DI-9105E

Intelligent reflective beam detector

General

The DI-9105E is a reflective infrared beam smoke detector for use in addressable fire alarm systems running the GST protocol. Being microprocessor based, the detector offers extensive algorithms for analysis and decision making. Taking ambient operating conditions into consideration, system adjustments such as drift compensation and alarm and fault analysis are automatic. The sensitivity of the detector is adjustable to suit various application conditions.

Operating mode

When connected with an addressable GST fire alarm control panel (CIE), the DI-9105E reports its information through the addressable loop. Its loop address may be configured between 1 and 242 as is common to with all GST addressable devices.

Installation

The number of reflectors in a system varies depending on the required operating distance (detection range) of the detector. Optical reflectors from 1 to 4 provide an effective range of the detector between 5 and 100 m. Four reflectors are supplied with the beam. The detection range of the beam can be selected from 4 levels with the standard GST hand held programmer (P-9910B). For very short range detection (>10 m) , a non reflective mask (NRM9105) is recommended to attenuate the reflector.

Applications

The DI-9105E is particularly suitable for use in historical buildings, warehouses, large storage areas, shopping malls, leisure centres, exhibition halls, hotel lobbies, printing houses, clothing factories, museums and prisons.



Details

- Loop powered with no additional wiring requirements
- Wide operating voltage range
- Large protection area
- Combination of transmitter & receiver in one housing allows for easy installation and optical alignment
- Easy alignment and commissioning with onboard laser and signal level indication
- Intelligent microprocessor based decision making on fire and fault statuses
- Self-diagnostics for monitoring & reporting of internal faults
- Automatic drift compensation for changing environmental conditions, dust and dirt accumulation, building movement and changing of component specifications due to ageing
- Easy electronic addressing and setup
- Four selectable sensitivity levels for wide application coverage

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Technical specifications

General

Status indication	LEDs
Compatibility	GST addressable fire alarm systems
Connectivity	2-wire loop
Addressing method	Electronic

Electrical

Power supply type	Loop powered
Operating voltage	16 to 28 V (24 VDC Nominal)
Current consumption	≤20 mA (Commissioning) ≤2 mA (Standby) ≤5 mA (Alarm)
Cable specification	>1.5 mm²
No. of cable cores	2 (twisted)
Terminals	2

Detection

Detection principle	Optical light scatter
Sensitivity	1.3 to 2.8 dB, selectable
Coverage area	1400 m²
Zone length	<100 m
Range	5 to 100 m
Lateral detection	14 m
Adjustment angle	-6 to +6°
Misalignment tolerance	±0.5°

Physical

Physical dimensions	95 x 206 x 95 mm (W x H x D)
Shipping weight	450 g
Colour	Grey
Mounting type	Wall mount
Cable entries	2
Material (body)	ABS

Environmental

Vandal proof	No
Operating temperature	-10 to +50°C
Storage temperature	-20 to +60°C
Relative humidity	≤95% noncondensing
Environment	Indoor
IP rating	IP20 IP66 with glue seal

Regulatory

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

Compatible products

Category	Reference	Description
Detection device	I-9105R REFLECTOR	Reflector mirror for the I-9105R beam detector
Mounting Accessories	NRM9105	Non-reflective mask for 9105 series beam detectors

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