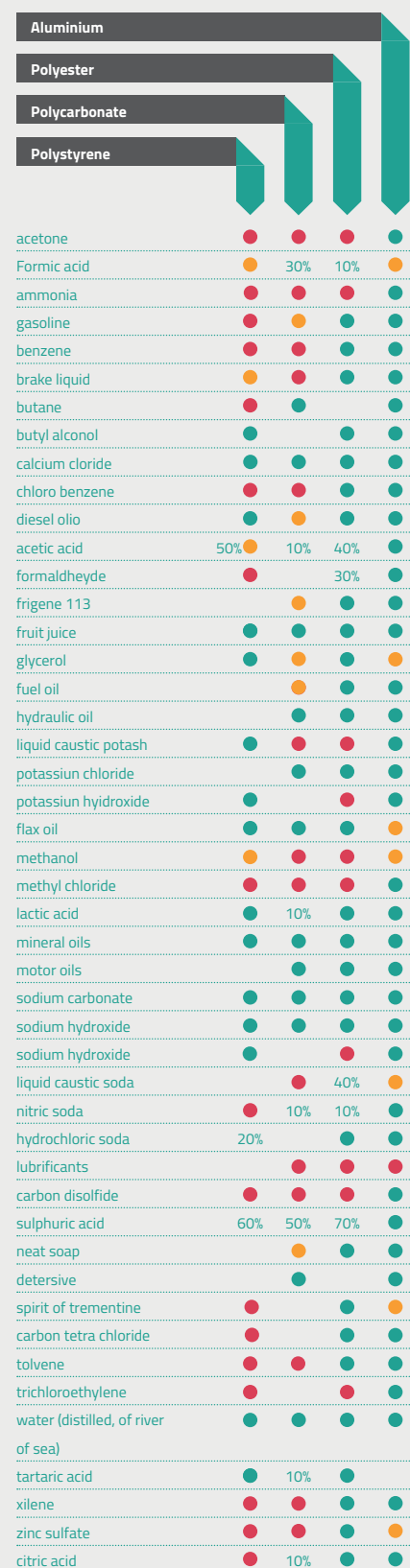


density	DIN 53479	g/cm ³	2.65	1.2	1.06	1.8
impact resistance	DIN 53453	ml/mm ²	150-300	65	60	80
resistance	DIN 53453	ml/mm ²	90-200	20	10	4
traction resistance	DIN 53455	N/mm ²	180-300	65	43	45
ultimate elongation	DIN 53455	%	60-90	90	20	20
E modulus (bending test)	DIN 53457	N/mm ²	75.000	2.300	2.100	6.500
max sollicitation of bending	DIN53452	N/mm ²		95	90	100
flammability	UL 94	Klasse		V2	HB	V0
linear resistance	DIN 53482	Ω x cm		10 ¹⁵	10 ¹³	3x10 ¹⁴
superficial resistance	DIN 53482	Ω		≥10 ¹⁵	2x10 ¹⁴	>0 ¹²
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 ²	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

0	Non protetto	
1	Protetto contro corpi solidi di dimensioni superiori a 50mm di Ø	
2	Protetto contro corpi solidi di dimensioni superiori a 12mm di Ø	
3	Protetto contro corpi solidi di dimensioni superiori a 2,5mm di Ø	
4	Protetto contro corpi solidi di dimensioni superiori a 1mm di Ø	
5	Protetto contro la polvere	
6	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.

A	Protetto contro l'accesso contro il dorso della mano
B	Protetto contro l'accesso con dito
C	Protetto contro l'accesso con un attrezzo
D	Protetto contro l'accesso con un filo

2ª CIFRA penetrazione dei liquidi

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

IK00	Non protetto	
IK01	Protetto contro l'energia d'urto 0,15 J	
IK03	Protetto contro l'energia d'urto 0,35 J	
IK05	Protetto contro l'energia d'urto 0,7 J	
IK06	Protetto contro l'energia d'urto 1 J	
IK07	Protetto contro l'energia d'urto 2 J	
IK08	Protetto contro l'energia d'urto 5 J	
IK09	Protetto contro l'energia d'urto 10 J	
IK10	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)

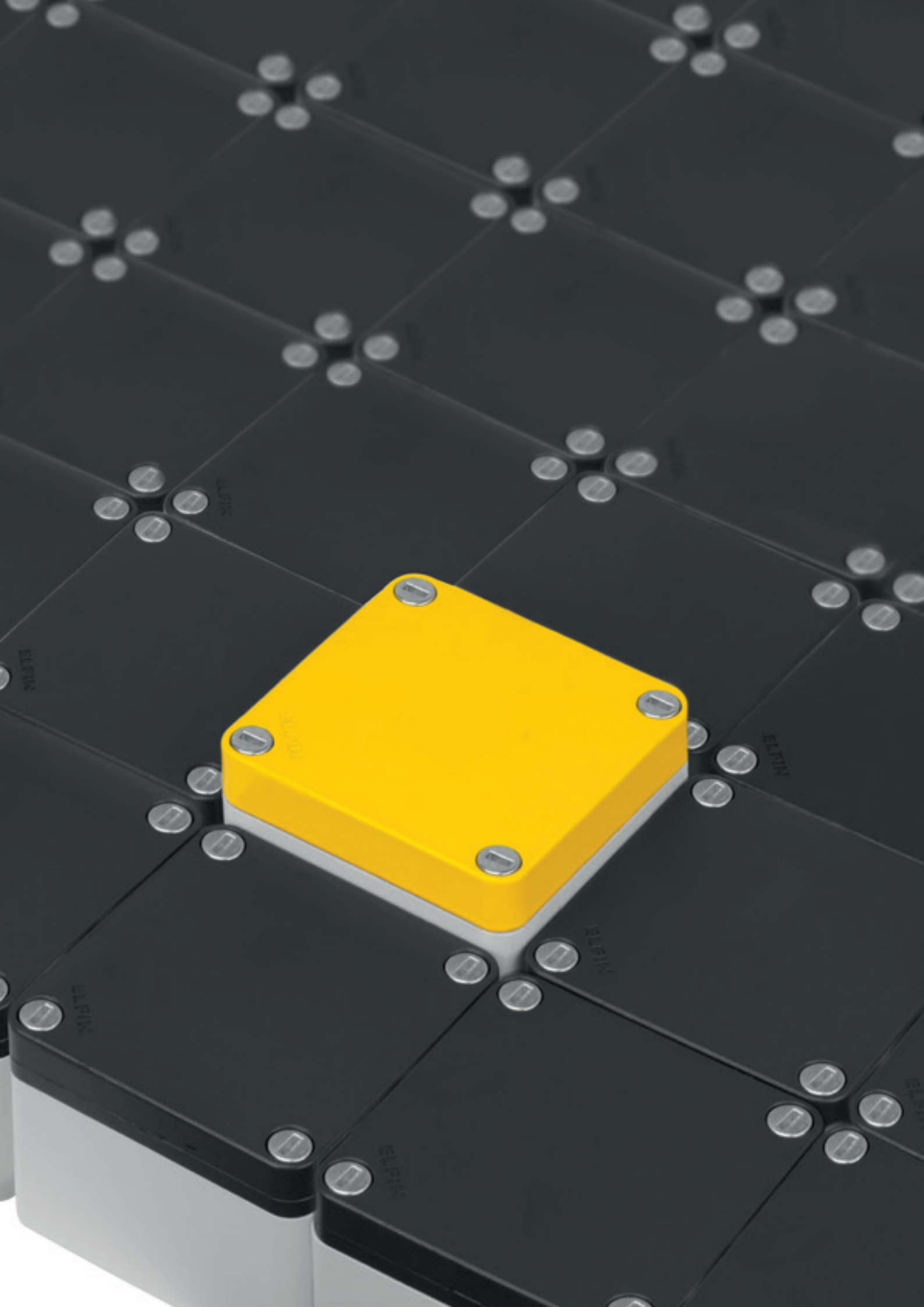
The table below shows Ingress protection ratings according to CEI-70-1 ed. 11/92 standards. The ratings are identified by the IP code followed by two digits to which two letters may be added indicating the protection rating against persons or other characteristics. There is a variation in application 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 st DIGIT penetration of solids		2 nd DIGIT penetration of liquids		Protection against impacts <small>According to CEI EN 50102: edition 1996-05; 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
ADDITIONAL LETTER 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.		7	Protected against the effects of immersion	IK09	Protected against impact energy 10 J
		8	Protected against the effects of long term immersion	IK10	Protected against impact energy 20 J
A	Protected against access with the back of the hand				
B	Protected against access with finger				
C	Protected against access with tool				
D	Protected against access with a wire				



040

**SCATOLE E CASSETTE
PULSANTIERE IN METALLO**

**METAL PUSH-BUTTON
BOXES, ENCLOSURES**

Contenitori in alluminio

Aluminium enclosures

Caratteristiche tecniche

Materiale custodia	Fusione in lega di alluminio Al Si 11 CU 2
Serraggi	<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 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>
Guarnizioni	<p>Contenitori M10: gomma nitrilica stampata</p> <p>Contenitori M4/M5: gomma sughero</p> <p>Scatole di derivazione: gomma EPDM iniettata</p>
Colorazioni	<p>Contenitori M10/M5: coperchio: grigio RAL 7016 testurizzato scatola: grigio RAL 7035 testurizzato</p> <p>Contenitori M4: coperchio: grigio RAL 7035 scatola: grigio RAL 7035 testurizzato</p> <p>Scatole di derivazione: coperchio: grigio RAL 7040 goffrato scatola: grigio RAL 7040 goffrato</p>
Grado di protezione	IP66 - CEI EN 60529
Limiti di temperatura	-40° ÷ +100° C
Resistenza alla corrosione	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.
Trattamenti di protezione	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
Procedimenti di fusione	<p>PF- Pressofusione: 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>FC- Fusione in conchiglia: 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 pressofusione	GK-AISi11CU2 fus. conchiglia
Densità g/cm ²	2,65	2,65
Limite alla trazione N/mm ²	120-180	80-110
Res. alla trazione N/mm ²	200-280	180-240
Tensione di rottura %	1-3	6-12
Durezza Brinell HB	60-80	50-60
Modulo E 10 ⁻⁶ /K	20-23	20-23
Resistenza elettrica m /mm ²	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

Housing material	Al Si 11 CU 2 aluminium alloy casting
Fasteners	<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 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>
Gaskets	<p>M10 enclosures: nitrile rubber, molded</p> <p>M4/M5 enclosures: rubber cork</p> <p>Junction boxes: EPDM rubber, injection molded</p>
Colours	<p>M10/M5 enclosures: lid: RAL 7016 grey, textured finish enclosure: RAL 7035 grey, textured finish</p> <p>M4 enclosures: lid: RAL 7035 grey enclosure: RAL 7035 grey, textured finish</p> <p>Junction boxes: lid: RAL 7040 grey, embossed finish enclosure: RAL 7040 grey, embossed finish</p>
Protection degree	IP66 - CEI EN 60529
Temperature range	-40° ÷ +100° C
Corrosion resistance	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. Our enclosures are made of Al Si 12 alloy, DIN 1725 and contain 0.05 ÷ 0.1% copper, thus extremely corrosion resistant.
Protective treatments	Our enclosures are degreased and washed with ionized water, chrome-plated in galvanic baths of chromic acid and painted with epoxy polyurethane paints
Metal casting methods	<p>PF- Die casting: 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>FC- Shell molding: 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 die casting	GK-AISi11CU2 shell molding
Density g/cm ²	2,65	2,65
Tensile strength N/mm ²	120-180	80-110
Ult. tensile strength N/mm ²	200-280	180-240
Breaking strength	1-3	6-12
Brinell hardness HB	60-80	50-60
E modulus 10 ⁻⁶ /K	20-23	20-23
Electrical resistivity m /mm ²	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.

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.

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).

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).

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).

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).

VERNICIATURE SPECIALI

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

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 guarnizione
imperdibilità viti

Set of captive screws



Lavorazioni personalizzate

Customized machinings



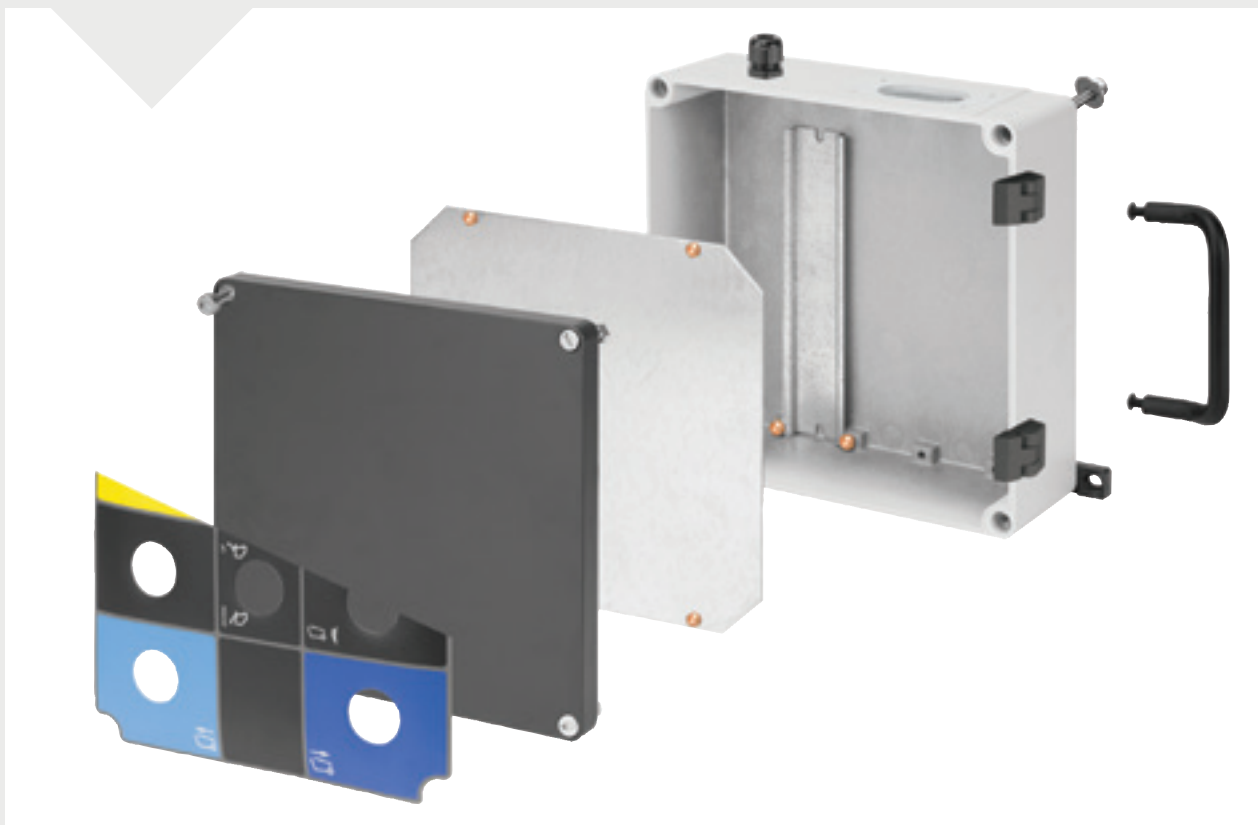
Kit di fissaggio con prigionieri

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

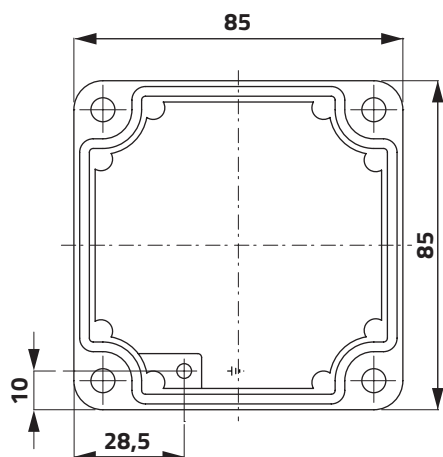
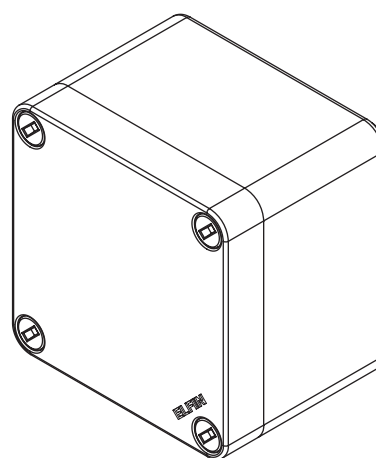
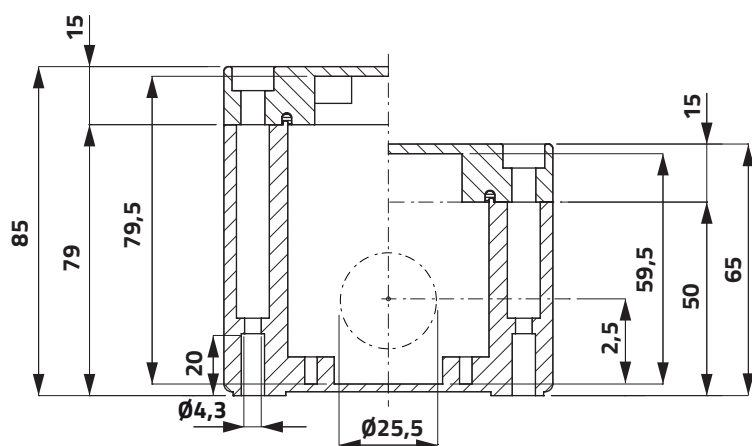
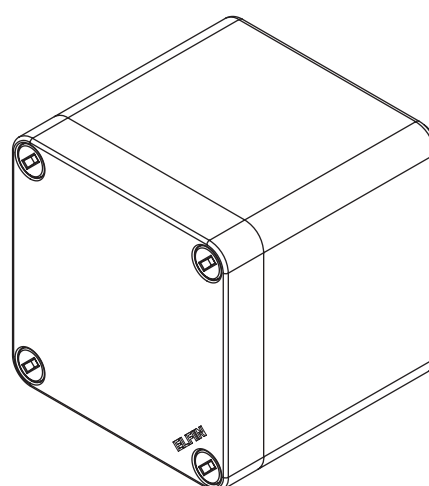
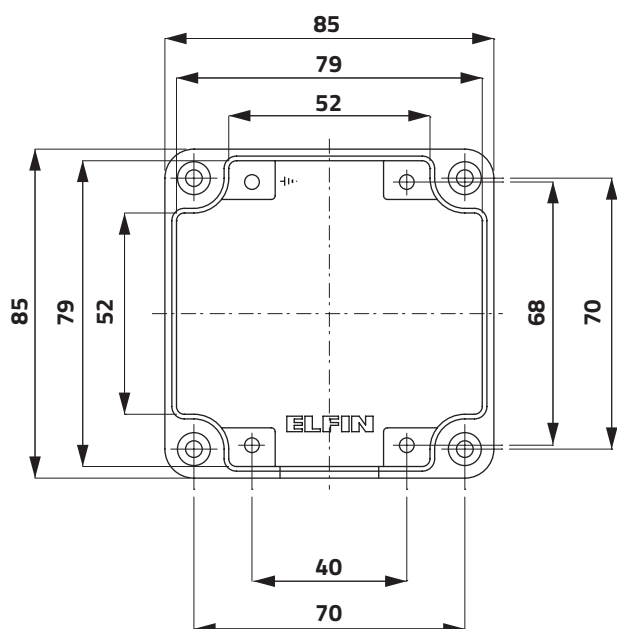


La guarnizione garantisce
protezione IP66

A sealing gasket assures
IP66 protection

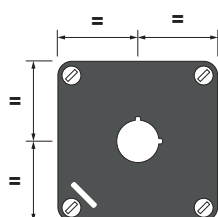
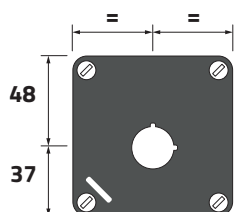
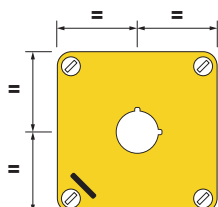
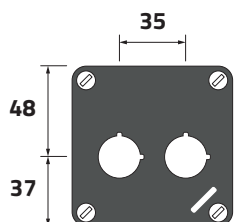
Scatole in alluminio M10 85x85mm

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

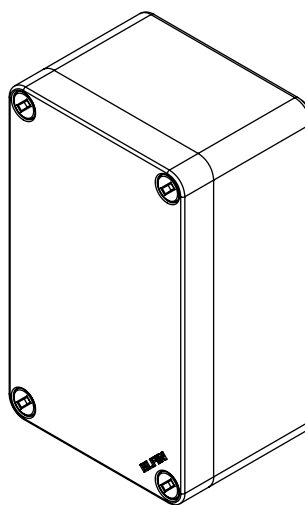
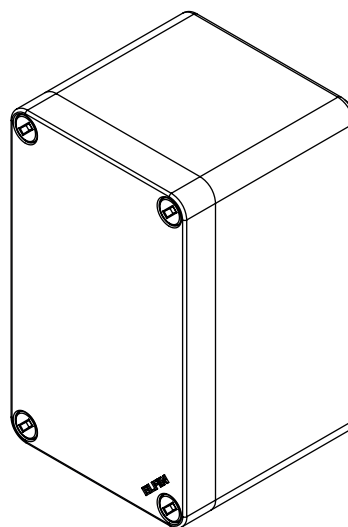
Coperchio giallo con 1 foro Ø 22mm / 1-hole yellow lid Ø 22mm

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

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Scatole in alluminio M10 85x140mm

Aluminium enclosures M10 85x140mm



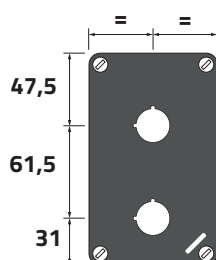
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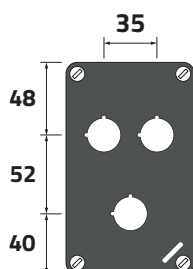
Coperchio senza fori / Undrilled lid

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



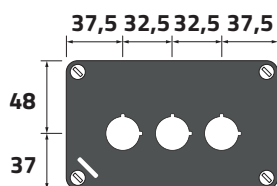
Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

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



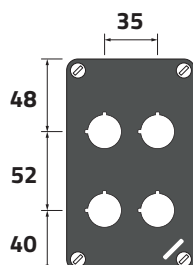
Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

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

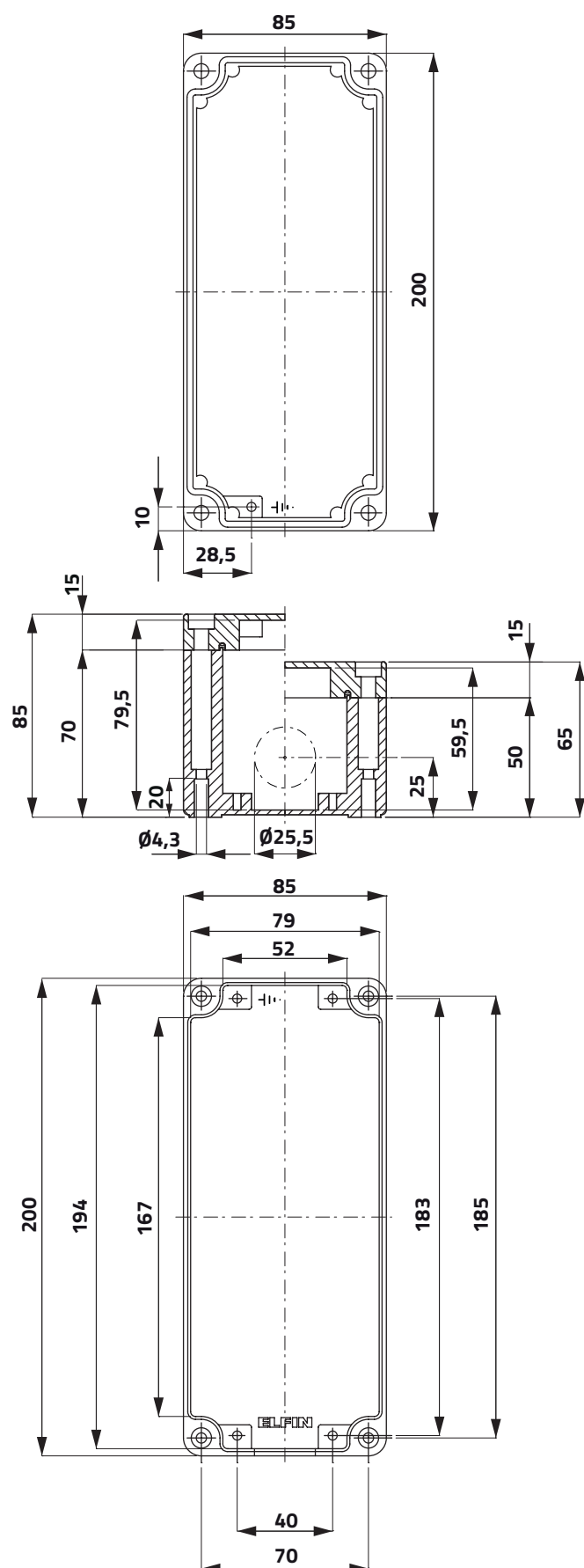
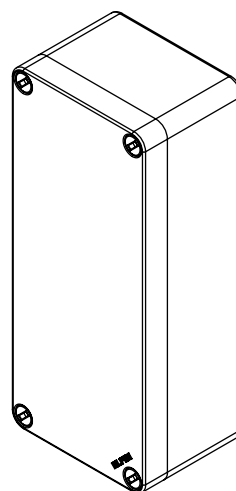
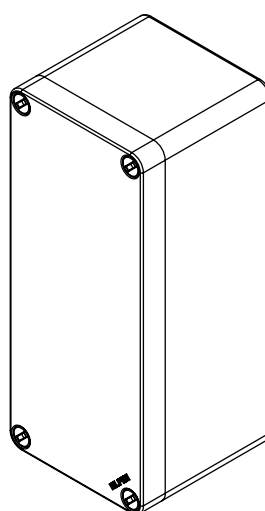


Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

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

Aluminium enclosures M10 85x200mm



Scatole in alluminio M10 85x200mm

Aluminium enclosures M10 85x200mm



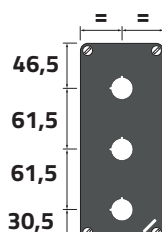
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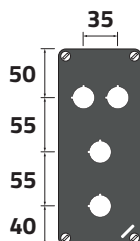
Coperchio senza fori / Undrilled lid

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



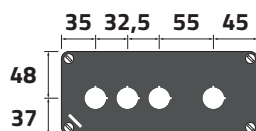
Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

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



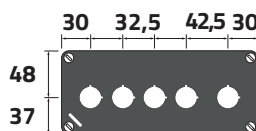
Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

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

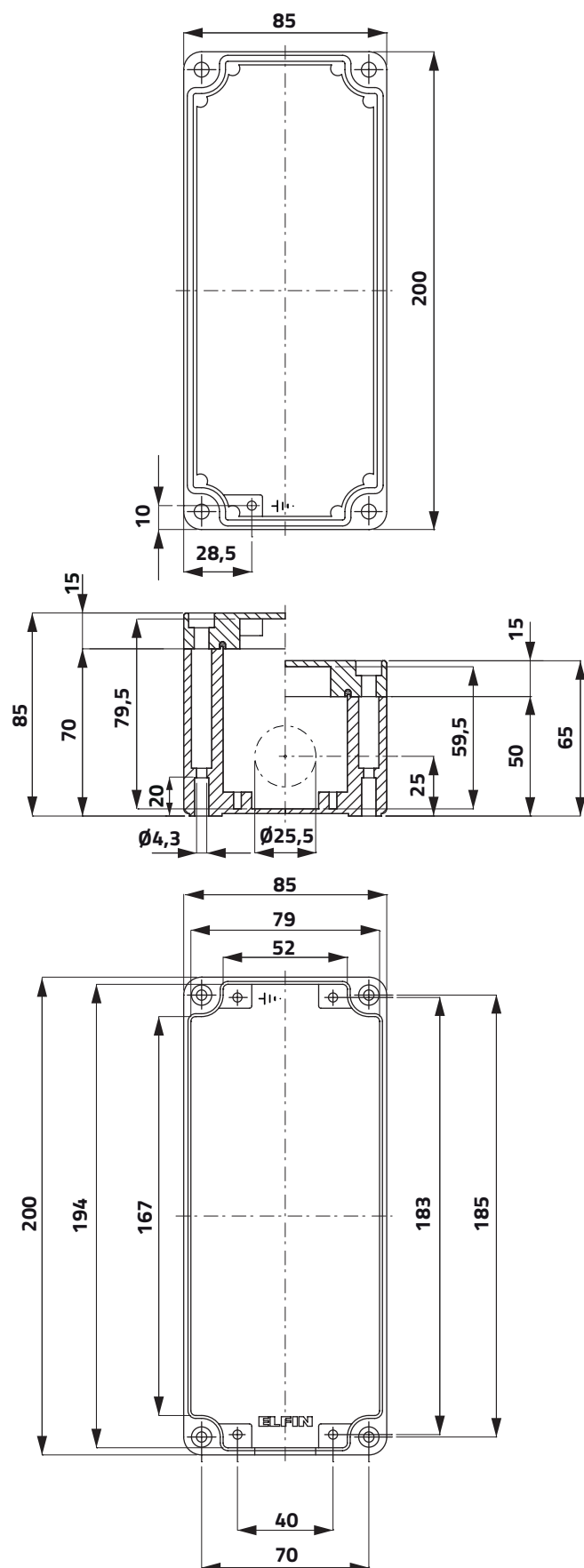
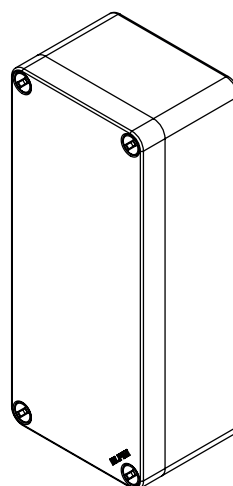
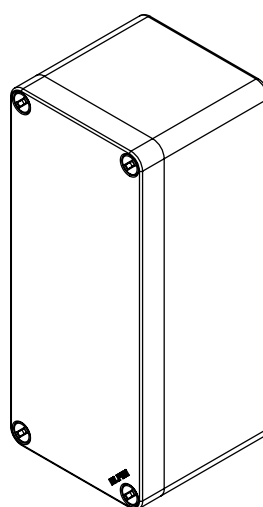


Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

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

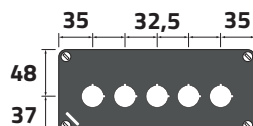
Scatole in alluminio M10 85x200mm

Aluminium enclosures M10 85x200mm



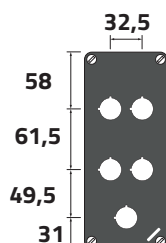
Scatole in alluminio M10 85x200mm

Aluminium enclosures M10 85x200mm



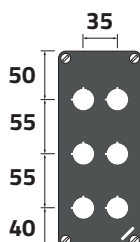
Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

	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

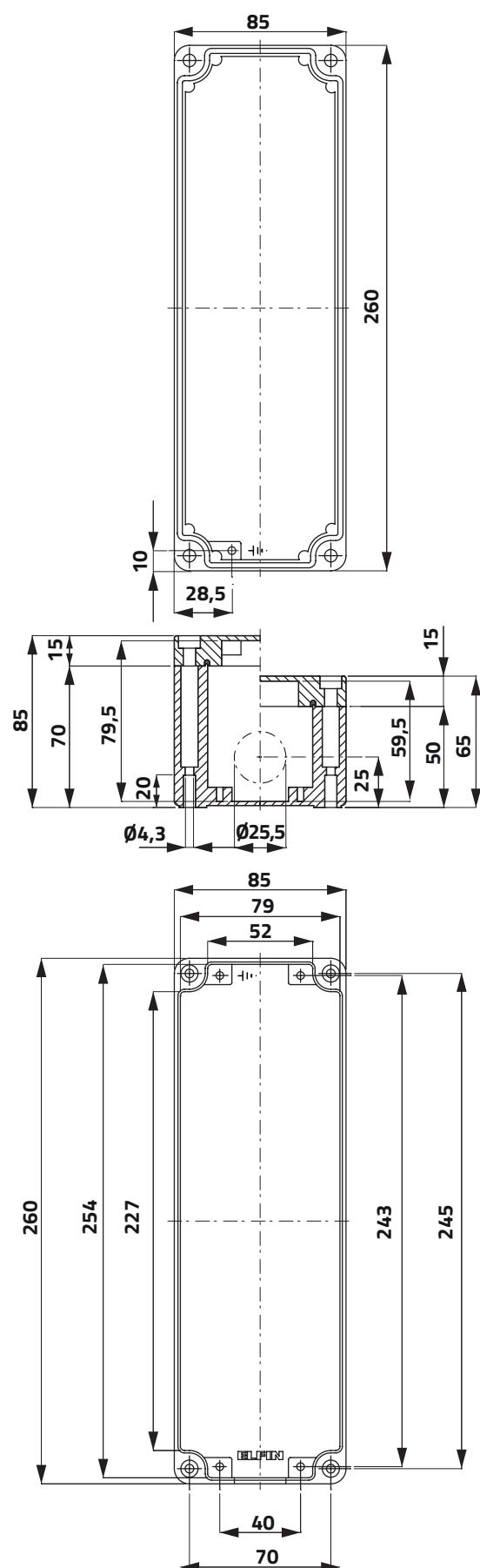
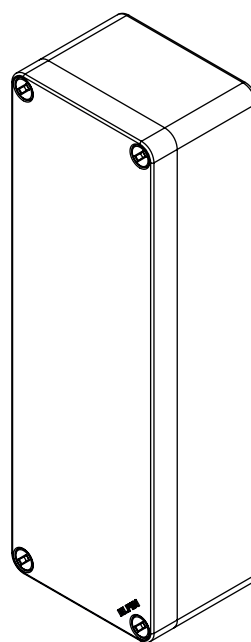
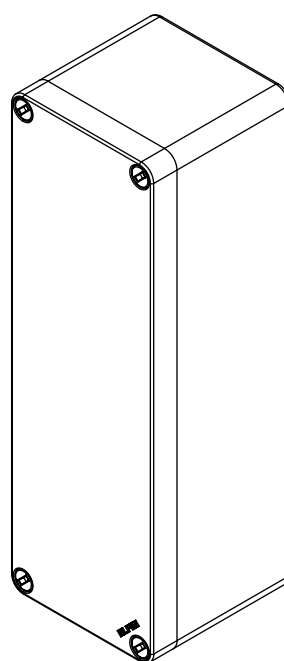


Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 22mm

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



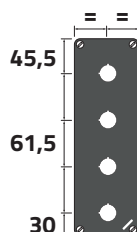
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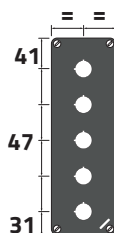
Coperchio senza fori / Undrilled lid

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



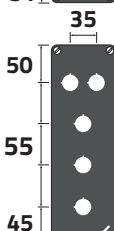
Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

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



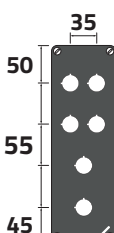
Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

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



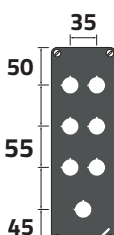
Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

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

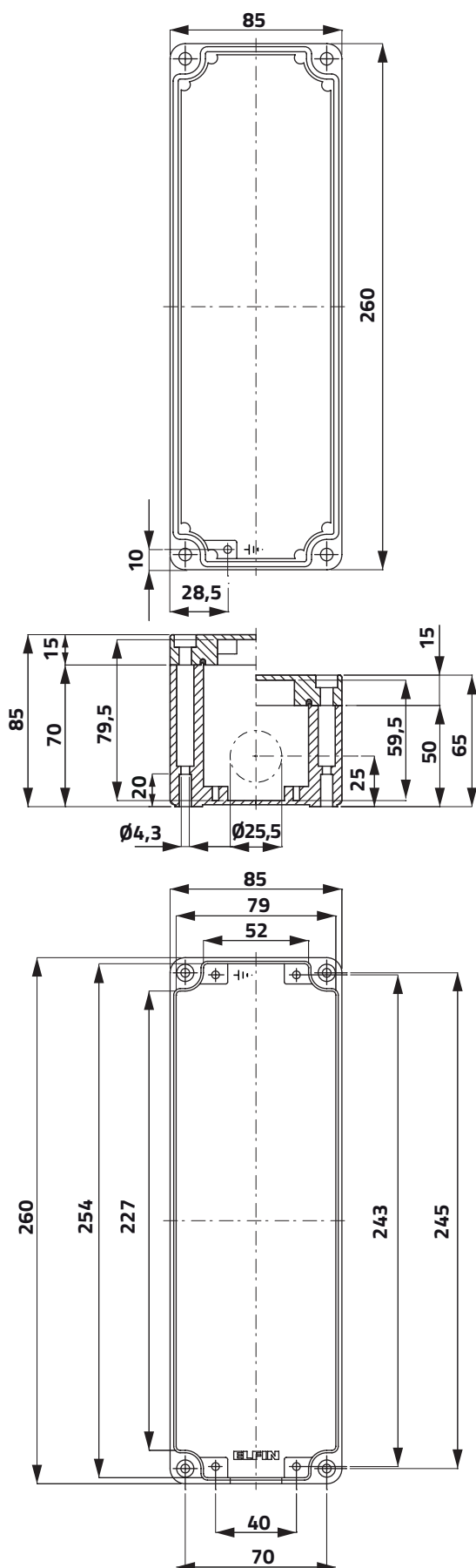
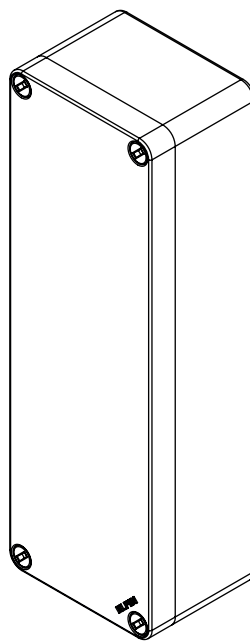
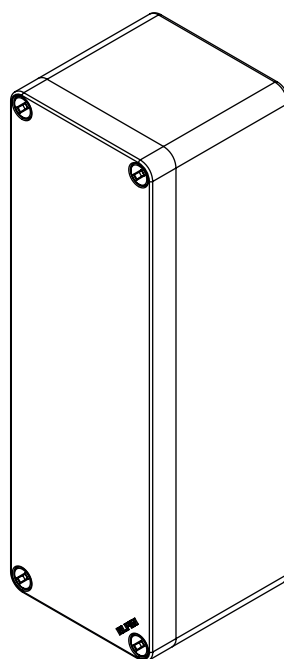


Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

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

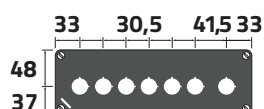
Scatole in alluminio M10 85x260mm

Aluminium enclosures M10 85x260mm



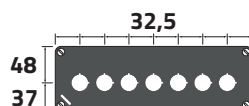
Scatole in alluminio M10 85x260mm

Aluminium enclosures M10 85x260mm



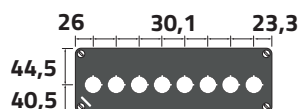
Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

	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



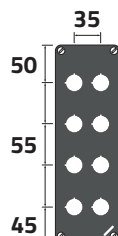
Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

	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



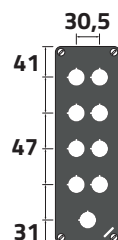
Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

	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



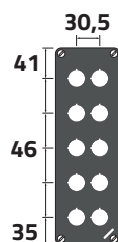
Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

	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

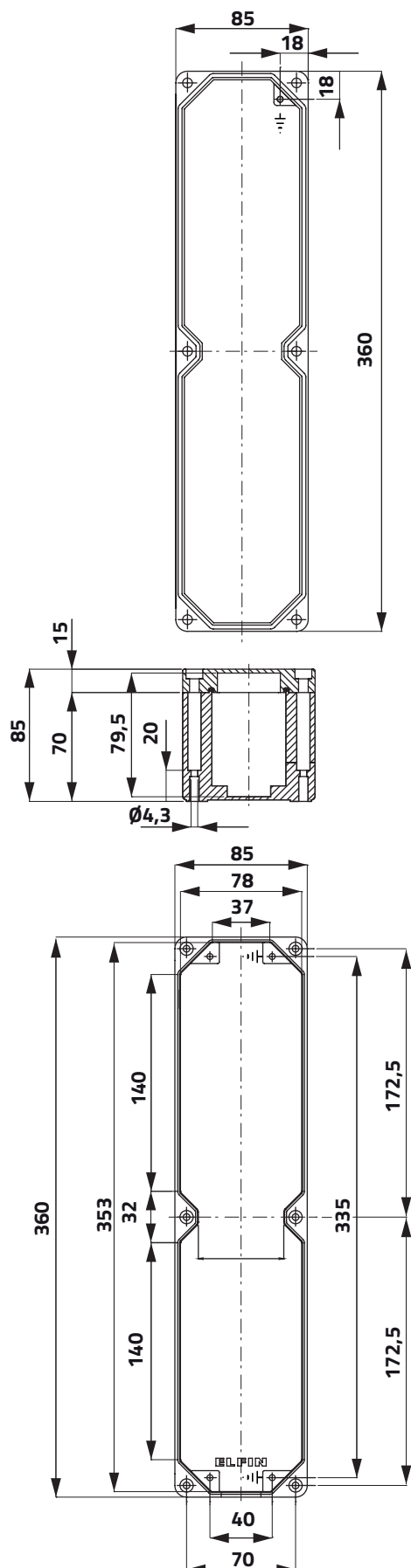
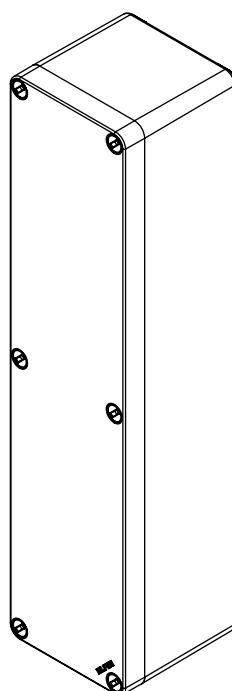


Coperchio con 10 fori Ø 22mm / 10-hole lid Ø 22mm

	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



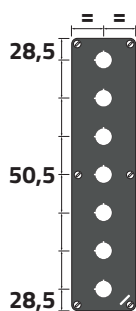
Scatole in alluminio M10 85x360mm

Aluminium enclosures M10 85x360mm



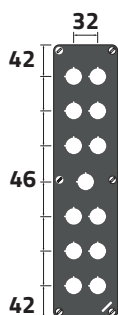
Coperchio senza fori / Undrilled lid

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



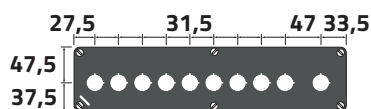
Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

Senza entrata cavo / No cable entry	85	1269	040C0836-8P7
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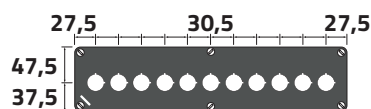
Coperchio con 13 fori Ø 22mm / 13-hole lid Ø 22mm

Senza entrata cavo / No cable entry	85	1243	040C0836-8P13
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Coperchio con 10 fori Ø 22mm / 10-hole lid Ø 22mm

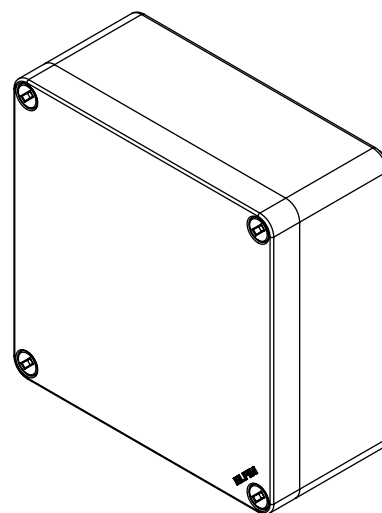
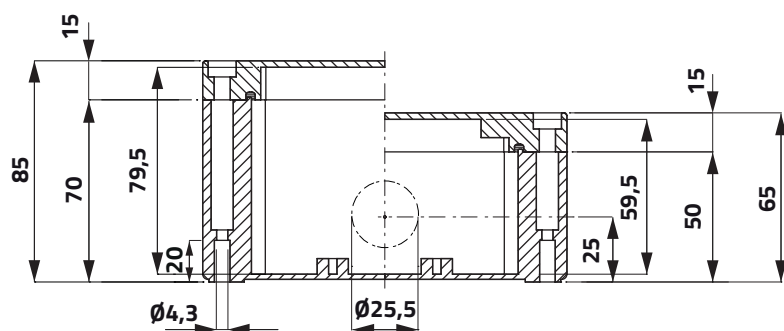
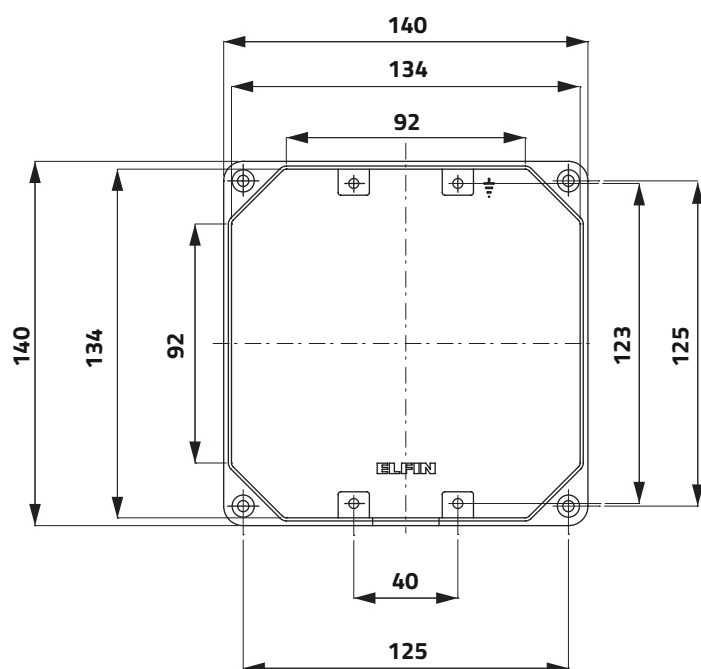
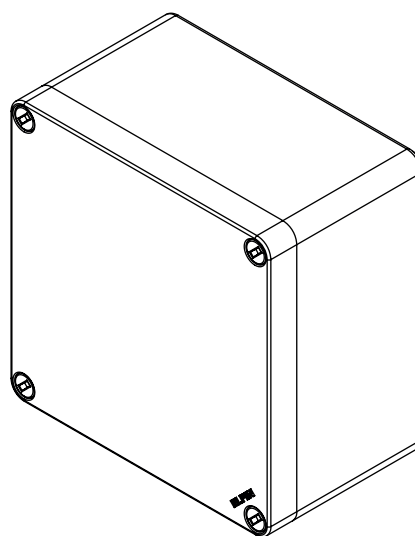
Senza entrata cavo / No cable entry	85	1256	040C0836-8P10LC
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Coperchio con 11 fori Ø 22mm / 11-hole lid Ø 22mm

Senza entrata cavo / No cable entry	85	1252	040C0836-8P11L
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Technical drawing of a square plate with an octagonal hole. The overall dimensions are 140 mm by 140 mm. The octagonal hole has a width of 28,5 mm. The plate has four mounting holes, each with a diameter of 10 mm, located at the corners. The distance between the center of the octagonal hole and the center of the mounting holes is 28,5 mm. The plate has a thickness of 10 mm.



Scatole in alluminio M10 140x140mm

Aluminium enclosures M10 140x140mm



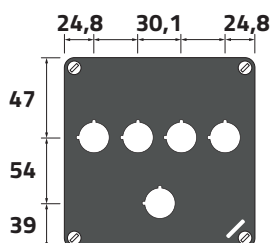
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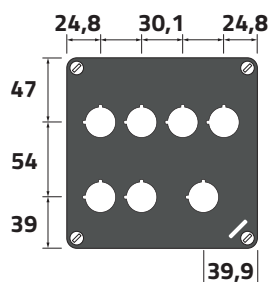
Coperchio senza fori / Undrilled lid

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



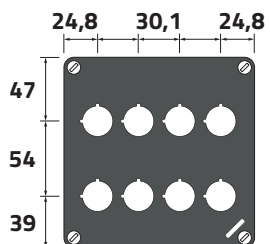
Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

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

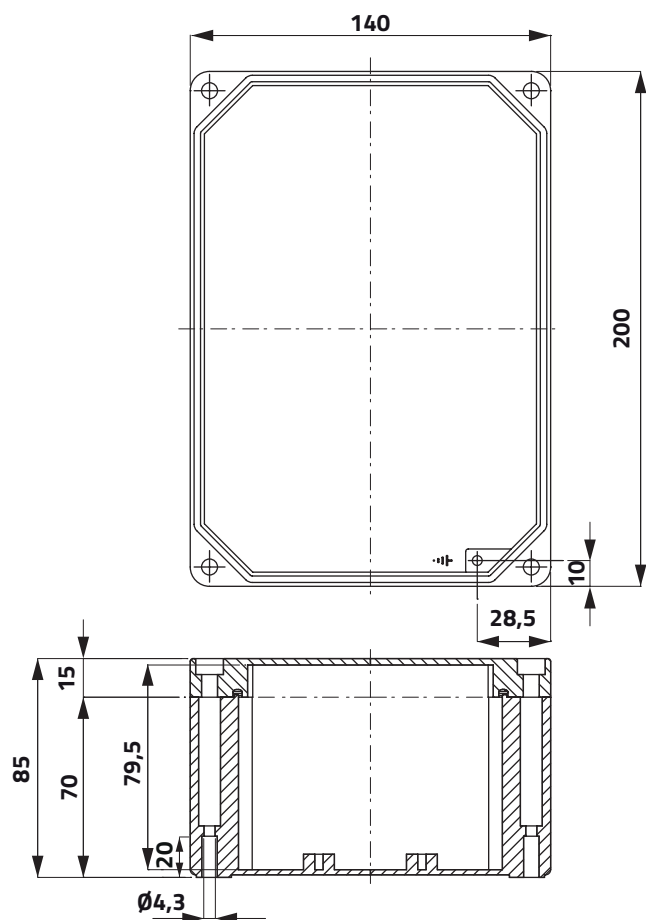
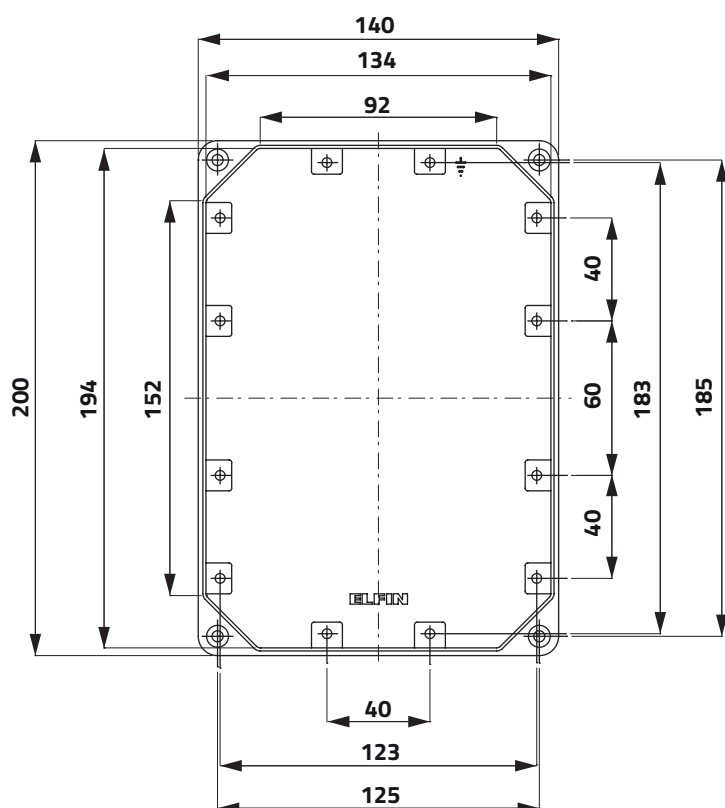
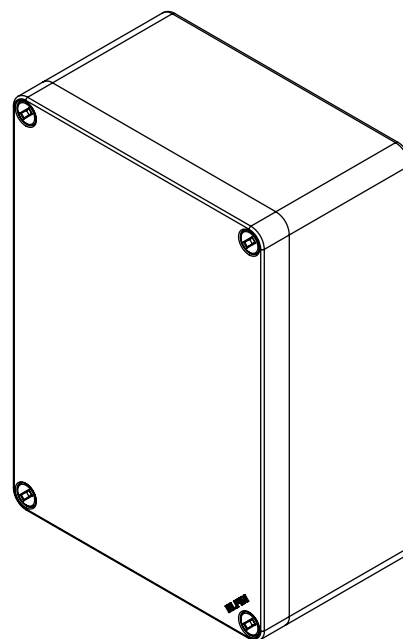


Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

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



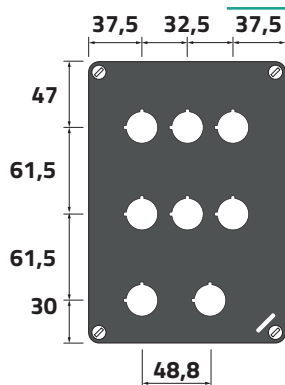
h

g

cod

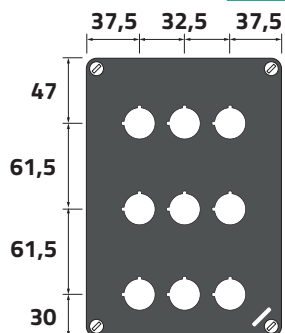
Coperchio senza fori / Undrilled lid

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



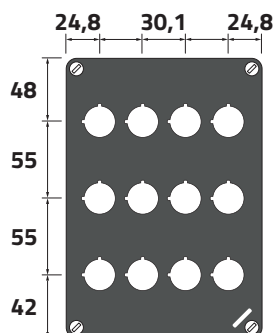
Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

Senza entrata cavo / No cable entry	85	968	040C1420-8P8C
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Coperchio con 9 fori Ø 22mm / 9-hole lid Ø 22mm

Senza entrata cavo / No cable entry	85	966	040C1420-8P9
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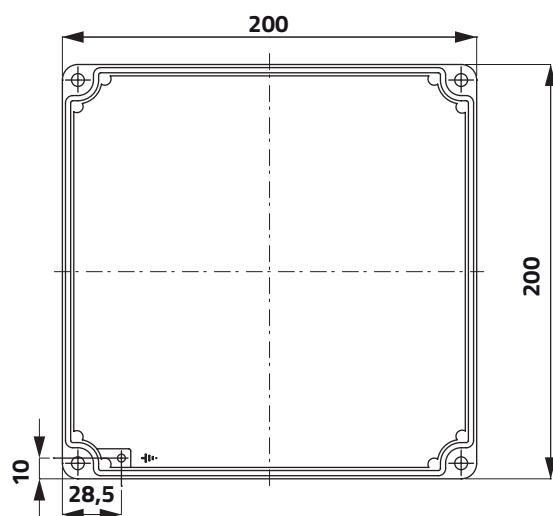
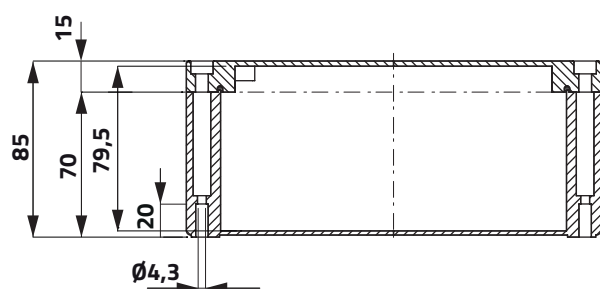
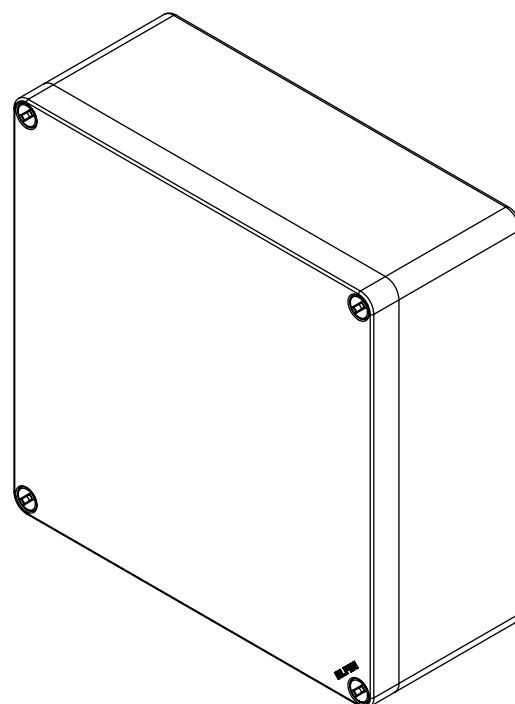
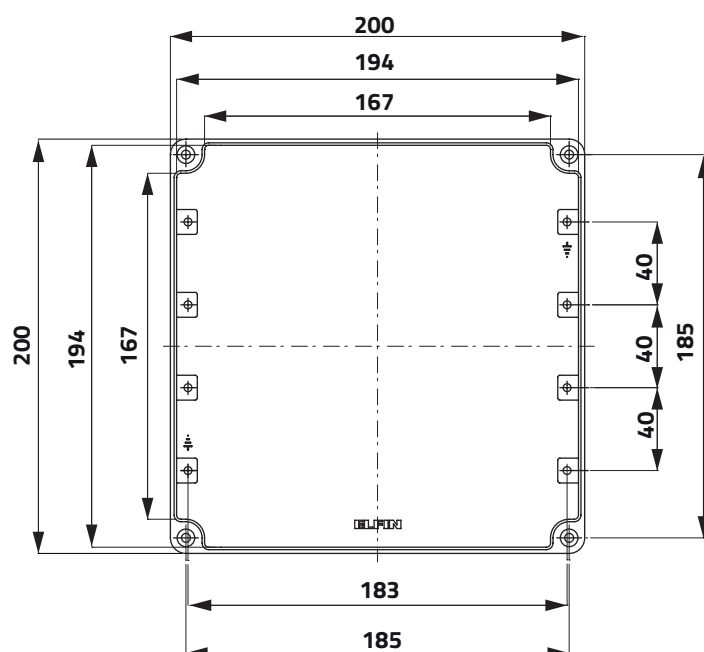


Coperchio con 12 fori Ø 22mm / 12-hole lid Ø 22mm

Senza entrata cavo / No cable entry	85	958	040C1420-8P12
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Scatole in alluminio M10 200x200mm

Aluminium enclosures M10 200x200mm



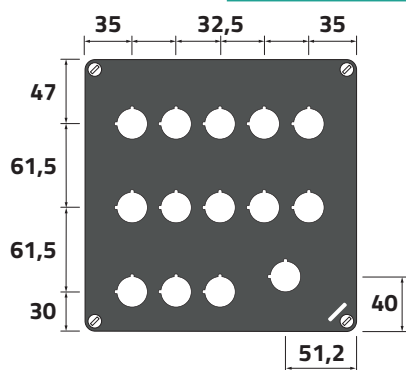
Scatole in alluminio M10 200x200mm

Aluminium enclosures M10 200x200mm



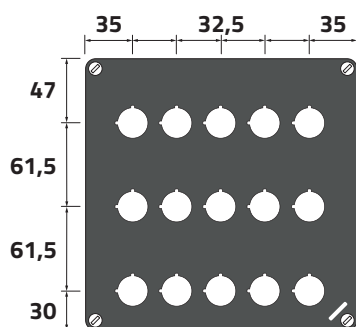
Coperchio senza fori / Undrilled lid

	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
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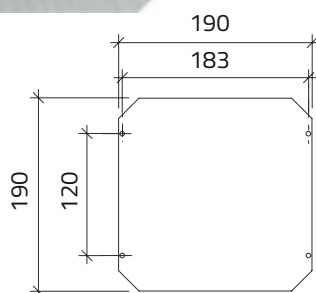
Coperchio con 15 fori Ø 22mm / 15-hole lid Ø 22mm

Senza entrata cavo / No cable entry	85	1316	040C2020-8P15
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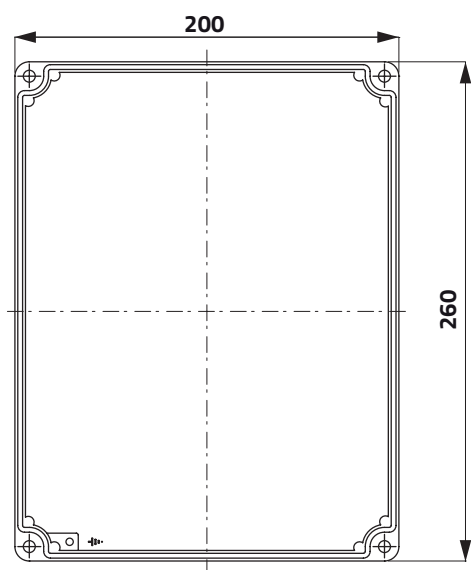
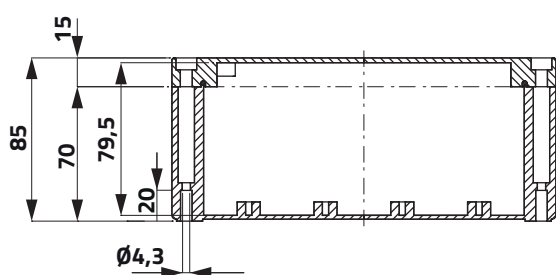
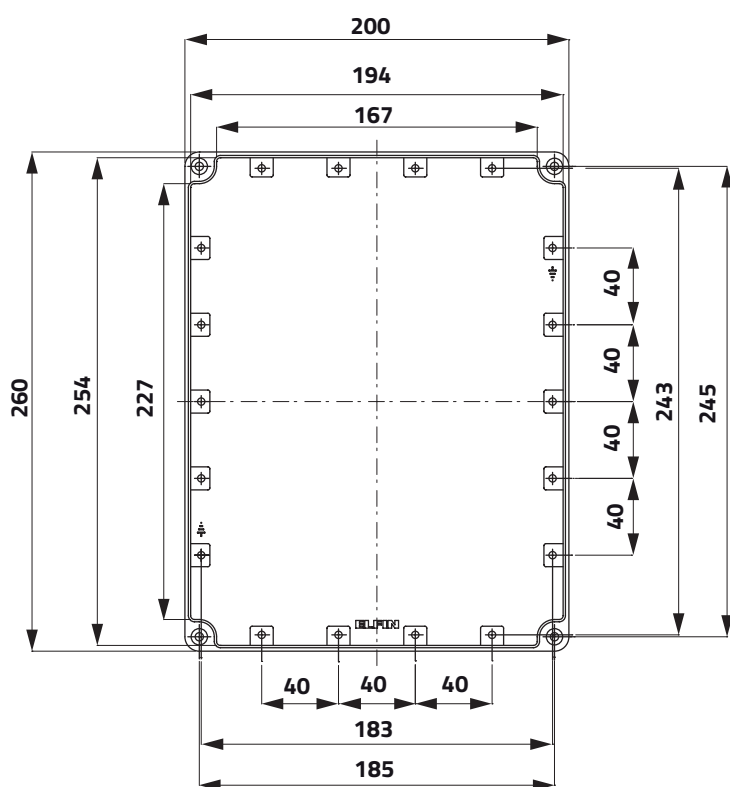
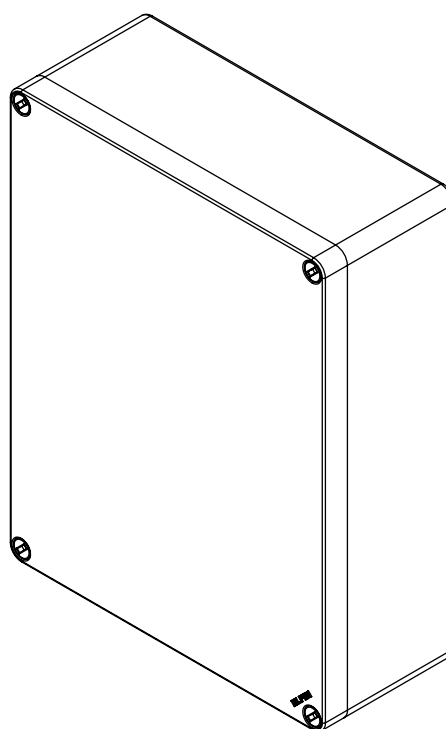
Piastra di fondo / Mounting plate

1,5	410	040P2020
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Scatole in alluminio M10 200x260mm

Aluminium enclosures M10 200x260mm



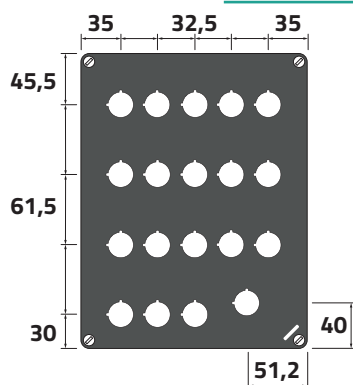
Scatole in alluminio M10 200x260mm

Aluminium enclosures M10 200x260mm



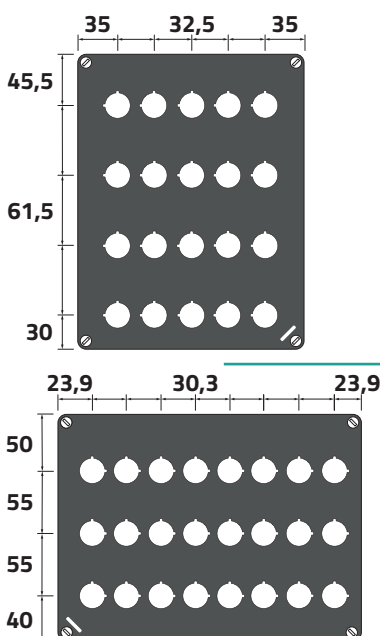
Coperchio senza fori / Undrilled lid

Senza entrata cavo / No cable entry	85	1608	040C2026-8
Grezza, cieca / Unpainted, no cable entry	85	1608	040C2026-8N



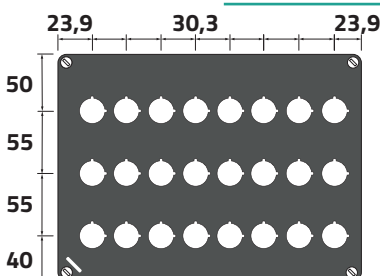
Coperchio con 19 fori Ø 22mm / 19-hole lid Ø 22mm

Senza entrata cavo / No cable entry	85	1554	040C2026-8P19C
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Coperchio con 20 fori Ø 22mm / 20-hole lid Ø 22mm

Senza entrata cavo / No cable entry	85	1552	040C2026-8P20
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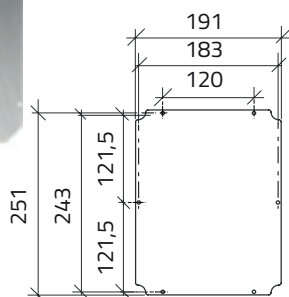
Coperchio con 24 fori Ø 22mm / 24-hole lid Ø 22mm

Senza entrata cavo / No cable entry	85	1540	040C2026-8P24
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Piastra di fondo / Mounting plate

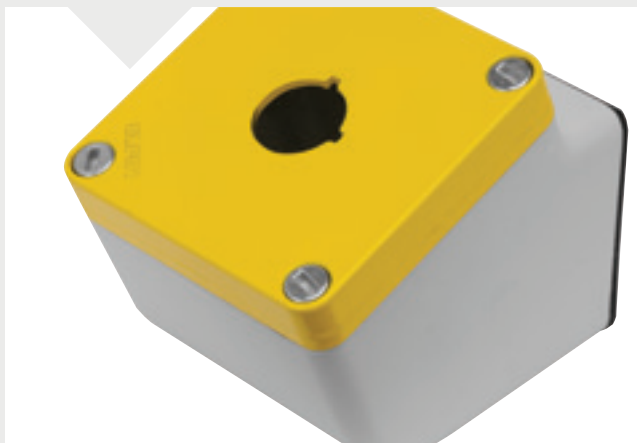
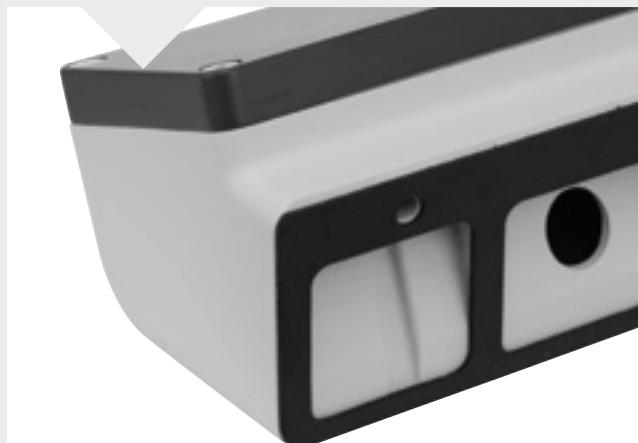
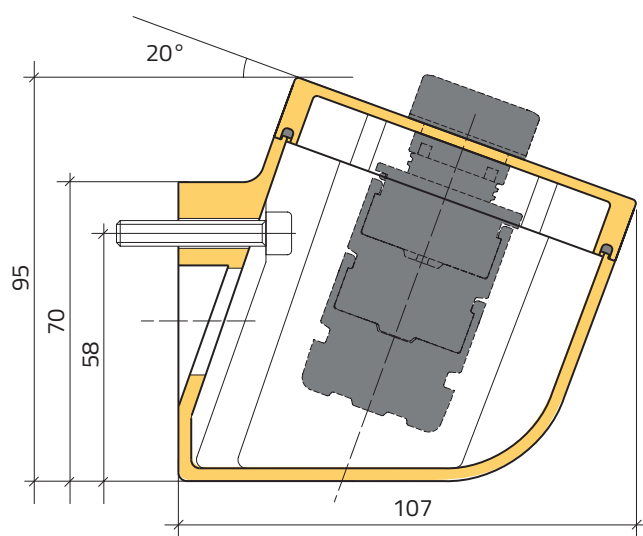
1,5	540	040P2026
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Scatole inclinate in alluminio M10 Sloped aluminium enclosures M10

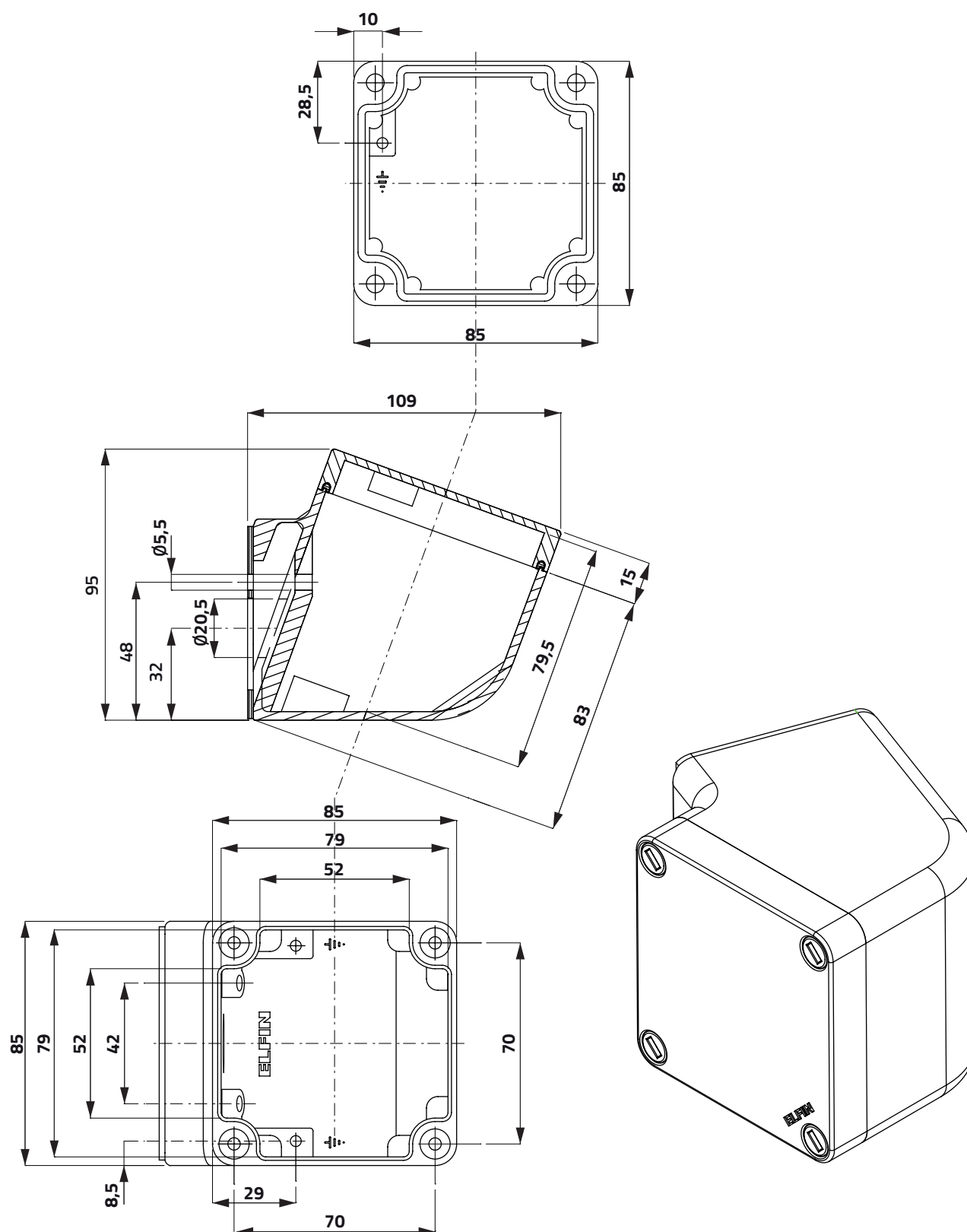


Scatole inclinate in alluminio M10 Sloped aluminium enclosures M10



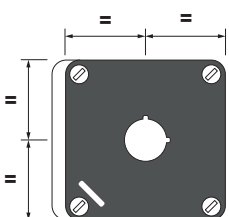
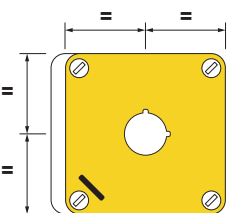
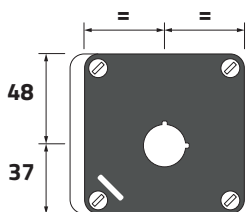
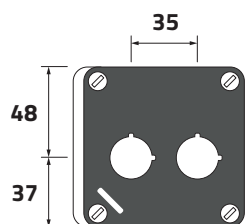
Scatole inclinate in alluminio M10 85x85mm

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

Con entrata cavo / With cable entry	542	040L0808-8EGP1
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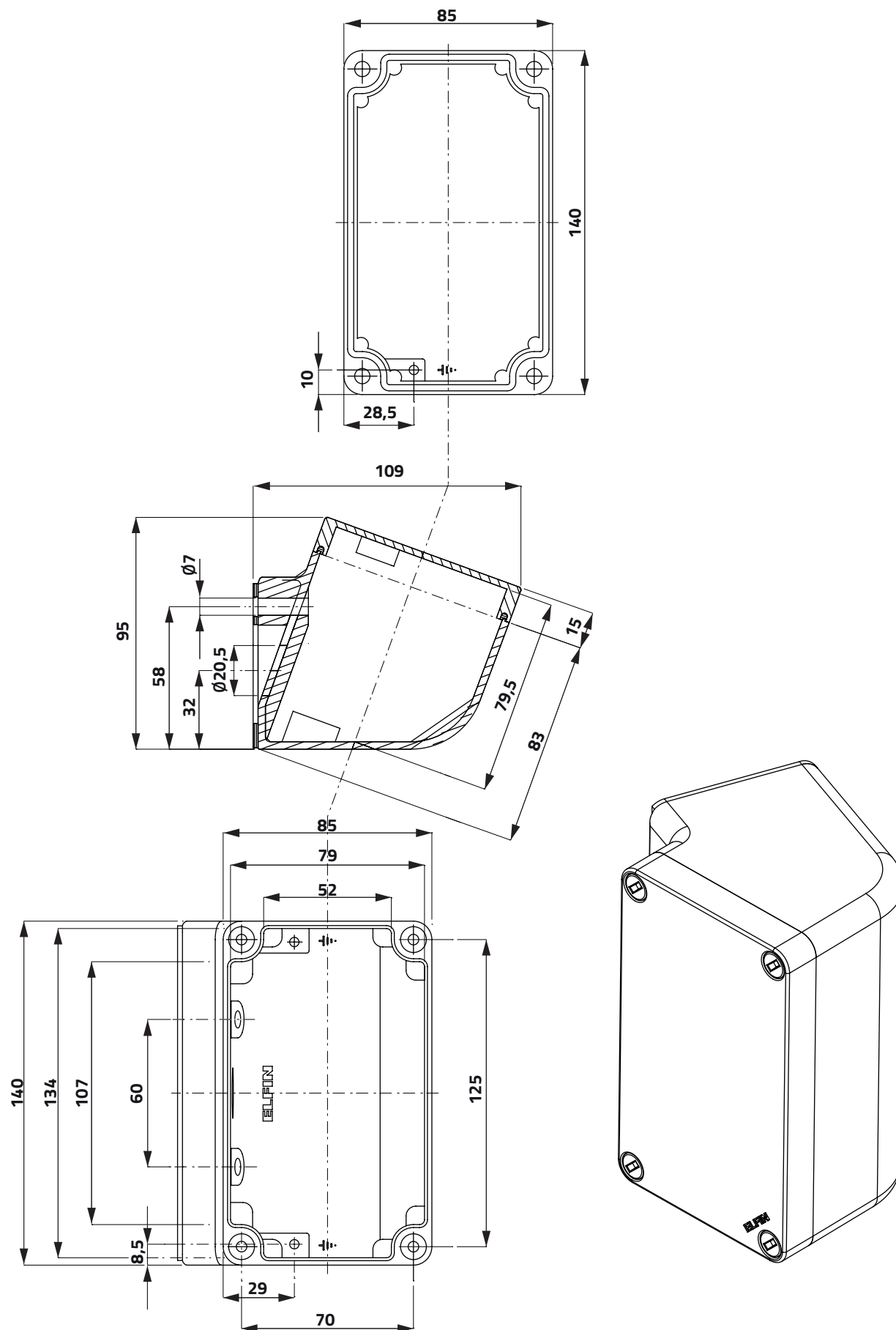
Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

Con entrata cavo / With cable entry	542	040L0808-8EP1
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Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

Con entrata cavo / With cable entry	539	040L0808-8EP2
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Scatole inclinate in alluminio M10 85x140mm Sloped aluminium enclosures M10 85x140mm



Scatole inclinate in alluminio M10 85x140mm

Sloped aluminium enclosures M10 85x140mm

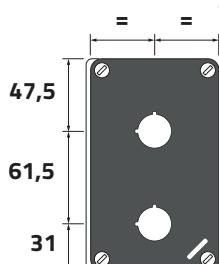


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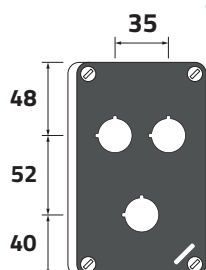
Coperchio senza fori / Undrilled lid

Con entrata cavo / With cable entry	750	040L0814-8E
Grezza, con entrata cavo / Unpainted, with cable entry	750	040L0814-8EN



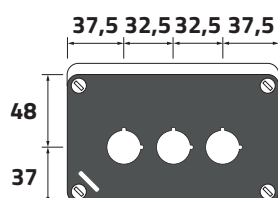
Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

Con entrata cavo / With cable entry	745	040L0814-8EP2
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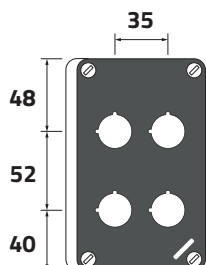
Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

Con entrata cavo / With cable entry	743	040L0814-8EP3C
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Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

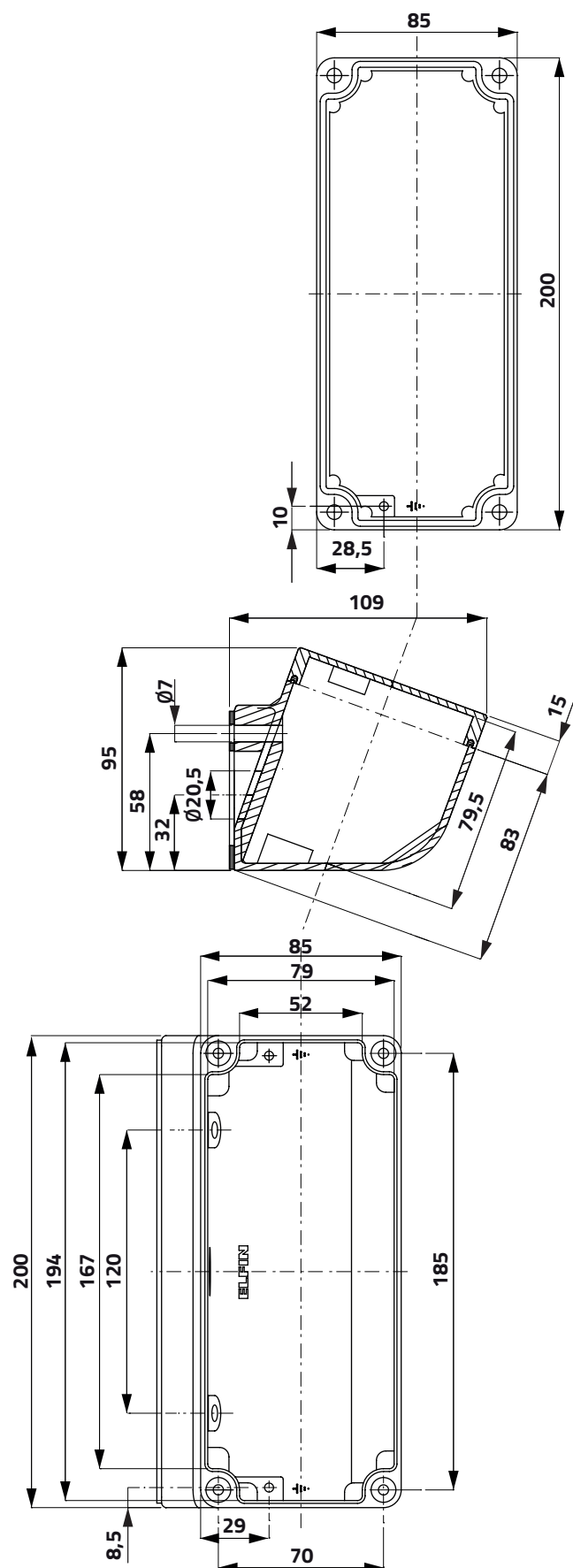
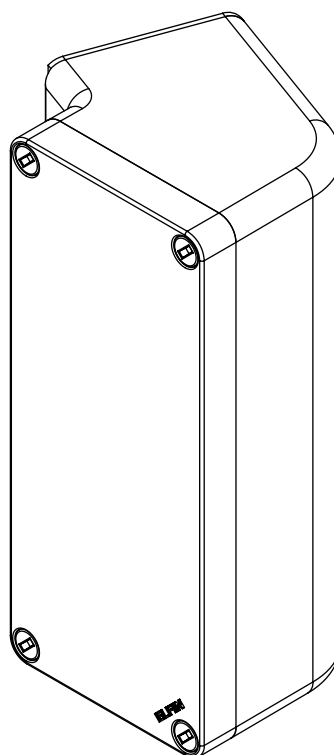
Con entrata cavo / With cable entry	743	040L0814-8EP3L
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Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

Con entrata cavo / With cable entry	740	040L0814-8EP4
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Scatole inclinate in alluminio M10 85x200mm Sloped aluminium enclosures M10 85x200mm



Scatole inclinate in alluminio M10 85x200mm

Sloped aluminium enclosures M10 85x200mm

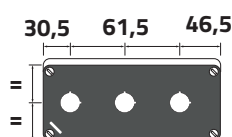


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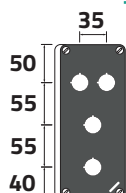
Coperchio senza fori / Undrilled lid

Con entrata cavo / With cable entry	980	040L0820-8E
Grezza, con entrata cavo / Unpainted, with cable entry	980	040L0820-8EN



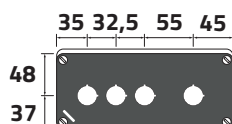
Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

Con entrata cavo / With cable entry	973	040L0820-8EP3
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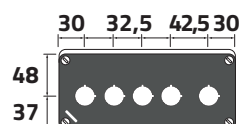
Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

Con entrata cavo / With cable entry	970	040L0820-8EP4C
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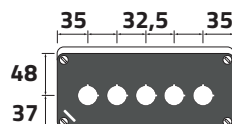
Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

Con entrata cavo / With cable entry	970	040L0820-8EP4LC
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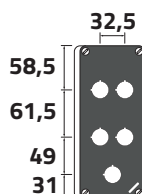
Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

Con entrata cavo / With cable entry	968	040L0820-8EP5LC
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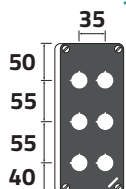
Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

Con entrata cavo / With cable entry	968	040L0820-8EP5L
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Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

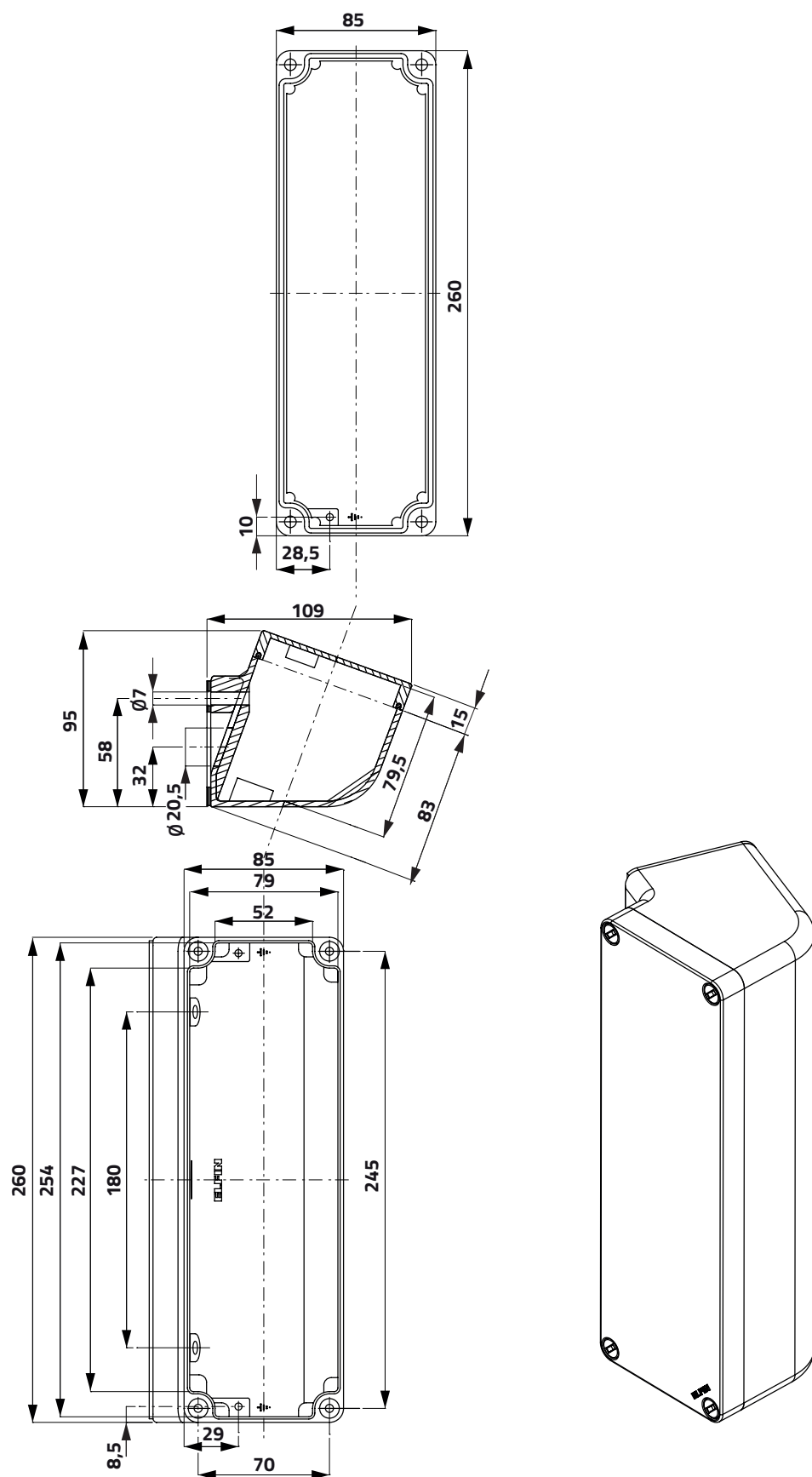
Con entrata cavo / With cable entry	968	040L0820-8EP5C
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Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 22mm

Con entrata cavo / With cable entry	965	040L0820-8EP6
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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

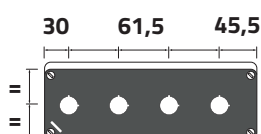
Con entrata cavo / With cable entry	1150
Grezza, con entrata cavo / Unpainted, with cable entry	1150

040L0826-8E
040L0826-8EN

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

Con entrata cavo / With cable entry	1140
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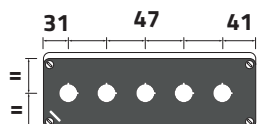
040L0826-8EP4



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

Con entrata cavo / With cable entry	1138
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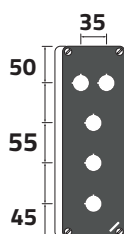
040L0826-8EP5



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

Con entrata cavo / With cable entry	1138
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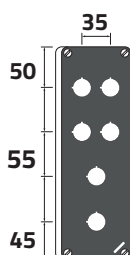
040L0826-8EP5C



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

Con entrata cavo / With cable entry	1135
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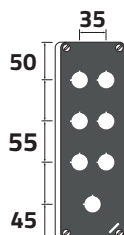
040L0826-8EP6C



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

Con entrata cavo / With cable entry	1133
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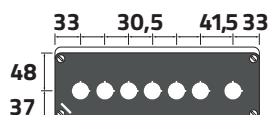
040L0826-8EP7C



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

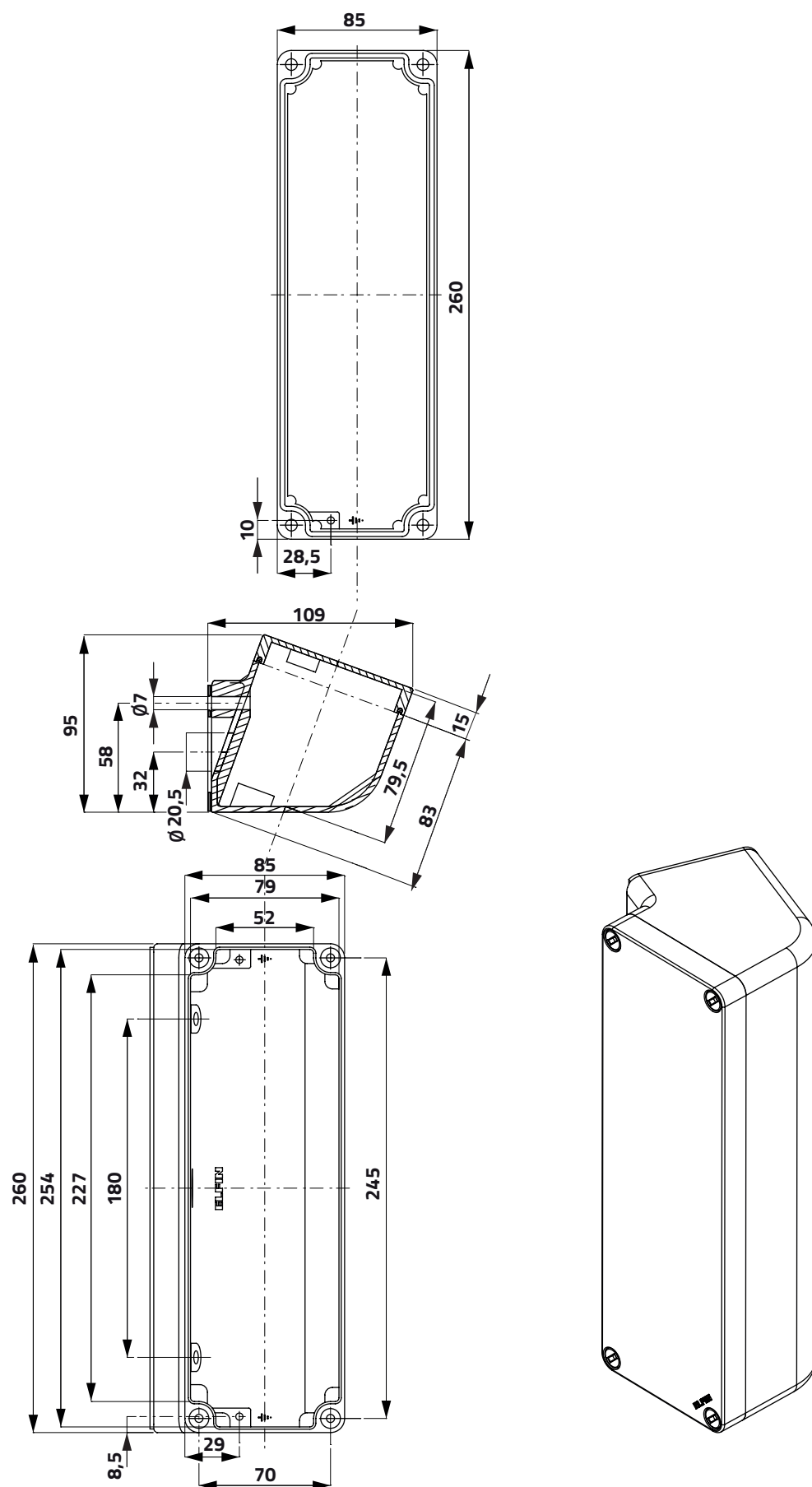
Con entrata cavo / With cable entry	1133
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040L0826-8EP7LC



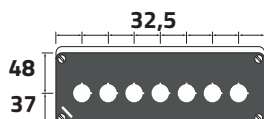
Scatole inclinate in alluminio M10 85x260mm

Sloped aluminium enclosures M10 85x260mm



Scatole inclinate alluminio in M10 85x260mm

Sloped aluminium enclosures M10 85x260mm

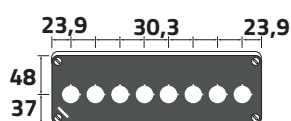


Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

Con entrata cavo / With cable entry

1133

040L0826-8EP7L

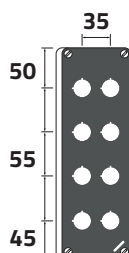


Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

Con entrata cavo / With cable entry

1133

040L0826-8EP8L

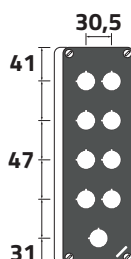


Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

Con entrata cavo / With cable entry

1133

040L0826-8EP8

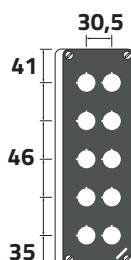


Coperchio con 9 fori Ø 22mm / 9-hole lid Ø 22mm

Con entrata cavo / With cable entry

1133

040L0826-8EP9C

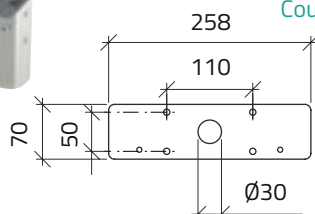


Coperchio con 10 fori Ø 22mm / 10-hole lid Ø 22mm

VeCon entrata cavo / With cable entry

968

040L0826-8EP10



Piastra / Plate

Per dettagli vedere sezione 060 / For details see section 060

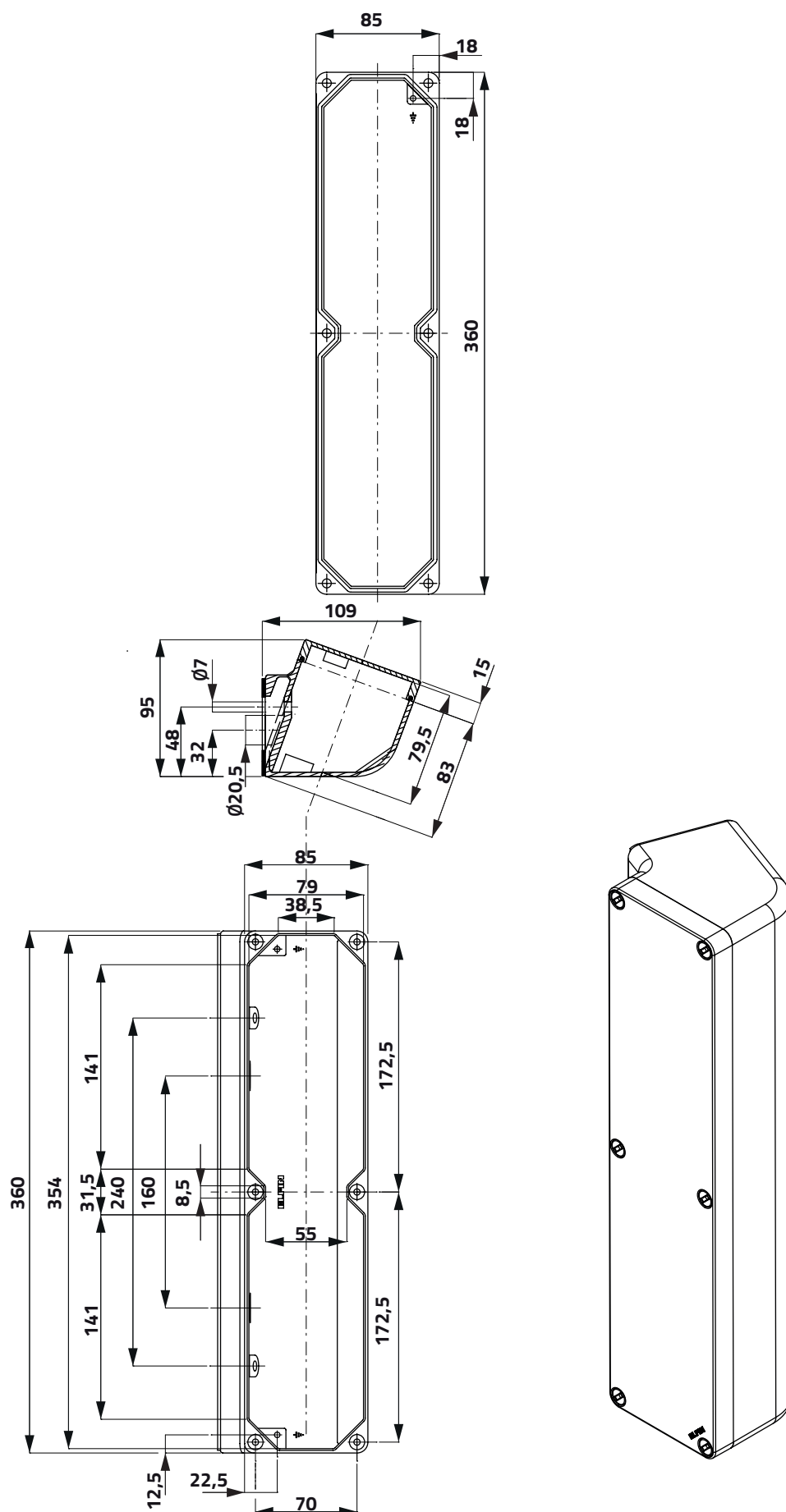
Piastra accoppiamento per scatole inclinate
Coupling plate for sloped enclosures

450

060PAP

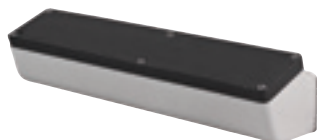
Scatole inclinate in alluminio M10 85x360mm

Sloped aluminium enclosures M10 85x360mm



Scatole inclinate alluminio in M10 85x360mm

Sloped aluminium enclosures M10 85x360mm

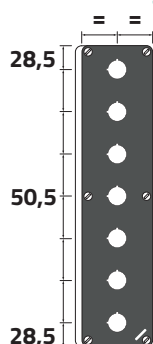


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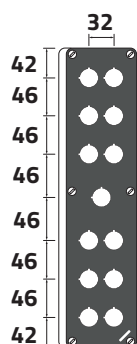
Coperchio senza fori / Undrilled lid

Con entrata cavo / With cable entry	1424	040L0836-8E
Grezza, con entrata cavo / Unpainted, with cable entry	1424	040L0836-8EN



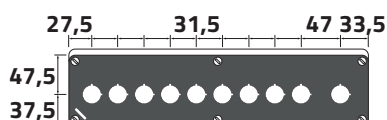
Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

Con entrata cavo / With cable entry	1400	040L0836-8EP7
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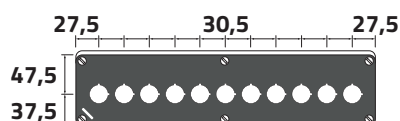
Coperchio con 13 fori Ø 22mm / 13-hole lid Ø 22mm

Con entrata cavo / With cable entry	1385	040L0836-8EP13
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Coperchio con 10 fori Ø 22mm / 10-hole lid Ø 22mm

Con entrata cavo / With cable entry	1394	040L0836-8EP10L
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Coperchio con 11 fori Ø 22mm / 11-hole lid Ø 22mm

Con entrata cavo / With cable entry	1391	040L0836-8EP11L
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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



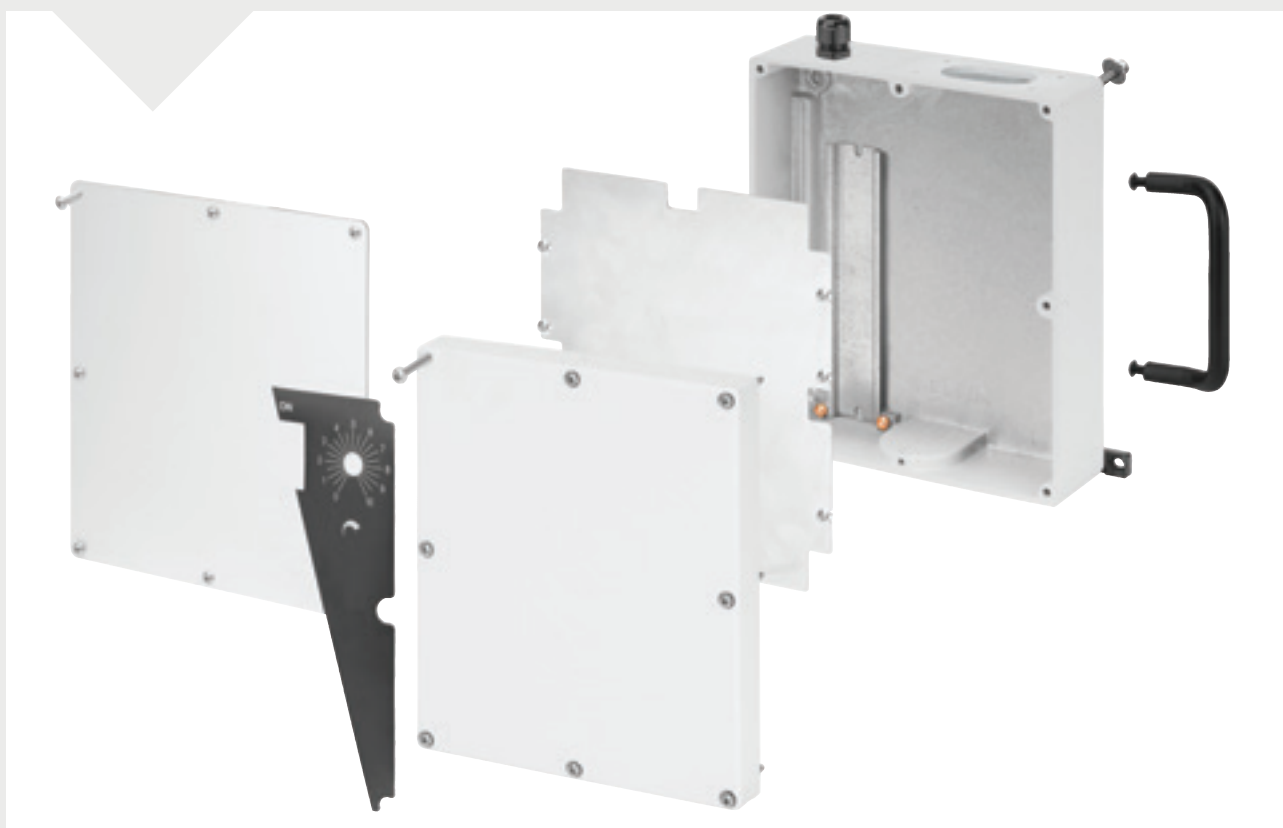
Viti di serraggio coperchio
Clamping screws for lid



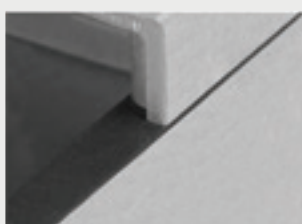
Lavorazioni personalizzate
Customized machinings



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

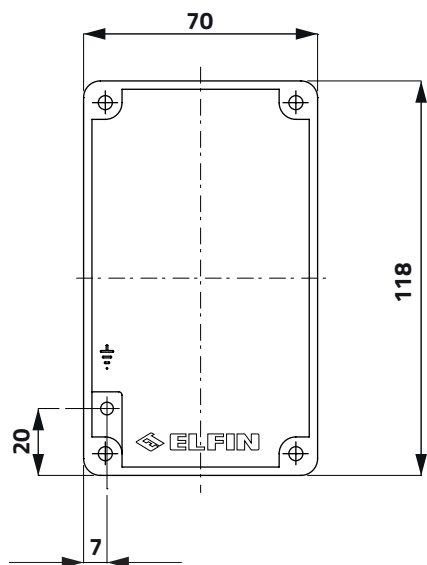
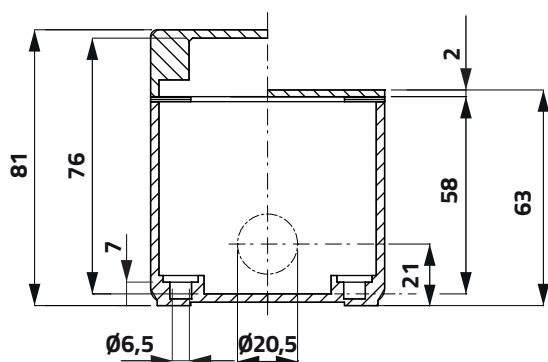
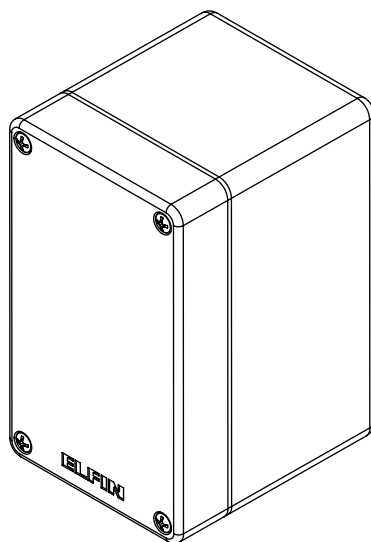
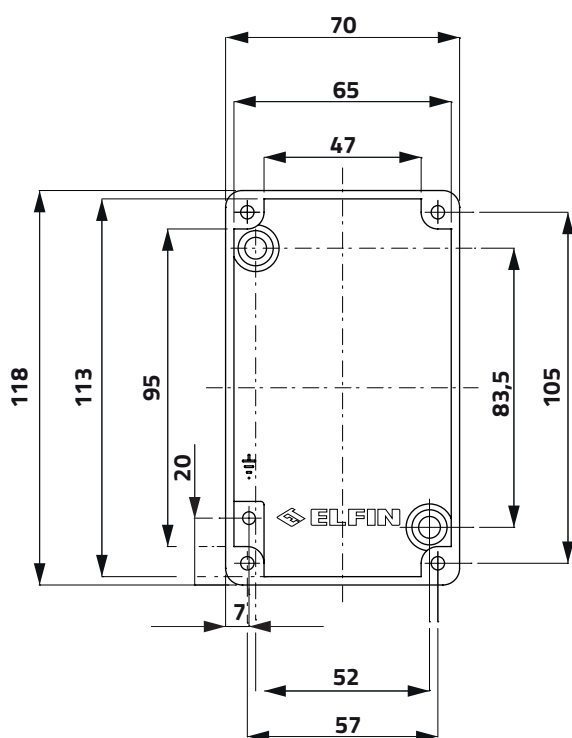
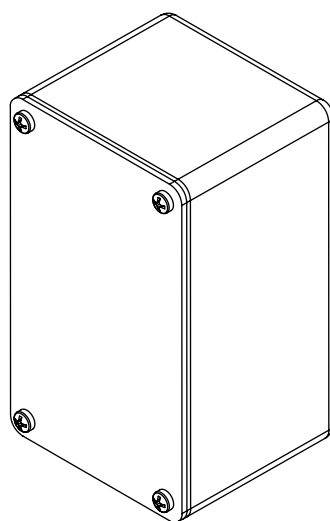


Kit di staffe di fissaggio
Set of mounting brackets



Scatole in alluminio M4 70x118mm

Aluminium enclosures M4 70x118mm



Scatole in alluminio M4 70x118mm

Aluminium enclosures M4 70x118mm



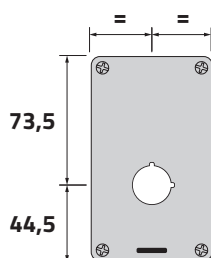
Coperchio senza fori / Undrilled lid

	h	g	cod
Senza entrata cavo / No cable entry	81	369	040C0711-8
Con entrata cavo / With cable entry	81	365	040C0711-8E
Grezza, cieca / Unpainted, no cable entry	81	369	040C0711-8N



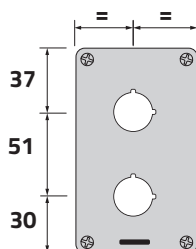
Piastra in alluminio senza fori / Undrilled aluminium plate

Senza entrata cavo / No cable entry	63	281	040C0711-6
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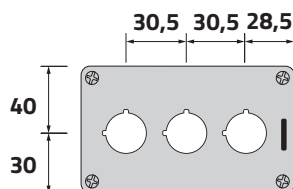
Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

Senza entrata cavo / No cable entry	81	366	040C0711-8P1
Con entrata cavo / With cable entry	81	362	040C0711-8EP1



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

Senza entrata cavo / No cable entry	81	363	040C0711-8P2
Con entrata cavo / With cable entry	81	359	040C0711-8EP2

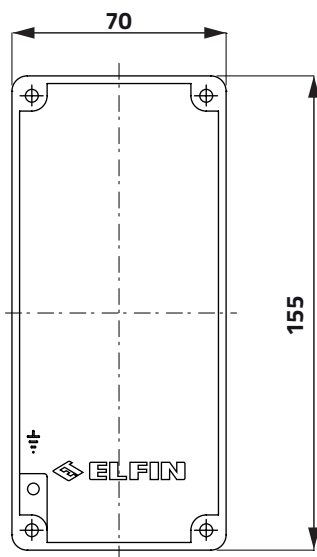
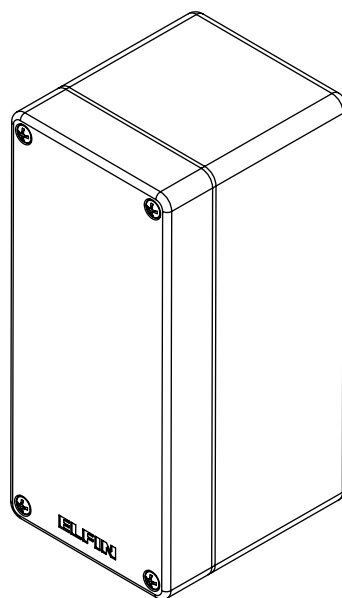
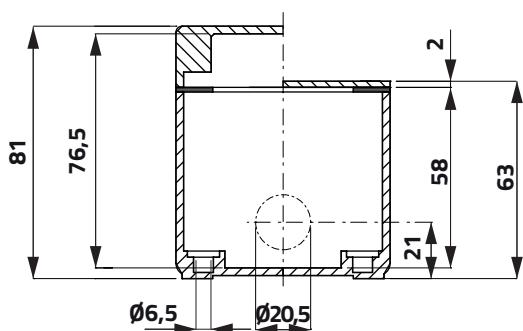
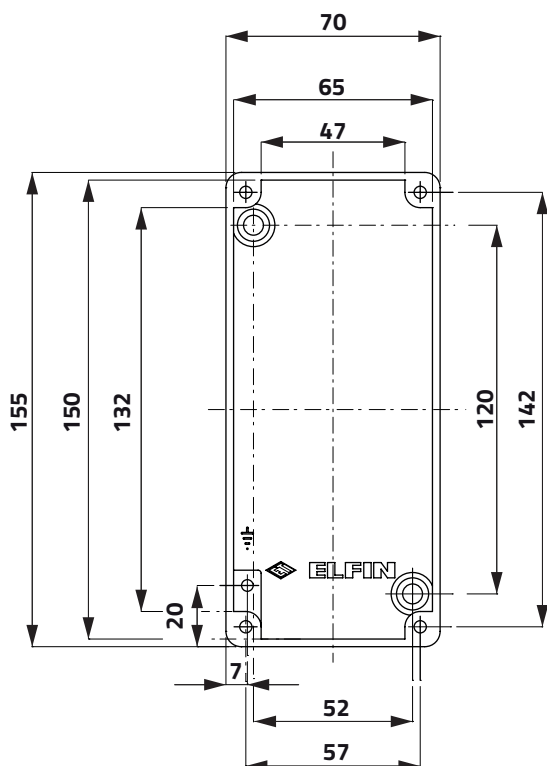
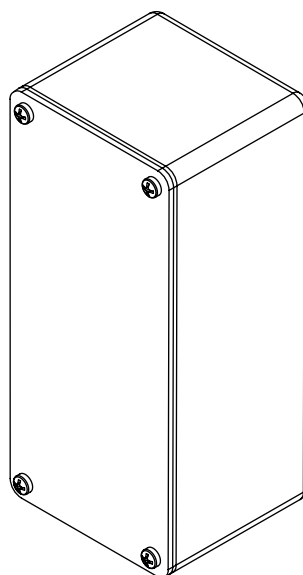


Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

Senza entrata cavo / No cable entry	81	360	040C0711-8P3
Con entrata cavo / With cable entry	81	356	040C0711-8EP3

Scatole in alluminio M4 70x155mm

Aluminium enclosures M4 70x155mm



Scatole in alluminio M4 70x155mm

Aluminium enclosures M4 70x155mm



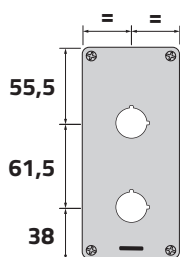
Coperchio senza fori / Undrilled lid

	h	g	cod
Senza entrata cavo / No cable entry	81	426	040C0715-8
Con entrata cavo / With cable entry	81	422	040C0715-8E
Grezza, cieca / Unpainted, no cable entry	81	426	040C0715-8N



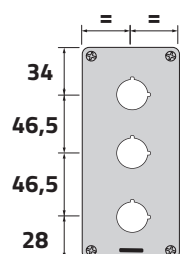
Piastra in alluminio senza fori / Undrilled aluminium plate

Senza entrata cavo / No cable entry	63	328	040C0715-6
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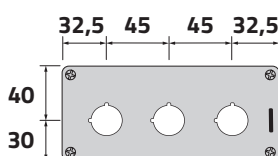
Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

Senza entrata cavo / No cable entry	81	417	040C0715-8P2
Con entrata cavo / With cable entry	81	413	040C0715-8EP2



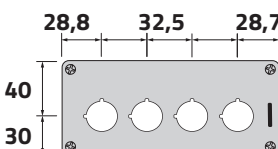
Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

Senza entrata cavo / No cable entry	81	417	040C0715-8P3
Con entrata cavo / With cable entry	81	413	040C0715-8EP3



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

Senza entrata cavo / No cable entry	81	414	040C0715-8P3L
Con entrata cavo / With cable entry	81	410	040C0715-8EP3L

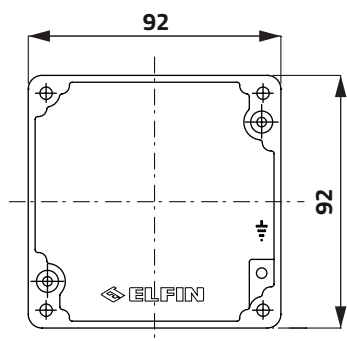
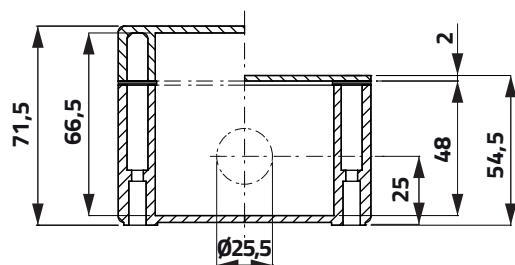
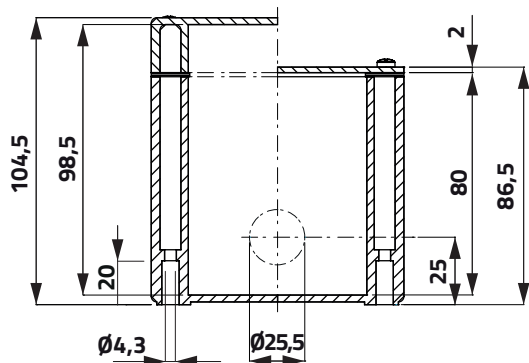
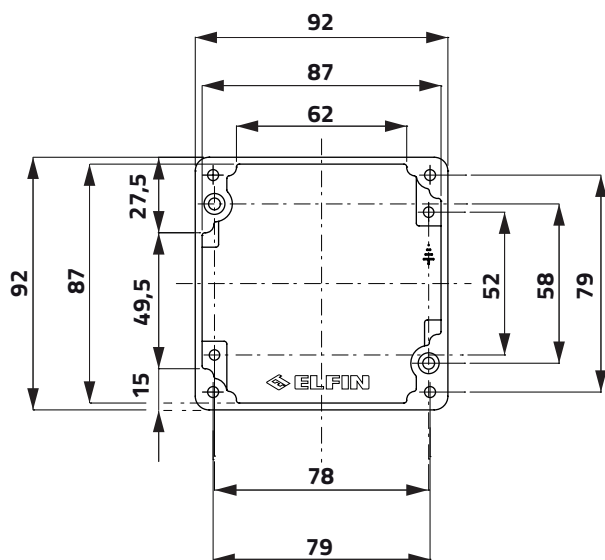
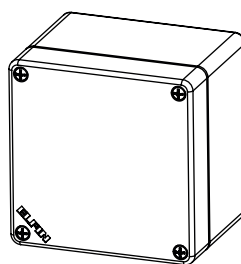
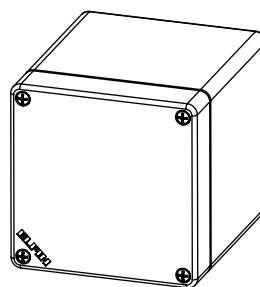
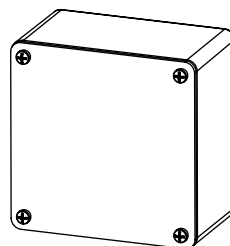
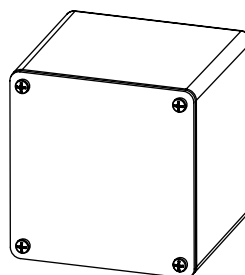


Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

Senza entrata cavo / No cable entry	81	414	040C0715-8P4L
Con entrata cavo / With cable entry	81	410	040C0715-8EP4L

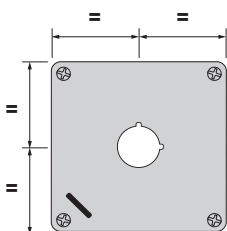
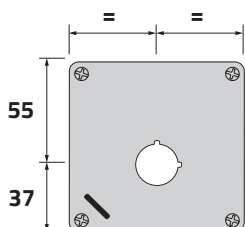
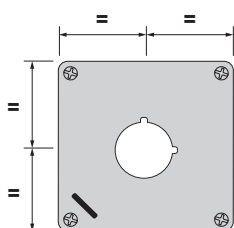
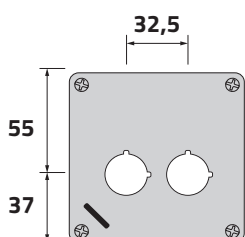
Scatole in alluminio M4 92x92mm

Aluminium enclosures M4 92x92mm



Scatole in alluminio M4 92x92mm

Aluminium enclosures M4 92x92mm



h

g

cod

Coperchio senza fori / Undrilled lid

Senza entrata cavo / No cable entry	71	302	040C0909-7
Senza entrata cavo / No cable entry	104	426	040C0909-1
Con entrata cavo / With cable entry	71	298	040C0909-7E
Con entrata cavo / With cable entry	104	422	040C0909-1E
Grezza, cieca / Unpainted, no cable entry	71	302	040C0909-7N
Grezza, cieca / Unpainted, no cable entry	104	426	040C0909-1N

Piastra in alluminio senza fori / Undrilled aluminium plate

Senza entrata cavo / No cable entry	54	328	040C0909-5
Senza entrata cavo / No cable entry	86	363	040C0909-8

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

Senza entrata cavo / No cable entry	71	299	040C0909-7P1C
Senza entrata cavo / No cable entry	104	423	040C0909-1P1C
Con entrata cavo / With cable entry	71	295	040C0909-7EP1C
Con entrata cavo / With cable entry	104	419	040C0909-1EP1C

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

Senza entrata cavo / No cable entry	71	299	040C0909-7P1
Senza entrata cavo / No cable entry	104	423	040C0909-1P1
Con entrata cavo / With cable entry	71	295	040C0909-7EP1
Con entrata cavo / With cable entry	104	419	040C0909-1EP1

Coperchio con 1 foro Ø 30mm / 1-hole lid Ø 30mm

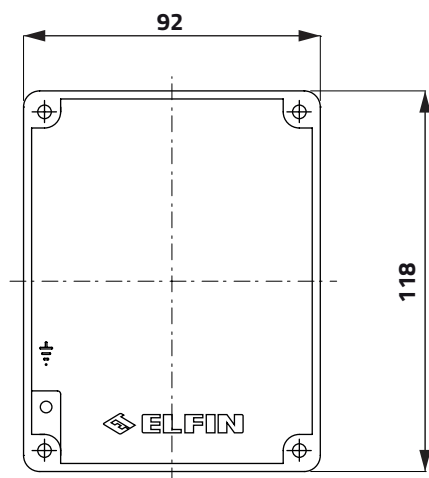
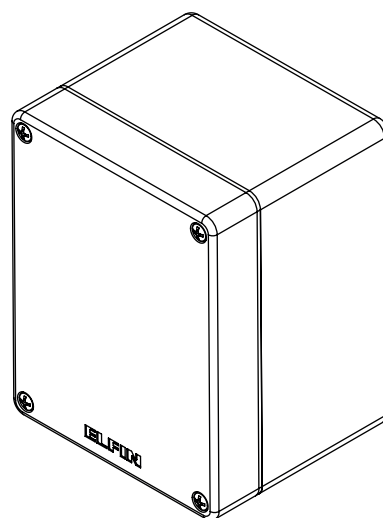
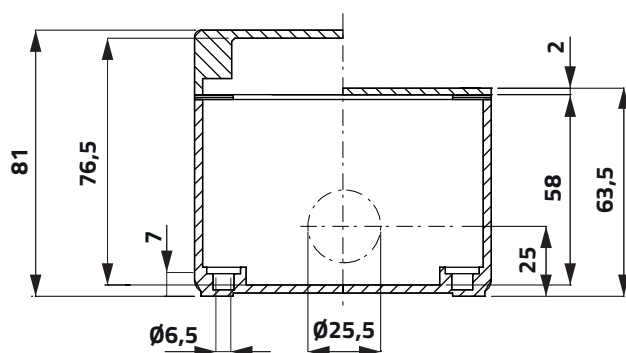
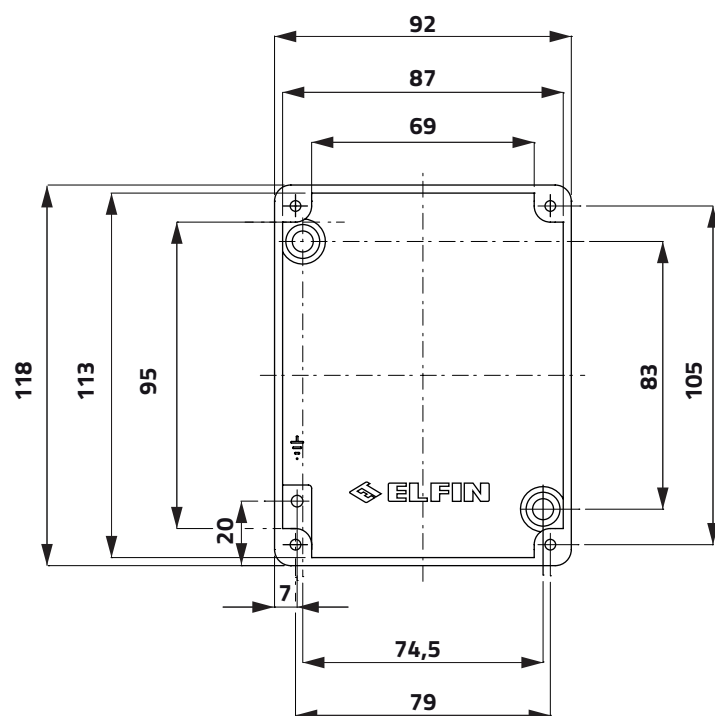
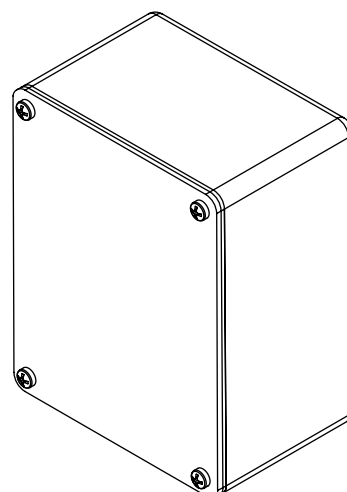
Senza entrata cavo / No cable entry	71	298	040C0909-7S1
Senza entrata cavo / No cable entry	104	422	040C0909-1S1
Con entrata cavo / With cable entry	71	294	040C0909-7ES1
Con entrata cavo / With cable entry	104	418	040C0909-1ES1

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

Senza entrata cavo / No cable entry	71	296	040C0909-7P2
Senza entrata cavo / No cable entry	104	420	040C0909-1P2
Con entrata cavo / With cable entry	71	292	040C0909-7EP2
Con entrata cavo / With cable entry	104	416	040C0909-1EP2

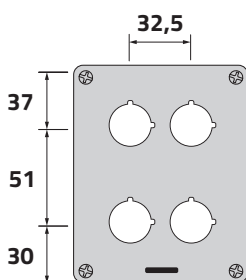
Scatole in alluminio M4 92x118mm

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	81	404	040C0911-8
Con entrata cavo / With cable entry	81	400	040C0911-8E
Grezza, cieca / Unpainted, no cable entry	81	404	040C0911-8N

Piastra in alluminio senza fori / Undrilled aluminium plate

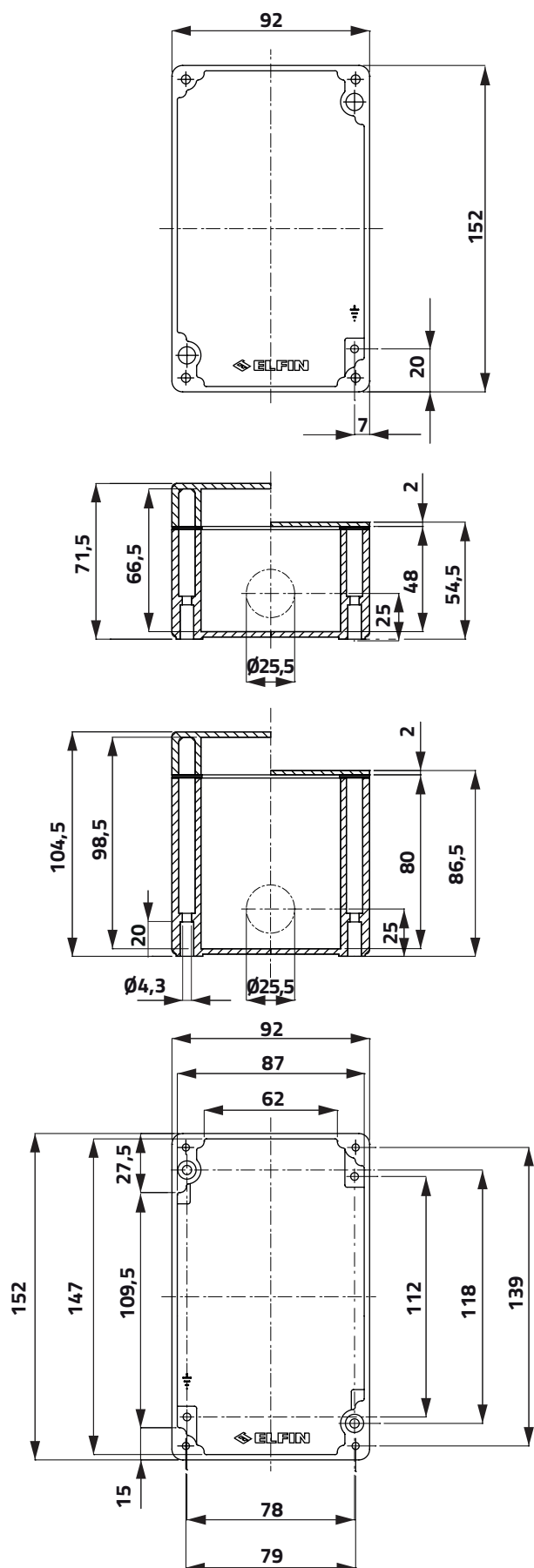
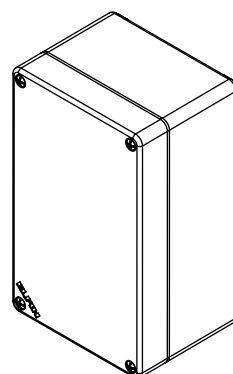
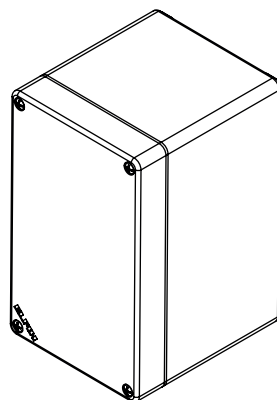
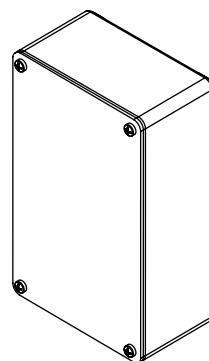
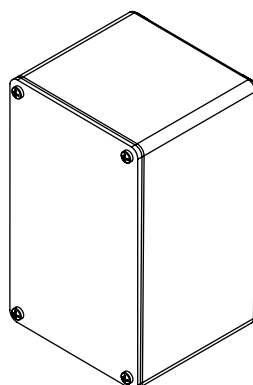
Senza entrata cavo / No cable entry	63	317	040C0911-6
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Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

Senza entrata cavo / No cable entry	81	392	040C0911-8P4
Con entrata cavo / With cable entry	81	388	040C0911-8EP4

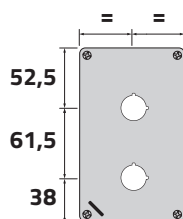
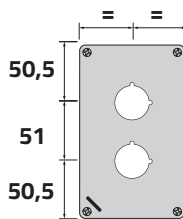
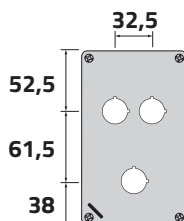
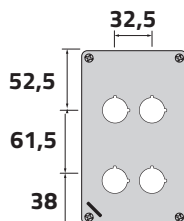
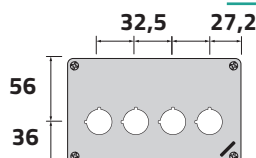
Scatole in alluminio M4 92x152mm

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	71	436	040C0915-7
Senza entrata cavo / No cable entry	104	564	040C0915-1
Con entrata cavo / With cable entry	71	432	040C0915-7E
Con entrata cavo / With cable entry	104	560	040C0915-1E
Grezza, cieca / Unpainted, no cable entry	71	436	040C0915-7N
Grezza, cieca / Unpainted, no cable entry	104	564	040C0915-1N

Piastra in alluminio senza fori / Undrilled aluminium plate

Senza entrata cavo / No cable entry	54	342	040C0915-5
Senza entrata cavo / No cable entry	86	468	040C0915-8

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

Senza entrata cavo / No cable entry	71	430	040C0915-7P2
Senza entrata cavo / No cable entry	104	558	040C0915-1P2
Con entrata cavo / With cable entry	71	426	040C0915-7EP2
Con entrata cavo / With cable entry	104	554	040C0915-1EP2

Coperchio con 2 fori Ø 30 / 2-hole lid Ø 30mm

Senza entrata cavo / No cable entry	71	428	040C0915-7S2
Senza entrata cavo / No cable entry	104	556	040C0915-1S2
Con entrata cavo / With cable entry	71	424	040C0915-7ES2
Con entrata cavo / With cable entry	104	552	040C0915-1ES2

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

Senza entrata cavo / No cable entry	71	424	040C0915-7P3C
Senza entrata cavo / No cable entry	104	552	040C0915-1P3C
Con entrata cavo / With cable entry	71	420	040C0915-7EP3C
Con entrata cavo / With cable entry	104	548	040C0915-1EP3C

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

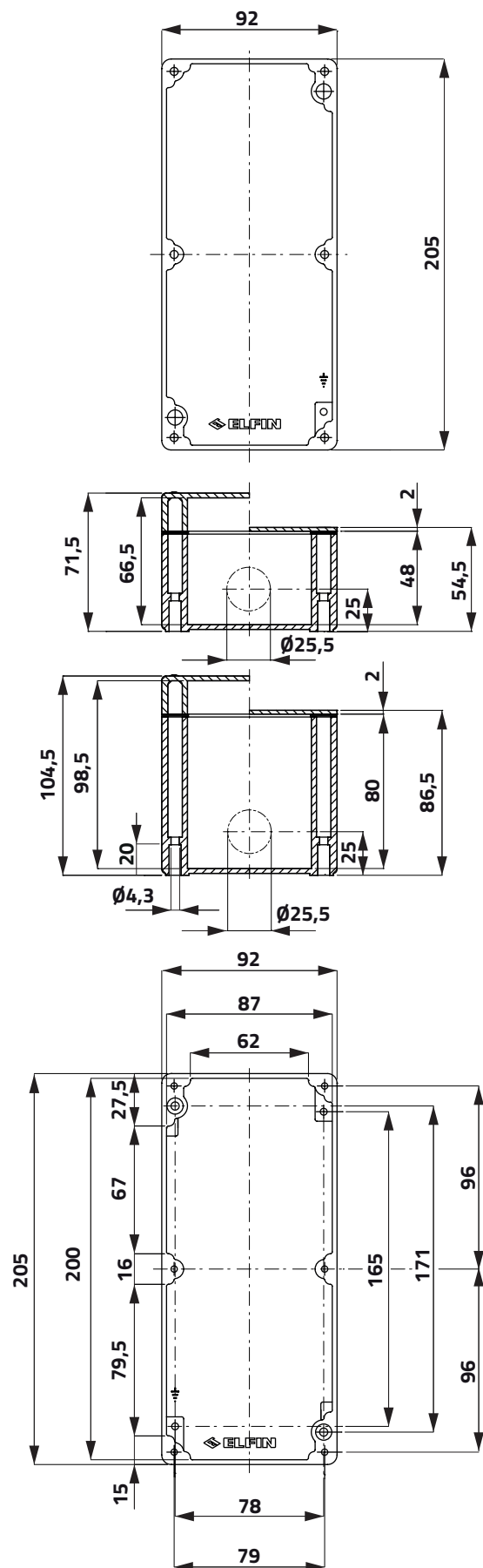
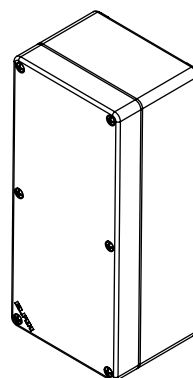
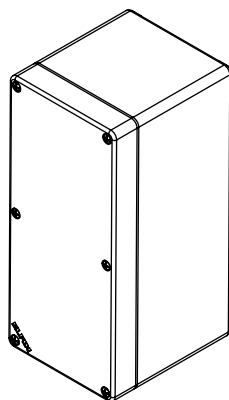
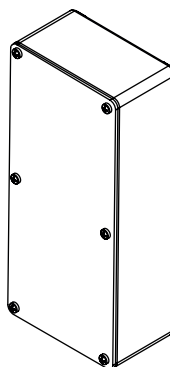
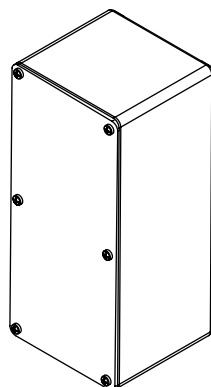
Senza entrata cavo / No cable entry	71	424	040C0915-7P4
Senza entrata cavo / No cable entry	104	552	040C0915-1P4
Con entrata cavo / With cable entry	71	420	040C0915-7EP4
Con entrata cavo / With cable entry	104	548	040C0915-1EP4

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

Senza entrata cavo / No cable entry	71	428	040C0915-7P4L
Senza entrata cavo / No cable entry	104	552	040C0915-1P4L
Con entrata cavo / With cable entry	71	420	040C0915-7EP4L
Con entrata cavo / With cable entry	104	548	040C0915-1EP4L

Scatole in alluminio M4 92x205mm

Aluminium enclosures M4 92x205mm



Scatole in alluminio M4 92x205mm

Aluminium enclosures M4 92x205mm

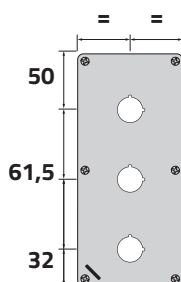


Coperchio senza fori / Undrilled lid

	h	g	cod
Senza entrata cavo / No cable entry	71	580	040C0920-7
Senza entrata cavo / No cable entry	104	762	040C0920-1
Con entrata cavo / With cable entry	71	576	040C0920-7E
Con entrata cavo / With cable entry	104	758	040C0920-1E
Grezza, cieca / Unpainted, no cable entry	71	580	040C0920-7N
Grezza, cieca / Unpainted, no cable entry	104	762	040C0920-1N

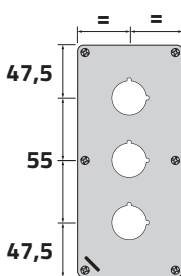
Piastra in alluminio senza fori / Undrilled aluminium plate

Senza entrata cavo / No cable entry	54	466	040C0920-5
Senza entrata cavo / No cable entry	86	638	040C0920-8



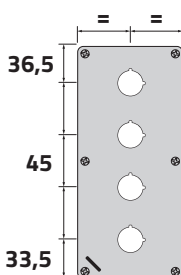
Coperchio con 3 fori Ø 22mm / 2-hole lid Ø 22mm

Senza entrata cavo / No cable entry	71	571	040C0920-7P3
Senza entrata cavo / No cable entry	104	753	040C0920-1P3
Con entrata cavo / With cable entry	71	567	040C0920-7EP3
Con entrata cavo / With cable entry	104	749	040C0920-1EP3



Coperchio con 3 fori Ø 30mm / 3-hole lid Ø 30mm

Senza entrata cavo / No cable entry	71	568	040C0920-7S3
Senza entrata cavo / No cable entry	104	750	040C0920-1S3
Con entrata cavo / With cable entry	71	564	040C0920-7ES3
Con entrata cavo / With cable entry	104	746	040C0920-1ES3

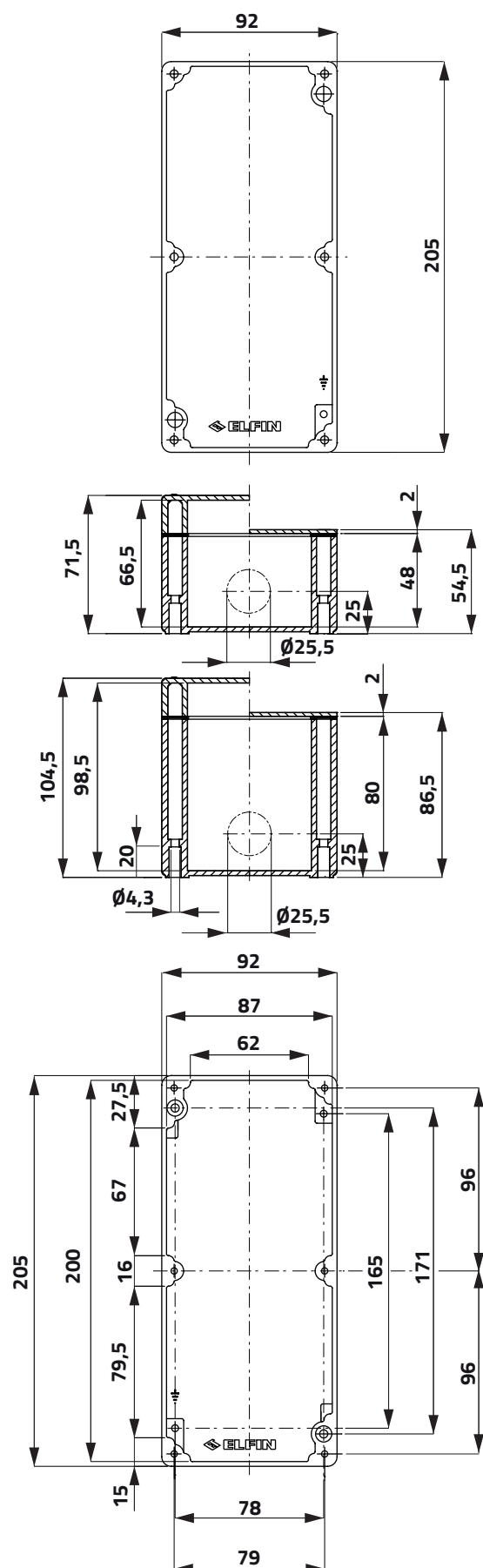
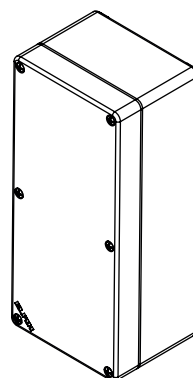
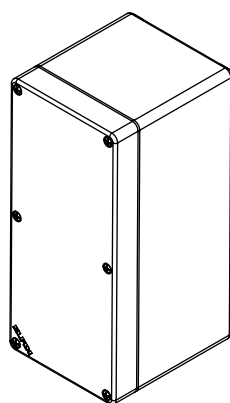
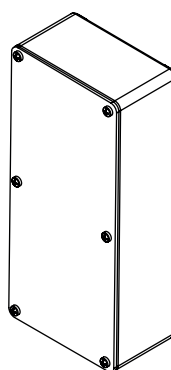
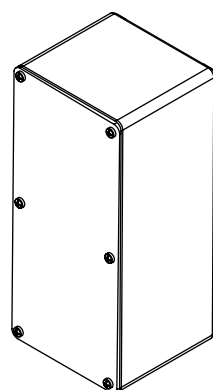


Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

Senza entrata cavo / No cable entry	71	568	040C0920-7P4
Senza entrata cavo / No cable entry	104	750	040C0920-1P4
Con entrata cavo / With cable entry	71	564	040C0920-7EP4
Con entrata cavo / With cable entry	104	764	040C0920-1EP4

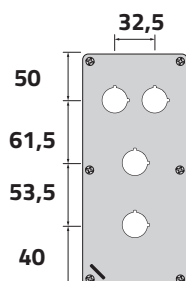
Scatole in alluminio M4 92x205mm

Aluminium enclosures M4 92x205mm



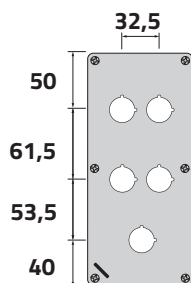
Scatole in alluminio M4 92x205mm

Aluminium enclosures M4 92x205mm



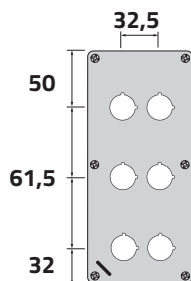
Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

Senza entrata cavo / No cable entry	71	568	040C0920-7P4C
Senza entrata cavo / No cable entry	104	750	040C0920-1P4C
Con entrata cavo / With cable entry	71	564	040C0920-7EP4C
Con entrata cavo / With cable entry	104	764	040C0920-1EP4C



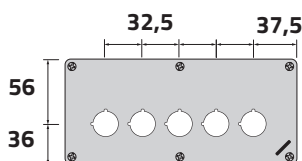
Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

Senza entrata cavo / No cable entry	71	565	040C0920-7P5C
Senza entrata cavo / No cable entry	104	747	040C0920-1P5C
Con entrata cavo / With cable entry	71	561	040C0920-7EP5C
Con entrata cavo / With cable entry	104	743	040C0920-1EP5C



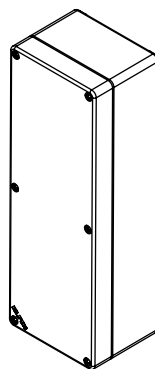
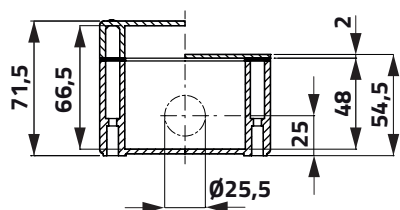
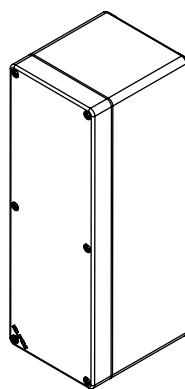
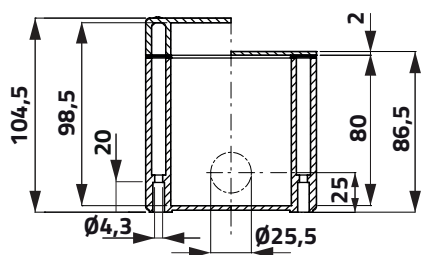
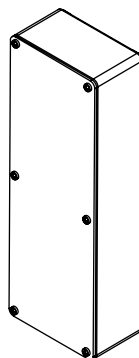
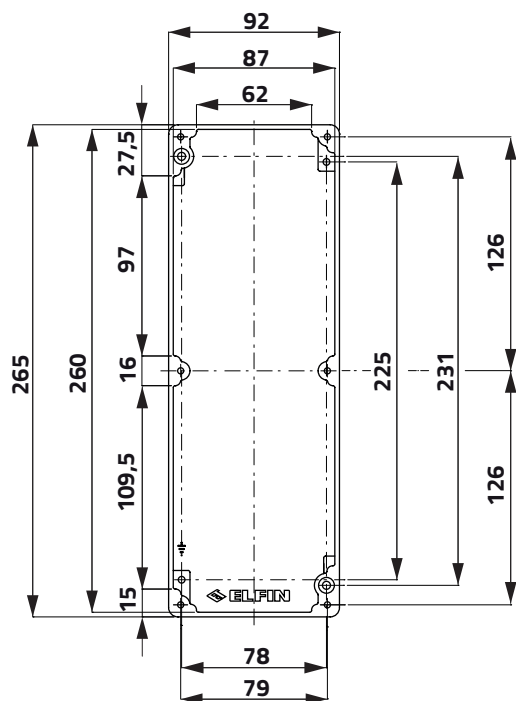
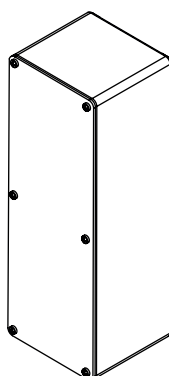
Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 22mm

Senza entrata cavo / No cable entry	71	562	040C0920-7P6
Senza entrata cavo / No cable entry	104	744	040C0920-1P6
Con entrata cavo / With cable entry	71	558	040C0920-7EP6
Con entrata cavo / With cable entry	104	740	040C0920-1EP6



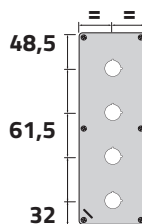
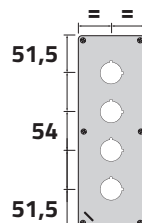
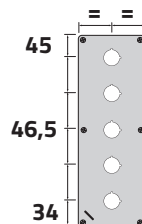
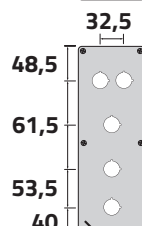
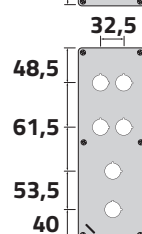
Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

Senza entrata cavo / No cable entry	71	565	040C0920-7P5L
Senza entrata cavo / No cable entry	104	747	040C0920-1P5L
Con entrata cavo / With cable entry	71	561	040C0920-7EP5L
Con entrata cavo / With cable entry	104	743	040C0920-1EP5L



Scatole in alluminio M4 92x265mm

Aluminium enclosures M4 92x265mm



Coperchio senza fori / Undrilled lid

	h	g	cod
Senza entrata cavo / No cable entry	71	770	040C0926-7
Senza entrata cavo / No cable entry	104	1020	040C0926-1
Con entrata cavo / With cable entry	71	765	040C0926-7E
Con entrata cavo / With cable entry	104	1015	040C0926-1E
Grezza, cieca / Unpainted, no cable entry	71	770	040C0926-7N
Grezza, cieca / Unpainted, no cable entry	104	1020	040C0926-1N

Piastra in alluminio senza fori / Undrilled aluminium plate

Senza entrata cavo / No cable entry	54	500	040C0926-5
Senza entrata cavo / No cable entry	86	750	040C0926-8

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

Senza entrata cavo / No cable entry	71	762	040C0926-7P4
Senza entrata cavo / No cable entry	104	1012	040C0926-1P4
Con entrata cavo / With cable entry	71	758	040C0926-7EP4
Con entrata cavo / With cable entry	104	1007	040C0926-1EP4

Coperchio con 4 fori Ø 30mm / 4-hole lid Ø 30mm

Senza entrata cavo / No cable entry	71	754	040C0926-7S4
Senza entrata cavo / No cable entry	104	1004	040C0926-1S4
Con entrata cavo / With cable entry	71	750	040C0926-7ES4
Con entrata cavo / With cable entry	104	1000	040C0926-1ES4

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

Senza entrata cavo / No cable entry	71	760	040C0926-7P5
Senza entrata cavo / No cable entry	104	1010	040C0926-1P5
Con entrata cavo / With cable entry	71	756	040C0926-7EP5
Con entrata cavo / With cable entry	104	1005	040C0926-1EP5

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

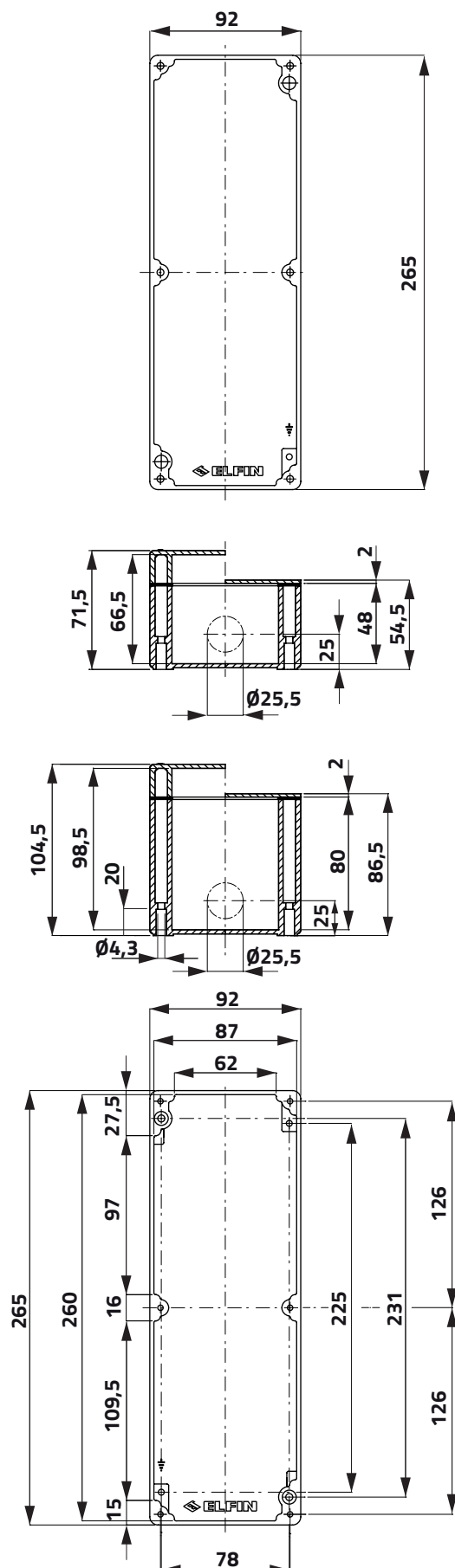
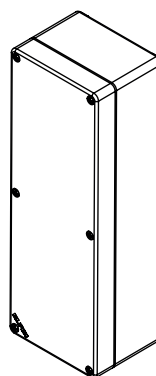
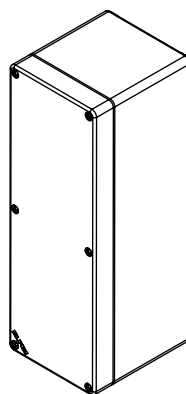
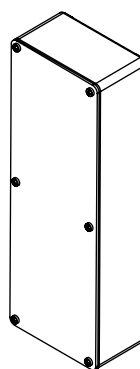
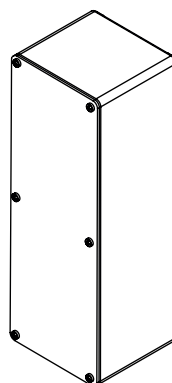
Senza entrata cavo / No cable entry	71	760	040C0926-7P5C
Senza entrata cavo / No cable entry	104	1010	040C0926-1P5C
Con entrata cavo / With cable entry	71	1010	040C0926-7EP5C
Con entrata cavo / With cable entry	104	1005	040C0926-1EP5C

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

Senza entrata cavo / No cable entry	71	758	040C0926-7P6C
Senza entrata cavo / No cable entry	104	1006	040C0926-1P6C
Con entrata cavo / With cable entry	71	754	040C0926-7EP6C
Con entrata cavo / With cable entry	104	1003	040C0926-1EP6C

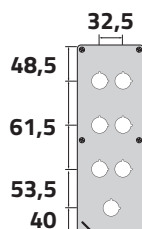
Scatole in alluminio M4 92x265mm

Aluminium enclosures M4 92x265mm



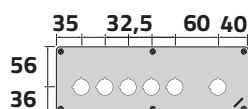
Scatole in alluminio M4 92x265mm

Aluminium enclosures M4 92x265mm



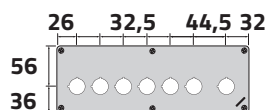
Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

	h	g	cod
Senza entrata cavo / No cable entry	71	756	040C0926-7P7C
Senza entrata cavo / No cable entry	104	1005	040C0926-1P7C
Con entrata cavo / With cable entry	71	752	040C0926-7EP7C
Con entrata cavo / With cable entry	104	1001	040C0926-1EP7C



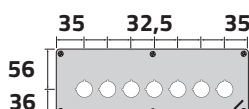
Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 22mm

	h	g	cod
Senza entrata cavo / No cable entry	71	758	040C0926-7P6LC
Senza entrata cavo / No cable entry	104	1006	040C0926-1P6LC
Con entrata cavo / With cable entry	71	754	040C0926-7EP6LC
Con entrata cavo / With cable entry	104	1003	040C0926-1EP6LC



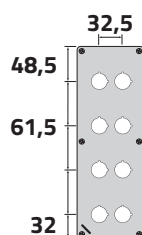
Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

	h	g	cod
Senza entrata cavo / No cable entry	71	756	040C0926-7P7LC
Senza entrata cavo / No cable entry	104	1005	040C0926-1P7LC
Con entrata cavo / With cable entry	71	752	040C0926-7EP7LC
Con entrata cavo / With cable entry	104	1001	040C0926-1EP7LC



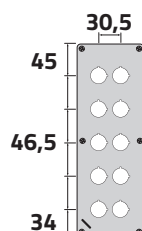
Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

	h	g	cod
Senza entrata cavo / No cable entry	71	756	040C0926-7P7L
Senza entrata cavo / No cable entry	104	1005	040C0926-1P7L
Con entrata cavo / With cable entry	71	752	040C0926-7EP7L
Con entrata cavo / With cable entry	104	1000	040C0926-1EP7L



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

	h	g	cod
Senza entrata cavo / No cable entry	71	754	040C0926-7P8
Senza entrata cavo / No cable entry	104	1004	040C0926-1P8
Con entrata cavo / With cable entry	71	750	040C0926-7EP8
Con entrata cavo / With cable entry	104	1000	040C0926-1EP8

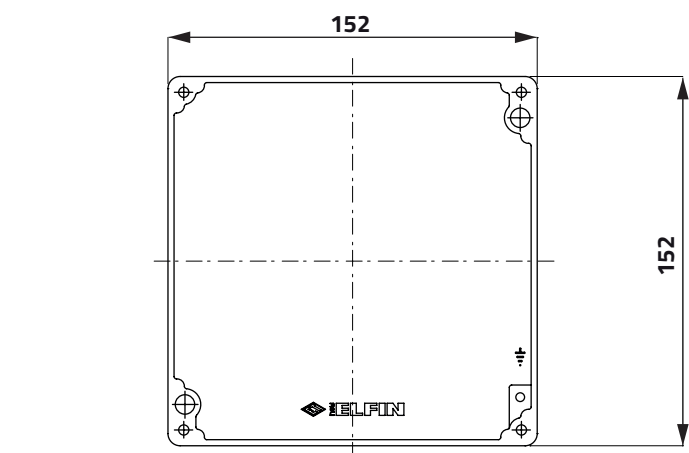
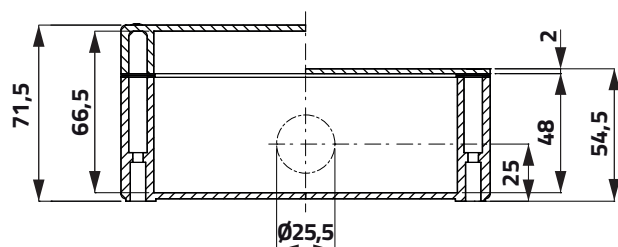
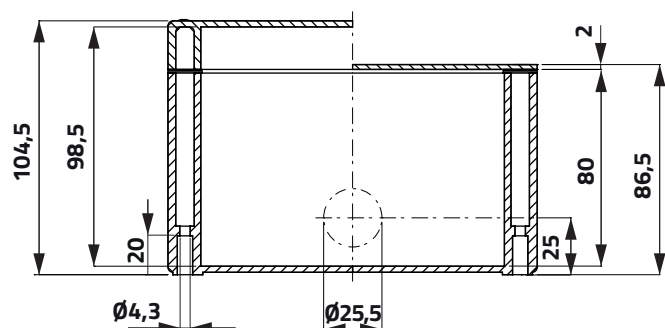
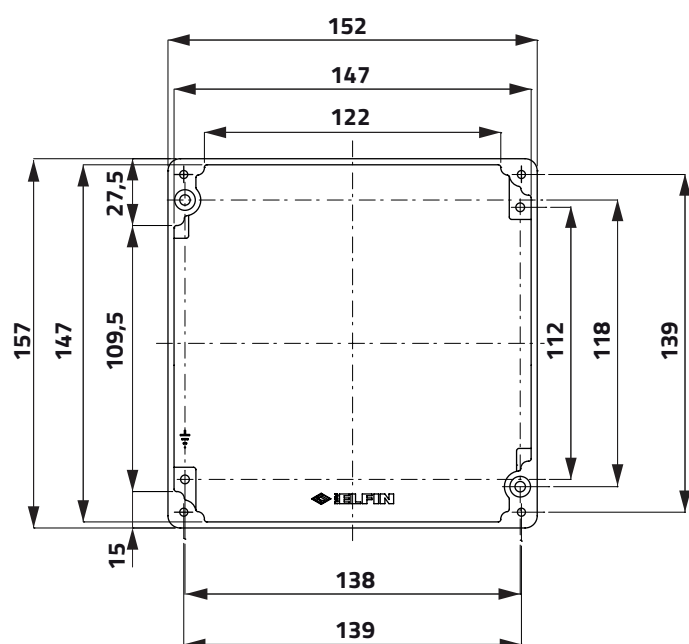
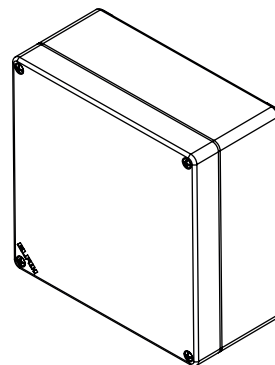
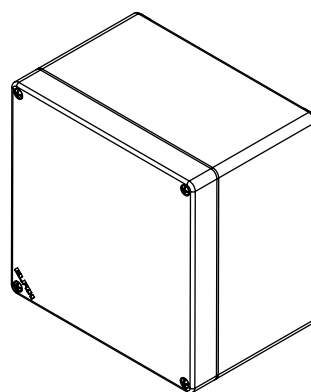
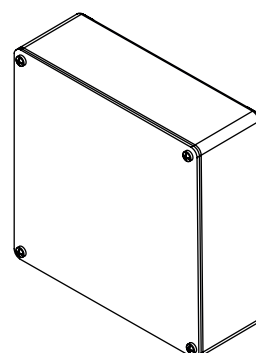
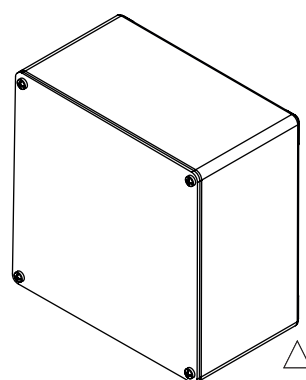


Coperchio con 10 fori Ø 22mm / 10-hole lid Ø 22mm

	h	g	cod
Senza entrata cavo / No cable entry	71	750	040C0926-7P10
Senza entrata cavo / No cable entry	104	1000	040C0926-1P10
Con entrata cavo / With cable entry	71	746	040C0926-7EP10
Con entrata cavo / With cable entry	104	995	040C0926-1EP10

Scatole in alluminio M4 152x152mm

Aluminium enclosures M4 152x152mm



Scatole in alluminio M4 152x152mm

Aluminium enclosures M4 152x152mm

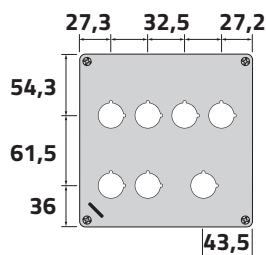


Coperchio senza fori / Undrilled lid

	h	g	cod
Senza entrata cavo / No cable entry	71	594	040C1515-7
Senza entrata cavo / No cable entry	104	754	040C1515-1
Con entrata cavo / With cable entry	71	590	040C1515-7E
Con entrata cavo / With cable entry	104	750	040C1515-1E
Grezza, cieca / Unpainted, no cable entry	71	594	040C1515-7N
Grezza, cieca / Unpainted, no cable entry	104	754	040C1515-1N

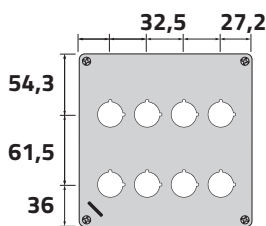
Piastra in alluminio senza fori / Undrilled aluminium plate

Senza entrata cavo / No cable entry	54	513	040C1515-5
Senza entrata cavo / No cable entry	86	690	040C1515-8



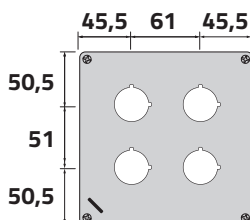
Coperchio con 7 fori Ø 22mm / 7-hole lid Ø 22mm

Senza entrata cavo / No cable entry	71	570	040C1515-7P7C
Senza entrata cavo / No cable entry	104	730	040C1515-1P7C
Con entrata cavo / With cable entry	71	566	040C1515-7EP7C
Con entrata cavo / With cable entry	104	726	040C1515-1EP7C



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

Senza entrata cavo / No cable entry	71	570	040C1515-7P8
Senza entrata cavo / No cable entry	104	730	040C1515-1P8
Con entrata cavo / With cable entry	71	566	040C1515-7EP8
Con entrata cavo / With cable entry	104	726	040C1515-1EP8

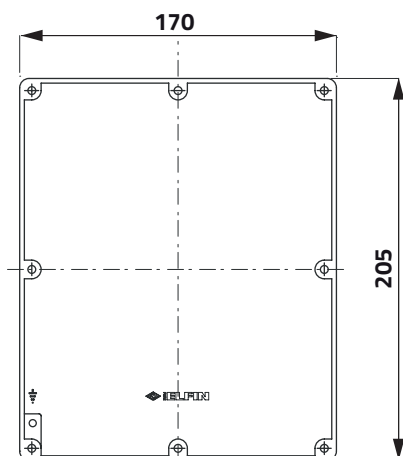
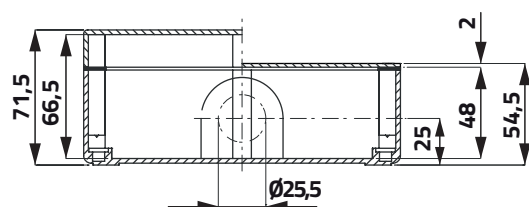
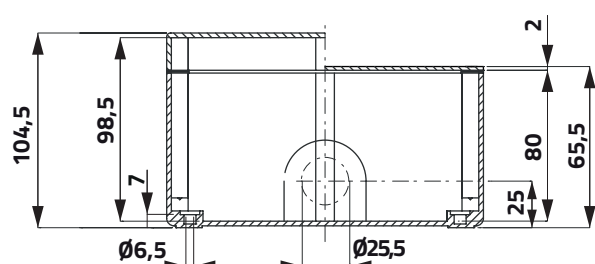
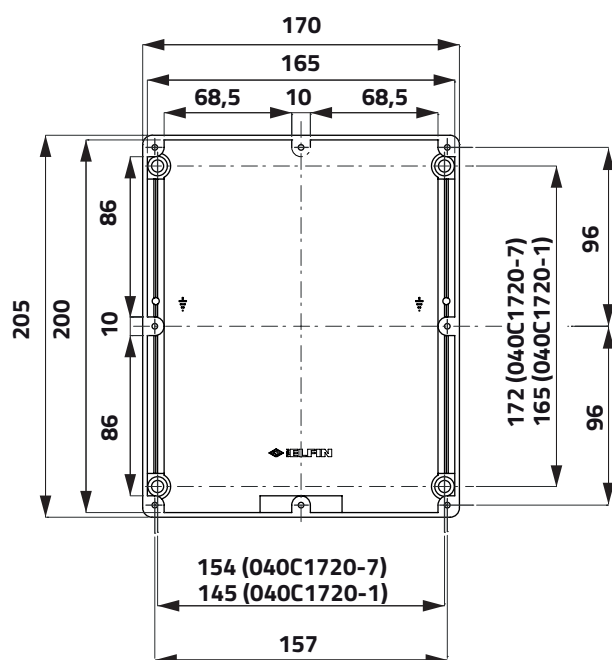
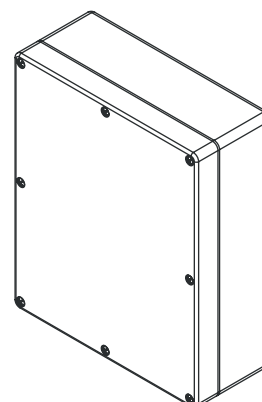
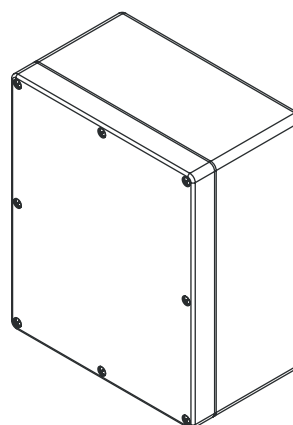
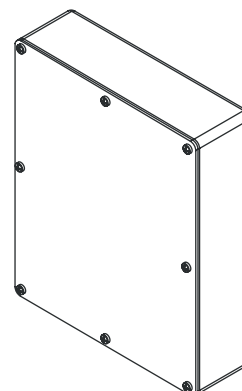
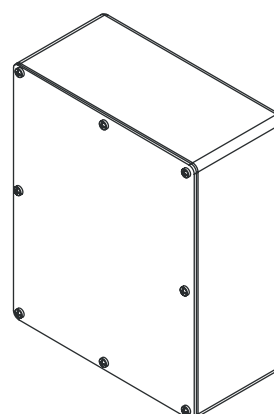


Coperchio con 4 fori Ø 30mm / 4-hole lid Ø 30mm

Senza entrata cavo / No cable entry	71	578	040C1515-7S4
Senza entrata cavo / No cable entry	104	738	040C1515-1S4
Con entrata cavo / With cable entry	71	574	040C1515-7ES4
Con entrata cavo / With cable entry	104	734	040C1515-1ES4

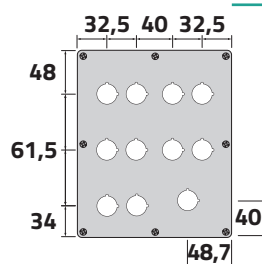
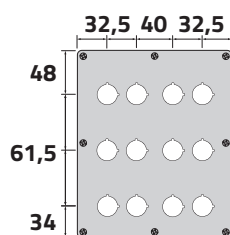
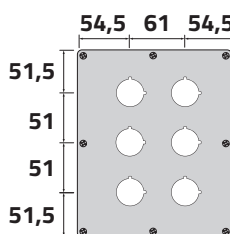
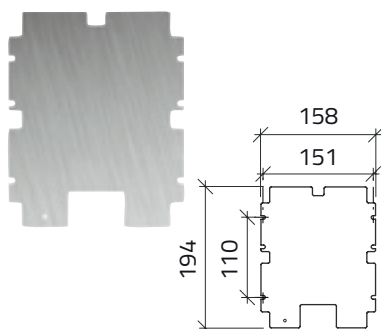
Scatole in alluminio M4 170x205mm

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	71	1276	040C1720-7
Senza entrata cavo / No cable entry	104	1736	040C1720-1
Con entrata cavo / With cable entry	71	1270	040C1720-7E
Con entrata cavo / With cable entry	104	1730	040C1720-1E
Grezza, cieca / Unpainted, no cable entry	71	1276	040C1720-7N
Grezza, cieca / Unpainted, no cable entry	104	1736	040C1720-1N

Piastra in alluminio senza fori / Undrilled aluminium plate

Senza entrata cavo / No cable entry	54	1126	040C1720-5
Senza entrata cavo / No cable entry	86	1416	040C1720-8

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

Senza entrata cavo / No cable entry	71	1240	040C1720-7P11C
Senza entrata cavo / No cable entry	104	1700	040C1720-1P11C
Con entrata cavo / With cable entry	71	1234	040C1720-7EP11C
Con entrata cavo / With cable entry	104	1694	040C1720-1EP11C

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

Senza entrata cavo / No cable entry	71	1240	040C1720-7P12
Senza entrata cavo / No cable entry	104	1700	040C1720-1P12
Con entrata cavo / With cable entry	71	1234	040C1720-7EP12
Con entrata cavo / With cable entry	104	1694	040C1720-1EP12

Coperchio con 6 fori Ø 30mm / 6-hole lid Ø 30mm

Senza entrata cavo / No cable entry	71	1234	040C1720-7S6
Senza entrata cavo / No cable entry	104	1694	040C1720-1S6
Con entrata cavo / With cable entry	71	1240	040C1720-7ES6
Con entrata cavo / With cable entry	104	1700	040C1720-1ES6

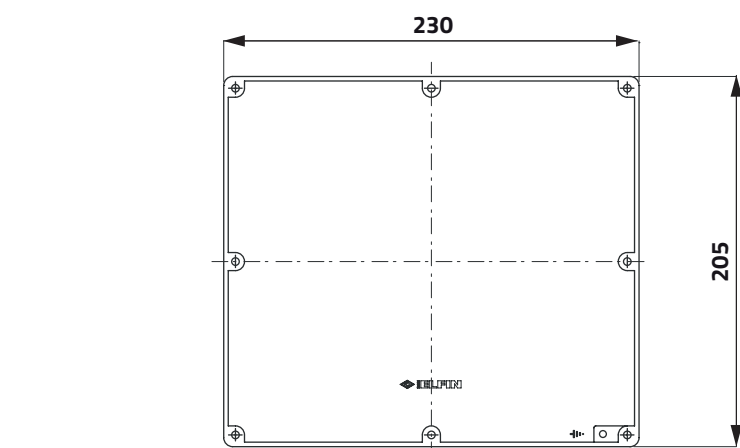
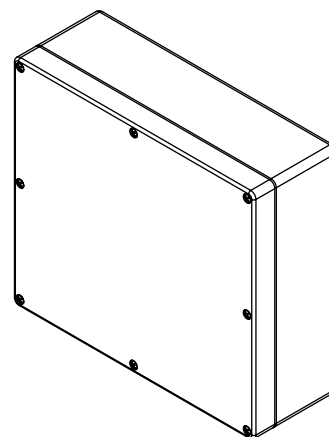
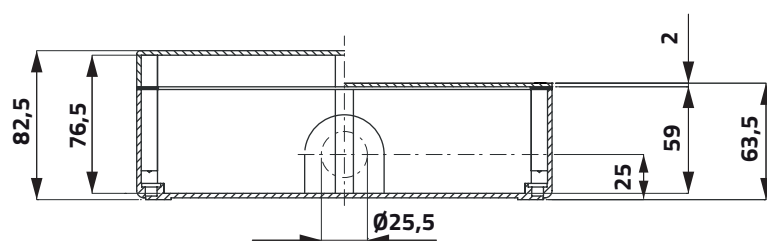
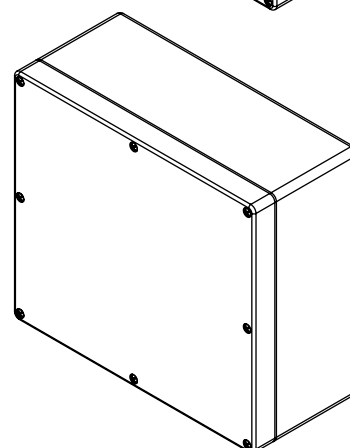
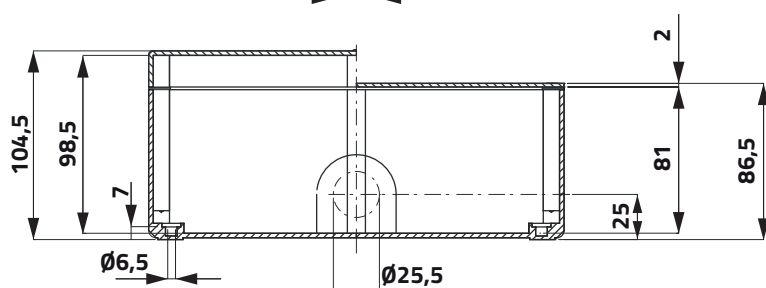
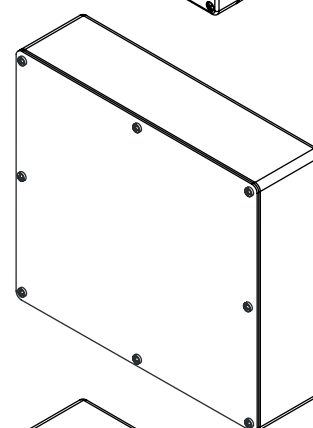
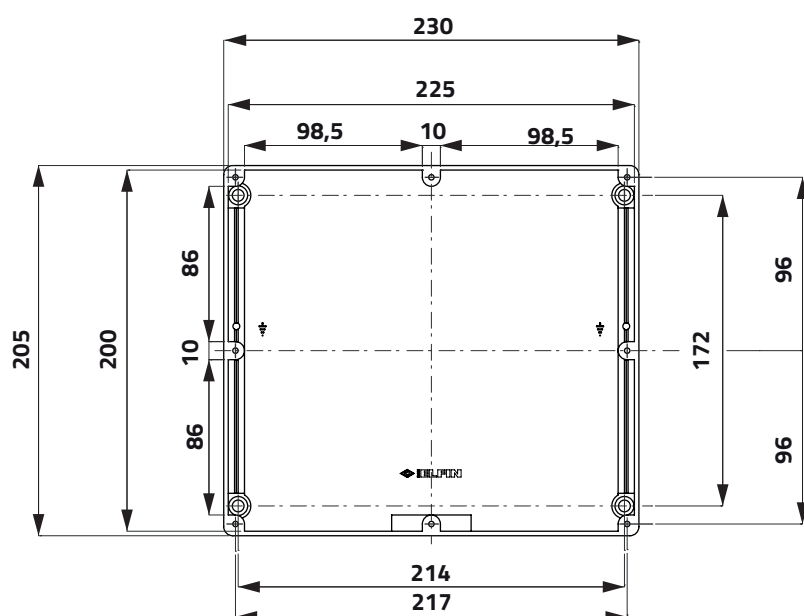
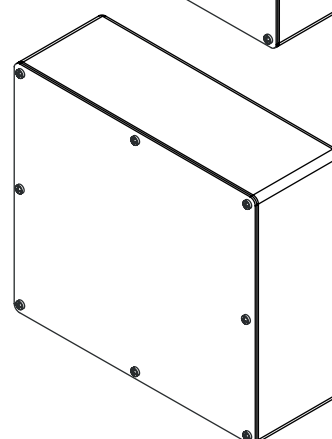
Piastra di fondo / Mounting plate

1,5	225	040P1720
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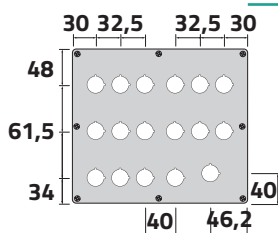
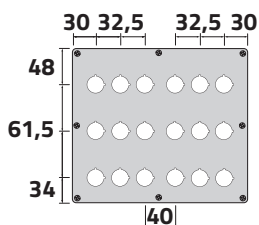
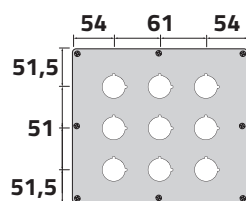
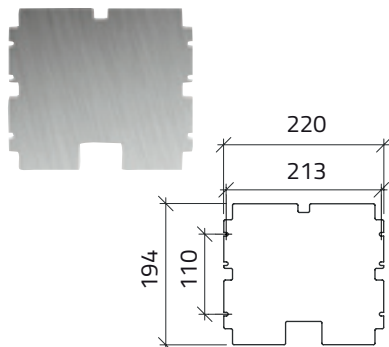
Scatole in alluminio M4 230x205

Aluminium enclosures M4 230x205mm



Scatole in alluminio M4 230x205

Aluminium enclosures M4 230x205mm



h

g

cod

Coperchio senza fori / Undrilled lid

Senza entrata cavo / No cable entry	82	1626	040C2320-8
Senza entrata cavo / No cable entry	104	1900	040C2320-1
Con entrata cavo / With cable entry	82	1620	040C2320-8E
Con entrata cavo / With cable entry	104	1895	040C2320-1E
Grezza, cieca / Unpainted, no cable entry	82	1626	040C2320-8N
Grezza, cieca / Unpainted, no cable entry	104	1900	040C2320-1N

Piastra in alluminio senza fori / Undrilled aluminium plate

Senza entrata cavo / No cable entry	63	1396	040C2320-6
Senza entrata cavo / No cable entry	86	1676	040C2320-9

Coperchio con 17 fori Ø 22mm / 17-hole lid Ø 22mm

Senza entrata cavo / No cable entry	82	1572	040C2320-8P17C
Senza entrata cavo / No cable entry	104	1846	040C2320-1P17C
Con entrata cavo / With cable entry	82	1566	040C2320-8EP17C
Con entrata cavo / With cable entry	104	1841	040C2320-1EP17C

Coperchio con 18 fori Ø 22mm / 18-hole lid Ø 22mm

Senza entrata cavo / No cable entry	82	1572	040C2320-8P18
Senza entrata cavo / No cable entry	104	1846	040C2320-1P18
Con entrata cavo / With cable entry	82	1566	040C2320-8EP18
Con entrata cavo / With cable entry	104	1841	040C2320-1EP18

Coperchio con 9 fori Ø 30mm / 9-hole lid Ø 30mm

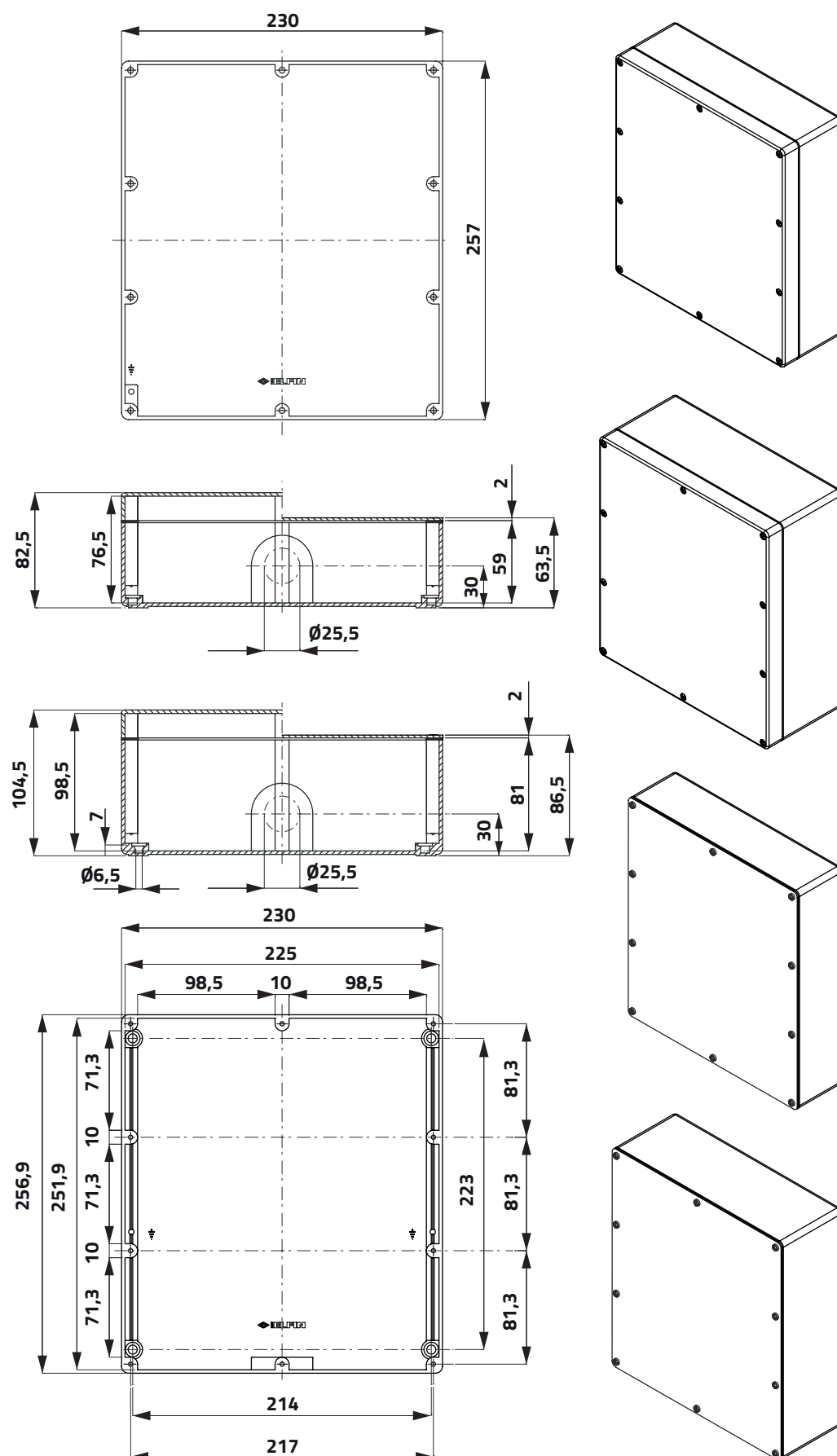
Senza entrata cavo / No cable entry	82	1572	040C2320-8S9
Senza entrata cavo / No cable entry	104	1846	040C2320-1S9
Con entrata cavo / With cable entry	82	1566	040C2320-8ES9
Con entrata cavo / With cable entry	104	1841	040C2320-1ES9

Piastra di fondo / Mounting plate

1,5	320	040P2320
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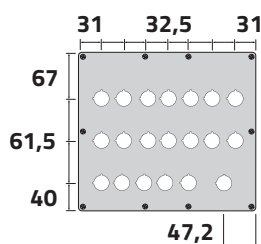
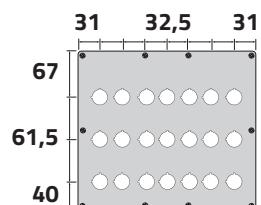
Scatole in alluminio M4 230x257mm

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	82	1912	040C2325-8
Senza entrata cavo / No cable entry	104	2186	040C2325-1
Con entrata cavo / With cable entry	82	1906	040C2325-8E
Con entrata cavo / With cable entry	104	2180	040C2325-1E
Grezza, cieca / Unpainted, no cable entry	82	1912	040C2325-8N
Grezza, cieca / Unpainted, no cable entry	104	2186	040C2325-1N

Piastra in alluminio senza fori / Undrilled aluminium plate

Senza entrata cavo / No cable entry	63	1696	040C2325-6
Senza entrata cavo / No cable entry	86	1957	040C2325-9

Coperchio con 20 fori Ø 22mm / 20-hole lid Ø 22mm

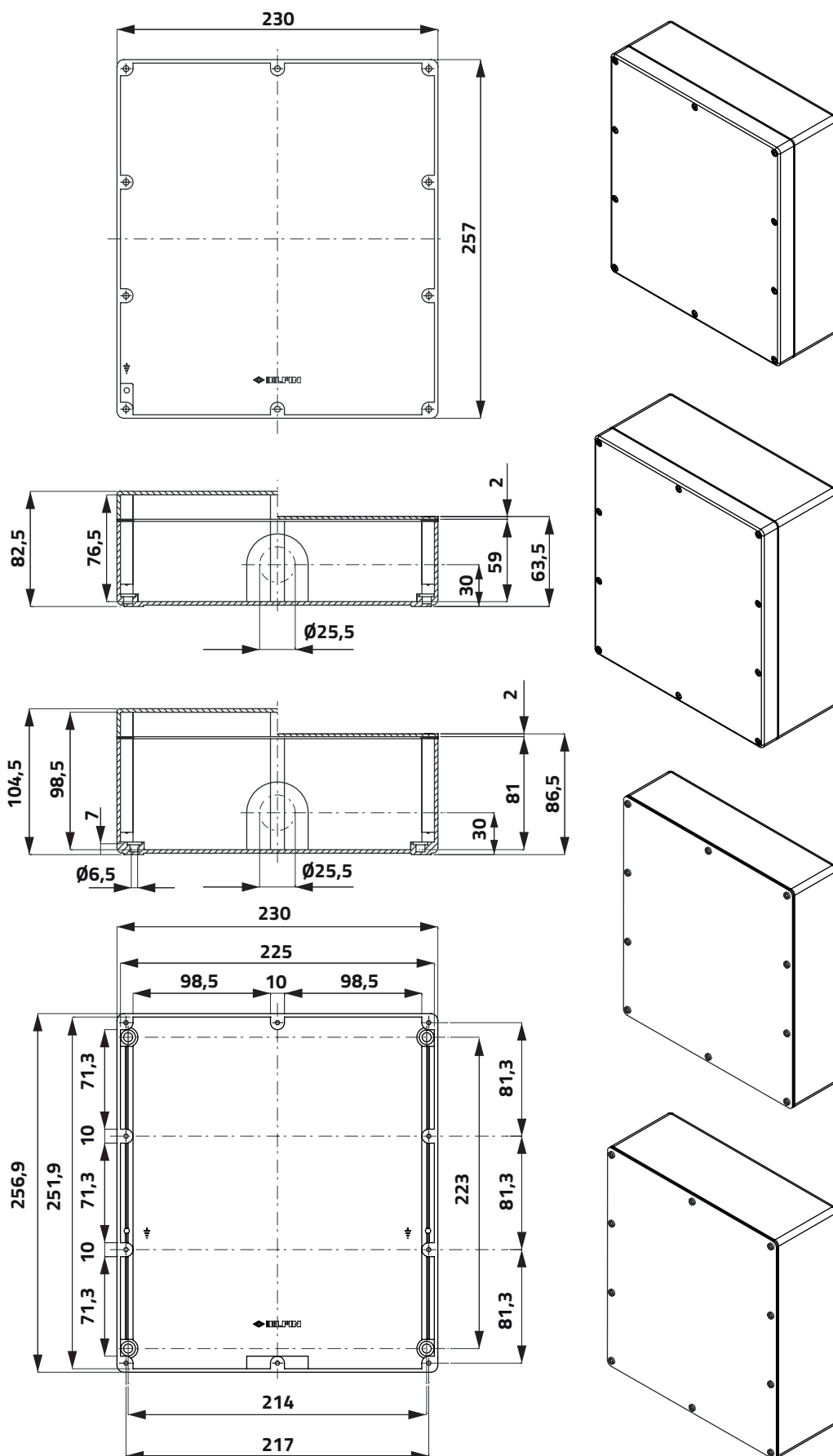
Senza entrata cavo / No cable entry	82	1840	040C2325-8P20C
Senza entrata cavo / No cable entry	104	2114	040C2325-1P20C

Coperchio con 21 fori Ø 22mm / 21-hole lid Ø 22 mm

Senza entrata cavo / No cable entry	82	1840	040C2325-8P21
Senza entrata cavo / No cable entry	104	2114	040C2325-1P21

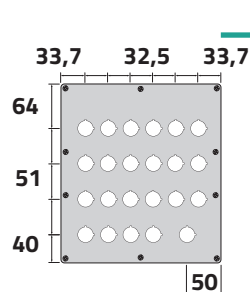
Scatole in alluminio M4 230x257mm

Aluminium enclosures M4 230x257mm



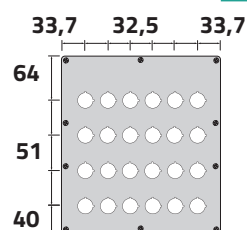
Scatole in alluminio M4 230x257mm

Aluminium enclosures M4 230x257mm



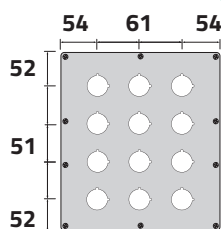
Coperchio con 23 fori Ø 22mm / 23-hole lid Ø 22mm

Senza entrata cavo / No cable entry	82	1840	040C2325-8P23C
Senza entrata cavo / No cable entry	104	2114	040C2325-1P23C
Con entrata cavo / With cable entry	82	1834	040C2325-8EP23C
Con entrata cavo / With cable entry	104	2108	040C2325-1EP23C



Coperchio con 24 fori Ø 22mm / 24-hole lid Ø 22mm

Senza entrata cavo / No cable entry	82	1840	040C2325-8P24
Senza entrata cavo / No cable entry	104	2114	040C2325-1P24
Con entrata cavo / With cable entry	82	1834	040C2325-8EP24
Con entrata cavo / With cable entry	104	2108	040C2325-1EP24



Coperchio con 12 fori Ø 30mm / 12-hole lid Ø 30mm

Senza entrata cavo / No cable entry	82	1840	040C2325-8S12
Senza entrata cavo / No cable entry	104	2114	040C2325-1S12
Con entrata cavo / With cable entry	82	1834	040C2325-8ES12
Con entrata cavo / With cable entry	104	2108	040C2325-1ES12

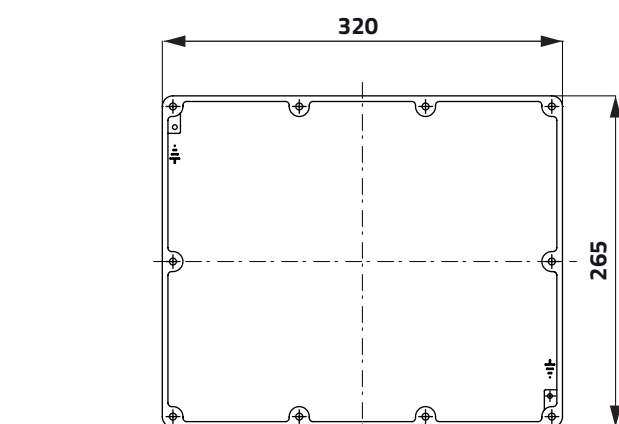
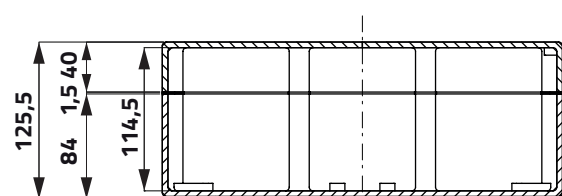
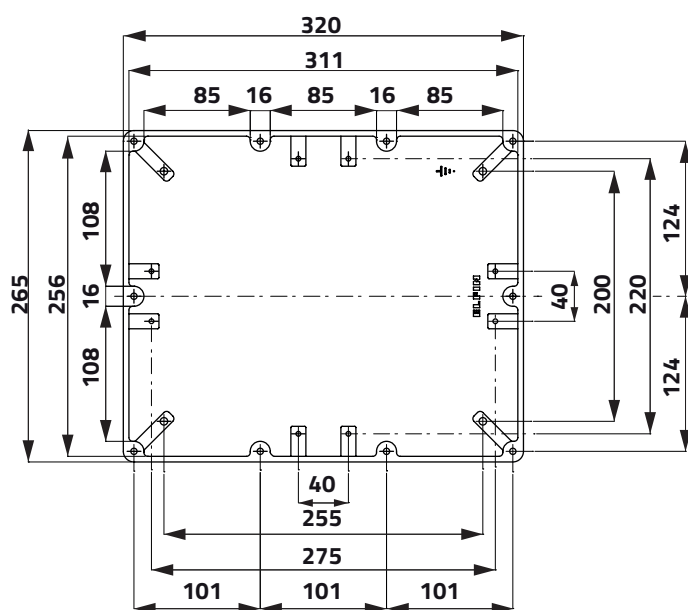
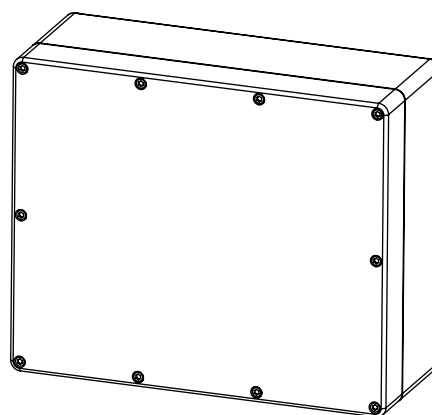
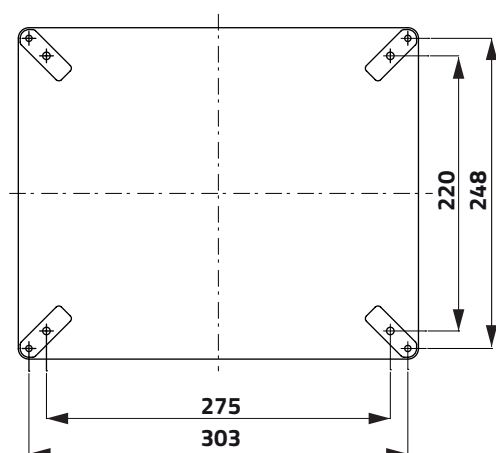


Piastra di fondo / Mounting plate

1,5	400	040P2325
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Scatole in alluminio M5 320x265mm

Aluminium enclosures M5 320x265mm



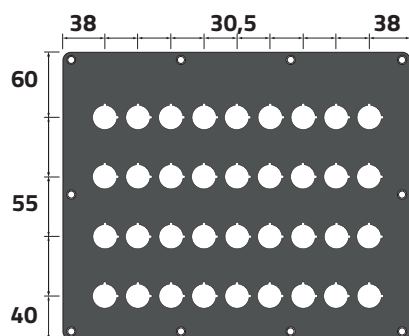
Scatole in alluminio M5 320x265mm

Aluminium enclosures M5 320x265mm



Coperchio senza fori / Undrilled lid

	h	g	cod
Senza entrata cavo / No cable entry	125	4060	040C3226-12
Grezza, cieca / Unpainted, no cable entry	125	4060	040C3226-12N



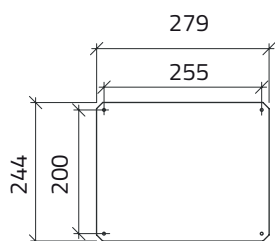
Coperchio con 36 fori Ø 22mm / 36-holes lid Ø 22mm

Senza entrata cavo / No cable entry	125	4028	040C3226-12P36
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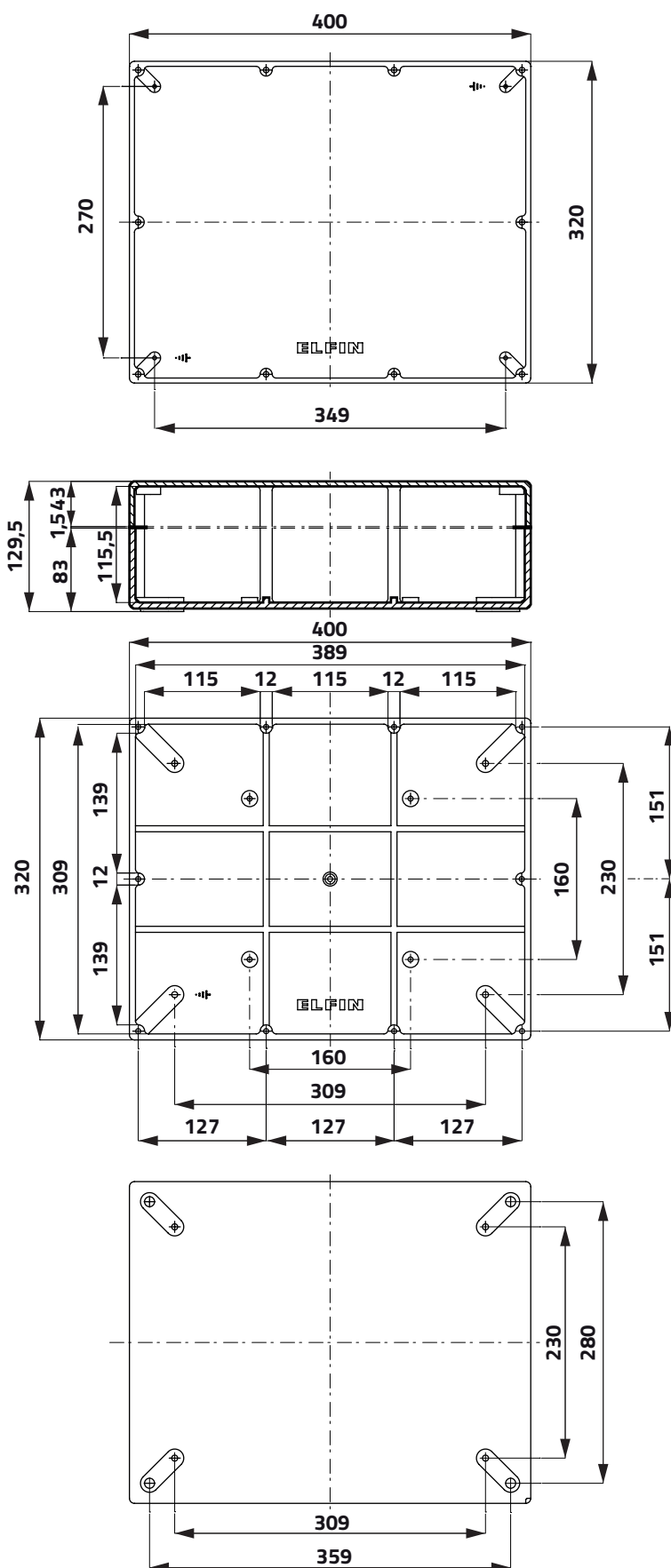
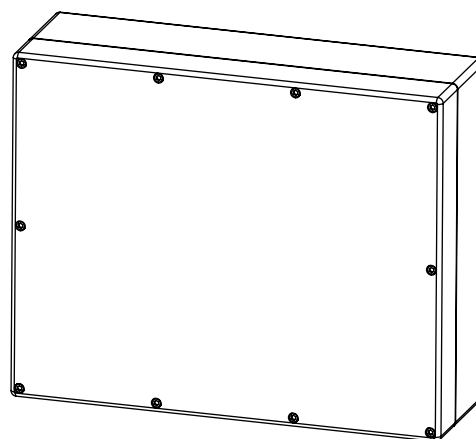
Piastra di fondo / Mounting plate

1,5	900	040P3226
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Scatole in alluminio M5 400x320mm

Aluminium enclosures M5 400x320mm



Scatole in alluminio M5 400x320mm

Aluminium enclosures M5 400x320mm



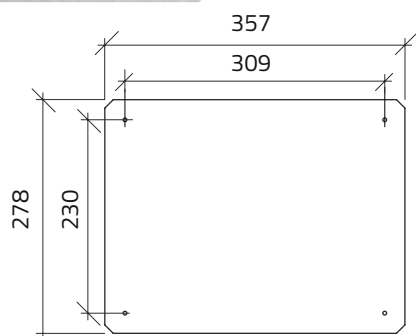
Coperchio senza fori / Undrilled lid

	h	g	cod
Senza entrata cavo / No cable entry	130	5350	040C4032-13
Grezza, cieca / Unpainted, no cable entry	130	5350	040C4032-13N



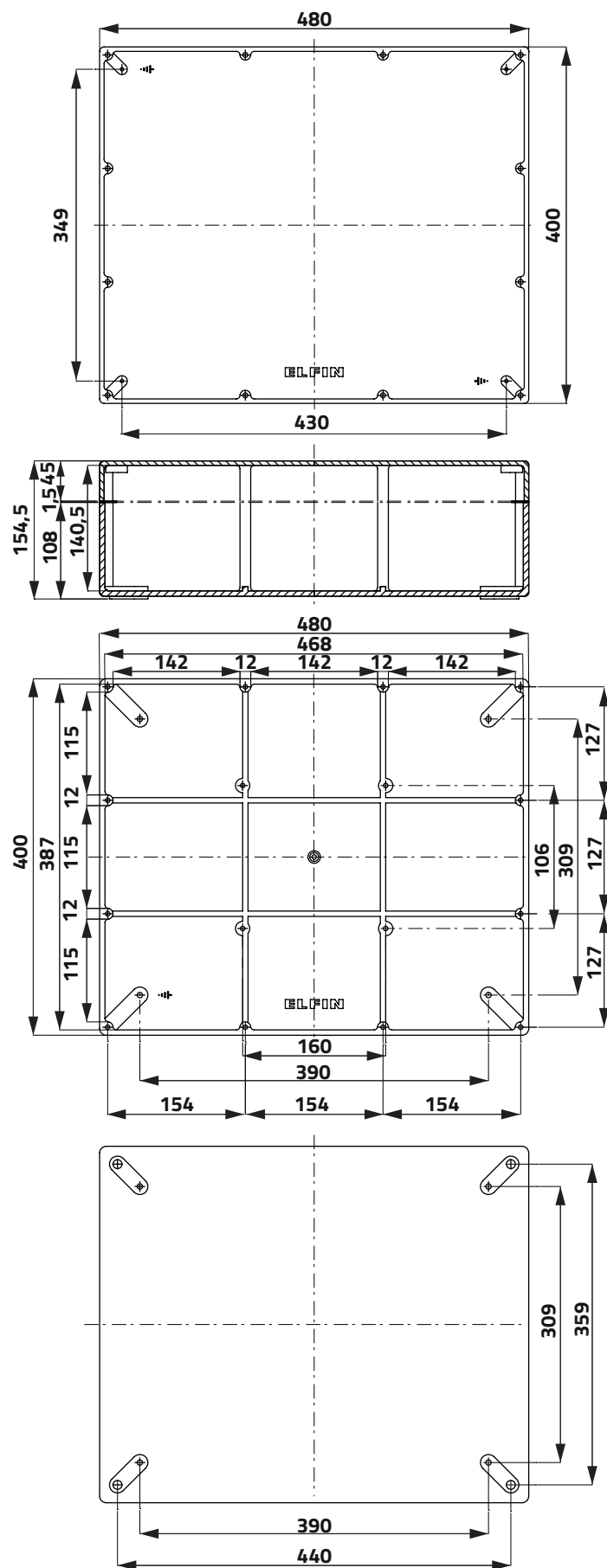
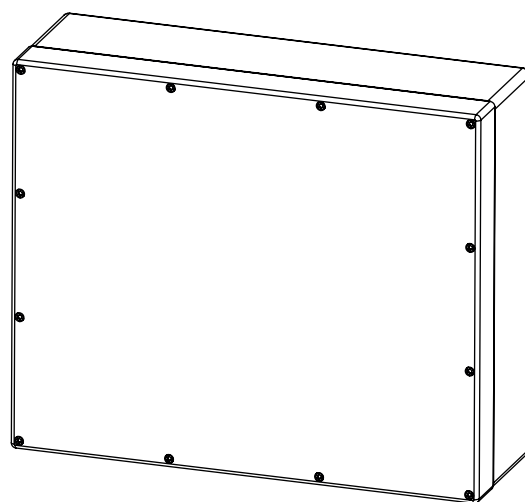
Piastra di fondo / Mounting plate

1,5	1206	040P4032
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Scatole in alluminio M5 480x400mm

Aluminium enclosures M5 480x400mm



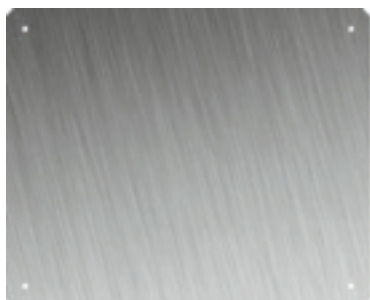
Scatole in alluminio M5 480x400mm

Aluminium enclosures M5 480x400mm



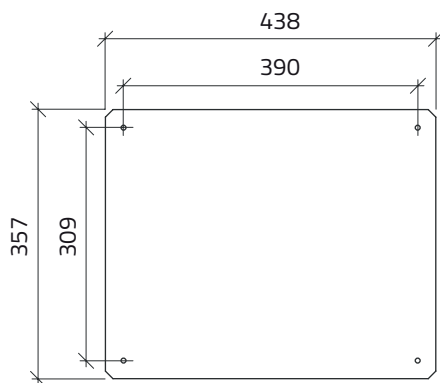
Coperchio senza fori / Undrilled lid

	h	g	cod
Senza entrata cavo / No cable entry	160	9000	040C4840-16
Grezza, cieca / Unpainted, no cable entry	160	9000	040C4840-16N



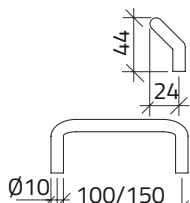
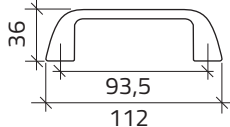
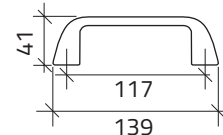
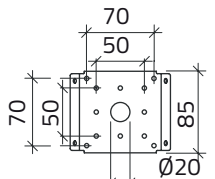
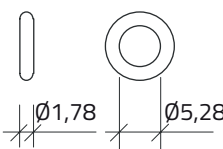
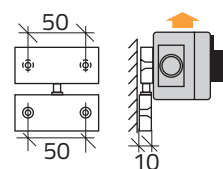
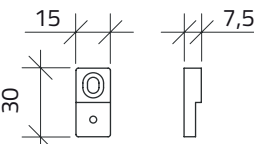
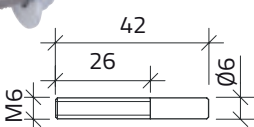
Piastra di fondo / Mounting plate

1,5	1900	040P4840
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Accessori

Accessories

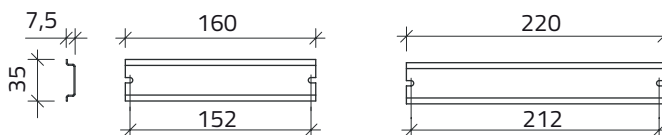
			g	cod
		Maniglia / Handle	112	040MM100
		Maniglia / Handle	135	040MM150
		Maniglia nera in plastica Black plastic handle	42	080M112
		Maniglia nera in plastica Black plastic handle	58	080M139
		Staffa in acciaio inox Stainless steel bracket	180	040FT
		Kit di guarnizioni O-RING impermeabilità viti M10 Set of M10 captive screws	16	040KIV
		Kit di fissaggio a parete per contenitori removibili Wall-mounting kit for removable enclosures	124	080SP
		Kit di staffe di fissaggio Set of mounting brackets		
		10 mm	28	010S10
		25 mm	32	010S25
		Kit di fissaggio con prigionieri (M4/M10) Fixing kit with studs (M4/M10)	26	010SFP

Accessori

Accessories



Guida / Rail Ø 35
Guida / Rail Ø 35



L

g

cod

160

52

040G3516

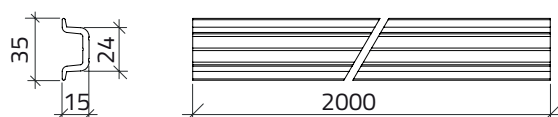
220

72

040G3522



Guida / PVC Rail Ø 35



2000

760

010GDP

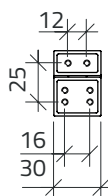
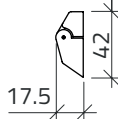


Coppia di cerniere per scatole pulsantiere
Pair of hinges for push-button enclosures

● Grigio / Grey

57

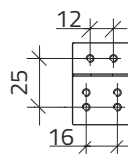
040CF



M4 x 14

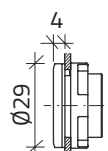
da sp. parete 7mm
M4x16
from 7mm wallthickness
m4x16

M4 x 12

da sp. parete 7mm
M4x16
from 7mm wallthickness
m4x16

Usare maschera di foratura solo su scatolacompletamente montata
Drilling jig only on complete mounted enclosure

Tappi di chiusura / Hole plug



● RAL 7035 Ø22
● Nero / Black Ø22
● RAL 7016

g

n

cod

5

10

020TTP

5

10

020TTPN

5

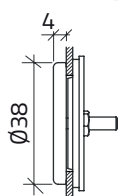
10

020TTPGR

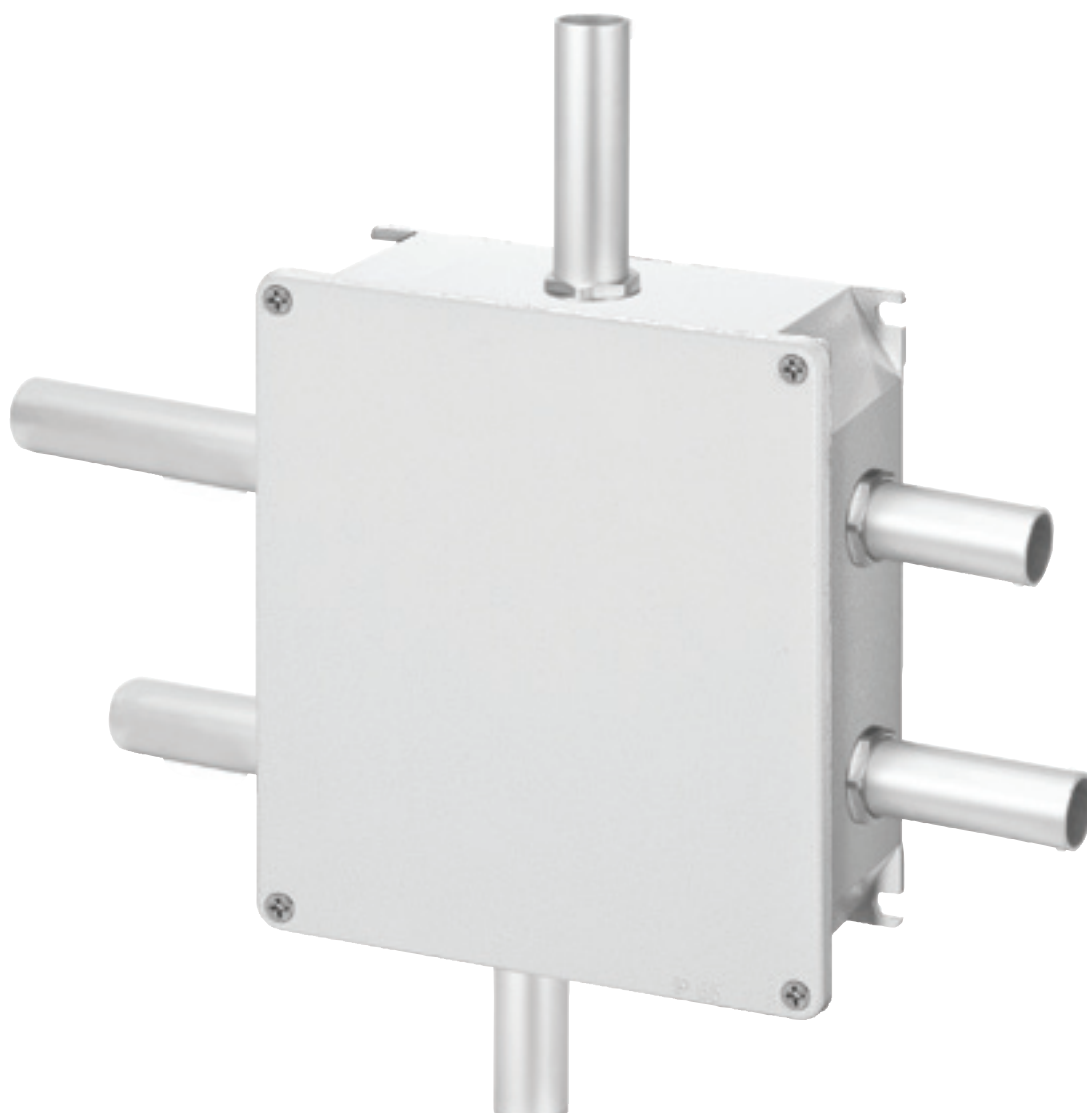
Tappo Ø30 / Plug Ø30

34

030CP



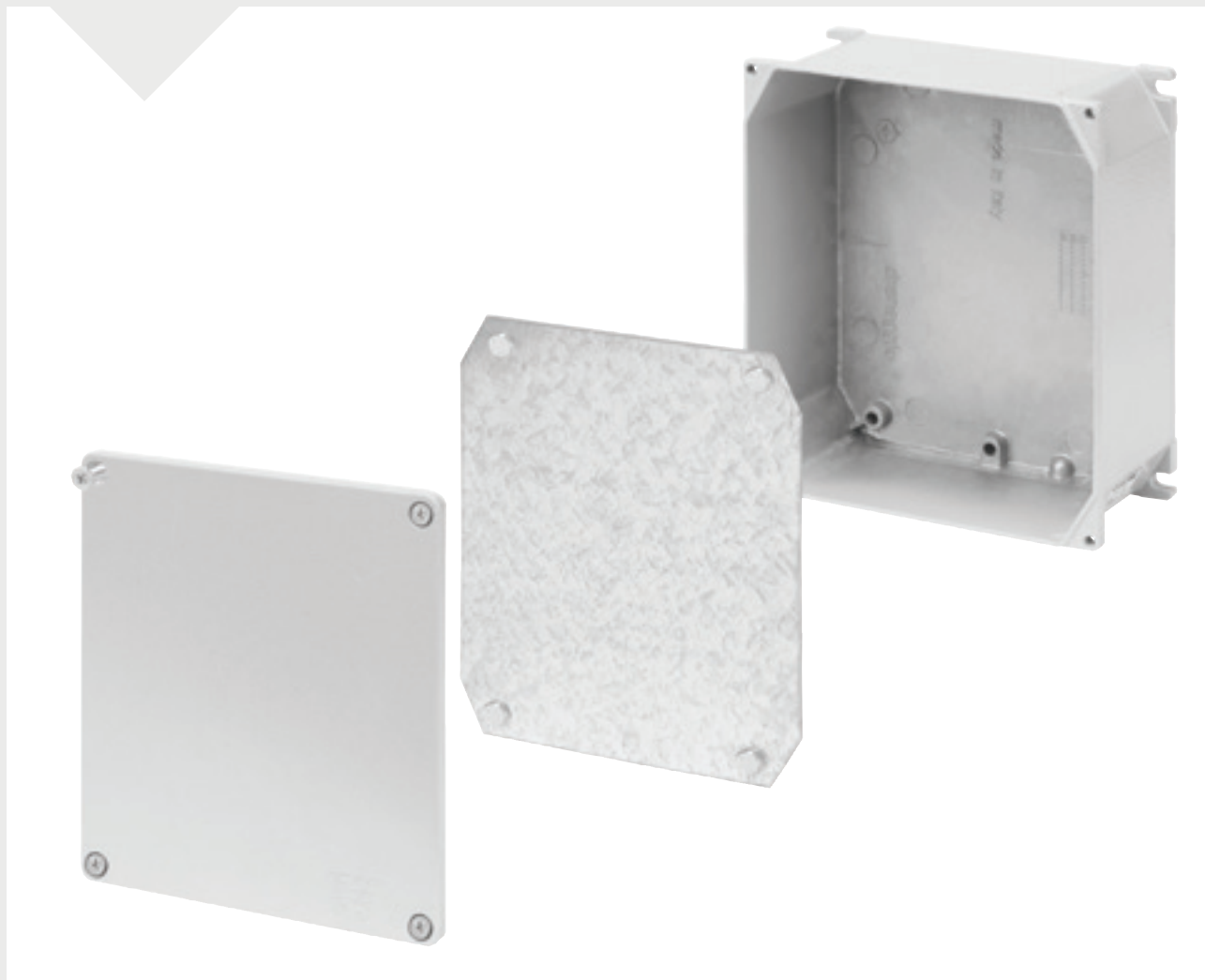
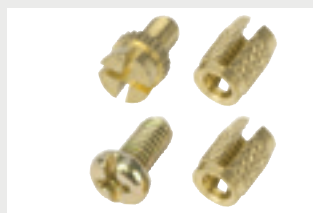
Scatole di derivazione in alluminio Aluminium junction boxes



Esempio di realizzazione

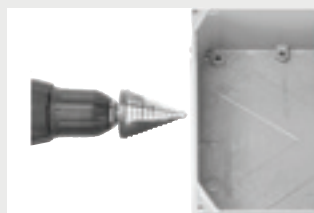
Example of execution

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



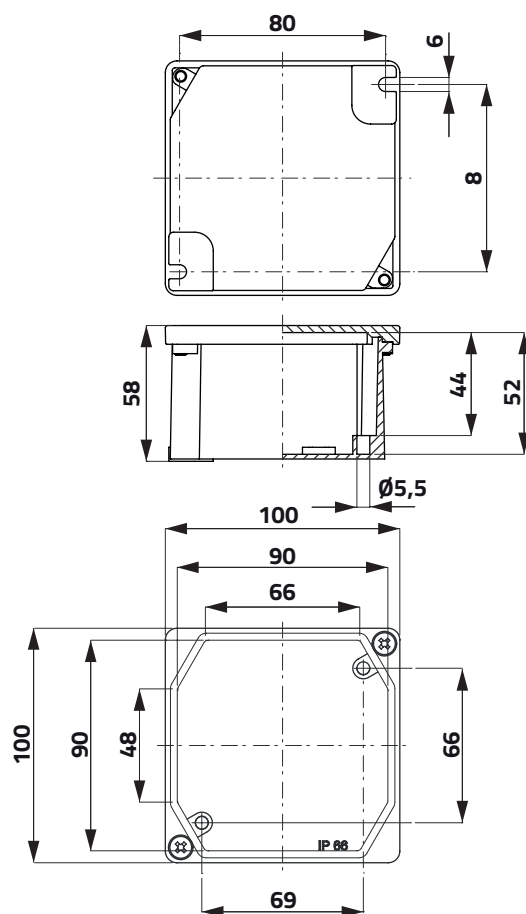
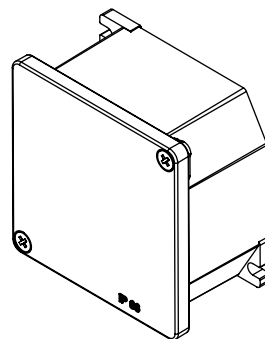
La guarnizione garantisce
protezione IP66

A sealing gasket assures
IP66 protection

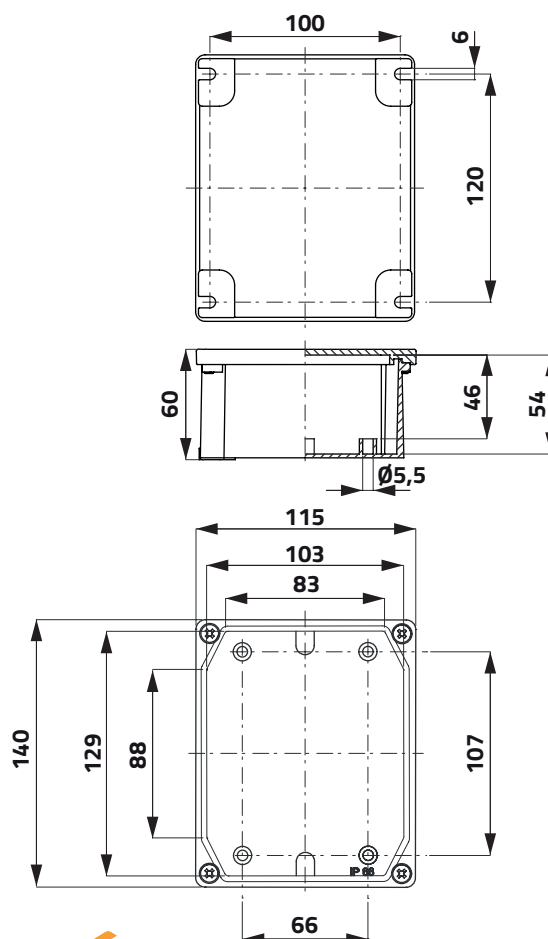
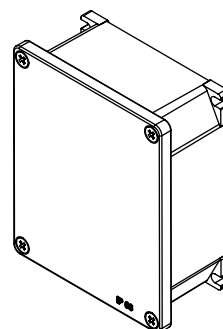
Scatole di derivazione in alluminio

Aluminium junction boxes

100x100



115x140



Scatole di derivazione in alluminio

Aluminium junction boxes

**100x100****h**

59

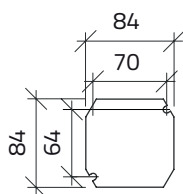
g

277

cod**040D1010-6****Piastra di fondo / Mounting plate**

1,5

85

040P1010**115x140****h**

60

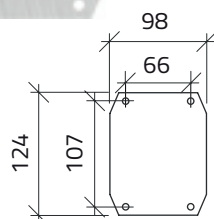
g

412

cod**040D1214-6****Piastra di fondo / Mounting plate**

1,5

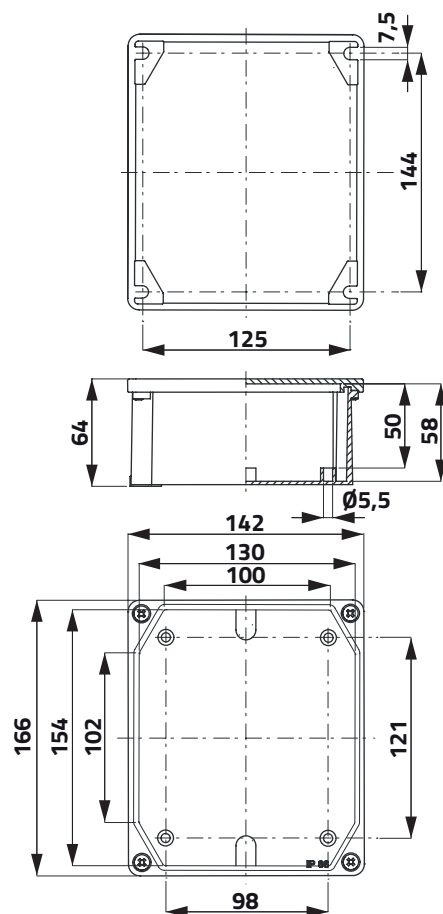
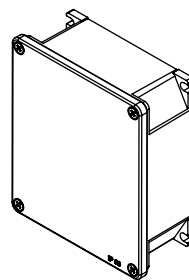
141

040P1214

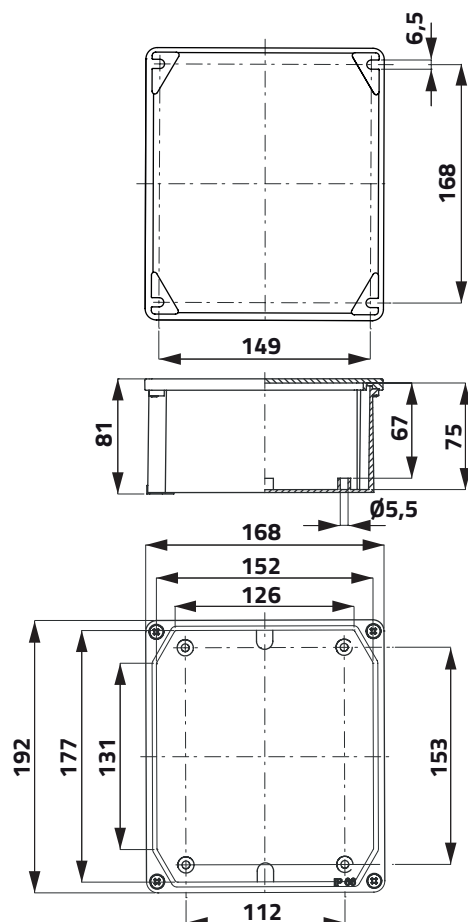
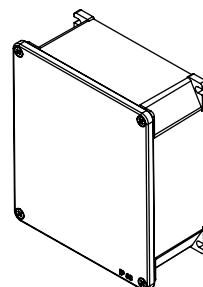
Scatole di derivazione in alluminio

Aluminium junction boxes

142x166



168x192



Scatole di derivazione in alluminio

Aluminium junction boxes

**142x166****h**

64

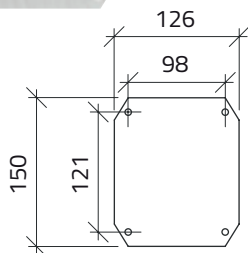
g

560

cod**040D1416-6****Piastra di fondo / Mounting plate**

1,5

222

040P1416**168x192****h**

80

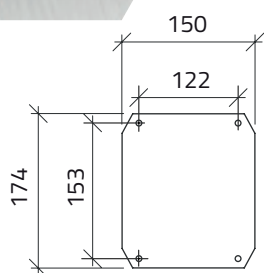
g

773

cod**040D1719-8****Piastra di fondo / Mounting plate**

1,5

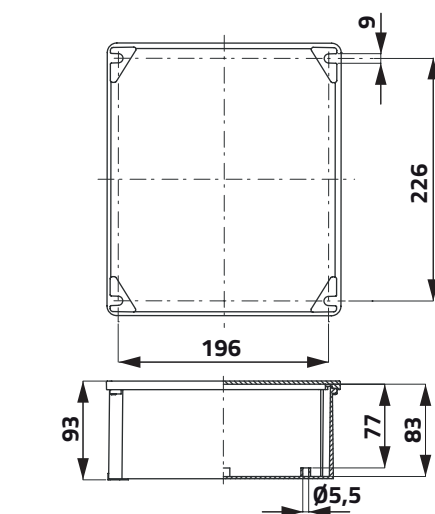
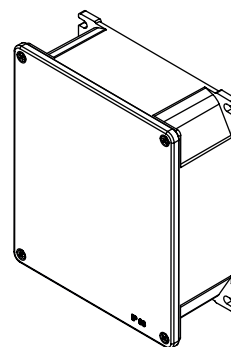
310

040P1719

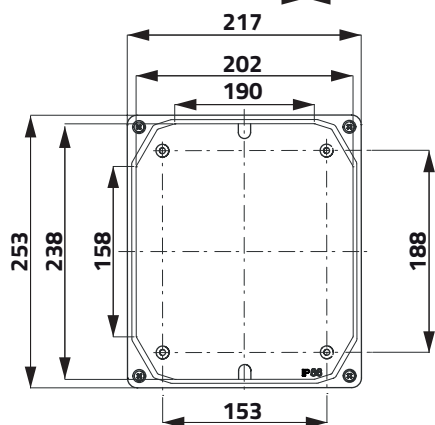
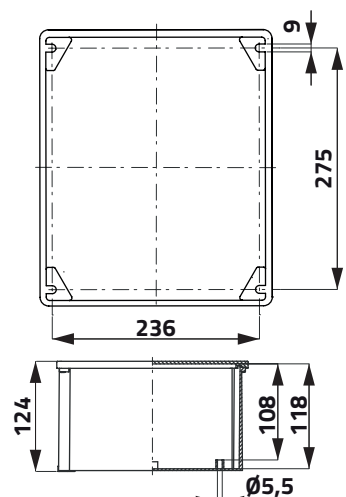
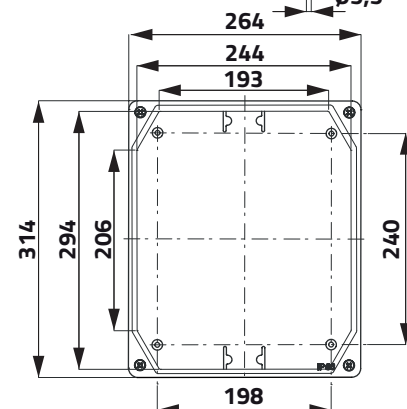
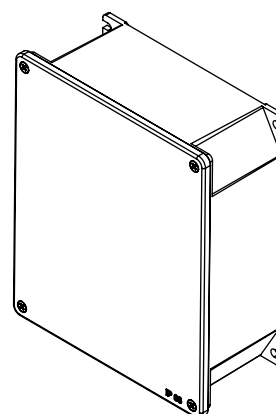
Scatole di derivazione in alluminio

Aluminium junction boxes

217x253



264x324



Scatole di derivazione in alluminio

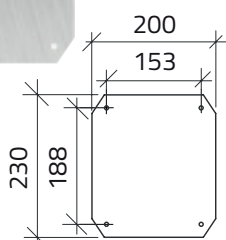
Aluminium junction boxes

**217x253**

h	g	cod
93	1409	040D2225-9

**Piastra di fondo / Mounting plate**

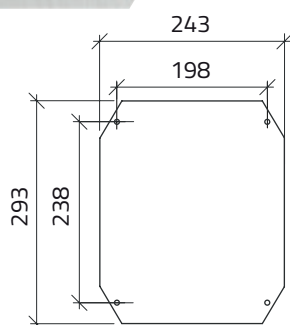
h	g	cod
1,5	538	040P2225

**264x314**

h	g	cod
122	2344	040D2631-12

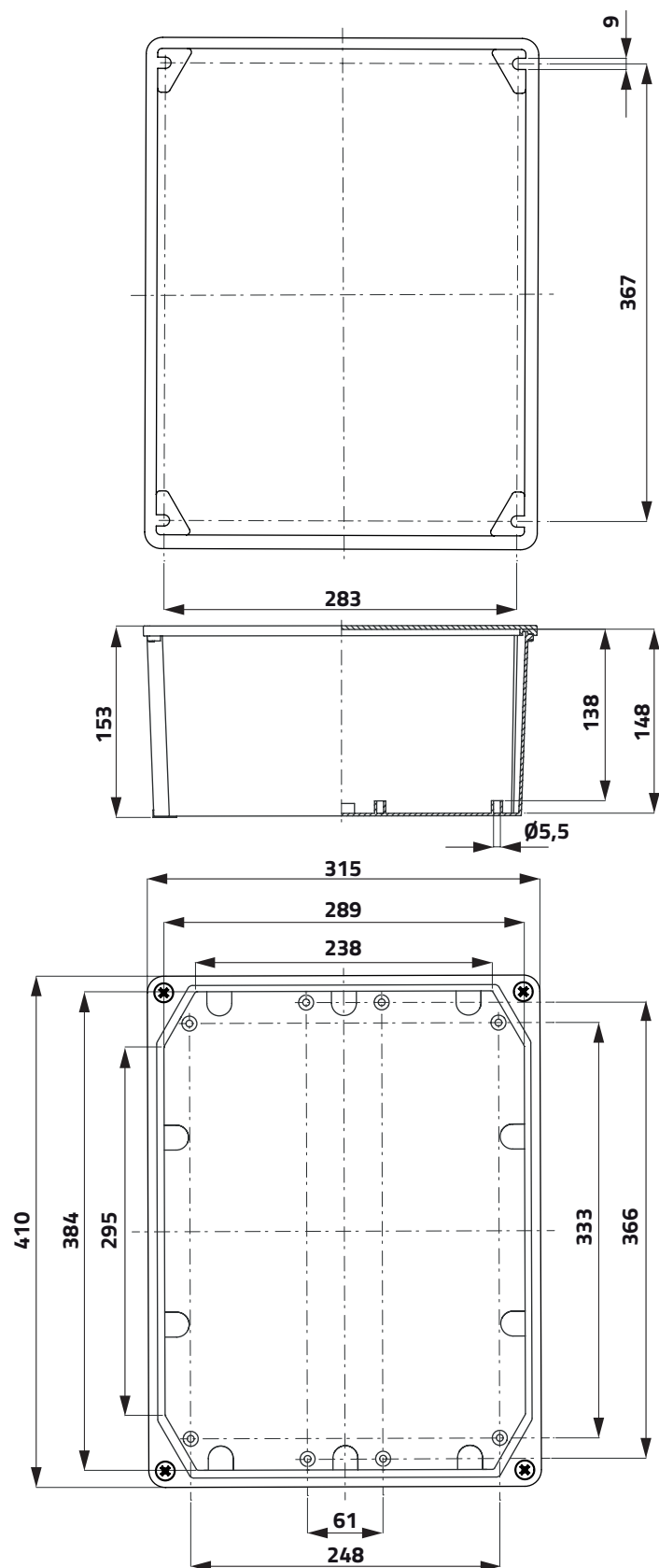
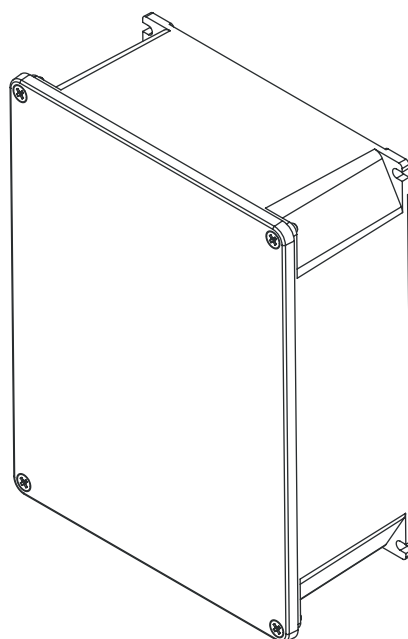
**Piastra di fondo / Mounting plate**

h	g	cod
1,5	840	040P2631



Scatole di derivazione in alluminio

Aluminium junction boxes



Scatole di derivazione in alluminio

Aluminium junction boxes



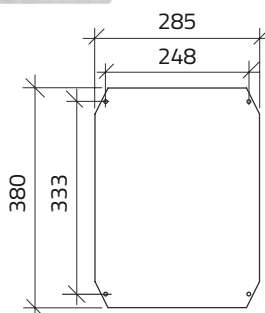
315x410

h	g	cod
153	3792	040D3141-15

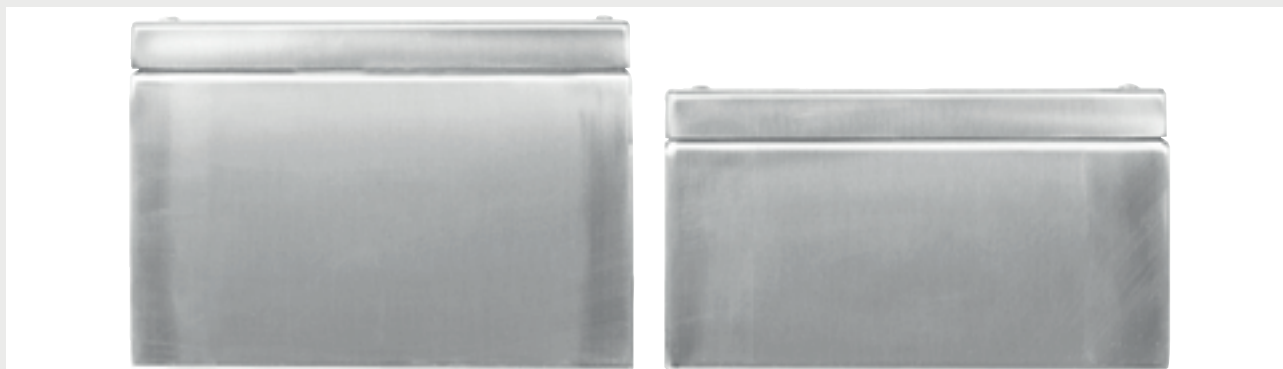


Piastra di fondo / Mounting plate

1,5	1315	040P3141
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Scatole acciaio inox Stainless steel enclosures



Disponibile in due altezze

Available in two heights



Coperchio basso formati da 82x82 a 82x202

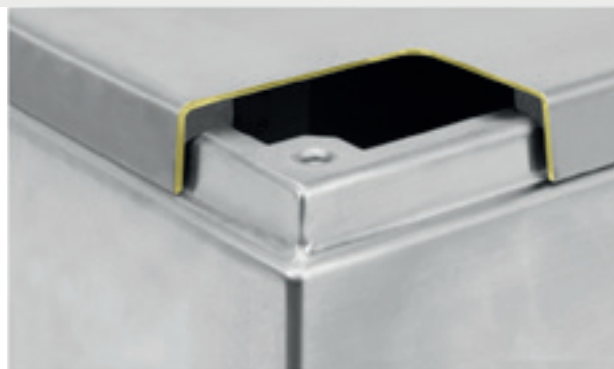
Low lid for sizes from 82x82 to 82x202



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)	●	●	●	●	clorofornio 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 ammonio 10%	●	●	●	●
acido solforico 5% bollente	●	●	●	●	etere 100%	●	●	●	●	solfo ferrico 10%	●	●	●	●
acido solforico fumante	●	●	●	●	formaldeide 100%	●	●	●	●	solfo ferroso 10-40%	●	●	●	●
(oleum) 50C	●	●	●	●	fosfato d'ammonio 10%	●	●	●	●	solfo di magnesio 10-40%	●	●	●	●
acido solforoso 100%	●	●	●	●	fosfato di sodio	●	●	●	●	solfo di nichel 30%	●	●	●	●
acido stearico 100% fino a 100C	●	●	●	●	a tutte le concentrazioni	●	●	●	●	solfo di potassio	●	●	●	●
acido tartarico 10% a 100C	●	●	●	●	furfurolo 100%	●	●	●	●	10% fino a 100C	●	●	●	●
acqua dolce	●	●	●	●	a temperatura di ebollizione	●	●	●	●	solfo di rame 10%	●	●	●	●
acqua ossigenata 10-30%	●	●	●	●	gas di cloro umido	●	●	●	●	solfo di sodio 10%	●	●	●	●
acqua ragia	●	●	●	●	gas di cokeria	●	●	●	●	solfo di zinco 10%	●	●	●	●
alcool etilico	●	●	●	●	gelatina	●	●	●	●	solfo di sodio 10%	●	●	●	●
(tutte le concentrazioni)	●	●	●	●	glicerina a tutte le concentrazioni	●	●	●	●	solfo di sodio 10%	●	●	●	●
alcool metilico 100%	●	●	●	●	glicole etilico 100%	●	●	●	●	solfo di zinco 10%	●	●	●	●
alluminio fuso	●	●	●	●	glucosio	●	●	●	●	solfo di sodio 10%	●	●	●	●
ammoniaca 100% (secca)	●	●	●	●	gomma lacca	●	●	●	●	solfo di sodio 10%	●	●	●	●
anidride acetica 100%	●	●	●	●	idrossido d'ammonio fino al 40%	●	●	●	●	solfo di sodio 10%	●	●	●	●
anidride carbonica 100% (secca)	●	●	●	●	idrossido di calcio	●	●	●	●	solfo di sodio 10%	●	●	●	●
anidride solforosa 90%	●	●	●	●	fino a 10% fino a 100C	●	●	●	●	solfo di sodio 10%	●	●	●	●
anilina 100%	●	●	●	●	idrossido di magnesio	●	●	●	●	solfo di sodio 10%	●	●	●	●
bagni di concia	●	●	●	●	10% fino a 100C	●	●	●	●	solfo di sodio 10%	●	●	●	●
bagni di cromatura	●	●	●	●	idrossido di potassio fino a 50%	●	●	●	●	solfo di sodio 10%	●	●	●	●
bagni di fissaggio fotografico	●	●	●	●	idrossido di sodio fino a 20%	●	●	●	●	solfo di sodio 10%	●	●	●	●
bagni di sviluppo fotografico	●	●	●	●	ipoclorito di calcio 100%	●	●	●	●	solfo di sodio 10%	●	●	●	●
benzina	●	●	●	●	ipoclorito di sodio 100%	●	●	●	●	solfo di sodio 10%	●	●	●	●



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
acetylene (commercial)	●	●	●
vinegar	●	●	●
vinegar (vapours)	●	●	●
acetone 100% at 100°C	●	●	●
acetic acid up to 20%	●	●	●
boric acid 5%	●	●	●
butyric acid 5%	●	●	●
hydrocyanic acid 100%	●	●	●
citric acid 5%	●	●	●
hydrochloric acid (all concentrations)	●	●	●
chromic acid 5%	●	●	●
hydrofluoric acid (all concentrations)	●	●	●
phosphoric acid 5%	●	●	●
lactic acid 5%	●	●	●
linoleic acid 100% up to 100°C	●	●	●
malic acid 10-40% up to 50°C	●	●	●
muriatic acid (commercial)	●	●	●
nitric acid up to 10% at 80°C	●	●	●
oleic acid 100%	●	●	●
oxalic acid 5%	●	●	●
picric acid (all concentrations)	●	●	●
wet sulphhydic acid 100% (hydrogen sulphide)	●	●	●
boiling sulphuric acid 5%	●	●	●
fuming sulphuric acid (oleum) 50°C	●	●	●
sulphurous acid 100%	●	●	●
stearic acid 100% up to 100°C	●	●	●
tartaric acid 10% at 100°C	●	●	●
soft water	●	●	●
hydrogen dioxide 10-30%	●	●	●
white spirit	●	●	●
ethyl alcohol (all concentrations)	●	●	●
methyl alcohol 100%	●	●	●
melted aluminium	●	●	●
ammonia 100% (dry)	●	●	●
acetic anhydride 100%	●	●	●
carbon dioxide 100% (dry)	●	●	●
sulphur dioxide 90%	●	●	●
aniline 100%	●	●	●
tanning bath	●	●	●
chromium plating bath	●	●	●
fixing bath	●	●	●
developer bath	●	●	●
gasoline	●	●	●
cold and hot benzol	●	●	●
sodium bicarbonate (all concentrations)	●	●	●
beer	●	●	●
sodium disulphate 15% at 85°C	●	●	●
carbon bisulphide 100%	●	●	●
hot borax 5%	●	●	●
butane	●	●	●
boiling coffee	●	●	●
saturated chlorine water	●	●	●
camphor	●	●	●
sodium carbonate 5% up to 65°C	●	●	●
hot and cold sodium citrate	●	●	●
chloroform 100%	●	●	●
ammonium chloride 1%	●	●	●
ferric chloride 5-50%	●	●	●
ferrous chloride 10-20%	●	●	●
magnesium chloride up to 20%	●	●	●
mercury chloride 10%	●	●	●
nickel chloride 10-30%	●	●	●
potassium chloride 1-5%	●	●	●
sodium chloride 5% (not agitated)	●	●	●
zinc chloride	●	●	●
sulphur chloride 100%	●	●	●
at boiling temperature	●	●	●
coca cola (pure syrup)	●	●	●
ether 100%	●	●	●
formaldehyde 100%	●	●	●
ammonium phosphate 10%	●	●	●
sodium phosphate	●	●	●
at all concentrations	●	●	●
furfural 100%	●	●	●
at boiling temperature	●	●	●
wet chloride gas	●	●	●
coke-oven gas	●	●	●
gelatine	●	●	●
glycerol at all concentrations	●	●	●
ethyl glycol 100%	●	●	●
glucose	●	●	●
shellac	●	●	●
ammonium hydroxide up to 40%	●	●	●
calcium hydroxide	●	●	●
up to 10% up to 100°C	●	●	●
magnesium hydroxide	●	●	●
10% up to 100°C	●	●	●
potassium hydroxide up to 50%	●	●	●
sodium hydroxide up to 20%	●	●	●
calcium hypochlorite 100%	●	●	●
sodium hypochlorite 100%	●	●	●
milk (fresh or acid)	●	●	●
yeast	●	●	●
mayonnaise	●	●	●
molasses	●	●	●
mustard	●	●	●
ammonium nitrate 10-50%	●	●	●
sodium nitrate 10-40%	●	●	●
hot and cold mineral oil	●	●	●
hot and cold vegetable oil	●	●	●
hot and cold paraffin	●	●	●
sodium perborate	●	●	●
10% up to 100°C	●	●	●
hydrogen peroxide 10%	●	●	●
sodium peroxide 10%	●	●	●
up to 100°C	●	●	●
melted lead	●	●	●
propane	●	●	●
soap	●	●	●
sugar syrup	●	●	●
at all concentration	●	●	●
whey	●	●	●
sodium silicate	●	●	●
up to 100% up to 100°C	●	●	●
aluminium sulphate 10%	●	●	●
ammonium sulphate 10%	●	●	●
ferric sulphate 10%	●	●	●
ferrous sulphate 10-40%	●	●	●
magnesium sulphate 10-40%	●	●	●
nickel sulphate 30%	●	●	●
potassium sulphate	●	●	●
10% up to 100°C	●	●	●
copper sulphate 10%	●	●	●
sodium sulphate 10%	●	●	●
zinc sulphate 10%	●	●	●
sodium sulphide 10%	●	●	●
concentrated orange juice	●	●	●
concentrated lemon juice	●	●	●
carbon tetrachloride 10%	●	●	●
sodium thiosulphate	●	●	●
10-60% up to 100°C	●	●	●
toluol	●	●	●
trichloroethylene	●	●	●
100% up to 100°C	●	●	●
paints	●	●	●
wine	●	●	●
whisky	●	●	●
melted zinc	●	●	●
melted sulphur	●	●	●



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.

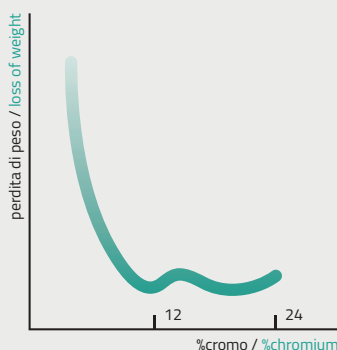
RESISTANCE TO CORROSION

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 lavorazione¹ necessari per costruire i contenitori. Questo strato protettivo continua la sua funzione protettiva presso la clientela sia nel primo immagazzinamento² 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 process¹. This protective layer continues to perform its protective function at customer's site during both initial storage² 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.

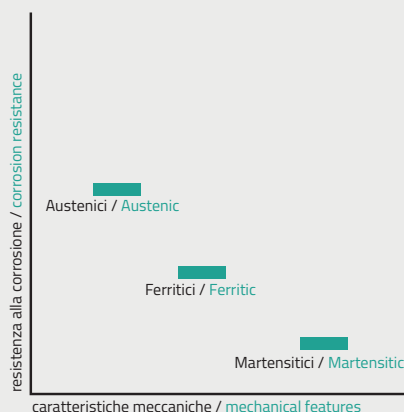
CLASSIFICATION OF STAINLESS STEEL

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

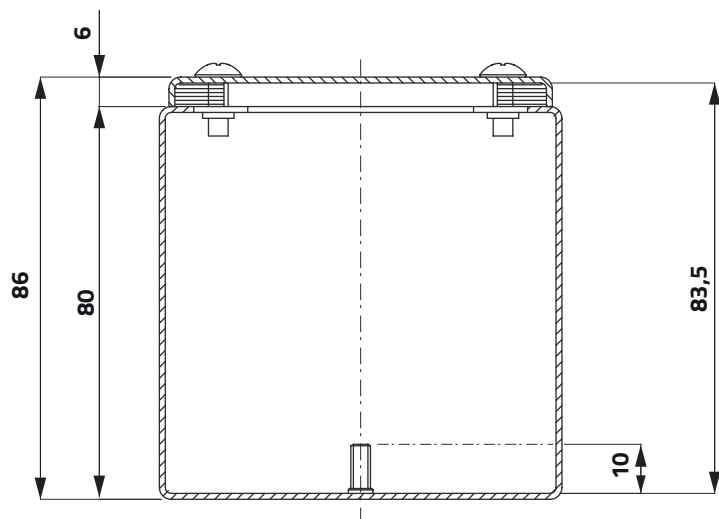
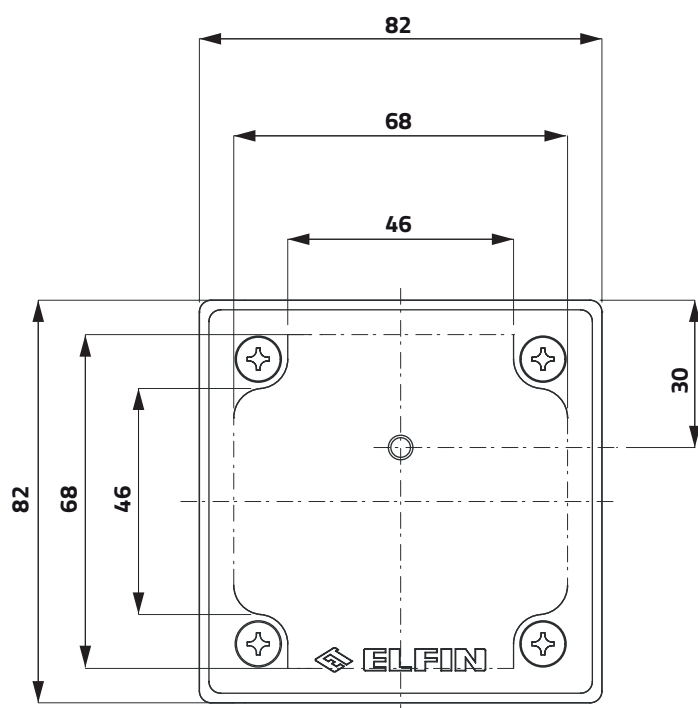
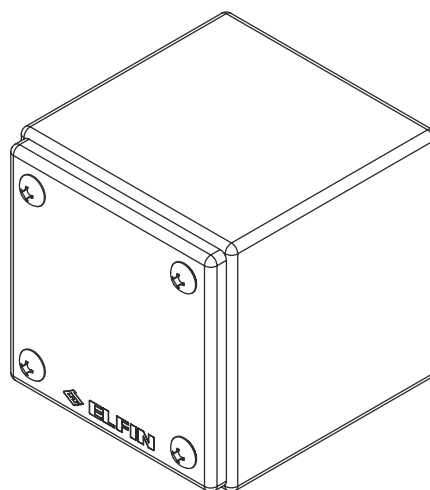
Materiale contenitori	Acciaio inox AISI 316
Materiale piastre di fondo	Acciaio zincato
Serraggi	Chiusura coperchio con viti TSB 5MA impermeabili: morsetto di messa a terra inserto filettato 5ma su coperchio e fondo scatola, dado non fornito; dai formati 140 x 180 n.4 inserti per fissaggio piastre di 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. 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

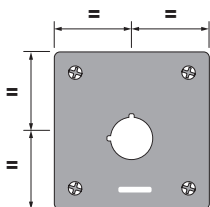
Stainless steel enclosures 82x82



Coperchio senza fori / Undrilled lid

Senza entrata cavo / No cable entry

h	g	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
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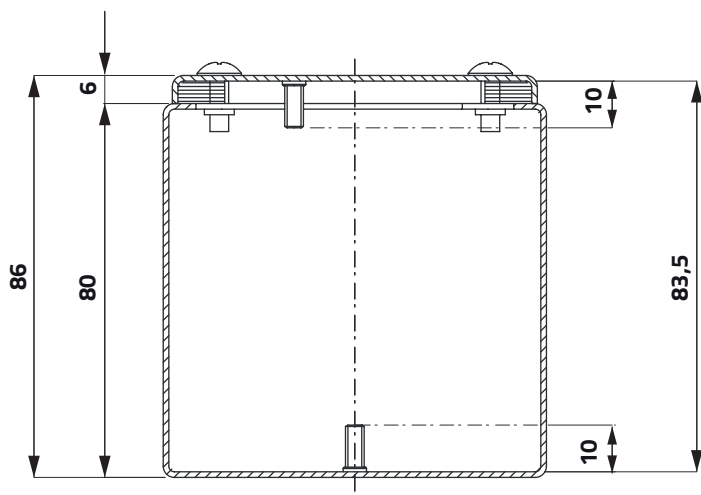
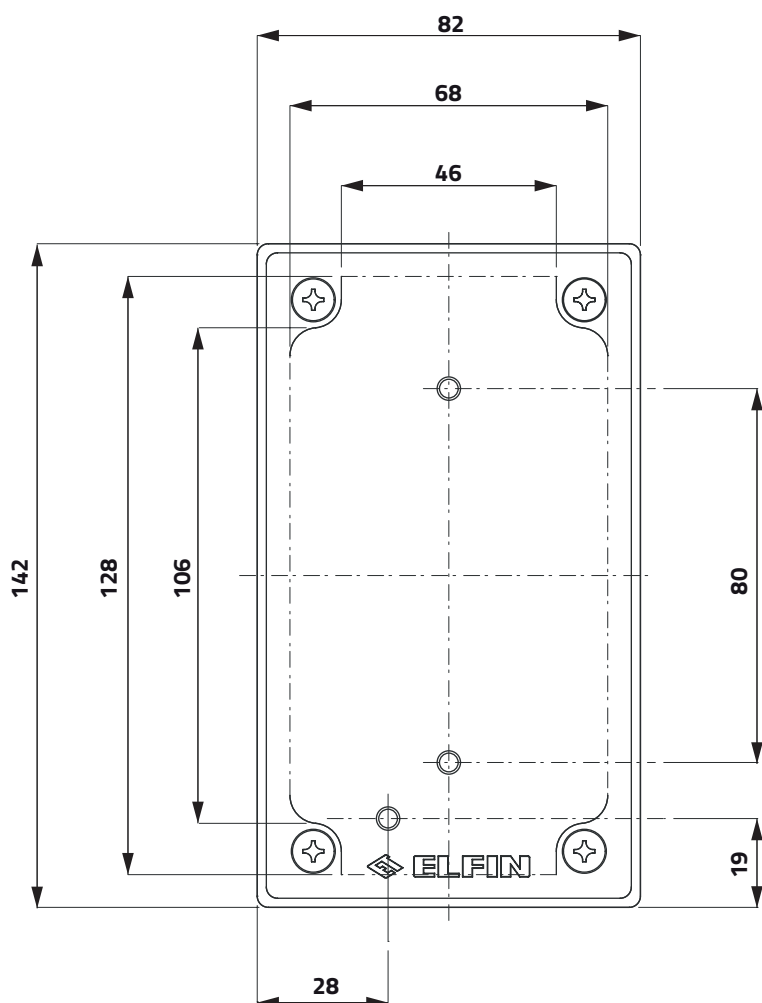
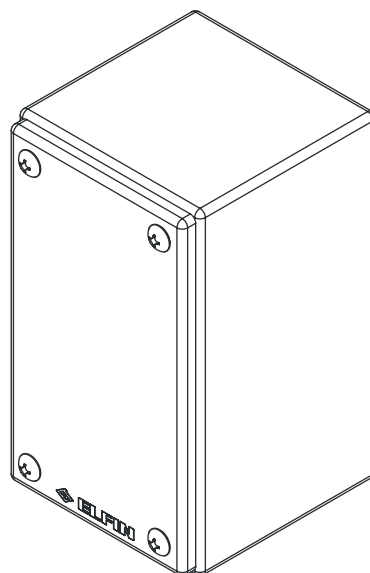
Coperchio con operatore Ø 22mm Lid with operator Ø 22mm

Pulsante fungo rosso, sgancio rotazione Ø40
Red mushroom push-button, twist release

85	483	040X0808-8GA
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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

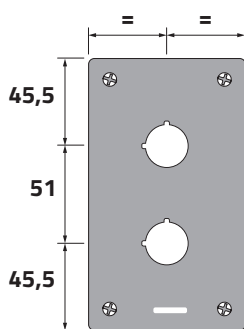
g

cod

86

536

040X0814-8



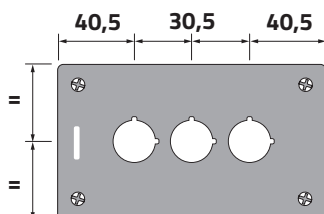
Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

Senza entrata cavo / No cable entry

86

530

040X0814-8P2



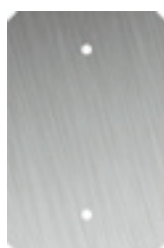
Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

Senza entrata cavo / No cable entry

86

527

040X0814-8P3

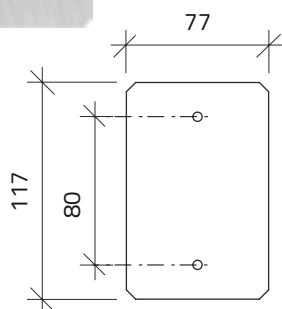


Piastra di fondo / Mounting plate

1,5

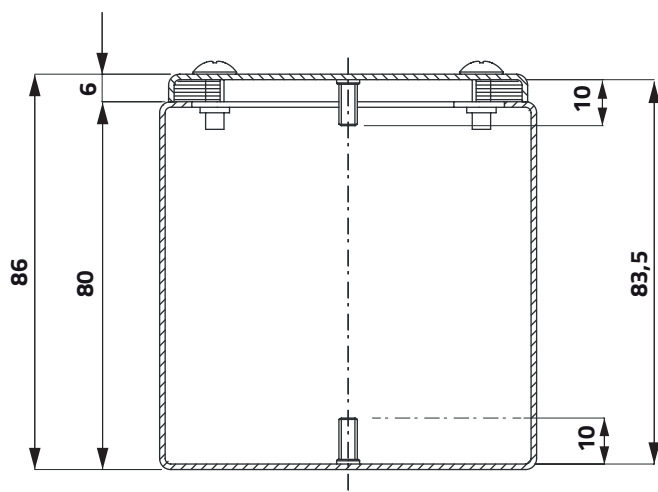
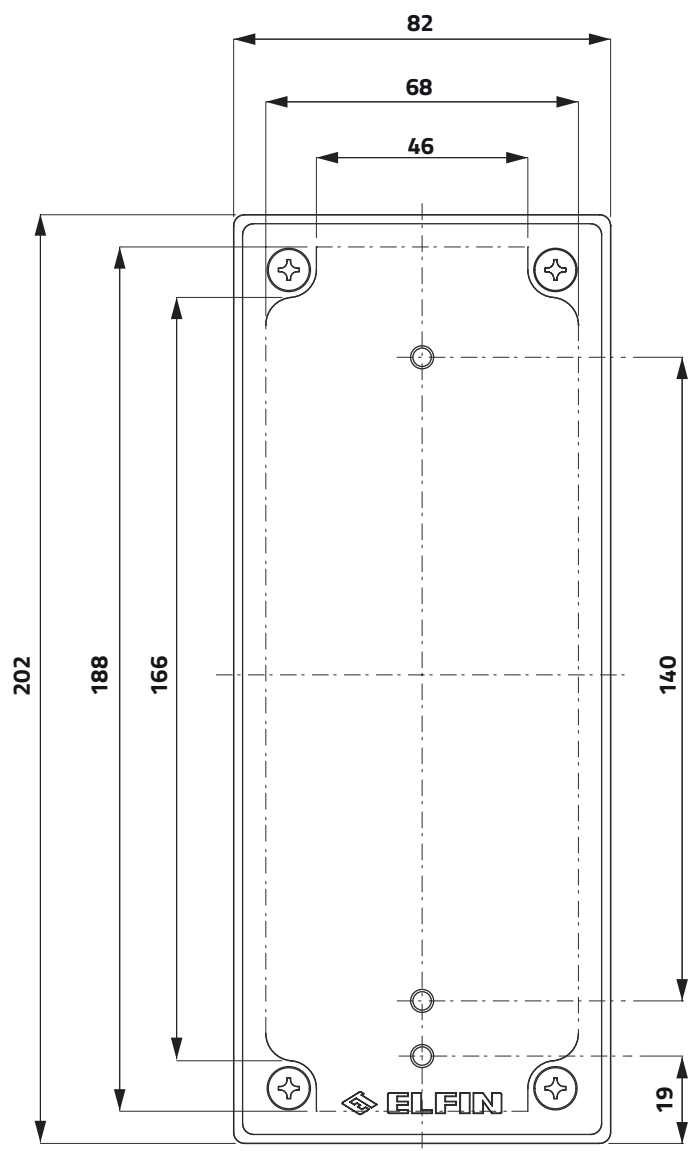
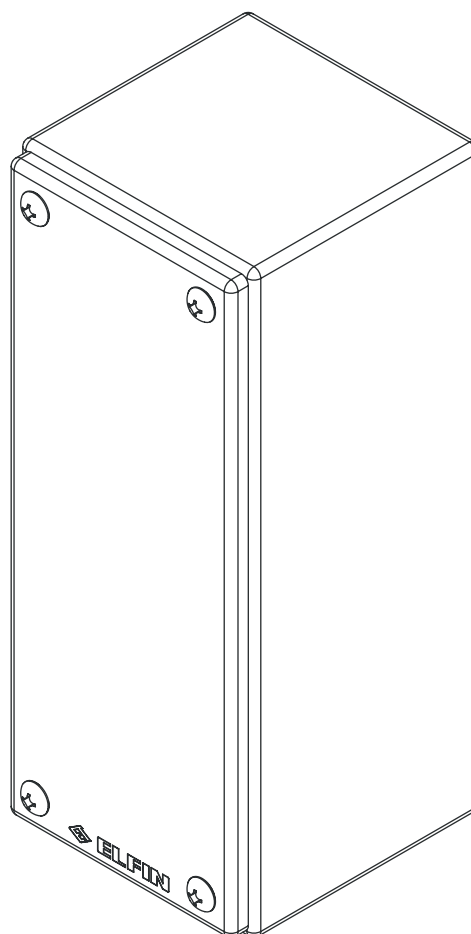
74

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

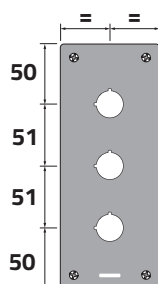
g

cod

86

826

040X0820-8



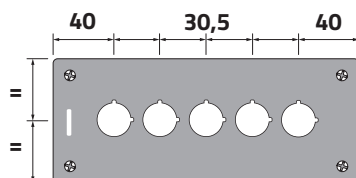
Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

Senza entrata cavo / No cable entry

86

817

040X0820-8P3



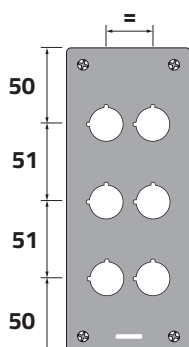
Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

Senza entrata cavo / No cable entry

86

811

040X0820-8P5L



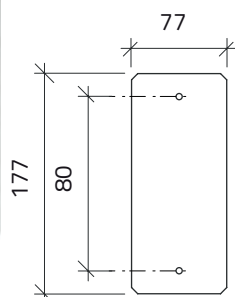
Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 22mm

Senza entrata cavo / No cable entry

86

808

040X0820-8P6



Piastra di fondo / Mounting plate

1,5

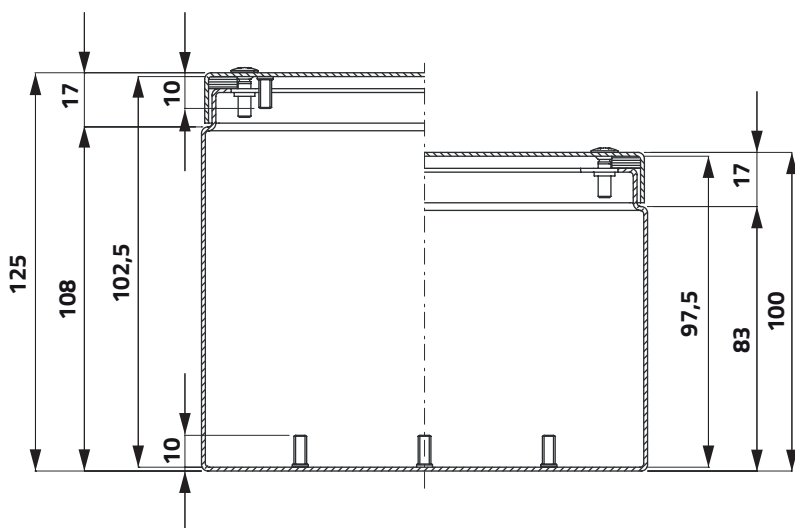
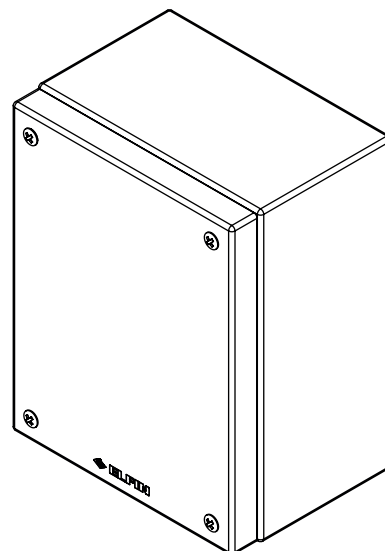
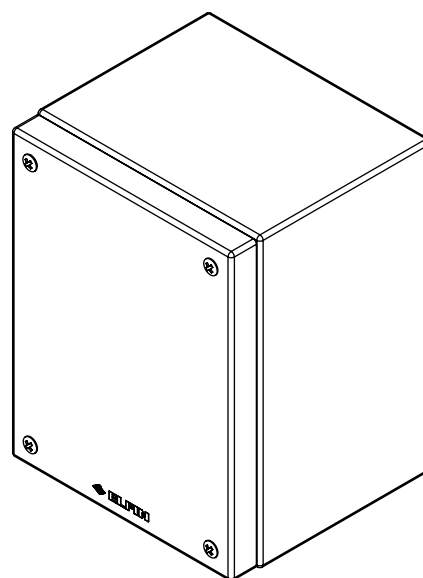
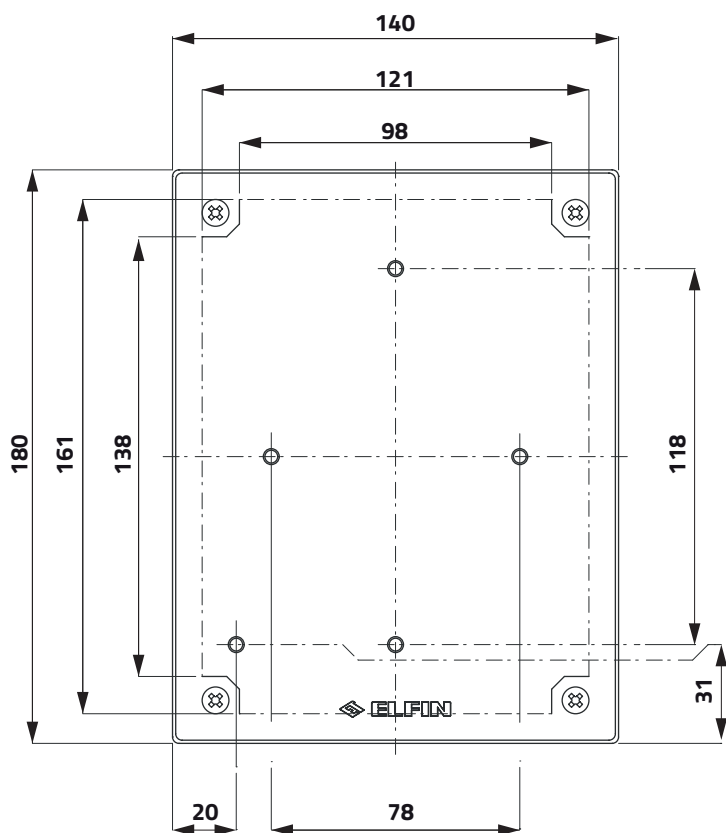
109

040P0820



Scatole acciaio inox 140x180

Stainless steel enclosures 140x180



Scatole acciaio inox 140x180

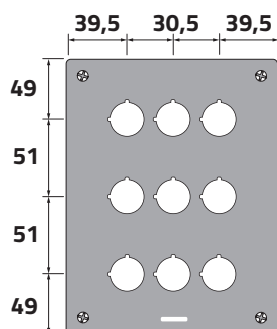
Stainless steel enclosures 140x180



Coperchio senza fori / Undrilled lid

Senza entrata cavo / No cable entry
Senza entrata cavo / No cable entry

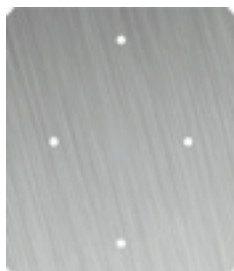
h	g	cod
100	1190	040X1418-1
125	1338	040X1418-12



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

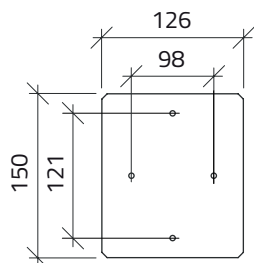
Senza entrata cavo / No cable entry

100	1123	040X1418-1P9
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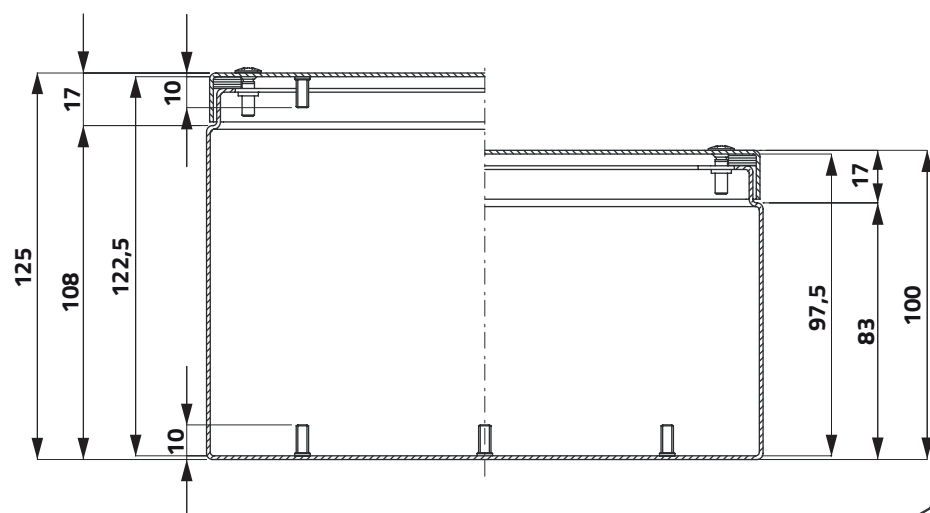
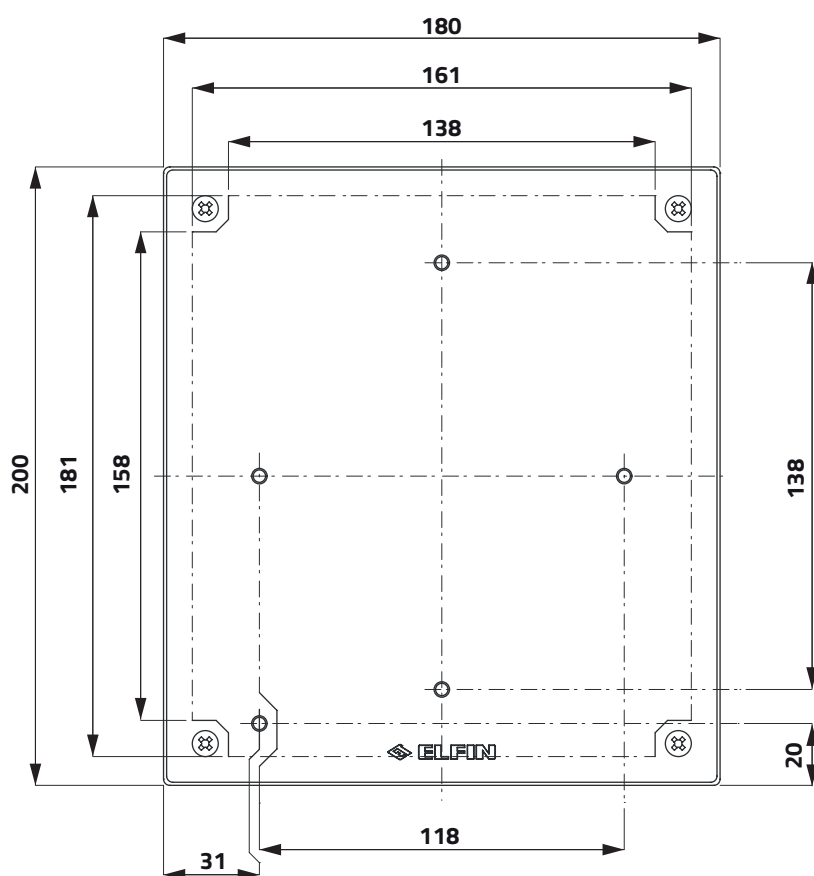
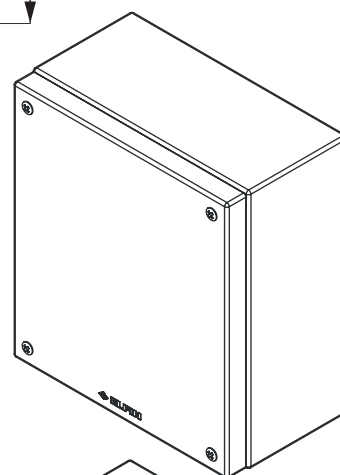
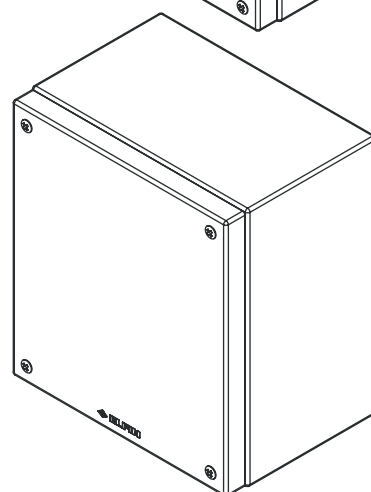
Piastra di fondo / Mounting plate

1,5	162	040P1418
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Scatole acciaio inox 180x200

Stainless steel enclosures 180x200



Scatole acciaio inox 180x200

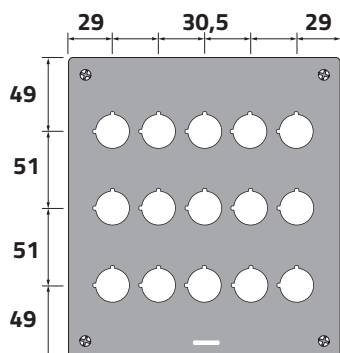
Stainless steel enclosures 180x 200



Coperchio senza fori / Undrilled lid

Senza entrata cavo / No cable entry
Senza entrata cavo / No cable entry

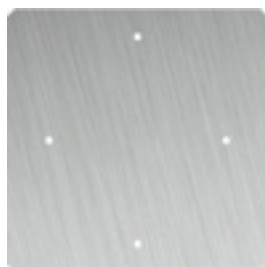
h	g	cod
100	1530	040X1820-1
125	1645	040X1820-12



Coperchio con 15 fori Ø 22mm / 15-hole lid Ø 22mm

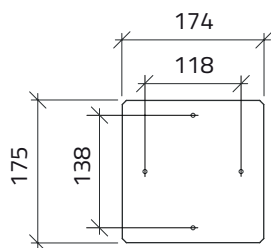
Senza entrata cavo / No cable entry

100	1480	040X1820-1P15
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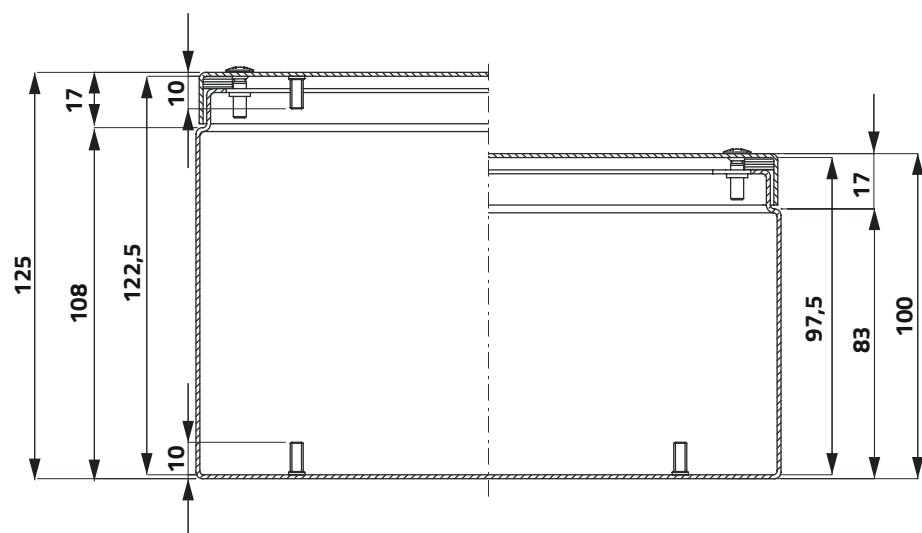
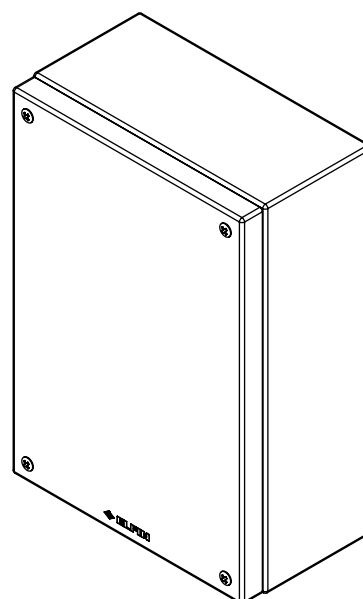
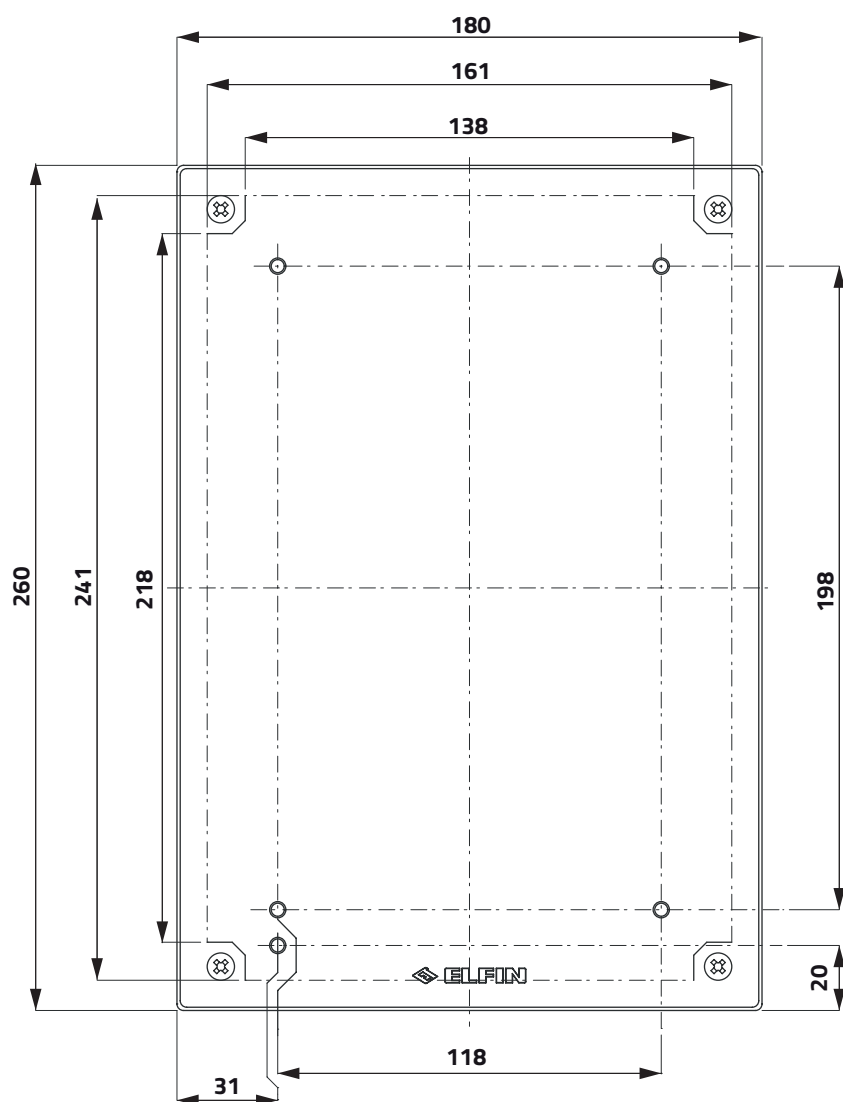
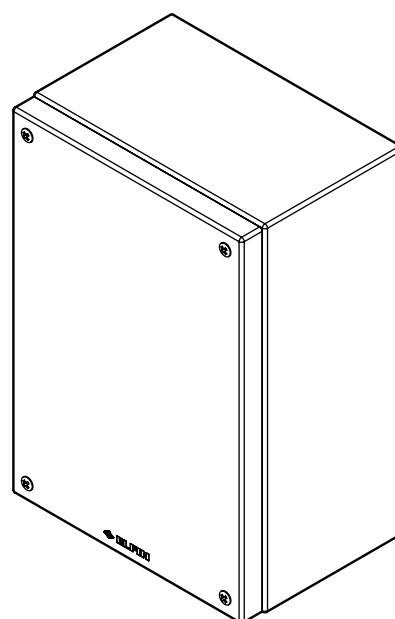
Piastra di fondo / Mounting plate

1,5	235	040P1820
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Scatole acciaio inox 180x260

Stainless steel 180x260



Scatole acciaio inox 180x260

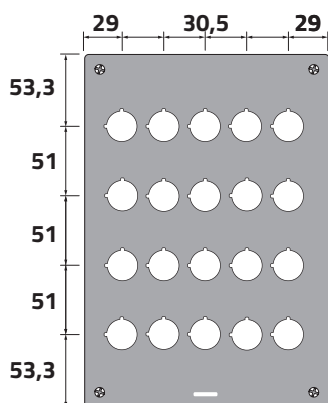
Stainless steel enclosures 180x260



Coperchio senza fori / Undrilled lid

Senza entrata cavo / No cable entry
Senza entrata cavo / No cable entry

h	g	cod
100	1900	040X1826-1
125	2000	040X1826-12



Coperchio con 20 fori Ø 22mm / 20-hole lid Ø 22mm

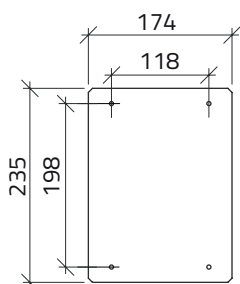
Senza entrata cavo / No cable entry

100	1820	040X1826-1P20
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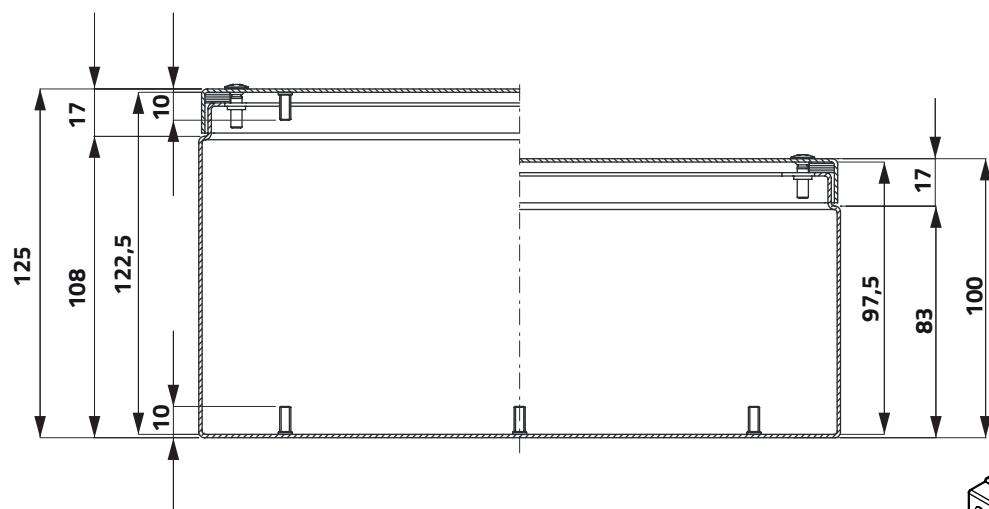
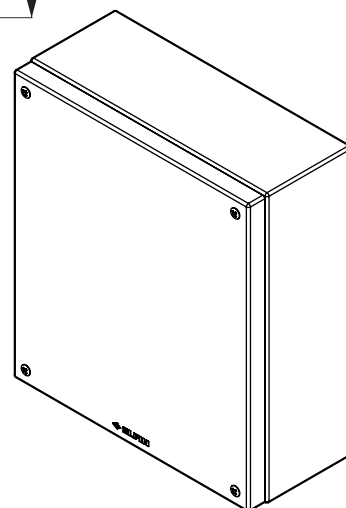
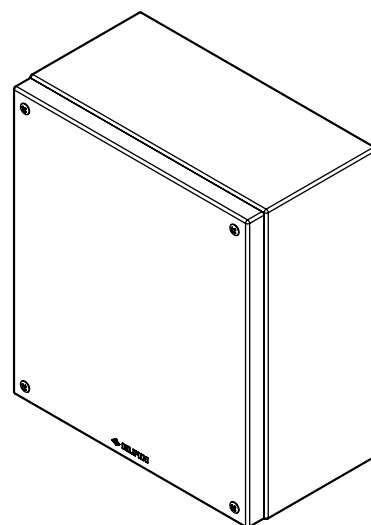
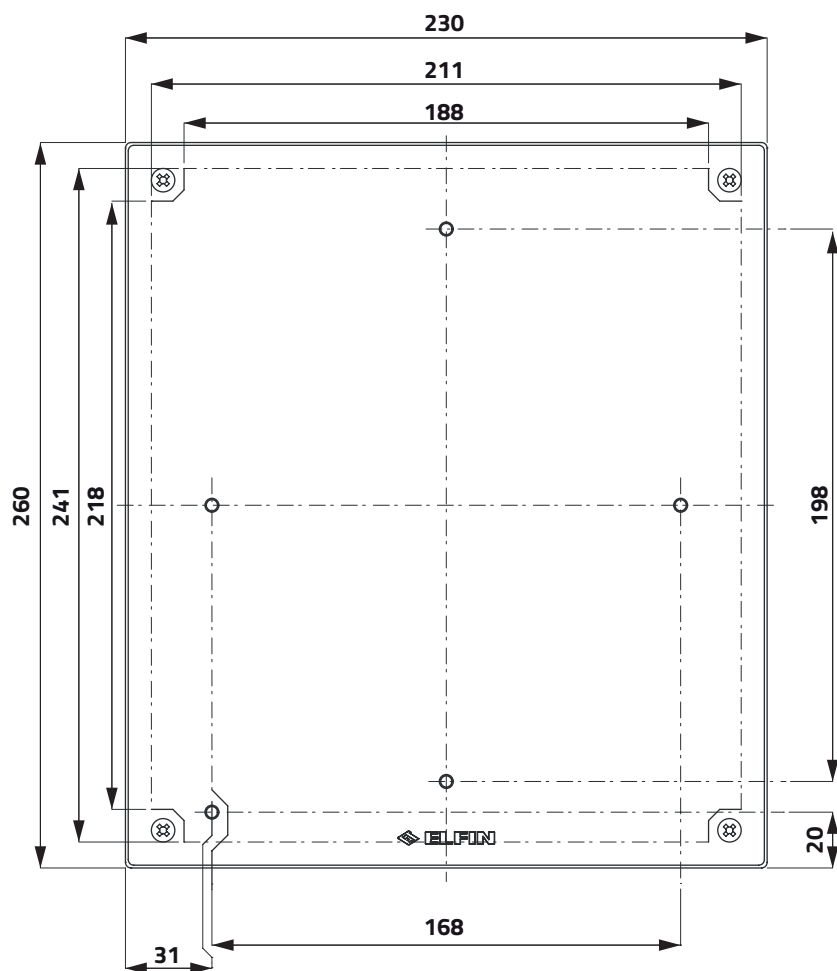
Piastra di fondo / Mounting plate

1,5	318	040P1826
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Scatole acciaio inox 230x260

Stainless steel enclosures 230x260



Scatole acciaio inox 230x260

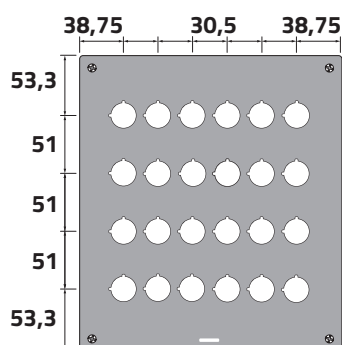
Stainless steel enclosures 230x260



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

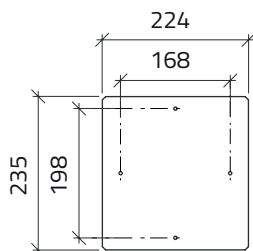
Senza entrata cavo / No cable entry

100	2160	040X2326-1P24
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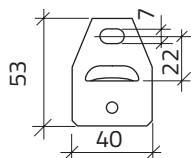


Piastra di fondo / Mounting plate

1,5	410	040P2326
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Accessori Accessories



Coppie staffe acciaio inox Couple of stainless steel brackets

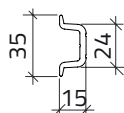
per montaggio a parete / for wall-mounting

g

cod

48

040XSP



Guida / PVC Rail Ø 35

L

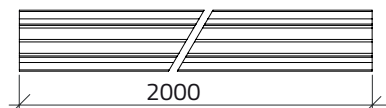
g

cod

2000

760

010GDP







080

**SCATOLE E CASSETTE
PULSANTIERE IN TERMOPLASTICO**

**THERMOPLASTIC PUSH-BUTTON
BOXES, ENCLOSURES**



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'utente in funzione della qualità richiesta.



When choosing the enclosure to be used, the first aspect to consider 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, 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	Smokey grey
Gasket	Polyurethane	Moulded
Screws	Polyamides	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 polyamide	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 glass fiber
- Strong resistance to chemical agents
- Possibility of manufacturing products with excellent finishing
- 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 ⁶ 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 ¹¹	10 ¹⁴
resistività di superficie	10 ¹⁵	257Ω
costante dielettrica 10 ² -10 ⁶ Hz	8-4,6	2,9
fattore di perdita dielettrica 10 ⁶ 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 ³
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

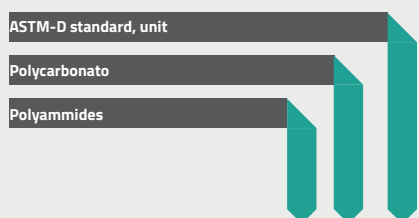
The resistance characteristics of the materials used to produce the 080 series are given in the tables below. When assessing these data, it is advisable to take into account the concentration of chemical agents and temperatures. If the casing is liable to be affected by a mix of chemicals, it is advisable 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



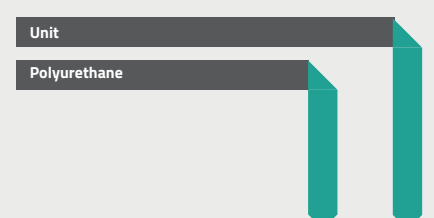
MECHANICAL			
ultimate tensile strenght at 23 °C	77	60	638Mpa
ultimate tensile strenght at 70 °C	41	48	638Mpa
yield elongation ultimate 23 °C	30/300	7/115	638%
bending modulus at 23 °C	1210	2170	790Mpa
fatigue strenght limit, 10 ⁶ cycles, 23 °C	21	7	671Mpa
Izod impact res. with shearing at 23 °C	112	850	256J/m
Izod impact res. with shearing at 40 °C	27	106	256J/m

THERMAL			
melting point	255	220	2133C
coeff. of linear thermal exp. -40°+29° C	7	6,7	696 10 ⁻³ °C
distortion temperature at 1,8MPa	90	135	638C
distortion temperature at 0,5MPa	235	140	638C
max. continuous operative temperatur. (UL)	100	125	C

ELECTRIC			
transverse resistivity 23 °C, 0,2% water	10 ¹¹	10 ¹⁴	257Ωm
surface resistivity		10 ¹⁵	257Ω
dielectric constant 10 ² -10 ⁶ Hz	8-4,6	2,9	150
dielectric loss factor 10 ⁶ Hz	0,1	0,011	150
diel. strenght over a short period(2,3mm)	17	15	149MV/m
arc resistance	10		495S

PHYSICAL			
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/cm³
residual compression	5	%

- Resistant to all concentrations
- Resistant to certain concentrations
- Not resistant
- % Resistant to concentrations up to max %
- NO indication





MONO

Scatole in termoplastico 84x84mm Termhoplastic enclosures 84x84mm

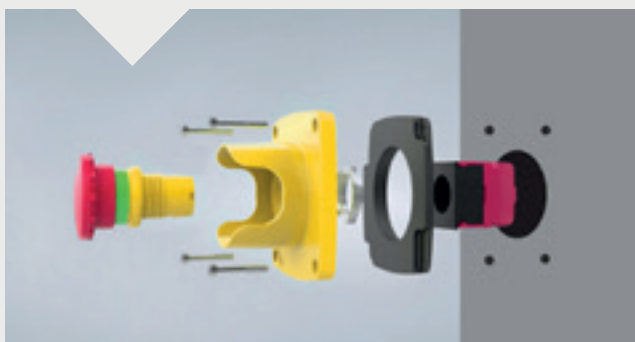
SERIE MONO / SERIES MONO



Pulsante d'emergenza con o senza scatola
Emergency push-button with or without enclosure



Pulsante o selettore con o senza scatola
Push-button or knob selector switch with or without enclosure



Supporto operatore per installazione ad incasso
Wall-mounting support for push-button



Inserimento pressacavo
Cable gland insertion



Installazione ad incasso
Wall-mounting installation

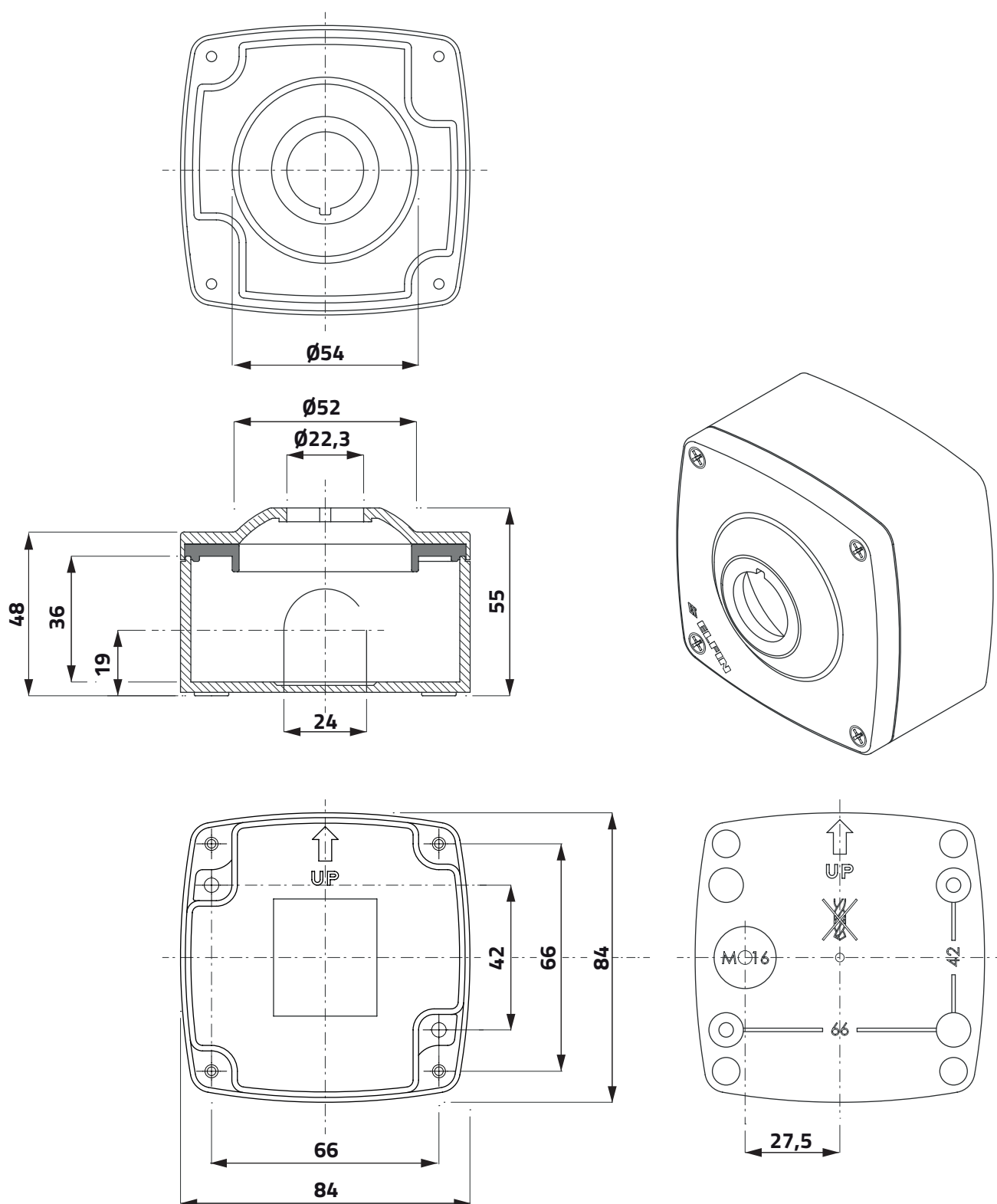


Installazione con scatola
Installation with enclosure

Scatole in termoplastico 84x84mm

Wall-mounting support for pushbutton 84x84mm

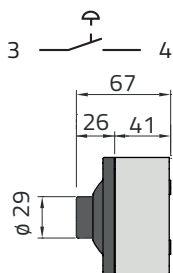
SERIE MONO / SERIES MONO



Scatole in termoplastico 84x84mm

Thermoplastic enclosures 84x84mm

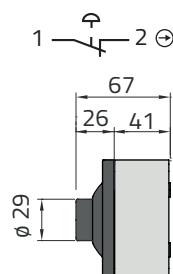
SERIE MONO / SERIES MONO



Pulsante con guardia verde Ø 22mm con scatola
Green guarded push-button Ø 22mm with enclosure

67

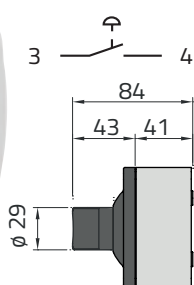
142

080F0808-5PV

Pulsante con guardia rosso con scatola
Red guarded push-button Ø 22mm with enclosure

67

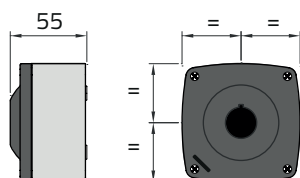
142

080F0808-5PR

Selettore a manopola 2 posizioni nero con scatola
Black knob selector switches 2 position with enclosure

84

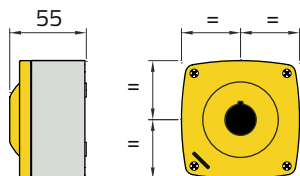
150

080F0808-5SM

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

55

125

080F0808-5P1

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

55

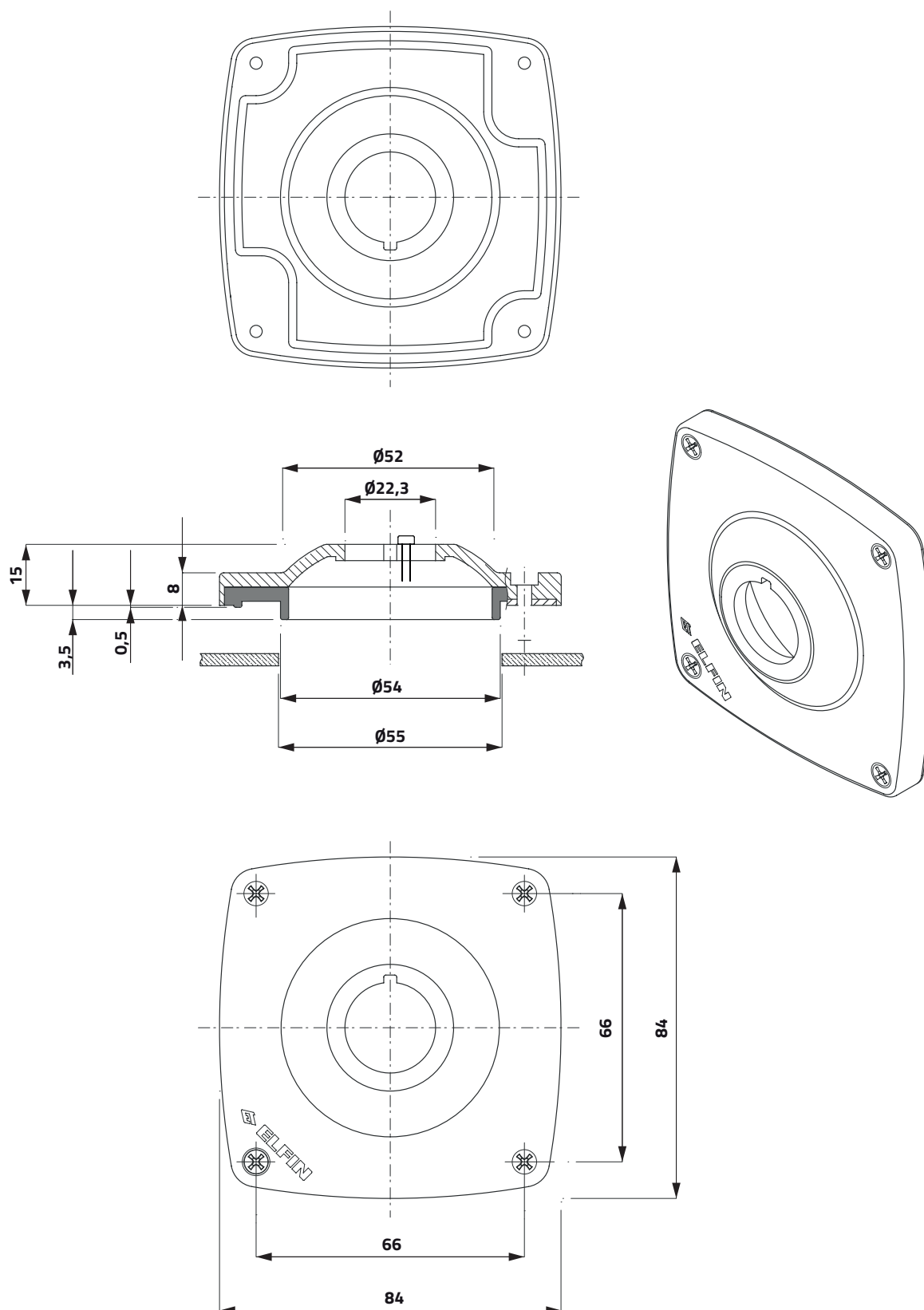
125

080F0808-5GP1

Supporto per installazione ad incasso 84x84mm

Thermoplastic enclosures 84x84mm

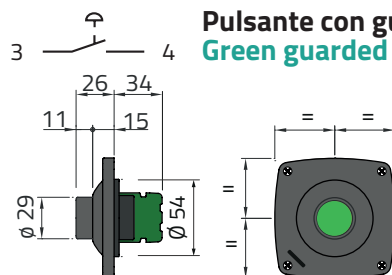
SERIE MONO / SERIES MONO



Supporto per installazione ad incasso 84x84mm

Wall-mounting support for pushbutton 84x84mm

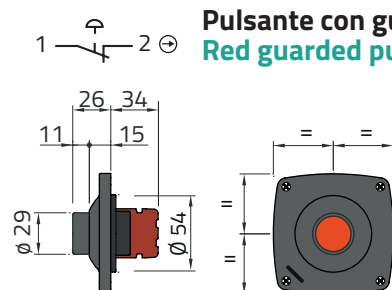
SERIE MONO / SERIES MONO



Pulsante con guardia verde Ø 22mm ad incasso
Green guarded push-button Ø 22mm wall-mounting

72

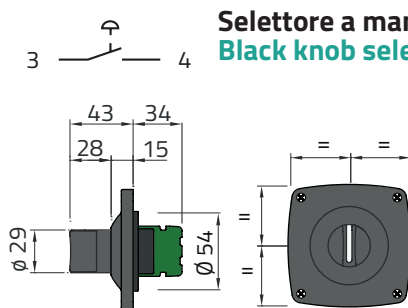
080F0808-PV



Pulsante con guardia rosso ad incasso
Red guarded push-button Ø 22mm wall-mounting

72

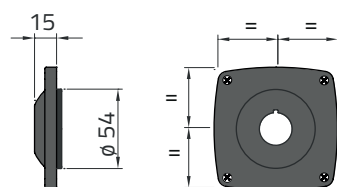
080F0808-PR



Selettore a manopola 2 posizioni nero ad incasso
Black knob selector switches 2 position wall-mounting

80

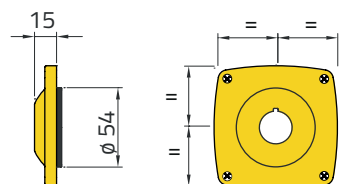
080F0808-SM



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

46

080F0808-P1



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

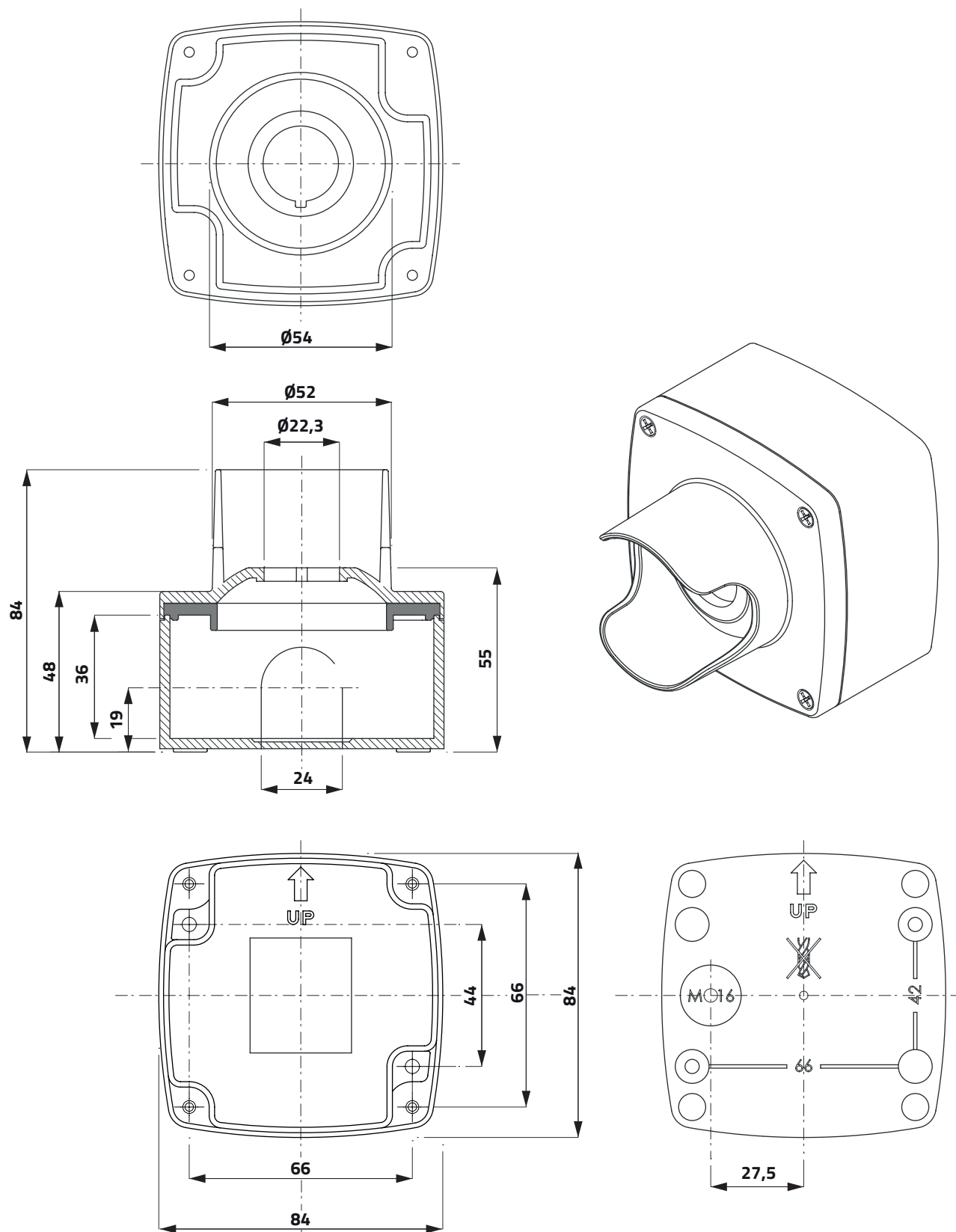
46

080F0808-GP1

Pulsante di emergenza con scatola 84x84mm

Emergency stop push-button with enclosure 84x84mm

SERIE MONO / SERIES MONO



Pulsante di emergenza con scatola 84x84mm

Emergency stop push-button with enclosure 84x84mm

SERIE MONO / SERIES MONO



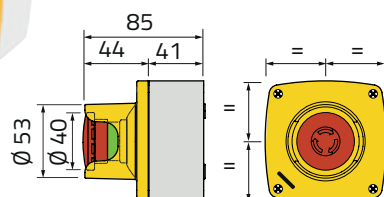
Pulsante rosso a fungo Ø40 con scatola
Red mushroom push-button Ø40 with enclosure

sgancio rotazione / twist release

85

165

080F0808-8GF4AP



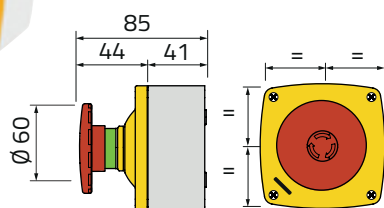
Pulsante rosso a fungo Ø60 con scatola
Red mushroom push-button Ø60 with enclosure

sgancio rotazione / twist release

85

166

080F0808-5GFFA



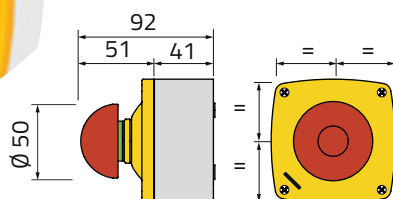
Pulsante rosso a fungo sferico Ø50 con scatola
Red palm push-button Ø50 with enclosure

momentaneo / momentary

92

145

080F0808-5GF5M



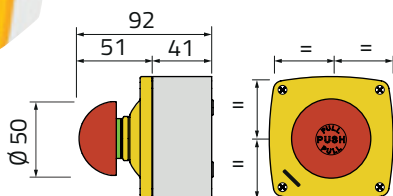
Pulsante rosso a fungo sferico Ø50 con scatola
Red palm push-button Ø50 with enclosure

sgancio trazione / pull release

92

145

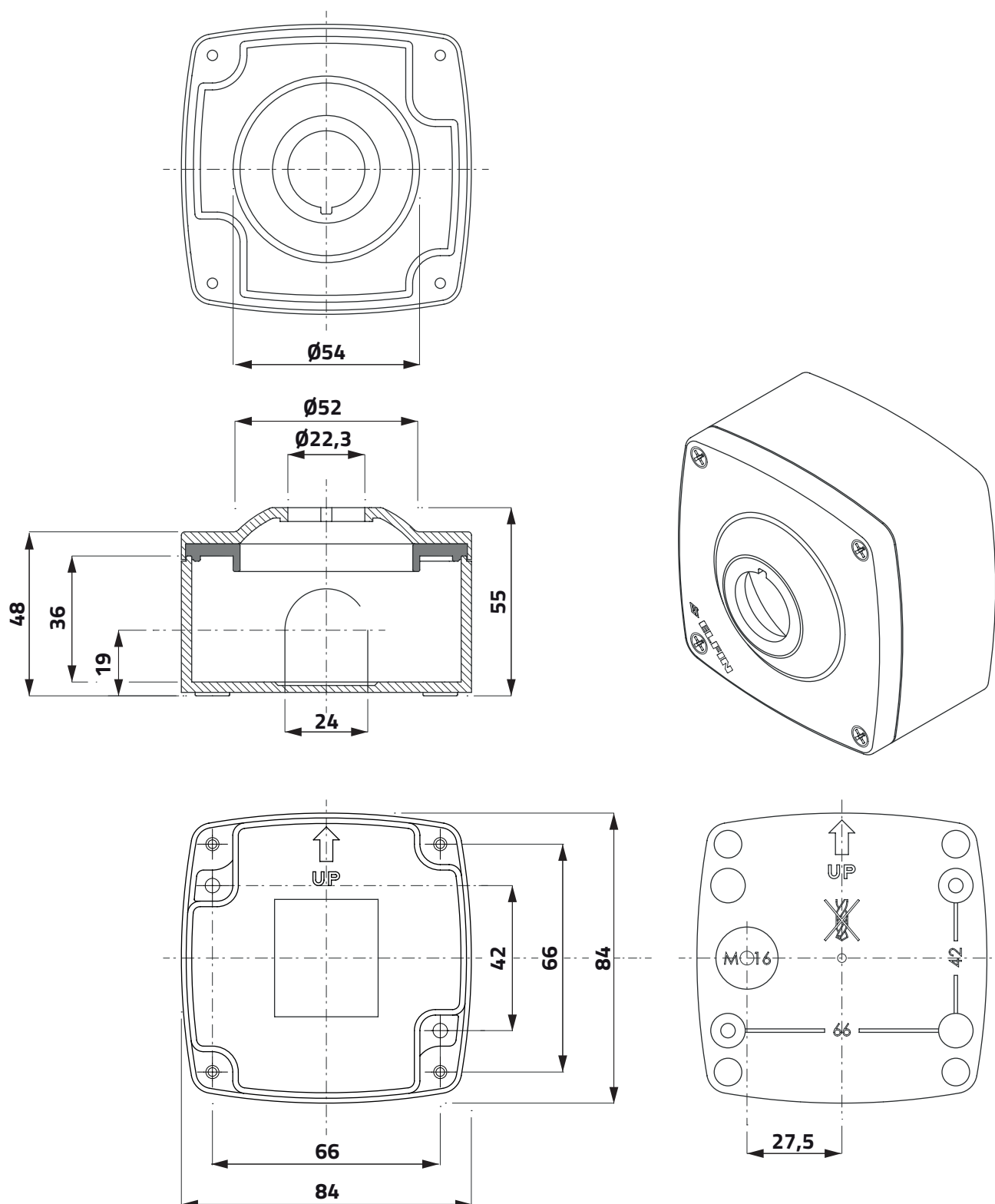
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Pulsante di emergenza con scatola 84x84mm

Emergency stop push-button with enclosure 84x84mm

SERIE MONO / SERIES MONO



Pulsante di emergenza con scatola 84x84mm

Emergency stop push-button with enclosure 84x84mm

SERIE MONO / SERIES MONO





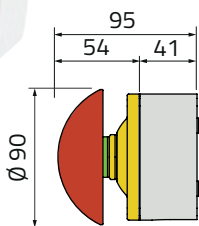
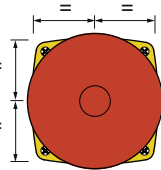
Pulsante rosso a fungo sferico Ø90 con scatola
Red palm push-button Ø90 with enclosure

momentaneo / momentary

h g

95 183

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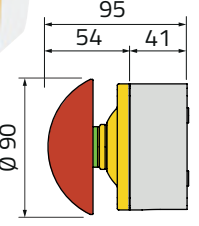
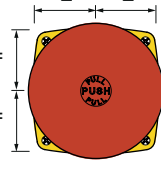


Pulsante rosso a fungo sferico Ø90 con scatola
Red palm push-button Ø90 with enclosure

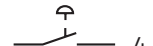
sgancio trazione / pull release

95 183

080F0808-5GF9T



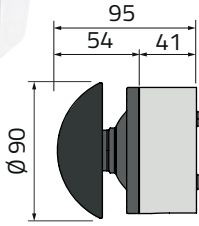
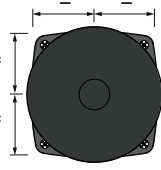


Pulsante nero a fungo sferico Ø90 con scatola
Black palm push-button Ø90 with enclosure

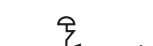
momentaneo / momentary

95 183

080F0808-5F9M



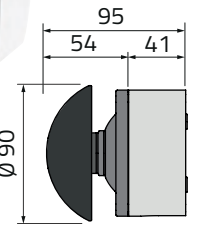
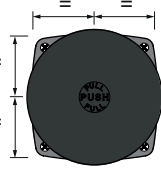


Pulsante nero a fungo sferico Ø90 con scatola
Black palm push-button Ø90 with enclosure

sgancio trazione / pull release

95 183

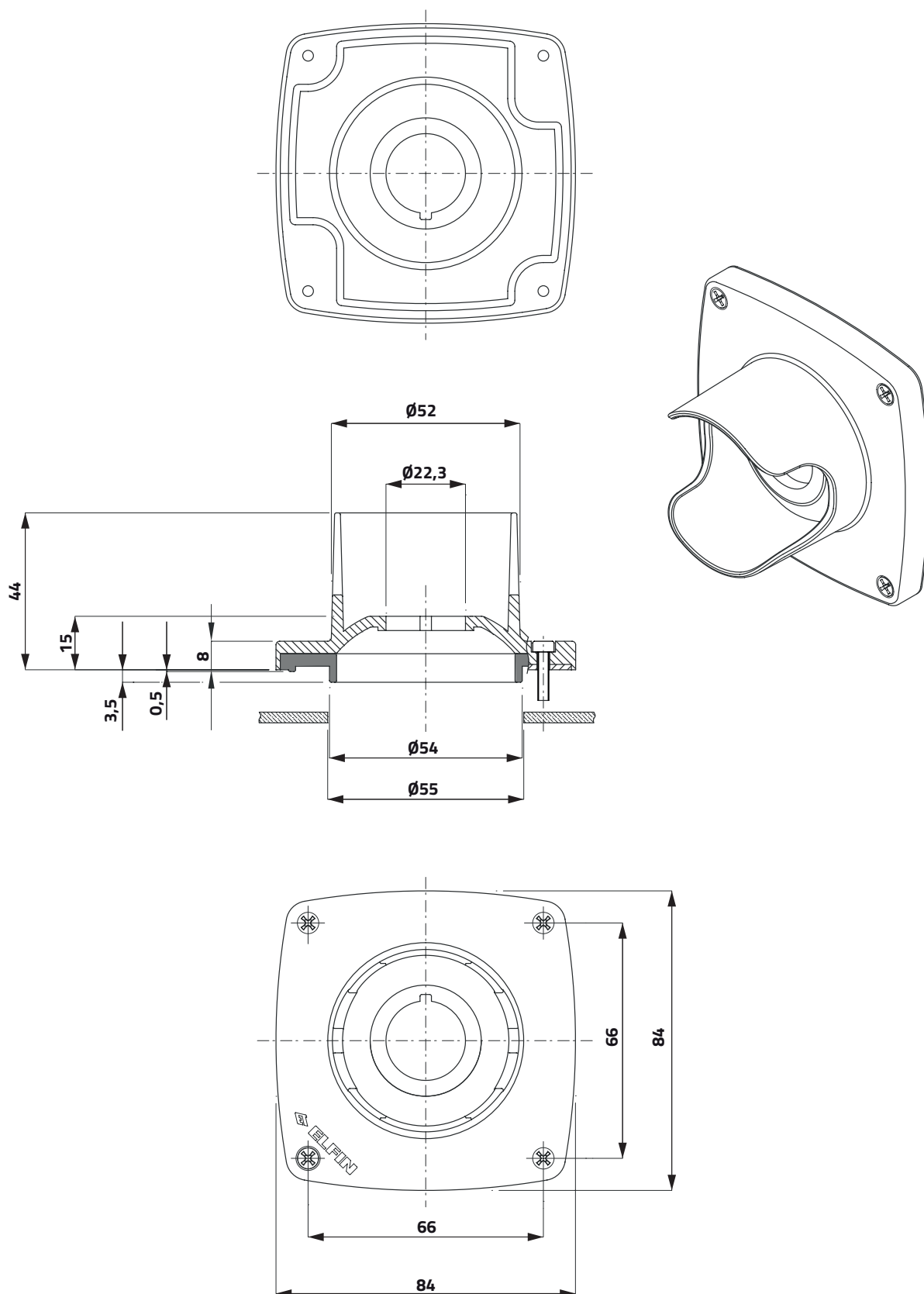
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Pulsante di emergenza ad incasso 84x84mm

Wall-mounting emergency stop push-button 84x84mm

SERIE MONO / SERIES MONO



Pulsante di emergenza ad incasso 84x84mm

Wall-mounting emergency stop push-button 84x84mm

SERIE MONO / SERIES MONO



Pulsante rosso a fungo Ø40 ad incasso
Red push-button Ø40 wall-mounting

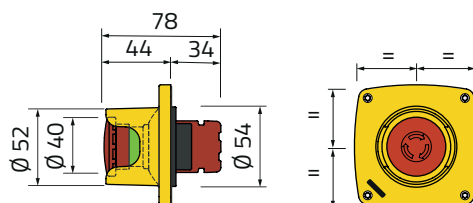
sgancio trazione / pull realase

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84

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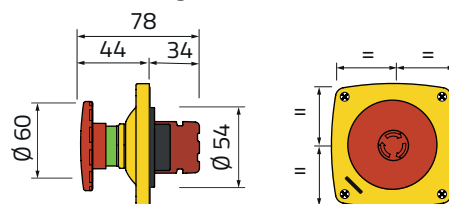


Pulsante rosso a fungo Ø60 ad incasso
Red mushroom push-button Ø60 wall-mounting

sgancio rotazione / twist realase

84

080F0808-GFFA

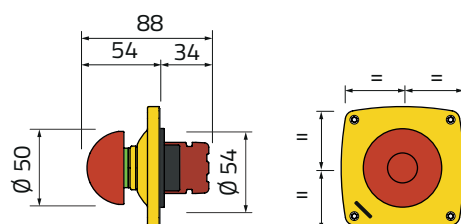


Pulsante rosso a fungo sferico Ø50 ad incasso
Red palm push-button Ø50 wall-mounting

momentaneo / momentary

84

080F0808-GF5M

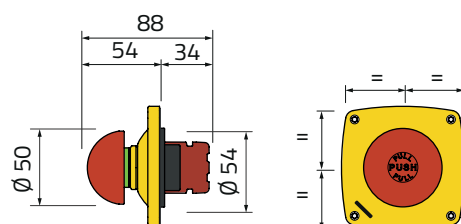


Pulsante rosso a fungo sferico Ø50 ad incasso
Red palm push-button Ø50 wall-mounting

sgancio trazione / pull realase

84

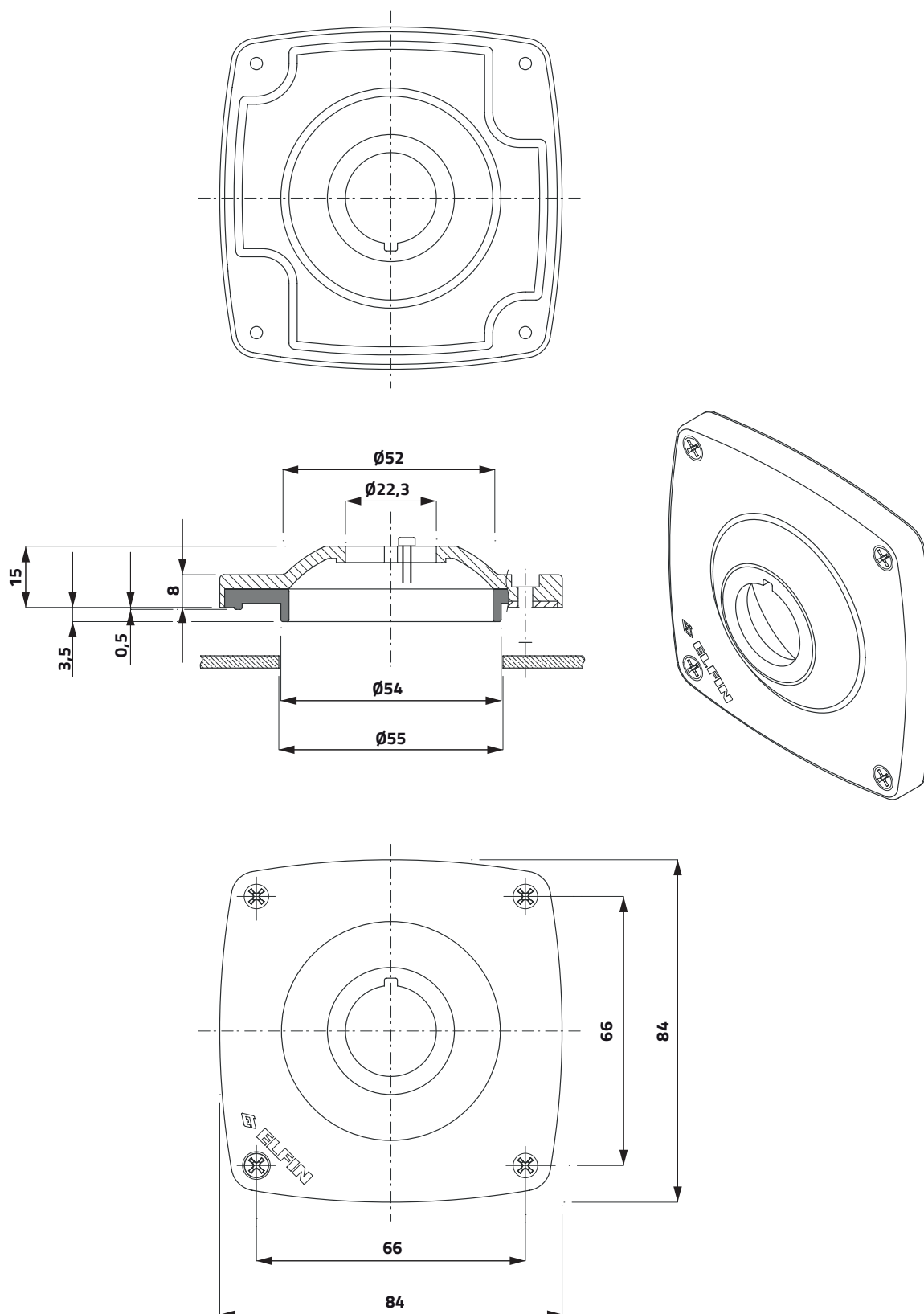
080F0808-GF5T



Pulsante di emergenza ad incasso 84x84mm

Wall-mounting emergency stop push-button 84x84mm

SERIE MONO / SERIES MONO



Pulsante di emergenza ad incasso 84x84mm

Wall-mounting emergency stop push-button 84x84mm

SERIE MONO / SERIES MONO

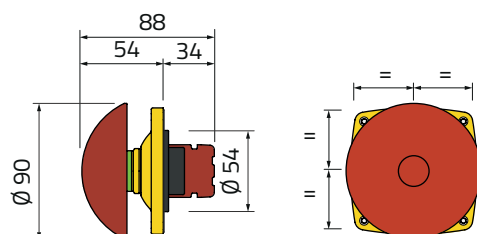


Pulsante rosso a fungo sferico Ø90 ad incasso
Red palm push-button Ø90 wall-mounting

momentaneo / momentary

102

080F0808-GF9M

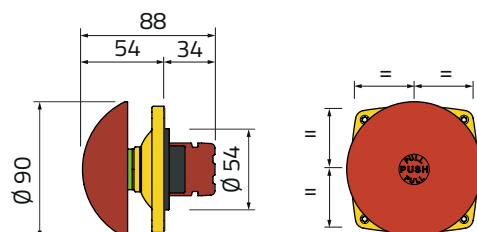
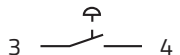


Pulsante rosso a fungo sferico Ø90 ad incasso
Red palm push-button Ø90 wall-mounting

sgancio trazione / pull release

102

080F0808-GF9T

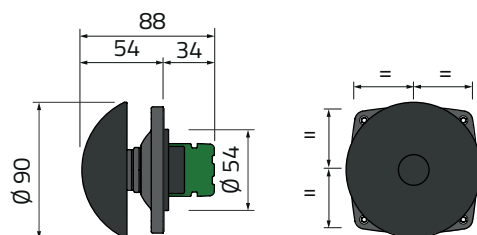
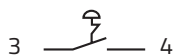


Pulsante nero a fungo sferico Ø90 ad incasso
Black palm push-button Ø90 wall-mounting

momentaneo / momentary

102

080F0808-F9M

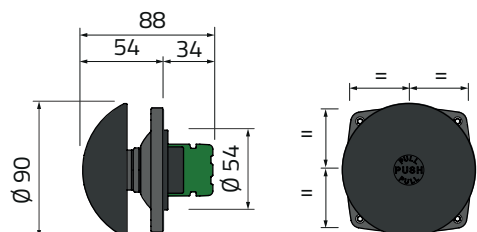


Pulsante nero a fungo sferico Ø90 ad incasso
Black palm push-button Ø90 wall-mounting

sgancio trazione / pull release

102

080F0808-F9T





ERGO

Scatole pulsantiere ergonomiche

Ergonomic push-button enclosures

SERIE ERGO / SERIES ERGO

INNOVATIVA E RIVOLUZIONARIA

La serie Ergo rivoluziona il concetto di pulsantiera grazie ad un avanzato studio ergonomico che ne esalta la praticità di utilizzo.

LA FORMA

L'innovativa e sinuosa forma permette all'utilizzatore una presa agevole e sicura, in modo che l'attuazione dei comandi, sia comoda e priva di sollecitazioni eccessive al polso e alla mano.

PRATICITÀ DI UTILIZZO

Adatta per azionamenti ripetuti:
Il maggior comfort raggiunto durante l'utilizzo, soprattutto negli azionamenti ripetuti frequentemente, riduce la possibilità di patologia alla mano, rendendo obsoleta la consueta forma di prisma a base rettangolare.

BREVETTO PER MODELLO DI UTILITÀ

Una nuova forma di prodotto industriale che dà al prodotto stesso una particolare efficacia, comodità di applicazione e di impiego. I modelli di utilità sono tutelati da una specifica forma di brevetto.

CARATTERISTICHE

Disponibile in due colorazioni	Grigio RAL 7016 / Grigio RAL 7035 Giallo RAL 1003 / Grigio RAL 7035
Disponibili in diverse dimensioni	90x90 90x160 90x225 90x290
Forma sinuosa	Impugnatura ergonomica
Disponibile in diverse forature	1 foro 2 fori 4 fori 6 fori 8 fori

ACCESSORI

Pulsanti comando e segnalazione Ø 22	
Accessoriabile con etichette adesive:	Il coperchio è dotato di apposito basso rilievo dedicato ad accogliere un'ampia scelta di targhette indicatrici adesive, realizzabili anche in forma personalizzata

INNOVATIVE AND REVOLUTIONARY

Series ERGO revolutionises the concept of push-button box thanks to an advanced study of ergonomics, which maximises its usability.

THE SHAPE

The innovative and sinuous shape allows to an easy and safe grip, making the operation of the control comfortable and free of excessive stress to the wrist and hand.

CONVENIENCE OF USE

Recommended for repeated operations.
The high level of comfort achieved during use, especially in frequently repeated operations, reduces the possibility of hand pathologies, making the usual rectangular-based box obsolete.

UTILITY MODEL PATENT

A new shape for a commonly used industrial equipment that gives the product a particular efficacy, convenience of application and use. Utility models are protected by a specific form of patent.

FEATURES

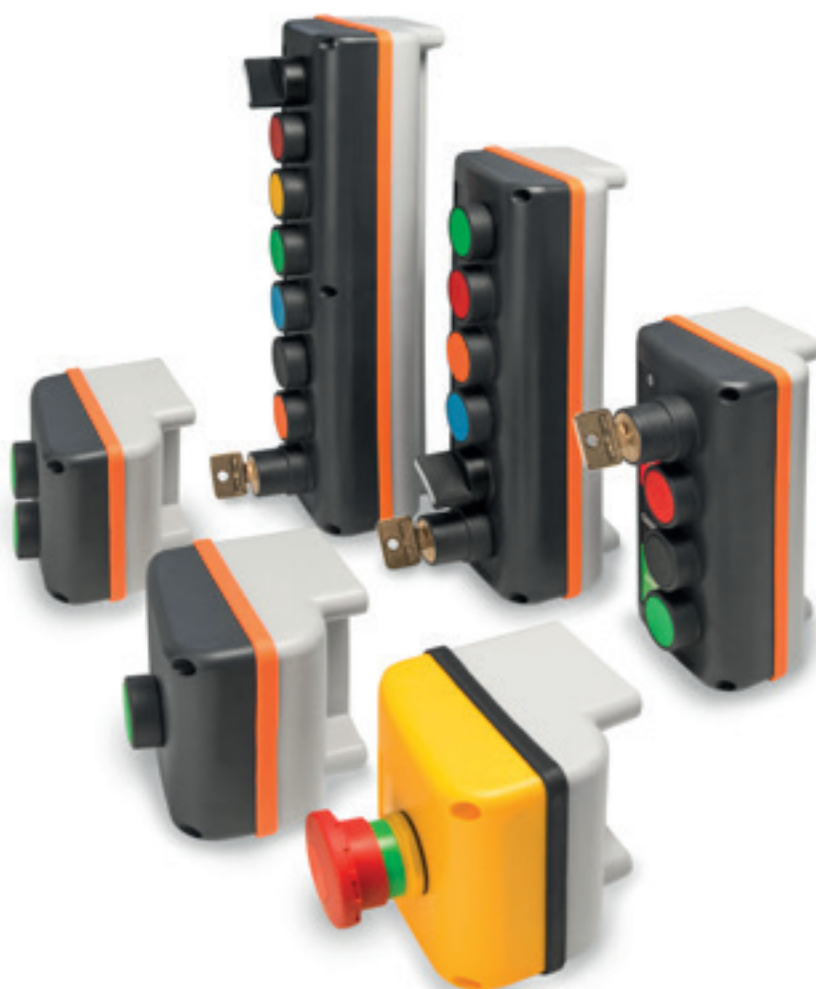
Available in two colors	Grey RAL 7016 / Grey RAL 7035 Yellow RAL 1003 / Grey RAL 7035
Available in different dimensions	90x90 90x160 90x225 90x290
Sinuous shape	Ergonomic grip
Available in different perforations	1 hole 2 holes 4 holes 6 holes 8 holes

ACCESSORIES

Command and Signalling SM2 Ø 22	
Can be accessorized with labels	The lid has a special low relief dedicated to accommodate adhesive indicator plates, selectable among a wide range of standard labels, or completely customizable.

Scatole pulsantiere ergonomiche Ergonomic push-button enclosures

SERIE ERGO / SERIES ERGO



Adozione di una colorazione armonizzata tra coperchio e scatola con due marcate tonalità di grigio. A complemento viene offerta anche una versione con coperchio giallo per realizzare una possibile postazione di emergenza.

Adoption of a harmonized coloring between the lid and the box with two marked shades of grey, a version with yellow lid is also available for the eventual realization of an emergency situation.

Scatole pulsantiere ergonomiche

Ergonomic push-button enclosures

SERIE ERGO / SERIES ERGO

Caratteristiche tecniche

Omologazioni	CE
Conformità agli standard	IEC-60529, UL508A, UL50, UL50E, CSA C22.2 No.14-13
Limiti di temperatura	-25° ÷ +70°C
Grado di protezione	IP66 - IP69K (IEC-EN60529 - DIN40050)
Protezione contro gli urti	IK07 (IEC-EN62262)
Protezione contro gli agenti atmosferici-uv	Buona
Processo di produzione	Stampaggio ad iniezione
Guarnizione	Elastomero termoplastico TPE
Materiale viti	Acciaio inox AISI 304
Tipo viti	Torx T15 testa scanalata
Coppia di serraggio	0.8 ÷ 1.2Nm (7.1 ÷ 10.6 Lb-in)
Categoria di sovratensione	Classe II (IEC-EN61140)
Senza metalli pesanti	si
PVC-free	si
Silicon-free	si
Halogen-free	si
Comportamento alla combustione	HB (UL94)
Comportamento alla combustione	650° (EN-IEC 60695-2-11)
Involucro	PC + C/V
Fitted for outdoor application	si
Operatori	Da 1 fino a 8 Ø 22
Periodo di garanzia	18 mesi

Technical data

Approvals	CE
Compliance with standards	IEC-60529, UL508A, UL50, UL50E, CSA C22.2 No.14-13
Operating temperatures	-25° ÷ +70°C
Protection degree	IP66 - IP69K (IEC-EN60529 - DIN40050)
Protection against impact	IK07 (IEC-EN62262)
Protection against uv-agents	Good
Manufacturing process	Injection moulding
Gasket material	TPE thermoplastic elastomer
Screw material	Stainless steel AISI 304
Screw type	Torx T15 slotted head type
Tightening torque	0.8 ÷ 1.2Nm (7.1 ÷ 10.6 Lb-in)
Overvoltage category	Class II (IEC-EN61140)
Heavy metal-free	yes
PVC-free	yes
Silicon-free	yes
Halogen-free	yes
Combustion behaviour	HB (UL94)
Combustion behaviour	650° (EN-IEC 60695-2-11)
Casing	PC + C/V
Fitted for outdoor application	yes
Operators	From 1 to 8 Ø22
Warranty period	18 months

SCATOLE PULSANTIERE IN TERMOPLASTICO

Scatole pulsantiere ergonomiche Ergonomic push-button enclosures

SERIE ERGO / SERIES ERGO

PAGINA IN COSTRUZIONE



Scatole pulsantiere ergonomiche Ergonomic push-button enclosures

SERIE ERGO / SERIES ERGO



Forma ergonomica, senza soluzione di continuità,
guarnizione perimetrale

Ergonomic shape, seamless, perimeter gasket



Brevetto per modello di utilità

Utility model patent



Prevenzione contro l'infiammazione del tunnel carpale

Prevention of carpal tunnel syndrome



Possibilità di applicazione etichette

Possible application of labels



Possibilità di inserire supporti
per il cablaggio o schede elettroniche

Possible installation of supports for wiring
or electronic boards



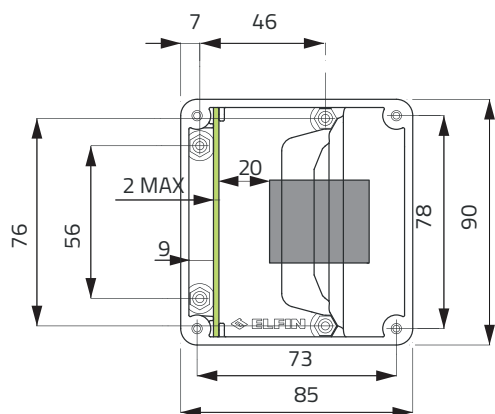
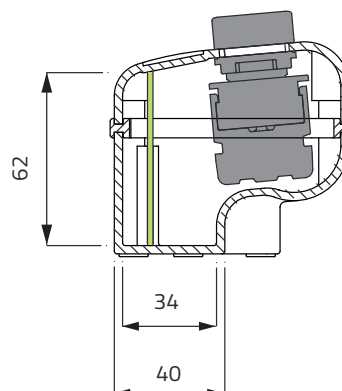
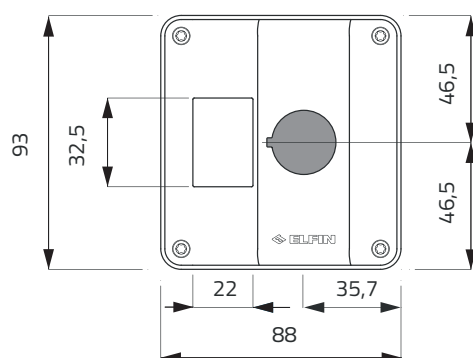
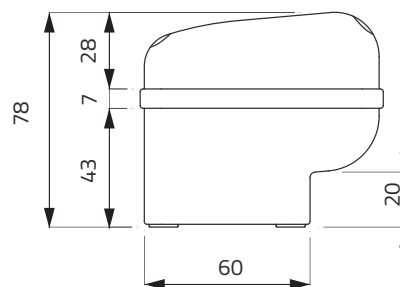
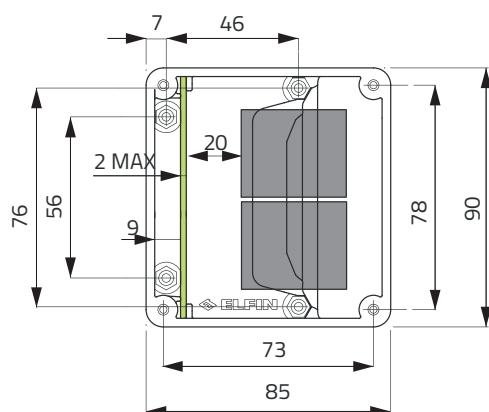
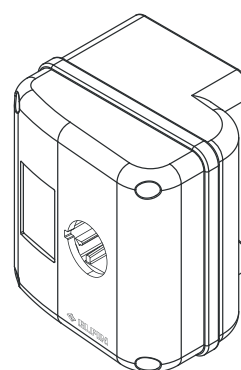
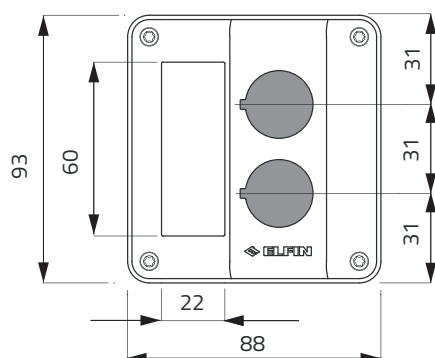
Indicata per azionamenti ripetuti

Recommended for repeated operations

Scatole pulsantiere ergonomiche

Ergonomic push-button enclosures

SERIE ERGO / SERIES ERGO



Scatole pulsantiere ergonomiche

Ergonomic push-button enclosures

SERIE ERGO / SERIES ERGO

Senza operatore / Without operator

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

Termoplastica, antiurto

Thermoplastic, shock absorbing

h

g

cod

90

130

080E90-P1

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

Termoplastica, antiurto

Thermoplastic, shock absorbing

90

130

080E90-GP1

**Coperchio con 2 fori Ø 22mm / 2-holes lid Ø 22mm**

Termoplastica, antiurto

Thermoplastic, shock absorbing

90

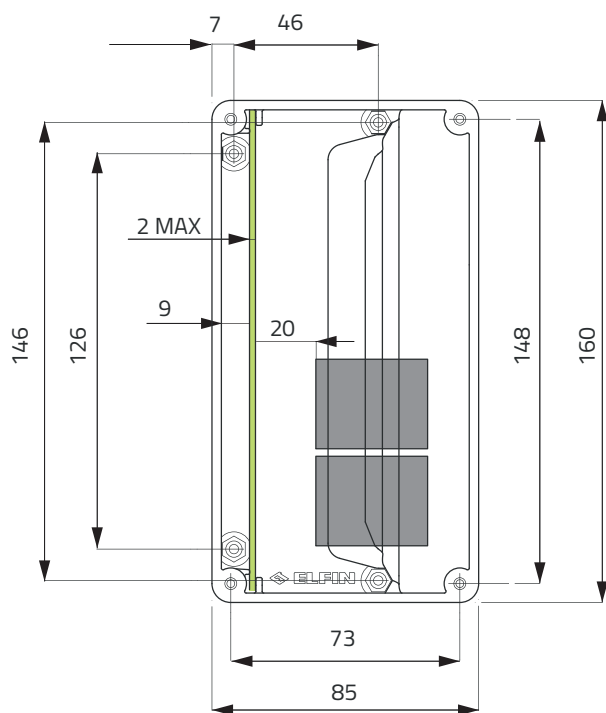
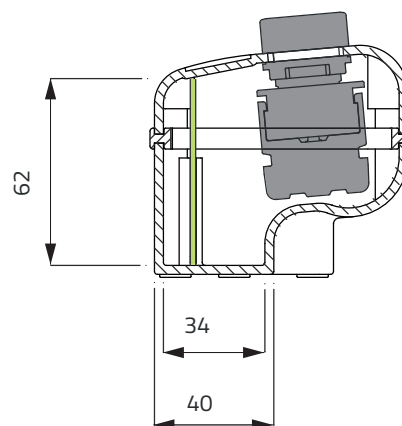
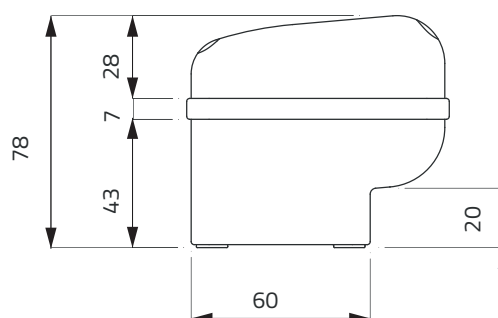
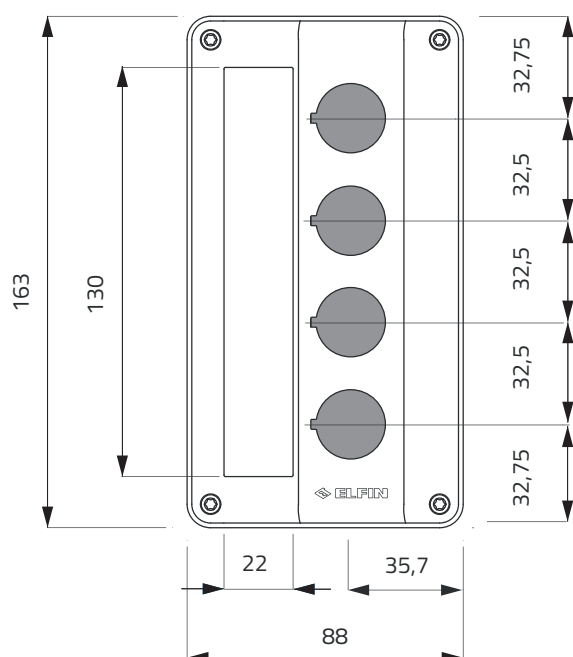
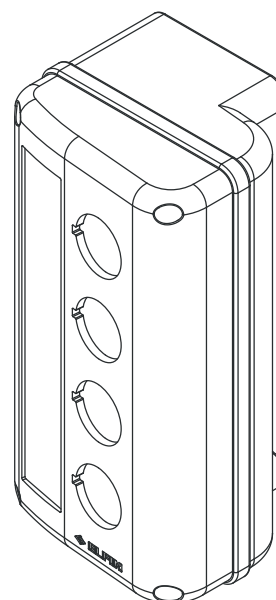
130

080E90-P2

Scatole pulsantiere ergonomiche

Ergonomic push-button enclosures

SERIE ERGO / SERIES ERGO



Scatole pulsantiere ergonomiche Ergonomic push-button enclosures

SERIE ERGO / SERIES ERGO



Senza operatore / Without operator

Coperchio con 4 fori Ø 22mm / 4-holes lid Ø 22mm

Termoplastica, antiurto

Thermoplastic, shock absorbing

h

g

cod

90

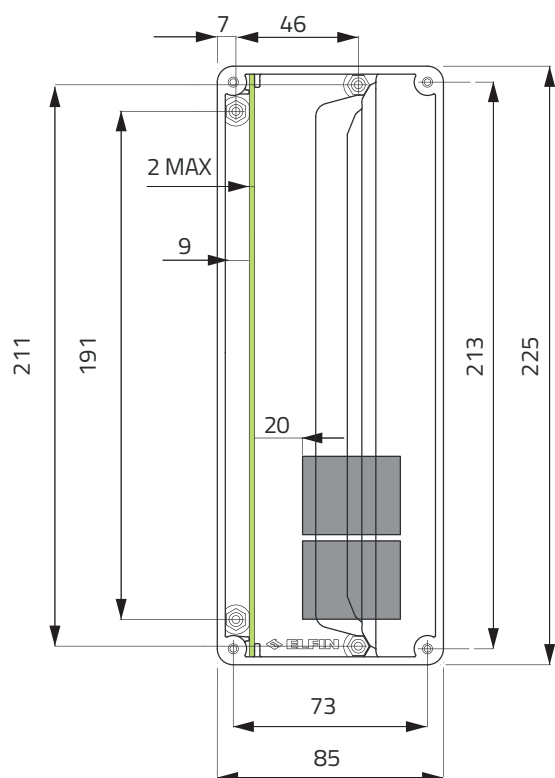
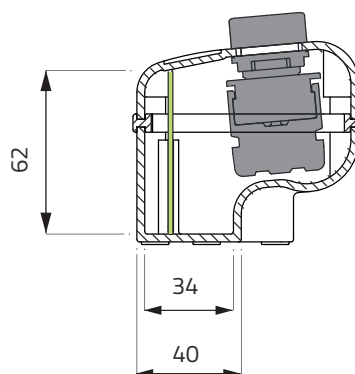
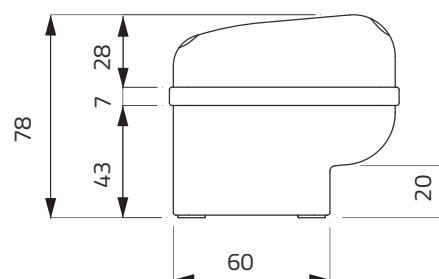
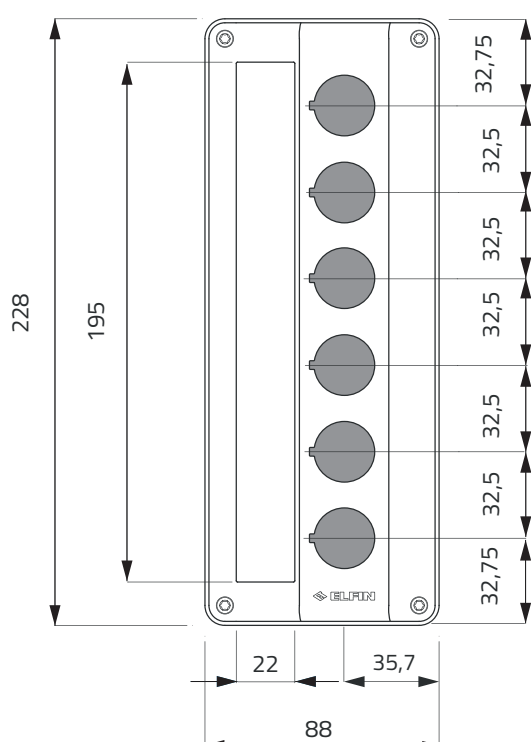
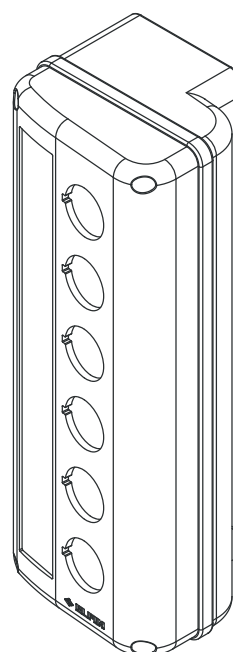
182

080E160-P4

Scatole pulsantiere ergonomiche

Ergonomic push-button enclosures

SERIE ERGO / SERIES ERGO



Scatole pulsantiere ergonomiche Ergonomic push-button enclosures

SERIE ERGO / SERIES ERGO



Senza operatore / Without operator

Coperchio con 6 fori Ø 22mm / 6-holes lid Ø 22mm

Termoplastica, antiurto

Thermoplastic, shock absorbing

h

g

cod

90

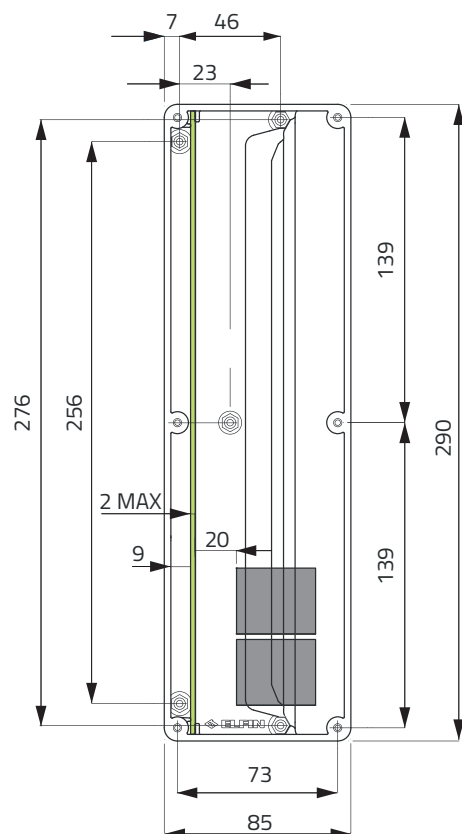
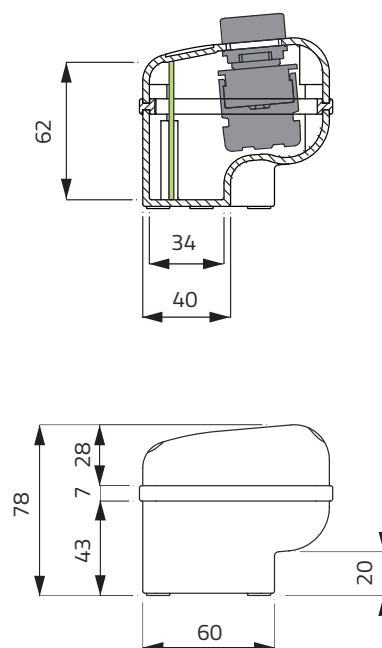
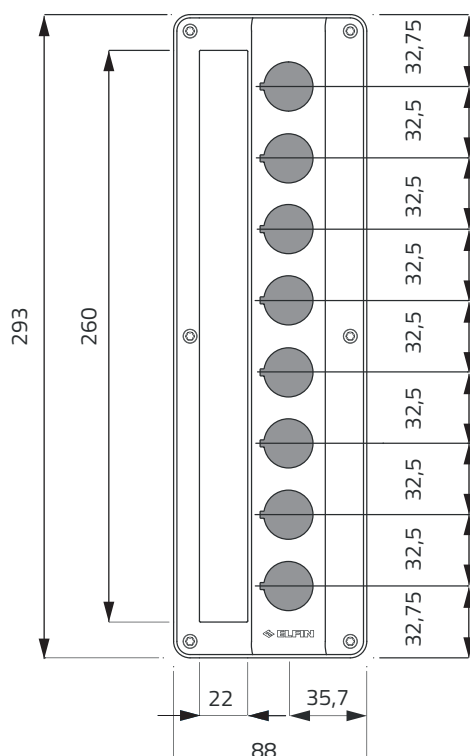
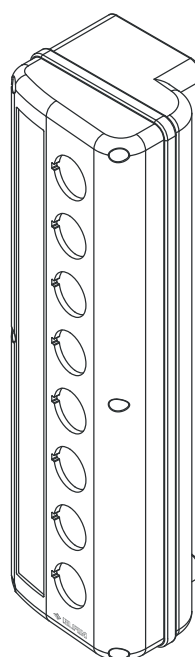
225

080E225-P6

Scatole pulsantiere ergonomiche

Ergonomic push-button enclosures

SERIE ERGO / SERIES ERGO



Scatole pulsantiere ergonomiche

Ergonomic push-button enclosures

SERIE ERGO / SERIES ERGO

Senza operatore / Without operator



h

g

cod

Coperchio con 8 fori Ø 22mm / 8-holes lid Ø 22mm

Termoplastica, antiurto

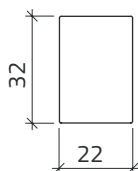
Thermoplastic, shock absorbing

90

290

080E290-P8

Targhette adesive 22x32 mm / Adhesive labels 22x32 mm

**Senza testo / Blank**

Quantità per confezione n° 10 / Pack quantity n° 10

● Nero / Black

● Giallo / Yellow

080ET32N

080ET32G

**Simbolo / Symbol**

Quantità per confezione n° 10 / Pack quantity n° 10



080E33T



080E41T



080E42T



080E43T



080E44T



080E45T



080E46T



080E47T



080E48T



080E67T



080E68T



080E72T



080E76T



080E78T



080E144T





SMOOTH

SCATOLE PULSANTIERE IN TERMOPLASTICO

Scatole pulsantiere in ABS

ABS push-button enclosures

SERIE SMOOTH / SERIES SMOOTH



Scatole pulsantiere in ABS

ABS push-button enclosures

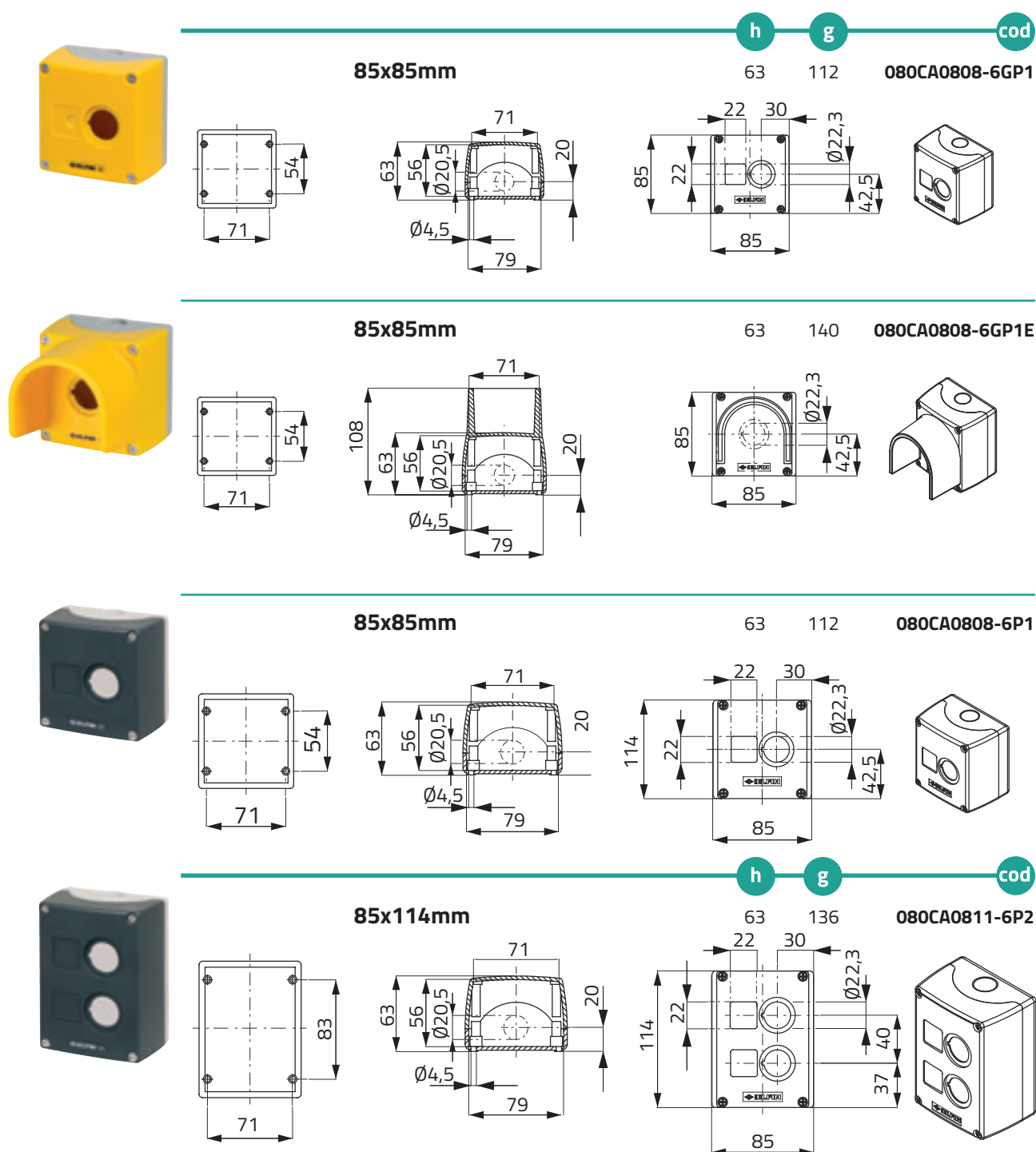
SERIE SMOOTH / SERIES SMOOTH

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°



Scatole pulsantiere in ABS

ABS push-button enclosures

SERIE SMOOTH / SERIES SMOOTH

	<p>85x154mm</p>	h	g	cod	<p>168</p> <p>080CA0815-6P3</p>
	<p>85x194mm</p>	h	g	cod	<p>205</p> <p>080CA0819-6P4</p>
	<p>85x234mm</p>	h	g	cod	<p>263</p> <p>080CA0823-6P5</p>
	<p>85x274mm</p>	h	g	cod	<p>282</p> <p>080CA0827-6P6</p>



Scatole pulsantiere complete in ABS 85x85mm

ABS assembled push-button enclosures 85x85mm

SERIE SMOOTH / SERIES SMOOTH

g

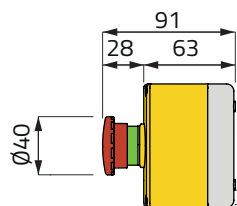
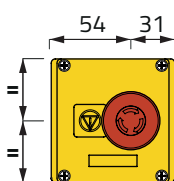
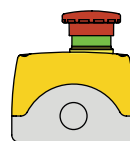
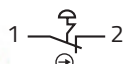
cod

**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

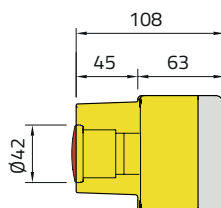
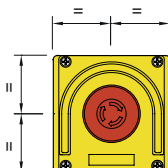
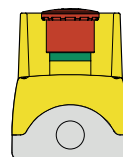
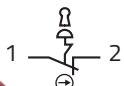
080CA0808-6GA

**Coperchio con operatore Ø 22mm / Lid with operator Ø 22mm**

Pulsante fungo rosso sgancio a rotazione Ø42
Red mushroom push-button, twist release Ø42

230

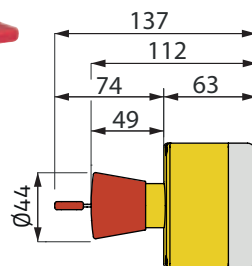
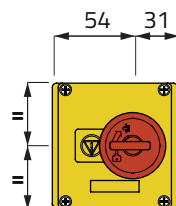
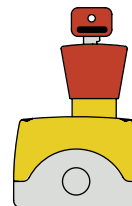
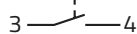
080CA0808-6GEAS

**Coperchio con operatore Ø 22mm / Lid with operator Ø 22mm**

Pulsante fungo rosso sgancio chiave Ø44
Red mushroom push-button, key release Ø44

200

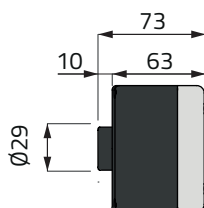
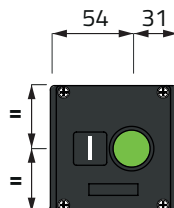
080CA0808-6GFC

**Coperchio con operatore Ø 22mm / Lid with operator Ø 22mm**

Pulsante guardia verde, blocco contatto 1NO
Green guarded push-button, 1NO contact block

150

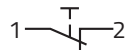
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Scatole in pulsantiera complete in ABS 85x85mm

ABS assembled push-button enclosures 85x85mm

SERIE SMOOTH / SERIES SMOOTH

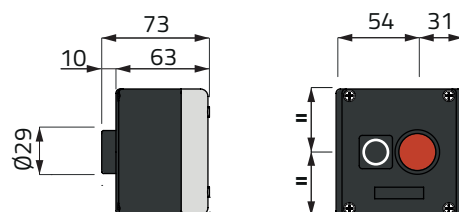


Coperchio con operatore Ø 22mm / Lid with operator Ø 22mm

Pulsante guardia rosso
blocco contatto 1NC
Red guarded push-button
1NC contact block

150

080CA0808-6PR

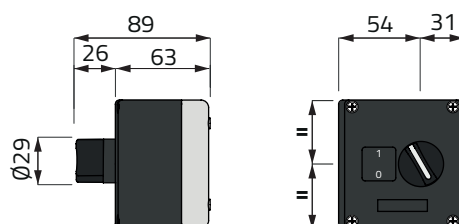


Coperchio con operatore Ø 22mm / Lid with operator Ø 22mm

Selettore a manopola 2 posizioni
blocco contatto 1NO
2 position knob selector switch
1NO contact block

157

080CA0808-6SMA

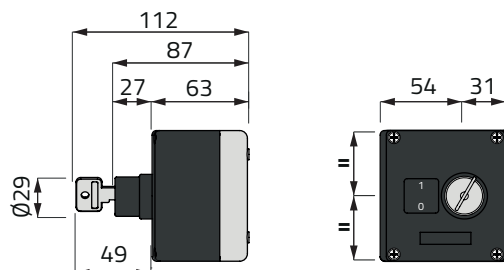


Coperchio con operatore Ø 22mm / Lid with operator Ø 22mm

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



g

0,2

cod

020144T22



0,2

02042T22



g

0,2

cod

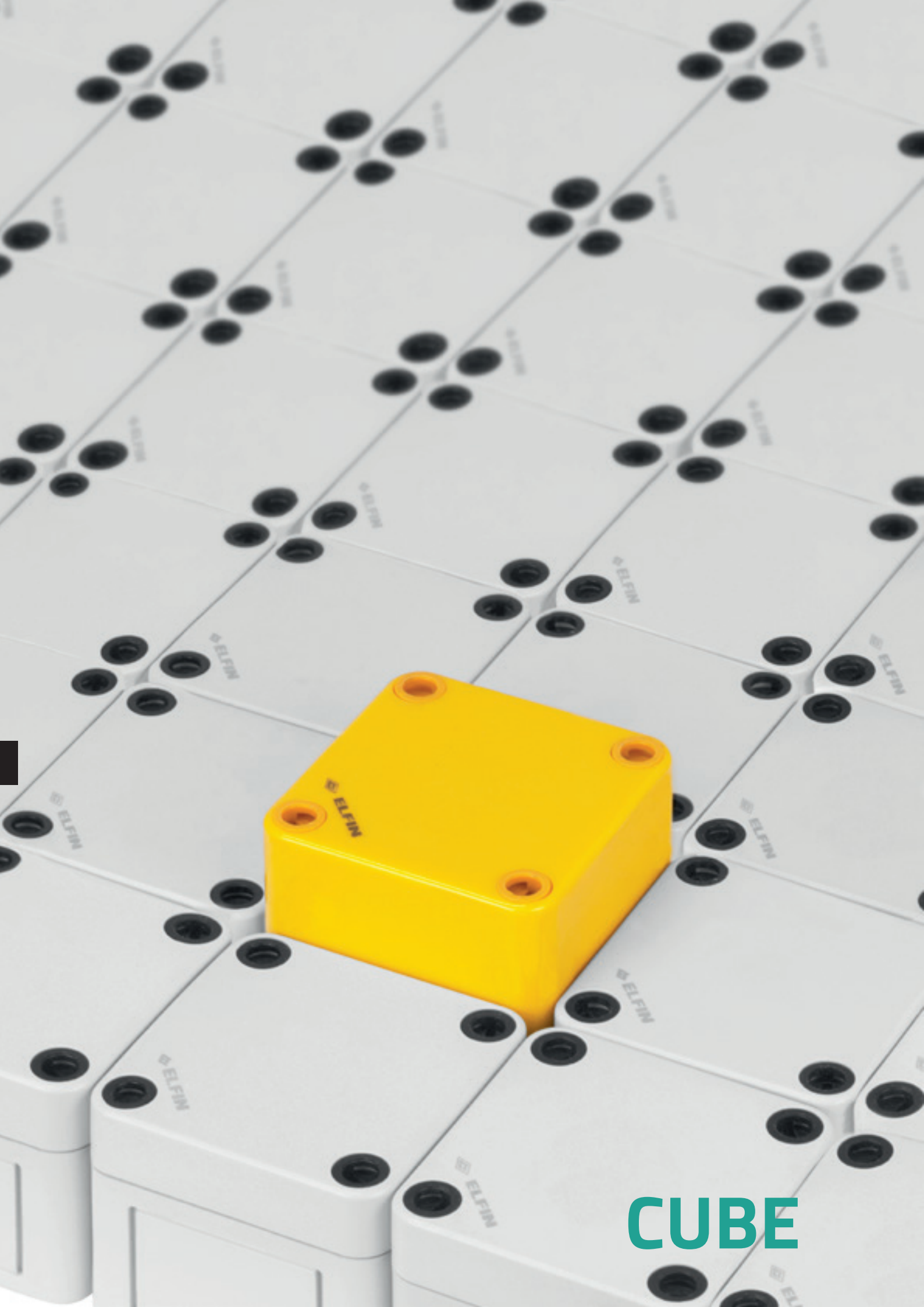
02046T22



0,2

02043T22





CUBE

Termoplastico PRINCIPI COSTRUTTIVI APPLICATI

Thermoplastic APPLIED CONSTRUCTION PRINCIPLES

SERIE CUBE / SERIES CUBE



■ 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.

■ 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 □

■ 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.

■ WALL-MOUNTING

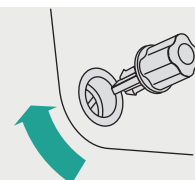
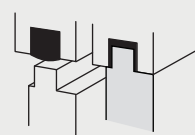
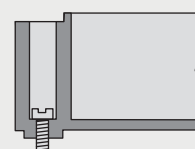
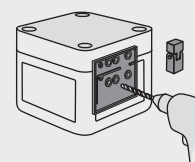
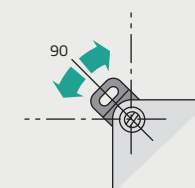
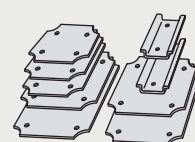
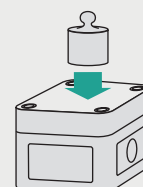
Wall-mounting through purpose-designed easy-mount thermoplastic brackets, or trough metal mounting brackets and screws. The mounting brackets can rotate by 90° for an easy installation.

■ 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 □



Scatole in termoplastico Thermoplastic enclosures

SERIES CUBE / SERIES CUBE



Coperchio disponibile in tre tipologie di colore :
RAL7035, giallo e trasparente

Lid available in three colours :
RAL7035, yellow and transparent



Disponibile in 4 profondità

Available in four depth

Scatole in termoplastico Thermoplastic enclosures

SERIE CUBE / SERIES CUBE



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

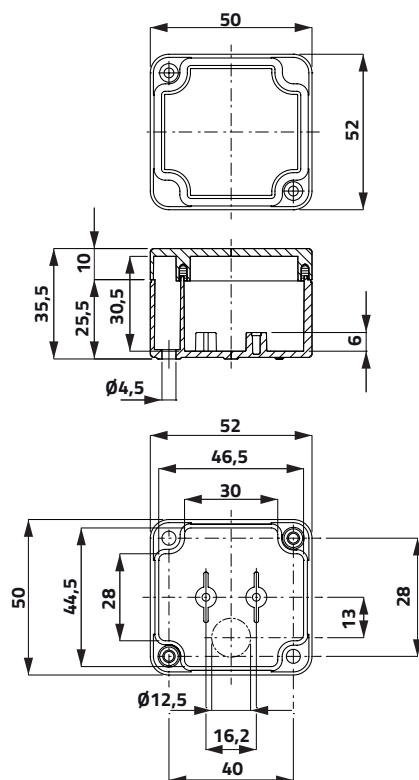
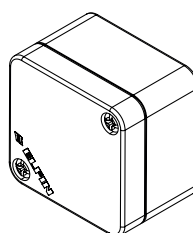


Scatole in termoplastico

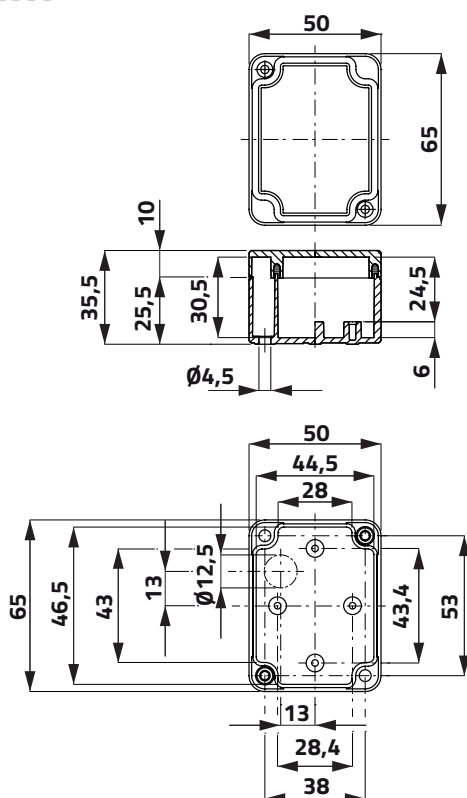
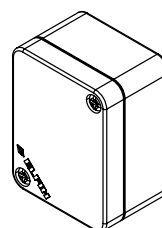
Thermoplastic enclosures

SERIES CUBE / SERIES CUBE

50x52mm



65x50mm



Scatole in termoplastico Thermoplastic enclosures

SERIE CUBE / SERIES CUBE



50x52mm

Policarbonato / Polycarbonate

h

g

cod

35,5

40

080C0505-3



65x50mm

Policarbonato / Polycarbonate

h

g

cod

35,5

50

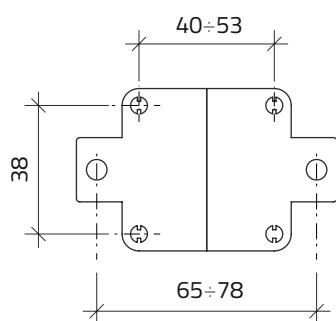
080C0605-3



Piastra di fissaggio a parete regolabile
Adjustable wall-mounting plate

8

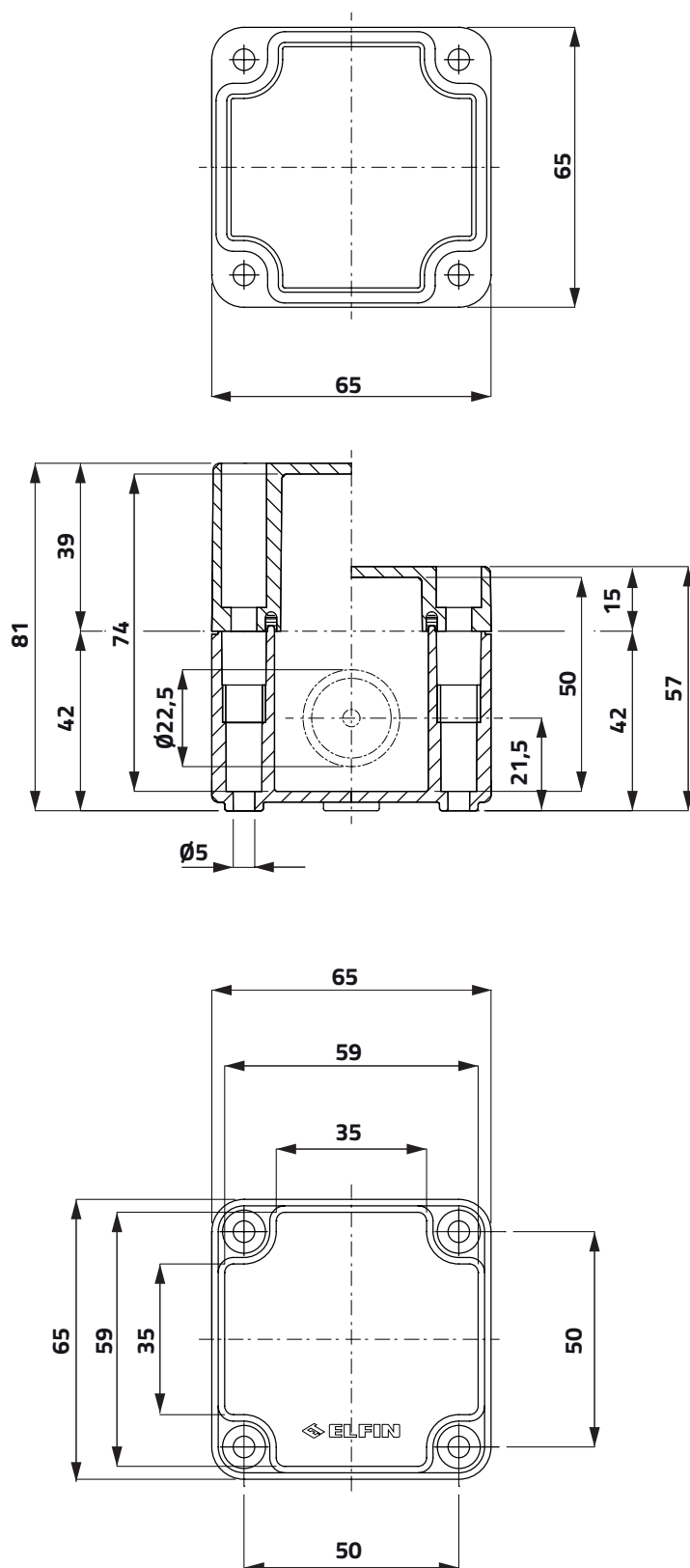
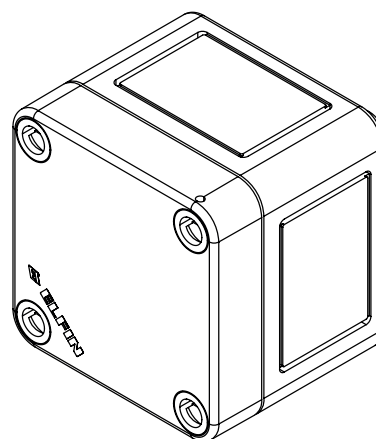
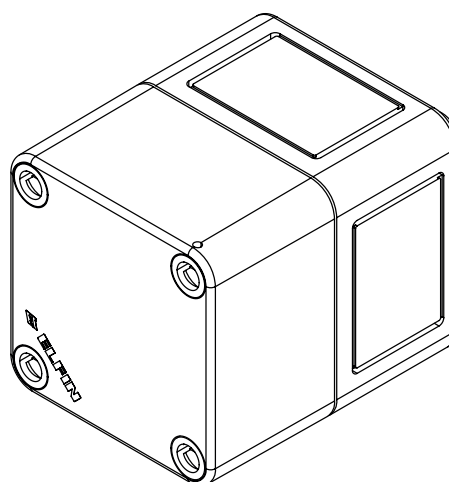
080S5065



Scatole in termoplastico 65x65mm

Thermoplastic enclosures 65x65mm

SERIES CUBE / SERIES CUBE



Scatole in termoplastico 65x65mm

Thermoplastic enclosures 65x65mm

SERIE CUBE / SERIES CUBE



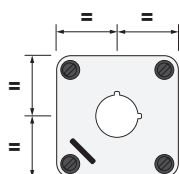
Coperchio senza fori / Undrilled lid

	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



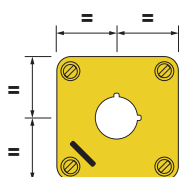
Coperchio trasparente senza fori / Transparent Undrilled lid

Policarbonato/ Polycarbonate	57	85	080C0606-5T
Policarbonato/ Polycarbonate	81	125	080C0606-8T



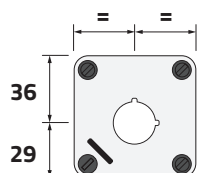
Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

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



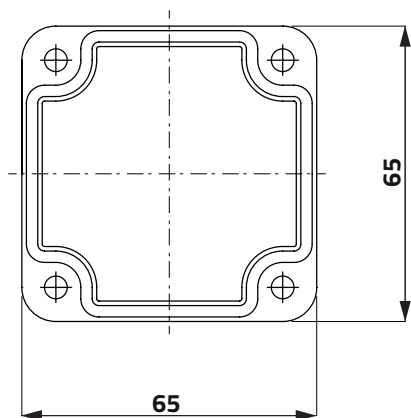
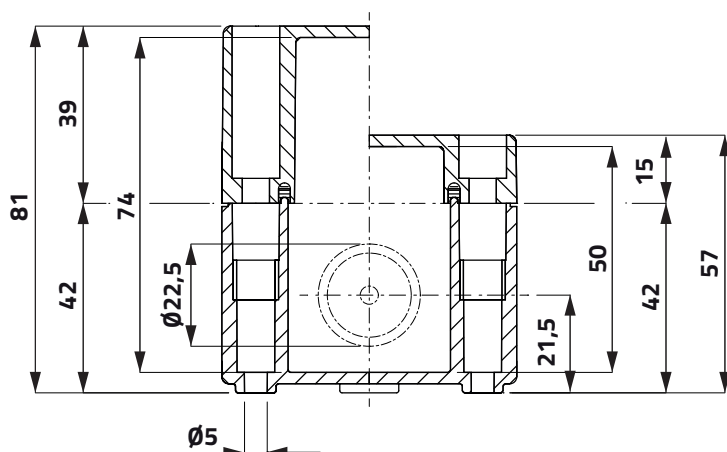
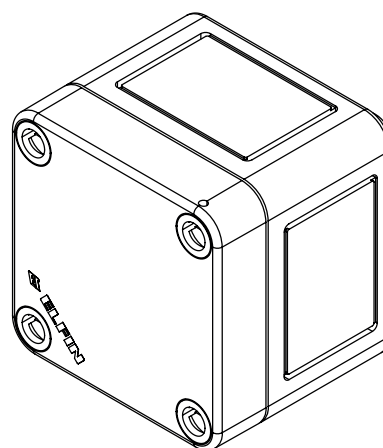
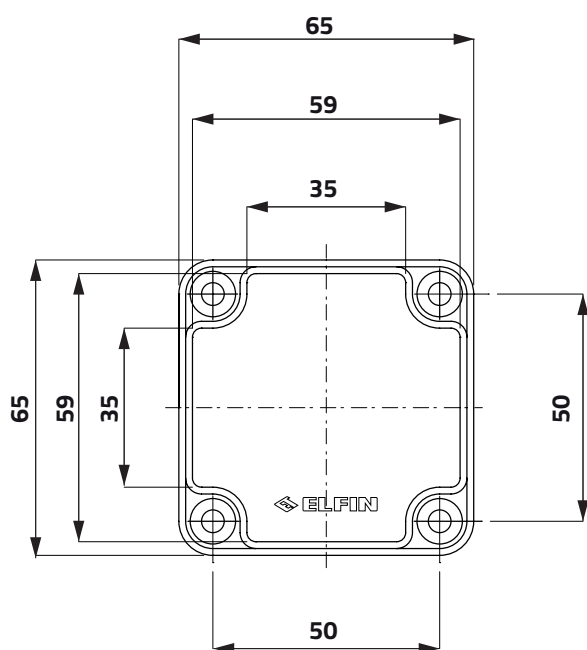
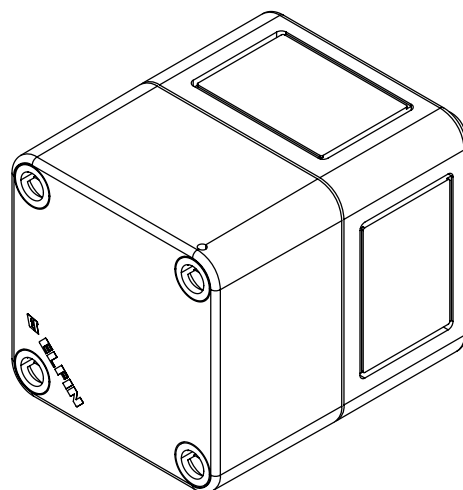
Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

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 65x65mm

Assembled push-button enclosures 65x65mm

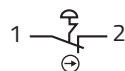
SERIES CUBE / SERIES CUBE



Scatole pulsantiere complete 65x65mm

Assembled push-button enclosures 65x65mm

SERIE CUBE / SERIES CUBE



Coperchio con pulsante a fungo rosso Ø32

Lid with red mushroom push-button Ø32

sgancio rotazione / twist release

Polistirene / Polystyrene

87

132

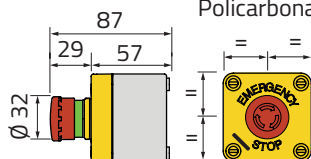
080CS0606-5GA

Policarbonato / Polycarbonate

87

145

080C0606-5GA



Coperchio con pulsante a fungo rosso Ø40

Lid with red mushroom push-button Ø40

sgancio rotazione / twist release

Polistirene / Polystyrene

87

137

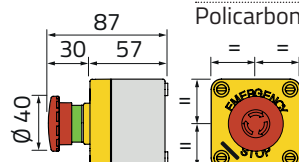
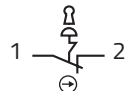
080CS0606-5GFA

Policarbonato / Polycarbonate

87

150

080C0606-5GFA



Coperchio con pulsante a fungo rosso Ø44

Lid with red mushroom push-button Ø44

sgancio con chiave / key release

Polistirene / Polystyrene

133

177

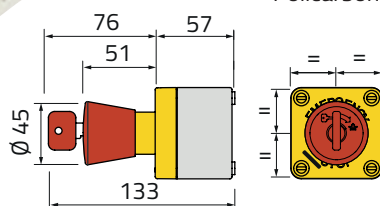
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Policarbonato / Polycarbonate

133

190

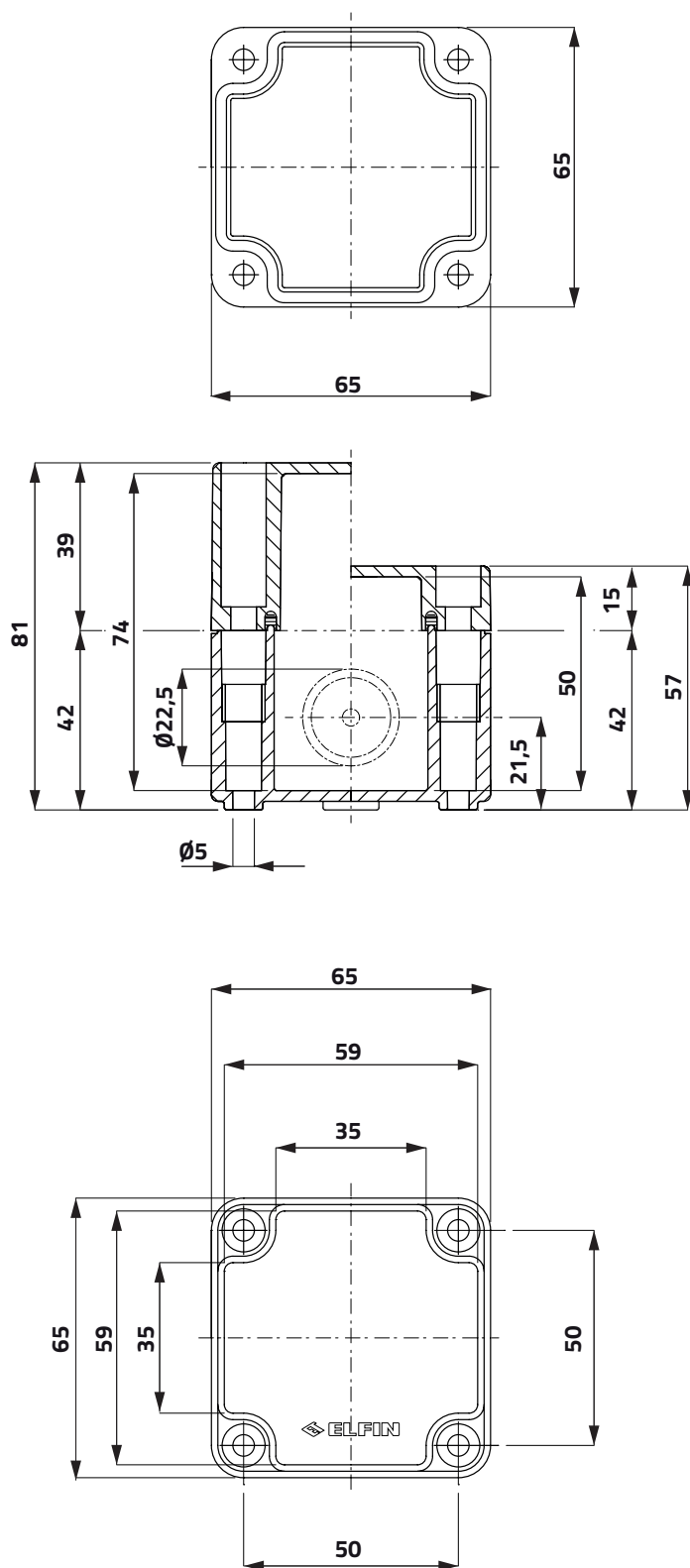
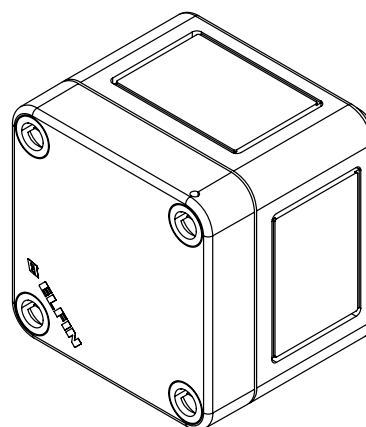
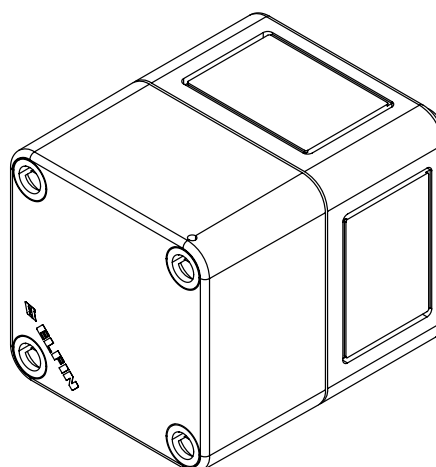
080C0606-5GFC



Scatole pulsantiere complete 65x65mm

Assembled push-button enclosures 65x65mm

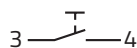
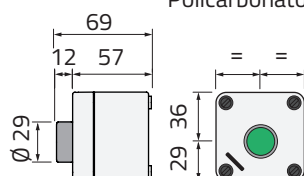
SERIES CUBE / SERIES CUBE



Scatole pulsantiere complete 65x65mm

Assembled push-button enclosures 65x65mm

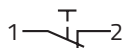
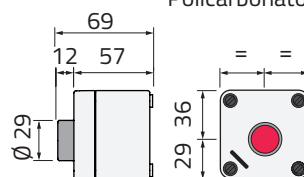
SERIE CUBE / SERIES CUBE



Coperchio con pulsante guardia verde

Lid with green guarded push-button

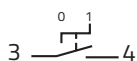
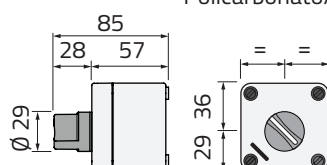
Polistirene / Polystyrene	69	117	080CS0606-5PV
Policarbonato/ Polycarbonate	69	130	080C0606-5PV



Coperchio con pulsante guardia rosso

Lid with red guarded push-button

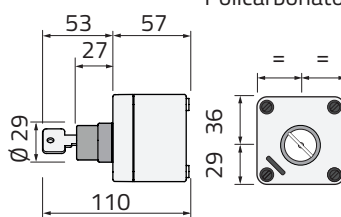
Polistirene / Polystyrene	69	171	080CS0606-5PR
Policarbonato/ Polycarbonate	69	130	080C0606-5PR



Coperchio con selettore a manopola nera 2 posizioni

Lid with 2-position black selector switch

Polistirene / Polystyrene	85	122	080CS0606-5SM
Policarbonato/ Polycarbonate	85	135	080C0606-5SM



Coperchio con selettore a chiave 2 posizioni

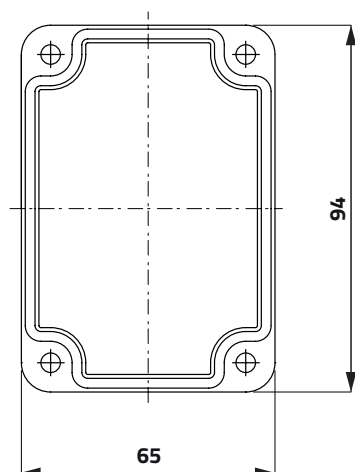
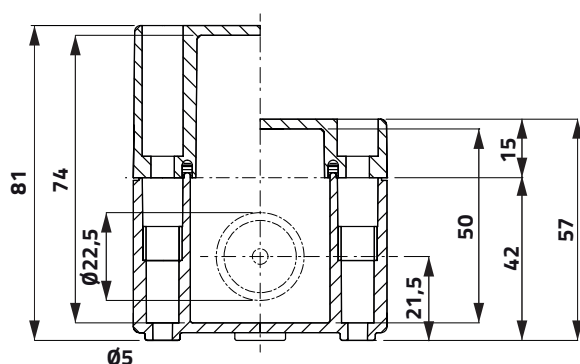
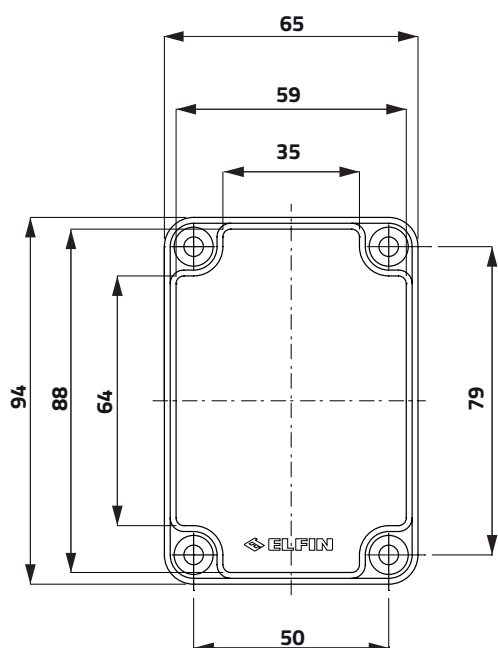
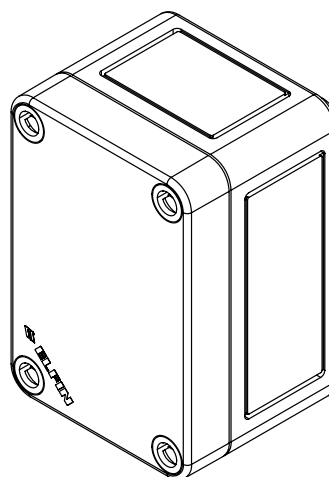
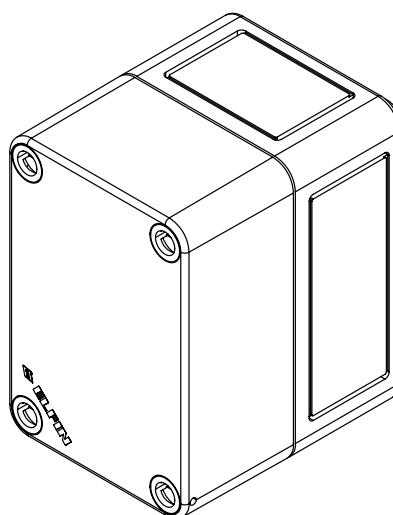
Lid with 2-position key selector switch

Polistirene / Polystyrene	110	181	080CS0606-5SC
Policarbonato/ Polycarbonate	110	194	080C0606-5SC

Scatole in termoplastico 65x94mm

Thermoplastic enclosures 65x94mm

SERIES CUBE / SERIES CUBE



Scatole in termoplastico 65x94mm

Thermoplastic enclosures 65x94mm

SERIE CUBE / SERIES CUBE

**Coperchio senza fori / Undrilled lid**

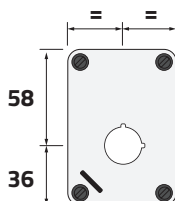
	h	g	cod
Polistirene / Polystyrene	57	96	080CS0609-5
Polistirene / Polystyrene	81	135	080CS0609-8
Policarbonato/ Polycarbonate	57	115	080C0609-5
Policarbonato/ Polycarbonate	81	160	080C0609-8

**Coperchio trasparente senza fori / Transparent Undrilled lid**

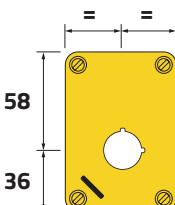
Policarbonato/ Polycarbonate	57	110	080C0609-5T
Policarbonato/ Polycarbonate	81	110	080C0609-8T

**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

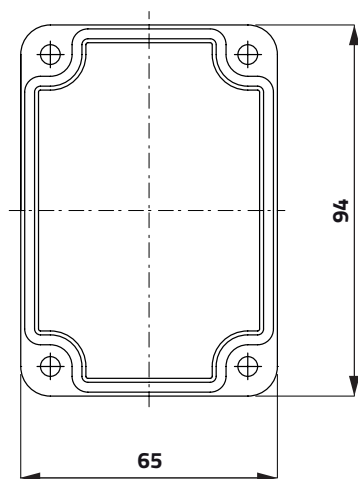
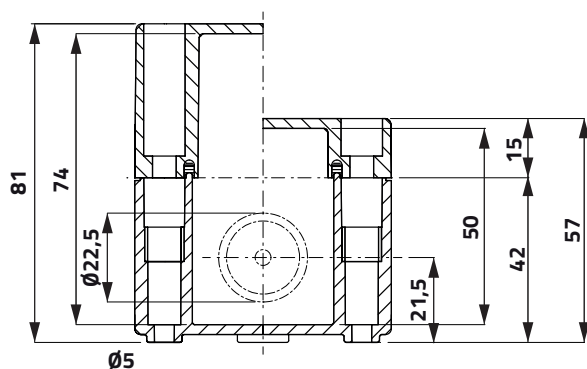
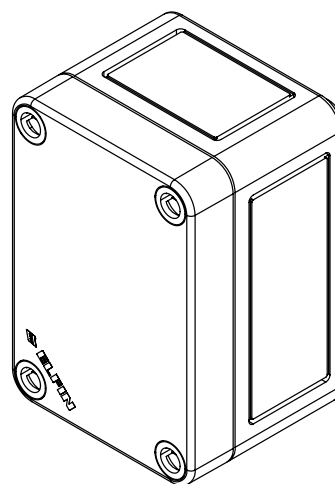
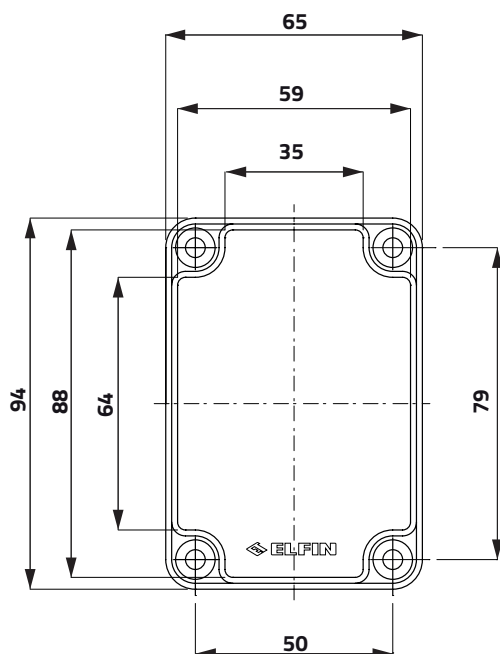
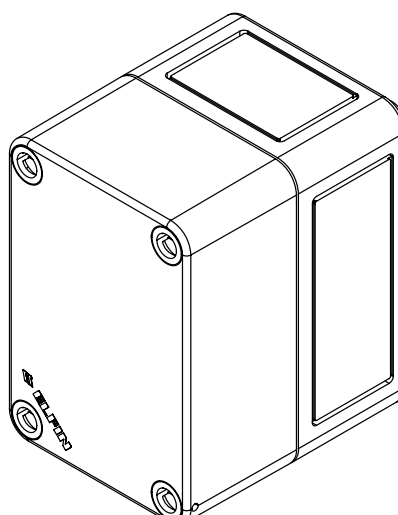
**Coperchio giallo con 1 foro Ø 22mm / 1-hole yellow lid Ø 22mm**

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 65x94mm

Thermoplastic enclosures 65x94mm

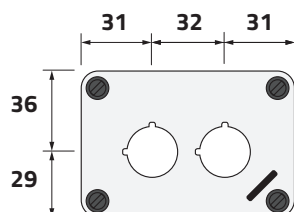
SERIES CUBE / SERIES CUBE



Scatole in termoplastico 65x94mm

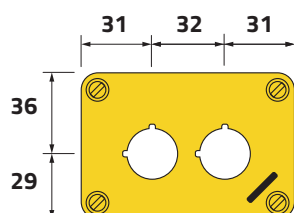
Thermoplastic enclosures 65x94mm

SERIE CUBE / SERIES CUBE



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

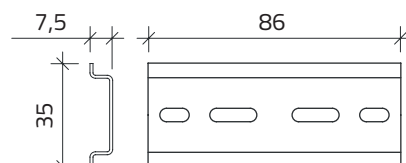
Polistirene / Polystyrene	57	92	080CS0609-5GP2
Polistirene / Polystyrene	81	131	080CS0609-8GP2
Policarbonato/ Polycarbonate	57	110	080C0609-5GP2
Policarbonato/ Polycarbonate	81	155	080C0609-8GP2



Guida / Rail

30

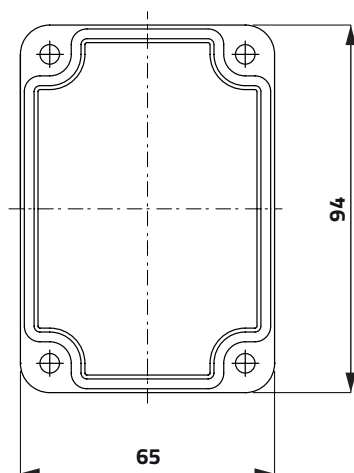
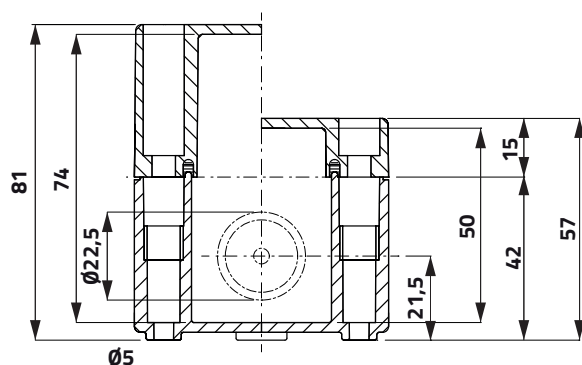
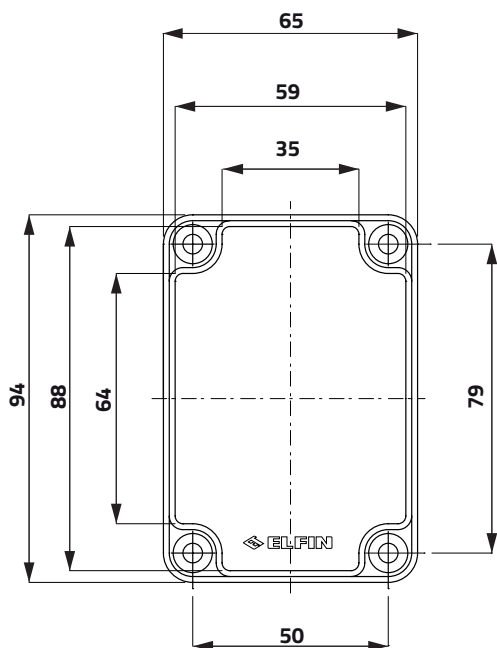
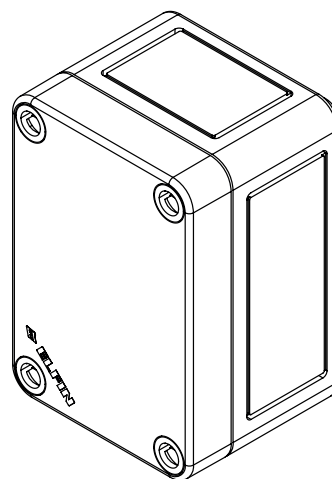
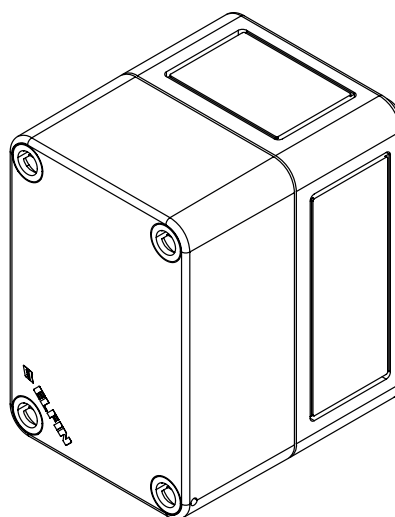
080G3508



Scatole pulsantiere complete 65x94mm

Assembled push-button enclosures 65x94mm

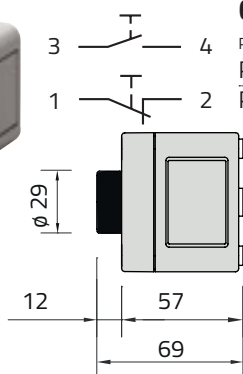
SERIES CUBE / SERIES CUBE



Scatole in termoplastico complete 65x94mm

Assembled push-button enclosures 65x94mm

SERIE CUBE / SERIES CUBE



Coperchio con due operatori / Lid with two operators

Pulsanti con guardia, I/O / Guarded push-button, I/O

Polistirene / Polystyrene

69

172

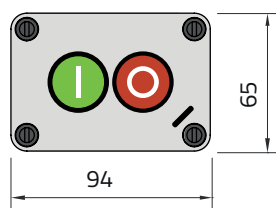
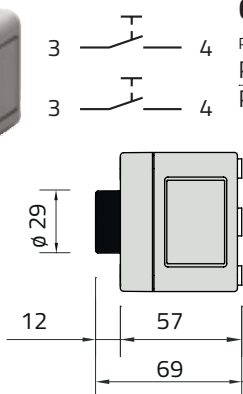
080CS0609-510

Policarbonato/ Polycarbonate

69

190

080C0609-510



Coperchio con due operatori / Lid with two operators

Pulsanti con guardia, frecce / Guarded push-button, arrows

Polistirene / Polystyrene

69

172

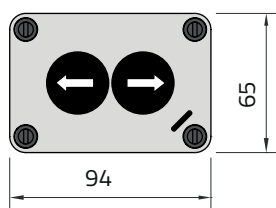
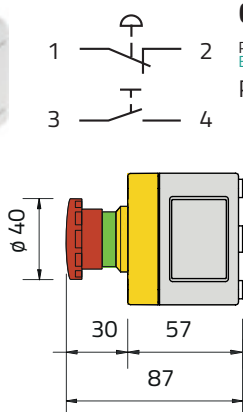
080CS0609-5547

Policarbonato/ Polycarbonate

69

190

080C0609-5547



Coperchio con due operatori / Lid with two operators

Pulsante emergenza Ø40, sgancio rotazione e pulsante con cappuccio in gomma

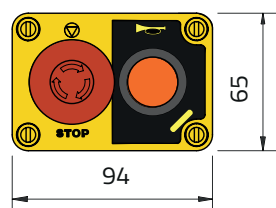
Emergency push-button Ø40, twist release and push-button with rubber cap

Polistirene / Polystyrene

87

172

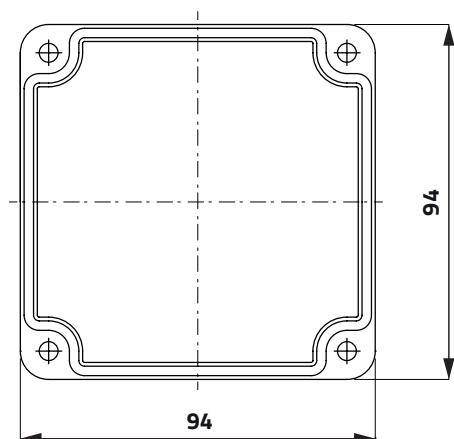
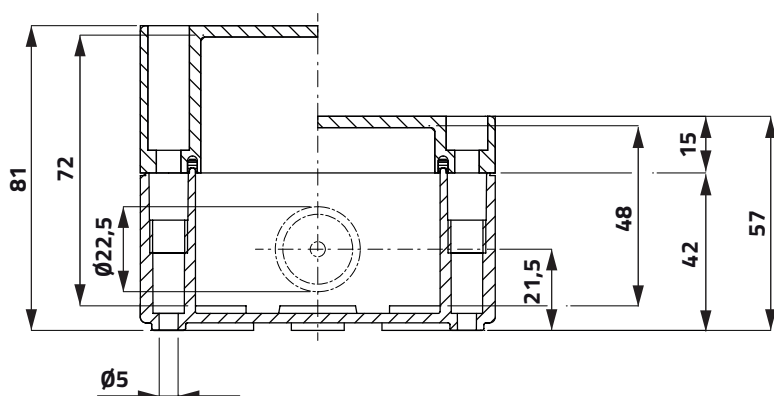
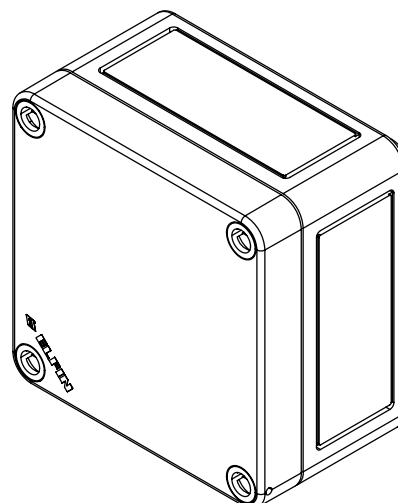
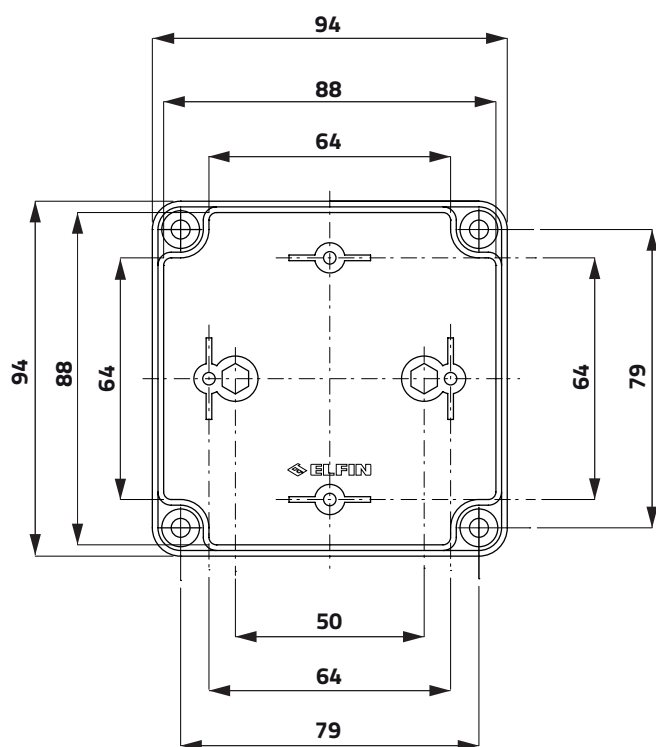
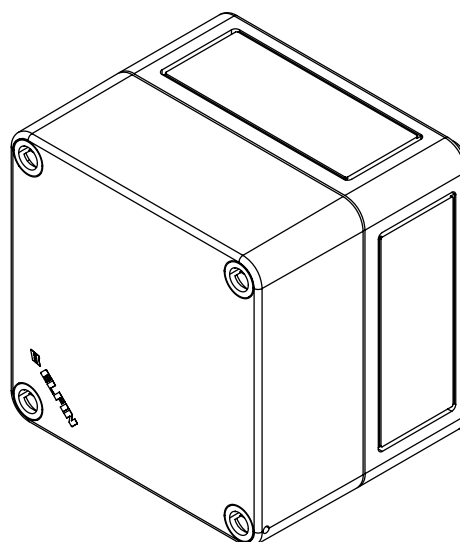
080CS0609-5PE



Scatole in termoplastico 94x94mm

Thermoplastic enclosures 94x94mm

SERIES CUBE / SERIES CUBE



Scatole in termoplastico 94x94mm

Thermoplastic enclosures 94x94mm

SERIE CUBE / SERIES CUBE



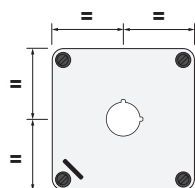
Coperchio senza fori / Undrilled lid

	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



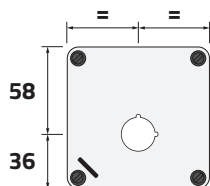
Coperchio trasparente senza fori / Transparent Undrilled lid

Policarbonato/ Polycarbonate	57	142	080C0909-5T
Policarbonato/ Polycarbonate	81	196	080C0909-8T



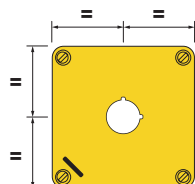
Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm

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



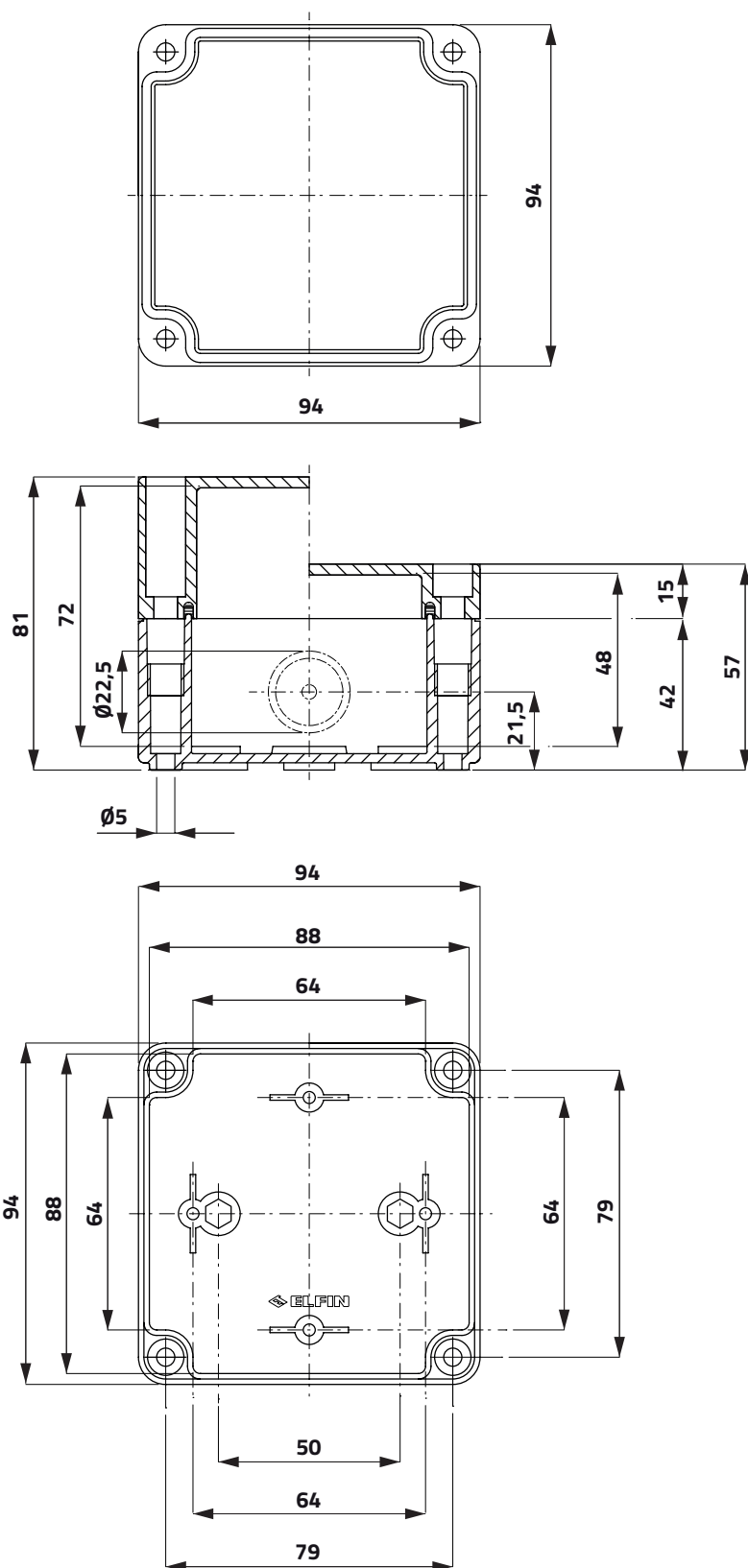
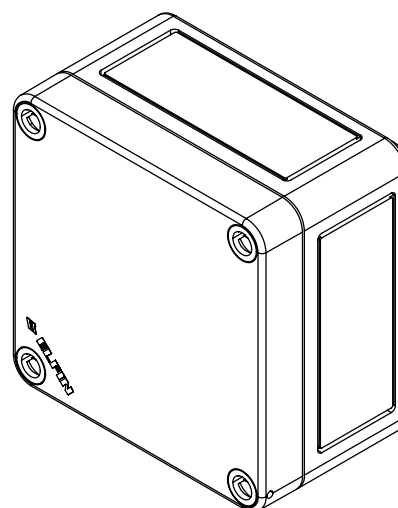
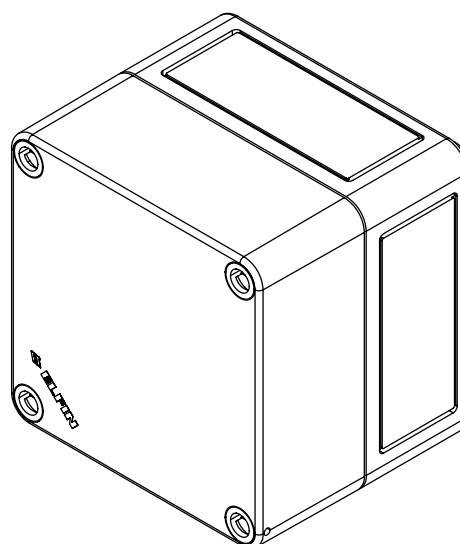
Coperchio giallo con 1 foro Ø 22mm / 1-hole yellow lid Ø 22mm

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 94x94mm

Thermoplastic enclosures 94x94mm

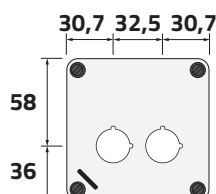
SERIES CUBE / SERIES CUBE



Scatole in termoplastico 94x94mm

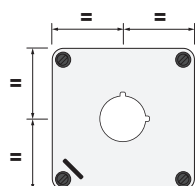
Thermoplastic enclosures 94x94mm

SERIE CUBE / SERIES CUBE



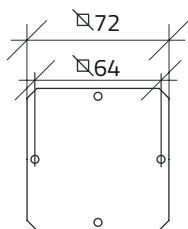
Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

	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



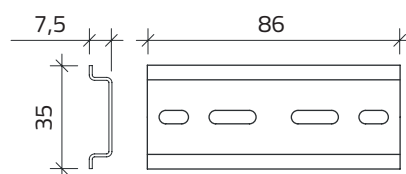
Coperchio con 1 foro Ø 30mm / 1-hole lid Ø 30mm

	h	g	cod
Polistirene / Polystyrene	81	168	080CS0909-8S1
Policarbonato / Polycarbonate	81	200	080C0909-8S1



Accessori adattabili / Adaptable accessories

	h	g	cod
Piastra di fondo / Mounting plate	1	100	080P0909



Guida / Rail

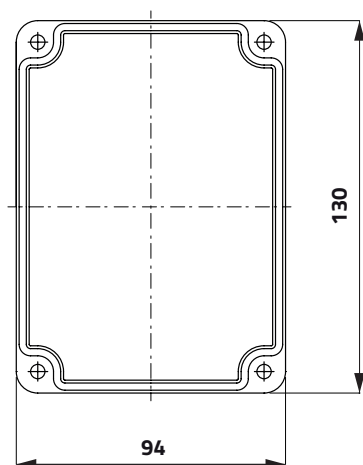
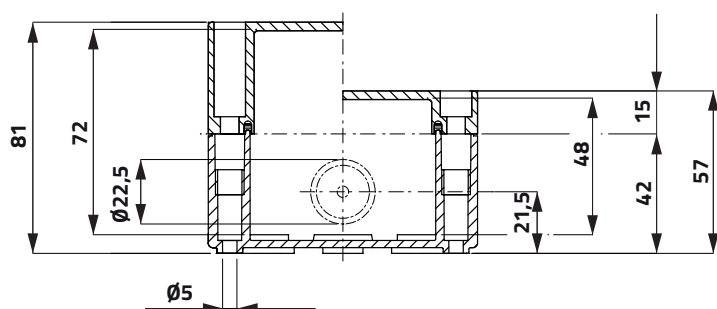
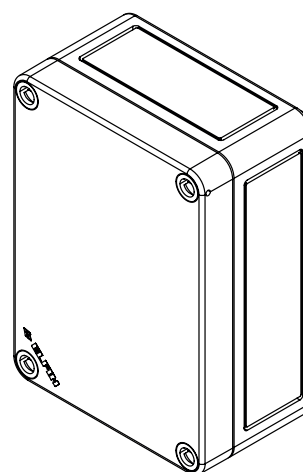
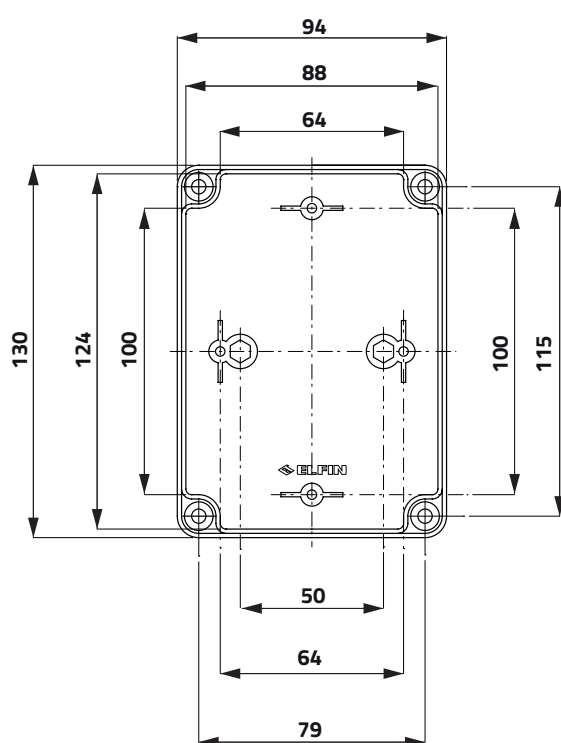
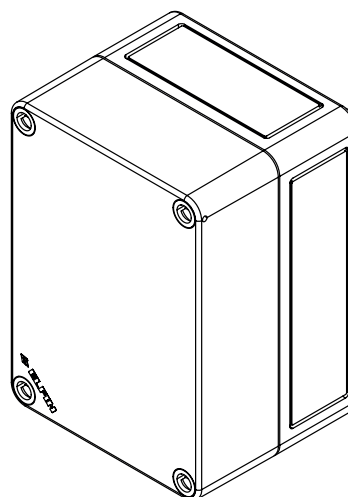
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080G3508

Scatole in termoplastico 94x130mm

Thermoplastic enclosures 94x130mm

SERIES CUBE / SERIES CUBE



Scatole in termoplastico 94x130mm

Thermoplastic enclosures 94x130mm

SERIE CUBE / SERIES CUBE



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



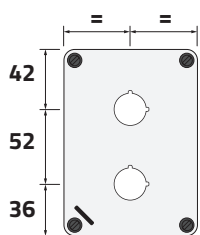
Coperchio giallo senza fori / Undrilled yellow lid

Polistirene / Polystyrene	57	152	080CS0913-5G
Polistirene / Polystyrene	81	213	080CS0913-8G
Policarbonato/ Polycarbonate	57	181	080C0913-5G
Policarbonato/ Polycarbonate	81	254	080C0913-8G



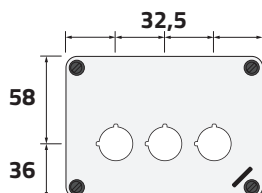
Coperchio trasparente senza fori / Transparent Undrilled lid

Policarbonato/ Polycarbonate	57	166	080C0913-5T
Policarbonato/ Polycarbonate	81	240	080C0913-8T



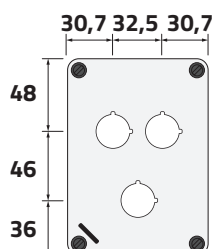
Coperchio con 2 fori Ø 22mm / 2-hole lid Ø 22mm

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

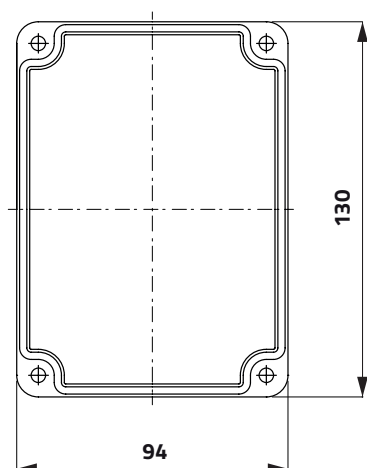
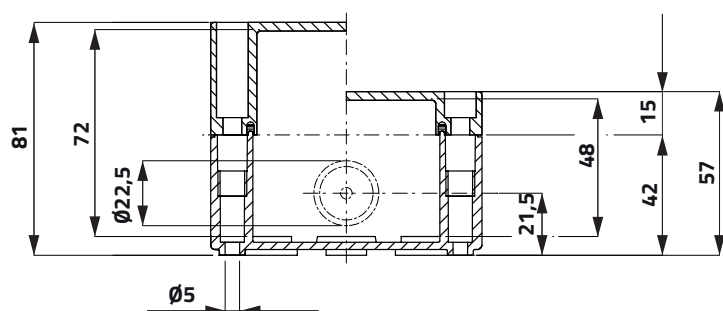
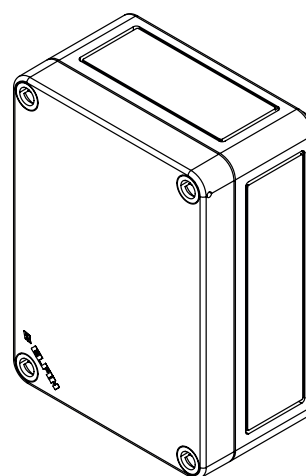
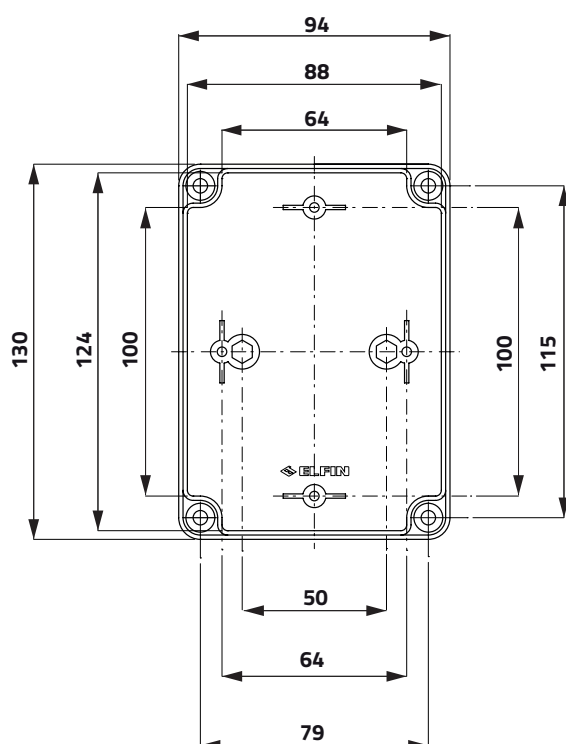
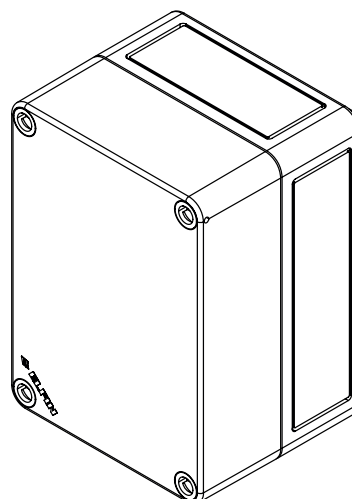
Polistirene / Polystyrene	57	147	080CS0913-5P3C
Polistirene / Polystyrene	81	208	080CS0913-8P3C
Policarbonato/ Polycarbonate	57	175	080C0913-5P3C
Policarbonato/ Polycarbonate	81	248	080C0913-8P3C



Scatole in termoplastico 94x130mm

Thermoplastic enclosures 94x130mm

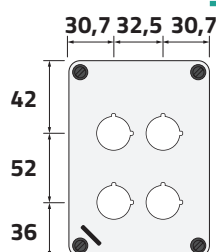
SERIES CUBE / SERIES CUBE



Scatole in termoplastico 94x130mm

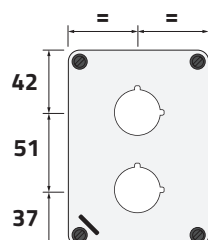
Thermoplastic enclosures 94x130mm

SERIE CUBE / SERIES CUBE



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



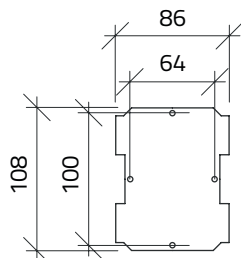
Coperchio con 2 fori Ø 30mm / 2-hole lid Ø 30mm

Polistirene / Polystyrene	81	206	080CS0913-8S2
Policarbonato / Polycarbonate	81	246	080C0913-8S2



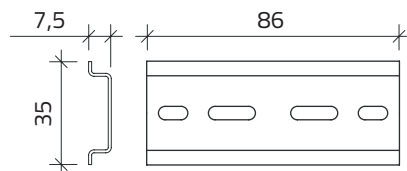
Piastra di fondo / Mounting plate

1	148	080P0913
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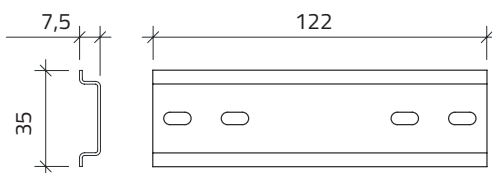
Guida / Rail

30	080G3508
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Guida / Rail

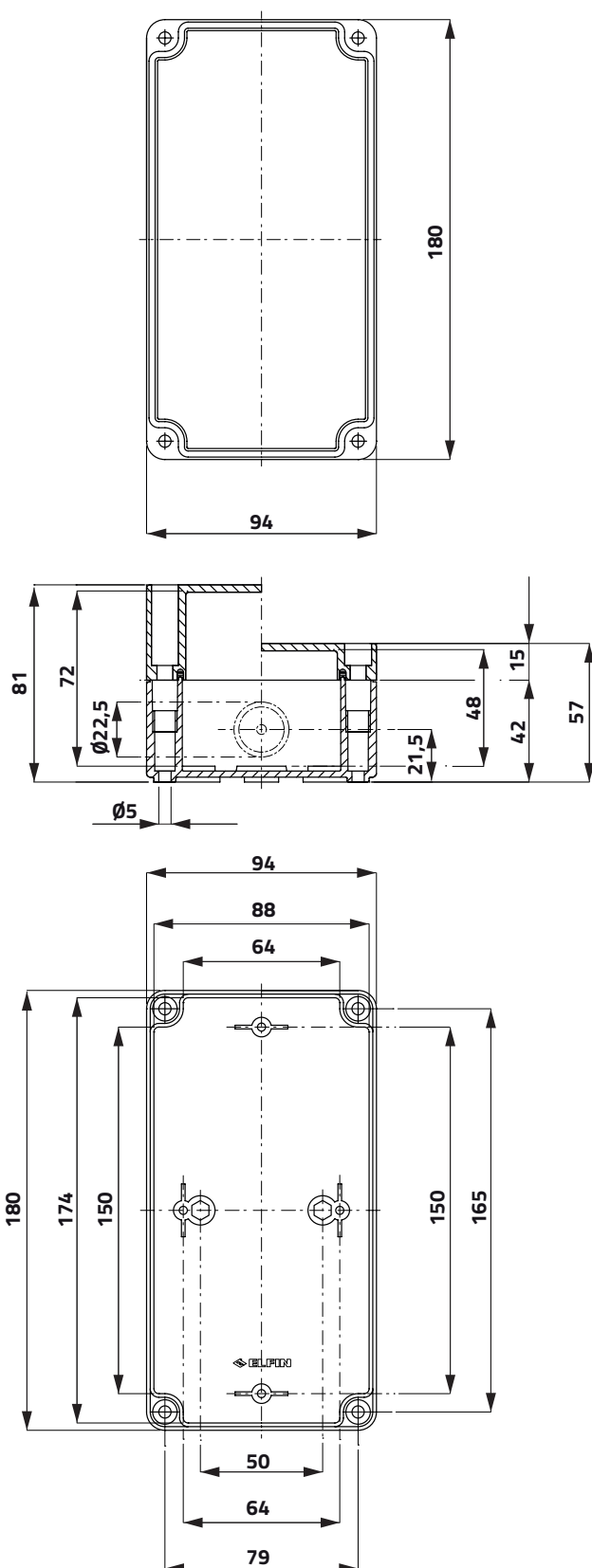
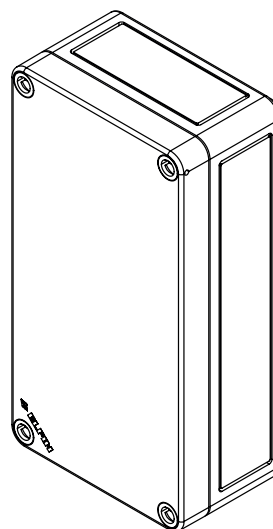
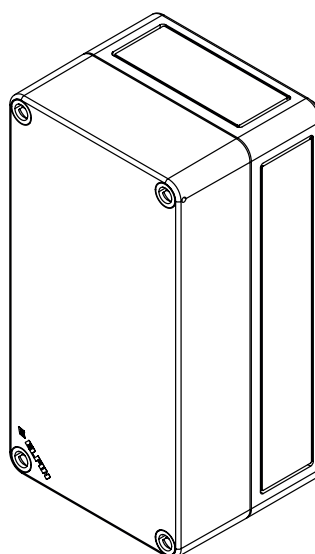
42	080G3512
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Scatole in termoplastico 94x180mm

Thermoplastic enclosures 94x180mm

SERIES CUBE / SERIES CUBE



Scatole in termoplastico 94x180mm

Thermoplastic enclosures 94x180mm

SERIE CUBE / SERIES CUBE



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



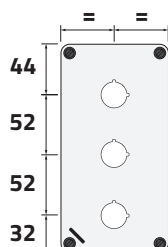
Coperchio giallo senza fori / Undrilled yellow lid

Polistirene / Polystyrene	57	201	080CS0918-5G
Polistirene / Polystyrene	81	263	080CS0918-8G
Policarbonato/ Polycarbonate	57	241	080C0918-5G
Policarbonato/ Polycarbonate	81	314	080C0918-8G



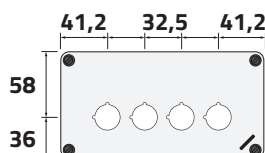
Coperchio trasparente senza fori / Transparent Undrilled lid

Policarbonato/ Polycarbonate	57	228	080C0918-5T
Policarbonato/ Polycarbonate	81	300	080C0918-8T



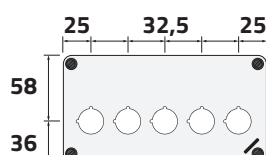
Coperchio con 3 fori Ø 22mm / 3-hole lid Ø 22mm

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



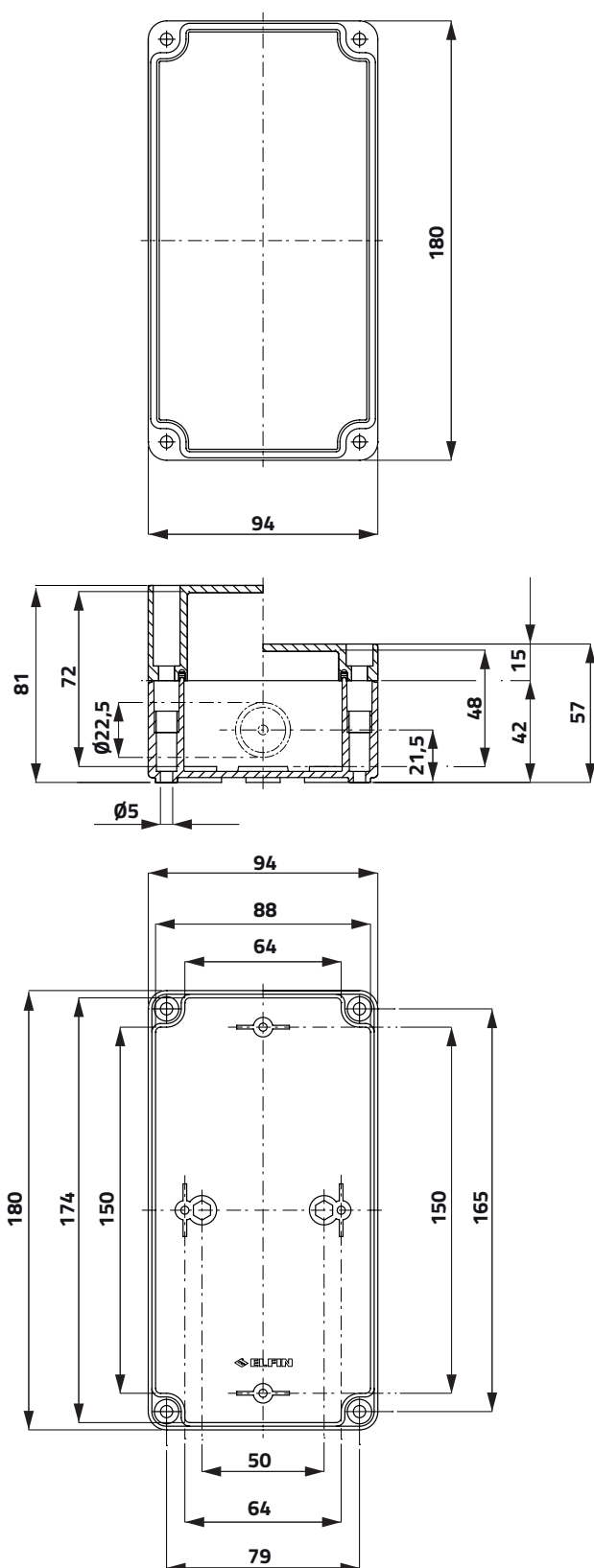
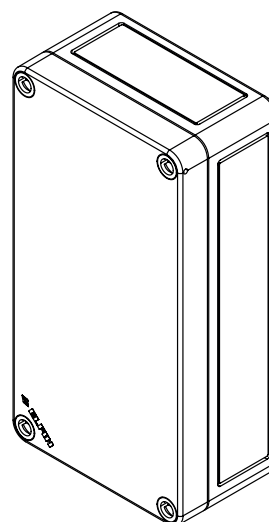
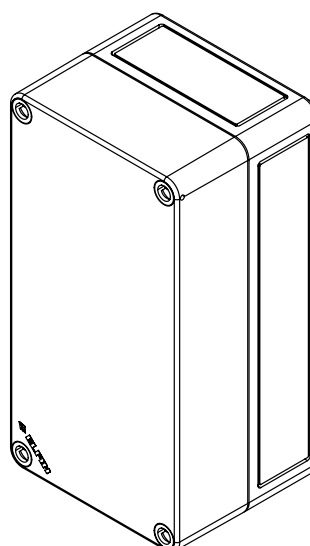
Coperchio con 5 fori Ø 22mm / 5-hole lid Ø 22mm

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 94x180mm

Thermoplastic enclosures 94x180mm

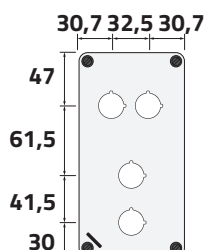
SERIES CUBE / SERIES CUBE



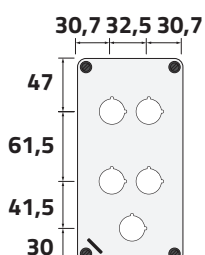
Scatole in termoplastico 94x180mm

Thermoplastic enclosures 94x180mm

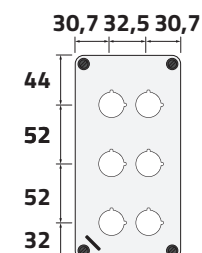
SERIE CUBE / SERIES CUBE

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

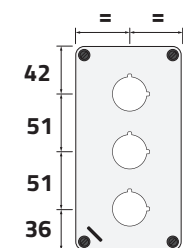
Polistirene / Polystyrene	57	193	080CS0918-5P4C
Polistirene / Polystyrene	81	255	080CS0918-8P4C
Policarbonato/ Polycarbonate	57	231	080C0918-5P4C
Policarbonato/ Polycarbonate	81	304	080C0918-8P4C

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

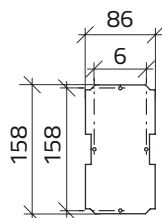
Polistirene / Polystyrene	57	193	080CS0918-5P5C
Polistirene / Polystyrene	81	255	080CS0918-8P5C
Policarbonato/ Polycarbonate	57	231	080C0918-5P5C
Policarbonato/ Polycarbonate	81	304	080C0918-8P5C

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

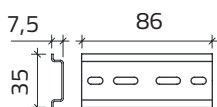
Polistirene / Polystyrene	57	191	080CS0918-5P6
Polistirene / Polystyrene	81	253	080CS0918-8P6
Policarbonato/ Polycarbonate	57	229	080C0918-5P6
Policarbonato/ Polycarbonate	81	302	080C0918-8P6

**Coperchio con 3 fori Ø 30mm / 3-hole lid Ø 30mm**

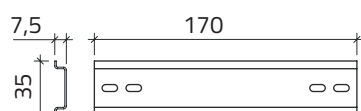
Polistirene / Polystyrene	81	308	080CS0918-8S3
Policarbonato/ Polycarbonate	81	308	080C0918-8S3

**Piastra di fondo / Mounting plate**

1	210	080P0918
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**Guida / Rail**

30	080G3508
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**Guida / Rail**

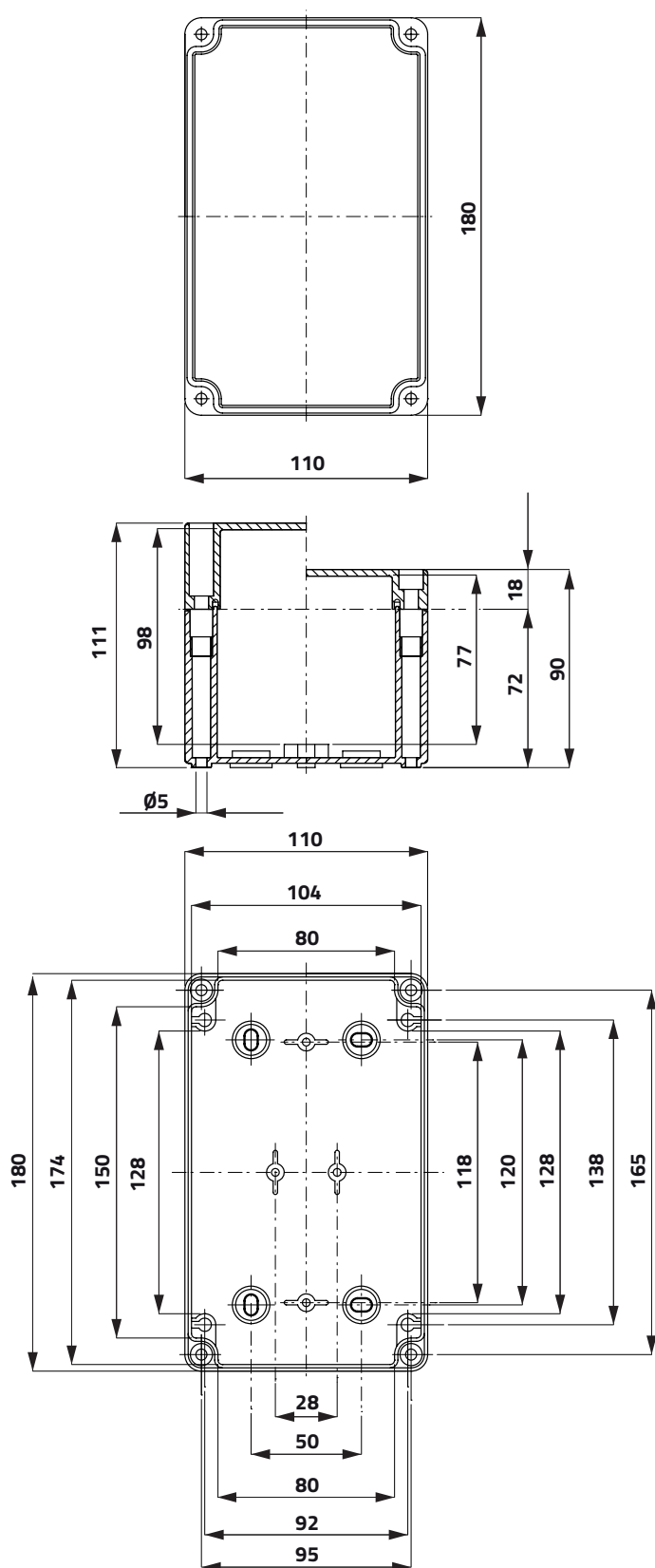
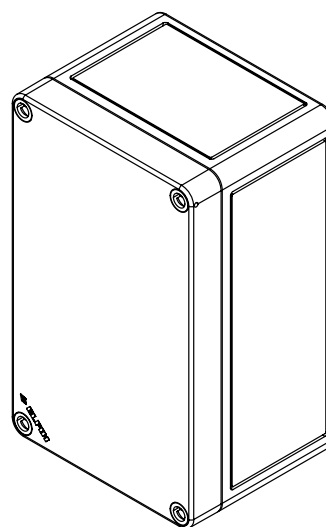
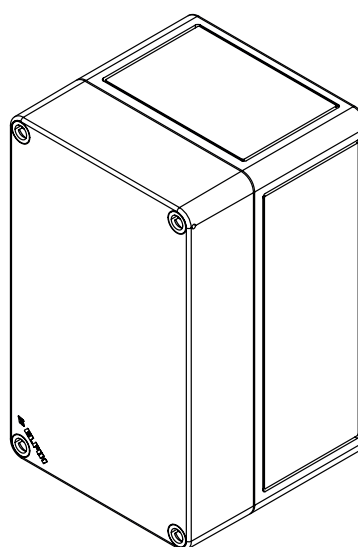
59	080G3517
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Scatole in termoplastico 110x180mm

Thermoplastic enclosures 110x180mm

SERIES CUBE / SERIES CUBE



Scatole in termoplastico 110x180mm

Thermoplastic enclosures 110x180mm

SERIE CUBE / SERIES CUBE



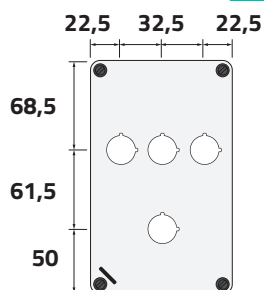
Coperchio senza fori / Undrilled lid

	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



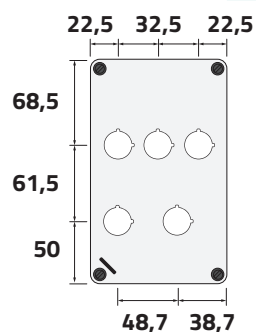
Coperchio trasparente senza fori / Transparent Undrilled lid

Policarbonato/ Polycarbonate	90	374	080C1118-9T
Policarbonato/ Polycarbonate	111	426	080C1118-11T



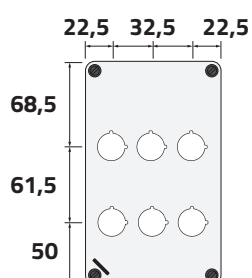
Coperchio con 4 fori Ø 22mm / 4-hole lid Ø 22mm

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



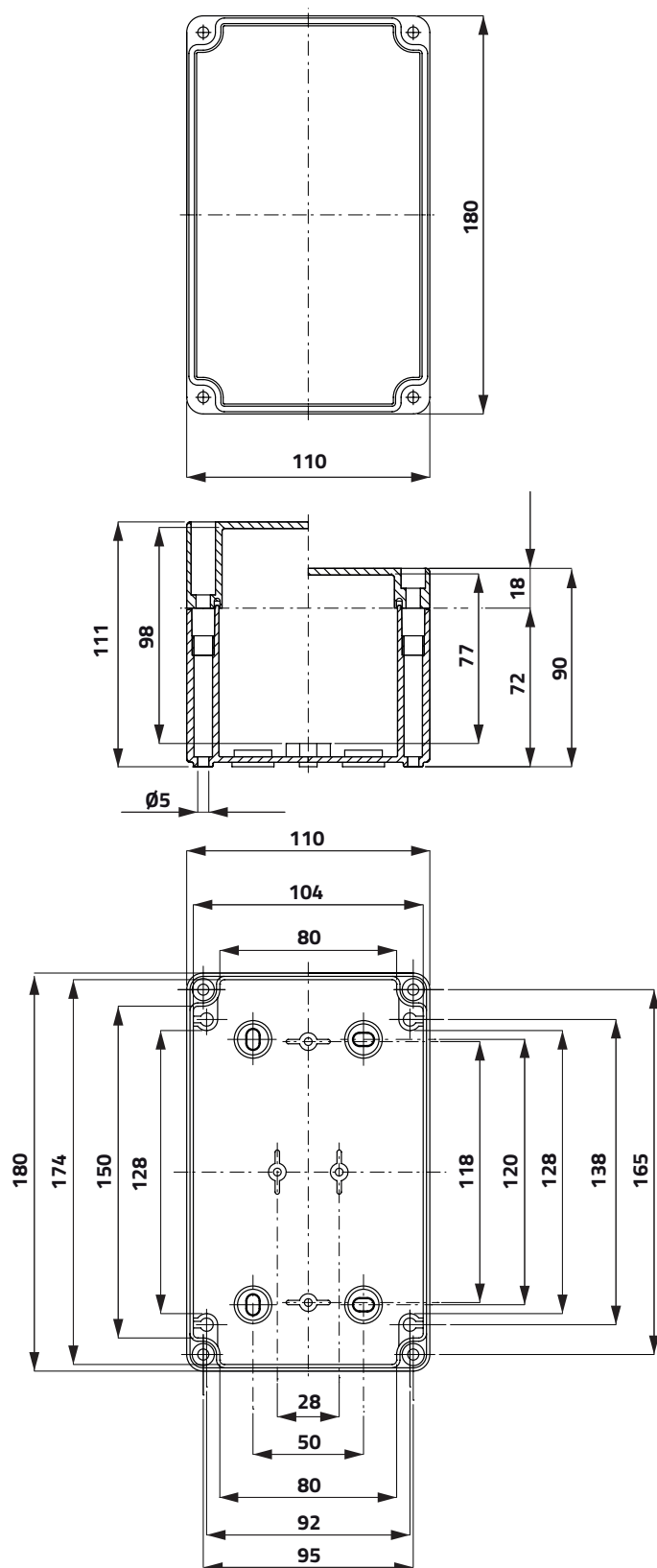
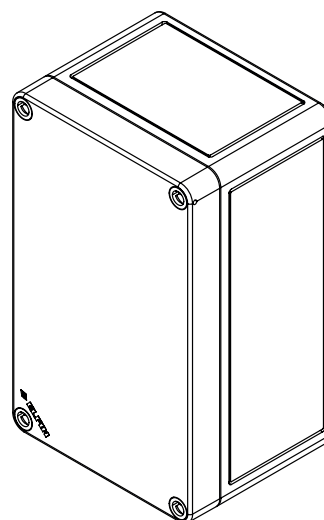
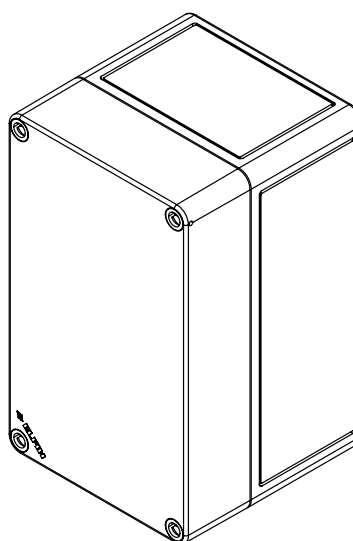
Coperchio con 6 fori Ø 22mm / 6-hole lid Ø 22mm

Polistirene / Polystyrene	90	314	080CS1118-9P6
Policarbonato/ Polycarbonate	90	376	080C1118-9P6

Scatole in termoplastico 110x180mm

Thermoplastic enclosures 110x180mm

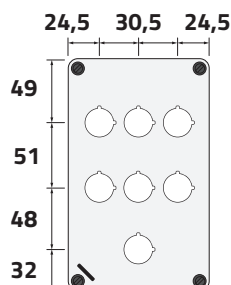
SERIES CUBE / SERIES CUBE



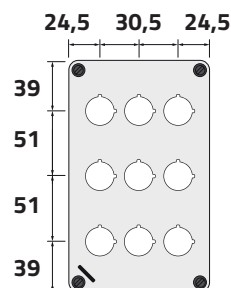
Scatole in termoplastico 110x180mm

Thermoplastic enclosures 110x180mm

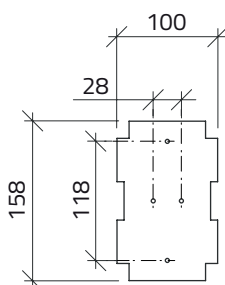
SERIE CUBE / SERIES CUBE

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

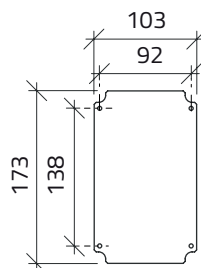
Polistirene / Polystyrene	90	314	080CS1118-9P7C
Policarbonato/ Polycarbonate	90	376	080C1118-9P7C

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

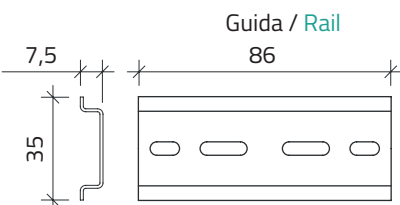
Polistirene / Polystyrene	90	314	080CS1118-9P9
Policarbonato/ Polycarbonate	90	376	080C1118-9P9

**Piastra di fondo / Mounting plate**

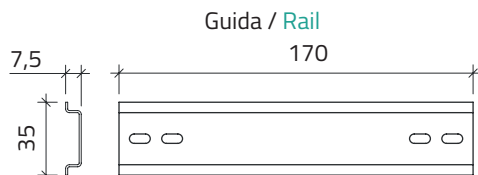
1	270	080P1118
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**Piastra superiore / Upper plate**

2	285	080PS1118
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**Guida / Rail**

85	080G3508
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**Guida / Rail**

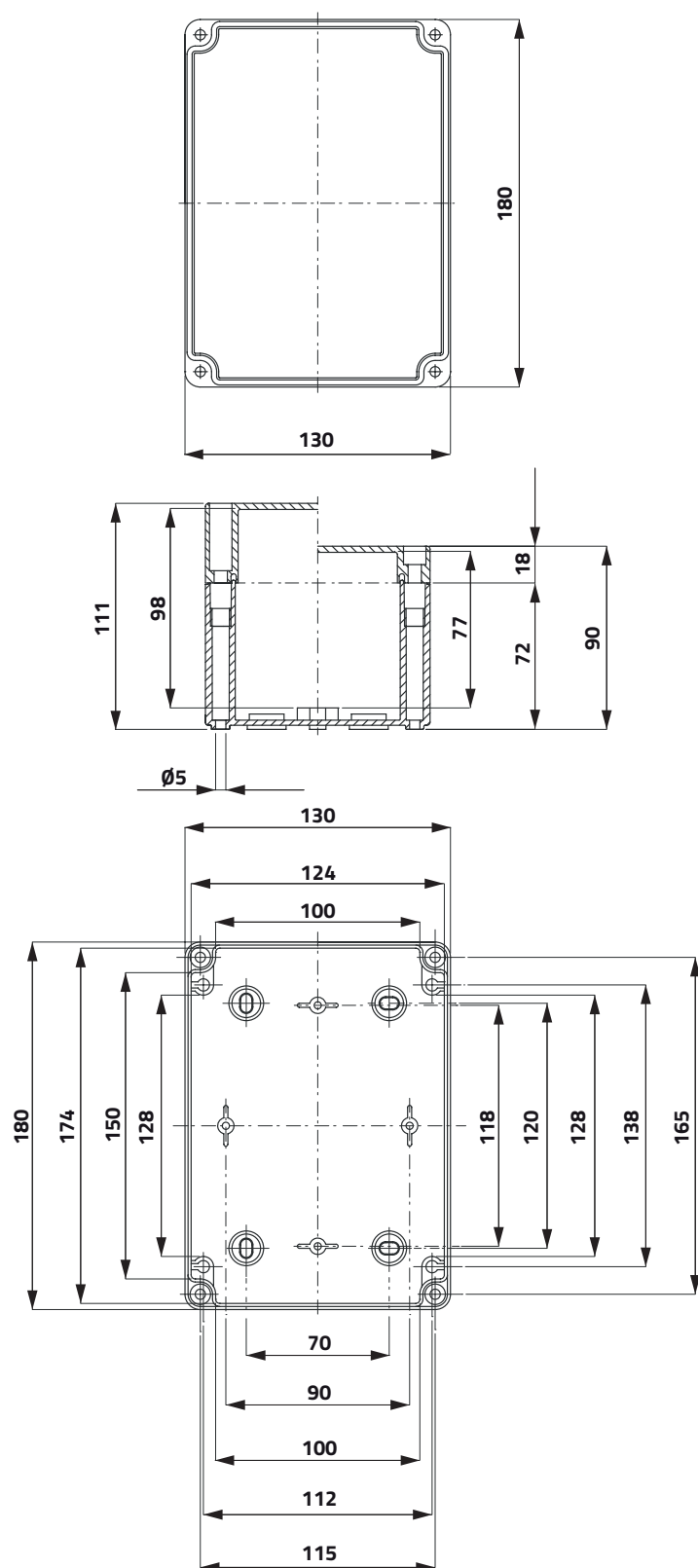
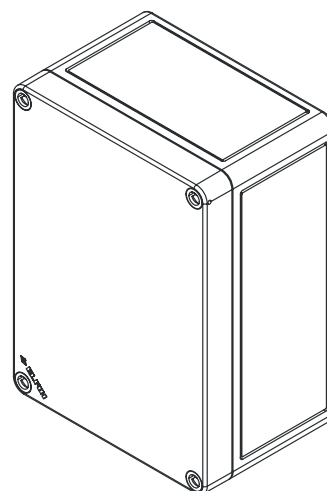
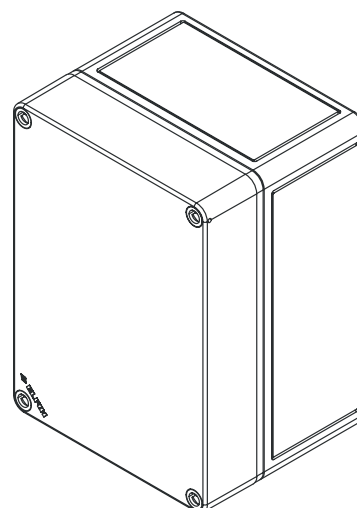
59	080G3517
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Scatole in termoplastico 130x180mm

Thermoplastic enclosures 130x180mm

SERIES CUBE / SERIES CUBE



Scatole in termoplastico 130x180mm

Thermoplastic enclosures 130x180mm

SERIE CUBE / SERIES CUBE

**Coperchio senza fori / Undrilled lid**

	h	g	cod
Polistirene / Polystyrene	90	380	080CS1318-9
Polistirene / Polystyrene	111	360	080CS1318-11
Policarbonato/ Polycarbonate	90	380	080C1318-9
Policarbonato/ Polycarbonate	111	430	080C1318-11

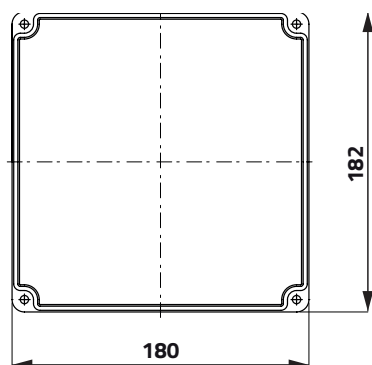
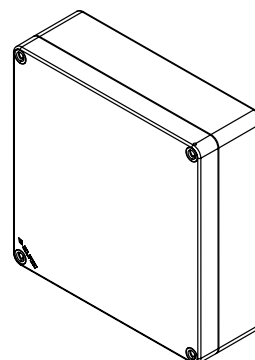
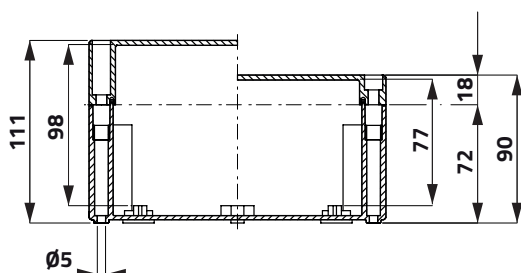
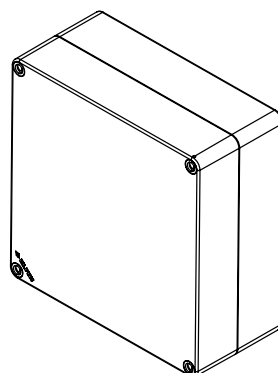
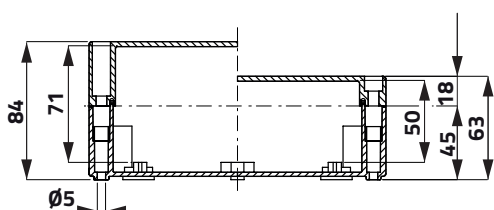
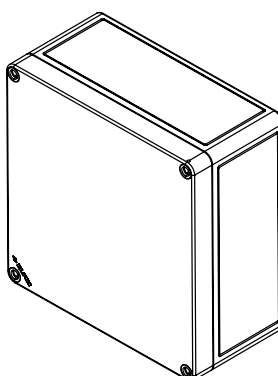
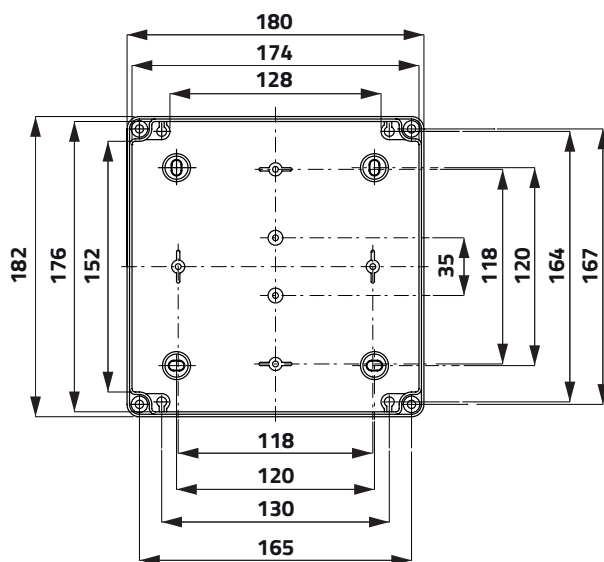
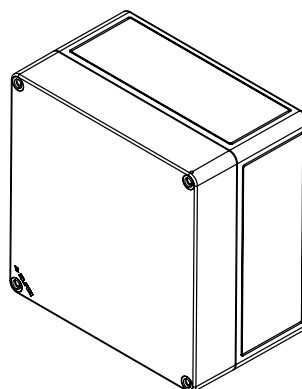
**Coperchio trasparente senza fori / Transparent Undrilled lid**

Policarbonato/ Polycarbonate	90	374	080C1318-9T
Policarbonato/ Polycarbonate	111	426	080C1318-11T

Scatole in termoplastico 180x182mm

Thermoplastic enclosures 180x182mm

SERIES CUBE / SERIES CUBE



Scatole in termoplastico 180x182mm

Thermoplastic enclosures 180x182mm

SERIE CUBE / SERIES CUBE

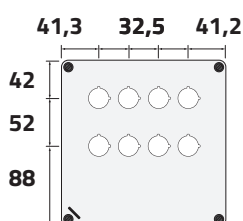


Coperchio senza fori / Undrilled lid

	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

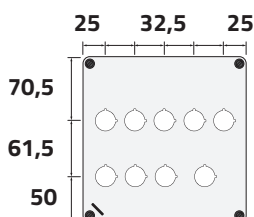
Coperchio trasparente senza fori / Transparent Undrilled lid

Policarbonato/ Polycarbonate	63	465	080C1818-6T
Policarbonato/ Polycarbonate	84	520	080C1818-8T
Policarbonato/ Polycarbonate	90	530	080C1818-9T
Policarbonato/ Polycarbonate	111	569	080C1818-11T



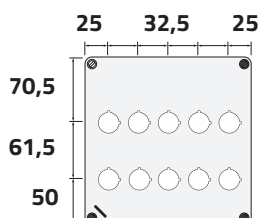
Coperchio con 8 fori Ø 22mm / 8-hole lid Ø 22mm

Policarbonato/ Polycarbonate	90	520	080C1818-9PB
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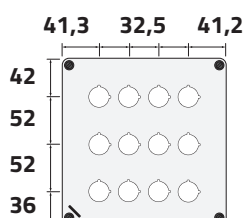
Coperchio con 9 fori Ø 22mm / 9-hole lid Ø 22mm

Policarbonato/ Polycarbonate	90	515	080C1818-9PB9C
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Coperchio con 10 fori Ø 22mm / 10-hole lid Ø 22mm

Policarbonato/ Polycarbonate	90	515	080C1818-9PB10
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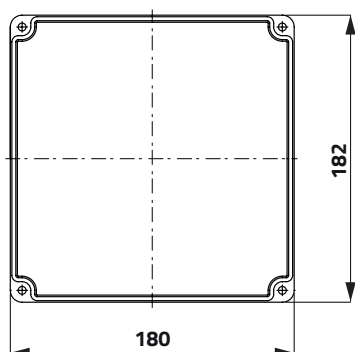
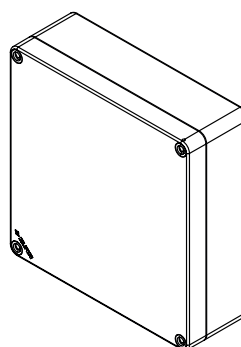
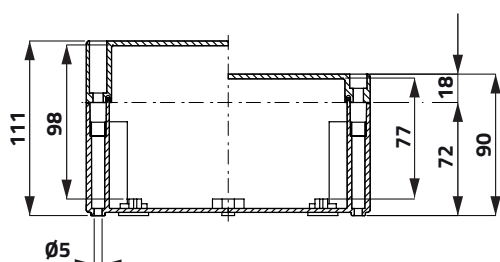
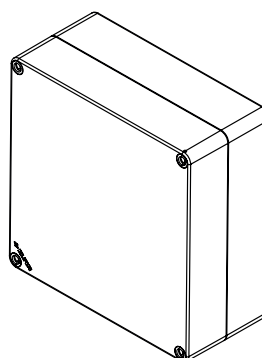
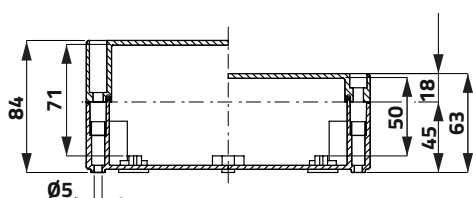
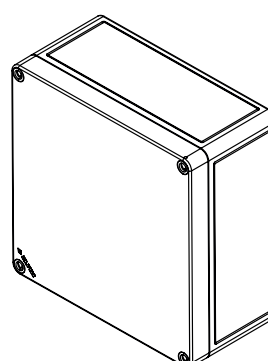
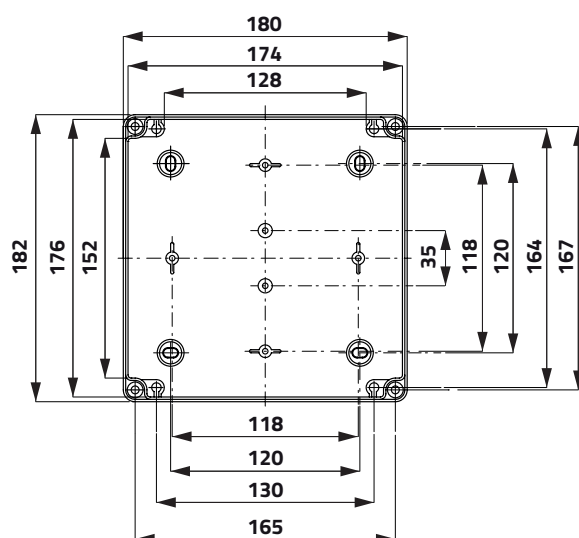
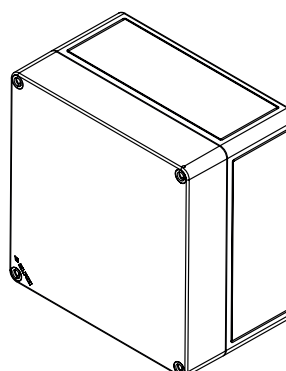
Coperchio con 12 fori Ø 22mm / 12-hole lid Ø 22mm

Policarbonato/ Polycarbonate	90	515	080C1818-9PB12
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Scatole in termoplastico 180x182mm

Thermoplastic enclosures 180x182mm

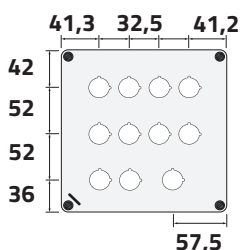
SERIES CUBE / SERIES CUBE



Scatole in termoplastico 180x182mm

Thermoplastic enclosures 180x182mm

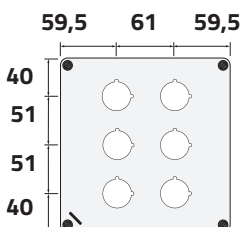
SERIE CUBE / SERIES CUBE

**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

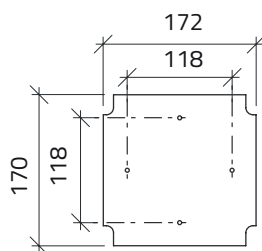
90

515

080C1818-9S6**Piastra di fondo / Mounting plate**

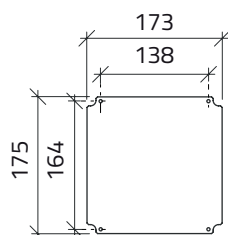
1,5

425

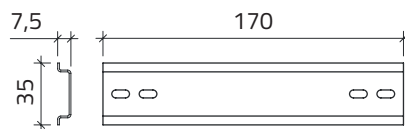
080P1818**Piastra superiore / Upper plate**

2

185

080PS1818**Guida / Rail**

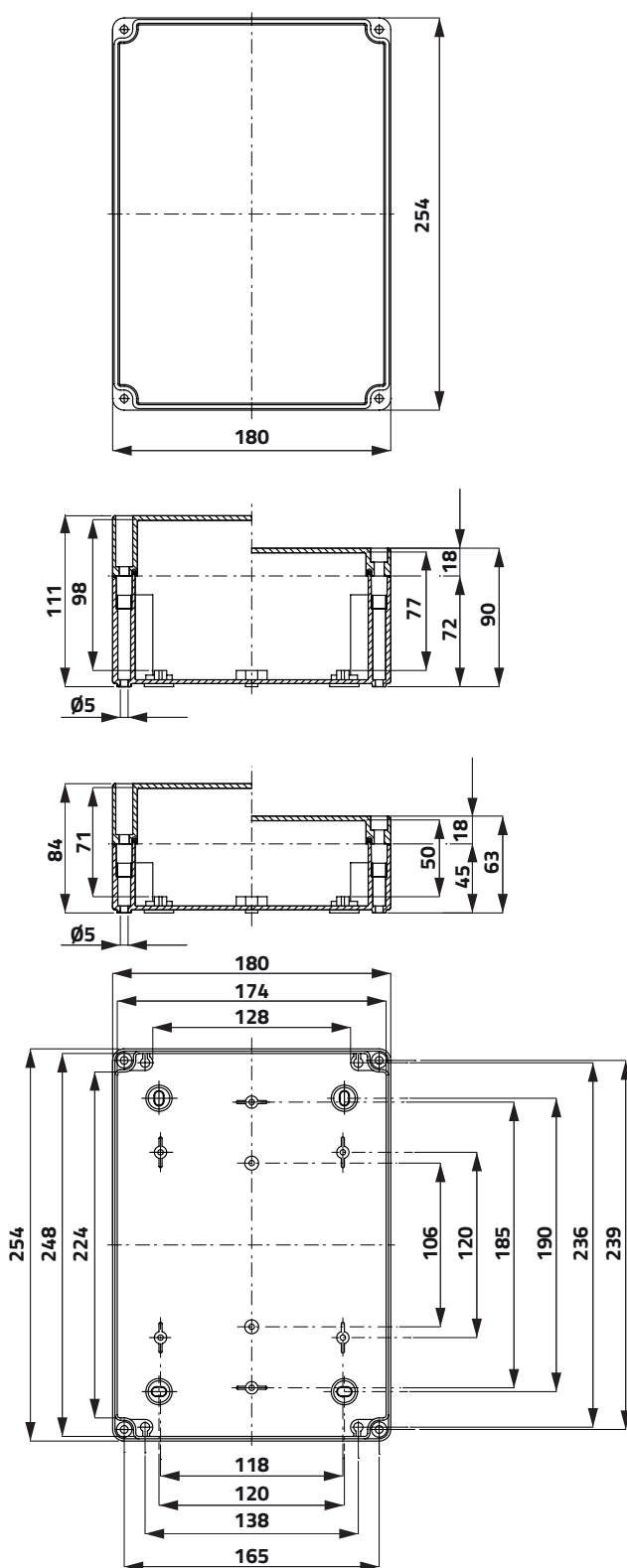
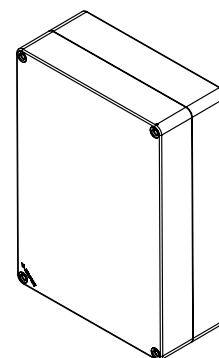
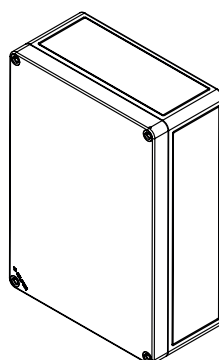
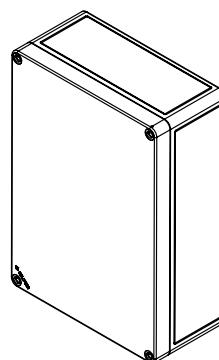
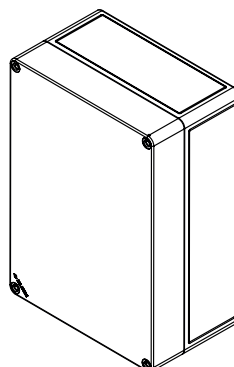
59

080G3517

Scatole in termoplastico 180x254mm

Thermoplastic enclosures 180x254mm

SERIES CUBE / SERIES CUBE



Scatole in termoplastico 180x254mm

Thermoplastic enclosures 180x254mm

SERIE CUBE / SERIES CUBE

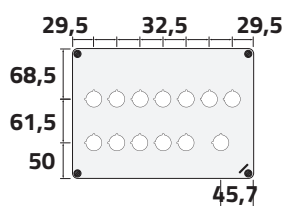


Coperchio senza fori / Undrilled lid

	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

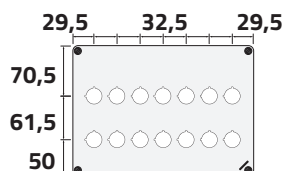
Coperchio trasparente senza fori / Transparent Undrilled lid

Policarbonato/ Polycarbonate	63	590	080C1825-6T
Policarbonato/ Polycarbonate	84	640	080C1825-8T
Policarbonato/ Polycarbonate	90	695	080C1825-9T
Policarbonato/ Polycarbonate	111	745	080C1825-11T



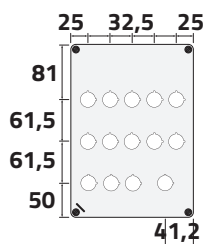
Coperchio con 13 fori Ø 22mm / 13-hole lid Ø 22mm

Policarbonato/ Polycarbonate	90	694	080C1825-9P13C
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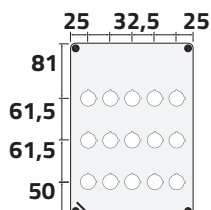
Coperchio con 14 fori Ø 22mm / 14-hole lid Ø 22mm

Policarbonato/ Polycarbonate	90	694	080C1825-9P14
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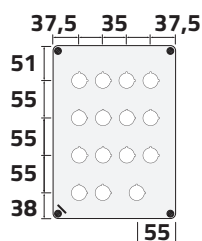
Coperchio con 14 fori Ø 22mm / 14-hole lid Ø 22mm

Policarbonato/ Polycarbonate	90	694	080C1825-9P14C
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Coperchio con 15 fori Ø 22mm / 15-hole lid Ø 22mm

Policarbonato/ Polycarbonate	90	694	080C1825-9P15
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Coperchio con 15 fori Ø 22mm / 15-hole lid Ø 22mm

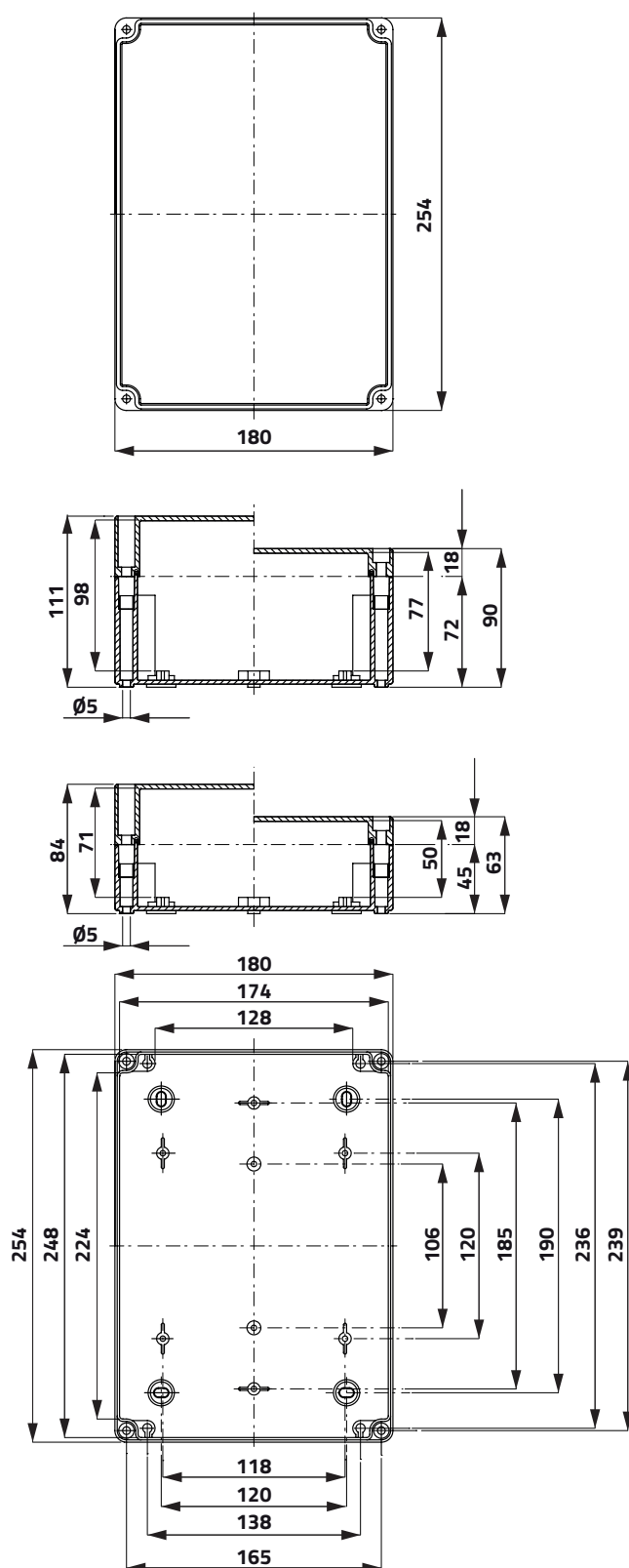
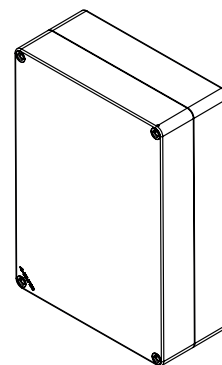
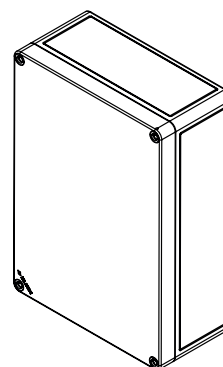
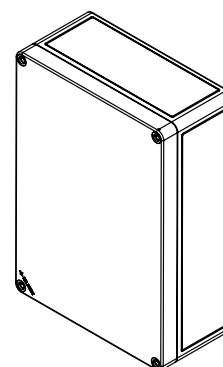
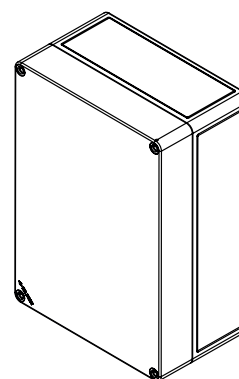
Policarbonato/ Polycarbonate	90	694	080C1825-9P15C
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Scatole in termoplastico 180x254mm

Thermoplastic enclosures 180x254mm

SERIES CUBE / SERIES CUBE



Scatole in termoplastico 180x254mm

Thermoplastic enclosures 180x254mm

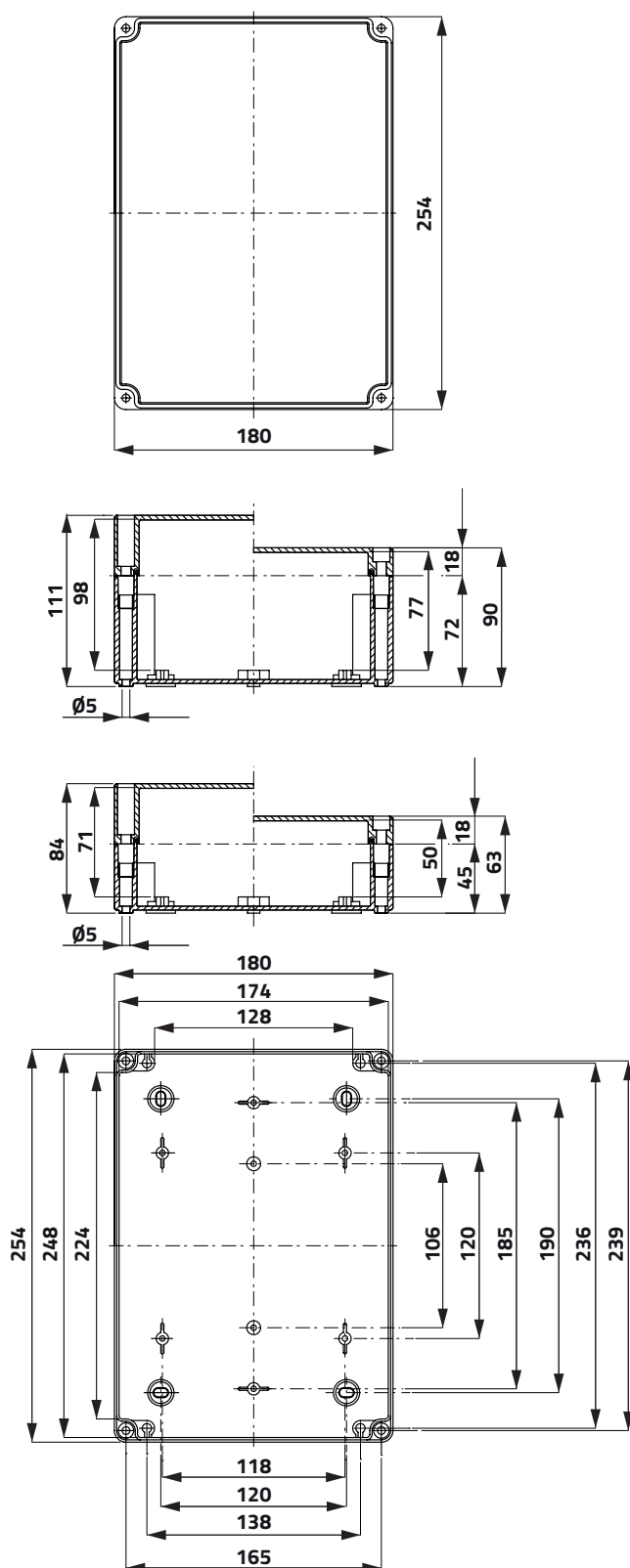
SERIE CUBE / SERIES CUBE

	h	g	cod
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 180x254mm

Thermoplastic enclosures 180x254mm

SERIES CUBE / SERIES CUBE



Scatole in termoplastico 180x254mm

Thermoplastic enclosures 180x254mm

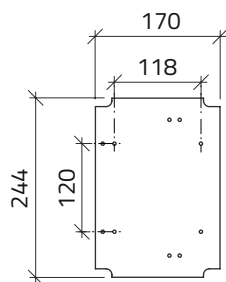
SERIE CUBE / SERIES CUBE

**Piastra di fondo / Mounting plate****h**

1,5

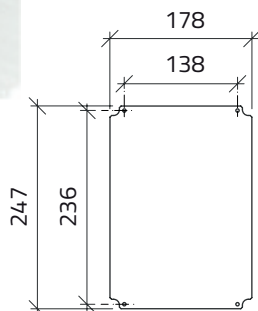
g

613

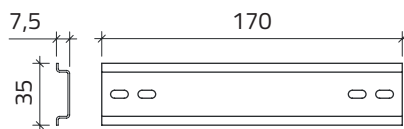
cod**080P1825****Piastra superiore / Upper plate**

2

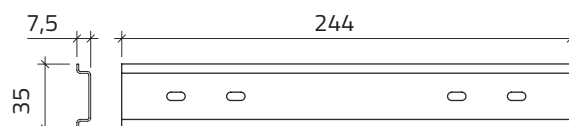
185

080PS1825**Guida / Rail**

59

080G3517**Guida / Rail**

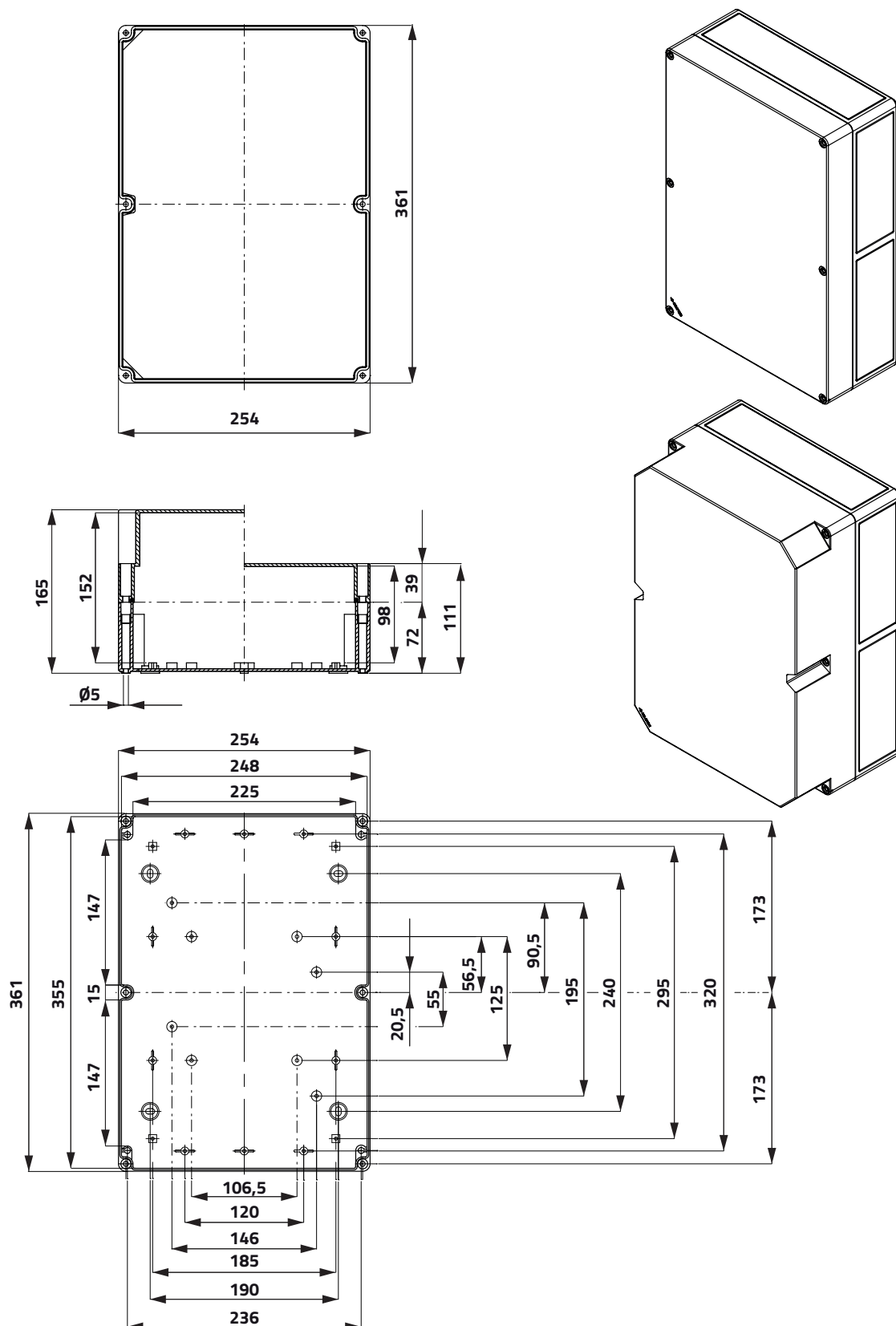
77

080G3522

Scatole in termoplastico 254x361mm

Thermoplastic enclosures 254x361mm

SERIES CUBE / SERIES CUBE



Scatole in termoplastico 254x361mm

Thermoplastic enclosures 254x361mm

SERIE CUBE / SERIES CUBE

**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

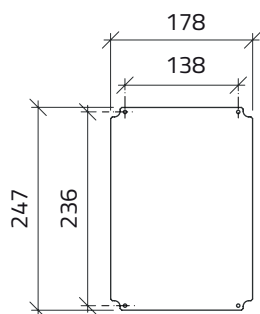
**Coperchio trasparente senza fori / Transparent Undrilled lid**

Policarbonato/ Polycarbonate	111	1330	080C2536-11T
Policarbonato/ Polycarbonate	165	1640	080C2536-16T

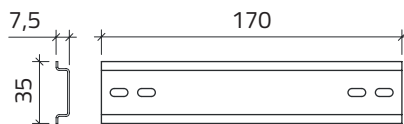
**Piastra di fondo / Mounting plate**

1,5	613	080P1825
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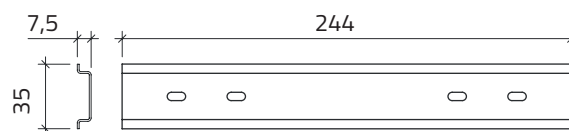
(Utilizzare 2 piastre 080P1825 / No. 2 plates 080P1825 are to be fitted)

**Guida / Rail**

59	080G3517
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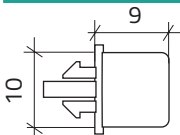
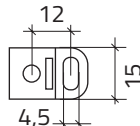
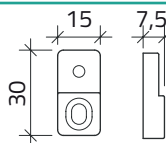
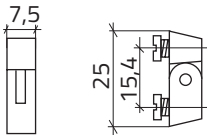
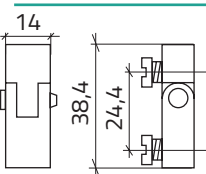
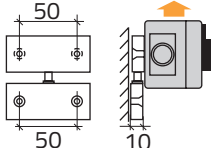
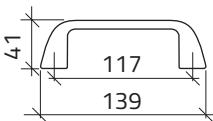
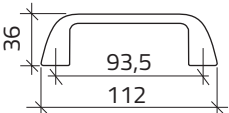
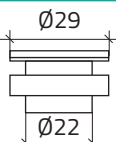
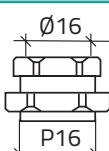
**Guida / Rail**

77	080G3522
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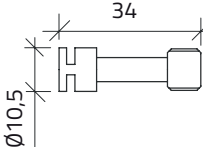
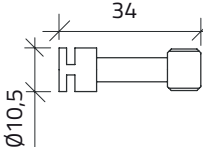
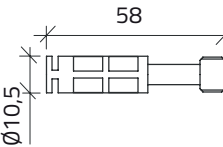
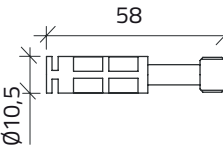
Accessori

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 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 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 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 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
	 Vite nera / Black screw	1,5	4	080VB
	 Vite gialla / Yellow screw	1,5	4	080VBG
	 Vite nera / Black screw	3	4	080VA
	 Vite gialla / Yellow screw	3	4	080VAG

Accessori

Accessories

h

g

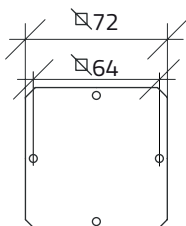
cod

Piastra di fondo / Mounting plate

1

100

080P0909

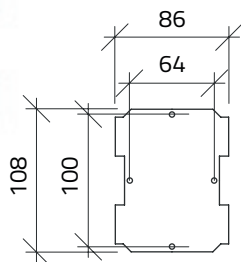


Piastra di fondo / Mounting plate

1

148

080P0913

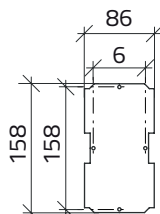


Piastra di fondo / Mounting plate

1

210

080P0918

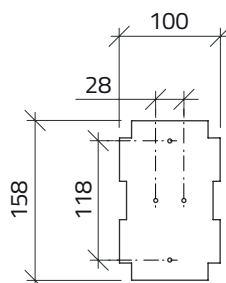


Piastra di fondo / Mounting plate

1

270

080P1118

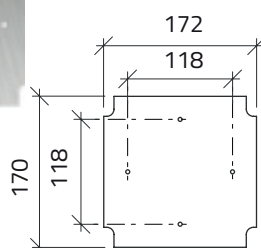


Piastra di fondo / Mounting plate

1,5

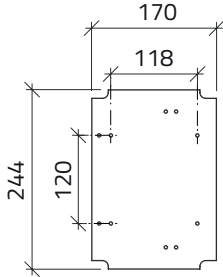
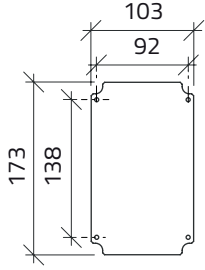
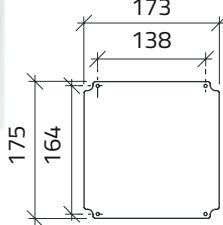
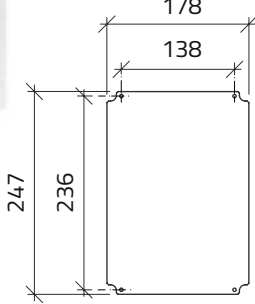
425

080P1818



Accessori

Accessories

		h	g	cod
	Piastra di fondo / Mounting plate 	1,5	613	080P1825
	Piastra superiore / Upper plate 	2	285	080PS1118
	Piastra superiore / Upper plate 	2	130	080PS1818
	Piastra superiore / Upper plat 	2	185	080PS1825



REMOTE

Pulsantieri pensili remote

Pendant push-button stations, remote control

INVOLUCRO

Design compatto ed ergonomico per una presa comoda e sicura con risalti antiscivolo. Realizzato in materiale antiurto. L'involucro viene ulteriormente protetto dalla guarnizione lungo tutto il perimetro laterale, per una elevata resistenza all'impatto.

Disponibilità di due colorazioni giallo/grigio - grigio/grigio. L'involucro garantisce un grado di protezione - IP67 - IP69K. L'entrata del cavo è assicurata da pressacavo tipo M20 flessibile Ø6 ÷ 14 mm posto sul coperchio. La reversibilità del coperchio permette di posizionare l'entrata cavo sia dall'alto, sia dal basso. Il trattenimento del cavo è garantito nel tempo da un efficace sistema serracavo presente all'interno della pulsantiera in grado di accogliere un'ampia serie di sezioni cavo. Modalità "appesa" tramite robusto anello in acciaio inox. Modalità su supporto contenitore di design evoluto e protettivo.

LAYOUT DI FORATURA

Ampia possibilità di foratura per il fissaggio di operatori di comando (pulsanti, selettori, lampade spia) con quote di interasse diverse, mirate all'ottimizzazione dello spazio utile. Il numero massimo di operatori utilizzabili è 5. Layout di foratura personalizzabili da 3 a 5 fori D.22,5 mm

OPERATORI UTILIZZABILI

Tutta la gamma di operatori, normali e luminosi, 020 SM2 (D.22mm) può essere montata sulla pulsantiera remota. Il grado di tenuta degli operatori IP66 - IP69K può essere aumentato fino a IP67 con l'impiego di cappucci in gomma trasparente. Selettori a manopola normali, oppure luminosi a pomello, possono essere utilizzati con un fissaggio che evidenzia l'indice in orizzontale. Il numero massimo di contatti elettrici utilizzabile sui pulsanti e sui selettori è 2.

Ampia scelta di simboli e pittogrammi da utilizzare sui pulsanti sia normali che luminosi e sulle lampade spia.

ETICHETTE ADESIVE

Ampia gamma di etichette indicatrici adesive e personalizzabili. Sono disponibili per applicazione laterale (inclinata) e per applicazione frontale, personalizzabile con il brand del cliente.

PULSANTIERE PERSONALIZZATE

Effettuabile fornitura completa di pulsantiera montate e cablate con cavo spiralato e connessioni elaborate secondo specifica del cliente.

CASING

Compact and ergonomic design.

Non-slip grip, comfortable to hold. Made of impact-resistant material, the casing is protected by a gasket running all along its perimeter. It guarantees a protection rating of IP67, IP69K. Available in two different colour combinations yellow/grey or grey/dark grey.

The cable entry is secured by a cable gland, M20 flexible type, Ø6 ÷ 14 mm, placed on the lid.

The cable entry can be positioned both at the top and at the bottom thanks to the reversibility of the lid.

An internal cable-retention system ensures the long-lasting fixing of cables of variable dimension.

'Hanging' mode via strong stainless steel eyelet.

"Wall-housing" mode with a support of advanced and embracing design.

DRILLING LAYOUT

Wide possibility of drilling, with different interaxes for fastening control operators, aimed at optimising the useful space.

Drilling layouts customizable from 3 to 5 D.22,5mm holes.

AVAILABLE OPERATORS

The Remote push-button station can be assembled with all normal and illuminated operators from 020 SM2(D.22mm).

The use of transparent rubber caps increases the protection degree of operators from IP66 - IP69K to IP67 .

Non-illuminated and illuminated knob selector switches can be used in a position which highlights the horizontal index.

2 is the maximum number of electrical contacts - applicable on each operator - for push-buttons and knob selector switches.

Wide choice of symbols and pictograms for non-illuminated and illuminated push-buttons and for pilot lights.

LABELS

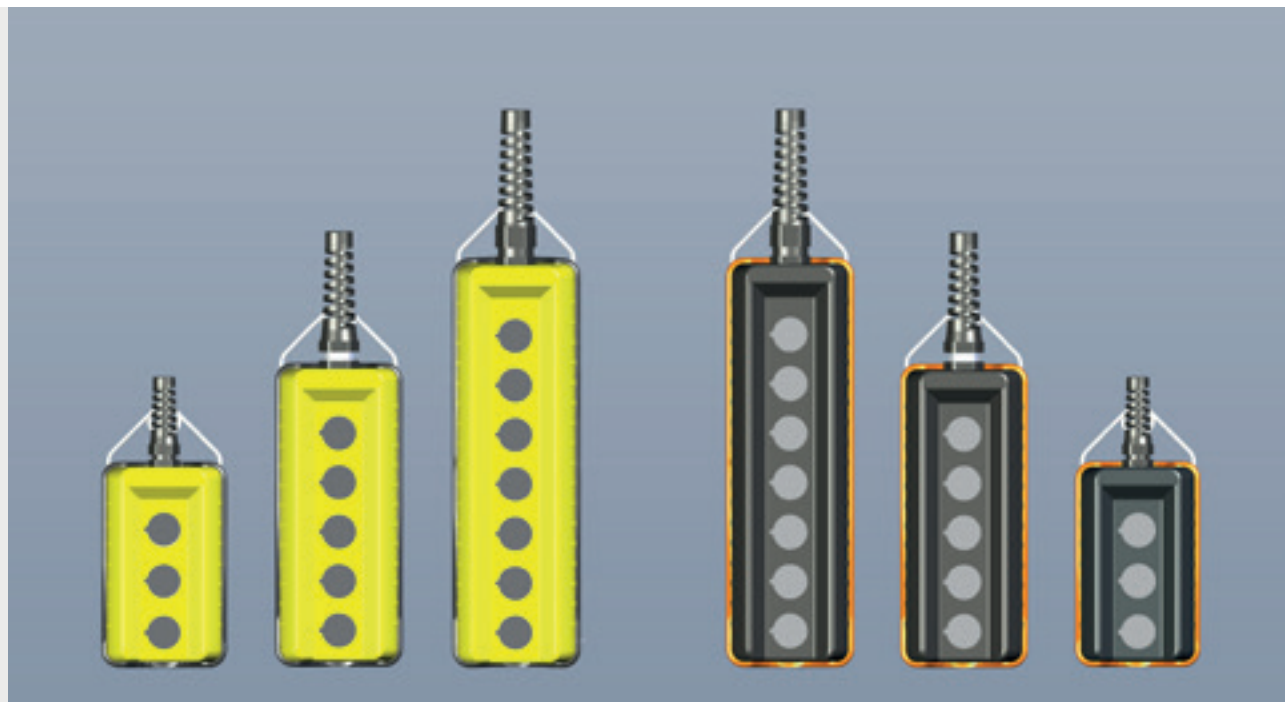
Large range of adhesive and customizable labels. They are available for side application (inclined) and front application. Customizable with the customer's brand.

CUSTOMIZABLE PUSH-BUTTON STATIONS

Enclosures available as complete equipment, supplied with push-buttons and spiral cable mounted and wired. Wiring made according to customer's specification.

Pulsantiere pensili remote Pendant push-button stations, remote control

SERIES REMOTE / SERIES REMOTE



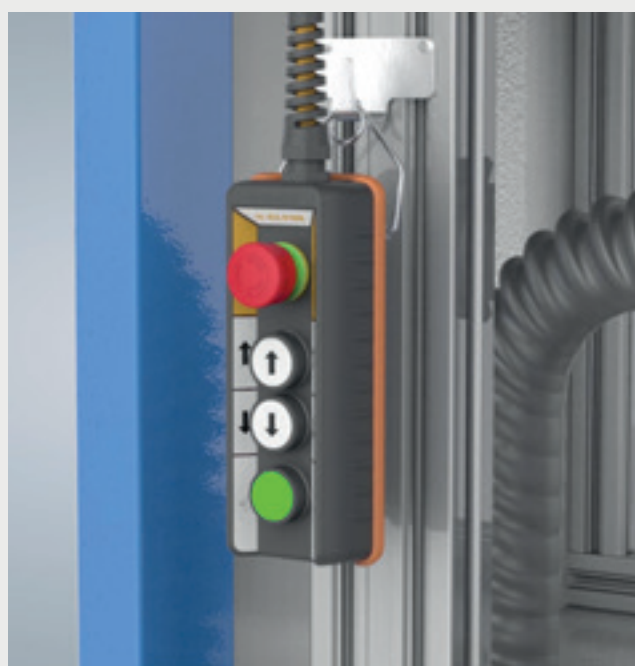
Molteplici layout di foratura per una completa libertà di utilizzo e applicazione

Multiple drilling layouts for complete freedom of use and application



Applicazione con supporto

Holder application



Applicazione con flancia in acciaio

Application with steel flannel

SCATOLE IN TERMOPLASTICO

Pulsantiere pensili remote Pendant push-button stations, remote control

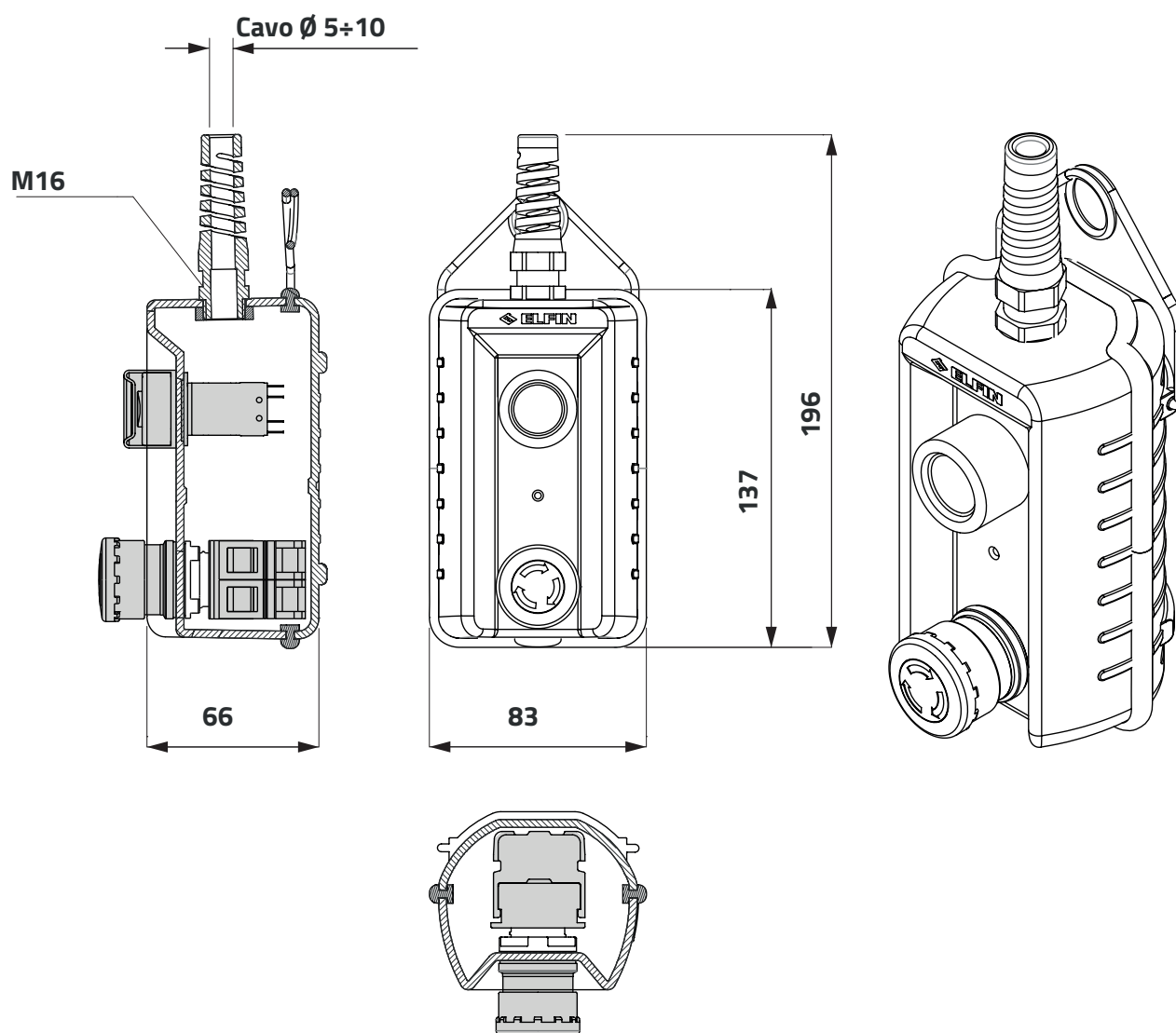
SERIE REMOTE / SERIES REMOTE



Pulsantiere pensili remote

Pendant push-button stations, remote control

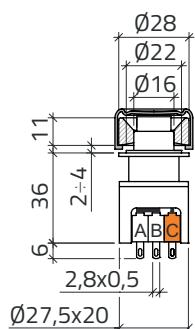
SERIE REMOTE / SERIES REMOTE



Pulsantiera pensili remote

Pendant push-button stations, remote control

SERIE REMOTE / SERIES REMOTE



Pulsantiera pensile remota con pulsante di abilitazione a 3 posizioni

Pendant push-button stations remote control with 3-position enabling switch

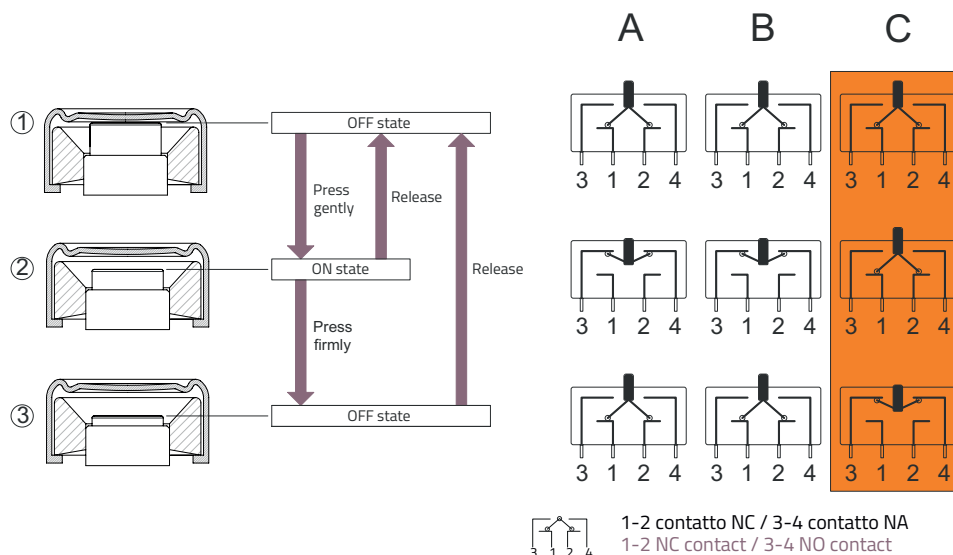
Microinterruttori con terminali faston 2,8 x 0,5

Microswitches with faston terminals 2.8 x 0.5

3 NO + 3 NC

130

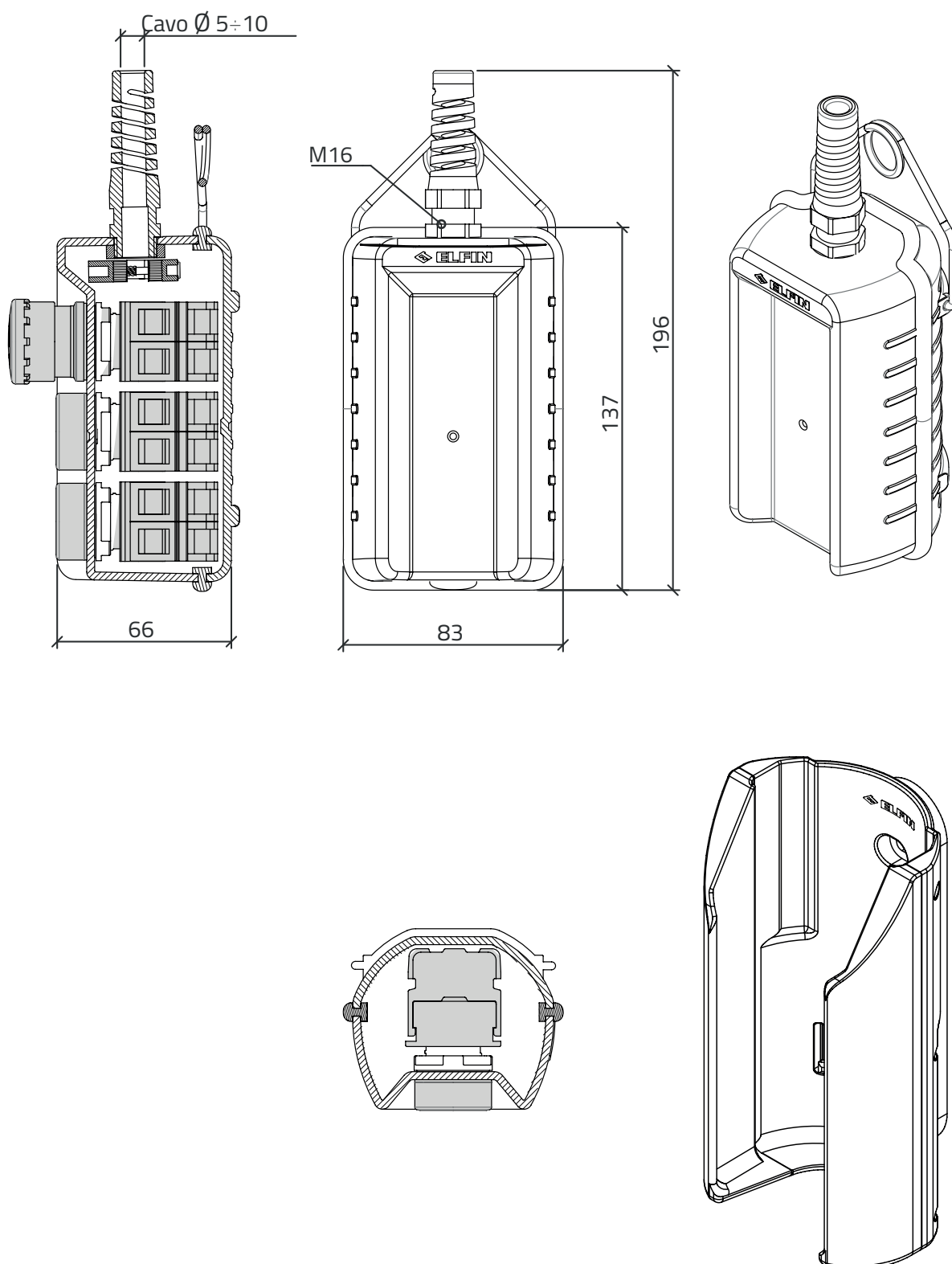
080R140GP3P33F



Pulsantiere pensili remote

Pendant push-button stations, remote control

SERIES REMOTE / SERIES REMOTE

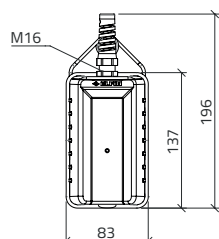


Pulsantiere pensili remote

Pendant push-button stations, remote control

SERIES REMOTE / SERIES REMOTE

Senza operatore 140mm / Without operator 140mm

**Coperchio senza fori / Undrilled lid**

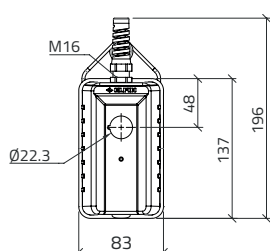
Termoplastica, antiurto
Thermoplastic, shock absorbing

g

cod

160

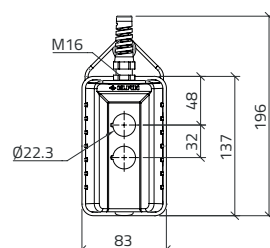
080R140

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

Termoplastica, antiurto
Thermoplastic, shock absorbing

160

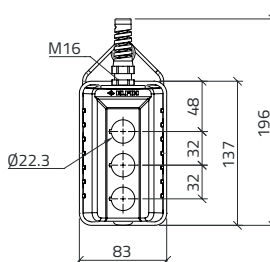
080R140-P1

**Coperchio con 2 fori Ø 22mm / 2-holes lid Ø 22mm**

Termoplastica, antiurto
Thermoplastic, shock absorbing

160

080R140-P2

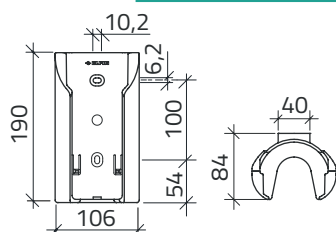
**Coperchio con 3 fori Ø 22mm / 3-holes lid Ø 22mm**

Termoplastica, antiurto
Thermoplastic, shock absorbing

160

080R140-P3

Accessori / Accessories

**Supporto a parete / Wall bracket**

Termoplastica, antiurto
Thermoplastic, shock absorbing

g

cod

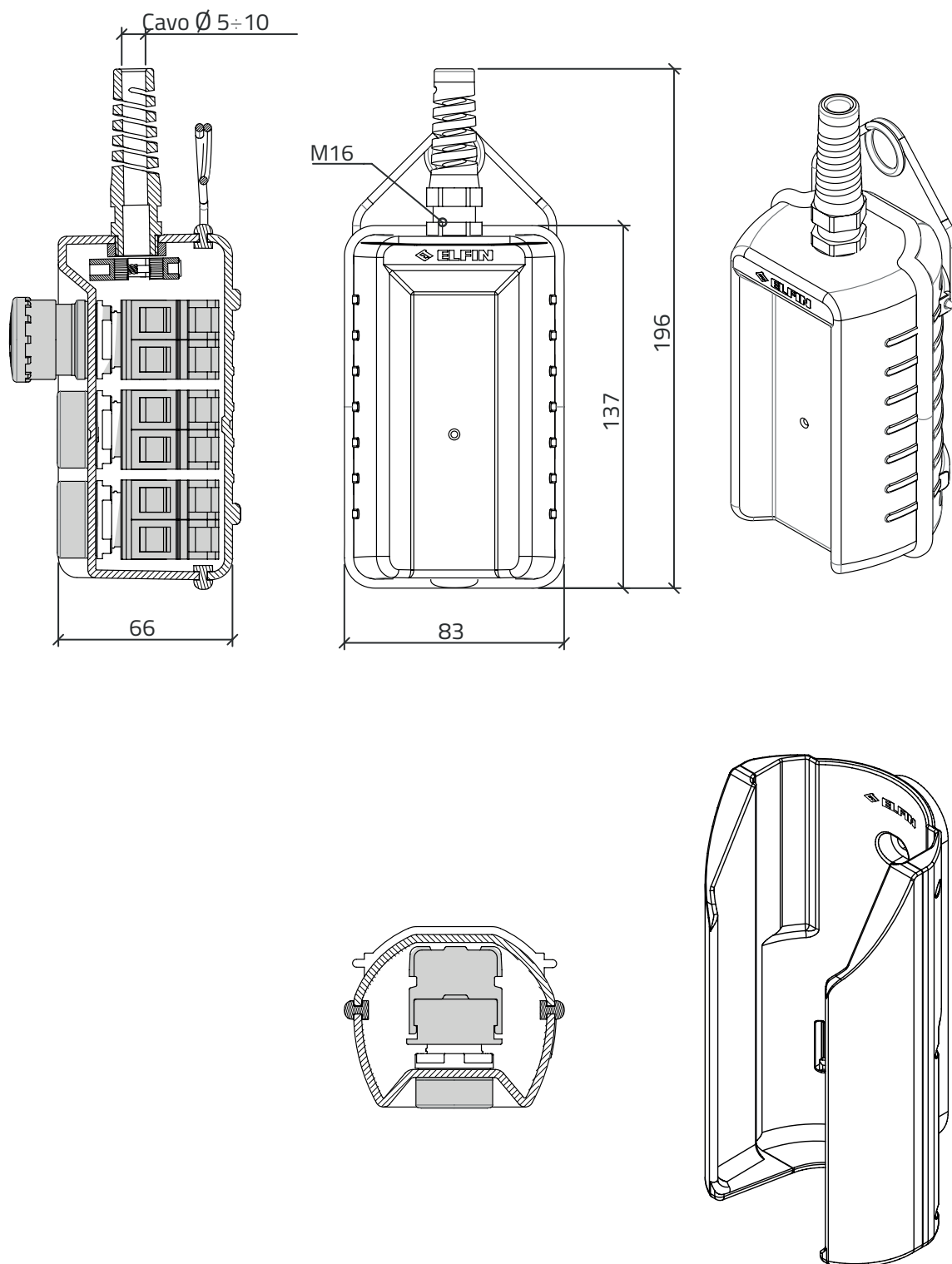
170

080RSPR

Pulsantiere pensili remote

Pendant push-button stations, remote control

SERIES REMOTE / SERIES REMOTE

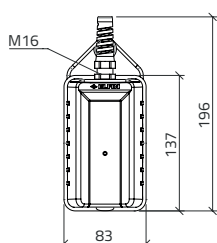


Pulsantiere pensili remote

Pendant push-button stations, remote control

SERIE REMOTE / SERIES REMOTE

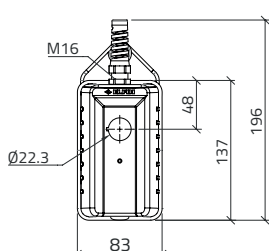
Senza operatore 140mm / Without operator 140mm

**Coperchio giallo senza fori / Undrilled yellow lid**

Termoplastica, antiurto
Thermoplastic, shock absorbing

160

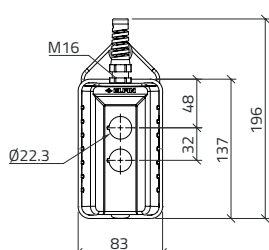
080R140-G

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

Termoplastica, antiurto
Thermoplastic, shock absorbing

160

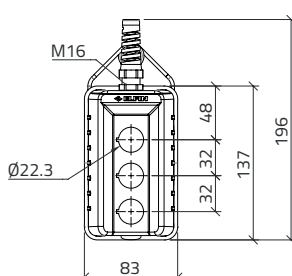
080R140-GP1

**Coperchio giallo con 2 fori Ø 22mm / 2-holes yellow lid Ø 22mm**

Termoplastica, antiurto
Thermoplastic, shock absorbing

160

080R140-GP2

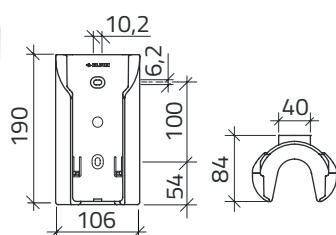
**Coperchio giallo con 3 fori Ø 22mm / 3-holes yellow lid Ø 22mm**

Termoplastica, antiurto
Thermoplastic, shock absorbing

160

080R140-GP3

Accessori / Accessories

**Supporto a parete / Wall bracket**

Termoplastica, antiurto
Thermoplastic, shock absorbing

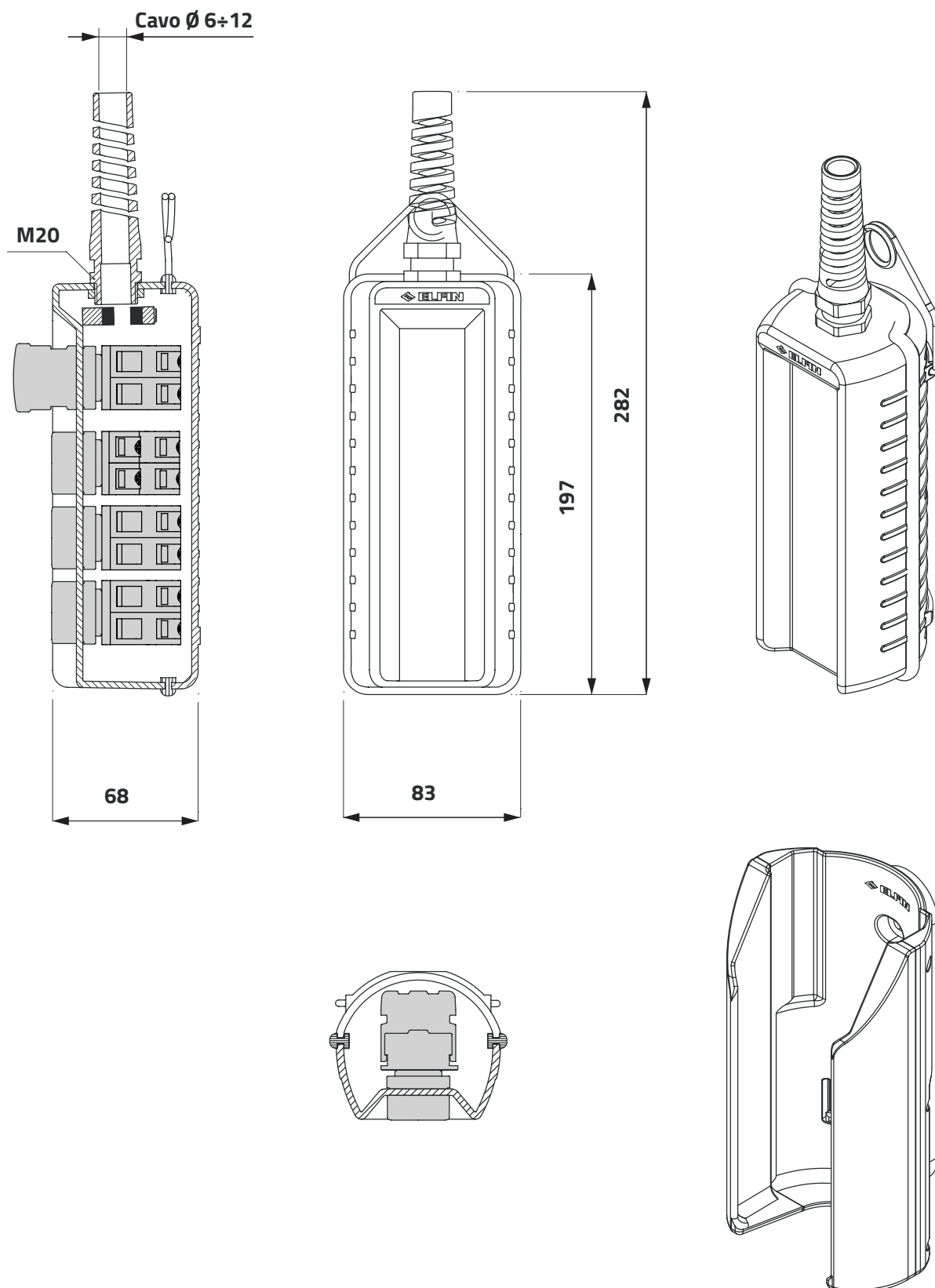
170

080RSPRG

Pulsantiere pensili remote

Pendant push-button stations, remote control

SERIES REMOTE / SERIES REMOTE



Pulsantiere pensili remote

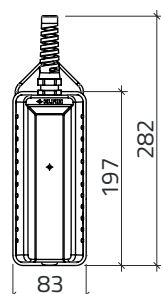
Pendant push-button stations, remote control

SERIE REMOTE / SERIES REMOTE

Senza operatore 200mm / Without operator 200mm

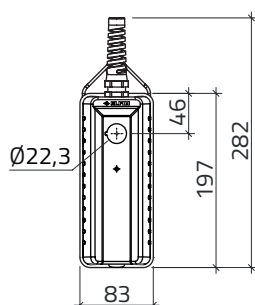
g

cod

**Coperchio senza fori / Undrilled lid**

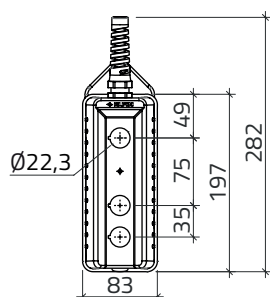
Termoplastica, antiurto
Thermoplastic, shock absorbing

220

080R200**Coperchio con 1 foro Ø 22mm / 1-hole lid Ø 22mm**

Termoplastica, antiurto
Thermoplastic, shock absorbing

220

080R200-P1**Coperchio con 3 fori Ø 22mm / 3-holes lid Ø 22mm**

Termoplastica, antiurto
Thermoplastic, shock absorbing

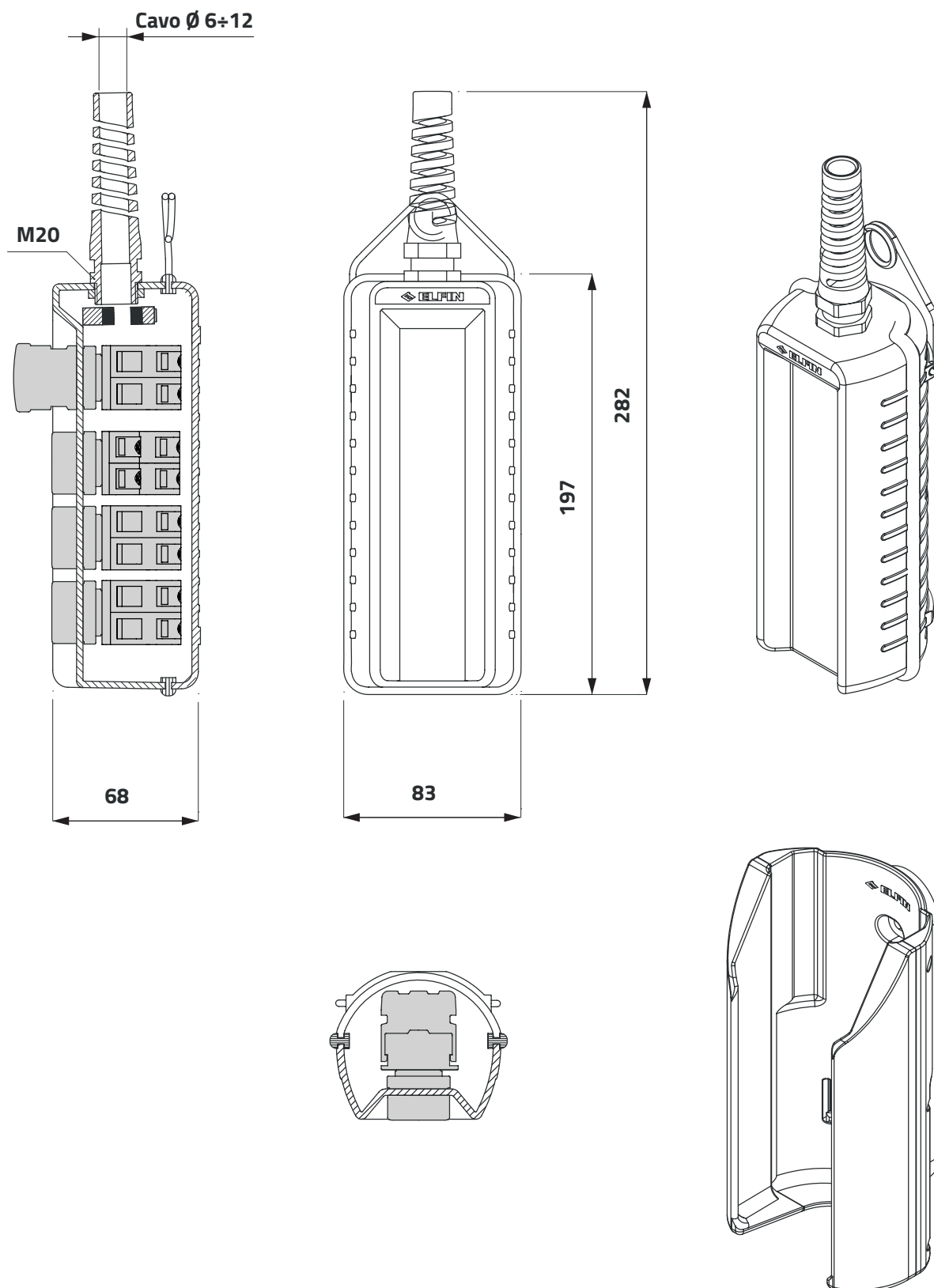
220

080R200-P3C

Pulsantiere pensili remote

Pendant push-button stations, remote control

SERIES REMOTE / SERIES REMOTE

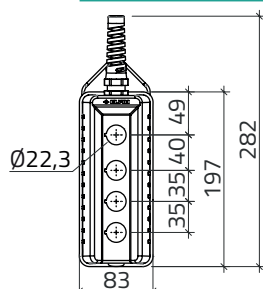


Pulsantiere pensili remote

Pendant push-button stations, remote control

SERIE REMOTE / SERIES REMOTE

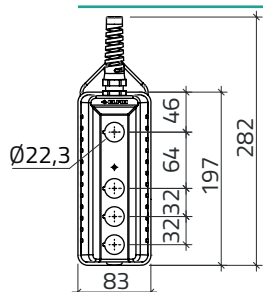
Senza operatore 200mm / Without operator 200mm

**Coperchio con 4 fori Ø 22mm / 4-holes lid Ø 22mm**

Termoplastica, antiurto
Thermoplastic, shock absorbing

g 220

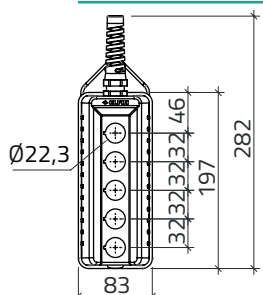
cod 080R200-P4

**Coperchio con 4 fori Ø 22mm / 4-holes lid Ø 22mm**

Termoplastica, antiurto
Thermoplastic, shock absorbing

g 220

cod 080R200-P4C

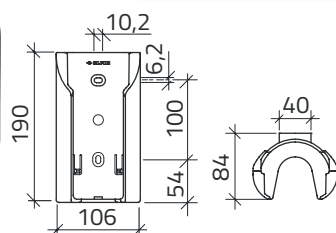
**Coperchio con 5 fori Ø 22mm / 5-holes lid Ø 22mm**

Termoplastica, antiurto
Thermoplastic, shock absorbing

g 220

cod 080R200-P5

Accessori / Accessories

**Supporto a parete / Wall bracket**

Termoplastica, antiurto
Thermoplastic, shock absorbing

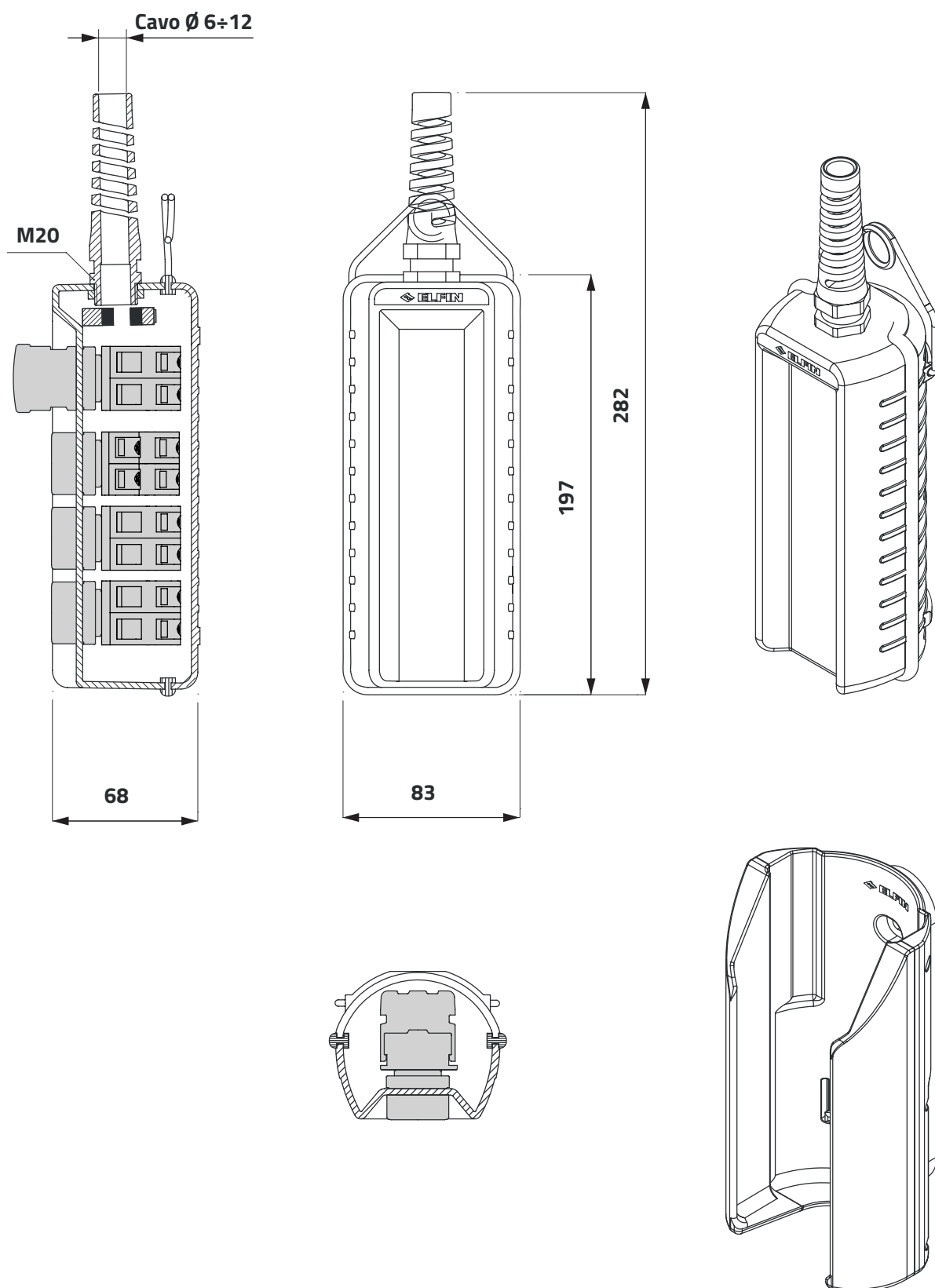
g 170

cod 080RSPR

Pulsantiere pensili remote

Pendant push-button stations, remote control

SERIES REMOTE / SERIES REMOTE



Pulsantiere pensili remote

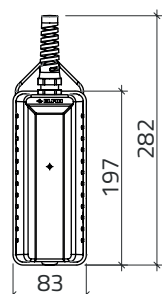
Pendant push-button stations, remote control

SERIE REMOTE / SERIES REMOTE

Senza operatore 200mm / Without operator 200mm

g

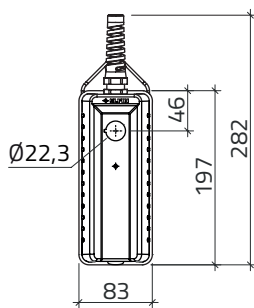
cod

**Coperchio giallo senza fori / Undrilled yellow lid**

Termoplastica, antiurto
Thermoplastic, shock absorbing

220

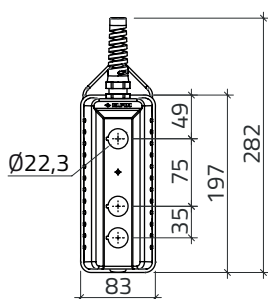
080R200-G

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

Termoplastica, antiurto
Thermoplastic, shock absorbing

220

080R200-GP1

**Coperchio giallo con 3 fori Ø 22mm / 3-holes yellow lid Ø 22mm**

Termoplastica, antiurto
Thermoplastic, shock absorbing

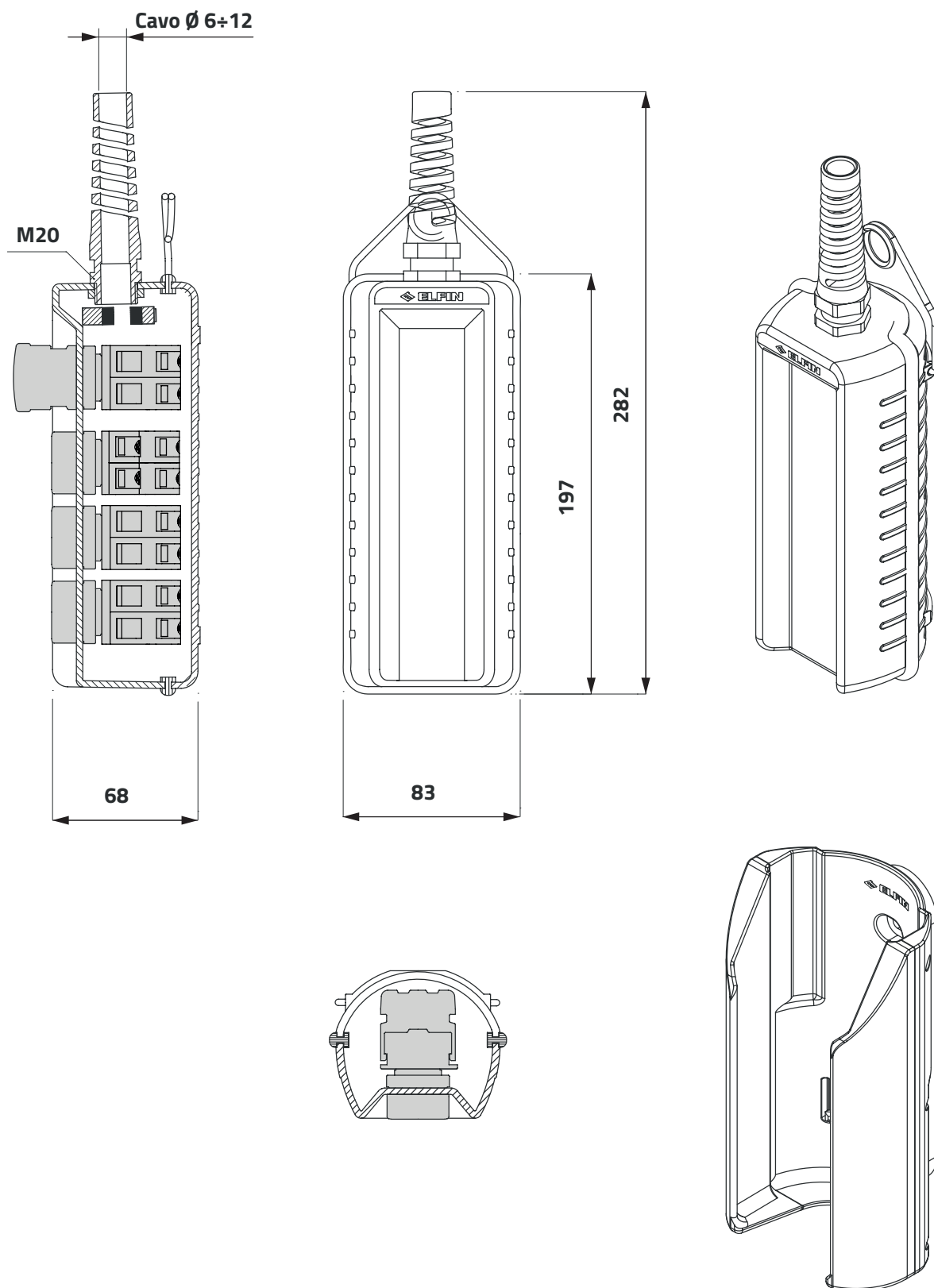
220

080R200-GP3C

Pulsantiere pensili remote

Pendant push-button stations, remote control

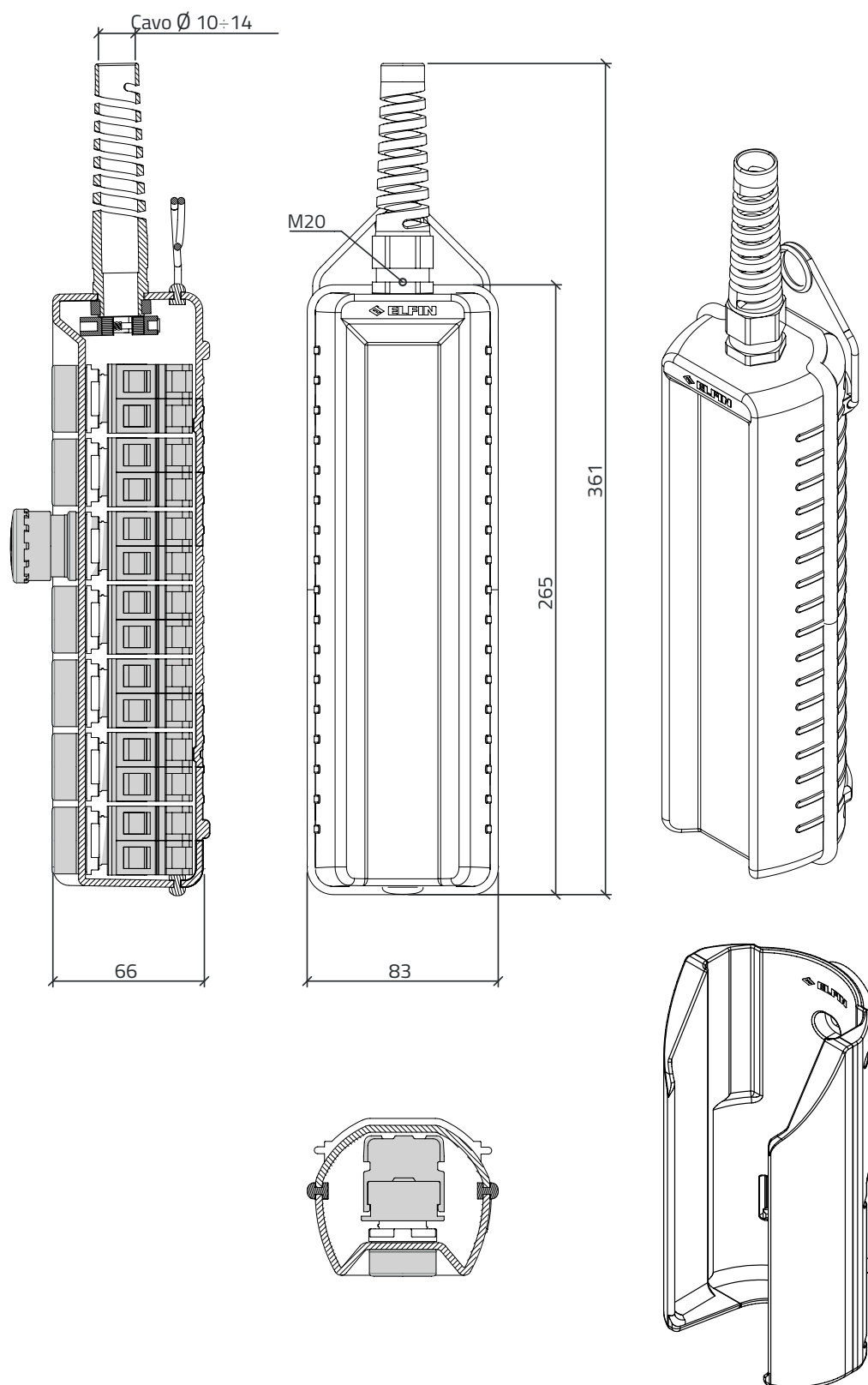
SERIES REMOTE / SERIES REMOTE



Pulsantiere pensili remote

Pendant push-button stations, remote control

SERIES REMOTE / SERIES REMOTE



Pulsantiere pensili remote

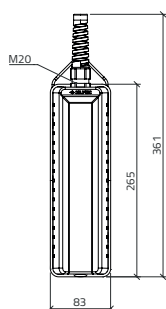
Pendant push-button stations, remote control

SERIE REMOTE / SERIES REMOTE

Senza operatore 265mm / Without operator 265mm

g

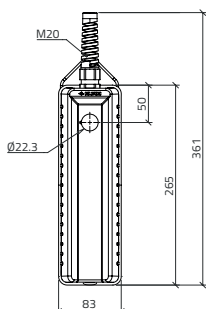
cod

**Coperchio senza fori / Undrilled lid**

Termoplastica, antiurto
Thermoplastic, shock absorbing

300

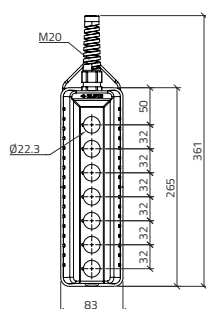
080R265

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

Termoplastica, antiurto
Thermoplastic, shock absorbing

300

080R265-P1

**Coperchio con 7 fori Ø 22mm / 7-holes lid Ø 22mm**

Termoplastica, antiurto
Thermoplastic, shock absorbing

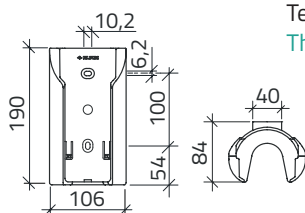
300

080R265-P7

Accessori / Accessories

g

cod

**Supporto a parete / Wall bracket**

Termoplastica, antiurto
Thermoplastic, shock absorbing

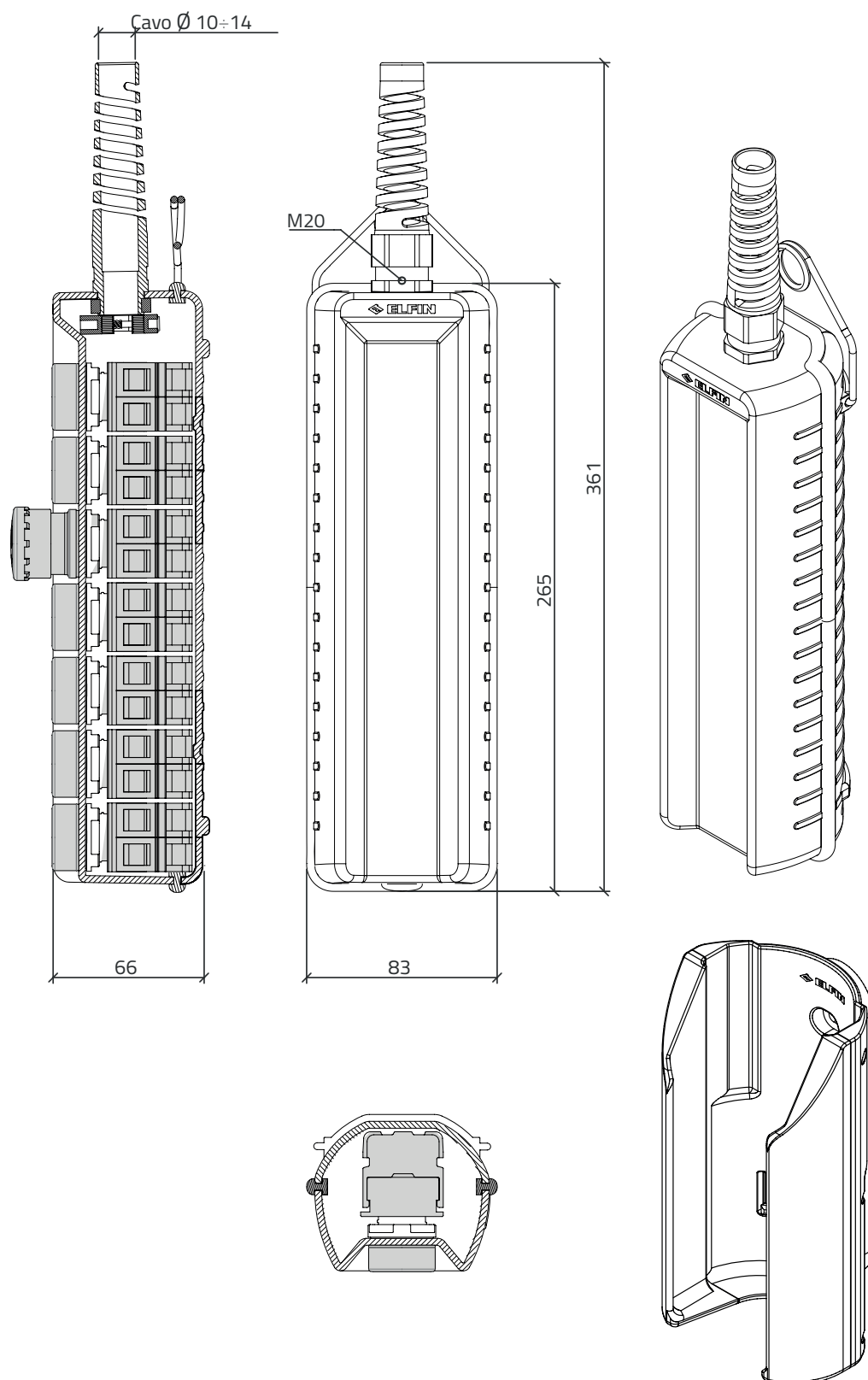
170

080RSPR

Pulsantiere pensili remote

Pendant push-button stations, remote control

SERIE REMOTE / SERIES REMOTE



Pulsantiere pensili remote

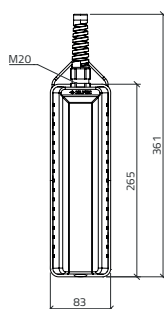
Pendant push-button stations, remote control

SERIE REMOTE / SERIES REMOTE

Senza operatore 265mm / Without operator 265mm

g

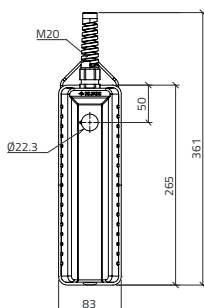
cod

**Coperchio giallo senza fori / Undrilled yellow lid**

Termoplastica, antiurto
Thermoplastic, shock absorbing

300

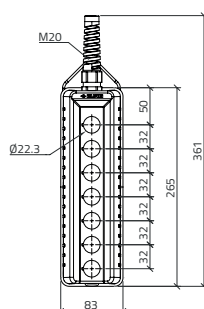
080R265-G

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

Termoplastica, antiurto
Thermoplastic, shock absorbing

300

080R265-GP1

**Coperchio giallo con 7 fori Ø 22mm / 7-holes yellow lid Ø 22mm**

Termoplastica, antiurto
Thermoplastic, shock absorbing

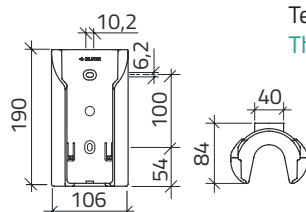
300

080R265-GP7

Accessori / Accessories

g

cod

**Supporto a parete giallo / Yellow wall bracket**

Termoplastica, antiurto
Thermoplastic, shock absorbing

170

080RSPRG

ELFIN
080
Q3040-20
www.elfin.cz



SCATOLE IN TERMOPLASTICO

Quadri in poliestere Polyester enclosures

SERIES Q / SERIES Q



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 V0	
Grado di protezione	IP65 CEI EN 60529	
Protezione agli agenti atmosferici	Basso assorbimento di acqua	
Limiti di temperatura	-30 °C ÷ +120 °C	
Protezione contro gli impatti	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 atmospherical agents	Low water absorbtion	
Temperature range	Resitant to chemical and corrosion agents	
Protection against impact	-30 °C ÷ +120 °C	
	IK 09 EN 50102	



Principi costruttivi quadri poliestere

Construction principles of polyester enclosures

SERIES Q / SERIES Q



Formato 250X300, una chiusura ad aletta

Size 250X300 , one wing lock



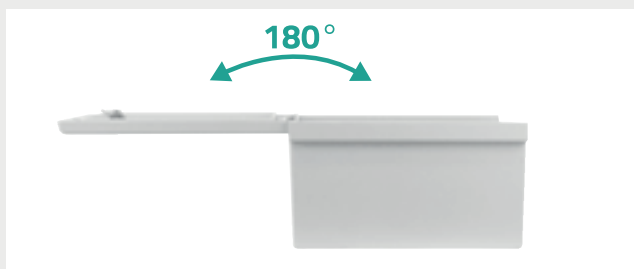
Da formato 300X400, due chiusure ad aletta

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

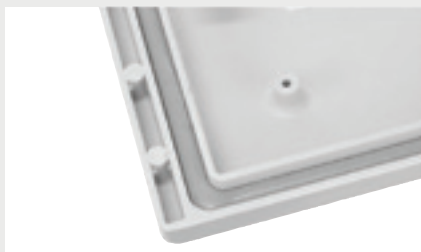


Inserire la piastra con le staffe montate e regolarle sulle guide con le viti e i dadi

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

SERIE Q / SERIES Q



La guarnizione garantisce protezione IP65

A sealing gasket assures IP65 protection



Chiave di chiusura

Locking key



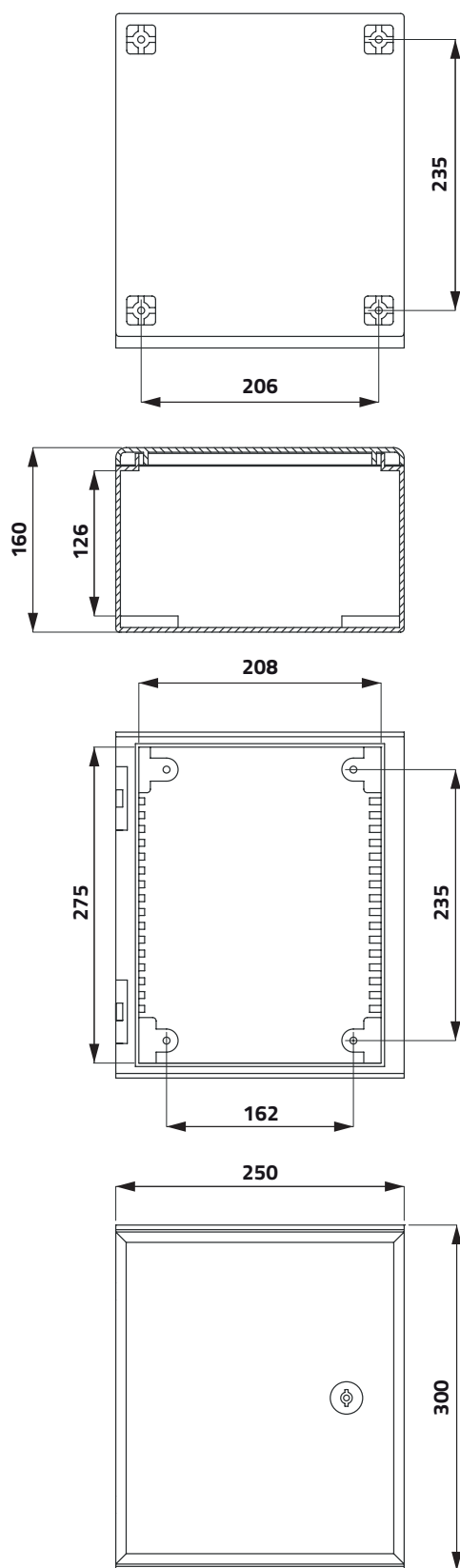
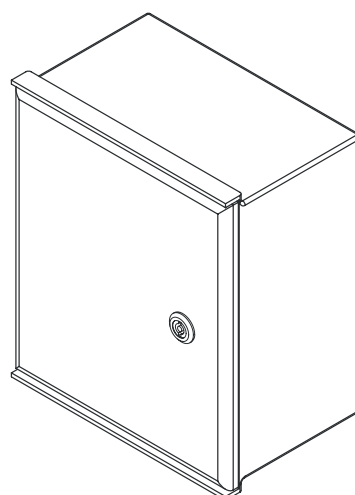
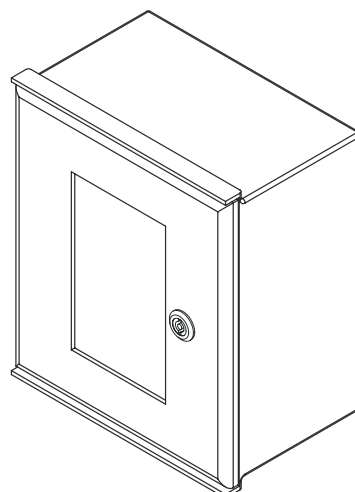
Kit di staffe di fissaggio

Set of mounting brackets



Quadri in poliestere 250x300mm Polyester enclosures 250x300mm

SERIES Q / SERIES Q



Quadri in poliestere 250x300mm

Polyester enclosures 250x300mm

SERIE Q / SERIES Q

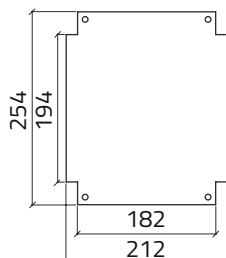


Porta piena / Plain door

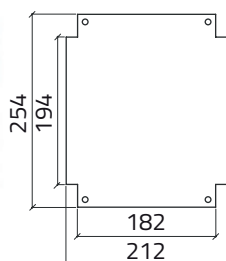
h	g	cod
160	3600	080Q2530-16

Porta con finestra
Door with window

160	3500	080Q2530-16F
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Piastra di fondo plastica
Plastic mounting plate

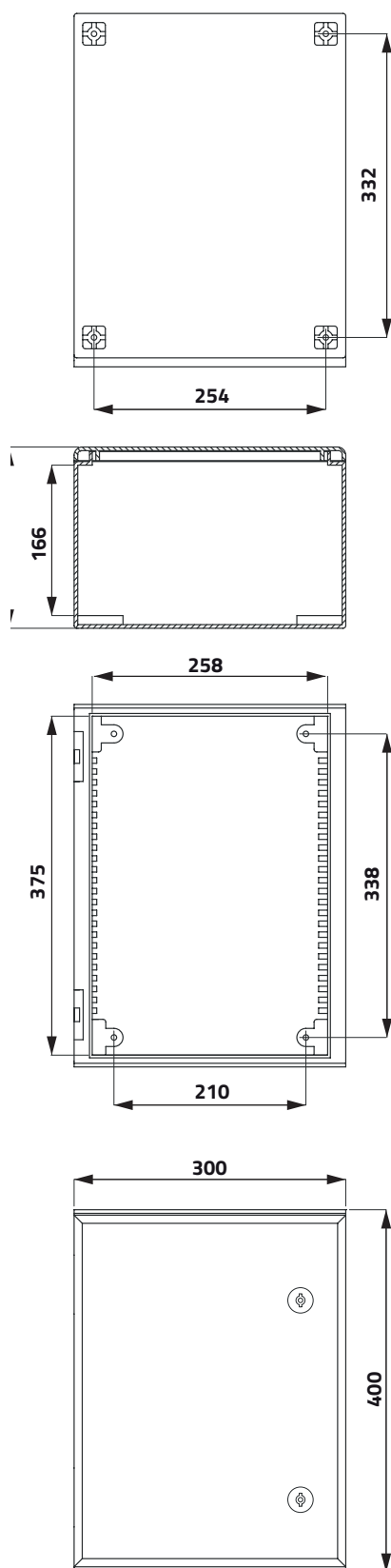
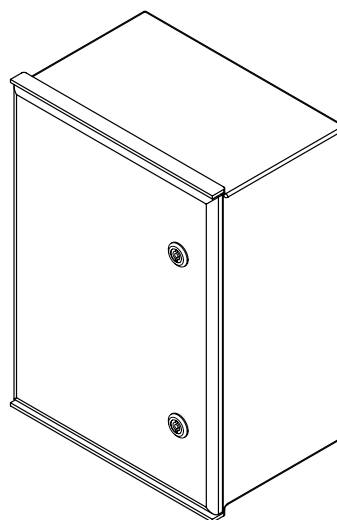
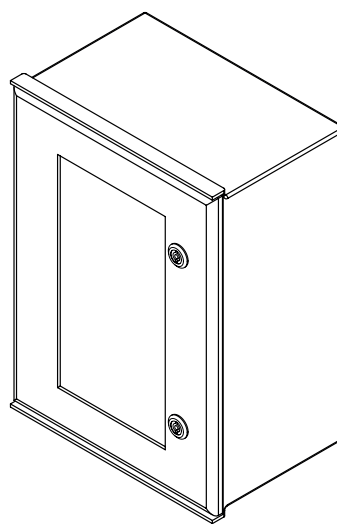
2,8	1800	080PP2530
-----	------	-----------

Piastra di fondo metallo
Metal mounting plate

2	1200	080PM2530
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Quadri in poliestere 300x400mm Polyester enclosures 300x400mm

SERIES Q / SERIES Q



Quadri in poliestere 300x400mm

Polyester enclosures 300x400mm

SERIE Q / SERIES Q

**Porta piena / Plain door**

h

200

g

4900

cod

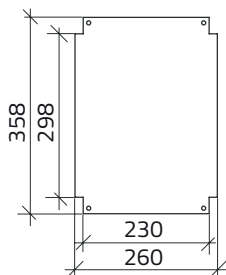
080Q3040-20

**Porta con finestra
Door with window**

200

4700

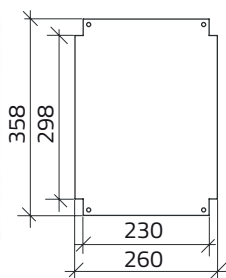
080Q3040-20F

**Piastra di fondo plastica
Plastic mounting plate**

2,8

2700

080PP3040

**Piastra di fondo metallo
Metal mounting plate**

2

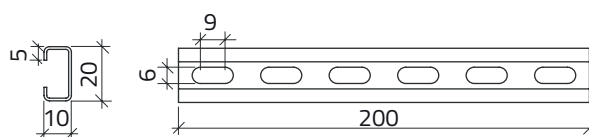
3200

080PM3040

**Guida perforata di regolazione
Adjustable perforated rail**

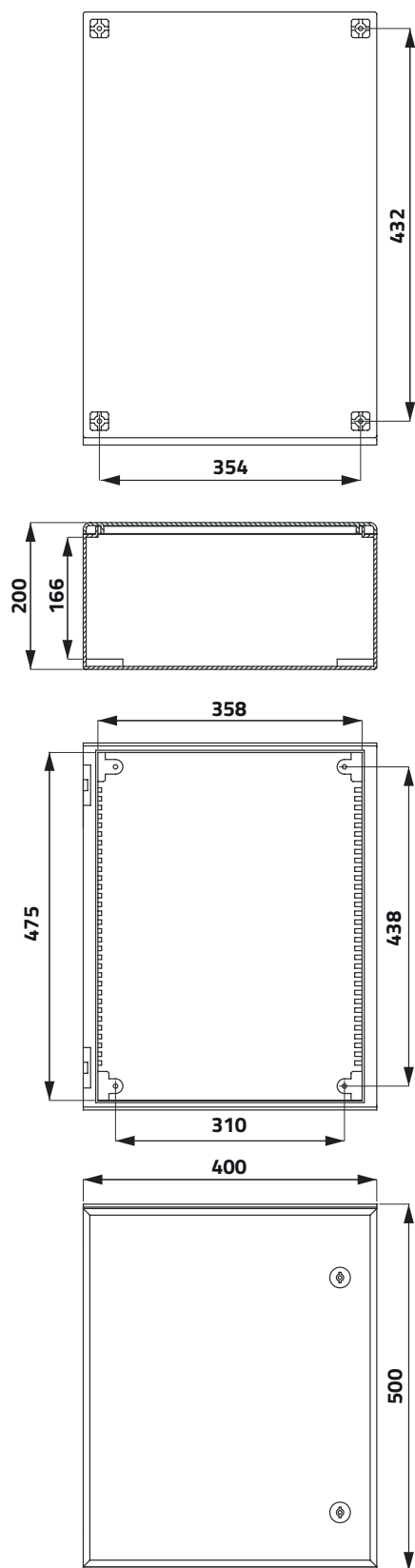
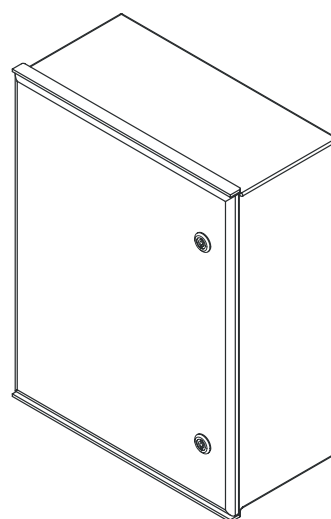
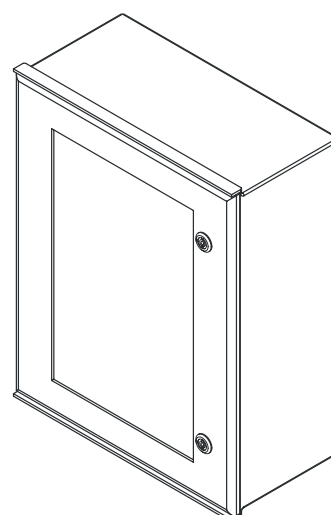
380

080GR200



Quadri in poliestere 400x500mm Polyester enclosures 400x500mm

SERIES Q / SERIES Q



Quadri in poliestere 400x500mm

Polyester enclosures 400x500mm

SERIE Q / SERIES Q

**Porta piena / Plain door**

h

200

g

6300

cod

080Q4050-20

**Porta con finestra**
Door with window

200

6100

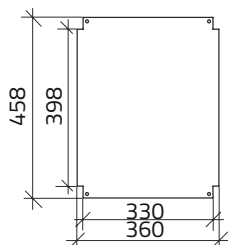
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**Piastra di fondo plastica**
Plastic mounting plate

2,8

3600

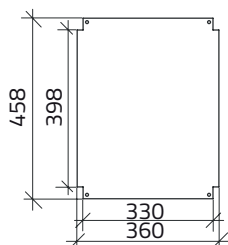
080PP4050

**Piastra di fondo metallo**
Metal mounting plate

2

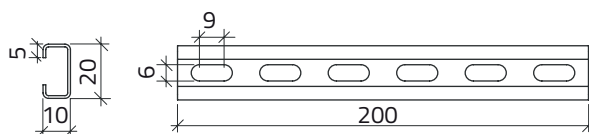
4300

080PM4050

**Guida perforata di regolazione**
Adjustable perforated rail

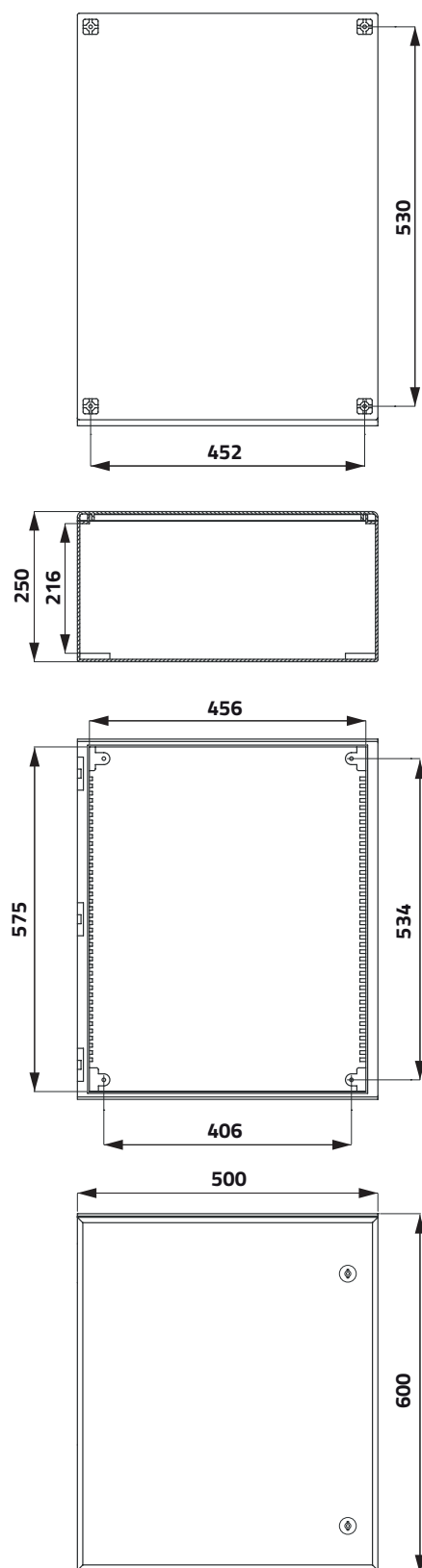
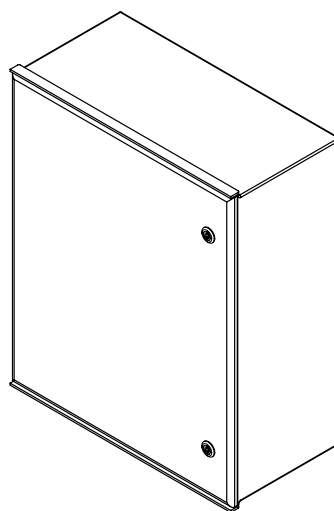
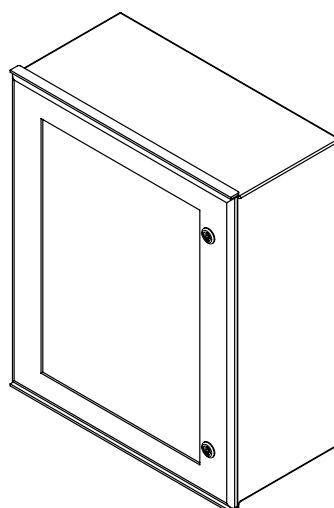
380

080GR200



Quadri in poliestere 500x600mm Polyester enclosures 500x600mm

SERIES Q / SERIES Q



Quadri in poliestere 500x600mm

Polyester enclosures 500x600mm

SERIE Q / SERIES Q

**Porta piena / Plain door**

h

250

g

7900

cod

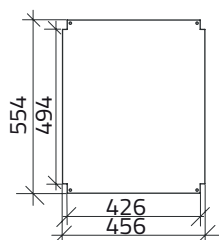
080Q5060-25

**Porta con finestra
Door with window**

250

7700

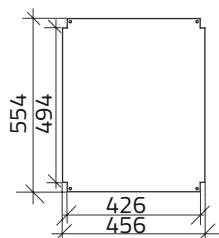
080Q5060-25F

**Piastra di fondo plastica
Plastic mounting plate**

2,8

4700

080PP5060

**Piastra di fondo metallo
Metal mounting plate**

2

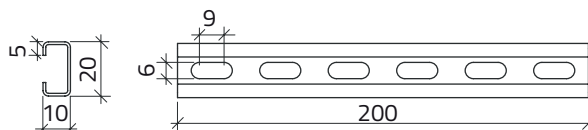
5300

080PM5060

**Guida perforata di regolazione
Adjustable perforated rail**

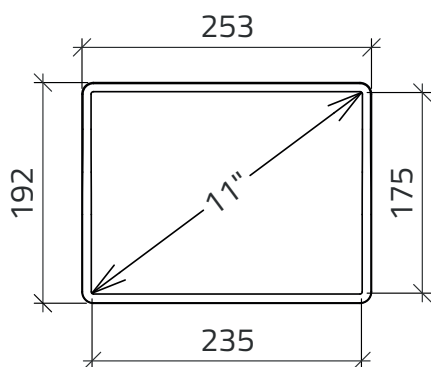
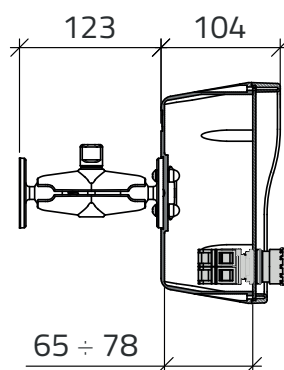
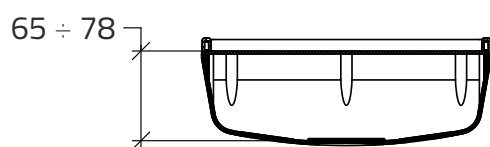
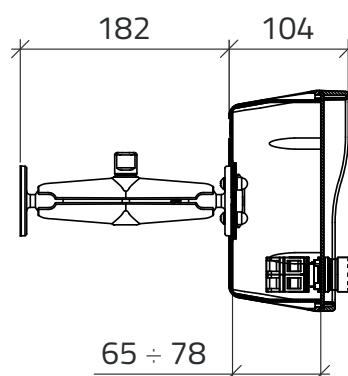
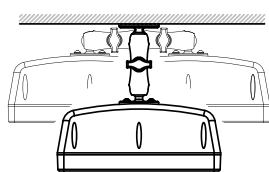
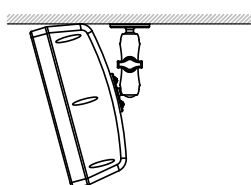
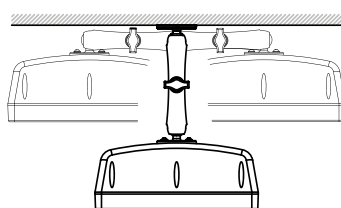
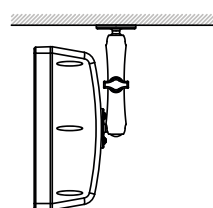
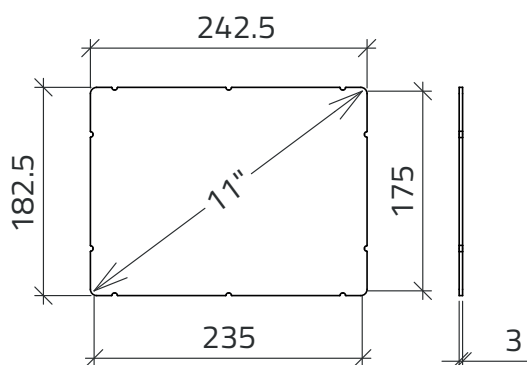
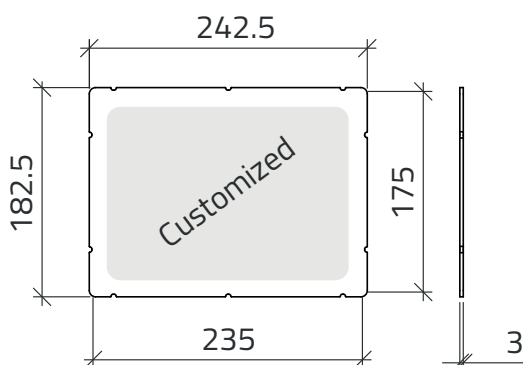
380

080GR250



Pulsantiera Display Personalizzabile

Customizable monitor and push-button enclosure



Pulsantiera Display

Monitor and push-button enclosure



Pulsantiera neutra Neutral push-button panel

Con supporto L 125mm / With support L 125mm
Con supporto L 185mm / With support L 185mm

g

cod

850

080V2621-12

980

080V2621-18



Pulsantiera senza piastra Push-button panel without plate

Con supporto L 125mm / With support L 125mm
Con supporto L 185mm / With support L 185mm

g

cod

700

080V2621-12SP

830

080V2621-18SP



Piastra frontale neutra / Neutral front plate

g

cod

156

080VPFN



Piastra personalizzabile / Customizable plate

g

cod

156

080VPFP-DXX



050

**SEGNALAZIONE ED
ILLUMINAZIONE
DEI QUADRI ELETTRICI**

**CONTROL CABINET
SIGNALLING AND LIGHTING**

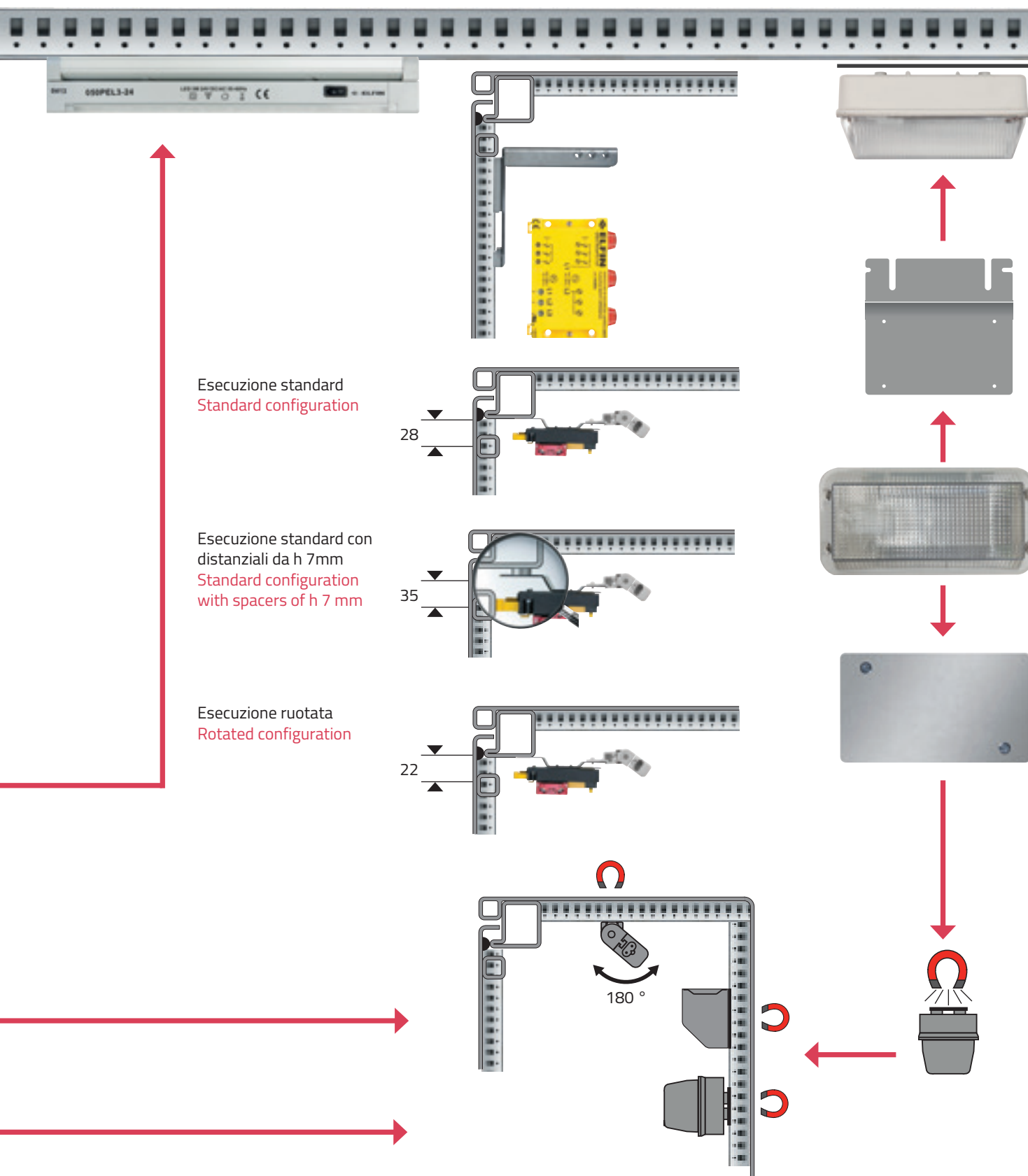
050





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 placed in few seconds.



low consumption

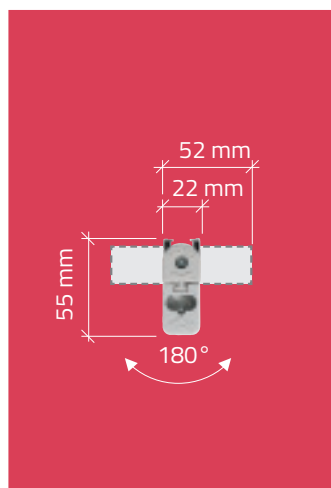


Illuminazione quadri elettrici

Control cabinet lighting



Illuminazione quadri elettrici Control cabinet lighting



Plafoniere lineari a led Linear led lamps

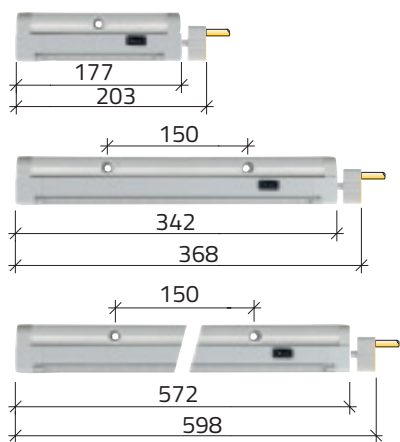
g Lm W cod

Connettore 050C7V2 incluso / 050C7V2 connector included

24V DC / AC 50 ÷ 60 Hz	170	200	2,5	050PEL1C-24
110 ÷ 240V AC 50 ÷ 60 Hz	170	200	2,5	050PEL1C

24V DC / AC 50 ÷ 60 Hz	340	600	5	050PEL3C-24
110 ÷ 240V AC 50 ÷ 60 Hz	340	600	5	050PEL3C

24V DC / AC 50 ÷ 60 Hz	520	950	8,5	050PEL5C-24
110 ÷ 240V AC 50 ÷ 60 Hz	520	950	8,5	050PEL5C

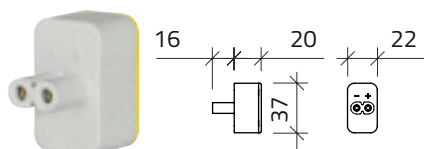


Accessori / Accessories

g cod

Kit per fissaggio magnetico / Magnetic mounting kit

14 **050KFM**



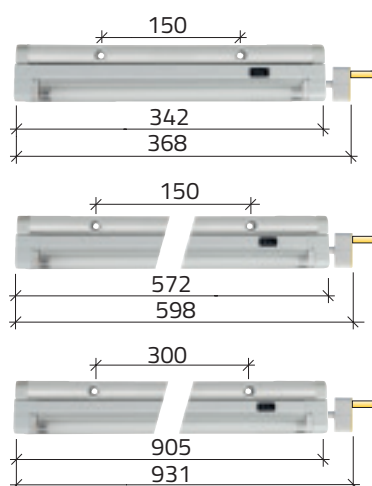
Connettore bipolare femmina
Two-pole female connector

14 **050C7V2**

Illuminazione quadri elettrici Control cabinet lighting



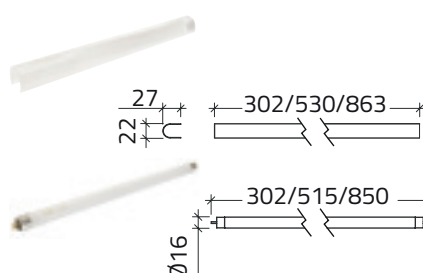
Plafoniere lineari fluorescenti Linear fluorescent lamps



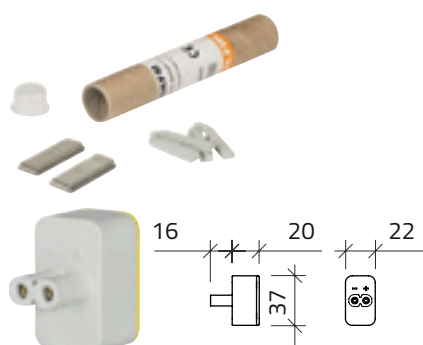
Connettore 050C7V2 incluso / 050C7V2 connector included

	g	Lm	W	cod
110 ÷ 130V AC 50 ÷ 60 Hz Omologazione INTERTEK - ETL per il mercato Nordamericano (USA - CND) INTERTEK - ETL approval for North American market (USA - CND)	380	350	8	050PE86C
220 ÷ 240V AC 50 ÷ 60 Hz	380	350	8	050PE8C
110 ÷ 130V AC 50 ÷ 60 Hz Omologazione INTERTEK - ETL per il mercato nordamericano (USA - CND) INTERTEK - ETL approval for north american market (USA - CND)	560	650	13	050PE136C
220 ÷ 240V AC 50 ÷ 60 Hz	560	650	13	050PE13C
220 ÷ 240V AC 50 ÷ 60 Hz	860	1200	21	050PE21C

Ricambi / Spare parts



	g	cod
Diffusori per plafoniere fluorescenti / Diffusers for linear fluorescent lamps		
050PE86C, 050PE8C	26	050DE8
050PE136C, 050PE13C	48	050DE13
050PE21C	70	050DE21
Neon per plafoniere fluorescenti / Neon for linear fluorescent lamps		
050PE86C, 050PE8C	32	050TNE8
050PE136C, 050PE13C	50	050TNE13
050PE21C	80	050TNE21



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

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	200 Lumen	170x55x22mm
050PEL3C	110÷240VAC 50/60Hz	6W	600 Lumen	342x55x22mm
050PEL5C	110÷240VAC 50/60Hz	10W	950 Lumen	572x55x22mm
050PEL1C-24	24V DC-AC 50/60Hz	2,5W	200 Lumen	170x55x22mm
050PEL3C-24	24V DC-AC 50/60Hz	6W	600 Lumen	342x55x22mm
050PEL5C-24	24V DC-AC 50/60Hz	10W	950 Lumen	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 (includere) idoneità al passo metrico 25mm 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 2014/30/UE direttiva compatibilità elettromagnetica 2011/65/UE direttiva RoHS
Rispondenza alle norme	EN 60598-1, EN 60598-2-1, EN 61547, EN 61347-1, EN 61347-2-13, EN 55015, EN 61000-3-2, 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)
Colour	Housing RAL 7035 - Diffuser clear
Overvoltage category	Class II (double insulation) EN 61140
Colour 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	Through door limit switch - 050F025
Approvals	CE
Compliance with directives	2014/35/UE low voltage directive 2014/30/UE EMC directive 2011/65/UE RoHS directive
Standard compliance	EN 60598-1, EN 60598-2-1, EN 61547, EN 61347-1, EN 61347-2-13, EN 55015, EN 61000-3-2, EN 61000-3-3, EN 62471

Caratteristiche tecniche Plafoniere lineari fluorescenti

Technical data Linear fluorescent lamps

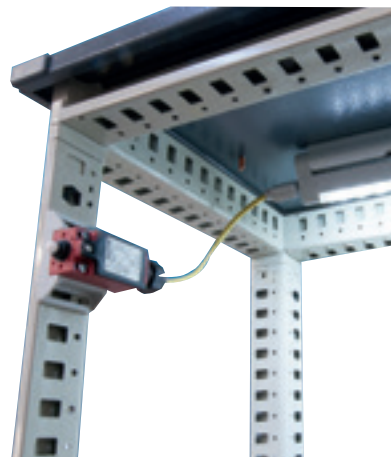
Versioni / Models	Tens di esercizio / Rated oper. voltage	Potenza / Power	Luminosità / Brightness	Dimensioni / Dimensions
050PE8C	220÷240VAC 50/60Hz	8W	350 Lumen	342x55x22mm
050PE13C	220÷240VAC 50/60Hz	13W	650 Lumen	572x55x22mm
050PE21C	220÷240VAC 50/60Hz	21W	1200 Lumen	905x55x22mm
050PE86C	110÷130VAC 50/60Hz	8W	350 Lumen	342x55x22mm
050PE136C	110÷130VAC 50/60Hz	13W	650 Lumen	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 (includere) idoneità al passo metrico 25mm Magnetico con Kit aggiuntivo 050KFM
Possibilità di accensione	Tramite fincorsa di posizione sulla porta - 050SF025
Omologazioni	CE, INTERTEK ETL (USA-CND)
Conformità alle direttive	2014/35/UE direttiva bassa tensione 2014/30/UE direttiva compatibilità elettromagnetica 2011/65/UE direttiva RoHS
Rispondenza alle norme	EN 60598-1, EN 60598-2-1, EN 61547, EN 61347-1, EN 61347-2-13, EN 55015, EN 61000-3-2, EN 61000-3-3, EN 60400, EN 60320-1, EN 6030-2-2 EN 60799

Operating temperature	-10°C - +50°C
Rated insulation voltage	Ui 300V AC
Housing, diffuser material	PC - Polycarbonate (halogen free)
Colour	Housing RAL 7035 - Diffuser clear
Overvoltage category	Class II (double insulation) EN 61140
Colour 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	Through door limit switch - 050SF025
Approvals	CE, INTERTEK ETL (USA-CND)
Compliance with directives	2014/35/UE low voltage directive 2014/30/UE EMC directive 2011/65/UE RoHS directive
Standard compliance	EN 60598-1, EN 60598-2-1, EN 61547, EN 61347-1, EN 61347-2-13, EN 55015, EN 61000-3-2, EN 61000-3-3, EN 60400, EN 60320-1, EN 6030-2-2 EN 60799



Illuminazione quadri elettrici Control cabinet lighting



Finecorsa alimentazione plafoniera Limit switches for lamp supply

Finecorsa 2NC su staffa e pressacavo
Limit switch 2NC on bracket with cable gland

g

cod

140

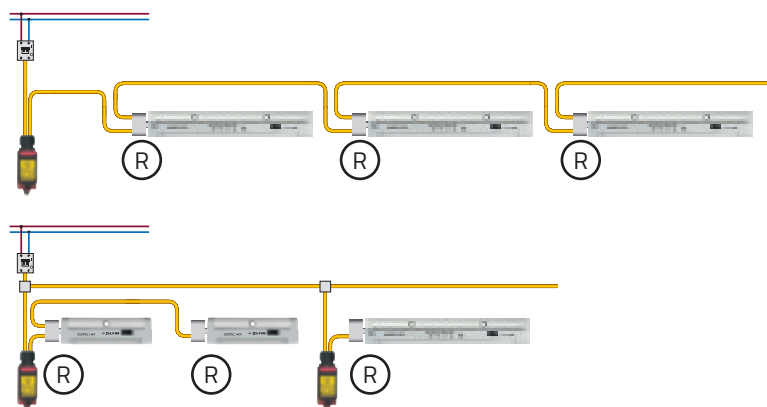
050F02S

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	050LQP VDE

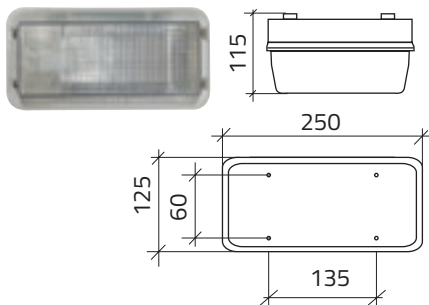


Caratteristiche tecniche

Alimentazione	230V/50Hz
Lampada	Fluorescente a risp. energetico 11W
Luminosità	900 Lm
Durata	5.000 h
Interferenze Radio	A Norme Vde 0712 lec 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 lec 82
Socket	Incorporated 250V Ac/16A
Installation	With magnetic plate or DIN bracket 080G3508
Material	Thermoplastic
Degree of protection	IP20
Standards	VDE

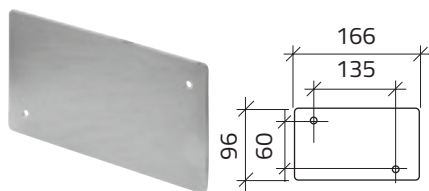


Plafoniere per lampadine E27 Bulkhead lamps for E27 bulbs

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.

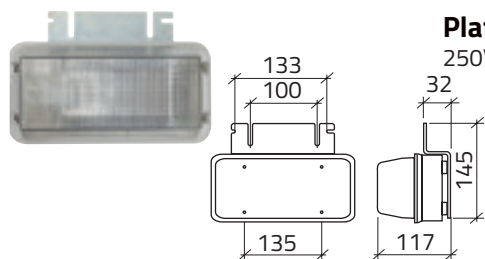
Lampholder E 27 Class IP44.
Flame and ignition resistant according to IEC 695-2-1 and CEI 50-11
Polycarbonate diffuser. Suitable for energy saver bulbs.

250V260 W max Tensione di alimentazione / Power Supply	530	050PL60
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per plafoniera 050PL60 / for bulkhead lamps 050PL60

Piastra magnetica / Magnetic plate	235	050S020
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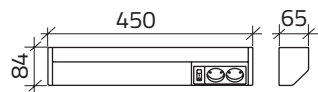


Plafoniera 050PL60 con staffa / Bulkhead with bracket

250V260 W max	1200	050SPL60
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Illuminazione quadri elettrici Control cabinet lighting

Plafoniere lineari fluorescenti con prese VDE Fluorescent linear lamps with VDE sockets

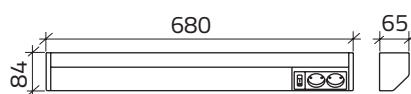


220/240 50÷60 Hz

650

8

050PPE8



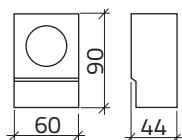
220/240 50÷60 Hz

750

13

050PPE13

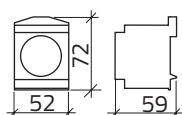
Accessori Accessories



Presa VDE con fusibile / VDE Socket with fuse
250V AC - 50-60Hz fusibile / fuse

113

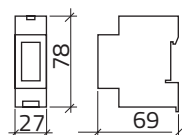
050PFVDE



Presa VDE / VDE Socket 250V AC - 16A

68

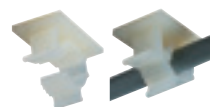
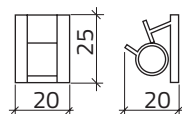
050PVDE



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 barrier restricting access	carter, ripari mobili, armadi, distanziamento covers, movable guards, segregation cabinets
barriera di contenimento containment barrier	serbatoio, tubazione, condotto a tenuta tank, pipe, sealed duct
barriera di limitazione danno damage restriction barrier	comando di arresto d'emergenza emergency stop control
barriera di riduzione della dose dose reduction barrier	aspiratori gas e fumi, protettori, auricolari, insonorizzazione gas and fume extractors, ear protectors, sound-proofing
barriera comportamentale behaviour type barrier	informazione e formazione del personale information and personnel training
barriera di avviso warning barrier	segnaletica di sicurezza safety signalling
barriera di allarme alarm barrier	sistemi automatici di allarme e preallarme automatic alarm and pre-alarm systems
barriera preventiva preventive barrier	procedure di manutenzione preventiva e/o su condizione preventive and/or on condition type 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 macchina¹.

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 machine¹.



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

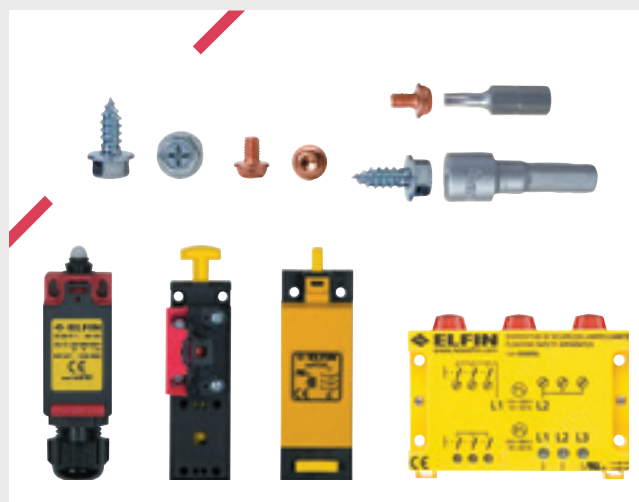
Misure atte a garantire la stabilità statica e dinamica della macchina
Measures intended to guarantee static and dynamic stability of the machine

Dispositivi di sicurezza lampeggianti

Flashing safety devices

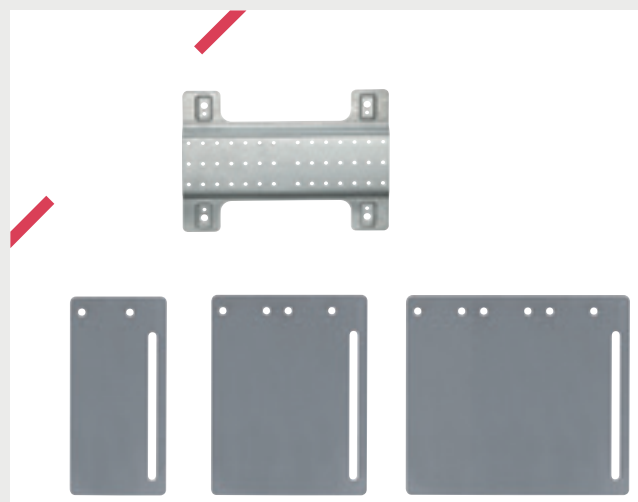
FACILITÀ DI MONTAGGIO

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.

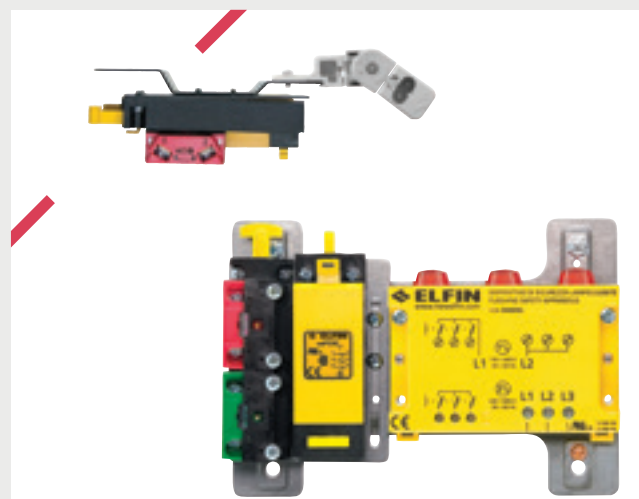
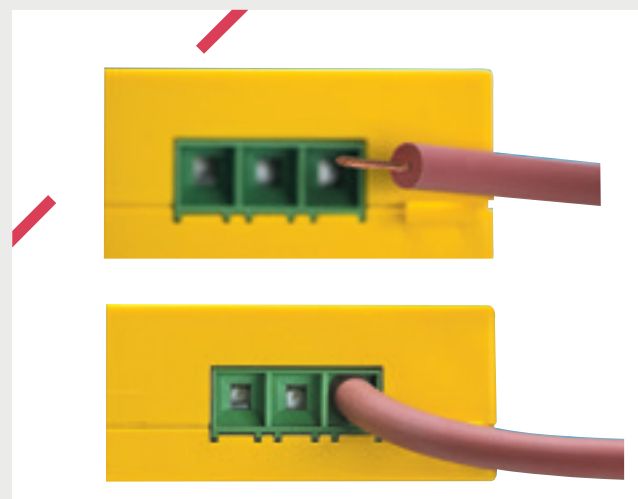


EASY MOUNTING

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.

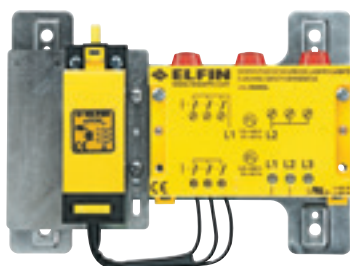


easy mounting



Dispositivi di sicurezza lampeggianti

Flashing safety devices



Dispositivo di sicurezza cablato

Safety device, wired

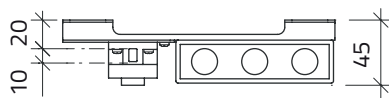
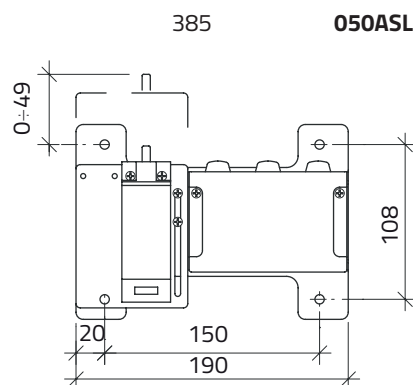
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Fincorsa tripolare cablato al lampeggiante. Si inserisce solo quando le porte dell'armadio sono aperte
Three-pole limit switch wired to the flashing device. It is on only when the cabinet doors are open

- (3~) 220÷690 V. 50÷60 Hz Tensione di alimentazione / Power Supply
- (1~) 110÷400 V. 50÷60 Hz Tensione di alimentazione / Power Supply

Configurazione con fincorsa
Configuration with limit switch



Dispositivi di sicurezza con fincorsa interblocco, cablati

Safety devices with interlock limit switch, wired

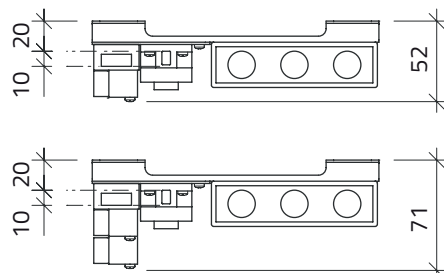
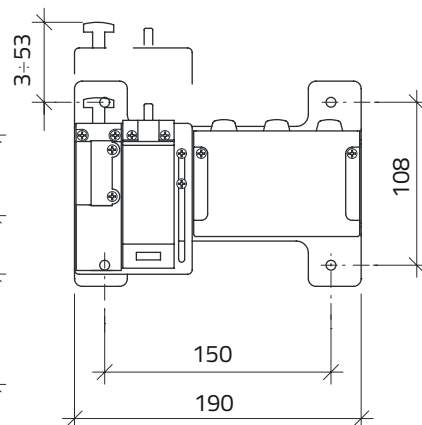
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Normalmente utilizzati per l'inserzione dell'illuminazione e per lo spegnimento di ventole o condizionatori.
Normally used to switch lighting on and fans or conditioners off

- (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	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



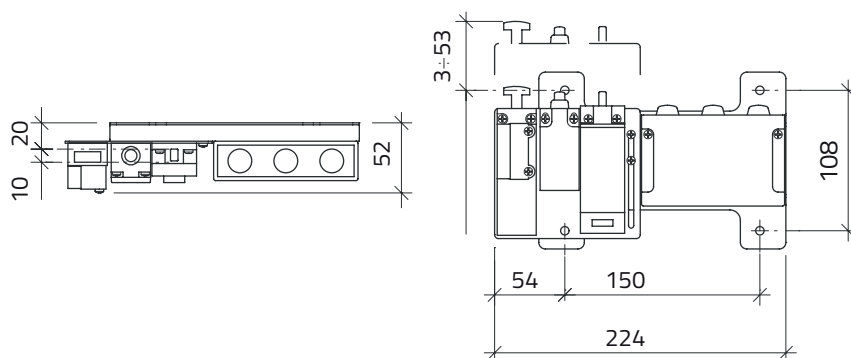
Dispositivi di sicurezza lampeggianti

Flashing safety devices



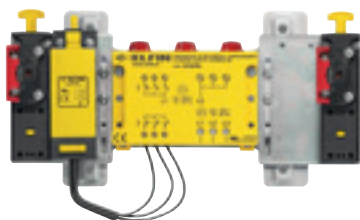
- 3~ 220÷690 V. 50÷60 Hz Tensione di alimentazione / Power Supply
 1~ 110÷400 V. 50÷60 Hz Tensione di alimentazione / Power Supply

Interblocco con 1NC / Interlock with 1NC	730	050AS01FC
Interblocco con 1NO / Interlock with 1NO	730	050AS10FC



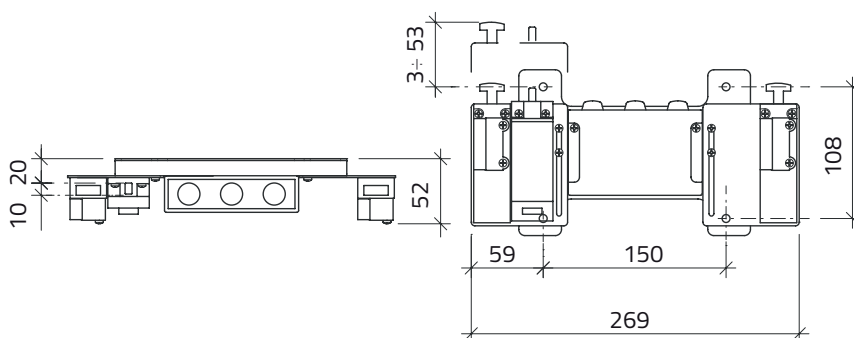
Dispositivo di sicurezza con finecorsa interblocco, cablato

Safety device with interlock limit switch, 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	050ASL2PFI01
Interblocco con 1NO / Interlock with 1NO	730	050ASL2PFI10



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.



220÷690 V. 50÷60 Hz Tensione di alimentazione / Power Supply



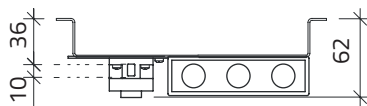
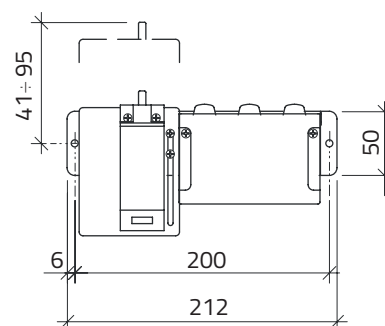
110÷400 V. 50÷60 Hz Tensione di alimentazione / Power Supply

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430

050ASL3



Dispositivi di sicurezza con finecorsa interblocco, cablati Safety devices with limit switch and microswitch, wired



220÷690 V. 50÷60 Hz Tensione di alimentazione / Power Supply

Interblocco con 1NC / Interlock with 1NC



110÷400 V. 50÷60 Hz Tensione di alimentazione / Power Supply

Interblocco con 1NO / Interlock with 1NO

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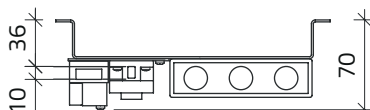
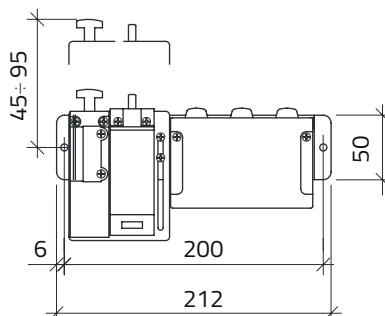
cod

490

050ASL3FI01

490

050ASL3FI10



Dispositivi di sicurezza lampeggianti

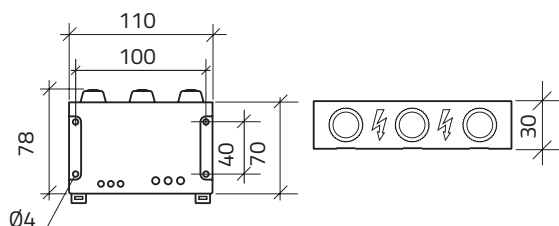
Flashing safety devices



Dispositivo di sicurezza lampeggiante

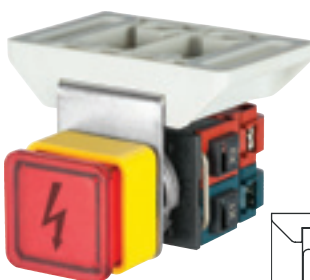
Flashing safety device

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

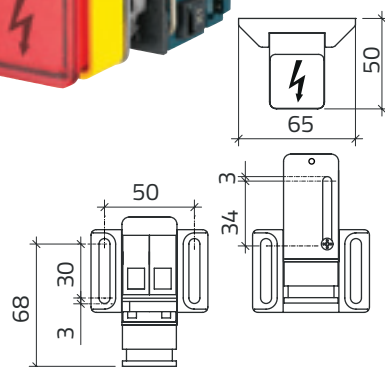
Single-phase flashing safety devices



Alimentazione diretta 24V con led lampeggiante rosso

24V direct power supply with flashing red led

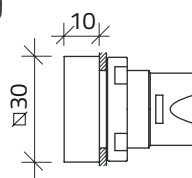
1NO + 1 NC	167	050ASPLD11
1NC	167	050ASPLD01
1NO	167	050ASPLD10



Dispositivo di sicurezza monofase senza led

Single-phase safety device without led

1NO + 1 NC	167	050ASPD11
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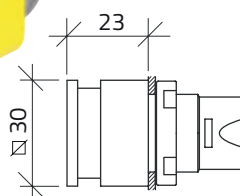


Unità luminosa di sicurezza

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
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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
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Dispositivi di sicurezza lampeggianti

Flashing safety devices

Caratteristiche tecniche

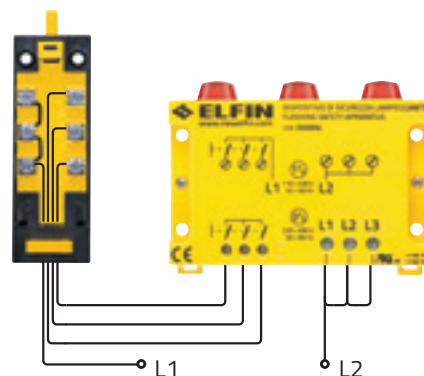
Rispondenza alle norme	IEC 947-5-1, CEI 7.45 VDE - UTE - BSI CENELEC, EN 60947.5.1
Omologazioni	(USA - CANADA)
Protezioni climatiche	In esecuzione normale T.C. tutti i climi
Limiti di temperatura	Funzionamento -25C° ÷ +65C° Stoccaggio -35C° ÷ +70C°
Protezione alla scossa elettrica	Classe II doppio isolamento secondo IEC 536
Tensione nominale di isolamento	Ui 690 A.C.
Grado di inquinamento	Classe 3 secondo DIN VDE 0110
Morsetti	Fase L1 - L2- L3 ↻ Coppia max 1Nm Ø vite a taglio 5mm max 1 conduttore / 4mm² / 10AWG Ausiliari ↻ Coppia max 0,5Nm Ø vite a taglio 3,5mm max 1 conduttore / 2,5mm² / 12AWG Grado di protezione morsetti IP20 secondo IEC 529
Conformità alle direttive emc/rohs	EN 50014-1, EN 50082-2, EN 55022, EN 61000-4-2÷11, EN 61000-6-2÷31. Immunità alle ESD. Immunità di BURST. Direttive: EMC EC 2004/108 - RoHS EC 2002/95
Assorbimento max	10mA

Technical data

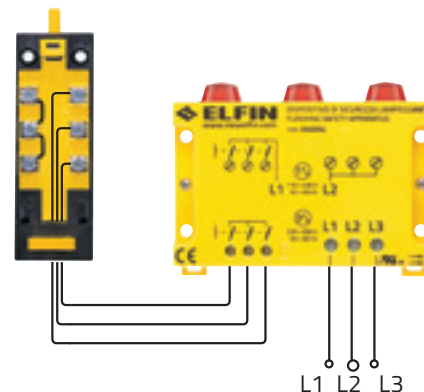
Conforming to standards	IEC 947-5-1, CEI 7.45 VDE - UTE - BSI CENELEC, EN 60947.5.1
Approvals	(USA - CANADA)
Protective treatment	Standard version: "TC"
Ambient temperature	Operation -25C° ÷ +65C° Storage -35C° ÷ +70C°
Ambient temperature protection	Class II double insulation conforming to IEC 536
Rated insulation voltage	Ui 690 A.C.
Level of pollution	Class 3 conforming to DIN VDE 0110
Terminals	Phase L1 - L2- L3 ↻ Torque max 1Nm Ø vite a taglio 5mm max 1 conductor / 4mm² / 10AWG Aux ↻ Torque max 0,5Nm Ø vite a taglio 3,5mm max 1 conductor / 2,5mm² / 12AWG Protection degree IP20 conforming to IEC 529
Compliance with emc/rohs directives	EN 50014-1, EN 50082-2, EN 55022, EN 61000-4-2÷11, EN 61000-6-2÷31. Immunity to ESD. Immunity to BURSTS. Directives: EMC EC 2004/108 - RoHS EC 2002/95
Max consumption	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

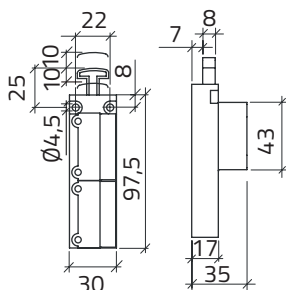
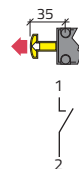
Il finecorsa interblocco è un dispositivo che viene azionato direttamente da ogni porta dell'armadio elettrico. Di norma vengono collegati sul primo elemento di contatto (unico su cui può intervenire il dispositivo d' interblocco) i circuiti ausiliari degli apparecchi di manovra. I restanti contatti 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

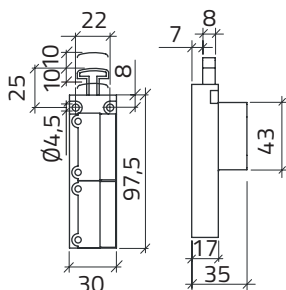
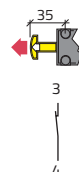


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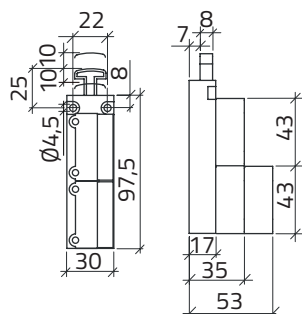
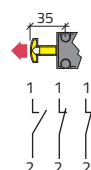
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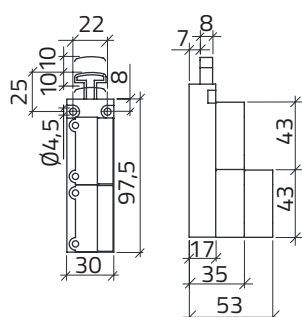
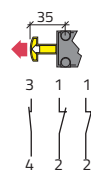
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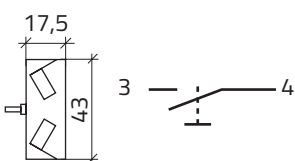
103

050FI03



103

050FI12



Contatti con protezione / Contact block with protections

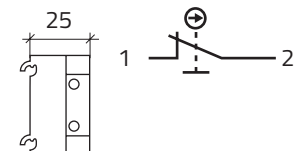
per finecorsa interblocco / for interlock limit switches

1NO

23

2

030FAP



1NC

23

2

030FCP

Dispositivi di sicurezza lampeggianti

Flashing safety devices

Caratteristiche tecniche

Finecorsa interblocco

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 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 CatAC15 <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  velocità di azionamento 0,05 - 2m/sec														
Configurazione contatti	MAX n°6 contatti 3 anteriori 3 posteriori														
Durata	Meccanica 1.0x10 ⁶ manovre Elettrica 5.0x10 ⁵ manovre														

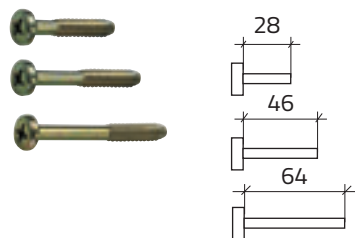
Technical data

Interlock limit switches

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 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 CatAC15 <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 on NC contact  Operating speed 0,05 - 2 m/sec														
Contact configuration	MAX n°6 contact 3 front 3 rear														
Durability	Mechanical 1.0x10 ⁶ operations Electrical 5.0x10 ⁵ operations														

Viti di fissaggio elementi di contatto

Fixing screws for contact blocks

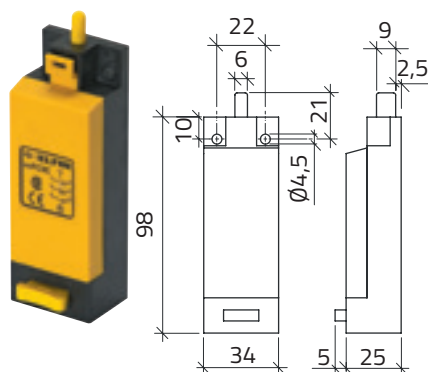


Montaggio di : / Mounting of :

1 elemento / 1 contact block	2	10	030V28
2 elementi sovrapposti / 2 overlapped contact blocks	3	10	030V46
3 elementi sovrapposti / 3 overlapped contact blocks	4	10	030V64

Dispositivi di sicurezza lampeggianti

Flashing safety devices



Finecorsa tripolari

Three-pole limit switches

Corsa e commutazioni / Contact travel and switching points

3NC	1-2 3-4 5-6		62	050FC3C
2NC + 1NO	1-2 3-4 5-6		62	050FC2C
1NC+2NO	1-2 3-4 5-6		62	050FC1C
3NO	1-2 3-4 5-6		62	050FC0C

Caratteristiche tecniche

Finecorsa tripolari

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, serrafilelo autosollevante, testa combinata DIN 7962 31x0,05mm ² , $\pm$ 2x2,5mm ²												
Tensione nominale d'isolamento Ui	690 V												
Corrente nominale termico Ith	10A												
Potenze nominali d'impiego	Secondo IEC 947-5-1 CatAC15 <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 NC azione positiva												

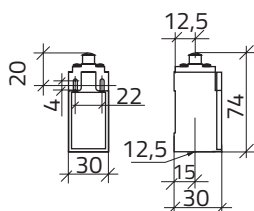
Technical data

Three-pole limit switches

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 captive cable clamp, combined head DIN 7962 31x0,05mm ² , $\pm$ 2x2,5mm ²												
Rated unsulation voltage Ui	690 V												
Rated thermal current Ith	10A												
Rated operational power	Conforming to IEC 947-5-1 CatAC15 <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 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

Finecorsa bipolare

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	ith:10A																								
Potenze nominali d'impiego	Secondo IEC 947-5-1 / UL508																								
	AC 15-A600DC 13-Q300																								
	<table><tr><td>UE V</td><td>le A</td><td>UE V</td><td>le A</td></tr><tr><td>24</td><td>10</td><td>24</td><td>2,5</td></tr><tr><td>110</td><td>6</td><td>110</td><td>0,6</td></tr><tr><td>220</td><td>3</td><td>230</td><td>0,3</td></tr><tr><td>400</td><td>1,5</td><td></td><td></td></tr><tr><td>600</td><td>1,2</td><td></td><td></td></tr></table>	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		
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 ⁷ manovre Elettrica 5.0 x 10 ⁵ manovre																								

Technical data

Two-pole limit switches

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	Ith: 10A			
Rated operational power	According to IEC 947-5-1 / UL 508			
	AC15-A600		DC13-Q300	
	UE V	Ie A	UE V	Ie 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 ⁷ operations			
	Electrical 5.0 x 10 ⁵ operation			

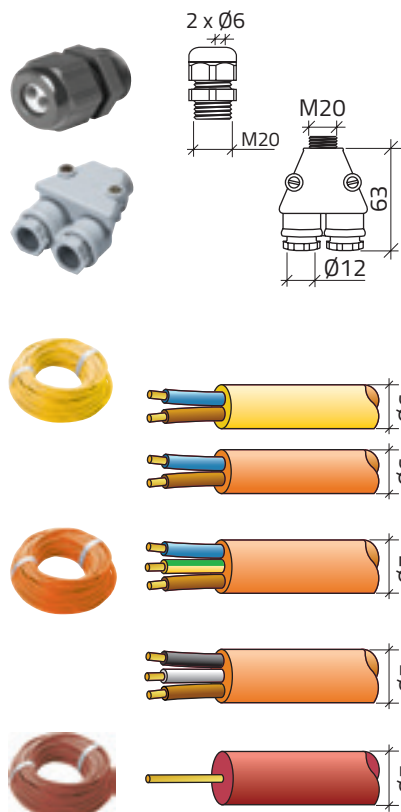
Pressacavi /Cable glands

	g	cod
Pressacavo 2 ingressi / 2-hole cable gland	10	0102P20
Pressacavo 2 vie / Double cable entry gland	45	010N2M20

Accessori

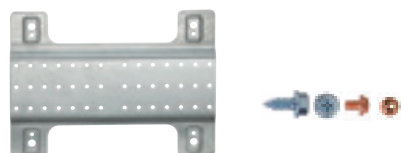
Accessories

	g	cod
matassa cavo mt 100 - norme CEI 20-22 II - tensione 300-500V cavo bipolare FROR NPI 2x0,75mm ² cable bundle mt 100 - standards CEI 20-22 II-voltage 300-500V~ two-pole cable FROR NPI 2x0,75mm ²		
● 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 ² -1X15mm ² cable bundle mt 100 - standards CEI 20-22 II-voltage 300-500V~ two-pole cable with earth FROR NPI 2x15mm ² -1X15mm ²		
● Arancione / Orange	4300	050CBG1A
matassa cavo mt 100 - norme CEI 20-22 II - tensione 300-500V cavo bipolare FROR NPI 3x15mm ² cable bundle mt 100 - standards CEI 20-22 II-voltage 300-500V~ two-pole cable FROR NPI 3x15mm ²		
● Arancione / Orange	4300	050CCT1A
matassa cavo unipolare 1x1mm ² - L 25 m - guaina ad alto isolamento single-pole cable bundle 1x1mm ² - L 25 m - high-insulating silicone sheat		
● Rosso / Red	1470	050CS1R



Accessori Accessories

Staffe Brackets

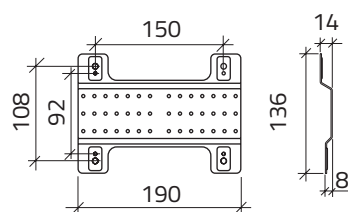


L'utilizzo di questi componenti, unitamente ai componenti ed accessori elencati nei precedenti capitoli, permette di configurare l'apparecchio secondo le proprie esigenze.

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

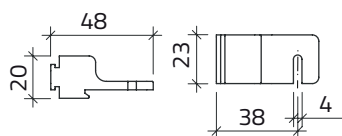
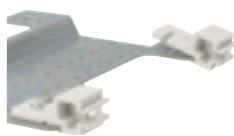
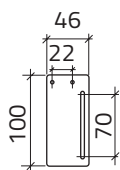
050S030



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

Accessori

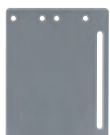
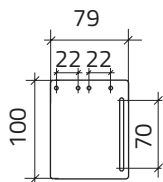
Accessories

Staffe Brackets

g

n

cod



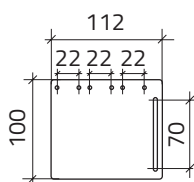
Staffa di fissaggio reversibile / Reversible mounting bracket

Staffa di fissaggio regolabile per 2 elementi

Adjustable mounting bracket for 2 components

86

050S032

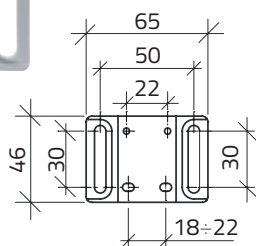


Staffa di fissaggio regolabile per 3 elementi

Adjustable mounting bracket for 3 components

125

050S033



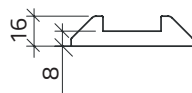
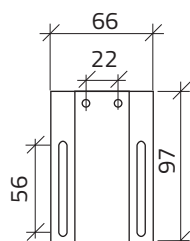
Staffa di fissaggio regolabile in termoplastico

Thermoplastic adjustable mounting bracket

23

2

050S003

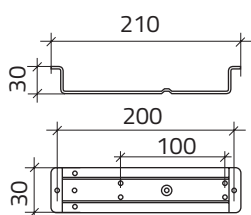


Staffa di fissaggio regolabile

Adjustable mounting bracket

23

050S003M



Staffa di fissaggio H 30 / Mounting bracket H30

150

050S001

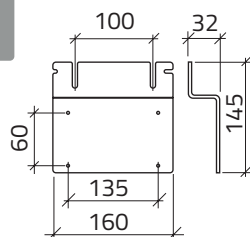
Accessori

Accessories

Staffe Brackets

g

cod

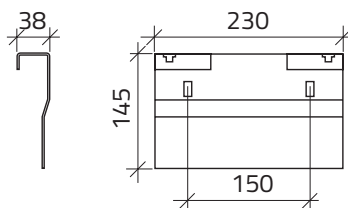


Staffa di fissaggio regolabile
Adjustable mounting bracket

per plafoniera 050PL60
for luminaires 050PL60

670

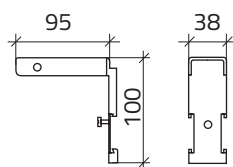
050S017



Staffa adattatrice / Adaptor bracket

708

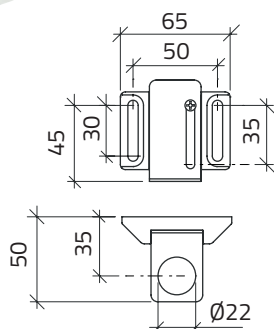
050SA005



Staffa guida omega / Omega rail bracket
DIN 35mm

128

050S013



Staffa per operatori / Bracket for operators

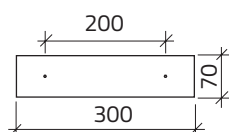
104

050S015

Accessori

Accessories

Staffe Brackets



Piastra magnetica / **Magnetic plate**

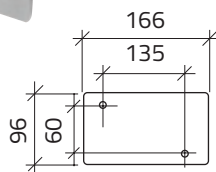
per plafoniere tipo 050PPE8-050PPE13
for luminaires type 050PPE8-050PPE13

g

314

cod

050S019



Piastra magnetica / **Magnetic plate**

per plafoniera 050PL60
for bulkhead lamp 050PL60

235

050S020

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

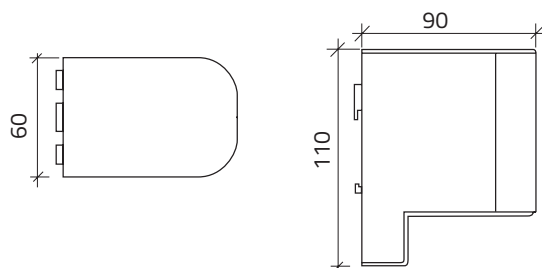
290

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

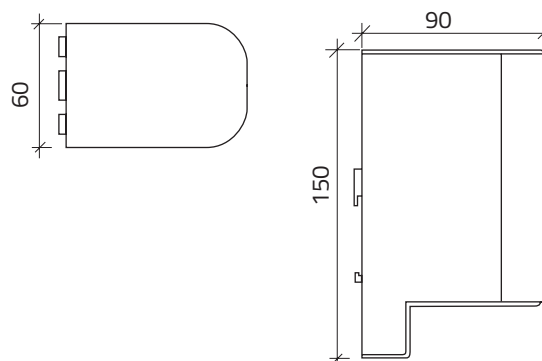
050RA100



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 Riscaldatore anticondensa

Tensione normale	120-250V AC/DC
Elemento termico	Conduttore a freddo (PTC) autoregolante
Temperatura della superficie	<+80°C
Connessione	4 morsetti 2,5mm ² 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 Anti-condensation heater

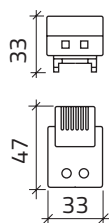
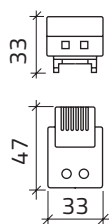
Power supply voltage	120-250V CA/DC
Heating element	PTC resistor self regulating
Surface temperature	<+80°C
Connection	4 terminals 2,5 mm ² max clamping torque 0,8 Nm
Mounting	35 mm DIN rail EN 50022
Housing	Plastic according UL94 V-0 black
Fitting position	Vertical
Temperature limits	-45°/+70°C functioning 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

Termostati ad impostazione fissa

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 EN61000-3-3
Connessione	2 morsetti 2,5 mm², 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 -45°C ÷ +80°C stoccaggio
Grado di protezione	IP20
Norme	VDE

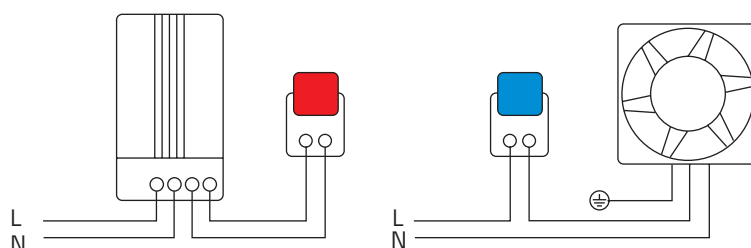
Technical data

Control cabinet climatisation

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 EN 61000-3-3
Connection	2 terminals 2,5 mm², 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 -45°C ÷ +80°C stocking
Protection degree	IP20
Standards	VDE

Esempi d'installazione

Mounting examples



Colonne luminose componibili Modular signal towers

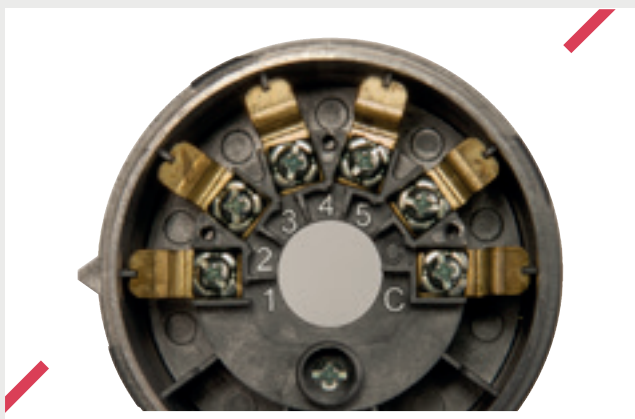
La gamma delle colonne luminose della serie "050" costituiscono una pratica soluzione per la segnalazione e comunicazione di apparecchiature in ambienti ampi e rumorosi, con la possibilità di sistemare la segnalazione in posizione ben visibile e coerente all'informazione, grazie ad una disponibilità di sei colorazioni diverse.

La composizione della colonna è realizzabile grazie ad una modularità di montaggio garantita da un aggancio a baionetta. La fonte luminosa è realizzata tramite una funzionale lampada BA15D a led luce bianca in due tipi di alimentazione che illuminano in maniera intera (completa) il modulo grazie ad una esclusiva pigmentazione del termoplastico.

- TRADUZIONE IN ARRIVO



Colonne luminose componibili Modular signal towers



Base di alimentazione
per 5 moduli luminosi con una linea comune



Base cablata



Indice per tappo chiuso



Indice per modulo chiuso



Indice per base chiusa



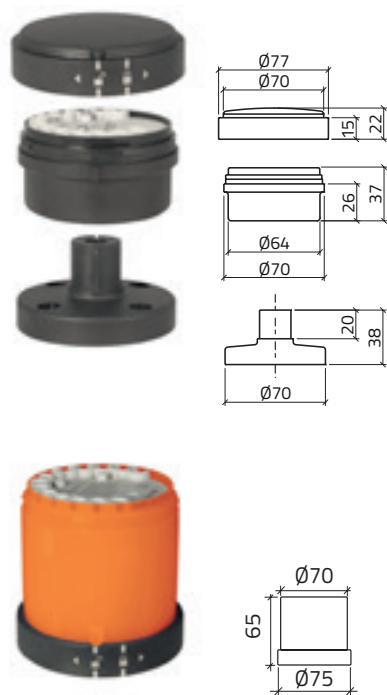
Esempi

Examples



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	050TLBA

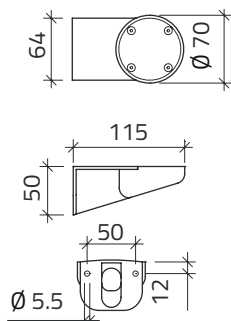
Moduli a luce fissa / Steady light modules

	g	cod
● Rosso / Red	130	050TMLR
● Verde / Green	130	050TMLV
● Giallo / Yellow	130	050TMLG
● Arancione / Orange	130	050TMLA
● Blu / Blue	130	050TMLBL
○ Bianco / White	130	050TMLB

Mensola per fissaggio a parete Wall mounting bracket

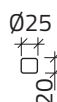
● RAL 7016

g	cod
63	050MFP



Colonne luminose componibili

Modular signal towers



Tubi di prolunga / Extension poles

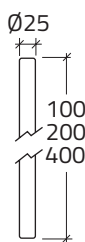
Anello di fissaggio / **Fixing ring**

g

6

cod

050TA



Tubi di prolunga / Extension poles

Elemento da 100mm / **Pole 100 mm**

g

30

cod

050TP100GR

Elemento da 200mm / **Pole 200 mm**

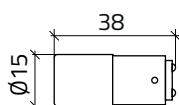
60

050TP200GR

Elemento da 400mm / **Pole 400 mm**

120

050TP400GR



Lampadine led BA15D / BA15D led lamps

24V AC-DC

○ Bianco / **White**

g

2

cod

010BA15DLB24

230V AC-DC

○ Bianco / **White**

2

010BA15DLB220

Caratteristiche tecniche Led BA 15D

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	-25° ÷ + 60°C

Technical data Led BA 15D

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	-25° ÷ + 60°C



060

**DISPOSITIVI DI COMANDO
DI SICUREZZA**

SAFETY CONTROL DEVICES



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**.

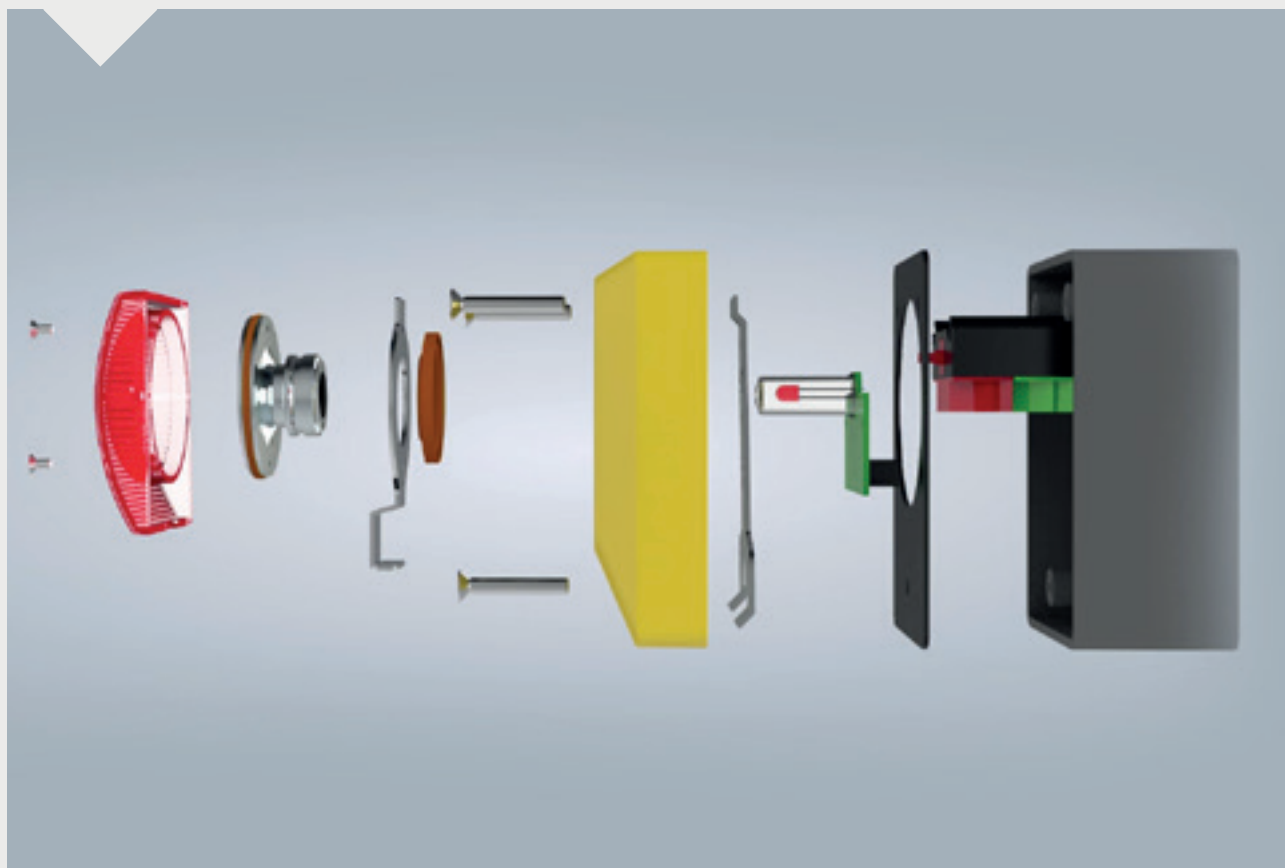
Il **design particolarmente accurato ed ergonomico** ne permette l'utilizzo anche avendo guanti da lavoro oppure con altre parti del corpo quali: gomito, spalla, ginocchio, piede. Inoltre la **linearità senza soluzione di continuità** evita che vi si possano impigliare indumenti, capelli, o elementi 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. Disponibile in due varianti: con tasto bombato o a fungo avvolgente, luminoso o no, con funzionamento momentaneo o ad aggancio. La **versione luminosa** ha svariate esecuzioni: tasto a luce continua, tasto e scatola a luce continua, tasto ad aggancio a luce continua e lampeggiante, tasto trasparente con illuminazione a due colori. Infine 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.

They are available in two models: with dome or mushroom buttons, normal or illuminated, momentary or latching. The **illuminated models** can have a steady light button, a steady light button and enclosure, latching button with steady and flashing light, clear button with two-colour light. Furthermore the big button surface allows complex symbols to be printed on.



Pulsanti a palmo Palm switches



Meccanicamente resistente
Strong and hard



Adatto ad alte temperature
Heat resistant



Adatto a basse temperature
Cold resistant

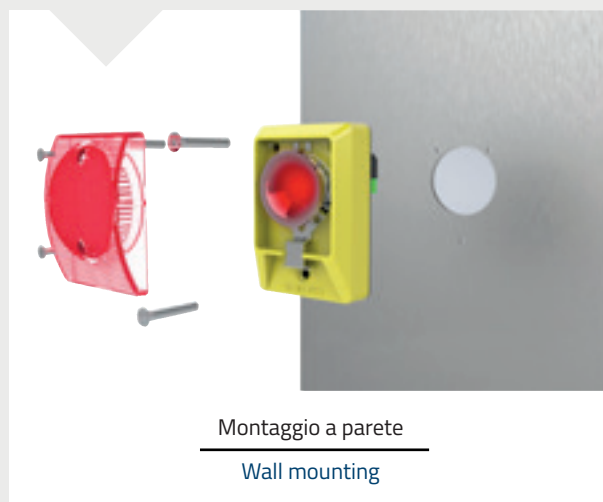
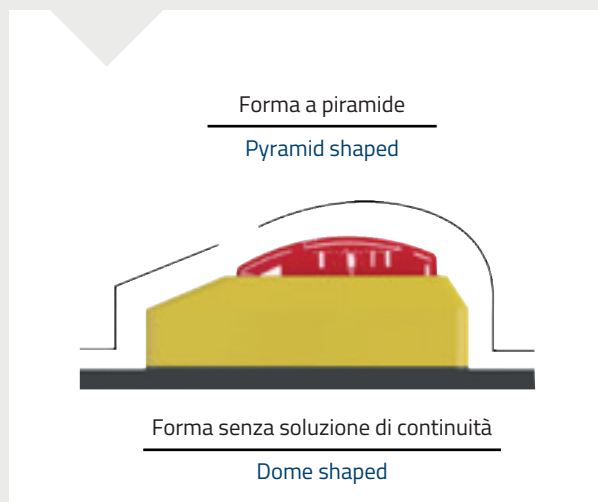


Resistente agli shock
Shock resistant



Ampia gamma di utilizzo
Wide range of use

Pulsanti a palmo Palm switches



Pulsanti di emergenza a palmo momentanei normali

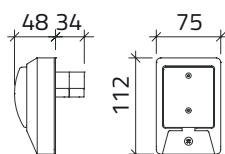
Momentary normal emergency stop palm switches

Pulsanti di emergenza momentanei normali

Normal momentary emergency stop push-buttons

g

cod

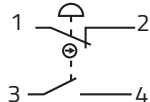
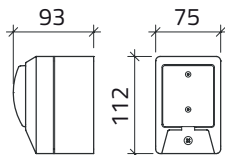


Tasto bombato senza custodia / Dome button without enclosure

● Rosso / Red

284

060APTR

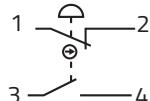
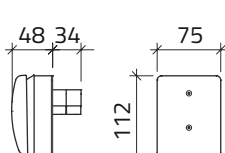


Tasto bombato con custodia / Dome button with enclosure

● Rosso / Red

366

060APTRC

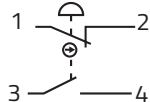
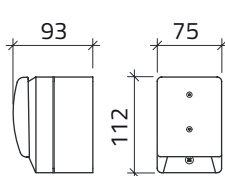


Tasto a fungo senza custodia / Mushroom button without enclosure

● Rosso / Red

284

060APFR

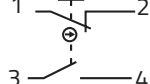


Tasto a fungo con custodia / Mushroom button with enclosure

● Rosso / Red

366

060APFRC



Pulsanti di emergenza a palmo ad aggancio normali

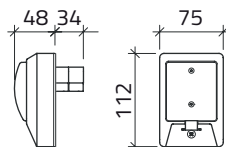
Latching normal emergency stop palm switches

Pulsanti di emergenza ad aggancio

Latching emergency stop push-buttons

g

cod

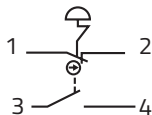
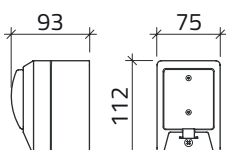


Tasto bombato senza custodia / Dome button without enclosure

● Rosso / Red

305

060APATR

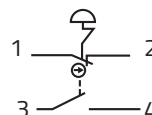
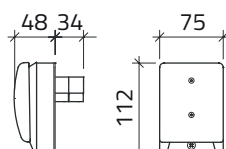


Tasto bombato con custodia / Dome button with enclosure

● Rosso / Red

387

060APATRC

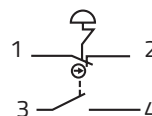
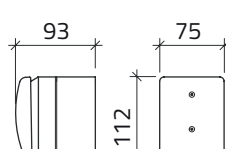


Tasto a fungo senza custodia / Mushroom button without enclosure

● Rosso / Red

305

060APAFR

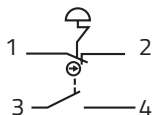


Tasto a fungo con custodia / Mushroom button with enclosure

● Rosso / Red

387

060APAFRC



Pulsanti di emergenza a palmo momentanei luminosi

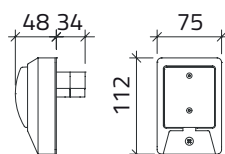
Momentary illuminated emergency stop palm switches

Pulsanti di emergenza a palmo luminosi

Illuminated emergency stop palm switches

g

cod

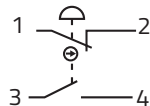
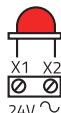
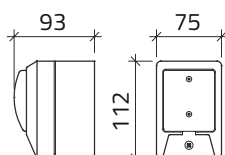


Tasto bombato senza custodia / Dome button without enclosure

● Rosso / Red

291

060APTLR

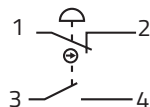
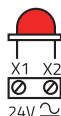
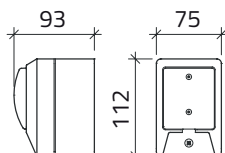


Tasto bombato con custodia / Dome button with enclosure

● Rosso / Red

373

060APTLRC



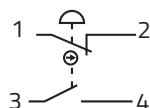
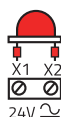
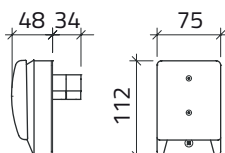
Tasto bombato con custodia luminosa

Dome button with illuminated enclosure

● Rosso / Red

373

060APTLRCL



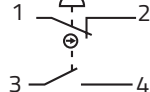
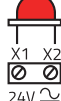
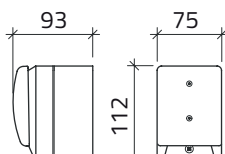
Tasto a fungo senza custodia

Mushroom button without enclosure

● Rosso / Red

291

060APFLR

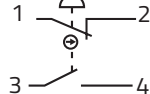
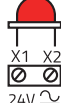
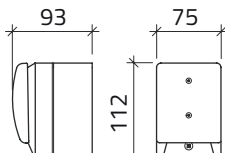


Tasto a fungo con custodia / Mushroom button with enclosure

● Rosso / Red

373

060APFLRC



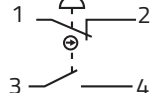
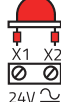
Tasto a fungo con custodia luminosa

Mushroom button with illuminated enclosure

● Rosso / Red

373

060APFLRCL



Pulsanti di emergenza a palmo ad aggancio luminosi

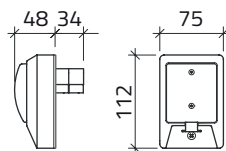
Illuminated latching emergency stop palm switches

Pulsanti di emergenza a palmo ad aggancio luminosi

Illuminated latching emergency stop palm switches

g

cod

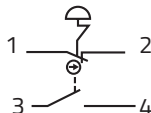
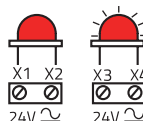
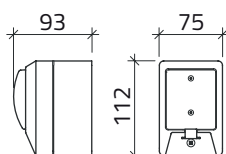


Tasto bombato senza custodia/ Dome button without enclosure

● Rosso / Red

312

060APATLR

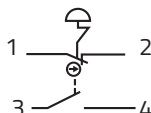
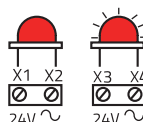
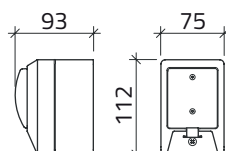


Tasto bombato con custodia / Dome button with enclosure

● Rosso / Red

394

060APATLRC



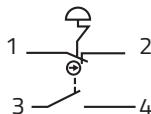
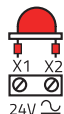
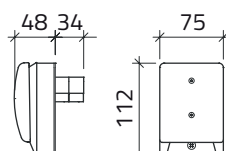
Tasto bombato con custodia luminosa

Dome button with illuminated enclosure

● Rosso / Red

394

060APATLRCL

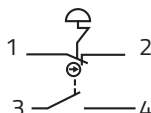
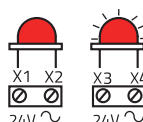
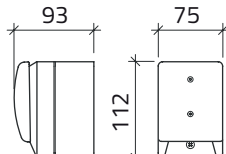


Tasto a fungo senza custodia/ Mushroom button without enclosure

● Rosso / Red

312

060APAFRLR

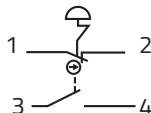
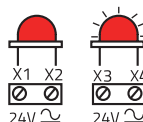
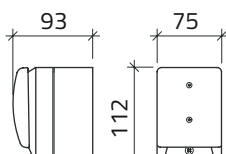


Tasto a fungo con custodia/ Mushroom button with enclosure

● Rosso / Red

394

060APAFRLRC



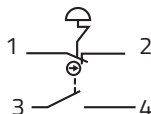
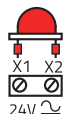
Tasto a fungo con custodia luminosa

Mushroom button with illuminated enclosure

● Rosso / Red

394

060APAFRLRCL



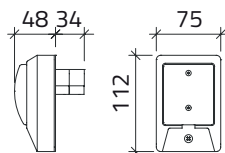
Pulsanti a palmo normali

Normal palm switches

Pulsanti normali Normal push-buttons

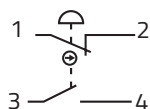
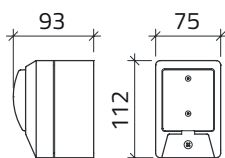
g

cod



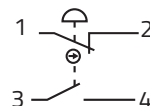
Tasto bombato senza custodia / Dome button without enclosure

● Nero / Black	284	060APTN
● Verde / Green	284	060APTV
● Giallo / Yellow	284	060APTG
● Blu / Blue	284	060APTBL



Tasto bombato con custodia / Dome button with enclosure

● Nero / Black	366	060APTNC
● Verde / Green	366	060APTVC
● Giallo / Yellow	366	060APTGC
● Blu / Blue	366	060APTBLC

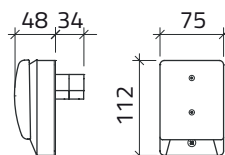


Pulsanti a palmo normali

Normal palm switches

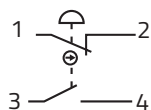
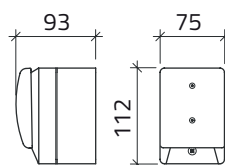
Pulsanti normali

Normal push-buttons



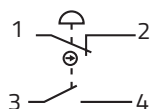
Tasto a fungo senza custodia / Mushroom button without enclosure

● Nero / Black	284	060APFN
● Verde / Green	284	060APFV
● Giallo / Yellow	284	060APFG
● Blu / Blue	284	060APFBL



Tasto a fungo con custodia / Mushroom button with enclosure

● Nero / Black	366	060APFNC
● Verde / Green	366	060APFVC
● Giallo / Yellow	366	060APFGC
● Blu / Blue	366	060APFBLC



Pulsanti a palmo luminosi

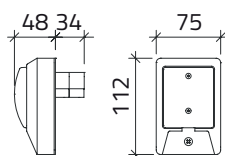
Illuminated palm switches

Pulsanti a palmo luminosi

Illuminated palm switches

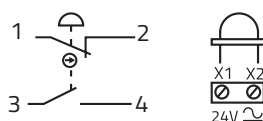
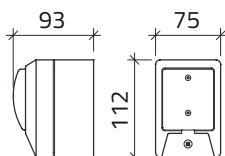
g

cod



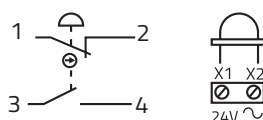
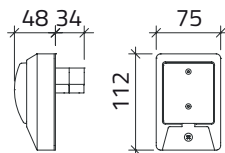
Tasto bombato senza custodia / Dome button without enclosure

● Verde / Green	291	060APTLV
● Giallo / Yellow	291	060APTLG
● Blu / Blue	291	060APTLBL
○ Bianco / White	291	060APTLB



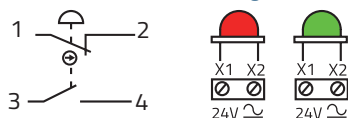
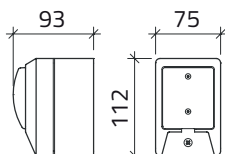
Tasto bombato con custodia / Dome button with enclosure

● Verde / Green	373	060APTLVC
● Giallo / Yellow	373	060APTLGC
● Blu / Blue	373	060APTLBLC
○ Bianco / White	373	060APTLBC



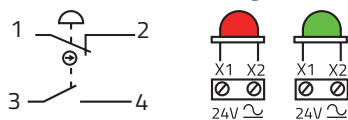
Tasto bombato senza custodia / Dome button without enclosure

● Rosso-verde / Red-green	291	060APTLRV
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Tasto bombato con custodia / Dome button with enclosure

● Rosso-verde / Red-green	373	060APTLRVC
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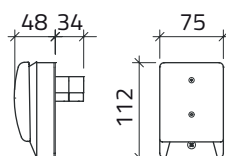


Pulsanti a palmo luminosi

Illuminated palm switches

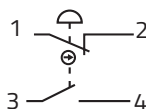
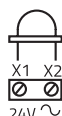
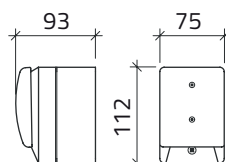
Pulsanti a palmo luminosi

Illuminated palm switches



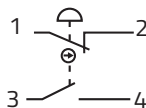
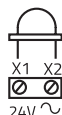
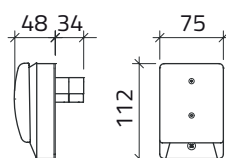
Tasto a fungo senza custodia / Mushroom button without enclosure

● Verde / Green	291	060APFLV
● Giallo / Yellow	291	060APFLG
● Blu / Blue	291	060APFLBL
○ Bianco / White	291	060APFLB



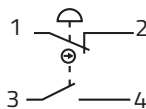
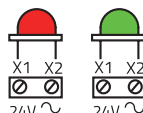
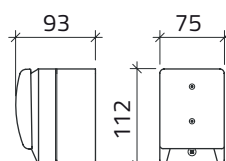
Tasto a fungo con custodia / Mushroom button with enclosure

● Verde / Green	373	060APFLVC
● Giallo / Yellow	373	060APFLGC
● Blu / Blue	373	060APFLBLC
○ Bianco / White	373	060APFLBC



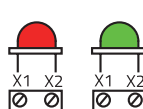
Tasto a fungo senza custodia / Mushroom button without enclosure

● Rosso-verde / Red-green	291	060APFLRV
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Tasto a fungo con custodia / Mushroom button with enclosure

● Rosso-verde / Red-green	373	060APFLRVC
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Suffissi per stampa simboli su tasti

Suffixes for printing symbols on buttons

Far seguire al codice del prodotto il suffisso del simbolo desiderato
Item code is to be followed by the suffix of the required symbol



S48



S148



S55



S152

Suffissi per stampa simboli su tasti

Suffixes for printing symbols on buttons

Far seguire al codice del prodotto il suffisso del simbolo desiderato
Item code is to be followed by the suffix of the required symbol



S153



S144



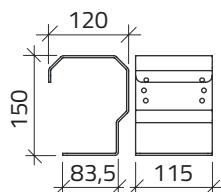
S154



S159

Accessori Accessories

Elemento di protezione per pulsante a palmo Protective shroud for palm switch



Acciaio / Steel

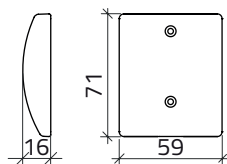
g

1,130

cod

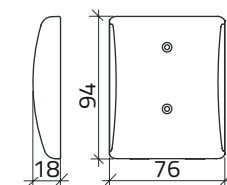
060SEP

Tasti per pulsanti a palmo normale Buttons for normal palm switches



Tasto bombato / Dome button

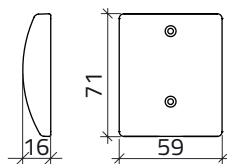
● Nero / Black	25	060TBN
● Rosso / Red	25	060TBR
● Verde / Green	25	060TBV
● Giallo / Yellow	25	060TBG
● Blu / Blue	25	060TBL



Tasto a fungo / Mushroom button

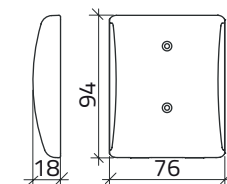
● Nero / Black	36	060TFN
● Rosso / Red	36	060TFR
● Verde / Green	36	060TFV
● Giallo / Yellow	36	060TFG
● Blu / Blue	36	060TFBL

Tasti per pulsante a palmo luminosi Buttons for illuminated palm switches



Tasto bombato / Dome button

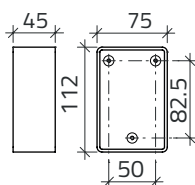
● Rosso / Red	25	060TBLR
● Verde / Green	25	060TBLV
● Giallo / Yellow	25	060TBLG
● Blu / Blue	25	060TBLBL
○ Bianco / White	25	060TBLB
○ Trasparente / Clear	25	060TBLI



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
○ Trasparente / Clear	36	060TFLI

Custodia per azionatore a palmo Palm switch enclosures



Custodia non luminosa / Not illuminated enclosure

● Grigio / Grey	115	060SGR
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Custodia luminosa / Illuminated enclosure

● Rosso / Red	115	060SRT
---------------	-----	--------

Pulsanti a palmo

Palm switches

Caratteristiche tecniche

Rispondenza alle norme	EN-IEC60947-1, EN-IEC60947-5-1 UNI EN 13850,UNI EN ISO 12100 EN-IEC60947-5-5 UNI CEI EN 45545/2, CEI EN 61373																														
Omologazioni	CE, (UL, CSA solo elementi di contatto 030FA-030FAA / 030FC-030FCF)																														
Limiti di temperatura	Funzionamento ≥ -30°C ÷ ≤ +120°C Stoccaggio ≥ -40°C ÷ ≤ +125°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 1 ÷ 2,5 Nm (8,8 ÷ 22,1 Lb-in) Viti terminali 0,8 ÷ 1,2 Nm (7,1 ÷ 10,6 Lb-in)																														
Durata meccanica	3 milioni di manovre																														
Elementi di contatto	NO-NC inclusi apertura positiva del contatto NC secondo EN, IEC 60947-5-1																														
Funzionamento contatti	Azionamento lento con autopulitura e 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 secondo EN-IEC60947-5-1 A600 - P300 secondo UL508																														
	<table><tr><td></td><td>AC</td><td></td></tr><tr><td>Ue V</td><td></td><td>Ie A</td></tr><tr><td>24</td><td></td><td>10</td></tr><tr><td>110</td><td></td><td>6</td></tr><tr><td>230</td><td></td><td>3</td></tr><tr><td></td><td>DC</td><td></td></tr><tr><td>Ue V</td><td></td><td>Ie A</td></tr><tr><td>24</td><td></td><td>5</td></tr><tr><td>110</td><td></td><td>1,1</td></tr><tr><td>230</td><td></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																														

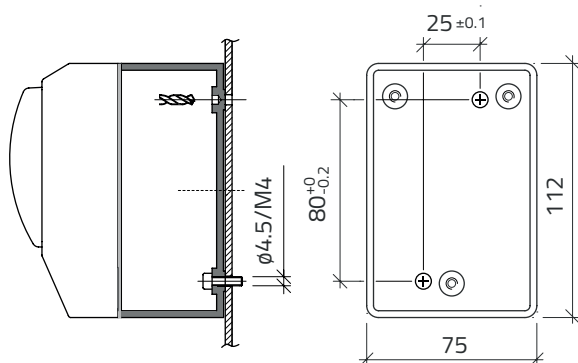
Technical data

Compliance with Standards	EN-IEC60947-1, EN-IEC60947-5-1 UNI EN 13850,UNI EN ISO 12100 EN-IEC60947-5-5 UNI CEI EN 45545/2, CEI EN 61373																														
Approvals	CE, (UL, CSA only for contacts blocks 030FA-030FAA / 030FC-030FCF)																														
Temperature ranges	Working ≥ -30°C ÷ ≤ +120°C Storage ≥ -40°C ÷ ≤ +125°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 1 ÷ 2,5 Nm (8,8 ÷ 22,1 Lb-in) Terminal screws 0,8 ÷ 1,2 Nm (7,1 ÷ 10,6 Lb-in)																														
Mechanical durability	3 millions operation																														
Contacts blocks	NO-NC included positive opening on NC contact according to EN, IEC 60947-5-1																														
Contact actuation	Slow action with self cleaning 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 according to EN-IEC60947-5-1 A600 - P300 according to UL508																														
	<table><tr><td></td><td>AC</td><td>Ie A</td></tr><tr><td>Ue V</td><td></td><td></td></tr><tr><td>24</td><td></td><td>10</td></tr><tr><td>110</td><td></td><td>6</td></tr><tr><td>230</td><td></td><td>3</td></tr><tr><td></td><td>DC</td><td>Ie A</td></tr><tr><td>Ue V</td><td></td><td></td></tr><tr><td>24</td><td></td><td>5</td></tr><tr><td>110</td><td></td><td>1,1</td></tr><tr><td>230</td><td></td><td>0,55</td></tr></table>		AC	Ie A	Ue V			24		10	110		6	230		3		DC	Ie A	Ue V			24		5	110		1,1	230		0,55
	AC	Ie A																													
Ue V																															
24		10																													
110		6																													
230		3																													
	DC	Ie A																													
Ue V																															
24		5																													
110		1,1																													
230		0,55																													
Illuminated models	Led 24AC-DC included																														

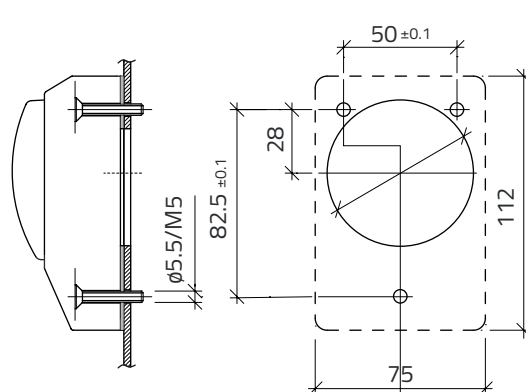
Dima di foratura

Drilling template

Con custodia
With case



A incasso
Wall mount





Pulsantiera mobile

Hand-held push-button control unit

■ PULSANTIERA MOBILE

La pulsantiera mobile è stata progettata per rispondere alle necessità di avere la portabilità di alcuni comandi elettrici manuali, garantendo l'interfaccia uomo macchina, anche in situazioni dove occorre posizionarsi in zone specifiche.

La forma particolare è stata appositamente progettata per un ottimo connubio tra ergonomia, facilità di impugnatura e spazio a disposizione per i comandi manuali elettromeccanici. Dotata di piastra frontale in alluminio anodizzato, facilmente lavorabile, la pulsantiera si rende adattabile a innumerevoli configurazioni e consente il contenimento di piccoli display, touch screen e altri dispositivi ausiliari di comando e controllo. La piastra è trattenuta da viti in acciaio inox, garantendo a tutta la pulsantiera un elevato grado di resistenza sia alla corrosione sia alla tenuta ai liquidi (IP66). Il corpo della pulsantiera è realizzato in materiale plastico antiurto particolarmente resistente in caso di caduta accidentale (IK07). Essa è inoltre dotata di aletta perimetrale disegnata per coprire e proteggere gli operatori di comando da azionamenti involontari a seguito di cadute dell'apparecchiatura. L'articolo è disponibile in due colorazioni: giallo RAL 1003 oppure grigio RAL 7016. Un'ampia gamma di accessori dedicati completano l'apparecchiatura, quali staffa magnetica, staffa per fissaggio a muro, staffa raccolta cavo e cinghia a tracolla.

■ MODULAR SYSTEM FOR PUSH-BUTTON

The hand-held push-button control unit has been designed to have some manual electrical commands within operator's reach, thus granting a man-machine interface, even when it is required to work in particular positions.

Its special shape is the result of a perfect combination design of ergonomics, easy grip and available space for the manual electromechanical commands.

Provided with a front easy-to-drill anodized aluminium plate, the enclosure is suitable for multiple configurations and can house small display panels, touch screens and other auxiliary command and control devices.

The plate is fastened using stainless steel screws, thus granting high resistance to both corrosion and liquid entrance (IP66).

The enclosure of the control unit is made of high impact resistant plastic (IK07) and is provided with a shaped border around its perimeter, which has been designed to protect the operators from their accidental operation in case of control unit drop.

It is available in two colours: yellow RAL 1003 or dark grey RAL 7016.

A wide range of accessories, like magnetic mounting plate, wall-mounting bracket, cable bracket and shoulder belt, are available to complete the control unit.



Pulsantiera mobile Hand-held push-button control unit



La pulsantiera è dotata di agevoli superfici per l'installazione di operatori.
The control unit has wide surfaces where the operators can be easily housed.



L'impugnatura può accogliere nei lati destro o sinistro un pulsante di abilitazione a tre posizioni.

The right or the left side of the grip can house a three-position enabling push-button.



La pulsantiera è dotata di un pratico cinghiolo che garantisce un sicuro utilizzo.

The control unit is equipped with a useful strap assuring a safe operation.



L'introduzione del cavo di alimentazione è favorito da un pratico pressacavo che protegge eventuali torsioni, mentre un robusto serracavo evita sfilacciamenti.

The power cable can be easily fitted thanks to a spiral cable gland, which protects from a possible twisting, and a strong wire clamp avoids cable fraying.

Pulsantiera mobile Hand-held push-button control unit



La parte superiore della pulsantiera adotta ancoraggi per l'accessorio a tracolla.

The upper side of the control unit is provided with openings to fit the shoulder belt.



Pratici accessori completano la gamma: supporto a parete con gancio avvolgicavo e piastra magnetica.

Useful accessories, like wall-mounting bracket, cable bracket and magnetic mounting plate complete the range.

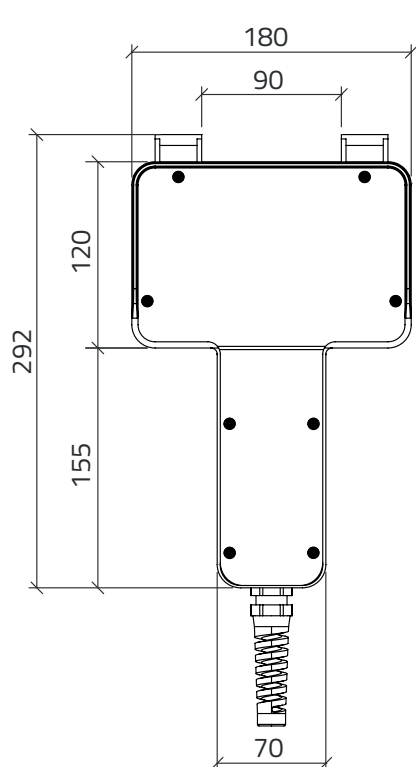
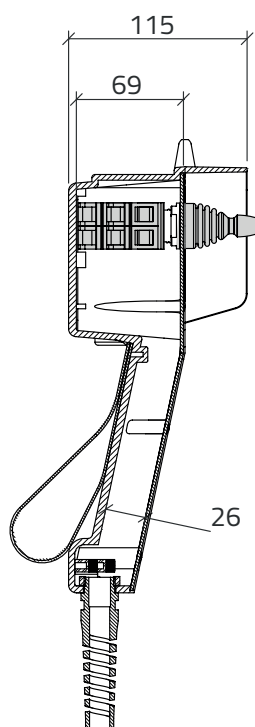
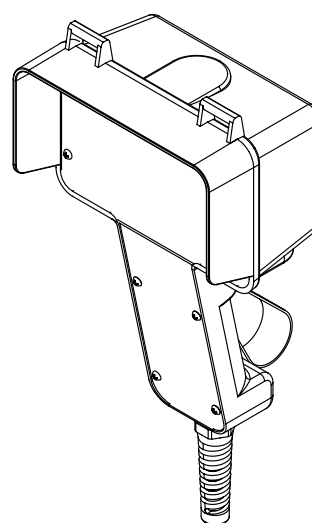
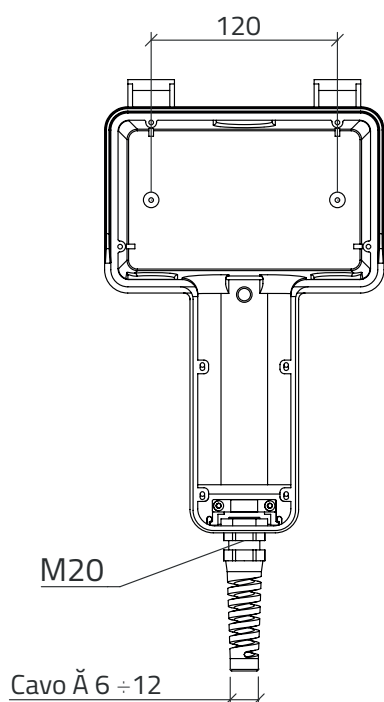
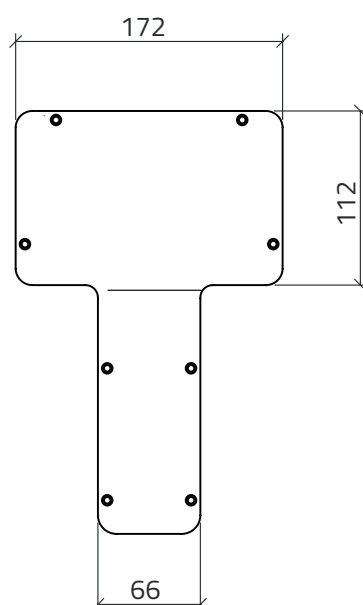


Tutta la struttura del contenitore è studiata per realizzare organizzate configurazioni di layout con diversi componenti elettromeccanici.

The whole enclosure structure is so designed to get layout configurations with different electromechanical components.

Pulsantiera mobile

Hand-held push-button control unit



PIEGATURA DOPO
LAVORAZIONE MECCANICA

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.
Provided with aluminium undrilled plate.

● Giallo / Yellow

g

cod

680

060PMG



Completa di piastra in alluminio, senza forature.
Provided with aluminium undrilled plate.

● Grigio / Grey

680

060PMGR

Per richieste speciali contattare la nostra organizzazione commerciale.
For special requirements get in touch with our commercial department.



Pulsantiera mobile

Hand-held push-button control unit



Staffa fissaggio parete / Wall-mounting bracket

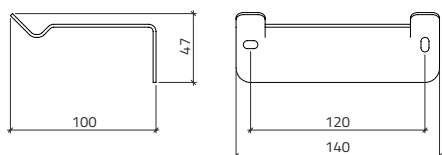
Acciaio / Steel

g

465

cod

060SFP



Staffa fissaggio cavo / Cable bracket

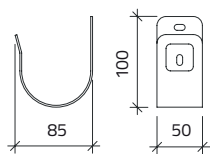
Acciaio / Steel

g

165

cod

060SFC



Staffa fissaggio magnetica / Magnetic mounting plate

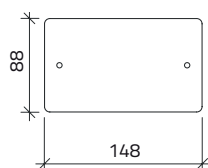
Acciaio / Steel

g

200

cod

060PFM



Piastra non forata (ricambio) / Undrilled plate (spare part)

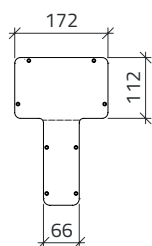
Alluminio anodizzato / Anodised aluminium

g

160

cod

060PPM



Pulsantiera mobile

Hand-held push-button control unit



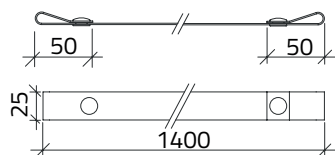
Cinghia tracolla / Shoulder belt
25x1400 mm

g

cod

90

010CT25



g

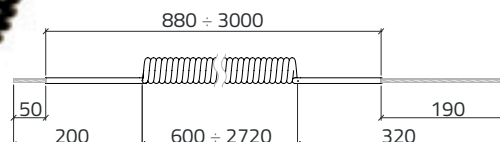
cod

700

010CSN12X05-3



Cavo Spiralo / Spiral cable
12x0,5 mm²



Caratteristiche tecniche

Certificazioni	CE
Rispondenza alle norme	IEC-EN60529
Rispondenza alle norme	IEC-ENC60947-1, IEC-EN60947-5-1
Temperature di operatività	-25° ÷ +65°C
Grado di protezione	IP66 - IP69K (IEC-EN60529 - DIN40050)
Protezione contro gli impatti	IK07 (IEC-EN62262)
Resistenza agli urti	50g (durata:11ms) EN-IEC 60068-2-27
Materiale custodia	Polimero termoplastico ad alto impatto
Processo di fabbricazione	Stampaggio ad iniezione
Materiale guarnizione	Schiuma EPDM + adesivo
Materiale viti custodia	Acciaio inossidabile AISI 304
Piastra frontale	Alluminio anodizzato - Spessore 2mm
Coppia di serraggio	1 ÷ 2,5Nm (8.8÷22.1 Lb-in)
Entrata cavo	M20x1,5
Categoria di sovratensione	Classe I (IEC-EN61140)
Maniglia con fori sinistro/destro	Per Q16P3Pxxx pulsanti di abilitazione a 3 posizioni
Periodo di garanzia	18 mesi

Technical data

Approvals	CE
Compliance with standards	IEC-EN60529
Compliance with standards	IEC-ENC60947-1, IEC-EN60947-5-1
Operating temperatures	-25° ÷ +65°C
Protection degree	IP66 - IP69K (IEC-EN60529 - DIN40050)
Protection against impact	IK07 (IEC-EN62262)
Shock resistance	50g duration=11ms (EN-IEC 60068-2-27)
Housing material	High impact grade thermoplastic polymer
Manufacturing process	Injection moulding
Gasket material	EPDM Foam + adhesive
Screw material	Stainless steel AISI 304
Front plate	Anodized aluminium - Thickness 2mm
Tightening torque	1 ÷ 2,5Nm (8.8÷22.1 Lb-in)
Cable entry	M20x1,5
Overvoltage category	Class I (IEC-EN61140)
Handle with left / right knockouts	For Q16P3Pxxx 3 position enabling safety switch
Warranty period	18 months



Dispositivi di comando a due mani

Two-hand control devices

DEFINIZIONE DI COMANDO A DUE MANI (UNI EN ISO 12100)

3.28.4

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 9.2.6.2)

9.2.6.2

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);
- 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 ISO 12100)

3.28.4

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 9.2.6.2)

9.2.6.2

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);
- when the time limit is up, both activation control devices must be released before a new operation can begin.



Pulsantiera a due mani

Two-hand control device

■ SISTEMA MODULARE PER PULSANTIERE

Il 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.

■ 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.

■ KIT DI RUOTE

Il kit di ruote risolve razionalmente il problema della mobilità senza compromettere la solidità di appoggio della base.

■ 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

The modular system for push-button panels, specifically designed by New Elfin to meet specific market and working needs is provided with several components allowing the user to configure multiple structures to be integrated in 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.

■ MODULAR SYSTEM FOR P/B PANELS

The versatility and modularity of the system can also be fitted with a support arm, which can be used to hold a wide range of specific components. The truncated conical shape of the joints confers solidity and rigidity to the frame.

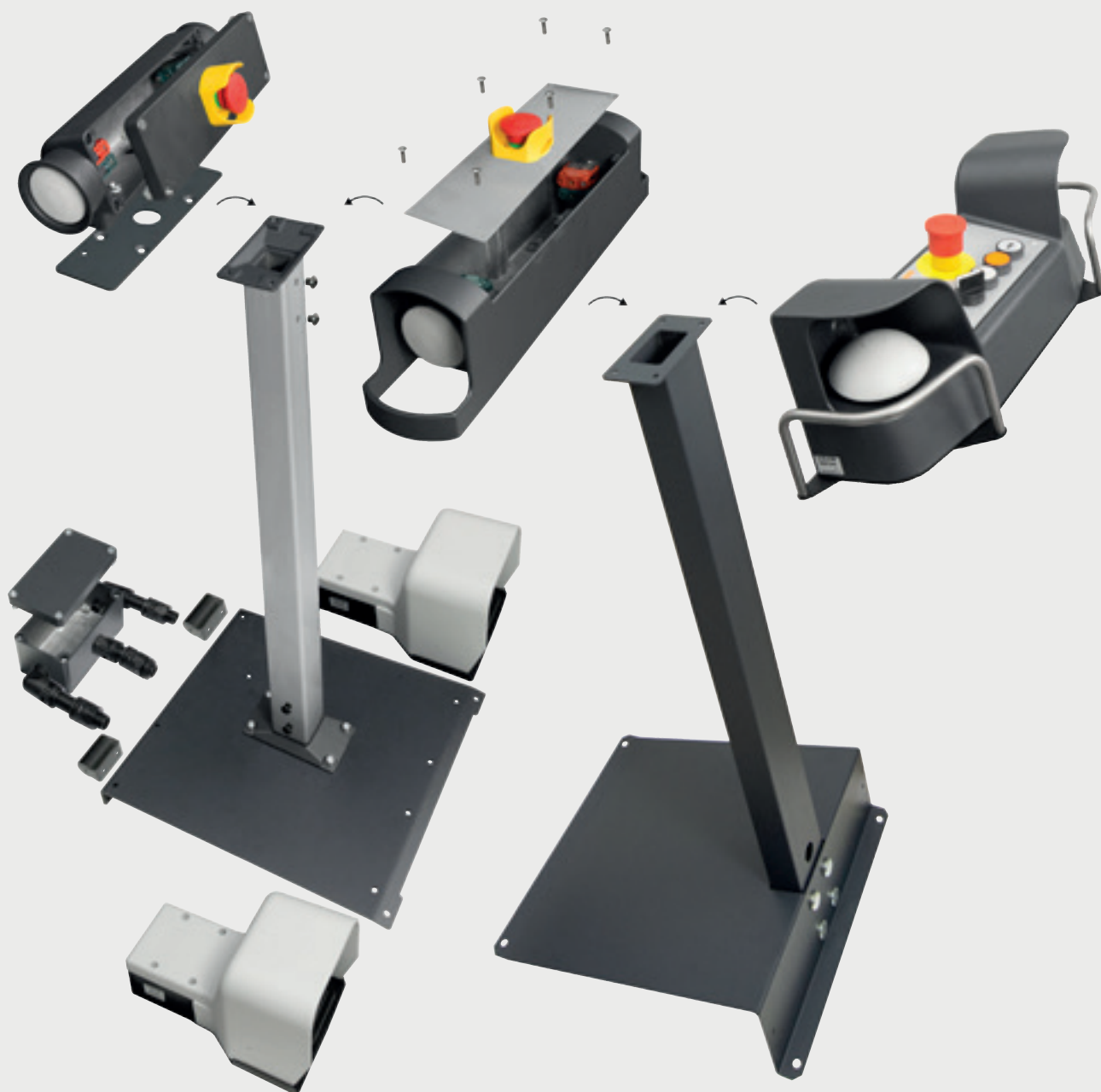
■ CASTOR KIT

The castor kit offers a rational solution to the problem of mobility without affecting the overall stability of the base.

■ CONNECTION KIT

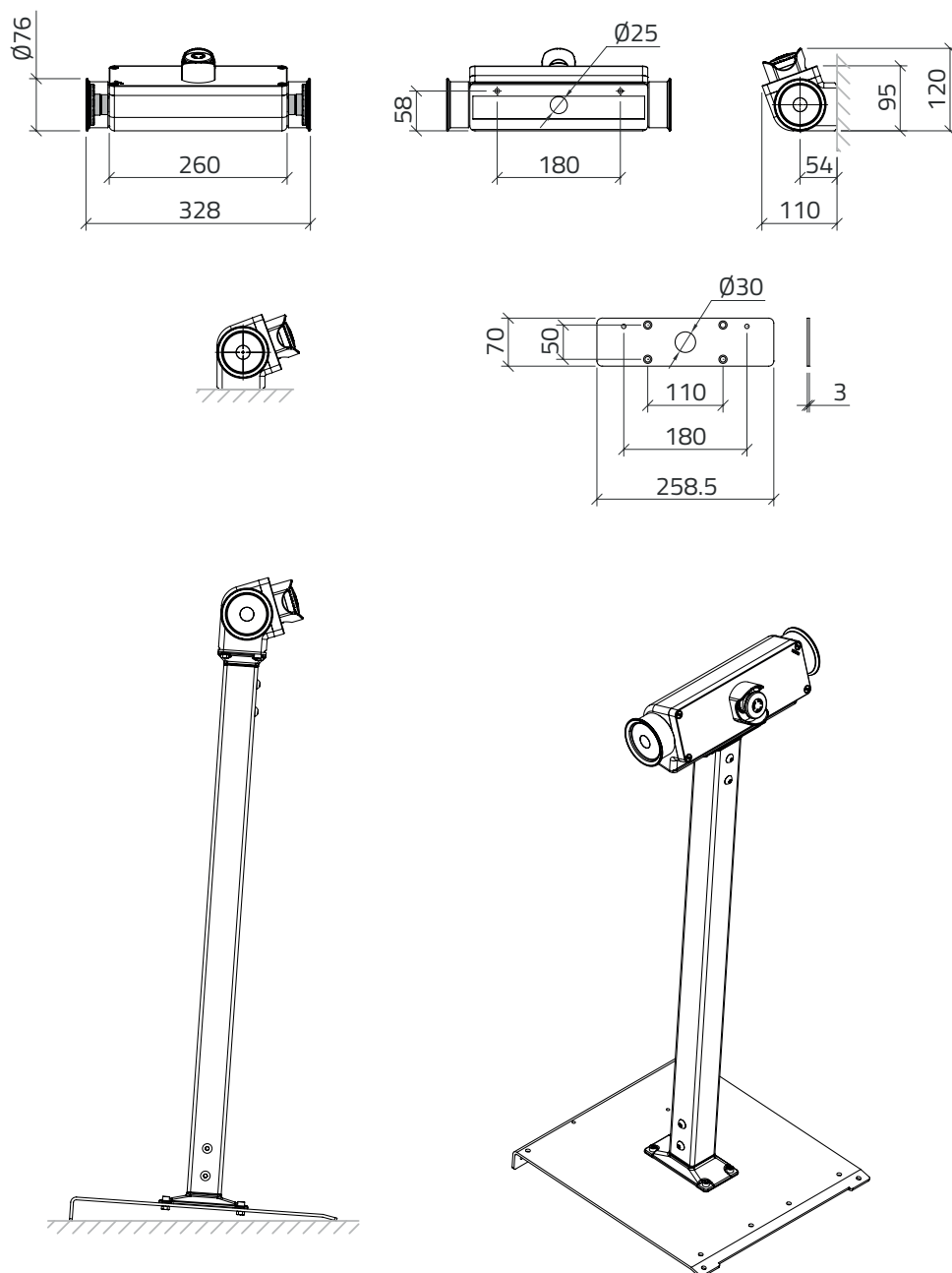
The connection kit allows to easily wire up all the components installed on the base.

Pulsantiera a due mani Two-hand control device



Dispositivi di comando a due mani

Two-hand control devices

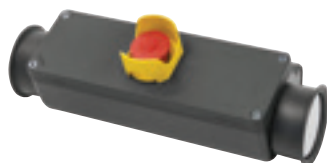


Dispositivi di comando a due mani

Two-hand control devices

Pulsantiera a due mani inclinata in alluminio

Sloped aluminium two-hand control panel



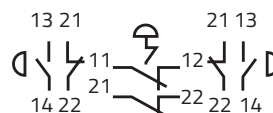
● RAL 7016

g

1461

cod

060CL2MA



Accessori

Accessories



Piastra accoppiamento pulsantiera inclinata

Coupling plate for sloped panel

g

450

cod

060PAP



Stativo componibile per comandi bimanuali

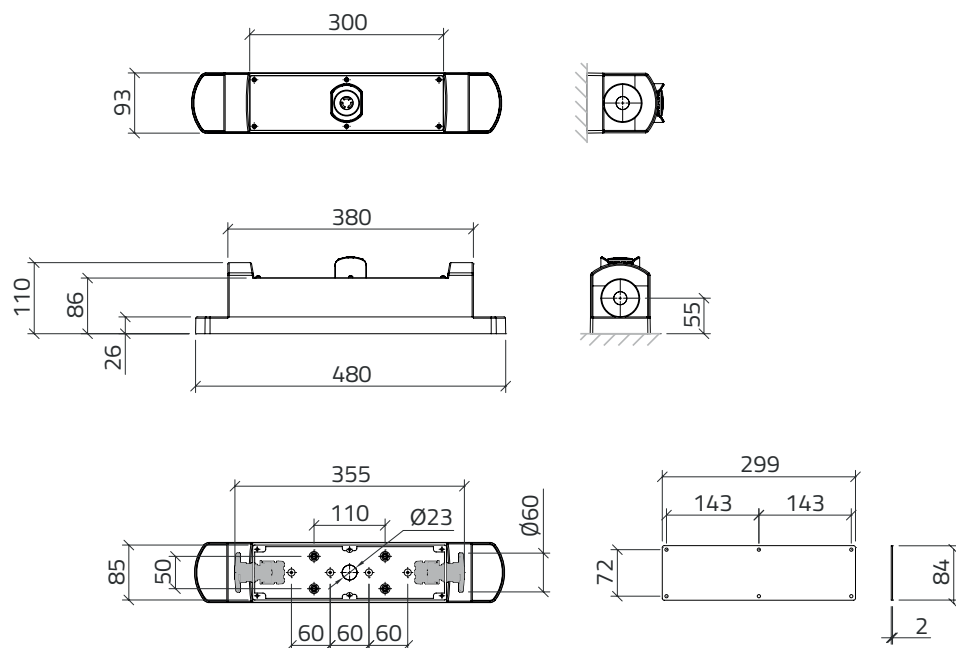
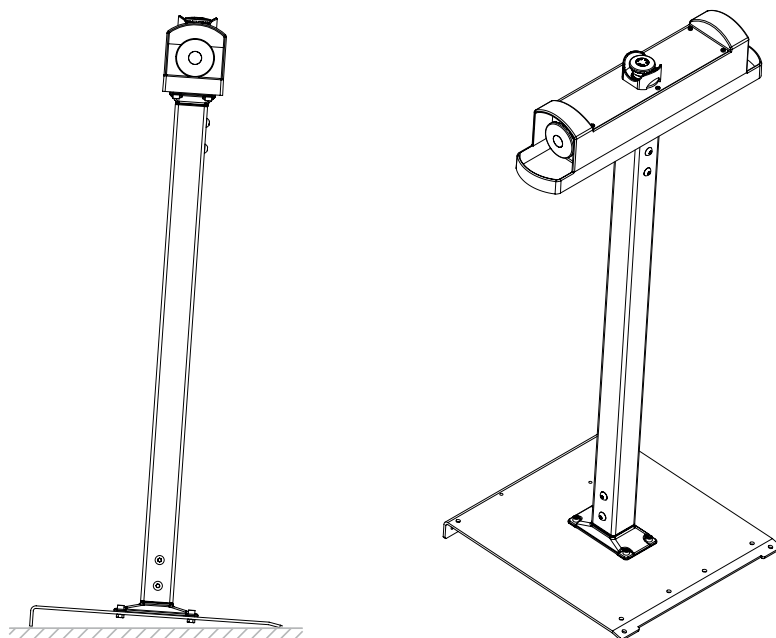
Modular stand for two-hand control devices

6450

060SC

Dispositivi di comando a due mani

Two-hand control devices



Dispositivi di comando a due mani

Two-hand control devices

Pulsantiera a due mani console in alluminio

Aluminium console two-hand control panel



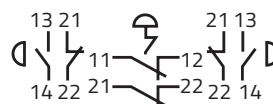
● RAL 7016

g

2050

cod

060C2MA



Pulsantiera a due mani console da completare

Console two-hand control panel to be completed

Pulsantiera con pulsanti
Control panel with push-buttons

● RAL 7016

g

1730

cod

060C2MGRP



Accessori

Accessories



Piastra di ricambio / Spare plate

g

150

cod

060PC

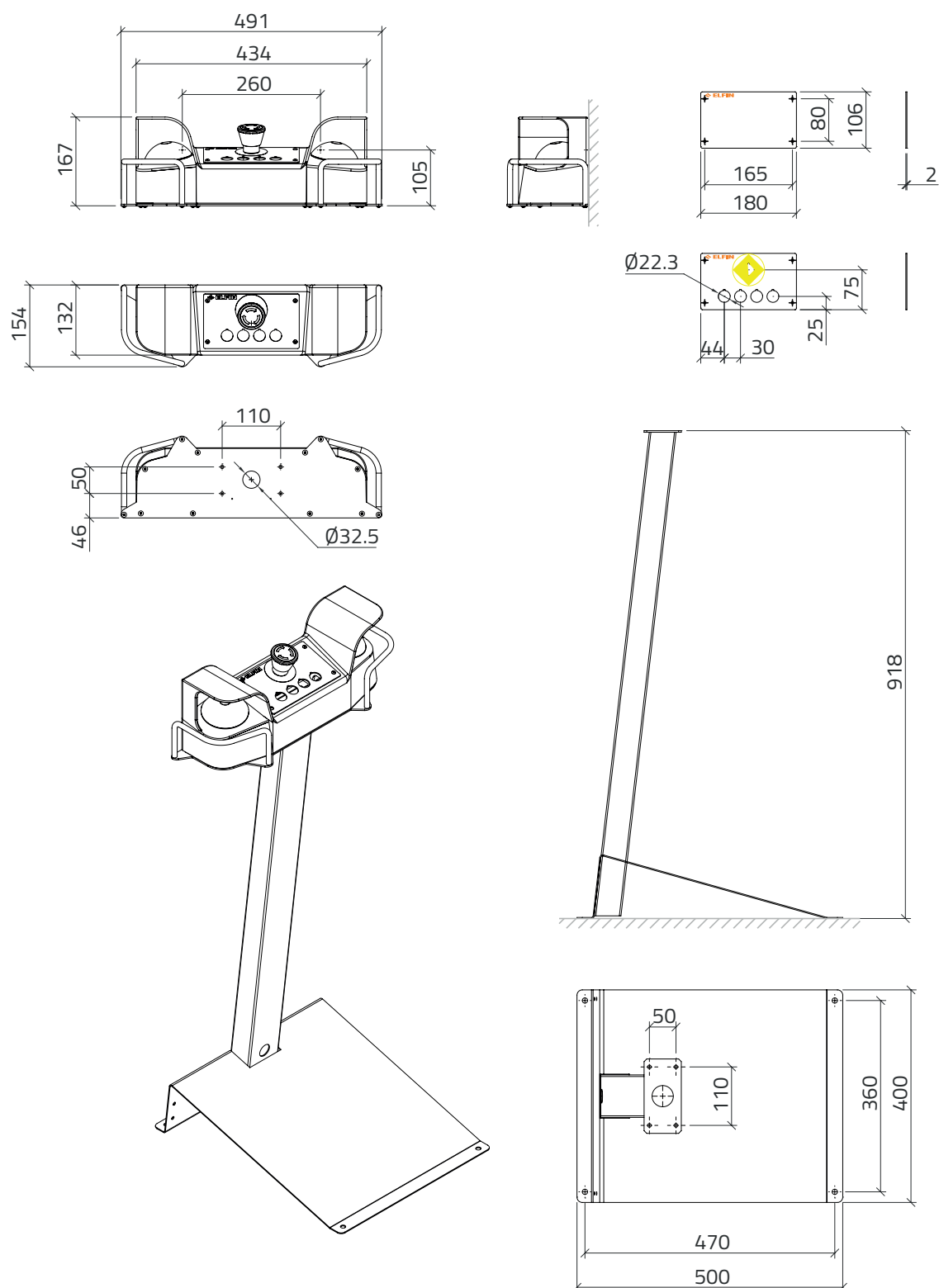
Stativo componibile per comandi bimanuali
Modular stand for two-hand control devices

6450

060SC

Dispositivi di comando a due mani

Two-hand control devices



Dispositivi di comando a due mani

Two-hand control devices

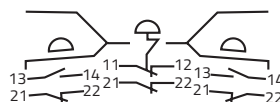
Pulsantiera a due mani protetta in alluminio

Aluminium two-hand control panel protected



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



4650

060P2MA



● RAL 2011

4650

060P2MAA

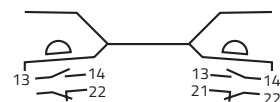
Pulsantiera a due mani protetta da completare

Two-hand control panel protected to be completed



Pulsantiera con pulsanti
Control panel with push-buttons

● RAL 7016



4454

060P2MGRP

Accessori

Accessories



Piastra di ricambio forata / Spare plate drilled

g

cod

95

060PP2MF

Piastra di ricambio non forata / Spare plate undrilled

100

060PP2MN



Viti chiusura ermetica / Sealing screws

25

060VCE



Stativo per comando bimanuale
Stand for two-hand control devices

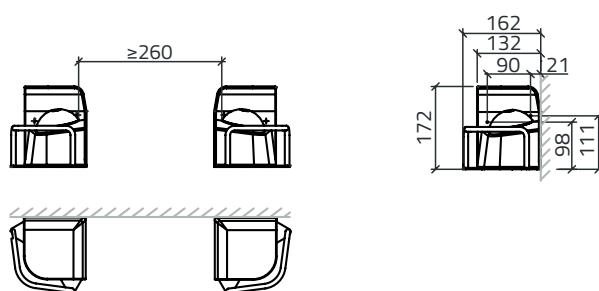
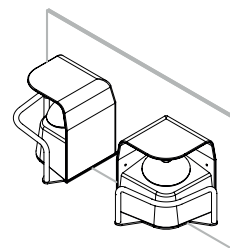
9785

060SP2M

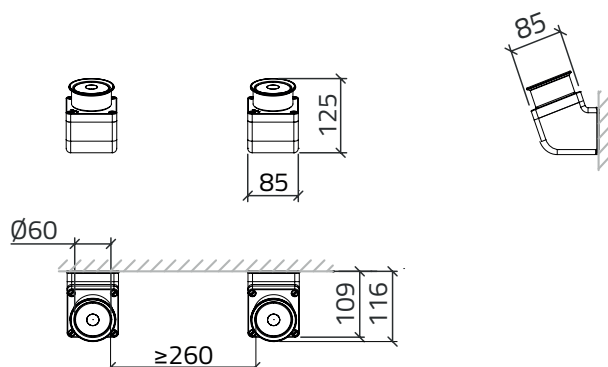
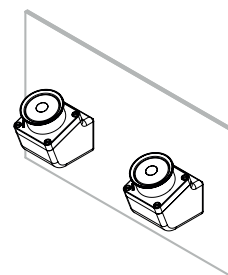
Dispositivi di comando a due mani

Two-hand control devices

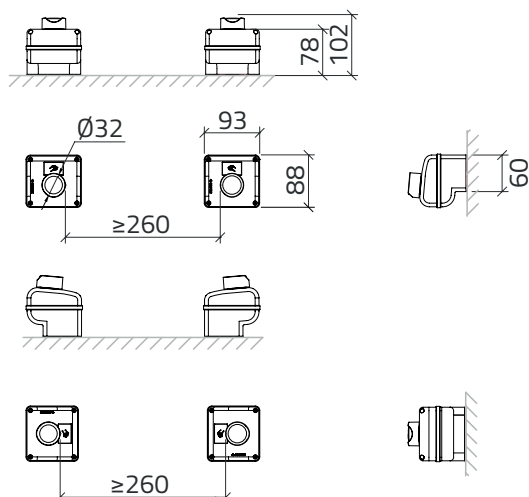
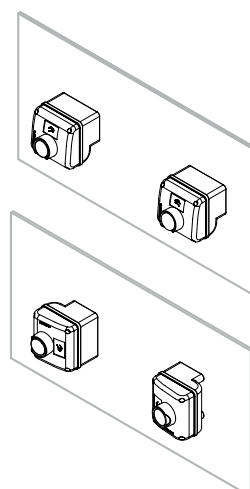
060MPP2GR



060MLP2GR



060MEP2GR



Dispositivi di comando a due mani

Two-hand control devices

Moduli singoli in alluminio

Single aluminium modules

g

cod



Moduli singoli protetti per comando a due mani

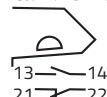
Protected single modules for two-hand control

● Grigio / Gray

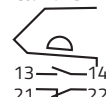
3200

060MPP2GR

Unità 1/ Unit 1



Unità 2/ Unit 2



g

cod



Moduli singoli inclinati per comando a due mani

Sloped single modules for two-hand control

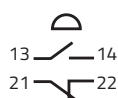
Involucro inclinato in alluminio - 2 unità
Sloped aluminium enclosures - 2 units

● Grigio / Gray

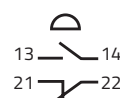
1300

060MLP2GR

Unità 1/ Unit 1



Unità 2/ Unit 2



g

cod



Moduli singoli in termoplastico

Single thermoplastic modules

Moduli singoli per comando a due mani

Single modules for two-hand control

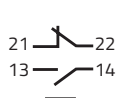
Involucro ergonomico in termoplastico - 2 unità
Ergonomic thermoplastic enclosures - 2 units

● Grigio / Gray

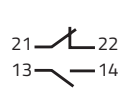
400

060MEP2GR

Unità 1/ Unit 1



Unità 2/ Unit 2



Dispositivi di comando a due mani

Two-hand control devices

Stativo componibile per comando bimanuale

Modular stand for two-hand control panel

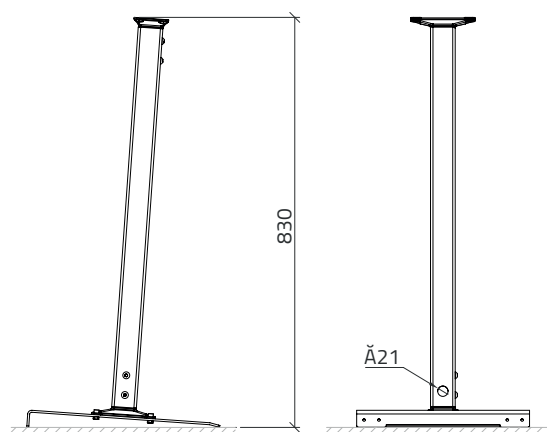
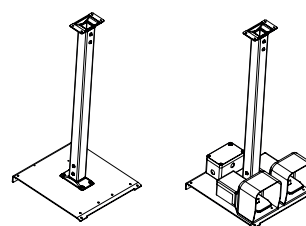
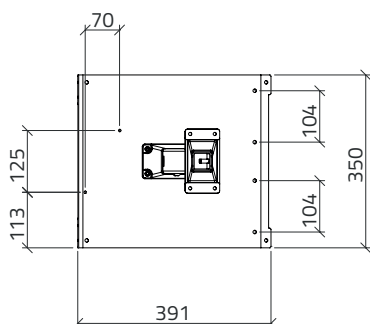
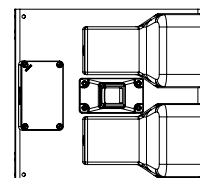
g

cod

Per articoli 060CL2MA - 060C2MA
For item code 060CL2MA - 060CL2MA

6450

060SC



Ruote

Wheels

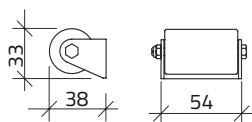
g

cod

Kit di ruote per piastra base colonna
Castor kit for column base plate

200

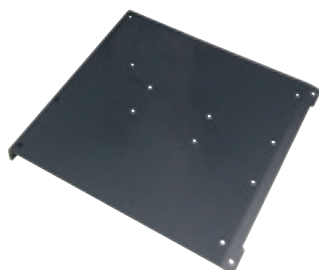
060KR



Dispositivi di comando a due mani

Two-hand control devices

Piastre Plates



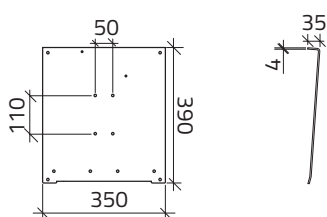
Piastra base colonna / Column base plate

g

4600

cod

060BC



Giunti Joints



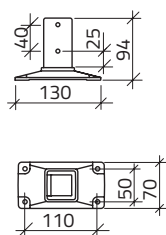
Ortagonale / Orthogonal

g

315

cod

060GCO



Colonne Columns



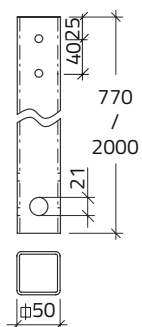
Lunghezza / Length mm 770

g

1185

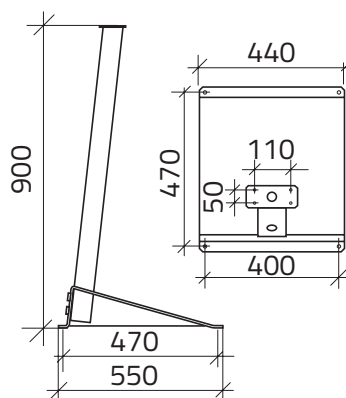
cod

060C8



Dispositivi di comando a due mani

Two-hand control devices



Stativo per comando bimanuale

Stand for two-hand control panel

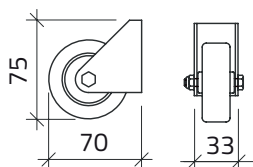
Per articolo 060C2MA - 060P2MA
For item code 060C2MA - 060P2MA

g

cod

9785

060SP2M



Kit ruote per stativo / Castor kit for stand

g

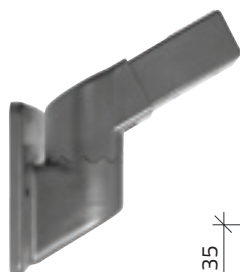
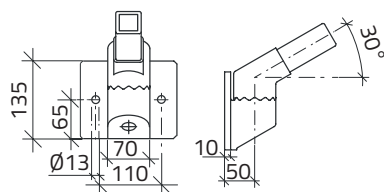
cod

290

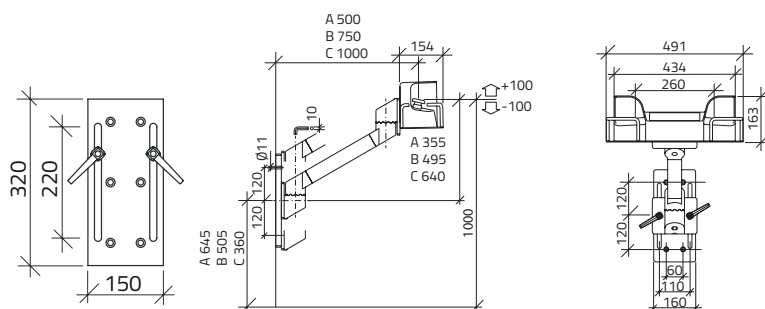
060SMS

Dispositivi di comando a due mani

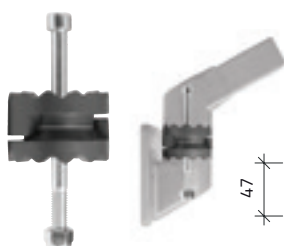
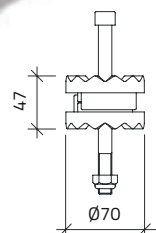
Two-hand control devices

**Supporto per braccio / Arm support****g**

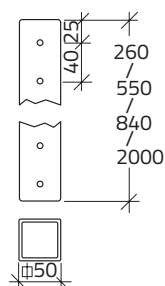
1800

cod**060SB****Piastra di regolazione/ Adjustment plate****g**

2420

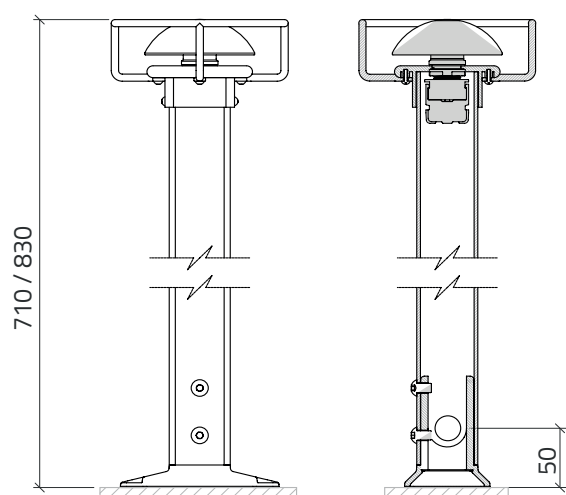
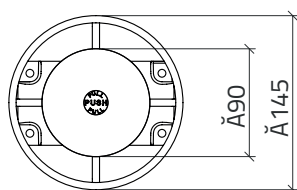
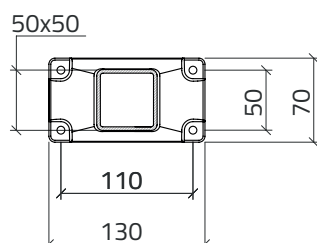
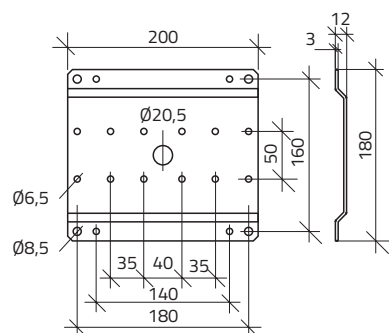
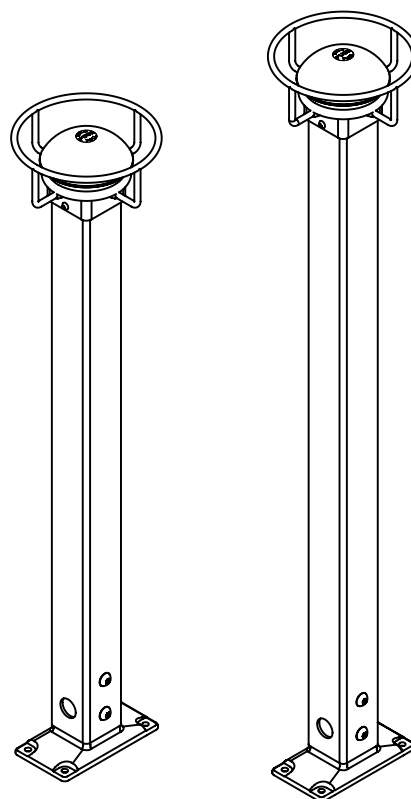
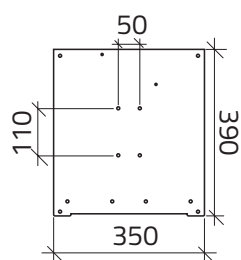
cod**060PRB0****Snodo per braccio
Articulated joint for arm****g**

530

cod**060SRB0****Bracci / Arms**

Lunghezza / Length mm 260	360	060B2
Lunghezza / Length mm 550	780	060B5
Lunghezza / Length mm 840	1160	060B8
Lunghezza / Length mm 2000		
senza fori / undrilled	2790	060C2000

Pulpito di emergenza Emergency stand



Pulpito di emergenza

Emergency stand



Pulpito pulsante di emergenza

Emergency push-button stand

Lunghezza / Length mm 710

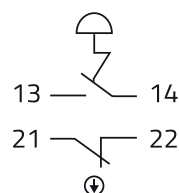
1535

060PES7

Lunghezza / Length mm 830

1815

060PES8

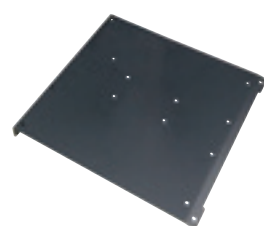


Piastra / Plate

Piastra base colonna / Column base plate

836

060PAC



Piastre / Plates

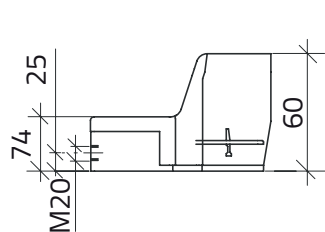
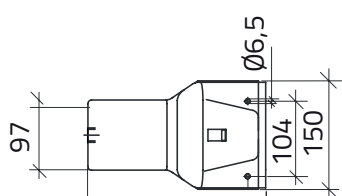
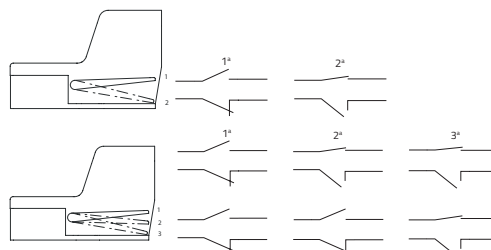
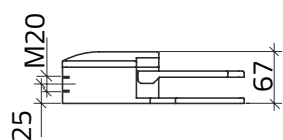
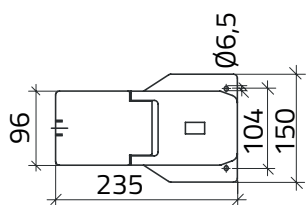
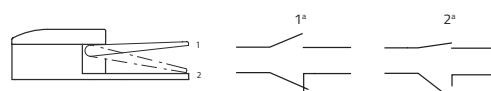
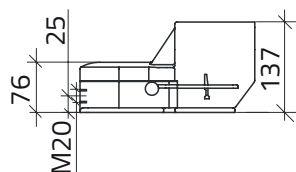
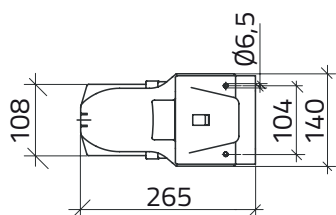
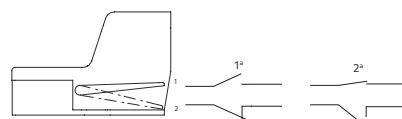
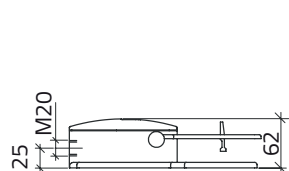
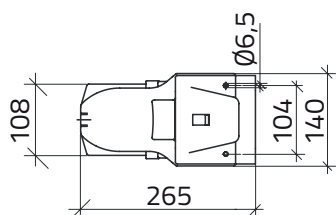
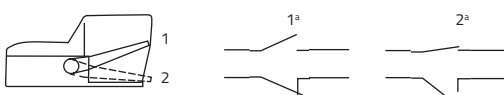
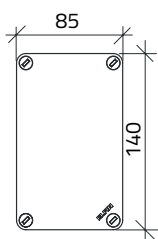
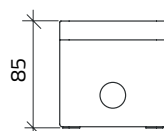
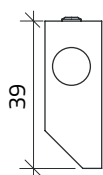
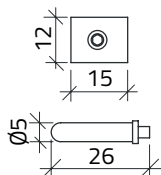
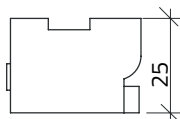
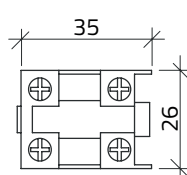
Piastra base colonna / Column base plate

4784

060BC

Interruttori a pedale

Foot switches



Interruttori a pedale

Foot switches

Interruttori a pedale in termoplastico

Thermoplastic foot switches



2 posizioni (1 microinterruttore) con leva di sicurezza
2 positions (1 microswitch) with safety lever

● Grigio / Grey

g

cod

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

632

060PT11

g

cod

Interruttori a pedale in alluminio

Aluminium foot switches



2 posizioni (1 microinterruttore) con leva di sicurezza
2 positions (1 microswitch) with safety lever

1700

060PPLA11



Senza coperchio / Without cover

2 posizioni (1 microinterruttore) con leva di sicurezza
2 positions (1 microswitch) with safety lever

1232

060PA11

g

cod

Kit di connessione interruttori a pedale

Foot switch connection kit



Contenitore / Enclosure 85x140 mm

780

060KC

g

cod

Accessori per comando a pedale

Foot switch accessories



Kit 2° micro / Kit for 2nd microswitch

74

060KM11

Ricambio micro / Spare microswitch

22

060M11

Modulo di contemporaneità

Simultaneous action controller

CARATTERISTICHE PRINCIPALI

- **Controllo a due mani:** 060MCP2M monitora il funzionamento sicuro delle console di controllo a due mani di tipo IIIC.
- **Conformità alla Direttiva Macchine:** Categoria 4, PL e secondo EN ISO 13849-1
- **Uscite di sicurezza:** Relè di sicurezza a guida forzata elettro meccanici con uscite ausiliarie 2NA + 1NC
- **Cablaggio flessibile:** Il modulo è dotato di morsetti a vite rimovibili per un facile cablaggio e manutenzione del prodotto; le morsettiere sono codificate in modo da evitare errori di collegamento
- **Diagnostica:** Indicazioni a LED per alimentazione, stato degli ingressi di sicurezza e stato delle uscite di sicurezza
- **Compatto:** 1 modulo DIN, L x A x P: 17,5 x 110,8 x 121,1mm
- **Approvazioni:** TÜV. CE, cULus

FUNZIONI PRINCIPALI

- Monitoraggio del funzionamento sicuro delle console di comando a due mani (Tipo IIIC secondo EN ISO 13851), utilizzato in applicazioni che richiedono all'operatore di supervisionare in sicurezza il funzionamento della macchina
- Funzionamento a doppio canale di sicurezza delle console di comando a due mani
- Controllo di 2 uscite di sicurezza NA con relè di sicurezza elettromeccanici
- Diagnostica del circuito di sicurezza tramite indicazioni a LED per alimentazione, stato degli ingressi di sicurezza e stato delle uscite di sicurezza
- 1 uscita ausiliaria NC utilizzabile per l'indicazione remota di stato

COMPATIBILITÀ E CONFORMITÀ

- **Direttiva bassa tensione 2014/35/UE**
EN 60947-5-1.
Apparecchiature e quadri di comando in bassa tensione - Dispositivi ed elementi di commutazione circuito di controllo
- **Direttiva EMC 2014/30/UE**
EN 60947-5-1.
Apparecchiature e quadri di comando in bassa tensione - Dispositivi ed elementi di commutazione circuito di controllo
- **Direttiva macchine 2006/42/CE. Esame di tipo CE certificato**
TÜV Cert. no. 44 205 15058307
EN ISO 13849-1
Sicurezza delle macchine - parti dei sistemi di controllo legate alla sicurezza- Principi generali di progettazione.
EN 60204-1
Sicurezza delle macchine - Equipaggiamento elettrico delle macchine - Requisiti generali Comando a due mani di tipo III
EN ISO 13851.
Sicurezza delle macchine - Dispositivi di comando a due mani Principi per la progettazione e la selezione.
EN 61326-3-1.
Apparecchiature elettriche per misurazione, controllo e uso in laboratorio. Requisiti EMC. Requisiti di immunità per i sistemi di sicurezza e per le apparecchiature destinate a svolgere funzioni di sicurezza (sicurezza funzionale)

MAIN FEATURES

- **Two-hand control:** 060MCP2M monitors the safe operation of Type IIIC two-hand control consoles
- **Machinery Directive compliance:** Cat. 4, PL e in accordance with EN ISO 13849-1
- **Safety outputs:** Electromechanical forcibly guided safety relays with 2NO+1NC aux outputs
- **Flexible wiring:** The module is equipped with detachable screw terminals for easy wiring and product maintenance; the terminal blocks are coded so to avoid wiring mistakes
- **Diagnostic:** LED indications for power supply, state of the safety inputs and state of the safety outputs
- **Compact:** 1-DIN, W x H x D: 17,5 x 110,8 x 121,1mm
- **Approval:** by TÜV. CE, cULus

MAIN FUNCTIONS

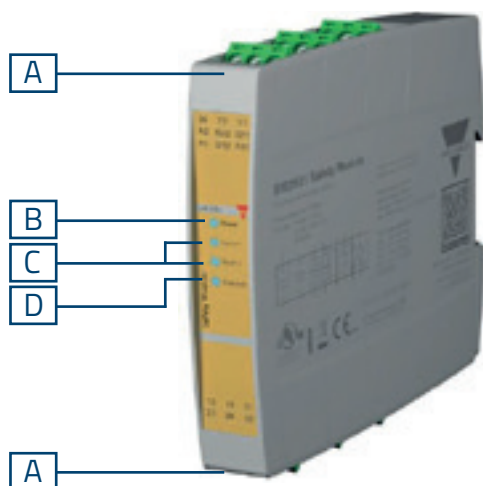
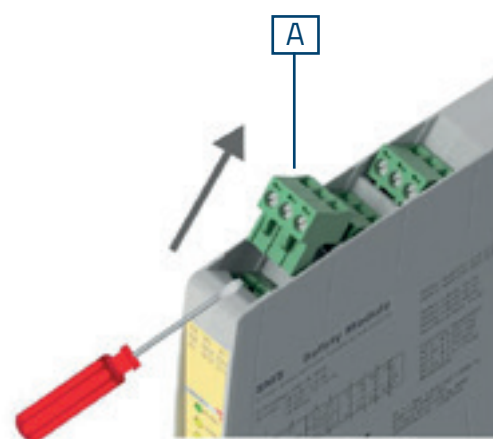
- Monitoring of the safe operation of two-hand control consoles (Type IIIC as per EN ISO 13851), used in applications requiring the operator to supervise safely the operation of the machinery
- Double safety channels operation of two-hand control consoles
- Control of 2 NO safety outputs with electromechanical safety relays
- Diagnostic of the safety circuit through on-board LED indications for power supply, status of safety channels and status of safety outputs
- 1 NC auxiliary output that can be used for external status indication

COMPATIBILITY AND CONFORMITY

- **Low Voltage Directive 2014/35/UE**
EN 60947-5-1.
Low-voltage switchgear and controlgear - Control circuit devices and switching elements.
- **EMC Directive 2014/30/EU**
EN 60947-5-1.
Low-voltage switchgear and controlgear - Control circuit devices and switching elements.
- **Machinery Directive 2006/42/EC EC type examined by TÜV**
Cert. no. 44 205 15058307
EN ISO 13849-1
Safety of machinery - safety related parts of control systems General principles for design
EN 60204-1 Safety of machinery - Electrical equipment of machines - General requirements. Two-hand control type III
EN ISO 13851 Safety of machinery - Two-hand control devices - Principles for design and selection
EN 61326-3-1
Electrical equipment for measurement, control and laboratory use. EMC requirements. Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety)

Modulo di contemporaneità

Simultaneous action controller



Elemento	Componente	Funzione
A	Morsettiere rimovibili	Alimentazione, segnale di feedback, ingressi e uscite di sicurezza
B	LED	Stato dell'alimentazione
C	LED	Stato degli ingressi di sicurezza
D	LED	Stato delle uscite di sicurezza

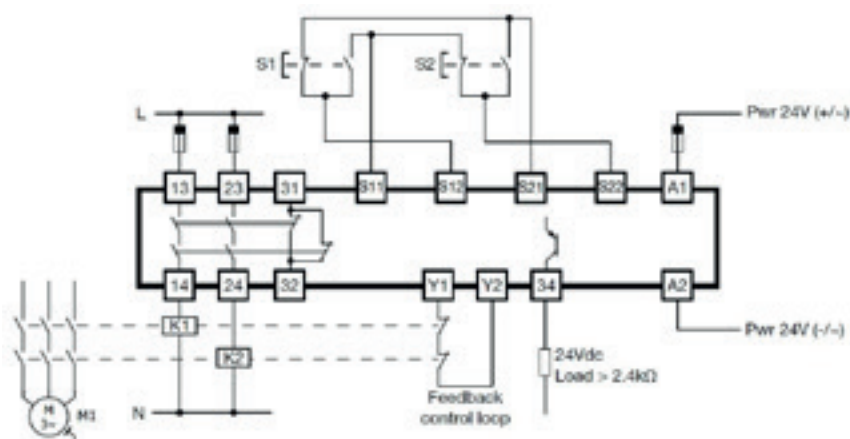
Element	Component	Function
A	Pluggable terminal blocks	Power supply, feedback signal safety inputs and outputs
B	LED	Power supply status
C	LED	Safety inputs status
D	LED	Safety outputs status

Schema di collegamento

Terminale	Funzione
A1	alimentazione 24 Vdc (+)/Vac(-)
A2	alimentazione 24 Vdc (-)/Vac(-)
S11-S12	ingresso canale 1 NA
S21-S22	ingresso canale 2 NA input
Y1-Y2	ingresso di feedback NC
10-14	uscita sicura NA
23-24	uscita sicura NA
31-32	uscita ausiliaria NC
34	uscita ausiliaria PNP

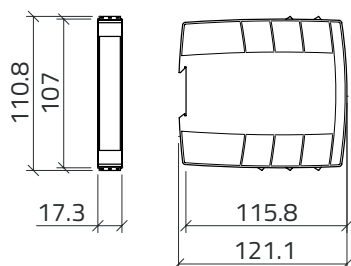
Connection diagram

Terminal	Function
A1	power supply 24 Vdc (+)/Vac(-)
A2	power supply 24 Vdc (-)/Vac(-)
S11-S12	channel 1 NO input
S21-S22	channel 2 NO input
Y1-Y2	NC feedback input
10-14	NO safety output
23-24	NO safety output
31-32	NC auxiliary output
34	PNP auxiliary output



Modulo di contemporaneità

Simultaneous action controller



Modulo di contemporaneità / Simultaneous action controller

Modulo / Controller

239

060MCP2M

Il modulo di sicurezza 060MCP2M è progettato per applicazioni fino alla Categoria 4, Livello di prestazione PLe in conformità con la Direttiva macchine EN ISO 13849-1 per monitorare e controllare in sicurezza il funzionamento delle console di controllo a due mani (Tipo III C secondo UNI EN ISO 13851). Il dispositivo abilita le uscite di controllo di sicurezza solo se i due pulsanti della console sono attivati dall'operatore contemporaneamente o con un intervallo massimo di 500 ms l'uno dall'altro.

The 060MCP2M safety module is designed in Category 4, Performance Level e in accordance with the Machine Directive EN ISO 13849-1 to monitor and control safely the operation of two-hand control consoles (Type III C according to UNI EN ISO 13851). The device enables the safety control outputs only if the two buttons of the console are activated by the operator simultaneously or with a max interval of 500 ms from each other.

Caratteristiche tecniche

Materiale	PA-GF, autoestinguente: UL 94 V-0
Montaggio	Montaggio su guida DIN (secondo EN 50022)
Alimentazione	24VCC $\pm 10\%$; 24VCA $-15\%/+10\%$, 50-60 Hz, Classe 2 Categoria di sovratensione III Protezione da corto circuito a mezzo PTC Tensione nominale di isolamento 4 kV
Numero di canali di ingresso	2
Ingressi	S11-S12 e S21-S22
Resistenza linea circuito ingressi	Max. 30 k Ω (eq. 2500m 1,5mm ² Cu)
Corrente di ingresso	Tipica 30 mA
Numero di uscite sicure NA	2
Numero di uscite ausiliarie NC	1
Numero di uscite ausiliarie	PNP 1; PNP, 24 VCC, carico resistivo esterno min 2.4 k Ω
Tipo di uscita	NA e NC Contatti liberi da tensione, relè con contatti a guida forzata
Corrente Max	Per ciascuna uscita @ 60°C (140°F) temperatura di funzionamento: CA 1: 250V / 6A / 2000 VA - CA 15: 230V / 3A CC 1: 24V / 6A - CC 13: 24V / 2.5A / 0.1 Hz UL508, pilot duty: B300 / R300
Corrente Max quadratica	Spazio tra i moduli ≥ 100 mm: 72A2 @40°C (104°F) temperatura ambiente Moduli montati affiancati: 26A2 @25°C (77°F) temperatura ambiente Fare riferimento alle curve di declassamento nel manuale di istruzioni
Durata meccanica	> 107 operazioni
Durata elettrica	AC1 (360 commutazioni/h) ~ 105 operazioni
ISO 13849-1 Categoria di sicurezza	Cat. 4
ISO 13849-1	Livello di prestazione PL e
MTTFD [a]	422,1
PFHD [1/h]	1,35 E-10
DCavg	99%
β	5,00 E-02
β D	2,00 E-02
Grado di protezione	IP40 sul frontale della custodia, IP20 sui terminali. Il dispositivo deve essere installato in un quadro elettrico con almeno un grado di protezione pari a IP54
Grado di inquinamento	2
Temperatura di funzionamento	-25 $\pm$ +60°C (-13 $\pm$ 140°F), UL: +40°C (104°F)
Temperatura di immagazzinamento	-30 $\pm$ +70°C (-22 $\pm$ 158°F)
Umidità ambiente	R.H. $\leq 95\%$ in assenza di condensa

Technical data

Material	PA-GF, self-extinguishing: UL 94 V-0
Assembly	DIN rail mounting (according to EN 50022)
Power supply	24Vdc $\pm 10\%$; 24Vac $-15\%/+10\%$, 50-60 Hz, Class 2 Overvoltage category III Short circuit protection internal PTC Rated insulation voltage 4 kV
Number of safety channels	2
Safety inputs	S11-S12 e S21-S22
Loop resistance	Max. 30 k Ω (eq. 2500m 1,5mm ² Cu)
Input current	Typical 30 mA
NO safety outputs	2
NC auxiliary output	1
PNP auxiliary output	1; PNP collector, 24 Vdc, min external resistive load 2.4 k Ω
NO and NC outputs type	Voltage free contact output, relays with forcibly guided contacts
Max current rating	single output @ 60°C (140°F) operating temperature: AC 1: 250V / 6A / 2000 VA - AC 15: 230V / 3A DC 1: 24V / 6A - DC 13: 24V / 2.5A / 0.1 Hz UL508, pilot duty: B300 / R300
Max quadratic current	Spacing between modules ≥ 100 mm: 72A2 @40°C (104°F) ambient temperature Modules mounted stacked: 26A2 @25°C (77°F) ambient temperature Please refer to the derating curves in installation manual
Mechanical life	> 107 operations
Electrical life	AC1 (360 s/h) ~ 105 operations
ISO 13849-1 Safety Category	Cat. 4
ISO 13849-1	Livello di prestazione PL e
MTTFD [a]	422,1
PFHD [1/h]	1,35 E-10
DCavg	99%
β	5,00 E-02
β D	2,00 E-02
Protection grade	IP40 on frontal part of the housing, IP20 on the terminals. The device has to be installed in a cabinet with protection degree of IP54.
Pollution degree	2
Operating temperature	-25 $\pm$ +60°C (-13 $\pm$ 140°F), UL: +40°C (104°F)
Storage temperature	-30 $\pm$ +70°C (-22 $\pm$ 158°F)
Ambient humidity range	R.H. $\leq 95\%$ non condensing



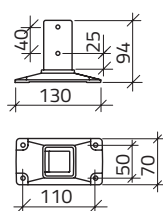
Esempi di realizzazione Mounting examples



Sistema di sospensione modulare per automazione

Modular suspension system for enclosures

Giunti / Joints



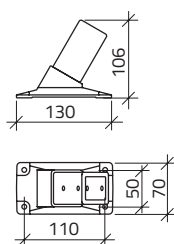
Ortagonale / Orthogonal

g

327

cod

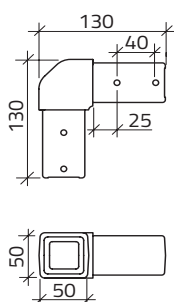
060GCO



Inclinato / Oblique

410

060GCI



Angolare 90° / Angle 90°

651

060GCA

Sistema di sospensione modulare per automazione

Modular suspension system for enclosures

Giunti / Joints

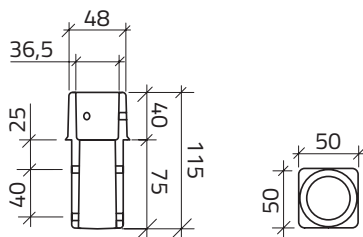
g

cod

Girevole assiale / Swivel, axial

324

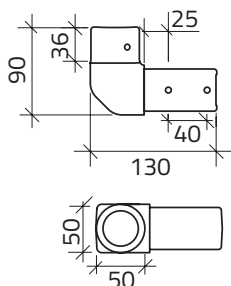
060GRD



Girevole 90° / Swivel 90°

521

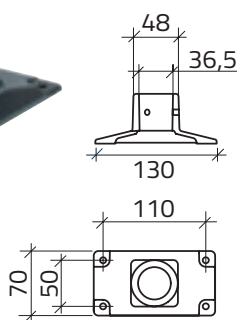
060GRA



Girevole / Swivel

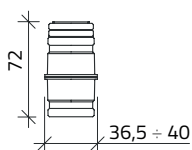
243

060GRO

Bussola girevole interno foro Ø 23
Swivel bushing, bore Ø 23

310

060GSR



Pulsantiera mobile Hand-held push-button control unit



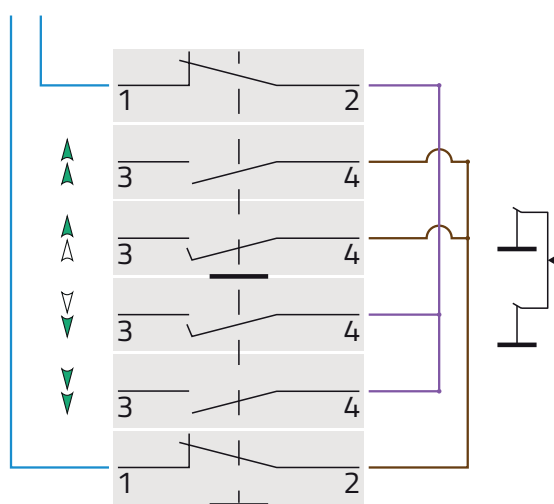
Fornibili operatori ad una o due velocità

Operators available at one or two speed



Manicotto antitorsione e serracavo antistrappo

Anti-torsion sleeve and tear-proof cable clamp



Coppia di operatori interbloccati meccanicamente ed elettricamente a due velocità

Couple of mechanically and electrically interlocked operators at two speeds

Pulsantiere 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

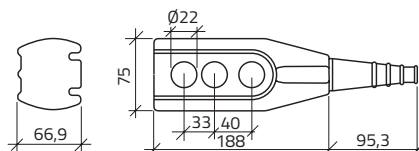
390

060PM2S1

Pulsanti a 2 velocità / 2 speed push-buttons

390

060PM2S2



4 operatori + emergenza 1NC / 4 operators + emergency 1NC



Pulsanti a 1 velocità / 1 speed push-buttons

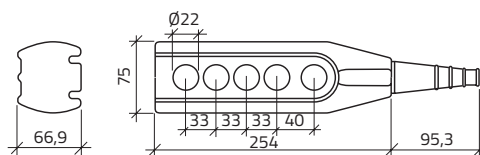
550

060PM4S1

Pulsanti a 2 velocità / 2 speed push-buttons

550

060PM4S2



6 operatori + emergenza 1NC / 6 operators + emergency 1NC



Pulsanti a 1 velocità / 1 speed push-buttons

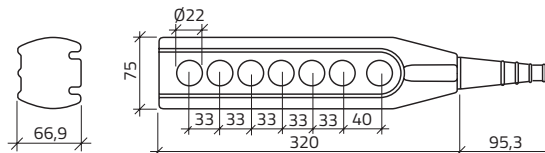
960

060PM6S1

Pulsanti a 2 velocità / 2 speed push-buttons

960

060PM6S2



8 operatori + emergenza 1NC / 8 operators + emergency 1NC



Pulsanti a 1 velocità / 1 speed push-buttons

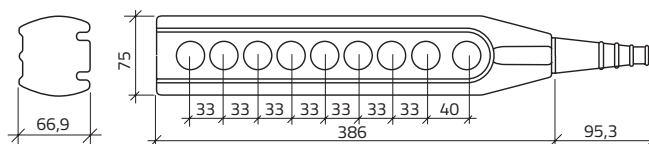
1070

060PM8S1

Pulsanti a 2 velocità / 2 speed push-buttons

1070

060PM8S2



Caratteristiche tecniche

Technical data

Involucro

Body

ABS

ABS

Grado

Degree

di protezione

of protection

IP65

IP65

Temperatura

Operating

di esercizio

temperature

-5°C +125°C

-5°C +125°C

Caratteristiche pulsanti

Durata meccanica

5 x 10⁵ cicli di manovra

Durata elettrica

1 x 10⁵ cicli di manovra

Tensione nominale Ue

250v AC

Corrente nominale Ia

4 A

Potenze nominali di impiego in AC 15 secondo IEC947-5-1

1000 VA

Tensione di isolamento UI

300V Uimp 2,5 Kv

Push-button performance

Mechanical durability

5 x 10⁵ operations

Electrical durability

1 x 10⁵ operations

Rating operating voltage Ue

250v AC

Rating operating current Ia

4 A

Rated switching power according to IEC947-5-1

1000 VA

Insulation Voltage UI

300V Uimp 2,5 Kv



090

**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

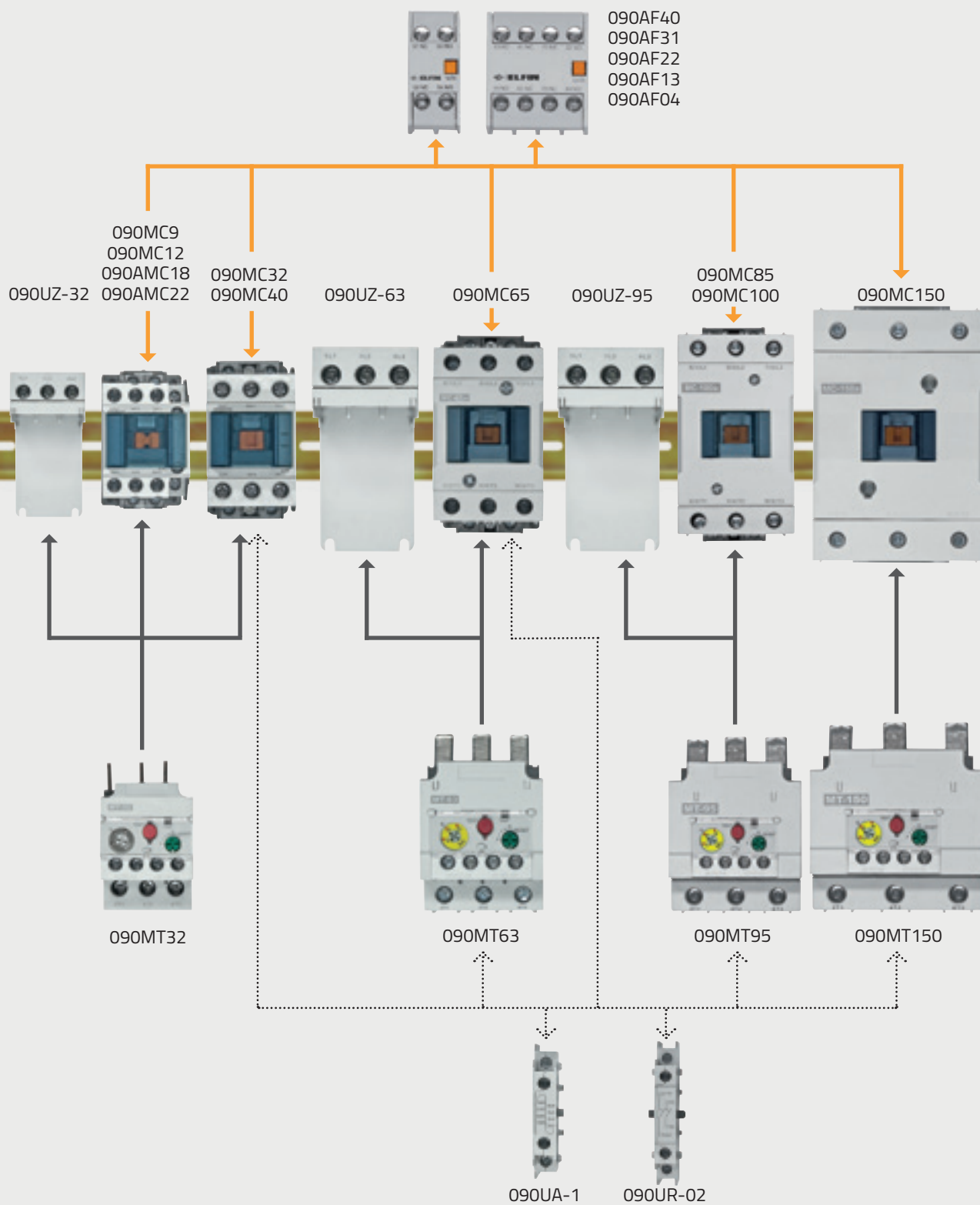
La **durata** nel tempo è fondamentale per garantire un flusso di lavoro costante ed un'ottimizzazione dell'investimento: i contattori NEW ELFIN garantiscono una media di 25 milioni di cicli come vita meccanica e 2,5 milioni come vita elettrica, queste caratteristiche pongono i nostri contattori al top della produzione mondiale.

DURATION

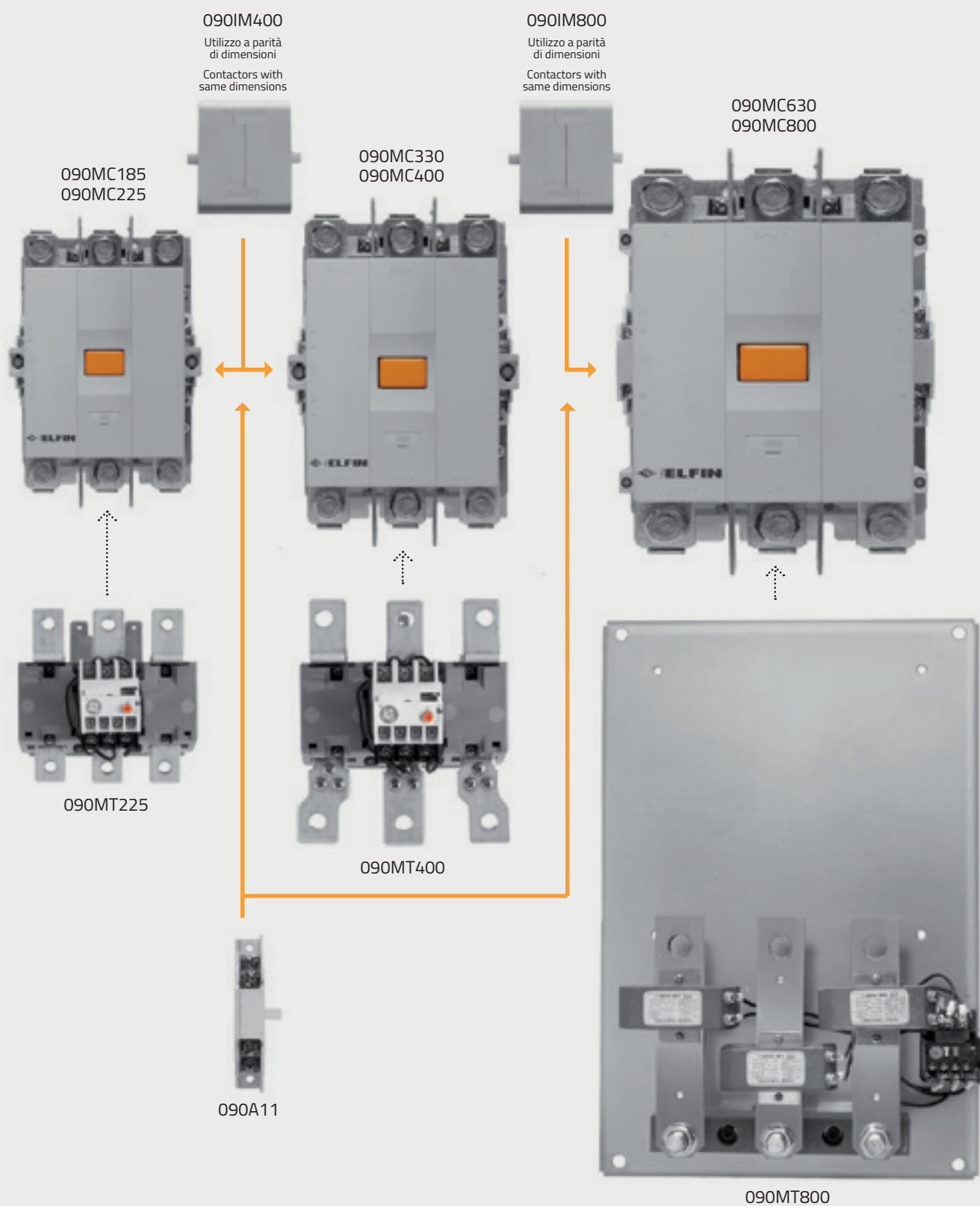
Duration is fundamental in order to guarantee a constant work flow and optimise the investment: NEW ELFIN contactors guarantee an average of 25,000,000 cycles of mechanical life and 2,500,000 cycles of electrical life. These characteristics place our contactors at the top of the international production.

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 Non inductive or slightly inductive loads, resistance furnaces	DC-1	Carichi non induttivi o debolmente induttivi, forni a resistenza Non inductive or slightly inductive loads, resistance furnaces
	AC-2	Motori ad anelli: avviamento, arresto 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 Shunt-motors: starting - plugging - inching. Dynamic breaking of D.C. motors
	AC-3	Motori a gabbia: avviamento, arresto del motore durante la marcia Squirrel cage motors: starting switching off motors during running		
	AC-4	Motori a gabbia: avviamento, frenatura in controcorrente, manovra a impulsi Squirrel cage motors: starting plugging - inching		
	AC-5a	Comando di lampade a scarica 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 Series motors: starting - plugging - inching. Dynamic braking of D.C. motors
	AC-5b	Comando di lampade ad incandescenza Switching of incandescent lamps		
	AC-6a	Comando di trasformatori Switching of transformers		
AC-6b	Comando di batterie di condensatori Switching of capacitors banks	CORRENTE CONTINUA / DIRECT CURRENT		
Circuiti ausiliari / Switching elements				
AC-12	Comando di carichi ohmici e semiconduttori con opto separazione Control of resistive loads and solid state loads with isolation by opto couples		DC-12	Comando di carichi ohmici e semiconduttori con opto separazione Control of resistive loads isolation by opto couples
AC-13	Comando di semiconduttori con trasformatore di separazione Control of solid state loads with transformer isolation		DC-13	Comando di elettromagneti Electromagnet control
AC-14	Comando di piccoli carichi elettromagnetici (max 72 VA), quali bobine di piccoli conduttori o elettrovalvole Control of small electromagnetic loads (<72VA)		DC-14	Comando di carichi elettromagnetici con resistenza di risparmio sul circuito ausiliario Control of electromagnetic loads having economic resistors in circuit
AC-15	Comando di carichi elettromagnetici (oltre 72VA) 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
AC-1	1,5 x I _n	1,5 x I _n	1 x I _n	1 x I _n
AC-2	4 x I _n	4 x I _n	2 x I _n	2 x I _n
AC-3	10 x I _n	8 x I _n	2 x I _n	2 x I _n
AC-4	12 x I _n	10 x I _n	6 x I _n	6 x I _n
AC-5a	3 x I _n	3 x I _n	2 x I _n	2 x I _n
AC-5b	1,5	1,5 x I _n	1 x I _n	1 x I _n
AC-6a	-	-	-	-
AC-6b	-	-	-	-
DC-1	1,5 x I _n	1,5 x I _n	1 x I _n	1 x I _n
DC-3	4 x I _n	4 x I _n	2,5 x I _n	2,5 x I _n
DC-5	4 x I _n	4 x I _n	2,5 x I _n	2,5 x I _n



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 _{th})	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 $\leq 20 \times I_{nom}$ 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 $\leq 20 \times I_{nom}$ 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					
	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 $\geq 20 \times I_{nom}$ 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 $\geq 20 \times I_{nom}$ 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

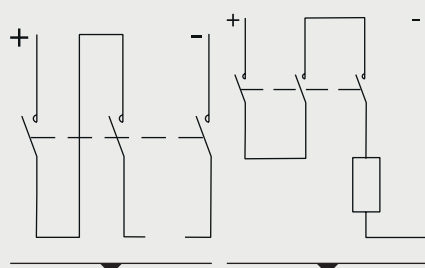


DC-1

DC-3
DC-5

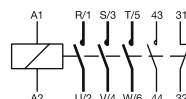
SEZIONI / SECTIONS

		Corrente impiego Rated operational current Ie [A] DC-1				Corrente impiego Rated operational current 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

g

cod

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	090MC9B-24
230V - 50/60 Hz Tensioni di comando / Coil voltage	0,34	090MC9B-230
400V - 50/60 Hz Tensioni di comando / Coil voltage	0,34	090MC9B-400

Prestazioni secondo IEC-60947
Performance in accordance with IEC-60947

AC1			25A
AC3	200-240V	2,5 kW	11A
	380-440V	4 kW	9A
	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	090MC12B-24
230V - 50/60 Hz Tensioni di comando / Coil voltage	0,34	090MC12B-230
400V - 50/60 Hz Tensioni di comando / Coil voltage	0,34	090MC12B-400

Prestazioni secondo IEC-60947
Performance in accordance with IEC-60947

AC1			25A
AC3	200-240V	3 kW	13A
	380-440V	5,5 kW	12A
	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	090MC18B-24
230V - 50/60 Hz Tensioni di comando / Coil voltage	0,34	090MC18B-230
400V - 50/60 Hz Tensioni di comando / Coil voltage	0,34	090MC18B-400

Prestazioni secondo IEC-60947
Performance in accordance with IEC-60947

AC1			32A
AC3	200-240V	4,5 kW	18A
	380-440V	7,5 kW	18A
	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	090MC22B-24
230V - 50/60 Hz Tensioni di comando / Coil voltage	0,34	090MC22B-230
400V - 50/60 Hz Tensioni di comando / Coil voltage	0,34	090MC22B-400

Prestazioni secondo IEC-60947
Performance in accordance with IEC-60947

AC1			40A
AC3	200-240V	5,5 kW	22A
	380-440V	11 kW	22A
	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

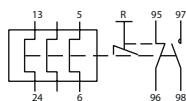
Ith		40A
Monofase / Mono-phase	115V	2 HP
	230V	3 HP
Trifase / Tri-phase	200V	7,5 HP
	230V	10 HP
	460V	15 HP
	575V	20 HP



Sezioni 9-12-18-22

9-12-18-22 sections

Relè termico differenziale / Thermal O/L relay



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	090MT32-04
0.4 ÷ 0.63 Taratura (A) / Setting range (A)	0,17	090MT32-063
0.63 ÷ 1 Taratura (A) / Setting range (A)	0,17	090MT32-1
1 ÷ 1.6 Taratura (A) / Setting range (A)	0,17	090MT32-1V6
1.6 ÷ 2.5 Taratura (A) / Setting range (A)	0,17	090MT32-2V5
2.5 ÷ 4 Taratura (A) / Setting range (A)	0,17	090MT32-4
4 ÷ 6 Taratura (A) / Setting range (A)	0,17	090MT32-6
6 ÷ 9 Taratura (A) / Setting range (A)	0,17	090MT32-9
9 ÷ 13 Taratura (A) / Setting range (A)	0,17	090MT32-13
12 ÷ 18 Taratura (A) / Setting range (A)	0,17	090MT32-18

Sistema di montaggio separato Separate mounting system



Adattatore montaggio barra DIN 35
Bar mounting adapter DIN 35

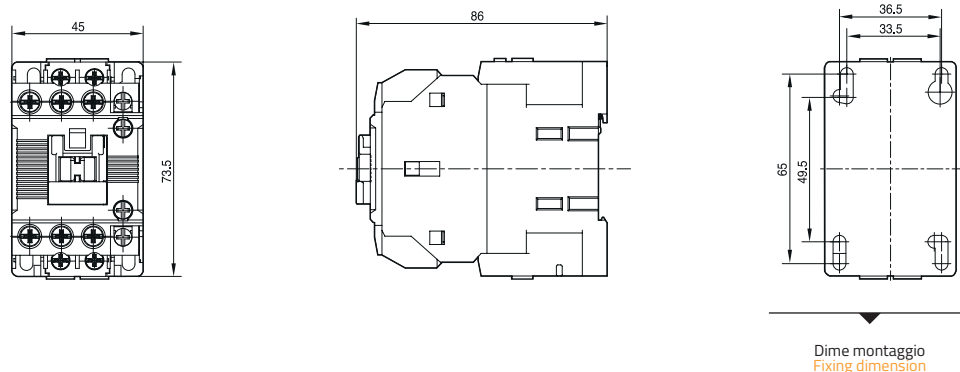
38

090UZ-32

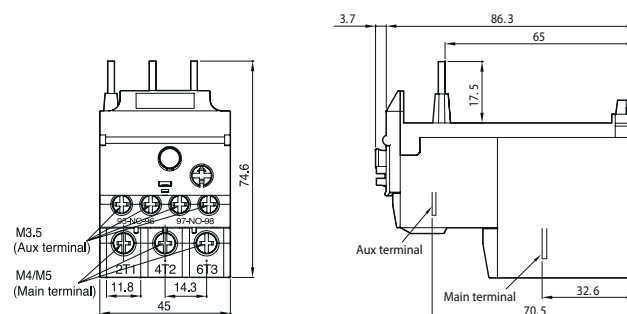
Sezioni 9-12-18-22

9-12-18-22 sections

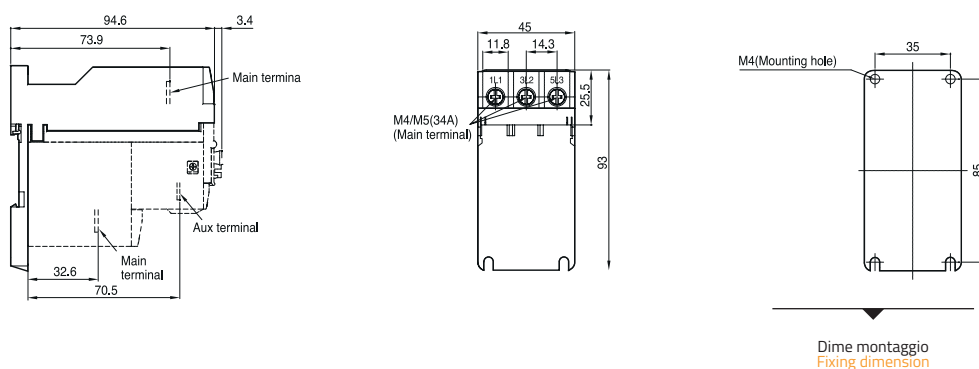
Contattore / Contactor



Relè termico differenziale / Thermal O/L relay



Sistema di montaggio separato / Separate mounting system



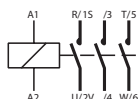
Interblocco meccanico (vedi accessori) / Mechanical interlock (see accessories)



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	090MC32A-24
230V - 50/60 Hz Tensioni di comando / Coil voltage	0,55	090MC32A-230
400V - 50/60 Hz Tensioni di comando / Coil voltage	0,55	090MC32A-400

Prestazioni secondo IEC-60947
Performance in accordance with IEC-60947

AC1			50A
AC3	200-240V 380-440V 500-550V 690V	7,5 kW 15 kW 18,5 kW 18,5 kW	32A 32A 28A 20A

Prestazioni secondo UL/CSA
Performance in accordance with UL/CSA
Potenza nominale massima / Maximum nominal power

Ith		50A
Monofase / Mono-phase	115V 230V	2 HP 3 HP
Trifase / Tri-phase	200V 230V 460V 575V	7,5 HP 10 HP 20 HP 25 HP

Sezione 40A / 40A Section

24V - 50/60 Hz Tensioni di comando / Coil voltage	0,55	090MC40A-24
230V - 50/60 Hz Tensioni di comando / Coil voltage	0,55	090MC40A-230
400V - 50/60 Hz Tensioni di comando / Coil voltage	0,55	090MC40A-400

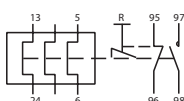
Prestazioni secondo IEC-60947
Performance in accordance with IEC-60947

AC1			60A
AC3	200-240V 380-440V 500-550V 690V	11 kW 18 kW 22 kW 22 kW	40A 40A 32A 32A

Prestazioni secondo UL/CSA
Performance in accordance with UL/CSA
Potenza nominale massima / Maximum nominal power

Ith		60A
Monofase / Mono-phase	115V 230V	3 HP 27,5 HP
Trifase / Tri-phase	200V 230V 460V 575V	15 HP 15 HP 30 HP 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	090MT32-25
24 ÷ 32 Taratura (A) / Setting range (A)	0,17	090MT32-32
28 ÷ 40 Taratura (A) / Setting range (A)	0,17	090MT32-40

Sistema di montaggio separato Separate mounting system



Adattatore montaggio barra DIN 35
Bar mounting adapter DIN 35

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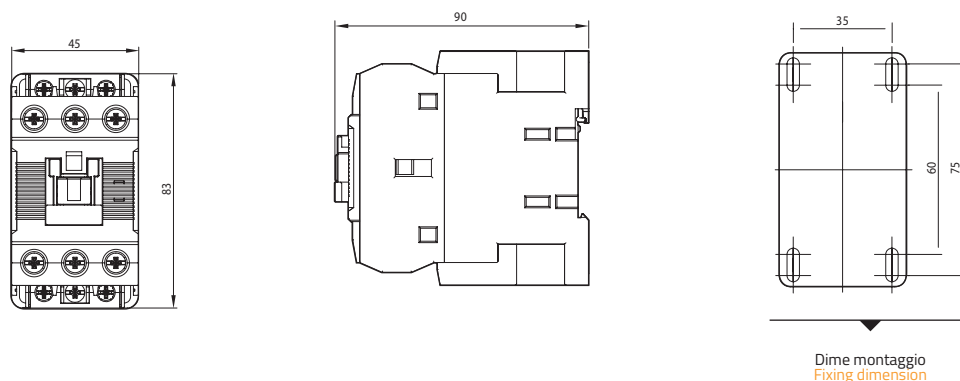
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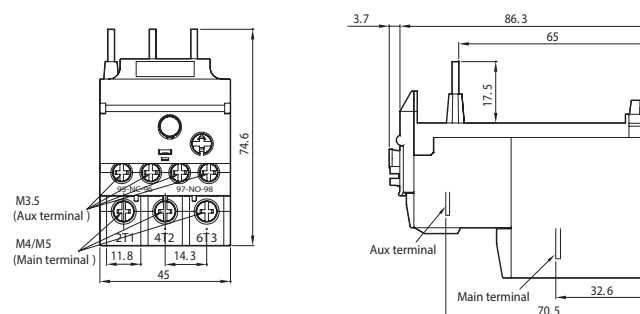
Sezioni 32 - 40

32 - 40 sections

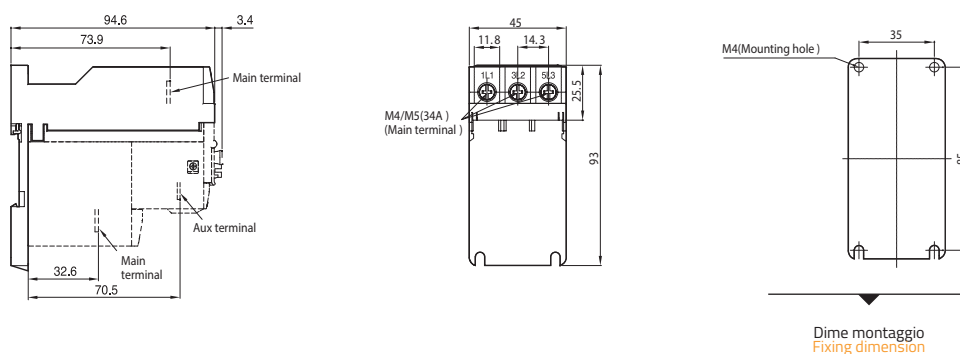
Contattore / Contactor



Relè termico differenziale / Thermal O/L relay



Sistema di montaggio separato / Separate mounting system



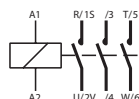
Interblocco meccanico (vedi accessori) / Mechanical interlock (see accessories)



Sezione 65

65 section

Contattore / Contactor



24V - 50/60 Hz Tensioni di comando / Coil voltage	1,05	090MC65A-24
230V - 50/60 Hz Tensioni di comando / Coil voltage	1,05	090MC65A-230
400V - 50/60 Hz Tensioni di comando / Coil voltage	1,05	090MC65A-400

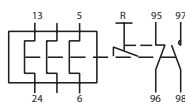
Prestazioni secondo IEC-60947
Performance in accordance with IEC-60947

AC1			100A
AC3	200-240V	18,5 kW	65A
	380-440V	30 kW	65A
	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

Ith		100A
Monofase / Mono-phase	115V	5 HP
	230V	15 HP
Trifase / Tri-phase	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) / Setting range (A)	0,32	090MT63-50
45 ÷ 65 Taratura (A) / Setting range (A)	0,32	090MT63-65

Sistema di montaggio separato Separate mounting system



Adattatore montaggio barra DIN 35
Bar mounting adapter DIN 35

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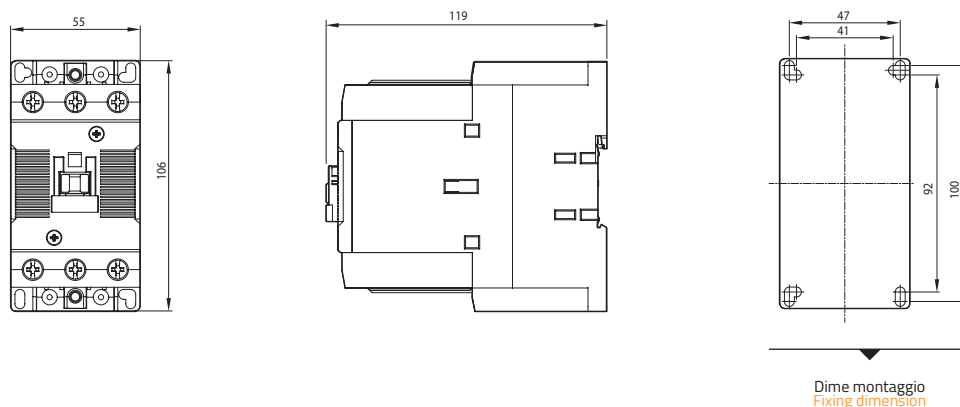
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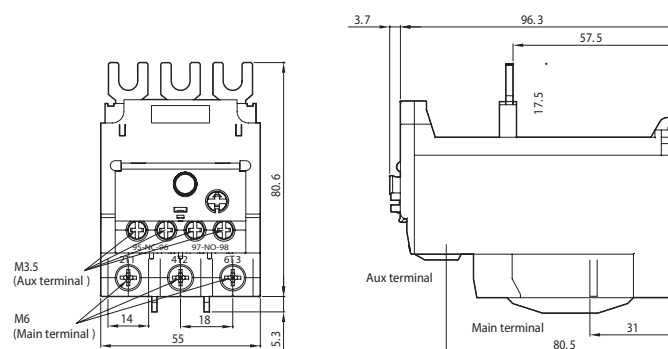
090UZ-65

Sezione 65 65 section

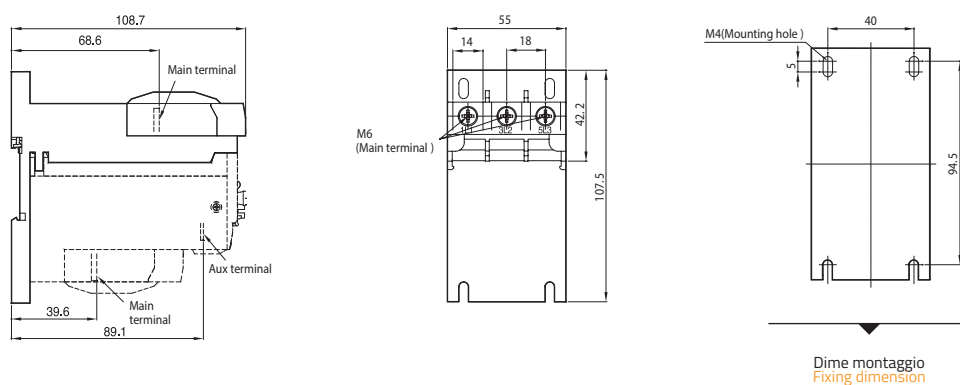
Contattore / Contactor



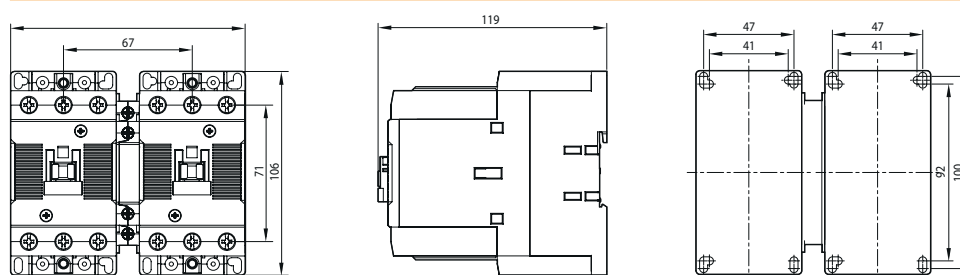
Relè termico differenziale / Thermal O/L relay



Sistema di montaggio separato / Separate mounting system

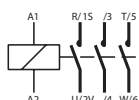


Interblocco meccanico (vedi accessori) / Mechanical interlock (see accessories)



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	090MC85A-24
230V - 50/60 Hz Tensioni di comando / Coil voltage	1,05	090MC85A-230
400V - 50/60 Hz Tensioni di comando / Coil voltage	1,05	090MC85A-400

Prestazioni secondo IEC-60947
Performance in accordance with IEC-60947

AC1			135A
AC3	200-240V 380-440V 500-550V 690V	11 kW 18 kW 22 kW 22 kW	85A 85A 75A 45A

Prestazioni secondo UL/CSA
Performance in accordance with UL/CSA
Potenza nominale massima / Maximum nominal power

Ith		135A
Monofase / Mono-phase	115V 230V	7,5 HP 15 HP
Trifase / Tri-phase	200V 230V 460V 575V	40 HP 40 HP 60 HP 75 HP

Sezione 100A / 100A Section

24V - 50/60 Hz Tensioni di comando / Coil voltage	2,0	090MC100A-24
230V - 50/60 Hz Tensioni di comando / Coil voltage	2,0	090MC100A-230
400V - 50/60 Hz Tensioni di comando / Coil voltage	2,0	090MC100A-400

Prestazioni secondo IEC-60947
Performance in accordance with IEC-60947

AC1			160A
AC3	200-240V 380-440V 500-550V 690V	30 kW 55 kW 55 kW 45 kW	105A 105A 85A 65A

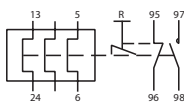
Prestazioni secondo UL/CSA
Performance in accordance with UL/CSA
Potenza nominale massima / Maximum nominal power

Ith		160A
Monofase / Mono-phase	115V 230V	10 HP 20 HP
Trifase / Tri-phase	200V 230V 460V 575V	30 HP 40 HP 75 HP 75 HP

Relè termico differenziale / Thermal O/L relay

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Classe d'intervento 20 / Trip class 20

Sezioni 85A-100A / 85A-100A Sections

54 ÷ 75 Taratura (A) / Setting range (A)	0,50	090MT95-75
63 ÷ 85 Taratura (A) / Setting range (A)	0,50	090MT95-85
80 ÷ 100 Taratura (A) / Setting range (A)	0,50	090MT95-100

Sistema di montaggio separato Separate mounting system

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Adattatore montaggio barra DIN 35
Bar mounting adapter DIN 35

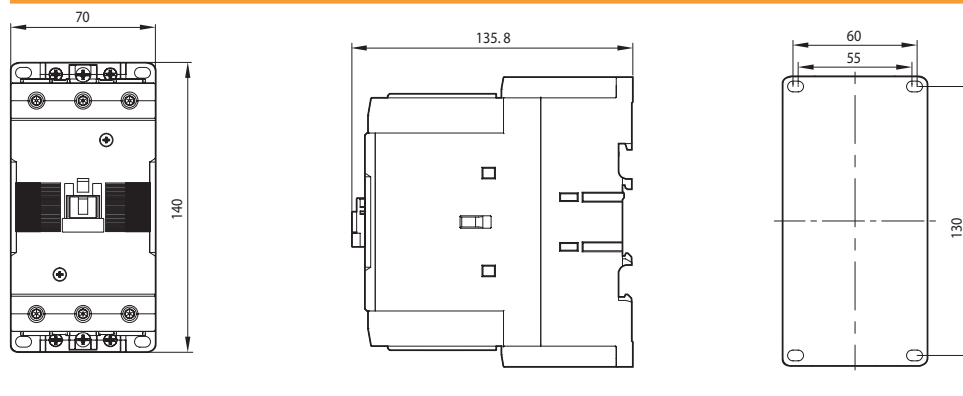
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090UZ-95

Sezioni 85 - 100

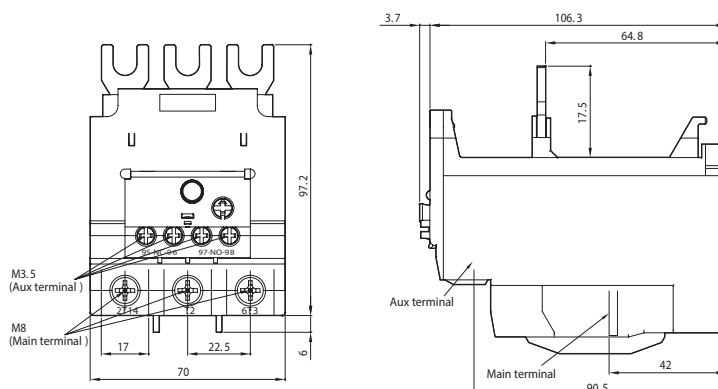
85 - 100 sections

Contattore / Contactor

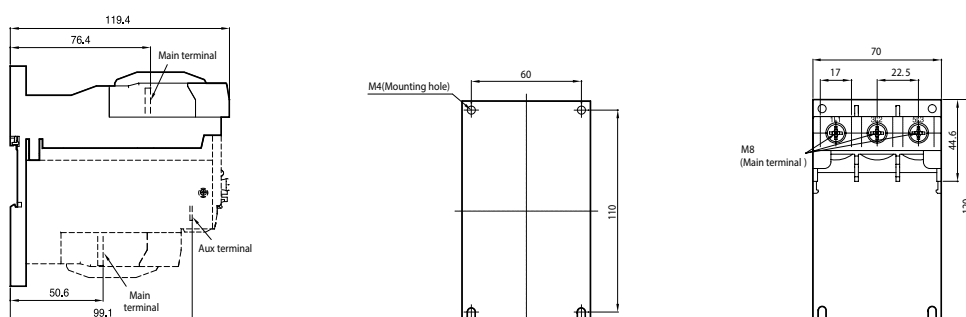


Dime montaggio
Fixing dimension

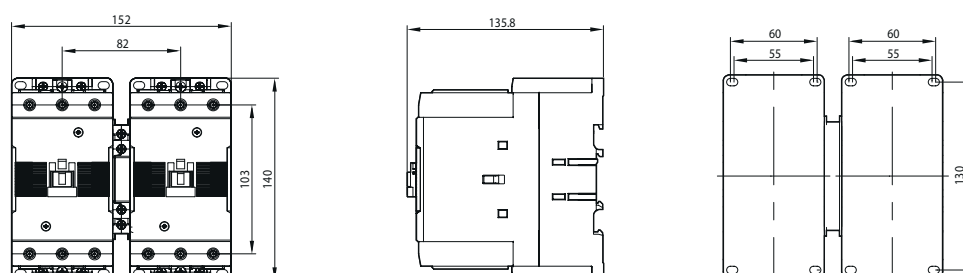
Relè termico differenziale / Thermal O/L relay



Sistema di montaggio separato / Separate mounting system



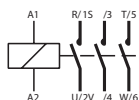
Interblocco meccanico (vedi accessori) / Mechanical interlock (see accessories)



Sezione 150

150 section

Contattore / Contactor



24V - 50/60 Hz Tensioni di comando / Coil voltage	2,4	090MC150A-24
230V - 50/60 Hz Tensioni di comando / Coil voltage	2,4	090MC150A-100
400V - 50/60 Hz Tensioni di comando / Coil voltage	2,4	090MC150A-400

Prestazioni secondo IEC-60947 Performance in accordance with IEC-60947

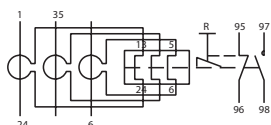
AC1			210A
AC3	200-240V	45 kW	150A
	380-440V	75 kW	150A
	500-550V	70 kW	100A
	690V	55 kW	60A

Prestazioni secondo UL/CSA Performance in accordance with UL/CSA

Potenza nominale massima / Maximum nominal power

Ith		160A
Monofase / Mono-phase	115V	15 HP
	230V	25 HP
Trifase / Tri-phase	200V	40 HP
	230V	50 HP
	460V	100 HP
	575V	75 HP

Relè termico differenziale / Thermal O/L relay



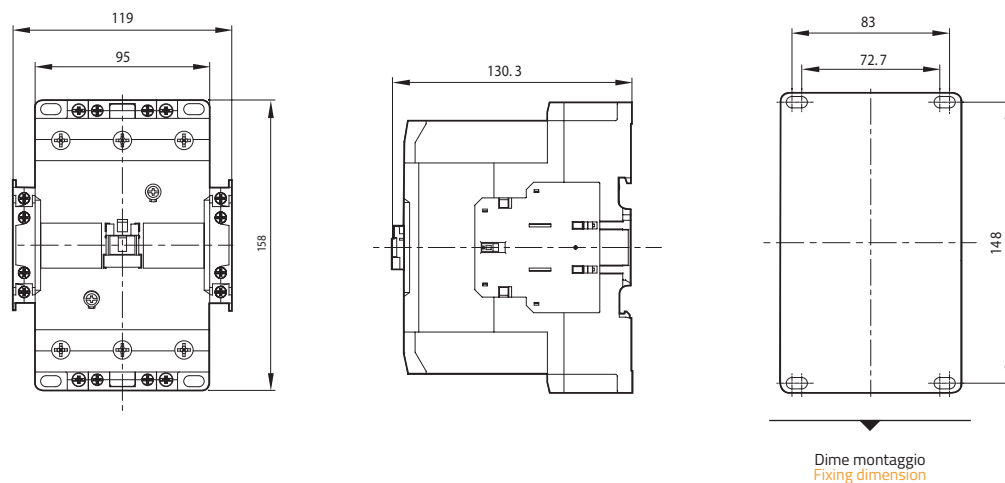
Classe d'intervento 20 / **Trip class 20**

65 ÷ 130 Taratura (A) / Setting range (A)	2,5	090MT150-130
110 ÷ 150 Taratura (A) / Setting range (A)	2,5	090MT150-150

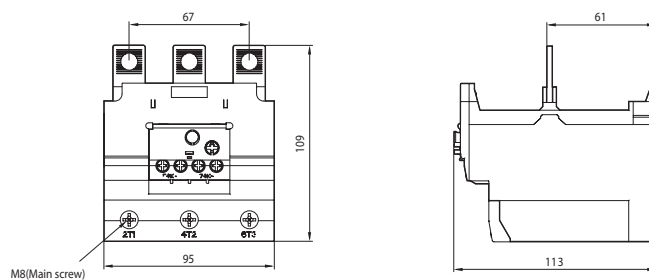
Sezione 150

150 section

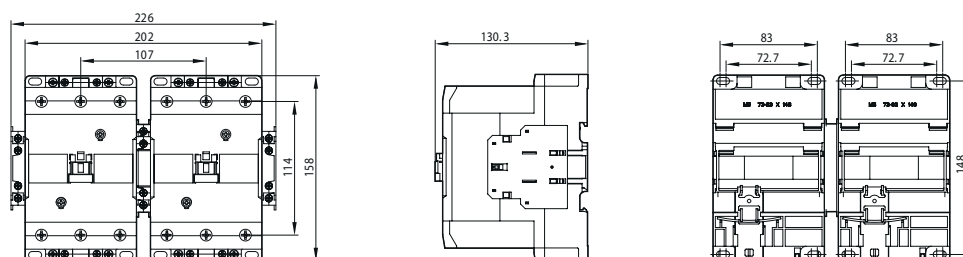
Contattore / Contactor



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

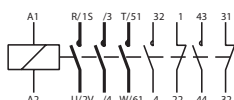
24V - 50/60 Hz 24VCC Tensioni di comando / Coil voltage	5,4	090MC185A-24
110-240V - 50/60 Hz Tensioni di comando / Coil voltage	5,4	090MC185A-240
400V - 50/60 Hz Tensioni di comando / Coil voltage	5,4	090MC185A-400

Prestazioni secondo IEC-60947
Performance in accordance with IEC-60947

AC1			230A
AC3	200-240V 380-440V 500-550V 690V	55 kW 90 kW 110 kW 110 kW	185A 185A 180A 180A

Prestazioni secondo UL/CSA
Performance in accordance with UL/CSA
Potenza nominale massima / Maximum nominal power

Ith		160A
Monofase / Mono-phase	115V 230V	15 HP 30 HP
Trifase / Tri-phase	200V 230V 460V 575V	60 HP 60 HP 125 HP 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	090MC225A-24
110-240V - 50/60 Hz Tensioni di comando / Coil voltage	5,4	090MC225A-240
400V - 50/60 Hz Tensioni di comando / Coil voltage	5,4	090MC225A-400

Prestazioni secondo IEC-60947
Performance in accordance with IEC-60947

AC1			275A
AC3	200-240V 380-440V 500-550V 690V	75 kW 132 kW 132 kW 140 kW	225A 225A 200A 150A

Prestazioni secondo UL/CSA
Performance in accordance with UL/CSA
Potenza nominale massima / Maximum nominal power

Ith		210A
Monofase / Mono-phase	115V 230V	15 HP 25 HP
Trifase / Tri-phase	200V 230V 460V 575V	60 HP 75 HP 150 HP 150 HP

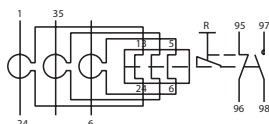
Relè termico differenziale / Thermal O/L relay



Classe d'intervento 20 / Trip class 20

Sezioni 185A-225A / 185A-225A Sections

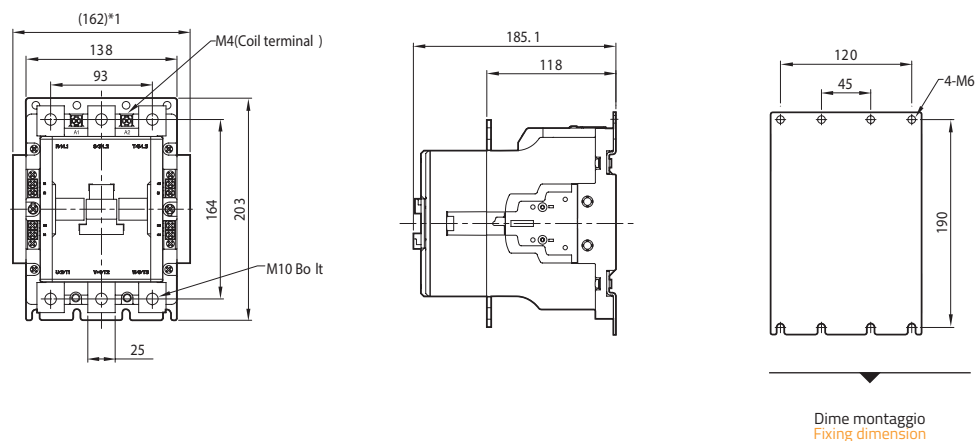
120 ÷ 185 Taratura (A) / Setting range (A)	2,6	090MT225-185
160 ÷ 240 Taratura (A) / Setting range (A)	2,6	090MT225-240



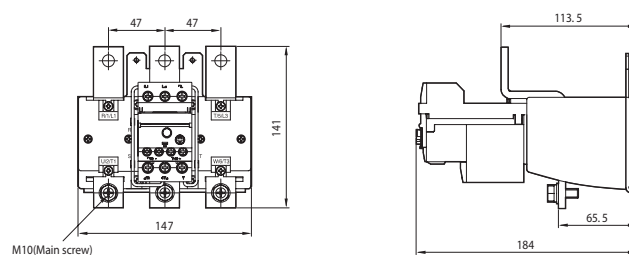
Sezioni 185 - 225

185 - 225 sections

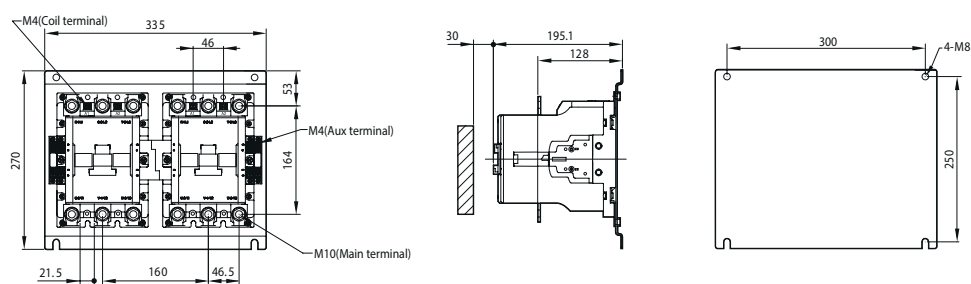
Contattore / Contactor



Relè termico differenziale / Thermal O/L relay



Interblocco meccanico (vedi accessori) / Mechanical interlock (see accessories)



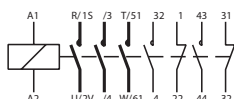
Sezioni 330 - 400

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	090MC330A-240
400V - 50/60 Hz Tensioni di comando / Coil voltage	9,2	090MC330A-400

Prestazioni secondo IEC-60947
Performance in accordance with IEC-60947

AC1			350A
AC3	200-240V 380-440V 500-550V 690V	90 kW 160 kW 160 kW 200 kW	330A 330A 280A 225A

Prestazioni secondo UL/CSA
Performance in accordance with UL/CSA
Potenza nominale massima / Maximum nominal power

Ith		30A
Trifase / Tri-phase	200V 230V 460V 575V	100 HP 125 HP 250 HP 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	090MC400A-240
400V - 50/60 Hz Tensioni di comando / Coil voltage	9,2	090MC400A-400

Prestazioni secondo IEC-60947
Performance in accordance with IEC-60947

AC1			450A
AC3	200-240V 380-440V 500-550V 690V	125 kW 222 kW 225 kW 250 kW	400A 400A 350A 300A

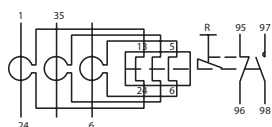
Prestazioni secondo UL/CSA
Performance in accordance with UL/CSA
Potenza nominale massima / Maximum nominal power

Ith		450A
Trifase / Tri-phase	200V 230V 460V 575V	125 HP 150 HP 300 HP 300 HP

Relè termico differenziale / Thermal O/L relay

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Classe d'intervento 20 / Trip class 20

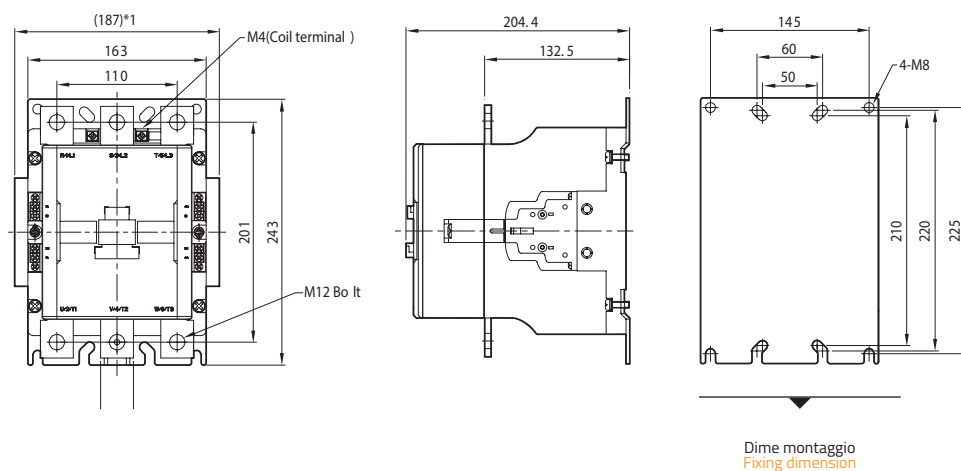
Sezioni 330A-400A / 330A-400A Sections

200 ÷ 300 Taratura (A) / Setting range (A)	2,5	090MT400-330
260 ÷ 400 Taratura (A) / Setting range (A)	2,5	090MT400-400

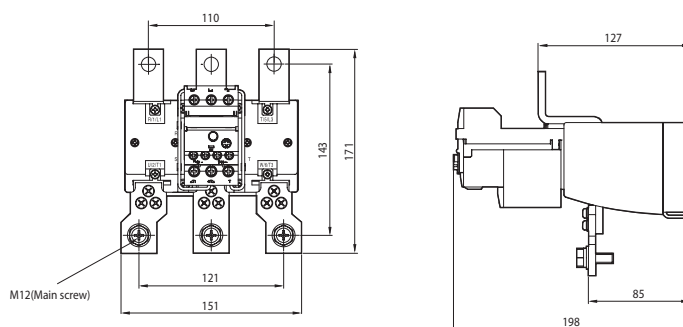
Sezioni 330 - 400

330 - 400 sections

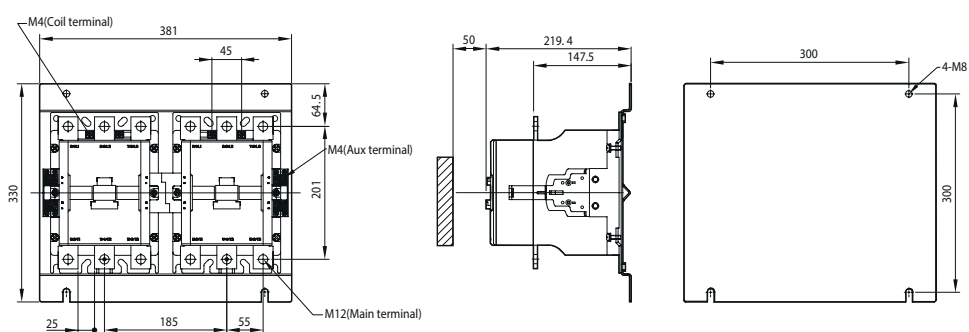
Contattore / Contactor



Relè termico differenziale / Thermal O/L relay



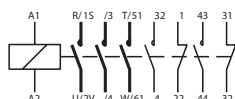
Interblocco meccanico (vedi accessori) / Mechanical interlock (see accessories)



Sezioni 630 - 800

630 - 800 sections

Contattore / Contactor



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	090MC630A-240
400V - 50/60 Hz Tensioni di comando / Coil voltage	9,2	090MC630A-400

Prestazioni secondo IEC-60947

Performance in accordance with IEC-60947

AC1			660A
AC3	200-240V 380-440V 500-550V 690V	190 kW 330 kW 330 kW 400 kW	630A 630A 500A 420A

Prestazioni secondo UL/CSA

Performance in accordance with UL/CSA

Potenza nominale massima / Maximum nominal power

Ith		660A
Trifase / Tri-phase	200V 230V 460V 575V	200 HP 250 HP 500 HP 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	090MC800A-240
400V - 50/60 Hz Tensioni di comando / Coil voltage	9,2	090MC800A-400

Prestazioni secondo IEC-60947

Performance in accordance with IEC-60947

AC1			900A
AC3	200-240V 380-440V 500-550V 690V	220 kW 440 kW 500kW 500 kW	4800A 800A 500A 500A

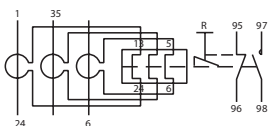
Prestazioni secondo UL/CSA

Performance in accordance with UL/CSA

Potenza nominale massima / Maximum nominal power

Ith		900A
Trifase / Tri-phase	200V 230V 460V 575V	200 HP 300 HP 600 HP 600 HP

Relè termico differenziale / Thermal O/L relay



Classe d'intervento 20 / Trip class 20

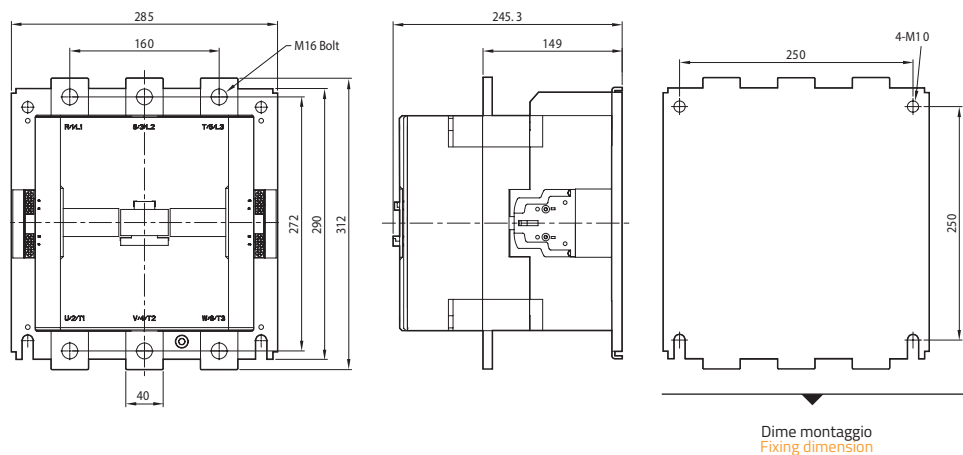
Sezioni 630A- 800A / 630A-800A Sections

400 ÷ 630 Taratura (A) / Setting range (A)	11,5	090MT800-630
520 ÷ 800 Taratura (A) / Setting range (A)	11,5	090MT800-800

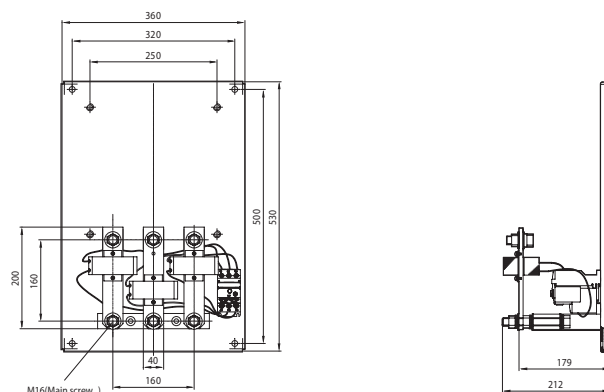
Sezioni 630 - 800

630 - 800 sections

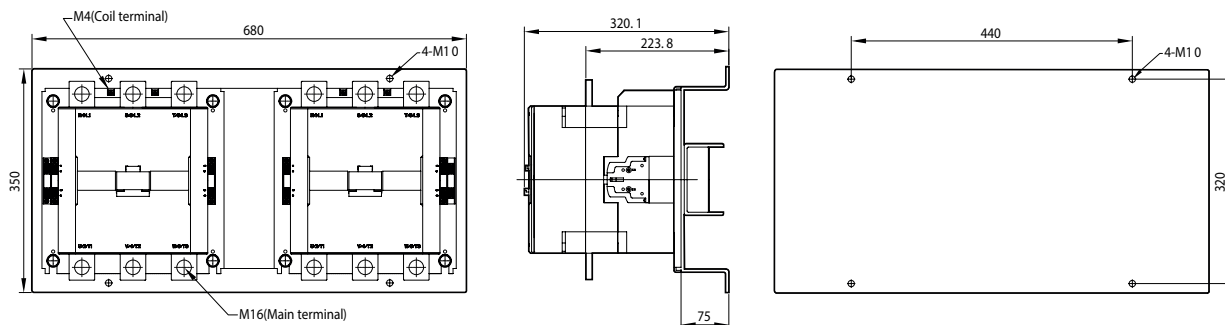
Contattore / Contactor



Relè termico differenziale / Thermal O/L relay



Interblocco meccanico (vedi accessori) / Mechanical interlock (see accessories)

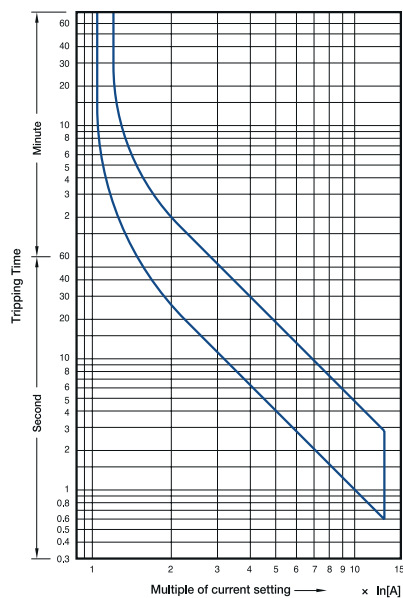


Curve caratteristiche relè Relay curve characteristics

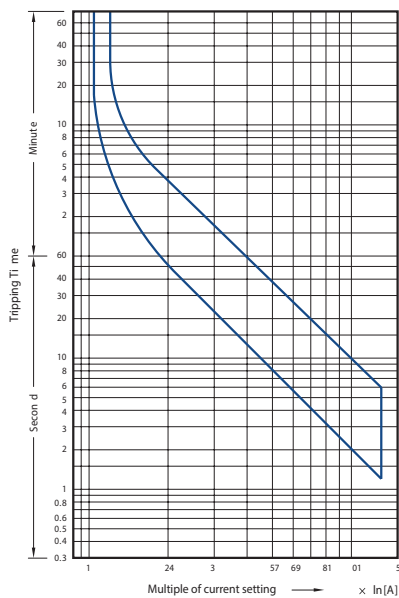
9-12-18-22-32-40

65

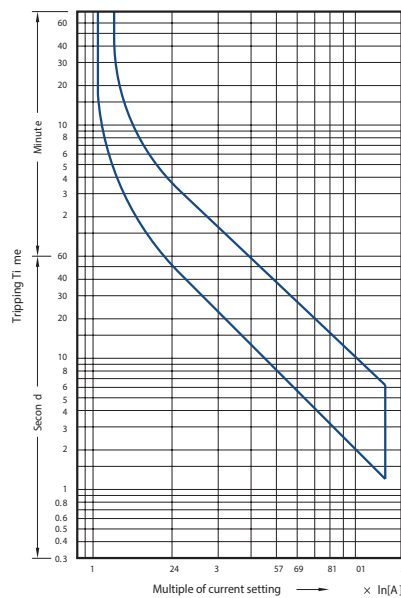
85-100



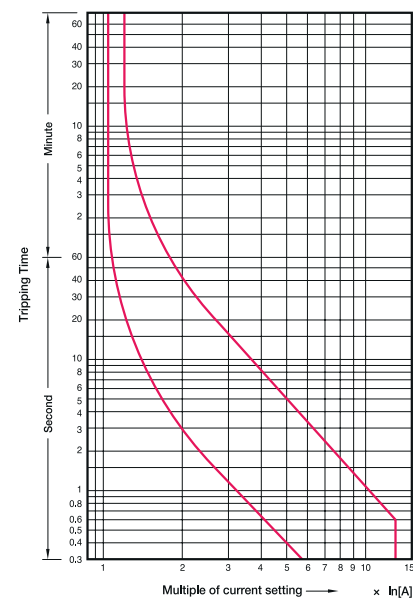
Avviamento a freddo
Cold starting



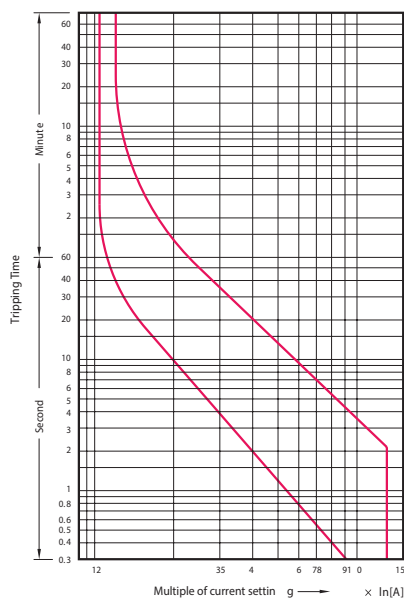
Avviamento a freddo
Cold starting



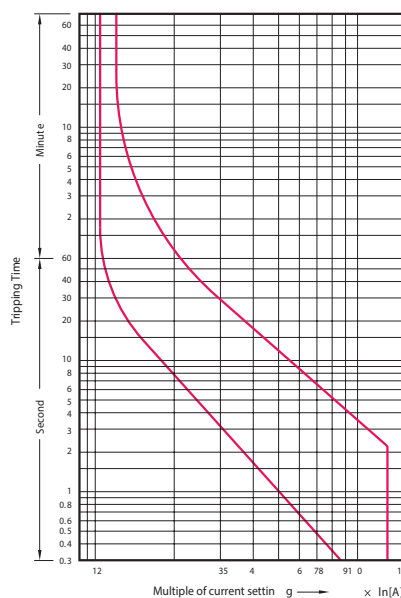
Avviamento a freddo
Cold starting



Avviamento a caldo
Hot starting



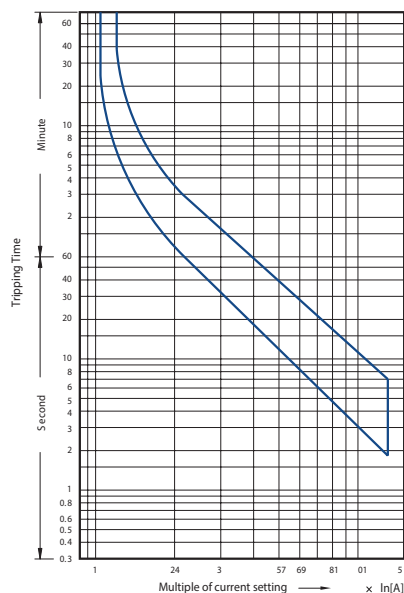
Avviamento a caldo
Hot starting



Avviamento a caldo
Hot starting

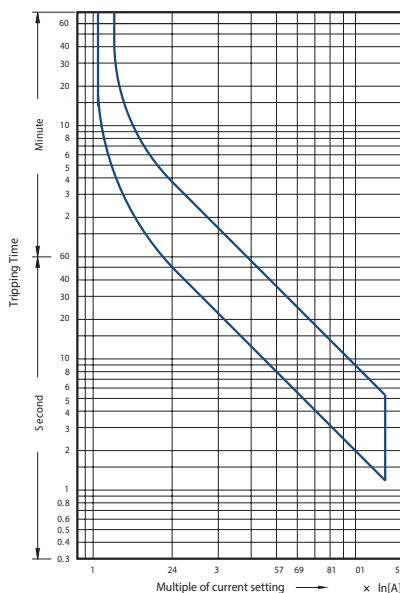
Curve caratteristiche relè Relay curve characteristics

150



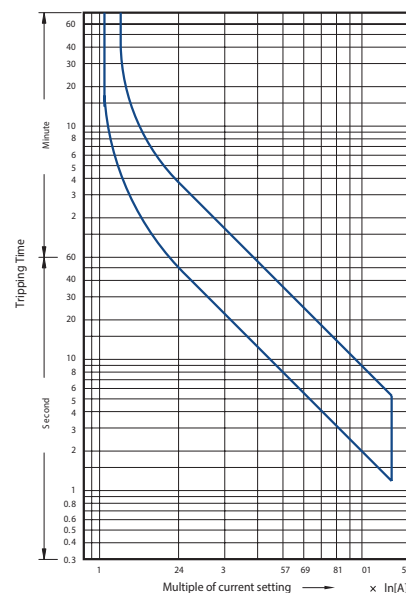
Avviamento a freddo
Cold starting

185-225-330-400

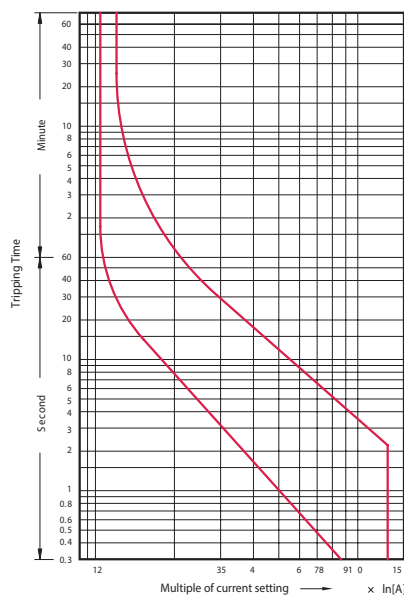


Avviamento a freddo
Cold starting

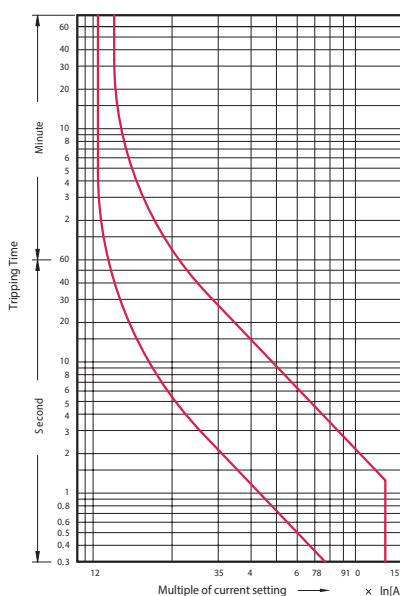
630-800



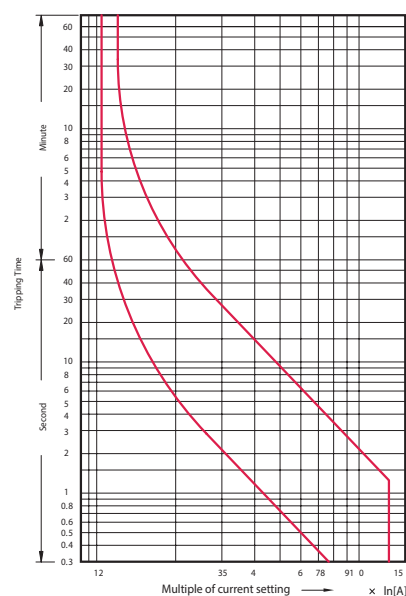
Avviamento a freddo
Cold starting



Avviamento a caldo
Hot starting



Avviamento a caldo
Hot starting

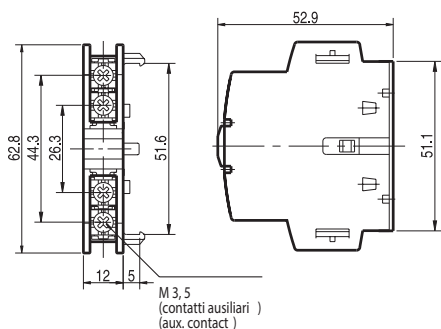


Avviamento a caldo
Hot starting

Contatti ausiliari

Auxiliary contacts

Sezioni / Sections
9-12-18-22-32
40-65-85-100-150



Montaggio laterale / Side mounting

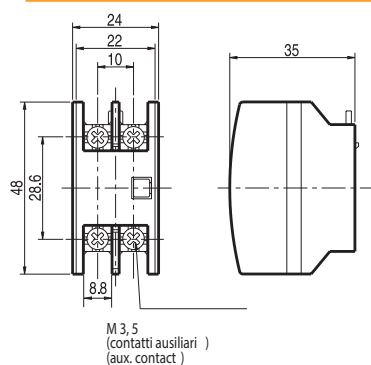
1NO + 1NC

g

33

cod

090UA-1



Montaggio frontale / Top mounting

1NO + 1NC

28

090AF11

2NO

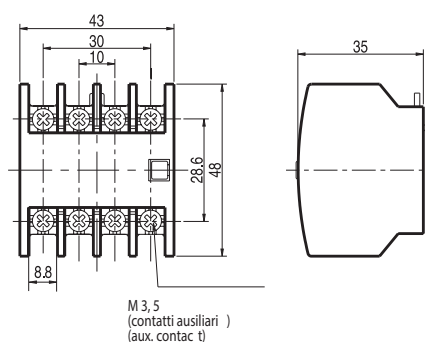
28

090AF20

2NC

28

090AF02



Montaggio frontale / Top mounting

4NO

50

090AF40

3NO + 1NC

50

090AF31

2NO + 2NC

50

090AF22

1NO + 2NC

50

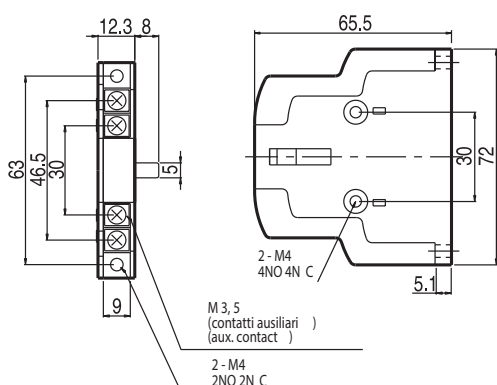
090AF13

4NC

50

090AF04

Sezioni / Sections
185-225-330-400-630-800



Montaggio laterale / Side mounting

1NO + 1NC

g

45

cod

090A11

Caratteristiche ausiliari

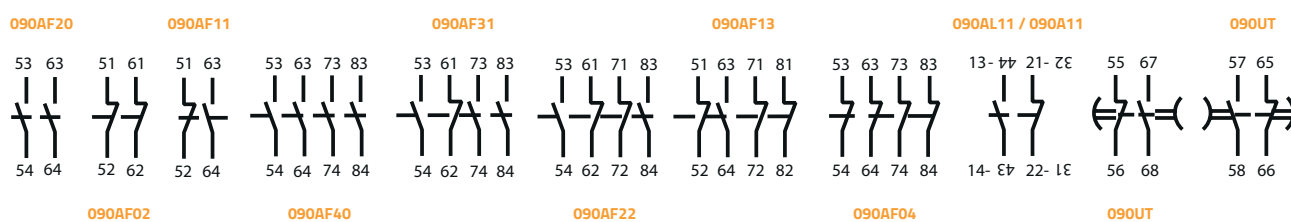
Auxiliary characteristics

Assorbimento Coil consumption [VA]				Limite tensione bobina Coil operating limit [V]		Tempo di funzionamento Operating time [ms]		
220V (50Hz)	Spunto Pick-up	Ritenuta Sealed	Dissipazione Dissipation [W]	Attrazione Pick-up	Rilascio Drop-out	Corrente bobina Coil current [mA]	Attrazione Pick-up	Rilascio 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 Nominal current										Vita elettrica [op x 10.000] Electrical life			
Ith		AC-15				DC-13				N. manovre/ora Operation per hour	Vita meccanica Mechanical life	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	090UW-22
32 ÷ 40	30	090UW-32
65	30	090UW-65
85 ÷ 100	30	090UW-95



Filtro soppressore / Surge suppressor RC unit

	g	cod
24 ÷ 48V AC/DC	150	090US-11
200 ÷ 240V AC/DC	150	090US-13
360 ÷ 440V AC/DC	150	090US-14



Interblocco meccanico / Mechanical interlock

	g	cod
Sezioni / Sections: 9-12-18-22-32-40-65-85-100-150		
2NC	30	090UR-02



Sezioni / Sections: 185-225-330-400

90 090IM400



Sezioni / Sections: 630-800

90 090IM800

Caratteristiche generali

General characteristics

Caratteristiche generali

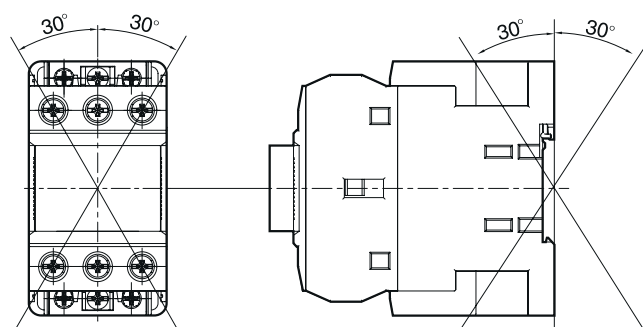
Rispondenza alle norme	IEC EN 60947-1, IEC EN 60947-4-1, UL500
Omologazioni	UL, CSA
Limiti di temperatura	Funzionamento $\geq -50^{\circ}\text{C} \div +80^{\circ}\text{C}$ Stoccaggio $\geq -5^{\circ}\text{C} \div +60^{\circ}\text{C}$
Altitudine d'impiego	3.000 m
Grado di protezione	IP 20 (IEC EN 60529)
Durata meccanica [mil ciclo]	9 ÷ 22A 15ML/32÷100A 12ML/150÷300 5ML/400÷800 2,5ML
Vita elettrica [mil ciclo]	9 ÷ 22A 2,5ML/32÷100A 2ML/150÷300 1ML/400÷800 0,5ML
Numero di manovre ora in AC-3 [n° ciclo]	9÷100A 1800 / 160÷800A 1200
Resistenza agli shock	Aperto: 8g Chiuso: 10g (1/2 sinusoide = 11mS)
Resistenza alle vibrazioni	Aperto: 2g Chiuso: 4g 5÷300 (IEC 60-2-6)
Resistenza alla fiamma	VO (UL94) 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 (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 $\geq -50^{\circ}\text{C} \div +80^{\circ}\text{C}$ 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 ÷ 22A 15ML/32÷100A 12ML/150÷300 5ML/400÷800 2,5ML
Electrical life [mil cycles]	9 ÷ 22A 2,5ML/32÷100A 2ML/150÷300 1ML/400÷800 0,5ML
N. of operations per hour in AC-3 [n. cycles]	9÷100A 1800 / 160÷800A 1200
Shock resistance	Opened: 8g Closed: 10g (1/2 sine wave = 11mS)
Vibration resistance	Opened: 2g Closed: 4g 5÷300 (IEC 60-2-6)
Flame resistance	VO (UL94) 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 (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



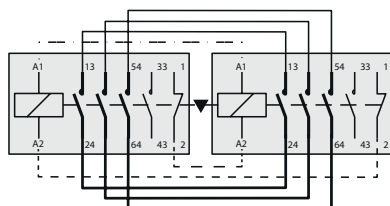
Caratteristiche generali

General characteristics

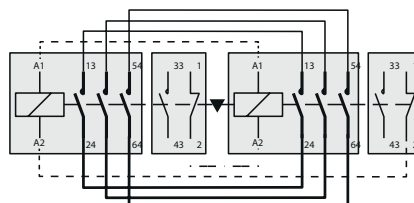
Schemi di collegamento interblocco meccanico

Mechanical interlock circuit diagram

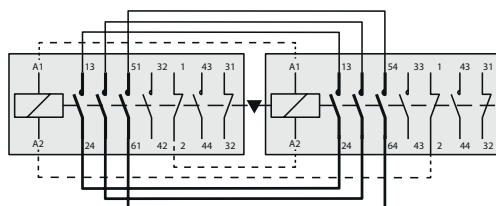
9-12-18-22



32-40-65-100-150



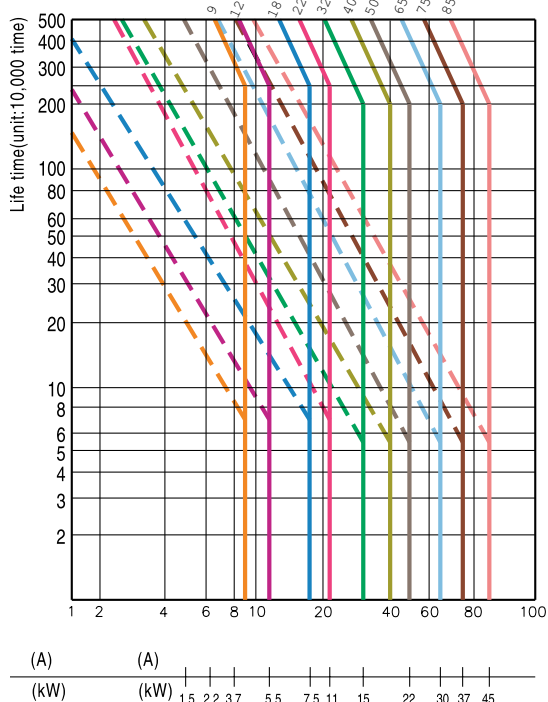
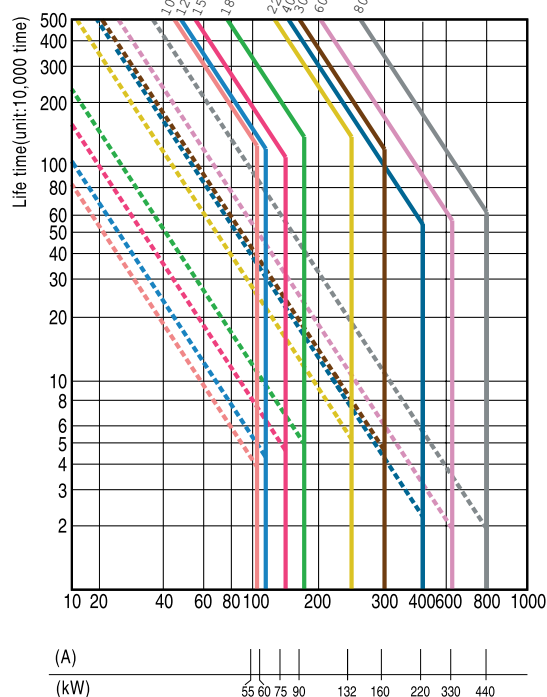
185-225-330-400-630-800



3Ø AC380-440V

3Ø AC380-440V

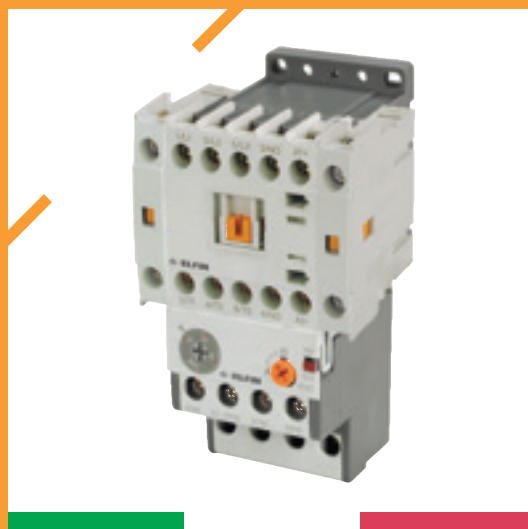
— AC-3
- - - AC-4



CONTATTORI, RELÈ TERMICI, MINI CONTATTORI, INTERRUTTORI SALVAMOTORE

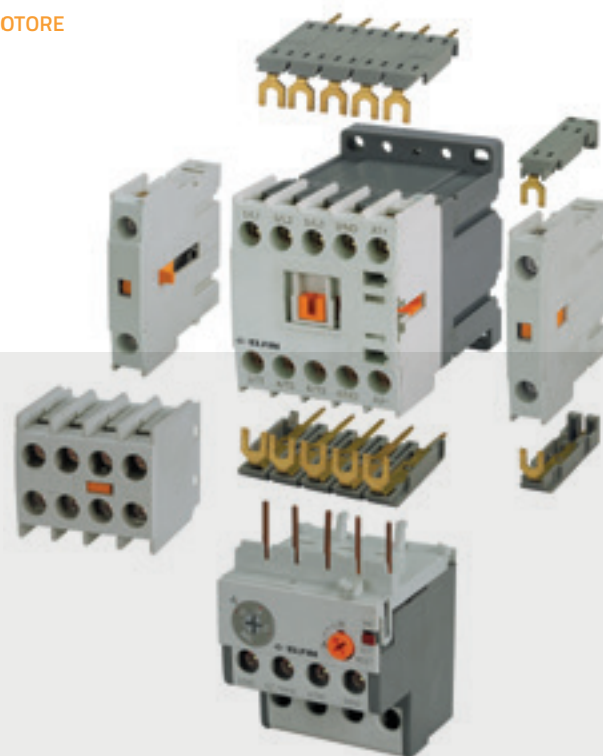
Minicontattori

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

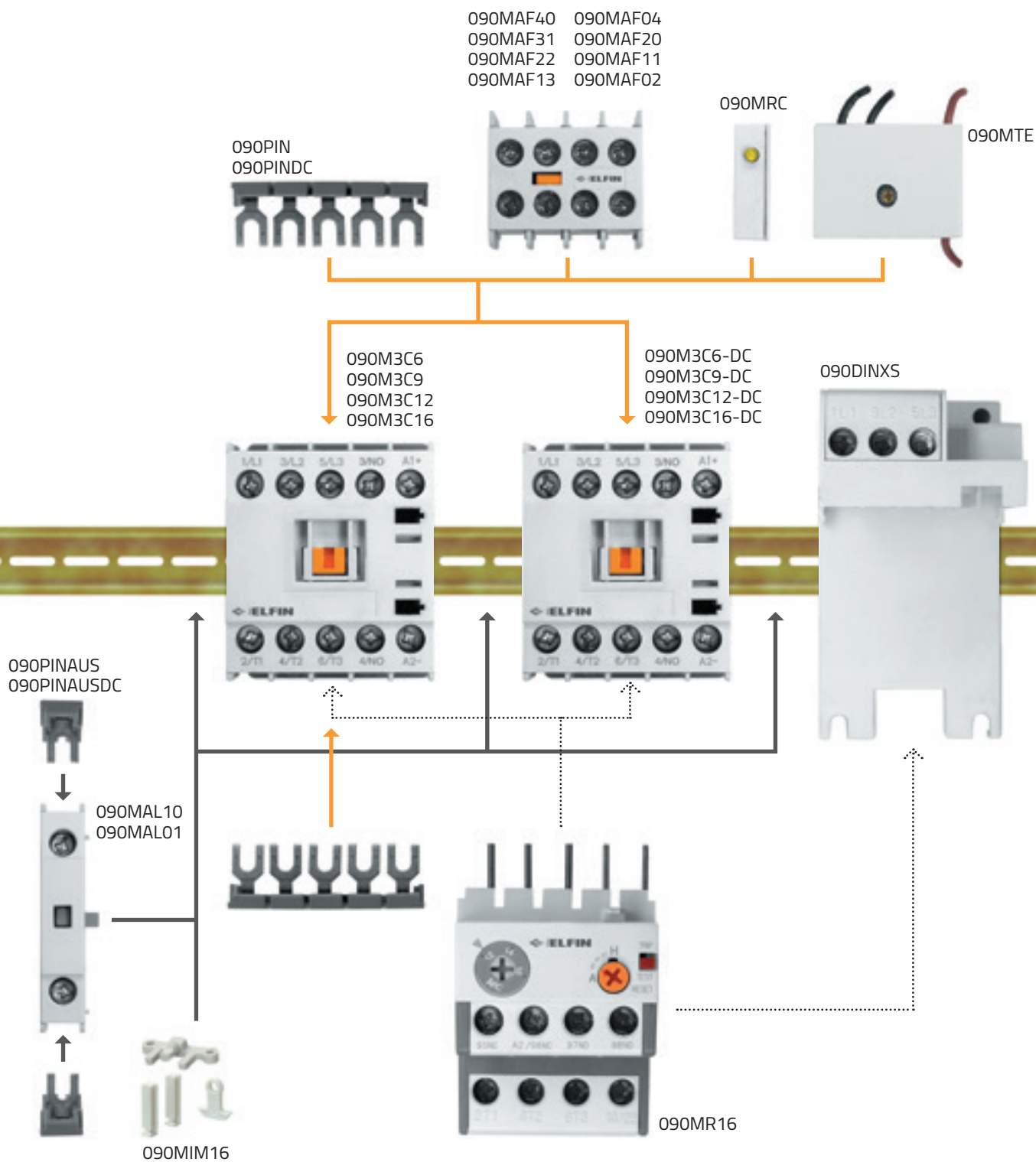
The translation of main contacts is vertical. With this solutions minicontactors have a longer distance between fixed and moving contacts respect to a standard solution with horizontal translation. Making and breaking capacity and electrical life are longer than competitors.

WIDE RANGE

Our range of minicontactors arrive up to 16A 7.5Kw AC-3.

Lay-out serie xsmall

Xsmall series lay-out



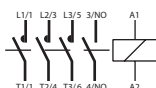
Sezioni 6-9-12-16

6-9-12-16 sections

Minicontattore / Minicontactor

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cod



Sezione 6A / 6A Section

24V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C6-24
48V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C6-48
110V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C6-110
230/240V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C6-240
380/400V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C6-400
12V DC Tensioni di comando / Coil voltage	0,23	090M3C6-12DC
24V DC Tensioni di comando / Coil voltage	0,23	090M3C6-24DC
48V DC Tensioni di comando / Coil voltage	0,23	090M3C6-48DC
110V DC Tensioni di comando / Coil voltage	0,23	090M3C6-110DC

Prestazioni secondo IEC-60947 Performance in accordance with IEC-60947

AC1			20A
AC3	200-240V 380-440V 500-550V 690V	1,5 kW 2,2 kW 3 kW 3 kW	7A 6A 5A 4A
DC1 L/R<1ms	24V 48V 110V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series 1 polo in serie/1 pole in series 2 poli in serie/2 poles in series 1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	9A 12A 8A 10A 3A 6A
DC3/DC5 L/R<10ms	24V 48V 110V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series 1 polo in serie/1 pole in series 2 poli in serie/2 poles in series 1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	6A 7A 5A 7A 1A 3A

Prestazioni secondo UL/CSA Performance in accordance with UL/CSA Potenza nominale massima / Maximum nominal power

Ith		20A
Monofase / Mono-phase	115V 230V	0,5 HP 1 HP
Trifase / Tri-phase	200V 230V 460V 575V	1,5 HP 1,5 HP 3 HP 3 HP

Sezione 9A / 9A Section

24V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C9-24
48V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C9-48
110V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C9-110
230/240V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C9-240
380/400V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C9-400
12V DC Tensioni di comando / Coil voltage	0,23	090M3C9-12DC
24V DC Tensioni di comando / Coil voltage	0,23	090M3C9-24DC
48V DC Tensioni di comando / Coil voltage	0,23	090M3C9-48DC
110V DC Tensioni di comando / Coil voltage	0,23	090M3C9-110DC

Prestazioni secondo IEC-60947 Performance in accordance with IEC-60947

AC1			20A
AC3	200-240V 380-440V 500-550V 690V	2,2 kW 4 kW 3,7 kW 4 kW	9A 9A 6A 5A
DC1 L/R<1ms	24V 48V 110V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series 1 polo in serie/1 pole in series 2 poli in serie/2 poles in series 1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	10A 13A 10A 12A 3A 7A
DC3/DC5 L/R<10ms	24V 48V 110V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series 1 polo in serie/1 pole in series 2 poli in serie/2 poles in series 1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	7A 9A 6A 8A 1A 4A

Prestazioni secondo UL/CSA Performance in accordance with UL/CSA Potenza nominale massima / Maximum nominal power

Ith		20A
Monofase / Mono-phase	115V 230V	0,5 HP 1,5 HP
Trifase / Tri-phase	200V 230V 460V 575V	3 HP 3 HP 5 HP 5 HP

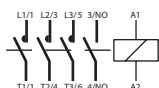
Sezioni 6-9-12-16

6-9-12-16 sections

Minicontattore / Minicontactor

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cod



Sezione 12A / 12A Section

24V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C12-24
48V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C12-48
110V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C12-110
230/240V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C12-240
380/400V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C12-400
12V DC Tensioni di comando / Coil voltage	0,23	090M3C12-12DC
24V DC Tensioni di comando / Coil voltage	0,23	090M3C12-24DC
48V DC Tensioni di comando / Coil voltage	0,23	090M3C12-48DC
110V DC Tensioni di comando / Coil voltage	0,23	090M3C12-110DC

Prestazioni secondo IEC-60947 Performance in accordance with IEC-60947

AC1			20A
AC3	200-240V	3 kW	12A
	380-440V	5,5 kW	12A
	500-550V	4 kW	7A
	690V	4 kW	5A
DC1 L/R<1ms	24V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	12A 15A
	48V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	11A 14A
	110V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	4A 8A
DC3/DC5 L/R<10ms	24V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	9A 12A
	48V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	8A 10A
	110V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	1A 5A

Prestazioni secondo UL/CSA Performance in accordance with UL/CSA Potenza nominale massima / Maximum nominal power

Ith		20A
Monofase / Mono-phase	115V	1 HP
	230V	3 HP
Trifase / Tri-phase	200V	3 HP
	230V	3 HP
	460V 575V	7,5 HP 7,5 HP

Sezione 16A / 16A Section

24V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C16-24
48V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C16-48
110V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C16-110
230/240V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C16-240
380/400V - 50/60 Hz Tensioni di comando / Coil voltage	0,17	090M3C16-400
12V DC Tensioni di comando / Coil voltage	0,23	090M3C16-12DC
24V DC Tensioni di comando / Coil voltage	0,23	090M3C16-24DC
48V DC Tensioni di comando / Coil voltage	0,23	090M3C16-48DC
110V DC Tensioni di comando / Coil voltage	0,23	090M3C16-110DC

Prestazioni secondo IEC-60947 Performance in accordance with IEC-60947

AC1			20A
AC3	200-240V	4 kW	16A
	380-440V	7,5 kW	16A
	500-550V	5,5 kW	9A
	690V	4 kW	5A
DC1 L/R<1ms	24V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	16A 20A
	48V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	14A 17A
	110V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	5A 9A
DC3/DC5 L/R<10ms	24V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	12A 15A
	48V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	10A 13A
	110V	1 polo in serie/1 pole in series 2 poli in serie/2 poles in series	2A 6A

Prestazioni secondo UL/CSA Performance in accordance with UL/CSA Potenza nominale massima / Maximum nominal power

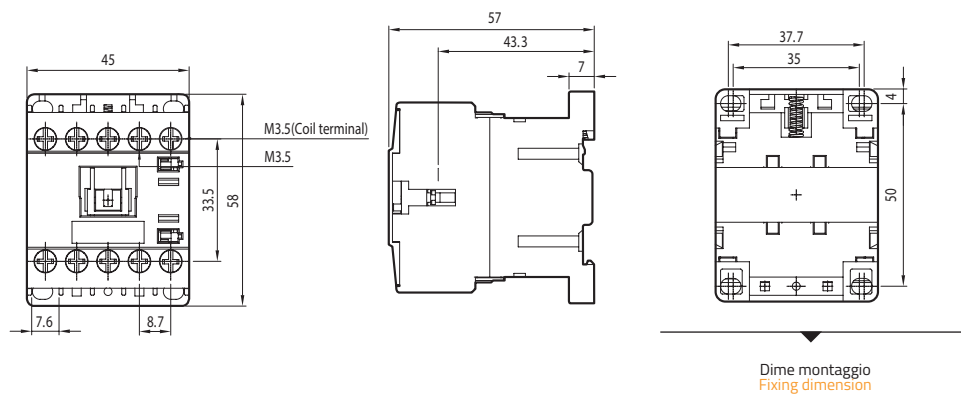
Ith		20A
Monofase / Mono-phase	115V	2 HP
	230V	3 HP
Trifase / Tri-phase	200V	4 HP
	230V	4 HP
	460V 575V	8 HP 8 HP



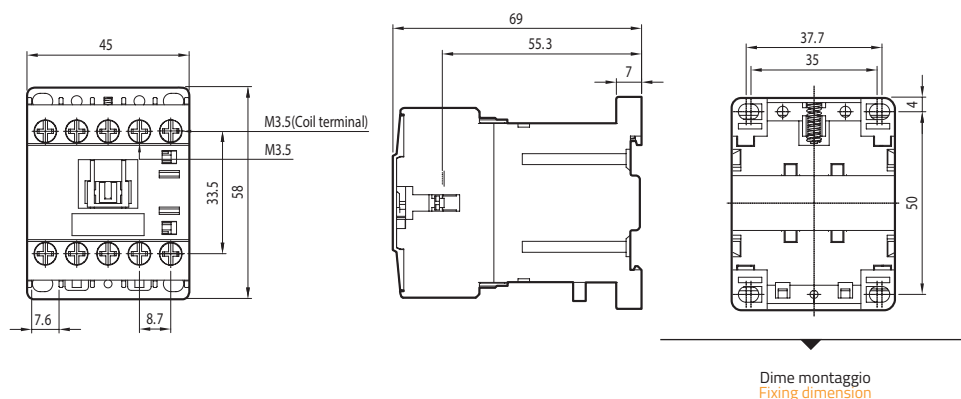
Sezioni 6-9-12-16

6-9-12-16 sections

Minicontattore C.A. / A.C. minicontactors

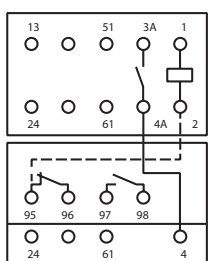


Minicontattore C.C. / D.C. minicontactors



Sezioni 6-9-12-16

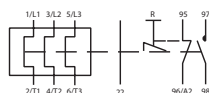
6-9-12-16 sections



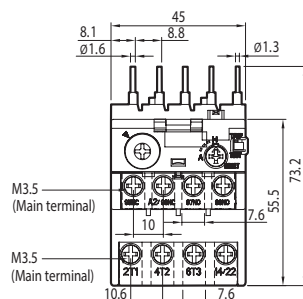
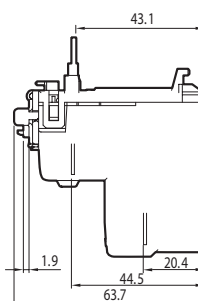
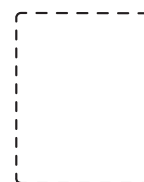
Schema per cablaggio diretto
contattore-relè
Direct mounting of T.O.R.
to minicontactor diagram
of prewiring

Relè termico differenziale / Thermal O/L relay

g	cod
0,1 ÷ 0,16 Taratura (A) / Setting range (A)	0,1 09MR16-016
0,16 ÷ 0,25 Taratura (A) / Setting range (A)	0,1 09MR16-025
0,25 ÷ 0,4 Taratura (A) / Setting range (A)	0,1 09MR16-04
0,4 ÷ 0,65 Taratura (A) / Setting range (A)	0,1 09MR16-065
0,63 ÷ 1 Taratura (A) / Setting range (A)	0,1 09MR16-1
1 ÷ 1,6 Taratura (A) / Setting range (A)	0,1 09MR16-1V6
1,6 ÷ 2,5 Taratura (A) / Setting range (A)	0,1 09MR16-2V5
2,5 ÷ 4 Taratura (A) / Setting range (A)	0,1 09MR16-4
4 ÷ 6 Taratura (A) / Setting range (A)	0,1 09MR16-6
5 ÷ 8 Taratura (A) / Setting range (A)	0,1 09MR16-8
6 ÷ 9 Taratura (A) / Setting range (A)	0,1 09MR16-9
7 ÷ 10 Taratura (A) / Setting range (A)	0,1 090MR16-10
9 ÷ 13 Taratura (A) / Setting range (A)	0,1 090MR16-13
12 ÷ 16 Taratura (A) / Setting range (A)	0,1 09MR16-16

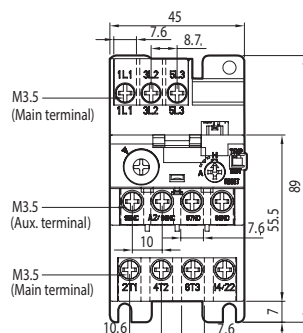
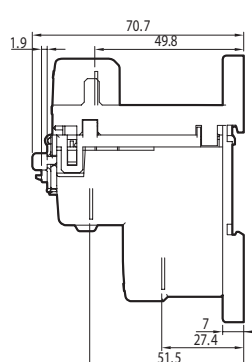
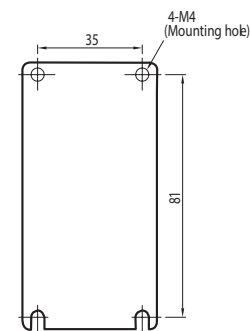


Minirelè / T.O.R.



Dime montaggio
Fixing dimension

Minirelè montaggio su accessorio separato T.O.R. with separate mounting adaptor



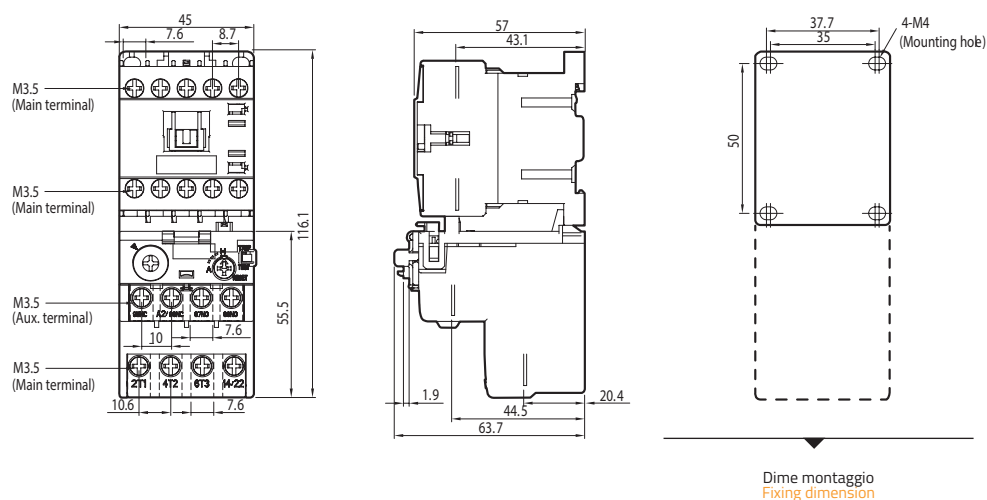
Dime montaggio
Fixing dimension



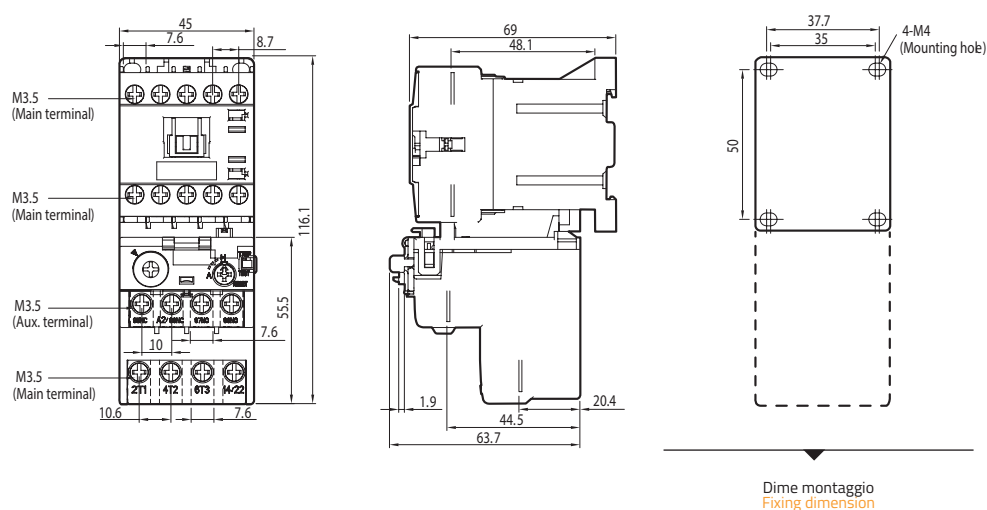
Sezioni 6-9-12-16

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

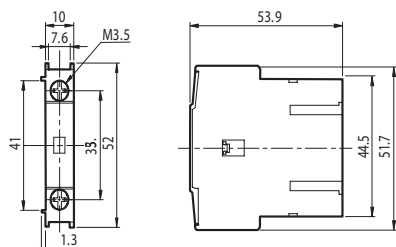


Contatti ausiliari

Auxiliary contacts

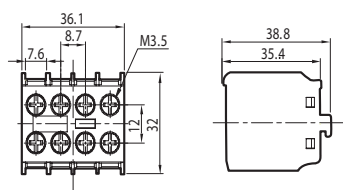
Contatti ausiliari

Auxiliary contacts



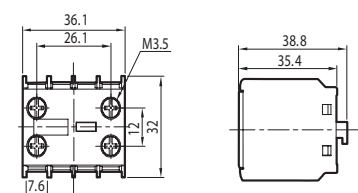
Montaggio laterale / Side mounting

1NO	20	090MAL10
1NC	20	090MAL01



Montaggio frontale / Top mounting

4NO	40	090MAF40
3NO + 1NC	40	090MAF31
2NO + 2NC	40	090MAF22
1NO + 3NC	40	090MAF13
4NC	40	090MAF04

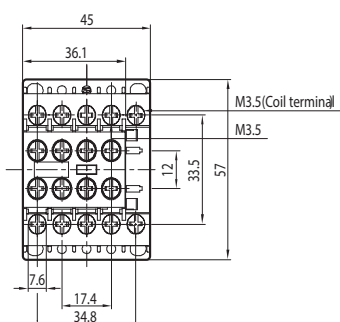
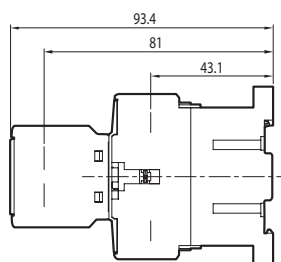
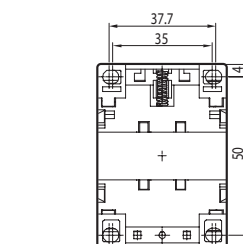


Montaggio frontale / Top mounting

2NO	30	090MAF20
1NO + 1NC	30	090MAF11
2NC	30	090MAF02

Minicontattore con ausiliario frontale

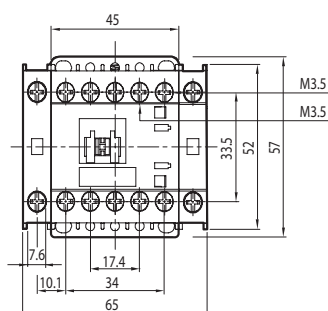
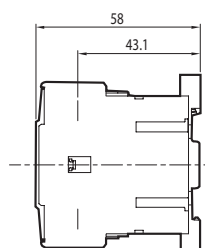
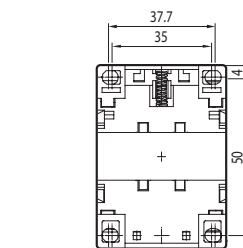
Minicontactor with top mounting contact



Dime montaggio
Fixing dimension

Minicontattore con ausiliario frontale

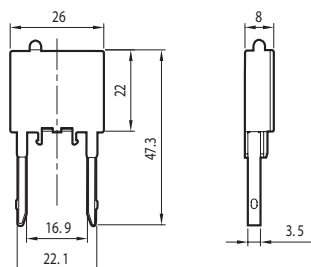
Minicontactor with top mounting contact



Dime montaggio
Fixing dimension

Accessori

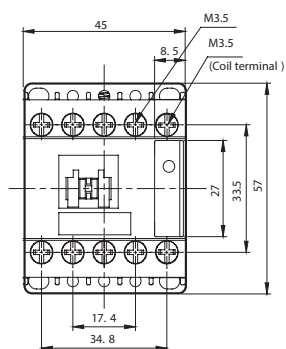
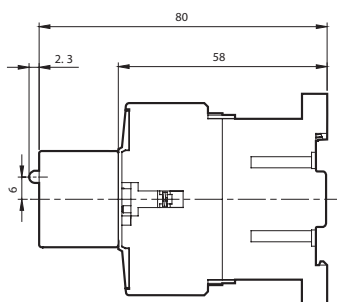
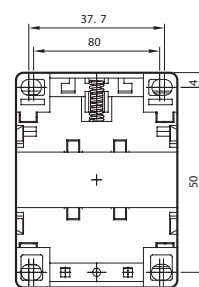
Accessories



Filtro soppressore Surge suppressor unit

	g	cod
24-48V CA	0,005	090MRC48
60-127V CA	0,005	090MRC110
200-240V CA	0,005	090MRC240
17-24V CC	0,005	090MRC24DC
36-72V CC	0,005	090MRC72DC

Minicontattore con filtro RC Minicontactor with surge suppressor unit



Dime montaggio
Fixing dimension

Accessori Accessories



Interblocco meccanico Mechanical interlock

Interblocco meccanico
Mechanical interlock

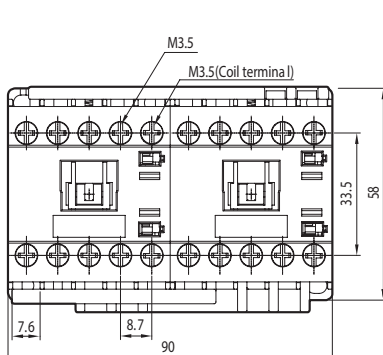
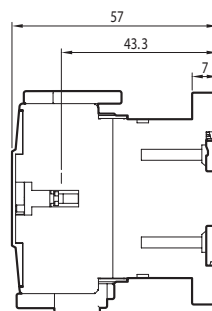
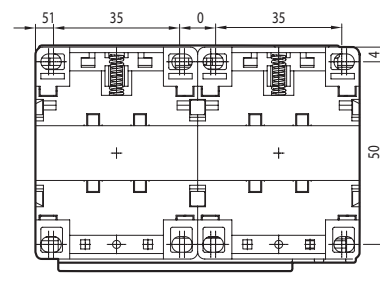
g

0,005

cod

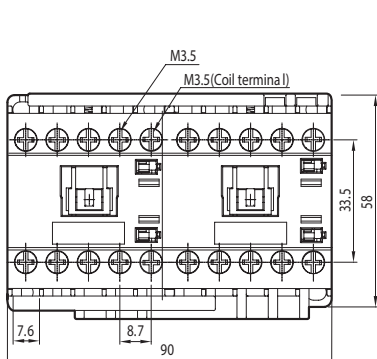
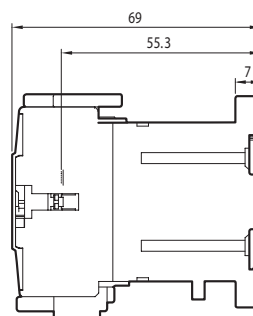
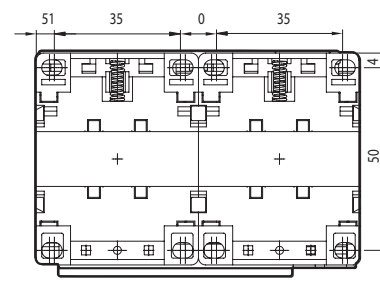
090MIM16

Minicontattori C.A. interbloccati A.C. minicontactors interlocked



Dime montaggio
Fixing dimension

Minicontattori C.C. interbloccati D.C. minicontactors interlocked



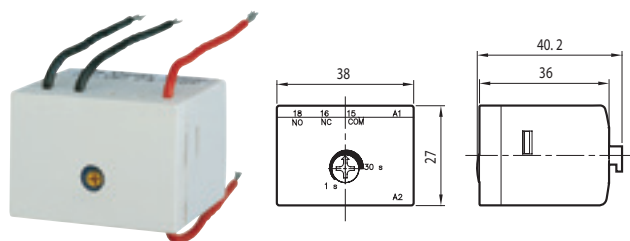
Dime montaggio
Fixing dimension

Accessori

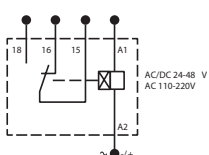
Accessories

Unità elettronica temporizzata

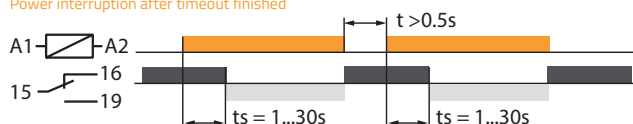
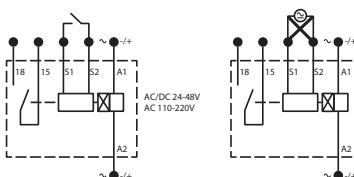
Electric timer unit



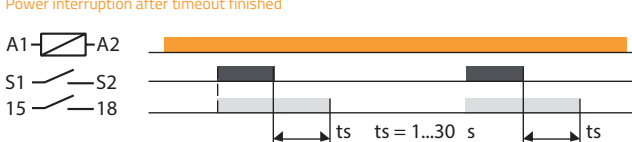
24-48V CA/CC delay ON 1-30 s	40	090MTEON48
100-220V CA/CC delay ON 1-30 s	40	090MTEON220
24-48V CA/CC delay OFF 1-30 s	40	090MTEOFF48
100-220V CA/CC delay OFF 1-30 s	40	090MTEOFF220



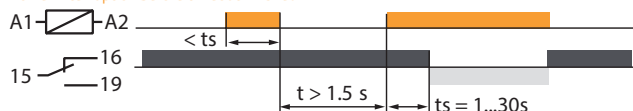
Interruzione alimentazione dopo il termine del tempo ts
Power interruption after timeout finished



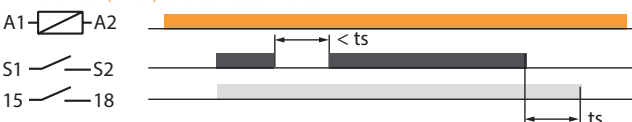
Interruzione alimentazione dopo il termine del tempo ts
Power interruption after timeout finished



Interruzione alimentazione prima del termine del tempo ts
Power interruption before timeout finished

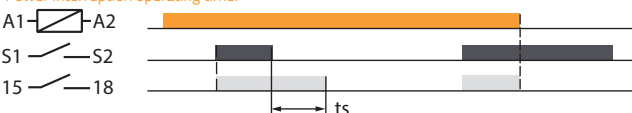


Apertura S1-S2 prima del termine del tempo ts
Turn on switch (S1-S2) before timeout finished

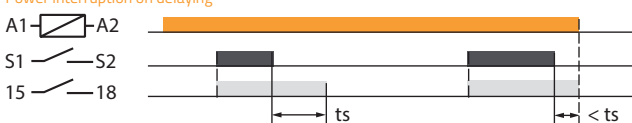


Senza tensione / De-energized
Sotto tensione / Energized

Interruzione alimentazione durante funzionamento timer
Power interruption operating timer

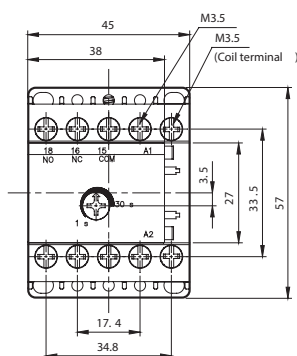
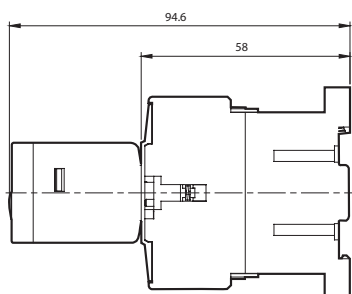
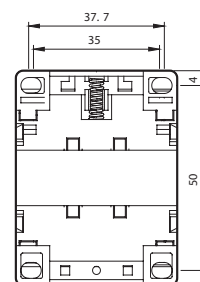


Interruzione alimentazione prima del termine del tempo ts
Power interruption on delaying



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

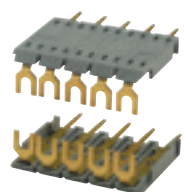
Adattatore montaggio barra DIN 35
Bar mounting adapter DIN 35

g

cod

0,3

090DINXS



Pettini / Solder pin terminal

Per contattori/ For contactors

Pettini corti A.C. / A.C. short

g

cod

20

090PIN

Pettini lunghi D.C. / D.C. long

20

090PINDC



Per contatti ausiliari / For auxiliary contacts

Pettini corti A.C. / A.C. short

10

090PINAUS

Pettini lunghi D.C. / D.C. long

10

090PINAUSDC



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 Coil consumption [VA]			Limite tensione bobina Coil operating limit [V]			Tempo di funzionamento Operating time [ms]	
60Hz (50Hz)	Spunto Pick-up	Ritenuta Sealed	Dissipazione Dissipation [W]	Attrazione Pick-up	Rilascio Drop-out	Attrazione Pick-up	Rilascio 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

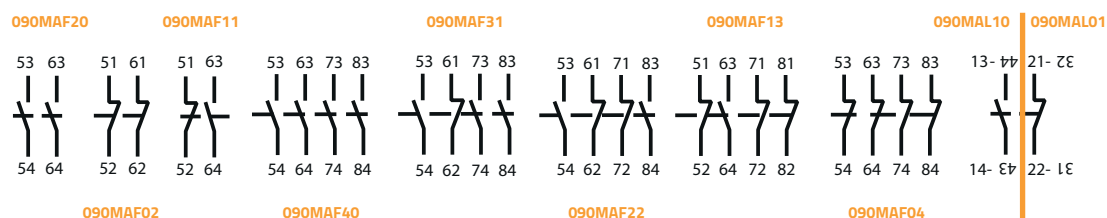
Caratteristiche elettriche ausiliari relè Auxiliary contact relays electrical characteristics

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

	CORRENTE NOMINALE / NOMINAL CURRENT										N. manovre/ora	Vita meccanica	Vita elettrica [op x 10.000]
	Ith	AC-15					DC-13				Operation per hour	Mechanical life	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

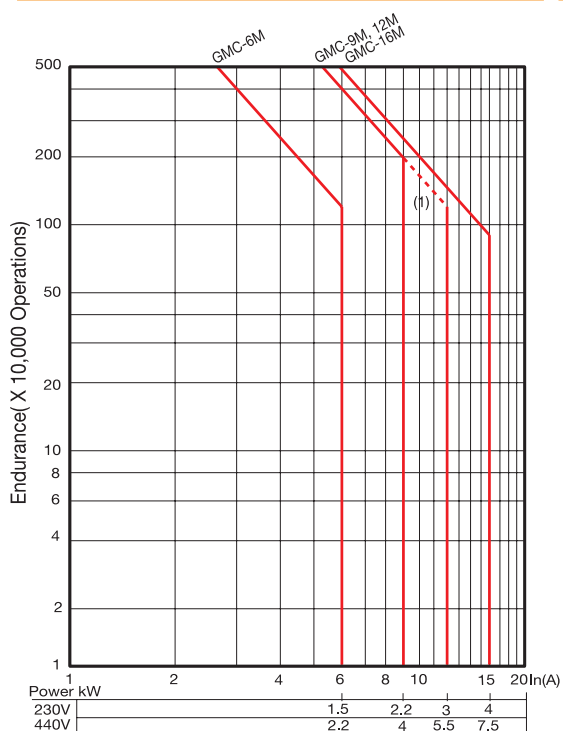


Caratteristiche generali

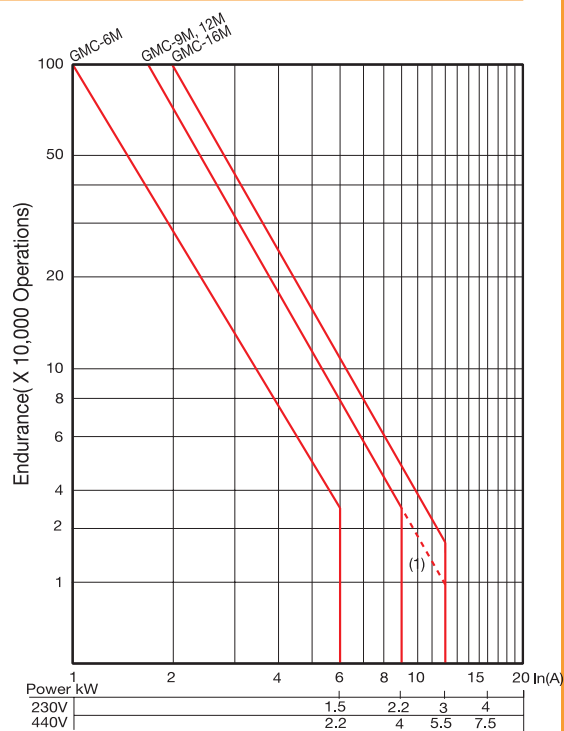
General characteristics

Vita elettrica / Electrical life time

AC-3 UE 380-440V

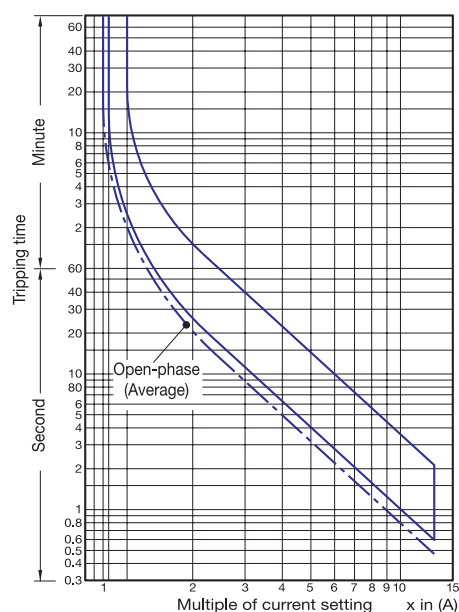


AC-4 UE 380-440V

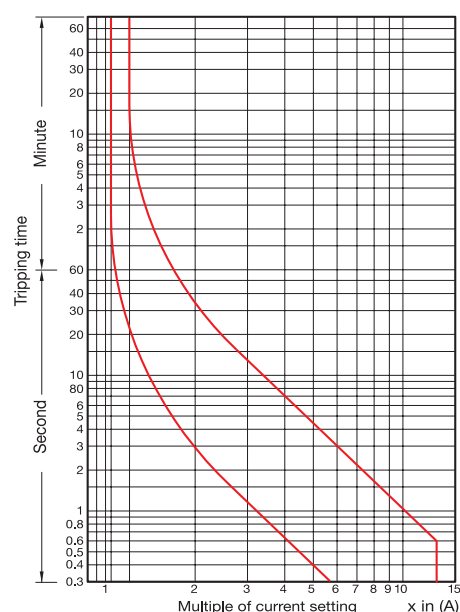


Curve caratteristiche relè / Relay curve characteristics

Avviamento a freddo / Cold start



Avviamento a caldo / Warm start



CONTATTORI, RELÈ TERMICI, MINI CONTATTORI, INTERRUTTORI SALVAMOTORE

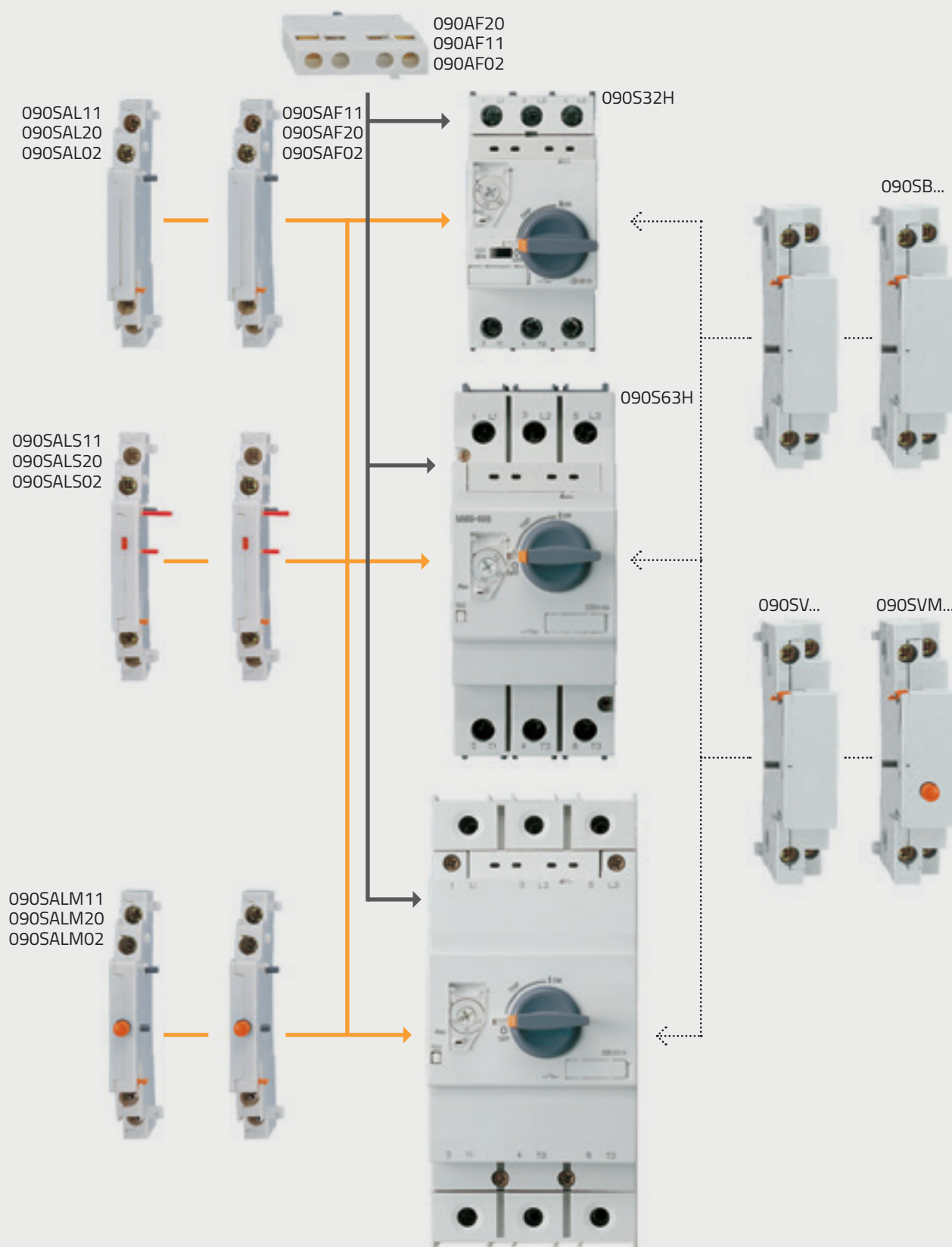
Interruttori automatici

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 IEC 60947-4 (avviatore): AC3
Durata meccanica	S32H 100.000 oper. S63H - S100H 50.000 oper.
Durata elettrica	S32H 100.000 oper. 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 IEC 60947-4 (motor starter): AC3
Mechanical endurance	S32H 100.000 oper. S63H - S100H 50.000 oper.
Electrical endurance	S32H 100.000 oper. 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 operational current range [A]	Thermal release adjustment range [A]	Magnetic release operating 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

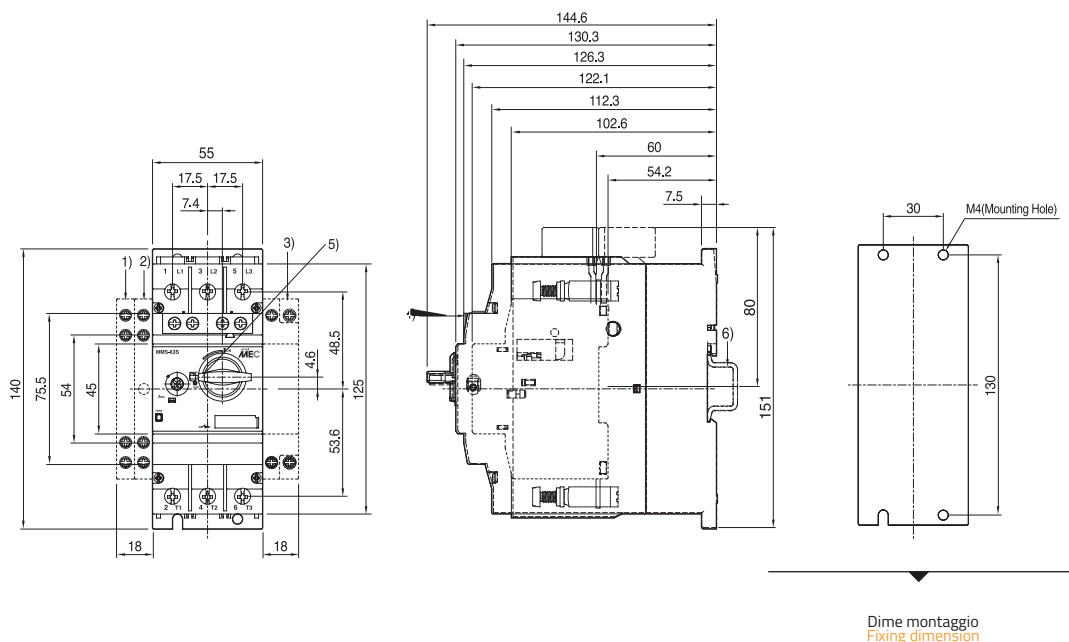
55-75 Taratura / Setting range [A] 100 KA	2,20	090S100H-75
70-90 Taratura / Setting range [A] 100 KA	2,20	090S100H-90
80-100 Taratura / Setting range [A] 100 KA	2,20	090S100H-100

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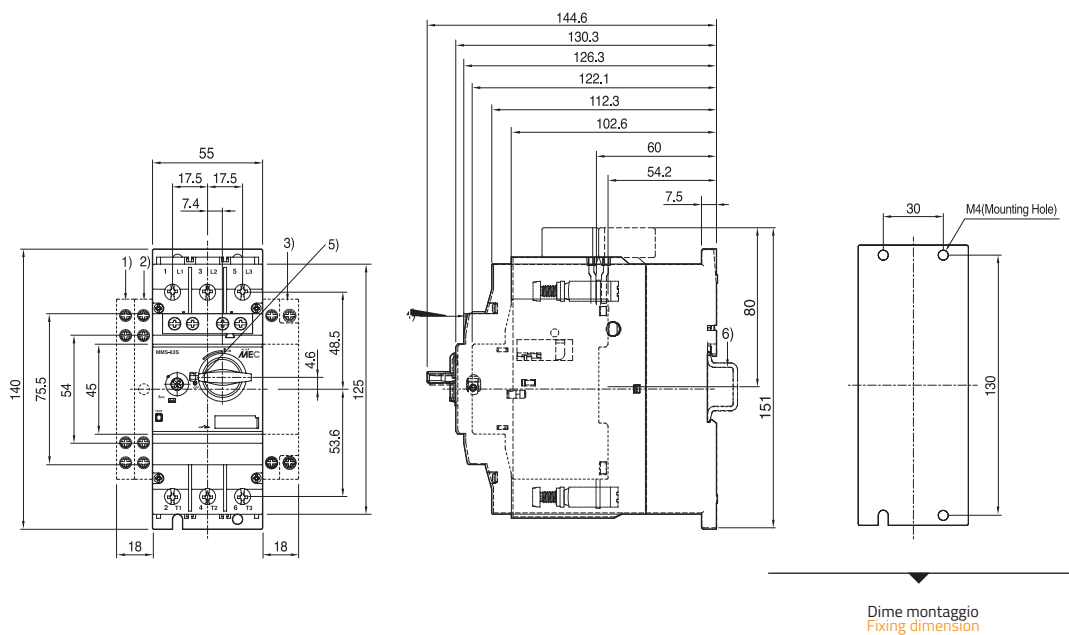
Sezioni 32-63-100

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	090SAF11
2NO	0,018	090SAF20
2NC	0,018	090SAF02

Contatto ausiliario laterale / Side mounting auxiliary contact

1NO+1NC Montaggio a sinistra / Side mounting on the left	0,030	090SAL11
2NO Montaggio a sinistra / Side mounting on the left	0,030	090SAL20
2NC Montaggio a sinistra / Side mounting on the left	0,030	090SAL02

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	090SALS11
2NO / Side mounting on the left	0,040	090SALS20
2NO / Side mounting on the left	0,040	090SALS02

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	090SALM11
2NO Montaggio a sinistra / Side mounting on the left	0,040	090SALM20
2NC Montaggio a sinistra / Side mounting on the left	0,040	090SALM02

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	090SB24
110...127V 50HZ / 120V 60 Hz	0,110	090SB110
220...230V 50HZ / 240...260V 60 Hz	0,110	090SB230
240V 50HZ / 277V 60 Hz	0,110	090SB240
380...400V 50HZ / 440...480V 60 Hz	0,110	090SB400
415...440V 50HZ / 460...480V 60 Hz	0,110	090SB440



Bobina di minima tensione / Undervoltage release

Montaggio a destra / Side mounting on the right

24V 50HZ / 28V 60 Hz	0,110	090SV24
110...127V 50HZ / 120V 60 Hz	0,110	090SV110
220...230V 50HZ / 240...260V 60 Hz	0,110	090SV230
240V 50HZ / 277V 60 Hz	0,110	090SV240
380...400V 50HZ / 440...480V 60 Hz	0,110	090SV400
415...440V 50HZ / 460...480V 60 Hz	0,110	090SV440



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

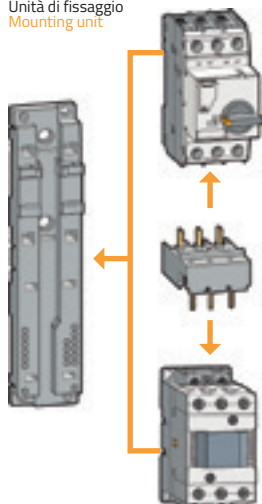
Montaggio solo su interruttore con manopola rotativa / Mounting only rotary handle

24V 50HZ / 28V 60 Hz	0,110	090SVA24
110...127V 50HZ / 120V 60 Hz	0,110	090SVA110
220...230V 50HZ / 240...260V 60 Hz	0,110	090SVA230
240V 50HZ / 277V 60 Hz	0,110	090SVA240
380...400V 50HZ / 440...480V 60 Hz	0,110	090SVA400
415...440V 50HZ / 460...480V 60 Hz	0,110	090SVA440

Combinazione di interruttore automatico e contattore

Combination manual motor starters and contactors

Unità di fissaggio
Mounting unit

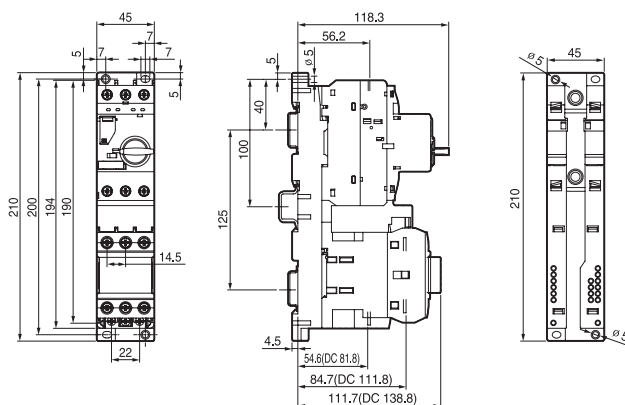


Unità di giunzione
Connection unit

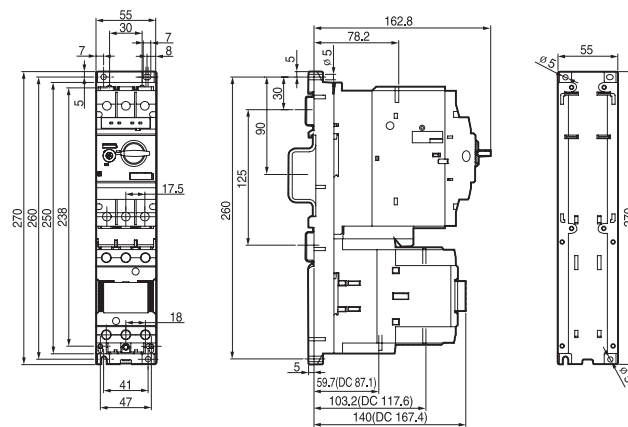
	Unità di congiunzione	Unità di fissaggio	Interruttore	Contattore
--	--------------------------	-----------------------	--------------	------------

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

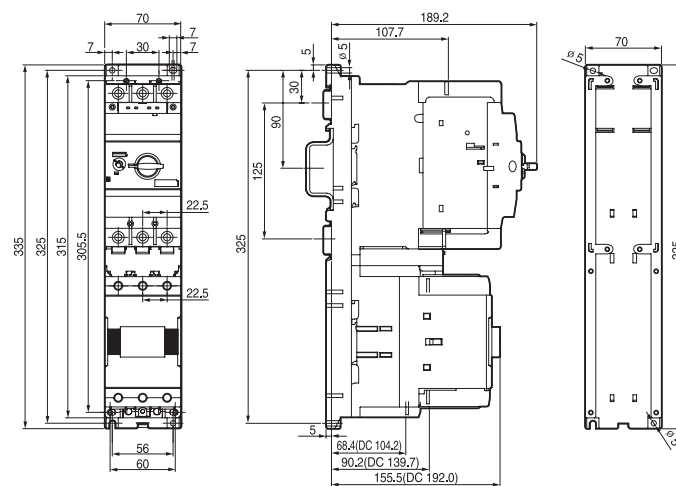
090S32H + 090MC40A



090S63H + 090MC65A



090S100H + 090MC100A



Legenda Legend

g	peso in grammi / weight in grams
n	quantità per confezione / pack quantity
h	altezza / height
cod	codice / code
suf	suffisso / suffix
c	cifratura / key coding
k	estrazione chiave / key extraction

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