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Quick Selection Guide Analog Addressable Fire Systems

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A focused direction in fire protection

With features that enable easier programming, installation and system management, the **FPA-1000-V2** offers a wealth of benefits for both installers and end users.

Plug-and-play installation

Networking module mounts to the panel slot, requiring less wiring and no need for separate power and supervision.

Remote programming & diagnostics

A set of interactive Web pages provide instant access to important system functions, such as status, programming, diagnostic tools and test data. This unique feature enables programming and diagnostic capabilities using any browser-enabled device, streamlining installation and reducing time required for servicing the system.

IP-based reporting

Built-in Bosch Conettix IP technology communicates over local or wide area networks for faster alarm reporting and reduced costs.

Integrated gas detection

The first combination panel listed for both fire and carbon monoxide (CO) alarm. Complies with CO regulation requiring this hazardous gas be monitored and reported.

Enhanced safety and efficiency

Extra-large buttons allow operation of the keypad control while wearing protective gloves.

More points, more protection

Networking capabilities support more than 2000 addressable points in one system for campuses or other large commercial environments. All connected panels can easily be programmed and controlled via any panel.

Suited to a wide range of applications

The FPA-1000-V2 Panel now offers networking capabilities to support a wide variety of medium to large applications:

- ▶ Retail - single-building applications
- ▶ Schools and Universities
- ▶ Apartment Buildings
- ▶ Manufacturing plants
- ▶ Warehouses
- ▶ Office Complexes
- ▶ Military Bases
- ▶ Government Installations
- ▶ Healthcare Facilities



The **Analog 440 Detector** family is an innovative addition to Bosch's expanding fire systems portfolio. These advanced analog addressable detectors feature Dual Ray Technology and Intelligent Signal Processing – setting the standard for reliable fire detection and reduce unwanted alarms.

Multicriteria and multisensor fire detection

Multicriteria detectors better distinguish between fire and non-fire conditions to reduce unwanted alarms in areas with challenging environmental conditions. The 440 Detector family gives you a choice of heat, optical smoke, or a combination of optical smoke and heat.

And, our most advanced model represents a step forward for the fire detection industry – a multicriteria detector that identifies the presence of smoke, heat and carbon monoxide (CO) for maximum reliability.

Intelligent Signal Processing

Each detector features Intelligent Signal Processing (ISP), which uses a sophisticated, high speed microprocessor to analyze signals from each sensor. A complex algorithm ensures the sensor pattern matches that of a real fire scenario to provide immunity against possible unwanted alarm sources.

This advanced technology significantly reduces unwanted alarm rates and provides more accurate fire detection, while also achieving faster recognition of different types of fires.

Reliable, affordable performance

The 440 Detector family features a unique self-monitoring feature. If sensor functionality is not detected, a trouble message is generated and reported back to the panel. This helps ensure each area of your facility is always being monitored. In addition, a triple-color LED indicates status, including normal, trouble or alarm.








Detect even the smallest particles

The dual-optical variants in the 440 detectors use Bosch's Dual Ray Technology for even greater precision. Dual Ray Technology determines smoke density and particle size by comparing the intensity of scattered light from the differing wavelengths of two LED sources, one infrared and one blue.

Bosch's powerful fire-detection algorithm provides exceptional differentiation between smoke particles and other particles – like dust and steam – that can cause a false alarm in other detectors. As a result, the Dual Ray detectors provide earlier, more reliable fire detection and produce fewer unwanted alarms.





Analog 440 Detector Family

Description	Photoelectric	Heat	MultiSensor	MultiCriteria	Dual-Photoelectric	MultiSensor	MultiCriteria
Control type number (CTN)	FAP-440	FAH-440	FAP-440-T	FAP-440-TC	FAP-440-D	FAP-440-DT	FAP-440-DTC
							
Optical Sensor	Single	–	Single	Single	Dual	Dual	Dual
Thermal Sensor	–	■	■	■	–	■	■
Chemical (CO gas) sensor	–	–	–	■	–	–	■
Smoke Sensitivity	Adjustable 1.25 to 3.5 %/ft	–	Adjustable 1.25 to 3.5 %/ft	Adjustable 1.25 to 3.5 %/ft	Adjustable 1.25 to 3.5 %/ft	Adjustable 1.25 to 3.5 %/ft	Adjustable 1.25 to 3.5 %/ft
Heat Sensitivity	–	Adjustable 135° to 194° F (57° to 90° C)	135° F (57° C)	135° F (57° C)	–	135° F (57° C)	135° F (57° C)
Rate-of-Rise	–	Programmable	–	–	–	–	–
Communication	SLC loop	SLC loop	SLC loop	SLC loop	SLC loop	SLC loop	SLC loop
Address Range	1 to 254	1 to 254	1 to 254	1 to 254	1 to 254	1 to 254	1 to 254
Addressing Method	Rotary Switch	Rotary Switch	Rotary Switch	Rotary Switch	Rotary Switch	Rotary Switch	Rotary Switch
Current Draw - Alarm	6 mA	6 mA	6 mA	6 mA	6 mA	6 mA	6 mA
Current Draw - Standby	0.17 mA	0.17 mA	0.17 mA	0.17 mA	0.17 mA	0.17 mA	0.17 mA
Operating Voltage	24 - 41 VDC	24 - 41 VDC	24 - 41 VDC	24 - 41 VDC	24 - 41 VDC	24 - 41 VDC	24 - 41 VDC
Max. Line Resistance	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω
Wiring: 18 AWG 16 AWG 14 AWG 12 AWG	4000 ft (1200 m) 6225 ft (1900 m) 7200 ft (2200 m) 9850 ft (3000 m)	4000 ft (1200 m) 6225 ft (1900 m) 7200 ft (2200 m) 9850 ft (3000 m)	4000 ft (1200 m) 6225 ft (1900 m) 7200 ft (2200 m) 9850 ft (3000 m)	4000 ft (1200 m) 6225 ft (1900 m) 7200 ft (2200 m) 9850 ft (3000 m)	4000 ft (1200 m) 6225 ft (1900 m) 7200 ft (2200 m) 9850 ft (3000 m)	4000 ft (1200 m) 6225 ft (1900 m) 7200 ft (2200 m) 9850 ft (3000 m)	4000 ft (1200 m) 6225 ft (1900 m) 7200 ft (2200 m) 9850 ft (3000 m)
Remote Indicator	< 10 ft (3m) from base	< 10 ft (3m) from base	< 10 ft (3m) from base	< 10 ft (3m) from base	< 10 ft (3m) from base	< 10 ft (3m) from base	< 10 ft (3m) from base
Environmental Rating	IP 42	IP 42	IP 42	IP 42	IP 42	IP 42	IP 42
Relative Humidity	< 95%	< 95%	< 95%	< 95%	< 95%	< 95%	< 95%
Operating Temperature	32° to 100° F (0° to 38° C)	32° to 100° F ** (0° to 38° C)	32° to 100° F (0° to 38° C)	32° to 100° F (0° to 38° C)	32° to 100° F (0° to 38° C)	32° to 100° F (0° to 38° C)	32° to 100° F (0° to 38° C)
Housing	CYCOLOY / ABS	CYCOLOY / ABS	CYCOLOY / ABS	CYCOLOY / ABS	CYCOLOY / ABS	CYCOLOY / ABS	CYCOLOY / ABS
Max. Airflow	4000 ft/min (20 m/s)	4000 ft/min (20 m/s)	4000 ft/min (20 m/s)	4000 ft/min (20 m/s)	4000 ft/min (20 m/s)	4000 ft/min (20 m/s)	4000 ft/min (20 m/s)
Indicator LED	Multicolor	Multicolor	Multicolor	Multicolor	Multicolor	Multicolor	Multicolor
Dimensions	4.4 x 1.5 in. (11.2 x 3.8 cm)	4.4 x 1.85 in. (11.2 x 4.7 cm)	4.4 x 1.85 in. (11.2 x 4.7 cm)	4.4 x 1.85 in. (11.2 x 4.7 cm)	4.4 x 1.5 in. (11.2 x 3.8 cm)	4.4 x 1.85 in. (11.2 x 4.7 cm)	4.4 x 1.85 in. (11.2 x 4.7 cm)

■ Available – Not available

** FAH-440: If the sensitivity temperature is programmed within a range of +175°F to +249°F (+79.4°C to +120.6°C), the maximum installation temperature is +150°F (+66°C)

Description	Standard Base	Isolator Base
Control type number (CTN)	FAA-440-B4 FAA-440-B6	FAA-440-B4 ISO FAA-440-B6 ISO
		
Indicator LED	No	Multicolor
Dimensions 4-inch (-B4)	4.3 x 0.94 in. (10.9 x 2.4 cm)	4.3 x 0.94 in. (10.9 x 2.4 cm)
Dimensions 6-inch (-B6)	6.6 x 0.94 in. (16.8 x 2.4 cm)	6.6 x 0.94 in. (16.8 x 2.4 cm)

Analog 325 Detector Family

Description	Photoelectric	Photoelectric	Heat	Duct
Control type number (CTN)	FAP-325	FAP-325-V2F	FAH-325	FAD-325-B2F (1) FAD-325-V2F-R (2)



Optical Sensor	■	■	–	■
Ionization Sensor	–	–	–	–
Thermal Sensor	–	–	■	–
Chemical (CO gas) Sensor	–	–	■	–
Smoke Sensitivity	Adjustable 0.88 to 3.75%/ft	0.5 to 3.80%/ft	–	0.90 to 2.65%/ft
Heat Sensitivity	–	–	Adjustable 135° to 150° F (57° to 66° C)	–
Rate-of-Rise	–	–	–	–
Communication	SLC loop	SLC loop	SLC loop	SLC loop
Address Range	1 to 127	1 to 254	1 to 127	–
Addressing Method	Handheld programmer	Handheld programmer	Handheld programmer	Handheld programmer
Current Draw - Alarm	8 mA	8 mA	9 mA	8 mA (1) / 55 mA (2)
Current Draw - Standby	0.39 mA	0.39 mA	0.35 mA	2 mA (1) / 10 mA (2)
Operating Voltage	24 - 40.7 VDC	22.9 - 39.5 VDC	24 - 40.7 VDC	17 - 41 VDC
Max. Line Resistance	50 Ω	50 Ω	50 Ω	–
Wiring: 18 AWG 16 AWG 14 AWG	3900 ft (1188 m) 6200 ft (1889 m) 10000 ft (3048 m)	3900 ft (1188 m) 6200 ft (1889 m) 10000 ft (3048 m)	3900 ft (1188 m) 6200 ft (1889 m) 10000 ft (3048 m)	–
Remote Indicator	–	–	–	–
Environmental Rating	Indoor only	Indoor only	Indoor only	Indoor only
Relative Humidity	< 95%	< 95%	< 95%	< 95%
Operating Temperature	32° to 100° F (0° to 37.8° C)	32° to 100° F (0° to 37.8° C)	32° to 100° F (0° to 37.8° C)	–
Housing	ABS Blend	ABS Blend	ABS Blend	ABS Blend
Max. Airflow	4000 ft/min (20 m/s)	4000 ft/min (20 m/s)	–	4000 ft/min (20 m/s)
Indicator LED	Yes	Yes	Yes	Yes
Dimensions	3.94 x 1.5 in. (10 x 3.8 cm)	3.94 x 1.5 in. (10 x 3.8 cm)	3.94 x 1.5 in. (10 x 3.8 cm)	9 x 7.3 x 2.3 in. (23 x 18.4 x 5.7 cm)

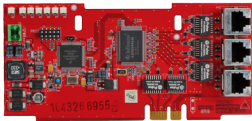
Description	Standard Base	Isolator Base
Control type number (CTN)	FAA-325-B4 FAA-325-B6	FAA-325-B6S



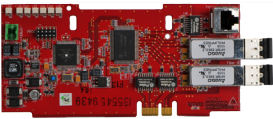
Indicator LED	No	No
Dimensions 4-inch (-B4)	4 x 1.5 in. (10 x 3.8 cm)	–
Dimensions 6-inch (-B6)	6 x 1.5 in. (15.2 x 3.8 cm)	5.9 x 1.3 in. (15 x 3.3 cm)

■ Available – Not available

Modules & Accessories



FPE-1000-NE
Class A Ethernet Networking Card



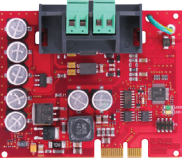
FPE-1000-NF
Network-to-Fiber Networking Card



FPE-1000-NW
Network-to-Wired Networking Card



FPE-1000-CITY
City Tie Plug-in Module



FPE-1000-SLC
Signaling Line Circuit Plug-in Module



FMR-1000-RA
Remote Annunciator



FMR-1000-RCMD
Remote Command Center



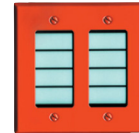
FPP-RNAC-8A-4C
Remote Notification Appliance Circuit Power Supply



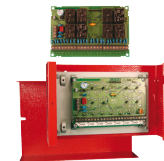
D7030X
LED Annunciators

D7030X-S2
Annunciator-2-Supervisory

D7030X-S8
Annunciator-8-Supervisory



D7032
Eight-zone LED Annunciator Expander



D7035
Octal Relay Modules

D7035B
Mux octal relay fire box

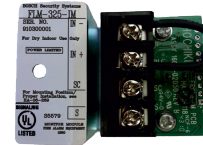


D7048 / D7048B
Octal Driver Modules

Modules & Accessories



FLM-325-2I4
Dual Input Monitor



FLM-325-IM
Contact Module



FLM-325-2R4
Dual Relay Module

FLM-325-2R4-2A
Dual Relay Module 2 AMP

FLM-325-2R4-2AI
Dual Relay Module 2 AMP with Isolator

FLM-325-2R4-8A
Dual Relay Module 8 AMP

FLM-325-2R4-8AI
Dual Relay Module 8 AMP with Isolator



FLM-325-ISO
Short Circuit Isolator



FLM-325-N4
Supervised Output Modules

FLM-325-NA4
Supervised Output Modules (CL.A/B)

FLM-325-NAI4
Supervised Output Modules (CL.A/B W/I)



FLM-325-CZM4
Conventional Zone Module



FMM-325A / FMM-325A-D
Analog Manual Stations



FLM-325-I4
Contact Monitors 4-inch

FLM-325-I4-A
Contact Monitors 4-inch Class A

FLM-325-I4-AI
Contact Monitors 4-inch Class A with Isolator



D5070
Analog Device Programmer

A Tradition of Quality and Innovation

For over 125 years, the Bosch name has stood for quality and reliability. Bosch is the global supplier of choice for innovative technology, backed by the highest standards for service and support. Bosch Security Systems proudly offers a wide range of security, safety, communications and sound solutions that are relied upon every day in applications around the world, from government facilities and public venues to businesses, schools and homes.

Bosch Security Systems

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