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**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 micro-processor determines an alarm condition when a predetermined level is reached.

The system is designed to be mounted so the beam will project between 19" (0.5m) and 2 ft.

(0.6m) below and parallel to the ceiling. Lateral detection may be up to 30 ft. (9.144m) on either side of the beam, providing a maximum total coverage area of up to 19,800 sq. ft. (60 ft. X 330 ft. or 18.29m x 100m).

**Features**

- Range of 26.25 ft. to 330 ft. (8m to 100m)
- Up to 4 Detector Heads reporting to One Ground Level Controller
- Built-In Laser Assisted prism mounting
- Auto-Alignment 2-4 minutes per head
- AutOptimise Auto-Correction due to building shift
- Built-In electronic UL/ULC/FM obscuration-acceptance fire test
- Contamination Compensation
- Common alarm and trouble contacts
- Password protected settings
- Low current draw 10-16mA
- Built-In 1/2"/M-20 conduit knock-outs on the system controller
- Programmable alarm thresholds: 10% - 60% in 1% increments



- Programmable Fault and Alarm Timing: 2 - 30 Seconds
- 5 Year Warranty

**Ordering Information**

Model Number	Part Number	Description
F5000	F5000	Reflective Auto Align Beam Smoke Detector 27 ft. to 330 ft. (8m to 100m)
23901	23901	Replacement Prism
5000-004	5000-004	Long Range Prism Kit 160 ft. and 330 ft. (50m to 100m)
5000-005	5000-005	Surface Mount Alignment Base. Used w/ F-5000 Detector Head, 5000-007 & 008
5000-006	5000-006	Wall Bracket Mounts 1 or 4 Prisms
5000-007	5000-007	4 Prism Alignment Adaptor
5000-008	5000-008	1 Prism Alignment Adaptor
5000-009	5000-009	Controller Back Box
5000-010	5000-010	Semi-Flush Trim Plate for 5000-009
5000-011	5000-011	Detector Back Box
5000-012	5000-012	Cover Plate for 5000-011
5000-014	5000-014	Ceiling Pendant Mount Bracket
5000-017	5000-017	Wire Protective Cage for Detector



### Engineering Specification

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. Unit shall be listed to UL 268 and shall consist of an integrated transmitter, receiver and remote control unit. The detector shall operate between a range of 26.25 ft. To 330 ft. (8m to 100m). The temperature range of the beam shall be -4° F to 131° F (-20° C to 55° C). The beam detector shall feature automatic gain control which will compensate for gradual signal deterioration from dirt accumulation on the lenses. The Reflective Beam shall include AutoOptimise Beam Alignment feature to ensure unit is always receiving maximum signal available. And shall be able to compensate for Building Shift. The unit shall include a wall mounting remote display and control unit with LCD backlight.

Testing shall be carried out by using UL approved internal obscuration test. The Reflective beam type smoke detector shall be a Harrington Fireray 5000.

### Construction Specification

Housing:  
Flame Retardant ABS

IP Rating:  
IP54

Finish:  
Light Grey/Black

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:  
2.80" H x 9.25" L x 7.87" W  
(71mm 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: 12mA @ 24 VDC  
High Current Mode: 52mA @ 24 VDC

Alarm Current:  
10 mA to 16mA @ 24 VDC

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:  
-4°F to 131° F (-20° C to 55° C)  
*For UL Listed Installations, 32° F to 100° F  
0° C to 38° C).*

Relative Humidity:  
0% to 93% RH non-condensing

Range:  
26.25 ft. To 330 ft. (8m to 100m)

Cabling Between Detector & Controller:  
18 - 14 AWG 1 - Pair Shield

NOTICE: The information contained in this document is intended only as a summary and is subject to change without notice. The devices described in this document have specific instruction sheets which cover various technical, limitation and liability information. Copies of these instruction sheets and the General Product Warning and Limitations Document, which also contains important information are provided with the product and are available from Harrington Signal Inc. Fire Alarm. Information contained in these documents should be consulted before specifying or using the product. For further information or assistance concerning particular problems contact Harrington Signal Inc. Harrington Signal Inc. Fire Alarm reserves the right to change specifications without notice. Quality manufactured for Harrington Signal Inc. by Fire Fighting Enterprises.