4451HT
Plug-in 190°F Thermal Detector

SYSTEM SENSOR®

Model

4451HT
4451HTA

Product Overview

190°F (88°C) fixed temperature response

Sealed against back pressure

Low standby current

Built-in tamper-resistant feature

Flame retardant Noryl plastic

360° field viewing angle of the visual alarm LEDs

Easy plug-in of the head to base

SEMS screws for easy wiring

UL listed for 50 ft. spacing

3-year warranty

The 4451HT fixed intermediate temperature thermal detector is designed to meet the stringent performance requirements of industrial and municipal fire detection/alarm systems.

The 4451HT thermal detector contains a unique dual thermistor sensing circuit to provide both maximum performance and solid state reliability. An RA400Z remote LED annunciator is available as an optional accessory.

S2101 7270-1209:105 3011446 326-94-E

Specifications

Operating Voltage
Mounting base dependent
(see chart below)

Standby Current
100 microamps

Weight
5 ounces (150 g)

Dimensions
Diameter: 4.1 inches (104 mm)
Height: 2.1 inches (53 mm)

Construction
Flame retardant noryl plastic

Operating Temperature
32° to 150°F (0° to 66°C)

Humidity Range
10% to 93% RH noncondensing

Alarm Point
190°F (88° C)

Wiring
12 to 18 gauge, twisted pair recommended

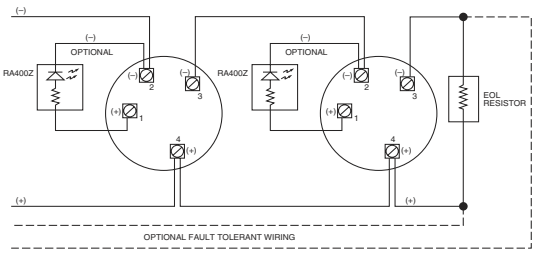
Smoke Detector Spacing
For detectors on smooth ceilings (as defined in NFPA 72), spacing of 50 feet (2500 sq. ft.) may be used. Other spacing may be used depending on ceiling height, high air movements, and other conditions or response requirements.

Mounting Base Selection Guide

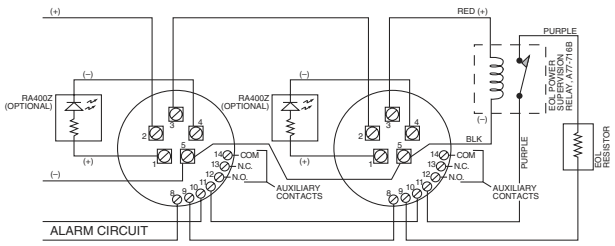
Base Model No.	Loop Type	Current Limit Resistor	Alarm Contact Type	Nominal Voltage	Current Draw on Alarm (mA)
B401B	2-wire*	No	—	24 VDC‡	10–100**
B401BR	2-wire*	Yes	—	24 VDC‡	22–62
B402B	4-wire	Yes	Form A & C	24 VDC	14–39
B404B	4-wire	Yes	Form A & C – Supy.	120 VAC	75 mA AC Max.
B406B	2-wire*	No	Form C	24 VDC	12–100**
B401†	2-wire*	No	—	24 VDC‡	10–100**
B401R†	2-wire*	Yes	—	24 VDC‡	18–62

*Functionality contingent on panel compatibility. **Must be limited by control panel. †Flangeless base
‡Although B401B and B401 bases are capable of 12/24 VDC operation, they cannot be used with the 4451HT in 12V applications.
Relay Contact Ratings: Resistive or Inductive (60% power factor) load.
Form A: 2.0A at 30VAC/DC
Form C: 0.6A at 110VDC, 2.0A at 30VDC
1.0A at 125VAC, 2.0A at 30VAC

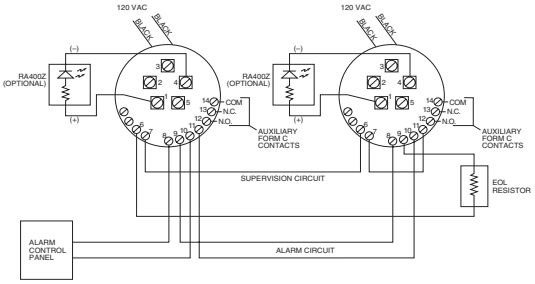
Wiring Guide



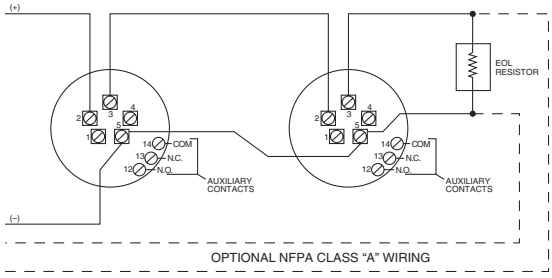
B401B Wiring Diagram



B402B Wiring Diagram



B404B Wiring Diagram



B406B Wiring Diagram

Ordering Information

Part No.	Description
4451HT	Fixed temperature thermal detector with alarm point at 190°F (88°C). Must be mounted to one of the B40X Series bases listed above (order separately).
4451HTA	Same as above, Canadian model
RA400Z	Remote Annunciator for 2- or 4-wire systems, 3–32V. Use with most 400 Series plug-in detector bases. Fits standard U.S. single gang electrical box.
SMK400	Surface Mounting Kit. Provides for entry of surface wiring conduit. Use with B401 or B401R mounting bases only.

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