Conventional Multi-criteria Smoke and Heat Detector
EDC-M9101N

SIGNALING UL LISTED

Overview

EDC-M9101N Conventional Multi-criteria Smoke and Heat Detector integrates photoelectric detection and fixed temperature detection technology by combining smoke sensor and semi-conductor heat sensor in mechanical and circuit structure. Using Multi-Wave Multi-Angle (MWMA) technology, DC-M9101N detector can identify features of smoke particles from different types of fire, improving sensitivity while reducing unwanted alarms caused by dust and vapor. With its heat sensor, the detector can also detect open fire with significant temperature rise such as alcohol flame, thus extending its range of application.

Standard Features

- Drift sensitivity, suit to environment extensively
- Remote indicator output available;
- Reed switch test
- Self-diagnostic
- Polling LED can be set to OFF
- 3 levels of smoke sensitivity programmable, complying to UL268 7th Edition; Fixed temperature feature complies to UL521.

Typical Wiring

Fig. 1 shows the detector bottom and Fig. 2 EDB-M01N base.

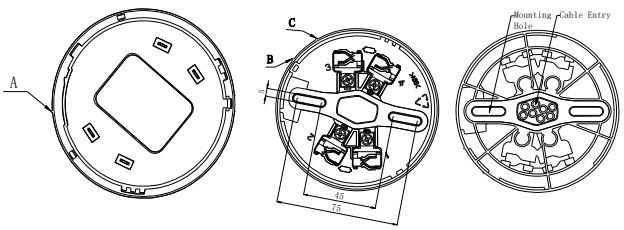
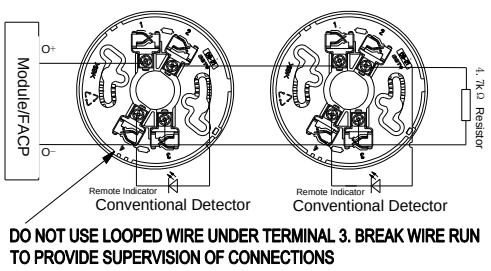


Fig. 1 Fig. 2

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 alarm output
4: Negative terminal of alarm output

Refer to respective Module/FACP Installation sheets for the wiring 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 is to be connected only to the control unit specified in the detector or control unit literature or the system may not operate.

The factory default setting is fixed temperature and smoke sensitivity Level 2. The detector can be addressed, and information be read or written in field using EP-9910B programmer. Below is the parameters set using programmer.

Detector Parameter	Smoke Sensitivity	Heat Setting	Polling LED
1	1	Fixed	Normal
2	2	Fixed	Normal
3	3	Fixed	Normal
129	1	Fixed	OFF
130	2	Fixed	OFF
131	3	Fixed	OFF

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
EST 4	SIGA-UM	12
IO64	SIGA-UM	12

Technical Specification

Operating Voltage	24VDC (16V~28V)
Standby Current	≤70μA
Alarm Current	≤55mA
Fire LED	Red. Flashes in polling, and illuminates steadily in alarm.
Fault LED	Yellow. Illuminates steadily in fault.
Remote Indicator Output	Polarity-sensitive output, directly connects to remote indicator (built in 10k resistor in series with max. output current 2mA); Flashes in alarming and does not illuminate in normal state.
Programming Method	Electronically addressed
Max. Ripple Voltage	2V (peak to peak)
Alarm Reset	Instantaneous cut off (min. 10 seconds, max. 1.0VDC)
Wiring	Power: two wire, polarity-sensitive Remote indicator: two-wire, polarity-sensitive
Smoke sensitivity Range	Level 1: 1.38%~3.38%/ft Level 2: 2.25%~4.25%/ft Level 3: 3.12%~5.12%/ft
Max. spacing (when used as heat detector only)	50 ft. (15.2 m)
Action Temperature	135℉(57.2℃)
UL Approved Environment Temperature	32° F (0° C)~120° F (49° C) 0~95%，non condensing
Operating Environment Temperature	14° F (-10° C) ~122° F (+50° C) 0~95%, non-condensing
Ingress Protection Rating	IP2X
Dimensions	Diameter: 100mm Height: 54.5mm (with base)
Mounting Hole Distance	45mm~75mm
Weight	About 110g

Ordering Information

Part No.	Description
EDC-M9101N	Conventional Multi-criteria Smoke and Heat Detector

Accessories and Tools (Order separately)	
EDB-M01N	Base
T-MT	Commission Tool
EP-9910B	Hand held programmer