

FAAST™ Fire Alarm Aspiration Sensing Technology

Model 8100€

Overview

Features

- Detection as precise as 0.0015 % obs/m
- Five alarm levels and two sensitivity modes provide application flexibility
- Dual flow detection including both ultrasonic and electronic sensing for pipe and chamber air flow measurement
- A single device protects up to 2000m²
- Advanced detection algorithms reject common nuisance conditions
- Patented particle separator and field-replaceable filter remove contaminants from the system
- PipeIQ™ software provides intuitive system layout, configuration, and monitoring all in one package
- Integral Ethernet interface enables remote monitoring and e-mail status updates
- Fault indicators provide a broad spectrum of events
- Unique air flow pendulum graph verifies pipe network functionality
- Particulate graph displays subtle environmental changes for early problem indications



Description

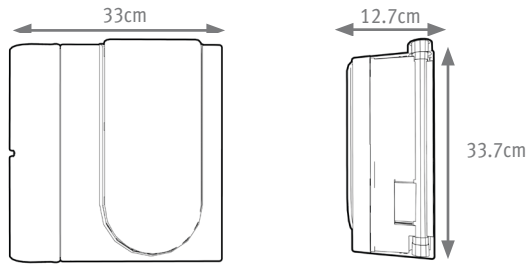
The FAAST™ Aspirating smoke detector combines dual source (blue LED and infra-red laser) optical smoke detection with advanced algorithms to detect a wide range of fire types while maintaining enhanced immunity to nuisance particulates. This enables FAAST™ to accurately detect incipient fire conditions as early as 30 to 60 minutes before a fire actually starts in class A and Class B Fire Detection.

Every FAAST™ comes complete with PipeIQ™ to guide users through pipe layout, and provide intuitive control over system configuration and ongoing system monitoring. When installed FAAST™ can be monitored through its integral display, from a computer connected to the device or remotely through a computer browser or mobile device when the detector is connected to the Internet via its Ethernet port.

When Internet-connected, FAAST™ can also e-mail status updates to appropriate personnel. The detector can communicate alarm levels, urgent and minor faults, and isolate inputs via eight form C relays.

To enable a full detection strategy, FAAST™ combines its advanced communications capabilities with an extensive range of customisable settings. The detector provides five alarm levels that 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. FAAST™ also supports two 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.

Architect/Engineer Specifications



Physical Specification

Height	33.7 cm
Width	33 cm
Depth	12.7 cm
Cable Access	2.54 cm cable entry holes on top and bottom of unit
Wire Gauge	12 AWG (2.0 mm) max. to 24 AWG (0.5 mm) min.
Maximum Single Pipe Length	120m
Maximum Air Inlet Holes	20 holes for Class A and B acc. to EN 54-20 24 holes for Class C acc. to EN 54-20 (Please consider local standards)
Maximum Total Branched Pipe Length	320m
Maximum Air Inlet Holes	36 holes acc. to EN 54-20 for Class A, B and C. (Please consider local standards)
Network Outside Pipe Diameter	25 mm
Internal Pipe Diameter	15-21 mm
Sensitivity Range	0.0015 % obs/m – 20.5 % obs/m
Noise Level:	As low as 41 db(A)
Relays	8 form C, 3 AMP, programmable latching or non-latching
Event Log	18,000 events stored
Communication Network	Ethernet monitoring, 6 E-mail address alerts
Shipping Weight	5.26kg, includes packing material

Electrical Specifications

External Supply Voltage	18-30 VDC
Remote Reset Time	External monitor must be pulled low for a minimum of 100 ms
Power Reset	1 sec.
Avg. Operating Current	500 mA @ 24 VDC
Alarm	650 mA – All relays active, all alarm levels displayed. Voltage @ 24 VDC
Maximum Current Draw	650 mA Voltage at 18 VDC

Environmental Specifications

Operating Temperature	0°C to 38°C
Sampled Air Temperature	-20°C to 60°C
Humidity Range	10 to 95% (non-condensing)
IP Rating	IP30
Coverage Area	Up to 2000m ²
Air Movement	0-1,219 m/min.



FAAST™ User Interface Display

The User Interface consists of 5 Alarm levels – Alert, Action 1, Action 2, Fire 1, and Fire 2, 10 Particulate levels, 10 Bi-colour Flow and Fault graph.

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Installation information: in order to ensure full functionality, refer to the installation instructions as supplied.

DS8100E-15

8100E Product Evaluation Record

General information

Manufacturing Location:	System Sensor 3825 Ohio Avenue St. Charles IL 60174 USA
Model Numbers	8100E
Product Description	FAAST Aspirating Smoke Detector
Product Life Cycle	Life span expectancy of >7 years (assuming that environmental conditions have been taken into consideration) Replaceable filter life = 4 years.

Material Content

Name Of Part	Material	RoHS	Hazardous	Recycling Instruction (WEEE is out of scope)
Housing	PC/ABS, brass	Yes	Non-Hazardous	Recycled, blend with virgin material
Front cover	PC/ABS	Yes	Non-Hazardous	Recycled, blend with virgin material
Display door	PC	Yes	Non-Hazardous	Recycled, blend with virgin material
Fan housing	ABS	Yes	Non-Hazardous	Recycled, blend with virgin material
Fan cover	ABS	Yes	Non-Hazardous	Recycled, blend with virgin material
Fan	metals, plastics, ceramics, Tin, brass	Yes	Non-Hazardous	Recycled or Landfill
Wiring door	PC/ABS	Yes	Non-Hazardous	Recycled, blend with virgin material
User interface card	PC	Yes	Non-Hazardous	Not Recyclable, Landfill
Chamber housing	PP, carbon	Yes	Non-Hazardous	Not Recyclable, Landfill
Chamber cover	PP, carbon, TPE, brass	Yes	Non-Hazardous	Not Recyclable, Landfill
Filter element	PU Foam	Yes	Non-Hazardous	Not Recyclable, Landfill
Filter cover	ABS	Yes	Non-Hazardous	Recycled, blend with virgin material
IRED housing, LED housing,	PC	Yes	Non-Hazardous	Recycled, blend with virgin material
Photo housing, Light trap	PC	Yes	Non-Hazardous	Recycled, blend with virgin material
Lens-IRED, Lens-LED, Lens-photo	PMMA	Yes	Non-Hazardous	Recycled, blend with virgin material
Foam, gaskets	Neoprene, EPDM, SBR	Yes	Non-Hazardous	Not Recyclable, Landfill
SS shields (2)	304 SS, tin plated	Yes	Non-Hazardous	Recyclable
Ferrite beads (5)	ferrite ceramic	Yes	Non-Hazardous	Not Recyclable, Landfill
Cables	Tn, Ni, PVC	Yes	Non-Hazardous	Not Recyclable, Landfill
Screws	steel, tin plated	Yes	Non-Hazardous	Recyclable
Magnet	Neodymium, Ni	Yes	Non-Hazardous	Recycled or Landfill
Tinnerman nut	steel	Yes	Non-Hazardous	Recyclable
Fan housing and cover	ABS	Yes	Non-Hazardous	Recyclable
Particle separator	PPE, PS	Yes	Non-Hazardous	Recyclable
Ultrasonic tube	ABS	Yes	Non-Hazardous	Recyclable
Flow sens housing	ABS	Yes	Non-Hazardous	Recyclable
O-rings	silicone	Yes	Non-Hazardous	Not Recyclable, Landfill
Printed circuit boards (7)	FR4(epoxy, glass), SAC305(copper, solder), ENIG(copper, gold)	Yes		Recycled or Landfill
Printed circuit board components	metals, plastics, ceramics, Tin, brass	Yes	Non-Hazardous	Recycled or Landfill
Reflow process	lead solder paste	No	Hazardous	Recycle or Reclaim
Wave solder process	lead solder	No	Hazardous	Recycle or Reclaim

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8100E Product Evaluation Record

Energy Consumption

Avg. Operating Current:	500 mA @ 24 VDC
Alarm:	650 mA – All relays active, all alarm levels displayed. Voltage @ 24 VDC

Packaging

Primary packaging	Single count master box: Corrugated box, paper inserts and tape (polypropylene)
Transportation packaging	Pallet (wooden platform), wrapping (polyethylene)

Additional Information

The purpose of this report is to provide information on the environmental aspects of the product, emphasis being on the material content and the energy consumption. The transportation emissions are not included.

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