

FSI-851 Series

Intelligent Plug-In Ionization Smoke Detector with FlashScan®



Intelligent/Addressable Devices

General

FSI-851 Series intelligent plug-in ion detectors with integral communication has features that surpass conventional detectors. Detector sensitivity can be programmed in the control panel software. Sensitivity is continuously monitored and reported to the panel. Point ID capability allows each detector's address to be set with decade address switches, providing exact detector locations for selective maintenance when chamber contamination reaches an unacceptable level.

The FSI-851 Series ionization detector incorporates a unique single-source, dual-chamber design to respond quickly and dependably to a broad range of fires. FSI-851 Series detectors are compatible with ONYX series and CLIP series intelligent Fire Alarm Control Panels (FACPs).

FlashScan® (U.S. Patent 5,539,389) is a communication protocol developed by NOTIFIER that greatly improves the speed of communication between analog intelligent devices and certain NOTIFIER systems. Intelligent devices communicate in a grouped fashion. If one of the devices within the group has new information, the panel's CPU stops the group poll and concentrates on single points. The net effect is response speed greater than five times that of other protocols.

Features

- Sleek, low-profile design.
- Addressable-analog communication.
- Stable communication technique with noise immunity.
- Low standby current.
- Two-wire SLC connection.
- Compatible with FlashScan® and CLIP systems
- Direct-dial entry of address 01– 159 for FlashScan loops, 01 – 99 for CLIP mode loops
- Optional remote, single-gang LED accessory (RA400Z).
- Dual LED design provides 360° viewing angle.
- Visible bicolor LEDs blink green every time the detector is addressed, and illuminate steady red on alarm.
- Remote test feature from the panel.
- Walk test with address display (an address of 121 will blink the detector LED: 12-(pause)-1) (FlashScan® systems only).
- Built-in functional test switch activated by external magnet.
- Built-in tamper-resistant feature.
- Sealed against back pressure.
- Constructed of off-white Bayblend®, designed to commercial standards, and offers an attractive appearance.
- 94-5V plastic flammability rating.
- SEMS screws for wiring of the separate base.
- Optional relay, isolator, or sounder bases.
- Listed to UL 268.

Specifications

Size: 2.0" (51 mm) high x 4.1" (10.4 cm) diameter installed in B501 base, 6.1" (15.5 cm) diameter installed in B710LP base.

Shipping Weight: 5.4 oz. (153 g).

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



FSI-851 Series
with B710LP base

UL/ULC-Listed Velocity Range: ION: 0 – 1200 ft./min. (365.76 m/min.).

Relative Humidity: 10% – 93% noncondensing.

ELECTRICAL SPECIFICATIONS

Voltage Range: 15 - 32 volts DC peak.

Standby Current (max. avg.): 300 μ A

LED Current (max.): 6.5 mA @ 24 VDC ("ON").

Installation

FSI-851 Series plug-in detectors use a separate base to simplify installation, service, and maintenance. A special tool allows maintenance personnel to plug in and remove detectors without using a ladder.

Mount base on an electrical backbox which is at least 1.5" (3.81 cm) deep. Suitable mounting base boxes include:

- 4.0" (10.16 cm) square box.
- 3.5" (8.89 cm) or 4.0" (10.16 cm) octagonal box.
- Single-gang box (except relay or isolator base).
- With B501BH-2 or B501BHT-2 base, use a 4.0" (10.16 cm) square box.
- With B224RB or B224BI base, use a 3.5" (8.89 cm) octagonal box, or a 4.0" (10.16 cm) octagonal or square box.

NOTES: 1) 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. 2) When using relay or sounder bases, consult install sheet DN-2243 (ISO-X) for device limitations between isolator modules and isolator bases

Agency Listings and Approvals

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications 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:** CS308 (FSI-851A)
- **CSFM:** 7271-0028:201

- **MEA:** 321-02-E
- **Maryland State Fire Marshal:** Permit #2140
- **BSMI:** CI313066760014
- **Lloyd's Register:** 03/60011
- **U.S. Coast Guard:** 161.002/23/3 (AFP-200); 161.002/27/3 (AFP1010/AM2020); 161.002/42/1 (NFS-640)
- **FM Approved**

Product Line Information

NOTE: "A" suffix indicates ULC Listed model.

FSI-851: Low-profile intelligent ionization sensor. Must be mounted to one of the bases listed below.

FSI-851A: Same as above but with ULC Listing.

INTELLIGENT BASES

B501: Flangeless mounting base.

B501A: Flangeless mounting base, ULC Listed.

B501BP: Flangeless mounting base, ULC Listed.

B710LP: Flanged mounting base.

B710LPA: Flanged mounting base, ULC Listed.

B710LPBP: Flanged mounting base.

B501BH-2: Plug-in System Sensor standard **sounder** detector base, steady tone. Includes **B501** base.

B501BHT-2: Plug-in System Sensor **temporal tone** sounder base.

B501BHA: Plug-in System Sensor standard **sounder** detector base, steady tone, with ULC Listing. Includes **B501** base.

B501BHTA: Plug-in System Sensor **temporal tone** sounder base, with ULC listing.

B224RB: Relay base.

B224RBA: Relay base, ULC Listed.

B224BI: Isolator base.

B224BIA: Isolator base, ULC Listed.

ACCESSORIES

F110: Retrofit replacement flange for older style base. Converts older high profile base for use with FlashScan® detectors.

RA400Z(A): Remote LED annunciator. 3 – 32 VDC. Fits U.S. single-gang electrical box. Supported by B710LP and B501(A) base bases only.

SMK400E: Surface mounting kit provides for entry of surface wiring conduit. For use with B501(A) base only.

RMK400(A): Recessed mounting kit. For use with B501(A) base only.

SMB600-C: Surface mounting kit for use with B710LP.

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

M02-04-00: Test magnet.

M02-09-00: Test magnet with telescope stick.

XR2B: Detector removal tool. Allows installation and/or removal of FlashScan® Series detector heads from base in high ceiling installations.

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

XP-4: Extension pole for XR2B. Comes in three 5-ft. sections.

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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 Notifier. Phone: (203) 484-7161, FAX: (203) 484-7118. www.notifier.com