Digital Optical
Smoke Detector

DI-9102

Description

The DI-9102 Digital Optical Smoke Detector is the ideal device for most application due to its excellent digital response to a wide variety of different type of smoke patterns. The unit meets the sensitivity requirement of EN 54 part 7, European Standard

Unique and pleasing with a low profile design, unobtrusive to complement modern building designs. The unit incorporates an intelligent processor that provides Algorithm map, Digital signaling, Drift compensation, Self Diagnosis and history log.

The integral microprocessor analyses the signal according to integrated algorithm of analyzing fire, 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 and sending data to the panel within a second, 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 DI-9102 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 and sensitivity adjustment can be done through Handhold Programming device (P-9910B), purchased separately and can be modified in the panel
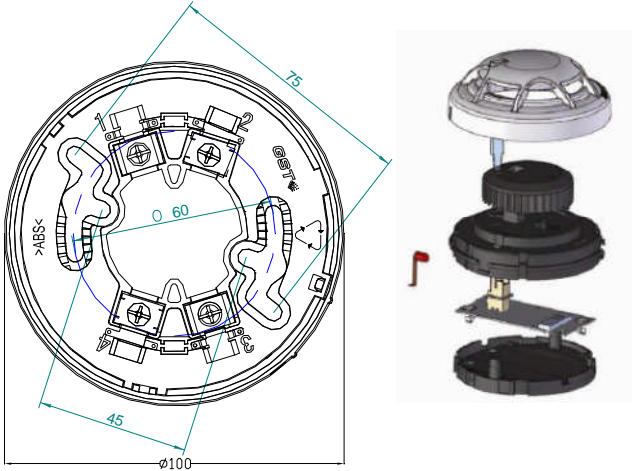
Features and Benefits

- Advance digital sensing technique
- Built in 8 bit microprocessor
- Algorithm maps for faster response and false alarm rejection
- Secure and speedy communication
- Intelligent Drift compensation
- Self diagnosis and history log
- Electronic addressing
- Duplicated address report
- Sensing chamber for exceptional dust proof ability and LED for 360° vision
- Built in remote indicator output
- Unique Low profile design
- EN54 compliance

Technical Specifications

- Standard: EN54-part7
- Approval: Pending
- Protection rating: IP 32
- Operating voltage: 24Vdc Loop voltage
- Operating Current: Standby current 0.8mA
                    Alarm Current 5mA
- Operating temperature: -10°C to +50°C
- Relative humidity: 95%
- Application: Indoor use
- Remote output: Directly connect to remote indicator (built in 5.1k resistor in series, output voltage is 4.3V); not lit in polling, constantly illuminated in alarming.
- Sensitivity: 0.10dB/m to 0.21dB/m
- Address setting: Via P-9910B, within 1 to 241, engage one address
- Recommended coverage area: 60 m²
- Visual Indicator: LED, Red (lit steady when alarm, flash in polling)
- Material and colour: ABS, traffic-white
- Wiring: 1 pair non polarized
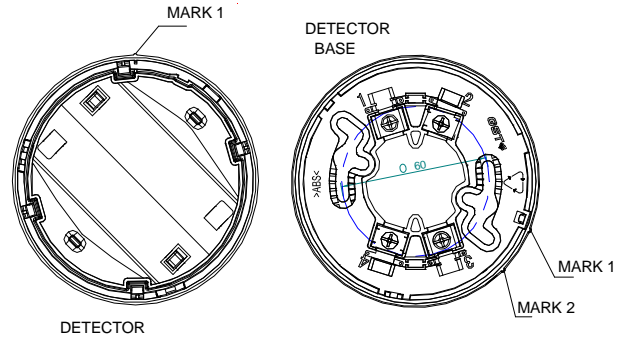- Dimensions: diameter 10cm; height 4.45cm

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D A T A S H E E T
Note: Specifications are subject to change without notice.

Detector Installation

The detector is mounted using our standard base DB-01.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.
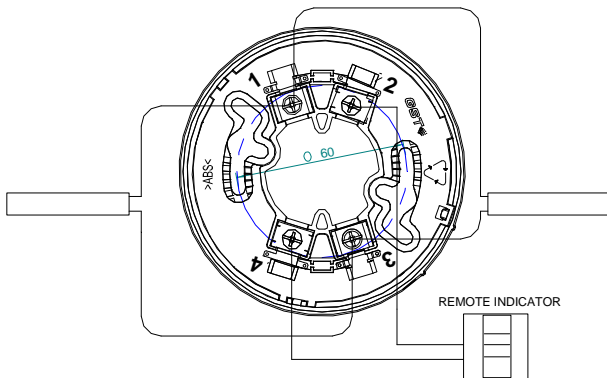

Detector Installation

The smoke detector should be installed in compliance with all local codes having a jurisdiction in your area or BS 5389 Part 1 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. Do not remove red plastic dust cover until the final handover is done.
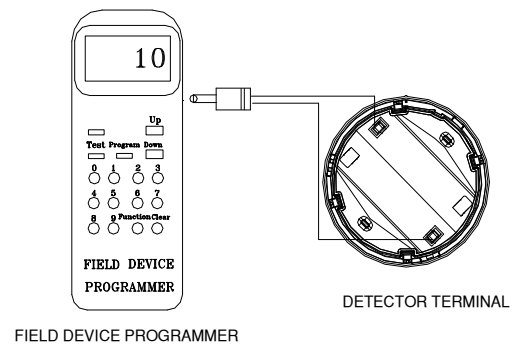

Wiring and Connection

Connect the wires to the required terminal according to the wiring diagram below; terminal 1(+) and terminal 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. Recommended cable size 1.5mm² fire rated min 2 hours

REMOTE INDICATOR

Programming

The address of the detector can be programmed using GST handheld programmer (P-9910B), purchased separately. Connect the two wires of the handheld programmer to any two opposite terminals of the detector.

FIELD DEVICE PROGRAMMER   DETECTOR TERMINAL

Selection of compatible Control Panels

Compatible with all GST Intelligent Fire Alarm Panels GST 100, GST 200/2, GST 5000, GST 9000 and IFP8

Accessories

Part Number: DI-9102
Description: Digital Optical Smoke Detector
Weight / Kg.: 0.110
Pack Qty. per Box: 100

Ordering Information

Part Number: DB-01
Description: Detector base
Weight / Kg.: 0.049
Pack Qty. per Box: 300

MANUFACTURED IN ACCORDANCE WITH

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DATA SHEET
Note: Specifications are subject to change without notice.