



FIRE RAY 5000

Auto Aligning Infrared Optical Beam Smoke Detector

Features

- Modular Design
- *Easifit* First Fix System
- Ground Level System Controller
- LASER Assisted Alignment
- Automatic Contamination Compensation
- *AutoOptimise* Beam Alignment
- Building Shift Compensation
- 2-wire interface from Detector to System Controller
- Cost Effective

General Descriptions

The FIRE RAY 5000 is the first of a new family of auto aligning infrared optical beam smoke detector products and accessories. 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 FIRE RAY 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 FIRE RAY 5000 combines an infrared 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.

Getting the system operational is simplified by a number of groundbreaking features that combine to make the FIRE RAY 5000 the quickest and easiest detector of its type to install.

Once the detector head is connected, using the *Easifit* First Fix system, an integral LASER, which is aligned along the optical path of the beam, can be activated. This allows the reflective prism to be sighted quickly and with confidence. Once the LASER has been used to coarsely align the beam, the *AutoOptimise* beam alignment system takes over and automatically steers the beam into the optimum position.

The system can be fully customised, according to local conditions; both alarm thresholds (sensitivity) and time to Alarm/Fault can be set from the ground level System Controller. Additionally, the integrated accessory mount allows the use of a variety of standard fittings to solve any specific installation issues. The optional dedicated mounting bracket allows a greater degree of flexibility during installation.

The system is fully compliant with the requirements of RoHS & WEEE and is supplied with a 3-year warranty as standard.

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FIRERAY 5000

Auto Aligning Infrared Optical Beam
 Smoke Detector



FIRERAY 5000
 with optional
 mounting bracket



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Installation Recommendations

Please refer to our installation guides for mounting and wiring instructions. The installation of the FIRERAY 5000 infrared optical beam smoke detector should be undertaken in accordance with recognised national or international standards and codes of practice.

Technical Specification

All figures are quoted for 25 deg C

Parameter	Min.	Typ.	Max.	Unit
Operating Voltage (to System Controller):	14	-	28	VDC
Operating Current - low current mode:	8	10	12	mA
Operating Current - high current mode:	48	50	52	mA
Response Threshold/ Sensitivity (Default 35%):	0.45	-	3.98	dB
	10	-	60	%
Delay to Alarm – user settable (Default 5 sec):	2	-	30	sec
Delay to Fault – user settable (Default 5 sec):	2	-	30	sec
Operating distance (separation):*	5	-	100	m
Maximum angular misalignment of Detector from optical axis:	-	-	±0.5	Deg
Maximum angular misalignment of Reflector from optical axis:	-	-	±5	Deg
Maximum angular alignment:	-	-	±3.5	Deg
Optical wavelength:		850		nm
Fault level/ Rapid obscuration ($\Delta \leq 2$ sec):	-	-	90	%
Operating temperature:	-20	-	+55	Deg C
Storage temperature:	-40	-	+85	Deg C
Relative humidity (non condensing):	-	-	85	%
IP rating:		54		-
Contact Voltage - Fire & Fault relays (DPCO):	0.1	-	220	VDC
Contact Current - Fire & Fault relays (DPCO):	0.1	-	500	mA
Cable length – System Controller to Detector: (2 core screened fire resistant)	1	-	100	m
Cable gauge:	24	-	14	AWG
	0.5	-	1.5	mm
Housing flammability rating:	UL94 V0			

* 4 Reflectors required for > 50 m operation

Approximate Dimensions:

Description	Width	Height	Depth	Weight
	mm	mm	mm	kg
System Controller, including base:	200	235	71	0.9
Detector, including 'easy fit' base:	134	135	134	0.5
Universal Bracket:	134	134	70.5	0.2
Reflector:	105	100	9.5	0.07

Dimensions

