Conventional Combination Heat Photoelectric Smoke Detector

EDC-M9101

SIGNALING UL LISTED

Overview

EDC-M9101 Conventional Combination Heat Photoelectric Smoke Detector integrates photoelectric detection and fixed temperature detection technology by combining smoke sensor and semi-conductor heat sensor in mechanism and circuitry structure. Just because of the combination of smoke detection and heat detection, it not only overcomes the disadvantage that detectors using common infrared scattering technology are insensitive to black smoke with small particles, but also can pick up fire with obvious rise of temperature such as alcohol flame, thus extending its application range.

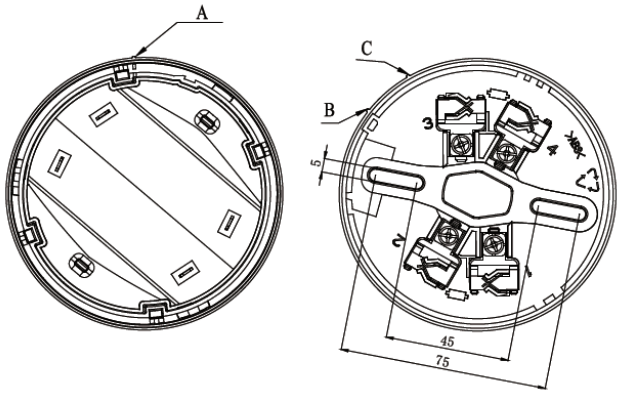
On detecting a fire signal, it can change its own current to transmit the signal to fire alarm control panel (FACP) or addressable zone monitor unit. The detector keeps illuminating fire LED until it is reset by power-down.

Standard Features

- Reed switch test.
- 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.
- Smoke performance complies with UL268. Heat part is fixed temperature, complies with UL521.

Typical Wiring

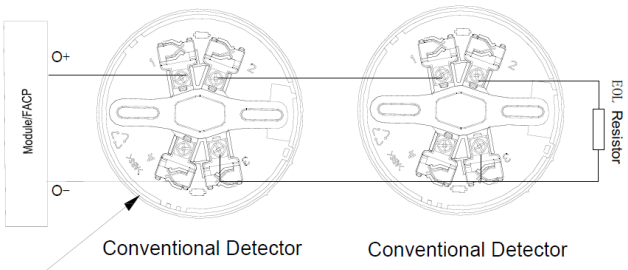
Below figures show the detector bottom and terminals of the base.



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

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



DO NOT USE LOOPED WIRE UNDER TERMINAL 3. BREAK WIRE RUN TO PROVIDE SUPERVISION OF CONNECTIONS

Recommended Cabling

1.0mm^2 or above fire cable is recommended, laid through metal or flame-retardant conduit, but subject to local codes.

Note: It's recommended to use cables of different colors to avoid incorrect wiring.

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	24VDC (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)
Alarm Reset	Instantaneous power down (Min.10sn, Max. 1.0VDC)
Wiring	Two-wire, polarity sensitive.
Sensitivity range	2.0%~3.89% per ft
Maximum spacing (When Used as a Heat Detector only)	50 ft. (15.2 m)
Fixed Temperature	135°F (57.2°C)
Environment Temperature	32°F (0°C) ~ 100°F(+37.8°C)
Operating Temperature	14°F (-10°C) - 122°F (+50°C)
Relative Humidity	≤ 95%, non-condensing
Material of Enclosure	ABS White (RAL 9016)
Ingress Protection Rating	IP2X
Dimensions	Diameter: 100mm Height: 54.5mm (with base)
Mounting Hole Distance	45mm-75mm
Weight	110g
Listing	UL268, UL521

Ordering Information

Part No.	Description
EDC-M9101	Conventional Combination Heat Photoelectric Smoke Detector

Accessories and Tools	
EDB-M01	Detector Base
T-MT	Commission Tool