



January 19, 1995

DN-4760 • I-306

5451 Thermal Detector 135° Fixed-Temperature and Rate-of-Rise

Section: Conventional Initiating Devices

GENERAL

The System Sensor 5451 plug-in rate-of-rise with fixed heat detector contains a unique dual thermistor sensing circuit to provide both maximum performance and solid state reliability. Additional features include a recess mounting option, various mounting bases, and a full line of accessories.

The 5451 thermal detector is specifically designed to meet the stringent performance requirements of industrial and commercial fire detection/alarm systems. The design of these detectors emphasizes ease of installation and field maintenance.

FEATURES

- Dual solid-state thermistor sensors.
- Fixed heat with rate-of-rise response (57.2°C/135°F alarm point).
- Rate-of-rise feature activates when the ambient temperature increases at a rate greater than 15°F (9.4°C) per minute.
- Exceptional stability and reliability.
- Thermistor technology.
- Restorable.
- Two visible LEDs "blink" in standby and latch on in alarm.
- Sealed against back pressure.
- Three year warranty.
- Built-in test switch.
- Low standby current.
- Built-in tamper-resistant feature.
- Designed for electrical box mounting.
- 360° field viewing angle of the visual alarm LEDs.
- Easy plug-in of the head to base.
- SEMS screws for easy wiring.
- Optional recess mounting kit (flangeless bases only).
- UL listed for 50 ft. spacing.

APPLICATIONS

The 5451 135° Fixed Temperature and Rate-of-Rise Thermal Detector is ideal for areas in which a smoke detector is not practical. Independent studies show that heat detectors should be used when property protection alone is involved.

SPECIFICATIONS

Operating voltage: mounting base dependent (see chart on page 2).

Weight: 0.6 lb. (277 g).

Size: 2" (52 mm) high, 4" (102 mm) diameter; 6.2" (158 mm) diameter with flanged bases.



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California
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Construction: flame-retardant white plastic.

Temperature: 32°F to 100°F (0°C to 37.8°C).

Humidity range: 10% to 93% RH non-condensing.

Agency listings: UL (listed for 50 ft. spacing).

ELECTRICAL RATINGS

Voltage range: 15 to 35 VDC.

Ripple voltage: 4 Vpp.

Maximum standby current: 100µA.

Input capacitance: 0.02µF.

Reset voltage: 2.50 V.

Reset time: 0.03 to 0.30 seconds.

Power-up time: 1 second maximum.

ORDERING INFORMATION

5451 Fixed heat detector with rate-of-rise. Alarm point at 57°C (135°F). Must be mounted to one of the 400 Series bases listed on page 2 (order separately).

RA400Z Remote annunciator for 2- or 4-wire systems, 3 – 32 V. Use with any 400 Series plug-in detector. Fits standard U.S. single-gang electrical box.

RMK400 Recessed mounting kit. Use with any 400 Series plug-in detector. Recesses detector by 0.8".

This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information, contact NOTIFIER. Phone: (203) 484-7161 FAX: (203) 484-7118



NOTIFIER

12 Clintonville Road, Northford, Connecticut 06472

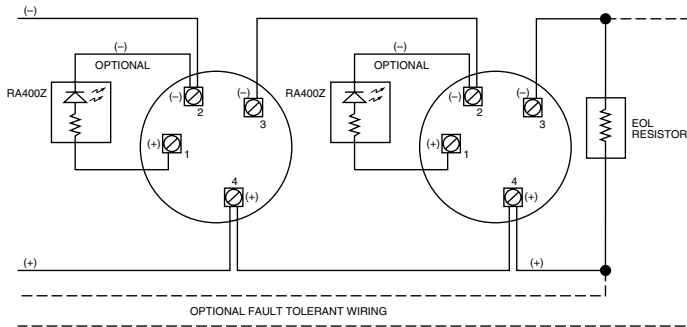
ISO 9001
CERTIFIED
ENGINEERING & MANUFACTURING

MOUNTING BASE SELECTION GUIDE

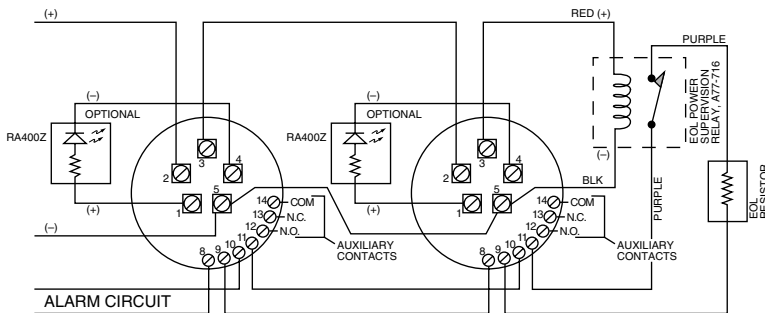
Base Model Number	Loop Type	Current Limit Resistor	Alarm Contact Type	Nominal Voltage	Current Draw on Alarm (mA)
B401B	2-wire	No	—	24 VDC‡	10–100**
B402B	4-wire	Yes	Form A&C	24 VDC	14–39
B404B	4-wire	Yes	Form A&C + A Supv.	120 VAC	75 mA AC max.
B406B	2-wire	No	Form C	24 VDC	12–100**
B401†	2-wire	No	—	24 VDC	10–100**

Must be limited by control panel. †Flangeless base. ‡Although B401B and B401 bases are capable of 12/24VDC operation, they cannot be used with the 5451 in 12V applications. **Relay Contact Ratings: Resistive or Inductive (60% power factor) load. **Form A:** 2.0 A @ 30 VAC/DC. **Form C:** 0.6 A @ 110 VDC; 2.0 A @ 30 VDC. 1.0 A @ 125 VAC; 2.0 A @ 30 VAC.

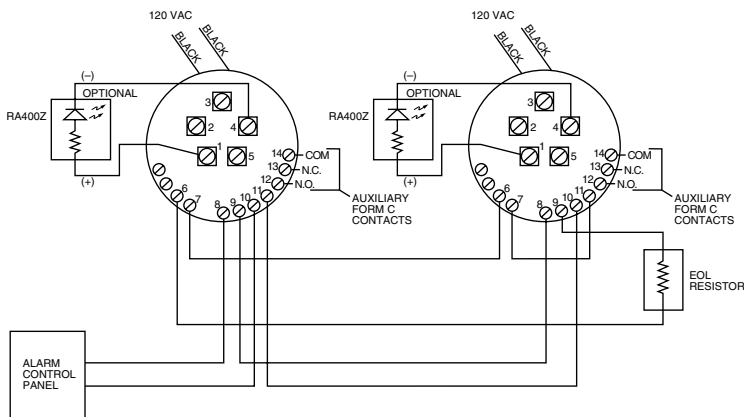
WIRING DIAGRAMS



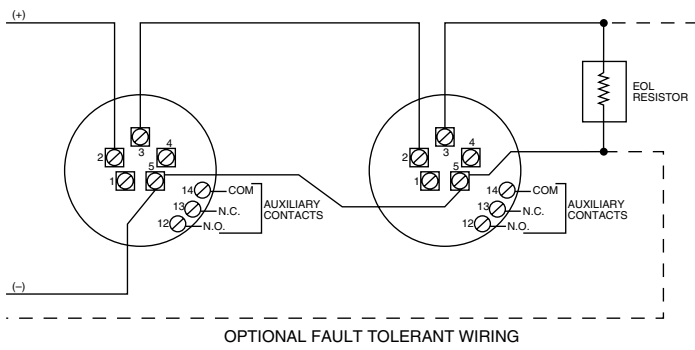
◀ For B401B



◀ For B402B



◀ For B404B



◀ For B406B