



Features

- ◇ Reed switch testing.
- ◇ Output terminal for remote indicator available.
- ◇ Rate of rise and fixed temperature, and fixed temperature programmable.
- ◇ Complying with UL 521.

Description

DC-M9103 Conventional Rate of Rise and Fixed Temperature Heat Detector is a new generation product of GST. 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.

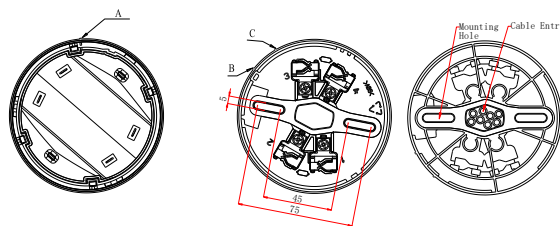


Fig. 1

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 remote indicator
- 4: Negative terminal of remote indicator

It connects a 4.7k/1w resistor between number 2 and 3 at the end of the base. The system connection is shown in Fig. 3.

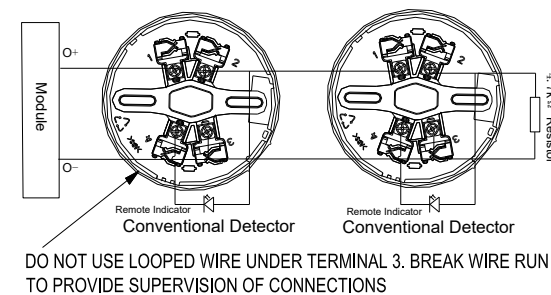


Fig. 3

Recommended Wiring

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

I-M9300 modules connect with 15 conventional devices at most.

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

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.

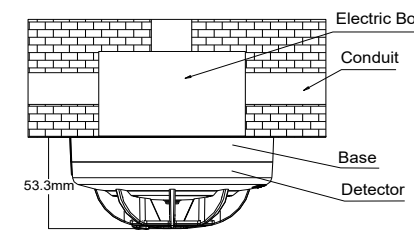


Fig. 4

Application

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.

The default class 7 of the detector is rate of rise & fixed temperature, and polling LED status is "ON", which can be modified using GST handheld programmer.

When the programmer is in standby state, entering unlock password and pressing "Clear", it will be unlocked. Pressing *Function* followed by 4, there will be a "-" at the last digit. Entering different number corresponding to the parameters (refer to Table 1) followed by "Program", there will be a "P" shown on the screen, indicating its class is programmed. Pressing "Clear" can clear the "P", and entering locking password followed by "Clear" will exit.

Table 1 Detector setting parameters

Parameters	Class	Polling LED Status
7	Rate of Rise and fixed temperature	ON
8	Fixed Temperature	ON
135	Rate of Rise and fixed temperature	OFF
136	Fixed Temperature	OFF

Read Heat Detector Class: When the programmer is in standby state, pressing "Test", it will display address of the detector. Pressing "Up", it will display sensitivity

level, device type and heat detector parameters in turn.

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.

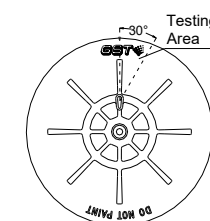


Fig. 5

- (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.

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

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
P-9910B	Handheld programmer	Order separately
DB-M01	Orientation base	Order separately
DC-M9402	Sounder Base	Order separately
T-MT	Commission Tool	Order separately
C-9314P	Passive Remote Indicator	Order separately
BP-9314P	Back Plate for Remote Indicator	Order separately

Specification

Operating Voltage	24VDC(16VDC - 28VDC)
Standby Current	≤ 60μA
Alarm Current	≤ 55mA
Fire LED	Red, periodically flash once in polling when the status is set to "ON"; don't illuminate when the status is set to "OFF". Periodically flash twice in fault; illuminate in alarming.
Sensitivity	Action Temperature:135°F (57.2°C) Response rate of rise:15°F /min (8.3°C /min)
Maximum spacing	50 ft. (15.2 m)
Remote Indication Output	Polarity-sensitive output ,Directly connecting with remote indicator (built in 10k resistor in series, maximum output current is 2.0mA); The remote indicator does not illuminate in normal and flashes in alarm.
Class and Setup	Rate of rise and fixed temperature (default), and fixed temperature programmable.
Maximum Ripple Voltage	2V (peak-to-peak)
Alarm Reset	Instantaneous cut-out (10s Min, 1.0VDCMax.)
Power-up Time	≤ 10s
Wiring	Polarized 2-core for loop.
Ingress Protection Rating	IP2X
UL Temperature Range	32°F (0°C) - 100°F (37.8°C) 0 - 95%, non-condensing
Operating Temperature	14°F (-10°C) - 122°F (+50°C) 0 - 95%, non-condensing
Mounting Hole Spacing	45mm - 75mm
Weight	About 110g (with base)

Limited Warranty

GST will repair or replace the product to the original purchaser free of charge, if defective in materials or workmanship during the warranty period, subject to the terms below. GST and KDSS are not responsible for defects or problems as a result of conditions or applications including normal wear and tear; catastrophe; fault or negligence of any user or any party other than GST and KDSS; improper installation, application, storage, maintenance, or use of products; other causes external to products; or failure to conform to any applicable recommendations of GST and KDSS. In no event shall GST and KDSS be liable for incidental, indirect, special or any other consequential damages. To the fullest extent permissible by law, the foregoing limited warranty is exclusive and in lieu of all other warranties, whether written, oral, implied or statutory. Subject to applicable law, in no event shall the liability of GST and KDSS exceed the purchase price of the products. NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE SHALL APPLY. Anybody, including the agents, distributors or employees, is not in the position to amend the contents of this warranty.

Product warnings and disclaimers

THESE PRODUCTS ARE INTENDED FOR SALE TO AND INSTALLATION BY QUALIFIED PROFESSIONALS. KIDDE GLOBAL SOLUTIONS AND ITS AFFILIATE COMPANIES (TOGETHER AND EACH INDIVIDUALLY "KGS") CANNOT PROVIDE ANY ASSURANCE THAT ANY PERSON OR ENTITY BUYING ITS PRODUCTS, INCLUDING ANY "AUTHORIZED DEALER" OR "AUTHORIZED RESELLER", IS PROPERLY TRAINED OR EXPERIENCED TO CORRECTLY INSTALL FIRE AND SECURITY RELATED PRODUCTS.

For more information on warranty disclaimers and product safety information, please check <https://firesecurityproducts.com/policy/product-warning/> or scan the following code:



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

Gulf Security Technology Co., Ltd.

No. 80 Changjiang East Road, ETDZ, Qinhuangdao, Hebei, P. R. China 066004
Tel: +86 (0) 335 8502434
www.gst.com.cn