DET-TRONICS®

A UTC Fire & Security Company

SPECIFICATION DATA

AUTOMATIC oi*

IR Flame Detector

X9800

DESCRIPTION

YEAR 3 WARRANTY

The evolution continues with the new X9800 IR Flame Detector. The X9800 meets the most stringent requirements worldwide with advanced detection capabilities and immunity to extraneous sources, combined with a superior mechanical design. The detector is equipped with automatic, manual and magnetic oi test capability. The detector has Division and Zone explosion-proof ratings and is suitable for use in indoor and outdoor applications.

The standard output configuration includes fire, fault and auxiliary relays. An optional 4 to 20 mA output can be provided in addition to the three relays. A model with pulse output is available for easy retrofitting into existing Det-Tronics controller based systems. Auxiliary relay and 4 to 20 mA output are not available with the pulse model. A tricolor LED on the detector faceplate indicates detector status condition.

The X9800 housing is available in aluminum or stainless steel, with NEMA 4X and IP66 rating.

Typical applications include:
- Dirty environments
- Petrochemical applications
- Automotive applications
- Powder coating applications
- Turbines.

*oi is Detector Electronics' Trademark for its patented Optical Integrity Systems, U.S. Patent 3,952,196, United Kingdom Patent 1,534,969, Canada Patent 1,059,598.

FEATURES

- FM 3260 (2000).
- EN 54-10 Certified (VdS).
- ATEX Directive compliant.
- EQP models available.
- TDSA (Time Domain Signal Analysis) for unequaled false alarm rejection.
- Responds to a fire in the presence of modulated blackbody radiation (i.e. heaters, ovens, turbines) without false alarm.
- High speed capability — 40 milliseconds.
- Microprocessor controlled heated optics for increased resistance to moisture and ice.
- Automatic, manual or magnetic optical integrity (oi) testing — no external test lamp required.
- Easily replaceable oi plate.
- Fire, fault and auxiliary relays standard.
- MODBUS RS-485 communication.
- 4 to 20 mA isolated output (optional).
- Pulse output for compatibility with controller based systems (optional).
- Tricolor LED indicates normal operation, fire and fault conditions.
- Operates under adverse weather conditions and in dirty environments.
- Mounting swivel allows easy sighting.
- Integral wiring compartment for ease of installation.
- Class A wiring per NFPA-72.
- Meets NFPA-33 response requirement for under 0.5 second (available when model selected).
- RFI and EMC Directive compliant.
- Built-in data logging/event monitoring.

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SPECIFICATIONS

Operating Voltage 24 vdc. Operating range is 18 to 30 vdc.

Power Consumption 2.1 watts @ 24 vdc minimum.
16.5 watts @ 30 vdc with EOL resistor installed and heater on maximum.

Relays Contacts rated 5 amperes at 30 vdc.

Fire Alarm: — Form C (NO and NC contacts)
— normally de-energized
— latching/non-latching.

Fault: — Form A (NO contacts)
— normally energized
— latching/non-latching.

Auxiliary*: — Form C (NO and NC contacts)
— normally energized
— latching/non-latching.

Current Output* (Optional) 4–20 mA, with a maximum loop resistance of 500 ohms from 18–19.9 vdc, 600 ohms from 20–30 vdc.

Temperature Range Operating: –40°F to +167°F (–40°C to +75°C).
Storage: –67°F to +185°F (–55°C to +85°C).

Humidity Range 0 to 95% relative humidity, can withstand 100% condensing humidity for short periods of time.

Field of View The X9800 has a 90 degree cone of vision with the highest sensitivity lying along its central axis.

Warranty 3 years.

Enclosure Material Copper-free aluminum or 316 stainless steel.

Conduit Entry Size 3/4 inch NPT or 25 mm.

Shipping Weight (Approximate) Aluminum: 6 pounds (2.7 kg).
Stainless Steel: 10 pounds (4.5 kg).

Response Characteristics

Very High Sensitivity, TDSA On

Fuel	Size	Distance Feet (M)	Typical Response Time (Sec.)	Quick Fire
n-Heptane	1 x 1 foot	85 (25.9)	15	Off
Methane	32 inch plume	60 (18.3)	5	Off
Propane	Torch	2 (0.6)	0.04	On

NOTE: Refer to the X9800 instruction manual (form number 95-8554) for details regarding detector response.

*Auxiliary relay and 4 to 20 mA output are not available on pulse output model.

Certification

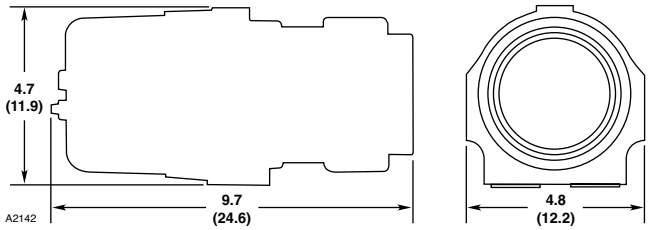
Class I, Div. 1, Groups B, C & D;
Class II, Div. 1, Groups E, F, & G;
Class I, Div. 2, Groups A, B, C & D (T3);
Class II, Div. 2, Groups F & G (T3);
Class III.
NEMA/Type 4X.

Increased Safety Model
0539 Ex II 2 GD
EEx de IIC T5–T6 T86°C
DEMKO 02 ATEX 132195
T6 (T_{amb} = –55°C to +60°C).
T5 (T_{amb} = –55°C to +75°C).
IP66.

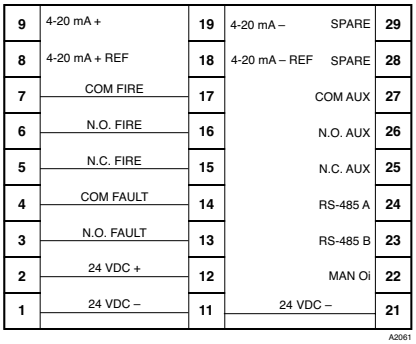
IECEx
Certificate of Conformity
IECEx ULD 06.0018X
Ex d IIC T5-T6 or Ex de IIC T5-T6
T6 (T_{amb} = –55°C to +60°C).
T5 (T_{amb} = –55°C to +75°C).

Flameproof Model
0539 Ex II 2 GD
EEx d IIC T5–T6 T86°C
DEMKO 02 ATEX
T6 (Tamb = –55°C to +60°C).
T5 (Tamb = –55°C to +75°C).
IP66.

Dimensions Dimensions shown in inches (centimeters).



Wiring 14 AWG (2.08 mm^2) or 16 AWG (1.31 mm^2) shielded cable is recommended.



Wiring Terminal Identification for Standard X9800

Detector Electronics Corporation
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Operator: (952) 941-5665 or (800) 765-FIRE
Customer Service: (952) 946-6491 • Fax (952) 829-8750
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Specifications subject to change without notice.