

FSL-751DNR(A)

High Sensitivity Duct Smoke Detector



Intelligent Devices

General

The FSL-751DNR(A) high sensitivity duct smoke detector provides dependable performance for management of fans, blowers, and air conditioning systems by using an intelligent laser smoke sensor residing in an efficient housing design that samples air currents passing through a duct. The twist-in, twist-out FSL-751DNR high sensitivity laser smoke detector head allows easy removal for quick cleaning, maintenance, and replacement without removing the duct housing. The laser detector achieves sensitivities as low 0.02 percent-per-foot by using a laser diode instead of a standard LED light source in the sensing chamber. Many sensitive areas cannot tolerate even small amounts of smoke. This FSL-751DNR detector is designed to protect valuable assets and operations where systems must remain online at all times.

Some ideal applications for the FSL-751DNR high sensitivity duct smoke detector include:

- Telecommunications switching facilities
- Cellular telephone infrastructure
- Integrated circuit fabrication facilities
- Computer rooms
- Clean rooms

NFPA 76, Section 8.5.3.1.2.3 *Very Early Warning Fire Protection*, calls for sensors to be mounted at the return air location for a space in the following instances.

A. "Where stand-alone packed HVAC units are installed, sensors or ports shall be installed where return air is brought back to the unit."

B. "Sensors or ports shall be installed such that each covers no greater than 0.4 m² (4 ft²) of the return air opening."

The FSL-751DNR high sensitivity duct smoke detector is designed to satisfy NFPA 76 for Very Early Warning Fire Protection.

NOTE: Unless otherwise specified, the term FSL-751DNR refers to both the FSL-751DNR and ULC-listed FSL-751DNR(A).

Specifications

PHYSICAL SPECIFICATIONS

Size:

- **Rectangular:** 14.38 in (37 cm) Length; 5 in (12.7 cm) Width; 2.5 in (6.6 cm) Depth
- **Square:** 7.75 in (19.7 cm) Length; 9 in (22.9 cm) Width ; 2.5 in (6.35 cm) Depth

Shipping Weight: 2.0 lbs (0.9 kg)

Operating Temperature Range: 32°F to 100°F (0°C to 38°C)

Storage Temperature Range: -22°F to 100°F (-30°C to 38°C)

Operating Humidity Range: 10% to 93% relative humidity

Air Duct Velocity: 300 to 4000 ft/min. (0.5 to 20.32 m/sec.)

ELECTRICAL SPECIFICATIONS

Voltage: 24 VDC

Power Supply Voltage: 15 to 32 VDC

Current Requirements (using no accessories)



60333covdnr.jpg

- **Max. Standby Current:** 230 μ A @ 24 VDC (without communication); 330 μ A @ 24 VDC (one communication every 5 sec. with LED enabled)
- **Max. Alarm Current:** 6. mA (LED on)

Features

- Temperature Range of 32°F to 100°F (0°C to 38°C)
- Air Velocity Rating from 300 to 4,000 fpm
- 24 VDC operation
- Versatile mounting options: Easy and quick mounting to round or rectangular ducts from 1 ft to 12 ft (0.3 m to 3.7 m) wide
- Patented sampling tube installs from front or back of the detector with no tools required.
- New Cover-tamper signal
- Increased wiring space with a newly added 3/4-inch conduit
- Clear cover for convenient visual inspection
- Remote testing capability (requires auxiliary 24VDC power)
- 3 year warranty

Architectural/Engineering Specifications

The high sensitivity air duct smoke detector shall be a Notifier model FSL-751DNR high sensitivity duct smoke detector. The detector shall be UL Listed per UL 268A, Standard for Smoke Detectors for Duct Applications, specifically for use in air handling systems. The detector shall operate at air velocities from 300 feet per minute to 4000 feet per minute. The detector shall have an operating temperature of 32°F to 100°F (0°C to 38°C). The detector housing shall be equipped with an integral mounting base capable of accommodating laser smoke detector heads; it shall fit both square and rectangular footprints; it shall be capable of local testing via magnetic switch or remote testing using the RTS151KEY or RTS151 Remote Test Station. The duct detector housing shall incorporate an airtight smoke chamber in compliance with UL Standard 268A. The housing shall be capable of mounting to rectangular or round ducts up to 12 feet wide without adapter brackets. Sampling tubes shall be installed after the housing is mounted to the duct by passing through the duct housing. Terminal connections shall be of the strip and clamp method suitable for 12 to 18 AWG wiring.

Agency Listings and Approvals

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:** S911
- **CSFM:** 3240-0028:0205

Ordering Information

NOTE: (A) suffix denotes Canadian product.

FSL-751DNR: High sensitivity duct smoke detector. (Replaces FSL-751D)

FSL-751DNRA: ULC-listed high sensitivity duct smoke detector. (Replaces FSL-751D)

FSL-751(A): Replacement intelligent laser sensor head. (For ULC-listed model, order "A" version.)

ACCESSORIES

DST-1: Metal sampling tube duct widths up to 1 ft (0.3 m).

DST-1.5: Metal sampling tube duct widths 1 ft to 2 ft (0.3 m to 0.6 m)

DST-3: Metal sampling tube duct widths 2 ft to 4 ft (0.6 m to 2.4 m)

DST-5: Metal sampling tube duct widths 4 ft to 8 ft (1.2 m to 2.4 m)

DST-10: Metal sampling tube duct widths 8 ft to 12 ft (2.4 m to 3.7 m)

DCOIL: Remote Test Coil (included)

ETX: Metal exhaust tube duct width 1ft (0.3 m)

P48-21-00: End cap for sampling tubes, metal.

RTS151(A): Remote test station.

RTS151KEY(A): Remote test station with key.

RA100Z(A): Remote annunciator alarm LED.

M02-04-00: Test magnet.

NOTIFIER® is a registered trademark of Honeywell International Inc.
©2010 by Honeywell International Inc. All rights reserved. Unauthorized use of this document is strictly prohibited.



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