

**Protect•ir Multispectrum IR Flame Detector
with Pulse Output
X3300****APPLICATIONS**

The Protect•ir Multispectrum IR Flame Detector is the future generation detector for performance and technology. The detector utilizes advanced signal processing algorithms supported by an embedded 32-bit microprocessor to provide continuous protection in the presence of false alarm sources and environments with infrared radiation present. It is suitable for indoor and outdoor applications that require the highest level of false alarm rejection and fire detection performance. The detector is available in aluminum or 316 stainless steel for installation in the harshest environments. The Protect•ir has a detection range to gasoline of over 200 feet, and a perfect cone of vision for methane. The detector provides a pulse output for easy retrofit into existing Det-Tronics controller based systems.

The X3300 provides superior performance in applications that are at the extremes, and where background infrared radiation is a normal condition:

- Offshore production platforms
- Offshore production ships
- Refineries
- Production facilities
- Loading racks
- Compressor stations
- Turbine enclosures.

NOTE: Shown with integral EExe junction box and Q9001L Swivel.

FEATURES AND BENEFITS**Protect•ir TECHNOLOGY FEATURES**

- Certified performance to multiple fuel types.
- Extended detection range.
- New standard set for cone of vision.
- Maximum false alarm rejection.
- Reliable flame detection with modulated IR background.
- Heated optics enable optimal performance in adverse environments.
- Calibrated automatic optical integrity test ensures proper detector operation.
- Factory sealed with integral wire harness to eliminate water ingress.
- High EMI and RFI immunity.
- International certifications.
- Solar resistance.

BENEFITS

- Single detector for multiple fuels.
- Ability to detect smaller fires earlier.
- Perfect cone of vision to 100 feet for methane.
- Better detection zoning capability.
- Best combination of flame detection and false alarm rejection.
- Low maintenance costs.
- Reliable fault diagnostics.
- Suitable for heavy industrial applications.
- Explosion/flame proof or increased safety installations (EExe) in hazardous locations.
- Multiple mounting configurations.
- Easily retrofitted (R7404, R7494).

SPECIFICATIONS

| | |
|---|--|
| Operating Voltage | 24 vdc nominal. Operating range is 18 to 32 vdc. |
| Power Consumption | 7.5 watts at 24 volts dc nominal; 9.0 watts at 32 volts dc maximum. |
| Wiring | Cable length = 3 feet (1 meter). |
| Temperature Range | <u>Operating:</u> -40°F to +167°F (-40°C to +75°C). <u>Storage:</u> -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. |
| Ingress Protection | IP66 NEMA/Type 4X. |
| Vibration | Meets MIL SPEC 810C, method 514.2, curve AW. |
| Enclosure Material | Copper-free aluminum or 316 stainless steel. |
| Thread Size | Conduit connection = 3/4 inch NPT or M25; Cable gland = M25, |
| Shipping Weight (Approximate) | Standard: <u>Aluminum:</u> 2.4 pounds (1.1 kg). <u>Stainless Steel:</u> 4.8 pounds (2.2 kg). EEx d e Model: <u>Aluminum:</u> 6.0 pounds (2.7 kg). <u>Stainless Steel:</u> 10.0 pounds (4.5 kg). |

Response Distances

| | Fuel | Size | Distance Ft (m) | Average Response Time (seconds) |
|------------------------------|----------|----------------------------------|-----------------|---------------------------------|
| Very High Sensitivity | Gasoline | 1 x 1 foot (0.1 m ²) | 210 (64)* | 8.4 |
| | Gasoline | 1 x 1 foot (0.1 m ²) | 100 (30) | 1.4 |
| | Diesel** | 1 x 1 foot (0.1 m ²) | 150 (46)* | 9.6 |
| | Methanol | 1 x 1 foot (0.1 m ²) | 150 (46)* | 5.7 |
| | Methane | 30 inch plume (0.8 m) | 100 (30) | 2.5 |
| | JP-5** | 2 x 2 foot (0.4 m ²) | 210 (64)* | 8.5 |
| | JP-5** | 2 x 2 foot (0.4 m ²) | 100 (30) | 2.6 |
| Medium Sensitivity | Gasoline | 1 x 1 foot (0.1 m ²) | 100 (30) | 6.0 |
| | Gasoline | 1 x 1 foot (0.1 m ²) | 50 (15) | 3.8 |
| | Diesel** | 1 x 1 foot (0.1 m ²) | 70 (21) | 7.4 |
| | Methanol | 1 x 1 foot (0.1 m ²) | 70 (21) | 9.7 |
| | Methane | 30 inch plume (0.8 m) | 65 (20) | 2.4 |
| | Methane | 30 inch plume (0.8 m) | 55 (17) | 0.8 |
| | JP-5** | 2 x 2 foot (0.4 m ²) | 100 (30) | 5.7 |

* Outdoor test condition.
** 10 second pre-burn from ignition.

Certification



FMR/CSA: Class I, Div. 1, Groups B, C & D;
Class II, Div. 1, Groups E, F, & G (T4A);
Class II/III.
Class I, Div. 2, Groups A, B, C & D;
Class II, Div. 2, Groups F & G (T3C);
Class II/III.
NEMA/Type 4X.
Explosion-proof Ambient Temperature Limits:
-55°C to +125°C.



GENELEC: Standard Temperature Model
EEx d IIC T6, EEx d e IIC T6
(T_{amb} = -40°C to +60°C).
EEx d IIC T5, EEx d e IIC T5
(T_{amb} = -40°C to +75°C).
IP66.

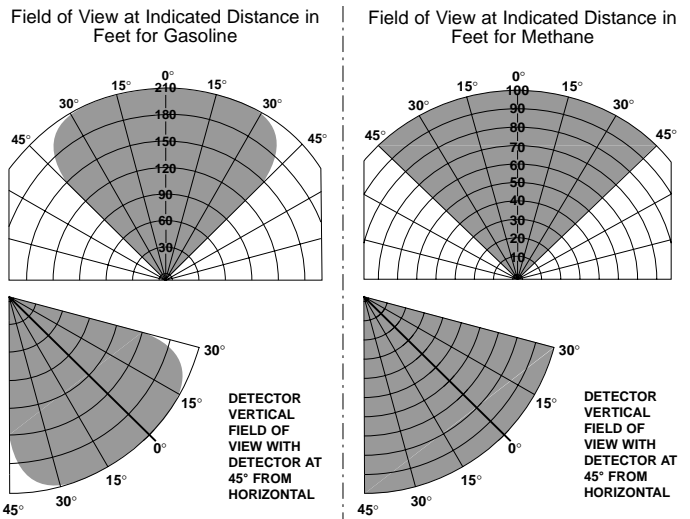
Integral J-Box Model
EEx d e IIC T6
(T_{amb} = -40°C to +60°C).
EEx d e IIC T5
(T_{amb} = -40°C to +70°C).
IP66.



CE: Conforms to all relevant European norms.

Field of View

90° horizontal by 75° vertical, at a minimum of 70% of the on-axis detection distance.



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Specifications subject to change without notice.