

Features

- ✧ Drift compensation to suit environment changing extensively.
- ✧ Integrated algorithm for analyzing fire, improving the sensitivity highly.
- ✧ Self-diagnostic.
- ✧ Removable innovative sensing chamber, easy for maintenance.
- ✧ Reporting dirt fault for contaminated chamber.
- ✧ Remote indicator output available.
- ✧ 3 levels sensitivities programmable; Level 1 complies with EN 54-7. Fix temperature or rate of rise programmable, rate of rise mode complies with EN 54-5.

Description

C-9101 Conventional Combination Heat/Photoelectric Smoke Detector is consisted of smoke sensing and semi-conductor temperature sensing parts in processing and circuitry. Matching with P-9907 Active End of Line Unit (AEOL), it can be connected with conventional fire alarm control panel or intelligent fire alarm control panels through I-9319 Addressable Zone Monitor Unit to execute signal processing. This non-addressable detector has the advantages of both conventional photoelectric detector and rate of rise and fixed temperature heat detector. Just because of the combination technology of smoke detector and heat detector, it overcomes the non-sensitivity to dark smoke particles of ordinary scattering type photoelectric detectors. It can also pick up fire with obvious rise of temperature such as alcohol fire, thus extending the application range.

Connection and Cabling

Fig.1 shows the detector bottom and Fig. 2 the base.

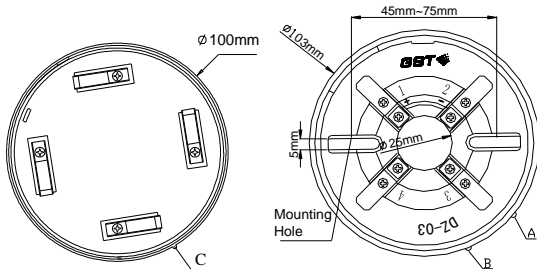


Fig. 1

Fig. 2

There are four terminals with numbers on the base.

- 1: Detection zone positive IN
- 2: Detection zone positive OUT
- 3: Detection zone negative IN and OUT
- 2: Positive terminal of remote indicator
- 4: Negative terminal of remote indicator

Recommended Cabling

1.0mm² or above fire cable for all the wires, laid out through metal conduit or flame retardant conduit, subject to local codes.

Installation

A fixed installation direction is ensured by the location elements on the detector and the base. Fix the base with two tapping screws, and then align mark C on the detector with A on the base, rotate the detector to align mark C with mark B (Refer to Fig. 1 and 2 for the position of the marks), the detector will be fitted to the base.



Fig. 3 shows mounting of the detector.

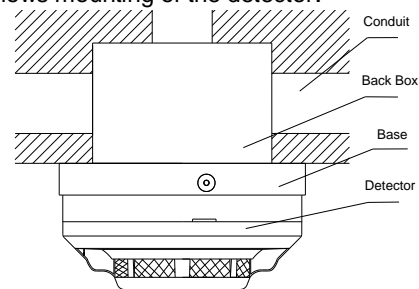


Fig. 3

Applications

Warning: The alarm current depends on the current limit of the control panel. 24VDC cannot power the detector directly. Otherwise the detector will be blown up for lack of current limit resistor.

Level 1 is defaulted, which can be modified by P-9910B programmer. Please refer to *P-9910B Hand Held Programmer Installation and Operation Manual* for details.

In power-on state of the programmer, input unlocking password and press *Clear* to unlock. Press *Function*, then press "3", the screen shows "-" at the last digit.

Input corresponding sensitivity or parameter and press *Program*, the screen will show a "P", the corresponding sensitivity or parameter is programmed. Press *Clear* to clear the "P". Input locking password and press *Clear* to return.

Parameters set using programmer

| Input Number | Smoke Sensitivity | Heat Sensitive |
|--------------|-------------------|-------------------|
| 1 | Level 1 | Rate of rise |
| 2 | Level 2 | Rate of rise |
| 3 | Level 3 | Rate of rise |
| 11 | Level 1 | Fixed temperature |
| 12 | Level 2 | Fixed temperature |
| 13 | Level 3 | Fixed temperature |

Rate of rise and level 1 is defaulted.

1. 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 a P-9907 AEOL is connected to the end of output loop, an 1N5819 Diode should be connected to the detector base.

- 1) Used as the detector base, the AEOL is to install a conventional detector on it. The system connection is shown in Fig. 4.

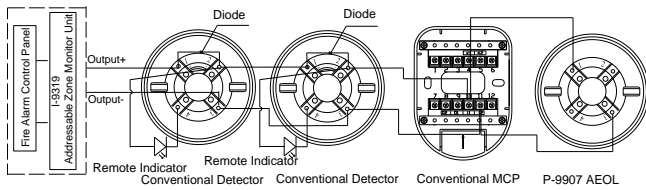


Fig. 4

- 2) When the AEOL is not used as the detector base, a cover should be added, the system connection is shown in Fig. 5.

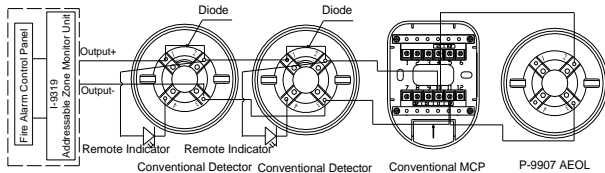


Fig. 5

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 in Fig. 6.

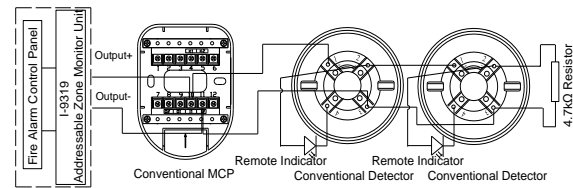


Fig. 6

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.

Maintenance

- ✧ The detector should be installed just before commissioning and kept well before installation, taken corresponding measures for dust-proof, damp-proof and corrosion-proof.
- ✧ The dust cover cannot be removed until the project has been plunged into usage, otherwise it cannot alarm normally.
- ✧ The detector should be cleaned at least once a year to ensure normal operation of the system.
- ✧ If nuisance alarms are often found of the detector on site, the sensing chamber should be cleaned and replaced when necessary.
- ✧ Before cleaning, notify the proper authorities that the system is undergoing maintenance and will temporarily be out of service. Disable the zone or system undergoing maintenance to avoid unwanted alarms.

- ✧ After cleaning, install the detector again, and test after re-installing. Notify the proper authorities when the system is back in service.
- ✧ Fire simulation test should be made to the detector once half a year.

Specification

| | |
|---------------------------|--|
| Operating Voltage | 24VDC (12VDC~28VDC) |
| Standby Current | ≤60μ A |
| Alarm Current | 10mA≤I≤40mA |
| Maximum Ripple Voltage | 2V (peak-to-peak value) |
| Indicator | Red: flashes in normal and illuminates in alarm. The LED is quiet in fault. And it lights and then turns out about every three seconds periodically when reported dirty. |
| Remote Indicator Output | Directly connecting with indicator (built-in 5.1kΩ resistor, maximum output current is 5.0mA). Quiet in normal condition. Flashes in alarm. |
| Alarm Clear | Instantaneous Power-off (10s MAX., 1.5VDC MAX.) |
| Power-up Time | ≤10s |
| Action Temperature | 62℃ |
| Class | A2R |
| Wiring | Polarized 2-core for detection zone cable. Polarized 2-core for remote indicator. |
| Ingress Protection Rating | IP22 |
| Environment Temperature | -10℃~+50℃ |
| Relative Humidity | ≤95%, non condensing |
| Material Enclosure of | ABS |
| Dimensions | Diameter: 100mm Height: 56mm (with base) |
| Mounting Hole Distance | 45mm~75mm |
| Weight | 126g |

Accessories and Tools

| Model | Name | Remark |
|---------|-------------------------|------------------|
| P-9907 | Active End of Line Unit | Order separately |
| P-9910B | Hand Held Programmer | Order separately |
| DZ-03 | Base | Order separately |

Limited Warranty

GST warrants that the product will be free of charge for repairing or removing from defects in design, materials and workmanship during the warranty period. This warranty doesn't cover any product that is found to have been improperly installed or used in any way not in accordance with the instructions supplied with the product. Anybody, including the agents, distributors or employees, is not in the position to amend the contents of this warranty. Please contact your local distributor for products not covered by this warranty.

This document is subject to change without notice. Please contact GST for more information or questions.

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