



by Honeywell

InnovairFlex™ Series DNRA Duct Smoke Detector

Description

The InnovairFlex™ Series, DNRA intelligent, non-relay photoelectric duct smoke detector or features a pivoting housing that fits both square and rectangular footprints. This detector is capable of mounting to a round or rectangular duct. The DNRA detector can be used with the 7100-C Series System.

Note: The InnovairFlex™ Series, DNRA requires the Velociti® Series, ASD-PL2FRA Sensor and AOM-2RFA, if relays are required for the fan control.

This unit senses smoke in the most challenging conditions, operating in airflow speeds of 100 to 4,000 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 low-flow 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 3/4-inch conduit knockout and ample space to facilitate easy wiring and mounting of the 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 the 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.
- NOT a replacement for a building's regular fire detection system.

Refer to CAN/ULC® 5524 for additional duct smoke detector application information.

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Intelligent Non-Relay Photoelectric Duct Smoke Detector



InnovairFlex-DNRA

Features

- Photoelectric, integrated low-flow technology
- Air velocity rating from 100 ft/min to 4,000ft/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
- New Cover tamper signal
- Increased wiring space with a newly added 3/4-inch conduit knockout
- Available space within housing to accommodate the mounting of the relay module
- Easily accessible code wheels on sensor head (sold separately)
- Clear cover for convenient visual inspection
- ULC® Listed
- Remote testing capability
- Requires com line power only

An ISO 9001-2000 Company



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Architectural/Engineering Specifications

The air duct smoke detector shall be a System Sensor InnovairFlex™ DNRA Intelligent Non-Relay Photoelectric Duct Smoke Detector. The detector housing shall be ULC Listed 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 4,000 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-A remote test station. Terminal connections shall be of the strip and clamp method suitable for 12–18 AWG wiring.

Physical Specifications

Size:

Rectangular Dimensions: 37 cm (14.38 in) Length; 12.7 cm (5 in) Width; 6.6 cm (2.5 in) Depth

Square Dimensions: 19.7 cm (7.75 in) Length; 22.9 cm (9 in) Width; 6.35 cm (2.5 in) Depth

Weight: 1.6 lb (0.73 kg)

Operating Temperature

Range: –4° to 158°F (–20° to 70°C)

Storage Temperature

Range: –22° 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)

DCOIL - (if included) 17.5 - 26.4 VDC.95mA max.

Electrical Ratings

For information on electrical specifications, refer to the Detector Head Installation Manual.

Accessory Current Loads at 24 VDC

Device	Standby	Trouble
RA100ZA	0 mA	12 mA Max.
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. (Figure 3 illustrates the front locking tab).



Figure 1



Figure 2



Figure 3

Wiring for Intelligent Non-Relay Duct Smoke Detector

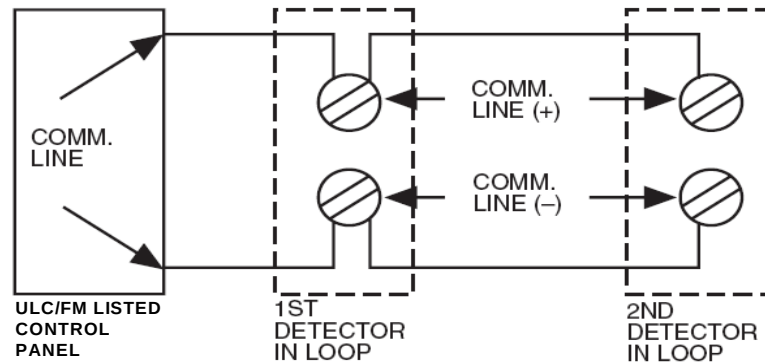


Figure 4 System Wiring Diagram for DNRA

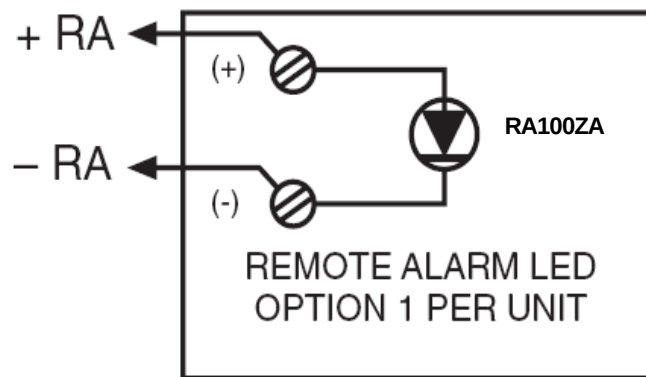


Figure 5 DNRA to RA100ZA

DNRA TO RTS151KEY-A
WITH "R" REMOTE TEST
CAPABLE DETECTOR HEAD OPTION:

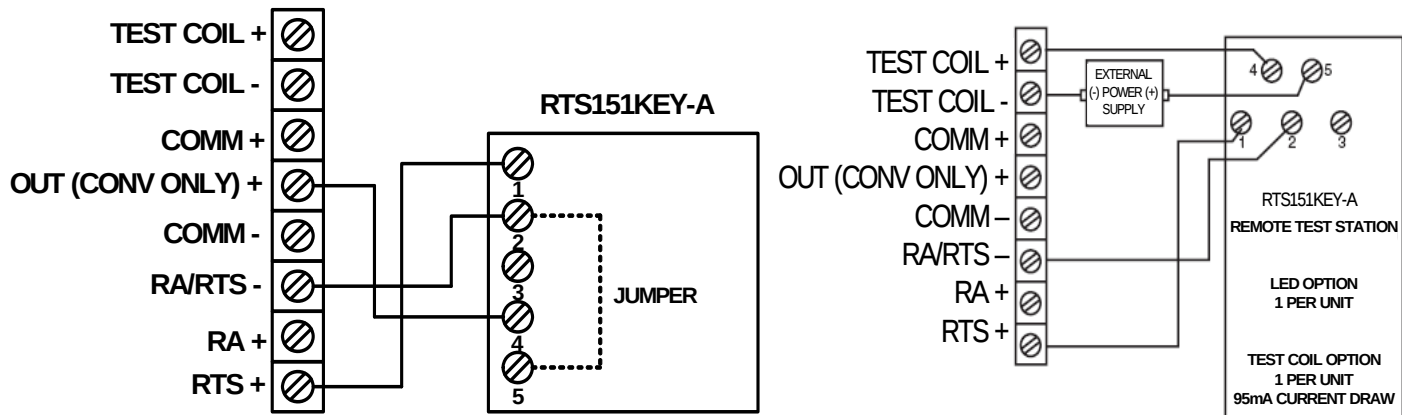


Figure 6 DNRA to RTS151KEY-A

Important Notes:

- The use of the RTS151KEY-A requires the installation of an accessory coil, DCOIL, sold separately. For additional information, refer to the DNRA Installation Manual.
- The RTS151KEY-A test coil circuit requires an external 24 VDC power supply which must be ULC Listed.

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Accessories

System Sensor provides system flexibility with a variety of accessories, including two remote test stations and different means of visible system annunciation. As with our duct smoke detectors, all duct smoke detector accessories are ULC Listed.



Figure 7 RTS151KEY-A



Figure 8 RA100ZA



Figure 9 ASD-PL2FRA

Ordering Information

Part Number	Description
DNRA	Intelligent non-relay photoelectric low-flow duct smoke detector
ASD-PL2FRA	Intelligent photoelectric smoke sensor with remote test capability in duct applications

Accessories

Part Number	Description
DCOIL	Remove test coil required with RTS151KEY-A
DST1	Metal sampling tube duct width up to 1 ft (0.3m)
DST1.5	Metal sampling tube duct widths 1 ft to 2 ft (0.3 to 0.6 m)
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)
DH400OE-1	Weatherproof enclosure
M02-09-00	Telescoping Test Magnet
P48-21-00	End cap for metal sampling tubes
RA100ZA	Remote annunciator alarm LED
RTS151KEY-A	Remote test station with key lock

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