

# Product Data Sheet: FireRay 5000 Self Aligning Infrared Beam Detectors

## Description

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

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.

Once the LASER has been used to coarsely align the beam, *Auto-Align* takes over and automatically steers the beam into the optimum position. Each detector now takes under 5 minutes to fully align.

The system can be fully customised, according to local conditions and installation guidelines; alarm thresholds (sensitivity) and time to Alarm/Fault can be set from the low level System Controller.

Each detector head is independently configurable from 8m through to 100m and has its own individual fire threshold. The System Controller retains one set of Fire and Fault relays that is common to all detectors that are installed.

## Ordering Information

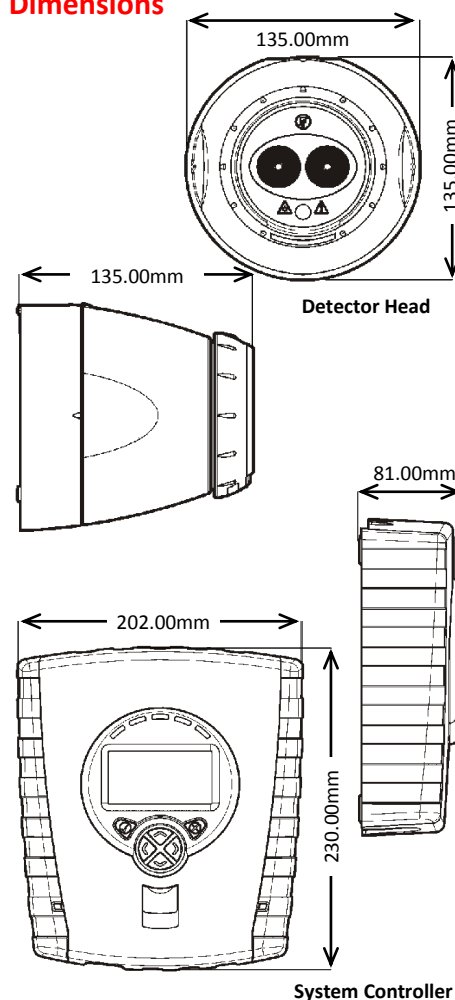
Part No:	Description	Includes
307-005	FireRay 5000 - 50m	Detector head, system controller & reflector prism
307-008	FireRay 5000 - 100m	Detector head, system controller & 4 x reflector prism
307-009	FireRay 5000 - 50m Kit	Detector head & reflector prism
307-010	FireRay 5000 - 100m Kit	Detector head & 4 x reflector prisms
307-006	FireRay 5000 - Long Range Kit	3 x reflector prisms

## Technical Information

Part No:	F5000
Operating Voltage (to Controller):	14 - 28Vdc
Operating Current (constant) - low current mode, with 1 detector:	10mA ± 2mA
Operating Current (constant) - for each additional detector:	2mA ± 0.2mA
Operating Current (constant) - high current mode, with 1 to 4 detectors:	50mA ± 2mA
Response Threshold/Sensitivity (Default 35%):	0.45 - 3.98dB (10 - 60%)
Delay to Alarm and to Fault - user settable (Default 10sec):	2 - 30sec
Operating distance (separation)*:	8 - 100m
Maximum angular misalignment of Detector from optical axis:	± 0.3°
Maximum angular misalignment of Reflector from optical axis:	± 5°
Maximum angular alignment:	± 3.5°
Optical Wavelength:	850nm
Fault level / Rapid obscuration (± 2 sec):	87%
Operating Temperature:	-10° - +55°C
Storage Temperature:	-40° - +85°C
Relative humidity (non condensing):	Max 93%
IP Rating:	IP54
Contact Voltage - Fire * Fault relays (DPCO):	0.1 - 36Vdc
Contact Current - Fire & Fault relays (DPCO):	0.1 - 100mA
Cable length - Controller to Detector (2 core screened fire resistant):	Max 100m
Cable gauge:	24 - 14AWG (0.5 - 1.5mm)
Housing Flammability Rating:	UL94V0
Reflector Dimensions (w x h x d):	100 x 100 x 10mm
Weight:	System Controller 1.0kg Detector Head 0.5kg Reflector Prism 0.1kg
All figures are quoted for 25°C *4 reflectors required for > 50m operation	



## Dimensions



## Approval Information

CPD Reference:	0832-CPD-0565
UL File:	S3417