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WORLD CLASS FIRE SOLUTIONS

Conventional End-to-End Optical Beam Detector

FUNCTION

The Conventional End-to-End Optical Beam Detector 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.

The Conventional End-to-End Optical Beam Detector is ideal for applications where line of sight for the IR (infra-red) detection path is narrow and where the building structure uses reflective surfaces. It has also been designed to be aesthetically pleasing and thus can equally suit modern architectural buildings as well as heritage sites, particularly where ornate ceilings exist.

Conventional End-to-End Optical Beam Detector

FEATURES

- Separate Transmitter and Receiver Heads
- Range 5 to 120 metres, configurable per set of Detectors
- 2-wire Interface between Controller and Receiver
- Single and Twin Detector options
- Low Level Controller with LCD display
- Programmable Sensitivity and Fire Threshold
- Integral Laser Alignment in Receiver
- Separate Fire and Fault Relays per Detector
- 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
- EN54:12 approved

INVESTOR IN PEOPLE

A HALMA COMPANY

Assessed to ISO 9001:2008
LPCB Cert No. 010

Certificate No. 010
See www.RedBookLive.com

Assessed to ISO 14001:2004
Certificate number EMS 010

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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 (29600-931) is available, which offers up to 180 degrees movement in both planes, as well as a full 360-degree rotation.

The Conventional End-to-End Optical Beam Detector 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.

An optional feature is to power the Transmitter from the Controller by wiring directly, thus reducing the number of power supplies required.

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.

The system is fully compliant with the requirements of RoHS and WEEE.

Description	**Part Number**
Conventional End-to-End Optical Beam Detector	29600-929
Additional Heads	29600-930
Adjustment Bracket	29600-931

ALARM & OPERATION THRESHOLDS

	Min	Typ	Max
Delay to Alarm (selectable in 1 sec steps:	2s	10s	30s
Delay to Fault (selectable in 1 sec steps):	2s	10s	30s
Laser Time-Out (selectable in 1 min steps):	1min	5min	59min
Response Sensitivity/ Threshold (selectable in 1% steps):	10%	35%	60%

TECHNICAL DATA

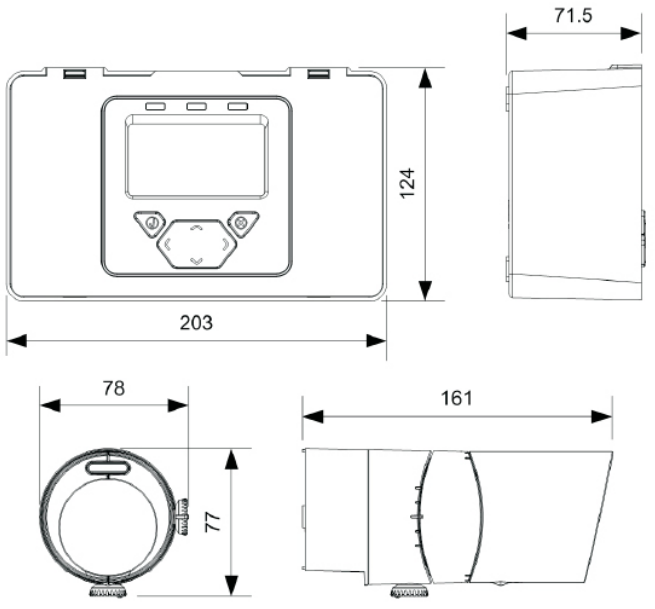
Operating Range:	5 to 120 m
Operating Voltage Range:	12 to 36V DC ± 10%
Operating Controller Current (with 1 or 2 Receivers):	14mA (constant)
Operating Transmitter Current:	8mA (per Transmitter)
Power Down Reset Time:	>20 Seconds
Fire and Fault Relay Contacts:	VFCO 2A @ 30 Volts DC resistive
Operating Temp. (non-condensing): EN54 -	-10°C to 55°C
Optical Wavelength	850nm
Led Indicators:	
Control Unit -	Red=Fire Amber = Fault Green = System OK
Receiver -	Red = Fire Alignment LEDs for single person alignment
IP Rating	IP54
Relative Humidity (non condensining)	93%
Housing Material (Transmitter/Receiver/Controller)	UL94 V2 PC

DIMENSIONS AND WEIGHT

Control Unit: 203 x 124 x 71.5mm (W x H x D) 606gms

Transmitter & Receiver: 78 x 77 161mm (W x H x D) 207gms

DIMENSIONAL DRAWINGS



EMC DIRECTIVE 89/336/EEC

The Conventional End-to-End Optical Beam Detector complies with the essential requirements of the EMC directive 89/336/EEC, provided that it is used as described in this data sheet.

A copy of the Declaration of Conformity is available from Apollo on request.

Conformity of the Conventional End-to-End Optical Beam Detector with the EMC directive does not confer compliance with the directive on any apparatus or systems connected to it.

CONSTRUCTION PRODUCTS DIRECTIVE 89/106/EEC

The Conventional End-to-End Optical Beam Detector complies with the essential requirements of the Construction Products Directive 89/106/EEC.