

FireRay® 5000

Motorised infrared optical beam smoke detector
Product Datasheet

Features

- Modular design
- *Easifit* First Fix system
- Integral LASER
- *Auto-Align* automatic beam alignment
- *Auto-Optimise* building movement and contamination compensation
- Low level system controller
- Worldwide approvals including EN 54-12 and UL268

Description

The FireRay® 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 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 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 FireRay® 5000 the quickest and easiest detector of its type to install.

A full range of installation accessories is available including the universal bracket, which allows a greater degree of flexibility during installation.

Once the detector head is connected, using the *Easifit* First Fix system, an integral LASER 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, *Auto-Align* takes over and automatically steers the beam into the optimum position.



The system can be fully customized, according to local conditions; alarm thresholds (sensitivity) and time to Alarm/Fault can be set from the low level system controller.

The system is fully compliant with the requirements of RoHS & WEEE and is supplied with a 5-year warranty as standard.

Applications

FireRay® 5000 is specially designed for use in:

- Large open spaces
- Warehouses and storerooms
- Aircraft hangars
- Libraries and archives
- Museums and galleries with decorative ceilings
- Cinemas and other cultural venues
- Atriums
- Large garage complexes

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 recognized national or international standards and codes of practice.

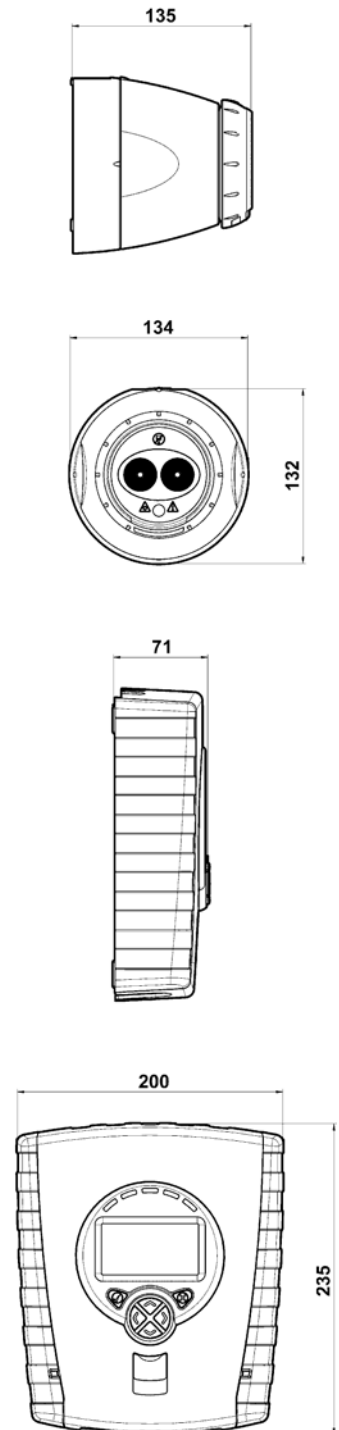
Technical specification				
Parameter	Min.	Typ.	Max.	Unit
Operating voltage (to system controller)	14	-	28	VDC
Operating current - low current mode	8	10	12	mA
Operating current - high current mode	48	50	52	mA
Response threshold/ Sensitivity (Default 35%)	0.45 10	-	3.98 60	dB %
Delay to Alarm – user settable (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 misalignment of detector from optical axis	-	-	±0.3	deg
Maximum angular misalignment of reflector from optical axis	-	-	±5	deg
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 (degree of protection)	-	54	-	-
Contact voltage - Fire & Fault relays (DPCO)	0.1	-	36	VDC
Contact current - Fire & Fault relays (DPCO)	0.1	-	100	mA
Cable length – system controller to detector (2 core screened fire resistant)	-	-	100	m
Cable gauge	24 0.5	-	14 1.5	AWG Ø mm
Housing flammability rating	UL94V0			
CPD reference	0832-CPD-0565			
UL file	S3417			

all figures are quoted for 25°C

*4 reflectors required for > 50 m operation

Part number	Description
116-5861-023.5101	FireRay® 5000-101 beam detector, 50m
116-5861-023.5102	FireRay® 5000-102 beam detector, 100m
116-5861-023.5005	Universal bracket for FireRay® 5000

Dimensions (mm)



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