HEAT DETECTION / CONVENTIONAL SYSTEMS

4-Wire Heat Detector

HYU-FA-HDR001-4

Installation, wiring and operating instructions



57°C
FIXED-TEMPERATURE ALARM

12 / 24 V
DC POWER VARIANTS

4-WIRE
NC / NO RELAY CONTROL

Product overview

Conventional heat detector with a fixed-temperature alarm and rate-of-rise response, designed for use in compatible monitored fire alarm systems. This manual covers installation and testing of the four-wire version with relay alarm contacts.

In this manual

02 Mounting and wiring

03 Relay setting and functional test

04 Specifications, maintenance and safety

01 / INSTALLATION

Mounting & wiring

Before installation. Switch off the power supply. Follow the control-panel manual, local fire-alarm requirements and the wiring diagram below. Keep the detector head protected from construction dust.

Four-wire connection diagram

Typical circuit with separate detector power and initiating-loop / relay wiring

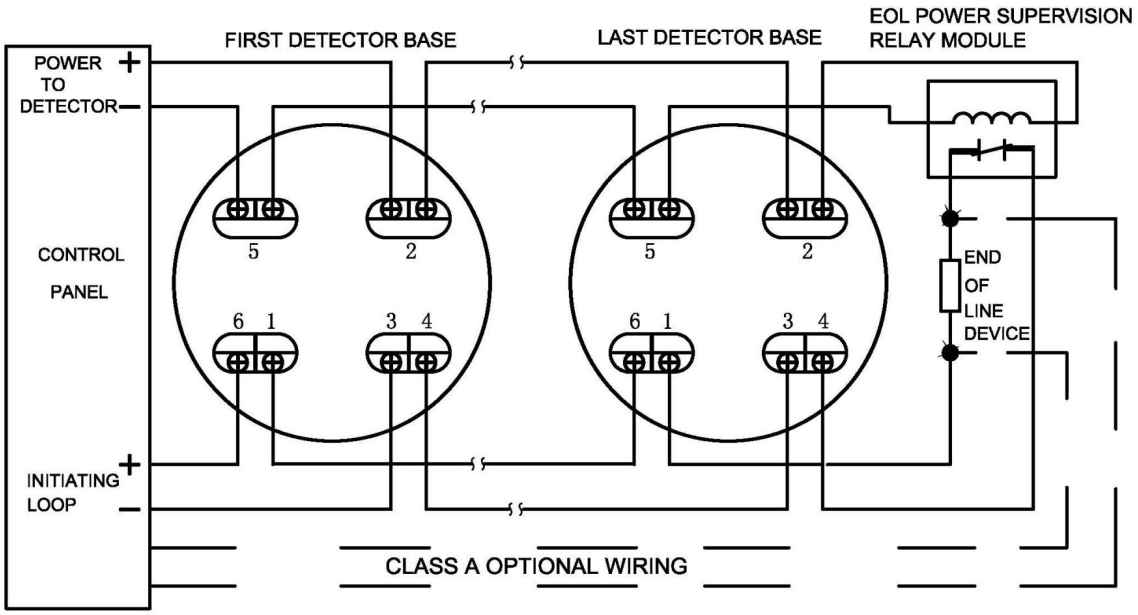


Fig. 1 - Four-wire detector bases connected to an alarm control panel

IMPORTANT: Do not bridge terminals 2 and 5 to provide power supervision. A temporary continuity-test jumper must be removed before the detector head is installed.

Mounting the base and detector head

- Position wiring neatly against the terminals and keep it clear of the detector-head connectors.
- Secure the base to a compatible electrical junction box or approved mounting surface.
- Align the detector head with the base and turn clockwise until locked. Install the head only after the area is clean.

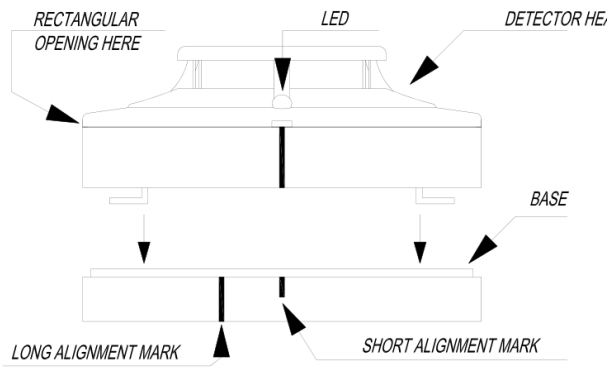


Fig. 2 - Attaching head to base

02 / CONFIGURATION

Relay & functional test

Selecting the alarm relay (NO / NC)

- Factory relay condition is normally open (NO).
- Insert a screwdriver into the rectangular opening between the cover and base; carefully remove the front cover.
- Locate the jumper beside the relay on the PCB (Fig. 3). Move the jumper to the NC position if normally closed operation is required.
- Refit the front cover before restoring power.

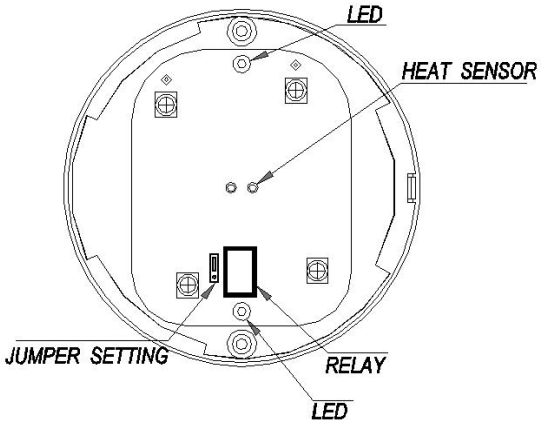


Fig. 3 - Jumper and relay position

Relay contact rating: 1 A at 30 V DC; 0.5 A at 125 V AC.

Functional test

- Isolate alarm actions: temporarily disable any release, extinguishing or other automatic functions that must not operate during the test.
- Power up: after approximately 30 seconds, verify that the red LED flashes once every 1-3 seconds. If it does not, inspect the wiring and detector.
- Apply heat: supply stable warm air at 56-80°C from several inches away, directed toward the thermistor guard.
- Verify alarm: the detector should alarm within 30 seconds. Remove the heat source immediately, check that the red LED is illuminated and reset the detector from the control panel.
- Restore operation: if the detector does not alarm within 30 seconds, have it serviced. Restore disabled alarm outputs, verify normal operation and notify responsible personnel.

TEST SAFETY: Use controlled warm airflow; avoid direct flame, excessive heat and contamination. Testing must be performed by qualified personnel. Never leave alarm or extinguishing functions disconnected after testing.

03 / REFERENCE

Technical data & safety

Four-wire configuration - verify installed 12 V or 24 V variant before connection

Detector type	Conventional heat detector, four-wire
Operating voltage	12 V DC variant / 24 V DC variant
Standby current	40 µA maximum
Alarm current	33 mA at 12 V / 46 mA at 24 V
Surge current	100 µA maximum
Temperature threshold	57°C (135°F)
Alarm LED interval	1-3 seconds in normal monitoring
Permissible current	80 mA maximum
Relay contact	Form A, normally open; jumper-selectable NC
Relay contact rating	1 A / 30 V DC; 0.5 A / 125 V AC
Mounting	Ceiling or wall as permitted by applicable rules

Current values differ between 12 V and 24 V hardware variants; verify the product label.

Inspection and maintenance

- Inspect and functionally test the detector according to the alarm-system maintenance plan and applicable fire-safety regulations.
- Do not dismantle the factory-sealed sensing head. Replacement after 10 years of service is recommended.
- Heat detectors respond to heat, not to smoke, gas, flames or combustion particles. They do not provide protection in all fire scenarios.

INSTALLATION NOTE: Only use approved compatible control equipment and supervise the detector power supply as required. Confirm the specific device rating and certification against its product label and market documentation before commissioning.