



Conventional Combined Smoke & Heat Detector

C-9101

Description

C-9101 is a multifunctional and highly reliable detector that able to sense fire cause by polyurethane and heptanes fire. And also detect fire with obvious rise of temperature such as alcohol fire. With all the combined features of standard optical and heat detector makes this suitable for application in data processing area like computer room and telephone exchange.

Features and Benefits

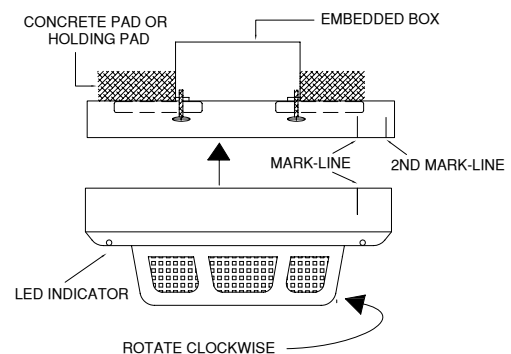
1. Multifunctional and highly reliable detector
2. Sensing chamber for exceptional dust proof ability
3. Twin LED for 360° vision
4. Low profile design

Technical Specifications

- Standard Manufactured: EN54 Part 5 and 7
- Operating Voltage: 24VDC (12VDC~28VDC)
- Standby Current: $\leq 60\mu\text{A}$
- Alarm Current: $10\text{mA} \leq I \leq 30\text{mA}$
- Maximum Ripple Voltage: 2V (peak-to-peak value)
- Indicator: Red (flashes in polling & illuminates in alarming)
- Alarm Clear: Instantaneous Power-off (10s MAX., 1.5VDC MAX.)
- Power-up Time: $\leq 5\text{s}$
- Action Temperature: 58°C
- Class: A2R
- Rate of Rise: 3°C/min
- Wiring: Polarized two-wire for power
- Ingress Protection Rating: IP22
- Environment Temperature: -10°C~+50°C
- Relative Humidity: $\leq 95\%$, non condensing
- Material and Color of Enclosure: ABS, white (RAL9016)
- Dimensions: Diameter: 100mm / Height: 56mm (with base)
- Mounting Hole Distance: 45mm~75mm
- Weight: 126g

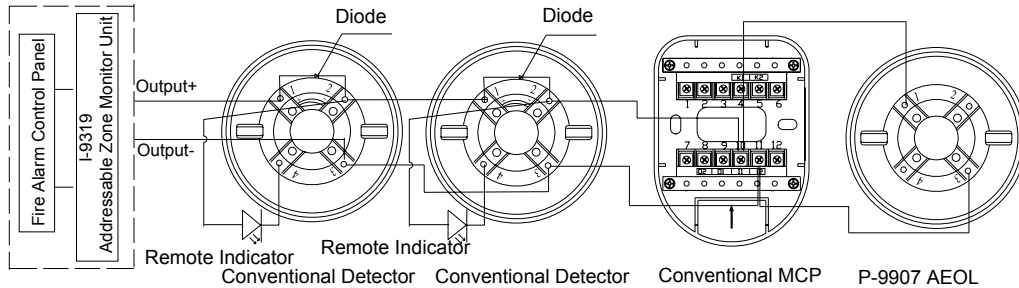
Detector Installation

The 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.

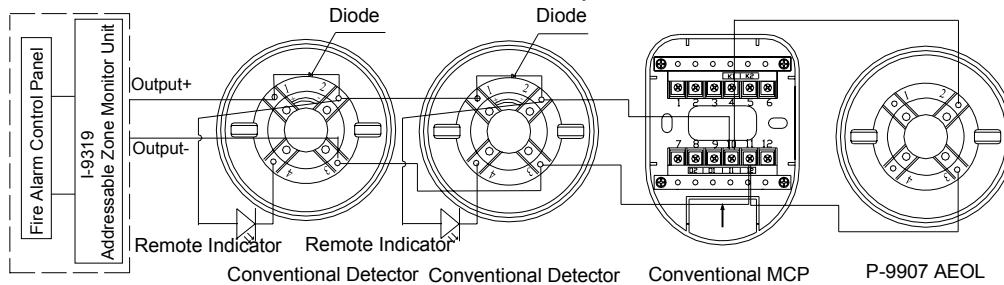


Wiring and Connection

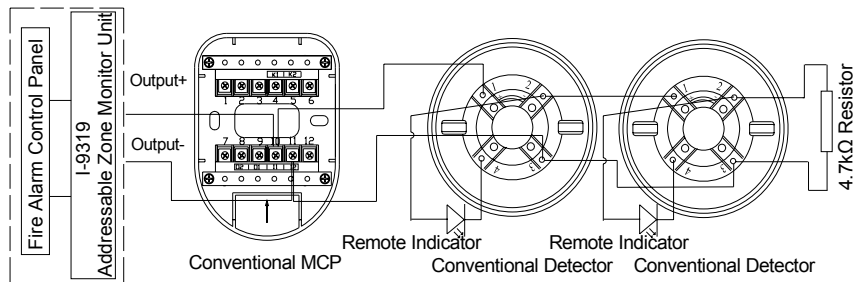
1. When the detector is connected with conventional fire alarm control panel or I-9319 addressable zone monitor unit in series, if a P-9907 AEOL is connected to the end of output loop, a 1N5819 Diode should be connected to the detector base. Used as the detector base, the AEOL is to install a conventional detector on it. The system connection is shown below:



When the AEOL is not used as the detector base, a cover should be added, the system connection is shown below:



2. When the detector is connected with conventional fire alarm control panel (those within the dotted line are equivalent to a conventional fire alarm control panel) or I-9319 Addressable zone monitor unit in series, if an end of line resistor is connected to the end of output loop, then no diode is connected to the detector base. The system connection is shown below:



Maximum 15 detectors can be connected in one zone. Cooperating with end of line device, the compatible panel can monitor the cable for open circuit and short circuit. Panel will report if any detector is removed. With the AEOL, the functioning of other device will not be affected by the detector removal.

Accessories



Part Number: DZ-03
Description: Detector Base - EOLR
Weight / Kg.: 0.05
Pack Qty. per Box: 300



Part Number: DZ-03D
Description: Base with Diode AOL
Weight / Kg.: 0.05
Pack Qty. per Box: 300

Ordering Information



Part Number: C-9101
Description: Conventional Combined Optical Smoke and Dual Heat Detector
Weight / Kg.: 0.123
Pack Qty. per Box: 100





Conventional Optical Smoke Detector

C-9102

Description

With the technique of scattering, the detector's reliability, stability and consistency are improved. The special chamber design ensures the insert-defend, dirt-defend and anti-light disturbance.

The conventional type can be used directly with our conventional fire alarm panels. Using an interface (I-9319), it can be connected to our intelligent panels.

Features and Benefits

1. Listed to LPCB
2. Sensing chamber for exceptional dust proof ability
3. Built-in Remote Indicator Output
4. Twin LED for 360° vision
5. Low profile design

Selection of Compatible Control Panel

Compatible with all GST Conventional panel and GST Intelligent Fire Alarm Panels

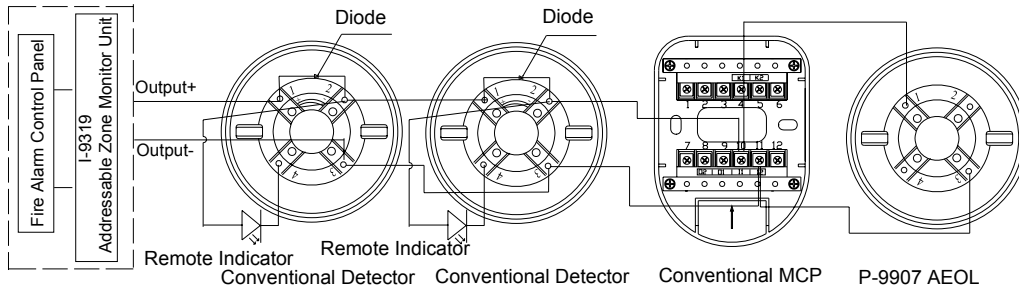
Technical Specifications

- Standard: EN54:7
- Approval: LPCB, CE-CPD
- Operating Voltage: 24VDC (12VDC~28VDC)
- Standby Current: $\leq 60\mu\text{A}$
- Alarm Current: $10\text{mA} \leq I \leq 30\text{mA}$
- Indicators: Red. Quiet in normal condition. Illuminates steadily in alarm.
- Remote Indicator Output: Directly connecting with LED (built-in $2\text{k}\Omega$ resistor in series). Quiet in normal condition. Illuminates steadily in alarm.
- Maximum Ripple Voltage: 4V (peak-to-peak)
- Alarm Clear: Instantaneous Power-off (5s Max., 2.5VDC Max.)
- Power-up Time: $\leq 10\text{s}$
- Max. Wind Speed: 7.6m/s (1500fpm)
- Wiring: Polarized 2-core for detection zone Cable.
- Ambient temperature: $-10^\circ\text{C} \sim +50^\circ\text{C}$
- Relative Humidity: $\leq 95\%$, non condensing
- Ingress Protection Rate: IP23
- Material and Color of Enclosure: ABS, white (RAL 9016)
- Dimensions: Diameter: 100mm
Height: 56mm (with base)
- Mounting Hole Distance: 45mm~75mm
- Weight: About 120g

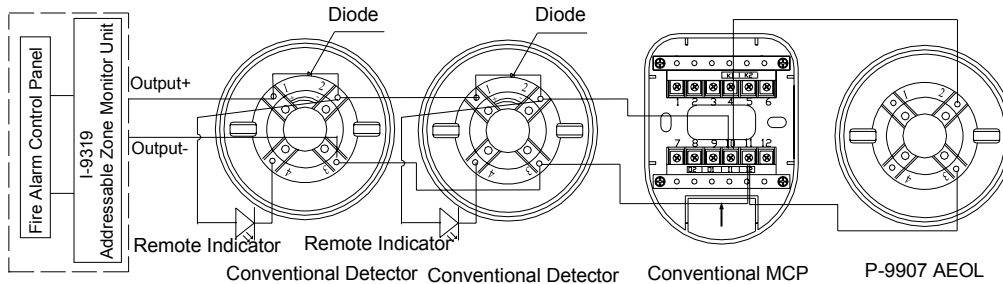
Wiring and Connection

1. When the detector is connected with conventional fire alarm control panel or I-9319 addressable zone monitor unit in series, if a P-9907 AEOL is connected to the end of output loop, a 1N5819 Diode should be connected to the detector base.

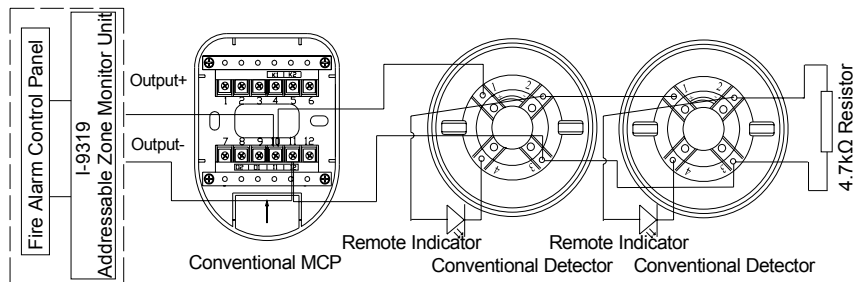
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Maximum 15 detectors can be connected in one zone. Cooperating with end of line device, the compatible panel can monitor the cable for open circuit and short circuit. Panel will report if any detector is removed. With the AEOL, the functioning of other device will not be affected by the detector removal.

Accessories



Part Number: DZ-03
Description: Detector Base - EOLR
Weight / Kg.: 0.05
Pack Qty. per Box: 300



Part Number: DZ-03D
Description: Base with Diode AOL
Weight / Kg.: 0.05
Pack Qty. per Box: 300

Ordering Information



Part Number: C-9102
Description: Conventional Optical Smoke Detector
Weight / Kg.: 0.123
Pack Qty. per Box: 100

MANUFACTURED IN ACCORDANCE WITH





548d(cl-5) 0832-CPD-0522

Conventional Dual Heat Detector

C-9103

Description

C-9103 Conventional Rate of Rise and Fixed Temperature Heat Detector (hereinafter called the detector) checks ambient temperature with the sensitive feature of thermo-sensitive elements. With a built-in SCM, it's fixed with highly reliable fire judging program.

Special processing technology ensures its stable and reliable operation. Matching with P-9907 Active End of Line Unit, it can connect with compatible fire alarm controller to conduct the processing of detector signals.

Features and Benefits

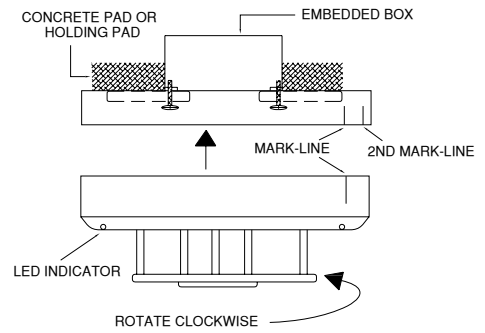
1. Listed to LPCB
2. Fixed Temperature and Rate of Rise Detection
3. Built-in Remote Indicator Output
4. Twin LED for 360° vision
5. Low profile design

Technical Specifications

- Standard: EN54:5
- Approval: LPCB, CE-CPD
- Operating Voltage: 24VDC(12VDC~28VDC)
- Standby Current: $\leq 60\mu\text{A}$
- Alarm Current: $10\text{mA} \leq I \leq 30\text{mA}$
- Indicators: Red. Quiet in normal condition. Illuminates steadily in alarm.
- Remote indication output: Directly connecting with remote indicator (built-in $2\text{k}\Omega$ resistor in series.). Quiet in normal condition. Illuminates steadily in alarm.
- Maximum Ripple Voltage: 4V (peak-to-peak value)
- Alarm Clear: Instantaneous Power-off (5s Max., 2.5VDC Max.)
- Power up Time: $\leq 10\text{s}$
- Action Temperature: 58°C
- Class: A1R
- Wiring: Polarized 2-core for detection zone cable.
Polarized 2-core for remote indicator.
- Operating Temperature: $-10^\circ\text{C} \sim +50^\circ\text{C}$
- Relative Humidity: $\leq 95\%$, non condensing
- Ingress Protection Rating: IP33
- Material and Color of Enclosure: ABS, white (RAL 9016)
- Dimensions: Diameter: 100mm / Height: 58mm (with base)
- Mounting Hole Distance: 45mm~75mm
- Weight: About 120g

Detector Installation

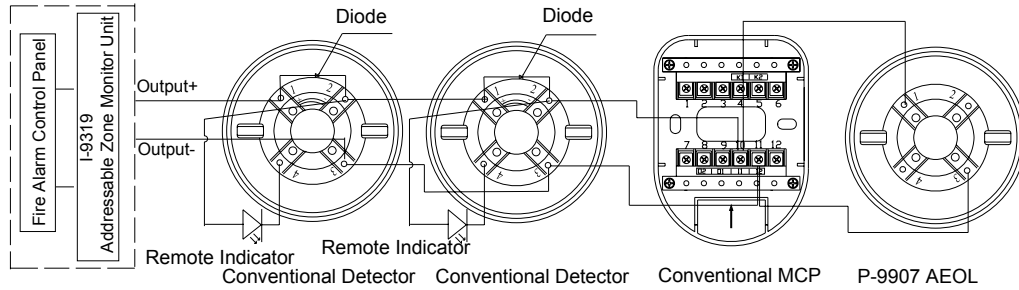
The detector should be installed in compliance with all local codes having a jurisdiction in your area or BS 5389 Part 1 and EN54. Before installation verify the proper wiring and base are firmly mounted to prevent detector damage before the installation. Point the detector in the base by the mark-line 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.



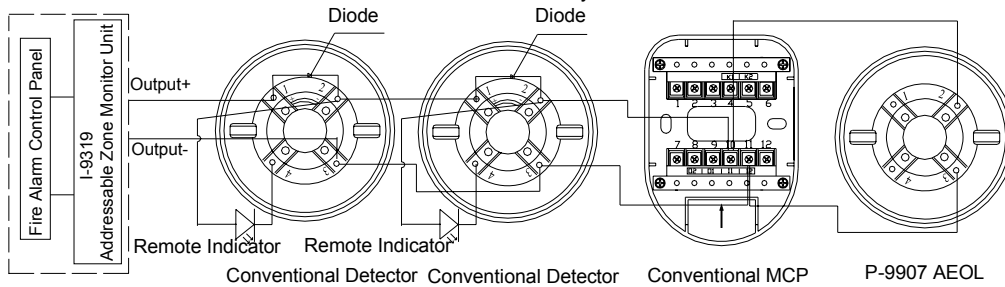
Wiring and Connection

1. When the detector is connected with conventional fire alarm control panel or I-9319 addressable zone monitor unit in series, if a P-9907 AEOL is connected to the end of output loop, a 1N5819 Diode should be connected to the detector base.

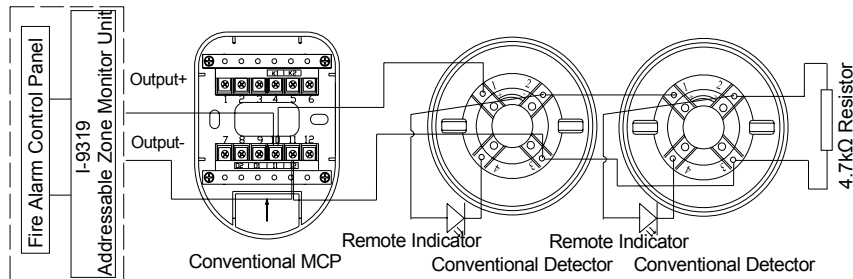
Used as the detector base, the AEOL is to install a conventional detector on it. The system connection is shown below:



When the AEOL is not used as the detector base, a cover should be added, the system connection is shown below:



2. When the detector is connected with conventional fire alarm control panel (those within the dotted line are equivalent to a conventional fire alarm control panel) or I-9319 Addressable zone monitor unit in series, if an end of line resistor is connected to the end of output loop, then no diode is connected to the detector base. The system connection is shown below:



Maximum 15 detectors can be connected in one zone. Cooperating with end of line device, the compatible panel can monitor the cable for open circuit and short circuit. Panel will report if any detector is removed. With the AEOL, the functioning of other device will not be affected by the detector removal.

Selection of Compatible Control Panel

Compatible with all GST Conventional panel and GST Intelligent Fire Alarm Panels using Zone monitor module:

Ordering Information



Part Number:C-9103
Description: Conventional Dual Heat Detector
Weight / Kg.: 0.123
Pack Qty. per Box: 100

Accessories



Part Number: DZ-03
Description: Detector Base - EOLR
Weight / Kg.: 0.05
Pack Qty. per Box: 300



Part Number: DZ-03D
Description: Base with Diode AOL
Weight / Kg.: 0.05
Pack Qty. per Box: 300

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Conventional Ultraviolet Flame Detector

C-9104

Description

The C-9104 Conventional Ultraviolet Flames Detector is fast and capable to detecting the ultraviolet (UV) rays emitted by a burning substance and is used in high hazard applications such as petrochemical plants, munitions factories and other areas where flammable or explosive liquids or solids are handled or stored. The C-9104 sensor adopts an ultraviolet photosensitive tube, with qualities of highly sensitive, reliable, dust-resistant, corrosion-proof and moisture-resistant, therefore is not sensitive in dust, oil, tolerance of fume, and humidity.

Features and Benefits

- Dust /corrosion/humidity resistance
- Secure and speedy communication
- Standard calibration set to detect a 3cm flame at 6metres
- Effective range 12 metres
- 80° effective detection dispersion angle
- Twin LED for 360° vision

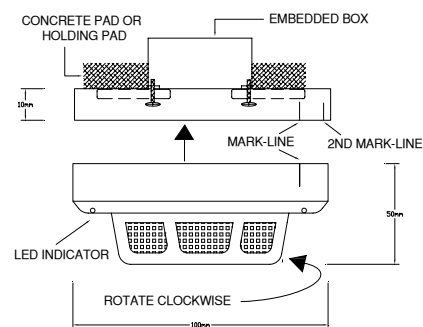
Technical Specifications

- Operating Voltage: 24VDC(12VDC~28VDC)
- Standby Current: $\leq 1.2\text{mA}$
- Alarm Current: $\leq 30\text{mA}$
- Sensitivity: Level I
- Indicator: Illuminates steadily in alarm.
- Detection Angle: $\leq 80^\circ$
- Monitoring Area:

$$S=(h \times \text{tg}\alpha)^2 \pi = 2.21h^2$$
 h: Height from the detector to the ground. $\alpha=40^\circ$
- Operating Temperature: $-20^\circ\text{C} \sim +50^\circ\text{C}$
- Relative Humidity: $\leq 95\%$, non condensing
- Dimension: Diameter: 103mm
 Height: 53.5mm (with base)
 Diameter: 100mm
 Height: 41mm (without base)
- Material and Color of Enclosure:
 ABS, white (RAL 9016)
- Weight: About 112g
- Mounting Hole Distance: 45mm~75mm

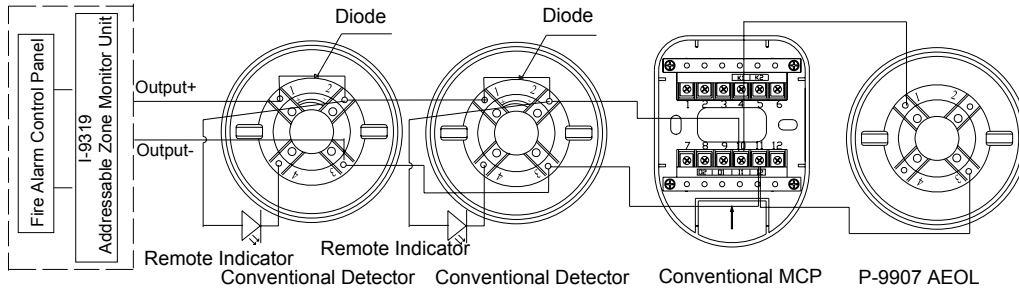
Detector Installation

The combination of fire detection should be installed complied with all local codes and / or NFPA 72 National Fire Alarm Code, NFPA 70 National Electrical Code. Verify the proper wiring and base is 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 rotates it clockwise until it reaches the next mark line.

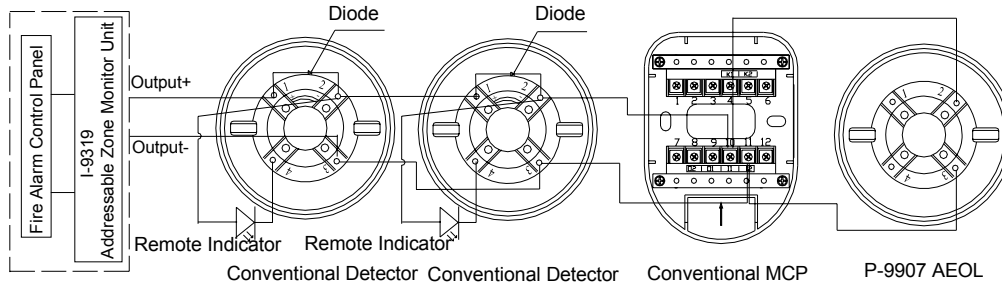


Wiring and Connection

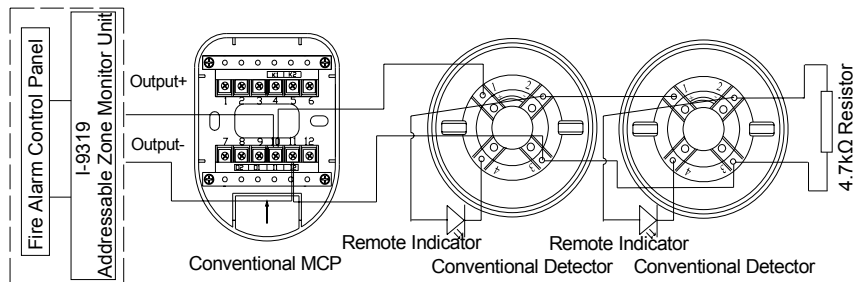
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When the AEOL is not used as the detector base, a cover should be added, the system connection is shown below:



2. When the detector is connected with conventional fire alarm control panel (those within the dotted line are equivalent to a conventional fire alarm control panel) or I-9319 Addressable zone monitor unit in series, if an end of line resistor is connected to the end of output loop, then no diode is connected to the detector base. The system connection is shown below:



Maximum 15 detectors can be connected in one zone. Cooperating with end of line device, the compatible panel can monitor the cable for open circuit and short circuit. Panel will report if any detector is removed. With the AEOL, the functioning of other device will not be affected by the detector removal.

Selection of Compatible Control Panel

Compatible with all GST Conventional panel and GST Intelligent Fire Alarm Panels using Zone monitor module:

Accessories



Part Number: DZ-03
Description: Detector Base - EOLR
Weight / Kg.: 0.05
Pack Qty. per Box: 300



Part Number: DZ-03D
Description: Base with Diode AOL
Weight / Kg.: 0.05
Pack Qty. per Box: 300

Ordering Information



Part Number: C-9104
Description: Conventional Ultraviolet Flame Detector
Weight / Kg.: 0.123
Pack Qty. per Box: 100





Conventional Sounder and Strobe

C-9403



548e(cl-5) 0832-CPD-0446

Description

The C-9403 is a conventional combined wall mounting sounder and strobe. The audio efficiency and sound distribution generate over 75 dB at 3 meters distance giving an excellent audibility from the device location. Using six high intensity LED's for high intensity visual alarm to warn the people.

The GST sounder series are convenient plug and turn installing method in shallow or deep base. Easy cabling and connection.

Features and Benefits

- High sound level
- Low power consumption
- High intensity LED cluster
- Easy installation and connection.

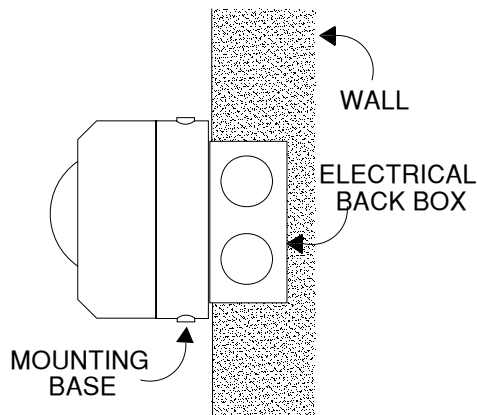
Technical Specifications

- Standard: EN54:3
- Approval: LPCB, CE-CPD
- Operating Voltage: 24VDC
- Operating Current: ≤65mA
- Wiring: 24VDC power line, polarity-sensitive
- Minimum Sound Level: 75dB
- Flashing Frequency: 1.4×(1±20%)Hz
- Sound Pattern: 2.8kHz (400ms on/340ms off)
- Ingress Protection Rating: IP33
- Operating Temperature: -10°C~+50°C
- Relative Humidity: ≤95%, non condensing
- Material and Color of Enclosure:
ABS, red (PANTONE 1795C)
- Dimension (L×W×H):
φ110mm×97.5mm (deep base)
φ110mm×83mm(shallow base)
- Mounting Hole Spacing: 55mm~80mm
- Weight: About 345g (deep base),
About : 317g(shallow base)

Angle	Horizontal		Vertical	
	18V	28V	18V	28V
15°	74.47	78.16	71.95	75.55
45°	81.85	86.44	82.03	85.36
75°	88.06	92.47	87.88	91.66
105°	88.15	91.93	89.14	92.92
135°	80.50	85.54	82.48	87.07
165°	62.32	66.37	73.93	78.07

Sounder Installation

The sounder base should be installed in compliance with all local codes or NFPA 72 National Fire Alarm Code, NFPA 70 National Electrical Code, BS5389 and EN54. Can be mounted in a shallow base or Optional deep base. It is installed onto a standard one gang electrical box with a mounting hole that has 6.5cm spacing.

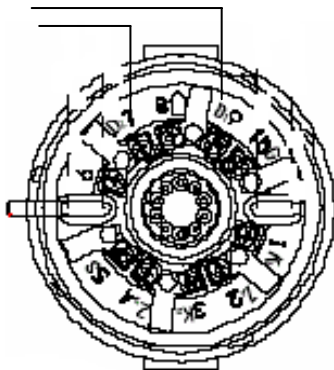


Wiring and Connection

Connect the wires to the required terminal according to the wiring diagram. The D1, D2 is for 24VDC power supply, polarized. The cable must be fire rated type and the size depends on the wiring distance. Minimum size gauge 1.0mm²(18 AWG)

Power Supply

24Vdc



Selection of compatible Control Panels

Compatible with all GST Conventional panel and GST Intelligent panel using sounder output and Intelligent Sounder Driver Module (I-9308)

Ordering Information



Part Number: C-9403
Description: Conventional Sounder Strobe
Weight / Kg.: 0.360
Pack Qty. per Box: 20

Accessories



Part Number: C-94DB
Description: Deep Base
Weight / Kg.: 0.070
Pack Qty. per Box: 100

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Conventional Gas Detector

C-9602LW

Description

C9602LW Gas Detector is suitable to detect liquefied petroleum gas in such areas as houses, hotels and apartments. This detector is available for different application such as LPG, Natural Gas and Coal gas. (Please specify at the time of order).

The detector adopts semiconductor gas-sensitive components enabling stable operation and simple installation. It's powered by AC 220V.

Features and Benefits

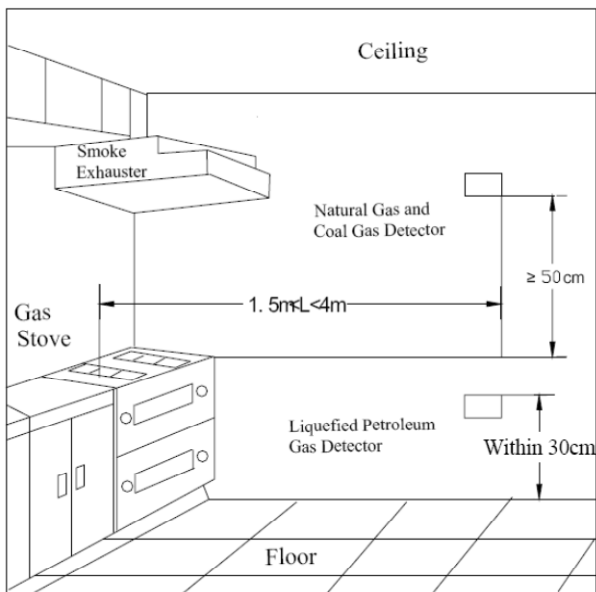
- Standalone Gas detector
- Available for LPG, Natural Gas and Coal gas.
- Self-diagnosis function can monitor the inner fault.
- Built-in relay contacts for control Gas Valve/Extract etc.
- Built-in Sounder
- Manual reset and control of relays contact.
- Wall mounting. Easy installation and connection.
- 220 VAC supply

Technical Specifications

- Operating Voltage: AC187V~AC250V
- Power Consumption: Monitoring State≤3W
Alarming State≤5W
- Output Capacity and Control Mode: Active Contact: Applicable to 12V one-way DC pulse solenoid valve, driving ability: 1000μF capacitance discharge.
- Passive Contact: Passive, normally open contact, capacitance 220V/1A, for controlling connected devices.
Alarm Density: Natural Gas: Natural Gas: 3000×10-6 (6%LEL)
Liquefied Petroleum Gas: 2000×10-6(10%LEL)
Coal Gas: 400×10-6(1%LEL)
- Indicators: Power: Green; Alarm: Red; Fault: Yellow
- Warm-up state: Green LED flashes at a frequency of 1Hz. After warm-up, the green, red and yellow LEDs will flash once in turn and the buzzer will sound, showing the detector enters monitoring state.
- Monitoring State: Green LED lights normally.
- Alarming State: Red LED flashes at a frequency of 2Hz, and green LED lights normally.
- Fault State: Green and yellow LED lights normally.
- Buzzer: frequency of 2Hz during alarming, and 0.3Hz in fault.
- Self Test: Press "Self-Test" during warm-up and monitoring state, the three LEDs will flashes in turn and the buzzer sounds three times.
- Life of Sensor: 3-5 years from manufacture date
- Operating Environment: Temperature: 0°C~ +50 °C
- Relative Humidity≤95%, no condensation
- Dimension: 176mm×80mm×45mm
- Degree of Protection of Enclosure: IP30
- Material and Color of Enclosure: ABS, ivory white
- Weight: 400g
- Mounting Hole Distance: 156mm

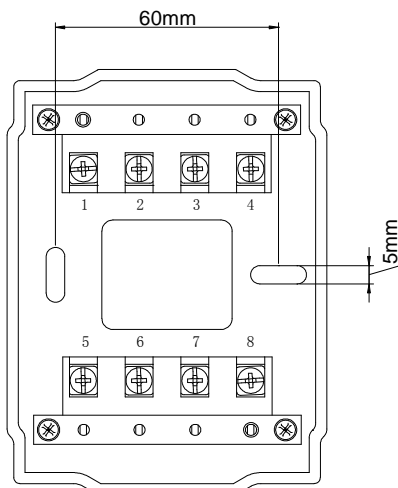
Mounting Gas Detector

The installation of gas detector should comply with all local codes and / or NFPA 72 National Fire Alarm Code, NFPA 70 National Electrical Code. Designed to install onto standard conduit electrical box (70mmx70mm). Recommended location of the detector is show below.



Wiring and Connection

Connect the wires to the required terminal according to the wire diagram. K1, K2: Normally open passive contact, which will be closed when the detector alarms. V (+), V (-): Connects with pipe solenoid. If the detector had alarmed for 3 to 7 seconds, there would be a delayed forward 12V pulse voltage between V(+) and V(-).



Selection of Compatible Control Panel

Compatible with all GST Conventional Control Panels.

Ordering Information



Part Number: I-9602LW/LPG
Description: Addressable LPG Gas Detector
Pack Qty. per Box: 100



Part Number: I-9602LW/NG
Description: Addressable Natural Gas Detector
Pack Qty. per Box: 100



Part Number: I-9602LW/CG
Description: Addressable Coal Gas Detector
Pack Qty. per Box: 100

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Innovative Manual Call Point

DC-9204



548g(cl-5) 0832-CPD-0789

Description

Designed for the purpose of raising an alarm manually once verification of a fire or emergency condition has occurred. By pressing the non breakable glass. Meets the standard requirement of EN 54 part 11, European Standard and approved by Loss Prevention Certificate Board (LPCB).

The DC-9204 constructed of high impact red ABS with a modern pleasing appearance. The terminating back box enables first fix installation and termination leaving the fascia.. Non breakable glass that can be reset with the GST standard reset key.

Features and Benefits

- Listed to LPCB,
- Semi-Flush mounted
- Compatible with latest EN standards
- Re-settable (non-breaking glass)
- Optional flipping plastic cover (D-92FC)
- Optional back box for surface mount
- LED indicator
- Friendly installation and test

Technical Specifications

- Standard: EN54:11
- Approval: LPCB
- Protection rating: IP 43
- Operating voltage: 24VDC (12VDC ~28VDC)
- Operating current:
 - Alarm Current: $\leq 30\text{mA}$
 - (equivalent resistance is $470\Omega/1\text{W}$)
- Operating temperature: -10°C to $+55^{\circ}\text{C}$
- Relative humidity: 95%
- Application: Indoor use
- Visual Indicator: LED, Red (lit steady when alarm)
- Front Cover: Plastic glass (optional)
- Material and colour: ABS, red
- Wiring: 1 pair polarized
- Dimensions(L×W×H):
 - 87mm×87mm×58mm (with backbox)
 - 87mm×87mm×23mm (without back box) mm

Ordering Information



Part Number: DC-9204

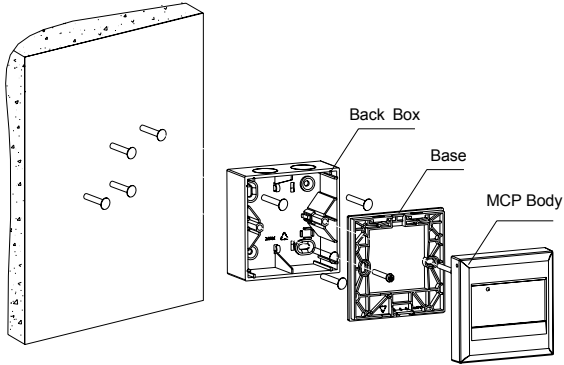
Description: Innovative Manual Call Point

Weight / Kg.: 0.16

Pack Qty. per Box: 50

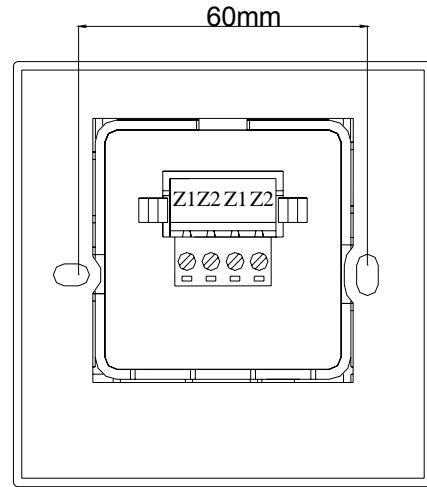
Mounting Base

The manual call point 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. Surface mount and it is installed onto a standard one gang electrical box with a mounting hole that has 52mm~68mm spacing.



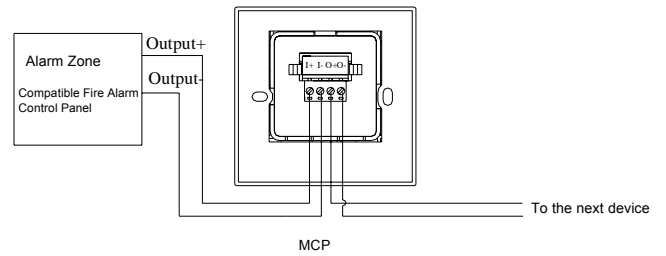
Wiring and Connection

Terminals on the MCP base are shown:



I+, I-: Input signal, connecting with compatible control panel or the previous MCP.

O+, O-: Output signal, connecting with the next MCP.



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Conventional Fire Alarm Control Panel

GST-116

Description

The GST116 conventional fire control panels provide two zones of fire detection. These panels have been designed to offer high standards of performance, reliability and quantity and comply fully with BS5839, Part 4, 1988 and EN 54 parts 2 and 4. Each zone can be connected with 15 conventional fire detectors.

Microprocessor controlled SMT Electronics

The GST116 conventional control panels are multi-wire fire alarm developed from SCM. Those with signal output interface board has a passive normally open alarm output contacts and fault output contact on each zone. They have two external control output points to control some devices such as sounder, sounder strobe or bells.

Designed with internal standby battery connection and housing. Multiple functions like isolation and test, setting day/night mode, indication of normal state, fault state, alarm state, short and open circuit alarm and identifying the location of detector zone. All control function is realized through a key switch and programming function realized through a key switch and a DIP switch.

The GST conventional panels includes an advanced range of facilities which make this the Ideal panel for both standalone solutions, or integrated to larger systems in applications such as, shopping Centers and industrial complexes.

Features and Benefits

- Microprocessor controlled SMT Electronics
- Compliant with EN54 part 2&4, & BS5839, Part 4, 1988
- Both end of line resistors and active end of line can be used.
- Programmable sounder circuits and outputs
- Zone Isolate control
- Fully monitored sounder circuits
- Key control evacuate over-ride
- Class change terminals for remote control
- Up to 15 fire detectors and infinite manuals call points each zone
- Optional Relay Board, 16 Fire & 16 Fault Outputs

Technical Specifications

- **Main Input Voltage**

Input Voltage: 230VAC^{+10%}-15% /Frequency: 50Hz/
Fuse: 2A delayed

- **Zone Parameters**

Zone input: 16/Monitored
Up to 15 Conventional detectors
Output Voltage: 15VDC~28VDC
Alarm Current: 25mA
Resistance range: Fire Signal - 150Ω~1.5kΩ
(normally 470Ω)
Fault Signal - 4.7kΩ end of line resistor or AEOL
Cable: 1Km/ GST FireCable ® 1pair/1.5mm2

- **Zone Relay**

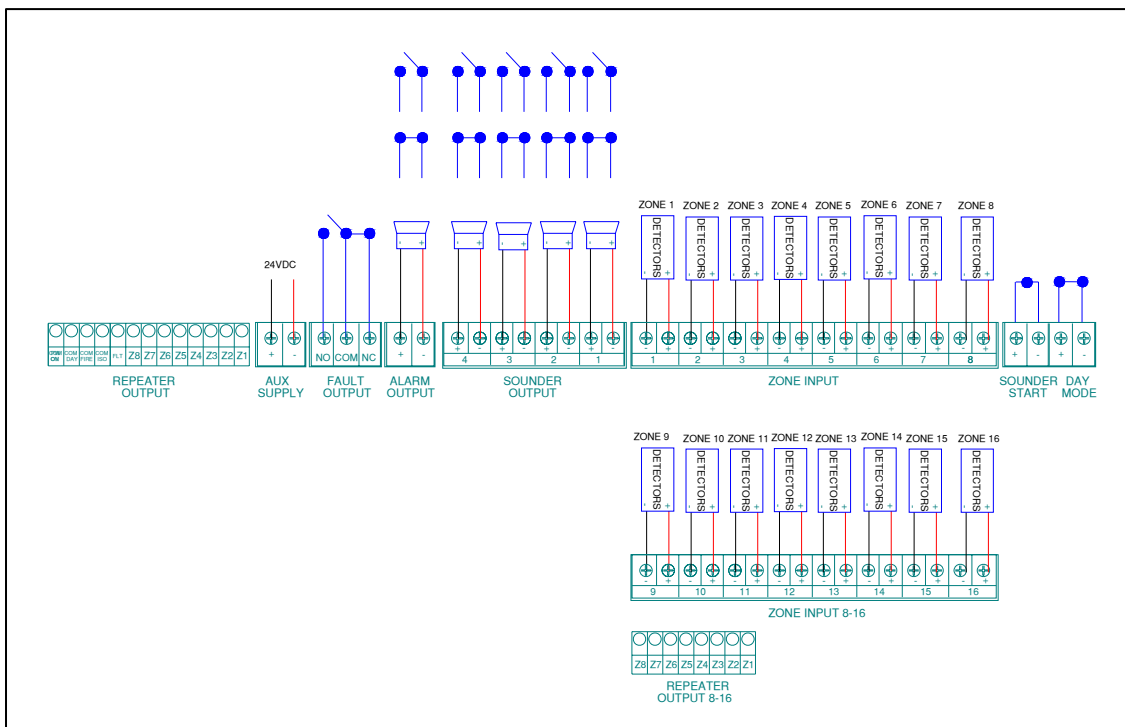
Optional Relay Board (RB116)
16 Fire & 16 Fault Outputs Rated @ 1 Amp 24V DC

- **Output Parameter**

Sounder Circuit:4/Monitored/4.7kΩ EOLR
Output Voltage: 20VDC~28VDC/N0/NC
Alarm Current: 130mA/per circuit
Cable: 1Km/ GST FireCable ® 1pair/1.5mm2
Fire Alarm Output:1 /Monitored//4.7kΩ EOLR
Output Voltage: 20VDC~28VDC/N0/NC
Alarm Current: 450mA
Auxiliary Output:1
Output Voltage: 20VDC~28VDC
Alarm Current: Standby-20mA, Alarm-80mA
Fault Output:
Output: 0 volt free contact
Contact Capacity: 1A/24VDC
Repeater Output: Repeater terminal (refers to the installation manual)
SOUNDER START: Remote access to the Sounder output
DAY MODE: Remote day/night mode conversion terminal.

- **Battery**

Optional Relay Board 2x12VDC /7AH
Minimum Operating Voltage: 21.5V
Maximum Charging Current: 300mA
Maximum Charging Voltage: 28V
Battery Type: Sealed lead-acid battery
Recommended Battery: Yuasa NP7-12



Typical Wiring Connection

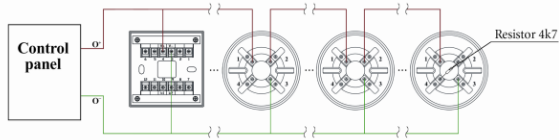


Fig.1 Using End of Line resistor, in compliance with EN/BS standard, when using EOL resistor, call points should be wired before detectors, so that the removal of any detector will not inhibit call point from operating.

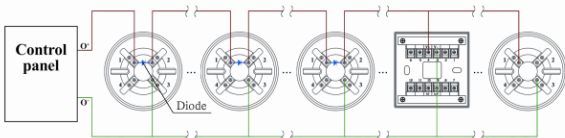


Fig.2 Using Active End of Line, enables call points to be installed in any location on zone as will not be affected by removal of detector (required base DZ-03D)

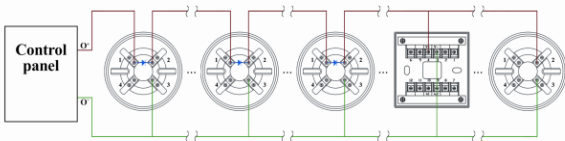


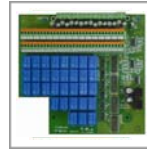
Fig.3 The same as fig.2 principle, using AEOL without detector.

Ordering Information



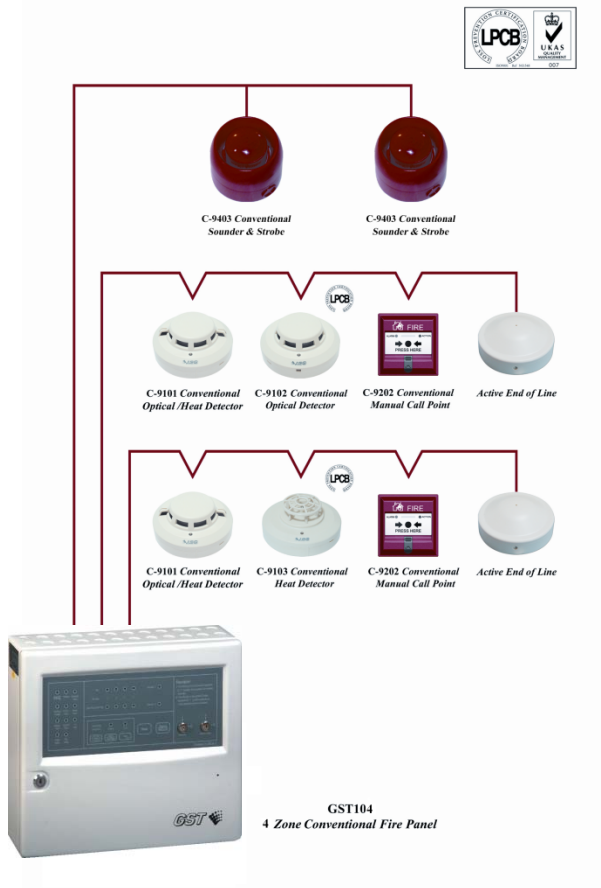
Part Number: GST116
Description: 16 zones Conventional Fire Panel
Weight / Kg.: 5.500
Pack Qty. per Box: 1

Accessories



Part Number: RB116
Description: Relay Board
Weight / Kg.:
Pack Qty. per Box: 1

Conventional Fire Alarm Systems



MANUFACTURED IN ACCORDANCE WITH





Intelligent Multi Sensor

I-9101

Description

Combining all the features of the I-9102 Optical and the I-9103 Dual Heat Detectors the unit provides an ideal solution for life and safety systems. Ideally suitable for application in data processing area including telephone exchange, conference rooms, indoor markets or shops, dining area, factory, recording studio and libraries etc.

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.

The integral microprocessor analyses 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 Handheld Programming device (P-9910B), purchased separately.

Features and Benefits

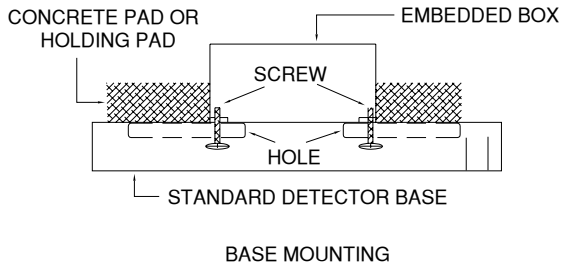
- Built in 8 bit microprocessor
- Algorithm maps for faster response and false alarm rejection
- Analogue sensing
- Secure and speedy communication
- Patented Linear Drift compensation
- Self diagnosis and history log
- Electronic addressing
- Sensing chamber for exceptional dust proof ability
- Twin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

Technical Specifications

- Standard: EN54-part 5 and Part 7
- Protection rating: IP 23
- Operating voltage: 24Vdc Loop voltage
- Operating Current:
 - Standby current 0.6mA
 - Alarm Current 2mA/5mA
- Operating temp:-10°C to +50°C
- Relative humidity: 95%
- Application: Indoor use
- Detecting range recommended: 50 Sq.m. for normal area; and 20 sqm for high risk
- Visual Indicator: twin LED, Red (lit steady when alarm, 3 sec interval blinking at normal state)
- Material and colour: ABS, white (RAL 9016)
- Wiring: 1 pair non polarized
- Dimensions: diameter 10cm; height 5cm

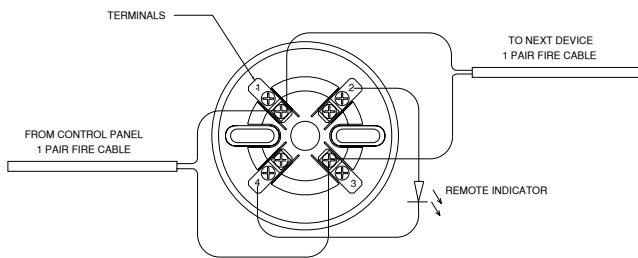
Standard Base

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



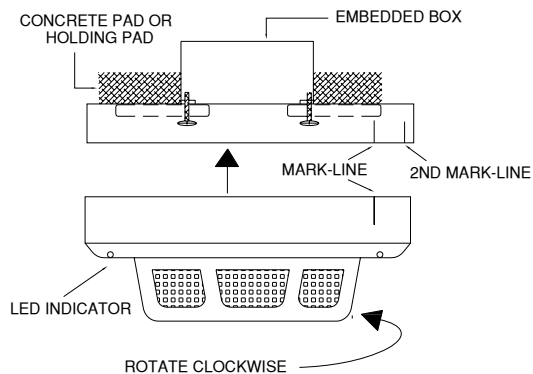
Wiring and Connection

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



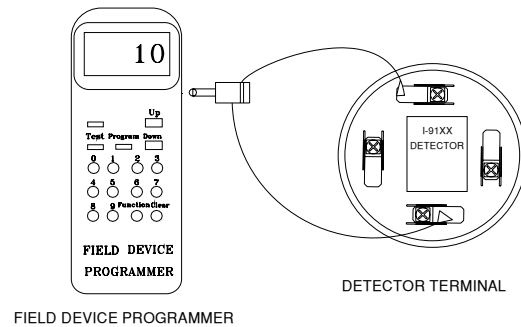
Detector Installation

The Intelligent 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.



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 terminals 1 and 3 (no polarity) of the detector.



Selection of compatible Control Panels

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

Ordering Information



Part Number: I-9101
Description: Intelligent Multi Sensor
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





Intelligent Optical Smoke Detector

I-9102

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 (LPCB).

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.

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

Features and Benefits

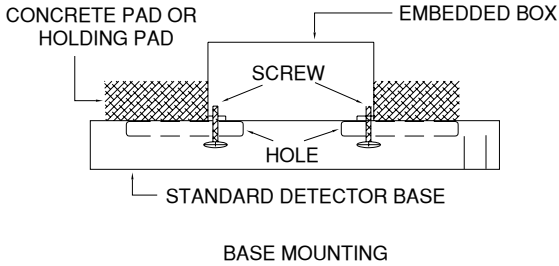
- Built in 8 bit microprocessor
- Algorithm maps for faster response and false alarm rejection
- Analogue sensing
- Secure and speedy communication
- Intelligent Linear Drift compensation
- Self diagnosis and history log
- Electronic addressing
- Sensing chamber for exceptional dust proof ability
- Twin 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 alarm, 3 sec interval blinking at normal state)
- Material and colour: ABS, white (RAL 9016)
- Wiring: 1 pair polarized
- Dimensions: diameter 10cm; height 5cm

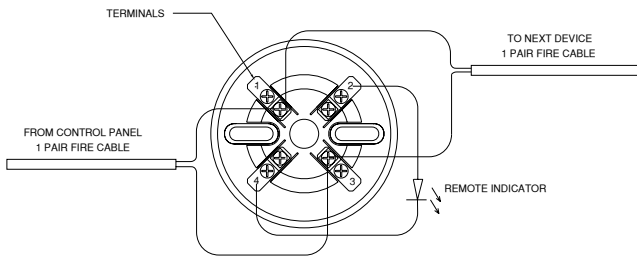
Standard Base

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



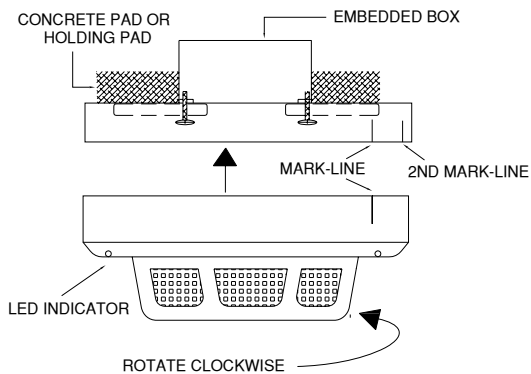
Wiring and Connection

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



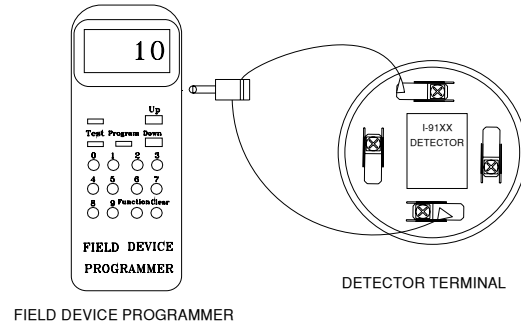
Detector Installation

The Intelligent optical 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 final handover is done. Do not remove red plastic dust cover until the final handover is done.



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 terminals 1 and 3 (no polarity) of the detector.



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-9314Pp
Description: Remote Indicator
Weight / Kg.: 0.03
Pack Qty. per Box: 270

MANUFACTURED IN ACCORDANCE WITH





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

Intelligent Dual Heat Detector

I-9103

Description

This detector is extremely reliable for application in places where there may be high dust levels or smoky environments, making a normal smoke detector unsuitable, for example boiler/plant room, car parks, kitchen, loading bays, furnace/kiln rooms.

Meets the sensitivity requirement of EN 54 part 5 European Standard and approved by Loss Prevention Certificate Board (LPCB).

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, Self Diagnosis and history log.

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.

The integral microprocessor analyzes the digital signal converted from analogue.

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

Features and Benefits

Dual fixed temperature heat detector. Combining both fixed temperature and rate of rise heat detection in a single sensor. As standard the fixed temperature is set to 58°C while the rate of rise is set to 3°C in one minute.

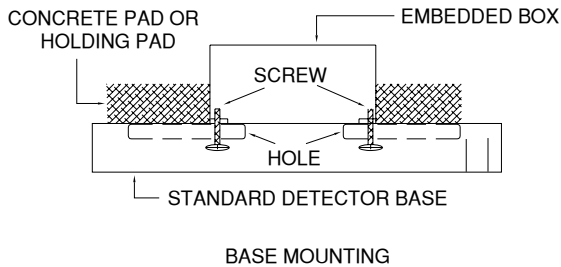
- Built in 8 bit microprocessor
- Analogue sensing
- Secure and speedy communication
- Self diagnosis and history log
- Field programmable electronically addressed
- Twin LED for 360° vision
- Low profile design
- Built-in remote indicator

Technical Specifications

- Standard: EN54-part5
- Class: A1R detector
- Approval: LPCB,CE-CPD
- Protection rating: IP 33
- Operating voltage: 24Vdc Loop voltage
- Operating Current: Standby Current: 0.8mA
Alarm Current: 2mA, 5 mA; with remote LED indicator
- Operating temp: -10°C to +50°C
- Alarm Temperature: 58°C
- Relative humidity: 95%
- Sensitivity is set within the range stipulated by EN54-5 standard
- Application: Indoor use
- Detecting range: 50 sqm for normal area; and 20 sqm for high risk
- Visual Indicator: twin LED, Red (lit steady when alarm, 3 sec interval blinking at normal state)
- Material and colour: ABS, white (RAL 9016)
- Wiring: 1 pair non polarized
- Dimensions: diameter 10cm; height 5cm

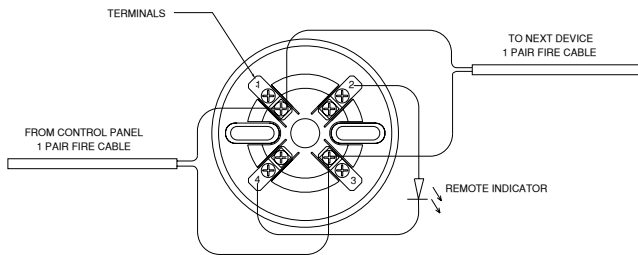
Standard Base

The detector is mounted using our standard base DZ-03. Multiple-direction design allows easy direction adjustment. Suitable for surface mount only, mount on embedded box; 1gang UK standard.



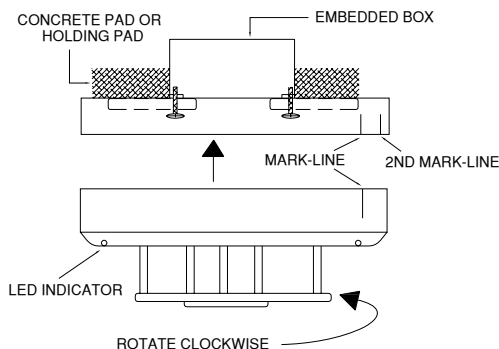
Wiring and Connection

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)



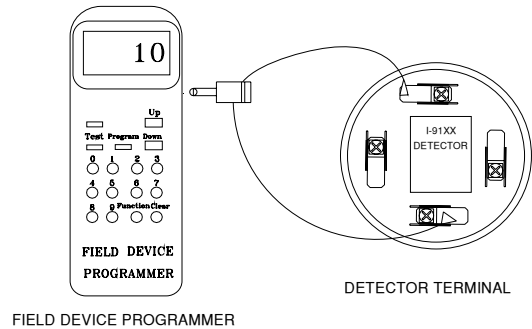
Detector Installation

The Intelligent Heat 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.



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 terminals 1 and 3 (no polarity) of the detector.



Selection of compatible Control Panels

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

Ordering Information



Part Number: I-9103
Description: Intelligent Dual Heat 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

MANUFACTURED IN ACCORDANCE WITH





Intelligent Ultraviolet Flame Detector

I-9104

Description

The I-9104 Intelligent Ultraviolet Flame Detector is fast and capable to detecting the ultraviolet (UV) rays emitted by a burning substance, used in high hazard applications such as petrochemical plants, munitions factories and other areas where flammable or explosive liquids or solids are handled or stored.

The I-9104 sensor provides an ultraviolet photosensitive tube, with qualities of highly sensitive, reliable, dust-resistant, corrosion-proof and moisture-resistant. The sensor is not sensitive to sunlight, dust, oil, fume, and humidity. Set as a standard calibration to detect a 3cm flame at a distance of 6 meters with a total effective range of 12 meters. Has unique electronic addressing to provide specific location, information and monitor condition.

The integral microprocessor analyses 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 flame patterns for a faster and safer 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.

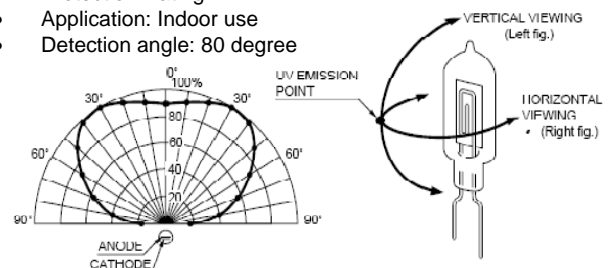
Electronic addressing can be done through Handhold Programming device (P-9910B), purchased separately.

Features and Benefits

- Built in 8 bit microprocessor
- Dust /corrosion/humidity resistant
- Secure and speedy communication
- Self diagnosis and history log
- Standard calibration set to detect a 3cm flame at 6metres
- Effective range up to 25 meters
- 110° effective detection dispersion angle
- Electronic addressing
- Twin LED for 360° vision

Technical Specifications

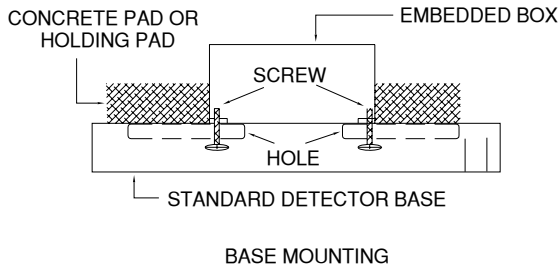
- Protection rating: IP 32
- Operating voltage: 24Vdc (12-28VDC) Loop powered
- Operating Current: Standby current 2.0mA
Alarm Current 2.5mA
- Operating temperature:-20°C to +55°C
- Relative humidity: 95%
- Spectral Response Range: 185nm~260nm
- Protection Rating: IP 21
- Application: Indoor use
- Detection angle: 80 degree



- Programmable sensitivity: 3 levels
L1-25meters, L2-17meters, L3-12meters
- Visual Indicator: 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

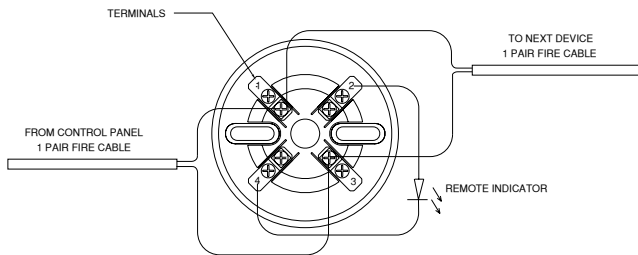
Standard Base

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



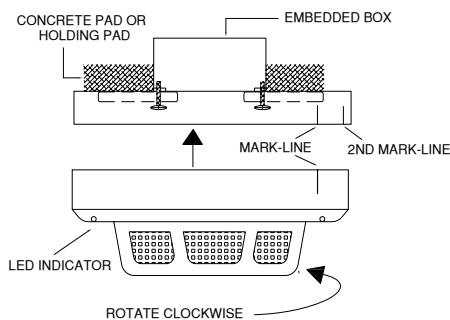
Wiring and Connection

Connect the wires to the required terminal according to the wiring diagram. Terminal 1 and 3 is for loop bus. The cable must be fire rated type and the size depends on the distance and application. Minimum size gauge 1.0mm².



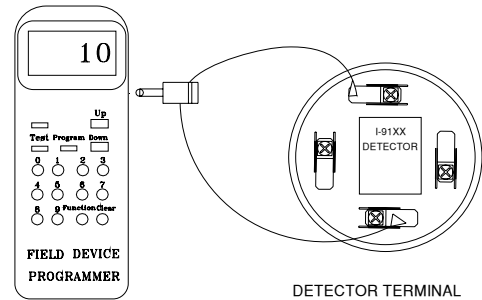
Detector Installation

The Intelligent ultraviolet flame 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.



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 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-9104
Description: Intelligent Ultraviolet Flame 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

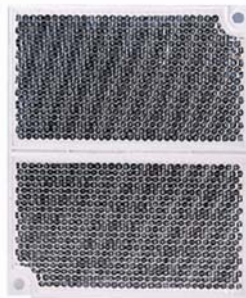


Part Number: I-9406
Description: Addressable Sounder Beacon Base
Weight / Kg.: .20
Pack Qty. per Box: 30



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





548d(cl-5) 0832-CPD-0521

Intelligent Reflective Beam Detector

I-9105R

Description

I-9105R Intelligent Reflective Beam Detector works on the principle of reflective infrared beam smoke detector that can be directly connected to a fire alarm loop. Transmitting status information via the loop between the detector and controller. The detector must be used together with a reflector. The number of reflector(s) to be used (one or four) depends on the distance from the detector.

Built-in intelligent microprocessor, the detector has strong ability of analysis and judgment. The detector automatically carries out system adjustment, compensation and variation of ambient data.

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

The detector is ideally suited to historical buildings, warehouses, large storages, shopping malls, leisure centres, exhibition halls, hotel lobbies, printing houses, clothing factories, museums and prisons, as well as places where slight smoke particles or corrosive gas exist.

Features and Benefits

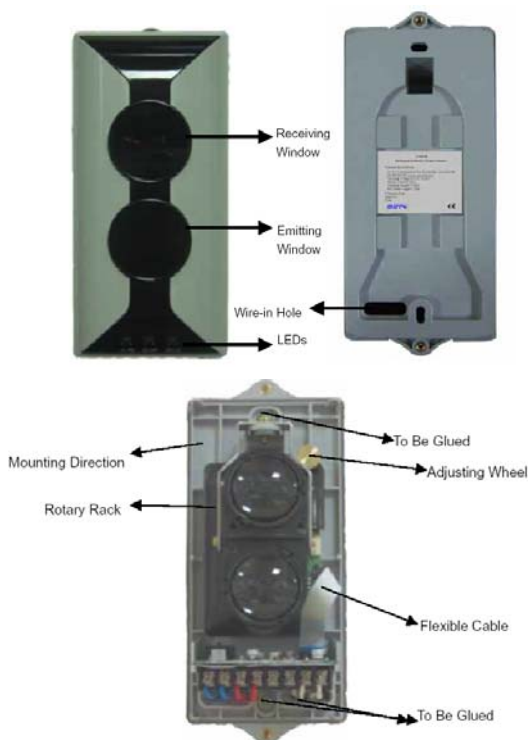
- Wide monitoring area, range 8-100 metres
- Combination of the emitting and receiving parts makes mounting easy and accurate optical pathway
- Simple and cost effective to install transmitter and reflective via 'honey comb' mirror.
- Quick and easy to set up, visual strength indication.
- Built-in microprocessor
- Conventional System compatible
- Self-diagnosis function can monitor for internal faults
- Automatic compensation for factors weakening received signals, such as dust contamination, positional movement and ageing of the transmitter.
- Electronically addressed
- Two selectable levels of sensitivity adjustment.
- SMT processing technology
- Attractive and pleasing appearance

Technical Specifications

- Standards: BS EN54 Part-12
- Approvals: LPCB, CE-CPD
- Operating Voltage :PSU Voltage: 24Vdc ($\pm 10\%$)
Loop Voltage: 24Vdc
- Operating Current
PSU
Commissioning: 20mA
Standby current: 8mA
Alarm current: 12mA
- Loop
Standby current: 2mA
Alarm current: 3mA
- Length of Optical Pathway: 8-100meter
- Monitoring width: 14meters
- Monitoring Area: 1400m²
- Max Height: 40 meters
- Adjusting Angle: -6° to +6°
- Field Programmable Sensitivity:
Level 1:1.61dB; Level 2: 2.31dB
- Protection Rating: IP20
- Operating Temperature: -10°C to +50°C
- Relative humidity: 95%
- Application: Indoor use
- Material and Colour: ABS, Gray
- Wiring: 1 pair -24Vdc, 1pair- loop
- Dimensions:206mmX95mmX95mm

Indication of Detector Status

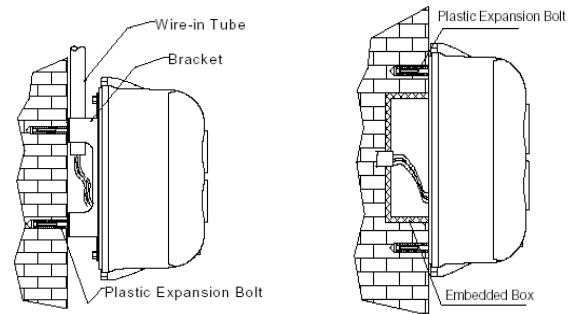
- Commission:** Green LED and Yellow LED are lit or flash in a sequence.
- Normal monitoring state:** Red LED flashes periodically (with loop connected)
- Fire:** Red LED constantly illuminates, and Yellow LED turns off. The fire signal has to be reset by the controller
- Fault:** Yellow LED constantly illuminates



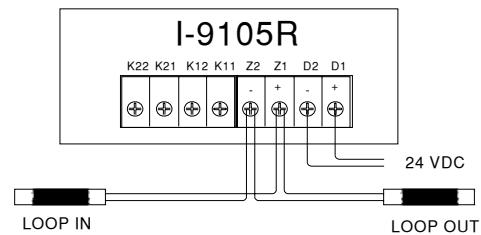
Mounting the Detector

The Intelligent beam detector should be installed in compliance with all local codes having a jurisdiction in your area or BS 5389-1 and EN54. The detector can be mounted in 2 ways: the installed onto standard two gang electrical box, or directly by drilling the holes and fixing with plugs.

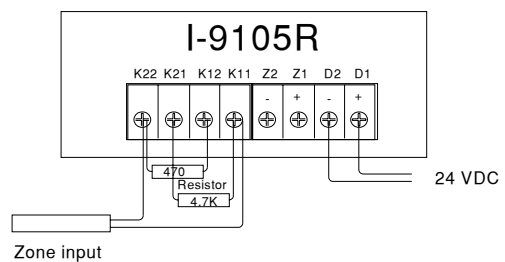
Connect the wires to the required terminal according to the wiring diagram. The D1, D2 is for 24VDC power supply. The Z1, Z2 for loop. For conventional system K11,K12 for Fire output-normally open and K21,K22 for Fault output-normally close. The cable must be fire rated and the size depends on the distance and application. The minimum size gauge 1.0mm²



For addressable Connection



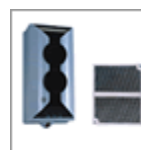
For conventional Connection



Selection of Compatible Control Panels

Compatible with all GST Intelligent Fire Alarm Panels GST200-2, GST5000, GST IFP8

Ordering Information



Part Number: I-9105R
Description: Intelligent Reflector Beam Detector
Weight / Kg.: 1.3
Pack Qty. per Box: 10

MANUFACTURED IN ACCORDANCE WITH





Addressable Sounder and Strobe

I-9403



548e(c1-5)



0832-CPD-0448

Description

The I-9403 is a detachable, surface mounted sounder and strobe. The audio efficiency and sound distribution generate over 85 dB at 3 meter distance giving an excellent audibility from the device location. Using six highlights LED's for high intensity visual alarm to warn the people.

The GST sounder series are convenient plug and turn installing method, two part construction with base mounted termination allows easy installation and avoiding the wiring and connection problem associated with traditional sounder.

Features and Benefits

1. Two tones high sound level
2. Low power consumption
3. High intensity LED cluster
4. Remote start input can be used to drive with other systems
5. Programmable alarm mode, evacuate or alert/evacuate mode
6. Electronically addressable
7. Easy installation and connection.

Technical Specifications

- Standard: EN54-3
- Approval: LPCB,CPD, CE
- Sound Level Output
 - Tone 1:** Sound Level: 75dB~85dB (at 3m ahead horizontally (A weighted))
 - Flashing Frequency:0.7×(1±20%)Hz
 - Sound Pattern: 2.8KHz (430ms on /1200ms off)
 - Tone 2:** 85dB~115dB (at 3m ahead horizontally (A weighted))
 - Flashing Frequency:1.4×(1±20%)Hz
 - Sound Pattern: 2.8KHz (430ms on /340ms off)
 - (Refer to sound level data below)
- Operating Current:
 - Loop: Standby-1mA; Alarm-5mA
 - PSU: Standby-3mA; Alarm-50mA
- Operating Voltage: Loop: 24V ; PSU: 24VDC
- Addressing: 1 or 2 using P-9910B
- Operating temp: -10°C to +50°C
- Relative humidity: 95%
- Application: Indoor use
- Protection rating: IP 33
- Material and colour: ABS, red (PANTONE 1795C)
- Wiring: 2 pairs ; 1 pair 24vdc supply and 1 pair for loop
- Weight:355g (deep base); 327g
- Dimensions: φ110mm×97.5mm (Deep Base)
φ110mm×83mm (standard supplied)

Tone I (alarm), Maximum Volume

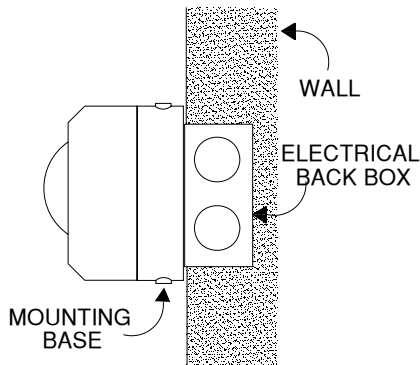
Angle	Horizontal		Vertical	
	20V	28V	20V	28V
15°	75.19	77.17	72.85	72.31
45°	84.01	87.07	82.57	85.63
75°	87.61	90.85	86.98	89.32
105°	87.43	90.22	88.42	90.67
135°	83.11	86.17	83.65	86.80
165°	70.60	73.84	75.55	77.98

Tone II (pre-alarm), Maximum Volume

Angle	Horizontal		Vertical	
	20V	28V	20V	28V
15°	72.67	75.73	61.15	65.11
45°	80.50	83.20	78.61	81.40
75°	84.37	87.25	83.56	86.53
105°	83.65	86.53	84.91	88.15
135°	79.51	82.57	80.32	83.65
165°	66.10	69.61	70.78	74.11

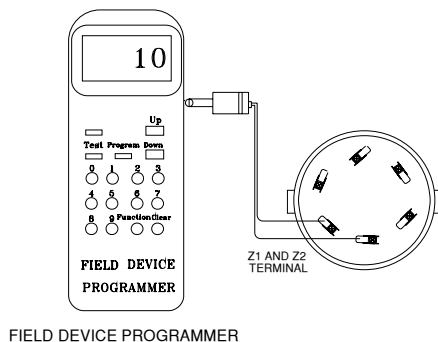
Sounder Installation

The sounder should be installed in compliance with all local codes or BS5389 and EN54. It is installed onto a standard one gang electrical box with a mounting hole that has 5.5cm to 8 cm spacing.



Programming

The address and mode of sound level of the sounder can be programmed using GST handheld programmer (P-9910), purchased separately. Connect the two wires of the handheld programmer to Z1 (2), Z2 (4) terminals of the sounder.fig1

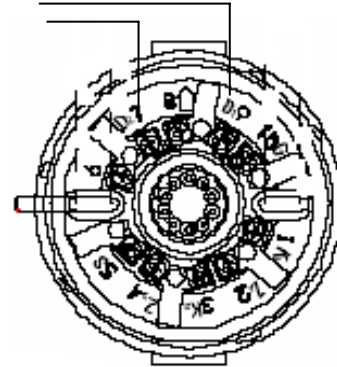


Wiring and Connection

Connect the wires to the required terminal according to the wiring diagram. The Z1, Z2 connect to addressable fire detection loop, non-polarized, the D1, D2 is for 24VDC power supply, non-polarized. The S and G is dry contact input. The cable must be fire rated type and the size depends on the wiring distance and application. Minimum size gauge 1.0mm²(18 AWG)

Power Supply

24Vdc



Selection of compatible Control Panels

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

Ordering Information



Part Number: I-9403
Description: Addressable Sounder Strobe
Weight / Kg.: 0.360
Pack Qty. per Box: 20

Accessories



Part Number: C-94DB
Description: Deep Base
Weight / Kg.: 0.070
Pack Qty. per Box: 100

MANUFACTURED IN ACCORDANCE WITH





Addressable Sounder

I-9404

Description

The I-9404 is a detachable, surface mounted sounder. The audio efficiency and sound distribution generate over 85 dB at 3 meter distance giving an excellent audibility from the device location.

The GST sounder series are convenient plug and turn installing method, two part construction with base mounted termination allows easy installation and avoiding the wiring and connection problem associated with traditional sounder.

Features and Benefits

- Two tones high sound level
- Low power consumption
- Remote start input can be used to drive with other systems
- Programmable alarm mode, evacuate or alert/evacuate mode
- Electronically addressable
- Easy installation and connection.

Technical Specifications

- Manufactured Standard: EN54-3
- Sound Level Output
 - Tone 1:** Sound Level: 75dB~85dB (at 3m ahead horizontally (A weighted))
 - Sound Pattern: 2.8KHz (430ms on /1200ms off)
 - Tone 2:** 85dB~115dB (at 3m ahead horizontally (A weighted))
 - Sound Pattern: 2.8KHz (430ms on /340ms off)
 - (Refer to sound level data below)
- Operating Current:
 - Loop: Standby-1mA; Alarm-5mA
 - PSU: Standby-3mA; Alarm-50mA
- Operating Voltage:
 - Loop: 24V ; PSU: 24VDC
- Addressing: 1 or 2 using P-9910B
- Operating temp: -10°C to +50°C
- Relative humidity: 95%
- Application: Indoor use
- Protection rating: IP 33
- Material and colour: ABS, red (PANTONE 1795C)
- Wiring: 2 pairs ; 1 pair 24vdc supply and 1 pair for loop
- Weight:355g (deep base); 327g
- Dimensions:
 - φ110mm×97.5mm (Deep Base)
 - φ110mm×83mm (standard supplied)

Tone I (alarm), Maximum Volume

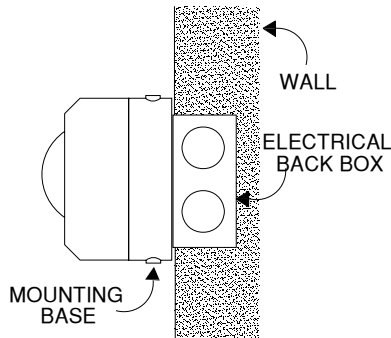
Angle	Horizontal		Vertical	
	20V	28V	20V	28V
15°	75.19	77.17	72.85	72.31
45°	84.01	87.07	82.57	85.63
75°	87.61	90.85	86.98	89.32
105°	87.43	90.22	88.42	90.67
135°	83.11	86.17	83.65	86.80
165°	70.60	73.84	75.55	77.98

Tone II (pre-alarm), Maximum Volume

Angle	Horizontal		Vertical	
	20V	28V	20V	28V
15°	72.67	75.73	61.15	65.11
45°	80.50	83.20	78.61	81.40
75°	84.37	87.25	83.56	86.53
105°	83.65	86.53	84.91	88.15
135°	79.51	82.57	80.32	83.65
165°	66.10	69.61	70.78	74.11

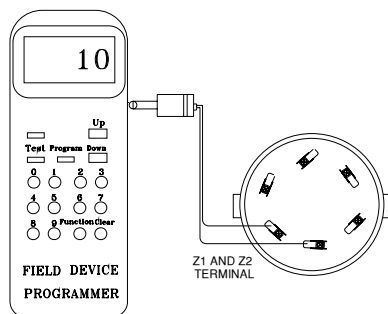
Sounder Installation

The sounder should be installed in compliance with all local codes BS5389 and EN54. It is installed onto a standard one gang electrical box with a mounting hole that has 5.5cm to 8 cm spacing.



Programming

The address and tone of the sounder can be programmed using GST handheld programmer (P-9910), purchased separately. Connect the two wires of the handheld programmer to Z1 (2), Z2 (4) terminals of the sounder.fig1



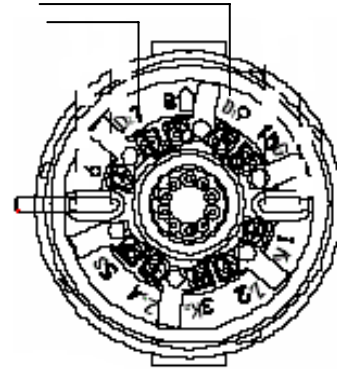
FIELD DEVICE PROGRAMMER

Wiring and Connection

Connect the wires to the required terminal according to the wiring diagram. The Z1, Z2 connect to addressable fire detection loop, non-polarized, the D1, D2 is for 24VDC power supply, non-polarized. The S and G is dry contact input. The cable must be fire rated type and the size depends on the wiring distance and application. Minimum size gauge 1.0mm²(18 AWG)

Power Supply

24Vdc



Selection of compatible Control Panels

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

Ordering Information



Part Number: I-9404
Description: Addressable Sounder
Weight / Kg.: 0.360
Pack Qty. per Box: 45

Accessories



Part Number: C-94DB
Description: Deep Base
Weight / Kg.: 0.070
Pack Qty. per Box: 100

MANUFACTURED IN ACCORDANCE WITH





Intelligent Single & 2 Loop Fire Alarm Control Panel

GST200-2



548p(cl-5)



0832-CPD-1213

Description

The GST 200-2 single loop and two loop addressable fire detection control panel is packed with features that are not usually associated with smaller and medium systems. The GST 200-2 provides a high quality solution at exceptional value.

By utilizing advanced GST Protocol, the system is compatible with the complete range of GST intelligent detectors, Sounders, Call Points, Interfaces, including gas extinguishing control.

The GST 200-2 is manufactured and certified to EN54 parts 2 and 4 and to BS5839 Part 4. The GSTDef2.1 programming facilities enables advanced and complex cause and effects to be programmed with ease, including phased and cascade evacuation scenario. The GST zonal indication and control facility allows the operator to manually intervene, with evacuation and control of each zone, including control of all plant equipment under an alarm condition.

Maintenance report of dirty detector, pre-alarm signal and gas release controls are built in as standard, making the system ideal for many applications such as Banks, Shops, Telecommunication Centers and GSM exchanges, industrial and commercial facilities.

By utilizing the GST protocol the GST200-2 can be networked with up to 32 panels, not only the GST200 single loop panel, but also with the New GST-IFP8, GST5000 series and the GST5000 modular 20 loop controller, making this the perfect solution for large decentralized systems such as Shopping Centers Military campus industrial complexes, Holiday villages etc.

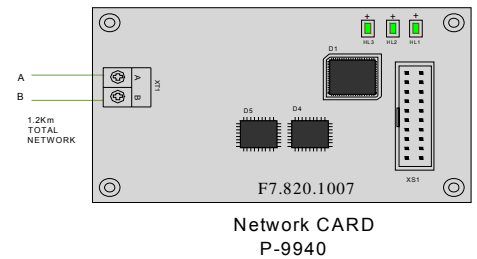
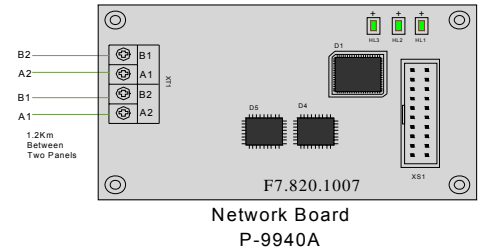
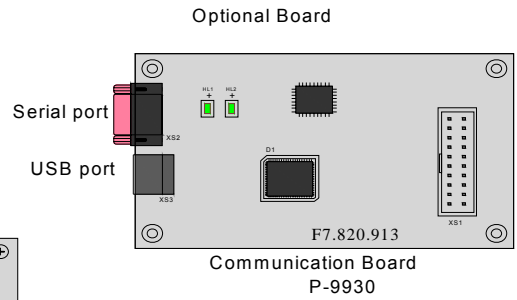
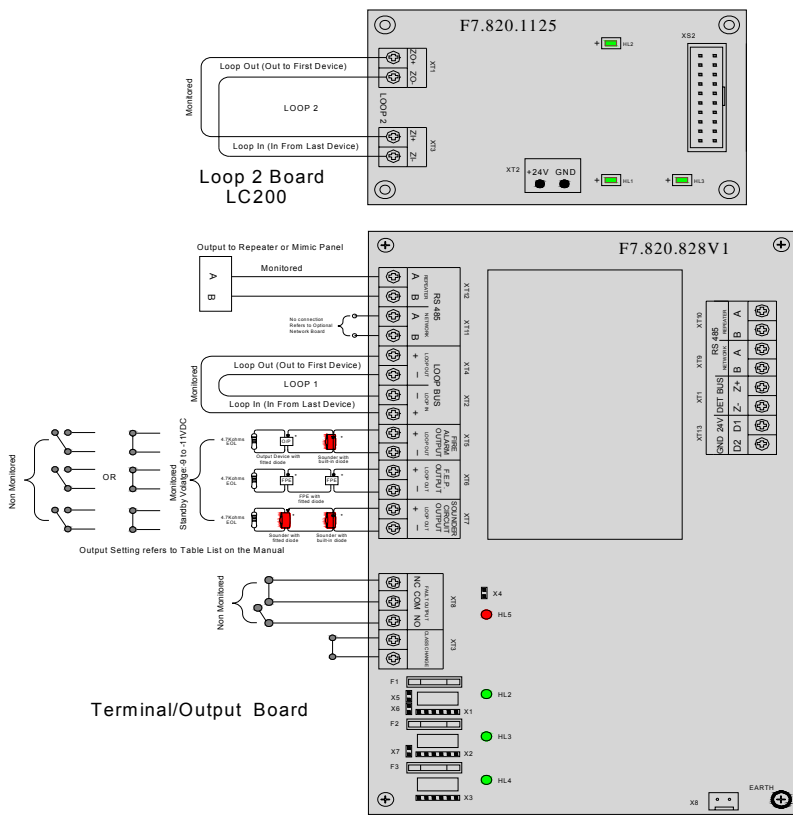
Features and Benefits

- Listed to LPCB standard
- 2 Loop capacity-477 Addressable Point
- 8x18 Graphical LCD Display
- 30 Zone indication including manual intervention and control
- 3 programmable alarm output
- Positive Alarm Signal (PAS) Pre-alarm
- Maintenance report of dirty detector
- Networkable with all GST Intelligent Fire Alarm panels
- Programmable from PC by GSTDef2.1
- History log 999-events capacity in non-volatile memory
- Test Facility-Silent Mode
- Device Start/Stop Mode
- Device Enable/Disable
- RS485 Repeater Output (Max. 10)
- Advanced user friendly programming software including 'Fuzzy Logic'
- Optional RS 232 Colour Graphics Software, Printer and Pager Interface
- Optional RS485 Network Card
- Optional Panel Printer

Fascia and Dimensions



Board Diagram



Technical Specifications

- **Standard**
- **Approvals**
- **Main Input Voltage**
- **Input Current Rating**
- **Operating Temperature**
- **Protection**
- **Application**
- **Programming**
- **Zone Capacity**
- **Loop Parameter**
 - Loop Capacity
 - Loop Topology
 - Loop Voltage
 - Loop Current
 - Loop Length/Cable
- **Output Circuits**

EN54 Part 2/4 ; BS5839 Part 4

LPCB, CPD

220/230 ± 10% VAC 50/60 Hz

0.500A, Fuse: 2A delay

0°C- 40°C /95% relative humidity

IP 30

Indoor installation

Laptop using GST Defining Software/P-9930

30 Zones programmable

1 loop expandable to 2 with LC200 card

477; Loop 1:235; loop 2:242(Address)

Class A or B

24 VDC Nominal (21-27 VDC)

0-300mA

1.00mm²-800m-Full Load

1.5mm²-1000 m-Full Load

Fire Alarm Output: Monitored (4.7Kohm)

Voltage: Standby: -9to-11VDC; Alarm: 21 to 27Vdc

Current: 500mA

Relay Contact: NO/NC Jumper Setting; rating: 24V/1A

F.P.E. Output: Monitored (4.7Kohm)

Voltage: Standby: -9to-11VDC; Alarm: 21 to 27Vdc Current: 500mA

Relay Contact: NO/NC Jumper Setting; rating: 24V/1A

Sounder Circuit Output: Monitored (4.7Kohm)

Voltage: Standby: -9to-11VDC; Alarm: 21 to 27Vdc

Current: 500mA

Relay Contact: NO/NC Jumper Setting; rating: 24V/1A

(Output circuit cable length: 1.00mm²- 1000m)

Fault Output: Non-monitored

Relay Contact: NO/COM/NC; rating: 24V/1A

Mains 2A (20mm A/S ceramic)

Sounders (2): 1A (20mm A/S)

Fire alarm Output 0.5A (20mm A/S)

Battery: 2A (20mm A/S HRC ceramic)

Twin 12 VDC Bat; 21AH as per load calculated

Maximum Charge Current: 1.2

Maximum Charge Voltage: 27.6

Type: Sealed lead acid batteries

Recommended model: Power-Sonic PG12V21

Maximum Internal Resistance: 1Ω

Quiescent Current under Full-loaded Condition: 0.75A

Maximum Battery Operating Current: 2.82A

Repeater Output: Up to 10 Repeater or Mimic panel

Cable length: 1.5mm²- 1000m

Optional Network card (P-9940A): Normal 32 panels (GST200/2); 64 with IFP8

Cable Length: 1.5mm²- 1200m between panels

Topology: Class A

Optional CANBUS Communication card (P-9960)

Network Capacity 240 panels (CANBUS HUB Required)

Cable Length: 3Km

Topology: STAR Connection

Optional Communication card (P-9930)

Cable Length: 15m (cable/flat ribbon Supplied)

Optional Printer (P-9901A)

Type: Thermal/ASCII Code/96 Characters

(Flat ribbon cable supplied) Voltage: 5Vdc

Outer: 580 x 420 x 30 mm

Inner: 550 x 393 x 173 mm

- **Fuses**

- **Standby Batteries**

- **RS485 Port**

- **CANBUS**

- **RS232 Port (Serial/USB)**

- **Panel Printer**

- **Dimension (HLW)**

Selection of GST200-2 compatible Panels & Devices

- ✓ GST-IFP8 8Loops Intelligent Fire Alarm Controller
- ✓ GST5000 Series Intelligent Fire Alarm Controller
- ✓ GST200 Fire Alarm Panel
- ✓ GSTGMC Graphic Monitor Software
- ✓ GST-NRP01 Network Repeater Panel
- ✓ GST852RP LCD Passive Repeater Panel
- ✓ GST8903 Mimic Panel
- ✓ DI-910N Digital Intelligent Detector Series
- ✓ I-910N Intelligent Analogue Detector Series
- ✓ DI-9204 Addressable Manual Call Point Series
- ✓ I-930X Addressable Series interfaces (Complete range for all requirements)
- ✓ I-940X Addressable Series Sounders and strobes
- ✓ I-950X Line Isolator Series
- ✓ I-960X Intelligent Series Combustible gas detectors

Ordering Information



Part Number: GST200-2/1
Description: Intelligent Single Loop Fire Alarm Panel
Pack Qty. per Box: 1



Part Number: GST200-2/2
Description: Intelligent Two Loop Fire Alarm Panel
Pack Qty. per Box: 1

Accessories



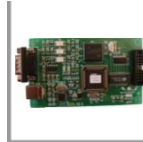
Part Number: P-9901A
Description: Panel Printer
Pack Qty. per Box: 1



Part Number: P-9930
Description: Compatible with USB and Serial Port. RS232 Communication Board for system Commissioning and GMC Connection
Pack Qty. per Box: 1



Part Number: P-9930-TCP / IP
Description: TCP/IP – RS232 Communication Board for Communication to NPORT
Pack Qty. per Box: 1



Part Number: P-9930-MB
Description: MODBUS Protocol RS232 Communication Board
Pack Qty. per Box: 1



Part Number: P-9940
Description: RS 485 Network Board, Serial Connection (Class B) 1.2Km range
Pack Qty. per Box: 1



Part Number: P-9940A
Description: RS 485 Network Board, Serial Connection (Class A) 1.2Km between panels
Pack Qty. per Box: 1

MANUFACTURED IN ACCORDANCE WITH





548p(d-5) 0832-CPD-1215

Intelligent 8 Loop Fire Alarm Control Panel

GST-IFP8

Description

The GST-IFP8 is an intelligent fire alarm control panel. Flush-mounted type housing, dual redundant processor technology capable of connecting over 1900 devices, provides the perfect solution for all medium to large systems.

The system is compatible with the complete range of GST Intelligent detectors, sounders, call points, and interfaces, including intrinsically safe and gaseous extinguishing controls. The IFP8 is manufactured and certified to EN54 parts 2 and 4, BS5839 Par 4. And CPD

The GST programming facilities enables advanced and complex cause and effects to be programmed with ease, including phased and cascade evacuation scenarios.

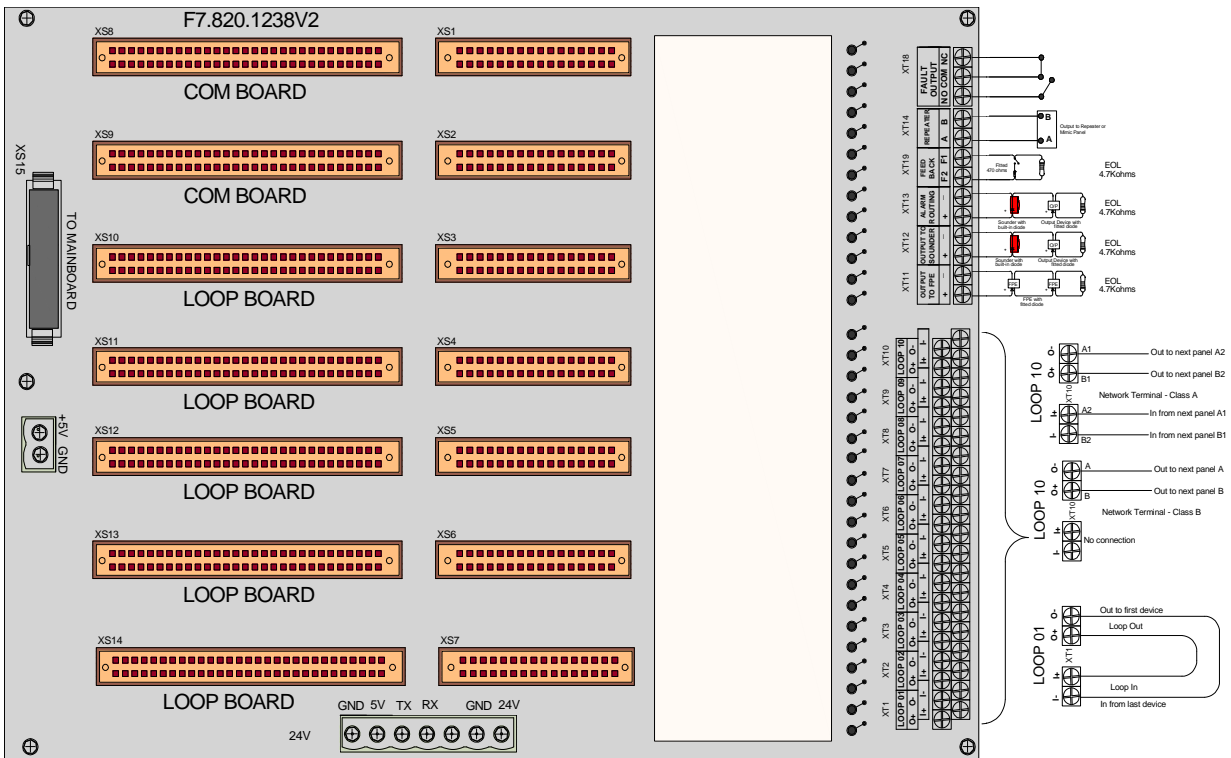
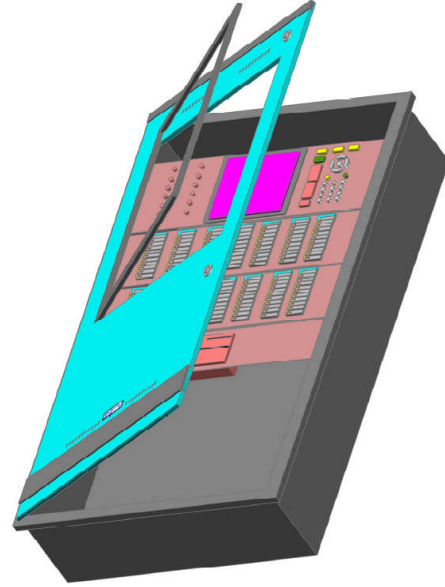
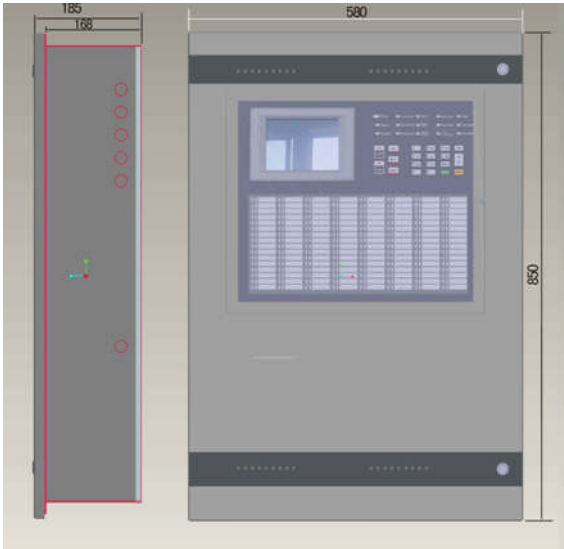
Added commission features such as duplicate address checking, device mismatch, editing device details and programmed through the control panel that has proved to be highly rated by both commissioning and service engineers.

By utilizing the GST protocol the GST-IFP8 can be networked with up to 240 panels, making this the perfect solution for large decentralized systems such as shopping centers, military camps, industrial complexes, holiday villages etc.

Features and Benefits

- Listed to LPCB
- 8 x Loops (242) capacity (1936) addressable points
- Maximum 10 Loops Standalone
- Modular constructed for future expansion
- 40 x15 lines Colour Graphical LCD Display
- Up to 999 programmable zones and 140 zone indication
- Auto Programming Day and Night Mode
- Enable and Disable function
- PAS and Acknowledge Function
- Dirty Detector Reporting
- Duplicate Address Checking
- Walk Test Function with optional silent mode
- Can edit device detailed and programmed
- Programmable from PC or Panel
- History record-999 fire incident only and 999 event capacity in non-volatile memory Fully simulation of Cause and Effect
- Advanced user friendly programming software including 'Fuzzy Logic'
- Networked with all GST Intelligent Fire panels up to 64 panels, Optional CAN BUS, Fiber Optic and LAN Network Interface
- RS 485 mimic and repeater output up 64
- RS 232-USB CRT interface, including GSTGMC graphic, Epson commercial printer, and BMS
- Built in Fire Alarm, FPE, Fault and Alarm Router output
- 80 column Panel Printer included
- Built in Battery charger

Dimensions and Board Diagram



Technical Specifications

- **Standard:** EN54 Part 2/4; BS5839 Part 4
- **Approvals:** LPCB, CPD
- **Main Input Voltage:** 220/230 ± 10% VAC 50/60 Hz
- **Input Current Rating:** 500A, Fuse: 2A delay
- **Operating Temperature:** 0°C- 40°C /95% relative humidity
- **Protection:** IP 30
- **Application:** Indoor installation
- **Programming:** Laptop using GST Defining Software/P-9935 or Panel Keypad
- **Zone Capacity:** 999 Zones programmable
- **Loop Parameter:**
 - Optional Loop card (LC-IFP8)
 - Loop:** 242(Address)
 - Class A or B
 - 24 VDC Nominal (21-27 VDC)
 - 0-300mA
 - 1.00mm²-800m-Full Load
 - 1.5mm²-1000m-Full Load

- **Output Circuits:**
 - Fire Alarm Routing:** Monitored (4.7Kohm)
 - Voltage: Standby: -9to-11VDC; Alarm: 21 to 27Vdc
 - Current: 200mA
 - Relay Contact: Optional C-9302 Module (C-9302:5A/220/24; 26mA alarm Current)
 - F.P.E. Output:** Monitored (4.7Kohm)
 - Voltage: Standby: -9to-11VDC; Alarm: 21 to 27Vdc
 - Current: 500mA
 - Relay Contact: Optional C-9302 Module (C-9302:5A/220/24; 26mA alarm Current)
 - Sounder Circuit Output:** Monitored (4.7Kohm)
 - Voltage: Standby: -9to-11VDC; Alarm: 21 to 27Vdc
 - Current: 1 A
 - (Output circuit cable length: 1.00mm²- 1000m)
 - Fault Output:** Non-monitored
 - Relay Contact: NO/COM/NC; rating: 24V/1A

- **Standby Batteries:**
 - Twin 12 VDC Bat; 28AH – 38AH, as per load calculation
 - Maximum Charge Current: 2.1A
 - Maximum Charge Voltage: 27.6
 - Type: Sealed lead acid batteries
 - Recommended model: Yuasa NP38-12I
 - Maximum Internal Resistance: 0.7Ω
 - Quiescent Current under Full-loaded Condition: 1.4A
 - Maximum Battery Operating Current: 4.2A

- **RS484 Port:**
 - Optional Repeater Card (P-9946)**
 - Up to 64 Repeater or Mimic panel
 - Cable length: 1.5mm²- 1000m
 - Optional Network card (P-9945A)** Normal 64 panels
 - Cable Length: 1.5mm²- 1200m between panels
 - Topology: Class A

- **CANBUS:**
 - Optional CANBUS Communication card (P-9965)**
 - Network Capacity 240 panels (CANBUS HUB Required)
 - Cable Length: 3Km
 - Topology: STAR Connection

- **RS232 Port:**
 - (Serial/USB) Optional Communication card (P-9935)**
 - Cable Length: 15m (cable Supplied)

- **Panel Printer:**
 - Type:** Thermal/ASCII Code Voltage: 5Vdc

- **Dimension (HLW):**
 - Outer:** 850 x 484 x 185 mm
 - Inner:** 804 x 440 x 150 mm

Selection of IFP8 Compatible Panels and Devices

- ✓ GST200/2/N Series Intelligent Fire Alarm Panel Controller
- ✓ GSTGMC Graphic Monitor Software
- ✓ GST-NRP01 Network Repeater Panel
- ✓ GST852RP LCD Passive Repeater Panel
- ✓ GST8903 Mimic Panel
- ✓ DI-910N Digital Intelligent Detector Series
- ✓ I-910N Intelligent Analogue Detector Series
- ✓ DI-9204 Addressable Manual Call Point Series
- ✓ I-930X Addressable Series interfaces (Complete range for all requirements)
- ✓ I-940X Addressable Series Sounders and Strobes
- ✓ I-950X Line Isolator Series
- ✓ I-960X Intelligent Series Combustible Gas Detectors

Ordering Information



Part Number: GST-IFP8
Description: Intelligent 8 Loop Fire Alarm Panel
Pack Qty. per Box: 1

Accessories



Part Number: LCIFP8
Description: Dual Loop Card - 484 Addressable devices capacity
Pack Qty. per Box: 1



Part Number: P-9935
Description: Compatible with USB and Serial Port, RS 232 Communication Card for System Commissioning and GMC connection
Pack Qty. per Box: 1



Part Number: P-9935-TCI/IP
Description: TCPIP - RS232 Communication Board for Communication to NPORT
Pack Qty. per Box: 1



Part Number: P-9935EVAC
Description: EVAC - RS232 Communication Board for Voice Alarm System
Pack Qty. per Box: 1



Part Number: P-9935MODBUS
Description: MODBUS Protocol RS232 Communication Board
Pack Qty. per Box: 1



Part Number: P-9945A
Description: RS 485 Network Card, Connection (Class A or B) 1.2 Km between Panels
Pack Qty. per Box: 1



Part Number: P-9946
Description: RS 485 Repeater Card
Pack Qty. per Box: 1



Part Number: P-9965
Description: CAN Bus Communication Board
Pack Qty. per Box: 1

MANUFACTURED IN ACCORDANCE WITH

