



Fireray[®] 5000

Motorised Reflective Auto-Aligning Beam Smoke Detector

The Fireray[®] 5000 motorised reflective, auto aligning infra-red beam smoke detector can be installed with up to two detector heads per system, thus saving on installation time and costs. In addition, each system controller houses two pairs of fire and fault relays, one per detector. This innovative system has been designed from the ground up to include pioneering technology that fully addresses the needs of the installer and user, both now and in the future.

With its industry leading optics, the Fireray[®] 5000 is ideally suited for the protection of large areas where the use of traditional detection technologies would prove to be too difficult and/or costly to install.

The Fireray[®] 5000 combines an infra-red transmitter and receiver in the same discrete unit and operates by projecting a well-defined beam to a reflective prism, which returns the beam to the receiver for analysis. Smoke in the beam path causes a drop in power, which, if below a pre-determined level, results in an alarm signal.

Features

- Allows for 2 Detectors per System Controller

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- 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
- Working Optical path for Detector Alignment



Operation

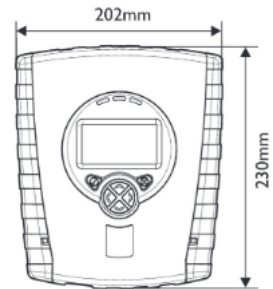
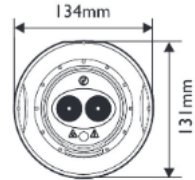
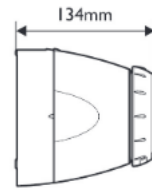
Getting the system operational is simplified by a number of ground breaking features that combine to make the Fireray[®] 5000 the quickest and easiest detector of its type to install. Each detector takes under 5 minutes to fully align.

A full range of installation accessories are available including the new Adjustment Bracket, which allows a greater degree of flexibility during installation.

Once the detector heads are connected, using the Easifit First Fix system, an integral LASER can be activated. This allows the reflective prism to be positioned quickly and with confidence. Once the LASER has been used to coarsely align the beam, Auto-Align takes over and automatically steers the beam into the optimum position. During alignment the system automatically switches to high current mode and drops back to low current mode when in normal operation, however, alignment is still possible in low current mode.

Technical Specification

Parameter	Min.	Typ.	Max.	Unit
Operating Voltage (to System Controller)	14	-	36	VDC
Operating Current (constant) - with 1 detector	5	5.5	6	mA
Operating Current (constant) - with 2 detectors	7.5	8	8.5	mA
Operating Current (constant) - alignment modes, with 1 or 2 detectors	35	36	37	mA
Response Threshold/ Sensitivity (Default 35%)	0.45	-	3.98	dB
	10	-	60	%
Delay to Alarm – user settable (Default 10 sec)	2	-	30	sec
Delay to Fault – user settable (Default 10 sec)	2	-	30	sec
Operating distance (separation)*	8	-	100	m
Maximum angular alignment of detector	-	-	±3.5	°C
Optical wavelength 850 nm				
Fault level/ Rapid obscuration ($\Delta \leq 2$ sec)	-	-	87	%
Operating temperature	-10	-	+55	°C
Storage temperature	-40	-	+85	°C
Relative humidity (non condensing)	-	-	93	%
IP rating		54		-
Contact Voltage - Fire & Fault relays (VFCO)	0.1	-	36	VDC
Contact Current - Fire & Fault relays (VFCO)	0.1	-	100	mA
Cable length - System Controller to Detector (2 core)	-	-	100	m
Cable gauge	24	-	14	AWG
	0.5	-	1.6	mm
Housing flammability rating	UL94 V0			
CPR Reference	0832-CPR-F0390			
UL File	S3417			



Dimensions and Weight

	Width mm	Height mm	Depth mm	Weight kg
System Controller, including base:	202	230	87	1.0
Detector, including 'easy fit' base: 1	134	131	134	0.5
Reflector:	100	100	10	0.1



Fireray 5000 Single Detector Pack (50m)

The FIRERAY 5000 motorised, auto aligning infrared optical beam smoke detector can now be installed with up to four detector heads per system, thus saving on installation time and costs.

This innovative system has been designed from the ground up to include pioneering technology that fully addresses the needs of the installer and user, both now and in the future.

Key Benefits

- Up to 2 optical beam detectors per system controller
- Easifit Fix System
- Ground Level Control
- Laser Assisted Alignment
- Auto-Optimise Beam Alignment
- Contamination Compensation
- Building Shift Compensation
- Approved to EN54:12 and UL268



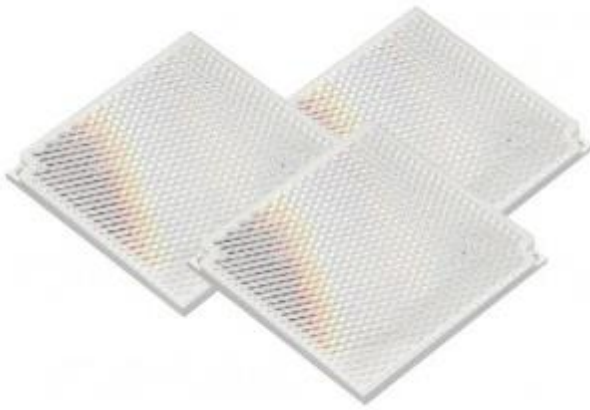
Fireray 5000 Single Detector Pack (100m)

The FIRERAY 5000 motorised, auto aligning infrared optical beam smoke detector can now be installed with up to four detector heads per system, thus saving on installation time and costs.

This innovative system has been designed from the ground up to include pioneering technology that fully addresses the needs of the installer and user, both now and in the future.

Key Benefits

- Up to 2 optical beam detectors per system controller
- Easifit Fix System
- Ground Level Control
- Laser Assisted Alignment
- Auto-Optimise Beam Alignment
- Contamination Compensation
- Building Shift Compensation
- Approved to EN54:12 and UL268



Fireray 5000 / Fireray One Long Range Kit

The FIRERAY® 5000 motorised, auto aligning infrared optical beam smoke detector can now be installed with up to four detector heads per system, thus saving on installation time and costs.

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Can also be used to increase the operating range of Fireray One to 120m from 50m.

Key Benefits

- Up to 4 optical beam detectors per system controller
- Easifit Fix System
- Ground Level Control
- Laser Assisted Alignment
- Auto-Optimise Beam Alignment
- Contamination Compensation
- Building Shift Compensation
- Approved to EN54:12 and UL268

FIRERAY® 50R/100R

Reflective Optical Beam Smoke Detector

The **FIRERAY®** 50R/100R series conventional infrared optical beam smoke detectors provide economical and effective protection of large, open plan spaces with high ceilings, particularly if access to 'point type' smoke detectors presents practical difficulties.

Optical beam smoke detectors are ideally suited for protecting warehouses, factories, atria, shopping malls, leisure centres, churches, museums, power stations and industrial plants.

The **FIRERAY®** 50R/100R optical beam smoke detectors can be connected to a zone of a conventional fire alarm control panel, or interfaced to an analogue addressable system via an addressable interface input module or a zone monitor module.

Features

- Combined transmitter and receiver unit in one discrete unit
- Range 5-50 Metres (**FIRERAY®** 50R),
50-100 Metres (**FIRERAY®** 100R)
- Low current consumption
- Automatic self check drift compensation
- Selectable sensitivity/threshold levels
- Selectable latching / non latching fire alarm
- **LED indicators to aid the alignment process**
- **Optional Low Level Test Unit for UL models only**



Operation

The **FIRERAY®** 50R/100R has three selectable 'Alarm Thresholds' 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 for approximately 10 seconds, the fire relay is activated. There are two modes of operation for 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 indefinitely after an alarm condition has occurred.

If the infrared beam is obscured rapidly to a level of 90% or greater for 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, transmitter failure, loss of the prism, or sudden misalignment of the detector. The fault relay will reset within 5 seconds of the condition being rectified.

For more information on these products, please contact us:



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