NOTIFIER®

FSI-751 and FSP-751/751T
Low-Profile Intelligent Plug-in Smoke Detectors with FlashScan®
Section: Intelligent/Addressable Devices

GENERAL

The NOTIFIER **FSP-751** (photo) and **FSI-751** (ion) are analog, addressable, low-profile (height measures only 1.66"/ 42.164 mm) smoke detectors designed for the entire line of intelligent systems from NOTIFIER. The **FSP-751T** photo model includes a built-in thermal (heat) detection device. If either condition (smoke or heat) is detected, the device will alarm.

The addressability of the FSP-751 and FSI-751 enables the control panel to provide firefighters with a pinpoint description of where the fire is located. The FSP-751 and FSI-751 are also analog devices. The control panel is capable of not only knowing the detector's location but exactly how much smoke is in the chamber of the detector. The detector may be set for different sensitivity settings appropriate to the environment of its location.

Analog devices continually send obscuration values to the control panel. These values may be gathered so as to allow the control panel to determine if a detector has accumulated an excessive amount of dirt or dust. A "maintenance" required indication allows the installer to clean the smoke detector before an unwanted false alarm occurs.

The FSI-751 Intelligent Ionization Sensor incorporates a unique single-source chamber design to respond quickly and dependably to a broad range of fires.

The FSP-751 Intelligent Photoelectric Sensor's unique optical sensing chamber is designed with superior signal to noise ratio. The optical chamber is engineered to sense the presence of smoke produced by a wide range of combustion sources.

FlashScan® (patent pending) is a new communication protocol developed by NOTIFIER Engineering that greatly enhances 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 earlier designs.

FEATURES

- Sleek, low-profile design (height only 1.66"/42.164 mm).
- Common base for both photo and ion detectors.
- Addressable-analog communication.
- Stable communication technique with noise immunity.
- Low standby current.
- Rotary 01 to 159 address switches (01 to 99 on traditional systems).
- Optional remote, single-gang LED accessory (RA400Z).
- Dual LED design provides 360° viewing angle.

FlashScan® is a registered trademark of NOTIFIER.

UL LISTED
S1115

ULC
CS308

California State Fire Marshal
7272-0028:206 *(FSP-751/-751T)*
7271-0028:201 *(FSI-751)*

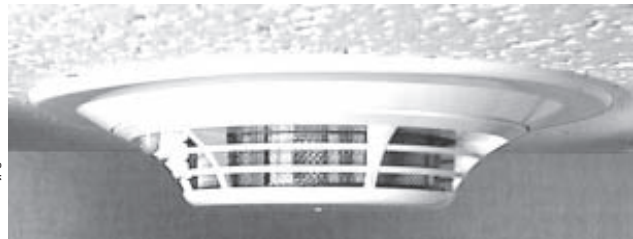**MARYLAND State Fire Marshal**
2020 *(FSI-751)*
2013 *(FSP-751/-751T)*

F M
Approved

MEA
277-99-E
(FSP-751/ -751T only)

6714pho1.jpg

FSP-751T with B710LP base

6714recs.jpg

FSP-751 with RMK400 recessed mounting kit

- Visible bicolor LEDs blink green every time the detector is addressed, and illuminate steady red on alarm.
- 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.
- Optional relay, isolator, or sounder bases.
- Listed to UL 268.

SPECIFICATIONS

Size: 1.66" (42.16 mm) high x 4.1" (104.14 mm) diameter.

Shipping weight: 3.6 oz. (104 g).

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

ISO 9001
CERTIFIED
ENGINEERING & MANUFACTURING

UL-Listed velocity range: *ION:* 0 – 500 ft./min. (152.4 m/min.). *PHOTO:* 0 – 4,000 ft./min. (1219.2 m/min.).

Relative humidity: 10% – 93% noncondensing.

ELECTRICAL SPECIFICATIONS:

Voltage range: 15 - 32 volts DC peak.

Standby current — *ION:* 200 µA @ 24 VDC (without communication); 300 µA @ 24 VDC (one communication every 5 seconds with LED enabled).

Standby current — *PHOTO:* 250 µA @ 24 VDC (without communication); 360 µA @ 24 VDC (one communication every 5 seconds with LED enabled).

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

BASES AVAILABLE:

B710LP: 6.1" (154.94 mm) diameter.

B501: 4.1" (104.14 mm) diameter.

B501BH or B501BHT: Sounder base assembly. Includes B501 base.

B224RB Relay Base: *Screw terminals:* up to 14 AWG (2.0 mm²). *Relay type:* Form-C. *Rating:* 2.0 A @ 30 VDC resistive; 0.3 A @ 110 VDC inductive; 1.0 A @ 30 VDC inductive. *Dimensions:* 6.2" (157.48 mm) x 1.2" (30.48 mm).

B524BI Isolator Base: *Dimensions:* 6.2" (157.48 mm) x 1.2" (30.48 mm). *Maximum:* 25 devices between isolator bases.

Duct applications: FSP-751 and FSP-751T are Listed for use in air ducts. See *Duct Application Guide* A05-1004 for details on pendant-mount applications. *NOTE: These products are **NOT** Listed for use inside a duct smoke detector housing.*

INSTALLATION

The FSP-751 and FSI-751 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 a box which is at least 1.5" (38.1 mm) deep. Suitable mounting base boxes include:

- 4" (101.6 mm) square box.
- 3-1/2" (88.9 mm) or 4" (101.6 mm) octagonal box.
- Single-gang box *(except relay or isolator base)*.
- *With B501BH base,* use a 4" (101.6 mm) square box.
- *With B224RB or B224BI base,* use a 3-1/2" (88.9 mm) octagonal box, or a 4" (101.6 mm) octagonal or square box.

SMOKE GUARD

Cover: 16 gauge perforated steel (3/16" [4.7625 mm] dia. perforations on 1/4" [6.35 mm] staggered centers). 51% open. SDG-773 is 3" (76.2 mm) deep by 7" (177.8 mm) wide.

Frame: 3/4" x 3/4" (19.05 x 19.05 mm) angle, 14 gauge solid steel.

All guards are supplied with the following:

1) Guards fasten to mounting frame with No. 10/24 x 3/8" (9.525 mm) long Allen-head screws *(10/24 spanner-head screws and tool option at extra cost).*

2) Standard finish: "Cool Tan" baked enamel.

PRODUCT LINE INFORMATION

FSI-751 Low-profile intelligent ***ionization*** sensor. Must be mounted to one of the bases listed below.

FSP-751 Low-profile intelligent ***photoelectronic*** sensor. Must be mounted to one of the bases listed below.

FSP-751T Same as FSP-751 but includes a built-in 135°F (57°C) fixed-temperature ***thermal*** device.

BASES:

B710LPBP Standard U.S. low-profile base, pkg. of 10.

B501BP Standard European flangeless base, pkg. of 10.

B501BH Sounder base, includes B501 base above.

B501BHT Same as B501BH, but includes temporal sounder.

B224RB Intelligent relay base.

B224BI Intelligent isolator base. Isolates SLC from loop shorts.

ACCESSORIES:

SDG-773 Smoke Detector Guard. *This guard is mechanically compatible with both FSI-751 and FSP-751 detectors. It is UL-compatibility listed with the FSP-751 (file UL S5515). It is **NOT** UL-compatibility listed with the FSI-751.*

F110 Retrofit replacement flange for BX-501 base. Converts BX-501 base for use with FlashScan® detectors.

RA400Z* Remote LED annunciator. 3 – 32 VDC. Fits U.S. single-gang electrical box.

SMK400 Surface mounting kit provides for entry of surface wiring conduit. *For use with B501 base only.*

RMK400 Recessed mounting kit. *For use with B501 base only.*
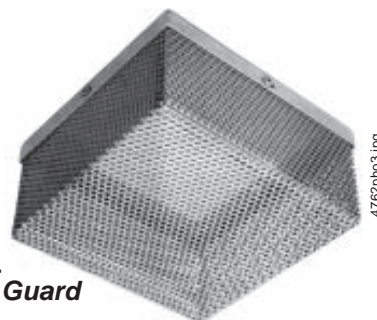
SMB600 Surface mounting kit for use with B710LP.

M02-04-01 Test magnet.

M02-09-00 Test magnet with telescope stick.

XR-2 Detector removal tool. Allows installation and/or removal of FlashScan® Series detector heads from base in high ceiling installations.
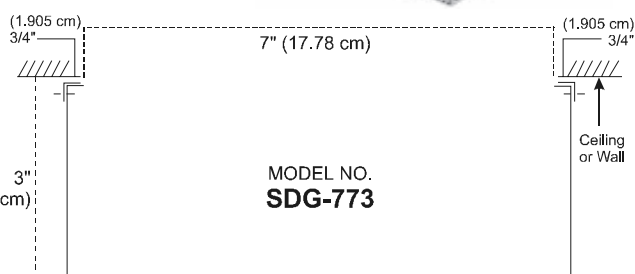
XP-4 Extension pole for XR-2. Comes in three five-foot sections.

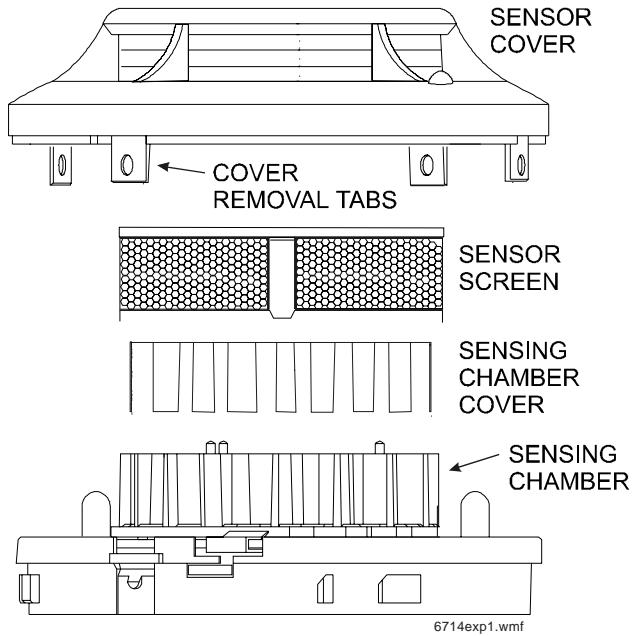**Supported by B710LP and B501 bases only.*

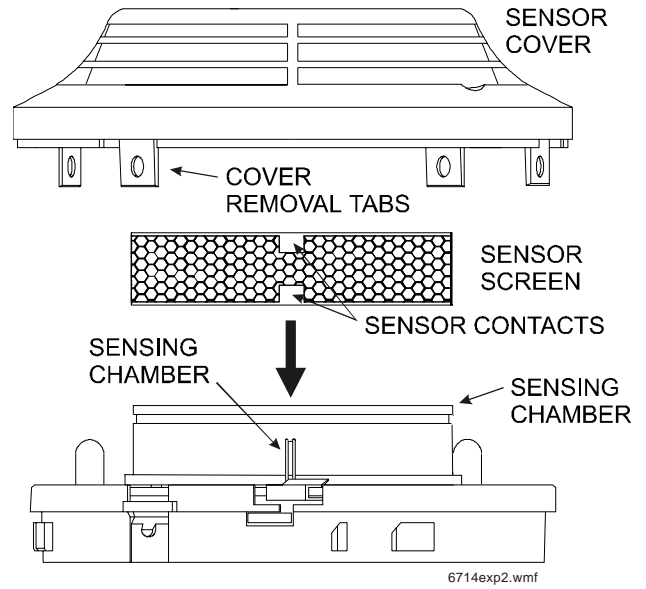***OPTIONAL***
SDG-773 Smoke Guard

4762pho3.jpg

MOUNTING DIAGRAM
SDG-773 Smoke Guard ▶

4762sdgm.wmf

(1.905 cm)
3/4"

7" (17.78 cm)

(1.905 cm)
3/4"

3"
(7.62 cm)

MODEL NO.
SDG-773

Ceiling
or Wall

DETECTORS, EXPLODED VIEW

SENSOR COVER

COVER REMOVAL TABS

SENSOR SCREEN

SENSING CHAMBER COVER

SENSING CHAMBER

6714exp1.wmf

▲ **FSP-751 and FSP-751T Photo**

SENSOR COVER

COVER REMOVAL TABS

SENSOR SCREEN

SENSOR CONTACTS

SENSING CHAMBER

SENSING CHAMBER

6714exp2.wmf

▲ **FSI-751 Ion**

TEST MAGNET POSITIONING

DO NOT PAINT

PAINTED SURFACE

TEST MAGNET

MAGNET TEST MARKER

LED STATUS INDICATORS

PAINTED SURFACE

TEST MAGNET

PAINTED SURFACE

6714mag1.wmf

▲ **FSP-751 and FSP-751T Photo**

LED 2

PAINTED SURFACE

TEST MAGNET

MAGNET TEST MARKER

LED 1

6714mag2.wmf

TEST MAGNET

PAINTED SURFACE

6714mag3.tif
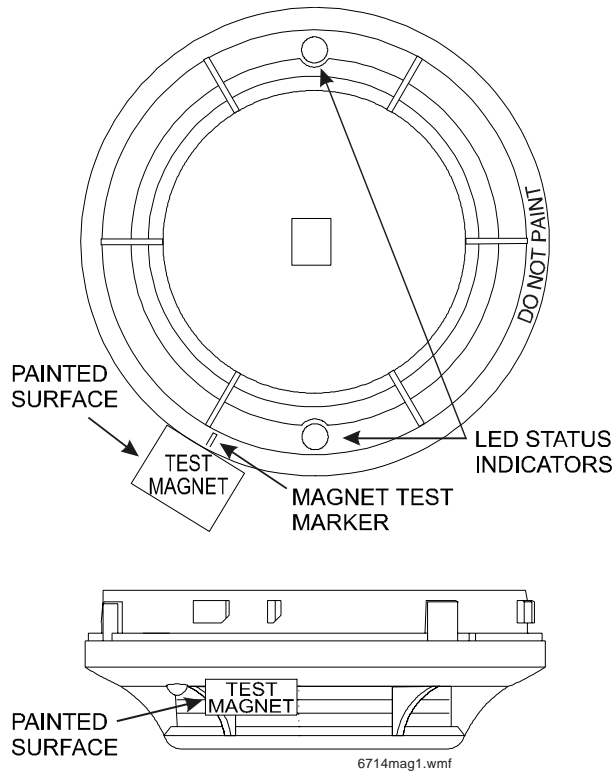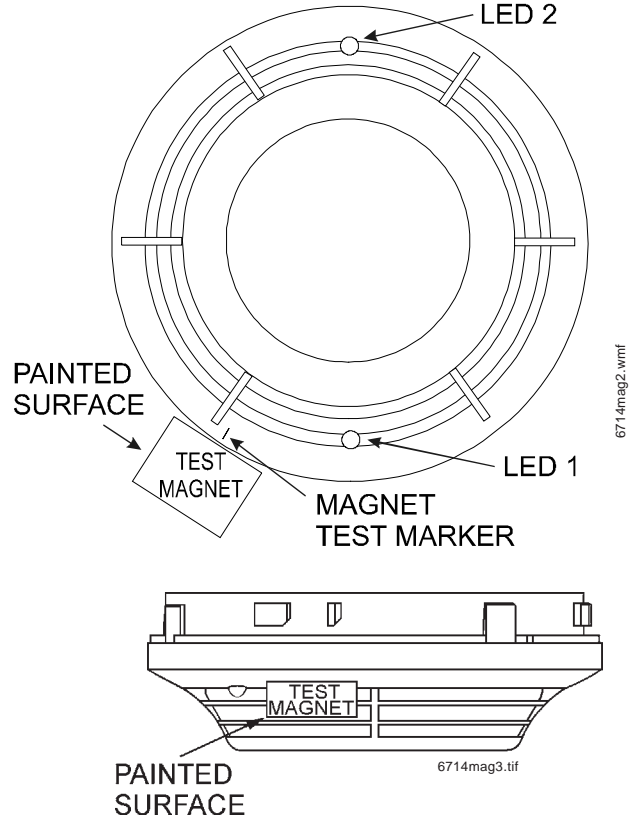
▲ **FSI-751 Ion**

WIRING DIAGRAMS

REMOTE ANNUNCIATOR
+   −

+

Listed
Compatible
CONTROL
PANEL

3 ⊠ 2   3 ⊠ 2
      1   1

−

OPTIONAL RETURN LOOP

−
+

4762wir1.tif

▲ **FSP-751 and FSP-751T Photo**

REMOTE ANNUNCIATOR
+   −

⚠ *CAUTION!* ▼

DO NOT LOOP wire under terminals 1 or 2.
Break wire run to provide supervision of connections.

+

Control
Panel

3 ⊠ 2   3 ⊠ 2   3 ⊠ 2
      1   1   1

−
−
+

STYLE 6/7 OPTIONAL WIRING

6714wir2.tif

▲ **FSI-751 Ion**