



Fireray 5000 Reflective Beam Smoke Detector



Description

The Fireray 5000 System is an auto-aligning, self-correcting infrared beam smoke detector. Up to 4 detector heads can report to a single ground level controller. Once the detector head is installed, using the *easyfit mounting system* an integral LASER can be activated. This allows the reflective prism to be located quickly and with confidence. The *Auto-Align* function ensures proper alignment and maximum signal during the beam installation. *AutoOptimise* automatically steers and maintains the beam in the optimum position for reliable performance. The signal generated in the transmitter element and reflected by the prism back to the receiver element is analyzed for the presence of smoke. The internal microprocessor determines an alarm condition when a predetermined level obscuration is reached. The system is designed to be mounted so the beam will project between 1ft. (0.31m) and 2ft. (0.61m) below and parallel to the ceiling. Lateral detection may be up to 30ft. (9.144m) on either side of the beam, providing a maximum total coverage area of up to 19,800 square feet (60ft. x 330ft. or 18.29m x 100m).

Engineering Specification

The projected beam type smoke detector shall be listed to U.L. 268 and shall consist of up to four integrated transmitter, receiver detector heads and single low level remote control unit. The detector shall operate between a range of 26.25 ft. to 330 ft. (8m to

Features

- **Up to 4 Detector Heads reporting to One Ground Level Controller**
- Range of 26.25 ft. to 330 ft. (8m to 100m)
- Built in Laser assisted prism mounting
- Auto-Alignment 2-4 minutes per head
- *AutoOptimise* - Auto-Correction due to building shift
- Built-In electronic UL/ULC obscuration-acceptance Fire Test
- Contamination compensation
- Common alarm and trouble contacts
- Password protected settings
- Low current draw 10-16 mA.
- Built-In 1/2"/M-20 conduit knock-outs on the system controller
- Programmable obscuration thresholds:
10% - 60% in 1% increments
- Programmable Fault and Alarm timing:
2—30 Seconds
- **5 Year Warranty**

100m). The temperature range of the system shall be -4°F to 131°F (-20°C to 55°C). The beam detector heads shall include an integral built-in laser pointer to assist prism mounting. The beam detector shall feature automatic gain control which will compensate for gradual signal deterioration from dirt accumulation on the lenses. The beams detector heads shall include *AutoOptimise Self-Correcting* motorized head feature to ensure unit is always receiving maximum signal available, and shall automatically compensate for Building Shift. The unit shall include a low level remote display and control unit with LCD read-out for set-up, reporting and testing of up to 4 separate detector heads. The system shall be capable of programming obscuration thresholds for 10% to 60% in 1% increments. The system shall be capable of programming delay to fault and delay to alarm from 2 seconds to 30 seconds in 1 second increments.

Test and acceptance of the system shall be carried out by using the UL approved internal electronic obscuration fire test. The projected beam type smoke detector shall be a 4-wire 24 VDC device to be used with a Nationally Recognized Testing Laboratory's Listed separately supplied 4-wire control panel. The Reflective beam type smoke detector shall be a Fire Fighting Enterprises Fireray 5000.

Construction Specification

Housing: Flame Retardant ABS

IP Rating:

IP54

Finish:

Light Grey/Black

Conduit Knock Outs

Controller: 7— 1/2"/M-20

Detector Head—I M-20

Weight:

Head & Controller 3.24 lbs (1.47 kg)

Dimensions:

Head:

5.28" H x 5.31" L x 5.28" W
(135mm H x 134mm L x 132mm W)

Controller:

3.20" H x 9.25" L x 7.87" W
(81mm H x 235mm L x 200mm W)

Prism:

0.37" H x 4.13" L x 3.94" W
(9.5mm H x 105mm L x 100mm W)

Electrical Specification

Primary Input Power:

14 to 28 VDC

Standby Current:

Low Current Mode: 10mA to 16mA @
24 VDC depending on number of detector
heads used

High Current Mode: 50mA @24VDC

Alarm Current:

10mA to 16mA @ 24 VDC depending
on number of detector heads used

Relay Contacts:

1A at 30 VDC Resistive

Reset Time:

5 Seconds maximum

Start Up Time:

45 Seconds

Optical Wavelength:

850nm.

Sensitivity:

10% - 60% (35% Default)

Temperature Rating:

-22°F to 131°F (-20°C to 55°C)
For UL Listed Installations, 32°F to 100°F
(0°C to 37.8°C).

Relative Humidity:

0% to 93% RH non-condensing

Range:

26.25ft. to 330ft. (8m to 100m)

Cableing Between Each Detector & Controller:

24—14 AWG 1—Pair Shielded

Listings

- UL - S3417
- ULC - S3417
- MEA - 22-08-E
- CSFM - 7260-1508-104
- FM Pending

Ordering Information

- 5000-103 Reflective Auto Align beam smoke detector 27ft.. to 330ft. (8m to 100m). System includes 1 Detector Head, 1 Controller and 1 Prism.
- 5000-031 Additional Detector Head and 1 Prism, Use up to 3 additional heads per 5000-103
- 5000-004 Long Range Prism Kit - 3 Additional Prisms for installations between 160ft. and 330ft. (50m -100m)
- 5000-005 Universal Alignment Bracket. Used with F-5000 Detector Head, 5000-007 and 5000-008
- 5000-006 Wall Bracket Mounts 1 or 4 Prisms.
- 5000-007 4 Prism Alignment Adaptor
- 5000-008 1 Prism Alignment Adaptor
- 5000-009 Controller Back Box
- 5000-010 Semi-Flush Trim Plate for 5000-009
- 5000-011 Detector Back Box
- 5000-012 Cover Plate for 5000-011
- 5000-014 Ceiling Pendant Mount Bracket
- 5000-017 Wire Protective Cage for Detector

Specifications and wiring information are provided for information only and are believed to be accurate. Fire Fighting Enterprises assumes no responsibility for their use. Data and design are subject to change without notice. Installation and wiring instructions are shipped with the products and should always be used for actual installation. For more information, contact your Sales Representative.



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