

**SPECIFICATION DATA**

AUTOMATIC **oi**

UVIR Flame Detector X5200

**DESCRIPTION**

The evolution continues with the new X5200 UVIR Flame Detector. The X5200 combines the technologies used in the X2200 and X9800 to provide unparalleled detection capabilities and immunity to extraneous sources, combined with a superior mechanical design. The mounting arrangement allows the UV and IR sensors to monitor the same hazardous location with a 90 degree cone of vision. When both sensors simultaneously detect the presence of a flame,

an alarm signal is generated. 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 0 to 20 mA output with HART 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 0 to 20 mA output are not available with the pulse model. A tricolor LED on the detector faceplate indicates normal condition and notifies personnel of fire alarm or fault conditions.

The X5200 housing is available in aluminum or stainless steel, with NEMA 4X and IP66 rating.

Typical applications include:

- Munitions
- Petrochemical applications
- Turbines.

FEATURES AND BENEFITS

- FM 3260 (2000).
- EN 54-10 Certified (VdS).
- ATEX Directive compliant.
- EQP models available.
- A new level of false alarm rejection.
- Responds to a fire in the presence of modulated blackbody radiation (i.e. heaters, ovens, turbines) without false alarm.
- HART models available.
- High speed capability.
- 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.
- 0 to 20 mA isolated output (optional).
- Pulse output for compatibility with controller based systems (optional).
- A tricolor LED on the detector faceplate indicates normal condition and notifies personnel of fire alarm or fault conditions.
- 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.

SPECIFICATIONS

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

Power Consumption 2.8 watts @ 24 Vdc minimum.
17.5 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) 0–20 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 X5200 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 (2.75 kg).
Stainless Steel: 10 pounds (4.5 kg).

Response Characteristics

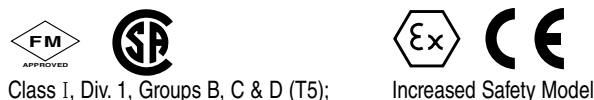
Very High Sensitivity UV & IR, Low Arc, TDSA On, Quick Fire On

Fuel	Size	Distance Feet (m)	Typical Response Time (seconds)
n-Heptane	1 x 1 foot	85 (25.9)	14
Methane	32 inch plume	65 (19.8)	5

NOTE: Refer to the X5200 instruction manual 95-8546 for details regarding detector response.

*Auxiliary relay and 0 to 20 mA output are not available on pulse output model.

Certification



Class I, Div. 1, Groups B, C & D (T5);

Increased Safety Model

Class II, Div. 1, Groups E, F, & G (T5);
Class I, Div. 2, Groups A, B, C & D (T3);
Class II, Div. 2, Groups F & G (T3);
Class III.
Enclosure NEMA/Type 4X.

CE 0539 II 2 G
Ex d e IIC T5–T6 Gb
DEMKO 02 ATEX 132195X
T6 (T_{amb} = –50°C to +60°C).
T5 (T_{amb} = –50°C to +75°C).
IP66.

IECEx Certificate of Conformity

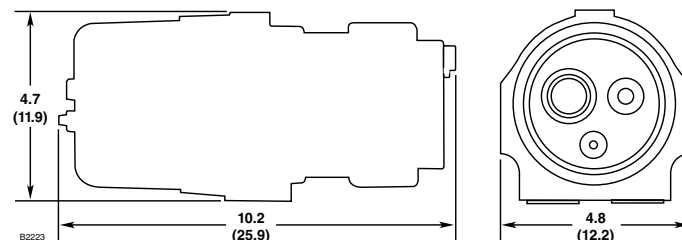
IECEx ULD 06.0018X
Ex d e IIC T5–T6 Gb
T6 (T_{amb} = –50°C to +60°C).
T5 (T_{amb} = –50°C to +75°C).
IP66.

Flameproof Model
CE 0539 II 2 G
Ex d IIC T5–T6 Gb
DEMKO 02 ATEX 132195X
T6 (T_{amb} = –55°C to +60°C).
T5 (T_{amb} = –55°C to +75°C).
IP66.

– or –
Ex d IIC T5–T6 Gb
T6 (T_{amb} = –55°C to +60°C).
T5 (T_{amb} = –55°C to +75°C).
IP66.

Dimensions

Dimensions shown in inches (centimeters).



Wiring

14 AWG (2.08 mm²) or 16 AWG (1.31 mm²) shielded cable is recommended.

9	4-20 mA +	19	4-20 mA –	SPARE	29
8	4-20 mA + REF	18	4-20 mA – REF	SPARE	28
7	COM FIRE	17	COM FIRE	COM AUX	27
6	N.O. FIRE	16	N.O. FIRE	N.O. AUX	26
5	N.C. FIRE	15	N.C. FIRE	N.C. AUX	25
4	COM FAULT	14	COM FAULT	RS-485 A	24
3	N.O. FAULT	13	N.O. FAULT	RS-485 B	23
2	24 VDC +	12	24 VDC +	MAN O ₁	22
1	24 VDC –	11	24 VDC –	24 VDC –	21

Wiring Terminal Identification for Standard X5200

IndustrialZone.com™
Your Portal to the Industrial World

IndustrialZone
P.O. Box 667306
Houston, Texas 77266
United States

(713)-395-1508
Fax: (713) 893-6924
support@industrialzone.com
www.industrialzone.com

Specifications subject to change without notice.

Det-Tronics, the DET-TRONICS logo, and Protect•IR are registered trademarks or trademarks of Detector Electronics Corporation in the United States, other countries, or both. Other company, product, or service names may be trademarks or service marks of others.

©Copyright Detector Electronics Corporation 2010. All rights reserved.



Detector Electronics Corporation

6901 West 110th Street • Minneapolis, Minnesota 55438 USA
Operator: (952) 941-5665 or (800) 765-FIRE
Customer Service: (952) 946-6491 • Fax (952) 829-8750
<http://www.det-tronics.com> • E-mail: det-tronics@det-tronics.com