FIRE·LITE® ALARMS

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D350P/D350RP

Intelligent Addressable Photoelectronic Duct Smoke Detector

Section: Addressable Devices

GENERAL

The new D350P and D350RP addressable photoelectric duct smoke detectors are used exclusively with the Fire•Lite MS-9200 and MS-9600 addressable fire alarm control panels. Since these duct detectors are addressable, they will help emergency personnel quickly locate a fire during its early stages, potentially saving precious rescue time while also reducing property damage. The D350RP offers the same features as the D350P while adding a Form-C relay.

An HVAC system supplies conditioned air to virtually every area of a building. Smoke introduced into this air duct system is thus distributed to the entire building. Smoke detectors for use in air duct systems sense the presence of smoke in the duct.

The D350P and D350RP air duct smoke detectors are photoelectric detectors, combining this detection technology with an efficient housing design that samples air passing through the duct, allowing detection of a developing hazardous condition. When sufficient smoke is sensed, an alarm signal is initiated at the fire control panel monitoring the detector. With the D350RP, appropriate action can be taken to shut off fans and blowers and to change over air handling systems, etc. This can isolate toxic smoke and fire gases or prevent their distribution thoughout areas served by the duct system.

Two LED's on each detector light to provide a local, visible alarm indication. A remote alarm output is provided for use with auxiliary devices. The D350P and D350RP have remote test capability with the RTS451/RTS451KEY Remote Test Station, as well as remote communication using the RA400Z alarm LED.

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D350P

APPLICATIONS

Duct smoke detectors have the following limitations:

- ***NOT*** a substitute for open area smoke detectors.
- ***NOT*** a substitute for early warning detection.
- ***NOT*** a replacement for a building's regular fire detection system.

Call your Fire•Lite distributor for a copy of System Sensor's application guide, *Proper Use of Smoke Detectors in Duct Applications* (A05-1004-00).

INSTALLATION

Wiring: For signal wiring (the wiring between detectors or from detectors to auxiliary devices), it is recommended that single conductor wire be no smaller than 18 AWG (0.75 mm^2). The duct smoke detector terminals accomodate wire sizes up to 12AWG (3.25 mm^2). Flexible conduit is recommended for the last foot (30.48 cm) of conduit: solid conduit connections may be used if desired.

Smoke detectors and alarm system control panels have specifications for Signaling Line Circuit (SLC) wiring. Consult the control panel specifications for wiring requirements before wiring the detector loop. The D350P/D350RP detector is designed for ease of wiring; the housing provides a terminal strip with clamping plates.

Remote LED annunciator capability is available as an option. Each duct smoke detector can only be wired to one remote accessory.

SPECIFICATIONS

D350P

Operating voltage range: 15 to 32 VDC.

Standby current: 300 µA @ 24 VDC (one communication every 5 seconds with LED blink enabled).

Operating temperature range: 32^0 to 131^0 F (0^0 to 55^0 C).

Humidity range: 10% to 93% (non-condensing).

Duct air velocity: 500 to 4,000 feet/min. (152.4 to 1219.2 meters/min.).

Dimensions: 14.375" (365.125 mm) wide x 5.500" (13.970 mm) high x 2.750" (69.850 mm) deep.

Options: RTS451, RTS451KEY, RA400Z. Separate auxiliary power not required.

D350RP

Operating voltage range: 15 to 32 VDC *(comm. line voltage)* and 24 VAC/VDC or 120/240 VAC auxiliary power *(separate source)*. ***NOTE:*** The D350RP requires a separate auxiliary source.

ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING

Standby current: 300 µA @ 24 VDC (one communication every 5 seconds with LED blink enabled).

Auxiliary power current draw (@ 24 VDC): 26 mA *(standby)*, 87 mA *(alarm)*.

Operating temperature range: 32^0 to 131^0 F (0^0 to 55^0 C).

Humidity range: 10% to 93% (non-condensing).

Duct air velocity: 500 to 4,000 feet/min. (152.4 to 1219.2 meters/min.).

Dimensions: 14.375" (365.125 mm) wide x 5.500" (13.970 mm) high x 2.750" (69.850 mm) deep.

Options: RTS451, RTS451KEY, RA400Z. APA451.

Relay contact ratings: 2 Form-C, DPDT, 10 A @ 250 VAC, 10 A @ 30 VDC *(resistive)*. Minimum switching current of 100 mA @ 5 VDC.

INLET TUBE SELECTION

Outside Duct Width	Inlet Tube*
Up to 2 feet (0.6096 m)	ST-1.5
2 to 4 feet (0.6096 to 1.2192 m)	ST-3
4 to 8 feet (1.2192 to 2.4384 m)	ST-5
8 to 12 feet (2.4384 to 3.6576 m)	ST-10

***NOTE:** Inlet tube is required and must be purchased separately. Order one inlet tube for each duct smoke detector ordered.

PRODUCT LINE INFORMATION

D350P	Addressable duct detector housing with photolectric smoke detector.
D350RP	Addressable duct detector housing with photolectric smoke detector and DPDT relay.
ST-1.5	Metal sampling tupe, duct widths 1' to 2' *(see table at left for metric lengths)*.
ST-3	Metal sampling tupe, duct widths 2' to 4'.
ST-5	Metal sampling tupe, duct widths 4' to 8'.
ST-10	Metal sampling tupe, duct widths 8' to 12'.
RA400Z	Remote annunciator alarm LED.
RTS451	Remote test station. Mounts in single-gang box. Includes red alarm LED and magnet test switch.
RTS451KEY	Key-activated remote test station.
F36-09-00	Replacement filters.
M02-04-00	Replacement test magnet.
S08-39-01	Replacement photo insect screen.
P48-55-00	Replacement end cap for plastic sampling tube.
P48-21-00	Replacement end cap for metal sampling tube.
A5053FS	Replacement photoelectric sensor board.
A5067	Replacement power board (without relay).
A5060	Replacement power board (with relay).