



548d(cl-5) 0832-CPD-0524

# Intelligent Optical Smoke Detector

I-9102

## Description

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

The unit is aesthetically pleasing with a low profile, unobtrusive design that will 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.

The integral microprocessor analyses the signal according to factors such as signal strength and rate of increase, then confirms these patterns with the pre-programmed fire scenarios and smoke patterns, for a faster and safer response.

Secure and speedy communication through the onboard processor enables the detector to make its own decision, resulting in greater automation. The sensor and the panels utilize 'fuzzy logic' - providing almost limitless cause and effect scenarios.

Features include Drift compensation to monitor for any long term changes caused by aging, humidity, temperature, dust, etc. The I-9102 is constantly monitoring and self adjusting and is capable of updating sensitivity baseline 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 a Handheld Programming device (P-9910B), available for purchase separately.

## Features and Benefits

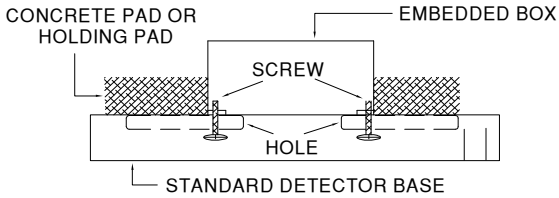
- Built in 8 bit microprocessor
- Algorithm maps for faster response and false alarm rejection
- Analogue sensing
- Secure and speedy communication
- Intelligent Linear Drift compensation
- Self diagnosis and history log
- Electronic addressing
- Sensing chamber for exceptional dust proof ability
- Twin LED for 360° vision
- Built-in remote indicator output
- Low profile design

## Technical Specifications

- Standard: EN54-part7
- Approval: LPCB,CE-CPD
- Protection rating: IP 23
- Operating Voltage: 24Vdc Loop voltage
- Operating Current: 5mA with remote LED indicator
- Standby Current 0.8mA
- Operating Temp: -10°C to +50°C
- Relative humidity: 95%
- Sensitivity is set within the range stipulated by LPCB standard
- Application: Indoor use
- Visual Indicator: twin LED, Red (lit steady when in alarm, 3 second interval blinking at normal state)
- Material and colour: ABS, white (RAL 9016)
- Wiring: 1 pair polarized
- Dimensions: diameter 10cm; height 5cm

## Standard Base

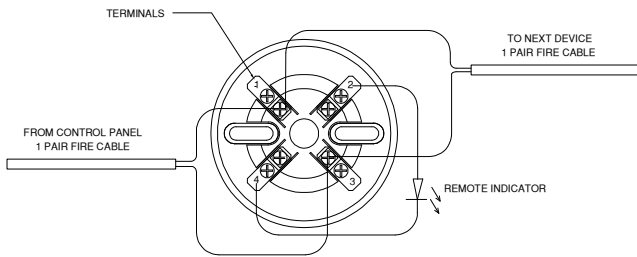
The detector is mounted using our standard base DZ-03. Multiple-direction design allows easy direction adjustment. Suitable for surface mount only, mount on standard 1gang electrical back box with a mounting hole of 65mm spacing.



BASE MOUNTING

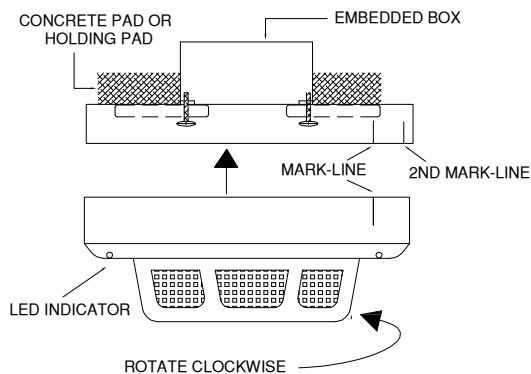
## Wiring and Connection

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 is 1.5mm<sup>2</sup>, fire rated min 2 hours.



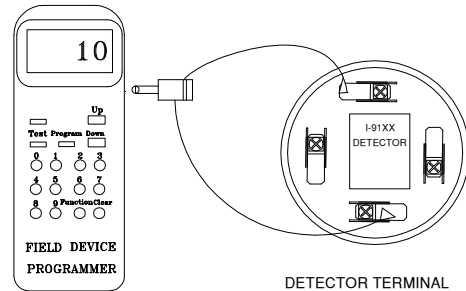
## Detector Installation

The Intelligent detector should be installed in compliance with all local codes having a jurisdiction in your area or BS 5839 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 the red plastic dust cover until the final handover is done.



## Programming

The address of the detector can be programmed using a GST handheld programmer (P-9910B), purchased separately. Connect the two wires of the handheld programmer to terminals 1 and 3 (no polarity) of the detector.



FIELD DEVICE PROGRAMMER

DETECTOR TERMINAL

## Selection of Compatible Control Panels

Compatible with all GST Intelligent Fire Alarm Panels - GST100, GST200-2 Series and GSTIFP8.

## Ordering Information



**Part Number:** I-9102  
**Description:** Intelligent Optical Smoke Detector  
**Weight / Kg.:** 0.123  
**Pack Qty. per Box:** 100

## Accessories



**Part Number:** DZ-03  
**Description:** Standard Detector Base  
**Weight / Kg.:** 0.050  
**Pack Qty. per Box:** 300



**Part Number:** C-9504  
**Description:** Base Mount Circuit Isolator  
**Weight / Kg.:** 0.010  
**Pack Qty. per Box:** 120



**Part Number:** I-9406  
**Description:** Addressable Sounder Beacon Base  
**Weight / Kg.:** .20  
**Pack Qty. per Box:** 30



**Part Number:** C-9314P  
**Description:** Remote Indicator  
**Weight / Kg.:** 0.03  
**Pack Qty. per Box:** 270

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