



Conventional Photoelectric Smoke Detector

EDC-M9102



Overview

EDC-M9102 Conventional Photoelectric Smoke Detector (the detector) is a new-generation product by building in a microprocessor, embedding a solid fire analyzing program, and performing effectively and efficiently.

Checking a fire alarm signal, the detector will send it to a fire alarm control panel (FACP) or addressable zone monitor unit by means of current changes. The detector indicates its fire condition by turning on fire LED and keeping the LED on until it is reset.

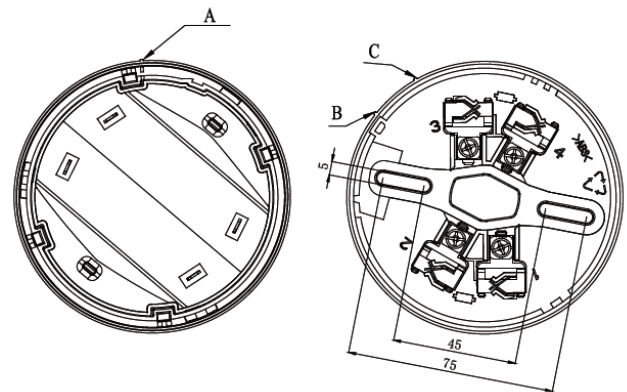
Using infrared scattering technology, with an innovative chamber, the detector receives very weak infrared light under normal smokeless condition. If smoke particles enter the chamber, the received light signal will increase by scattering. When smoke density reaches certain density, the detector will output fire signal. In order to reduce interference and power consumption, the emitting circuit works in pulse mode to prolong the life of IR LED

Standard Features

- Reed switch testing
- Drift sensitivity, suit to environment extensively.
- Removable innovative sensing chamber, easy for maintenance.
- The fire LED allows 360°viewing.
- Providing alarm output terminal connecting with remote indicator.
- Complying with UL 268

Typical Wiring

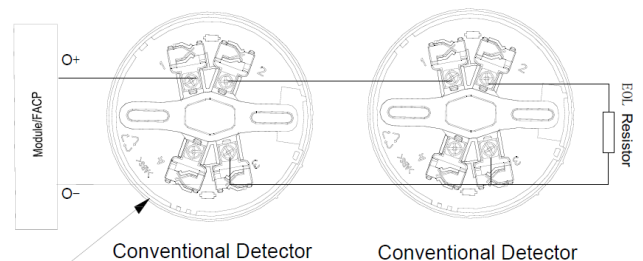
Below figures show the detector bottom and terminals of the base.



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
- 4: Positive terminal of alarm output
- 2: Positive terminal of alarm output
- 4: Negative terminal of alarm output

Refer to respective Module/FACP Installation sheets for the wiring connections



Recommended Cabling

1.0mm² or above fire cable for all terminals laid through metal conduit or flame proof conduit, subject to local codes.

Note: Different color cables are used to avoid wiring mistake.

Application

Warning:

The detector should be connected with fire alarm control panel or other devices with current limit function. Otherwise the detector may be damaged by too heavy alarm current.

The alarm current depends on the current limit of the control panel or interface unit.

Compatible control panels and modules connected to the detector, and the max. quantity of detectors per zone are shown in the table below.

Control Panel	Modules	Detector Capacity
EST3	3-IDC8/4	19
	SIGA-UM	10
3X-SFS1B/3X-SFS1R	3-IDC8/4	19
	SIGA-UM	10
IO64G-2/IO64R-2	SIGA-UM	10
IO1000G-2/IO1000R-2	RZI16-2	25
FSP302/502/1004	IDC ccts	25

Technical Specification

Operating Voltage	16VDC~28VDC
Standby Current	≤ 60μA
Alarm Current	≤ 55mA
LED Indicator	Red, periodically flash once in polling, periodically flash twice in fault or sensing chamber dirty; illuminate in alarming.
Alarm Output	Polarized output. Cycle 0.25S, duty ratio 1/2, Voltage range 13V~24V (built in 10k resistor in series, maximum output current is 2.0mA);
Maximum Ripple Voltage	2V (peak-to-peak value)
Alarm Reset	Instantaneous power down (Min.10sn, Max. 1.0VDC)
Wiring	Two-wire, polarity sensitive.
Sensitivity and range	1.23%~3.20% per ft
Environment Temperature	32°F (0°C) - 100°F (37.8°C)
Operating Temperature	14°F (-10°C) - 131°F (+55°C)
Relative Humidity	≤ 95%, non-condensing
Material of Enclosure	ABS White (RAL 9016)
Ingress Protection Rating	IP2X
Dimensions	Diameter: 100mm Height: 44.5mm (without base)
Mounting Hole Distance	45mm-75mm
Weight	110g
Listing	UL268

Ordering Information

Part No.	Description
EDC-M9102	Conventional Photoelectric Smoke Detector

Accessories and Tools

EDB-M01	Detector Base
T-MT	Commission Tool



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