



August 3, 1998

100 Series™

F-495

**Low-Profile Direct-Wire
Conventional Smoke Detectors**

Section: Conventional Initiating Devices

GENERAL

System Sensor 100 Series low-profile detectors use state-of-the-art sensing chambers to meet all applicable UL performance criteria. The backs of the smoke detectors are sealed against back pressure, air flow, and dirt. A fine mesh screen also protects the chamber against the entry of insects. These detectors are intended for open area protection and for use with UL-listed control panels.

Photoelectric/Thermal — The unique design of the optical sensing chamber in 100 Series photoelectric smoke detectors can sense smoke particles from a wide range of combustion sources. These detectors minimize nuisance alarms by using a custom integrated circuit for signal processing.

FEATURES

- Smart-Check™ self-diagnostic maintenance feature to satisfy NFPA 72 sensitivity testing requirements.
- Larger plug-in terminal block with captured SEMS screws decreases wiring and installation time.
- Removable insect screen protects sensor from insects and airborne dust.
- Includes auxiliary Form-C relay ("R" suffix).
- Built-in test switch.
- Visual alarm, power, and maintenance indicator.
- Refined insect screen for a tight seal; simplified, removable for cleaning.
- Thermal models available.
- Ceiling white color.
- 12/24 VDC operation.
- Built-in sounder and temporal tone.
- Three-year warranty.

System Sensor 100 Series low-profile, direct-wire detectors pack superb performance and reliability into a small package. Their sleek, 1.7" (43 mm) profile is the lowest in the industry, and the advanced circuitry provides superior false-alarm immunity, while reducing maintenance.

Other key features include:

- Low current draw.
- Stable performance in high air velocities.
- Built-in tamper-resistant base design.



California
State Fire
Marshal
7272-1209:159
(2100D, 2100TD)

2212/24T

100 Series
with Sounder

SPECIFICATIONS

- **Operating voltage:** 12 or 24 VDC (nominal).
- **Contact rating:** 1 Form-C, 1.0 A @ 30 VDC.
- **Standby current:** 50 µA maximum average.
- **Alarm current:** **2-wire models:** 100 mA maximum limited by panel. **4-wire models:** 12 VDC = 35 mA maximum; 24 VDC = 45 mA maximum (**2112/24AITR:** 60 mA maximum and 70 mA maximum respectively).
- **Temperature range:** 32°F to 120°F (0°C to 50°C). **For 2100TD, 2112/24TR models:** 32°F to 100°F (0°C to 39°C).
- **Dimensions:** 5.5" (140 mm) diameter. Height 1.7" (43 mm) including adapter bracket.
- **Shipping weight (approximate):** 5.3 oz. (150 g).
- **Humidity range:** 10% - 93% RH, noncondensing.
- **Smoke detector spacing:** On smooth ceilings (as defined in NFPA 72), spacing of 30 feet (900 sq.ft.) may be used as a guideline. Other spacing may be used depending on ceiling height, high air movements, and other conditions or response requirements. Refer to NFPA 72 and local authority having jurisdiction.
- **Air velocity:** 0 to 3,000 ft./min. (914.4 m/min.) maximum.

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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 **Fire-Lite Alarms**, One Fire-Lite Place, Northford, Connecticut 06472. Phone: (800) 627-3473, Toll Free FAX: (877) 699-4105, FAX Back:(888) 388-3299
WEB: www.firelite.com

ISO 9001
CERTIFIED
ENGINEERING & MANUFACTURING

PRODUCT LINE INFORMATION

2100D – Low-profile photoelectric smoke detector, two-wire, 12/24 VDC.

2100TD – Low-profile photoelectric with 135°F (57°C) thermal, two-wire, 12/24 VDC.

2100TR – Low-profile photoelectric with 135°F (57°C) thermal, two-wire, 12/24 VDC, auxiliary Form-C relay.

2100AT – Low-profile photoelectric with sounder and 135°F (57°C) thermal, two-wire, 12/24 VDC.

2112/24R – Low-profile photoelectric smoke detector, four-wire, 12/24 VDC, auxiliary Form-C relay.

2112/24TR – Low-profile photoelectric with 135°F (57°C) thermal, four-wire, 12/24 VDC, auxiliary Form-C relay.

2112/24ATR – Low-profile photoelectric with sounder and 135°F (57°C) thermal, four-wire, 12/24 VDC, auxiliary Form-C relay.

2112/24AITR – Low-profile photoelectric with sounder and isolated 135°F (57°C) thermal, four-wire, 12/24 VDC, auxiliary Form-C relay.

A77-716B – EOL power supervision relay module for 12/24 VDC smoke detectors.

MOD400R – Sensitivity test tool for 100 Series smoke detectors.

RR1 – Polarity-reversal relay module for 2-wire or 4-wire sounder models, activated by panel alarm output.

RA400Z – Remote annunciator, 7 mA, 3.1 - 32 VDC.

WIRING DIAGRAMS

(TOP TO BOTTOM)

Figure 1:
2100D, 2100TD.

Figure 2:
2112/24R, 2112/24TR.

Figure 3: 2112/24ATR, 2112/24AITR.

