Intelligent Optical Smoke Detector I-9102

Global System Technology PLC
The Intelligent Solution

The integral microprocessor analysis the signal according to the factors such as signal strength and rate of increase, then confirms these pattern with the pre-programmed fire scenarios and smoke patterns for a faster and safer response. By intelligent analysis, the smoke detection sensitivity will be automatically adjusted according to temperature change, providing a rapid response.

Secure and speedy communication through the on board processor enables the detector to make its own decision, resulting in greater automation. The sensor and the panels utilized fuzzy logic providing an almost limitless cause and effect scenarios.

Drift compensation, to monitor for the long term changes caused by aging, humidity, temperature, dust, etc. constant monitoring and self adjusting, the I-9101 updates sensitivity base line for its sensing element. Even when the detector raises a warning advising that it requires cleaning, the sensitivity remains the same as the day it was installed.

Electronic addressing can be done through Handhold Programming device (P-9910), purchased separately.

Features and Benefits

1. Built in 8 bit microprocessor
2. Algorithm maps for faster response and false alarm rejection
3. Analogue sensing
4. Secure and speedy communication
5. Intelligent Linear Drift compensation
6. Self diagnosis and history log
7. Electronic addressing
8. Sensing chamber for exceptional dust proof ability
9. Twin LED for 360º vision
10. Built-in remote indicator output
11. Low profile design

Description

The I-9102 Optical Smoke Detector is the ideal device for most application due to its excellent linear response to a wide variety of different type of smoke patterns. The unit meets the sensitivity requirement of EN 54 part 7, European Standard and approved by Loss Prevention Certificate Board (LCPB).

Aesthetically pleasing with a low profile design, unobtrusive to complement modern building designs. The unit incorporates an intelligent processor that provides Algorithm map, Built-in A/D converter, Drift compensation, Self Diagnosis and history log.

Technical Specifications

- Standard: EN54-part7
- Approval: LPCB,CE
- Protection rating: IP 32
- Operating voltage: 24Vdc Loop voltage
- Operating Current:
- Standby current 0.6mA
- Alarm Current 2mA
- Operating temperature: -10°C to +50°C
- Relative humidity: 95%
- Application: Indoor use
- Detecting range: 100 sqm elevated than 6m, 80 sqm less than 6m
- Field Programmable sensitivity: 0.10dB/m to 0.56dB/m – 3 level
- Visual Indicator: twin LED, Red (lit steady when alarm, 3 sec interval blinking at normal state)
- Material and colour: ABS, off-white
- Wiring: 1 pair non polarized
- Dimensions: diameter 10cm; height 5cm

Intelligent Optical Smoke Detector **I-9102**

CONCRETE PAD OR HOLDING PAD — EMBEDDED BOX
MARK-LINE — 2ND MARK-LINE
LED INDICATOR
ROTATE CLOCKWISE

Mounting Standard Base

The detector is mounted using our standard base DZ-03. Multiple-direction design allows easy direction adjustment. Suitable for surface mount only, mount on standard 1gang electrical back box with a mounting hole of 65mm spacing

CONCRETE PAD OR HOLDING PAD — EMBEDDED BOX
SCREW
HOLE
STANDARD DETECTOR BASE

BASE MOUNTING
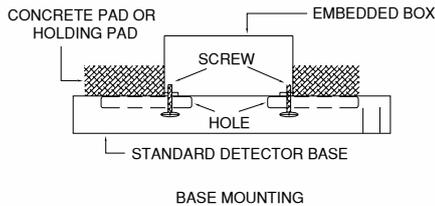
Wiring and Connection

Connect the wires to the required terminal according to the wiring diagram below; terminal 1 and 3 for the loop; connection of remote indicator output is on terminals 2 and 4. The cable must be fire rated type and the size depends on the distance and application. Minimum size gauge 1.0mm²(18 AWG)

TERMINALS
TO NEXT DEVICE 1 PAIR FIRE CABLE
FROM CONTROL PANEL 1 PAIR FIRE CABLE
REMOTE INDICATOR
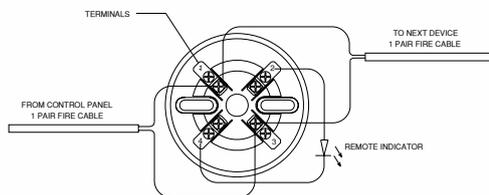
Detector Installation

The Intelligent optical smoke detector should be installed in compliance with all local codes having a jurisdiction in your area or NFPA 72 National Fire Alarm Code, NFPA 70 National Electrical Code, BS 5389 and EN54. Before installation verify the proper wiring and base are firmly mounted to prevent detector damage before the installation. Point the detector in the base by the mark-line and secure the detector in that position by rotating it clockwise until it reaches the next mark line.
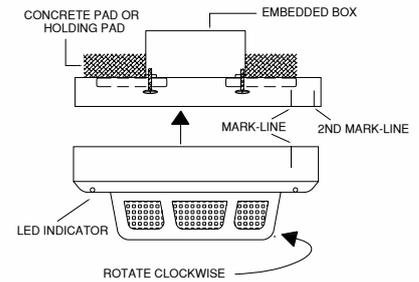
Programming

The address of the detector and sensitivity can be programmed using GST handhold programmer (P-9910), purchased separately. Connect the two wires of the handheld programmer to terminals 1 and 3 of the detector.

FIELD DEVICE PROGRAMMER

DETECTOR TERMINAL
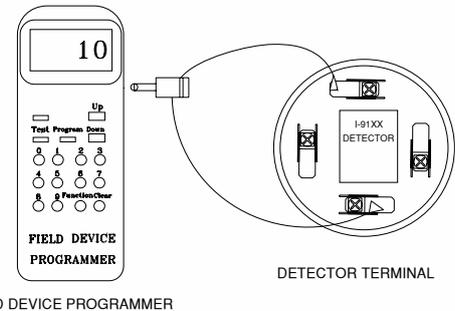
Selection of compatible Control Panels

Compatible with all GST Intelligent Fire Alarm Panels GST 100, GST 200, GST 5000 and GST 9000.

Ordering Information:

Part No	Description	Weight /Kg	Pack Qty per Box
I-9102	Intelligent Optical Smoke Detector with Remote Indicator	0.123	120
DZ-03	Standard Detector Base	0.050	360

MANUFACTURED IN ACCORDANCE WITH

Note: Specifications are subject to change without notice.

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