

FPD-7024 Family Fire alarm control panels

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Invented for life



- ▶ Four initiating zones (expandable to eight) with up to 20 two-wire smoke detectors per zone
- ▶ Programmable through keypads or remote programming software (RPS) through a Conettix interface module or over the public switched telephone network (PSTN)
- ▶ Two notification appliance circuits (NACs) on board with a shared internal regulated 24 VFWR, 4 A NAC power supply
- ▶ Easily converts to addressable with the addition of a MUX expansion module
- ▶ Reports to two phone numbers, two IP addresses, or a phone number and an IP address

The FPD-7024 Family FACPs can be used in commercial, retail, and public building applications. They are listed by UL for central station, local, auxiliary, and remote station systems.

The FACPs support four on-board initiating zones that can be expanded to eight using the FPC-7034 Four-point expander. Each initiating zone supports two-wire and four-wire detectors configurable as Class A or Class B loops. Each zone can support up to 20 two-wire detectors, or any number of four-wire detectors depending on available power. Each FACP has a built-in digital fire alarm communicator transmitter (DACT).

Enhance the FPD-7024 conventional system features by adding an FPE-7039 or D7039 MUX expansion module. Adding a MUX expansion module to the FACP turns the conventional FACP into an addressable FACP. The MUX expansion module adds up to 247 addressable points to the base system. It also adds an additional 400 events to the history buffer for a total of 499 events. The module increases the number of programmable relay outputs from 19 to 59 and expands system users to 100. The FPE-7039 allows

you to use FPE-7024-ISO MUX bus isolator modules. The isolator modules prevent failure of the entire bus when there is a short on the bus.

Functions

Notification Appliance Circuits

Two Class A or Class B NACs provide regulated power to operate notification appliances. Each NAC can be programmed to provide synchronized output for Wheelock, Gentex, or System Sensor notification appliances. The available outputs are:

- Temporal Code 3
- California March
- Steady
- Pulsed

User Interface

A viewing port shows the status light-emitting diodes (LEDs) and liquid-crystal display (LCD) while maintaining system keypad security. For multi-language applications, the status LEDs and keypad buttons are labeled with symbols. The display

can be in US English, Latin-American Spanish, or Brazilian Portuguese. Unlocking the enclosure door provides access to the system controls for:

- Silencing off-normal conditions
- Bypassing zones
- Resetting detectors
- Testing
- Programming
- Other fire functions

Two additional keypads (FMR-7033 LCD keypad and FMR-7036 Fire annunciator keypad) mimic the panel's built-in keypad. Wherever the FMR-7033 is connected to the system, it makes all the functions of the built-in keypad available. The FMR-7036 provides the status LEDs and display (in any of the three available languages). The key-locked buttons provide access only to reset, scroll, and silence functions.

Organized Event Display

The software sorts alarm, trouble, and supervisory events into categories and allows scrolling through specific events.

History Buffer

The system stores events in a 99-event history buffer.



Notice

A MUX expansion module increases the number of events that can be stored in the history buffer to 499.

Central Station Reporting

The FPD-7024 FACPs uses account numbers up to 10 digits to send reports. It can send reports with full single, double, and backup reporting. It can send reports to two telephone numbers, one telephone number and one IP address, or two IP addresses.



Notice

IP use requires a Conettix interface module at the panel and an appropriate Conettix receiver at the central station.

The panel supports communication in BFSK, SIA, Contact ID, Modem IIIa², and 4/2 or 3/1 Tone Burst formats.

Dirty Detector Monitoring

All on-board zones and FPC-7034 zones are continuously monitored for smoke detectors signaling a dirty condition. The Chamber Check feature signals a dirty smoke chamber using the LED on the detector head. If the calibration is out of range, the detector's LED flashes once every 4 seconds. This indicates that the detector must be cleaned following the instructions provided with the detector.

Also, the control panel annunciates that there is a dirty detector on the loop or the address. For detectors on a two-wire loop, if the detector's smoke chamber is

dirty, the detector sends a CleanMe signal. For detectors on an addressable loop, the detector sends a dirty detector signal.

Accessories

The FPD-7024 enclosure (P/N: F01U068852) has a viewport for keypad messages while the enclosure door is locked. It also has space for additional accessory modules and two 18 Ah batteries. The BATB-40 or BATB-80 Battery box/enclosures accommodate larger batteries or additional batteries.



Notice

The panel can handle batteries up to 40 Ah. When selecting batteries, ensure that the batteries can handle an initial charge current of at least 1.7 A.

Certifications and approvals

Region	Regulatory compliance/quality marks	
USA	UL	ANSI/UL 864, Control Units and Accessories for Fire Alarm Systems (10th edition)
	FM	see the FM Approval Guide
	CSFM	see www.boschsecurity.com (the Bosch website)
	FCC	ESVAL04B7024
	FDNY-CoA	6285

Installation/configuration notes

Compatible Products

The following products are compatible with the FACPs (refer to the specific product documentation for detailed information):

Category	Product ID and Description
Batteries and Power Supplies	D126 12 V, 7 Ah battery
	D1218 12 V, 18 Ah battery
	FPP-RNAC-8A-4C Remote NAC power supply
	BATB-40 Battery box/enclosure
	BATB-80 Battery box/enclosure with shelf
Detectors	For two-wire detector compatibility, refer to the <i>FPD-7024 Smoke Detector Compatibility List</i>
Keypads and Annunciators	D7030X Eight-point LED annunciator (eight red)
	D7030X-S2 Eight-point LED annunciator (two yellow, six red)
	D7030X-S8 Eight-point LED annunciator (eight yellow)

	D7032 Eight-point LED annunciator expander (eight red)
	FMR-7033 LCD fire system keypad
	FMR-7036 LCD annunciator
Modules	D132B Smoke detector reversing relay module
	D185 Reversing polarity module
	D7039 Multiplex expansion module
	FPC-7034 Four-point expander
	FPE-7039 Multiplex expansion module
	PAM-4 Relay module, form C, 10A 12/24V
Option Bus Devices	B420 Ethernet communicator
	B426 Ethernet communication module
	B450 Conettix plug-in communicator interface
	D7035 Octal relay module
	D7035B Octal relay module in box
	DX4010V2 USB/serial interface module
	DX4020 Network interface module
	ITS-DX4020-G GPRS/GSM communicator
NAC Devices	Refer to the <i>FPD-7024/FPP-RNAC-8A-4C NAC Compatibility List</i>

The following additional products are compatible with the Addressable FACPs:

Category	Product ID and Description
Detector Heads and Bases	D7050 Addressable photoelectric smoke detector head
	D7050TH Addressable photoelectric smoke and heat detector head
	D7050-B6 Detector base
Modules	D7042 Multiplex eight-input remote module
	D7042B Multiplex eight-input remote module in box
	D7044 Multiplex single-input module
	D7044M Mini multiplex single-input module
	D7048 Octal driver module
	D7052 Multiplex dual-input module
	D7053 Multiplex input-output module
	FLM-7024-ISO MUX bus isolator module*
Pull Stations	FMM-7045 Single-action manual station

FMM-7045-D Double-action manual station

* Requires FPE-7039 MUX expansion module

Technical specifications

Electrical

Line impedance for ground fault detection (Option Bus, conventional input, NAC, secondary power circuit, MUX Bus, AUX power, SMK power)	10 kΩ or less
Power (non-resettable Input)	120 V 60 Hz 1.4 A or 230/240 V 50 Hz, 0.7 A
Power (non-resettable Auxiliary)	17 to 31 VRMS, unfiltered, 1.0 A
Power (resettable Smoke) ¹	20.4 to 28.2 VDC nominal, filtered, 1.0 A.
Power (Option Bus)	12 VDC nominal, 500 mA
Power (Notification Appliance Circuit [NAC]) ²	Each NAC has 24 VRMS nominal, unfiltered power with up to 2.5 A capacity (but limited by the panel's overall 4.0 A capacity)
Power (Optional Standby Batteries)	Two 12 V (in series), 7 Ah to 40 Ah
NACs Line Impedance (voltage loss)	1.5 V
Recommended battery manufacturers ³	Power Sonic: PS-1270, PS-12170, PS-12180 YUASA: NP7-12, NPG18-12

¹ For compatible smoke detection devices, see also the *FPD-7024 Smoke Detector Compatibility List*.

² For compatible NAC devices, see also the *FPD-7024/FPP-RNAC-8A-4C NAC Compatibility List*

³ If other manufacturers or battery types are used, ensure that the battery or batteries can handle an initial charge current of at least 1.7 A.

Environmental

Temperature (operating and storage)	+32°F to +120°F (0°C to +49°C)
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Notification Appliance Circuits

Wiring	Class B or Class A
Notification patterns	Configurable for steady, pulsing, California March, Temporal (ANSI) code 3, synchronized Wheelock, synchronized Gentex, and synchronized System Sensor.

Relays

Local (on-board)	The main control panel includes Three Form C relays. The relay contacts are rated at 5 A, 28 VDC. No over current limiting is performed on the contacts of the relays. The default selection for the relays is to indicate general alarm (relay 1), general system trouble (relay 2), and supervisory (relay 3). By using point or zone mapping, they can be programmed to activate in a wide variety of conditions.
Remote ⁴	Eight Form C relay outputs are provided by a D7035 Remote Relay Module. The module connects to the FACP through the option bus. The outputs are fully programmable, exactly as the local relays are programmed. Each output operates independently of the other seven to provide complete flexibility. Communication with the D7035 is supervised. Contact Rating: 5 A at 28 VDC Number of Modules: two modules maximum.

⁴ For wiring requirements, see Option bus wiring requirements in the *FPD-7024 Family installation and operation guide*.

Trademarks

All hardware/software product names used in this document are likely to be registered trademarks and must be treated accordingly.

Ordering information

FPD-7024 Fire panel, 4-zone 24V, red enclosure

It has four detector zones (expandable to eight) with up to 20 two-wire smoke detectors per zone. It has two NACs on board with a shared internally-regulated 24 VFWR, 4 A NAC power supply. It communicates over phone or IP communication circuits.
Order number **FPD-7024**

FPD-7024-LC Fire panel, 4-zone, 24V, no enclosure

Four detector zones (expandable to eight) with up to 20 two wire smoke detectors per zone
Order number **FPD-7024-LC**

Accessories

FPD-7024-LT Fire panel, no transformer, 4-zone, 24V

Four detector zones (expandable to eight) with up to 20 two wire smoke detectors per zone. **Available only in Latin America.**

Order number **FPD-7024-LT**

D102 Replacement key for D101 lock set

The D102 is a replacement key for locks stamped with 1358.

Order number **D102**

Represented by:

Europe, Middle East, Africa:
Bosch Security Systems B.V.
P.O. Box 80002
5600 JB Eindhoven, The Netherlands
Phone: + 31 40 2577 284
emea.securitysystems@bosch.com
emea.boschsecurity.com

Germany:
Bosch Sicherheitssysteme GmbH
Robert-Bosch-Ring 5
85630 Grasbrunn
Germany
www.boschsecurity.com

North America:
Bosch Security Systems, Inc.
130 Perinton Parkway
Fairport, New York, 14450, USA
Phone: +1 800 289 0096
Fax: +1 585 223 9180
onlinehelp@us.bosch.com
www.boschsecurity.us

Asia-Pacific:
Robert Bosch (SEA) Pte Ltd, Security Systems
11 Bishan Street 21
Singapore 573943
Phone: +65 6571 2808
Fax: +65 6571 2699
apr.securitysystems@bosch.com
www.boschsecurity.asia