# Self-Test Series  Self-Testing Addressable Detectors

The breakthrough NOTIFIER® Self-Test Series intelligent plug-in smoke detectors are designed for performance, ease of use and aesthetics. When used with the NOTIFIER INSPIRE™ Series N16 panel and initiated through an app, the Self-Test Series detectors automatically perform maintenance tests of smoke and heat detection without using canned smoke or heat guns. The Self-Test process meets the three core NFPA requirements for detector maintenance: functional test, smoke entry test, and ability to verify a visual inspection has taken place. It is the first detector of its type to be approved by UL. It also retains the great features of the standard 951 series including the enhanced optical sensing chamber which is engineered to sense smoke produced by a wide range of combustion sources in accordance with more stringent code standards.

For ease, its sensitivity can also be programmed in the control panel software. Sensitivity is continuously monitored and reported to the panel for selective maintenance when chamber contamination reaches an unacceptable level.

Dual electronic thermistors add 135°F (57°C) fixed temperature thermal sensing on the FSP-951T-SELFT. The FST-951-SELFT intelligent temperature sensor can be programmed as either a 135°F fixed temperature sensor, a rate of rise and 135°F fixed temperature sensor or a 190°F high temperature sensor through the Fire Alarm Control Panel (FACP).

Point ID capability allows each detector's address to be set with rotary, decimal address switches providing exact detector location. The NOTIFIER Self-Test series detectors are available for our Flash-Scan® applications.

## Features

### SELF-TEST
- Introduces small amounts of smoke and heat into the chamber to test both sensors
- Automatically tests if the photo sensor smoke entry points are blocked by the dust cover
- Verifies that the technician has completed the visual inspection through its built-in beacon and the self test app
- Tests detectors across multiple loops and panels concurrently
- Listed to UL 268 7th edition and/or UL 521

### SLC LOOP
- Two-wire SLC loop connection
- Unit uses base for wiring
- Compatible with FlashScan® protocol systems
- Stable communication technique with noise immunity

### ADDRESSING
- Addressable by device
- Rotary, decimal addressing
  (Refer to the NOTIFIER panel manuals for device capacity.)

### ARCHITECTURE
- Sleek, low-profile, stylish design
- Unique single-source design to respond quickly and dependably to a broad range of fires
- Integral communications and built-in device-type identification
- Tamper resistance option provided by bases
- Remote test feature from the panel
- Built-in functional test switch activated by external magnet
- Removable cover and insect-resistant screen for simple field cleaning

### OPERATION
- LED "blinks" when the unit is polled (communicating with the fire panel) and latches in alarm.
- LED "on" when unit is performing Self-Test
- Low standby current

### MECHANICALS
- Sealed against back pressure
- SEMS screws for wiring of the separate base
- Designed for direct-surface or electrical-box mounting
- Plugs into separate base for ease of installation and maintenance

### OPTIONS
- Optional relay, isolator, and sounder bases

## Installation

NOTIFIER Self-Test Series plug-in intelligent smoke detectors use a detachable base to simplify installation, service and maintenance. Installation instructions are shipped with each detector.

Mount detector 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 Class "B" wiring only.*
*When using relay or sounder bases, consult the ISO-X/ISO-XA manuals for device limitations between isolator modules and isolator bases.*

## Construction

These detectors are constructed of fire-resistant plastic. NOTIFIER® Self-Test Series plug-in intelligent smoke detectors are designed to commercial standards and offer an attractive appearance.

## Operation

Each NOTIFIER Self-Test Series detector uses one of the panel's addresses on the NOTIFIER Signaling Line Circuit (SLC). The detector responds to regular polls from the control panel and reports its type and the status. If it receives a test command from the panel (or a local magnet test), it stimulates its electronics and reports an alarm. It blinks its LEDs when polled and turns the LEDs on when commanded by the panel. The NOTIFIER Self-Test Series offers an industry breakthrough with its UL approved Self-Test feature as well as great fire detection performance that represent the latest in smoke detector technology.

## Product Line Information

**FSP-951-SELFT:** White, low-profile intelligent self-testing photo-electric sensor, FlashScan only

**FSP-951T-SELFT:** White, same as FSP-951 but includes a built-in 135°F (57°C) fixed-temperature thermal device, FlashScan only

**FST-951-SELFT:** White, low-profile intelligent self-testing programmable thermal sensor, FlashScan only

### *INTELLIGENT BASES*

*NOTE: For details on intelligent bases, see DN-60054.*

**B300-6:** White, 6" base, standard flanged low-profile mounting base *(CSFM: 7300-1653:0109)*

**B300-6-BP:** Bulk pack of B300-6, package contains 10

**B501-WHITE:** White, 4" standard European flangeless mounting base. UL listed *(CSFM: 7300-1653:0109)*

**B501-WHITE-BP:** Bulk pack of B501-WHITE contains 10

**B224RB-WH:** White, relay base *(CSFM: 7300-1653:0216)*

**B224BI-WH:** White, isolator detector base (CSFM: 7300-1653:0216)

**B200S-WH:** White, Intelligent addressable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone. Uses FlashScan protocol. *(CSFM: 7300-1653:0213)*

**B200S-LF-WH:** White, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/-10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. (*CSFM: 7300-1653:0238)*

### *MOUNTING KITS AND ACCESSORIES*

**TR300**: White, replacement flange for B300-6 series bases

**RA100Z:** Remote LED annunciator. 3-32 VDC. Mounts to a U.S. single-gang electrical box. For use with B501 and B300-6 series bases.

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

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

## ELECTRICAL SPECIFICATIONS

**Voltage range:** 15 - 32 volts DC peak

**Standby current (max. avg.):** 200µA @ 24 VDC (one communication every 5 seconds with LED enabled)

**Max current:** 4.5 mA @ 24 VDC ("ON")

**NOTE:** *If Self Test Smoke Detectors are installed on a SLM-318 loop card (CLP-2PCB), the maximum permissible long line resistance drops to 35 ohms; initial release of SLM-318 drops to 23 ohms (CLP-PCB).*

## PHYSICAL SPECIFICATIONS

**Sensitivity:**

- UL Applications:
  - Open Area: 2.86 - 5.0 %/FT obscuration
  - Special Application: 0.5 - 2.86 %/FT obscuration

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

  - **B300-6 series:** 6.1" (15.6 cm) diameter
  - **B501 series:** 4" (10.2 cm) diameter

*For a complete list of detector bases see DN-60054*

**Shipping weight:** 3.4 oz. (95 g)

**Operating temperature range:**

- FSP-951-SELFT: 32°F to 122°F (0°C to 50°C)
- FSP-951T-SELFT: 32°F to 115°F(0°C to 47°C)
- FST-951-SELFT:
  - Set for fixed-temperature or rate-of-rise (ROR):–4°F to 100°F (–20°C to 38°C)
  - Set for high-heat: –4°F to 150°F (–20°C to 66°C)

**UL Listed Velocity Range:** 0-4000 ft/min. (1219.2 m/min.). Velocity range with Self-Test process in operation: 0-300 ft/min (91.4 m/min).

**Relative humidity:** 10% – 93% non-condensing

**Thermal ratings:** fixed-temperature set point 135°F (57°C), rate-of-rise detection 15°F (8.3°C) per minute, high temperature heat 190°F (88°C)

**Self-Test Operation:** The Self-Test feature offers up to 150 tests before reaching an end of life.

**Mounting:** To ensure the operation of the Self-Test feature, a detector installed on the ceiling must remain in a ceiling-oriented position; those installed on the wall must remain in a wall-oriented position.

**Detector Spacing and Applications:** NOTIFIER recommends spacing detectors in compliance with NFPA 72. For specific information regarding detector spacing, placement, and special applications refer to NFPA 72. A *System Smoke Detector Application Guide*, document SPAG91, is available at **www.systemsensor.com.**

## STANDARDS

- **UL268 7th edition** (FSP-951-SELFT, FSP-951T-SELFT)
- **UL521** (FSP-951T-SELFT, FST-951-SELFT)

## Listings and Approvals

The file number(s) below reference the specific listings for the modules 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 (FSP-951-SELFT, FSP-951T-SELFT), S747 (FST-951-SELFT)
- **FM Approved**
- **CSFM:** 7270-0028:0502 (FST-951-SELFT), 7272-0028:0503 (FSP-951-SELFT, FSP-951T-SELFT)

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