

# FIRERAY® 3000

## End-to-End Infrared Optical Beam Smoke Detector



Single Detector Version

The **FIRERAY®** 3000 End to End infrared Optical Beam Smoke Detector (OBSD) 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

- Separate Transmitter and Receiver Heads
- Range 5 to 120 metres
- Laser Alignment in Receiver Head
- 2-wire Communication between Controller and Receiver
- Single and Twin Detector options
- Separate Fire/Fault Relays per Detector
- Low Level Controller with LCD display
- Selectable sensitivity/threshold levels
- Automatic Gain Control (AGC) for drift compensation
- First Fix concept for Transmitter, Receiver and Controller
- Numerous cable gland knockouts for ease of wiring
- Optional Transmitter powering from Controller
- 5 year Warranty

### Approvals

World-wide approvals include EN54:12 and UL268. Visit [www.ffeuk.com](http://www.ffeuk.com) for up to date approvals information.

### 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 Alignment Bracket will be available, which will offer full adjustment up to 90 degrees 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 a visual feedback. Integrated laser alignment aid can be activated at the controller or at the Receiver head.

An optional feature is to power the Transmitter 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 sensitivity and fire 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 and is supplied with a 5-year warranty as standard.

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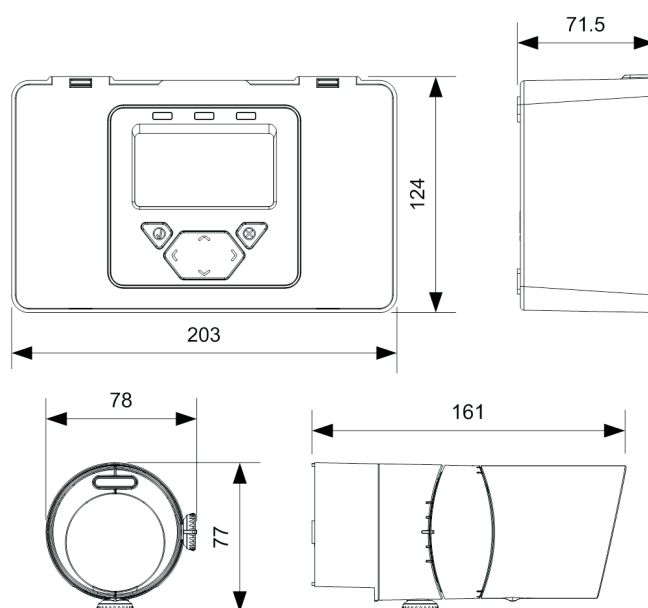
## Technical Specification

Operating Range:	5 to 120 m
Operating Voltage Range:	12 to 36V DC $\pm$ 10%
Operating Current (constant) - (Controller and Receiver):	8mA with 1 Receiver 14mA with 2 Receivers
Transmitter Current:	8mA
Power Down Reset Time:	>10 seconds
Fire and Fault Relay Contacts:	VFCO 2A @ 30Volts 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 -	Red = Fire Alignment LEDs for single person alignment.
IP Rating:	IP54
Relative Humidity (non-condensing):	93%
Parts List (Single channel):	1 x Transmitter (clear lens) 1 x Receiver (dark lens) 1 x Control Unit 1 x Test Filter
Parts List (Twin channel):	2 x Transmitter (clear lens) 2 x Receiver (dark lens) 1 x Control Unit 1 x Test Filter
Housing Material (Transmitter/Receiver/Controller):	UL94 V0 PC
CPD Reference:	To be confirmed
UL File:	To be confirmed

Alarm & Operation Thresholds	Min	Typ	Max
Delay to Alarm (selectable in 1 sec steps):	2s	10s	30s
Delay to 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):	10%	35%	60%

## Dimensions & Weight

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



## Installation Recommendations

Please refer to the relevant Quick Start Guide (QSG) or full User Guide (UG) for mounting, wiring and commissioning instructions. The installation of the FIRERAY 3000 infrared optical beam smoke detector should be undertaken in accordance with the recognised national, or international, standards and Codes of Practice (COP).

Specifications and wiring information are provided for information only and are believed to be accurate. Fire Fighting Enterprises 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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