DUCT SMOKE DETECTOR

DSD Series

The DSD Series, 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 –20°C to 70°C (–4°F to 158°F), and a humidity range of 0 to 95% (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.

The DSD housing provides ample wiring space, a ¾-inch conduit knockout, and built-in short circuit protection to prevent damage to sensitive components during installation. High contrast terminal designations make wiring easy. With its 2:1 sensor-to-power capability, the power board of the DSD may be used to monitor a second sensor, D4S, simultaneously (i.e., supply and return side). As many as 50 detectors can be interconnected. When one unit senses smoke, all interconnected detectors will switch their relays; only the detector sensing smoke will go into alarm, thus pinpointing the fire source.

All detectors must be used with a metal sampling tube, DST series.

PRODUCT HIGHLIGHTS

* 4-wire Photoelectric, integrated low-flow technology
* Low flow air velocity rating from 100 to 4000 FPM
* Plug-in sensor offers superb false alarm immunity and latest sensor technology
* 24 Vac/dc or 120/240 Vac operation
* Two SPDT Form-C relay contacts
* Easy and quick mounting to round or rectangular ducts
* One easy-access Test/Reset button and improved LED status
* Patented sampling tube installs with no tools required
* cULus and FM approved

SPECIFICATIONS

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| DESCRIPTION | ENGINEERING SPEC | | | |
| SIZE | **Rectangular Dimensions:** 37cm (14.38”) L x 12.74cm (5”) W x 6.36cm (2.5”) D  **Square Dimensions:** 19.7cm (7.75”) L x 22.9cm (9”) W x 6.35cm (2.5”) D | | | |
| WEIGHT | 1.14kg (2.5lbs) | | | |
| OPERATING CONDITIONS | -20 to 70°C (-4 to 158°F), 0 to 95 %RH, non-condensing | | | |
| STORAGE TEMPERATURE | -30 to 70°C (-22 to 158°F) | | | |
| AIR DUCT VELOCITY | 0.5 to 20.32 m/sec (100 to 4000 ft/m) | | | |
| ELECTRICAL RATINGS | DSD120/240 | DSD120/240 | DSD120 | DSD240 |
| POWER SUPPLY VOLTAGE | 20-29 Vdc | 24Vac 50-60Hz | 120Vac 50-60Hz | 240 Vac 50-60Hz |
| INPUT CAPACITANCE | 270 µF maximum | 270µF minimum | N/A | N/A |
| RESET VOLTAGE | 3.0 Vdc minimum | 2.0 Vac minimum | 10 Vac minimum | 20 Vac minimum |
| REST TIME (BY POWER DOWN) | 0.6 sec. max. | 0.6 sec. max. | 0.6 sec. max. | 0.6 sec. max. |
| POWER UP TIME | 35 sec. max. | 35 sec. max. | 35 sec. max. | 35 sec. max. |
| ALARM RESPONSE TIME | 15 seconds | 15 seconds | 15 seconds | 15 seconds |
| SENSITIVITY TEST | See detector label | See detector label | See detector label | See detector label |
| CURRENT REQUIREMENTS | | | | |
| MAX. STANDBY TEST | 21 mA @ 24 Vdc | 65 mA RMS @ 24 Vac 60 Hz | 20 mA RMS @ 120 Vac 60 Hz | 10mA @ 240 Vac 60 Hz |
| MAX. ALARM CURRENT | 65 mA @ 24 Vdc | 135 mA RMS @ 24 Vac 60 Hz | 35 mA RMS @ 120 Vac 60 Hz | 18 mA RMS @ 240 Vac 60 Hz |
| CONTACT RATINGS | **Alarm Initiation Contacts (SPST):** 2.0A @ 30 Vdc (resistive)  **Alarm Auxiliary Contacts (SPST):** 10A @ 30 Vdc (resistive); 10A @ 250 Vac (resistive); ½ HP @ 240 Vac; ¼ HP @ 120 Vac  *Note:* Alarm auxiliary contacts shall not be connected to initiating circuits of control panels. Use the alarm initiated contact or this purpose.  **Supervisory Contacts (SPST):** 2.0A @ 30 Vdc (resistive); 2.0A @ 125 Vac (resistive) | | | |