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NP-100(A) and NP-100T(A) Addressable Photoelectric Detectors

Section: Addressable

GENERAL

The **NP-100(A)** and **NP-100T(A)** addressable, low-profile plug-in photoelectric detectors use a state-of-the-art photoelectric sensing chamber with communications to provide open area protection and are used exclusively with NOTIFIER's **FireWarden-100** Addressable Fire Alarm Control Panel (FACP). The NP-100T(A) adds thermal sensors that will alarm at a fixed temperature of 135°F (57°C). Since these detectors are addressable, they will help emergency personnel quickly locate a fire during its early stages, potentially saving precious rescue time while also reducing property damage. Two LEDs on each sensor light to provide a local, visible sensor indication. Remote LED annunciator capability is available as an optional accessory (P/N **RA400Z**).

FEATURES

SLC loop:

- Two-wire loop connection.
- Unit uses base for wiring.

Addressing:

- Addressable by device.
- Direct Decade 01 – 99 (FireWarden-100) entry of address.

Architecture:

- Unique single-source, dual-chamber design to respond quickly and dependably to a broad range of fires.
- Sleek, low-profile design.
- Integral communications and built-in type identification.
- Built-in tamper-resistant feature.
- Removable cover and insect-resistant screen for simple field cleaning.

Operation:

- Withstands air velocities up to 4,000 feet-per-minute (20 m/sec.) without triggering a false alarm.
- Factory preset at 1.5% nominal sensitivity for panel alarm threshold level.
- Visible LED "blinks" when the unit is addressed (communicating with the fire panel) and latches on in alarm.

Mechanicals:

- Sealed against back pressure.
- Direct surface mounting or electrical box mounting.
- Mounts to: single-gang box, 3.5" (8.89 cm) or 4.0" (10.16 cm) octagonal box, or 4.0" (10.16 cm) square electrical box (using a plaster ring — included).

Other system features:

- Fully coated circuit boards and superior RF/transient protection.
- 94-V0 plastic flammability rating.
- Low standby current.

Options:

- Remote LED output connection (P/N RA400Z).



MARYLAND
State Fire Marshal
Permit # 2173

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**NP-100(A)
with
B710LP base**

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**NP-100T(A) with
B710LP base**

SPECIFICATIONS

Voltage range: 15 – 32 VDC (peak).

Standby current: 300 µA @ 24 VDC.

LED current: 6.5 mA @ 24 VDC (latched "ON").

Air velocity: 4,000 ft./min. (20 m/sec.) maximum.

Diameter: 6.1" (15.5 cm) installed in B710LP base.

Height: 2.1" (5.33 cm) installed in B710LP base.

Weight: 3.6 oz. (102 g).

Operating temperature range: for **NP-100(A)**: 0°C to 49°C (32°F to 120°F); for **NP-100T(A)**: 0°C to 38°C (32°F to 100°F).

Temperature: 0°C – 49°C (32°F – 120°F).

Relative humidity: 10% – 93%, non-condensing.

NOTIFIER® is a Honeywell company.

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



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ISO 9001
CERTIFIED
ENGINEERING & MANUFACTURING
QUALITY SYSTEMS

APPLICATIONS

Use photoelectric detectors in life-safety applications to provide a broad range of fire-sensing capability, especially where smoldering fires are anticipated. Ionization detectors are often better than photoelectric detectors at sensing fast, flaming fires.

CONSTRUCTION

These detectors are constructed of off-white LEXAN®. NP-100(T/A) plug-in, low-profile smoke detectors are designed to commercial standards and offer an attractive appearance.

LEXAN® is a registered trademark of GE Plastics, a subsidiary of General Electric Company.

INSTALLATION

NP-100(T/A) plug-in detectors use a detachable mounting base to simplify installation, service and maintenance. Mount base on box which is at least 1.5 inches (3.81 cm) deep. Suitable boxes include:

- 4.0" (10.16 cm) square box with plaster ring.
- 4.0" (10.16 cm) octagonal box.
- 3.5" (8.89 cm) octagonal box.
- Single-gang box.

NOTE: Because of the inherent supervision provided by the SLC loop, **end-of-line resistors** are not required. Wiring "T-taps" or branches are permitted for Style 4 (Class B) wiring.

OPERATION

Each NP-100(T/A) uses one of 99 possible addresses on the FireWarden-100 Signaling Line Circuit (SLC). It responds to regular polls from the system and reports its type and status.

The NP-100(T/A) addressable photoelectric sensor's unique unipolar chamber responds quickly and uniformly to a broad range of smoke conditions and can withstand wind gusts up to 4,000 feet-per-minute (20 m/sec.) without sending an alarm level signal. Because of its unipolar chamber, the NP-100(T/A) is approximately two times more responsive than most photoelectric sensors. This makes it a more stable detector.

DETECTOR SENSITIVITY TEST

Each detector can have its sensitivity tested (required per NFPA 72, Chapter 7 on *Inspection, Testing and Maintenance*) when installed/connected to a FireWarden-100 addressable fire alarm control panel. The results of the sensitivity test can be printed off the FireWarden-100 for record keeping.

PRODUCT LINE INFORMATION

NOTE: "A" suffix indicates ULC-Listed model.

- NP-100** Addressable photoelectric detector (B710LP base sold separately).
- NP-100A** Same as NP-100 with ULC Listing (B710LPA base sold separately).
- NP-100T** Same as NP-100 but with **thermal** element (B710LP base sold separately).
- NP-100TA** Same as NP-100T with ULC Listing (B710LPA base sold separately).
- RA400Z(A)** Remote LED. Mounts to a single-gang box.
- B710LP(A)** Plug-in detector base (sold separately). **Dimensions:** 6.1" (15.5 cm). **Mounting:** 4.0" (10.16 cm) square box with or without plastic ring, 4.0" (10.16 cm) octagonal box, 3.5" (8.89 cm) octagonal box, or single-gang box. All mounting boxes have a minimum depth of 1.5" (3.81 cm).
- B224RB(A)** Plug-in System Sensor **relay** detector base. **Diameter:** 6.2" (15.75 cm). **Mounting:** 4.0" (10.16 cm) square box with or without plastic ring, 4.0" (10.16 cm) octagonal box, or 3.5" (8.89 cm) octagonal box. All mounting boxes have a minimum depth of 1.5" (3.81 cm).
- B501BH(A)** Plug-in System Sensor **sounder** detector base. **Diameter:** 6.0" (15.24 cm). **Mounting:** 4.0" (10.16 cm) square box with or without plastic ring. Mounting box has a minimum depth of 1.5" (3.81 cm).