INTELLIGENT NON-RELAY PHOTOELECTRIC DUCT SMOKE DETECTOR   DNR

Description

The InnovairFlex DNR intelligent non-relay photoelectric duct smoke detector and DNRW watertight non-relay photoelectric duct smoke detector feature a pivoting housing that fits both square and rectangular footprints capable of mounting to a round or rectangular duct.

DNRW duct smoke detector, with its NEMA 4 rating, is listed as a watertight enclosure providing protection against falling dirt, rain, and windblown dust, splashing and hose directed water, allowing operators to use the detector in the most extreme environments.

These units sense smoke in the most challenging conditions, operating in airflow speeds of 100 to 4000 feet per minute, temperatures of -4°F to 158°F, and a humidity range of 0 to 95 percent (non-condensing).

An improved cover design isolates the sensor head from the lowflow feature for simple maintenance. A cover tamper feature was added to indicate a trouble signal for a removed or improperly installed sensor cover. The InnovairFlex housing provides a ¾ inch conduit knockout and ample space to facilitate easy wiring and mounting of relay module.

The InnovairFlex duct smoke detector can be customized to meet local codes and specifications without additional wiring. The new InnovairFlex product line is compatible with all previous Innovair models, including remote test accessories.

WARNING: Duct smoke detectors have specific limitations.

DUCT SMOKE DETECTORS ARE:
NOT a substitute for an open area smoke detector,
NOT a substitute for early warning detection, and
NOT a replacement for a building's regular fire detection system.

Refer to NFPA 72, 90A and CAN/ULC S524 for additional duct smoke detector application information.

Features

- Photoelectric, integrated low-flow technology
- Air velocity rating from 100 ft/min to 4000ft/min (0.5m/s to 20.32m/sec)
- Versatile mounting options: square or rectangular configuration
- Broad ranges for operating temperature (-4°F to 158°F) and humidity (0% to 95% non-condensing)
- Patented sampling tube installs from front or back of the detector with no tools required
- Cover tamper signal
- Increased wiring space with a newly added 3/4-inch conduit knockout
- Available space within housing to accommodate mounting of relay module
- Easily accessible code wheels on photoelectric sensor head (sold separately)
- Clear cover for convenient visual inspection
- Remote testing capability
- Requires com line power only
- NEMA Type 4 UL listed for non-hazardous indoor and outdoor applications (DNRW only)
- UV Resistant, UL listed housing and cover material (DNRW only)

Architectural/Engineering Specifications

The air duct smoke detector shall be a System Sensor InnovairFlex™ DNR Intelligent Non-Relay Photoelectric Duct Smoke Detector and DNRW Watertight NEMA4 Duct Smoke Detector. The detector housing shall be UL listed per UL 268A specifically for use in air handling systems. The flexible housing of the duct smoke detector fits both square and rectangular footprints. The detector shall operate at air velocities of 100 ft/min to 4000 ft/min (0.5 m/sec to 20.32 m/sec). The unit shall be capable of providing a trouble signal in the event that the sensor cover is removed or improperly installed. It shall be capable of local testing via magnetic switch or remote testing using the RTS151KEY remote test station. Terminal connections shall be of the strip and clamp method suitable for 12–18 AWG wiring.

CATALOG NUMBER
5932

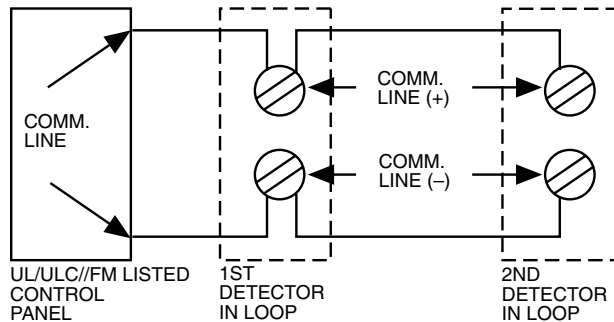| Physical Specifications	
Size: (Rectangular)	14.38 in (37 cm) Length; 5 in (12.7 cm) Width; 2.5 in (6.36 cm) Depth
Size: (Square)	7.75 in (19.7 cm) Length; 9 in (22.9 cm) Width; 2.5 in (6.35 cm) Depth
Weight:	1.6 lb (0.73 kg)
Operating Temp. Range:	-4°F to 158°F (-20°C to 70°C)
Storage Temp. Range:	–22°F to 158°F (–30° to 70°C)
Operating Humidity Range:	0% to 95% relative humidity non-condensing
Air Duct Velocity:	100 to 4000 ft/min (0.5 to 20.32 m/sec)

Accessory Current Loads @ 24 VDC		
Device	Standby	Alarm
RA100Z(A)	0 mA	12 mA Max.
RTS151 / RTS151KEY(A)	0 mA	12 mA Max.

Installing the InnovairFlex Sampling Tube

The InnovairFlex sampling tube may be installed from the front or back of the detector. The tube locks securely into place and can be removed by releasing the front or rear locking tab.

DNR(A) Wiring Diagram

Accessories

A variety of accessories are available, including remote test stations, and several different means of visible and audible system annunciation.

RTS151
Remote Test Station

RTS151KEY
Remote Test Station with Key

RA100Z
Remote Annunciator

Ordering Information

Model	Description
DNR*	Intelligent non-relay photoelectric low-flow duct smoke detector housing. Requires photoelectric smoke detector (sold separately).
DNRW	Watertight intelligent non-relay photoelectric low-flow duct smoke detector housing. *(UL Listed only)* Requires photoelectric smoke detector (sold separately).
MIX-2251B*	Addressable low-profile photoelectric smoke detector
MIX-2251BR*	Remote test capable addressable low-profile photoelectric smoke detector
Accessories	
DCOIL	2-wire remote test coil required with RTS151/RTS151KEY
DST3	Metal sampling tube duct widths 2 ft to 4 ft (0.6 to 1.2 m)
DST5	Metal sampling tube duct widths 4 ft to 8 ft (1.2 to 2.4 m)
DST10	Metal sampling tube duct widths 8 ft to 12 ft (2.4 to 3.7 m)
ETX	Metal exhaust tube duct width 1ft (0.3m)
DH400OE-1	Weatherproof Enclosure
RA100Z*	Remote annunciator alarm LED
RTS151	Remote test station
RTS151KEY*	Remote test station with key lock

* Add suffix "A" for Canadian models.
Note: DNR(W) duct detectors with a date code of 0013 or higher do not require a DCOIL or auxiliary 24VDC for remote test applications when used with a remote test capable smoke detector. DNR(W) duct detectors with a data code of 0012 or earlier require a DCOIL and auxiliary power for remote test applications.

NOT TO BE USED FOR INSTALLATION PURPOSES.

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