

**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 solid cone of vision for methane. The detector offers fire alarm/fault relays and an isolated 4 to 20 mA output.

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: Detector shown with optional swivel and EExe junction box

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 test.
- Factory sealed with integral wire harness to eliminate water ingress.
- High EMI and RFI immunity.
- Automatic optical integrity check on each sensor ensures proper detector performance.
- International certifications.
- Built in positioning swivel or direct connection to conduit.

BENEFITS

- Single detector for multiple fuels.
- Ability to detect smaller fires earlier.
- Solid 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.

SPECIFICATIONS

Operating Voltage	24 vdc. Operating range is 18 to 32 vdc.
Power Consumption	9.0 watts maximum during all operating conditions.
Relays	Contacts rated 5 amperes at 30 vdc. <u>Fire Alarm:</u> — Form C (N.O. and N.C.) — normally de-energized — latching/non-latching. <u>Fault:</u> — normally energized — normally closed contacts.
Wiring	Cable length 3 foot/1 meter.
Temperature Range	Operating: —40°F to +167°F (–40°C to +75°C). Storage: —67°F to +185°F (–55°C to +85°C). Hazardous location ratings from -55°C to +125°C available on extended temperature model.
Humidity Range	0 to 95% relative humidity, can withstand 100% condensing humidity for short periods of time.
Field of View	90° horizontal by 75° vertical, at a minimum of 70% of the on-axis detection distance.
Ingress Protection	IP66 NEMA/Type 4X.
Vibration	Meets MILSPEC 810C, method 514.2, curve AW.
Response Distance	

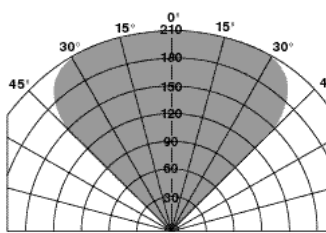
	Fuel	Size	Distance Ft (m)	Average Response Time (seconds)
Very High Sensitivity	Gasoline	1 x 1 foot (0.1 m ²)	210 (64)'	0.4
	Gasoline	1 x 1 foot (0.1 m ²)	100 (30)	1.4
	Diesel**	1 x 1 foot (0.1 m ²)	150 (48)'	9.8
	Methanol	1 x 1 foot (0.1 m ²)	150 (48)'	5.7
	Methane	30 inch plume (0.9 m)	100 (30)	2.5
	JP-5**	2 x 2 foot (0.4 m ²)	210 (64)'	0.5
Medium Sensitivity	JP-5**	2 x 2 foot (0.4 m ²)	100 (30)	2.8
	Gasoline	1 x 1 foot (0.1 m ²)	100 (30)	8.0
	Gasoline	1 x 1 foot (0.1 m ²)	50 (15)	3.0
	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 (0.9 m)	65 (20)	2.4
	Methane	30 inch plume (0.9 m)	55 (17)	0.9
	JP-5**	2 x 2 foot (0.4 m ²)	100 (30)	5.7

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

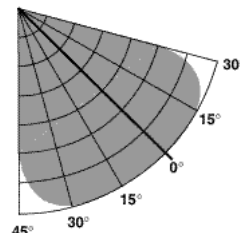
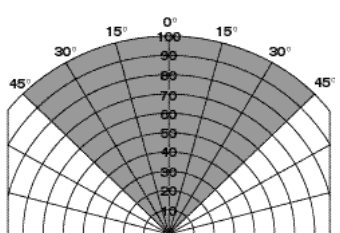
Certification	FMRC/CSA: Class I, Div. 1, Groups B, C & D; Class II, Div. 1, Groups E, F, & G; Class III (T4A). Class I, Div. 2, Groups A, B, C & D; Class II, Div. 2, Groups E, F & G; Class III (T3C). NEMA/Type 4X. CENELEC: Standard Temperature Model EEx d IIC T6, EEx d e IIC T6 (T _{amb} = –40°C to +60°C). EEx d IIC T5, EEx d e IIC T5 (T _{amb} = –40°C to +75°C). IP66. Extended Temperature Model EEx d IIC T6, EEx d e IIC T6 (T _{amb} = –55°C to +60°C). EEx d IIC T5, EEx d e IIC T5 (T _{amb} = –55°C to +75°C). EEx d IIC T4, EEx d e IIC T4 (T _{amb} = –55°C to +100°C). IP66. CE Conforms to all relevant European norms.
Enclosure Material	Copper-free aluminum or 316 stainless steel.
Conduit Entry Size	Male, 3/4 inch NPT or 25 mm.
Mounting Options	Direct, swivel or integral swivel aiming adapter.
Shipping Weight (Approximate)	Aluminum: 2.4 pounds (1.1 kg). Stainless Steel: 4.8 pounds (2.2 kg).

Field of View

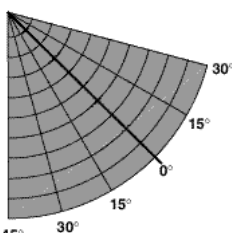
Field of View at Indicated Distance in Feet for Gasoline



Field of View at Indicated Distance in Feet for Methane



DETECTOR VERTICAL FIELD OF VIEW WITH DETECTOR AT 45° FROM HORIZONTAL.



DETECTOR VERTICAL FIELD OF VIEW WITH DETECTOR AT 45° FROM HORIZONTAL.



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Specifications subject to change without notice.