



Fireray[®] 3000

End-to-End Beam Smoke Detector

The Fireray[®] 3000 End to End Infra-red Beam Smoke Detector has been designed using the latest optical technology, incorporating modern industrial, electronic and software techniques. This detector offers cost effective protection of large, open area spaces with high ceilings. It is also very suited to applications where access to ceiling mounted smoke detectors presents practical difficulties.

The Fireray[®] 3000 is ideal for applications where line of sight for the IR (infra-red) detection path is narrow and where the building structure uses reflective surfaces. It has also been designed to be aesthetically pleasing and thus can equally suit modern architectural buildings as well as heritage sites, particularly where ornate ceilings exist.

Features

- Range 5 to 120 metres, configurable per set of Detectors
- Light Cancellation Technology
- Integral Laser Alignment in Receiver
- 2-wire Interface between Controller and Receiver
- Single and Twin Detector Options
- Separate Fire and Fault Relays per Detector
- Low Level Controller with LCD display
- Programmable Sensitivity and Fire/Threshold
- Contamination Compensation
- First Fix Design for Transmitter, Receiver and Controller
- Multiple cable gland knockouts for ease of wiring
- Optional Transmitter powering from Controller
- Working Optical path for Detector Alignment



Operation

The system comprises a modern looking Transmitter head, which emits a narrow beam of infra-red light to an associated Receiver head, with a compact Low Level Controller. Once smoke crosses through and thus obscures the IR beam path, the signal strength at the Receiver drops below a preset level which in turn results in an alarm condition.

Both the detector heads, Transmitter and Receiver, have integrated alignment thumbwheels for ease of alignment. Using these thumbwheels provides a smooth and repeatable alignment process. The detector heads have up to 10 degrees of adjustment in both planes. For further adjustment, a bespoke Adjustment Bracket is available, which offers up to 180 degrees movement in both planes, as well as a full 360-degree rotation.

The Fireray[®] 3000 has been designed so that it can be installed by one operator, with its laser assisted alignment method combined with easy to use alignment LED's offering visual feedback. Integrated laser alignment aid can be activated at the Controller or at the Receiver head.

The Fireray[®] 3000 also has a feature which allows for the Transmitter to be powered from the Controller by wiring directly, thus reducing the number of power supplies required.

The low level Controller incorporates a LCD display, which offers a full icon-based, easy-to-use interface unit. This Controller enables ease of commissioning, testing and maintenance of the beam detection system. During commissioning the detector's fire sensitivity thresholds can be selected, along with the user variable time to fire and time to fault settings.

The system is fully compliant with the requirements of RoHS and WEEE.

Technical Specification

Operating Range:	5 to 120 Metres
Operating Voltage Range:	12 to 36V DC \pm 10%
Operating Controller Current (with 1 or 2 Receivers):	14mA (constant)
Operating Transmitter Current:	8mA (per Transmitter)
Power Down Reset Time:	>20 seconds
Fire and Fault Relay Contacts:	VFCO 2A @ 30 Volts DC resistive
Operating Temp. (non-condensing):	
UL -	-20°C to +55°C
EN54 -	-10°C to +55°C
Optical Wavelength:	850nm
LED Indications:	
Control Unit -	Red = Fire Amber = Fault Green = System OK
Receiver -	Alignment LEDs for single person alignment.
IP Rating:	IP54 (Controller)
Relative Humidity (non-condensing):	93%
Parts List (System):	1 x Transmitter (clear lens) 1 x Receiver (dark lens) 1 x Control Unit
Parts List (Additional Detector):	1 x Transmitter (clear lens) 1 x Receiver (dark lens)
Housing Material (Transmitter/Receiver/Controller):	UL94 V2 PC
CPD Reference:	0786-CPD-21162
UL File:	S3417

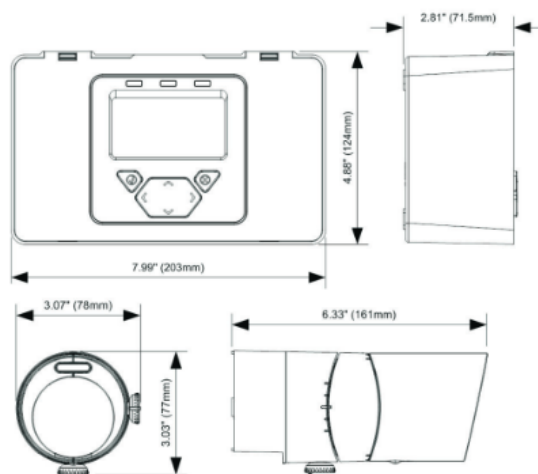
All figures are quoted for 25°C

Alarm & Operation Thresholds

	Min	Type	Max
Delay to Alarm/Fault (selectable in 1 sec steps):	2s	10s	30s
Laser Time-out (selectable in 1 min steps):	1min	5min	59min
Response Sensitivity/Threshold (selectable in 1% steps):	35%	60%	

Weight

Control Unit:	203 x 124 x 71.5mm (W x H x D) 606g
Transmitter & Receiver:	78 x 77 x 161mm (W x H x D) 207gms





Fireray 3000 Transmitter & Receiver

The FIRERAY 3000 End to End Infrared Optical Beam Smoke Detector (OBSD) has been designed using the latest optical technology, incorporating modern industrial, electronics and software techniques. This detector offers cost effective protection of large, open area spaces with high ceilings. It is also very suited to applications where access to ceiling mounted smoke detectors presents practical difficulties.

Key Benefits:

- Separate Transmitter and Receiver Heads
- Range 5 to 120 metres, configurable per set of Detectors
- Integral Laser Alignment in Receiver
- 2-wire Interface between Controller and Receiver
- Single and Twin Detector options
- Separate Fire and Fault Relays per Detector
- Low Level Controller with LCD display
- Programmable Sensitivity and Fire Threshold
- Automatic Gain Control (AGC) for drift compensation
- First Fix concept for Transmitter, Receiver and Controller
- Multiple cable gland knockouts for ease of wiring
- Optional Transmitter powering from Controller



Fireray 3000 Exd Explosion Proof Detector 3000-026

The Fireray® 3000 Exd comprises of a Transmitter Unit, which projects a modulated infra-red light beam to a Receiver Unit. The received signal is analysed and should smoke be present for a predetermined time a fire condition is signalled. A Control Unit is located within 100 metres cable run of the Receiver Unit enabling low level installation and diagnostic capability. Conforms to BS 5839 Part 5.

Approvals:

- II 2 GD
- Ex db op is IIC T6 Gb
- Ex tb IIC T85°C Db
- Ta = 20°C to +55°C

Key Features:

- 12 and 24V operation
- Explosion Proof Transmitter and Receiver Units
- Low level Safe Area electronics
- Selectable sensitivity levels
- Low current consumption
- Self-check and automatic compensation
- Robust metal construction
- Ideal for the protection of large enclosures within hazardous areas in petrochemical plants, oil rigs, ordance stores

For more information on these products, please contact us:



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