FD310

End-To-End beam detector system, 5 to 120 m

General

The FD310 End to End infrared Optical Beam Smoke Detector (OBSD) has been designed using the latest optical technology, incorporating modern industrial, electronic and software techniques.This detector offers cost effective protection of large, open area spaces with high ceilings. It is also very suited to applications where access to ceiling mounted smoke detectors presents practical difficulties.



Operation

The system comprises a modern looking Transmitter head, which emits a narrow beam of infra-red light to an associated Receiver head, with a compact Low Level Controller. Once smoke crosses through and thus obscures the IR beam path, the signal strength at the Receiver drops below a preset level which in turn results in an alarm condition. Both the detector heads,Transmitter and Receiver, have integrated alignment thumbwheels for ease of alignment. Using these thumbwheels provides a smooth and repeatable alignment process.The detector heads have up to 10 degrees of adjustment in both planes. For further adjustment, a bespoke Adjustment Bracket is available, which offers up to 180 degrees movement in both planes, as well as a full 360-degree rotation.

The FD310 has been designed so that it can be installed by one operator, with its laser assisted alignment method combined with easy to use alignment LED’s offering a visual feedback. Integrated laser alignment aid can be activated at the Controller or at the Receiver head.

The low level Controller incorporates a LCD display, which offers a full icon-based, easy-to-use interface unit.This Controller enables ease of commissioning, testing and maintenance of the beam detection system. During commissioning the detector sensitivity and fire thresholds can be selected, along with the user variable time to fire and time to fault settings.

Details

- Separate Transmitter and Receiver Heads
- Range 5 to 120 metres, configurable per set of Detectors
- Integral Laser Alignment in Receiver
- 2-wire Interface between Controller and Receiver
- Single and Twin Detector options
- Separate Fire and Fault Relays per Detector
- Low Level Controller with LCD display
- Programmable Sensitivity and Fire Threshold
- Automatic Gain Control (AGC) for drift compensation
- First Fix concept for Transmitter, Receiver and Controller
- Multiple cable gland knockouts for ease of wiring
- Optional Transmitter powering from Controller

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Technical specifications

Electrical

Operating voltage	12 to 36 VDC
Current consumption	14 mA (controller) 8 mA (transmission head)

Detection

Range	5 to 120 m

Output

Output type and rating	Relay output 2A @ 30 VDC

Physical

Physical dimensions	Controller: 203 x 124 x 73 mm (W x H x D) Head: 74 x 74 x 161 mm (W x H x D)
Net weight	606 g (controller) 104 g (transmission head)
Colour	White
Mounting type	Wall mount

Environmental

Operating temperature	-10 to +55°C
Environment	Indoor
IP rating	IP54 (controller and head)

Regulatory

Certification	EN54-12

Compatible products

Category	Reference	Description
Detection device	FD310H	

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