# 6020-100

## Fireray Hub Reflective System

### General

The Fireray Hub Reflective System is a modular beam detection system that can be configured to suit a variety of demanding applications.

With no specialist tools or knowledge needed for installation and operation, the Fireray Hub Reflective builds on the technology offered by the Fireray One (FD001R), adding the ability to align, commission, configure, and maintain from ground level without the need for access equipment.

### Benefits

The Fireray Hub Reflective enables excellent accessibility and user-configurable settings for long-term ease of maintenance and ownership due to to the intuitive, ground level controller.

Connection of up to 3 Fireray Reflective Detectors can be accommodated on a single cable run, making the installation extremely easy and flexible.

It supports modern, reflective motorised beam technology that facilitates:
• Auto-Alignment™
Using the Hub, direct the laser onto the prism and with the press of a button, it aligns itself.

• Building Movement Tracking™
Keeping the beam aligned even if the building moves, preventing unwanted alarms and faults

• Light Cancellation Technology™
Prevent nuisance alarms by compensating for sunlight and artificial light sources

### Applications

In large public areas where downtime for maintenance needs to be kept to a minimum, the Fireray Hub Reflective allows monitoring and testing of detectors without shutting down the area.

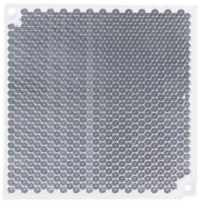
In glass atria in hotels and retail complexes where sunlight can cause nuisance alarms, Light Cancellation Technology™ actively cancels sunlight to prevent nuisance alarms.

Very large spaces e.g. warehouses and aviation hangars where installation and maintenance can get very time-consuming, up to 3 detectors can be connected on a single cable run, each with 120 m detection range, all controlled from a single system controller.

Amongst others, education and heritage establishments, as well as sports facilities can benefit from this technology.







### Details

- Connect and monitor up to 3 detector heads with independent fire and fault signals for each detector
- Offers laser-assisted, motorised Auto-Alignment™ from the system controller, with manual alignment as an option if needed
- 2-wire interface from detector to system controller offers an installation with 60% less wiring and in 25% less time using network mode
- Compensates for natural shifts in alignment from building movement
- Compensates for gradual build-up of contamination on the optical surfaces
- Compensates for high levels of sunlight and artificial lighting
- Dynamic beam phasing allowing beam detectors to be mounted facing each other with the reflectors in the middle
- Operate in dusty or wet environments due to the high enclosure integrity of the hub and detector
- Event log with time and date stamps – 128 per detector, 600 per system controller offers easy diagnoses of system events
- Backlit display for easy readability

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## Technical specifications

### General

| | |
|---|---|
| Status indication | Ground level controller |
| User interface | LEDs and backlit LCD display |
| Compatibility | Conventional supervised systems |
| Connectivity | Potential free relays |

### Electrical

| | |
|---|---|
| Power supply type | 24 VDC |
| Operating voltage | 14 to 36 VDC |
| Current consumption | 12.5 mA with 1 detector<br>15 mA with 2 detectors<br>17.5 mA with 3 detector<br>33 mA (alignment and LCD backlight ON) |
| Cable specification | 24 to 14 AWG (0.5 to 1.6 mm) ( 1/100" to 6/100") |
| No. of cable cores | 2, dedicated |

### Detection

| | |
|---|---|
| Detection principle | Optical infrared beam |
| Zone length | < 100 m to furthest detector |
| Range | 8 to 50 m (to 120 m with FD-LRK) |
| Optical wave length | 850 nm |
| Adjustment angle | ± 4.5° |
| Misalignment tolerance | ± 0.5° |
| Beam path clearance | 0.5 m (1¾ ft) radius from centre line between detector and reflector |
| Detectors per controller | > 3 |
| Response time | < 2 s |

### Output

| | |
|---|---|
| Output quantity | < 6 (2 per detector head) |
| Output type and rating | Relay: 1 A at 36 VDC |

### Physical

| | |
|---|---|
| Physical dimensions | Controller: 170 x 274 x 73 mm (H x W x D)<br>Detector: 131 x 134 x 131 mm (H x W x D)<br>Reflector: 100 x 100 x 9 mm (H x W x D) |
| Net weight | Controller: 1.05 kg<br>Detector: 0.57 kg<br>Reflector: 0.06 kg |
| Mounting type | Hinged mouting, Montaggio a superficie |
| Cable entries | 2 knock-out locations of 21 mm (¾") diameter for cable glands, 2 drill-out locations of up to 21 mm (¾") diameter |
| Material (body) | Policarbonato - UL94V-0 |
| Colour | White RAL9016, Grey RAL7001 |

### Environmental

| | |
|---|---|
| Vandal proof | No |
| Operating temperature | -10 to +55°C (+14 to +131ºF) |
| Storage temperature | -40 to +85°C (-40 to +185ºF) |
| Relative humidity | 0 to 93% non condensing or icing |
| Environment | Indendør |
| IP rating | Controller: IP65<br>Detector: IP55 |

### Regulatory

| | |
|---|---|
| Compliancy | CE, REACH, RoHS 3, UKCA, WEEE |
| Certification | CPR |
| Voluntary marks | VdS |
| Standards | EN54-12 |

### Compatible products

| Category | Reference | Description |
|---|---|---|
| Detection device | 5000-008 | Fireray Reflective short range prism plate |
| Detection device | 6030-100 | Fireray Hub Reflective - Detector |
| Detection device | FD-LRK | Long-range reflector kit for Fireray Beam Detectors (1010-000) |
| Mounting Accessories | FD-MB001R | Mounting bracket for FD001R beam detectors (6010-100) and 5000-007/5000-008 reflector plates |
| Mounting Accessories | FD-PC001R | Protective cage for Fireray reflective beam detectors (1100-000) |

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