

FPC-500 Conventional Fire Panel

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Invented for life



- ▶ High-value modern optics – suitable for public access areas
- ▶ Plain text LCD
- ▶ Available for 2, 4 or 8 detector zones for up to 64, 128 or 256 detectors
- ▶ Optional use of EOL module (EN 54-13 requirement)
- ▶ Strong 3 A power supply

The FPC-500-x Conventional Fire Panel is the ideal solution for small and medium-sized objects. Thanks to the proven conventional line technology a cost-saving fire alarm system can be set up.

Three types are available:

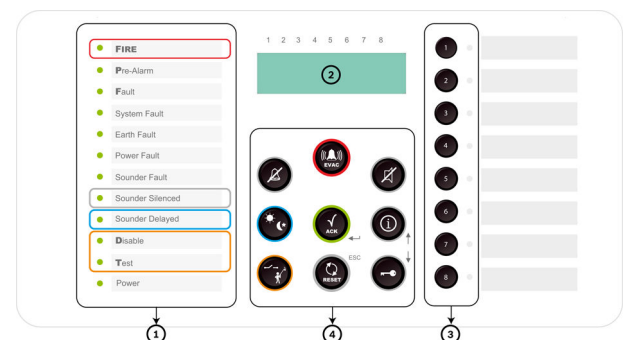
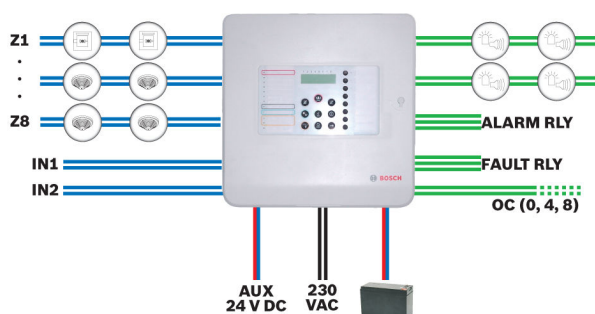
- FPC-500-2: 2 zones for up to 64 detectors
- FPC-500-4: 4 zones for up to 128 detectors
- FPC-500-8: 8 zones for up to 256 detectors

With the integrated LCD display, the panel can be programmed and operated.

The optional extensions such as relay modules, open collector modules and key switches allow further tailoring to user needs.

Z1...Z8	Up to 8 zones
IN1, IN2	Up to 2 inputs (FPC-500-2 and FPC-500-4 one input) Two NAC outputs (500 mA each)
ALARM RLY, FAULT RLY	Alarm and fault relay
AUX	AUX power supply (500 mA) Emergency power supply, up to 2 x 7.2 Ah

System overview



- 1 LEDs
- 2 LCD display with zone numbers

- 3 Zone keys and zone status LEDs
- 4 Operating panel

Functions

The fire panels of FPC-500 series have the following features available:

- Alarm verification
- Dual-detector dependency
- Dual-zone dependency
- Intermediate alarm storage
- Programmable delays
- Switching between day and night mode (AV)
- Event and test history
- Alarm counter

Operating levels

The fire panels have three different operating levels. No access code is required for level 1. Access to level 2 and 3 requires four-digit codes (level 2 also accessible with optional key switch). The access codes for level 2 and 3 can be changed.

Different test functions are available. On level 1 LED, buzzer and LCD tests can be run. On level 2 and 3 additional tests for zones, outputs and NACs can be run.

Programming

You can program the panel easily via the keypad and LCD display. The zones can be configured independently allowing for a perfect tailoring to individual customer needs. The default programming helps getting acquainted quickly with the system and must be modified slightly to fit many applications.

Certifications and approvals

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

- Alarm counter
- Test condition
- Output to fire alarm devices
- Delays to outputs
- Dependencies on more than one alarm signal
 - Type A dependency
 - Type B dependency

Region	Certification	
Germany	VdS	VdS-G211100 FPC-500
Europe	CE	FPC-500
	CPD	0786-CPD-21105 FPC-500
Belgium	BOSEC	FPC-500 EN54-13
Hungary	TMT	TMT-15/2012 FPC-500
Croatia	ELTEH	145-SF/12 FPC 500

Installation/configuration notes

- The fire panel must be mounted indoors in a dry, maintained place, note environmental conditions (see Technical Data).
- Mount the fire panel to the wall with the LCD at eye level.
- For optimum battery life, the fire panel should only be operated at permissible operating temperatures (0°C to +40°C).
- Country-specific standards and guidelines must be observed when planning.
- Note the requirements of your local authorities and institutions (police, fire service).
- For an operation of the fire detection system according to EN 54-13, it is required to terminate every zone with an EOL module.

Maintenance

Have maintenance and inspection work carried out regularly by trained, qualified personnel. Bosch Sicherheitssysteme GmbH recommends a functional and visual inspection at least once a year.

Specifications according to EN 54-4 chapter 7.1

a) It is a power supply equipment, used in the fire alarm system FPC-500. It supplies the fire alarm system and the connected peripherals, and charges the two connectable batteries.

b) Technical specifications

1) Recommended load	61 W
2) Input voltage	230 VAC +10%/-15%, 50-60 Hz
Operating voltage	26 VDC – 29 VDC
3) Communication parameter	none
4) Fuse ratings	3.15A / 250 V
5) Batteries	2 x 7.0 – 7.2 Ah (max.) Lead-Acid Battery
6) Current consumption, max	2.3 A
7) Battery, max. internal resistance	800 mOhm
I_{min}	70 mA
$I_{max, a}$	0.7 A
$I_{max, b}$	2.3 A
9) Line parameter	
Battery	Cable comes standard
PCB power supply	factory-made wiring
230 V power supply	1.5 mm ² standard cable (max.)

c) The power supply equipment is a pre-assembled part of the FPC-500 Conventional Fire Panel. No additional installation information is required.

1) For environmental conditions see technical specifications beneath.

- 2) The power supply equipment is a pre-assembled part of the FPC-500 Conventional Fire Panel. No additional mounting instructions are required.
- 3) Refer to installation guide FPC-500 for connecting instructions.
- d) The power supply equipment is a pre-assembled part of the FPC-500 Conventional Fire Panel. No additional commissioning instructions are required.
- e) The power supply equipment is a pre-assembled part of the FPC-500 Conventional Fire Panel. No additional operating instructions are required.
- f) Have maintenance and inspection work carried out regularly by trained, qualified personnel. Bosch Sicherheitssysteme GmbH recommends a functional and visual inspection at least once a year. Change the batteries regularly. Country-specific standards and guidelines must be considered.

Parts included

Qty.	Components
1	Fire panel FPC-500-2/FPC-500-4/FPC-500-8
1	Labeling strips for zones
1	Labeling strips for LEDs
1	Quick Installation Guide
1	Quick Operation Guide
1	CD with Installation and User Guide, battery calculator and software flashing tool
1	EOL resistors for zones and inputs
1	Battery cable set
1	Cable ties for strain relief on power supply feeder
2	Rubber pads to fix batteries

Technical specifications

	FPC-500-2	FPC-500-4	FPC-500-8
Detector zones	2	4	8
Max. number of detectors in accordance with EN 54-2	64	128	256
Max. number of detectors per zone in accordance with EN 54-2	32		
Max. extension modules	0	1	2
Prog. inputs	1		2
AUX output	1		
NAC output	2		
Relays	2		

Alarm counter	999 alarms
Event history	1000 events
Test history	1000 test events

Electrical

	FPC-500-2	FPC-500-4	FPC-500-8
Input voltage	230 VAC +10%/-15%, 50-60 Hz		
Max. current consumption AC	275 mA	312 mA	375 mA
Power consumption	80 W		
Operating voltage	21.4 VDC to 29 VDC		
I_{min}	70 mA		
$I_{max,a}$	0.7 A		
$I_{max,b}$	2.3 A		
Zones	<ul style="list-style-type: none"> voltage: 20 VDC \pm1VDC current: max. 100 mA \pm5 mA max. cable resistance: 22.5 Ω 		
AUX	<ul style="list-style-type: none"> voltage: 21 VDC to 29 VDC current: 500 mA \pm10% max. cable resistance: 22.5 Ω fuse: 0.75 A @ 60 V 		
NAC	<ul style="list-style-type: none"> voltage: 21 VDC to 29 VDC current: 500 mA \pm10% each fuse: 0.75 A @ 60 V max. cable resistance: 22.5 Ω 		
Relay outputs	<ul style="list-style-type: none"> contact rating: 1 A @ 30 VDC max. cable resistance: 22.5 Ω 		
OC outputs	No inductive load.		
	<ul style="list-style-type: none"> contact rating: 20 mA @ 24 VDC max. cable resistance: 22.5 Ω 		
recommended cable type	Unshielded cable, 0.8 mm cable diameter to 1.5 mm ² cable cross section		
Batteries	2 x 7.2 Ah (max.)		

• max. internal resistance	800 mΩ
• current consumption	2.3 A
• fuse	5 A @ 60 V
Discharge voltage threshold	21.4 V

Communication parameters

NAC

Normal	
• A-	10 – 15 V
• B+	0 – 0,5 V
Alarm	
• A-	0 – 1 V
• B+	21 – 29 V

Inputs

• Alarm resistor	820 Ω ±5%
• End of line resistor	3.9 kΩ ±1%

Zone (with resistors)

• Alarm resistor	820 Ω ±5% 910 Ω ±5% No dual-detector dependency: 680 Ω ±5%
• End of line resistor	3.9 kΩ ±1%

Zone (with EOL-Module)

• Alarm resistor	820 Ω ±5% 910 Ω ±5% No dual-detector dependency: 680 Ω ±5%
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Mechanics

	FPC-500-2	FPC-500-4	FPC-500-8
Dimensions (H x W x D)	351 x 351 x 90 mm		
Weight	2200 g, without batteries		
Housing material			
• Front	ABS+PC		
• Back	ABS-FR		
Housing color			
• Front	RAL 9003 (signal white)		
• Back	PANTONE 10 C (cool grey)		

Environmental conditions

	FPC-500-2	FPC-500-4	FPC-500-8
Protection class as per IEC 60529	IP 30		
Protection class as per EN 60950	II		
EMC emission	EN 61000-6-3		
EMC immunity	EN 50130-4		
Vibrations	EN 60068-2-6		
Permissible operating temperature	0°C to +40°C		
Permissible storage temperature	-10°C to +55°C		
Permitted relative humidity	95% non-condensing		

Ordering information

FPC-500-2 Conventional Fire Panel

Order number **FPC-500-2**

FPC-500-4 Conventional Fire Panel

Order number **FPC-500-4**

FPC-500-8 Conventional Fire Panel

Order number **FPC-500-8**

Accessories

Relay Extension Module

Order number **FPC-500-RLYEXT**

OC Extension Module

Order number **FPC-500-OCEXT**

Access Key

Order number **FPC-500-KEY**

FLM-320-EOL2W Conventional EOL Module 2-Wire

for EN 54-13 compliant termination of conventional lines

Order number **FLM-320-EOL2W**

FLM-320-EOL4W-S Conventional EOL Module 4-Wire

for EN 54-13 compliant termination of conventional lines

Order number **FLM-320-EOL4W-S**

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