



Fireray® 2000 EEXd

Flameproof Projected Optical Beam Smoke Detector

The Fireray® 2000 EEXd is ideally suited for the protection of large areas, with potentially explosive atmospheres, against smoking fires. Fireray® 2000 EEXd comprises an infrared transmitter and a receiver, both of which are ATEX-certified for use in Group 2 hazardous areas. There is a separate, safe area, wall-mounted remote/low level control unit to allow adjustment and testing from a convenient non-hazardous location.

The product is designed for large enclosures within oil rigs, refineries, ordnance stores and similar premises. It provides an early warning of smoldering or strongly smoke-generative fires, which may not be picked up by flame detectors installed in many hazardous areas. The Fireray® 2000 EEXd optical beam smoke detector, together with a battery backed power supply, can be connected to a zone of a conventional fire alarm control panel or interfaced to an analogue-addressable system via an addressable input module or a zone monitor module.

Features

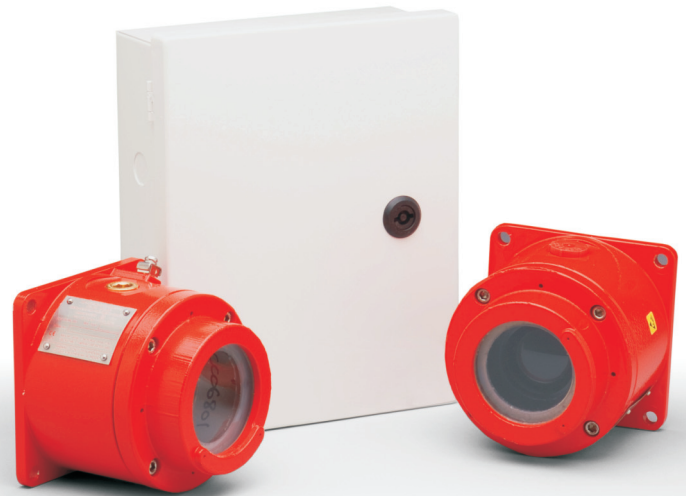
- Separate transmitter and receiver unit certified to EEXd
- Range 10-100 metres
- 12 and 24V d.c. operating voltage
- Low current consumption
- Automatic self check drift compensation
- 3x Selectable fire alarm thresholds
- Remote/low level control unit (Safe Area)
- Complies with ATEX and EN54:12

Approvals

The Fireray® 2000 EEXd complies with the ATEX Directive.



Ⓜ II 2 G D IP6X EEx d IIB T6 (Tamb = -20°C to +55°C)



Operation

The Fireray® 2000 EEXd optical beam smoke detector has three selectable "Alarm Threshold" settings of 25%, 35% and 50%, which can be selected to suit the environment; if the received infrared signal reduces to below the selected threshold and is present for approximately 10 seconds, the fire relay is activated. There are two modes to the operation of the fire relay. "Auto Reset Mode" will reset the fire relay approximately 5 seconds after the received infrared signal has recovered to a level above the alarm threshold. "Latching Mode" holds the fire relay active after an alarm condition has occurred until the external reset is activated.

If the infrared beam is obscured rapidly to a level of 93% or greater for approximately 10 seconds the fault relay is activated. This condition can be achieved in a number of ways, for example, an object being placed in the beam path or sudden misalignment of the detector. The fault relay will reset within approximately 4 seconds of the condition being rectified.

The Fireray® 2000 EEXd Optical Beam Smoke Detectors monitor long-term degradation of signal beam strength caused by the build up of dirt on its optical surfaces; this operates by comparing the received infrared signal against a voltage reference every 1.5 hours.

Accessories



Optional Wall Mounting Bracket

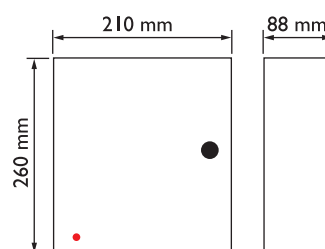
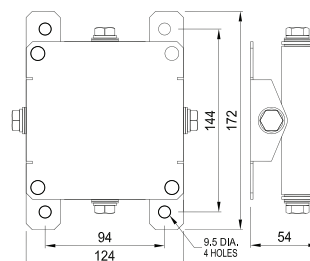
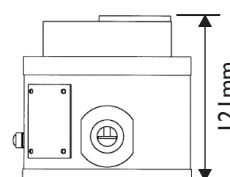
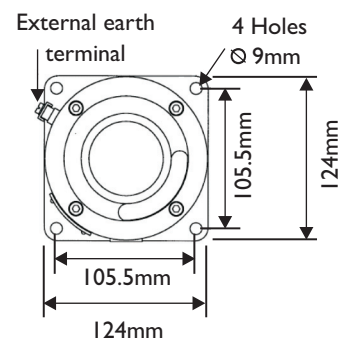


Alignment Aid Tool

Technical Specification

Operating Range:	10 to 100 Metres
Operating Voltage Range:	11.5V DC to 28V DC
Transmitter Current:	< 1.6 to 5.6mA
Quiescent Current (Controller inc. Rx):	< 8mA @ 24V DC
Alarm & Fault Current (Controller inc. Rx):	< 16.5mA @ 24V DC
Power Down Reset Time:	5 second.
Fire Relay Contacts:	Normally Open, VFCO 2A @ 30 Volts DC, resistive
Fault Relay Contacts:	Normally Closed, VFCO 2A @ 30 Volts DC, resistive
Operating Temperature:	-20°C. to +55°C. (non-condensing)
Fire Alarm Thresholds:	1.25dB (25%), 1.87dB (35%), 3dB (50%)
Optical Wavelength:	880nm
Control Unit Dimensions (Single Channel):	Width 210mm, Height 260mm, Depth 88mm
Control Unit Dimensions (3/4 Channel):	Width 415mm, Height 395mm, Depth 88mm
Tx & Rx Dimensions (excl. bracket):	Width 124mm, Height 124mm, Depth 121 mm
Weight - Control Unit :	1.1 Kg
Weight -Transmitter & Receiver inc. brackets:	4 Kg
LED Indications (Control Unit):	Red LED (Located on the door): Indicates FIRE Continuous Yellow (Located inside): Indicates FAULT Alarm Condition: Indicated by fire relay operating Fault Condition: Indicated by fault relay operating Alarm may be latching or non-latching (default)
Signal High/Signal Low Alignment LEDs:	Led 1 Green and LED 2 Green
Fuse Protection:	100mA (Control Unit)
IP Rating (Controller):	IP50(Controller) / IP66 (Transmitter/Receiver)
Relative Humidity:	RH 0% to 90%, (non-condensing)
Approvals/Certification:	ATEX Directive 94/9/EC EN54:12 CPD ref 0786-CPD-20196
Certificate No:	Sira 03ATEX1504
Certification Code:	Ex II 2 G D IP6X EEx d IIB T6 (Tamb = -20°C to +55°C)
Parts List:	1 x Transmitter (clear lens), 1 x Receiver (dark lens), 1 x Control Unit, 4 x Bolts, 1 x Test Filter & Bracket
Housing Construction (Controller):	Steel, colour white RAL9010
Housing Construction (Transmitter/Receiver):	Marine grade aluminium alloy, colour red RAL2002
Bracket Construction:	Steel, colour red RAL2002

All figures are quoted for 25 deg C



Installation Recommendations

The installation of the Fireray® infrared optical beam smoke detector should be undertaken in accordance with recognized national or international standards and codes of practice. Please refer to our installation guide number/reference 23989. We also recommend simulated fire tests are conducted to ensure the desired response time, for a given installation, is met.

Specifications and wiring information are provided for information only and are believed to be accurate. FFE Ltd assumes no responsibility for their use. Data and design are subject to change without notice. Installation and wiring instructions are shipped with the products and should always be used for actual installation. For more information, contact your Sales Representative.

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