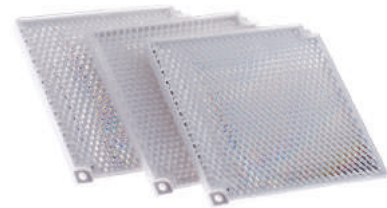


Fireray® One The Beam Detector that aligns itself

PN: 6010-000

With no specialist tools or knowledge needed for installation and operation, the Fireray® One is a standalone beam detector that prioritises ease of installation. Using the Fireray® One, it couldn't be easier to bring the benefits of beam detection to your application:

- Auto-Alignment - using the integrated user interface - just steer the laser onto the reflector, then at the flick of a switch, it aligns itself. 8 times faster than previous detectors
- One person installation - everything can be done by one person
- One standalone product - no specialist tools required; minimal prior knowledge and training needed



Operating range up to 50m or 120m with the Long Range Kit. PN: 1010-000



visit: feuk.com | +44 (0) 1462 444 740



KEY FEATURES

- Integrated visible laser and auto-alignment for ultimate ease of alignment
- Integrated user interface
- Prevent nuisance alarms with Light Cancellation Technology™ which compensates for sunlight and artificial light sources
- Building Movement Tracking™ continuously maintains alignment when buildings settle or flex due to temperature variations
- Contamination compensation to correct for gradual build-up of dust on optics
- Clean detectors quickly and easily without affecting alignment
- Low power consumption; can be powered from the loop
- Prevent interference between beams with dynamic beam phasing; install beams facing each other or in irregular configurations
- Detection range of up to 120m

IDEAL APPLICATIONS

- Education and Heritage Establishments
- Industrial Units and Warehousing
- Aviation Hangers
- Glass Atria in Hotels and Retail Complexes
- Chemical Processing and Storage Facilities

Fireray® 5000 Motorised Reflective Auto-Aligning Beam Smoke Detector

PN: 5000-101 (for up to 50m)
PN: 5000-102 (for up to 100m)

The Fireray® 5000 is one of the most advanced fire detection products in the world, combining a transmitter/receiver in the same detector head with an automatic alignment motor. This combination allows for quick, simple installation and requires wiring and power at only one side (the opposite side is covered by a reflector).

The Fireray® 5000 beam automatically compensates for environmental effects on the beam signal, keeping the unit in the best possible working order. This is achieved through the combination of software (contamination compensation) and motorised realignment of the beam.

Other installation aids include the detector and controller first-fix systems, as well as a visible laser to aid the user in alignment. The laser also allows the reflective prism to be positioned quickly and with confidence. This device can be installed by a single engineer, thus offering further saving on installation and commissioning costs.

The system is fully customisable with both the alarm thresholds (sensitivity) and delay to alarm/fault being controlled from the ground level system controller. The low level controller incorporates a LCD display, which offers a full icon-based, easy-to-use interface unit.



KEY FEATURES

- Allows for 2 detectors per system controller
- Each detector configurable from 8m to 100m
- Separate fire and fault relays per detector
- Integral laser alignment
- Auto-align fast automatic beam alignment
- Contamination compensation
- Low level system controller
- Logs the 50 most recent events per detector
- Programmable sensitivity and fire thresholds
- 20mm cable gland knockouts on system controller
- 2-wire interface from system controller to detector

IDEAL APPLICATIONS

- Education and Heritage Establishments
- Industrial Units and Warehousing
- Aviation Hangers
- Glass Atria in Hotels and Retail Complexes
- Chemical Processing and Storage Facilities

Efficient
and effective
wide-area fire
detection



visit: feuk.com | +44 (0) 1462 444 740



Fireray® 3000 End-to-End Beam Smoke Detector

PN: 3000-101

The Fireray® 3000 is our solution to the most technically challenged installation environments. The system uses a paired set of transmitter/receiver heads to cover the protected area. The transmitter emits a narrow beam of infra-red (IR) light in order to monitor for smoke and is controlled using a compact low level controller. Both detector heads (transmitter and receiver) have integral thumbwheels for ease of alignment. Using these thumbwheels provides a smooth and repeatable alignment process.

The Fireray® 3000 model has been designed to be installed by a single engineer. It incorporates a visible laser as an alignment aid, with alignment LEDs offering visual feedback.

The Fireray® 3000 is fully customisable, with both the alarm thresholds (sensitivity) and delay to alarm/fault being controlled from the low level controller. This 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.



KEY 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

IDEAL APPLICATIONS

- Education and Heritage Establishments
- Industrial Units and Warehousing
- Aviation Hangers
- Glass Atria in Hotels and Retail Complexes
- Chemical Processing and Storage Facilities

Fireray® 3000 Exd End-To-End Explosive Proof Beam Smoke Detector

PN: 3000-115

The Fireray® 3000 Exd is ideally suited for the protection of large areas, with potentially explosive atmospheres, against smouldering fires. The Fireray® 3000 Exd comprises an infra-red transmitter and 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 Fireray® 3000 Exd is designed for large enclosures within oil rigs, refineries, ordnance stores and similar premises. It provides an early warning of smouldering or strongly smoke-generative fires, which may not be picked up by flame detectors.



KEY FEATURES

- Separate transmitter and receiver unit certified to Exd
- Allows for 2 detectors per system controller
- Separate fire and fault relays per detector
- Range 5 to 80 metres, configurable per set of detectors
- Integral laser alignment in receiver
- 2-wire interface between controller and receiver
- Remote/low level controller with LCD display (Safe Area)
- Programmable sensitivity and fire/fault delay
- Contamination compensation for dust and building movement
- Multiple cable gland knockouts for ease of wiring
- Transmitter can be powered from controller
- Complies with ATEX and EN54:12
- Light Cancellation Technology™

IDEAL APPLICATIONS

- Petrochemical Installations
- Ordnance Stores
- Flour mills
- Dusty Environments
- Aviation Hangers
- Chemical Processing and Storage Facilities





WORLD'S MOST TRUSTED BEAM

Fireray Range Specifications	Fireray® One 6010-000	Fireray® 5000 5000-101 (50m). 5000-102 (100m)	Fireray® 3000 3000-101	Fireray® 3000 Exd 3000-115
MECHANICAL SPECIFICATION				
Dimensions	130(W) x 181(H) x 134(D)mm - Detector. 100(W) x 100(H) x 9(D)mm - Single reflector 200(W) x 200(H) x 9(D)mm - Four reflectors	134(W) x 131(H) x 134(D)mm - Detector. 202(W) x 230(H) x 87(D)mm - System Controller 100(W) x 100(H) x 10(D)mm - Reflector	203(W) x 124(H) x 71.5(D)mm - System Controller 78(W) x 77(H) x 161(D)mm - Transmitter & Receiver	203(W) x 124(H) x 73.50(D)mm - System Controller 149(W) x 172(H) x 190(D)mm - Transmitter & Receiver
Weight	0.7kg - Detector. 0.1kg - Reflector	1.0kg - System controller. 0.5kg - Detector. 0.1kg - Reflector	606g - System controller. 207g - Transmitter & Receiver	606g - System controller. 3.7kg - Transmitter & Receiver Including brackets
Operation Range	5m to 50m from Detector to Reflector (Prism), 50m to 120m with Reflective Long Range Kit	8m to 50m from Detector to Reflector with the 5000-101, 50m to 100m from the Detector to Reflector with the 5000-102	5m to 120m from Transmitter and Receiver	10m to 80m from Transmitter and Receiver
Beam path clearance	1m in diameter from centre line between Detector and Reflector (Prism)	1m in diameter from centre line between Detector and Reflector (Prism)	60cm in diameter from centre line between Transmitter and Receiver	60cm in diameter from centre line between Transmitter and Receiver
Optical wavelength – smoke detection	850nm	850nm	850nm	850nm
Signal output	Individual Alarm and Fault relays (VFCO) 2A @ 30 VDC	Individual Alarm and Fault relays (VFCO) 2A @ 30 VDC	Individual Alarm and Fault relays (VFCO) 2A @ 30 VDC	Individual Alarm and Fault relays (VFCO) 2A @ 30 VDC
Cable gauge and type	2 core, dedicated, 0.5 to 1.6mm (24 to 14 AWG) System compatible with fireproof and non-fireproof cable meeting local installation standards	2 core, dedicated, 0.5 to 1.6mm (24 to 14 AWG) 100m in Length from System Controller to Detector	2 core, dedicated, 0.5 to 1.6mm (24 to 14 AWG) 100m in Length from System Controller to Detector	2 core, dedicated, 0.5 to 1.6mm (24 to 14 AWG) 100m in Length from System Controller to Detector
Cable entry	3 knock-out locations capable of accepting M20, ½" or ¾" glands 4 drill-out locations capable of accepting glands up to 21mm diameter	4 x 20mm cable gland knock-outs on system controller	4 x 20mm cable gland knock-outs on system controller	3 x 20mm cable gland knock-outs on system controller
ELECTRICAL SPECIFICATION				
Operating voltage	14 to 36 VDC	14 to 36 VDC	12 to 36 VDC +/- 10%	12 to 36 VDC +/- 10%
Operating current all operational modes	5mA to 33mA (constant)	5mA to 6mA for 1 Detector. 7.5mA to 8.5mA for 2 Detectors 35mA to 37mA for alignment modes with 1 or 2 Detectors	14mA (constant) with 1 or 2 Receivers 8mA per Transmitter	14mA (constant) with 1 or 2 Receivers 8mA per Transmitter
Contact Voltage - Fire & Fault relays (VFCO)	VFCO, 2A at 30 VDC resistive	VFCO, 2A at 30 VDC resistive	VFCO 2A at 30 VDC resistive	VFCO, 2A at 30 VDC resistive
Contact Current - Fire & Fault relays (VFCO)	10mA at 20mV (min) 1A at 30 VDC (max)	10mA at 20mV (min) 1A at 30 VDC (max)	10mA at 20mV (min) 1A at 30 VDC (max)	10mA at 20mV (min) 1A at 30 VDC (max)
PROGRAMMABLE USER SETTINGS				
Alarm response threshold levels	25% / 1.25dB – Fastest response to smoke. 35% / 1.87dB – Default value 55% / 3.46dB – High immunity to false alarms, slow response to smoke 85% / 8.23dB – Highest immunity to false alarms, slowest response to smoke Configured via the integrated user interface	35% (default) 10% / 0.45dB (min) - Fastest response to smoke 60% / 3.98dB (max) - Highest immunity to false alarms, slowest response to smoke	1 min (min) 5 min (typical) 59 min (max) - Laser Time-out 35% (min) 60% (typical) - Response Sensitivity/Threshold	1 min (min) 5 min (typical) 59 min (max) - Laser Time-out 25% (min) 35% (typical) 60% (max) - Response Sensitivity/Threshold
Delay to Alarm/fault	10 seconds for momentary partial obstruction of the beam path	10 seconds (default). 2 seconds (min). 30 seconds (max)	10 seconds (default). 2 seconds (min). 30 seconds (max)	10 seconds (default). 2 seconds (min). 30 seconds (max)
USER FEATURES				
Alignment Aid/Tool	Laser	Laser	Laser	Laser
System status indication	Green LED = Normal operation Red LED = Alarm condition Yellow LED = Fault condition	Green LED = Normal operation Red LED = Alarm condition Yellow LED = Fault condition	Red LED = Fire (control unit) Amber LED = Fault (control unit) Green LED = System OK (control unit)	Red LED = Fire (control unit) Amber LED = Fault (control unit) Green LED = System OK (control unit)
ENVIRONMENTAL SPECIFICATIONS				
Operating temperature	-20°C to +55°C	-10°C to +55°C	-20°C to +55°C (UL). -10°C to +55°C (EN54)	-10°C to +55°C
Storage temperature	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Relative humidity (non-condensing)	0 to 93%	0 to 93%	0 to 93%	0 to 93%
IP rating	IP55	IP54	IP54 (Controller)	IP54 (Controller). IP66 (Transmitter/Receiver)
Housing flammability rating:	UL94 V0	UL94 V0	UL94 V2 PC	UL94 V2 PC
OPTICAL SPECIFICATIONS				
Fault level / Rapid obscuration ($\Delta \leq 2$ seconds)	$\geq 85\%$	$\geq 87\%$	$\geq 85\%$	$\geq 85\%$
Maximum angular alignment Range	$\pm 4.5^\circ$ - Detector ($\pm 70^\circ$ with adjustment bracket accessory)	$\pm 3.5^\circ$ - Detector	$\pm 10^\circ$ - Receiver and Transmitter	$\pm 10^\circ$ - Receiver and Transmitter
Maximum angular misalignment	$\pm 0.5^\circ$ - Detector	$\pm 0.41^\circ$ - Detector	$\pm 0.7^\circ$ - Transmitter. $\pm 2.5^\circ$ - Receiver	$\pm 0.7^\circ$ - Transmitter. $\pm 2.5^\circ$ - Receiver
Maximum angular misalignment of Reflector (Prism)	$\pm 5^\circ$	$\pm 5^\circ$	N/A	N/A

SPECIALIST APPLICATIONS

As manufacturers of Beam Smoke Detectors technology, our experts can provide you with fire protection technology for any type of application. In addition to our design consultation service, we can also provide you with a complete technical design service, along with drawings to assist you with your installation.

HELP FROM FFE

As additional support, we provide comprehensive training programmes for the Fireray® range, tailored to suit your own specific requirements. We are happy to train individuals or your entire installation team.

Contact us at:
e technical@ffeuk.com