EDC-M9103
Conventional Rate of Rise and Fixed Temperature Heat Detector

Features

- ✧ Reed switch testing
- ✧ The fire LED allows 360° viewing.
- ✧ Providing alarm output terminal connecting with remote indicator.
- ✧ Rate of rise and fixed temperature
- ✧ Complying with UL 521.

Description

EDC-M9103 Conventional Rate of Rise and Fixed Temperature With built-in microprocessor, it works stably by being fixed with highly reliable fire judging program.

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.

Connection and Wiring

The detector connects with UL-certified products such as modules and control panels. The detector bottom is shown in Fig. 1 and the base in Fig. 2.

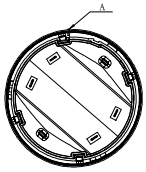

Fig. 1

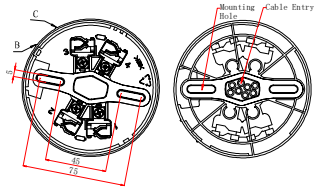

Fig. 2

Please install the base according to following steps:

1) Locate mounting holes on the rubber layer of the base according to the holes on the back box, and punch the holes with a screwdriver.
2) Count the number of cables needed and punch correct quantity of holes with a screwdriver on the rubber layer. Thread the cables through the cable entry holes.
3) Install the base onto the back box with screws.

Warning: Do not punch mounting holes and cable entry holes bigger than needed. Do not punch more holes than needed.

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

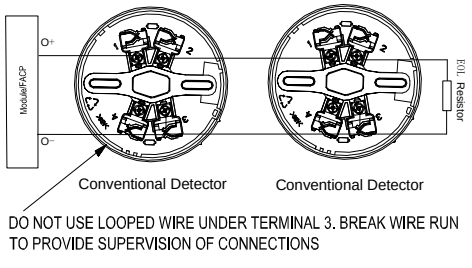

Fig. 3

Recommended Wiring

1.0mm^2 or above fire cable for all terminals laid through metal conduit or flame retardant conduit, subject to local codes.

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

SIGNALING UL LISTED

Up to 25 conventional devices can be connected to a module/FACP. See next page, compatibility section, for detector capacity per circuit

Installation

Refer to *D Series Detector Application Bulletin* for additional installation instructions.

First fix the orientation base with two tapping screws. Then align A (Fig. 1) on the bottom of the detector to B (Fig. 2) of the base, and rotate the detector clockwise to mark C.

Mounting of the detector is shown in Fig. 4.

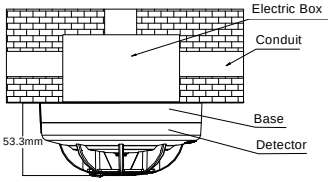

Fig. 4

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.

Testing

Note: Before testing, make sure the detector is properly installed and powered up. Testing can only begin after the detector is powered up for 10 seconds.

Before testing, 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

The detector must be tested after installation and regular maintenance. The methods should meet the requirements from local authority. The detector should meet NFPA72. The testing methods are as follows:

(1) Reed switch testing

The testing area of the detector is shown in Fig. 5. Approach the commission tool to the testing area of the detector and hold for several seconds until the detector alarms.

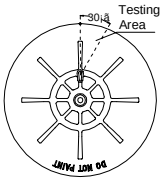

Fig. 5

(2) Temperature test

Approach a heater (such as a hair drier of 1000w-1500w) to the thermistor of the detector until it alarms. It is 12 inches between the hair drier and the thermistor to avoid damaging on the plastic enclosure of the detector

After testing, disconnect power of the detector for over 10 seconds and then reset it. Notify the proper authorities that the system is back to normal operation.

Maintenance

- ✧ The detector should be installed just before commission 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.
- ✧ Do fire simulation test at least once every 6 months.
- ✧ Before fire simulation test, 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.
- ✧ Protect the metal component on the PCB against damp and improper distortion.

Cautions

1. Detector should be firmly installed and the wire be reliable.
2. LED on the detector should face the main entrance for people to see it.
3. Be careful not to damage the detector in maintenance.
4. Heat detector is not suitable for detecting smoldering fire.

Accessories and Tools

Module	Name	Remarks
EDB-M01	Base	Order separately
T-MT	Commission Tool	Order separately

Specification

Operating Voltage	*16VDC~28VDC*
Standby Current	≤60μA
Alarm Current	≤55mA
Fire LED	Red, periodically flash once Periodically flash twice in fault; 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 2.0(mA)
Maximum spacing	50 ft. (15.2 m)
Class and Setup	Rate of rise and fixed temperature
Rate of Rise	8.3℃ / min
Fixed Temperature	135℉(57℃)
Maximum Ripple Voltage	2V (peak-to-peak)
Alarm Reset	Instantaneous cut-out (10s Min, 1.0VDCMax.)
Power-up Time	≤10s
Wiring	Two-wire, polarity sensitive.
Ingress Protection Rating	IP2X
Ambient Temperature	32℉(0℃)～100℉(37.8℃) (UL 521)
Dimensions	Diameter: 100mm Height: 53.3mm (with base)
Mounting Hole Spacing	45~75mm
Weight	About 110g (with base)
Compatibility	EST3/3x IDC (detector capacity:19) SIGA-UM/MAB(detector capacity:10) RZI16-2 (detector capacity:25) Fireshield Plus(detector capacity:25)
Listing	UL 521