

Modular Panel

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FPA-5000 With Functional Modules



Features

- ▶ **Modular configuration allowing for easy extension**
- ▶ **Easy adaptation to country-specific regulations and conditions**
- ▶ **Complete set-up with up to 46 modules per control panel**
- ▶ **Interconnection of up to 32 Panel Controllers and Remote Keypads (by August 2009)**
- ▶ **Loop or bus connection with redundancy**
- ▶ **Connection to BIS Building Integration System via OPC server**
- ▶ **Control of up to 4096 addresses (stand-alone panel), or of up to 32512 addresses of a network with 2032 addresses per control panel (by August 2009)**
- ▶ **Installation and auto-detection of functional modules by simply inserting them into the Panel Rail**
- ▶ **Large LCD display with touch screen**

Thanks to the modular configuration, the innovative FPA-5000 Modular Fire Panel is easily adapted to local circumstances and regulations. Due to the different functional modules, country-specific characteristics are accommodated in the connection just as quickly as the respective alarm handling.

The fire panel is available with two different housings:

- Housing for mounting directly on the wall
- Frame installation housings which are fitted to the mounting frame and can be swiveled.

With the aid of special mounting kits, the housings can be mounted in 19" cabinets.

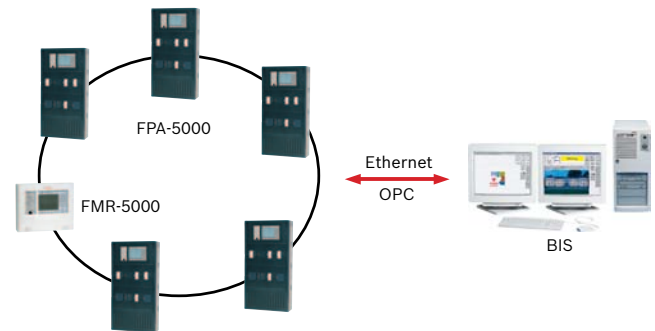
All housings can be extended with various additional housings for all conceivable applications.

The entire fire detection system is configured via a laptop using the new programming software FSP-5000-RPS.

Thanks to the external CAN bus interface, several Panel Controllers and Remote Keypads can be interconnected. Using either a loop structure or bus structure, the network adapts to every application conditions.

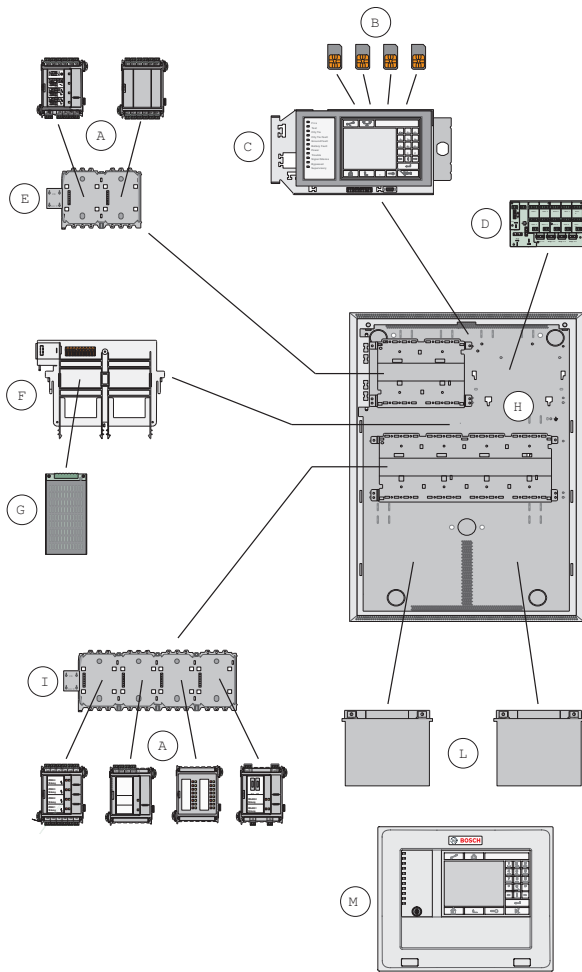
FPA-5000 systems can be connected to the Bosch UGM 2020 Universal Security System and thus, be integrated into a large network system.

An Ethernet interface allows for the connection to a Building Management System (BIS Bosch Building Integration System) via an OPC server.



The FMR-5000 Remote Keypad offers the decentralized operation of a control panel or control panel network.

System Overview



Pos.	Description
A	Functional Modules
B	ADC Address Cards
C	Panel Controller
D	Distributor, optional (RLE/RLU/HPD)
E	Panel Rail Short
F	Power Supply Bracket (installed in Frame Installation Housings ex-works)
G	Power Supply
H	Housing (in this case: HCP 0006 A)
I	Panel Rail Long
L	Batteries
M	Remote Keypad

Functions

Modular Structure of the FPA-5000 Modular Fire Panel

Due to its modular structure, the FPA-5000 Modular Fire Panel provides complete flexibility and thus customized solutions for any application.

Depending on the requirements, the following selection can be made when planning:

1. Housing type: Frame installation or wall-mount

- Selection of a basic housing
 - Optional Extension Housings
 - Optional Power Supply Housings
 - Optional kits for installation in 19" racks
2. Operating and Display Unit with Panel Controller
 - Selection from the various language variants
 3. Panel Rail
 - Selection according to housing type and/or number of required functional modules
 4. Functional modules
 - Selection based on planning and country-specific requirements
 5. Power supply
 - Batteries
 - Additional power supply facilities
 - Power Supply Brackets are preinstalled ex-works for Frame Installation Housings
 - For Wall-mount Housings, Power Supply Brackets are selected as needed
 6. Additional accessories
 - Front Doors
 - Printer with Frame Installation Housing
 - Cable Sets for special applications

Modules

The functional modules are autonomous, encapsulated units that can be inserted into any control panel slot using "plug-and-play" technology. Thus, the power supply and the data traffic to the control panel are indicated automatically without any additional settings. The module is automatically identified by the control panel and functions in the default operating mode.

Wiring to external components is performed using compact connector/screw terminals.

After a replacement, only the connectors need to be reinserted; extensive rewiring is no longer required.

Module	Description
BCM-0000-B	Battery Controller Module <ul style="list-style-type: none"> • module that controls batteries and power supply
ANI 0016 A	Annunciator Module <ul style="list-style-type: none"> • with 16 red and 16 yellow LEDs, freely programmable
LSN 0300 A	LSN improved Module 300 mA <ul style="list-style-type: none"> • for the connection of an LSN loop with up to 254 LSN improved elements or 127 standard LSN elements, maximum line current 300 mA
LSN 1500 A	LSN improved Modul 1500 mA <ul style="list-style-type: none"> • for the connection of an LSN loop with up to 254 LSN improved elements, maximum line current 1500 mA, or with up to 127 standard LSN elements, maximum line current 300 mA
FPE-5000-UGM	Interface Module <ul style="list-style-type: none"> • for the connection to a UGM-2020 System
CZM 0004 A	4 Zone Conventional Module <ul style="list-style-type: none"> • for the connection of existing conventional peripherals, with four monitored conventional lines
IOS 0020 A	20 mA Communication Module <ul style="list-style-type: none"> • sports an S20 interface, an RS232 interface and an S1 interface • for a connection with a voice alarm system Plena via RS232

Module	Description
IOS 0232 A	RS232 Communication Module <ul style="list-style-type: none"> with two RS323 interfaces for a connection with a voice alarm system Ple-na, a printer or laptop
ENO 0000 B	Fire Service Interface Module <ul style="list-style-type: none"> for the connection to fire service equipment according to DIN 14675
IOP 0008 A	Input/Output Module <ul style="list-style-type: none"> with 8 digital inputs and 8 open collector outputs
RML 0008 A	Relay Module <ul style="list-style-type: none"> with 8 relays for low voltage applications
RMH 0002 A	Relay Module <ul style="list-style-type: none"> with 2 relays for mains power (250 V) and with feedback inputs (can also be used as an interface to extinguishing systems)
NZM 0002 A	Notification Appliance Zone Module <ul style="list-style-type: none"> with two monitored primary lines

Networking

The CAN interfaces allow for the connection of up to 32 Panel Controllers and / or Remote Keypads in a single network. Depending on the usage, Panel Controllers and Remote Keypads can either be defined as a group or as a network or as a local node. Within a group, only the conditions of the control panels belonging to the defined group can be displayed. From the network nodes, the conditions of all control panels, regardless of their classification as a group, can be displayed and edited.

When networking via CAN1 and CAN2 interfaces, there are the following three connection topologies:

- Non-redundant bus via CAN1
- Redundant bus via busses CAN1 and CAN2
- Redundant loop via CAN1 and CAN2

For networking with optical fibers, PSI-MOS-DNET CAN/FO converters by Phoenix Contact can be used.

Detection Points

For identification and monitoring purposes, a distinct LSN address is allocated to each LSN element. The Address Cards allocate one detection point per address. The FPA-5000 governs up to 4096 addresses and 4096 detection points respectively.

Each element and input which, after the programming, is able to set off an alarm requires a detection point. This applies to all manual call points and automatic detectors as well as to the following modules and interfaces because of their inputs.

Module	Detection Points
LSN 0300 A	up to 254
CZM 0004 A	up to 4
IOP 0008 A	up to 8
ENO 0000 B	requires a detection point only if an FSE release element is connected and programmed via the FSP-5000-RPS programming software

Interfaces	Detection Points
FLM-420/4-CON	up to 2
FLM-420-I8R1-S	up to 8
FLM-420-I2	up to 2
FLM-420-O8I2-S	up to 2
FLM-420-O1I1	up to 1
FLM-420-RLE-S	up to 2
FLM-420-EOL-2W-W	1 detection point for each interface

Inputs are only considered as detection points if they are programmed as "Supervisory" or "Fault" in the FSP-5000-RPS.

The following interfaces do not require the allocation of detection points: FLM-420-NAC, FLM-420-RHV, FLM-420-RLV1, FLM-420-RLV8, FLM-420-O2.

Signaling devices and outputs have no detection points!

Certifications and Approvals

The provided options according to EN 54-2:1997/A1:2006 include:

- Output to fire alarm devices
- Control of fire alarm routing equipment
 - Output to fire alarm routing equipment
 - Alarm confirmation input from fire alarm routing equipment
- Outputs to fire protection equipment
 - Output type A
 - Output type B
 - Output type C
 - Fault monitoring of fire protection equipment
- Delays to outputs
- Dependencies on more than one alarm signal
 - Type A dependency
 - Type B dependency
- Alarm counter
- Fault warning condition
 - Fault signals from points
 - Total loss of the power supply
 - Output to fault warning routing equipment
- Disabled condition
 - Disablement of addressable points
- Test condition

Region	Certification	
Europe	CE	FPA-5000
	CPD	0786-CPD-20818 FPA 5000
Germany	VdS-S	S 295042 BS 1000
		S205106 BS FPA
	VdS	G 205106 FPA-5000
	DIBt	Z-6.5-2027 (B) FSA 5000 LSN
Switzerland	VKF	AEAI 19197 FPA 5000

Region	Certification	
Belgium	BOSEC	TCC2-738 FPA 5000
		TCC2-739 FPA 5000
		TCC2-740 FPA 5000
		TCC2-741 FPA 5000
		TCC2-742 FPA 5000
		FPA 5000 V2.0
Poland	CNBOP	2662/2008 FPA-5000
Turkey	TSE	14.10.01/TSE-4692 FPA-5000
Czech Republic	TZÚS	080-011414 FPA-5000
Hungary	TMT	TMT-32/2005 FPA-5000
Russia	GOST	B.00223 FPA-5000
		POCC DE.C313B06299
	MOE	UA1.016.0040642-06 FPA-5000
Singapore	PSB	022767 FPA-5000
Bulgaria	GD FSPP	POPSd 60 FPA-5000

Installation/Configuration Notes

- Country-specific standards and guidelines must be considered during planning.
- Connection conditions for the regional authorities and institutions (police, fire service) must be maintained.
- It is preferable to use the loop formation owing to the greater security of loop lines compared with stub lines.
- It is possible to combine LSN interface modules and LSN detectors on one loop or stub line.
- If connecting classic and improved LSN elements within one loop, observe the following:
 - All LSN improved elements must be set to classic mode.
 - The maximum number of elements within one mixed loop is limited to 127.
- Existing conventional detectors can be connected to a CZM 0004 A module. A CZM 0004 A module provides four DC primary lines (zones).
- In accordance with EN 54-2, control panels with more than 512 LSN elements must be connected redundantly. To that end, a second basic housing with a second MPC Panel Controller is used.
- For operation of the fire detection system according to EN 54-13, it is necessary to terminate every stub and T-tap with EOL-modules.

General System Limits

	Max. number
Control panels/remote keypads in network	
• Loop topology	32
• Bus topology, redundant	8
• Bus topology, non-redundant	8
Addresses	
• Stand-alone	4096 stand-alone
• In Network	32512
• In network, per control panel	2032
Detection points / detector zones	

	Max. number
• Stand-alone	4096 stand-alone
• In Network	32512
• In network, per control panel	2032

Limits per Fire Panel

Sets, e.g. bypass group	128
Total number of modules, per control panel	46
Printer	4
Alarm counter (external, internal, revision)	3
Number of entries in the event database	10000
FSP-5000-RPS programming interface	1
Time control channel	20
Time control programs	19
Programming defined days	365
User	10
Access level	4

System Limits Functional Modules

Functional module	Max. number
BCM-0000-B	8
ANI 0016 A	32
LSN 0300 A	32
LSN 1500 A	11
FPE-5000-UGM	4
CZM 0004 A	32
IOS 0020 A	4
IOS 0232 A	4
ENO 0000 B	8
IOP 0008 A	32
RML 0008 A	32
RMH 0002 A	32
NZM 0002 A	8

System Limits for Each LSN 0300 A Module

- Up to 254 LSN improved version elements or 127 classic LSN elements can be connected
- Output current
 - LSN 0300 A: up to 300 mA
 - LSN 1500 A: up to 1500 mA
- Cable length
 - LSN 0300 A: up to 1600 m
 - LSN 1500 A: up to 3000 m
- Unshielded cables can be used

Note

Owing to the FSD (Fire System Designer) programming software, the planning of fire panels in compliance with the limits (e.g. concerning cable length and power supply) is quick and easy.

Installation Notes

- Fire panels can only be installed in dry, clean interior rooms.
- To ensure optimum battery service life, the control panel should only be operated at sites with normal room temperatures.
- The following environmental conditions must be noted:

- Permissible ambient temperature:
-5 °C – 50 °C (23 °F – 122 °F)
- Permissible relative humidity:
Max. 95 %, non-condensing
- Operating and display elements should be located at eye level.
- Frame installation housings require at least 230 mm free space on the right next to the last housing; this space is for swiveling out the attached housing for connection, maintenance, and service.
- Sufficient space should be left underneath and next to the control panel for any possible extensions, e.g. for an additional power supply or an extension housing.
- Do not operate devices showing condensation.
- Only use the mounting materials specified by BOSCH ST. Interference resistance cannot otherwise be guaranteed.
- If connected to a Building Management System (BIS Bosch Building Integration System) via the Ethernet and an OPC server, please verify with the responsible network administrator that in case of a network spanning multiple buildings
 - the network is designed for connections across multiple buildings (e.g. no interference by different potentials of the ground connection)
 - all users are assigned to the network.

Ordering Information

BCM 0000 A Battery Controller Module for extension of the FPA-5000 with the Panel Controller MPC version A	BCM 0000 A
CBB 0000 A Cable Set BCM/Battery Used to connect a battery pair and a Power Supply Housing to the BCM-0000-B Battery Controller Module	CBB 0000 A
CPB 0000 A Cable BCM/UPS Used to connect the BCM-0000-B Battery Controller Module to a UPS Power Supply, cable length 150 cm	CPB 0000 A
BCM-0000-B Battery Controller Module monitors the power supply of the fire and the charging of the batteries	BCM-0000-B
ANI 0016 A Annunciator Module displays the status of 16 individually programmable detection points	ANI 0016 A
LSN 0300 A LSN improved Module 300 mA for connecting an LSN loop with up to 254 LSN improved elements or 127 classic LSN elements, with a maximum line current of 300 mA	LSN 0300 A
FLM-420-EOL2W-W EOL Module LSN for EN 54-13 compliant termination of LSN stubs or T-taps	FLM-420-EOL2W-W
LSN 1500 A LSN improved Module 1500 mA for connecting an LSN loop with up to 254 LSN improved elements with a maximum line current of 1500 mA, or with up to 127 classic LSN elements, with a maximum line current of 300 mA	LSN 1500 A
FLM-420-EOL2W-W EOL Module LSN for EN 54-13 compliant termination of LSN stubs or T-taps	FLM-420-EOL2W-W

Ordering Information

FPE-5000-UGM Interface Module for connecting the fire panels FPA-5000 and FPA-1200 to superordinate systems (UGM 2020, FAT 2002/RE, FSM-2000)	FPE-5000-UGM
CZM 0004 A 4 Zone Conventional Module for connecting existing conventional peripherals; providing four monitored conventional lines	CZM 0004 A
FLM-320-EOL2W Conventional EOL Module 2-Wire for EN 54-13 compliant termination of conventional lines	FLM-320-EOL2W
IOS 0020 A 20 mA Communication Module provides one interface each of S20, RS232 and S1	IOS 0020 A
IOS 0232 A RS232 Communication Module for connecting two devices, e.g. voice alarm system Plena, a laptop or a printer, via two independent serial interfaces	IOS 0232 A
ENO 0000 B Fire Service Interface Module for connecting fire service equipment in compliance with DIN 14675	ENO 0000 B
CPA 0000 A Cable Set AT 2000 Used to connect an AT 2000 to the MPC and the ENO 0000 B.	CPA 0000 A
IOP 0008 A Input/Output Module for individual displays, providing eight independent digital inputs and eight open collector outputs	IOP 0008 A
RML 0008 A Relay Module for low voltage, providing 8 change-over contact relays (type C)	RML 0008 A
RMH 0002 A Relay Module for monitored connection of external elements with feedback, providing 2 change-over contact relays (type C) for high voltage	RMH 0002 A
NZM 0002 A Notification Appliance Zone Module for connecting 2 separate notification appliance zone lines, providing 2 monitored primary lines	NZM 0002 A
NMC 0000 A Cable HPD/NZM Used for synchronization in accordance with UL requirements, cable length 90 cm	NMC 0000 A
Accessories	
FLM-320-EOL2W Conventional EOL Module 2-Wire for EN 54-13 compliant termination of conventional lines	FLM-320-EOL2W
FLM-420-EOL2W-W EOL Module LSN for EN 54-13 compliant termination of LSN stubs or T-taps	FLM-420-EOL2W-W
FDP 0001 A Dummy Cover Plate For available module slots	FDP 0001 A
PSK 0001 A Labelling Strips, Wide 20 sheets each with 6 strips, printable, for the functional modules BCM-0000-B, LSN 0300 A, LSN 1500 A, CZM 0004 A, NZM 0002 A, RMH 0002 A, CTM 0002 A and ENO 0000 B	PSK 0001 A

Ordering Information

PSL 0001 A Labelling Strips, Small

20 sheets each with 10 strips, printable, for
the ANI I0016 A Annunciator Module

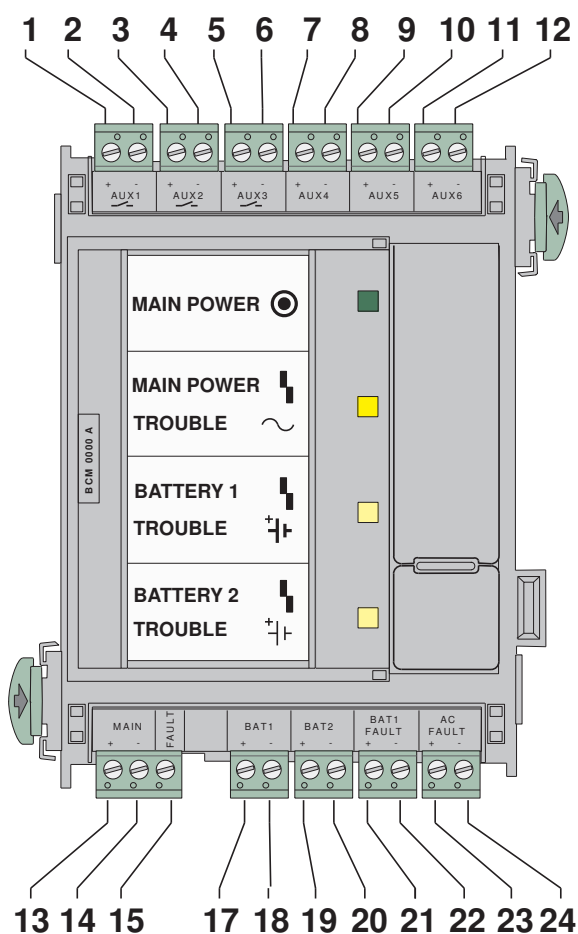
PSL 0001 A

1 BCM 0000 A Battery Controller Module



for extension of the FPA-5000 with the Panel Controller MPC version A

System Overview



Pos.	Description	Connector
1-12	AUX n +/- AUX 1/2/3 AUX 4/5/6	Voltage outputs: - switchable, battery-buffed (programmable) - not switchable, battery-buffered
13-14	MAIN +/-	Power supply unit UPS
15	FAULT	Input fault, mains
17-18	BAT1 +/-	Batteries 1+2 pos./neg.
19-20	BAT2 +/-	Batteries 3+4 pos./neg.
21-22	BAT FAULT -/+	Battery fault
23-24	AC FAULT -/+	Main power fault signal output

Voltage outputs 1, 2 and 3: +24 V / max. 1.4 A

Voltage outputs 4, 5 and 6: +24 V / max. 0.5 A

Fault signal outputs: max. 500 mA (at 24 V DC)

Functions

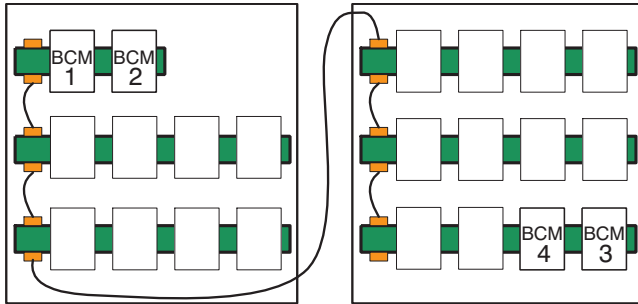
The BCM 0000 A Battery Controller Module monitors the power supply of the entire control panel and controls temperature- and time-controlled charging of up to four batteries (12 V/40 Ah or 12 V/28 Ah).

The charging of batteries is started manually with the key (at $V_{\text{Batt}} < 22 \text{ V}$). The control panel can be started without any mains current if the batteries are charged.

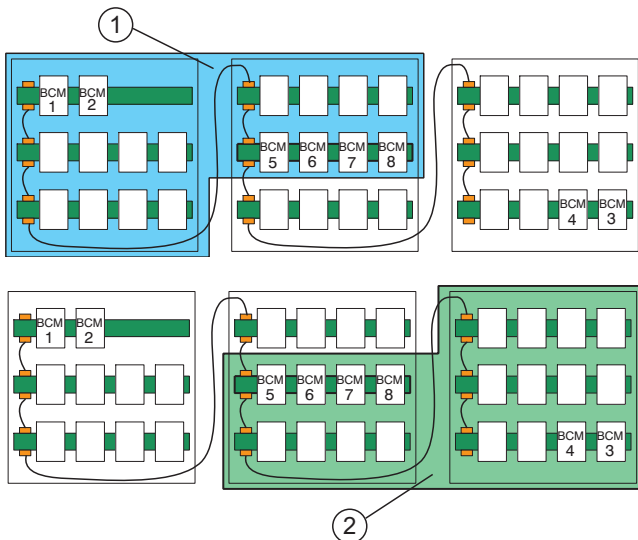
Installation/Configuration Notes

Configuration specifications for Battery Controller Modules

- With 1 to 4 BCM modules:
 - max. 2 modules at the start of the first panel rail
 - max. 2 modules at the end of the last panel rail



- With 5 to 8 BCM modules:
 - 2 modules at the start of the first panel rail (BCM 1 and 2)
 - 2 modules at the end of the last panel rail (BCM 3 and 4)
 - additional BCM modules as shown



Pos. Description

- | | |
|---|--------|
| 1 | Area 1 |
| 2 | Area 2 |
- Current consumption of the BCM modules must not exceed 10 A in Area 1.
 - Current consumption of the BCM modules must not exceed 10 A in Area 2.
 - This only applies to current consumption for consumer loads of the outputs 1-12 (AUX 1-6).

Parts Included

Qty.	Components
1	BCM 0000 A Battery Controller Module
1	Cable set with 2 connection cables: BCM/battery (90 cm) and battery/battery (17 cm)

Note If the batteries are located in a power supply housing, cable set CBB 0000 A is required (cable length for BCM/battery 180 cm).

Technical Specifications

Electrical

Input voltage	20 V DC to 30 V DC 5 V DC $\pm$ 5%
Current consumption	
• Standby	31 mA (at 24 V DC)
• Fault	40 mA (at 24 V DC)
Voltage outputs	
• 3 outputs, switchable	+24 V / 1.7 A, battery-buffed (programmable)
• 3 outputs, not switchable	+24 V / 0.5 A, battery-buffered
Capacity of the outputs BAT FAULT, AC FAULT	max. 500 mA (at 27 V DC)
Maximum current to the panel rails (PRS 0002 A/PRD 0004 A)	Max. 6 A via the BCM 0000 A Max. 8 A via the batteries

Mechanics

Operating/display elements	
• 1 green LED	Power ON
• 3 yellow LEDs	Trouble mains/batt. 1/batt. 2
• 1 key	Batteries charge at $V < 22$ V and central units start with battery current
Housing material	ABS plastic, Polyac PA-766 (UL94V-0)
Housing color	Satin finish, anthracite, RAL 7016
Dimensions	Approx. 127 x 96 x 60 mm (5.0 x 3.8 x 2.4 in.)
Weight	
• Without packaging	Approx. 185 g (6.5 ounces)
• With packaging	Approx. 335 g (11.8 ounces)

Environmental conditions

Permitted operating temperature	-5 °C to 50 °C (23 °F ... 122 °F)
Permitted storage temperature	-20 °C to 60 °C (-4 °F ... 140 °F)
Permitted relative humidity	95%, non-condensing
Protection class as per IEC 60529	IP 30

Ordering Information

BCM 0000 A Battery Controller Module for extension of the FPA-5000 with the Panel Controller MPC version A	BCM 0000 A
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Accessories

CBB 0000 A Cable Set BCM/Battery Used to connect a battery pair and a Power Supply Housing to the BCM-0000-B Battery Controller Module	CBB 0000 A
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CPB 0000 A Cable BCM/UPS Used to connect the BCM-0000-B Battery Con- troller Module to a UPS Power Supply, cable length 150 cm	CPB 0000 A
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BCM-0000-B Battery Controller Module



Features

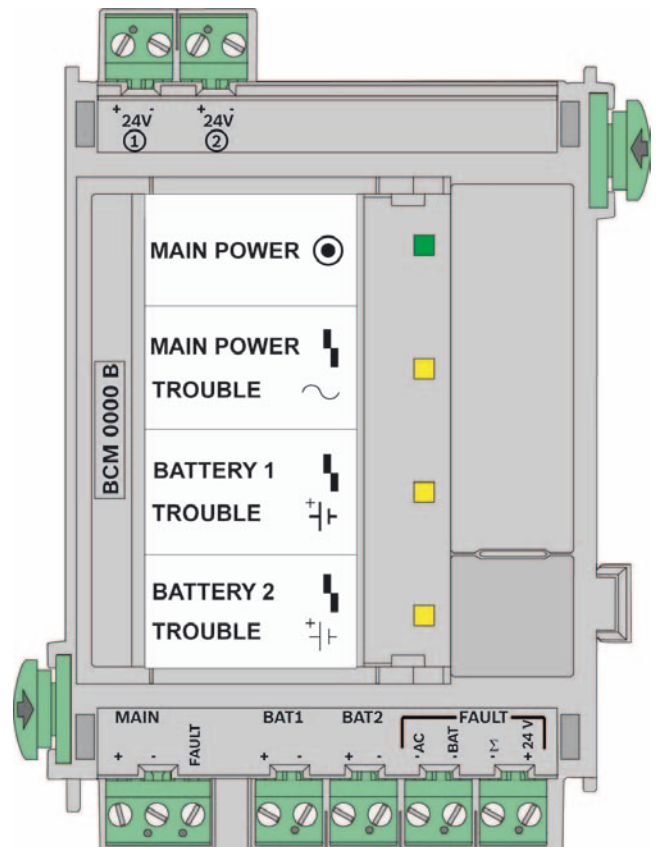
- ▶ Two voltage outputs of 2.8 A at 24 V each
- ▶ Temperature-controlled charging of batteries according to EN 54-4
- ▶ Ready to go thanks to plug-and-play technology and pluggable terminal blocks

The BCM-0000-B Battery Controller Module monitors the power supply of the entire control panel. It controls the charging of up to four batteries (12 V/24 Ah to 12 V/26 Ah or 12 V/36 Ah to 12 V/45 Ah). The charging is actuated by temperature and time.

The key has three functions, depending on the state of the battery controller module:

- The LED test of the module is activated by pushing the key.
- The key starts the charging of the batteries if the battery voltage is between 18 V and 21 V. A mains power supply is required.
- The reset of the 24 V outputs. If an error occurs, the output is deactivated.

System Overview



Description

24V +/-
24V +/-
MAIN +/-
MAIN FAULT
BAT1 +/-
BAT2 +/-
FAULT AC -
FAULT BAT -
FAULT Σ -
FAULT +

Connector

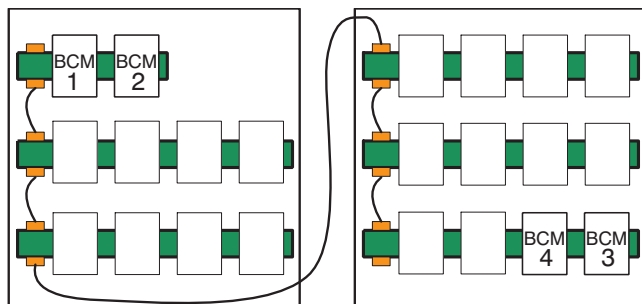
Output max. 2.8 A (battery buffered)
Output max. 2.8 A (battery buffered)
Power supply unit UPS
Input fault, mains
Battery pair 1
Battery pair 2
Main power fault signal output
Battery fault signal output
Collective fault signal output
Signal output +

Installation/Configuration Notes

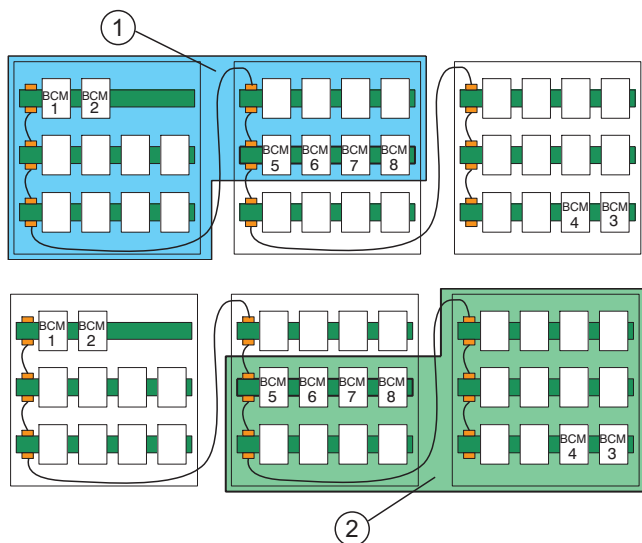
Do not use the 24V outputs in parallel wiring.

Configuration specifications for Battery Controller Modules

- With 1 to 4 BCM modules:
 - max. 2 modules at the start of the first panel rail
 - max. 2 modules at the end of the last panel rail



- With 5 to 8 BCM modules:
 - 2 modules at the start of the first panel rail (BCM 1 and 2)
 - 2 modules at the end of the last panel rail (BCM 3 and 4)
 - additional BCM modules as shown



Pos. Description

- | | |
|---|--------|
| 1 | Area 1 |
| 2 | Area 2 |
- Current consumption of the BCM modules must not exceed 10 A in Area 1.
 - Current consumption of the BCM modules must not exceed 10 A in Area 2.
 - This only applies to the current consumption for consumer loads of the outputs (1) 24 V and (2) 24 V.

Calculation of the standby current according to EN 54-4

$$(1) I_{\max, \text{Standby}} = \frac{C_{\text{Batt}} \cdot I_{\text{Alarm}} \times 0,5\text{h}}{t_{\text{Standby}}} \quad (2) I_{\max, A} = 6A - \frac{C_{\text{Batt}}}{18\text{h}}$$

$$(3) I_{\text{nom}} = \min[I_{\max, \text{Standby}}, I_{\max, A}]$$

Formula (1) gives the maximum panel current required to provide a specific buffering time ($I_{\max, \text{Standby}}$).

Formula (2) gives the maximum panel current with simultaneous consideration of the battery charge ($I_{\max, A}$).

According to formula (3), the required standby current of the panel (I_{nom}) is based on the smaller value of the two maximum current values of the panel.

Parameter:

- t_{Standby} = buffering time in hour

- I_{Alarm} = maximum alarm current ($I_{\max, B}$)
 - C_{Batt} = battery capacity in Ah
- The following capacities are feasible:
- 24 – 26 Ah and 36 – 45 Ah for 2 batteries
 - 48 – 52 Ah and 72 – 90 Ah for 4 batteries

Parts Included

Qty.	Components
1	BCM-0000-B Battery Controller Module
1	Cable set with 2 connection cables: BCM/battery (90 cm) and battery/battery (17 cm)

Note If the batteries are placed in a power supply housing, the cable set CBB 0000 A is required (cable length for BCM/battery 180 cm).

Technical Specifications

Electrical

Input voltage	20,4 V DC to 30 V DC
Current consumption	
• Standby	25 mA
• Fault	40 mA
Voltage outputs	
• 2 outputs, switchable	+24 V / 2.8 A, battery-buffed (programmable)
Capacity of the outputs BAT FAULT, AC FAULT and collective FAULT	0 V / 0 to 20 mA
Maximum current of the module	Max. 6 A
• to the panel rails (PRS 0002 A/PRD 0004 A)	Max. 6 A via the BCM 0000 A
• of the outputs	Max. 5.6 A (2 x 2.8 A not in parallel wiring)
• Maximum battery resistance	430 mΩ
• Permitted battery capacity	
• with 2 batteries	24 – 26 Ah 36 – 45 Ah
• with 4 batteries	48 – 52 Ah 72 – 90 Ah

Mechanics

Operating/display elements	
• 1 green LED	Power ON
• 3 yellow LEDs	Trouble mains/batt. 1/batt. 2
• 1 key	Batteries charge at V < 21 V and central units start with battery current
Housing material	ABS plastic, Polylac PA-766 (UL94 V-0)
Housing color	Satin finish, anthracite, RAL 7016
Dimensions	Approx. 127 x 96 x 60 mm (5.0 x 3.8 x 2.4 in.)

Weight	
• Without packaging	Approx. 195 g (6.9 ounces)
• With packaging	Approx. 340 g (12 ounces)

Environmental conditions

Permitted operating temperature	-5°C to 50°C (23°F to 122°F)
Permitted storage temperature	-20°C to 85°C (-13°F to 185°F)
Permitted relative humidity	95%, non-condensing
Protection class as per IEC 60529	IP 30

Ordering Information

BCM-0000-B Battery Controller Module	BCM-0000-B
monitors the power supply of the fire and the charging of the batteries	

ANI 0016 A Annunciator Module

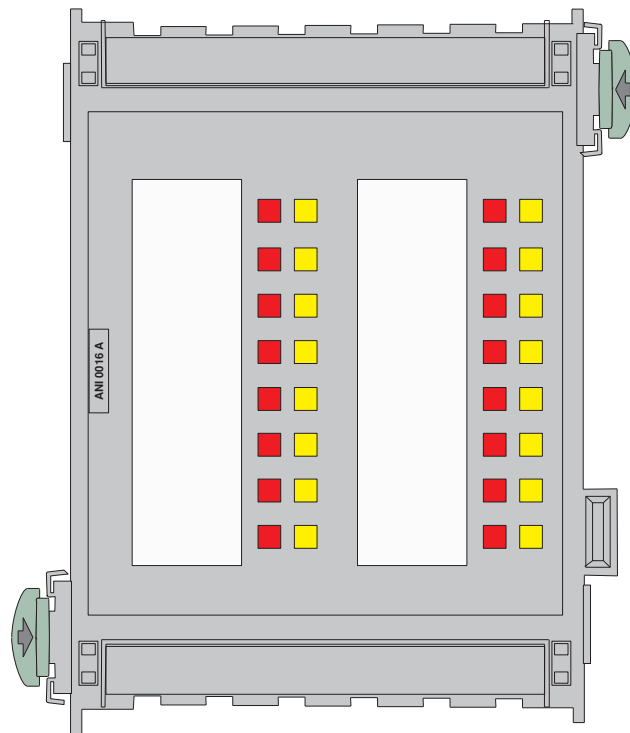


Features

- ▶ **Status display of 16 individually programmable detection points**
- ▶ **Ready to go thanks to plug-and-play technology**

The module, with 16 red and 16 yellow LEDs, can display the status of 16 individually programmable detection points.

System Overview



Functions

The Annunciator Module has 16 red and 16 yellow LEDs for displaying the operating states of 16 definable detection points.

The module is inserted in an open module slot and is therefore ready for operation.

Only the detection points to be displayed must still be defined via the programming software [RPS].

Parts Included

Qty.	Components
1	ANI 0016 A Annunciator Module
4	Labelling strips

Technical Specifications

Electrical

Input voltage	20 V DC to 30 V DC 5 V DC $\pm$ 5%
Max. current consumption	
• Standby (all LEDs off)	6 mA (at 24 V DC)
• All LEDs on	26 mA (at 24 V DC)

Mechanics

Display elements	16 red LEDs 16 yellow LEDs
Housing material	ABS plastic, Polyloc PA-766 (UL94 V-0)
Housing color	Satin finish, anthracite, RAL 7016
Dimensions	Approx. 127 x 96 x 60 mm (5.0 x 3.8 x 2.4 in.)
Weight	
• Without packaging	Approx. 206 g (7.3 ounces)
• With packaging	Approx. 356 g (12.6 ounces)

Environmental conditions

Permitted operating temperature	-5 °C to 50 °C (23 °F to 122 °F)
Permitted storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Permitted relative humidity	95%, non-condensing
Protection class as per IEC 60529	IP 30

Ordering Information**ANI 0016 A Annunciator Module****ANI 0016 A**

displays the status of 16 individually programmable detection points

LSN 0300 A

LSN improved Module

300 mA

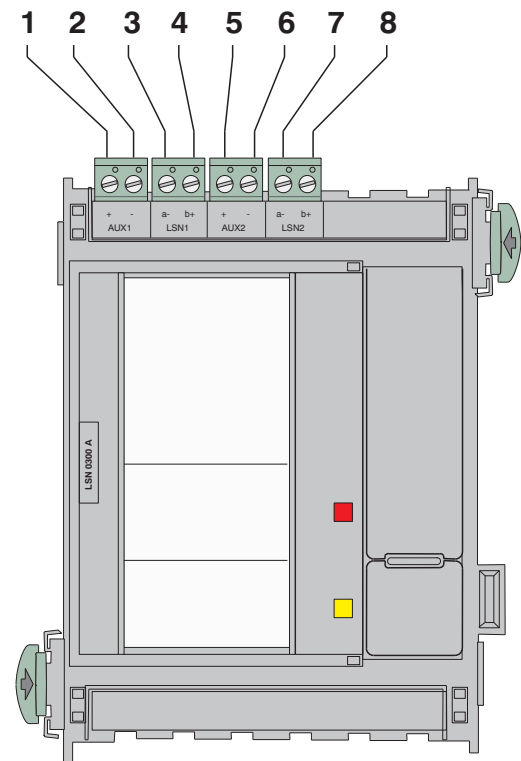


Features

- ▶ Up to 254 LSN improved elements
- ▶ Line length up to 1600 m, depending on configuration and cable type
- ▶ Unshielded cable can be used
- ▶ Line current up to 300 mA, depending on configuration and cable type
- ▶ Additional voltage output (ERT-capable)
- ▶ Flexible network structures (loop, stub, and T-tap)
- ▶ Addressing techniques: LSN improved auto-addressing, LSN classic auto-addressing and manual address assignment

This module allows the connection of an LSN loop with up to 254 LSN improved elements or 127 classic LSN elements, with a maximum line current of 300 mA.

System Overview



Ite	Description	Connection
m	LSN LSN stub loop	

1/2	AUX1 + / -	Auxiliary power supply	Auxiliary power supply stub 1
3	LSN a1-	LSN a1- outgoing	Stub 1 LSN a1-
4	LSN b1+	LSN b1+ outgoing	Stub 1 LSN b1+
5/6	AUX2 + / -	Auxiliary power supply***	Auxiliary power supply stub 2
7	LSN a2-	LSN a2- incoming	Stub 2 LSN a1-
8	LSN b2+	LSN b2+ incoming	Stub 2 LSN b1+

*** Auxiliary power must only be returned to AUX2 in looped isolators (ERT systems). [Suitable isolators include YBO-R/SCI isolators]

Installation/Configuration Notes

Note Current consumption of the connected devices and cable length can be calculated with the Fire System Designer (FSD).

- Country-specific standards and guidelines must be considered during planning.
- For operation of the fire detection system according to EN 54-13, it is necessary to terminate every stub and T-tap with EOL-modules.

Parts Included

Qty.	Components
1	LSN 0300 A LSN improved Module 300 mA

Technical Specifications**Electrical systems**

Input voltage	20 V DC to 30 V DC / 5 V DC $\pm$ 5 %
Output voltage:	
• LSN	30 $\pm$ 1.0 V DC
• Aux auxiliary power	28 $\pm$ 1.0 V DC
Max. current consumption	1750 mA at 24 V DC
Nominal current consumption	
• Module	39 mA at 24 V DC
• LSN	1,7 x current consumption of LSN elements
• AUX	1,2 x Auxiliary power
LSN line current	Max. 300 mA, depending on configuration and cable type
AUX auxiliary power (28 V DC)	Max. 500 mA in an LSN loop (ERT system) or 2 x max. 500 mA in 2 stubs

Mechanical systems

Operation/display elements	2 LEDs (red = alarm, yellow = fault) 1 button (LED test)
Housing material	ABS plastic, (UL94 V-0)
Housing color	Satin finish, anthracite, RAL 7016
Dimensions	Approx. 127 x 96 x 60 mm (5.0 x 3.8 x 2.4 in.)
Weight	Approx. 225 g

System limits

Max. line length	1600 m, depending on configuration and cable type
Number of elements	Max. 127 classic LSN elements Max. 254 LSN improved elements

Environmental conditions

Permissible operating temperature	-5 °C to 50 °C (23 °F to 122 °F)
Permitted storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Permitted relative humidity	95 % , non-condensing
Protection class as per IEC 60529	IP 30

Ordering Information

LSN 0300 A LSN improved Module 300 mA	LSN 0300 A
for connecting an LSN loop with up to 254 LSN improved elements or 127 classic LSN elements, with a maximum line current of 300 mA	

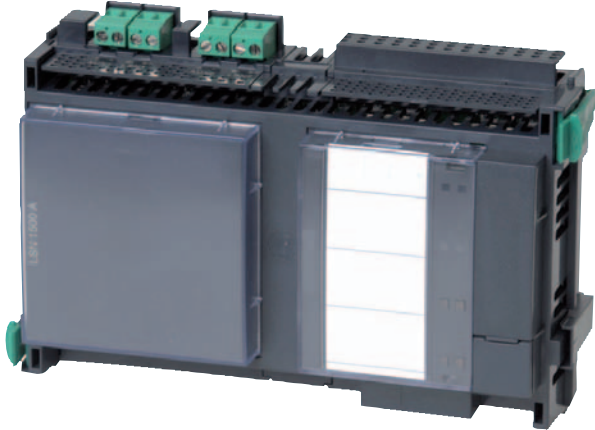
Accessories

FLM-420-EOL2W-W EOL Module LSN	FLM-420-EOL2W-W
for EN 54-13 compliant termination of LSN stubs or T-taps	

LSN 1500 A

LSN improved Module

1500 mA

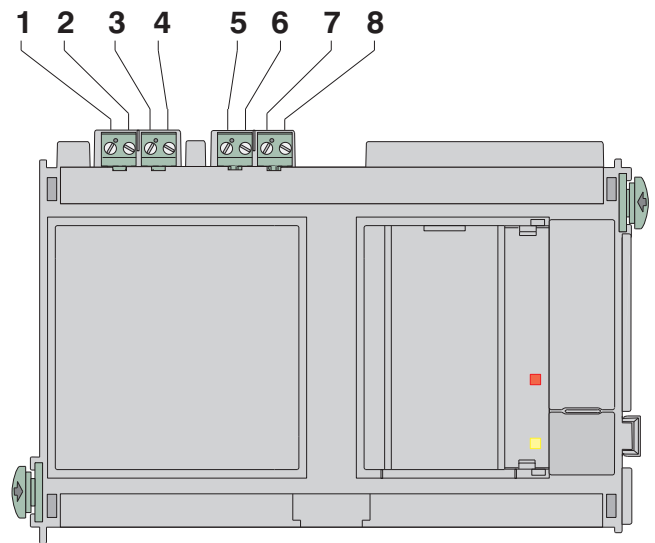


Features

- ▶ Up to 254 LSN improved elements
- ▶ Line length up to 3000 m, depending on configuration and cable type
- ▶ Unshielded cable can be used
- ▶ Line current up to 1500 mA, depending on configuration and cable type
- ▶ Additional voltage output (ERT-capable)
- ▶ Flexible network structures (loop, stub, and T-tap)
- ▶ Addressing techniques: LSN improved auto-addressing, LSN classic auto-addressing and manual address assignment

This module allows the connection of an LSN loop with up to 254 LSN improved elements with a maximum line current of 1500 mA or with up to 127 classic LSN elements, with a maximum line current of 300 mA.

System Overview



Item	Description	Connection
1/2	AUX1 + / -	Auxiliary power supply
3	LSN a1-	LSN a1- outgoing
4	LSN b1+	LSN b1+ outgoing
5/6	AUX2 + / -	Auxiliary power supply***
7	LSN a2-	LSN a2- incoming
8	LSN b2+	LSN b2+ incoming

*** Auxiliary power must only be returned to AUX2 in looped isolators (ERT systems). [Suitable isolators include YBO-R/SCI isolators]

Installation/Configuration Notes

System limits for each LSN 1500 A LSN improved Module

Note Current consumption of the connected devices and cable length can be calculated with the Fire System Designer (FSD).

- Country-specific standards and guidelines must be considered during planning.
- It can only be plugged in on the left side of a PRD 0004 A panel rail and requires two slots!
- For operation of the fire detection system according to EN 54-13, it is necessary to terminate every stub and T-tap with EOL-modules.

Parts Included

Qty.	Components
1	LSN 1500 A LSN improved Module 1500 mA

Note Ready for delivery on request.

Technical Specifications**Electrical systems**

Input voltage	20 V DC to 30 V DC / 5 V DC $\pm$ 5 %
Output voltage:	
• LSN	30 $\pm$ 0.85 V DC
• Aux auxiliary power	28 $\pm$ 1.0 V DC
Max. current consumption	4010 mA at 24 V DC
Nominal current consumption	
• Module	260 mA at 24 V DC
• LSN	1.7 x current consumption of LSN elements
• AUX	1.2 x Auxiliary power
LSN line current:	
• Standby	Max. 750 mA, depending on configuration and cable type
• Alarm	Max. 1500 mA, depending on configuration and cable type, Max. 300 mA at connection of classic LSN elements
AUX auxiliary power (28 V DC)	Max. 500 mA in an LSN loop (ERT system) or 2 x max. 500 mA in 2 stubs

Mechanical systems

Operation/display elements	2 LEDs (red = alarm, yellow = fault) 1 button (LED test)
Housing material	ABS plastic, (UL94 V-0)
Housing color	Satin finish, anthracite, RAL 7016
Dimensions	Approx. 127 x 190 x 60 mm (5.0 x 7.6 x 2.4 in.)
Weight	Approx. 440 g

System limits

Max. line length	3000 m, depending on configuration and cable type
Number of elements	Max. 127 classic LSN elements Max. 254 LSN improved elements

Environmental conditions

Permissible operating temperature	-5 °C to 50 °C (23 °F to 122 °F)
Permitted storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Permitted relative humidity	95 % , non-condensing
Protection class as per IEC 60529	IP 30

Ordering Information

LSN 1500 A LSN improved Module 1500 mA **LSN 1500 A**
for connecting an LSN loop with up to 254 LSN improved elements with a maximum line current of 1500 mA, or with up to 127 classic LSN elements, with a maximum line current of 300 mA

Accessories

FLM-420-EOL2W-W EOL Module LSN **FLM-420-EOL2W-W**
for EN 54-13 compliant termination of LSN stubs or T-taps

FPE-5000-UGM Interface Module

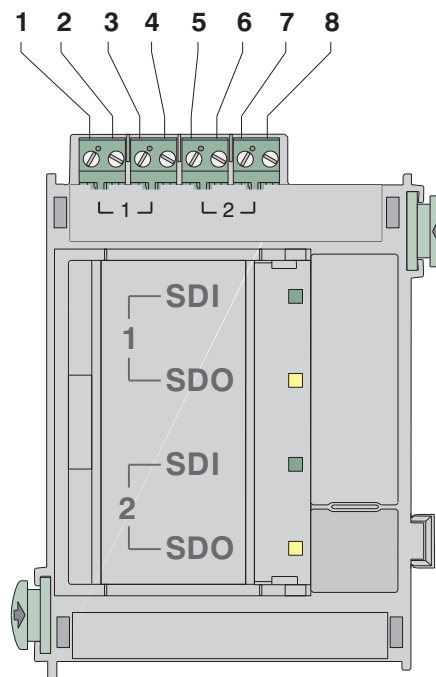


Features

- Easy and redundant connection to superordinate systems
- MTS protocol
- Ready to go thanks to plug-and-play technology and pluggable terminal blocks

The Communication Module is used to connect the fire panels FPA-5000 and FPA-1200 to a superordinate system like the UGM 2020, FAT 2002/RE and FSM-2000. The module provides two bi-directional transmission paths.

System Overview



Pos.	Labeling	Connection	
1	SDI 1 +	Transmission path 1	Data input +
2	SDI 1 -		Data input -
3	SDO 1 +	Transmission path 2	Data input +
4	SDO 1 -		Data input -
5	SDI 2 +		Data input +
6	SDI 2 -		Data input -
7	SDO 2 +		Data input +
8	SDO 2 -		Data input -

Functions

Quant.	Component
1	FPE-5000-UGM Interface Module

Technical Specifications

Electrical

Input voltage	20 V DC to 30 V DC
Maximum current consumption	
• Standby	7 mA (at 24 V DC)
• One transmission path active	10 mA (at 24 V DC)
• Both transmission paths active	13 mA (at 24 V DC)
Maximum line length	1000 m
Maximum line resistance	70 Ω
Baud rate	9600 bit/s at 1000 m to 38400 bit/s at 200 m

Mechanics

Operating and display elements

• 4 Bi-colorLEDs	Green = transmission / Yellow = fault
• 1 key switch	LED test
Housing material	ABS plastic (UL94 V-0)
Housing color	satın finish, anthracite, RAL 7016
Dimensions	110 x 90 x 60 mm
Weight	150 g

Environmental conditions

Permissible operating temperature	-5 °C to 50 °C
Permissible storage temperature	-20 °C to 60 °C
Permissible relative humidity	max. 95 %, non-condensing
Protection class as per IEC 60529	IP 30

Ordering Information**FPE-5000-UGM Interface Module****FPE-5000-UGM**

for connecting the fire panels FPA-5000 and
FPA-1200 to superordinate systems
(UGM 2020, FAT 2002/RE, FSM-2000)

CZM 0004 A 4 Zone Conventional Module

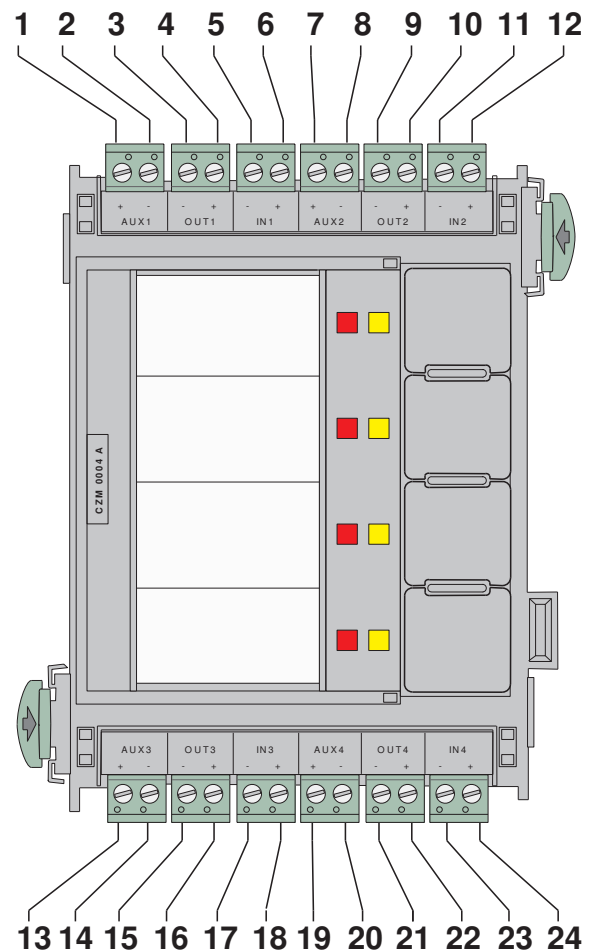


Features

- Connection of 2-wire and 4-wire conventional elements
- Ready to go thanks to plug-and-play technology and pluggable terminal blocks

The CZM 0004 A is used to connect existing conventional peripherals and provides four monitored conventional lines.

System Overview



Pos.	Description	Connector
1 / 2	AUX1 + / -	Additional power supply* zone 1
3 / 4	OUT1 - / +	Zone 1 output low/output high
5 / 6	IN1 - / +	Zone 1 input low/input high
7 / 8	AUX2 + / -	Additional power supply* zone 2
9 / 10	OUT2 - / +	Zone 2 output low/output high
11 / 12	IN2 - / +	Zone 2 input low/input high
13 / 14	AUX3 + / -	Additional power supply* zone 3
15 / 16	OUT3 - / +	Zone 3 output low/output high
17 / 18	IN3 - / +	Zone 3 input low/input high
19 / 20	AUX4 + / -	Additional power supply* zone 4
21 / 22	OUT4 - / +	Zone 4 output low/output high
23 / 24	IN4 - / +	Zone 4 input low/input high

* +24 V DC, connectable

Installation/Configuration Notes

- All additional voltage outputs (AUX 1-AUX 4) can be switched on and off simultaneously.
- 2-wire and 4-wire conventional components can be connected.
- Country-specific standards and guidelines must be considered during planning.

- For operation of the fire detection system according to EN 54-13, it is necessary to terminate every conventional zone with EOL-modules.
- Observe the maximum line resistance:
 - 25 Ω for conventional lines with FMC-300-RW or automatic fire detectors
 - 12 Ω for conventional lines with FMC-120-DKM manual call points.

Parts Included

Qty.	Components
1	CZM 0004 A 4 Zone Conventional Module

Technical Specifications

Electrical

Input voltage	20 V DC to 30 V DC (min...max) 5 V DC $\pm$ 5%
---------------	---

Max. current consumption

• Standby (all 4 zones)	65 mA (at 24 V DC)
• Alarm (all 4 zones)	65 mA + 100 mA per zone (at 24 V DC)

Max. output voltage	20 V DC $\pm$ 5%
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Max. output current	100 mA per zone $\pm$ 10%
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Max. lead resistance	2 x 25 Ω per zone
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Mechanics

Operating/display elements	8 LEDs (4 x red, 4 x yellow) 4 keys
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Housing material	ABS plastic, Polylac PA-766 (UL94 V-0)
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Housing color	Satin finish, anthracite, RAL 7016
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Dimensions	Approx. 127 x 96 x 60 mm (5.0 x 3.8 x 2.4 in.)
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Weight

• Without packaging	Approx. 135 g (4.8 ounces)
• With packaging	Approx. 270 g (9.5 ounces)

Environmental conditions

Permitted operating temperature	-5 °C to 50 °C (23 °F to 122 °F)
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Permitted storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)
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Permitted relative humidity	95%, non-condensing
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Protection class as per IEC 60529	IP 30
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Ordering Information

CZM 0004 A 4 Zone Conventional Module	CZM 0004 A
for connecting existing conventional peripherals; providing four monitored conventional lines	

IOS 0020 A 20 mA Communication Module



Features

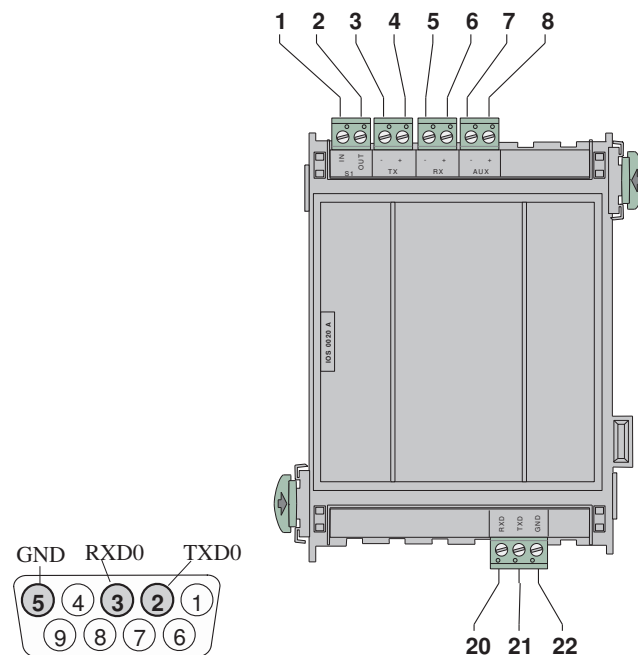
- Connection of peripherals with serial interface
- Ready to go thanks to plug-and-play technology and pluggable terminal blocks

The IOS 0020 A Communication Module has the following interfaces:

- An S20 interface
- An RS232 interface
- An S1 interface.

The voice alarm system Plena can be connected via RS232.

System Overview



Pos.	Description	Connector
1 / 2	S1 IN/OUT	S1 interface
3 / 4	TX - / +	20 mA interface
5 / 6	RX + / -	20 mA interface
7 / 8	AUX - / +	Power supply, +24 V DC/max. 1.3 A
20 / 21 / 22	RXD/TXD/GND	RS232 interface

Parts Included

Qty.	Components
1	IOS 0020 A 20 mA Communication Module

Technical Specifications

Electrical

Input voltage	20 V DC to 30 V DC 5 V DC $\pm$ 5%
Max. current consumption	15 mA (at 24 V DC)
Max. output current AUX	1.3 A at 24 V DC
Max. cable length	
• 20 mA interface	1000 m (3280 ft.)
• RS232 interface	3 m (10 ft.)

Mechanics

Housing material	ABS plastic, Polyac PA-766 (UL94 V-0)
Housing color	Satin finish, anthracite, RAL 7016
Dimensions	Approx. 127 x 96 x 60 mm (5.0 x 3.8 x 2.4 in.)
Weight	
• Without packaging	Approx. 175 g (6.2 ounces)
• With packaging	Approx. 350 g (12.4 ounces)

Environmental conditions

Permitted operating temperature -5 °C to 50 °C (23 °F to 122 °F)

Permitted storage temperature -20 °C to 60 °C (-4 °F to 140 °F)

Permitted relative humidity 95%, non-condensing

Protection class as per IEC 60529 IP 30

Ordering Information

IOS 0020 A 20 mA Communication Module **IOS 0020 A**

provides one interface each of S20, RS232 and S1

IOS 0232 A RS232 Communication Module

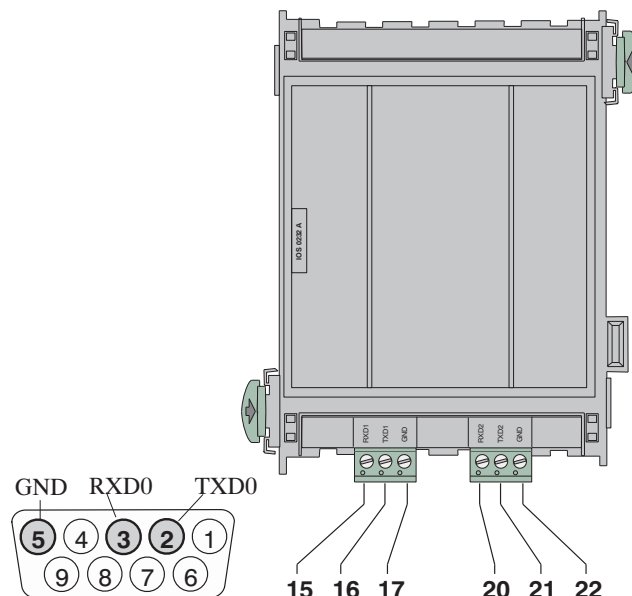


Features

- **Connection of peripherals with RS232 serial interface**
- **Ready to go thanks to plug-and-play technology and pluggable terminal blocks**

The RS232 Communication Module can be used to connect two devices, e.g. voice alarm system Plena, a laptop or a printer, via two independent serial interfaces.

System Overview



Pos.	Description	Connector
15 / 16 / 17	RXD1/TXD1/GND	RS232 interface 1
20 / 21 / 22	RXD2/TXD2/GND	RS232 interface 2

Parts Included

Qty.	Components
1	IOS 0232 A RS232 Communication Module

Technical Specifications

Electrical

Input voltage	20 V DC to 30 V DC (min...max) 5 V DC $\pm$ 5%
Max. current consumption	15 mA (at 24 V DC)
Max. cable length	3 m (10 ft.) per interface

Mechanics

Housing material	ABS plastic, Polylac PA-766 (UL94 V-0)
Housing color	Satin finish, anthracite, RAL 7016
Dimensions	Approx. 127 x 96 x 60 mm (5.0 x 3.8 x 2.4 in.)

Weight

- Without packaging Approx. 180 g (6.3 ounces)
- With packaging Approx. 230 g (8.1 ounces)

Environmental conditions

Permitted operating temperature	-5 °C to 50 °C (23 °F to 122 °F)
Permitted storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Permitted relative humidity	95%, non-condensing
Protection class as per IEC 60529	IP 30

Ordering Information

IOS 0232 A RS232 Communication Module	IOS 0232 A
for connecting two devices, e.g. voice alarm system Plena, a laptop or a printer, via two independent serial interfaces	

ENO 0000 B Fire Service Interface Module



Features

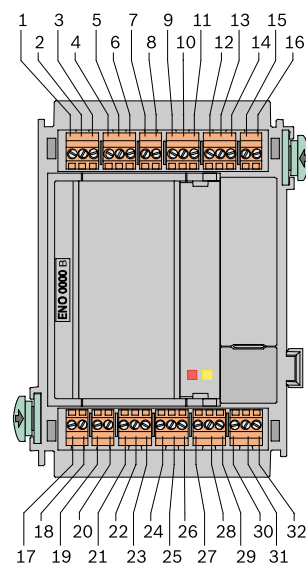
- **Connection of Fire Service Systems according to DIN 14675**
- **Ready to go thanks to plug-and-play technology and pluggable terminal blocks**

The ENO 0000 B enables the connection of fire service equipment in compliance with DIN 14675:

- Transmission unit to fire service (AT 2000)
- SD key deposit
- Signal light (BEGA light, BL 200)
- Monitoring of a release device
- 4 freely-programmable relays.

The ENO 0000 B module is only used in Germany.

System Overview



Pos.	Description	Connector
1	A	Ground
2	B	Transmission unit control
3	C	Feedback contact
4	ÜE	AWUG fault
5	NQuit	Acknowledge
6	GND	Ground
7 / 8	ÜE + / -	Transmission unit power supply
9	1	Monitoring of key deposit
10		Jumper from position 10 to 11 for the door release magnet of a 12 V key deposit.
11	2	Ground
12	5	Door release magnet, 24 V, approx. 10 W
13	8	Lock monitoring
14	6/7	Ground
15	9	Heat system, 24 V, approx. 8 W
16	10	Ground
17 / 18	FSE + / -	Monitoring of the release device
19 / 20	II + / -	Signal light, 24 V, approx. 10 W
21 - 32	1/2/3/4	Relays 1-4

Installation/Configuration Notes

- For a fire system operation according to EN 54-2, the transmission units (FMA-AT2000-GSM/-ISDN/-IP) must be installed directly next to or within the fire panel. If the installation is remote, the feedback line to the fire panel must be monitored.

Parts Included

Qty.	Components
1	ENO 0000 B Fire Service Interface Module
2	Labeling strips

Technical Specifications

Electrical

Input voltage	20 V DC to 30 V DC 5 V DC $\pm$ 5%
---------------	---------------------------------------

Max. current consumption

• Standby	25 mA (at 24 V DC)
• All relays triggered	60 mA (at 24 V DC)

Contact load relay	1 A / 30 V DC
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Max. lead resistance transmission unit (ÜE)	2 x 10 Ω
---	-----------------

Max. cable length key deposit	10 m
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Cable type key deposit	LiYY 10 x 0.5 mm ²
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Mechanics

Housing material	ABS plastic, Polylac PA-766 (UL94 V-0)
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Housing color	Satin finish, anthracite, RAL 7016
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Dimensions	Approx. 127 x 96 x 60 mm
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Weight	Approx. 150 g
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Environmental conditions

Permitted operating temperature	-5 °C to 50 °C
---------------------------------	----------------

Permitted storage temperature	-20 °C to 60 °C
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Permitted relative humidity	95 %, non-condensing
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Protection class as per IEC 60529	IP 30
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Ordering Information

ENO 0000 B Fire Service Interface Module for connecting fire service equipment in compliance with DIN 14675	ENO 0000 B
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Accessories

CPA 0000 A Cable Set AT 2000 Used to connect an AT 2000 to the MPC and the ENO 0000 B.	CPA 0000 A
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IOP 0008 A Input/Output Module

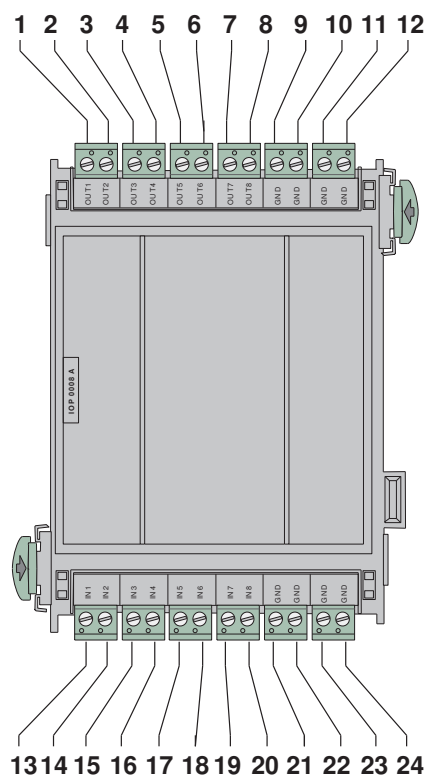


Features

- Interface for electrically isolated inputs and outputs
- Ready to go thanks to plug-and-play technology and pluggable terminal blocks

The IOP 0008 A Input/Output Module has eight independent digital inputs and eight open collector outputs for individual displays.

System Overview



Pos.	Description	Connector
1-8	OUT1-OUT8	8 outputs with a max. voltage of 35 V DC, nominal 700 mA
9-12	GND	Ground
13-20	IN1-IN8	8 inputs with a max. voltage of 5 V DC at 0.1 mA per input
21-24	GND	Ground

Parts Included

Qty.	Components
1	IOP 0008 A Input/Output Module

Technical Specifications

Electrical

Input voltage	20 V DC to 30 V DC 5 V DC $\pm$ 5%
Max. current consumption	10 mA (at 24 V DC)
Output current	Max 1.5 A, nominal 700 mA (short-circuit protected)
Max. cable length	3 m (10 ft.) per input/output

Mechanics

Housing material	ABS plastic, Polylac PA-766 (UL94 V-0)
Housing color	Satin finish, anthracite, RAL 7016
Dimensions	Approx. 127 x 96 x 60 mm (5.0 x 3.8 x 2.4 in.)
Weight	Approx. 150 g (5.3 ounces)

Environmental conditions

Permitted operating temperature	-5 °C to 50 °C (23 °F to 122 °F)
Permitted storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Permitted relative humidity	95%, non-condensing
Protection class as per IEC 60529	IP 30

Ordering Information

IOP 0008 A Input/Output Module	IOP 0008 A
for individual displays, providing eight independent digital inputs and eight open collector outputs	

RML 0008 A Relay Module



Features

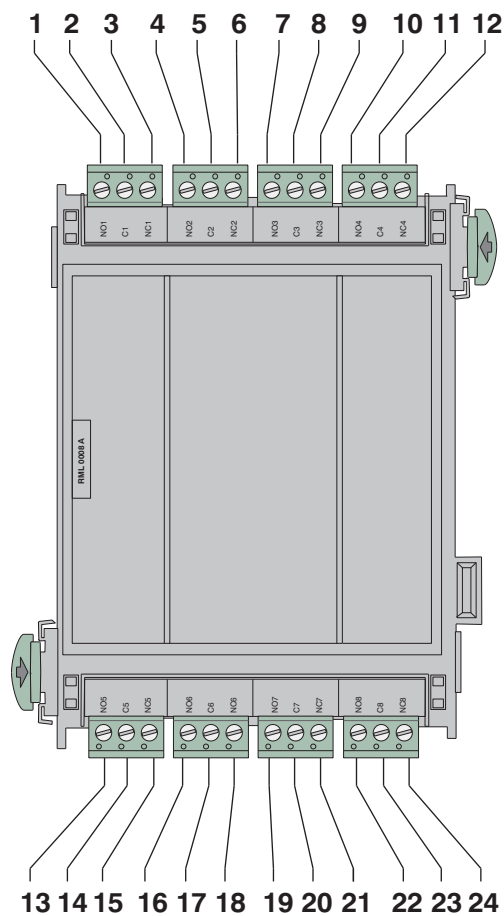
- 8 freely programmable relay outputs
- Ready to go thanks to plug-and-play technology and pluggable terminal blocks

The module has eight change-over contact relays (type C) to provide potential-free output contacts.

Each of the eight relays has an NO (normally open) and an NC (normally closed) contact.

The maximum relay contact load is 30 V DC/1 A.

System Overview



Pos.	Description	Connector
1-3	NO1 / C1 / NC1	Relay 1
4-6	NO2 / C2 / NC2	Relay 2
7-9	NO3 / C3 / NC3	Relay 3
10-12	NO4 / C4 / NC4	Relay 4
13-15	NO5 / C5 / NC5	Relay 5
16-18	NO6 / C6 / NC6	Relay 6
19-21	NO7 / C7 / NC7	Relay 7
22-24	NO8 / C8 / NC8	Relay 8

Parts Included

Qty.	Components
1	RML 0008 A Relay Module Low Voltage

Technical Specifications

Electrical

Input voltage	20 V DC to 30 V DC 5 V DC $\pm$ 5%
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Max. current consumption

- Standby 4 mA (at 24 V DC)
- All relays triggered 68 mA (at 24 V DC)

Max. contact load	1 A at 30 V DC
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Mechanics

Housing material	ABS plastic, Polylac PA-766 (UL94 V-0)
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Housing color	Satin finish, anthracite, RAL 7016
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Dimensions	Approx. 127 x 96 x 60 mm (5.0 x 3.8 x 2.4 in.)
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Weight	Approx. 150 g (5.3 ounces)
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Environmental conditions

Permitted operating temperature	-5 °C to 50 °C (23 °F to 122 °F)
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Permitted storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)
-------------------------------	-----------------------------------

Permitted relative humidity	95%, non-condensing
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Protection class as per IEC 60529	IP 30
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Ordering Information

RML 0008 A Relay Module

RML 0008 A

for low voltage, providing 8 change-over contact relays (type C)

RMH 0002 A Relay Module



Features

- ▶ **Contact rating of 5 A**
- ▶ **Ready to go thanks to plug-and-play technology and pluggable terminal blocks**

The module has two change-over contact relays (type C) for monitored connection of external elements with feedback, e. g.

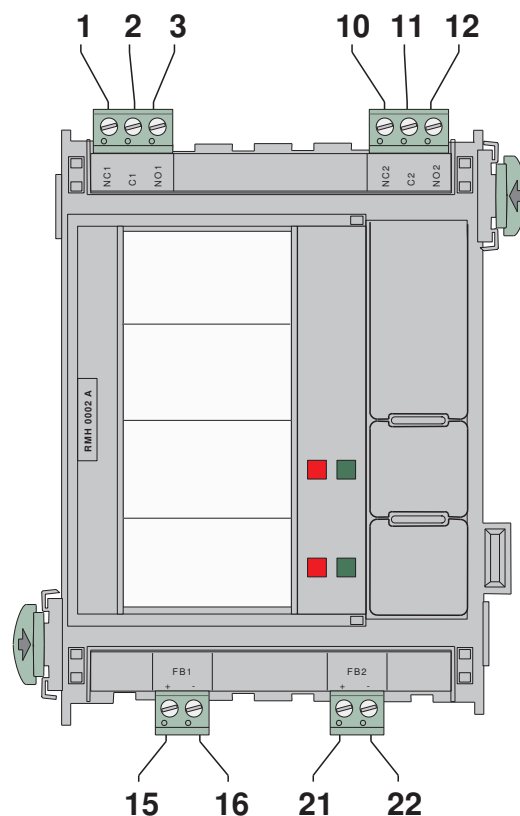
- Door retaining magnets
- Fan
- Smoke dampers.

Each relay has an NO (normally open) and an NC (normally closed) contact and is protected by a 6.3 A fuse.

The maximum relay contact load is 5 A at 120 V/230 V AC and 5 A at 30 V DC.

The Relay Module can also be used as an extinguishing system interface in accordance with VdS 2496.

System Overview



Pos.	Description	Connector
1-3	NC1/C1/NO1	Relay 1
10-12	NC2/C2/NO2	Relay 2
15 / 16	FB1 + / -	Feedback relay 1
21 / 22	FB2 + / -	Feedback relay 2

Parts Included

Qty.	Components
1	RMH 0002 A Relay Module High Voltage
2	Labeling strips

Technical Specifications

Electrical

Input voltage	20 V DC to 30 V DC 5 V DC $\pm$ 5%
Max. current consumption	
• Standby	10 mA (at 24 V DC)
• Both relays triggered	50 mA (at 24 V DC)
Max. contact load	5 A at 120/230 V AC 5 A at 30 V DC
Feedback current	Max. 4.5 mA per relay
Feedback voltage	Max. 30 V DC

Maximum line resistance of the feedback lines	2 x 25 Ω
---	-----------------

Fuses	F1 = T 6.3 A, F2 = T 6.3 A
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Mechanics

Operating/display elements	4 LEDs (2 x red, 2 x green) 2 keys
----------------------------	---------------------------------------

Housing material	PPO Noryl
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Housing color	Satin finish, anthracite, RAL 7016
---------------	------------------------------------

Dimensions	Approx. 127 x 96 x 60 mm (5.0 x 3.8 x 2.4 in.)
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Weight	Approx. 135 g (4.8 ounces)
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Environmental conditions

Permitted operating temperature	-5 °C to 50 °C (23 °F to 122 °F)
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Permitted storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)
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Permitted relative humidity	95%, non-condensing
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Protection class as per IEC 60529	IP 30
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Ordering Information

RMH 0002 A Relay Module

for monitored connection of external elements with feedback, providing 2 change-over contact relays (type C) for high voltage

RMH 0002 A

NZM 0002 A Notification Appliance Zone Module



Features

- **Monitored control of signaling devices by voltage polarity reversal**
- **Ready to go thanks to plug-and-play technology and pluggable terminal blocks**

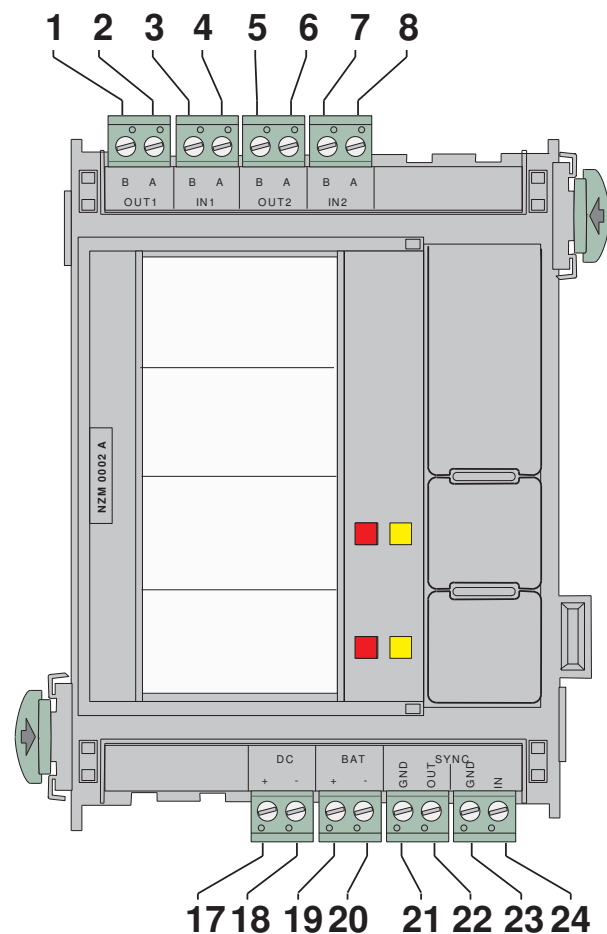
The NZM 0002 A Notification Appliance Zone Module provides two monitored primary lines. This enables the connection of two separate notification appliance zone lines.

Connection of:

- Sirens
- Strobes
- Horns

The operating status of each zone is shown by a red and a yellow status LED.

System Overview



Pos.	Description	Connector
1 / 2	B OUT1/A OUT1	NAC zone 1
3 / 4	B IN1/A IN1	
5 / 6	B OUT2/A OUT2	NAC zone 2
7 / 8	B IN2/A IN2	
17 / 18	DC + / -	External power supply via HPD 0000 A Power distributor
19 / 20	BAT + / -	24 V DC input, battery voltage
21 / 22	SYNC GND/OUT	Synchronization output
23 / 24	SYNC GND/IN	Synchronization input

Parts Included

Qty.	Components
1	NZM 0002 A Notification Appliance Zone Module
2	Labelling strips

Technical Specifications

Electrical

Input voltage	20 V DC to 30 V DC 5 V DC $\pm$ 5%
Max. current consumption	
• Standby (2 zones)	40 mA (at 24 V DC)
• Alarm (2 zones)	65 mA (at 24 V DC)
Max. output voltage	29.5 V DC
Max. output current for	
• Power supply via rail	500 mA per notification appliance zone line (in the event of an alarm)
• External power supply	3 A per notification appliance zone line (in the event of an alarm)
• Max. cable length	Dependent on type and number of connected signaling devices

Mechanics

Operating/display elements	4 LEDs (2 x red, 2 x yellow) 1 key
Housing material	ABS plastic, Polylac PA-766 (UL94 V-0)
Housing color	Satin finish, anthracite, RAL 7016
Dimensions	Approx. 127 x 96 x 60 mm (5.0 x 3.8 x 2.4 in.)
Weight	Approx. 135 g (4.8 ounces)

Environmental conditions

Permitted operating temperature	-5 °C to 50 °C (23 °F to 122 °F)
Permitted storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Permitted relative humidity	95%, non-condensing
Protection class as per IEC 60529	IP 30

Ordering Information

NZM 0002 A Notification Appliance Zone Module

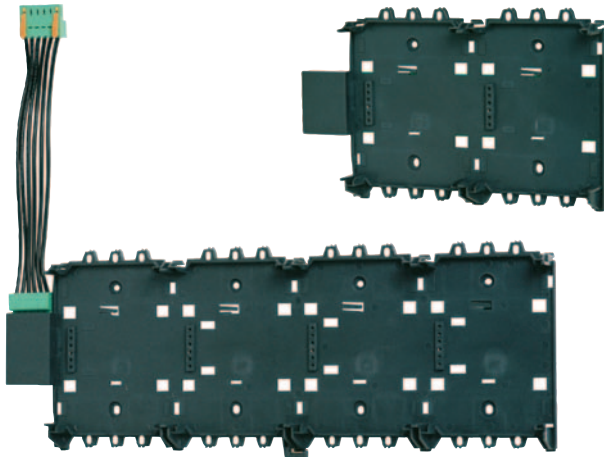
for connecting 2 separate notification appliance zone lines, providing 2 monitored primary lines

Accessories

NMC 0000 A Cable HPD/NZM

Used for synchronization in accordance with UL requirements, cable length 90 cm

Panel Rails



Features

- ▶ **Plug-and-play rails**
- ▶ **Adequate for two or four modules**

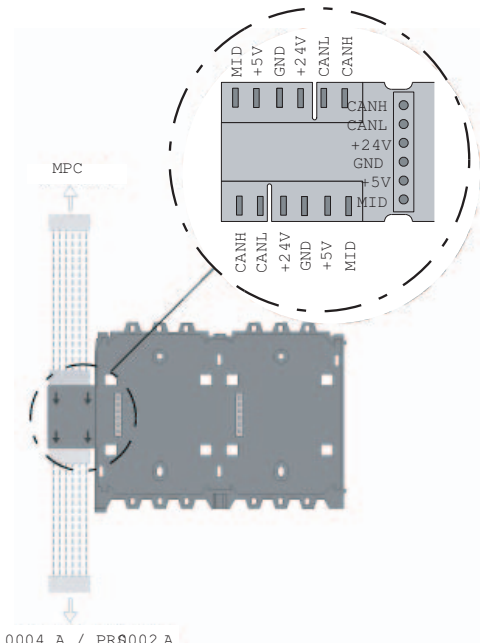
The PRS 0002 A Panel Rail Short and the PRD 0004 A Panel Rail Long are plug-and-play rails made from glass-fiber-reinforced plastic for two or four modules. The power supply for both modules and all the data traffic between the module and the Control Panel are achieved via the plug contacts in the rail.

Functions

PRS 0002 A Panel Rail Short

Due to its hidden position behind the Operating and Display Unit with Panel Controller, the PRS 0002 A Panel Rail Short is intended for mounting of the following modules without operating and display elements:

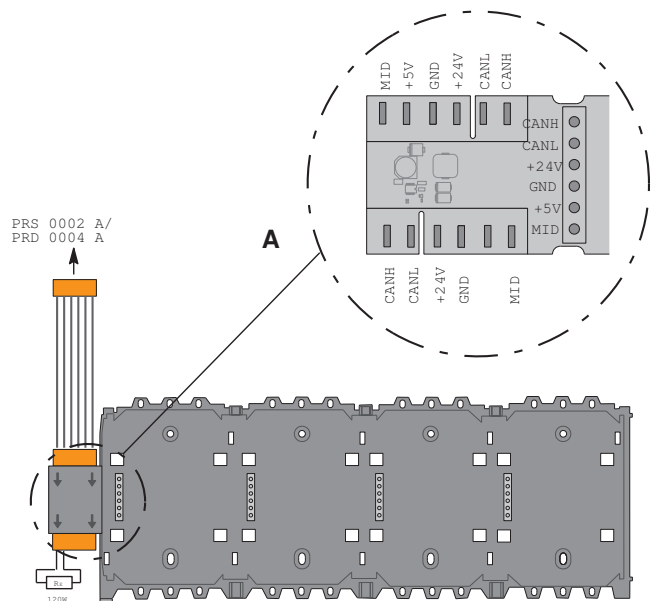
- BCM-0000-B Battery Controller Module
 - IOS 0020 A and IOS 0232 A Communication Modules
- The two modules on the short rail are supplied with voltage (+5 V/GND) directly from the Panel Controller.



PRD 0004 A Panel Rail Long

The PRD 0004 A Panel Rail Long has four module slots.

The panel rails are supplied with voltage via the BCM-0000-B Battery Controller Module and have an integrated DC/DC voltage converter for the 5 V module operating voltage.



Parts Included

Type	Qty.	Components
PRS 0002 A	1	Panel Rail Short, for 2 modules
PRD 0004 A	1	Panel Rail Long, for 4 modules
	1	Data transmission cable

Technical Specifications

Electrical

Input voltage	+5 V DC via MPC +24 V DC via BCM-0000-B
---------------	--

Output voltage

- | | |
|--------------|--|
| • PRS 0002 A | +5 V DC via DC/DC converter
+24 V DC via BCM-0000-B |
| • PRD 0004 A | +5 V DC via BCM-0000-B
+24 V DC via BCM-0000-B |

Mechanics

Material	ABS plastic, Polylac PA-766 (UL94 V-0)
----------	--

Color	Satin finish, anthracite, RAL 7016
-------	------------------------------------

Dimensions

- | | |
|--------------|--|
| • PRS 0002 A | Approx. 146 x 216 x 35 mm
(5.7 x 8.5 x 1.4 inches) |
| • PRD 0004 A | Approx. 146 x 396 x 35 mm
(5.7 x 15.6 x 1.4 inches) |

Weight

- | | |
|--------------|-----------------------------|
| • PRS 0002 A | Approx. 135 g (4.8 ounces) |
| • PRD 0004 A | Approx. 320 g (11.3 ounces) |

Environmental conditions

Permissible operating temperature	-5 °C ... 50 °C (23 °F ... 122 °F)
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Permissible storage temperature	-20 °C ... 60 °C (-4 °F ... 140 °F)
---------------------------------	-------------------------------------

Ordering Information

PRS 0002 A Panel Rail Short for up to 2 modules	PRS 0002 A
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PRD 0004 A Panel Rail Long for up to 4 modules	PRD 0004 A
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1 Panel Controller



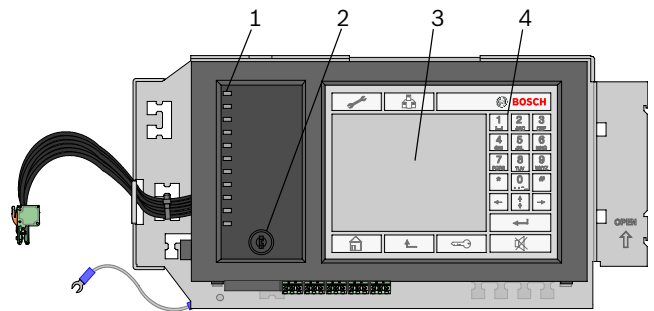
Features

- ▶ Up to 32 Panel Controller or Remote Keypads can be connected to a single network (from August 2009)
- ▶ Ethernet interface for OPC connection
- ▶ Ergonomic design
- ▶ 5.7" touch-screen with 22 fixed keys for the standard entries
- ▶ 11 LEDs for displaying the operating status of the system
- ▶ Simple user guidance thanks to easy menu structures
- ▶ Large number of language variants and country-specific designs

The Panel Controller is the central element of the system, which shows all messages on the display. The complete system is operated via a touch panel above the display. The user-friendly user interface adapts to the various situations. This allows correct operation that is simple, targeted and intuitive.

The FSP-5000-RPS programming software enables adaptation to country-specific circumstances.

System Overview



Pos.	Description
1	Status LEDs
2	Key switch
3	LCD touch display
4	Membrane keys

Functions

Networking

Via CAN interfaces up to 32 Panel Controller and / or Remote Keypads can be connected to a single network. Depending on usage various panel controller and remote keypads can be grouped or defined as network or a local node. Within a group, conditions of panels can be shown which also belong to the defined group. Independent of groups from network nodes conditions of all panels can be displayed and be edited. Local nodes display conditions of the associated panel.

For networking via CAN1 and CAN2 interfaces the following three connection topologies are possible:

- Non-redundant bus via CAN1
- Redundant bus via busses CAN1 and CAN2
- Redundant loop via CAN1 and CAN2

Alarm indication

The indication element is a high-resolution LCD touch-screen (320 x 240 px) with automatically activated backlight. 11 LEDs provide continuous information about the operating status of the control panel and / or system. Additional LED annunciator modules, each containing 16 detection points, can be used to visually display alarms or faults.

Operation / processing of messages

The operation of the panel controller and the processing of all messages is done on the ergonomically-designed control panel using the integrated LCD touch-screen. To that end, there are permanently located keys on the right, bottom, and upper edge of the display as well as variably located virtual keys in the touch-screen area.

There is a key switch underneath the status LEDs; the key switch has two programmable switch positions, e. g.:

- For switching back and forth between day and night operation
- Local alarm ON / OFF (internal / external alarm)

Interfaces

To transmit the desired configuration to the panel controller, an USB interface is available. Additionally, there is an Ethernet interface to add for example the BIS software to the local network.

Saving and printing messages

Messages and events are saved internally and can be viewed on the display at any time. A log printer for printing incoming messages can be connected.

Language variants

The language of the menu can be selected arbitrarily.

Installation/Configuration Notes

In accordance with EN 54 Part 2, panels with more than 512 LSN elements must be connected redundantly. To that end, a second basic housing with a second Panel Controller is used.

Cable Set CRP 0000 A is required for the redundant connection.

Parts Included

Qty. Components

1	Panel Controller, user interface and labeling strips in the relevant language, CD with FSP-5000-RPS programming software
---	--

Technical Specifications

Electrical

Operating voltage	20 V DC ... 30 V DC
Max. current consumption	
• Standby operation	120 mA @ 24 V DC
• In the event of an alarm	205 mA @ 24 V DC
PRS 0002 A Power Supply	
• Operating voltage	5 V DC $\pm$ 4,5 %
• Current consumption	max. 500 mA
Max. cable length when networking	1000 m depending on configuration, topology and cable type

Mechanics

Display element	5,7" LCD display
Operating element	Touch screen
Permanent operating elements	22 keys
Permanent display elements	11 LEDs
Interfaces	CAN1, CAN2, Ethernet, USB, RS232, 2 signal inputs
Dimensions (H x W x D)	190 mm x 404 mm x 60 mm
Active surface (H x W)	127,5 mm x 170 mm
Weight	ca. 2 kg

Environmental conditions

Permissible operating temperature	-5 °C to 50 °C
Permissible storage temperature	-20 °C to 70 °C

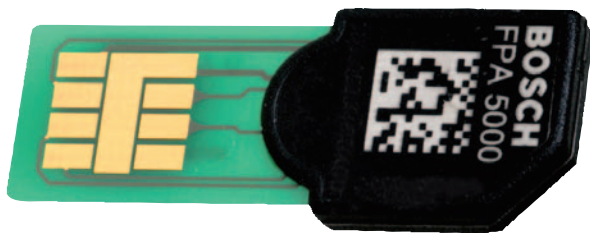
Ordering Information

MPC-0000-B Panel Controller DE	MPC-0000-B
MPC-2000-B Panel Controller ES	MPC-2000-B
MPC-3000-B Panel Controller PL	MPC 3000 B
MPC-4000-B Panel Controller DA	MPC-4000-B
MPC-5000-B Panel Controller FR-NL	MPC-5000-B
MPC-6000-B Panel Controller EL	MPC-6000-B
MPC-7000-B Panel Controller RO-EN	MPC-7000-B
MPC-8000-B Panel Controller RU	MPC-8000-B
MPC-9000-B Panel Controller TR	MPC-9000-B
MPC-1300-B Panel Controller EN	MPC-1300-B
MPC-1400-B Panel Controller PT	MPC-1400-B
MPC-1500-B Panel Controller CS	MPC-1500-B
MPC-1600-B Panel Controller HU	MPC-1600-B
MPC-1700-B Panel Controller IT-DE	MPC-1700-B

Accessories

ADC 0064 A 64 Point Address Card	ADC 0064 A
ADC 0128 A 128 Point Address Card	ADC 0128 A
ADC 0512 A 512 Point Address Card	ADC 0512 A
ADC 1024 A 1024 Point Address Card	ADC 1024 A
ADC-2048-A 2048 Point Address Card	ADC-2048-A
ADC-5000-OPC License Key	ADC-5000-OPC
enables reliable communication between the BIS software and the fire panels FPA-1200 or FPA-5000 or networks	

Address Cards

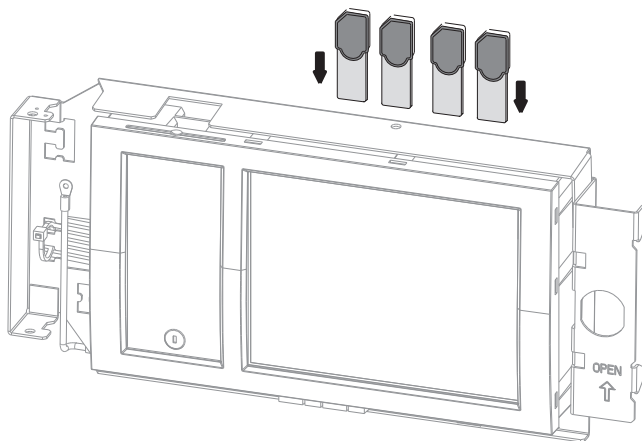


Features

- ▶ Up to 64, 128, 512, 1024 or 2048 addresses on one card
- ▶ Up to four cards in one control panel

A control panel can be equipped with up to four optional Address Cards each containing 64, 128, 512, 1024 or 2048 addresses depending on requirements.

System Overview



Installation/Configuration Notes

- When selecting the address cards, make sure that each module, each supervised module input and each LSN element is allocated to one detection point (one address).
 - Example 1: The CZM 0004 A 4 Zone Conventional Module is allocated to 4 detection points, one per zone.
 - Example 2: The IOP 0008 A Input/Output Module is allocated to up to 8 detection points, one for every single supervised input.

Parts Included

Type	Count	Components
ADC 0064 A	1	SIM card with 64 addresses
ADC 0128 A	1	SIM card with 128 addresses
ADC 0512 A	1	SIM card with 512 addresses
ADC 1024 A	1	SIM card with 1024 addresses
ADC 2048 A	1	SIM card with 2048 addresses

Ordering Information

ADC 0064 A 64 Point Address Card	ADC 0064 A
ADC 0128 A 128 Point Address Card	ADC 0128 A
ADC 0512 A 512 Point Address Card	ADC 0512 A
ADC 1024 A 1024 Point Address Card	ADC 1024 A
ADC-2048-A 2048 Point Address Card	ADC-2048-A

FMR-5000 Remote Keypad



Features

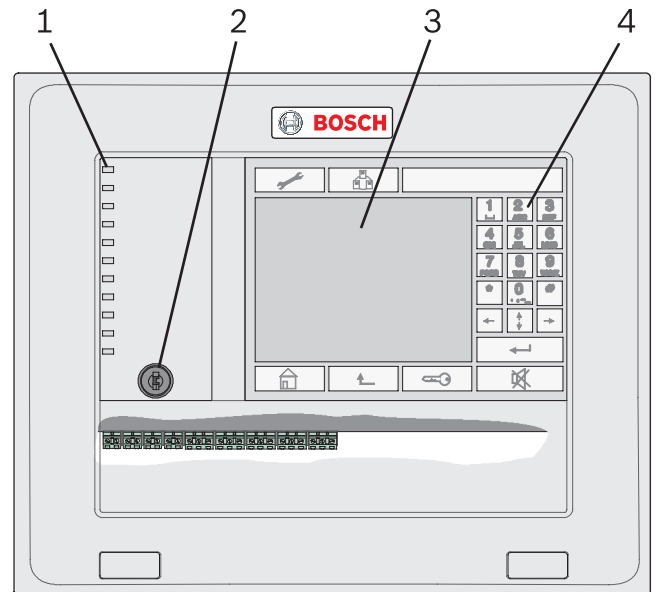
- ▶ Identical user interface like panel controller
- ▶ Convenient solution for remote operation of fire panel
- ▶ Up to 32 Panel Controller or Remote Keypads in a network of FPA-5000 fire panels (by August 2009)
- ▶ Surface and flush mounting possible
- ▶ 5.7" touch-screen with 22 fixed keys for the standard entries
- ▶ 11 LEDs for displaying the operating status of the system
- ▶ Simple user guidance thanks to easy menu structures
- ▶ Large number of language variants and country-specific designs

The FMR-5000 Remote Keypad is a convenient solution for the remote operation of the FPA-1200 Fire Panel, the FPA-5000 Modular Fire Panel or a complete network. The design of the user interface is identical with that of the FPA-1200 and FPA-5000 Panel Controllers and therefore enables an intuitive and quick operation.

In a network of FPA-5000 fire panels, up to 32 Panel Controllers and / or Remote Keypads can be connected.

The FPA-1200 Fire Panel can be networked with up to three FMR-5000 Remote Keypads.

System Overview



Pos.	Description
1	Status LEDs
2	Key switch
3	LCD touch display
4	Membrane keys

Functions

Networking

Via CAN interfaces up to 32 Panel Controllers and / or Remote Keypads can be connected to a single FPA-5000 network. Depending on usage various panel controller and remote keypads can be grouped, defined as network or local node. Within a group, conditions of panels can be shown which also belong to the defined group. Independent of groups, via network nodes conditions of all panels can be displayed and be edited. Local nodes display conditions of the associated panel.

For networking via CAN1 and CAN2 interfaces the following three connection topologies are possible:

- Non-redundant bus via CAN1
- Redundant bus via busses CAN1 and CAN2
- Redundant loop via CAN1 and CAN2

Alarm indication

The indication element is a high-resolution LCD touch-screen (320 x 240 px) with automatically activated backlight. 11 LEDs provide continuous information about the operating status of the control panel and / or system. Additional LED annunciator modules, each containing 16 detection points, can be used to visually display alarms or faults.

Operation / processing of messages

The operation of the panel controller and the processing of all messages is done on the ergonomically-designed control panel using the integrated LCD touch-screen. To that end, there are permanently located keys on the right, bottom, and upper edge of the display as well as variably located virtual keys in the touch-screen area.

There is a key switch underneath the status LEDs; the key switch has two programmable switch positions, e. g.:

- Operation released / not released
- For switching back and forth between day and night operation

Interfaces

The USB interface enables the configuration of the connected fire panel or the complete network.

Saving and printing messages

Messages and events are saved internally and can be viewed on the display at any time. A log printer for printing incoming messages can be connected.

Language variants

The language of the menu can be selected arbitrarily.

Certifications and Approvals

Region	Certification
Poland	CNBOP 2663/2008 FMR-5000

Parts Included

Quant.	Component
1	FMR-5000 Remote Keypad, user interface and labeling strips in language of the country
1	Literature pack

Technical Specifications

Elektrical

Operating voltage	11 V DC to 30 V DC
Max. current consumption	
• Standby	130 mA @ 24 V DC
• Alarm	225 mA @ 24 V DC
Max. resistance	18 Ω
Max. cable length when networking	1000 m depending on configuration, topology and cable type

Mechanical

Display element	5,7" LCD display
Operating element	Touch screen
Fixed operating elements	22 keys
Fixed display elements	11 LEDs
Interfaces	CAN1, CAN2, Ethernet, 100BaseTX, USB, RS232
Dimensions (H x W x T)	280 mm x 340 mm x 87,2 mm
LCD display (H x W)	86 mm x 116 mm
Weight	ca. 3 kg

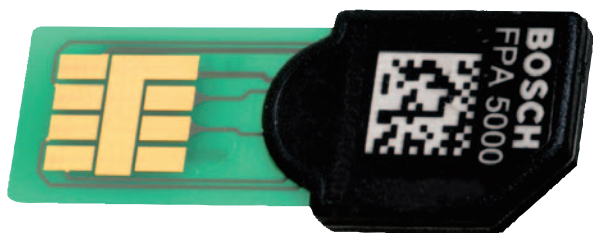
Environmental

Permissible operating temperature	-5 °C to 50 °C
Permissible storage temperature	-20 °C to 70 °C

Ordering Information

FMR-5000-00 Remote Keypad DE	FMR-5000-00
FMR-5000-02 Remote Keypad ES	FMR-5000-02
FMR-5000-03 Remote Keypad PL	FMR-5000-03
FMR-5000-04 Remote Keypad DA	FMR-5000-04
FMR-5000-05 Remote Keypad FR-NL	FMR-5000-05
FMR-5000-06 Remote Keypad EL	FMR-5000-06
FMR-5000-07 Remote Keypad RO-EN	FMR-5000-07
FMR-5000-08 Remote Keypad RU	FMR-5000-08
FMR-5000-09 Remote Keypad TR	FMR-5000-09
FMR-5000-13 Remote Keypad EN	FMR-5000-13
FMR-5000-14 Remote Keypad PT	FMR-5000-14
FMR-5000-15 Remote Keypad CS	FMR-5000-15
FMR-5000-16 Remote Keypad HU	FMR-5000-16
FMR-5000-17 Remote Keypad IT-DE	FMR-5000-17

ADC-5000-OPC License Key

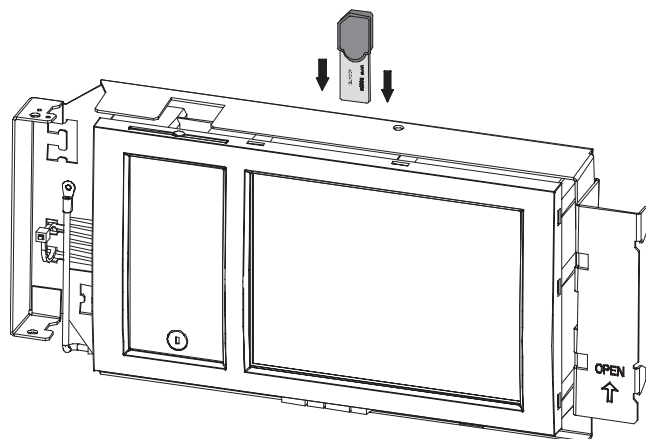


The ADC-5000-OPC License Key enables reliable communication between the BIS software and the fire panels FPA-1200 or FPA-5000 or networks.

For each OPC server only one license key is required. The OPC server can monitor several fire panels or networks.

The OPC server software can be found on the FSP-5000-RPS CD (2.0.49 and higher).

System Overview



Parts Included

Quant.	Component
1	ADC-5000-OPC License Key

Ordering Information

ADC-5000-OPC License Key

enables reliable communication between the BIS software and the fire panels FPA-1200 or FPA-5000 or networks

ADC-5000-OPC

Housings for Frame Installation



Features

- ▶ **Surface-mount or installation in 19" racks**
- ▶ **Modular system**

Housings for Frame Installation are fitted in suitable mounting frames and can be swiveled to the front for installation and service. The mounting frames are screwed to the wall surface and accommodate the pre-cabling.

As an alternative to the surface-mounted version, installation in 19" racks with special installation kits is also possible.

12 V/40 Ah batteries can be used in the frame installation housing.

The modular system makes it easy to extend the facility.

Functions

Housing designs and combinations

Two Housings for Frame Installation are available as the basic unit:

- CPH 0006 A (for 6 modules) or
- MPH 0010 A (for 10 modules)

These housings can accommodate an MPC operating and display unit with panel controller.

Basic housings CPH 0006 A and MPH 0010 A can be extended with the following equipment to meet individual requirements:

- EPH 0012 A Extension housing for an additional 12 modules, frame installation
- Power supply housings PSF 0002 A or PMF 0004 for two or four 12 V/40 Ah batteries respectively and an additional power supply
- USF 0000 A Universal housing small, frame installation.

Mounting frame

All mounting frames have integrated terminal blocks for the mains supply, integrated junction boards, as well as permanently-installed cable ducts to facilitate clear and tidy cable routing.

Mounting frames are available in three sizes:

- FBH 0000 A Mounting frame large
- FMH 0000 A Mounting frame medium
- FSH 0000 A Mounting frame small

The large mounting frame is also available in a design with a distributor rail compliant with EN 500022 (not for use in Germany):

- FHS 0000 A Mounting frame large with distributor rail
- The housings for frame installation require the following mounting frames for surface-mounted version:

Housing type	Mounting frame
CPH 0006 A	FBH 0000 A/FHS 0000 A
MPH 0010 A	FBH 0000 A/FHS 0000 A
EPH 0012 A	FBH 0000 A/FHS 0000 A
PSF 0002 A	FSH 0000 A
PMF 0004 A	FMH 0000 A
USF 0000 A	FSH 0000 A

Mounting plate

An HMP 0003 A Mounting plate can be mounted in large mounting frames FBH 0000 A and FHS 0000 A; this mounting plate can be individually equipped. The mounting bore holes for the components must be drilled on-site by the customer.

Equipment limits

Installation option and maximum number of:

- Modules
- Panel rails (short PRS 0002 A, long: PRD 0004 A)

Housing type	Modules	PRS 0002 A	PRD 0004 A
CPH 0006 A	6	1	1
MPH 0010 A	10	1	2
EPH 0012 A	12	-	3
PSF 0002 A	-	-	-
PMF 0004 A	-	-	-

Installation option and maximum number of:

- MPC operating and display unit with panel controller
- UPS power supplies
- Batteries

Housing type	MPC	UPS power supplies	Batteries
CPH 0006 A	1	1	2 x 40 Ah
MPH 0010 A	1	-	-
EPH 0012 A	-	-	-
PSF 0002 A	-	1	2 x 40 Ah
PMF 0004 A	-	1	4 x 40 Ah

A power supply bracket for a UPS power supply is fitted ex-works in housing units CPH 0006 A, PSF 0002 A and PMF 0004 A.

The USF 0000 A comes with an HMP 0002 A Mounting plate long and can be equipped according to individual requirements.

Rack installation kit for 19" racks

There are special installation kits available for installation in 19" racks or racks:

Housing type	19" Installation kit
CPH 0006 A	FRB 0019 A
MPH 0010 A	FRB 0019 A
EPH 0012 A	FRB 0019 A
PSF 0002 A	FRS 0019 A
PMF 0004 A	FRM 0019 A
USF 0000 A	FRS 0019 A

If 19" Rack Installation Kits are used, mounting frames are not required.

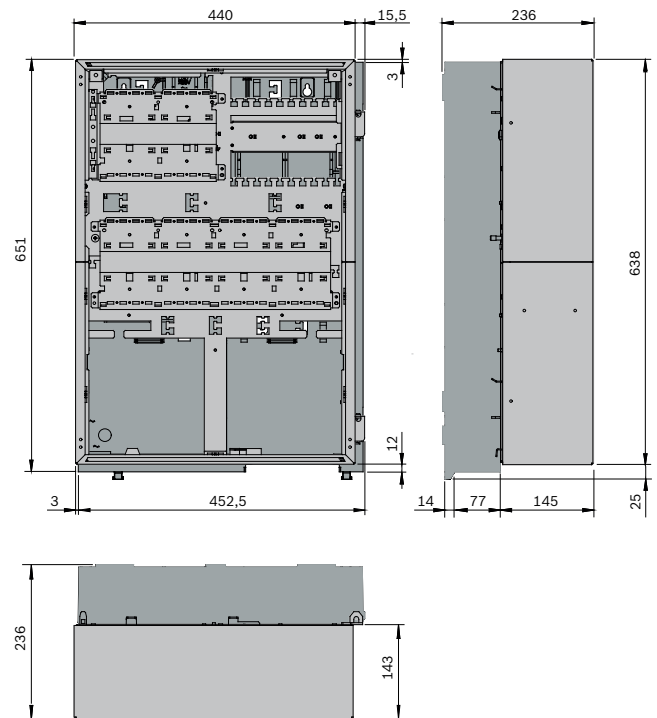
Front doors

Alternatively, the housings can be equipped with transparent front doors made from impact resistant plastic with each door each having a lock on the left or right.

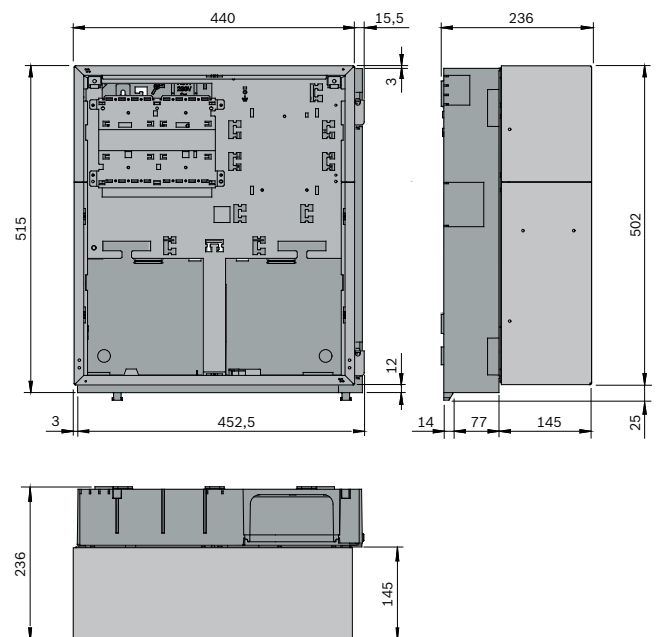
Installation/Configuration Notes

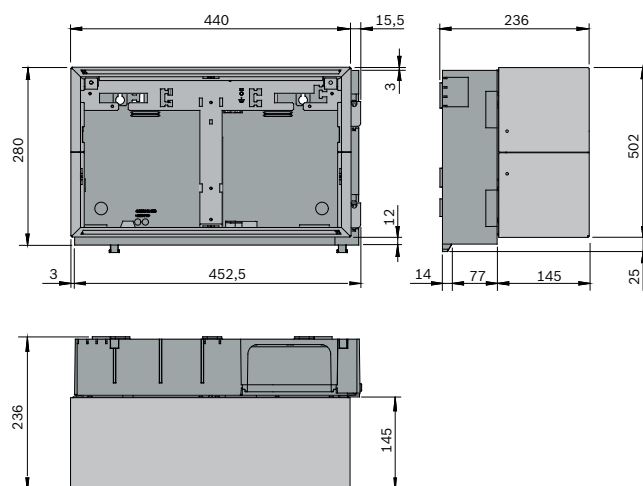
- All mounting frames have an opening for cable bushings; the opening is closed with an insert. Pre-formed cable routes can be created from the insert.
- At least 230 mm free space is required on the right next to the last housing; this space is for swiveling out the attached housing for connection, maintenance, and service.
- The Mounting Frame Large FBH 0000 A and Mounting Frame Small FSH 0000 A are equipped with a earth bar
- For the Mounting Frame Large FBH 0000 A the Earth Bar FPO-5000-EB can be ordered as accessory if necessary.

Installation dimensions of CPH 0006 A, EPH 0012 A and MPH 0010 A:



Installation dimensions of PMF 0002 A, PMF 0004 A and FPP-5000:



Installation dimensions of PSF 0002 A, USF 0000 A and THP 2020 A:**Parts Included**

Type	Qty.	Components
CPH 0006 A	1	Housing, painted sheet steel
	1	Power supply bracket
	1	Cable set for battery connection
MPH 0010 A	1	Housing, painted sheet steel
EPH 0012 A	1	Housing, painted sheet steel
PSF 0002 A	1	Housing, painted sheet steel
	1	Power supply bracket
	1	Cable set for battery connection
PMF 0004 A	1	Housing, painted sheet steel
	1	Power supply bracket
	1	Cable set for battery connection
USF 0000 A	1	Housing, painted sheet steel
	1	HMP 0002 A Mounting Plate Long

Technical Specifications**Mechanics**

Housing material	Sheet steel, painted
Housing color	Slate gray, RAL 7015 Front: anthracite gray, RAL 7016

Dimensions

- CPH 0006 A, MPH 0010 A and EPH 0012 A Approx. 638 x 440 x 236 mm (approx. 25.1 x 17.2 x 9.3 in.)
- PMF 0004 A Approx. 502 x 440 x 236 mm (approx. 19.8 x 17.2 x 9.3 in.)
- PSF 0002 A and USF 0000 A Approx. 267 x 440 x 236 mm (approx. 10.5 x 17.2 x 9.3 in.)

Dimensions, incl. mounting frame

- CPH 0006 A, MPH 0010 A and EPH 0012 A Approx. 638 x 440 x 327 mm (approx. 25.1 x 17.2 x 12.9 in.)
- PMF 0004 A Approx. 502 x 440 x 327 mm (approx. 19.8 x 17.2 x 12.9 in.)
- PSF 0002 A and USF 0000 A Approx. 267 x 440 x 327 mm (approx. 10.5 x 17.2 x 12.9 in.)

Weight

- CPH 0006 A and MPH 0010 A Approx. 12.5 kg (approx. 440 ounces)
- EPH 0012 A Approx. 13.2 kg (approx. 470 ounces)
- PMF 0004 A Approx. 11.4 kg (approx. 400 ounces)
- PSF 0002 A and USF 0000 A Approx. 6.4 kg (approx. 230 ounces)

Ordering Information

CPH 0006 A Modular Panel Housing for 6 Modules, Frame Installation **CPH 0006 A**

MPH 0010 A Modular Panel Housing for 10 Modules, Frame Installation **MPH 0010**

EPH 0012 A Extension Housing for 12 Modules, Frame Installation **EPH 0012 A**

USF 0000 A Universal Housing Small, Frame Installation **USF 0000 A**
comes with mounting plate

PSF 0002 A Power Supply Small, Frame Installation **PSF 0002 A**

PMF 0004 A Power Supply Big, Frame Installation **PMF 0004 A**

Accessories

FBH 0000 A Mounting Frame Large **FBH 0000 A**

FMH 0000 A Mounting Frame Medium **FMH 0000 A**

FSH 0000 A Mounting Frame Small **FSH 0000 A**

FHS 0000 A Mounting Frame Large with Distributor Rail **FHS 0000 A**
as per EN 500022

HMP 0003 A Mounting Plate for Mounting Frame **HMP 0003 A**

RLE 0000 A Junction Board EU **RLE 0000 A**
Comes with 2 D-SUB connectors, 9-pin

FRB 0019 A 19" Rack Installation Kit, Large **FRB 0019 A**
Used for Modular Panel Housings, Frame Installation, CPH 0006 A, MPH 0010 A and EPH 0012 A

FRM 0019 A 19" Rack Installation Kit, Medium **FRM 0019 A**
Used for the PMF 0004 A Power Supply Medium, Frame Installation

FRS 0019 A 19" Rack Installation Kit, Small **FRS 0019 A**
Used for Frame Installation Housings PSF 0002 A and USF 0000 A

FDT 0000 A Front Door Transparent **FDT 0000 A**
Lock right side

FDT 0003 A Front Door Transparent **FDT 0003 A**
Lock left side

FDP 0001 A Dummy Cover Plate **FDP 0001 A**
For available module slots

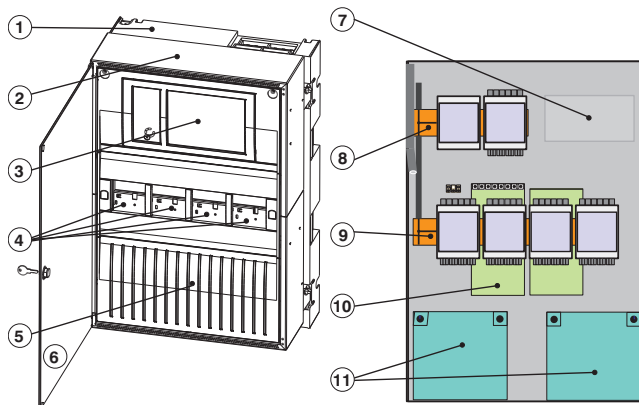
CPH 0006 A Modular Panel Housing for 6 Modules, Frame Installation



The CPH 0006 A can accommodate an MPC Operating and Display Unit with Panel Controller, up to six modules, two 12 V/40 Ah batteries, and a Power Supply. The Power Supply Bracket is fitted ex-works.

The modular configuration means easy extension.

System Overview



Pos.	Description
1	Mounting frame
2	Housing
3	MPC Operating and Display Unit with Panel Controller
4	Modules 3-6
5	Space for 2 batteries
6	Front Door Transparent (optional)
7	Junction Board (optional)
8	Panel Rail for modules 1-2 (behind the MPC)
9	Panel Rail for modules 3-6

Pos. Description

10	Power Supply Bracket for 1 Power Supply
11	2 x 12 V/40 Ah batteries

Installation/Configuration Notes

- The following are required for the CPH 0006 A Modular Panel Housing, Frame Installation:
 - An FBH 0000 A Mounting Frame Large or alternatively
 - An FRB 0019 A Rack Installation Kit for installation in a 19" rack.
- A Power Supply Bracket for a UPS Power Supply is fitted ex-works.
- Can be equipped with:
 - 1 MPC Operating and Display Unit with Panel Controller
 - 1 PRS 0002 A Panel Rail Short, for 2 modules
 - 1 PRD 0004 A Panel Rail Long, for 4 modules
 - 1 UPS Power Supply
 - 2 x 12 V/40 Ah batteries
- Can be extended with:
 - FDT 0000 A Front Door Transparent, lock right side
 - FDT 0003 Front Door Transparent, lock left side

Parts Included

Pos. Description

1	Housing, painted sheet steel
1	Power Supply Bracket for 1 UPS Power Supply
1	Battery pole connection cable for frame installation housing
1	Supplementary package

Ordering Information

CPH 0006 A Modular Panel Housing for 6 Modules, Frame Installation

CPH 0006 A

MPH 0010 A Modular Panel Housing for 10 Modules, Frame Installation



The MPH 0010 A can accommodate an MPC Operating and Display Unit with Panel Controller as well as up to 10 modules.

Batteries and Power Supplies must be installed in a separate Power Supply housing.

The modular configuration means easy extension.

Pos.	Description
7	Front Door Transparent (optional)
8	Junction Board (optional)
9	Modules 1-2 (behind the MPC)
10	Panel Rail for modules 1-2
11	Panel Rail for modules 3-6
12	Panel Rail for modules 7-10
13	2 x 12 V/40 Ah batteries (in a separate Power Supply housing)

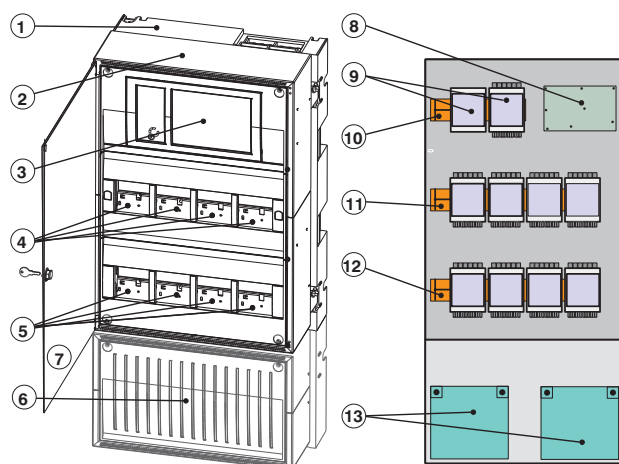
Installation/Configuration Notes

- The following are required for the MPH 0010 A Modular Panel Housing, Frame Installation:
 - An FBH 0000 A Mounting Frame Large or alternatively
 - An FRB 0019 A Rack Installation Kit for installation in a 19" rack.
- Can be equipped with:
 - 1 MPC Operating and Display Unit with Panel Controller
 - 1 PRS 0002 A Panel Rail Short, for 2 modules
 - 2 PRD 0004 A Panel Rails Long, each for 4 modules
- Can be extended with:
 - FDT 0000 A Front Door Transparent, lock right side
 - FDT 0003 Front Door Transparent, lock left side

Parts Included

Pos.	Description
1	Housing

System Overview



Pos.	Description
1	Mounting Frame
2	Housing
3	MPC Operating and Display Unit with Panel Controller
4	Modules 3-6
5	Modules 7-10
6	Power Supply (in a separate housing)

Ordering Information

MPH 0010 A Modular Panel Housing for
10 Modules, Frame Installation

MPH 0010

EPH 0012 A Extension Housing for 12 Modules, Frame Installation



- An FRB 0019 A Rack Installation Kit for installation in a 19" rack.
- Can be equipped with:
 - 3 PRD 0004 A Panel Rails Long, each for 4 modules
- Can be extended with:
 - FDT 0000 A Front Door Transparent, lock right side
 - FDT 0003 A Front Door Transparent, lock left side

Parts Included

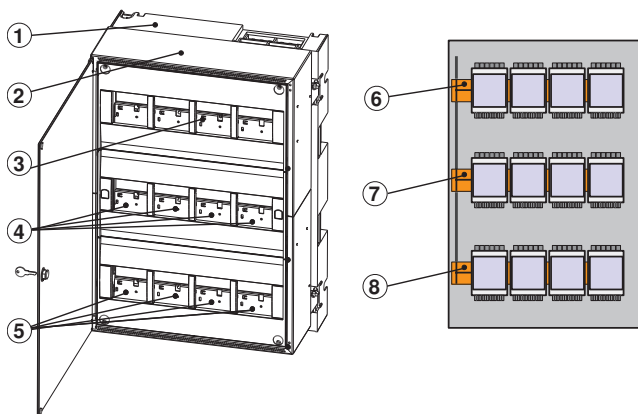
Pos.	Description
1	Housing
1	CAN bus connection cable, cable length 190 cm

Ordering Information

EPH 0012 A Extension Housing for
12 Modules, Frame Installation

EPH 0012 A

System Overview



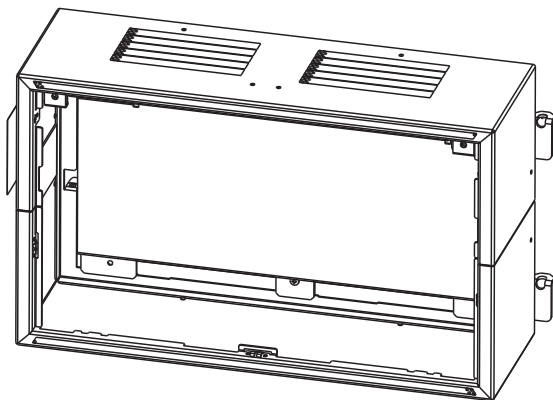
Pos. Description

- | | |
|---|-----------------------------|
| 1 | Mounting Frame |
| 2 | Housing |
| 3 | Modules 1-4 |
| 4 | Modules 5-8 |
| 5 | Modules 9-12 |
| 6 | Panel Rail for modules 1-4 |
| 7 | Panel Rail for modules 5-8 |
| 8 | Panel Rail for modules 9-12 |
- The transparent front door is optional.

Installation/Configuration Notes

- The following are required for the EPH 0012 A Extension Housing, Frame Installation:
 - An FBH 0000 A Mounting Frame Large or alternatively

USF 0000 A Universal Housing Small, Frame Installation



The USF 0000 A Universal Housing Small, Frame Installation has an HMP 0002 A Mounting Plate that is fitted ex-works; the Mounting Plate can be equipped according to individual requirements. The Mounting Plate does not have any mounting bore holes.

Installation/Configuration Notes

- The following are required for the USF 0000 A Universal Housing Small, Frame Installation:
 - An FSH 0000 A Mounting Frame Small or alternatively
 - An FRS 0019 A Rack Installation Kit for installation in a 19" rack.

Parts Included

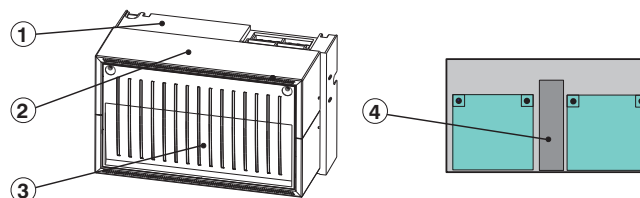
Pos.	Description
1	Housing
1	HMP 0003 A Mounting Plate for Frame Installation

Ordering Information

USF 0000 A Universal Housing Small, Frame Installation **USF 0000 A**
comes with mounting plate

PSF 0002 A Power Supply Small, Frame Installation

System Overview



Pos. Description

- | | |
|---|---|
| 1 | Mounting Frame |
| 2 | Housing |
| 3 | Space for 2 x 12 V/40 Ah batteries and 1 UPS Power Supply |
| 4 | Power Supply Bracket for 1 UPS Power Supply |

Installation/Configuration Notes

- The following are required for the PSF 0002 A Power Supply Small, Frame Installation:
 - An FSH 0000 A Mounting Frame Small or alternatively
 - An FRS 0019 A Rack Installation Kit for installation in a 19" rack.

Parts Included

Pos.	Description
1	Housing
1	Power Supply Bracket for 1 UPS Power Supply
1	Battery pole connection cable for frame installation housing
1	Supplementary package

Ordering Information

PSF 0002 A Power Supply Small, Frame Installation

PSF 0002 A

PMF 0004 A Power Supply Big, Frame Installation



Parts Included

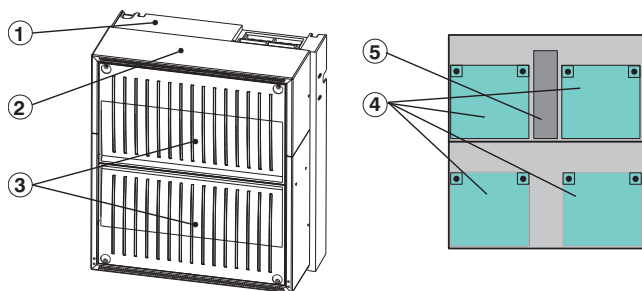
Pos.	Description
1	Housing
1	Power Supply Bracket incl. cable set for 1 UPS Power Supply
1	Battery pole connection cable for frame installation housing
1	Supplementary package

Ordering Information

**PMF 0004 A Power Supply Big, Frame
Installation**

PMF 0004 A

System Overview



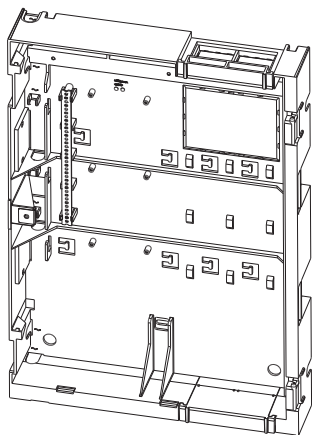
Pos. Description

1	Mounting Frame
2	Housing
3	Space for 4 x 12 V/40 Ah batteries and 1 UPS Power Supply
4	4 x 12 V/40 Ah batteries
5	Power Supply Bracket for 1 UPS Power Supply

Installation/Configuration Notes

- The following are required for the PMF 0004 A Power Supply Small, Frame Installation:
 - An FMH 0000 A Mounting Frame Medium or alternatively
 - An FRM 0019 A Rack Installation Kit for installation in a 19" rack.

FBH 0000 A Mounting Frame Large



The large mounting frame is required for the frame installation housings:

- CPH 0006 A
- MPH 0010 A
- EPH 0012 A

Parts Included

Pos.	Description
1	Mounting Frame, Large
1	FPO-5000-EB Earth Bar

Technical Specifications

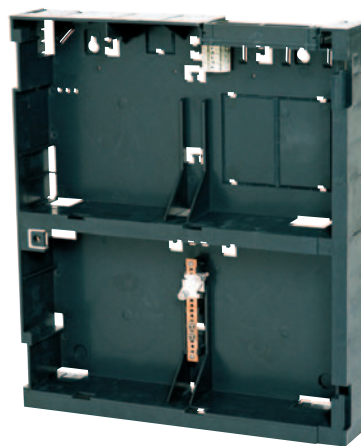
Mechanics

Material	Plastic, ABS
Color	Anthracite gray, RAL 7016
Dimensions	Approx. 638 x 450 x 87 mm (approx. 25.1 x 17.7 x 3.4 in.)

Ordering Information

FBH 0000 A Mounting Frame Large	FBH 0000 A
--	-------------------

FMH 0000 A Mounting Frame Medium



The medium mounting frame is required for the PMF 0004 A Power Supply Big, Frame Installation.

Technical Specifications

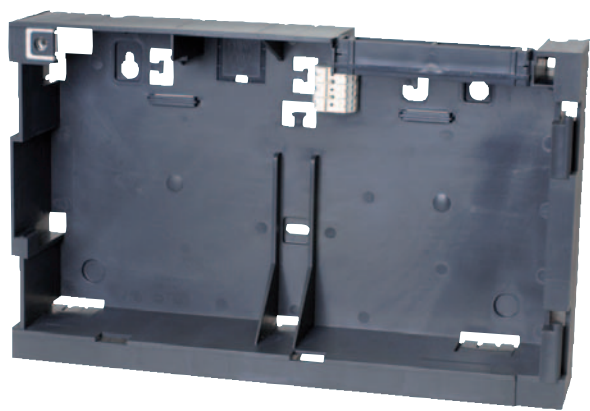
Mechanics

Material	Plastic, ABS
Color	Anthracite gray, RAL 7016
Dimensions	Approx. 502 x 450 x 87 mm (approx. 19.8 x 17.7 x 3.4 in.)

Ordering Information

FMH 0000 A Mounting Frame Medium	FMH 0000 A
Accessories	
FPO-5000-EB Earth Bar For housing earth connection	FPO-5000-EB

FSH 0000 A Mounting Frame Small



The small mounting frame is required for the frame installation housings:

- PSF 0002 A Power Supply, Frame Installation
- USF 0000 A Universal Housing Small, Frame Installation.

Technical Specifications

Mechanics

Material	Plastic, ABS
Color	Anthracite gray, RAL 7016
Dimensions	Approx. 267 x 450 x 87 mm (approx. 10.5 x 17.7 x 3.4 in.)

Ordering Information

FSH 0000 A Mounting Frame Small	FSH 0000 A
--	-------------------

FHS 0000 A Mounting Frame Large with Distributor Rail



The large mounting frame is equipped with a distributor rail in accordance with EN 500022 for attaching series terminals.

The large mounting frame can be used as an alternative to FBH 0000 A for the following frame installation housings:

- CPH 0006 A
- MPH 0010 A
- EPH 0012 A.

Parts Included

Pos.	Description
1	Mounting Frame Large with Distributor Rail
1	FPO-5000-EB Earth Bar

Technical Specifications

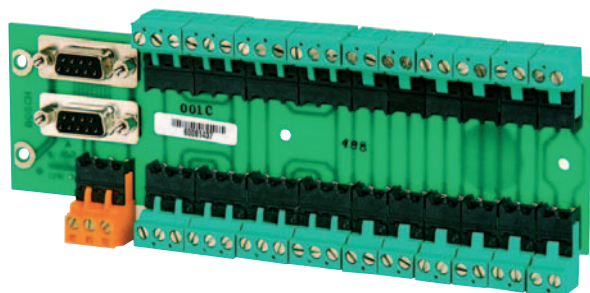
Mechanics

Material	Plastic, ABS
Color	Anthracite gray, RAL 7016
Dimensions	Approx. 638 x 450 x 87 mm (approx. 25.1 x 17.7 x 3.4 in.)

Ordering Information

FHS 0000 A Mounting Frame Large with Distributor Rail as per EN 500022	FHS 0000 A
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RLE 0000 A Junction Board EU



The RLE 0000 A Junction Board can be used for the following applications:

- Possibility for cable running
- Possibility to disconnect cables for technical measurements
- Possibility to connect a laptop for parameter setting of the system

The Junction Board can also be installed in the frame installation housing to facilitate connection according to country-specific conditions (e. g. based on British standards).

Ordering Information

RLE 0000 A Junction Board EU

Comes with 2 D-SUB connectors, 9-pin

RLE 0000 A

HMP 0003 A Mounting Plate for Mounting Frame



The HMP 0003 A Mounting Plate can be mounted in large mounting frames FBH 0000 A and FHS 0000 A; this mounting plate can be individually equipped. The mounting bore holes for the components must be drilled on-site by the customer.

Technical Specifications

Mechanics

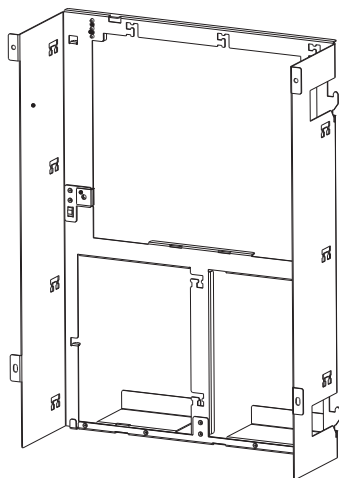
Material	Sheet steel
Dimensions	Approx. 282 x 130 x 7.5 mm (approx. 11.1 x 5.1 x 0.3 in.)

Ordering Information

HMP 0003 A Mounting Plate for Mounting Frame

HMP 0003 A

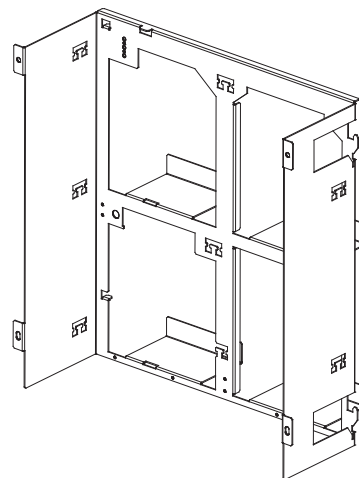
FRB 0019 A 19" Rack Installation Kit, Large



Ordering Information

FRB 0019 A 19" Rack Installation Kit, Large **FRB 0019 A**
Used for Modular Panel Housings, Frame Installation, CPH 0006 A, MPH 0010 A and EPH 0012 A

FRM 0019 A 19" Rack Installation Kit, Medium

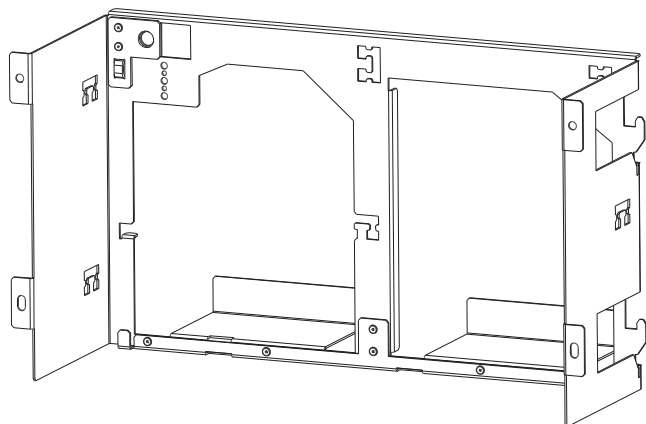


Ordering Information

FRM 0019 A 19" Rack Installation Kit, Medium **FRM 0019 A**
Used for the PMF 0004 A Power Supply Medium, Frame Installation

1

FRS 0019 A 19" Rack Installation Kit, Small



Ordering Information

FRS 0019 A 19" Rack Installation Kit, Small FRS 0019 A

Used for Frame Installation Housings

PSF 0002 A and USF 0000 A

FDT 0000 A Front Door Transparent

Technical Specifications

Mechanics

Material	Polycarbonate
Color	Transparent
Dimensions	Approx. 605 x 430 x 10 mm (approx. 23.8 x 16.9 x 0.39 in.)

Ordering Information

FDT 0000 A Front Door Transparent

Lock right side

FDT 0000 A

FDT 0003 A Front Door Transparent

Technical Specifications

Mechanics

Material	Polycarbonate
Color	Transparent
Dimensions	Approx. 605 x 430 x 10 mm (approx. 23.8 x 16.9 x 0.39 in.)

Ordering Information

FDT 0003 A Front Door Transparent	FDT 0003 A
Lock left side	

1 Housings for Wall Mounting



Features

- ▶ **Surface-mount, flush-mount or installation in 19" racks**
- ▶ **Modular system**

Wall-mount housings are available in various designs for all conceivable applications. They can be installed as surface-mounted or flush-mounted variants, with variable installation depths up to wall-flush, as well as in 19" racks. The modular system makes it easy to extend the facility.

Functions

Housing designs and combinations

Two wall-mount housings are available as the basic unit:

- HCP 0006 A (for 6 modules) or
- HBC 0010 A (for 10 modules)

These housings can accommodate an MPC Operating and Display Unit with Panel Controller as the central element of the control panel.

Basic housings HCP 0006 A and HBC 0010 A can be extended with the following equipment to meet individual requirements:

- HBE 0012 A Modular Extension Housing for an additional 12 modules, 2 x 12 V/28 Ah batteries
- PSS 0002 A or PSB 0004 A Power Supply Housings for additional power supplies and 12 V/28 Ah batteries
- DIB 0000 A Distribution Box, Frame Installation.

Equipment limits

Installation option and maximum number of:

- Modules
- Panel rails (small: PRS 0002 A, large: PRD 0004 A)

Housing type	Modules	PRS 0002 A	PRD 0004 A
HCP 0006 A	6	1	1
HBC 0010 A	10	1	2
HBE 0012 A	12	-	3
PSS 0002 A	-	-	-

Housing type	Modules	PRS 0002 A	PRD 0004 A
PSB 0004 A	-	-	-
DIB 0000 A	-	-	-

Installation option and maximum number of:

- MPC Operating and Display Unit with Panel Controller
- UPS Power Supplies
- Batteries

Housing type	MPC	Power supplies	Batteries
HCP 0006 A	1	1	2 x 28 Ah
HBC 0010 A	1	1	2 x 28 Ah
HBE 0012 A	-	1	2 x 28 Ah
PSS 0002 A	-	1	2 x 28 Ah
PSB 0004 A	-	1	4 x 28 Ah
DIB 0000 A	-	-	-

The DIB 0000 A Distribution Box, Frame Installation, is equipped with a distributor rail and is used to install terminal strips.

Installation types

Various types of installation are possible:

- Surface-mounted
- Flush-mounted with variable installation depths (up to wall-flush)
- Installation in 19" racks.

With surface-mounted installation, the housings are mounted directly on the wall. All other types of installation require special mounting kits.

The housings have pre-formed cable bushings.

Only the 12 V/28 Ah batteries can be integrated in the wall-mount housing.

Installation in 19" racks.

Each wall-mount housing requires an FRK 0019 A Installation kit.

Mounting plates

Mounting plates are available for wall-mount housings in the following designs:

- HMP 0001 A Mounting Plate Short
- HMP 0002 A Mounting Plate Long

The plates can be equipped to meet individual requirements.

The mounting bore holes for the components must be drilled on-site by the customer.

Front doors

The housings can also be equipped with transparent front doors. The housings are made from impact-resistant plastic and are available in two sizes with each having a lock on the left or right.

Installation/Configuration Notes

- All housings have pre-formed cable bushings with the three most common diameters (22 mm, 35 mm, 44 mm).
- The openings are designed for metal pipes with fittings.

- The pre-formed openings for the cable route must be created carefully.
- In order to flush-mount the wall-mount housing, the carrier sheet is first mounted in the recess. The housing is screwed onto the carrier sheet. The sheet acts as a cover for the rear of the housing and also forms part of the corresponding installation kits.

Parts Included

Qty.	Components
1	Housing, painted sheet steel

Technical Specifications

Mechanics

Housing material	Sheet steel, painted
Housing color	Slate gray, RAL 7015 Front: anthracite gray, RAL 7016

Dimensions

• HCP 0006 A	Approx. 638 x 440 x 149 mm (approx. 25.1 x 17.2 x 5.87 in.)
• HBC0010A and HBE0012A	Approx. 840 x 440 x 149 mm (approx. 33.1 x 17.2 x 5.87 in.)
• PSB 0004 A	Approx. 502 x 440 x 149 mm (approx. 19.8 x 17.2 x 5.87 in.)
• PSS 0002 A and DIB 0000 A	Approx. 267 x 440 x 149 mm (approx. 10.5 x 17.2 x 5.87 in.)

Weight

• HCP 0006 A	Approx. 12.5 kg (approx. 440 ounces)
• HBC0010A and HBE0012A	Approx. 17 kg (approx. 600 ounces)
• PSB 0004 A	Approx. 11.4 kg (approx. 400 ounces)
• PSS 0002 A and DIB 0000 A	Approx. 6.4 kg (approx. 230 ounces)

Ordering Information

HCP 0006 A Modular Panel Housing for 6 Modules	HCP 0006 A
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HBC 0010 A Modular Panel Housing for 10 Modules	HBC 0010 A
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HBE 0012 A Modular Extension Housing for 12 Modules	HBE 0012 A
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PSS 0002 A Power Supply Small	PSS 0002 A
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PSB 0004 A Power Supply	PSB 0004 A
--------------------------------	-------------------

DIB 0000 A Distribution Box	DIB 0000 A
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Accessories

RLU 0000 A Junction Board Comes with 2 D-SUB connectors, 9-pin	RLU 0000 A
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HMP 0001 A Mounting Plate Short	HMP 0001 A
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HMP 0002 A Mounting Plate Long	HMP 0002 A
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Ordering Information

FRK 0019 A 19" Rack Installation Kit For wall-mount housing	FRK 0019 A
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FDT 0000 A Front Door Transparent Lock right side	FDT 0000 A
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FDT 0003 A Front Door Transparent Lock left side	FDT 0003 A
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FDT 0001 A Large Front Door Transparent Lock right side	FDT 0001 A
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FDT 0002 A Large Front Door Transparent Lock left side	FDT 0002 A
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HCP 0006 A Modular Panel Housing for 6 Modules



The HCP 0006 A can accommodate an MPC Operating and Display Unit with Panel Controller, up to six modules, as well as batteries and Power Supplies.

The modular configuration means easy extension.

Installation/Configuration Notes

- Can be equipped with:
 - 1 MPC Operating and Display Unit with Panel Controller
 - 1 PRS 0002 A Panel Rail Short, for 2 modules
 - 1 PRD 0004 A Panel Rail Long, for 4 modules
 - HPD 0000 A Power Distributor
 - 1 FPO-5000-PSB-CH Power Supply Bracket for panel housings
 - 2 x 12 V/28 Ah batteries
- Can be extended with:
 - FDT 0000 A Front Door Transparent, lock right side
 - FDT 0003 Front Door Transparent, lock left side

Parts Included

Pos. Description

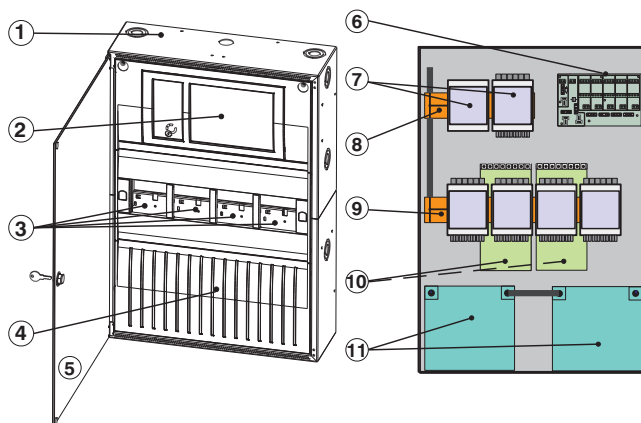
1 Housing

Ordering Information

HCP 0006 A Modular Panel Housing for 6 Modules

HCP 0006 A

System Overview



Pos. Description

- | | |
|----|---|
| 1 | Housing |
| 2 | MPC Operating and Display Unit |
| 3 | Modules 3-6 |
| 4 | Space for 2 batteries |
| 5 | Front Door Transparent (optional) |
| 6 | HPD 0000 A Power Distributor (optional) |
| 7 | Modules 1-2 |
| 8 | Panel Rail for modules 1-2 |
| 9 | Panel Rail for modules 3-6 |
| 10 | Power Supply |
| 11 | 2 x 12 V/28 Ah batteries |

HBC 0010 A Modular Panel Housing for 10 Modules



The HBC 0010 A can accommodate an MPC Operating and Display Unit with Panel Controller, up to ten modules, as well as batteries and Power Supplies.

The modular configuration means easy extension.

Pos. Description

11	Panel Rail for modules 7-10
12	Power Supply
13	2 x 12 V/28 Ah batteries

Installation/Configuration Notes

- Can be equipped with:
 - 1 MPC Operating and Display Unit with Panel Controller
 - 1 PRS 0002 A Panel Rail Short, for 2 modules
 - 2 PRD 0004 A Panel Rails Long, each for 4 modules
 - HPD 0000 A Power Distributor
 - 1 FPO-5000-PSB-CH Power Supply Bracket for Panel Housings
 - 2 x 12 V/28 Ah batteries
- Can be extended with:
 - FDT 0001 A Large Front Door Transparent, lock right side
 - FDT 0002 A Large Front Door Transparent, lock left side

Parts Included

Pos. Description

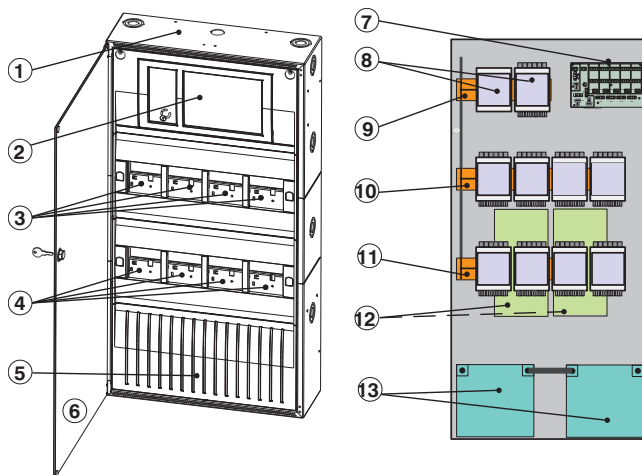
1	Housing
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Ordering Information

HBC 0010 A Modular Panel Housing for 10 Modules

HBC 0010 A

System Overview



Pos. Description

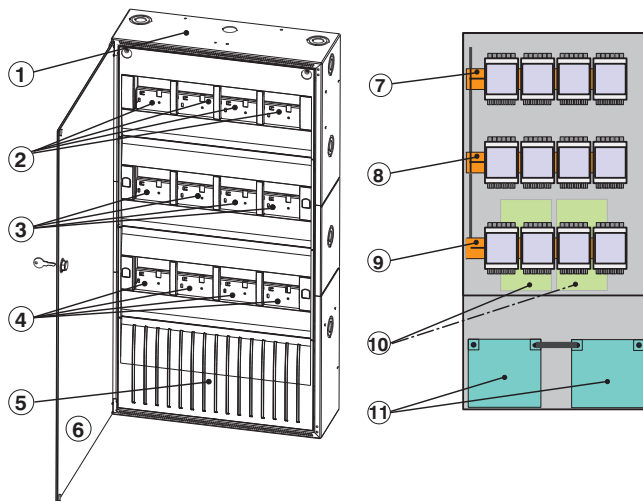
1	Housing
2	MPC Operating and Display Unit
3	Modules 3-6
4	Modules 7-10
5	Space for 2 batteries
6	Front Door Transparent (optional)
7	HPD 0000 A Power Distributor (optional)
8	Modules 1-2
9	Panel Rail for modules 1-2
10	Panel Rail for modules 3-6

HBE 0012 A Modular Extension Housing for 12 Modules



The HBE 0012 A can accommodate up to 12 modules as well as batteries and Power Supplies.

System Overview



Pos. Description

- | | |
|---|--|
| 1 | Housing |
| 2 | Modules 1-4 |
| 3 | Modules 5-8 |
| 4 | Modules 9-12 |
| 5 | Space for 2 batteries or 1 Power Distributor |
| 6 | Front Door Transparent (optional) |
| 7 | Panel Rail for modules 1-4 |
| 8 | Panel Rail for modules 5-8 |
| 9 | Panel Rail for modules 9-12 |

Pos. Description

- | | |
|----|--|
| 10 | Power Supply |
| 11 | 2 x 12 V/28 Ah batteries or alternatively
1 Power Distributor |

Installation/Configuration Notes

- Can be equipped with:
 - 3 PRD 0004 A Panel Rails Long, each for 4 modules
 - 1 FPO-5000-PSB-CH Power Supply Bracket for Panel Housings
 - 2 x 12 V/28 Ah batteries or alternatively 1 HPD 0000 A Power Distributor
- Can be extended with:
 - FDT 0001 A Large Front Door Transparent, lock right side
 - FDT 0002 A Large Front Door Transparent, lock left side

Parts Included

Pos. Description

- | | |
|---|---|
| 1 | Housing |
| 1 | CAN bus connection cable, cable length 190 cm |

Ordering Information

HBE 0012 A Modular Extension Housing for 12 Modules **HBE 0012 A**

PSS 0002 A Power Supply Small

Ordering Information

PSS 0002 A Power Supply Small

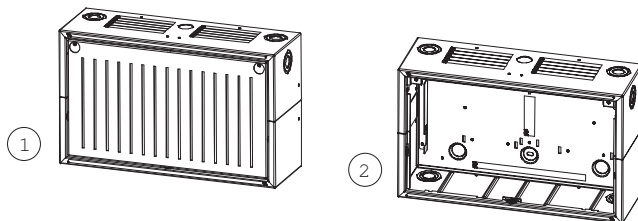
PSS 0002 A

1



The PSS 0002 A is a Power Supply housing that can be flexibly equipped.

System Overview



Pos. Description

- | | |
|---|-----------------------------|
| 1 | Housing |
| 2 | Housing without front panel |

Installation/Configuration Notes

- Equipment variants:
 - 2 x 12 V/28 Ah batteries and 1 Power Supply FPO-5000-PSB1 between the batteries
 - 1 HMP 0002 A Mounting Plate Long for individual equipping.

Note With the HMP 0002 A Mounting Plate, the mounting bore holes for the components must be drilled on-site by the customer.

Parts Included

Pos. Description

- | | |
|---|---------|
| 1 | Housing |
|---|---------|

PSB 0004 A Power Supply



- 2 x 12 V/28 Ah batteries and 1 FPO-5000-PSB1 Power Supply Bracket and 1 HMP 0001 A Mounting Plate Short

Note With the HMP 0001 A Mounting Plate, the mounting bore holes for the components must be drilled on-site by the customer.

Parts Included

Pos.	Description
1	Housing

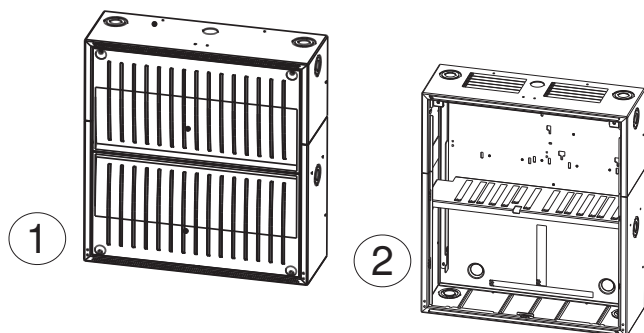
Ordering Information

PSB 0004 A Power Supply

PSB 0004 A

The PSB 0004 A Power Supply housing has enough space for up to four 12 V/28 Ah batteries. Alternatively, a Power Supply Bracket and a Power Distributor and/or a Power Supply Bracket and a Mounting Plate can be installed instead of the two upper batteries.

System Overview



Pos. Description

- | | |
|---|-----------------------------|
| 1 | Housing |
| 2 | Housing without front panel |

Installation/Configuration Notes

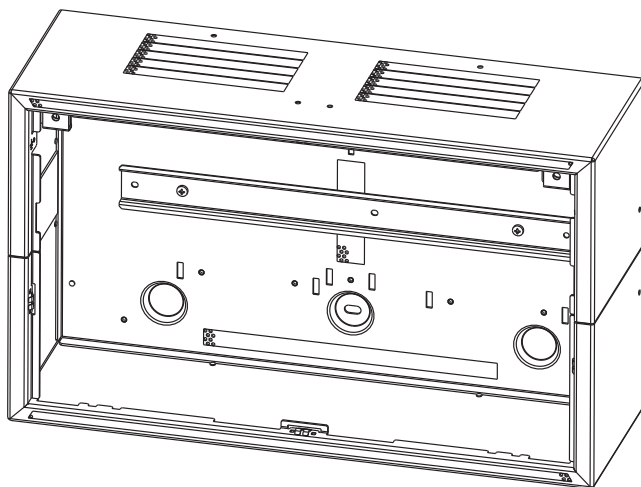
- Equipment variants:
 - 4 x 12 V/28 Ah batteries and 1 FPO-5000-PSB1 Power Supply Bracket
 - 2 x 12 V/28 Ah batteries and 1 FPO-5000-PSB1 Power Supply Bracket
 - 2 x 12 V/28 Ah batteries and 1 FPO-5000-PSB1 Power Supply Bracket and 1 HPD 0000 A Power Distributor

DIB 0000 A Distribution Box



The DIB 0000 A Distribution Box is equipped with a distributor rail compliant with EN 500022 and is used to install series terminals.

System Overview



Parts Included

Pos. Description

- | | |
|---|--|
| 1 | Housing with distributor rail installed compliant with EN 500022 |
|---|--|

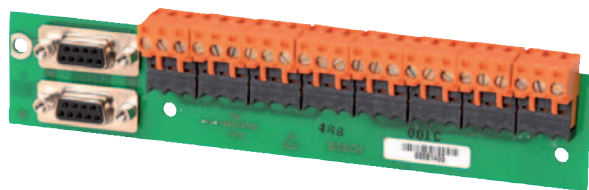
Ordering Information

DIB 0000 A Distribution Box

DIB 0000 A

1

RLU 0000 A Junction Board



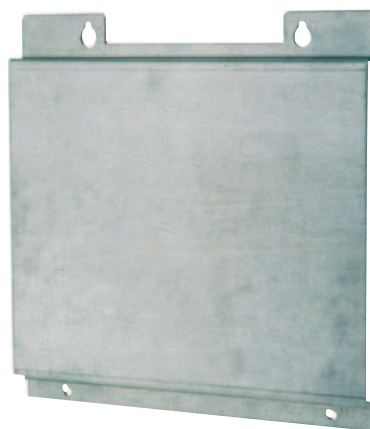
Ordering Information

RLU 0000 A Junction Board

Comes with 2 D-SUB connectors, 9-pin

RLU 0000 A

HMP 0001 A Mounting Plate Short



The HMP 0001 A Mounting Plate Short can be installed in the PSB 0004 A Power Supply Big and can be individually equipped to meet requirements. The mounting bore holes for the components must be drilled on-site by the customer.

Technical Specifications

Mechanics

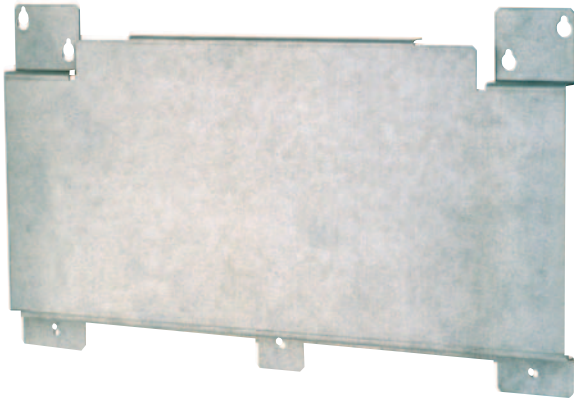
Material	Sheet steel
Dimensions	Approx. 200 x 196 x 14 mm (approx. 7.9 x 7.7 x 0.55 in.)

Ordering Information

HMP 0001 A Mounting Plate Short

HMP 0001 A

HMP 0002 A Mounting Plate Long



The HMP 0002 A Mounting Plate Long can be installed in the PSS 0002 A Power Supply housing and can be individually equipped to meet requirements. The mounting bore holes for the components must be drilled on-site by the customer.

Technical Specifications

Mechanics

Material	Sheet steel
Dimensions	Approx. 394 x 222 x 14 mm approx. 15.5 x 8.4 x 0.55 in.)

Ordering Information

HMP 0002 A Mounting Plate Long	HMP 0002 A
--------------------------------	------------

FRK 0019 A 19" Rack Installation Kit

1

Ordering Information

FRK 0019 A 19" Rack Installation Kit For wall-mount housing	FRK 0019 A
--	------------

FDT 0000 A Front Door Transparent

Technical Specifications

Mechanics

Material	Polycarbonate
Color	Transparent
Dimensions	Approx. 605 x 430 x 10 mm (approx. 23.8 x 16.9 x 0.39 in.)

Ordering Information

FDT 0000 A Front Door Transparent	FDT 0000 A
Lock right side	

FDT 0001 A Large Front Door Transparent

Technical Specifications

Mechanics

Material	Polycarbonate
Color	Transparent
Dimensions	Approx. 807 x 430 x 10 mm (approx. 31.8 x 16.9 x 0.39 in.)

Ordering Information

FDT 0001 A Large Front Door Transparent	FDT 0001 A
Lock right side	

FDT 0002 A Large Front Door Transparent

Technical Specifications

Mechanics

Material	Polycarbonate
Color	Transparent
Dimensions	Approx. 807 x 430 x 10 mm (approx. 31.8 x 16.9 x 0.39 in.)

Ordering Information

FDT 0002 A Large Front Door Transparent	FDT 0002 A
Lock left side	

FDT 0003 A Front Door Transparent

Technical Specifications

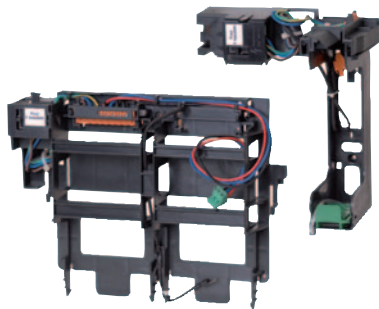
Mechanics

Material	Polycarbonate
Color	Transparent
Dimensions	Approx. 605 x 430 x 10 mm (approx. 23.8 x 16.9 x 0.39 in.)

Ordering Information

FDT 0003 A Front Door Transparent	FDT 0003 A
Lock left side	

Power Supply Brackets



The Power Supply Brackets are installed in wall-mount housings and accommodate one Power Supply. The Power Supply Unit is immediately ready for operation via the pre-wired plug connection.

The brackets are made of glass-fiber-reinforced plastic and have a thermal sensor as well as a T10A mains fuse.

Installation/Configuration Notes

FPO-5000-PSB-CH Power Supply Bracket

- For the Modular Panel Housings:
 - HCP 0006 A
 - HBC 0010 A
 - HBE 0012 A

FPO-5000-PSB1 Power Supply Bracket

- For Power Supply Housing, wall mounting:
 - PSS 0002 A
 - PSB 0004 A
- The Power Supply Bracket is mounted in the middle right between a pair of batteries.

Overview

Housing	FPO-5000-PSB-CH	FPO-5000-PSB1
HCP 0006 A	x	-
HBC 0010 A	x	-
HBE 0012 A	x	-
PSS 0002 A	-	x
PSB 0004 A	-	x

x = Installation possible

- = Installation not possible

Parts Included

Qty.	Components
1	Power Supply Bracket

Technical Specifications

Mechanics

Material	PA6 Plastic, Grilon BS V0 (UL94 V-0)
Color	Satin finish, anthracite, RAL 7016

Weight

- FPO-5000-PSB-CH Approx. 550 g (19.4 ounces)
- FPO-5000-PSB1 Approx. 395 g (13.9 ounces)

Environmental conditions

Permissible operating temperature	-5 °C ... 50 °C (23 °F ... 122 °F)
Permissible storage temperature	-20 °C ... 60 °C (-4 °F...140 °F)

Ordering Information

FPO-5000-PSB1 Power Supply Bracket
for PSS 0002 A and PSB 0004 A

FPO-5000-PSB1

FPO-5000-PSB-CH Power Supply Bracket
for HCP 0006 A, HBC 0010 A and HBE 0012 A

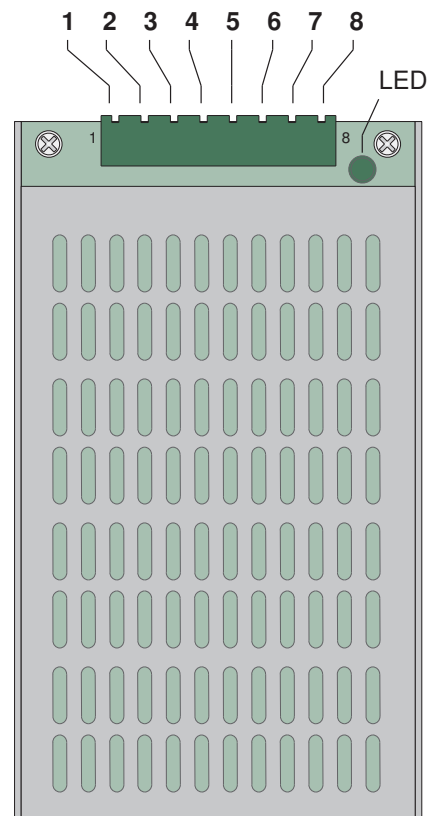
FPO-5000-PSB-CH

UPS 2416 A Universal Power Supply



The UPS Power Supply Unit is a plug-and-play power supply for the entire power supply to the control panel.

System Overview



Pos.	Description	Connector
1-3	ACL/ACN/G	Mains supply
4 / 5	DC+ / DC-	27 V DC output pos./neg.
6	FAULT	Mains fault
7 / 8	RTH+ / RTH-	Thermal sensor pos./neg.

Functions

The Power Supply is protected against pole reversal and overvoltage.

The output voltage is monitored and regulated via the thermal sensor. If there is a fault, the FAULT output drops to 0 V.

A green LED on the Universal Power Supply indicates operativeness.

Installation/Configuration Notes

- The Power Supply Unit is inserted into a Power Supply Bracket and is thus immediately ready for operation.

Parts Included

Type	Qty.	Components
UPS 2416 A	1	Universal Power Supply 24 V/5 A

Technical Specifications

Electrical

Input voltage	100 V AC ... 240 V AC
Input frequency range	50 Hz ... 60 Hz
Efficiency	> 85 %
Back-up time	> 16 ms bei 115 V AC
Output voltage	26 V DC ... 29 V DC (temperature-dependant) Nominal 26.8 V DC at 40°C
Max. output current	6 A
Max. power	160 W (permanent)

Mechanics

Cooling	Ventilation without ventilator
Housing material	Aluminum, anodized
Housing color	Matt black
Dimensions	Approx. 200 x 100 x 40 mm (7.9 x 3.9 x 1.6 in.)
Weight	Approx. 780 g (27.5 ounces)

Environmental conditions

Permitted operating temperature	-5 °C ... 50 °C (23 °F ... 122 °F)
Permitted storage temperature	-20 °C ... 60 °C (-4 °F ... 140 °F)
Permitted relative humidity	95 %, non-condensing

Ordering Information

UPS 2416 A Universal Power Supply	UPS 2416 A
plug-and-play power supply for the entire power supply to the control panel.	

Accessories

CPB 0000 A Cable BCM/UPS	CPB 0000 A
Used to connect the BCM-0000-B Battery Controller Module to a UPS Power Supply, cable length 150 cm	

Cables



Functions

There are various types of cables and cable sets available for connecting the central components:

Cable set	Connection from ...	... to
CPR 0001 A	MPC Panel Controller	RLE 0000 A Junction Board EU/RLU 0000 A Junction Board US
CRP 0000 A	MPC Panel Controller	MPC Panel Controller (redundant)
CBB 0000 A ¹⁾	BCM-0000-B Battery Controller Module	Battery pair
CPB 0000 A	BCM-0000-B Battery controller module	UPS Power Supply
CPP 0000 A	HPD 0000 A Power Distributor	UPS Power Supply
PDC 0000 A ¹⁾	HPD 0000 A Power Distributor	BCM-0000-B Battery Controller Module and battery pair
CPA 0000 A	MPC Panel Controller / ENO 0000 B Fire Service Interface Module	AT 2000 Transmission Unit

1) Required if the power supply is in a separate Power Supply Housing

Cable sets CBB 0000 A and PDC 0000 A are required if the power supply is located in a separate Power Supply Housing. These sets have a longer connection cable to the battery than the standard cable sets supplied with the unit.

Certifications and Approvals

Region	Certification
Russia	GOST POCC DE.C313B06299

Ordering Information

CPR 0001 A Printer Cable To connect the MPC Panel Controller - Junction Board, cable length 100 cm	CPR 0001 A
CRP 0000 A Cable Set Redundant Panel Controller used to redundantly connect one Panel Controller to an additional MPC Panel Controller	CRP 0000 A
CBB 0000 A Cable Set BCM/Battery Used to connect a battery pair and a Power Supply Housing to the BCM-0000-B Battery Controller Module	CBB 0000 A
CPB 0000 A Cable BCM/UPS Used to connect the BCM-0000-B Battery Controller Module to a UPS Power Supply, cable length 150 cm	CPB 0000 A
CPP 0000 A Cable HPD/UPS Used to connect an HPD 0000 A Power Distributor to a UPS Power Supply, cable length 120 cm	CPP 0000 A
CPA 0000 A Cable Set AT 2000 Used to connect an AT 2000 to the MPC and the ENO 0000 B.	CPA 0000 A
NMC 0000 A Cable HPD/NZM Used for synchronization in accordance with UL requirements, cable length 90 cm	NMC 0000 A

THP 2020 A Thermal Printer



The THP 2020 A Thermal Printer comes in a frame installation housing. It is connected to the S20 interface of the IOS 0020 A Communication Module.

Certifications and Approvals

Region	Certification
Russia	GOST POCC DE.C313B06299

Parts Included

Qty.	Components
1	Thermal Printer incl. connection cable
1	USF 0000 A Universal Housing Small, Frame Installation.
1	Connection cable for the printer interface module

Note The Thermal Printer requires either an FSH 0000 A Mounting Frame Small (for surface-mounted installation) or an FRS 0002 A 19" Rack Installation Kit, for Small Frame Installation Housing (for installation in a 19" rack).
The CPR 0001 A Printer Cable is not necessary.

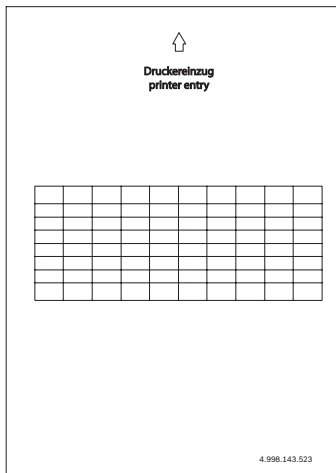
Ordering Information

THP 2020 A Thermal Printer	THP 2020 A
comes standard with frame-mount housing. Additionally required: FSH 0000 A Mounting Frame Small (surface-mounting) or FRS 0002 A 19" Rack Installation Kit Small.	

Accessories

CPR 0001 A Printer Cable	CPR 0001 A
To connect the MPC Panel Controller - Junction Board, cable length 100 cm	

PSL 0001 A Labelling Strips, Small



The PSL 0001 A Labelling Strips can only be used for the ANI 0016 A Annunciator Module.

The strips can be printed individually with a customary laser printer. A dot file is available on the CD that came with the MPC Panel Controller.

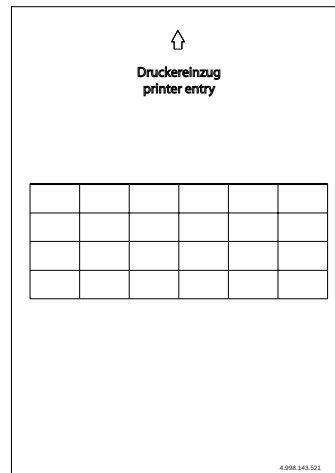
Parts Included

Qty.	Components
20	Each sheet has 10 strips, printable

Ordering Information

PSL 0001 A Labelling Strips, Small	PSL 0001 A
20 sheets each with 10 strips, printable, for the ANI I0016 A Annunciator Module	

PSK 0001 A Labelling Strips, Wide



The PSK 0001 A Labelling Strips for Modules are suitable in the following functional modules:

BCM-0000-B, LSN 0300 A, LSN 1500 A, CZM 0004 A, NZM0002 A, RMH 0002 A, CTM 0002 A and ENO 0000 B.

The strips can be printed individually with a customary laser printer. A dot file is available on the CD that came with the MPC Panel Controller.

Parts Included

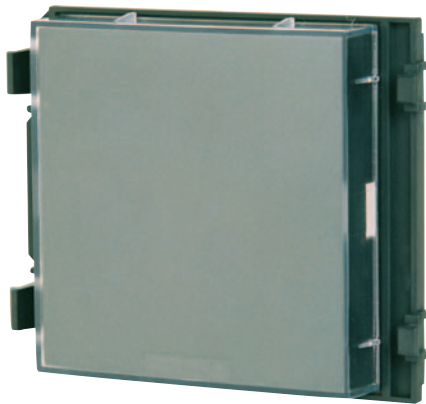
Qty.	Components
20	Each sheet has 6 strips, printable,

Ordering Information

PSK 0001 A Labelling Strips, Wide	PSK 0001 A
20 sheets each with 6 strips, printable, for the functional modules BCM-0000-B, LSN 0300 A, LSN 1500 A, CZM 0004 A, NZM 0002 A, RMH 0002 A, CTM 0002 A and ENO 0000 B	

1

FDP 0001 A Dummy Cover Plate



The FDP 0001 A Dummy Cover Plate is used to cover available module slots. It is placed in the corresponding window in the front cover of the housing.

Parts Included

Qty.	Components
1	FDP 0001 A Dummy Cover Plate

Ordering Information

FDP 0001 A Dummy Cover Plate	FDP 0001 A
For available module slots	

FSM-2000 Fire Monitoring System



Features

- ▶ Easy installation and operation
- ▶ Importing floor plans from AutoCAD
- ▶ Zoom and pan
- ▶ Automatic allocation of detection points in floor plan
- ▶ Comprehensive event logging
- ▶ Up to four panels with 2000 detection points at maximum can be connected
- ▶ Can be connected with FPA-5000, FPA-1200, UEZ 2000 LSN, BZ 500 LSN
- ▶ Available in German and English

The FSM-2000 Fire Monitoring System is a graphical user interface for displaying and monitoring small to medium fire alarm systems with up to 2000 detection points. It is designed for four panels of the FPA-5000, FPA-1200, UEZ 2000 LSN or BZ 500 LSN at maximum.

Functions

Installation and Operation

A wizard guides you through the installation as well as the configuration in a few steps. Logically arranged graphics and icons allow to capture events precisely and to initiate appropriate measures.

Importing Floor Plans of AutoCAD

You can import floor plans of AutoCAD as dwf-file. The software automatically allocates the detector list of the fire panel to the floor plan.

Authorizations

You can set up as many operators as required and classify them according to their tasks into one of the three authorization groups: Operator, installer or administrator. A maximum of two operators can be logged on to the system at the same time.

Zoom and Pan

These two functions offer a comfortable navigation in the floor plan. With the zoom function it is possible to increase or minimize specific areas. With the pan function the floor plan can be moved in any direction.

Event Logging

In the event log all procedures and actions are recorded. You can generate statistics, make backups, print the event log and search according to various criteria.

Connectivity

You can connect up to 2000 detection points and four panels to the FSM-2000. It is working with the fire panels FPA-5000, FPA-1200, UEZ 2000 LSN and BZ 500 LSN.

Installation/Configuration Notes

Hardware Preconditions:

- USB port
- CD-ROM
- 3.5" disk drive
- 4 COM ports
- RAM 1024 MB (server), 512 MB (client)
- Hard drive memory of 10 GB
- Network card 100 Mbit

Software Preconditions:

- Windows 2000, Windows XP, Windows 2003 Server (German and English operating system)
- Internet Explorer version 5.0 or 6.0
- MSDE 2000
- Microsoft IIS 5.0 (Windows 2000, Windows XP), Microsoft IIS 6.0 (Windows 2003 Server)

Parts Included

Quant.	Component
1	CD for Installation
1	USB-Dongle
1	Floppy-disk with the file Dongle.crp

Ordering Information**FSM-2000 Fire Monitoring System****FSM-2000**

Additionally order:

- Interface Converter OVS
- Connection Cable DSUB 9F-9M
- IOS 0020 A 20 mA Communication Module (FPA-5000/FPA-1200) or SM 20 Interface Module (UEZ 2000 LSN / BZ 500 LSN)

Accessories**IOS 0020 A 20 mA Communication Module****IOS 0020 A**

provides one interface each of S20, RS232 and S1

Connection Cable DSUB 9F-9M**DB EK 822 9F-9M**