DSD-P

CONVENTIONAL DUCT SMOKE DETECTOR

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 06/08/17

- Detect and limit the spread of smoke throughout building HVAC ducts
- Compatible with building automation and fire alarm system
- Installs quickly and easily - Duct Housing Cover does not need to be removed before installation to duct
- Interchangeable “Plug-In” photoelectric or ionization heads
- No screens or filters to clean
- Cover provides magnet window and placement guide for go/no-go operational testing with out disassembly
- Rugged gray steel back box with clear cover
- Accessories - Remote power, remote alarm indication capability and remote, horn/piezo capability
- Meets UL 268A Requirements

Stock number: 1430009

Application

The Potter Electric DSD-P duct smoke detector provides early detection of smoke and products of combustion present in air moving through HVAC ducts in commercial, industrial and residential applications. The DSD is designed to prevent the recirculation of smoke in areas by the air handling systems, fans and blowers. Complete systems may be shut down in the event of smoke detection. The DSD-P operates on 115 VAC, 24 VAC and 24 VDC.

Product Description

The DSD-P is designed and built to meet all local requirements, as well as the NFPA regulations regarding duct smoke detectors. Output terminals are provided for remote accessories such as a horn, strobe, remote status indicators and reset key switches or push buttons.

Air sampling is accomplished by two tubes which protrude into the duct. An exhaust tube of one standard length (7.5") is supplied in the installation kit with the smoke duct unit. Once the duct width has been determined the air intake sampling tubes must be ordered. Sampling tubes are supplied in three standard lengths 2.5 ft., 5 ft. and 10 ft. and cut to size to fit the duct. Mounting the duct smoke unit is accomplished by the use of a template and 4 sheet metal screws, which are provided. Mounting can be achieved without the removal of the clear cover which is secured by 4 capture screws.

The compact DSD contains 3 sets of alarm contacts, 1 set of form “C” contacts rated at 10 amps, 1 set of form “A” contacts rated at 10 amps, 1 set of form “A” contacts rated at 1 amp. There is also 1 set of form “C” 10 amp trouble contacts for monitoring detector head removal, and the failure of the input supply voltage.

The pilot and alarm visual indicators provided on the front of the DSD duct unit, signal the operating status of the device. A manual test/reset switch is located along side the visual indicators. This switch can be defeated by cutting a jumper on the PCB.

Duct Detector Model #		DSD-P
Operating Voltage		115V AC, 24V C/DC
Detector Head Model		SLR-24DH
Detector Head Type		Conventional Photoelectric
Power Requirements Standby	230 VAC	-
	115 VAC	14mA
	24 VAC	20mA
	24 VDC	13mA
Power Requirements Alarm	230VAC	-
	115 VAC	28mA
	24 VAC	95mA
	24 VDC	60mA
Alarm Contacts		1 form "C" and 1 form "A" rated at 10 amps at 115 VAC
Detection Loop		1 form A (1A)
Trouble Contacts		1 form "C"
Sensitivity Test Method		Self diagnostic test
Remote Indication Capability (Refer to DSD Accessories Data Sheet for Specifications)		Power, Alarm, Horn, Piezo, Test
Air Velocity		300 to 4000 ft./min
Ambient Temperature		32°F to 120°F (0°C to 49°C)
Humidity		10% to 85% Relative humidity (non-condensing)
Housing Material		18 G.A. steel backbox, clear plastic cover
Finish		Grey paint
Dimensions		9 1/8"L x 7 1/4" W x 2 1/4" H
Maximum Net Weight		3 lbs.
Sampling Tubes		2.5 ft., 5 ft., or 10 ft.
Radioactive Element		DSD-I only: Americum 24I 0.5 micro-curie

CITY OF PORTLAND, MAINE
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Engineering Specifications

Air duct smoke detectors shall be Potter Electric DSD Series. The detectors shall be listed by Underwriters Laboratories per UL 268A. The detectors shall operate at air velocities from 300 feet per minute to 4000 feet per minute.

The duct detector housings shall be of metal construction and complete mechanical installation may be performed without removal of detector cover. Visual indication of alarm and power must be provided on detector front. A manual reset switch shall be located on front of the device. Detector heads shall not require additional filters or screens which must be maintained. The housing shall contain a detector base which will accept photoelectric or ionization detector heads. Terminal connections shall be of the screw type and be a minimum of # 6 screw. Terminals shall be provided for remote pilot, remote alarm indication, strobe/horn and remote key switch. All wiring must comply with local codes and regulations.

Wiring Diagrams

DSD

24 V.A.C. OPERATION

DSD-I
DSD-P

24 V.D.C. OPERATION

DSD-I
DSD-P

115 V.A.C. OPERATION

DSD-I
DSD-P

230 V.A