Training

FlexES control

New

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Honeywell

ESSER

ACKERMANN clino

Variations

- FlexES control FX2
- FlexES control FX10
- FlexES control FX18
- Power supply unit modules

FlexES control

Variations

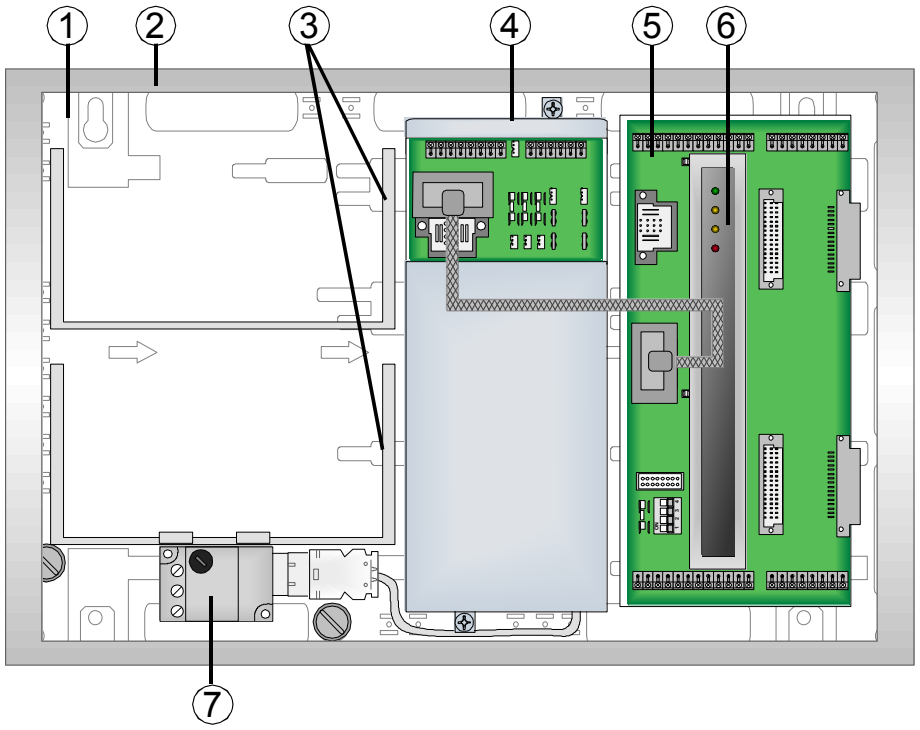
FlexES control

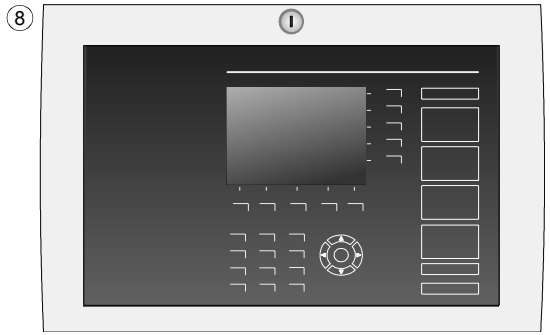
FlexES control
FX 2 Model

FlexES control
FX 10 Model

FlexES control
FX 18 Model

FlexES control FX2





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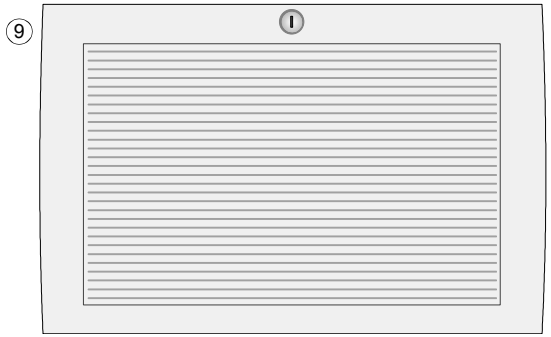


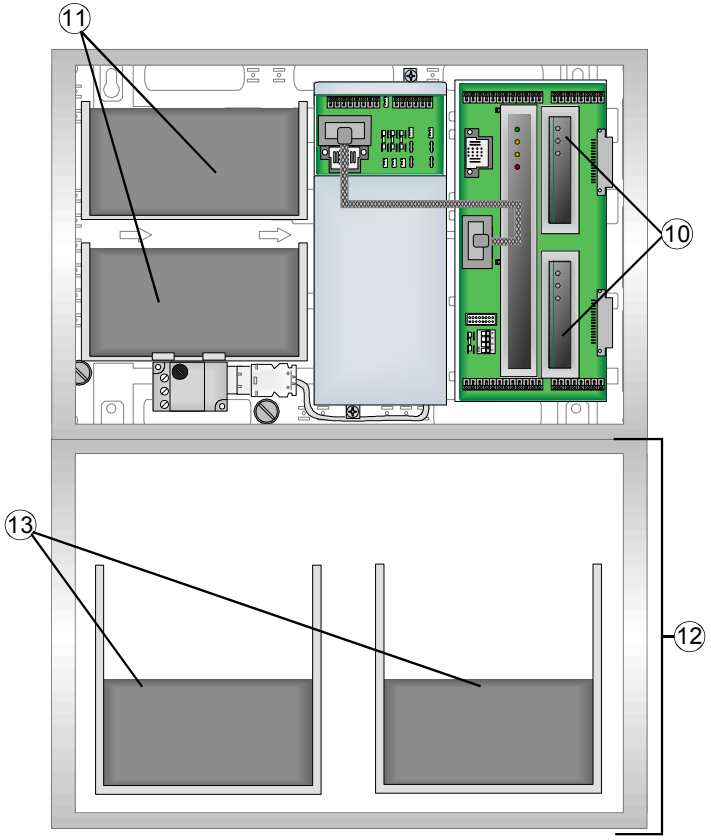
Bundle FX2 (part-no. FX808392)

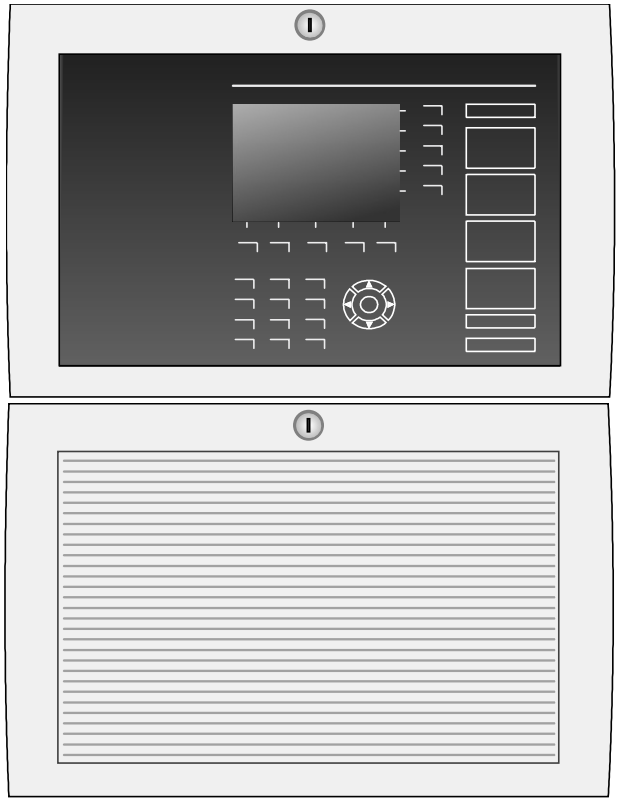
FlexES control FX2 Panel:		part-no.FX808360 incl. *
①	Backplate 1, horizontal	part-no. FX808310*
②	Housingframe	part-no. FX808312*
③	Battery fixture 2 x 12 V / 12 Ah	part-no. FX808314*
④	Power supply module 24 V DC / 150 W	part-no. FX808326*
⑤	Main back plane (2 slots)	part-no. FX808321*
⑦	Mains terminal block	part-no. FX808327*
	+	
⑥	Controller module (SM) supporting 2loops	part-no. FX808328.2R

Options must (seperate order!)

⑧	HMI	part-no. FX808324
or		
⑨	Blank front (only with networking panel or remote HMI)	part-no. FX808325

FlexES control FX2



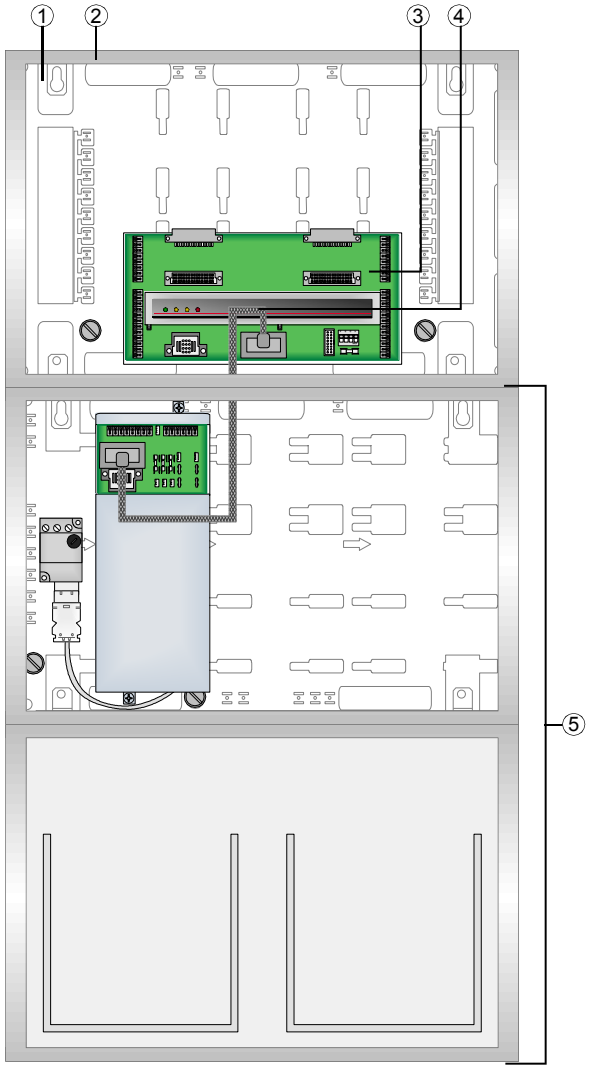


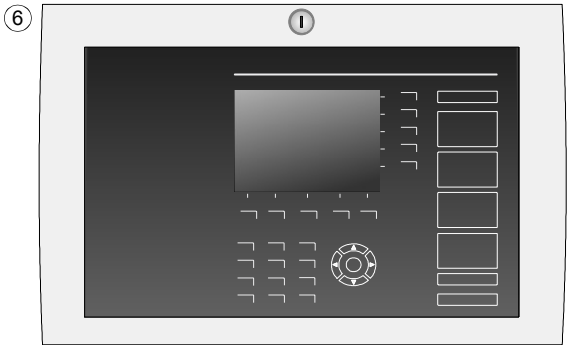
FlexES control FX2

Options

⑩	esserbus®-Modul	part-no. FX808331
	esserbus®-Modul GI	part-no. FX808332
	essernet®-Modul 62,5 kBd	part-no. FX808340
	essernet®-Modul 500 kBd	part-no. FX808341
⑪	2 x Batteries 12 V / 12 Ah (24 V / 12 Ah)	part-no. 018011
⑫	Battery extension housing max. 2 x 12 V / 24 Ah incl. blank front	part-no. FX808313
⑬	2 x Batteries 12 V / 12 Ah (24 V / 12 Ah)	part-no. 018011

FlexES control FX10





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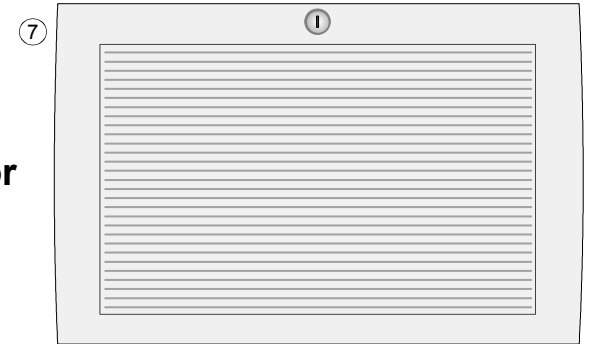


Bundle FX10 (part-no. FX808393/94)

FlexES control FX10 Panel:		**part-no. FX808361 incl.***
①	Backplate 2, vertical	part-no. FX808311*
②	Housingframe	part-no. FX808312*
③	Main back plane (2 slots)	part-no. FX808321*
⑤	Power Supply Unit (24 V / 24 Ah) incl. blank front	part-no. FX808364*

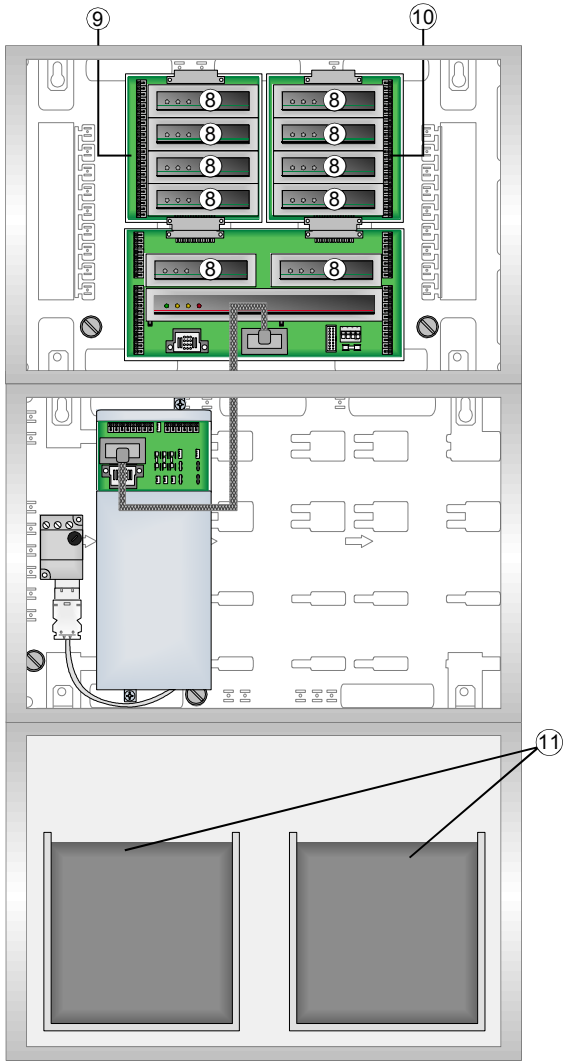
+

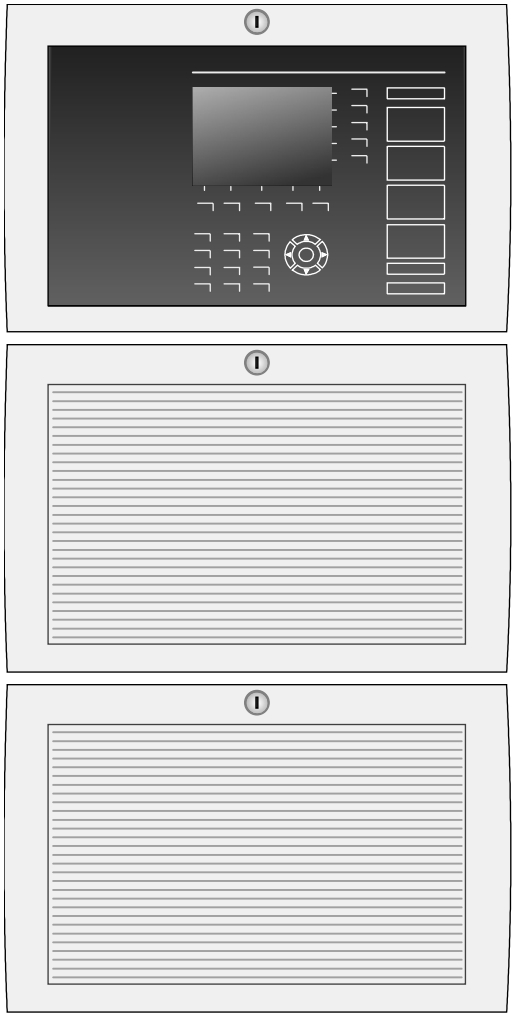
④	Controller module (SM) supporting 5 or 10 loops	part-no. FX808328.5R or .10R

Options must (seperate order!)

⑥	HMI	part-no. FX808324
or		
⑦	Blank front (only with networking panel or remote HMI)	part-no. FX808325

FlexES control FX10





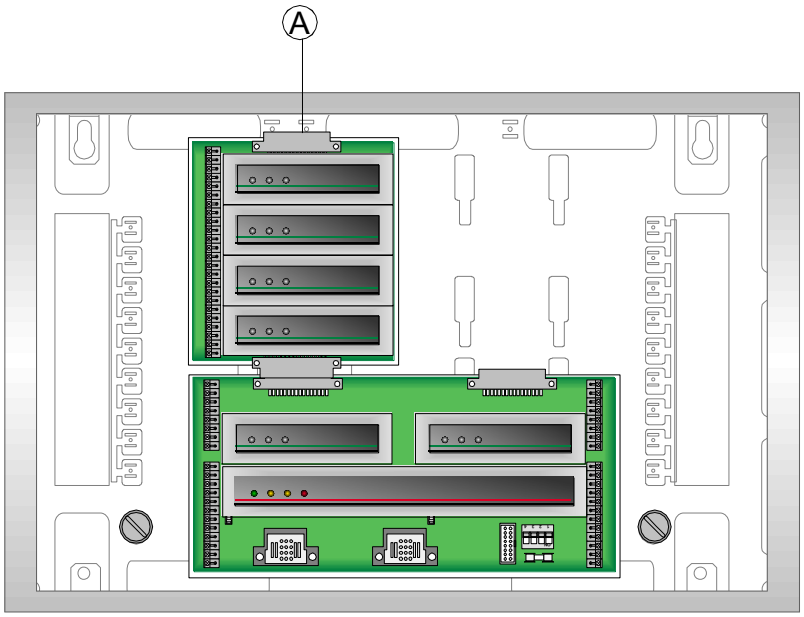
FlexES control FX10

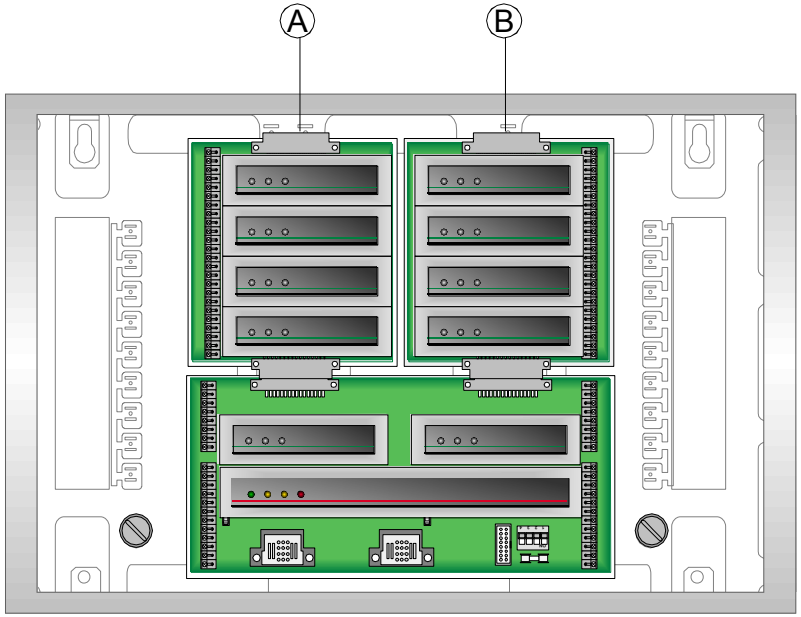
Options

⑧	esserbus®-Modul	part-no. FX808331
	esserbus®-Modul GI	part-no. FX808332
	essernet®-Modul 62,5 kBd	part-no. FX808340
	essernet®-Modul 500 kBd	part-no. FX808341
⑨	Extension Backplane 1 (4 slots)	part-no. FX808322
⑩	Extension Backplane 2 (4 slots)	part-no. FX808323
⑪	Batteries, max. 2 x 12 V / 24 Ah (24 V≒ 24 Ah)	part-no. 018006

Extension Backplane

(vertical use with backplate part-no. FX808311)



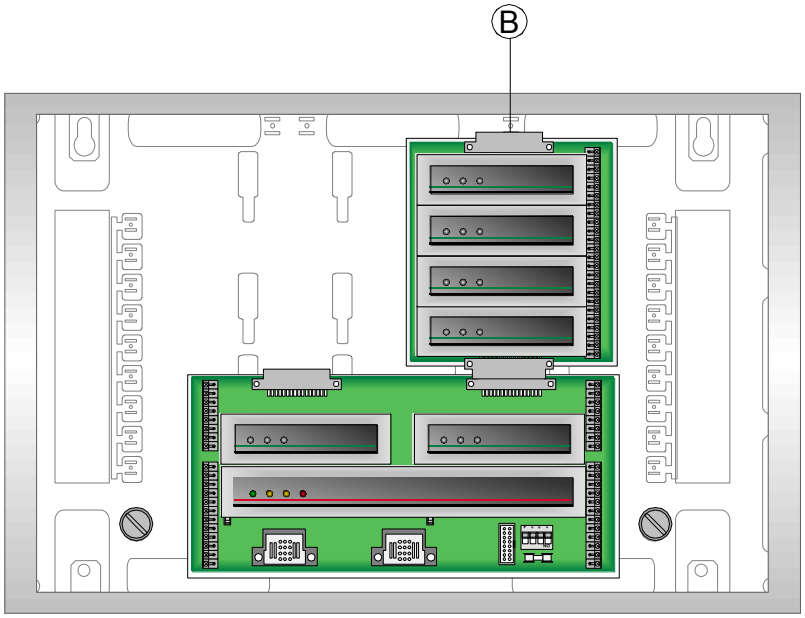


Ⓐ Extension Backplane 1

Ⓑ Extension Backplane 2

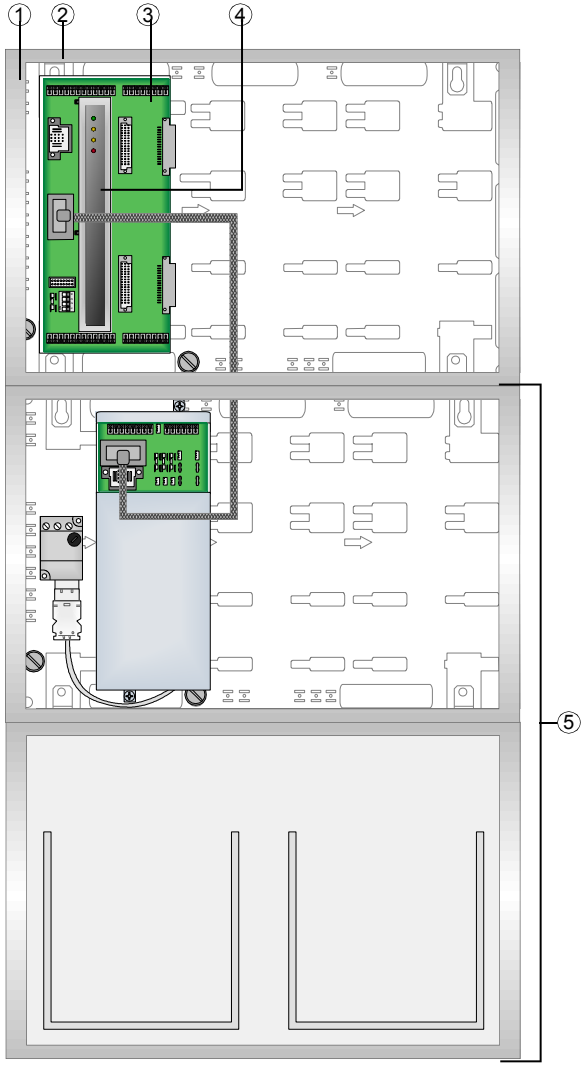
Extension Backplane

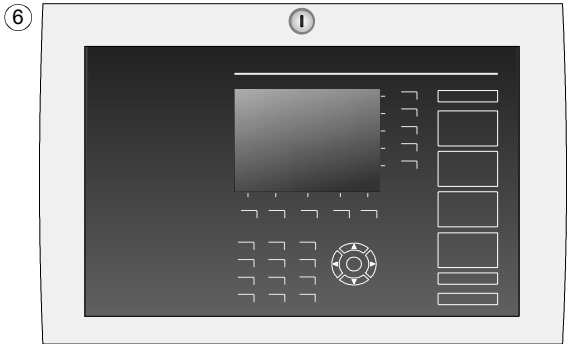
(vertical use with backplate part-no. FX808311)



Ⓑ Extension Backplane 2

FlexES control FX18





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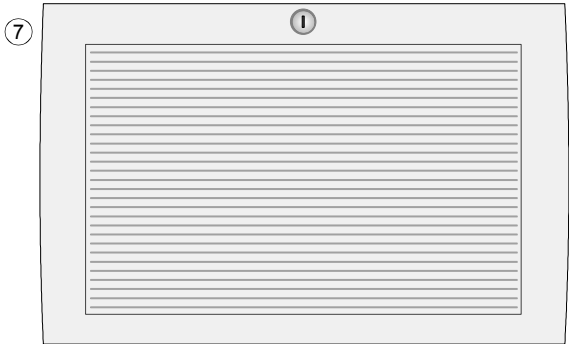


Bundle FX18 (part-no. FX808395/96/97)

FlexES control FX18 Panel:		**part-no. FX808362 incl. ***
①	Backplate 2, horizontal	part-no. FX808310*
②	Housingframe	part-no. FX808312*
③	Main back plane (2 slots)	part-no. FX808321*
⑤	Power Supply Unit (24 V / 24 Ah) incl. blank front	part-no. FX808364*

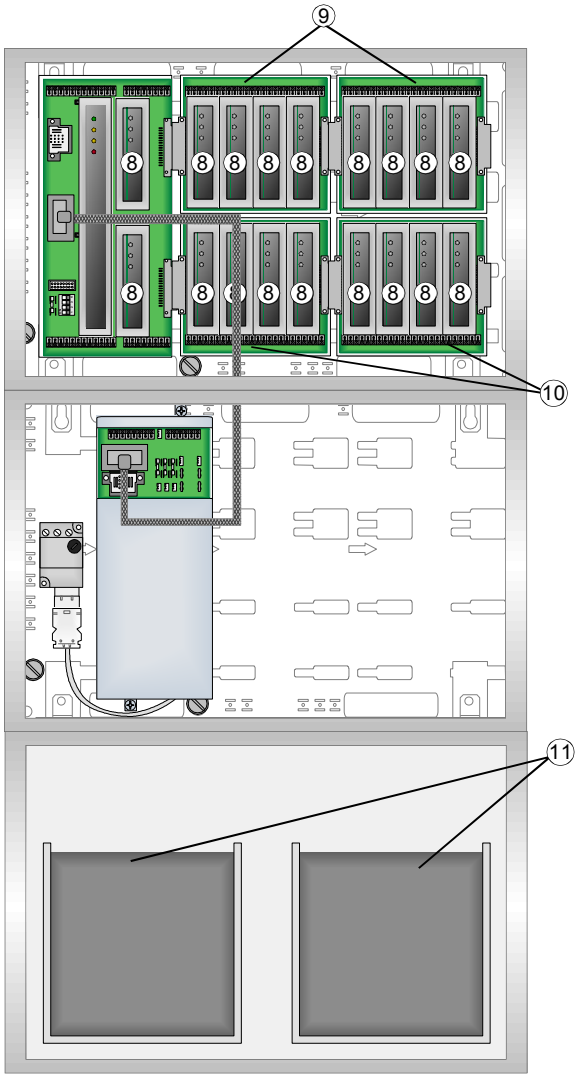
+

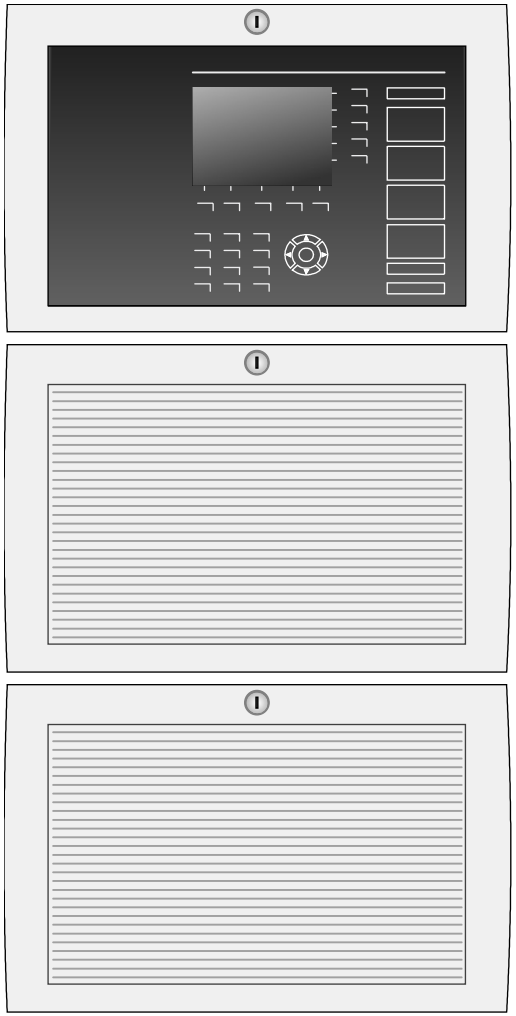
④	Controller module (SM) supporting 5 or 10 or 18 loops	part-no. FX808328.5R/.10R/.18R

Options must (seperate order!)

⑥	HMI	part-no. FX808324
or		
⑦	Blank front (only with networking panel or remote HMI)	part-no. FX808325

FlexES control FX18





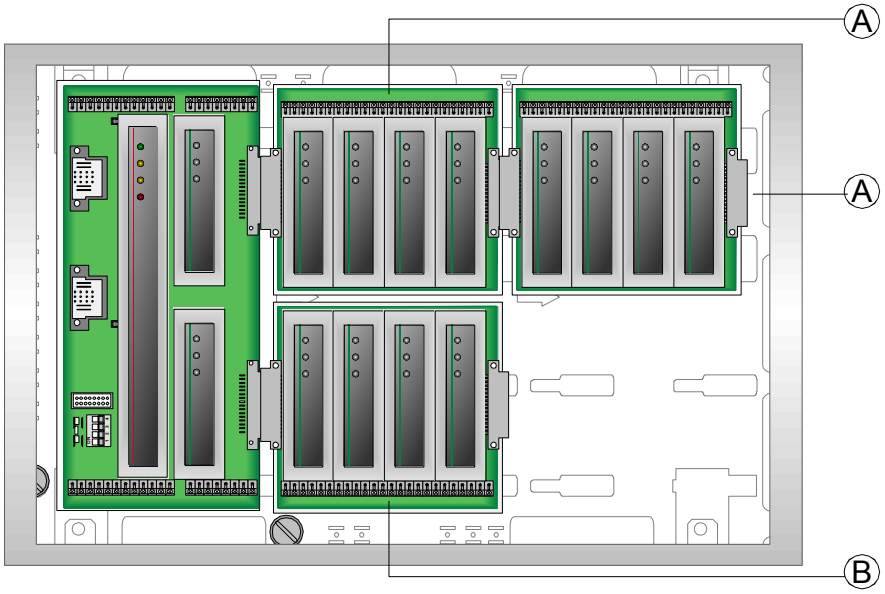
FlexES control FX18

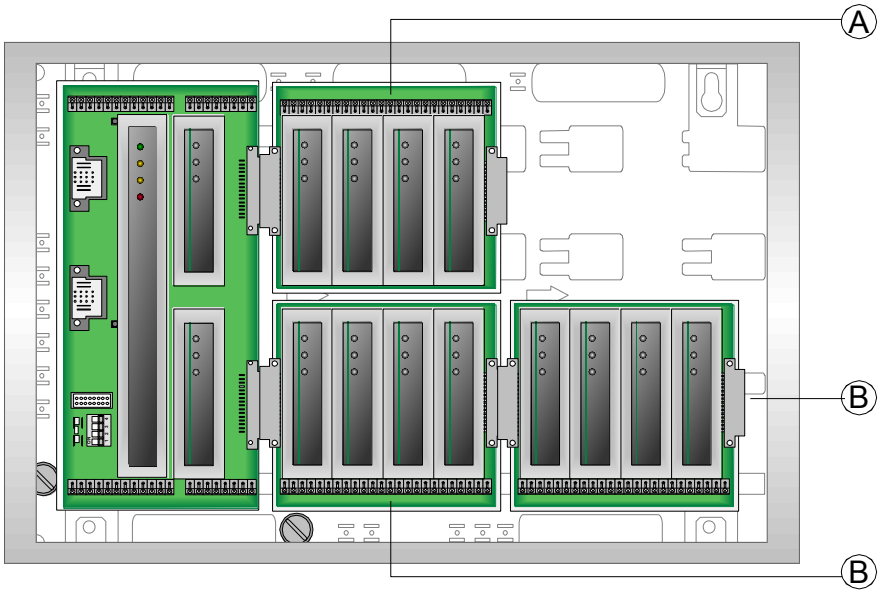
Options

⑧	esserbus®-Modul	part-no. FX808331
	esserbus®-Modul GI	part-no. FX808332
	essernet®-Modul 62,5 kBd	part-no. FX808340
	essernet®-Modul 500 kBd	part-no. FX808341
⑨	Extension Backplane 1 (4 slots)	part-no. FX808322
⑩	Extension Backplane 2 (4 slots)	part-no. FX808323
⑪	Batteries, max. 2 x 12 V / 24 Ah (24 V / 24 Ah)	part-no. 018006

Installation options for expansion module carriers 1 or 2

Variable installation of expansion module carriers (horizontal use on rear panel part-no. FX808310)



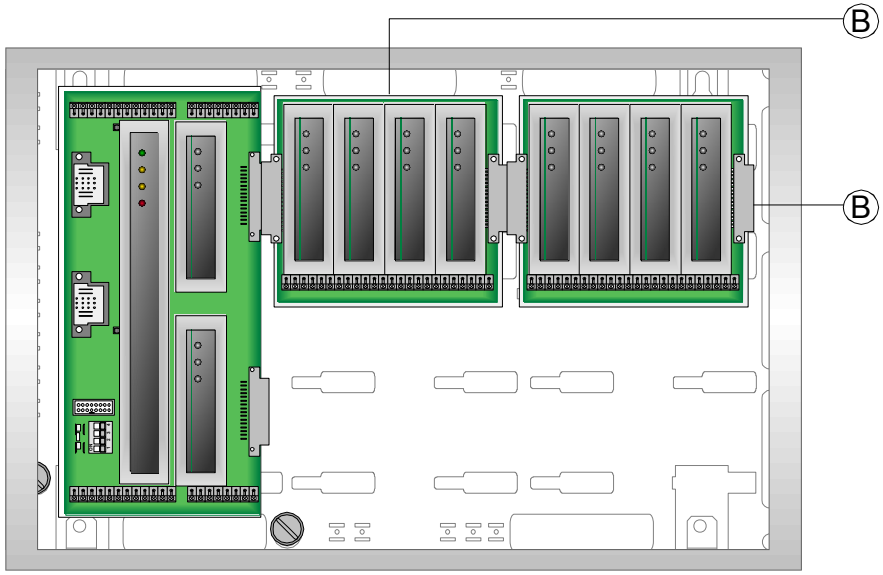


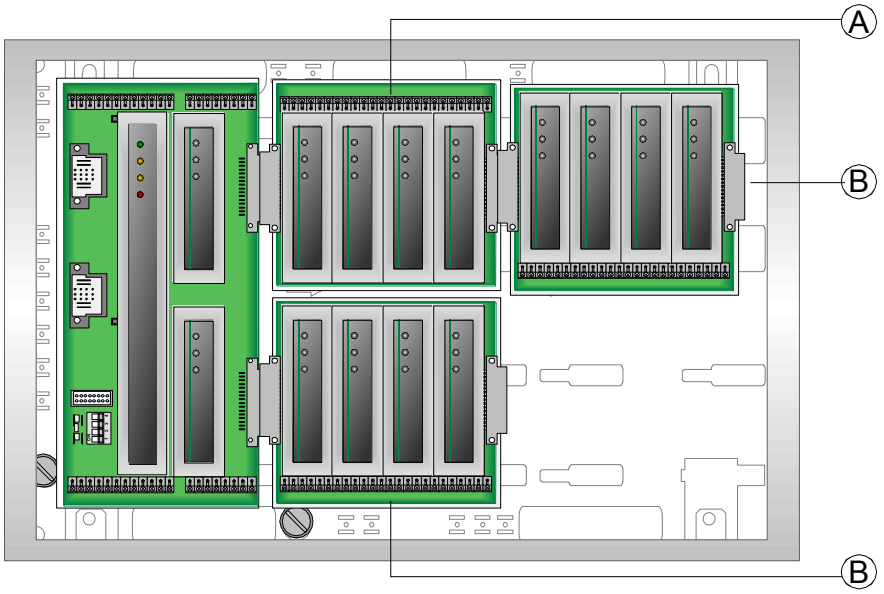
Ⓐ Expansion module carrier 1

Ⓑ Expansion module carrier 2

Installation options for expansion module carriers 1 or 2

Variable installation of expansion module carriers (horizontal use on rear panel part-no. FX808310)



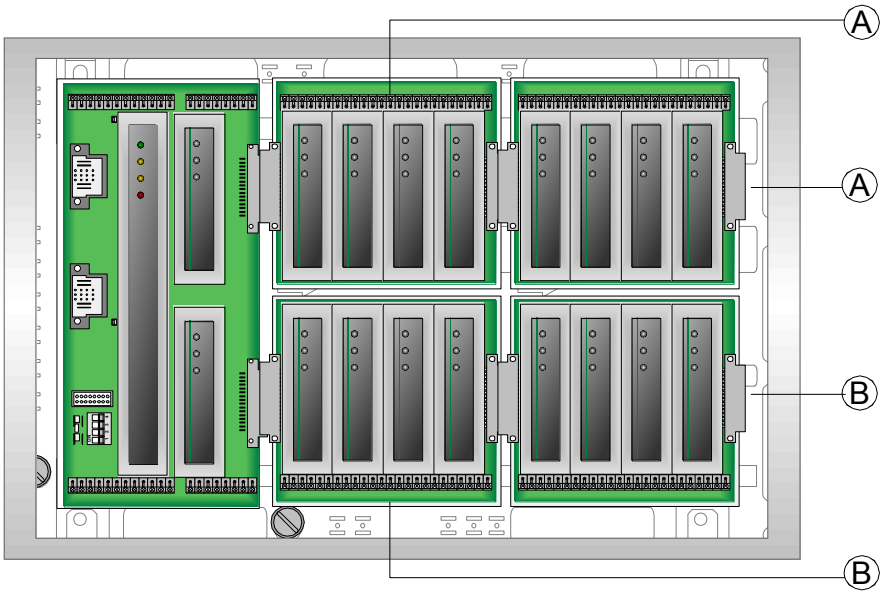


Ⓐ Expansion module carrier 1

Ⓑ Expansion module carrier 2

Installation options for expansion module carriers 1 or 2

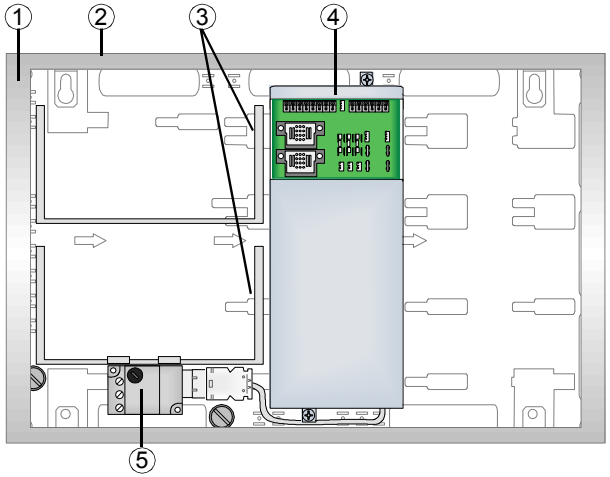
Variable installation of expansion module carriers (horizontal use on rear panel part-no. FX808310)

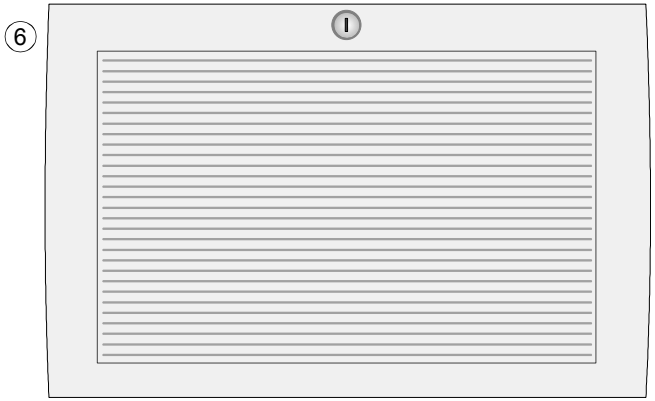


Ⓐ Expansion module carrier 1

Ⓑ Expansion module carrier 2

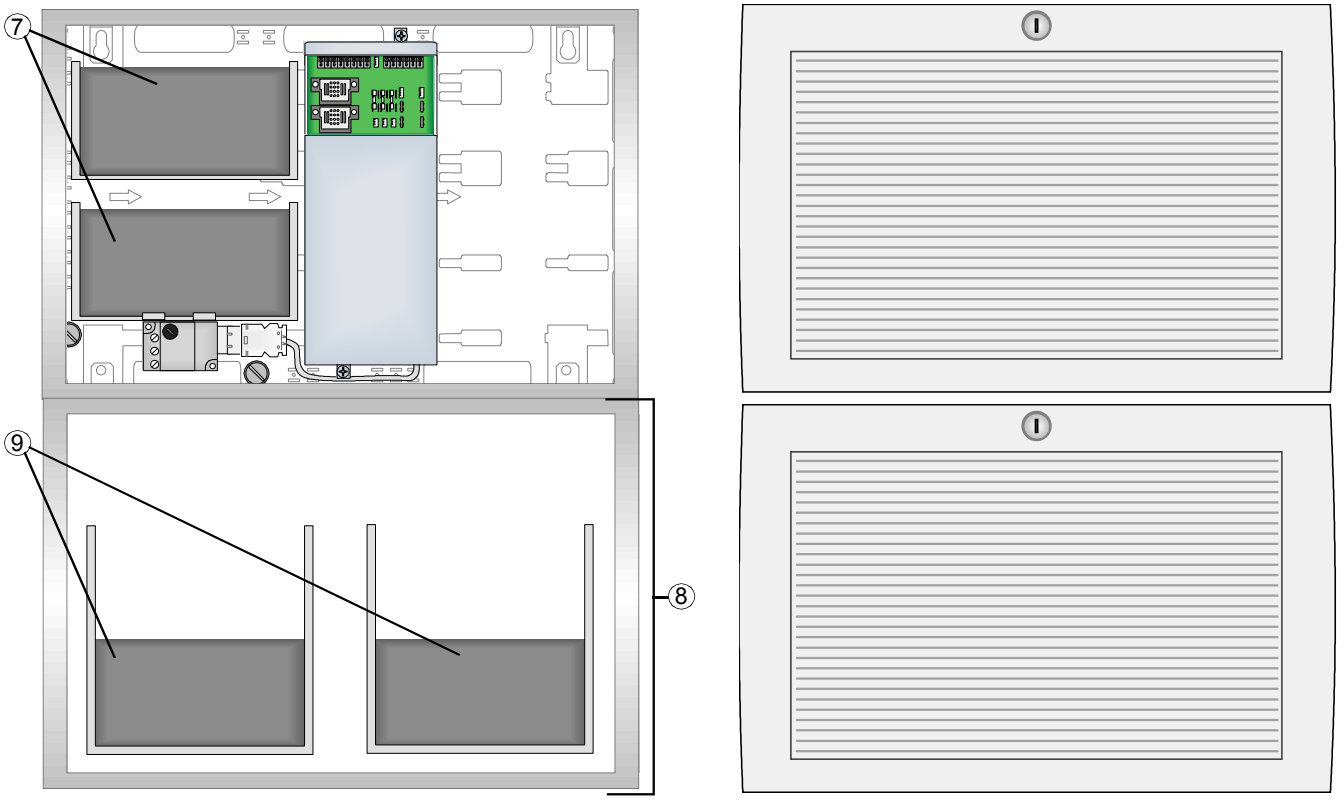
Power Supply Unit 24 V / 12 Ah (part-no. FX808363)





Power Supply Unit 24 V / 12 Ah :		**part-no. FX808363**
1	1 x Backplate 1, horizontal	part-no. FX808310
2	1 x Housingframe	part-no. FX808312
3	1 x Battery fixture für 2 x 12 V / 12 Ah	part-no. FX808314
4	1 x Power supply module 24 V DC / 150 W	part-no. FX808326
5	1 x Mains terminal block	part-no. FX808327
6	1 x Blank front (only with networking panel or remote HMI)	part-no. FX808325

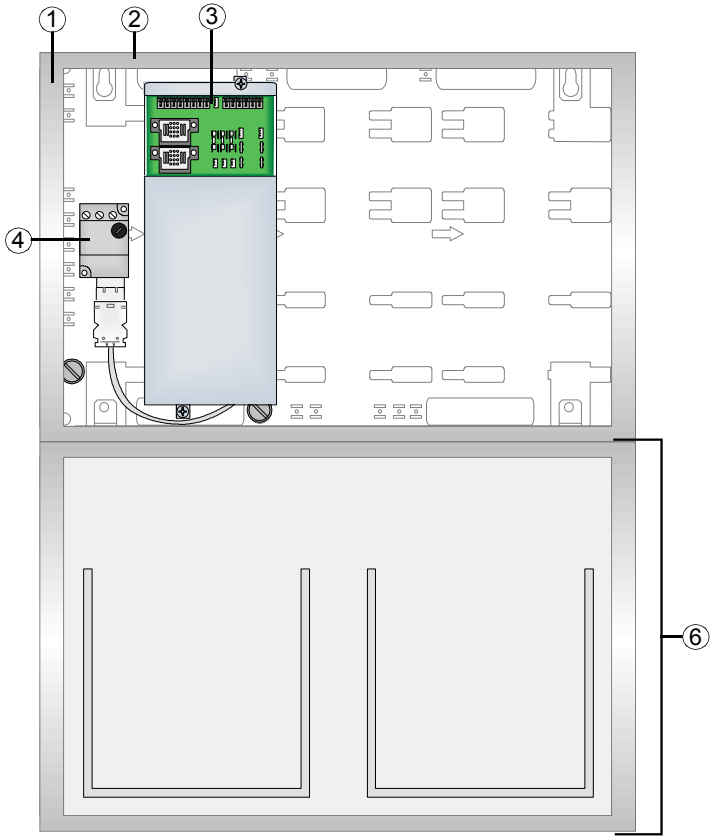
24 V / 12 Ah Power Supply Unit

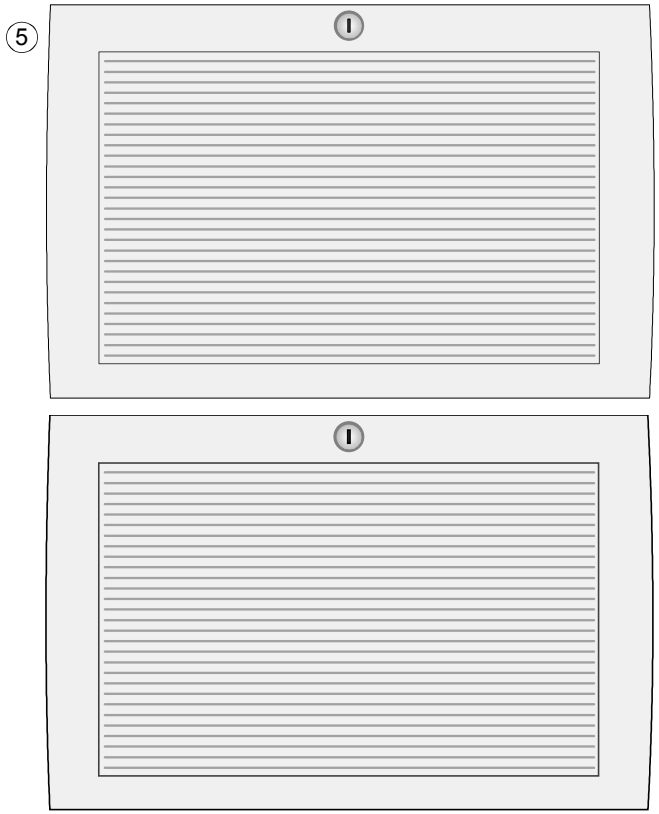


Options

⑦	Batteries, max. 2 x 12 V / 12 Ah (24 V / 12 Ah)	part-no. 018011
⑧	1 x Battery extension housing 2 incl. blank front	part-no. FX808313
⑨	Batteries, max. 2 x 12 V / 12 Ah (24 V / 12 Ah)	part-no. 018011

Power Supply Unit 24 V / 24 Ah (part-no. FX808364)

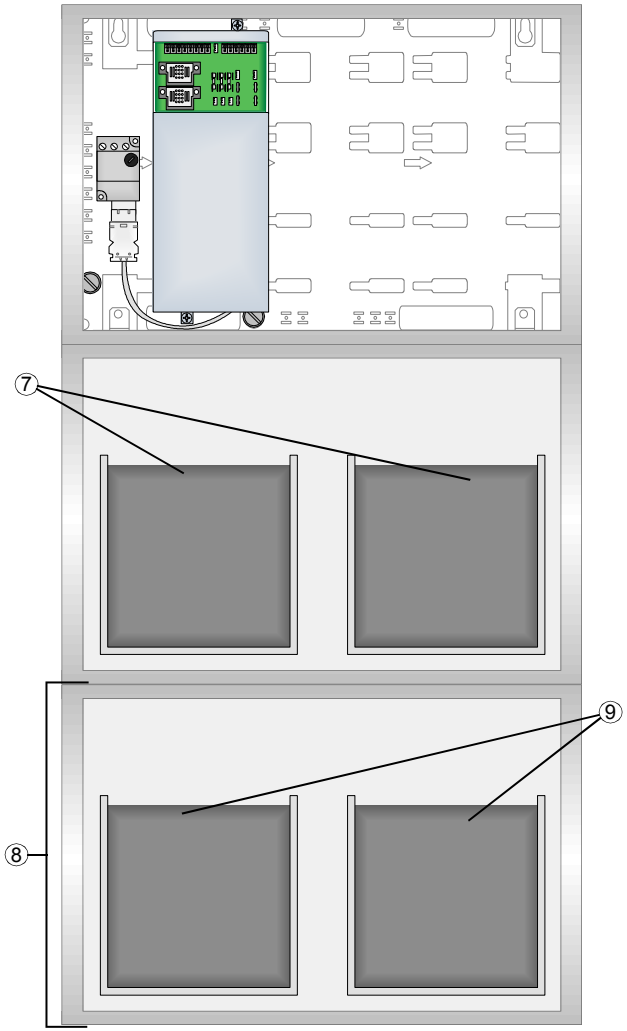


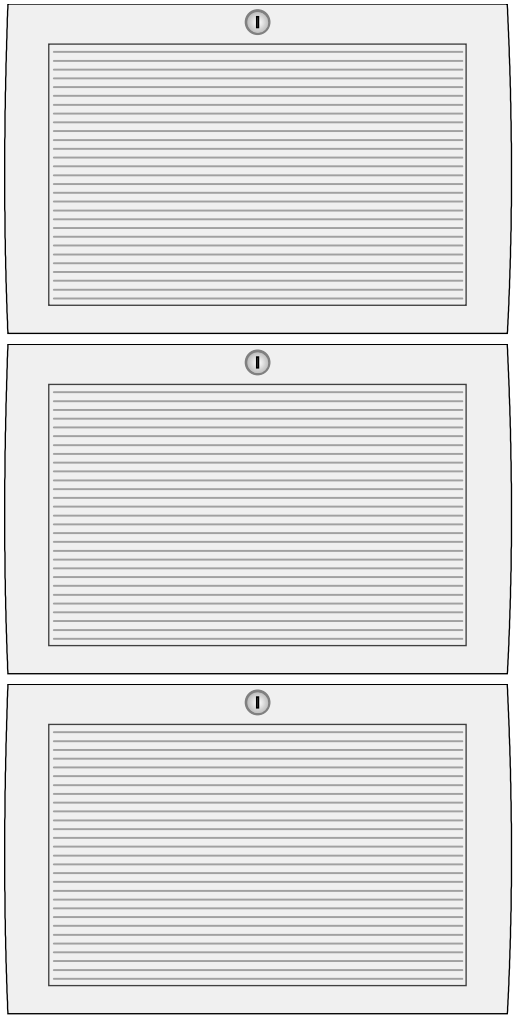


Power Supply Unit 24 V / 24 Ah (part-no. FX808364)

Power Supply Unit 24 V / 24 Ah :		**part-no. FX808364**
①	1 x Backplate 1, horizontal	part-no. FX808310
②	1 x Housingframe	part-no. FX808312
③	1 x Power supply module 24 V DC / 150 W	part-no. FX808326
④	1 x Mains terminal block	part-no. FX808327
⑤	1 x Blank front (only with networking panel or remote HMI)	part-no. FX808325
⑥	1 x Battery extension housing 2 incl. blank front	part-no. FX808313

24 V / 24 Ah Power Supply Unit



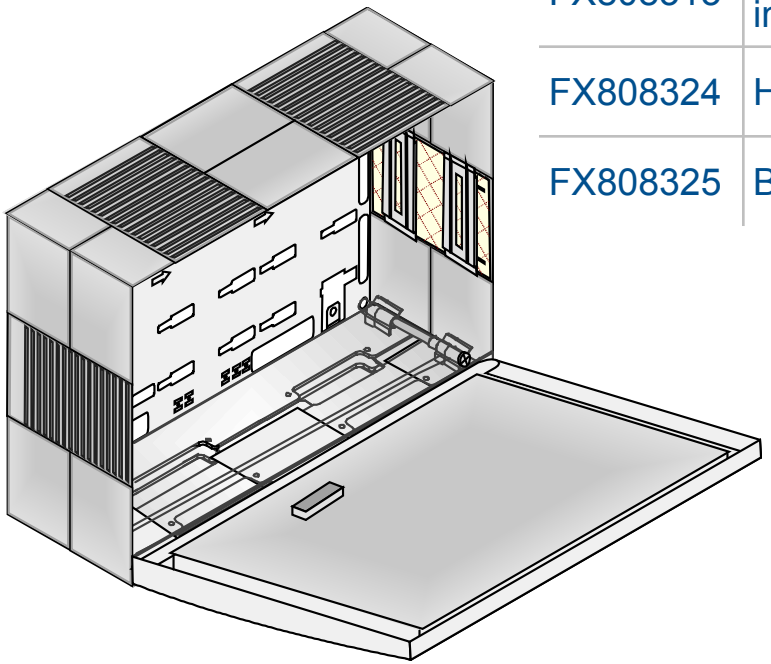


24 V / 24 Ah Power Supply Unit

Options

⑦	Batteries, max. 2 x 12 V / 24 Ah (24 V / 24 Ah)	part-no. 018006
⑧	1 x Battery extension housing 2 batteries	part-no. FX808313
⑨	Batteries, max. 2 x 12 V / 24 Ah (24 V / 24 Ah)	part-no. 018006

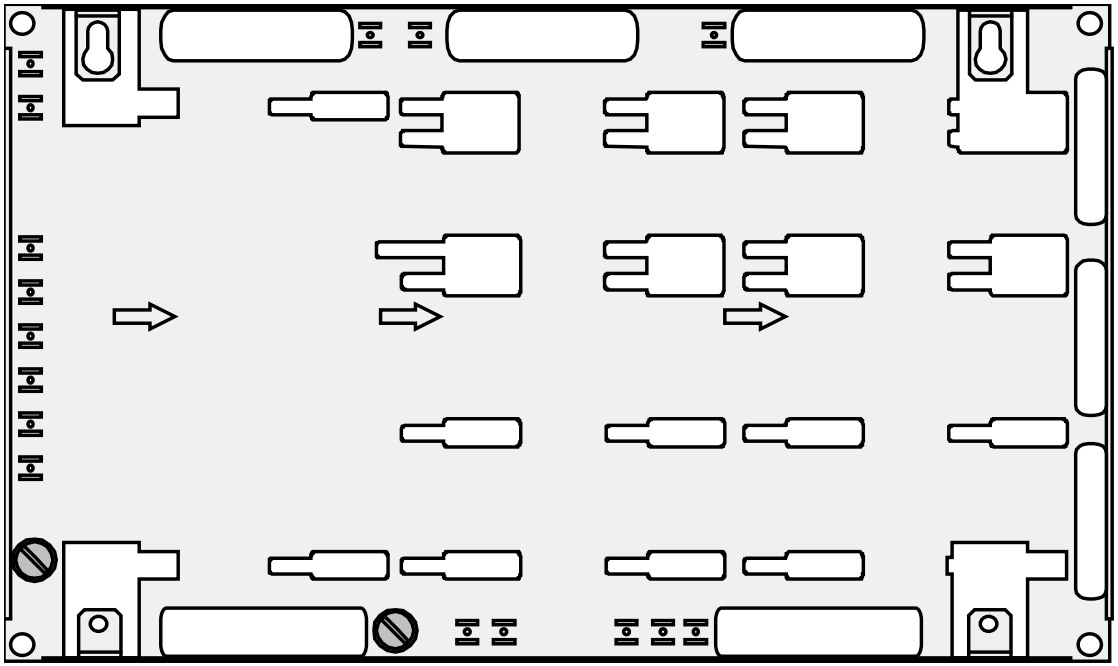
Assemblement



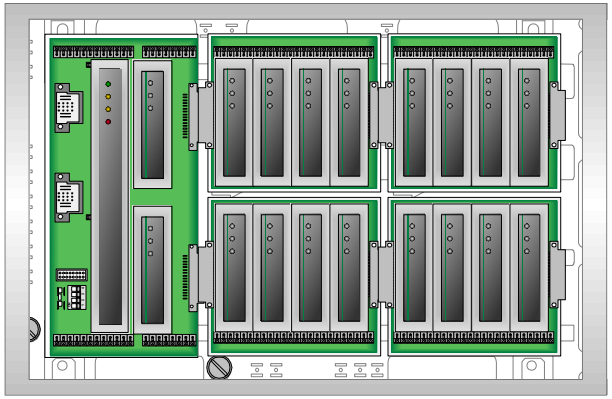
FX808310	Backplate 1 horizontal
FX808311	Backplate 2 vertical
FX808312	Housingframe
FX808313	Battery extension housing max. 2 x 12 V / 24 Ah batteries incl. Blank front
FX808324	HMI with frame and hinge
FX808325	Blank front with frame and hinge

Backplate (part-no. FX808310)

For horizontal use of components

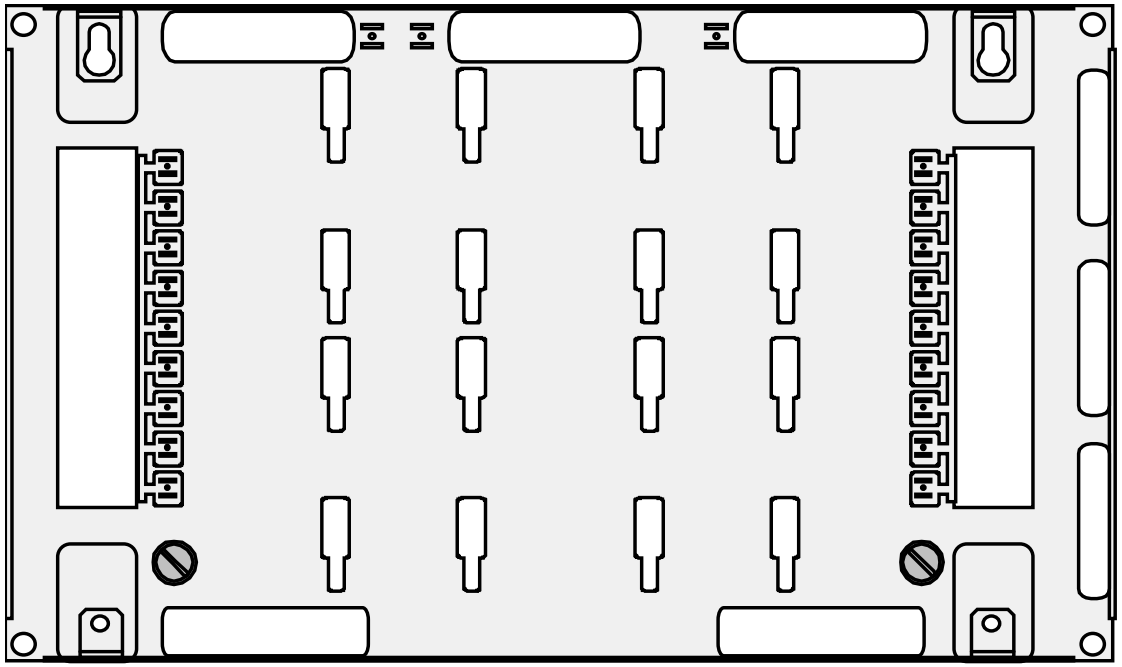


example

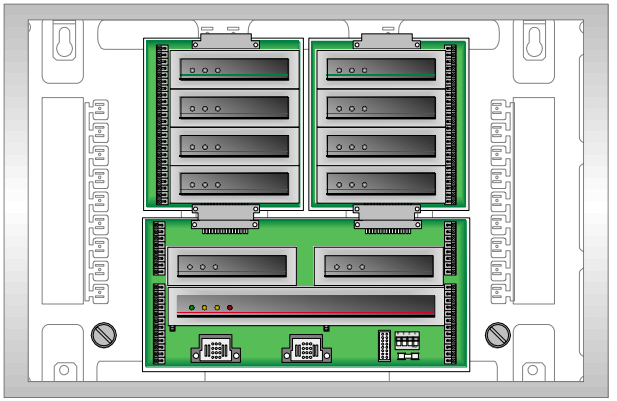


Backplate (part-no. FX808311)

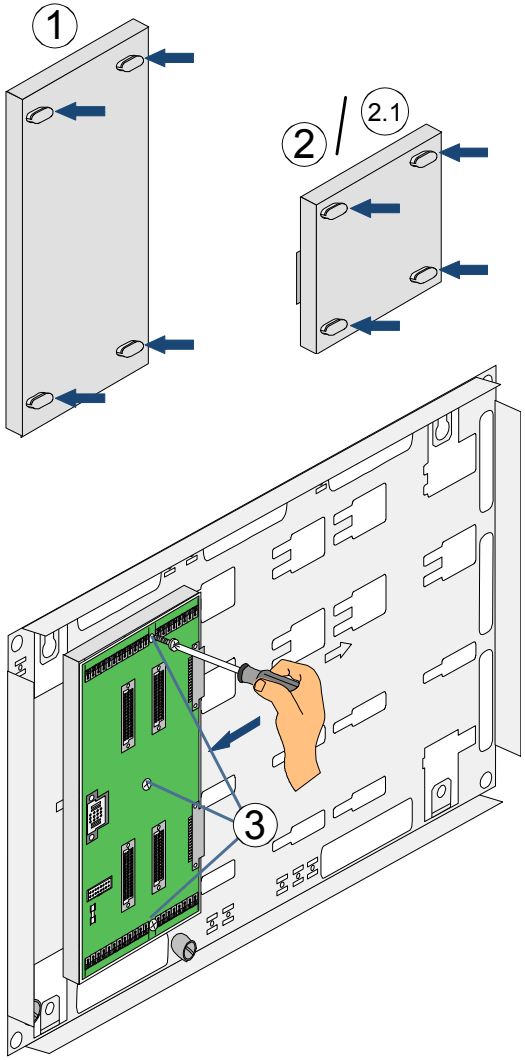
For vertical use of components



example



Mount of backplane

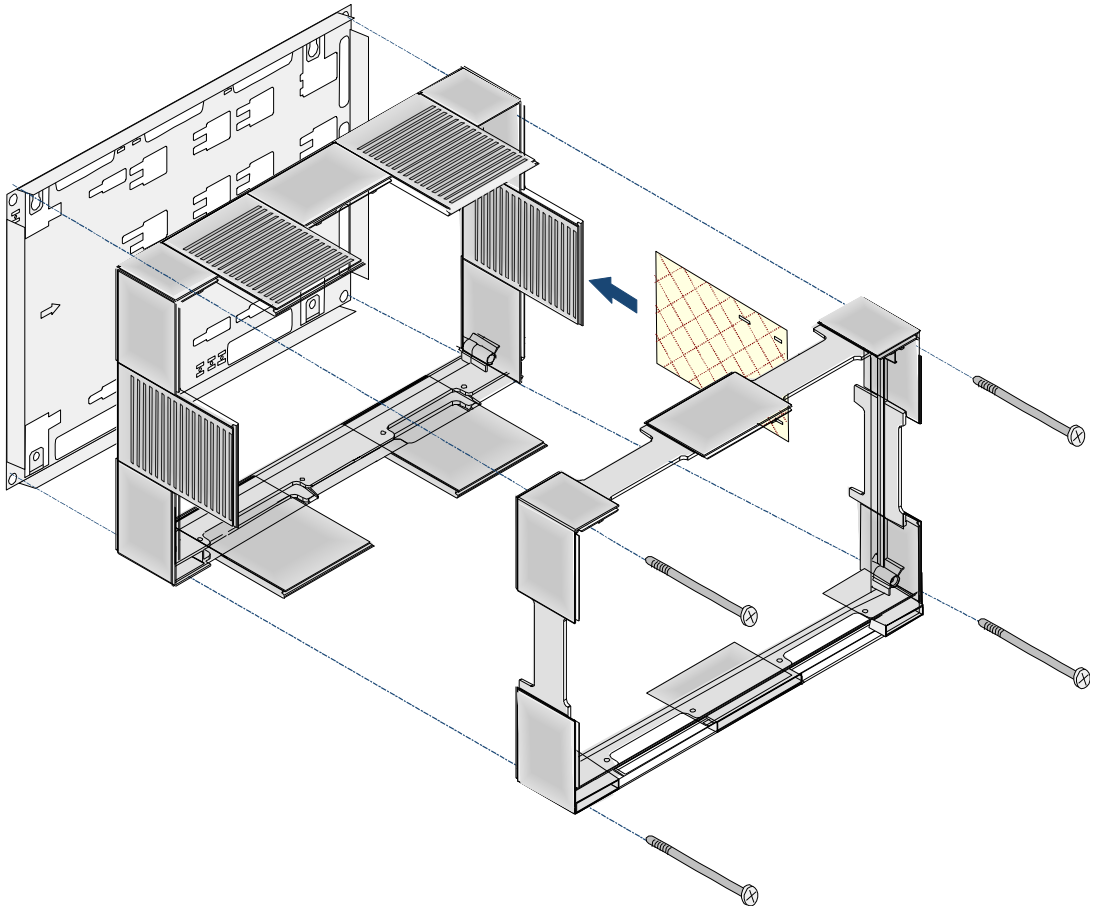


- Each module carrier is equipped with four holders on their rear which directly slide into the cut-outs on the rear housing panel. Fasten each module carrier using the supplied fastening screw.
- **Note the installation sequence:**
  - Insert the basic module (1) carrier and fasten it with the three screws.
  - Insert EM module carrier (2), check connection to basic module carrier 1 and fasten it with the screws.
  - Insert EM module carrier (2).1, check connection to basic module carrier 1 and fasten it with the screws.

- Insert the module carrier into the required position, align and slide into the cut-outs in the rear housing panel.
- Insert the three module carrier's fastening screw and tighten. Hereby the FE-connection of the module carrier is done.

Assemblement of the wall box

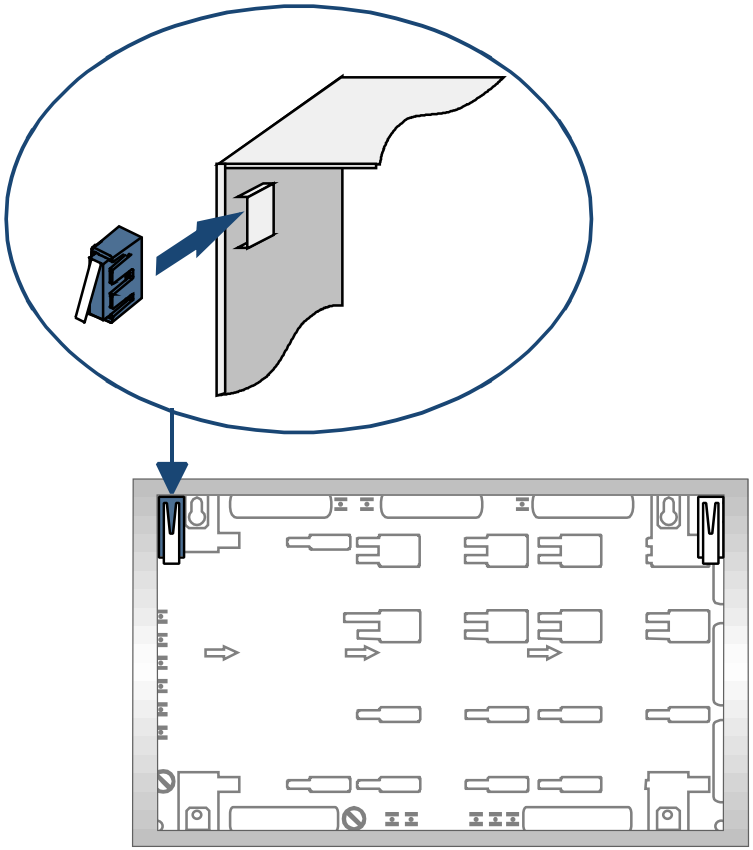
1. Fit rear housing panel
2. Fit battery holder
3. Install power supply module
4. Insert and fasten module carriers
5. Connect signal lines and connecting cables as required
6. Insert modules
7. Fit housing frame and tamper contactes incl. housing plates and dust filters
8. Insert front panel and faste

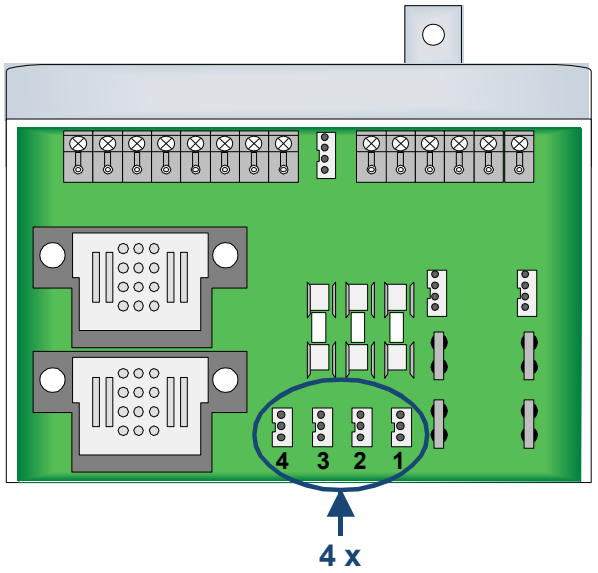


Tamper contact

The tamper contact is slotted into the holder in one of the housing's top corners together with the plastic insert (with the contact tab pointing down).

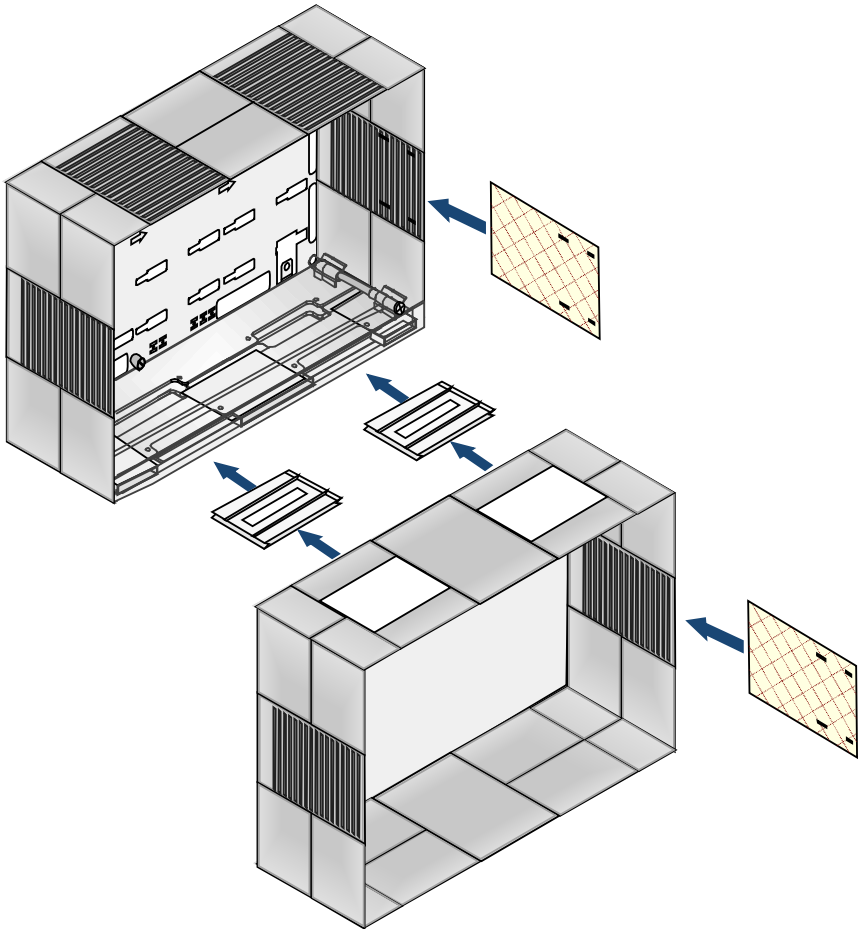
Connect to the power supply module (PSM). Take note of the assignments of terminal 1 to 4!





Connection between two housings

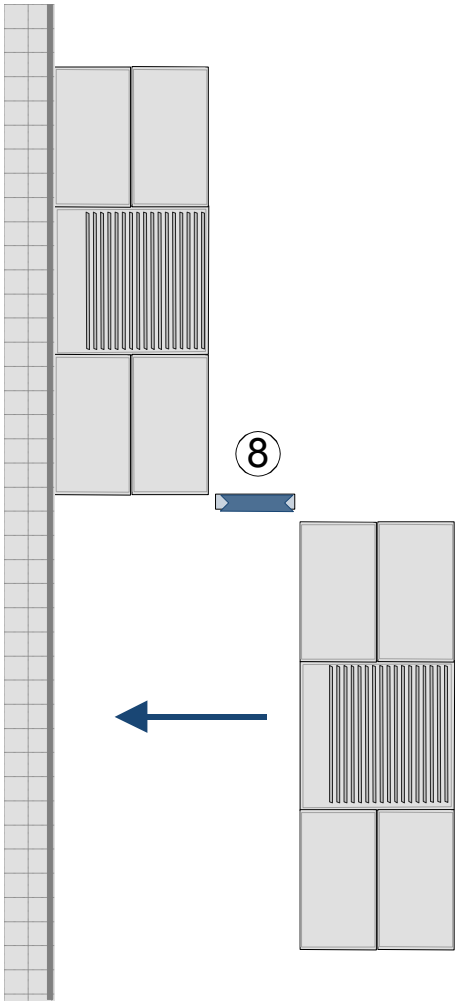
The compact housing is connected to the expansion housing unit with the supplied connecting plates.



Example of housings fitted vertically on top of each other.
Always use two connecting plates with cable entry.

Fit supplied dust filters to each plate.
Observe the proper fixixing of the dust filters to ensure an effective dust protection.

Connection between two housings

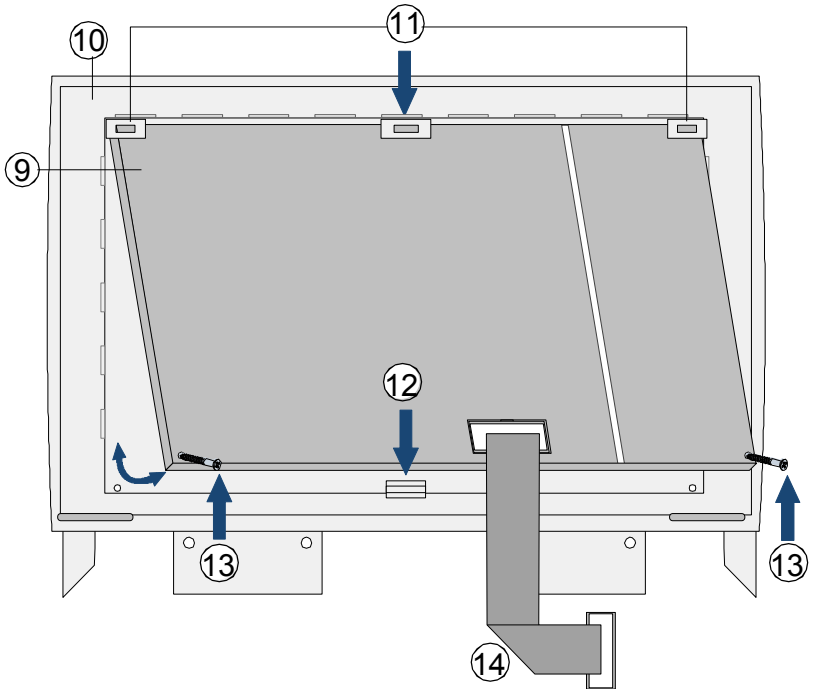


Each housing must be individually fastened to the mounting surface with four fastening screws

Connection plate

Attaching the label strips to the display and operating panel

The display and operating panel, associated label strips as well as the country-specific lettering sets must be inserted into the front panel in the correct position.



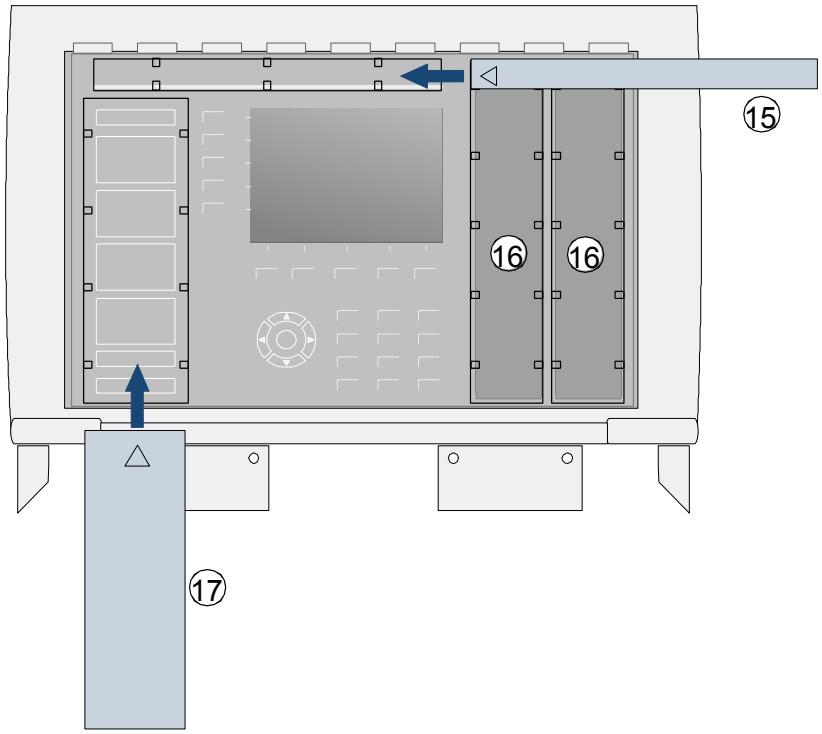
Disassembly

Remove the flat connecting cable (14) from the display and operating unit (9) .

Remove the two fastening screws (13).

Carefully push down the holding clip (12), D/O panel and lift the D/O panel from the front panel (10).

Attaching the label strips to the display and operating panel

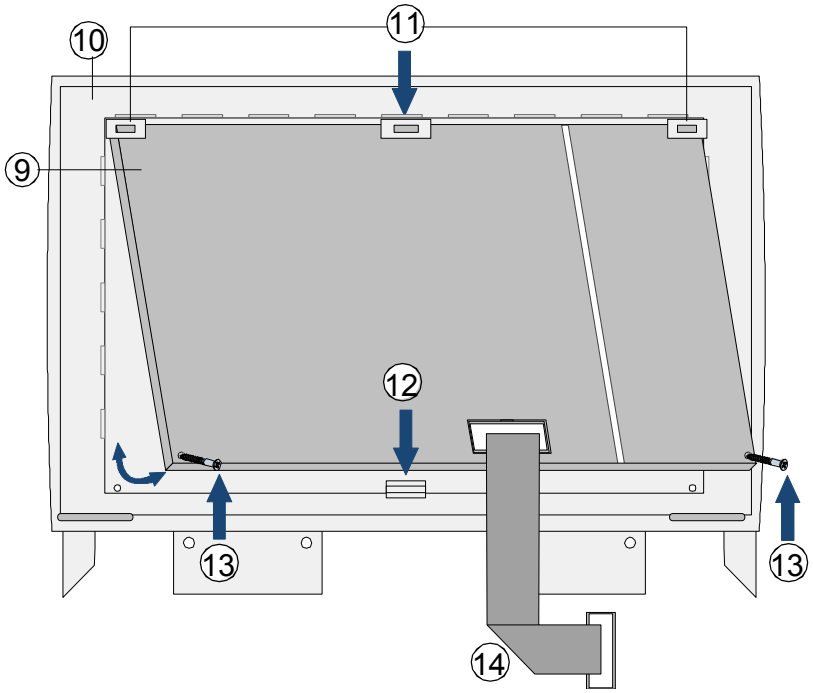


Collective and function displays

Insert the label strips for the collective display (15) and the function display (17) in the correct positions.

If there is no SZI, insert the two black cover strips (16).

Attaching the label strips to the display and operating panel



Installation

Align the display and operating unit (D/O panel) on the rear of the front panel's frame (10).

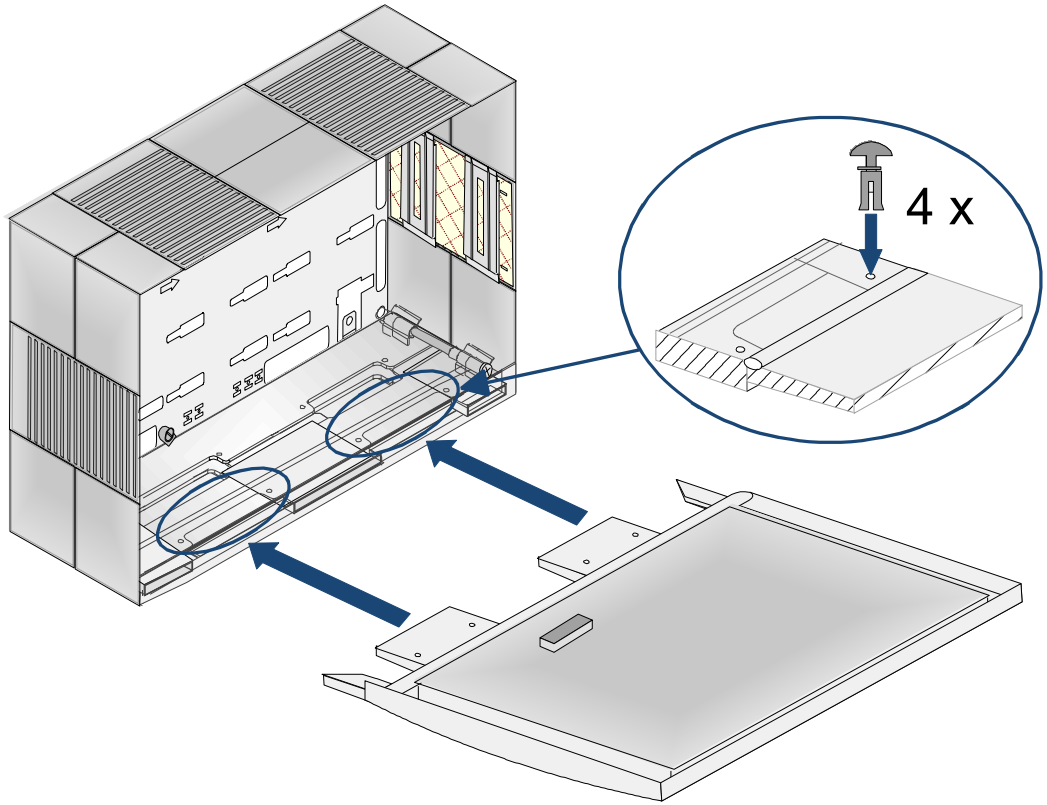
Slide the D/O panel, under the top holders (11) and press until the holding clip (12) positively engages.

Fasten the display and operating unit with the two screws (13).

Connect the ribbon cable (14) for the basic module carrier.

Fitting the front panel to the housing frame

The fully-assembled front panel with the display and operating unit and ready-inserted labelling strips can now be fitted to the fully-assembled and mounted housing.

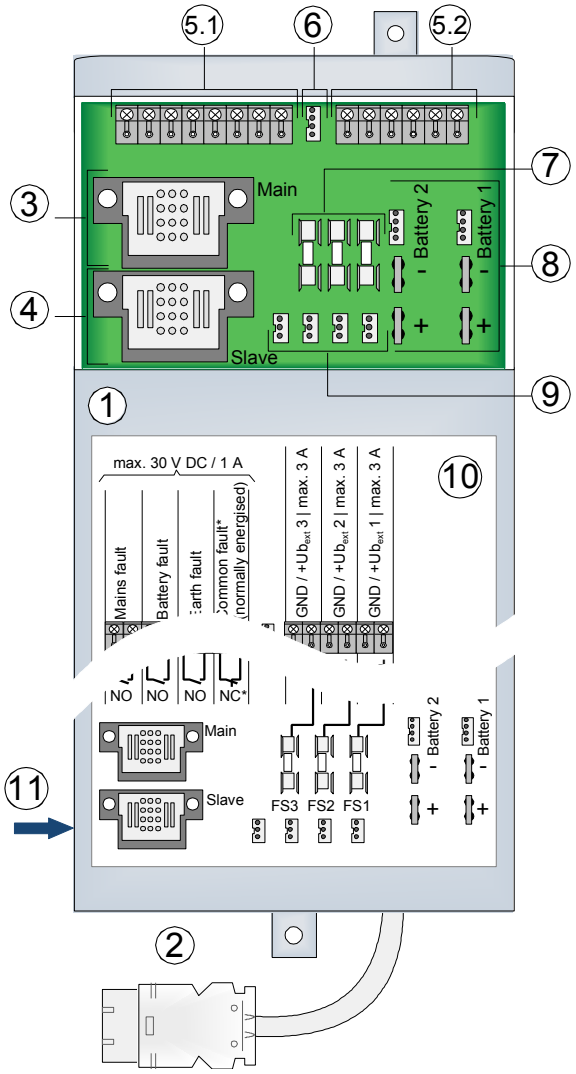


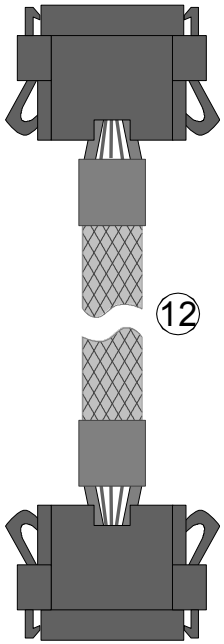
Insert the two plastic fittings into the corresponding openings in the panel housing and fasten with the four expanding rivets.

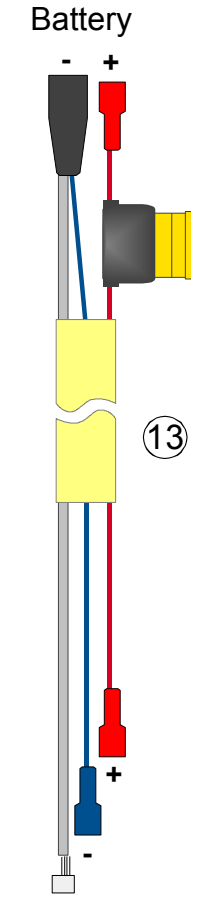
The modules

- **Power supply module (24 V DC / 150 W)**
- **Controller module (CM)**
- **essernet®-Modul (enM)**
- **esserbus®-Module (ebM / ebMGI)**

Power supply module (24 V DC / 150 W)



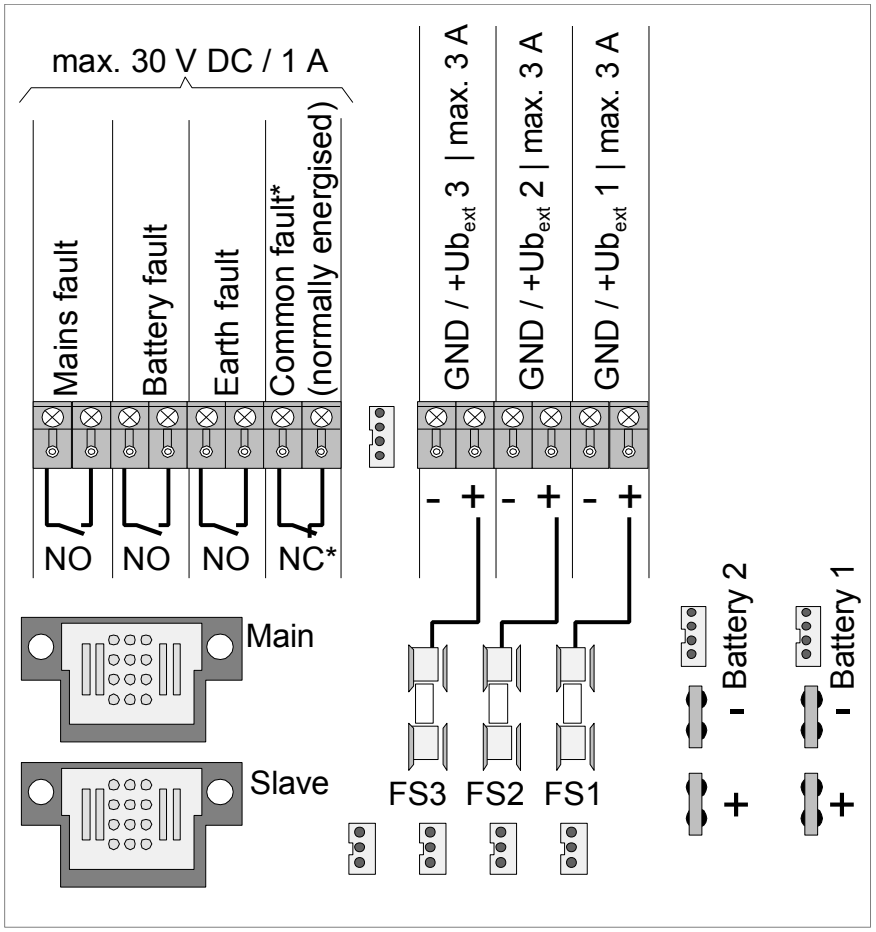




Power supply module (24 V DC / 150 W)

1	Power supply module (24 V DC / 150 W) max. connectable battery capacity 24 V / 48 Ah.	
2	Connector for PS connection module (PSM) If several power supply modules are connected, connect them using the 3-way connector (part-no. FX808330)	
3	MAIN-plug ➔ connection for the hybrid cable for connecting the basic module carrier	
4	SLAVE - plug ➔connection for the hybrid cable for connecting the next power supply module	
5.1	Terminals for 4 relays Common fault relay (break contact = inverse operation) Earth fault relay (normally open) Battery fault relay (normally open) Mains fault relay (normally open)	Potential free contact Max. contact load 30 V DC / 1 A
5.2	Connection terminals: 3 x Ubext/GND for external consumers. Max. load per terminal 3 A Max. total load 6 A	
6	Connection for LED display when operated as stand-alone	
7	3 x individual fuses (T3,15 A) for the three Ubext/GND (UB1 to UB3) connections	
8	Battery and temperature sensor connections 1 = 2 x 12 V / max. 24 Ah 2 = 2 x 12 V / max. 24 Ah	total 24 V / max. 48 Ah
9	Connection for tamper contact (max. 4 tamper contactes)	
10	Label on power supply housing stating the terminal connections / components	
11	Earth fault detection	
12	Hybrid cable – for connecting the power supply module and basic module carrier	
13	Connecting cable for batteries incl. fuse (T10 A) and temperature sensor	

Connection power supply module



The label shows the connection terminals assigned to the power supply module (PSM). Only the four PSM relays and associated indicators for the relevant PSM are connected. These connections cannot be used for other components / purposes!

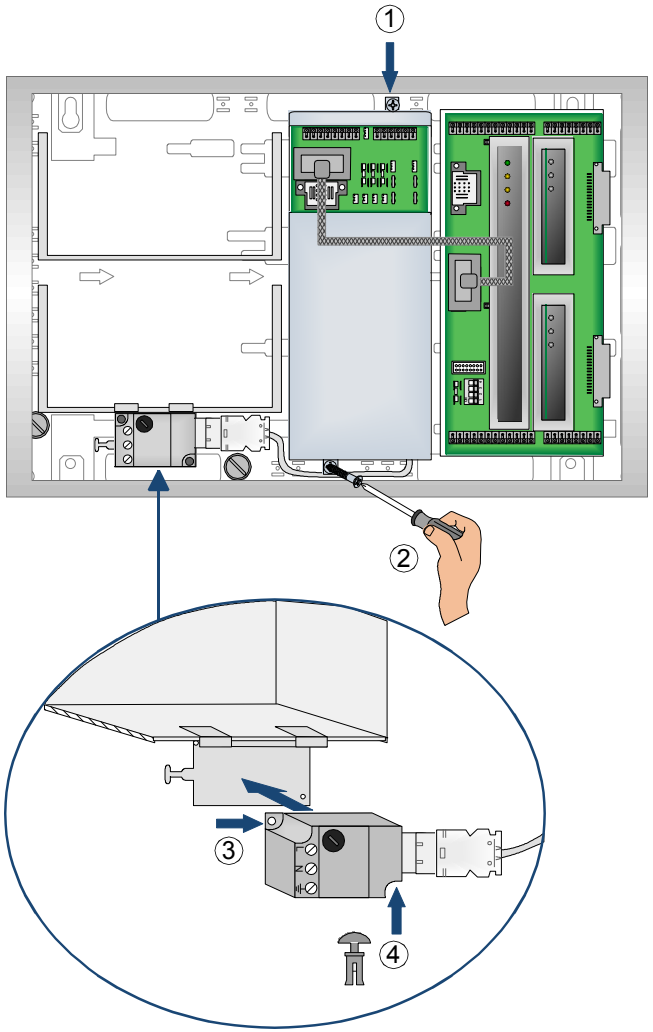
Earth fault detection

The earth fault detection function can be activated or deactivated using the jumper on the side of the PSM.

Earth fault detection on (factory setting)

Earth fault detection off

Installing power supply module / PS connection module



FX2 (part-no. FX808360)

Insert the power supply module in the correct position and fasten to the rear housing panel with the two crews

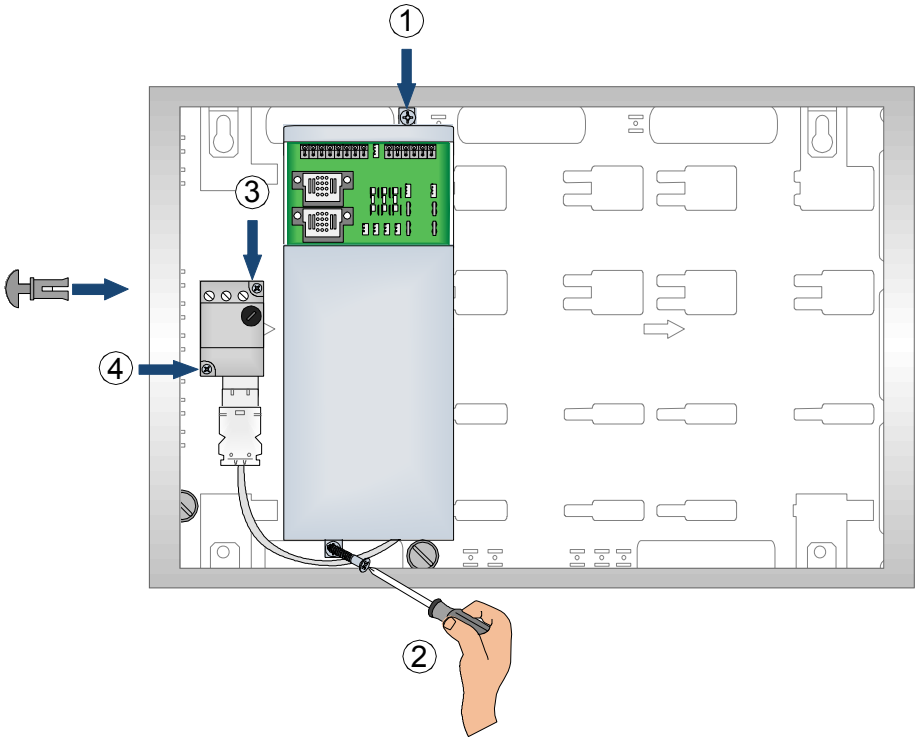
(1) + (2)

PS connection module (part-no. FX808327)

The PS connection module is required for connecting the 230 V AC voltage to the power supply module. Fasten the module to the battery holder angle brackets or rear panel with the two supplied expanding rivets (3) + (4)

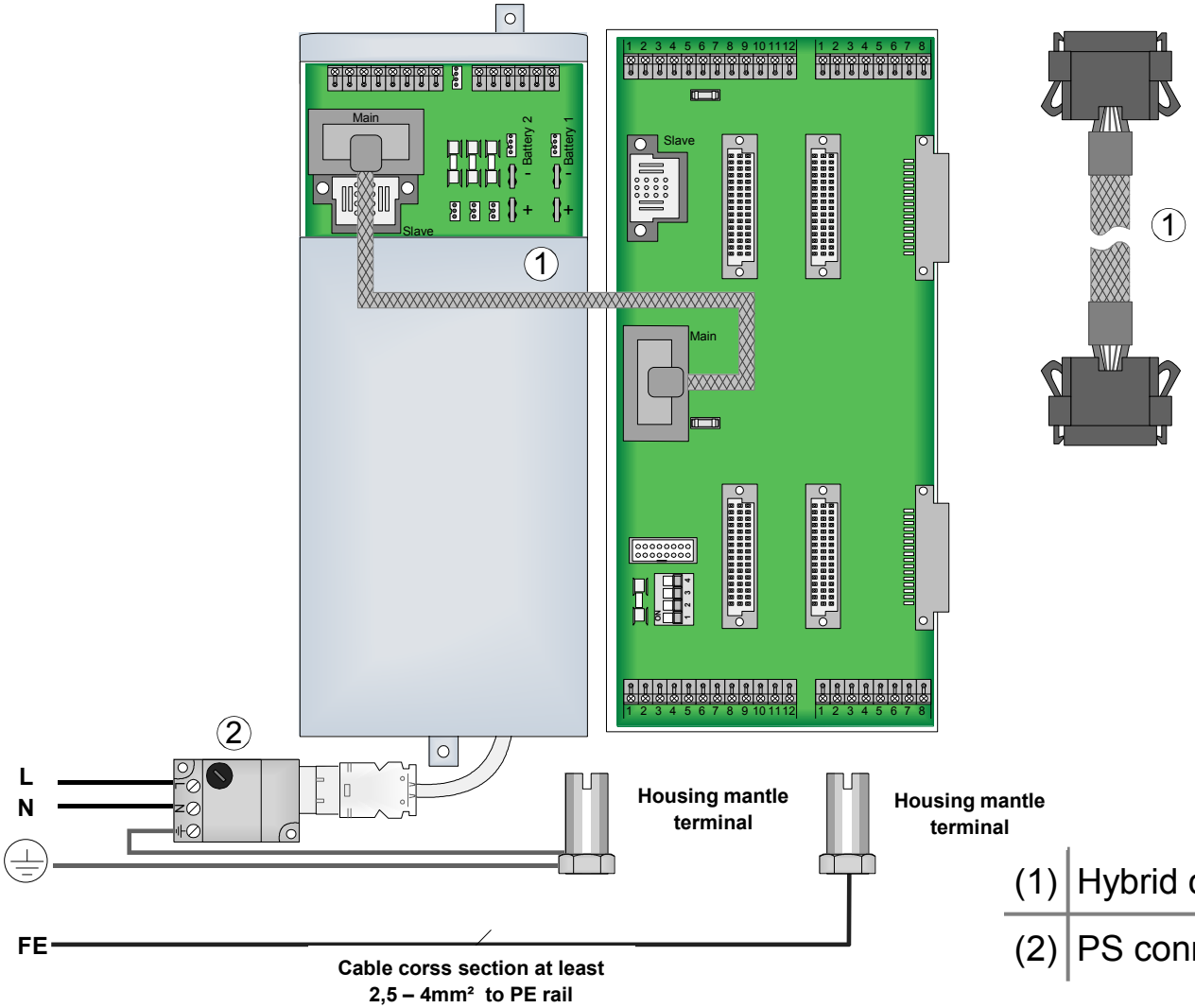
Installing power supply module / PS connection module

There are two different power supply expansion units (Part No. FX808363 and FX808364) from which to choose to connect larger batteries and additional power supply modules (max. 3).



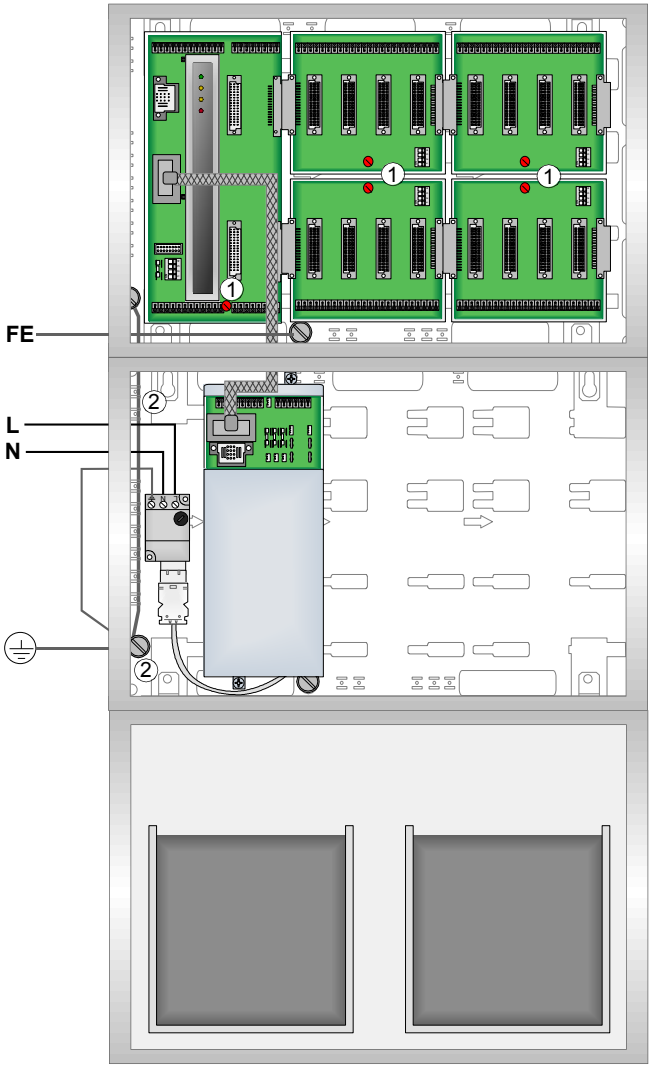
FX10 (part-no. FX808361)
FX18 (part-no. FX808362)
Power Supply Unit 24 V / 12 Ah (part-no. FX808363)
Power Supply Unit 24 V / 24 Ah (part-no. FX808364)

Main connection (230 V AC) and ground connection



(1)	Hybrid cable (lengh 700 mm)
(2)	PS connection module(part-no. FX808327)

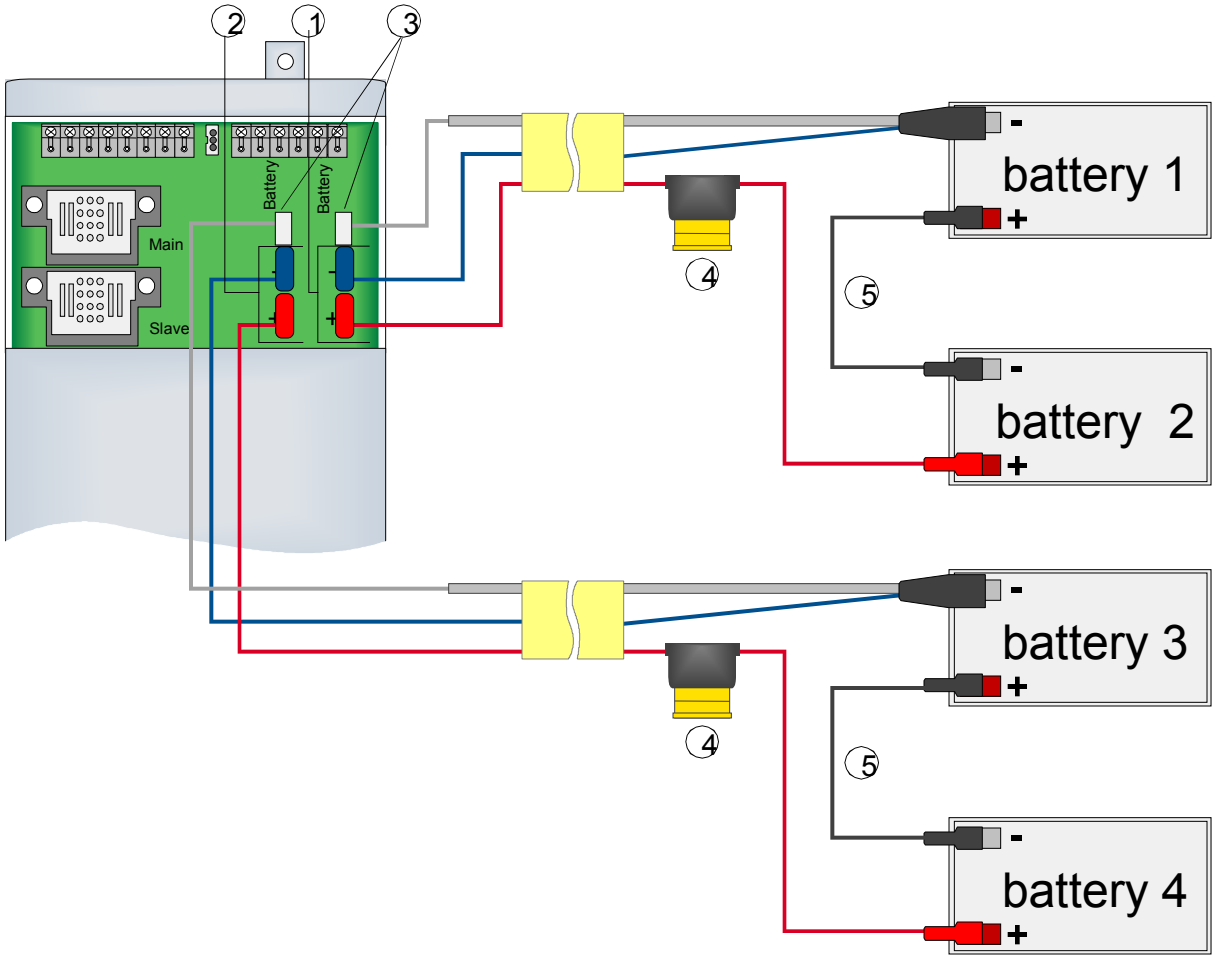
Ground connections and potential equalisation



(1)	Metal screws for creating an electrically conductive connection to the rear housing panel
(2)	Sheath clamp on housing (PE connection) The sheath clamps on the rear metal panels must be connected to one another.

Batterie connection (24 V DC)

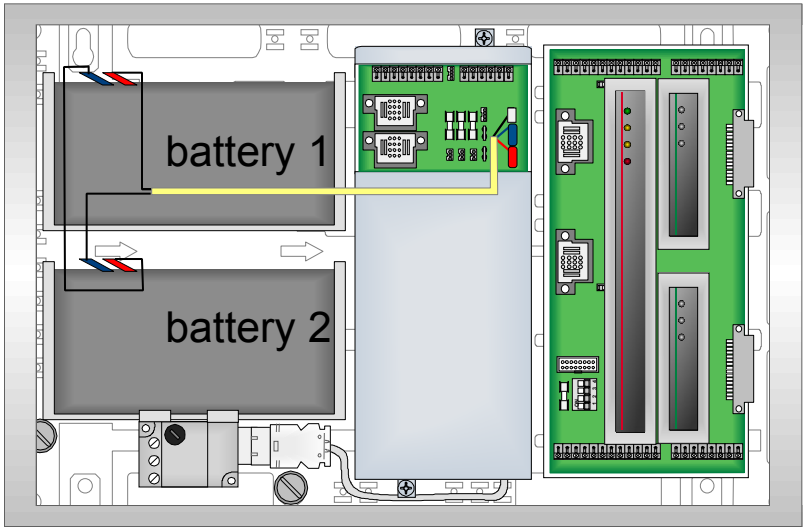
The power supply module can be connected to 4 batteries (2 x to Battery 1 and 2 x to Battery 2) The max. battery capacity is 24 Ah each.



Batterie connection (24 V DC)

(1)	Battery connector 1 / Battery 1 (max. 24 Ah)	Max. 48 Ah total capacity per PSU module!
(2)	Battery connector 2 / Battery 2 (max. 24 Ah)	
(3)	Temperature sensor connection (use of the battery cable with integrated temperature sensor required)	
(4)	Fuse T10 A (250 V)	
(5)	Cable for series connection of both 12 V batteries (24 V DC) ⩲	

Fitting the batteries



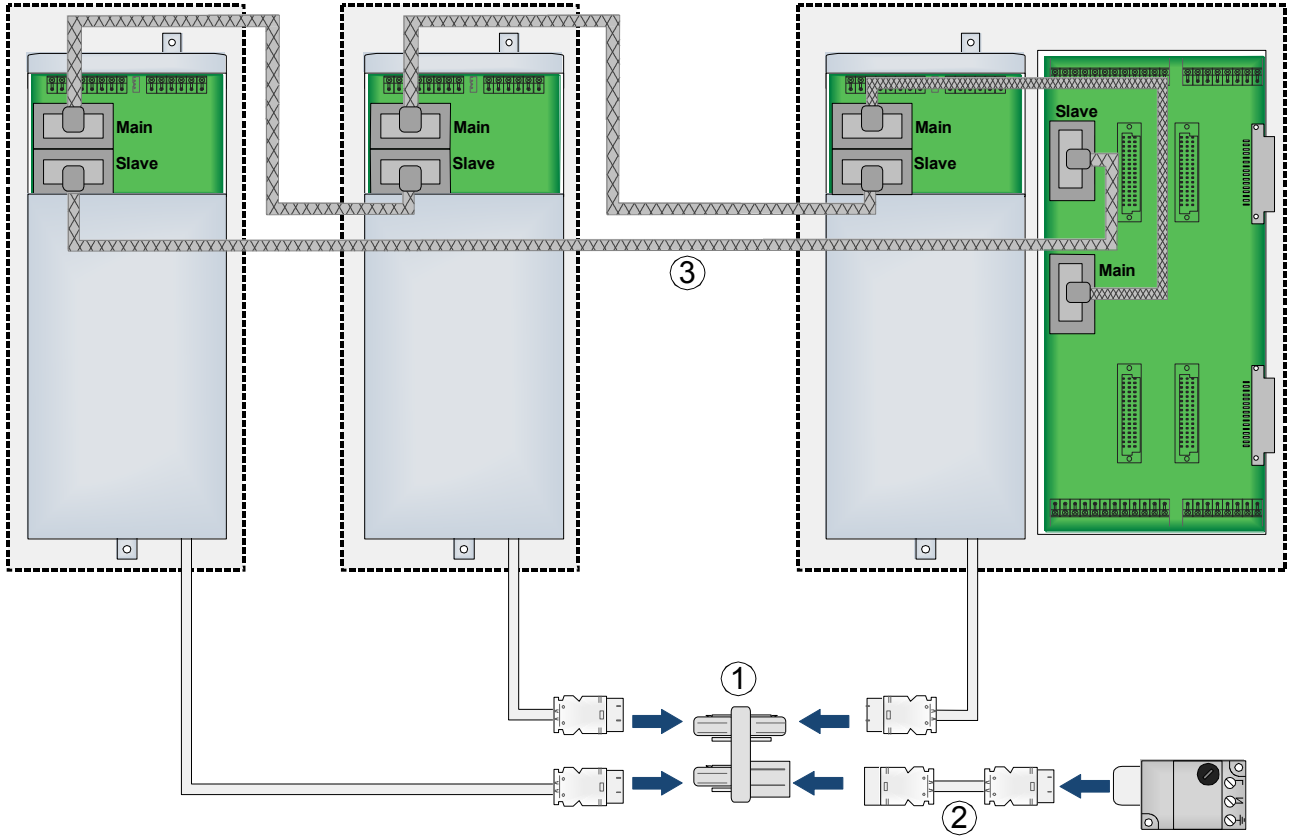
Max. 2 x 12 V / 12 Ah-batteries can be fitted in:

- Variant FX2 (part-no. FX808360)
- PSU expansion 24 V / 12 Ah (part-no. FX808363)

Cascading of power supply modules

A FlexEs fire alarm control panel can be fitted with up to three power supply modules.

The individual PS modules (and basic module carrier) are connected using hybrid cables (MAIN/SLAVE).

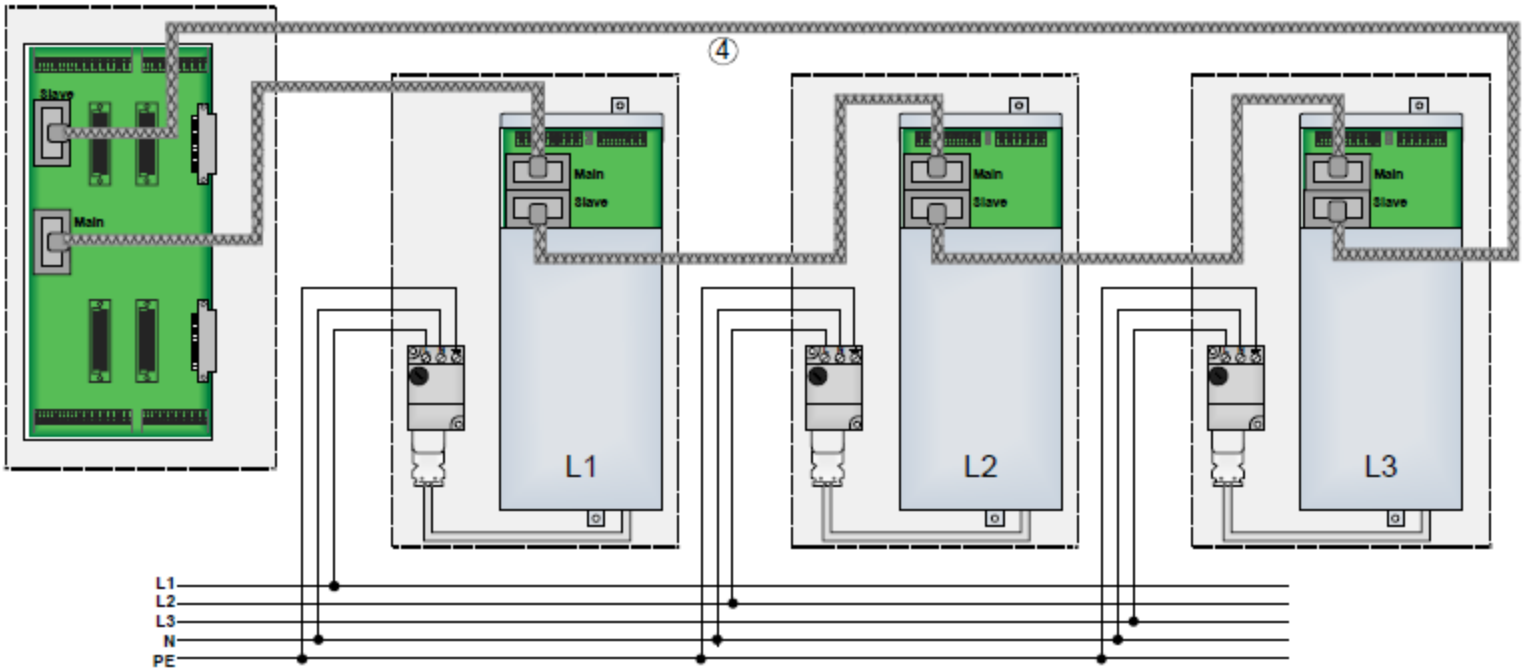


(1) 3-way connector incl. Connecting cable (2) (part-no. FX808330)

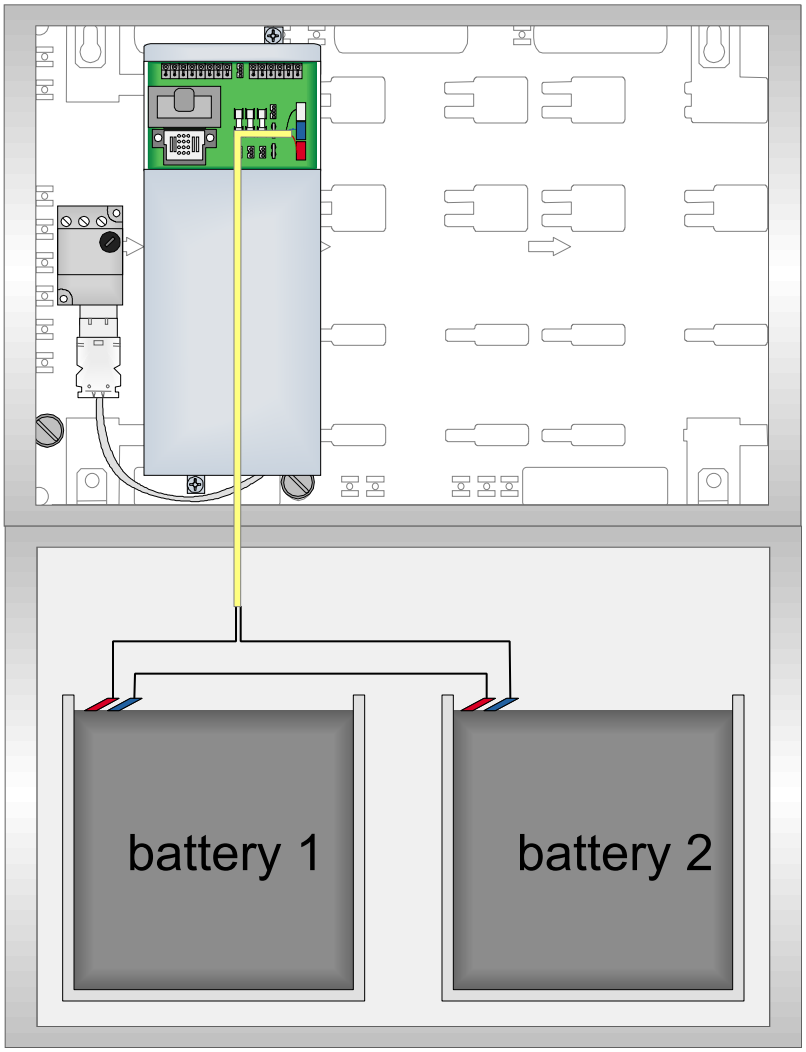
(3) Hybrid cable – optional connection

Cascading of power supply modules

With cascading of the PSM, a max. power of 450 W @ 24 V is available. In addition, the energy supply can be redundantly designed with ring-shaped wiring. A “3-phase supply” (400 V) is therefore also possible.



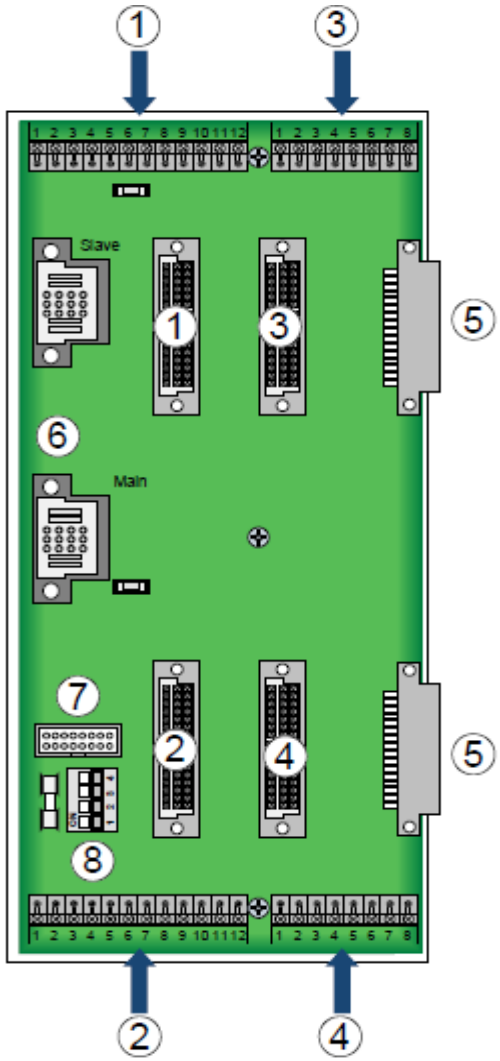
Fitting the batteries



Max. 2 x 12 V / 24 Ah-batteries can be fitted in:

- Variant FX10 (part-no. FX808361)
- Variant FX18 (part-no. FX808362)
- PSU expansion 24 V / 24 Ah (part-no. FX808364)

Basic Module Carrier (BM)

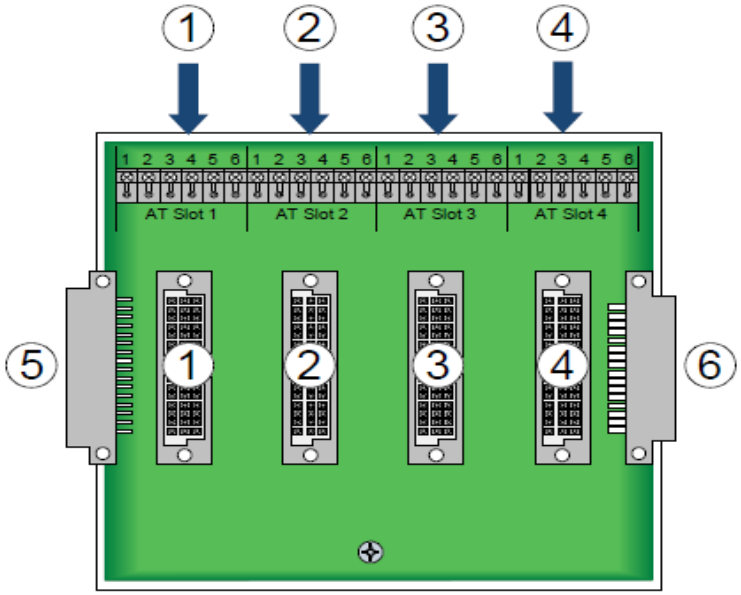


① + ②	Slot for the control module with associated terminal clamps
③	Module slot with associated terminal clamps
④	Module slot with associated terminal clamps
⑤	Plug-in connection for expansion module carrier
⑥	Connector for the hybrid cable for the power supply module
⑦	Connector for the ribbon cable for the display and operating unit
⑧	DIL-switch for the operation panel

DIL-switch 1 – 4 OFF ≙ factory setting with operation panel to ⑦

DIL-switch 1 – 4 ON ≙ without operation panel connected

Expansion module carrier 1 (EMC 1)



①	Module slot and associated connection components
②	Module slot and associated connection components
③	Module slot and associated connection components
④	Module slot and associated connection components
⑤	Connection for basic module carrier or expansion module carrier 1
⑥	Connection for the second expansion module carrier 1

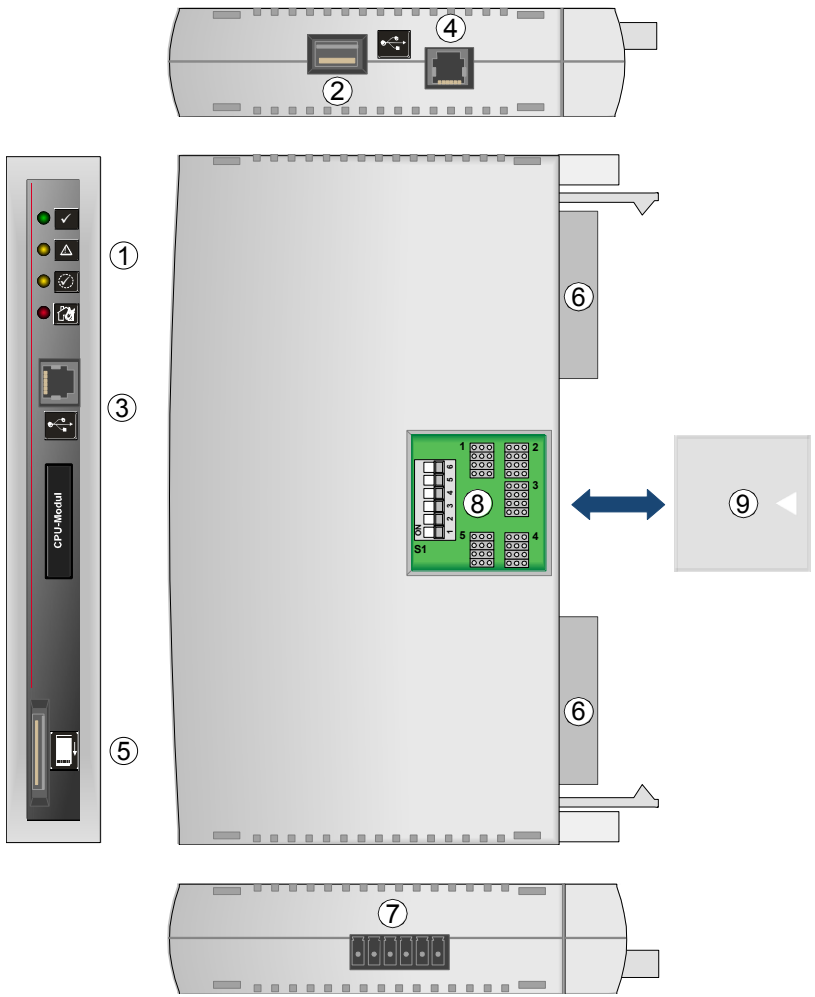
The assignments of terminal clamps 1 to 6 depend on the relevant module being used.

Controller module (CM)

Controller module including CPU

- USB master interface for programming
- USB slave interface for memory expansion or media exchange
- SD card slot for memory expansion
- Ethernet interface
- TTY interface
- RS485 interface / fire department periphery
- 4 freely programable and monitorable relay outputs
- Master-Slave function for redundancy (part-no. FX808328.RE)
- Esser Data Protocol (EDP) on-board

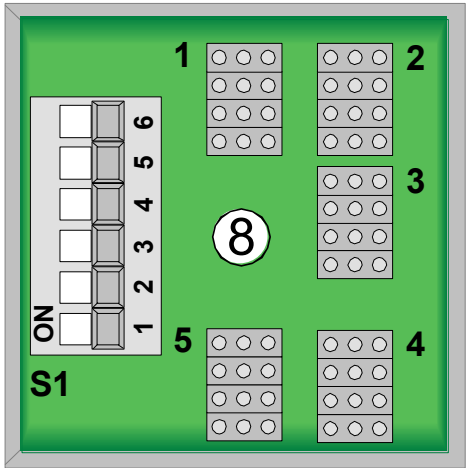
Controller module (CM)

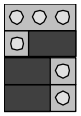
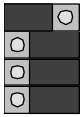
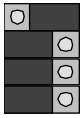


①	LED green	Lit up ➔ normal operation
	LED yellow	Lit up ➔ Control module faulty or reset mode active (emergency operating mode)
	LED yellow	Flashing 1 Hz ➔ Redundant control module in stand-by mode (future function expansion)
	LED red	Lit up ➔ Fire alarm (including during emergency operating mode)
②	USB-connection (Master, future function expansion)	
③	USB-connection (Slave), for Service-PC	
④	Ethernet-connection (future function expansion)	
⑤	Plug-in SD memory card (future function expansion)	
⑥	Connector for connection to basic module carrier	
⑦	Connector TTY 1000m	
⑧	DIL-switch S1 and jumpers 1 to 5	
⑨	Cover	

Controller module (CM)

Each relay is assigned a jumper block for selecting the required operating mode (e.g. relay 1 - jumper block 1 etc.).

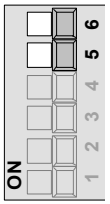


	Positive switching 24 V DC, non-monitored
	Changeover (electrically isolated, potential-free)
	Positive switching 24 V DC, monitored

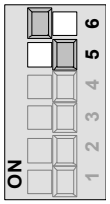
Controller module (CM)

DIL Switch S1

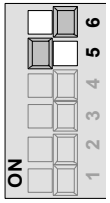
DIL switches 1 to 4 are reserved for future function expansions.



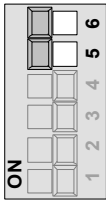
- No activation of alarm transmission unit (ATU) while the system is operating in emergency mode



- No activation of alarm transmission unit (ATU) while the system is operating in emergency mode

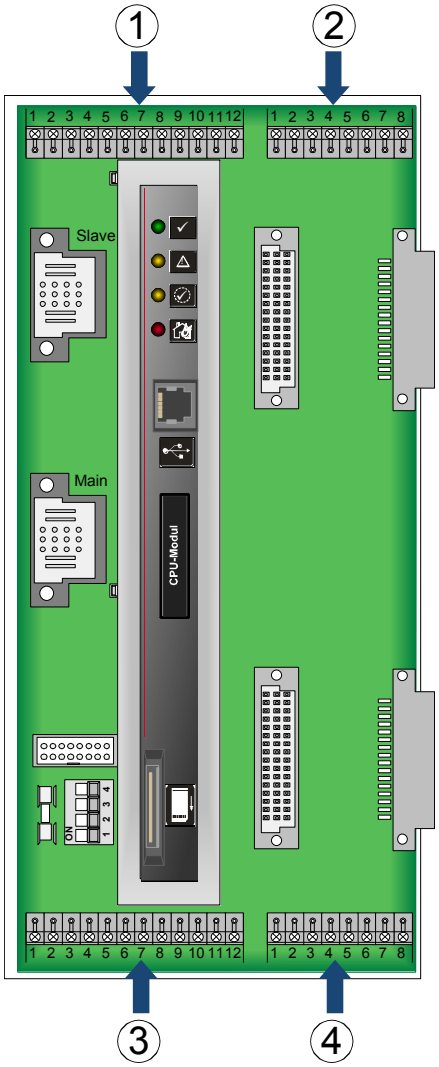


- Relay 1 alarm transmission unit (ATU) and relay 2 will be activated if there is a fire alarm while the system is operating in emergency mode. Irrespective of the tamper contact



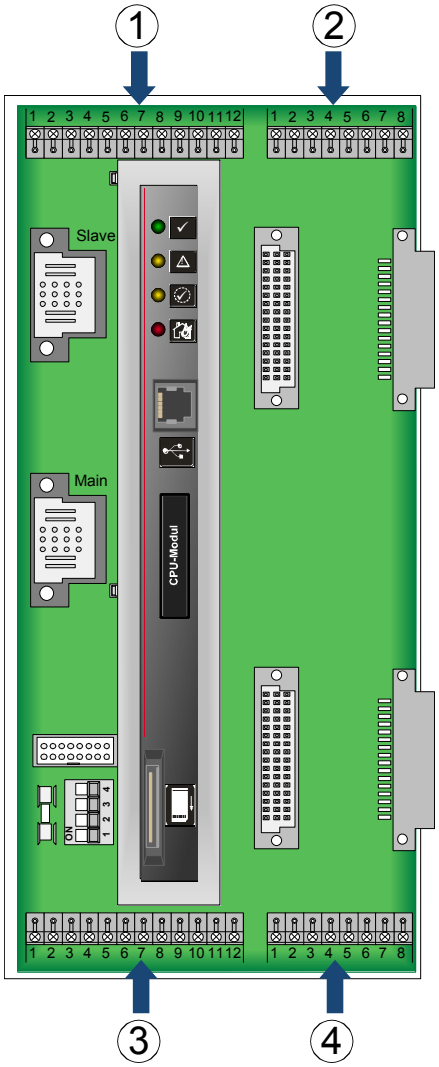
- Factory setting Relay 1 alarm transmission unit (ATU) and relay 2 will be activated if there is a fire alarm while the system is operating in emergency mode and if the tamper contact is closed

Terminal Controller module



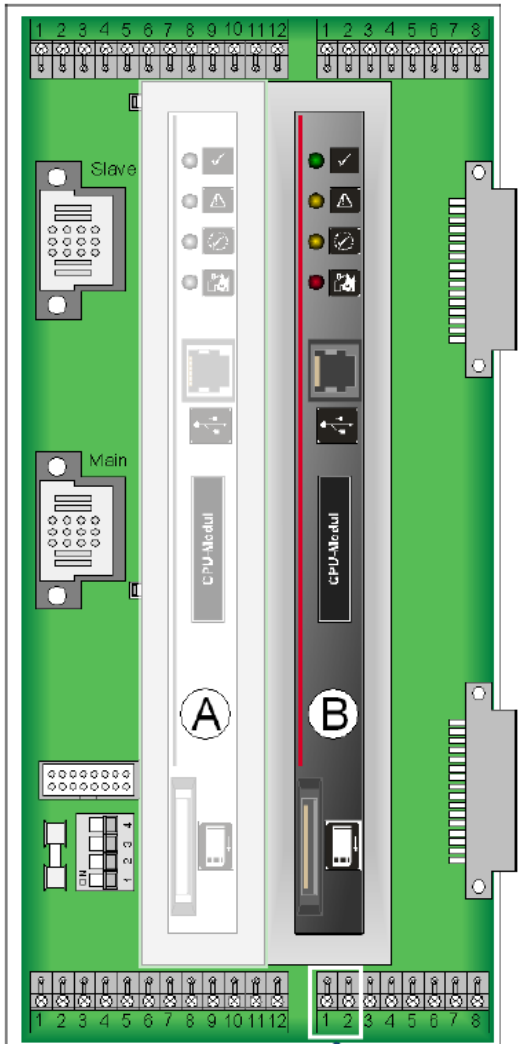
1	1	NO ➔ ATU-relay 1
	2	C ➔ ATU-relay 1
	3	NC ➔ ATU-relay 1
	4	Feedback signal ATU
	5	NO ➔ relay 2
	6	C ➔ relay 2
	7	NC ➔ relay 2
	8	NO ➔ relay 3
	9	C ➔ relay 3
	10	NC ➔ relay 3
	11	Do not use!
	12	Do not use!
2	1	Module terminal clamps
	2	
	3	
	4	
	5	
	6	
	7	Do not use!
	8	Do not use!

Terminal Controller module



3	1	RS485a interface 1 +
	2	RS485b interface 1 -
	3	RS485a interface 2 +
	4	RS485b interface 2 -
	5	NO ➔ relay 4
	6	C ➔ relay 4
	7	NC ➔ relay 4
	8	NO ➔ relay 5
	9	C ➔ relay 5
	10	NC ➔ relay 5
	11	Do not use!
	12	Do not use!
4	1	Module terminal clamps
	2	
	3	
	4	
	5	
	6	
	7	Do not use!
	8	Do not use!

Terminal - Control module 2 (redundancy)

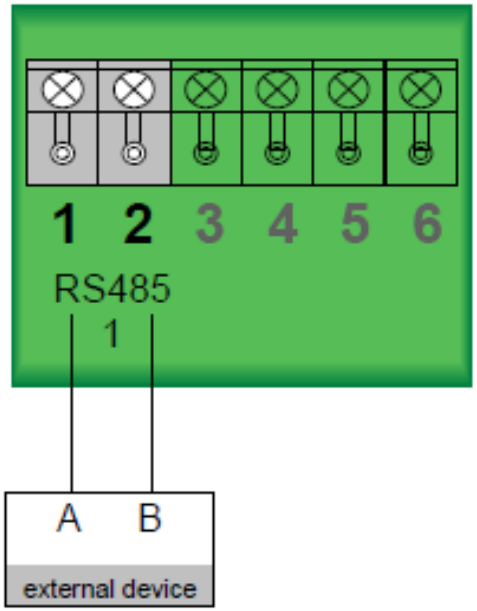


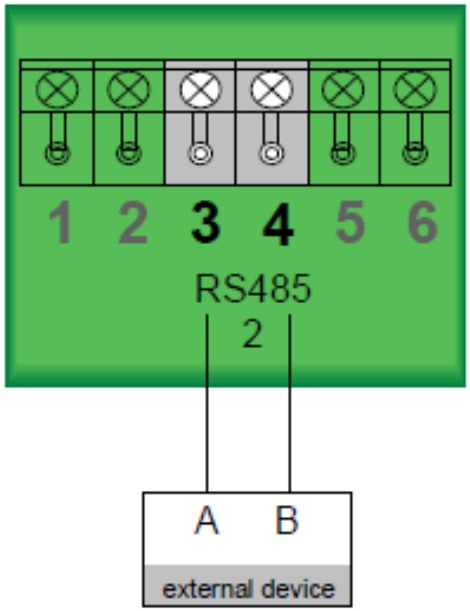
A second control module (Part No. FX808328.RE) is required for redundant operation of the FACP FlexES control. The second control module is connected to the two open plug contacts of the basic module carrier. This allows a maximum of 16 additional modules (variant FX18) to be used in a redundant configuration.

Terminal Controller module

RS485-interfaces

Two RS485 interfaces are available at terminal clamps terminal 1 and 2 and terminal clamps 3 and 4 of the control module. These interfaces can be used to connect external devices, e.g. a fire department indicating panel.





Terminal Controller module

RS485

Length < 1000m

FDOU

RS485

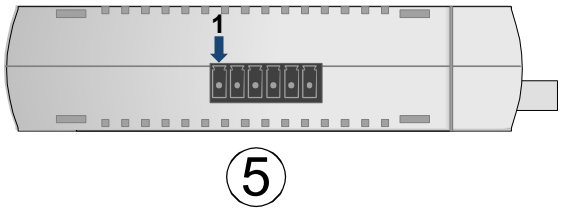
Length < 1000m

FAT

FDOU

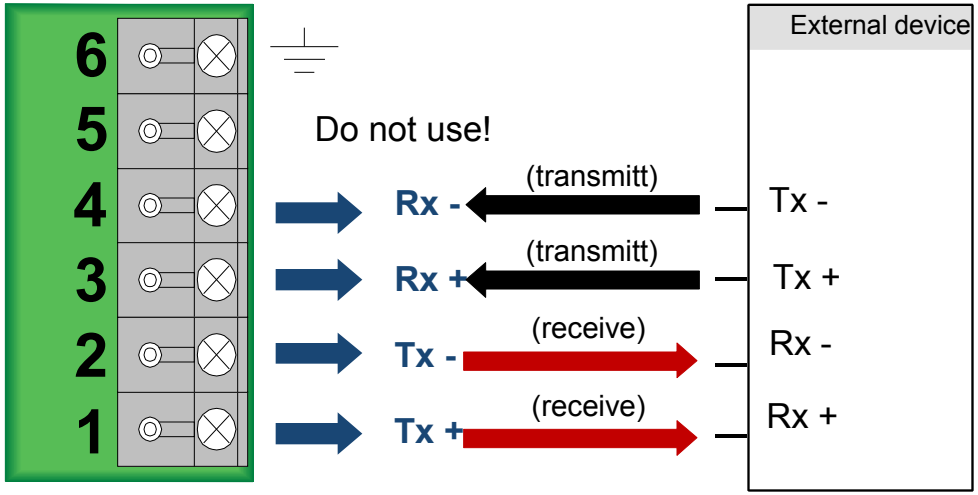
RS232

Terminal Controller module



5	1	TTY-interface transmitter Tx +
	2	TTY-interface transmitter Tx -
	3	TTY-interface Receiver Rx +
	4	TTY-interface Receiver Rx -
	5	Do not use!
	6	PE

TTY-interface auf dem Controller module



essernet®-Modul (enM)

essernet module 62.5 kBaud

Loop interface for setting up a network with up to 16 FACPs or for integrating into existing essernet installations.

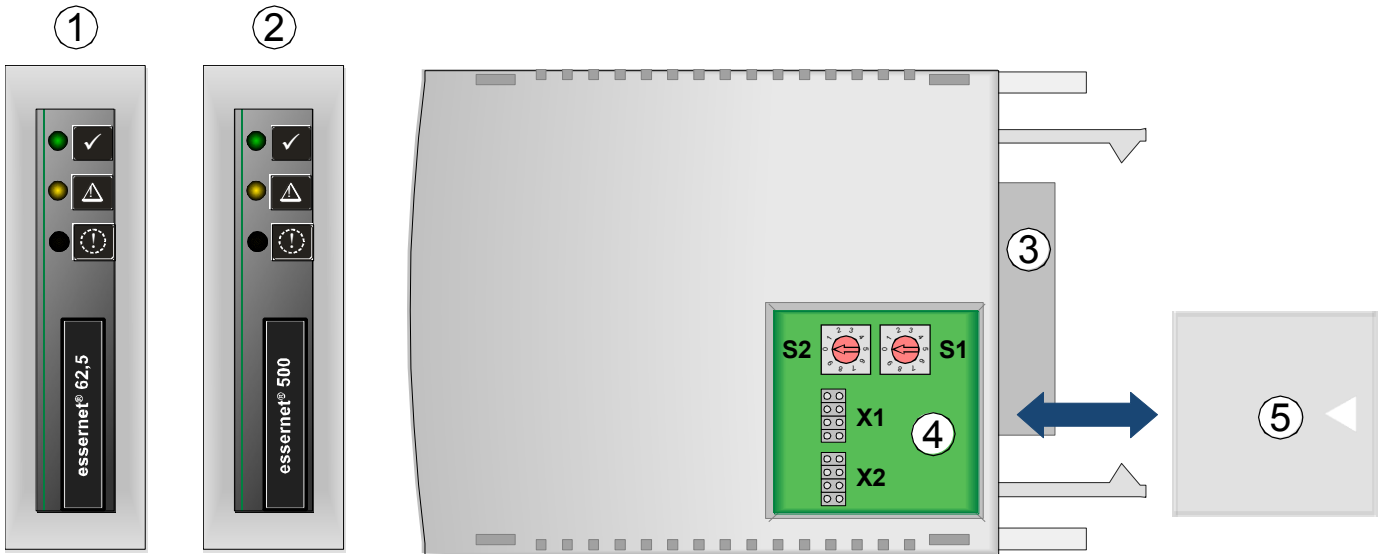
Fully downwards compatible.

essernet module 500 kBaud

Loop interface for setting up a network with up to 31 FACPs or for integrating into existing essernet installations.

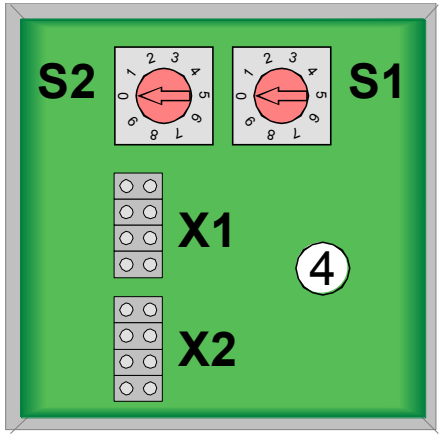
Fully downwards compatible.

essernet®-Modul (enM)



1	essernet®-Modul 62,5 (transmission speed 62,5 kBd/s) – (part-no. FX808340)
2	essernet®-Modul 500 (transmission speed 500 kBd/s) – (part-no. FX808341)
	✓ LED green Lit up ➔ normal operation
	⚠ LED yellow Lit up ➔ modul error
	ⓘ LED yellow Lit up ➔ essernet® connection fault
3	Connector for module slot
4	Switch S1 and S2, jumpers X1 and X2
5	Control element cover

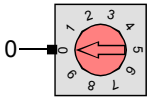
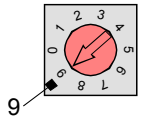
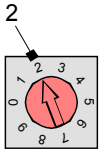
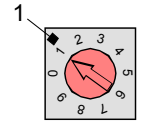
essernet®-Modul (enM)



Selecting the control panel's address

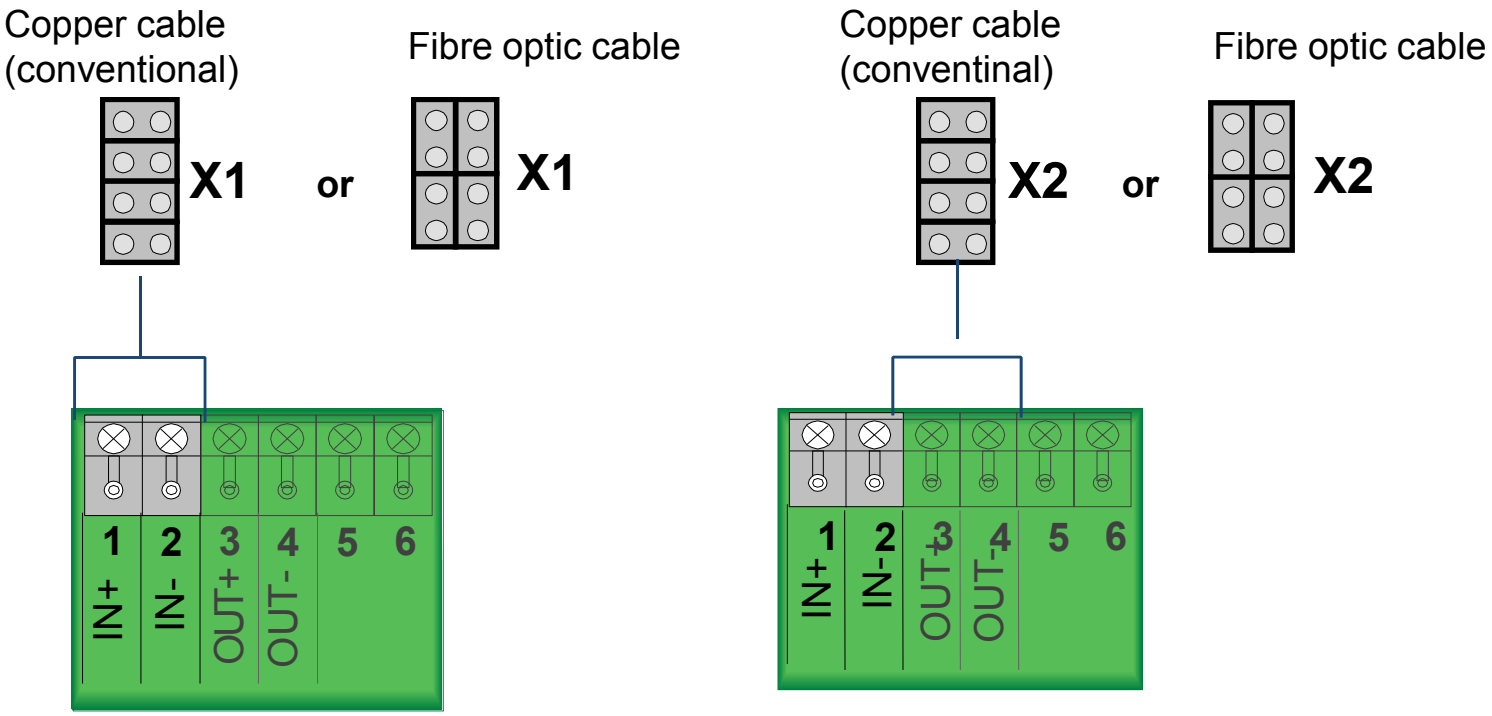
The control panel's address is set according to the decimal system using two rotary switches. Turn switch S1 using an appropriate screwdriver to set address factor x 1 (ones place) and switch S2 to set factor x 10 (tens place).

Example addresses, e.g. control panel, address 9 or 21

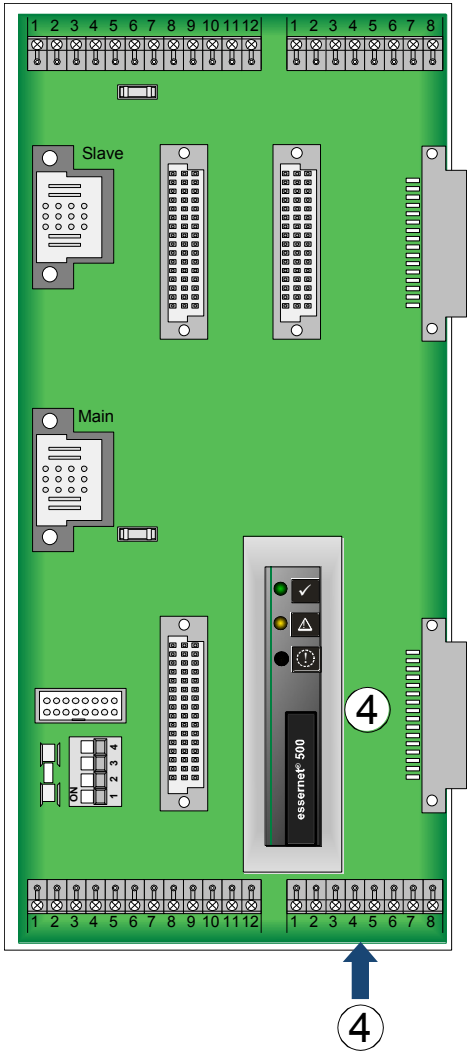
Module adress	Switch setting S2	Switch setting S1	Adressing factor	Weight Σ = S1 x 1 + S2 x 10
9			S1 = x 1 S2 = x 10	9 x 1 + 0 x 10 = 9
21			S1 = x 1	1 x 1 + 2 x 10 = 21

essernet®-Modul (enM)

Configuring the connection type



Terminal – essernet®-Modul



essernet® modules are suitable for operation on any of the module slots (basic and expansion module carriers). However, to ensure uniformity when equipping several control panels, it is advisable to use the slot on the basic module carrier shown in the illustration. The terminal assignments (1 to 6) for this module are always identical.

Example:

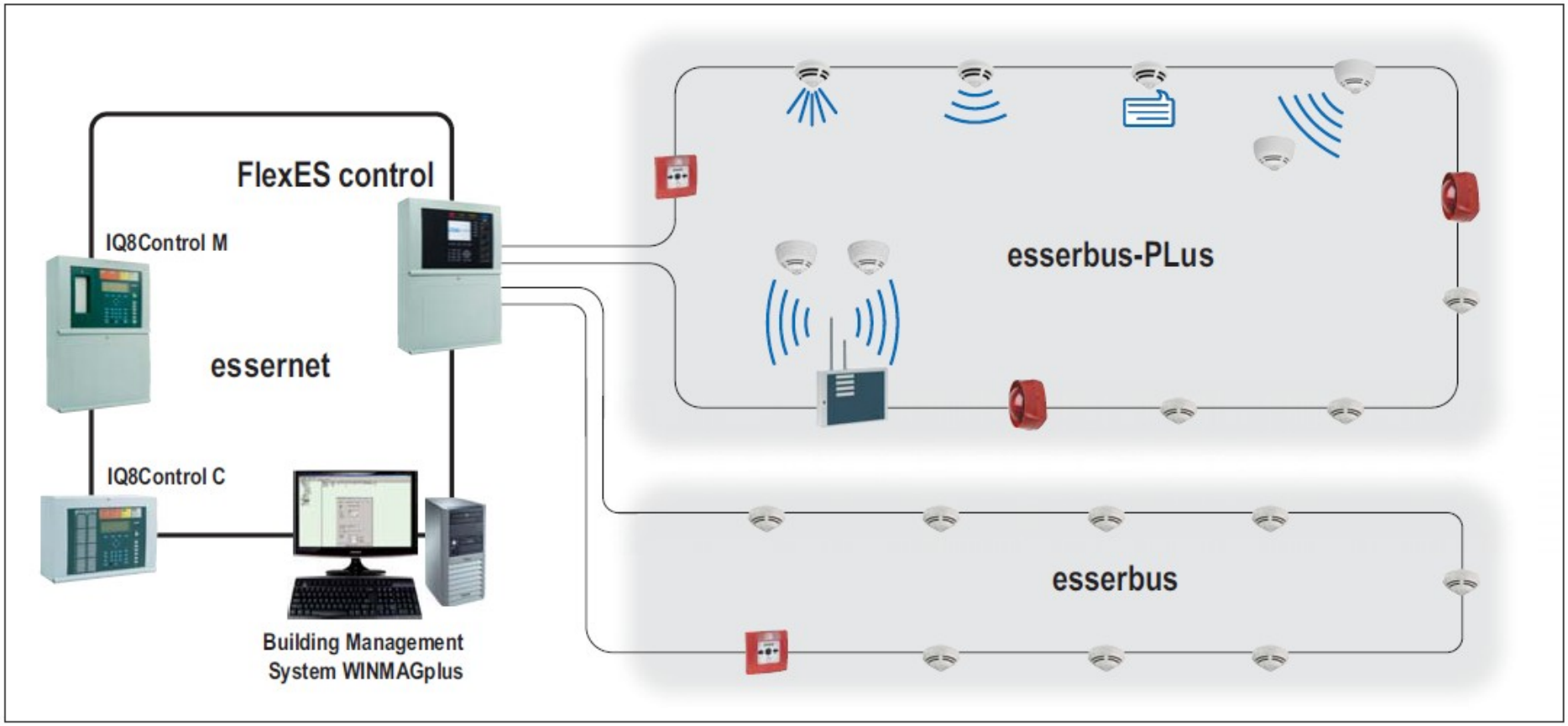
The essernet® module is slotted onto the basic module carrier's bottom module slot.

This slot is assigned the corresponding terminal clamps (1 to 8).

Assignments of terminal clamps for the essernet® module

4	1	essernet® IN+
	2	essernet® IN-
	3	essernet® Out+
	4	essernet® Out-
	5	Do not connect!
	6	Do not connect!
	7	Do not connect!
	8	Do not connect!

Essernet with FlexEs control



esserbus®-Module

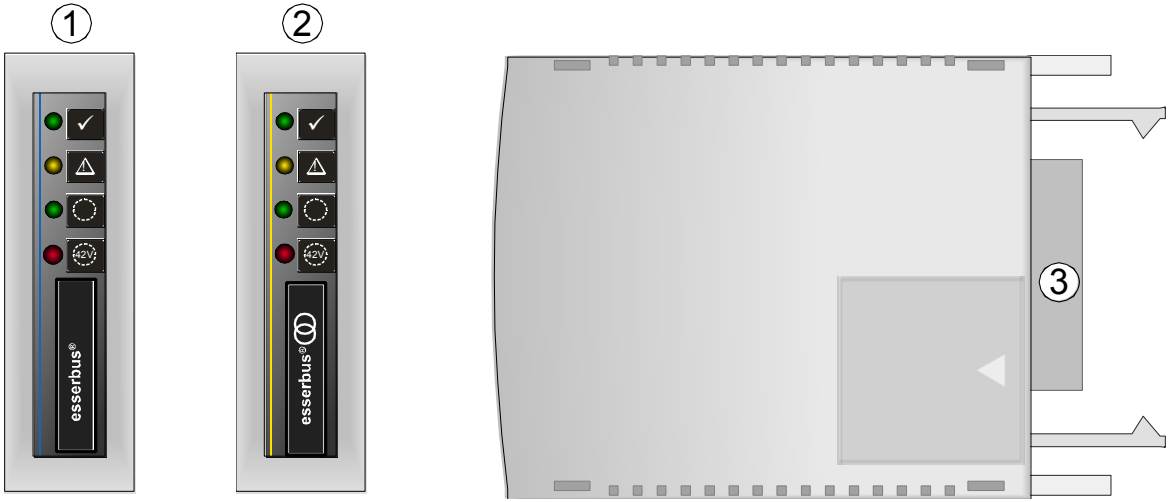
esserbus module for operation of one analog loop with max. 127 devices

- Convertible to esserbus-PLus
- Compatible with existing installations
- CPU by-pass in case of need

esserbus®-Module

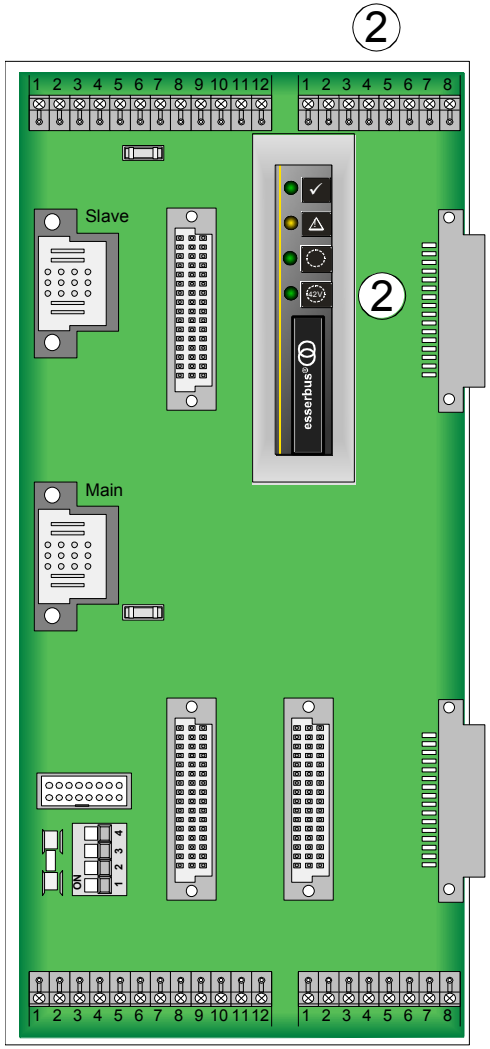
- esserbus module GI for operation of one analog loop with max. 127 devices
- Same as before, but with galvanic isolation to prevent potential transfers in large expansions via DC/DC converter for ground fault
- Necessary for expansions of more than four loops. The fifth to the 18th modules have to be used with galvanic isolation

esserbus®-Module (ebM / ebMGI)



1	esserbus®-Modul (ebM) – up to 4 Module per fire alarm control panel	
	✓	LED green flashes 1 Hz ➔ operation normal
	⚠	LED yellow flashes 1 Hz ➔ Fault, it is not possible to communicate through the internal BUS
	◯	LED green flashes ➔ During signal transmission on the loop
	42V	LED red Lit up ➔ If the loop is connected to 42 V. (Only in esserbus®-PLus mode during 42 V activation)
2	Like (1), although with esserbus® module (ebMGI) – up to 18 modules p. fire alarm control panel	
3	Plug-in contact for the module slot on the basic or expansion module carrier	

Terminal – esserbus®-Modul



essernet® modules are suitable for operation on any of the module slots (basic and expansion module carriers). The terminal assignments (1 to 6) for this module are always identical.

Example:

The essernet® module is slotted onto the basic module carrier's top module slot.

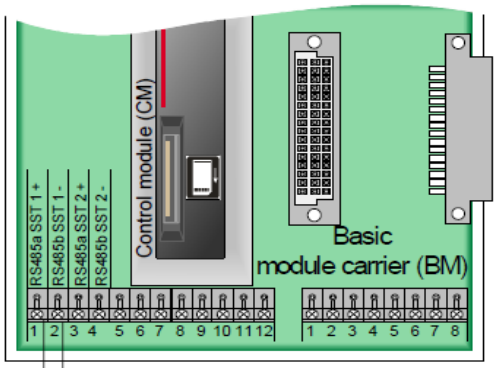
This slot is assigned the corresponding terminal clamps (1 to 8).

Every module slot is assigned the corresponding terminal clamps for this slot.

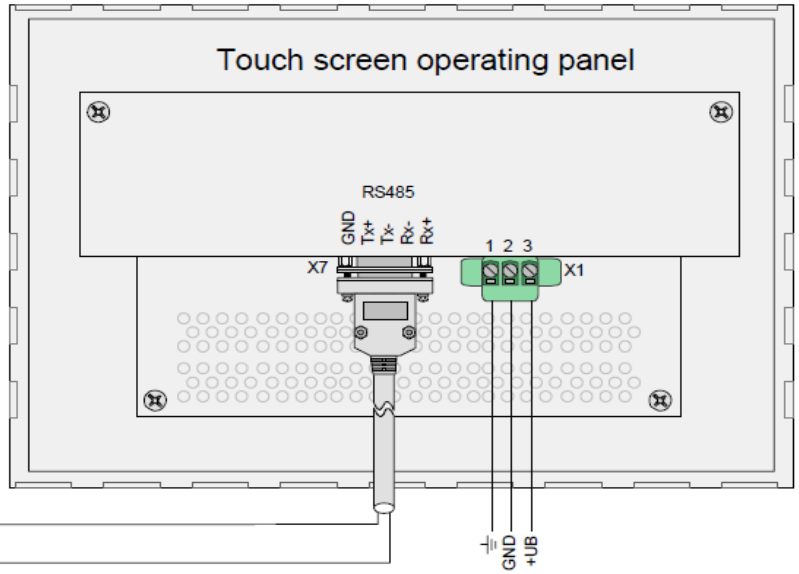
Assignments of terminal clamps for the essernet® module

2	**1**	esserbus® A+
	2	esserbus® A-
	3	Do not use!
	4	esserbus® B+
	5	esserbus® B-
	6	Do not use!
	7	Do not use!
	8	Do not use!

Touch screen operating panel



PIN assignment of the 9-pin DSUB connector:
1 => GND
2 + 5 => RS485a 1+
3 + 4 => RS485b 1-



A typical 9-pin DSUB connector is required to connect the touch screen operating panels. Program the RS485 interface of the FACP in the customer data with the protocol >WINMAG<

Max length 1000 m

Indication and operating panel

and operating panel (I/O
control panel FlexES with
ve an illuminated "night
e of use and to make it
formation being presented,
d operating elements that
minated in the case of an

Indicating and operating panel

Changes:

① Glare-free night design

② Backlit indicators

③ Ergonomic operation

④ Touch-sensitive, capacitive keyboard

⑤ 5.7“ colour graphical display

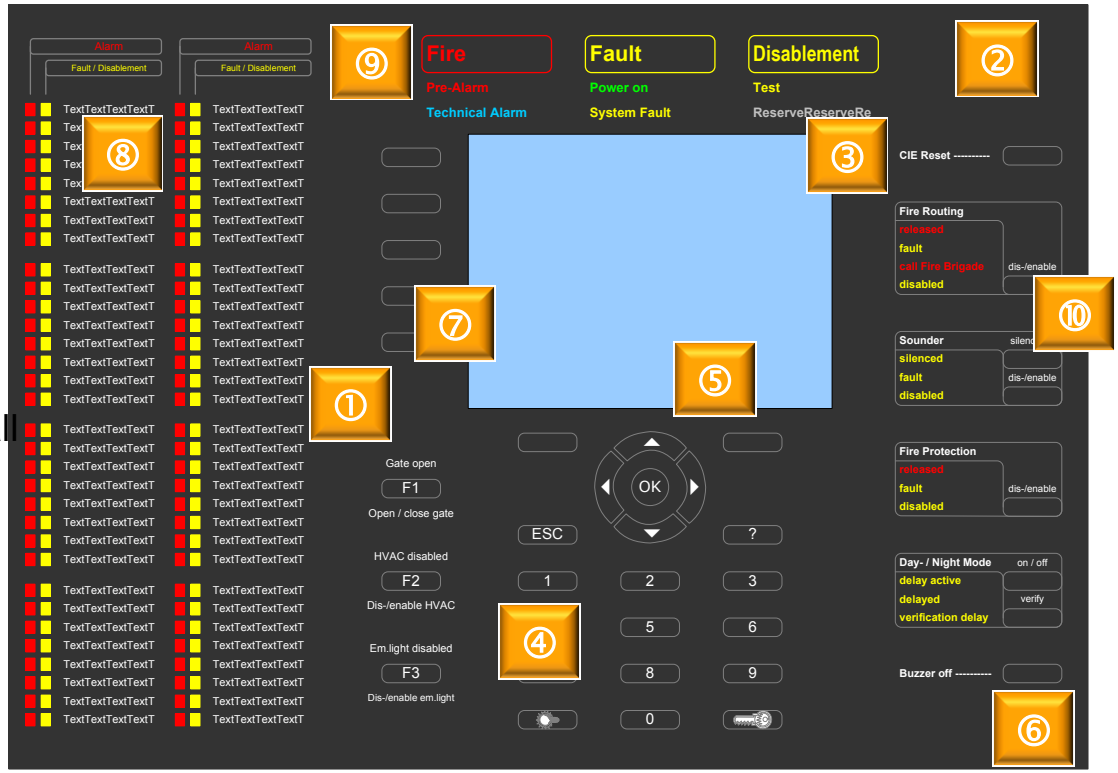
⑥ Keyboard approval via access code for all operating levels

⑦ Variable-use function buttons

⑧ Single zone indicator with background indication

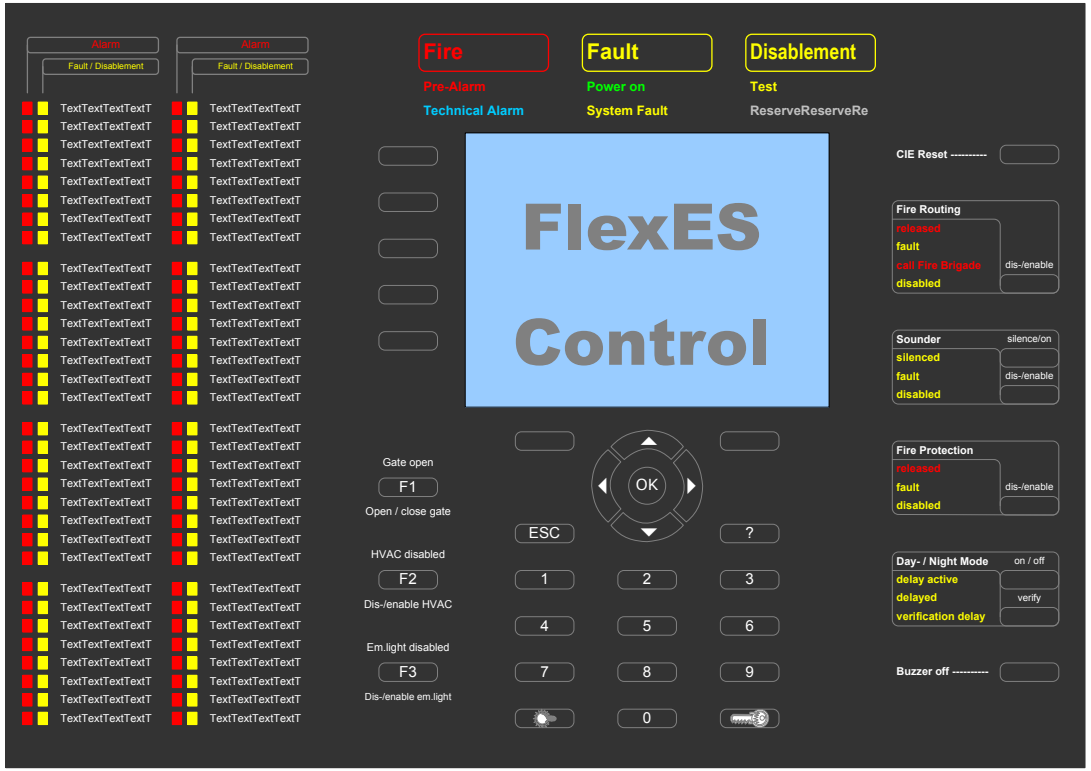
⑨ Multilingual labeling with insert films

⑩ Pictograms for clear verification

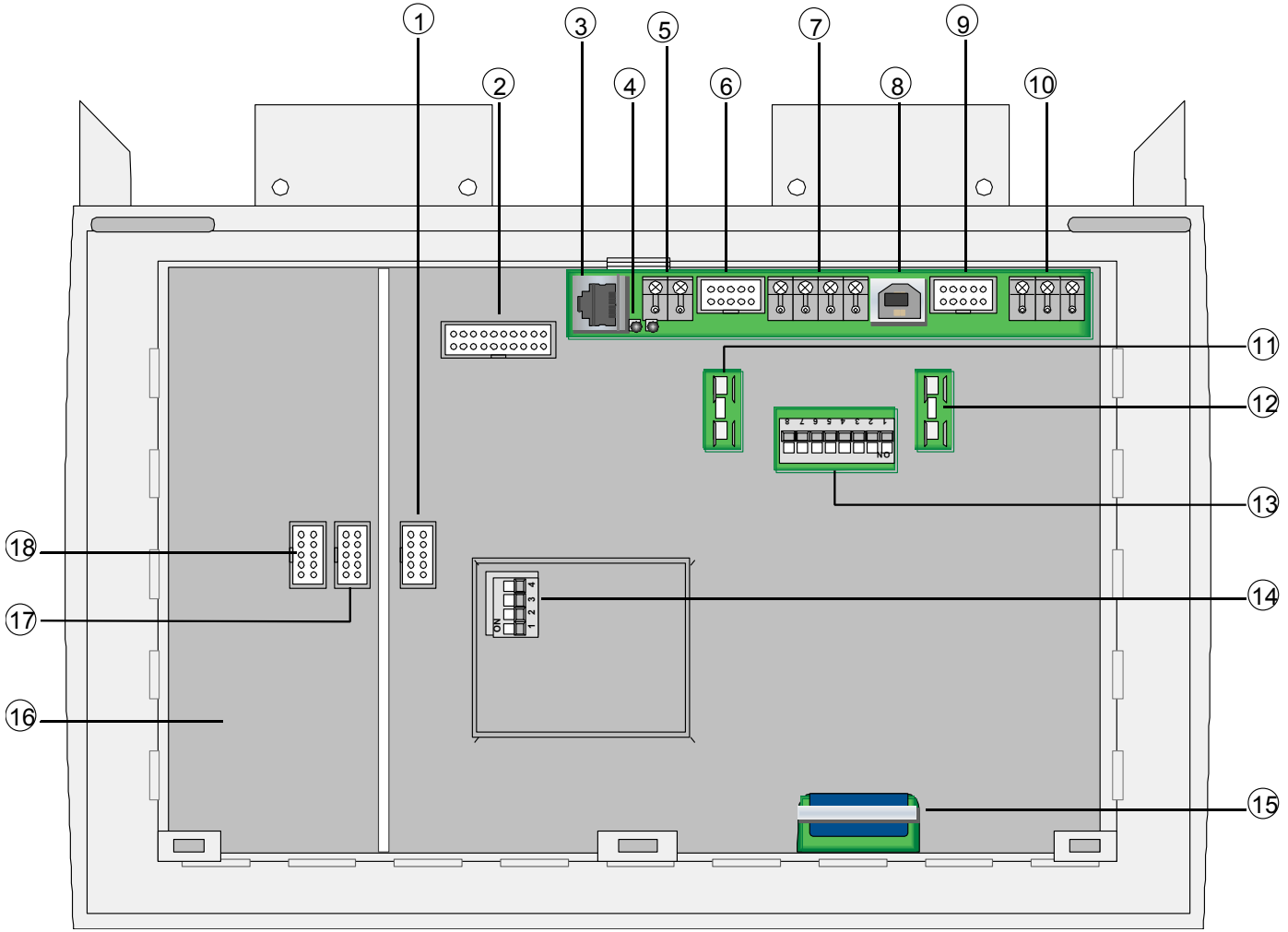


Operating panel of the **FlexES** Control

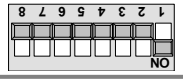
- Only active indicators and actuators are visible
- Appearance without attracting attention in „normal“ operation mode
- User guidance in critical situations
- Easy to clean
- Free programmable F1-5 keys i.f.
- Only code access, no key
- Two HMI variants with 5,7 inch display
- Monochrome and colour TFT (by software)
- Night design approach
- Capacitive keys
- Multilingual labeling with insert films
- Easy and userfriendly handling of service level (ESSER-Like)



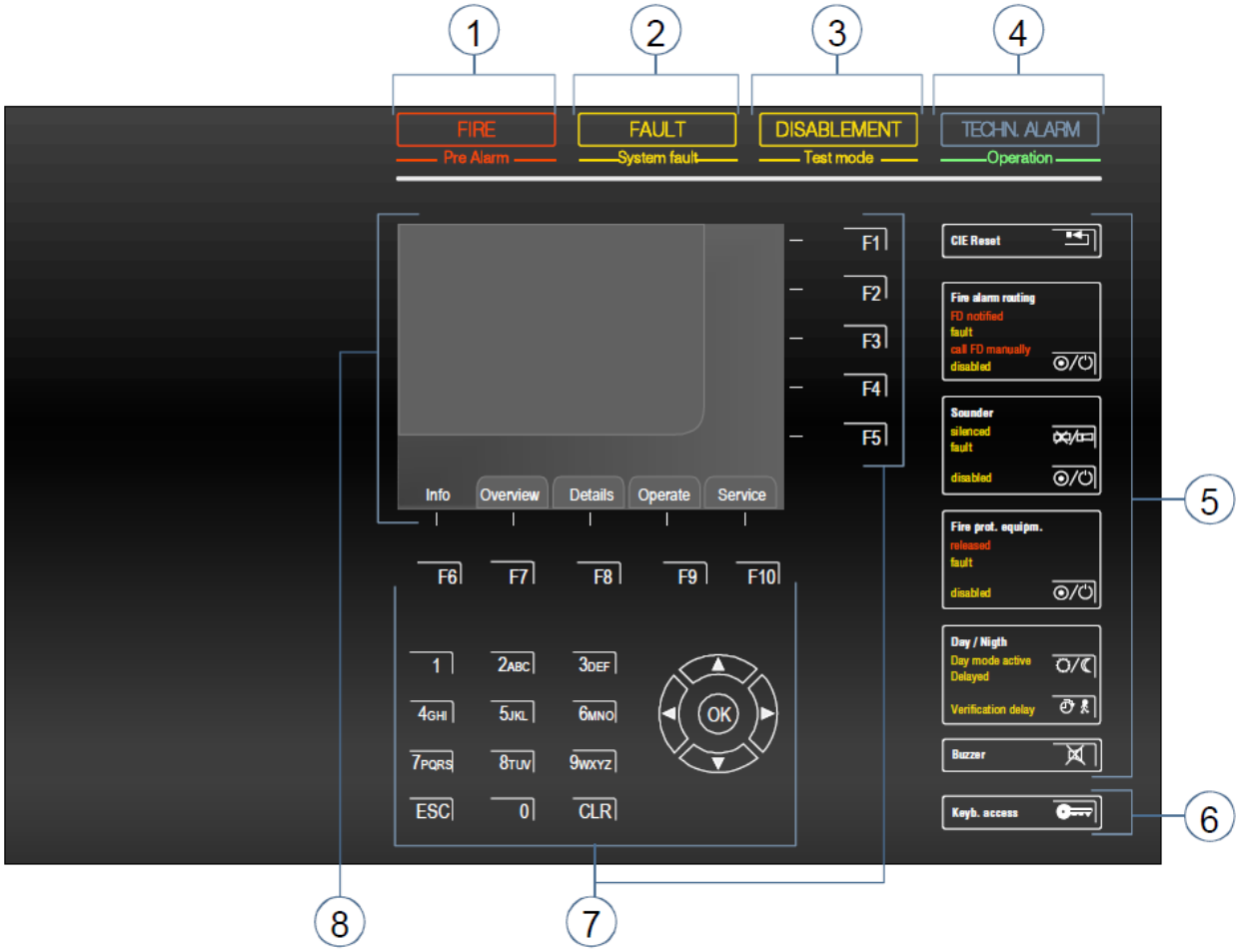
Location of components on the display and operating panels rear side



Location of components on the display and operating panels rear side

①	Connection for the single zone indicator unit (SZI) via ribbon cable (out)
②	Connection for the basic module carrier via ribbon cable
③	Ethernet connection ➔ future function expansion
④	LED for optical function indicator ➔ future function expansion
⑤	+24 V DC Ub_{int} for the integrated printer ➔ future function expansion – do not connect!
⑥	connection for integrated printer with ribbon cable ➔ future function expansion
⑦	RS485 – interface for remote display and operating units
⑧	USB connection for service PC
⑨	➔ future function expansion
⑩	➔ future function expansion – do not connect!
⑪	T2A fuse for integrated printer's +Ub connection
⑫	T1A fuse for connection
⑬	DIL- switch (do not change switch factory setting) 
⑭	Operating panel / CPU electronics cover incl. DIL-switch  DIL 1 – 3 ON Emergency mode indication activated  DIL 1 – 3 OFF Emergency mode indication deactivated  Buzzer on  Buzzer of
⑮	Slot for SD memory card ➔ future function expansion
⑯ / ⑰	Single zone indicator unit (SZI) incl. connector to operation panel (in)
⑱	Connector for additional Single zone indicator units (out)

Indicating and operating panel

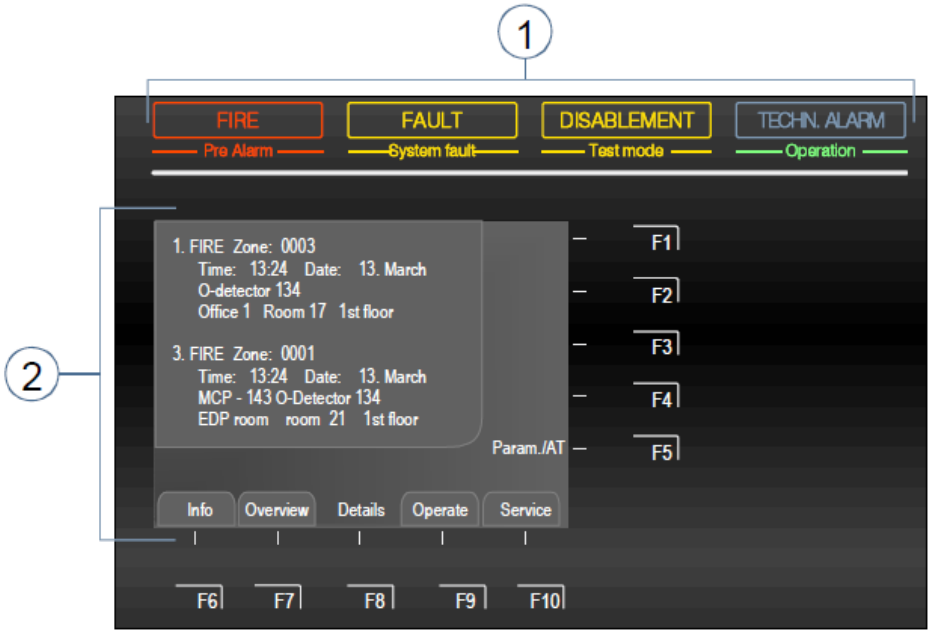


①	Common display FIRE/Pre alarm
②	Common display FAULT/System fault
③	Common display DISABLEMENT/Test mode
④	Common display TECHN. ALARM / Operation
⑤	Common display and operating function groups
⑥	Keypad enable (requires access code)
⑦	Function keys F1 to F10, keypad and cursor keys
⑧	¼-VGA (320 x 240) plain text display

Operating mode status indicator

A fire alarm control panel has five distinct operating modes:

1. Ready for operation (normal state)
2. Fire / Pre Alarm
3. Fault / System fault
4. Disablement / Test mode
5. Technical Alarm



①	Common displays for immediate information
②	Detailed text message in display

Operation / normal state

The unit is connected to a power supply (battery or mains).
The fire alarm control panel is ready for operation.

- The green >Operation< indicator is illuminated.
- All other indicators are inactive and there are no messages.
- The operating unit keypad is disabled.
- The >Keyb. access< key is illuminated.

Common display FIRE

FIRE (red)

This indicator signals that a fire has been detected and that an internal or external alarm might have been triggered. The fire warning will be shown on the display, and some other indicators might also be illuminated for additional information.

Pre-Alarm (red)

A >Pre-alarm< is shown if a fire detector has reached the pre-alarm threshold or if a zone or detector has detected a fire signal in the case of a pre-programmed two-zone / two-detector interdependency. The >Pre Alarm< is reset automatically if no other signals are detected. If there is a pre-alarm warning, the site from which the pre-alarm originates and its cause must always be checked.

The pre-alarm is the precursor to a fire warning. The decision of whether to issue a pre-alarm or fire warning is made either by the fire alarm control panel or the automatic detector.

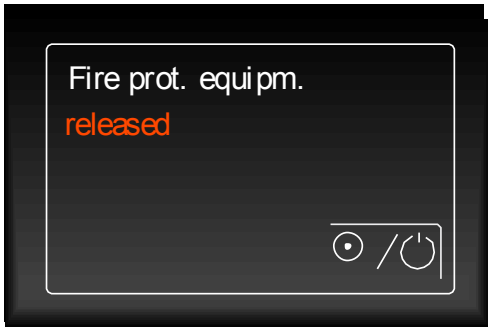
Other common displays

FD notified (red)

The emergency response services (e.g. fire department) will be automatically notified of the fire through the connected master box.

call FD manually (red)

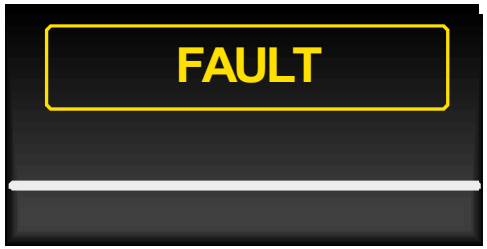
If no master box is connected or if it has not been possible to activate the master box because of a fault/disablement, the >call FD manually < indicator will also light up, which indicates that it has **not** been possible to automatically notify the fire department.



released (red)

Fire protection equipment is being activated.

Common display FAULT



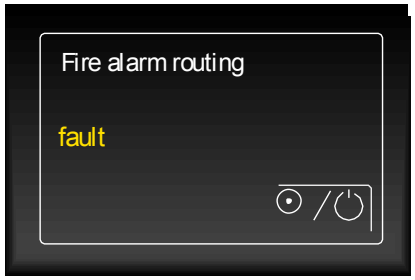
Fault (yellow)

The system has detected at least one fault.

The error message is shown on the display.

Other indicators might also illuminate to provide additional information.

Other common displays

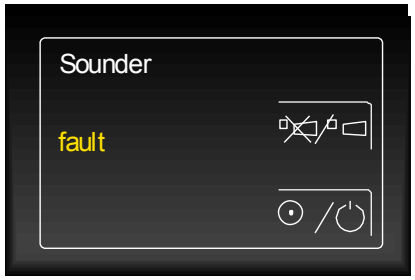


Fault (yellow)

At least one of the master box for automatically notifying the fire department or emergency services cannot be activated.

See the display for further details (control panel zone ID etc.)

This means that, in the case of an event, the fire department will not be automatically called.

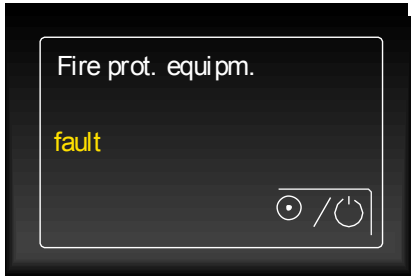


Fault (yellow)

At least one of the acoustic alarms cannot be activated.

See the display for further details (control panel zone ID etc.)

There is a possibility that not all of the acoustic alarms are activated in the case of an event.



Fault (yellow)

At least one of the activation paths for the fire protection equipment is malfunctioning.

See the display for further details (control panel zone ID etc.)

The connected fire protection equipment will not be activated in the case of an event.

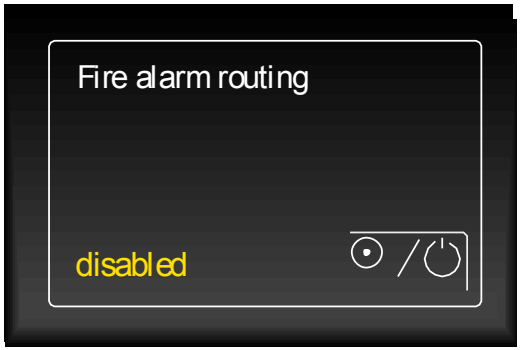
Common display System fault

System fault (yellow) - emergency mode
The fire alarm control panel (FACP) is no longer functioning reliably.

The FACP's warning capability is diminished.

Other indicators might also illuminate to provide additional information.

Additional common display



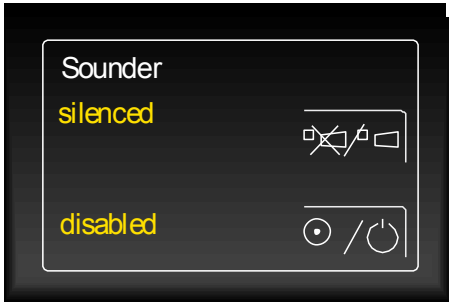
Disabled (yellow)

Is illuminated ➔ The master box (e.g. alarm transmission unit) for automatically notifying the fire department or emergency services has been manually deactivated. This means that, in the case of an event, the fire department will not be automatically called.

Flashes ➔ The master box activation function is currently deactivated (e.g. due to an open tamper contact). This means that, in the case of an event, the fire department will not be automatically called. This state can only be changed by closing the housing tamper contact. The keys cannot be operated!

This function can be manually switched on/off by pressing the  key (alternate function key).

Additional common display



Silenced (yellow)

The activated acoustic alarms have been acknowledged and silenced. Depending on the program, the alarm transmitters will be activated again when there are new alarm signals.

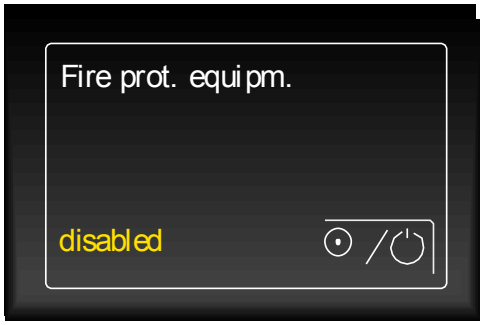
The acoustic alarms can be switched to silence by pressing the  key and will then be activated again if there are new events, or can be switched back on manually (alternate function key).

Disabled (yellow)

The activation function for the acoustic alarms has been automatically or manually deactivated. This means that, in the case of an event, the acoustic alarm transmitters are not activated and there will not be any acoustic alarms.

The alarm transmitters can be manually switched on/off by pressing the key  (alternate function key).

Additional common display



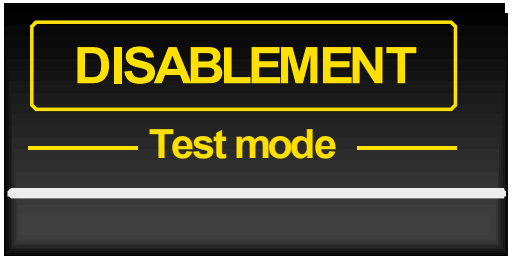
Disabled (yellow)

The activation function for the fire protection equipment has been automatically or manually deactivated.

The connected fire protection equipment will therefore not be activated in the case of an event.

This function can be manually switched on/off by pressing the  key (alternate function key).

Common display test mode



Test mode (yellow)

The control panel's test mode has been activated for servicing and maintenance purposes.

The operating mode status is shown on the display.

Other indicators might also illuminate to provide additional information.

Common display TECHN. ALARM

Technical alarm (blue)

The unit has detected a technical alarm signal (plant alarm).

The alarm cause is shown on the display.

Other indicators might also illuminate to provide additional information.

The technical alarm monitoring function can also be used to view or monitor the state of external components.

An example of a technical alarm signal is an external error indicator contact (e.g. of an air conditioning / ventilation system or of an external power supply). The fire alarm control panel will decode and display the triggering of the external contact as a >TECHN. ALARM<.

Keypad enable / Access authorisation

When the fire alarm control panel is fully operational and in its normal state, the keypad is protected against unauthorised and accidental operation by an access code. The keypad is locked during normal operation and cannot be used for inputting information. When in this state, the unit can only be operated at access level 1.

Enable

Press the key and enter the relevant access code.

Disable

Pres the key again.

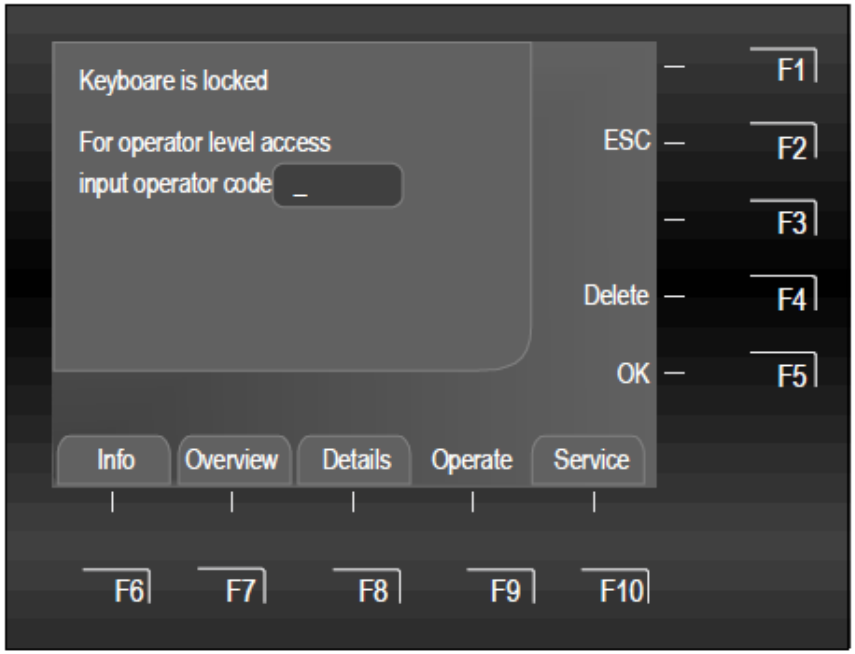
Access level 1

This access level only permits the control panel buzzer to be acknowledged and the use of the Other messages< (cursor keys) function.

Keypad enable / Access authorisation

Access level 2 (operator)

- The keypad is fully enabled for the operation of the fire alarm control panel FlexES control and other control panels that are connected to one another via the essernet®.
- The display menu is activated.
- The common display >DISABLEMENT< might illuminate. Depending on the customer data programming, enabling the keypad will cause at least one zone, one output or one of the fire alarm system's components, such as an master box, to be deactivated.

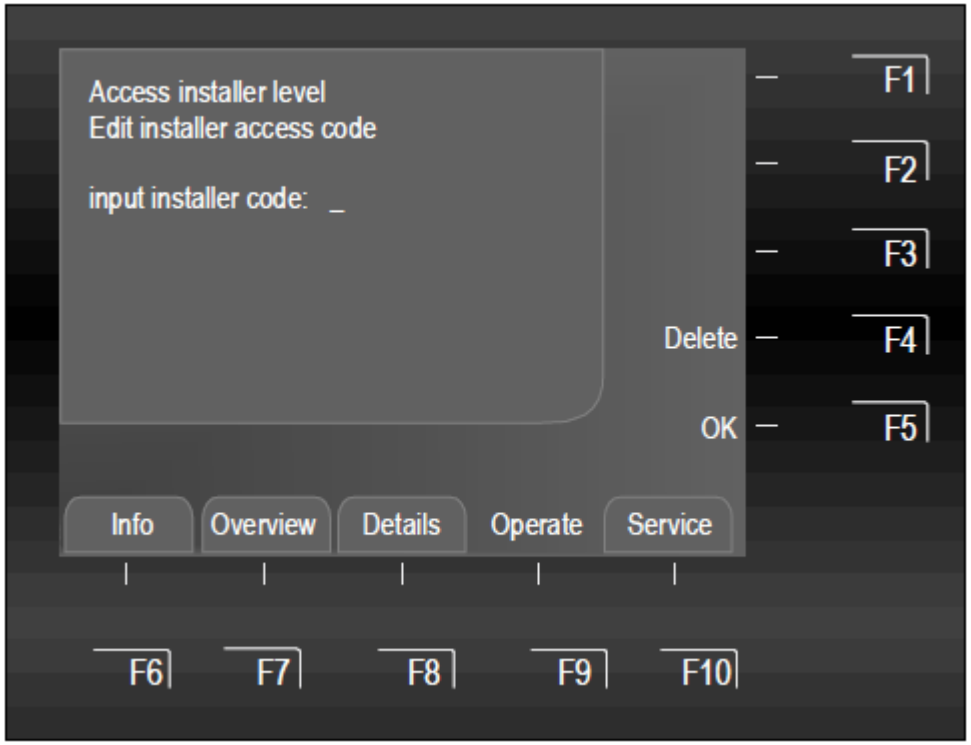


Enter the operator access code and confirm by pressing the function key F5 >OK<.

Keypad enable / Access authorisation

Access level 3 (Fire alarm specialist / customer service)

This access level may only be used for operating and configuring the unit and for inputting data by specialist personnel. Incorrect configuration / data inputs can impact the proper function of the fire alarm control panel.

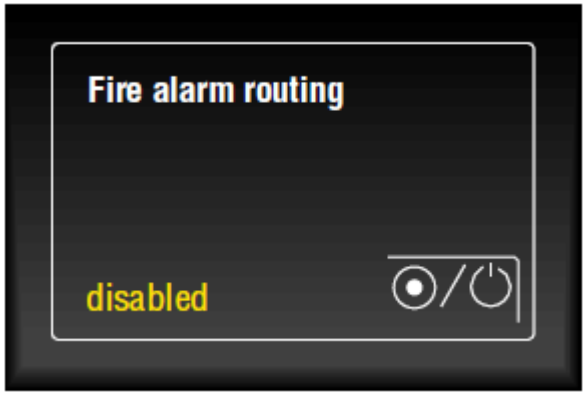


Enter the fire alarm specialist / customer service access code and confirm by pressing the function key F5 >OK<.

Resetting the fire alarm control panel

Pressing the key  will reset all triggered or faulty fire alarms, zones, displays and technical alarms to their normal default state and make them fully operational

Activating / deactivating fire department call



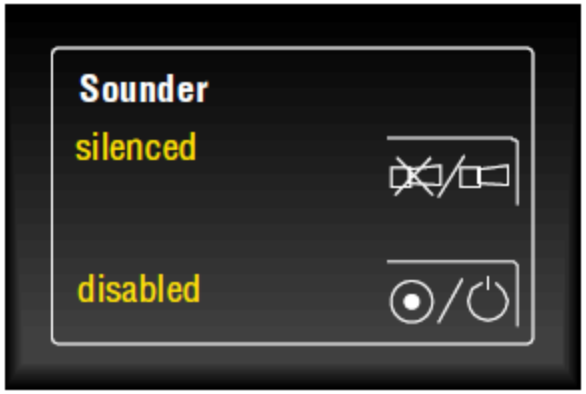
Deactivated (yellow)

Is illuminated ➔The master box (e.g. alarm transmission unit) for automatically notifying the fire department or emergency services has been manually deactivated. This means that, in the case of an event, the fire department will not be automatically called.

Flashes ➔ The master box activation function is currently deactivated (e.g. due to an open tamper contact). This means that, in the case of an event, the fire department will not be automatically called. This state can only be changed by closing the housing tamper contact. The keys cannot be operated!

This function can be manually switched on/off by pressing the  key. (alternate function key).

Activating / deactivating acoustic alarms



Silenced (yellow)

The activated acoustic alarms have been acknowledged and silenced. Depending on the programme, the alarm transmitters will be activated again with each new alarm signal. The acoustic alarms can be silenced by pressing the key  and will be activated again in the case of new events or can be reactivated manually (alternate function key).

Deactivated (yellow)

This key can be used to activate or deactivate (alternate function key) the activation function for those relays of this control panel that were programmed with the >acoustic alarm off< function in the customer data, such as the relays to which acoustic and optical alarms are connected. Deactivated components are optically shown in the common display >DISABLEMENT<.

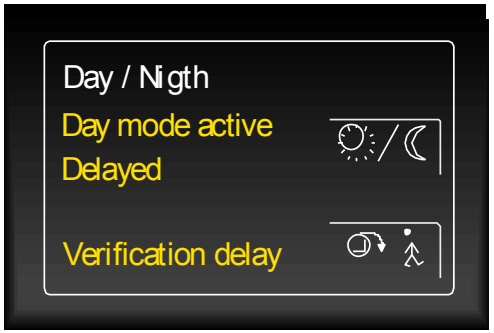
This function can be manually switched on/off by pressing the key  (alternate function key).

Switching off the buzzer

Acknowledging the control panel's buzzer

This key  can also be operated if the keypad is disabled.
The buzzer will be activated again when there is a new event.

Day/Night mode and delay/investigate



Key 

Activate/deactivate (if programmed) day/night mode.

Delay function active (yellow) day mode

Illuminates to indicate that the >Day mode< function has been activated on the fire alarm control panel.

Delay activated (yellow)

The programmed delay has been triggered by a fire alarm. Once the time delay has elapsed, the alarm is automatically triggered unless the  key for investigating the cause of the alarm is pressed within this time.

Key 

>Investigate activated< (yellow) display

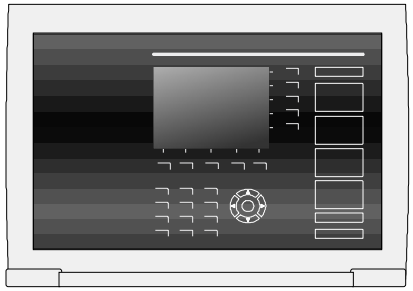
Pressing this key will stop the delay function and start the programmed investigation time. Once the investigation time has elapsed, the alarm is automatically triggered unless the >Reset FACP< key for resetting the control panel is pressed within this time.

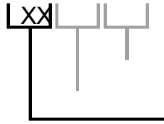
Fire alarms can be set off manually at any time by triggering a manual fire alarm.

Example fire alarm control panel FlexES control (control panel 1)

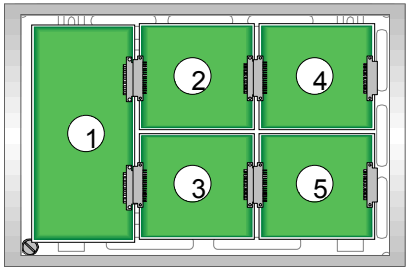
The fire alarm control panel is a stand-alone control panel that can be used on its own or as one of many control panels integrated within an essernet®-network and has been allocated the ID 01. An essernet® network can comprise up to 31 interlinked individual fire alarm control panels (with IDs ranging from 01 to 31).

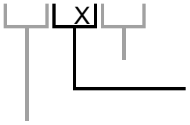
Number of panel



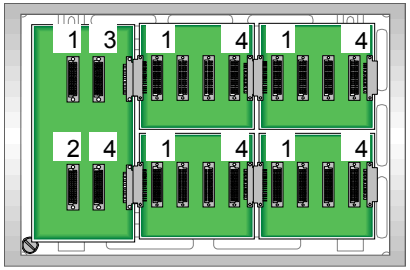


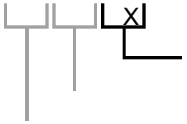
Number of the module carrier





Slot number on the module carrier

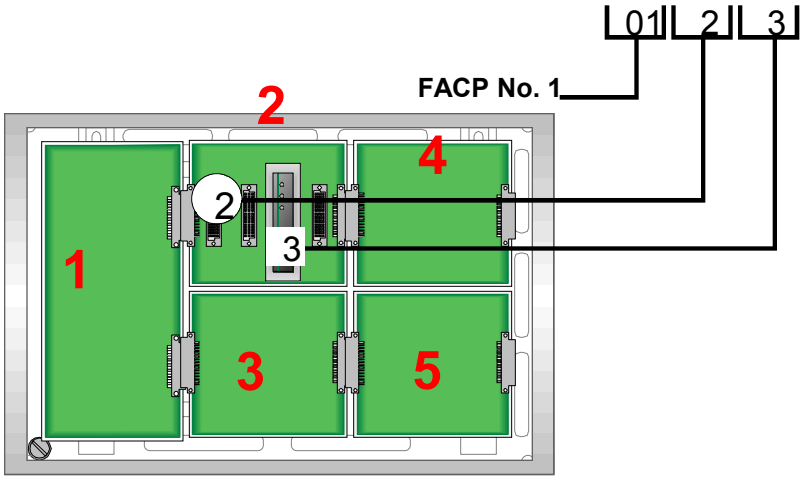




Example for loop adress definition

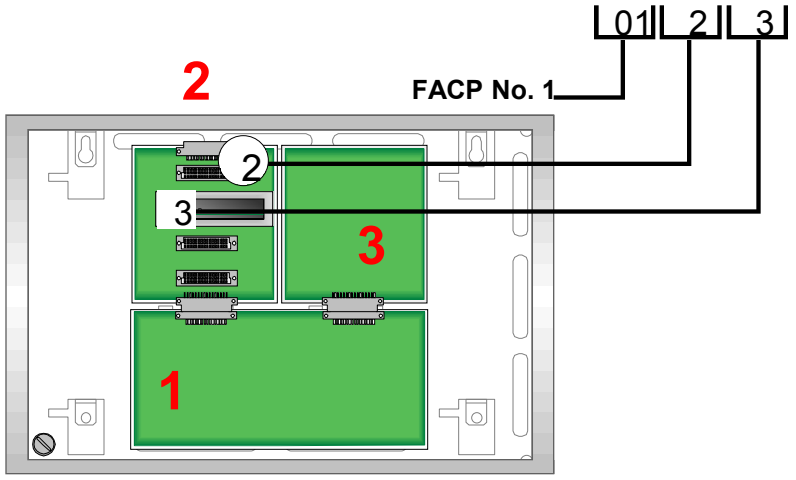
The communication path ID of the module in the following example is comprised of the fire alarm control panel ID **01**, the carrier module ID **2**, slot ID **3** , is **>0123<.**

Horizontal layout



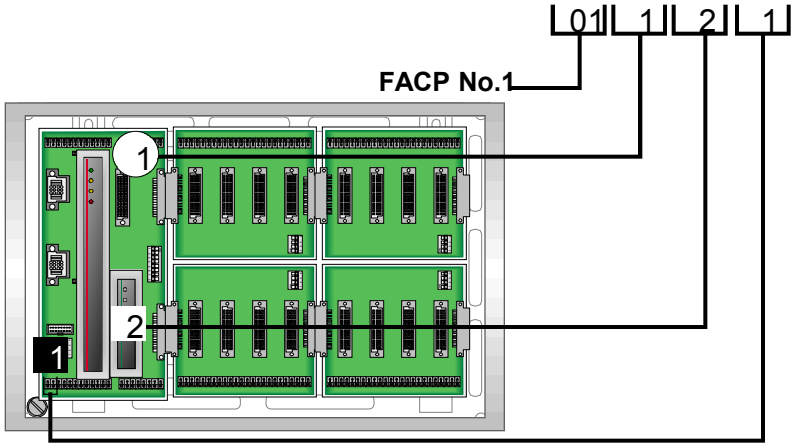
or

Vertical layout



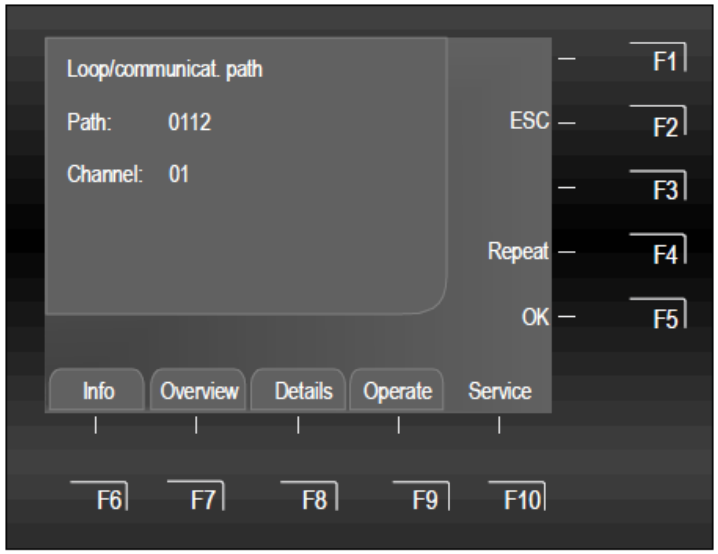
Channel number

The channel number can be used to differentiate between other slot connection options, e.g.:



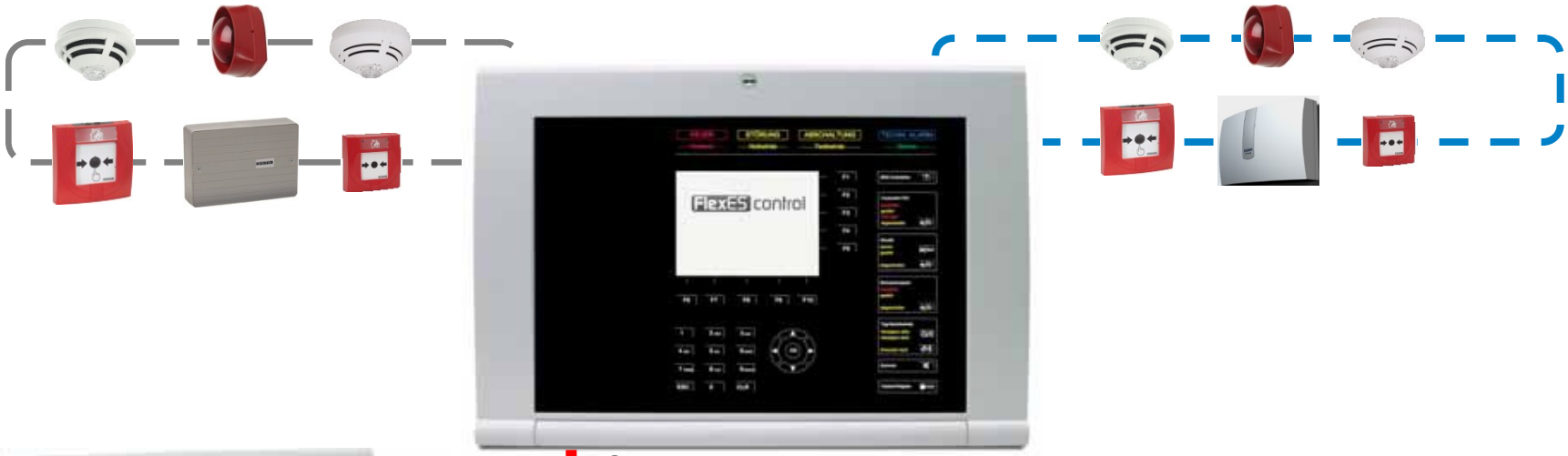
Path 0112 Channel 1	➔	interface 1 of the basic module carrier / control module (RS485-1)
Path 0112 Channel 2	➔	interface 2 of the basic module carrier / control module (RS485-2)
Path 0112 Channel 3	➔	interface 3 of the basic module carrier / control module (TTY)

Path ID 0112 and channel number 01 (example)



FlexES designing the future

FlexES designing the future



Touchscreen-operating unit

FlexEScom transponder

- **Improved control operation for**
  - **Fire alarm activities**
  - **Operating conventional sounders**
  - **Technical alarm features**
  - **230V relay outputs**
- **Improved service functionalities**
  - **Extension of settable software parameters**
  - **Firmware Update directly on the loop without removing the transponder**
- **User optimized assembly and installation**
  - **Support of multiple installation methods**
    - **DIN-rail mounted, wall-mounted housing, integration in FACP**
    - **Pluggable modules**
    - **Improved terminals on board**
    - **Enhanced housing concepts with more space for installation**

FlexES designing the future