

Appendix A Questionnaire

The following questionnaire can be used as a means of establishing the customer's requirements for new buildings, renovations or redevelopments.

No technical knowledge is needed to answer any of the questions. The questionnaire is divided into general question areas according to the scope of the project, equipment in the rooms, requirements on the lighting, etc.

Some of the questions are redundant or mutually exclusive. Analysis of the questionnaire ultimately leads to the creation of the specifications document as described in chapter 7.2. An offer can be drawn up on the basis of this document, using the "ZVEH calculation aid". Project design starts as soon as the contract has been awarded.

1. Scope of the project

- 1.1 Are we dealing with an owner-occupied flat, a single-family house or an apartment block?
- 1.2 In the case of a new building, does it involve a solid building or a prefab?
- 1.3 Is an old building to be redeveloped, modernised or renovated?
- 1.4 Is the house/flat situated in the inner city, suburbs or countryside?
- 1.5 How many main rooms?
- 1.6 How many side rooms?
- 1.7 Is there any change in usage planned for the future, e.g. the addition of a granny flat?
- 1.8 Is a winter garden planned?
- 1.9 How is the winter garden to be used?
- 1.10 Is there any shading planned for the winter garden?
- 1.11 Is the warm air generated in the winter garden to

- be used to heat the house in the transitional periods?
- 1.12 Is there a balcony?
 - 1.13 Is there a garden?
 - 1.14 Is there a garden gate?
 - 1.15 Is there a yard gate to be considered?
 - 1.16 Is there a garage?

2. Equipment in every room

2.1 General data

- 2.1.1 Name of the room (e.g. kitchen)?
- 2.1.2 Position of the room (e.g. ground floor)?
- 2.1.3 Size of the room (e.g. approx. m2)?
- 2.1.4 Number of doors?
- 2.1.5 Number of windows?

2.2 Lighting data

- 2.2.1 How many ceiling lights are provided in total?
- 2.2.2 How many of these are low-voltage halogen lamps?
- 2.2.3 How many of the lamps are to be switched?
- 2.2.4 How many ceiling lights should allow dimming?
- 2.2.5 Are there to be any other switches in the room in addition to those near the door?
- 2.2.6 Should remote control be provided for the lights?
- 2.2.7 Is the lighting to be switched on automatically as somebody enters the room and switched off again once they have left?

2.3 Socket data

- 2.3.1 How many sockets should be installed in the room?
- 2.3.2 Do you want to be able to switch off the sockets, e.g. in the children's rooms?
- 2.3.3 Should it be possible to switch a standing lamp connected to a socket on and off according to a

- certain program allowing the simulation of an occupied house?
- 2.3.4 Do you want to pre-program the breakfast equipment in the kitchen, e.g. toaster, coffee percolator, etc. so that it operates according to a rhythm defined by you?

2.4 Heating data

- 2.4.1 How many radiators in this room?
- 2.4.2 Should it be possible to adjust the temperature in this room according to the usage?

2.5 Blind/shutter data

- 2.5.1 Are blinds and shutters planned for this room?
- 2.5.2 Should motorised operation be planned in addition to manual operation?
- 2.5.3 Are you only using blinds and shutters to protect against dazzle effects?
- 2.5.4 Are you also using the shutters for security reasons?
- 2.5.5 Are you also using the shutters for protection against light and heat?

2.6 TV and radio antenna data

- 2.6.1 Is there an antenna socket planned for this room?

2.7 Telephone system data

- 2.7.1 Is the main telephone connection located in this room?
- 2.7.2 Is there a secondary telephone socket in this room?
- 2.7.3 Are you using a telephone with a cordless handset?
- 2.7.4 How many cordless stations will you be using?

3 Planning and using the lighting

- 3.1 How certain are you of the switching functions for the lights? Would you prefer to establish the definitive functions once you have lived in the room for a while?
- 3.2 Do you want to be able to switch off the lights in the house from one or several switching points, in order to avoid checking the entire house before going to bed?
- 3.3 So that you feel safer in the house, do you want to be able to switch on all the lights including those in the garden from one or more locations in the house?
- 3.4 Depending on the occasion or situation, do you want to create different "atmospheres" by varying the lighting of the ceiling and floor lamps, and then be able to recall this setting at the touch of a button?
- 3.5 Do you always want to have an even, optimum brightness in the rooms, without having to push any buttons? (If the sun is too bright for example the shutters will close slightly, or the lights will come on automatically when it clouds over.)
- 3.6 In your absence do you want to simulate the appearance of occupancy by switching the lights in the various rooms on and off in a suitable rhythm?
- 3.7 Do you want this switching program to be automatically orientated around and saved according to your living habits?
- 3.8 If you are away from home do you want to be able to use the telephone to enquire whether all the lights are off, or to be able to switch the simulation program on in case you have forgotten?
- 3.9 Is the exterior lighting, e.g. at the garden gate and along the access paths etc. to be as flexible as the interior lighting, i.e. should it react to movement,

brightness and darkness?

- 3.10 Do you want to be able to check whether the lights are on or off from a central point?
- 3.11 From this central location do you also want to be able to switch the lights on and off or to program their sequence according to your requirements?

4 Planning and using the sockets

- 4.1 Are sockets to be provided on the external walls of the house or other exterior locations?
- 4.2 Should it only be possible to use the exterior sockets when needed?
- 4.3 Do you want to be able to switch off any of the sockets, e.g. in any of the children's bedrooms?
- 4.4 Do you want to be able to switch off the sockets in the bedrooms at night (if you are over-sensitive to electromagnetic fields)?
- 4.5 Should it be possible to switch standing lamps that are connected to any of the sockets on and off for the simulation of an occupied house?
- 4.6 Do you want to be able to program the breakfast equipment, e.g. toaster, coffee percolator, in the kitchen to work according to a rhythm defined by you?
- 4.7 Do you want the possibility of checking from a central location the sockets that are operating and those that are switched off as well as those that need to be used for the breakfast program?
- 4.8 If you were away from the house would you like to be able to deactivate certain sockets via the telephone in case you think, for example, that you have forgotten to unplug the iron?

5 Planning and using the room heating

- 5.1 What type of heating have you planned?
- 5.2 Is the specified thermostat valve to be the only possible way to adjust the temperature in the individual rooms?
- 5.3 To save energy, do you only want to heat the rooms according to the level of usage?
- 5.4 How exact do you want the temperature control?
- 5.5 Should it be possible to reduce the temperature through the night in all of the rooms? If the rooms are then being used in accordance with your living patterns, should the desired temperature be re-stored?
- 5.6 To save maximum energy, do you want a very flexible temperature control?
- 5.7 Do you want to be able to differentiate between weekdays and weekends?
- 5.8 Should holidays automatically be taken into consideration?
- 5.9 To save energy, should the radiators be turned off automatically when the windows are opened in a room?
- 5.10 During your vacation, do you want to maintain an energy-saving temperature level?
- 5.11 If you were away from home do you want to be able to use the telephone to check that your heating is working properly even on very cold days?
- 5.12 If you intend returning home earlier than planned, do you want to be able to raise the temperature setting to you optimum level via the telephone?
- 5.13 On sunny autumn or winter days, do you want to incorporate the solar energy to reduce your heat energy whilst maintaining an even temperature?
- 5.14 Do you want to be able to change the temperature in every room depending on how you feel?
- 5.15 Do you want to be able to check the temperatures

in all of the rooms from a central location?

- 5.16 Do you want to be able to simply change or set different temperatures for different time periods from one central location for all rooms?
- 5.17 From a central location do you want to be able to reduce the temperature in the guestroom as the situation demands (e.g. cancellation of a visit), without having to enter this room?
- 5.18 In your absence do you want a neighbour to be informed automatically if there are any deviations in the temperature as a result of a fault?
- 5.19 Do you want the customer services to be informed if there are any major disturbances?
- 5.20 Do you want to entrust a security service with your heating in your absence?

6 Planning and using hot water

- 6.1 How do you generate your hot water? From the existent heating system (summer operation?)?
- 6.2 Have you planned special hot water devices (gas or electric) for your requirements?
- 6.3 Do you plan using a solar panel for generating hot water as an energy saving measure?
- 6.4 Do you want to connect the washing machine and the dishwasher to the hot water network in order to save electrical energy?
- 6.5 Would you like the hot water temperatures in the kitchen to be different from those in the bathroom or other hand basins?
- 6.6 In your absence, do you want to be able to use the telephone to check that your hot water system is working properly or to make any changes?
- 6.7 In the case of disruptions, do you want to inform the responsible office, a security service or the customer services department?

7 Planning and using the heating system

- 7.1 Do you want your heating system to work in the most optimum way, i.e. using as little energy as possible?
- 7.2 Do you want to be able to monitor the operation of your heating system from a central location, without having to enter the boiler room?
- 7.3 Should any errors in the system be detected automatically and if necessary reported to your heating engineer?
- 7.4 Should this heating engineer have the possibility of carrying out remote diagnosis?

8 Planning and using the blinds and shutters

- 8.1 Should the blinds and shutters close automatically in the wind or rain?
- 8.2 Should the blinds close automatically if you have left the house and there is nobody else at home?
- 8.3 Do you want to register any manipulation of the blinds from the outside and then pass this information onto an address that is specified by you?
- 8.4 Do you want to program the blinds so that they move up and down as normal when the house is empty for extended periods?
- 8.5 Do you want to be able to check from a central location whether the blinds are fully or partially closed?
- 8.6 In addition to manual operation, do you also want to be able to check and adjust the blinds from a central location?
- 8.7 In your absence do you want to be able to check the functioning and control the blinds via the telephone?
- 8.8 Should any functional faults be reported centrally and if necessary reported to other sources?

9 Planning and using awnings

- 9.1 Do you want to have an awning over a veranda or balcony?
- 9.2 In addition to the usual manual operation do you also want the possibility of automatic operation so that the awning is lowered when the sunlight becomes too strong preventing the room behind from becoming overheated?
- 9.3 Should the awning be retracted automatically once a certain wind strength is reached or once it starts to rain?
- 9.4 Do you want to be able to check and control the functioning of the awning via the telephone?
- 9.5 Should any functional faults be reported centrally and if necessary reported to other sources?
- 9.6 Should it be possible to check and adjust the awnings from a central location, in addition to manual operation?
- 9.7 During your absence should the awnings be moved as they would during a normal day?
- 9.8 Do you want to be able to check whether the awning is fully or partially extended from a central location?

10 Planning and using window monitoring

- 10.1 Do you want to be able to check whether all the windows in the flat, cellar and on the roof are closed, or to be given an indication if any are slightly open?
- 10.2 Should any unauthorised attempt to open a window be registered?
- 10.3 Should this fact then be reported to an address specified by you?
- 10.4 If there is any attempt to force open a window do

- you want the lights in that room to go on automatically, and at the same time all the lights in the house (flat) and garden?
- 10.5 Should damage to the windowpanes be monitored and reported?
- 10.6 In addition to manual operation, do you want to have electrical operation for the windows?
- 10.7 Do you want to be able to operate electrically lockable windows both manually and automatically?
- 10.8 Should the opening and closing of windows be adjusted to meet the weather conditions or climate and temperature conditions within the rooms?

11 Planning and using door and gate monitoring

- 11.1 Do you want to be able to check whether the
– house door
– garage door
– garden gate or yard gate
is closed from a central location?
- 11.2 Do you want to be able to see who is standing at the gate or door?
- 11.3 Do you want to be able to speak to these people?
- 11.4 Do you want to be able to illuminate the areas in front of the doors or gates whenever necessary?
- 11.5 Do you want to be able to open the doors and gates via a motorised mechanism?
- 11.6 Do you want to be able to operate these motorised doors and gates from a central location in the house?
- 11.7 During your absence do you want to be able to check or change the closed status of the doors and gates?

12 Planning and monitoring the supply lines

- 12.1 Water valves
Should the main water supply be cut off via a valve if the situation demands?
Should this main water supply be shut off in general if there is nobody at home, to avoid the possibility of water damage?
Should any inexplicable water consumption generate a warning to you or a neighbour?
After such a warning, should the main stopcock be cut off and this status clearly displayed or reported to another source?
- 12.2 Oil valves
Do you want to be able to shut off the oil supply either manually or automatically should the situation demand, e.g. in dangerous circumstances?
For safety reasons, do you want to be able to cut off the oil supply when absent from the house, e.g. during vacations.
- 12.3 Do you want to be able to cut off the gas supply at the point where the pipe enters the house, either manually or automatically?
- 12.4 Do you want the gas supply to be cut off whenever the house is empty?
- 12.5 Should the gas supply be cut off when any unusual gas consumption is detected?
- 12.6 Do you want to install a sensor in one of the rooms to detect gas leaks, and do you want to automatically shut off the gas if this sensor is triggered?

13 Planning various meters

- 13.1 Do you want to be able to check how much energy each of your appliances is using thereby helping you save energy and costs?

- 13.2 How do you feel about being able to check how much money you are spending on electricity every day, week or month?
- 13.3 What do you think of the possibility of being provided with advice on saving energy when you are using a device or being told that there is a better tariff available?
- 13.4 As you know, water is becoming more expensive both for drinking and sewage.
Wouldn't it be useful to be able to check your water consumption at any time on a daily or monthly basis, and to work out the equivalent costs?
- 13.5 Wouldn't it be useful to be able to check the oil consumption at any time without having to enter the cellar to look at the oil tank?
- 13.6 Is it important to you to be able to compare oil consumption with that of the previous year for example, in order to be able to assess whether any implemented measures, e.g. heat insulation, have been effective?
- 13.7 Would it be interesting for you to know how high the gas consumption is, in order to be able to decide upon gas cooking and/or heating?
- 13.8 If you are on the (long-distance) heating network, would you like to be able to check that everything is in full working order at any time and to see how the costs are increasing? All necessary information can be viewed on the central operating and indication panel.
- 13.9 How do you feel about the possibility of arranging for the various meter readings to be transmitted via the telephone line at a time appointed by you, thereby eliminating the need for a visit to the house?
- 13.10 Do you want to be able to detect and read the length of the operating periods of the various devices, how often they have been switched on and off?

- 13.11 Do you want to be promptly notified once a particular checking interval has been reached?

14 Planning and using connections for household appliances

- 14.1 What appliances do you intend buying in the future?
- 14.2 Do you have a large kitchen, which is used not only for cooking but also as a breakfast room/living area?
- 14.3 Apart from the cooker, extractor fan, fridge and dishwasher, do you also plan to install the washing machine and dryer in the kitchen?
- 14.4 Or will they be placed in a separate "washroom" or utility room?
- 14.5 Would you like to be able to use your appliances in special situations without having to always look up the instruction booklet?
- 14.6 What do you think about tips, tricks and advice that allow you to help yourself instead of having to splash out on costly customer services?
- 14.7 Would you like to use your appliances at the times you want whilst exploiting the best tariff times?
- 14.8 Would you like to be informed of the status of your appliances at all times, including that of the washing machine in the cellar, for example, regardless of whether you are in the kitchen or bedroom?
- 14.9 Would you like to be able to check the status of your appliances, and to switch them on and off via the telephone?
- 14.10 Would you like to use water that has been warmed via a solar panel in your washing machine or dishwasher, which not only saves money but time too?
- 14.11 What do you feel about always being provided with useful information on the correct storage of food in your fridge?

15 Planning and using exterior systems

- 15.1 Do you want to have lighting in the garden, which you can adjust according to the atmosphere or occasion?
- 15.2 Do you want to automatically illuminate the path between the house and garden gate whenever anybody is using it?
- 15.3 Do you want to switch the garden lights on and off according to a specific program?
- 15.4 Do you want to install a sprinkler system in the garden?
- 15.5 Should this sprinkler system be switched on and off according to a specific time program?
- 15.6 Should the sprinkler system operate in accordance with the level of humidity?
- 15.7 Should it be possible to operate the sprinkler system depending on the various plants?
- 15.8 If you were away from the house would you like to be able to switch the sprinkler system on and off via the telephone?
- 15.9 Do you want to operate the fountain in the garden depending on the time or weather?
- 15.10 How would you feel about being able to enquire about the weather from a central location in the home? For example, to find out if it is raining and how hard, whether the air pressure has changed and how high it is, which direction the wind is blowing and how strongly?
What is the outside temperature and what's the trend?
Do you want to be able to use these parameters to control the necessary equipment?
- 15.11 Do you want to be able to operate the circulating pump of your garden pond exactly as you want, including the possibility of remote control?

- 15.12 Should the status of the pump filter be monitored and reported?

16 Planning and using security equipment

- 16.1 Would you like to have any unwanted activity in front of your house registered and displayed?
- 16.2 In addition to this message would you like to switch on an outside light in the area where the disturbance is occurring?
- 16.3 Would you like to have a display in the entrance area to your flat where you can check that everything is the same as you left it or whether there have been any changes in your absence?
- 16.4 On this display would you also like to be able to enquire about the status of other entrances (closed status of the windows, garage door, garden gate etc.)?
- 16.5 Should the reaction of security equipment be transmitted to an address that has been specified by you?
- 16.6 Do you want to be able to check the status of your security equipment via the telephone?
- 16.7 Do you want to be informed, via a pager for example, whenever something important changes in your home?
- 16.8 Do you want to be able to trigger an emergency call if you find yourself in a difficult situation?
- 16.9 Should this call be forwarded to another family member, a neighbour or an emergency service?
- 16.10 Should perhaps a doctor be informed?
- 16.11 Do you want to simulate occupancy? (In your absence the control simulates the illusion of an occupied house).

17 Planning and using a central operating and control unit

- 17.1 Do you know that with a special centralised operating and control unit you can also watch TV, and with that have a second TV in the kitchen?
- 17.2 Would you also like to be able to listen to CDs there?
- 17.3 Would you like to use it to make easy telephone calls by selecting the name and address from a telephone book in plain text and then dialling the number with a single keystroke?
- 17.4 Would you like all members of your family to be able to use this central operating and control unit?
- 17.5 Would you like to ensure that certain settings can only be made or changed by certain people?
- 17.6 Would you like to be able to initiate actions by simply touching the screen?
- 17.7 Without having to attend a PC course, would you like to be able to operate a system, in which all devices connected to it are controlled in the same way according to the same rules?
- 17.8 Would you also like to be able to send and receive fax messages on this machine?
- 17.9 Would you like to be able to read tips and advice on your devices without having to look up the individual instruction manuals?
- 17.10 Would you like to know with certainty that you do not need to buy everything at once, that you can in fact expand your system bit by bit as and when you want?
- 17.11 Do you want to install the unit in the hallway, in the kitchen, near the cooker or in the living room, or would you like several units distributed about the house?

Appendix B Terms and definitions

This summary of common and useful terms has been put together to ease understanding of building systems engineering, upon its introduction to the market. The definitions of technical terms and abbreviations refer to *EIB*, but also to more general connections and will be helpful to electricians, manufacturers, planners and the trade in general. Explanations are not given in a purely scientific manner; we have tried to give descriptions in layman terms. With this objective in mind, we have listed the universal terms that crop up in connection with building systems engineering – the list however should only be used in this context. In the creation of this list we have drawn on many dictionaries that already exist in the field of data technology. In some cases, the definitions may differ from those generally used in the field of telecommunication. Any suggestions with regard to changing the wording or the inclusion of terms not already listed will be gratefully accepted.

a.m.	Ante meridiem; before midday
a/b interface	Two-wire connection for the transmission of signals with analogue terminals (telephone, answering machine, modem, etc.).
A/D converter	Converts an analogue signal to a digital signal, see DIN 19226, Appendix D
Absence of electrical interaction/feedback	<ul style="list-style-type: none"> – Errors in devices connected to the <i>EIB</i> installation bus remain limited for those with absence of electrical feedback. – Errors, e.g. short circuits in an electrical segment, remain limited in these segments.
Absence of interaction/feedback	<p>Electrical and/or logical decoupling of bus devices and/or electrical segments or lines within a compound system.</p> <p>See absence of electrical interaction/feedback</p> <p>See absence of logical interaction / feedback</p> <p>See absence of physical interaction / feedback</p>
Absence of logical interaction/feedback	<p>The decoupling of two subsystems (e.g. lines) within a system to ensure that the subsystems cannot influence each other by the exchange of telegrams.</p> <p>Example:</p> <p>One line is used for light control and another for monitoring/reporting. Whenever a danger message occurs, it is possible for example to switch on the light. When the light is switched on however, a danger message should not be wrongly generated.</p>

Absence of physical interaction/feedback	See absence of electrical interaction/feedback.
AC	Area Coupler
Access	Method of reaching a specific place in a memory medium or type of organisation which establishes the sequence in which network partners can communicate with one another, see CSMA.
Access authorisation	Authorisation to use the system after entering a password or PIN.
Access lighting	Limited lighting for pedestrians
Account	User account that is used to calculate the cost of network services
ACK	Acknowledge
Acknowledgement	Positive confirmation of reception. With the <i>EIB</i> installation bus it is included in the acknowledgement field of the telegram.
Acoustic coupler	Device to link a computer to the telephone network via a telephone handset. Allows data transmission to other computers by converting digital signals into acoustic signals and vice versa.
Active conductor	Live wire
Actuators	<i>EIB</i> bus devices, which receive information, process it and trigger actions.

	<p>Examples:</p> <ul style="list-style-type: none"> – Switching actuator, binary output – Dimming actuator, analogue output – Display, display unit
ADC	Analogue Digital Converter
Address	<p>Identification of bus devices, e.g. in the form of a sequential number</p> <ul style="list-style-type: none"> – Telegram – Target address – Source address – Physical address – Group address
Address field	Part of the <i>EIB</i> telegram. Contains the source and target addresses.
Address manager	Hardware or software module for the automatic, dynamic allocation and management of group addresses in an <i>EIB</i> system with plug-and-play components.
Address table	See equipment list and function list
Addressing	Procedure with which the bus device is assigned a physical address and/or several group addresses.
Adjacency	See separation
AFL	Application-specific function bar, see function bar
Alarm configuration	The selection of sensors (e.g. closed status sensors and movement detectors) and signal transmitters to be analysed in an

	alarm situation.
Alarm scenario	Alarm configuration saved on the Home-Assistant.
Alarm, "local"	Visual and audible alarm to warn the occupants and scare any intruders.
Alarm, "silent"	Alarm message transmitted to the outside world via an automatic dialling and announcement device.
Alphanumeric characters	A set of characters containing letters and special characters in addition to numbers.
Alternative mark	Method of bit coding, used with inversion, AMI, see DDB
AM	See amplitude modulation
Amplitude keying	With amplitude keying, the information to be transmitted is superimposed on the frequency of a carrier. For example, if the information to be transmitted is digital, the carrier is switched ON with a logical 1 and switched OFF with a logical 0.
Amplitude modulation	Modulation method in which the carrier is modified in the rhythm of the signals to be transmitted.
Analogue value	Value which can take on an infinite number of intermediate values between a minimum and maximum, e.g. temperature, brightness.
ANSI	American National Standard Institute

Answering machine	Device which outputs saved messages when called and which automatically records incoming messages.
APC	Application Controller
APCI	Application Layer Protocol Control Information
API	Application Programming Interface; Application Interface of software modules (here the HomeAssistant in particular)
Appliance Interface	Interface between the <i>EIB</i> and the bus compatible devices (household appliances), consisting of the <i>EIB</i> bus coupling unit and the communications interface.
APM	Advanced Power Management; power saving circuitry for computers (Intel and Microsoft)
Application	Solution for a specific set of tasks within the framework of the <i>EIB</i> system
Application controller	Control device connected to the bus for application-specific links and processes. Not necessary for simple applications.
Application event	Event that is defined and solvable by the application itself
Application module	Also used to describe the application-specific hardware and/or user interface of a bus device.

Application program	Computer program with fixed tasks
Application software	Program for a set of defined additional functions.
Application-specific function bar	See function bar
Area	Via a main line it is possible to combine several bus lines to form an area using line couplers.
Area coupler	<i>EIB</i> system component. Connects a main line with the area line.
Area line	Connects several area couplers allowing data to be exchanged within the specified area.
ARI	Air-conditioning and Refrigeration Institute
ARU	Audio Response Unit
ASCII	A digital 7-bit code, usually referred to as ASCII characters
ASHRAE	American Society of Heating, Refrigeration and Air-conditioning Engineers
Asynchronous transmission	Transmission method in which the transmitter and receiver are only synchronised after the transmission of a special signal. Used with the <i>EIB</i> installation bus.

Audio-CD	Compact disk for music and voice reproduction.
Authorisation level	Allocation of the use of functions within a system for specific people.
Auxiliary power supply	Additional power supply for certain bus devices and sensors; additional to the power supply from the <i>EIB</i> .
Awning	Retractable sun protection made of firm material for windows, balconies, etc.
Backbone bus	Superordinate bus, which is used for example to connect several sub-buses. Can be constructed in the same way as a sub-bus, or be much more powerful.
BACnet	Communication protocol for building systems automation (ANSI standard, under revision as an ISO standard).
Band stop	Component in <i>EIB</i> powerline to physically limit the powerline transmission.
Bandwidth	In communication technology: The frequency band between two threshold frequencies, in which the voltage or current transmission drops by 3 dB. The bigger the bandwidth the more information can be transmitted per time unit.
BAPT	German Federal Office for Postal Services and Telecommunication
Base system	Basic module of a software program

Basic components	Term for the equipment which forms the basic requirements for communication between the bus devices, independent of application, e.g. power supply. See system components.
Basis tables	Data on people, companies, addresses or telephone numbers.
Baud rate	Dimension for the speed of data transmission, e.g. in bits per second.
BC	See broadcast
BCD	Binary Coded Decimal
BCI	Broadcast Interference
BCU	Bus Coupling Unit
BD	Bus Device
Bi-directional	In transmission technology means that signal flow is possible in both directions.
Binary system	System that can only take on two defined states.
BIOS	Basic Input Output System; software routines for the fundamental system operations of a computer.
Bit	Binary digit; binary unit either "1" or "0".
Bit coding	Adapts digital signals for transmission on the line. There are various bit codes (with reference to a given binary signal), where

	"voltage" and "no voltage" or "current " and "no current" represent the two possible states.
Bit error	Falsification of a binary character during transmission (from "0" to "1" or vice versa).
Bit error rate	Ratio of faulty bits to total number of bits during a transmission.
Bit rate	Bit frequency or bit speed. The speed with which information is transmitted, measured in bit/time unit.
Bitmap	Definition of the picture elements of a graphical representation in the computers screen memory.
Blind	Moving shutter composed of overlapping slats for windows, doors etc.
Blind control	Program to control blinds.
Block lock	Electromechanical safety lock with priming device for the alarm system, sabotage-proof.
Blocking effect of the band stop	Created when the band stop is arranged properly within the system.
BNC	Barrel Nut Connector; coaxial connector for high frequency connections of all types, such as for example, data network connections, antenna connections etc.
Boot process	Start-up of a computer system.

Breakthrough message	Display of highest priority messages on the screen, which are superimposed over the current contents.
Bridge	Connection of the same type of network with possibly differing transmission media (e.g. twisted pair and fibre-optic cables). A bridge converts among other things, the level or physical sizes, regulates access to the transmission medium and deals with transmission errors. It has no intelligence; such as for example that which is needed for the conversion of different transmission formats, see gateway.
Brightness sensor	Optoelectronic sensor which, depending on the sensitivity and mechanical design, can be used for internal and external areas.
Broadband transmission	Divides the bandwidth of the transmission medium into frequency bands. Certain tasks can then be assigned to the individual frequency bands, e.g. transmitting or receiving. Greater technical complexity when compared with baseband transmission.
Broadcast	Message from an active bus device sent to all other bus devices.
Browse	Turn the pages.
Browser	Auxiliary program to browse within files and data networks.
BSI	British Standards Institution

BSI	German Federal Office for Security in Information Technology
Btx	See screen text; see DATEX J, T-Online.
Btx decoder	Software to make the data received via modem visible on the screen.
Building disciplines	Represent specific works in the field of construction, i.e. the services provided by different, suitably qualified, contractors such as electrical installation, plumbing etc. Application area or domain.
Building systems automation	Networked equipment for the control and automation of functions within a building.
Building systems control	Previously used term to describe the central display, operation and reporting of operational systems in buildings. Section of the more general building systems automation.
Building systems engineering	Networking of system components and bus devices via the <i>EIB</i> installation bus to form a system tuned into the electrical installation, which guarantees the functions and processes as well as system links within a building. The intelligence is distributed among the bus devices, information is exchanged directly between the bus devices. See HBES.
Built-in unit	A bus device integrated into a housing.

BUS	Binary Unit System; a data exchange line to which many devices can be connected allowing them to communicate with one another ("omnibus line").
Bus access method	Method which each individual bus device uses to access the bus for the purpose of exchanging information (not physical, only organisational), see CSMA/CA, CSMA/CD.
Bus connection terminal	Is the same as a bus terminal, connects bus devices with the bus line.
Bus coupling unit, BCU	Forms the mechanical, electrical and data technical coupling between the bus line and the application module/terminal. May also include application software.
Bus device, BD	Any device that is connected to the bus line and contains at least one bus coupling unit.
Bus line	Line for transmitting data with the <i>EIB</i> installation bus, twisted pair for connecting the bus devices.
Bus rail	Top hat rail according to DIN EN 50022, 35x7.5 with inlaid data rail.
Bus topology	See topology.
Bus utilisation	A measure for the relative temporal occupancy of the bus line with telegrams. Specified as a %.

Busy	Occupied; acknowledgement signal for data transmissions.
Button	Also as a graphical symbol on the user interface.
Byte	A data word of 8 bits.
BZT	German Federal Office for Telecommunications Certification
Cache memory	<ul style="list-style-type: none"> – Fast buffer memory as a section of the main memory (RAM), which increases the speed of programs as it avoids having to access the memory drives (hard disk, disk and CD-ROM drives) as often. – Stand-alone hardware module (second level cache) with a particularly fast memory, which optimises microprocessor access on the main memory.
CAPI	<ul style="list-style-type: none"> – Communication Application Programming Interface, transmission standard for fax polling in Europe. – Common ISDN API; standard software interface for ISDN operation.
Carrier	To transmit information via radio, it must be put into a suitable frequency band. This is achieved by superimposing the information onto a carrier with the desired frequency.
CAS	Communication Application Standard; transmission standard for fax polling (Intel).

CASE	Computer Aided Software Engineering.
CATV	Community Antenna Television
CCIR	International Consultative Committee for Radio, see ITU
CCITT	International Consultative Committee for Telegraph and Telephone, see ITU
CD	Compact Disc
CDI (also CD-IV)	Compact Disc Interactive; interactive digital audio-video CD
CD-ROM	Compact disc as an interchangeable data storage medium in a computer system, read-only.
CE certification	Statement of conformity from the manufacturer. The products adhere to the corresponding EC guidelines, e.g. EMC regulations.
CENELEC	European Committee for Electrotechnical Standardization. European standards passed by CENELEC must be accepted as the national standard by all member countries in their original format.
Centralised system	System with a controlling centre. In this type of system, the control centre controls the exchange of information and device access to the bus.
CEPT	European Conference for the Administration of Postal and Telecommunication

	<p>Services.</p> <p>Committee for suggestions regarding new communication services and standardisation of the implemented methods of data transmission.</p>
Channel	<p>General term describing the transmission path for signals. It firstly indicates the actual purpose, e.g. data channel, television channel, etc. Further information then determines the transmission medium, e.g. wire channels, fibre-optic channels or radio channels. The physical features are also mentioned, e.g. carrier frequency channel or time channel. A transmission channel only ever knows one direction. With devices, this term is also used to describe individual equipment parts in more detail, e.g. 4-way switching actuator, channel 1 = relay contact 1, channel 2 = relay contact 2, etc.</p>
Character	<p>Element of a set, which can exist in the usual graphical form (letter, number, etc.) or in coded form (group of binary characters).</p> <p>Combination of several bits to form a unit understood by the system. With the <i>EIB</i> installation bus it consists of 11 bits: start bit, 8 data bits, parity bit, stop bit.</p>
Characteristic method	See load characteristic
Check bit	See parity bit

Checkback signal	<p>Message confirming that an item of information (command) has been understood and/or processed and/or executed and the relevant resource has changed its status. There are different types of checkback signals, which may need to be specified in greater detail.</p> <p>See confirmation of reception, acknowledgement.</p>
Checklist	Aid to systematic questioning.
Checksum	Additional data within a telegram, in order to detect any transmission errors.
Checksum field	Part of the <i>EIB</i> installation bus telegram.
Child-proof	Systems that prevent children gaining access to them.
Chip	Semiconductor crystal; integrated electronic circuit on a semiconductor crystal
Choke	Prevents any short-circuiting of the telegrams on the bus line due to the power supply.
City call	Radio calling system, which transmits signals in one or more zones (tones, numbers or texts), see pager.
Closed status sensor	Magnetic contact on windows and doors to monitor the closed status.
Closed-loop control	Process of bringing a true value in line with an adjustable set point and maintaining it, taking into consideration disturbance.

	es, e.g. regulating the room temperature by thermostat valves on the radiator. Also referred to as feedback control.
CNG	Tone signal for fax code (1000 Hz 500 ms, 0 Hz 3 ms).
CoC	Centre of Competence
Coding	Agreed representation of information to be transmitted, e.g. the representation of a character by voltage or current. See bit coding.
Collision	Occurs when two or more transmitters access the bus simultaneously. With the EIB installation bus there is a mechanism to avoid collisions. See CSMA/CD
Colour depth	Differentiation of the colour difference on the screen; depending on the method up to 16.7 million colours (TrueColor).
Command	Information contained in the telegram that orders the triggering of an actuator, e.g. ON/OFF, UP/DOWN, COLD/WARM.
Common system manager	Contact person for a comprehensive <i>EIB</i> system who is common to all building disciplines, e.g. gas, electricity etc.
Communication network	Facilitates the transmission of data, voice, text or pictures between the devices.
Communication system	– System for the transmission of information between two or more devices

	– Representation of the connection of various system components, i.e. the communication between applications as well as subsystems and devices (hardware and virtual devices).
Communications socket	Interface between the <i>EIB</i> and the bus compatible devices (household appliances), consisting of the <i>EIB</i> bus coupling unit and the communications interface.
Compatibility	The ability of devices from one or several manufacturers to be operated in conjunction with other devices within a bus system, without exerting a negative influence on one another. Example: Within a system, sensors from manufacturer A control actuators from manufacturer A and sensors from manufacturer B control actuators from manufacturer B. Devices from manufacturer A however must not be used directly with devices from manufacturer B. See interoperability.
Components	See basic components, system components.
Computer	An electronic computing machine that is controlled by programs, preferably with digital data processing. In special cases analogue computers are used for measuring purposes.
ComSys	Communication System

Configuration manager	Manages the configuration status as well as the functionality of the equipment available in the HomeAssistant.
Configure	Set the parameters of a computer system, a peripheral device or a program
Confirmation (of reception)	Reply to confirm the reception of faultless or faulty information. See ACK, acknowledgement, checkback signal
Console	<ul style="list-style-type: none"> – Control panel – Input and output device of computer systems, see terminal (keyboard/screen, keyboard/printer, touchscreen, etc.)
Context-sensitive	Information specific to the situation.
Control centre operation	Method of using the <i>EIB powerline</i> controller.
Control field	Part of an <i>EIB</i> telegram . Contains system information such as for example, access priority.
CoRes	Concrete Resource; hardware components of the HomeAssistant (modem, loudspeaker, etc.), which are stored as an abstraction of the physical device in the HAL (Hardware Abstraction Layer).
Correlative pattern comparison technology	Correlation is a dimension for statistical similarity. With <i>EIB powerline</i> , bit decisions are made on the basis of correlation. This technology is very robust with regard to disturbance.

Coupler	See area coupler, line coupler.
Coupling module	See bus coupling unit.
CPU	Central Processing Unit; central control of a computer with microprocessor
Cross-reference list	See equipment list, function list.
CRT	Cathode Ray Tube
CSMA	Carrier Sense Multiple Access; a multiple access method in local data networks, which by virtue of a special process (e.g. CSMA/CA) prevents any collisions during simultaneous transmissions.
CSMA/CA	Carrier Sense Multiple Access with Collision Avoidance
CSMA/CD	Carrier Sense Multiple Access with Collision Detection; denotes a bus access method, standardised according to ISO 8802-3. Every bus device listens in on the bus and only accesses the bus once it detects that there is no data traffic. When sending a message, it simultaneously listens in to ensure that no other bus device has begun to transmit at the same time. If a collision is detected both devices withdraw. Random generators in the bus devices control the time until the next bus access, so that there is only a very slight possibility that both bus devices will begin their transmissions

	again at the same time. With high bus traffic, the net data throughput is greatly reduced by the associated time delays.
CT 1+	Analogue transmission standard for cordless phones, not protected against bug-ging.
CT 2	Digital transmission standard for cordless phones, limited protection against bug-ging
Cursor key	Key for controlling the position of the cursor.
D/A converter	Converts a digital signal into an analogue signal (see DIN 19226, Appendix D).
D1	The German Telecom radio telephone network.
D2	Radio telephone network from the Mannesmann Mobilfunk company.
D2B	Alternative abbreviation for DDB, Domestic Digital Bus
DAC	Digital-to-Analogue Converter
Daily profile	Smallest adjustable unit for time-temperature profiles.
DAL	Data Access Library; with regard to ETS, access functions for reading the database are provided.

Data	All information elements that are exchanged via the transmission paths and processed in communication devices.
Data circuit-terminating equipment, DCE	Converts the signals from the data terminal into a form suitable for transmission, and converts the arriving signals into a form suitable for the terminals. A modem is a typical device for adapting signals in an analogue network such as the telephone network.
Data field	Part of the telegram with <i>EIB</i> technology that contains the useful data.
Data interface	Term used in building systems engineering for a bus device with a V24/RS 232 interface. Bus devices can for example be programmed via the data interface.
Data management module	Module for the management of data in the HomeAssistant.
Data rail	Conductive plate for the bus used in building systems engineering, inserted into the DIN rail. See bus rail.
Data rail connector	Facilitates the connection of the bus lines to the data rail.
Data service	Supply and management of data transmission possibilities in large networks (e.g. Btx, Datex J etc. by the German Telecom).
Data sink	Data receiver.

Data source	Data transmitter.
Data terminal equipment, DTE	General term for all devices transmitting and/or receiving data, i.e. data terminals, data concentrators and data processing systems. This also includes telecontrol terminal equipment.
Database	A collection of data by the systematic storage of related data; search method for the fast and secure retrieval of individual data items; access possible via different search mechanisms. See product database.
Datex	Various data transmission services of the German Telecom.
Datex J	Development of Btx.
Datex P	Data transmission via addressed data packages according to the X.25 protocol.
dB	Decibel; logarithmic dimension for the ratio of two voltages, currents or quantities, including optical quantities.
DCF 77	Time transmitter located in Mainflingen (D), carrier frequency 77.5 kHz, approx. range 1500 km.
DCI	Display Control Interface (Intel and Microsoft), real-time video representation without loading the CPU.
DDB	Domestic Digital Bus

Debugging	Troubleshooting and error removal in hardware and software; test.
Decentralised bus access method	All bus devices can access the data bus.
Decentralised system	System that manages without a control centre. In such systems the bus devices themselves regulate the process of exchanging information and bus access.
DECT standard	Digital European Cordless Telephone Standard, protected against bugging.
Device connection box	Installation material
Digital	Representation of information with discrete (staged) values.
Dimmer	Device for the continuous variation of the brightness of lights.
DIN	German Institute for Standardization.
DIN rail	Data rail model.
DIN rail mounted devices	Devices according to DIN 43 880 to clip on to the DIN rail according to DIN EN 50022.
Directory	A listing of documents or files.
Diskette, disk	Disk shaped storage medium, easily interchangeable and suitable for data exchange; currently available in 3.5" format.

Display unit	<ul style="list-style-type: none"> – Device for the alphanumeric or graphical display of information, – Liquid crystal mini-display as an <i>EIB</i> device with the following functions: alphanumeric display, blinking and signal tone as well as an acknowledgement key, see info display
Distortion	Change in the original form of a signal during transport through a circuit or line.
DKE	German electrotechnical commission in DIN and VDE.
DLL	Dynamic Link Library; software library which in the course of a program once called up is loaded into the memory and after execution removed again.
Door camera	Visual extension of the intercom system by a simple TV camera at the entrance door, garden gate.
Door contact	Contact to monitor the closed status of the door, see magnetic contact.
Door intercom	Device allowing the user to enquire about the status of the door via the telephone or to open the door from a distance.
Double word	A 32 bit data word.
Download	The transfer of data from a large computer into a smaller one, e.g. a microcomputer; updating virtual memory resistant programs (firmware in EEPROMs or Flash-ROMs); transferring data from a third party

	computer into your own computer.
DR	Choke
Drag-and-drop	To move a screen element from one position to another with the mouse cursor.
Driver	Sub-program for controlling devices (e.g. printers) or executing other programs.
DSP	Digital Signal Processing; digital processing of analogue signals (after AD conversion at the circuit input and if necessary DA conversion at the circuit output). Used for example in measuring methods, control technology, filters, displays, modulators, demodulators, etc.
DTMF	Dual Tone Multiple Frequency; dialling procedure in which after every keystroke, the additive mixed product is generated from two frequencies of a matrix. See MFV
Dual system	Number system in base 2 represented by the numbers 0 and 1.
Duplex	<p>There are basically three ways of using a transmission path:</p> <ul style="list-style-type: none"> – One-way traffic (simplex, i.e. information flows in one direction only, e.g. point-to-point radio). – Exchange traffic (half-duplex, i.e. transmission on the same path alternates in direction, e.g. telex network). – Two-way traffic (duplex or full duplex, i.e. simultaneous transmission in both

	directions, e.g. telephone network).
Duplex operation	Simultaneous functioning of two data transmission and reception devices in separate locations (bi-directional communication, full duplex).
Dynamic scenario	Program to operate lights and blinds in variable time sequences.
Echo	(Unwanted) signal caused by reflection that travels back to the transmitter.
EDH	Enhanced Device Handling; a logical link for handling routines with separate data libraries.
Editor	Program which supports the entry, output, modification and saving of data (e.g. texts and programs).
EDP	Electronic Data Processing, see computer.
EEPROM	Electrically Erasable Programmable Read Only Memory
EHSA	European Home Systems Association
EIA	Electronics Industries Association, standards committee in the USA.
<i>EIB</i>	European Installation Bus Denoted by the trademark EIB . A decentralised, event-controlled, electrical installation bus for switching, reporting, controlling, monitoring and displaying in functional and residential buildings. Fol-

	lows DIN EN 50 090 or DIN V VDE 0829.
EIB Tool Software (ETS)	See ETS
EIBA	European Installation Bus Association; organisation for all companies developing and manufacturing <i>EIB</i> products.
EIBA certification	Confirmation from EIBA that the product meets the requirements.
EIBA trademark	The EIBA logo EIB
EIS	<i>EIB</i> Interworking Standard.
Electrical interference	See electromagnetic compatibility.
Electrical segment	Smallest independent unit within the topology of a bus system/an <i>EIB</i> installation. An electrical segment is supplied by at least one power supply with choke.
e-mail	Electronic mail transmitted within a computer network or by remote data transmission.
EMC	Electromagnetic Compatibility; property of electronic and electrical systems, which work perfectly under certain conditions and do not cause mutual interference.
EMC protection management	Measures to comply to the EMC guidelines.

Emergency call	Message with the highest priority in the message system; can be reported to the police, fire brigade etc. See breakthrough message
EMI	Electromagnetic Interference
Energy management	An application for cost management, which takes into account the energy tariffs.
EPIS	<i>EIB</i> Product Interworking Standard
EPROM	Erasable Programmable Read Only Memory
Equipment level	Definition of the design of an electrical installation involving up to 3 stars.
Equipment list	List of devices connected to the <i>EIB</i> installation bus. Created during the project design stage. The equipment list contains: <ul style="list-style-type: none"> – Physical address – Device type – Manufacturer – Installation site – Group address(es) – Remarks See function list.
Error detection	Method of detecting transmission errors. See parity bit, check sum
Escalation	See message escalation.
ESD	Electrostatic Discharge

ESPRIT	See European Strategic Programme for Research in Information Technology.
ETE	<i>EIB</i> Tool Environment; software library for basic ETS functions.
Ethernet	A LAN (Local Area Network) with a bus structure, access to which is achieved with CSMA/CD. The maximum transmission rate is equal to 10 Mbit/s.
ETS	<i>EIB</i> Tool Software; software for the design and commissioning of <i>EIB</i> products.
ETSI European Installation Bus Association	European Telecommunication Standard Institute See EIBA
Eurosignal	Radio paging system
Event manager	Analyser of events that can arise in the VALs.
Event-controlled information exchange	Information that is passed on in specific situations.
External camera	Simple TV camera to monitor the outside area or to check visitors at the entrance door (element of the door intercom system, see door camera).
External protection	Involves the checking of all windows and doors etc. for their closed status by suitable sensors, as well as the checking of outside areas by movement detectors.

External security	Positive status check of all sensors and actuators to guarantee external security.
Extra-low voltage	Voltage ≤ 25 V AC or ≤ 60 V DC for protection against direct or indirect contact. See FELV, PELV, SELV.
Fan in	Standardised value of the input current. (Definition of the value however is arbitrary).
Fan out	Specifies how many inputs can be controlled from an output. Example: If fan out = 8, then 8 inputs can be controlled when fan in = 1 or 4 inputs when fan in = 2.
Fax	Transmission of graphical information via the telephone network.
Fax polling	Communication between fax machines via remote polling; reception of prepared messages after selecting the polling function.
Fax-on-demand	Polling of prepared fax messages via the telephone; after agreeing the transmission on the telephone, operation switches over to fax mode.
FELV	See Functional Extra Low Voltage
Fibre-optic cable	Medium for the transmission of optical signals.
FIFO	First In First Out; sequence for data processing, the first accepted into memory

	is the first thrown out again.
File	Set of data belonging together with an own name.
Filter table	Table that can be created by the design and commissioning program. It is loaded into the coupler. It specifies which telegrams will be passed on or blocked by the coupler. See coupler.
Firmware	System and application programs that are permanently stored in the computer memory (ROM). See download.
Flag	Character indicating status.
Flash memory (Flash-ROM)	Fast, integrated mass storage with read and write properties (similar to EEPROM). Information is retained when the power supply is cut off and can be deleted by short current pulses (flashes) without additional external devices.
Flat square monitor	Computer screen with very slight camber.
Floor channel	Type of channel for laying cables.
Floppy disk	Magnetic disk.
Flow diagram	Graphical representation of the sequence of steps in an operational process.

Flush-mounted device	Bus devices that are installed in the wall, flush to the surface.
FM	Frequency modulation
Font	Letter style, character set
Frame	Within data transmission also used to describe a bit group.
Frame grabber	Device to produce single pictures from a video sequence with the possibility of after-editing.
Free field	Ideal transmission area without interfering or reflective influences, e.g. <i>EIB</i> radio.
Freeware	Free software, where the developer retains the copyright.
Frequency band	Section of a frequency spectrum.
Frequency division multiplexing	Simultaneous transmission of different information on a transmission medium with the aid of various frequencies.
Frequency keying	With frequency keying, the information to be transmitted is superimposed with the frequency of a carrier. For example, if the information to be transmitted is digital, the frequency of the carrier is boosted by a certain amount with a logic 1 and reduced by that amount with a logic 0.
Frequency response (amplitudes)	Signal height in relation to the frequency; dimension for the bandwidth of a transmission system.

Frost protection	Minimal heating program with a fixed minimum temperature.
FSK	Frequency Shift Keying; special frequency modulation method involving the keying of two or more frequencies.
FTP	File Transfer Protocol; protocol for the transmission of files between computers.
Full duplex	See duplex.
Function bar, application specific (AFL)	The application-specific function bar is an operating element group in the lower screen border of the HomeAssistant. It makes it easier for the user to find his way around the application and entire system.
Function groups	Combination of several functions to form one unit.
Function list	Describes the interaction between actuators and sensors. The function list contains: <ul style="list-style-type: none"> – Group address – Allocated sensor – Allocated actuator – Remarks See equipment list.
Functional building	Building for commercial usage.
Functional Extra Low Voltage, FELV	Low voltage without protective separation according to DIN VDE 0100 part 410/11.83 section 4.3.3 Modification draft A2/8.88 Future: Low voltage with earthed electric

	circuit without protective separation; for functional reasons additional measures are needed against direct and indirect contact.
Functions	<p>Functions generally describe the connection between cause and effect, between input value and output value or sensor and actuator. The <i>EIB</i> system offers the following functions:</p> <ul style="list-style-type: none"> – Switching – Controlling – Regulating – Reporting – Measuring – Monitoring
Gateway	Connection element between different bus systems or networks (translation of different protocols).
Glass breakage sensor	Sensor to monitor glass panes in windows and doors, e.g. by interrupting a closed circuit current or by noise detection.
Glossary	Index of words with descriptions.
GMT	Greenwich Mean Time
GND	Earth (Ground US)
GPS	Global Positioning System; global satellite navigation system based on radio.
Green mode	Energy saving function in a PC which involves switching off the monitor, switching off the drives, decreasing the clock

	rate etc., see APM
Group address	Address which allows several receivers to be contacted with a telegram. These form a group. The group address is a function-related address. In ETS 1 it is represented in two levels with main and sub groups. With ETS 2 it can be represented in either 2 or 3 levels with main, middle and sub groups.
GSM	Global System for Mobile Communications; international transmission standard for mobile radio.
GST	Building systems engineering
HAL	Hardware Abstraction Layer; the abstraction of <i>EIB</i> hardware (concrete resources) is determined in this level.
Half-duplex	See duplex.
Halogen-free line	Special bus line.
Handshaking	<ul style="list-style-type: none"> – Co-operation between two computers via the reciprocal exchange of data, always after acknowledgement – Exchange of data between two interfaces for the purpose of mutual control.
Handy	Colloquial term for mobile phone
Hard disk	Disk shaped, magnetic storage medium in a hard drive or in the form of a removable disk memory.

Hardware	All mechanical components and devices of a computer system.
HBES	Home and Building Electronic Systems
Header line	The header line in the upper screen border of the HomeAssistant (with integrated status line) is a helpful aid to the user. It permanently displays the name of the application or operating mask. See status line.
Heating program	Temporal sequence of daily profiles.
Heating program cycle	Cyclic repetition of daily profiles.
Help system	On-line support system, e.g. for the users of a HomeAssistant.
Help text	Advice and tips in the form of texts that can be called up during running programs.
Home banking	Carrying out bank business from a home PC.
Home office	Screen workplace in your own home, on-line connection with your employer
Home shopping	Carrying out your shopping from a home-based PC.
HomeAssistant	Software package, see chapter 5
HomeAssistant Tool Software (HTS)	Integrates the HomeAssistant into an <i>EIB</i> system configured with ETS 2.

Hook detection	Detection of whether the telephone receiver is on the hook or not, see hook switch.
Hook switch	Cradle switch.
Host computer	Main computer to which other lower order computers or controls are connected.
Hotline	Service centre for emergencies, contacted via telephone or fax, currently free, 24-hour operation.
Household systems automation	Range of tasks as for building systems automation but with regard to the home or living areas.
HTML	Hypertext Markup Language; formal language for the creation of text that contains so-called hyperlinks (formatting language for documents). HTML allows the integration of texts, pictures and sounds in hypertext documents.
HTTP	Hypertext Transmission Protocol; transmission protocol in the Internet.
Hyperlink	Connections in a networked, hierarchy-free system which make information from different types of media accessible. Hyperlinks are used for example to guide the user through a help system with text, graphics, sound and video.
Hypertext	A networked text system, in which additional information can be called up as needed via a means of highlighting (or markings and inserted graphics).

Icon	Symbol.
ID	Identification
IEC	International Electrotechnical Commission
Impedance	Amount of electrical resistance of the 230/400 V supply network. With <i>EIB powerline</i> systems this is generally dependent on frequency and location. A low impedance dampens <i>EIB powerline</i> transmissions.
Increment	Increase by a specific amount
Incremental	Changing in defined steps...
Index	Directory of names or objects, register
Indication system	System module of the HomeAssistant for the generation of messages.
Inductive disturbance	Undesired transmission of a signal from one data transmission path to a neighbouring path (by coupling of an electric, optical sort etc.)
Info display	See display unit, mini display
Information	General term for every type of single or combined message, statements or characteristic values, which are exchanged between bus devices.
Infrared decoder	Element for data transmission based on infrared light.

Infrared hand-held transmitter	Remote control unit for the transmission of digital data telegrams using infrared light.
Infrared light	Invisible radiation in the red area of the light spectrum with wavelengths > 770 nm.
Infrared receiver	Element for data transmission based on infrared light.
Infrared receiver-decoder	Element for data transmission based on infrared light.
Infrared system	System for the transmission of information using infrared light.
Infrared transmission	Wireless means of transmission using light in the infrared range as the transmission medium.
Infrared transmitter	Element for data transmission based on infrared light.
Installation (software)	Installation of operating systems and programs with the set-up command from external storage media or the network server.
Installation bus system, <i>EIB</i>	A system which is based on the <i>EIB</i> installation bus and contains a transmission path and protocol as well as bus devices/components, product database, system documentation etc.
Installation bus, <i>EIB</i>	See <i>EIB</i>

Installation socket	Installation material
Installation zone	Established cable paths in the case of concealed wiring arrangements.
Integrated Services Digital Network, ISDN	ISDN denotes the public digital telecommunications network, which on one line under one call number allows the simultaneous transmission of voice, data, text and pictures. Several services with high transmission quality can run via the same line, e.g. fax and phone.
Interaction	Manual intervention by the user, in order to be able to proceed with the program.
Interactive TV	Interaction between screen information (questions, problems) and user input via mouse, keyboard or touchscreen.
Intercom system	Voice link in half-duplex mode between the living area and the entrance door or the garden gate, usually combined with the doorbell (entrance) and the open button (inside the house).
Interface	Electrical, mechanical or data-technical interface for adaptation between different devices and systems. In data processing, an interface between the computer and its peripheral devices and between data networks of differing structures, see gateway. In <i>EIB</i> there are defined interfaces, for example between the line and bus coupling unit or between the bus coupling

	unit and application module.
International Electrotechnical Commission, IEC	This commission has its headquarters in Geneva and develops international standards for the individual areas of electrical engineering.
International Organization for Standardization, ISO	Headquarters in Geneva. Develops international standards for various technical fields excluding electrical engineering.
International Telecommunication Union, ITU	The tasks of this union include the international allocation and registration of transmitting and receiving frequencies, the promotion of new developments and the international co-ordination of activities in the field of telecommunication. The formulation of technical recommendations previously taken up by the CCITT has been carried out by the ITU-TS, the standardisation body of the ITU, since spring 1993. Since 1993, officially sanctioned co-operation with ISO/IEC JTC 1 "Information Technology" in the drafting of telecommunication standards. The radio communication sector, ITU-RS, has been named as the successor to CCIR.
Internet	World-wide computer network
Interoperability	The ability of devices from one or several manufacturers to work with other devices within an application or across applications.

Interrupt	Interruption of a running program
Intersection and adjacency	Intersection and adjacency of <i>EIB</i> cables with other systems.
IR decoder	See infrared decoder
IR receiver	See infrared receiver
IR transmitter	See infrared transmitter
IrDA	Infrared Data Association; committee for the purpose of establishing a quasi-standard for infrared data transmission (half-duplex; 9.6-115 kBit/s; range 1-3 m)
ISDN	Integrated Services Digital Network; network that integrates a variety of data transmission methods and services.
ISO	International Organization for Standardization.
ISO 9000	Rules for the layout and design of a quality control system. Standards of the 9000 group deal with all the problems of quality control, from the development through production right up to delivery of products and services.
ISO/OSI seven layer model	OSI = Open Systems Interconnection. Theoretical model for the subdivision of communication processes into different layers. The layer model does not determine requirements, it merely describes which requirements need to be established in the various layers.

	<ul style="list-style-type: none"> – Layer 1: electrical and mechanical quantities – Layer 2: data protection – Layer 3: connection layout in the network – Layer 4: transport of information through the network – Layer 5: connection set-up by the user – Layer 6: transparent preparation of data – Layer 7: user instructions <p>The communication processes of the <i>EIB</i> installation bus correspond to this model.</p>
Isolated signal area	Transmission range isolated by band stops for <i>EIB</i> powerline applications.
ISP	Internet Service Provider; company that provides access to the Internet subject to a charge.
ITU	International Telecommunication Union
IWV	Pulse Dialling Method; digital dialling procedure in the telephone network (alternative to MFV).
Java	Programming language in the World Wide Web (company JavaSoft or Sun Microsystems), which aims to help the WWW achieve the functionality of a network computer.
JPEG	Joint Photographic Experts Group; committee that has developed a standard for digital picture compression.

Junction	Point in the bus at which the transmission medium branches
Keyboard	Bank of keys for the entry of alphanumeric and special characters in the computer and for the execution of control functions.
Keyword index	Method of finding terms in a file.
LAN	See Local Area Network
Laser disc	Disc that records sounds digitally, pictures in analogue.
Layer model	See ISO/OSI seven layer model
LC	Line Coupler
LCD	Liquid Crystal Display
Leased line	Telephone or data line which is constantly available to the user.
LED	Light Emitting Diode
Level ratio	The ratio of two electrical voltages, currents or powers. The signal to noise ratio (S/N) on the power network is the decisive factor and is given as the level ratio (in decibels [dB]).
Library	Here: A collection of sub-programs to process frequently occurring tasks.
Light intensity switch	Switching element that reacts to light intensity.

Lighting actuator	Installation bus device, which switches or dims lights according to the bus telegram
Lighting control	Control of the lights in an electrical system.
Lightning arrester	Part of the lightning protection system to divert excess currents.
Lightning protection system	System for the protection against lightning strikes.
Line	Smallest element of the <i>EIB</i> installation bus with up to 64 bus devices. The line consists of one or more electrical segments that are connected via repeaters.
Line coupler, LC	Component in the <i>EIB</i> installation bus system used to connect lines together. Telegrams are either passed on via the line couplers or blocked by them, see filter table.
Line identification	Measure to identify the lines.
Line segment	See electrical segment
Line termination	See terminating resistor.
Link	<ul style="list-style-type: none"> – Link; connection element between hardware or software modules – Return command; sub-program function, which creates the connection to the main program

Link layer	Session layer of the OSI layer model.
List box	Representation of tables or lists in a Windows window. The complete list can be read by scrolling.
LL	Link layer
Load centre	Installation site of an <i>EIB powerline</i> repeater. A point within the installation at which separation from all <i>EIB powerline</i> devices is as equal as possible. This achieves the greatest efficiency of the repeater.
Load characteristic	Criterion for the possibility of using <i>EIB powerline</i> .
Load management	Application that monitors the energy consumption of <i>EIB</i> bus devices with the aim of using electrical energy more economically or avoiding any overloading of the network.
Load physical address	Assign the bus device with its address.
Local Area Network, LAN	Local network for bit-serial communication between independent devices that are connected together via a communication medium.
Logical operation	Guided operating procedure
Login	Signing on to the network with name and possibly password.

Logo	Company sign.
Logo field	Place for the representation of the logo
Logout	Sign off from the system
LON	Local Operating Network; local network in automation technology, especially for household and building systems automation.
Loop formation	Illegal connection in bus technology.
LV	Repeater
LWL	Fibre-optic cable
Macro (command)	Group of individual commands belonging together and which under a new name can solve complex tasks.
Magnetic contact	Magnetically operated protective contact (e.g. reed contact) in the <i>EIB</i> system to monitor the closed status of windows, doors, etc.
Mailbox	Electronic post box into which messages for other mailbox users can be written.
Main group	Part of the group address.
Main line	Component in the installation bus system. Connects several line couplers together and these possibly with the allocated area couplers. This facilitates data exchange across the area and included lines.

Mains impedance	See impedance
Mains signalling	Transmission of information in a power installation using signals that typically lie in the 100 kHz range
Maintenance contract	Defined service agreement for the purpose of maintaining good operation.
Mask	Operative representation on the screen; screen contents.
Mask element	Element of the mask, e.g. print key or display element.
Master/slave	In a system with a master/slave configuration, one device (master) leads the functional process in the exchange of information. All other devices (slaves) are dependent on the master. With the <i>EIB</i> installation bus all devices are equal.
Media coupler	Interface between different bus transmission methods.
Medium	Term for the means of transmission of information, e.g. copper wiring, infrared, radio, coaxial cable, fibre-optic cable.
Menu	List of possible actions represented on the screen, which can be executed via the user interface.
Menu structure	The grouping of individual menus to form a hierarchic or linked overall arrangement with possible crossovers (menu tree: hier-

	archic, menu graph: linked)
Message category	A pictograph is used to represent the type of incoming message at the HomeAssistant (danger, emergency etc.).
Message escalation	Automatic mechanism in the message system, which orders messages according to their urgency and depending on the reaction, allows the running of various escalation levels with various actions.
Message profile	Description of the properties of a message.
Message profile for external communication paths	This message profile is designed for remote control.
Message system	Via the HomeAssistant, this system informs the user of different types of event, from danger messages up to tips and advice. Messages, in particular those with higher priority such as alarms and emergencies, can also be transmitted to external locations.
MessLog	Message log
MessQueue	Message queue
MFC	Microsoft Foundation Classes; almost standard library of classes from Microsoft with a common interface.
MFV	Multi-frequency dialling method, see DTMF

Microcomputer	Computer based on a microprocessor.
Microprocessor	Central element for controlling and processing data in a computer, in the form of a highly integrated circuit, see CPU.
Middle group	Part of the group address.
Mini LCD	See display unit, info display
Mixed installation	<i>EIB</i> installation with various transmission methods.
Modem	Modulator-demodulator; device used for the transmission of data via the telephone line (analogue network) using FSK modulation.
Modulation	The modification of a carrier by the information to be transmitted.
Modulation method	The modification of one or more signal parameters of a carrier by another signal. These parameters include amplitude, frequency and phase. If the carrier is sinusoidal, we differentiate between amplitude, phase and frequency modulation. If the carrier is pulsed, the methods are pulse amplitude, pulse frequency and pulse phase modulation. The modulation of sinusoidal carriers with digital signals is called keying, e.g. frequency keying.
Module	Element of a compound system (hardware, software).

Monitor	<ul style="list-style-type: none"> – Screen for the representation of computer data, graphics, video sequences – Program for the visualisation of statuses in systems, e.g. bus monitor
Monitoring function	Measures for monitoring the expected/actual value deviation.
Motherboard	Main board of a computer with the microprocessor, memory (RAM) and other important elements; baseboard.
Mouse	Operating device with a ball whose two-dimensional movement moves a cursor on the screen. Commands can be entered using the two or three keys. A variant is the mouse with a reflex light barrier whose movement across a specially indexed background describes the position of the screen cursor.
Mouse click	Possibility of entering PC commands
Movement detector or sensor	Device to detect moving persons, animals or other objects, e.g. using infrared or ultrasound technology.
MPEG	Motion Picture Expert Group; committee to define a method of digital video compression
MPR II	Recommendations for low-radiation screens (Swedish standard)
Multi-frequency dialling method	MFV, see DTMF

Multimedia	Information system which uses various media
Multimedia PC	PC for representing different types of information
Multiplexing	Method of simultaneously (or virtually simultaneously) transmitting several items of information on one transmission channel.
Multitasking	Several applications and system programs can run simultaneously.
Music-on-hold	Playing music whilst a conversation is on hold.
NAK	Negative acknowledgement for data transmissions (characters have been received but not understood).
Navigational element	Aid to find a desired setting in a program.
Network	General term for a connected system for the transmission of energy and/or information. Examples: – Power network – Data network – Telephone network – D network Or: The general term for every type of data connection between more than one device, see LAN, WAN
NG	Power Supply Unit

Night reduction	Heating program to save energy.
Node	Nodal point, branching point; network node, connection point for branching in data networks.
Noise immunity	See electromagnetic compatibility.
Noise radiation	See electromagnetic compatibility.
Numerical characters	Character set consisting of numbers only.
NVRAM	Non Volatile RAM
Object	An object is a quantity of information, which is embedded in another file or can be linked with it such as for example, a diagram or a graphic.
Occupied house	See simulation of occupancy
OCR	Optical Character Recognition; method for the optical detection of characters, especially hand-written characters.
OCX	OLE controls, see OLE
ODBC	Open Data Base Connectivity; database driver under Windows.
OEM	Original Equipment Manufacture; manufacturers of hardware and software
OLE	Object Linking and Embedding; the linking and embedding of objects to form a compound document.

Online	Physical and electronic connection of a computer with its peripherals; electronic connection of computers in data networks.
Online help	Help on data networks.
Online service	Supply and management of services in data networks.
Open-loop control	Process by which the input values influence the output values. Also referred to as sequence control, logic control.
Operating device	Device for the input and output of information between the user and <i>EIB</i> system
Operating element	Button representation on the touch-sensitive screen
Operating system	Program package, which controls, coordinates, monitors the sequence of programs in a computer and regulates access to the peripheral devices.
Opto-interface	Interface between optical and electronic data transmission.
OS	Operating System
OSI; OSI layer model	Open Systems Interconnection; theoretical model standardised by ISO for the subdivision of communication processes into (seven) different session layers (structured software) for the development of open transmission systems.

Overshooting	Transmission that in open transmission media (<i>EIB powerline/EIB radio</i>) goes beyond the usual dimension due to the local conditions.
p.m.	Post meridiem; after midday (12-24 hours)
Pager	<ul style="list-style-type: none"> – see Radio call receiver; depending on the call class the message is made audible by acoustic signals or shown on a display as numeric or alphanumeric characters. – See City call, Scall
Paging	Search function for cordless phones, where the transmission from the fixed station to the hand-held device is reproduced as an acoustic signal.
Paging system	Personal calling system.
Parallel transmission	Simultaneous transmission of n-bit words via n connection paths.
Parameter	Variable setting in the <i>EIB</i> system
Parameterisation	Procedure by which the bus devices are provided with addresses and any necessary application software.
Parity bit	Means of detecting errors in data fields to detect transmission errors. A 1 or 0 is added to the end of a series of binary digits, to make the overall sum odd or even.
Parity checking	Safety mechanism using a check bit for a coded character sequence.

Partner installer	Marketing measure for the distribution of the <i>EIB</i> .
PAS	Equipotential busbar
Password	Word or sequence of characters for the purpose of identification. Passwords are used to restrict access to programs and files.
PBX	Private Branch Exchange
PC card standard	Standardised system of multifunctional plug-in computer cards, development of the PCMCIA standard.
PCI-BUS	Peripheral Components Interconnection Bus; internal computer bus system, data width 32 bits (double word).
PCM	Pulse Code Modulation; digitalisation of analogue signals by periodic keying (sampling) and quantising.
PCMCIA	Personal Computer Memory Card International Association; committee for the standardisation of highly integrated memory elements in credit card format. Other applications of the PCM housing include peripheral components such as modems, LAN adapter, data acquisition cards etc. See PC card.
PDA	Personal Digital Assistant.
PEI	Physical External Interface

PELV	See Protective Extra Low Voltage
Pen entry	Entry of hand-written notes and characters into a computer by moving the pen across a touch-sensitive display.
Pendant PA	Personal alarm worn around the neck, which can easily be used by old or hand-capped people. It is used to trigger emergency calls or alarms via the telephone. Security equipment can also be incorporated into the system, such as window contacts etc., which also activate alarms when triggered. Emergency calls can also be transmitted when a specified check key is not pressed within a defined time limit (automatic alarm).
Performance spec	(Performance specification). Description of the scope of supply and functionality based on a translation of the customer requirements in a system-based environment. The specification defines HOW and WITH WHAT the requirements are to be implemented (DIN 19 246) See specifications.
Personalisation	The saving of certain personal options of multiple users in the HomeAssistant.
PFAT	Person - Firm - Address - Telephone (tables). Data relations can exist between the person, firm, address and telephone tables. With the search function (linking) it is possible to create a new table.

PGV	Program-controlled distributor
Phase coupler	Component in <i>EIB powerline</i> for the defined coupling of signals on all active conductors.
Phase keying	With phase keying, the information to be transmitted is superimposed with the phase of a carrier. For example, if the information for transmission is digital, the phase of the carrier is increased by a certain amount with a logical 1 and reduced by this amount with a logical 0.
Photo-CD	Digital disc for a maximum of approx. 100 colour stills as well as for combinations of picture and sound.
Physical address	Unique code of a bus device in the <i>EIB</i> installation bus system. The physical address includes area, line and bus device number.
Physical external interface, PEI	Interchange point between the bus coupling unit and an <i>EIB</i> bus device or the communication interface/ <i>EIB</i> device. Mechanical, electrical and if applicable data technical interface between the bus coupling unit and the application module/terminal.
Pictograph	Picture or character with established, internationally agreed meaning.
PIN	Personal Identification Number

Pixel	Luminous point on the screen generated by the computer; the greater the number of pixels per unit surface area of screen, the higher the resolution of a picture on the screen.
PK	Primary Key; used as the unique identification of a data set in a table.
PL	Powerline
PLC	Programmable Logic Control
Plug and play	Immediate operability of devices after connecting the power supply, no assembly or configuration problems.
Polling	Remote calling of data; calling up of messages; cyclic enquiry
Potential equalisation	The lightning protection system is connected to the potential equalisation to prevent unchecked flashovers.
Power down	Energy saving circuit. See green mode, sleep mode.
Power line signalling	See mains signalling.
Power management	Energy saving technology such as for example APM, which reduces the energy consumption of a computer in 4 stages.
Power manager	Energy saving function for picture tube monitors, three-stage, with energy saving effects > 90%.

Power supply	Basic component which within the scope of <i>EIB</i> , supplies the bus devices within a line (electrical segment) with power. Used in combination with a choke.
Power supply unit	See power supply
Powerline	Power supply network 230/400 V
Preparatory cabling	Electrical installation prepared for future expansion.
Preset	The pre-setting of specific parameters (e.g. programming for a TV).
Primary protection	See lightning arrester
Prime	To set an alarm system so that it is ready or switched on, e.g. via a block lock
Priority	Privilege, precedence, sequence of access. Processes can be arranged according to priority levels.
Private key	Operating element to select personalised programming
Process	Progression, course, e.g. a computer program that is currently running.
Process control	Technical procedure in which process data is fed into the computer and which after processing in predefined algorithms is fed back into the process as correcting variables.

Product database	Colloquial term for a diskette containing manufacturer-specific product data for the project design and commissioning of an <i>EIB</i> installation.
Product management	System module of the ETS 2
Product-specific CD-ROM	Disc containing product-specific data for the integration of a bus-compatible device into an <i>EIB</i> installation with a HomeAssistant.
PROFI bus	Process Field Bus; a bus defined in DIN V 19245 for automation procedures.
Program	A sequence of commands or instructions to solve a problem.
Programming	In building systems engineering this term is used for <ul style="list-style-type: none"> – Assigning addresses – Entering switching times – Establishing links – Establishing threshold values – Loading data into the bus devices
Project design, team oriented	Characteristic feature of ETS 2
Project management	Characteristic feature of ETS 2
Propagation	E.g. the propagation of electromagnetic waves in a medium.

Property	Here it means the property of an <i>EIB</i> communication object (program part). The <i>EIB</i> object has compulsory properties (type, access) and also sometimes optional properties.
Protective Extra Low Voltage, PELV	Functional low voltage with protective separation according to DIN VDE 0100 part 410/11.83 section 4.3.2. Modification draft A2/8.88 Future: Low voltage with earthed circuit; the circuit earth can be achieved with a suitable connection to earth within the source of electricity.
Protocol	Regulations and requirements with which data transmission between a computer and its accessories is established.
Prototype	E.g. the initial design of a household appliance that has been developed far enough to allow the series construction.
PS	Power Supply
Public domain	Freely available programs or information, no charge. See freeware.
Pulse Code Modulation, PCM	This is a method of modulation by which a digital signal is obtained from an analogue signal by sampling and quantising. See A/D converter
Pushbutton	Also used to describe an active symbol on a computer screen.

QMS	Quality Management System
Quad word	A 64 bit data word
Quality audit	Assessment of the effectiveness of the quality control system or its parts.
Quality control	All measures to guarantee high quality, from the planning right through to the supply and after sales service for a product/project.
Quality control system	The established layout and organised procedure for carrying out quality control.
Questionnaire	List of questions to determine customer requirements
Radio code	Coded, wireless message, which by identifying authorisation allows the remote control of devices and systems.
Radio interference	High frequency voltage that is generated by electrical devices and has a reverse effect on the supply network.
Radio nodes	Radio nodes are devices within a bus system that are connected with other bus devices in the system via radio.
Radio transmission	With radio transmission the information is radiated from an antenna transmitted through the air and received at a different antenna.
RAM	Random Access Memory; read/write memory - electrically erasable and programmable

	ble semiconductor memory. Without a battery supply, the memory contents are lost when the power is switched off.
Read Only Memory, ROM	Permanent memory with a constant, unchangeable content, e.g. program, constants. The content is retained when the power supply is removed.
Real-time	New data is processed as soon as it occurs.
Receiver	Part of a system that receives information, with the <i>EIB</i> installation termed an actuator.
Redundancy	Generally used term for the mirrored layout of a technical solution to increase the availability.
REG	DIN Rail Mounted Device
Remote control	<ul style="list-style-type: none"> – Technical device, – Method for operating remote devices, fittings and accessory equipment, either with or without cables, – Method for controlling vehicles, aeroplanes, etc. usually without wires.
Remote control, infrared	Remote control using infrared light as the transmission medium.
Remote diagnosis	Remote polling of the functionality and status of devices, fittings and accessory equipment.
Remote maintenance	After remote diagnosis has taken place, a means of providing maintenance for devices and equipment situated at remote

	locations.
Remote monitoring	See remote diagnosis
Remote operation	See remote control
Remote polling	Transmission of the status of a system, e.g. via the telephone network.
Remote system	E.g. a distant (third-party) computer.
Reparameterisation	Changing the parameterisation.
Repeater	Component in the <i>EIB</i> installation bus system that boosts signals in order to increase the transmission range or to connect two electrical segments together.
Reset	Command to return the computer to its original status.
Resource management	Application for the management of resources in the compound system, without exceeding predefined threshold values.
Resource sharing	Shared usage of common resources
Response time	Time period between the entry of a command in a computer and its execution.
Restart (wake-up)	Starting the computer after the end of the green or sleep modes.

Review	Here it means talking through the results and discussing how to proceed.
RF	Radio Frequency
RFI	Radio Frequency Interference; high frequency interference.
ROM	Read Only Memory
RS 232 interface	Serial (voltage) interface for data transmission between the computer and peripheral devices (V.24 interface)
RS 485 interface	Serial (current) interface
RTTY	Radio Teletype
RX	Receiver
Safety Extra Low Voltage	Protective low voltage according to DIN VDE 0100, part 410/11.83, section 4.1 Modification draft A2/8.88 Future: Extra low voltage with non-earthed circuit; active parts must not be connected with earth nor with active parts of other circuits and must be electrically isolated from higher voltage circuits.
Sample depth	Differentiation of the volume differences for every sample
Sample rate	Number of measurements of analogue signals per second
Sampling	Conversion of analogue signals into digital values.

Scall	Cable-free message service from the German Telecom on a numeric basis without feedback. When transmitting a call, the message (as a sequence of numbers) is either sent by MFV or speech input.
SCART box	Video-audio box on the television receiver with signal inputs and outputs.
Scenario	Sequence of desired functions
Scenario manager	In the HomeAssistant it is possible to use the scenario manager to combine various actions together and with that to create scenes.
Scene	A scene is a universal, programmed situation and setting within the system that can be invoked.
Screen	See shielding
Screen ergonomics	Minimum requirements for the ergonomic design of screens (non-flicker, contrast, brightness) in ISO 9241-3.
Screen text (Btx)	Data service of the German Telecom.
Scroll	Roll the screen contents upwards, downwards or side to side.
Scroll bar (display)	Scrolled linear display which can be moved to the desired position using two keys (>/<).
Secondary protection	Surge arrester

Security	Needs to be defined in more detail, e.g.: <ul style="list-style-type: none"> – Security against electric shock, fire and other dangers – Functional system security – Intrusion protection, protection against break-ins – Security of the system and its components against overvoltage
Security circuit	Combination of several operational functions for the simple transfer of emergency calls.
Security lighting	The switching on of all lighting (or the larger lighting groups) in the house and garden via a switch or via a button on the touchscreen.
Security scenario	Sequence of actions with the sensors and actuators installed via the <i>EIB</i> to check or guarantee security.
SELV	See Safety Extra Low Voltage
Sensor	Element for converting physical quantities into electrical values. Bus device in the <i>EIB</i> system, which processes physical quantities and possibly transmits telegrams on the bus. Examples: <ul style="list-style-type: none"> – Touch sensor/Push button – Temperature sensor – Brightness sensor
Sensor element	Element for converting physical quantities into electrical values. Examples:

	<ul style="list-style-type: none"> – Temperature – Brightness – Humidity
Separation	The separation of <i>EIB</i> lines from lines of other circuits. See DIN VDE 0100-410 (HD 384.4.41.S2), section 411.1.3.2, Appendix D.
Serial data interface	Standardised interface
Serial transmission	The transmission of data in a temporal sequence via a connection path. Staggered transmission of different information via a line. As an example, only one twisted pair is needed for the transmission of 8 bits of information.
Series filter	See band stop.
Server	Central computer in a networked system. A large part of the data and programs are stored here.
Service	Here, it means the services provided by the operators of telecommunication equipment. This includes for example, telephone services, teletext or telex, telefax and others.
Set	Pre-setting of analogue and digital controller outputs. Example: Setting the volume on the radio.
Set point generator	Also called a command generator. In regulating circuits it specifies the set point and

	in control circuits the actuating variable. With <i>EIB</i> it belongs to the sensors group.
SFSK	See Spread Frequency Shift Keying
Shareware	Generally accessible software, which can be tried out for free before buying.
Shell	Specific, limited area of the operating system.
Shielding	With cables a conductive film or covering, with devices for example, a metal housing, to reduce possible EMC problems.
Shutters	Retractable coverings for windows or doors.
Signal delay	Propagation time of electrical signals on the bus line between two bus devices in an electrical segment.
Signal/noise	Ratio of useful voltage to noise.
Sill cavity	Form of cable channel.
SIM	<ul style="list-style-type: none"> – Subscriber Identity Module; chip card with processor and memory for the D1 telephone network – Computer memory module (DRAM type).
Simulation	Realistic recreation of a process.
Simulation of occupancy	See "occupied house", pre-programmed scenario involving the switching on and off of lights, the moving of blinds etc. to

	create the illusion of occupancy when the inhabitants are away from home.
Single actuator group	Possibility of an exactly defined address allocation
Single room temperature control	Autonomous combination of the position of the temperature controller and servo valves on the radiators for every room.
Slat position	Tilt position of the blind slats.
Slave	See master/slave
Sleep mode	Energy saving circuit where only one part of the mains supply function is active whilst all other modules of the computer are switched off.
Sleep timer	Switch-off function (stand-by) for devices according to a pre-defined time. This time is controlled by the internal clock of a TV, radio device or multimedia PC.
SMS	Short Message Service (mobile phone)
SO interface	The international SO interface forms the actual user connection in the ISDN and with that the boundary between partner devices and the public telephone network.
Soft key	Programmable function key.
Software	General term for computer programs, i.e. operating systems, auxiliary programs or applications, as well as the accompanying literature.

Software tool	Aid to create computer programs.
Sound card	Computer module for the digital processing of analogue audio signals (voice, music, noises, etc.) with input and output functions as well as software for data compression.
Source address	In networked systems this is the code of a device that is sending information.
Source document	The document from which an object originates.
Special characters	All characters that are neither letters or numbers.
Specifications	Totality of the contractor's obligations as regards the services and functions demanded by the customer. This document defines WHAT is to be solved and WHY. The specifications are either written by or on the request of the customer and used as the tender and/or contract documentation (DIN 19 246). See performance spec.
Spread Frequency Keying	Stands for frequency keying in spread spectrum technology. Two carrier frequencies with a large frequency separation are used for the transfer of binary information (logical "0" or "1").
Spring Connection block	Connection element for connecting DIN rail mounted units.
SQL	Standard Query Language; communica-

	tion language for databases. Database software (Watcom, Sybase), based on SQL, helps the HomeAssistant process <i>EIB</i> information (ETS) as well as non- <i>EIB</i> information (user databases).
Star	See topology
Star code	See equipment level.
Star structure	Type of wiring arrangement.
Status bar	The status bar is an integral part of the header line. It is always visible when mask-specific information is to be displayed (advice on operation, tips for proceeding etc.).
Status communication object group	Possibility to attribute an exactly defined address.
Store	Used here to indicate the storage of messages, synonym for database.
Style guide	Design rules and recommendations for the user interface of the HomeAssistant.
Sub group	Part of the group address.
Sub-bus	Stand-alone bus that has become a sub-bus by being integrated into another bus network.
Surface-mounted device	Device for installation on the wall.

SVGA	Super Video Graphics Adapter; see VGA
Synchronous transmission	Type of data transmission in which transmitter and receiver run in absolute synchronicity at all times. Usually guaranteed by the constant transmission of a timing signal.
System code	See system ID
System components	Code for bus devices which carry out general functions independent of the application, e.g. line coupler. See basic components.
System events	Alarm messages, operating and error messages for devices.
System function column	The system function column on the left-hand side of the HomeAssistant screen contains functions that are made available by the base software of the HomeAssistant.
System ID	A code in telegrams to separate an <i>EIB powerline</i> system. A telegram received by a device that has a different system ID will not be evaluated.
System manager	Contact person who covers all building disciplines, services
System settings	Operating element in the HomeAssistant for system functions, which can activate switching processes in all applications.
TAPI	Telephone Application Programming Interface

Target address	Group address of the bus device(s) which is (are) to receive the telegram. When programming (commissioning) it is the physical address of the bus device.
Target document	The document into which an object is to be placed.
Target selection	Creation of a connection by pressing a single button.
Tariff management	Application to optimise energy costs.
Teaching program	Software for the teaching of any desired areas, installed on the HomeAssistant.
Technical connection requirements	Requirements of the electric power company concerning the design of electrical installations to ensure they do not have an adverse feedback effect on the supply network.
Tel. no. type	Telephone number type. We differentiate between private and business telephone numbers, fax numbers, mobile numbers etc.
Telecommunication	Telecommunication denotes all types of communication that exceed the audible or visible ranges. It is irrelevant whether this involves the exchange of information between man and/or machines or other equipment. In the field of data transmission, this term covers everything from voice, picture, text and data transmission technologies and equipment as well as

	the exchange techniques.
Telecontrol engineering	Methods of remote control, remote operation, remote maintenance.
Telefax	Remote copying of documents, texts and graphics via the telephone network.
Telegram	A sequence of bits which contains all necessary data to identify the bus devices and transfer the information.
Terminal	Unit for the input and output of data in a computer system, see console. See application module.
Terminating resistor	Resistance that is necessary for some networks in order to avoid the reflection of signals. Not needed for the <i>EIB</i> installation bus.
Test log	Form for entering the results of testing an electrical system. Obtained from WFE, Postfach 90 03 70, 60443 Frankfurt, Germany, Tel: ++49 (0) 69/24 77 47-0, Fax:++49 (0) 69/24 77 47-49.
Thread	Execution path, sub-process; subject branch in messages.
Time division multiplex, TDM	See multiplexing
Time sharing	A mode of operation in which several users can work on a computer (seemingly simultaneously).

TL	Transport Layer
Token	<ul style="list-style-type: none"> – Character – Access method using a bit pattern ("free characters", "occupied characters"), which allows network devices to exchange information without collision.
Token ring	Bus in a ring structure with a standardised access procedure, medium and organisation, Not used in the <i>EIB</i> installation bus.
T-Online	Service provided by the German Telecom via the telephone network, see Datex J, Btx
Tool	Hardware or software
Tool kit	Help for programmers, programming tools.
Topology	<ul style="list-style-type: none"> – Basic design of the wiring arrangement in a data network – Structural information concerning the number and position of rooms as well as external systems within <i>EIB</i> installations. – Term for the network structure and system layout, see DIN VDE 0829-522, AppendixD
Total load characteristic	Criterion to determine the possibility of usage of <i>EIB powerline</i> .
Touchscreen	Touch sensitive screen for activating control functions.

TP	Twisted Pair
Tracer	Possibility for identifying a line
Track ball	A type of upturned mouse. Rotating the protruding ball causes a corresponding movement of the cursor on the screen.
Transmission	See asynchronous / synchronous transmission.
Transmission distance	Length of the transmission path between two devices.
Transmission duration	Signal transmission time.
Transmission path	See bus.
Transmission reliability	Totality of the parameters defined in the transmission system, which guarantee the perfect transmission of information and with that the proper functioning of the system. E.g. the mechanisms included in the telegram that provide secure transmission. See protocol.
Transmission speed	Number of bits transmitted within a specific time period. Measured in bit/s. See Baud rate.
Transmitter	Part of the system that transmits information. With <i>EIB</i> it is called a sensor.

Transmitter level	The field intensity radiated at the transmitter antenna.
TT profile	Time temperature profile, desired sequence of temperature changes over a period of time. See daily profile.
TTY	Teletype
TVI	Television Interface
Twisted pair, TP	Twisted wire pair for bus transmission. See bus line.
TX	Transmitter
UART	Universal Asynchronous RX/TX; device for converting serial data streams into parallel data streams (and vice versa) in receivers and transmitters.
Universal Asynchronous Receiver Transmitter, UART	Switching circuit that converts parallel data, which is to be transmitted, into serial data, and serial received data into parallel data.
Update	Updating for programs and files.
Upload	Transferring data from your own computer to a third party computer.
UPS	Uninterruptable Power Supply; can be used as a backup for example, to supply a computer or the <i>EIB</i> to avoid data loss in the case of mains power failure.

Upwards compatibility	A program of an older version which also works under the operating system of a newer version.
Usability lab	Examination site for questions of usage and ergonomics of systems and devices.
Usability test	Here in particular, an analysis of the usability of application programs by unpractised users.
Use of the second wire pair	Two wires of the four-wire bus line can be used for other purposes.
Useful data	Part of the data field, which represents the data to be transmitted. With the <i>EIB</i> installation bus, a minimum of 1 byte and a maximum of 15 bytes, e.g. for on/off, temperature values etc. See telegram.
User interface	Generally used term for the interface between man and machine, in data processing for the interface between software and user
User manual	Functional and operating instructions for the user.
UTC	Universal Time Co-ordination; world-wide, see GMT
Utility	An auxiliary software program to simplify routine processes
V.24	See RS 232 interface

VAL	Virtual Device Abstraction Layer; driver interface for virtual resources at the communications system core.
VDE	Association of German Electricians
VDEW	Organisation of German Electric Power Companies
VDRG	Association of German TV and Radio Traders
VEG	German Association of Electrical Traders
VESA feature connector	Standardised interface on graphic cards, to which it is possible to connect an MPEG adapter for example (generally board connectors or rod connectors on graphic cards).
VGA	Video Graphics Adapter (Video Graphics Array); graphics card for a video operating mode with a higher resolution for the representation of texts and graphics on the screen. Monitor control with analogue signals for improved colour reproduction. Even greater improvement in the resolution with the SVGA.
Video CD	Digital video-CD for MPEG standard. See CD-V, CD-IV.
Video connection	Television connection.
Video text	Auxiliary programs from television companies, which with the use of a special

	decoder allow texts to be shown on the TV screen (the blanking intervals are used for transmission).
ViRes	Virtual Resource; virtual representation of concrete resources, which are stored in the VAL.
Virus	Sabotage program, which changes programs and damages or even destroys data.
Visualisation	Make visible; representation of processes on the screen in the form of text or pictures.
Visualisation program	Software to represent information on the screen.
Voice input	<ul style="list-style-type: none"> – Input of commands and information at the computer using speech – Words or sentences are written to memory after they have been digitised and can then be output as required, either individually or in new sequences. See voice output
Voice output	Words or sentences saved in digitised form are made audible after digital-analogue conversion.
VxD	Virtual Device Driver; see HAL
WAN	Wide Area Network; network covering a wide area, usually composed of several LANs connected together.

Watchdog	Device for data backup in computers in the case of malfunction (e.g. power failure); cyclic checking of the software installation; processor reset after the absence of cyclic control signals.
Wave file	File into which digitised sound signals are written.
Western connector	A form of connector for junction box cables according to the American standard, e.g. RJ12, RJ45.
Window	A Windows element in which a mask is represented.
Window contact	Contact to monitor the closed status of a window. See magnetic contact.
Word	In data technology, a word represents the number of bits a computer can process in parallel. With microprocessors, word lengths of 8, 16 and 32 bits are usual; main-frame computers have word lengths of 64 bits and more.
Working area	A section of the screen that serves as the working area in representing operating and display elements of the individual applications.
WWW	World Wide Web; Internet service, multimedia part of the Internet
X.25	X.25 describes the lowest three layers of the ISO/OSI layer model for the interface

	between data terminals and data transmission devices in public data package exchange networks.
X.xx interface, X.21	<p>Selection of standardised interfaces in public data networks.</p> <p>All interfaces denoted X.xx have been standardised by CCITT or represent recommended standards for public data networks. X.21 describes the physical meaning of the lines and the electrical properties of a connection of terminal and data transmission device with synchronous operation.</p> <p>See International Telecommunication Union, ITU.</p>
ZVEH	Association of German Electrical Contractors
ZVEH calculation aid	ZVEH Help for the calculation of electrical systems.
ZVEI	Association of German Electrical and Electronic Industries