

7100X(A), 8100(A), 9400X(A)

Conventional FFAST™ Series Detectors



Conventional Smoke Detector

General

Conventional FFAST Series aspirating smoke detectors deliver highly accurate very early warning fire detection, early warning fire detection, and standard Fire Detection that meets the needs of a variety of environments, including mission-critical facilities like data centers where downtime from smoke or fires can be incredibly costly.

The ability to configure FFAST for standard fire detection allows FFAST to be used in harsh environments where standard spot detectors may be subject to nuisance alarm conditions. As FFAST can be easily tested via a test port within the pipe network it can simplify the testing associated with standard detectors.

The Conventional FFAST Series detectors combine dual-source optical smoke detection (blue LED and infrared laser) with advanced algorithms to detect a wide range of fires while maintaining enhanced immunity to nuisance particulates. The combination enables the detectors to accurately detect incipient fire conditions as early as 30 to 60 minutes before a fire actually starts.

Three models are available for use in different size applications. The series consists of FFAST XS, FFAST XM, and FFAST XT; with specific model numbers of 7100X(A), 8100(A), and 9400X(A). The three models can provide standard detection coverage to protect the following areas:

- **7100X(A) (FAAST XS):** Up to 5,000 sq. ft. (464 sq. m) through one pipe.
- **8100(A) (FAAST XM):** Up to 8,000 sq. ft. (743 sq. m) through one pipe.
- **9400X(A) (FAAST XT):** Up to 28,800 sq. ft. (2601 sq. m) through one to four pipes.

Conventional FFAST provides Form C relays that connect to input points on any FACP. The detector communicates alarm levels, urgent and minor faults, and isolate inputs via the relays. To enable a full detection strategy, FFAST combines its advanced communications capabilities with an extensive range of customizable settings. Up to five alarm levels can be programmed for latching or non-latching relays. To accommodate specific codes or environments, alarm delays can be set anywhere between 0 to 60 seconds.

Conventional FFAST series detectors offer selectable sensitivity modes. In Acclimate® mode, the detector automatically adjusts itself to current environmental conditions to reduce nuisance alarms. Day/Night/Weekend mode enables technicians to preset alarm thresholds based on routine changes in the environment.

Alternate or additional monitoring is supported in several different ways, including: Serial or TCP Modbus, Ethernet over a LAN or a direct connection, or via onboard USB. When connected to a LAN, FFAST series devices email server can provide email event notification to appropriate personnel.

PipelQ® is intuitive design, configuration, and monitoring software used for all FFAST series devices. The all-in-one program can be used to create a pipe network tailored to meet site specific requirements, configure a FFAST device, and monitor an installed device — including live trending and reading of historic reports.



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Features

- Detection as precise as 0.00029%/ft obscuration.
- Multiple alarm levels provide application flexibility: five on FFAST XM and FFAST XT, three on FFAST XS.
- In Acclimate® mode, the detector automatically adjusts itself to current environmental conditions to reduce nuisance alarms. Day/Night/Weekend mode enables technicians to preset alarm thresholds based on routine changes in the environment. A Conventional FFAST series detector can self-adapt to its environment in 24 hours.
- All devices provide ultrasonic sensing for pipe and chamber air-flow measurements; FFAST XM offers additional electronic sensing.
- Advanced detection algorithms reject common nuisance conditions.
- Patented particle separator and field-replaceable filter remove contaminants from the system.
- Intuitive system layout, configuration, and monitoring provided by PipelQ software.
- Comprehensive, simple and intuitive display has real-time, quick-read information at the device including alarm levels, particulate levels, air flow, power and a wide range of faults to quickly identify the problem for prompt correction.
- The onboard Ethernet interface enables monitoring from any compatible Internet browser, smart phone or mobile device with VPN capability. Detector can be configured to e-mail status updates to appropriate personnel.
- TCP and serial Modbus for easy integration with Building Management Systems.
- Fault indicators exhibit a broad spectrum of events.
- Unique air flow pendulum graph verifies pipe network functionality.
- Particulate graph displays subtle environmental changes for early problem indications.
- Approved for use in Class I, Division 2, Groups A,B,C, and D Hazardous Locations (FAAST XM, FFAST XT only).
- User configurable 3-speed fan, allowing for maximum coverage area or minimizing current consumption [7100X(A) and 9400X(A) only].
- Detector trouble reporting at panel.

- Individual activation of the event relays on the Conventional FAAST series detectors.

Specifications for All Conventional FAAST Series Detectors

ELECTRICAL SPECIFICATIONS

External Supply Voltage: 18-30 VDC; provided by a UL 864 or UL 1481 listed power supply.

Remote Reset Time: External monitor must be pulled low for a minimum of 100 ms.

Power Reset: 1 sec.

Relay Contact Ratings: 3.0 A @ 30 VDC, 0.5 A @ 125 VAC.

ENVIRONMENTAL RATINGS

Operating Temperature: 32°F (0°C) to 100°F (38°C).

Sampled Air Temperature: -4°F (-20°C) to 140°F (60°C).

Humidity Range: 10 to 95% (non-condensing).

IP Rating: IP30.

Air Movement: 0-4,000 ft./min (0-1,219 m/min).

Sensitivity Range: 0.00029%/ft. obs – 6.25%/ft. obs.

PHYSICAL SPECIFICATIONS

Communication Network: Ethernet monitoring, 6 E-mail address alerts, Modbus/TCP.

Cable Access: Cable-entry holes on top and bottom of unit [1 inch (2.54 cm)].

Wire Gauge: 12 AWG (2.05 mm) max. to 24 AWG (0.5 mm) min.

Network Outside Pipe Diameter: 1.050 inches, IPS (25 mm).

Internal Pipe Diameter: 0.591 to 0.827 inches (15-21 mm).

Event Log: 18,000 events stored.

Specifications for Specific Models

7100X(A)

- **Coverage:** Up to 5,000 sq.ft. (464 sq.m), through one pipe.
- **Avg. Operating Current:** Fan High - 200mA, 4.8W; Fan Med - 151mA, 3.7W; Fan Low - 120mA, 2.1W.
- **Alarm:** Fan High - 230mA, 5.6W; Fan Med - 172mA, 4.2W; Fan Low - 142mA, 3.5W.
- **Relays:** 5 Form C, 3 A, programmable latching or non-latching.
- **Maximum Single Pipe Length:** 180 ft. (54.8 m). *All designs must be verified within PipelQ software.*
- **Total Pipe Length:** 225 ft. (68.6 m). *All designs must be verified within PipelQ software.*
- **Size:** 11.0 in (27.9 cm) tall x 9.0 inches (22.9 cm) wide x 6.25 inches (15.9 cm) deep.
- **Shipping Weight:** 8.8 lbs (3.99 kg), includes packaging material.

8100(A)

- **Coverage:** 8,000 sq. ft. (743 sq. m), through one pipe.
- **Avg. Operating Current:** 415 mA @ 24 VDC.
- **Alarm:** 465 mA – All relays active, all alarm levels displayed. Voltage @ 24 VDC.
- **Relays:** 8 Form C, 3 A, programmable latching or non-latching.
- **Maximum Single Pipe Length:** 262 ft. (80 m). *All designs must be verified within PipelQ software.*
- **Total Pipe Length:** 333 ft. (101.5 m). *All designs must be verified within PipelQ software.*
- **Size:** 13.25 inches (33.7 cm) tall x 913.0 inches (33 cm) wide x 5.0 inches (12.7 cm) deep.

- **Shipping Weight:** 11.6 lbs. (5.26 kg), includes packing material.

9400X(A)

- **Coverage:** 28,800 sq. ft. (2,676 sq. m), through one to four pipes.
- **Avg. Operating Current:** Fan High - 465mA, 11.2W; Fan Med - 340mA, 8.2W; Fan Low - 220mA, 5.3W.
- **Alarm:** Fan High - 493mA, 11.85W; Fan Med - 368mA, 8.85W; Fan Low - 248mA, 6W.
- **Relays:** 8 Form C, 3 A, programmable latching or non-latching.
- **Maximum Single Pipe Length:** 400 ft. (123 m), with other three pipes disabled. *All designs must be verified within PipelQ software.*
- **Total Pipe Length:** 1050 ft. (320 m). *All designs must be verified within PipelQ software.*
- **Size:** 13.3 inches (33.8 cm) tall x 13.1 inches (33.3 cm) wide x 7.5 inches (19.1 cm).
- **Shipping Weight:** 11.8 lbs. (5.4 kg), includes packing material.

User Interface Display

- Up to five alarm levels:
 - 7100X(A): Three alarm levels (Alert, Fire 1, & Fire 2).
 - 8100(A), 9400X(A): Five alarm levels (Alert, Action 1, Action 2, Fire 1, & Fire 2).
- Ten particulate levels.
 - 7100X(A): Ten single-color flow with more info on the LCD.
 - 8100(A): Ten bi-color flow.
 - 9400X(A): Ten single-color flow with more info on the LCD.
- Fault graph.

Agency Listings and Approvals

The listings and approvals below apply to Conventional FAAST Series components. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL Listed:** S911.
- **ULC Listed:** S911.
- **FM approved.**
- Approved for use in Class I, Division 2, Groups A,B,C, and D Hazardous Locations (FAAST XM, FAAST XT only).

Product Line Information

7100X (Conventional FAAST XS): Intelligent aspiration smoke detector, covers up to 5,000 sq.ft. For Canadian applications, order 7100XA.

8100 (Conventional FAAST XM): Intelligent aspiration smoke detector, covers up to 8,000 sq.ft. For Canadian applications, order 8100A.

9400X (Conventional FAAST XT): Intelligent aspiration smoke detector, covers up to 28,800 sq.ft. For Canadian applications, order 9400XA.

F-A3384-000: Replacement Air Filter.

F-LCARD-SP: FAAST XM Language Card, Spanish.

P-ENDCAP: End Cap (25 each).

P-TEE: Tee (15 each).

P-UNION: Union (10 each).

P-LABEL-P: Pipe Label (100 each).

P-LABEL-T: Sampling Point Labels (100 each).

P-SAMP-KT: Sampling Point Kit (10 sets).

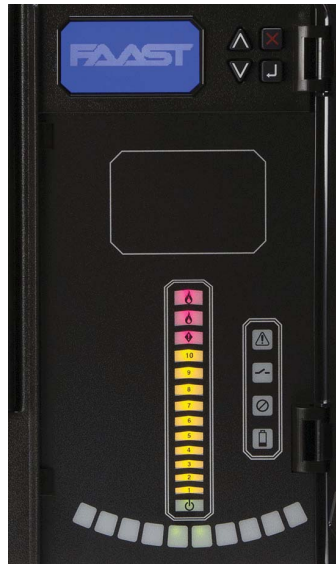
P-COUPPLING: Coupling.

P-ELB-45: 45° CPVC Elbow.

P-ELB-90: 90° CPVC Elbow.

P-PIPE-210: CPVC Pipe.

PipeIQ® software is available for download at no charge at systemsensor.com/faast.



User Interface Display:
Conventional FAAST™ XS



User Interface Display:
Conventional FAAST™ XM



User Interface Display:
Conventional FAAST™ XT

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