# FD2705R

## 2000 series addressable reflective beam detector 5 to 50 m

### General

The FD2705R and FD2710R provides an integral, loop powered analogue addressable reflective beam detector up to 100 m distance.

### Configuration

The FD2705R and FD2710R consist of an infrared transmitter and receiver in one single compact housing. The infrared signal is reflected by a prism and analysed for smoke presence. It is particularly designed to be use where point smoke detectors are not practical due to height or inaccessibility.

The FD27xxR series units are loop powered for connection to 1200/2000 series fire panels. They use the Aritech 2000 series protocol.

### Installer friendly

Wiring is restricted to a minimum as the transmitter and receiver are in the same housing. The detector is very easily aligned by means of checking the alignment LEDs. Easy alignment ensures optimum operation, both electrically and mechanically. The unit is easily tested using the graduated obscuration test card supplied.

The low power consumption of the units allows multiple beams to be powered on the same loop without compromising the system's autonomy.

### Reducing false alarms

Various alarm thresholds may be selected from to suit the environment. If the signal reduces to below the selected threshold and is present for ±10 seconds, a fire condition is signalled. If the infrared beam is obscured rapidly to a level of 90 % or greater for ±10 seconds, a fault condition is signalled. The detector monitors long term degradation of signal strength caused by component ageing or build up of dirt on optical surfaces.



### Details

- Loop Powered
- Up to ceiling heights of 25 m
- Low current consumption
- 3 selectable alarm thresholds
- Self check and automatic contamination compensation
- Automatic discrimination between fire and fault
- Vertical or horizontal mount
- Easy wiring and unique alignment
- Microprocessor controlled
- Conforms to BS5839 part 5 and EN54

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## Technical specifications

### General

| | |
|---|---|
| Status indication | LEDs |
| Compatibility | Aritech 2000 series systems |
| Alarm levels | 3 |
| Connectivity | 2-wire loop |
| Addressing method | DIP Switches |

### Electrical

| | |
|---|---|
| Power supply type | Loop powered |
| Operating voltage | 17 to 28 VDC |
| Current consumption | 5 mA (Quiescent)<br>14 mA (Alarm)<br>10 mA (Fault)<br>22 mA (Alignment mode) |

### Detection

| | |
|---|---|
| Detection principle | Optical light scatter |
| Coverage area | <750 m² |
| Range | 5 to 50 m |
| Lateral detection | 7.5 m |
| Optical wave length | 880 nm |
| Installation height | < 25 m |
| Misalignment tolerance | Detector ± 0.4°, Prism ± 5.0° (@ 25%) |

### Physical

| | |
|---|---|
| Physical dimensions | 130 x 210 x 120 mm( W x H x D) |
| Net weight | 770 g |
| Colour | Black, Grey |
| Mounting type | Wall mount |
| Material (body) | Flame retardent ABS |

### Environmental

| | |
|---|---|
| Vandal proof | No |
| Operating temperature | -10 to 55°C (32 to 100°F) |
| Relative humidity | 93% (non-condensing) |
| Environment | Indoor |
| IP rating | IP50 |

### Regulatory

| | |
|---|---|
| Compliancy | CE, REACH, RoHS 3, WEEE |
| Certification | CPR |
| Standards | EN54:12 |

### Compatible products

| Category | Reference | Description |
|---|---|---|
| Detection device | FD-MB10 | Mounting bracket for use with FD700, FD900, FD2700 & FDR-EZ series beam detectors (1000-002) |
| Detection device | OR2000 | Reflective prism for Fireray reflective beam detectors (23901.01) |

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