Installation Wiring Diagram

Before Installing

The heat detector must be installed in compliance with the control panel manual and meet the requirements of NFPA.

TYPICAL WIRING DIAGRAM

Figure 1(a) shows the typical wiring diagram of the 2-wire heat detector system.

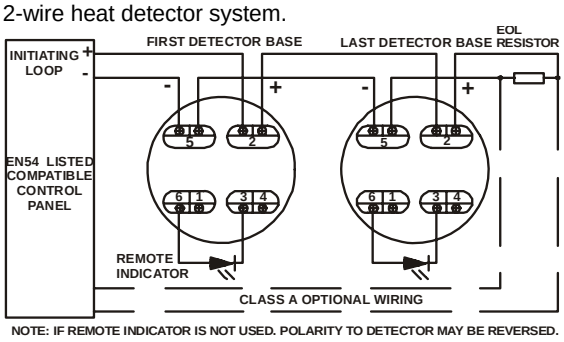

Fig.1.a. Installing the 2-wire heat detector base

DO NOT PLACE LINKS BETWEEN THE WIRING POSITIONS OF TERMINALS 2 AND 5 TO PROVIDE POWER SUPERVISION

Figure 1(b) shows the typical wiring diagram of the 4-wire heat detector system.

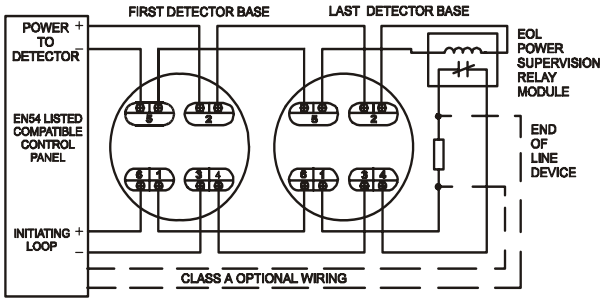

Fig.1.b. Installing the 4-wire heat detector base

DO NOT PLACE LINKS BETWEEN THE WIRING POSITIONS OF TERMINALS 2 AND 5 TO PROVIDE POWER SUPERVISION

WARNING
TO PREVENT DETECTOR CONTAMINATION AND SUBSEQUENT WARRANTY CANCELLATION, THE HEAT DETECTOR MUST REMAIN COVERED UNTIL THE AREA IS CLEAN AND DUST FREE.

INSTALLING THE BASE

1. The detector must be installed in compliance with the control panel manual and meet the requirements of NFPA 72.
1. To insure proper installation of the detector head to the base, all the wires should be properly addressed at installation:
   (A) Position all the wires flat against terminals.
   (B) Fasten the wires away from connector terminals.
2. If you use a jumper wire to connect the poles of terminal 2 and 5 when testing the detector loop continuity, be sure to remove the jumper wire prior to the installation of the detector head.
3. The end-of-line device shown in fig. 1(a) and 1(b) should be compatible with the control unit. The end-of-line supervisory relay used should be rated for the DC power voltage used.
4. Open area heat detectors are intended for mounting on a ceiling or a wall in accordance with the fire standard in your country.
5. The base of the heat detector can be mounted directly onto an electrical junction box such as an octagonal (75mm, 90mm or 100mm), a round (75mm), or a square (100mm) box without using any type of mechanical adapter.

INSTALLING THE HEAD

1. Align the components as shown in Figure 2.
2. Mate the detector head onto the base and twist clockwise to secure it.
3. The maximum numbers of heat detector allowed to connected to each initiating device circuit of the control unit are 30 units.

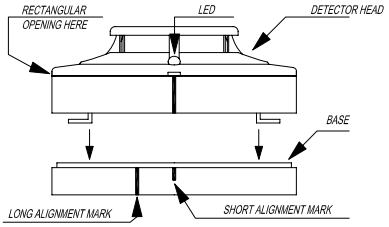

Fig. 2 mating detector head onto base

TESTING

1. All the alarm signal services, releasing device and extinguisher system should be disengaged during the test period and must be re-engaged immediately at the conclusion of testing.
2. After energizing the detector head for approximately 30 seconds, check to see the indicator red LED flashing once every 1-3 seconds. If red LED fails to flash, it indicates the non-functioning of the detector or faulty wiring. Re-check the wiring or replace the detector if necessary.
3. The detector to be tested should be subject to a flow of warm air at a temperature of between 56°C and 80°C. (This requirement can be met by some domestic hair dryers).
   Proceed as follows:
   (1). Switch on the warm airflow and check that temperature is correct and stable.
   (2). From a distance of several inches, direct the airflow at the guard protecting the thermistor. The detector should alarm within 30 seconds.
   (3). Upon alarm immediately remove the heat source and check that the red LED of the detector is illuminated. Reset the detector from the control panel.
   (4). If detector fails to go into alarm mode within 30 seconds it is too insensitive and needs to be returned to the distributor for servicing.
   (5). After testing, check that the system is set for normal operation and notify the appropriate authorities that the testing operation is complete and the system is active again.

● **CAUTIONS**

This heat detector is particularly designed to **initiate and activate** emergency action, but will do so only when it is used in conjunction with an authorized fire alarm system. This detector must be installed in accordance with NFPA Standard 72.

The purpose of design of heat detectors is meant to protect property, not life. The heat detectors do not provide early warning of fire and cannot detect smoke, gas, combustion particles, or flame. They will alarm when temperature at the heat detector reach 57°C (135°F) or above. Given the rapid growth of certain types of fires, heat detectors cannot be expected to provide adequate warning of fires resulting from smoking in bed, inadequate fire protection practices, violent explosions, escaping gas, and improper storage of flammable liquids like cleaning solvents, other safety hazards, or arson.

Heat detectors do not always detect all fires because the fire may be a slow-smoldering, low-heat type (producing smoke), or because they may not be mean where the fire occurs, or because the heat of the fire may bypass them. Heat detectors will not detect smoke, gas, flames, or combustion particles.

Heat detectors are components in professionally installed fire alarm systems. **They will not function if they have been improperly wired into the fire alarm system or if power to them is disconnected for any reason.**

Heat detectors cannon last forever. They should be tested and maintained following the instructions in this manual. To be safe, they should be replaced after they have been installed for ten years.

Refer to NFPA 72 for application.

Maintenance

At least once every 12 months remove the detector for close inspection and, if found to be necessary cleaning, clean the detector more frequently if environment contains appreciable sources dirt or corrosive agents.

IMPORTANT: *Before removing a detector for maintenance, notify the appropriate authorities that fire alarm system or a specific zone of the system will be temporarily out of service. Disable the zone or system undergoing maintenance to prevent unwanted alarms.*

To maintain a heat detector the following steps can be applied:

1. Remove the detector head from its base.
2. Do not damage the heat sensor for the heat detector models.
3. Check that thermistor bead is free from dirt or dust, if necessary; gently wipe it with a clean tissue paper.
4. After cleaning the detector, be sure not to tangle the leads of thermistor.
5. Check thermistor head in standing upright in the center of its plastic protective guard.
6. Install the detector into its base again.
7. Test the operation of the heat detector.
8. Enable the zone or system again and notify the appropriate authorities that the maintenance operation is complete and the system is active again.
9. Enable the zone or system again and notify the appropriate authorities that the maintenance operation is complete and the system is active again.

Heat detectors are designed to be as maintenance-free as possible. However, dirt or corrosive agents can accumulate inside a detector's sensing head and influence its sensitivity. They could reduce the amount of warning time given in case of a fire. Therefore, detectors should be tested periodically and maintained at regular intervals. Follow closely the manufacturer's recommended procedures for maintenance and testing and refer to the NFPA 72.

REFER TO THE TECHNICAL BULTTIN ISSUE NO. STHD20080508S1, REV.E, May 08, 2008.

SPECIFICATION

Model	2/4 wire	Voltage DC	Standby Current (Max)	Alarm Current (Min /Max)	Surge Current (Max)	Frequency	Temperature Rating	Rate of Rise of Temperature (Max)	UL Maximum Spacing (10-foot ceiling)	Alarm Impedance (Min/Max)	Alarm Contact	Base Model
HD 912-2	2	10.8~33V	180μA	18/80mA	180μA	1-3 Seconds	135℉/57℃	15℉/8.3℃	40-feet x40-feet	411Ω/594Ω	-	P/N852001
HD 912-2L	2	10.8~33V	180μA	18/80mA	180μA	1-3 Seconds	135℉/57℃	15℉/8.3℃	40-feet x40-feet	411Ω/594Ω	-	P/N854001
HD 912-4(12V)	4	12V	180μA	23/33mA	180μA	1-3 Seconds	135℉/57℃	15℉/8.3℃	40-feet x40-feet	-	Form A	P/N854001
HD 912-4(24V)	4	24V	180μA	34/46mA	180μA	1-3 Seconds	135℉/57℃	15℉/8.3℃	40-feet x40-feet	-	Form A	P/N854001

Remarks: L-remote LED indicator output

HDMI912080528, REV H, 05.28.2008.