

# NI-100(A)

## Intelligent Addressable Ionization Detector for FireWarden Systems



Addressable

### General

The NI-100(A) addressable, low-profile, plug-in ionization detector uses a state-of-the-art ionization sensing chamber to provide open-area protection and is used exclusively with NOTIFIER's FireWarden Series addressable Fire Alarm Control Panels (FACPs). The ionization detector is used to sense products-of-combustion and report the measured level of such products to the fire alarm control panel. Since this detector is addressable, it 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, PN RA100Z(A).

### Features

#### SLC loop

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

#### Addressing

- Addressable by device.
- Rotary, decimal addressing: 01 – 99 with FireWarden-100-2, 01 – 50 with FireWarden-50.

#### 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 1,200 feet-per-minute (6.1 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.
- Base 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).

#### APPLICATIONS

Use ionization detectors in life-safety applications to provide a broad range of fire-sensing capability, especially fast, flaming fires. Where smoldering fires are anticipated, a photoelectric sensor may provide faster response.

#### CONSTRUCTION

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



NI-100(A) in B210LP(A) Base

B210-1951.jpg

### Installation

NI-100(A) plug-in detectors use a detachable mounting base to simplify installation, service and maintenance.

Mount base (all base types) on an electrical backbox which is at least 1.5" (3.81 cm) deep. For a chart of compatible junction boxes, see DN-60054.

**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 NI-100(A) uses one of 99 possible addresses on the FireWarden-100-2 or one of 50 possible addresses on the FireWarden-50 Series Signaling Line Circuit (SLC). It responds to regular polls from the system and reports its type and status.

The NI-100(A) addressable ionization sensor's unique unipolar chamber responds quickly and uniformly to a broad range of smoke conditions and can withstand wind gusts up to 1,200 feet-per-minute (6.01 m/sec.) without sending an alarm level signal. Because of its unipolar chamber, the NI-100(A) is approximately two times more responsive than most ionization sensors. This makes it a more stable detector.

### Specifications

**Voltage range:** 15 – 32 VDC (peak).

**Standby current:** 300  $\mu$ A @ 24 VDC.

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

**Air velocity:** 1,200 ft./min. (6.1 m/sec.) maximum.

**Size:** 2.0" (51 mm) high; base determines diameter.

- B210LP(A): 6.1" (15.5 cm) diameter.
- B501(A): 4.1" (10.4 cm) diameter.
- B200SR(A): 6.875" (17.46 cm) diameter.
- B224RB(A): 6.2" (15.748 cm) diameter.

**Weight:** 3.6 oz. (102 g).

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

**Relative humidity:** 10% – 93%, noncondensing.

## Listings and Approvals

Listings and approvals below apply to the NI-100(A) detector. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL Listed:** S1115.
- **ULC Listed:** S1115.
- **CSFM:** 7271-0028:0233.
- **MEA:** 319-02-E Vol. II.
- **Maryland State Fire Marshal:** permit 2173.
- **FM approved.**

## Product Line Information

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

**NI-100:** Addressable ionization detector; B210LP base included.

**NI-100A:** Same as above with ULC Listing; B210LPA base included.

### INTELLIGENT BASES

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

**NOTE:** For details about intelligent bases and their mounting, see DN-60054.

**B210LP(A):** Plug-in detector base (included); standard U.S. flanged low-profile mounting base.

**B210LPBP:** Bulk pack of B210LP; package contains 10.

**B501(A):** Standard European flangeless mounting base.

**B501BP:** Bulk pack of B501; package contains 10.

**B200SR(A):** Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Replaces B501BH series bases in retrofit applications.

**B224RB(A):** Plug-in System Sensor **relay** base. Screw terminals: up to 14 AWG (2.0 mm<sup>2</sup>). Relay type: Form-C. Rating: 2.0 A @ 30 VDC resistive; 0.3 A @ 110 VDC inductive; 1.0 A @ 30 VDC inductive.

**B224BI(A):** Plug-in System Sensor **isolator** detector base. Maximum 25 devices between isolator bases (see DN-6994).

### ACCESSORIES

**F110:** Retrofit flange to convert B210LP(A) to match the B710LP(A) profile, or to convert older high-profile bases to low-profile.

**F110BP:** Bulk pack of F110; package contains 15.

**F210:** Replacement flange for B210LP(A) base.

**RA100Z(A):** Remote LED annunciator. 3 – 32 VDC. Mounts to a U.S. single-gang electrical box. For use with B501(A) and B210LP(A) bases only.

**SMB600:** Surface mounting kit

**M02-04-00:** Test magnet.

**M02-09-00:** Test magnet with telescoping handle.

**XR2B:** Detector removal tool. Allows installation and/or removal of detector heads from bases in high ceiling applications.

**XP-4:** Extension pole for XR2B. Comes in three 5-foot (1.524 m) sections.

**T55-127-010:** Detector removal tool without pole.

**BCK-200B:** Black detector covers; box of 10.

**WCK-200B:** White detector covers; box of 10.



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.  
[www.notifier.com](http://www.notifier.com)