



GAS & SPECIALTY SENSORS

INNOVAIRFLEX™ DUCT-SMOKE DETECTORS

D4120 SERIES

DESCRIPTION

The **InnovairFlex D4120** 4-wire photoelectric duct-smoke detector features a pivoting housing that fits both square and rectangular footprints and mounts to round or rectangular ductwork. 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 (noncondensing). A plug-in sensor head offers improved false alarm immunity and simple installation, testing, and maintenance. An improved cover design isolates the sensor head from the low-flow feature for simple maintenance.

FEATURES

- **Photoelectric, integrated low-flow technology**
- **NEMA 4 models for outdoor mounting**
- **Versatile mounting options: square or rectangular configuration**
- **Plug-in sensor offers superb false alarm immunity and the latest sensor technology**
- **2:1 sensor-to-power capability allows one power board to monitor both supply and return smoke sensors**
- **Patented sampling tube installs from front or back of the detector with no tools required**
- **Increased wiring space with a newly added 3/4-inch conduit knockout**

NEW!



Innovairflex



D4120



- **One easy-access Test/Reset button and improved LED status**
- **Patented interconnect feature for multi-fan shut-down**
- **New high contrast terminal designations**
- **Built-in short circuit protection from operator wiring errors**
- **Field selectable settings for configuring the detector**
- **Two DPDT Form-C relay contacts**
- **24 VAC/DC or 120VAC**
- **Backward compatibility**

SPECIFICATIONS

Power supply voltage 20-29 VDC
24 VAC 50-60 Hz
120 VAC 50-60 Hz

Reset Voltages 3.0 VDC minimum
2.0 VAC minimum
10 VAC minimum

Reset time
With RTS451 0.03 to 0.3 seconds
By power down 0.6 seconds maximum

Power up time 35 seconds maximum

Alarm response time 15 seconds

Current requirements (using no accessories)
21 mA @ 24 VDC
65 mA RMS @ 24 VAC 60Hz
20 mA RMS @ 120 VAC 60Hz

Max. alarm current 65 mA @ 24 VDC
135 mA RMS @ 24 VAC 60Hz
35 mA RMS @ 120 VAC 60Hz

Contact ratings

Alarm init contacts (SPST) 2.0A @ 30 VDC (resistive)
Alarm aux contacts (DPDT) 10A @ 30 VDC (resistive)
10A @ 250 VAC (resistive)
1/2 HP @ 240 VAC
1/4 HP @ 120 VAC

Note: Alarm auxiliary contacts shall not be connected to initiating circuits of control panels. Use the alarm initiation contact for this purpose.

Supervisory contacts (SPDT) 2.0A @ 30 VDC (resistive)
2.0A @ 125 VAC (resistive)

Operating temperature range

D4120 & D4S -4° to 158°F (-20° to 70°C)
D4P120 -40° to 158°F (-40° to 70°C)

Storage temperature range

D4120 & D4S -22° to 158°F (-30° to 70°C)
D4P120 -40° to 158°F (-40° to 70°C)

Operating RH range 0% to 95% relative humidity
noncondensing

Air duct velocity 100 to 4000 ft/min
(0.5 to 20.32 m/sec)

Warranty 3 years

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GAS & SPECIALTY SENSORS

NEW!

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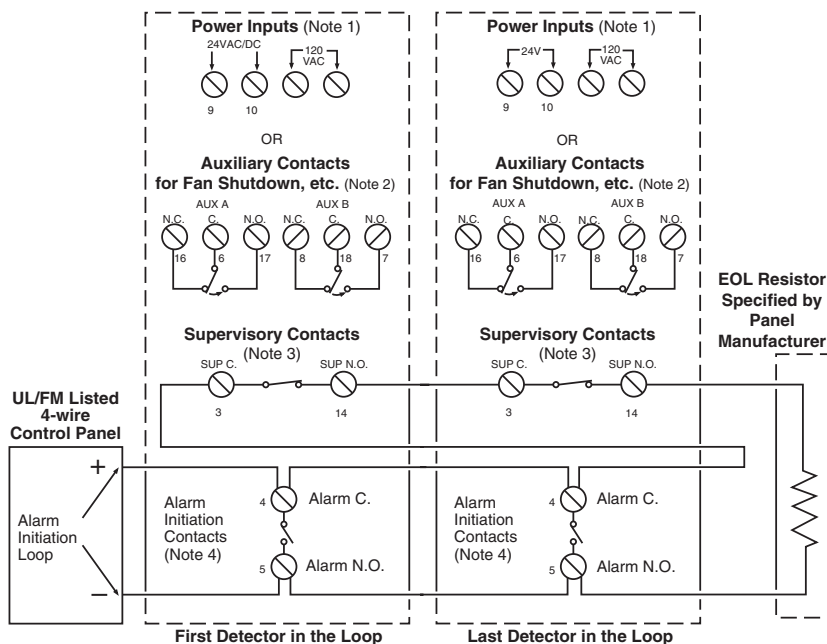
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WIRING



NOTE 1: 24V Power Inputs accept a non-polarized 24VDC or 24VAC 50-60Hz. 120VAC Power Inputs accept only 120VAC 50-60Hz. Connect power source to appropriate terminals of each detector. See specifications for additional power supply information.

NOTE 2: Auxiliary contacts shown in standby position. Contacts switch during alarm as indicated by arrows. Auxiliary contacts are not to be used for connection to the control panel. See specifications for contact ratings.

NOTE 3: Supervisory contacts shown in standby position. Open contacts indicate a trouble condition in the panel. See specifications for contact ratings.

NOTE 4: Alarm Initiation contacts shown in standby position. Closed contacts indicate an alarm condition to the panel. See specifications for contact ratings.

*Please refer to the corresponding installation manual for accessory wiring diagrams.

ORDERING INFORMATION

MODEL	DESCRIPTION
D4120	4-wire photoelectric low-flow duct smoke detector
D4120W	Watertight 4-wire photoelectric low-flow duct smoke detector

ACCESSORIES

D4120W	D4120	D4S	D4P120	2D51

MODEL	DESCRIPTION	MODEL	DESCRIPTION
D4S	Remote or replacement sensor (not watertight)	APA151	Remote annunciator with piezo alarm
D4P120	Power board component only, 24 VAC/DC, 120 VAC	MHR	Mini Horn, Red
2D51	Replacement sensor head	MHW	Mini Horn, White
DST1	Metal sampling tube duct width up to 1ft (0.3m)	P48-21-00	End cap for metal sampling tubes
DST1.5	Metal sampling tube duct widths 1 ft to 2 ft (0.3 to 0.6 m)	ASO	Mini-Alert add-on strobe (red)
DST3	Metal sampling tube duct widths 2 ft to 4 ft (0.6 to 1.2 m)	RA100Z	Remote annunciator alarm LED
DST5	Metal sampling tube duct widths 4 ft to 8 ft (1.2 to 2.4 m)	RTS151	Remote test station
DST10	Metal sampling tube duct widths 8 ft to 12 ft (2.4 to 3.7 m)	RTS151KEY	Remote test station with key lock
		RTS2	Multi-signaling accessory