Conventional Duct Smoke Detector Model D2E

Overview

Features

- Photoelectric, integrated low-flow technology
- Air velocity rating from 1.5 m/s to 20.3 m/sec
- Versatile mounting options in square or rectangular configuration with modular construction
- Plug-in sensor
- Superb false alarm immunity with the latest sensor technology
- Broader ranges for operating temperature (-20ºC to 70ºC) and humidity (0% to 95% non-condensing)
- Patented sampling tube installs from front or back of the detector with no tools required
- A cover tamper feature to indicate a trouble condition for removed or improperly installed sensor cover
- Increased wiring space with 15mm and 20mm conduit knockout
- Improved LED status
- 24 VDC
- Backward compatibility with existing DH400 range, including remote accessories

VdS - Pending

Description

The InnovairFlex™ D2E 2-wire photoelectric duct smoke detector features a pivoting housing that fits various applications: both square and rectangular footprints mount to round or rectangular duct work.

This new duct smoke detector senses airflow speeds ranging from 1.5 -20meters per second with proven System Sensor precision. The enhancements built into this model improve false alarm immunity (with plug-in sensor head); broaden operating temperature (-20ºC to 70ºC) and humidity (0 to 95 percent non-condensing) ranges; while simplifying installation and maintenance. These advance features can detect smoke even in the harshest duct applications.

The new design provides more wiring space with an added 20mm conduit knockout. Numbers and labels for terminal designations are consistent with previous Innovair models. The new sampling tube can be clicked into position with one smooth motion from either the front or the back of the detector.

The InnovairFlex D2E duct smoke detector has signals to indicate trouble and maintenance conditions. Additionally, a cover tamper feature is incorporated to indicate a trouble condition for removed or improperly installed sensor cover. An improved cover design,

with an integrated the low-flow feature, isolates the sensor head from the low-flow technology for simple maintenance.

The InnovairFlex series is designed for greater flexibility and reliable smoke detection to simplify installation and maintenance. The new InnovairFlex product line is backward compatible to existing Innovair models, including remote test accessories

PLEASE REMEMBER 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.

Architect/Engineers Specifications

The air duct smoke detector shall be a System Sensor InnovairFlex™ D2E Photoelectric 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 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 2mm gauge wiring.

Electrical Specifications

Power supply voltage:	8.5-35 VDC	Current Requirements: (Using No Accessories)		
Input capacitance:	0.1 µF max.	Peak standby current:	120µA	
Reset voltage:	2.5 VDC min.	Max. standby current:	60 µA (average)	
Reset time: (with RTS451)	0.03 to 0.3 sec.	Max. alarm current:	130 mA	
Reset time: (by power down)	0.3 sec. max.	Accessory Current Loads at 24 VDC		
Power up time:	35 sec. max.	Device	Standby	Alarm
Alarm response time:	15 sec.	RA100Z	0 mA	12 mA Max.
Sensitivity Test:	See detector label	RTS151	0 mA	12 mA Max.
		RTS151KEY	12 mA	12 mA Max.

Physical Specifications

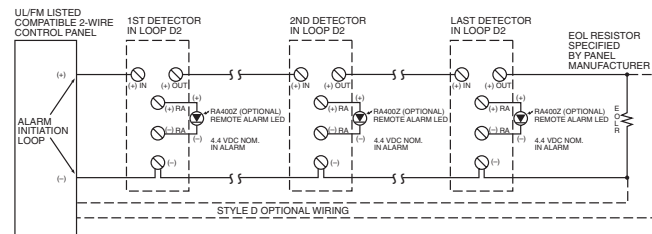|	
Size: (Rectangular)	37 cm Length; 12.7 cm Width; 6.36 cm Depth
(Square)	19.7 cm Length; 22.9 cm Width; 6.35 cm Depth
Weight:	0.82 kg
Operating Temperature Range:	-20°C to 70°C
Storage Temperature Range:	-30° to 70°C
Operating Humidity Range:	0% to 95% relative humidity non-condensing
Air Duct Velocity:	1.5 to 20.3 m/sec

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.
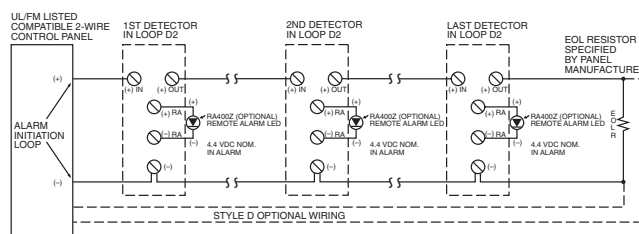
Wiring for Intelligent Non-Relay Duct Smoke Detector *

System wiring diagram for 2-wire duct smoke detectors (powered from initiating device circuit):

Wiring diagram for 2-wire duct smoke detector to RTS151/RTS151KEY Remote Test Station

Product Range

		Part No.	Description
D2E	2-wire photoelectric low-flow duct smoke detector		
DCOIL	2-wire remote test coil required with RTS451/RTS451KEY	RA100Z	Remote annunciator alarm LED
DST1	Metal sampling tube duct width up to 0.3m	RTS151	Remote test station
DST1.5	Metal sampling tube duct widths 0.3 to 0.6 m	RTS151KEY	Remote test station with key lock
DST3	Metal sampling tube duct widths 0.6 to 1.2 m		
DST5	Metal sampling tube duct widths 1.2 to 2.4 m		
DST10	Metal sampling tube duct widths 2.4 to 3.6 m		

Important Notes:
The use of either RTS151 or RTS151KEY requires the installation of an accessory coil, DCOIL, sold separately.
Please refer to the D2E installation manual for more information

System Sensor Europe (Technical Services)