3000-115

End-to-end flame proof beam detector system

The 3000-115 is ideally suited for the protection of large areas, with potentially explosive atmospheres, against smoking fires. 3000-115 comprises of an infrared transmitter and a receiver, both of which are ATEX-certified for use in Group 2 hazardous areas.There is a separate, safe area, wall-mounted remote/low level control unit to allow adjustment and testing from a convenient non-hazardous location.



The product is designed for large enclosures within oil rigs, refineries, ordnance stores and similar premises. It provides an early warning of smoldering or strongly smoke-generative fires, which may not be picked up by flame detectors installed in many hazardous areas.The end-to-end beam smoke detector, together with a battery backed power supply, can be connected to a zone of a conventional fire alarm control panel or interfaced to an analogue-addressable system via an addressable
input module or a zone monitor module.

Operation

The Transmitter head emits a narrow beam of infra-red light to an associated Receiver head. 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.

The 3000-115 has been designed so that it can be installed by a single Engineer, with its laser assisted alignment method combined with easy to use alignment LEDs offering visual feedback. Integrated laser alignment aid can be activated at the Controller.

It also has a feature which allows for the Transmitter to be powered 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’s fire sensitivity thresholds can be selected, along with the user variable time to fire and time to fault settings.

Details

- Seperate transmitter and receiver unit certified to Exd
- Allows for 2 Detectors per System Controller (Additional Detector Set: 3000-026)
- Separate fire and fault relays per detector
- Range 5 to 80m, configurable per set of detectors
- Integral laser alignment in receiver
- Low current consumption
- 2-wire interface between controller and receiver
- Remote/low level controller with LCD display (safe area)
- Programmable sensitivity and fire/fault delay
- Contamination compensation for dust and building movement
- Transmitter can be powered from controller
- ATEX, IECEx, EN54:12, VdS Approved
- Light cancellation technology

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Technical specifications

General

Reset time	>20 seconds (Power Down)

Electrical

Operating voltage	12 to 36 VDC +/-10%
Current consumption	Controller: 14 mA (constant) (with 1 or 2 receivers) Transmitter: 8 mA (per transmitter)

Detection

Optical wave length	850 nm

Physical

Physical dimensions	Control Unit: 124 x 203 x 73.5 mm Transmitter/Receiver : 172 x 149 x 190 mm (incl. bracket)
Net weight	Control unit: 0.6 kg Transmitter/Receiver: 3.7 Kg (incl. bracket)
Mounting type	Wall mount

Environmental

Operating temperature	-20 to +55°C noncondensing
Relative humidity	93% noncondensing
Environment	Exd
IP rating	Controller: IP50 Transmitter/Receiver: IP66

Regulatory

Certification	CENELEC/ATEX

Fire and Fault Relay Contacts

	2A @ 30Vdc resistive

Housing Material

Controller	UL94 V2 PC
Transmitter/Receiver	Aluminium Alloy LM25, red
Bracket	Steel, red

LED Indications

Controller	Red = Fire; Amber = Fault; Green = System OK
Receiver	Alignment LEDs for single person alignment

Parts List

	Transmitter (clear lens), receiver (dark lens), controller, fixing kit, two brackets

Alarm & Operation Thresholds

Delay to Alarm/Fault	Min: 2sec; Typ: 10sec; Max: 30sec (selectable in 1sec steps)
Laser Time-out	Min: 1min; Typ: 5min; Max: 59min (selectable in 1min steps)
Response Sensitivity/Threshold	Min: 25%; Typ: 35%; Max: 60% (selectable in 1% steps)

Certifications

EN54:12 and ATEX	Ex II 2GD
	Ex db op is IIC T6 Gb
	Ex tb IIIC T85C Db

Compatible products

Category	Reference	Description
Detection device	3000-026	Additional detector set for 3000-015 system

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