



Overview

The SuperDuct four-wire smoke detector is ideally suited to HVAC applications where early indication of combustion is required within the confined space of ventilation ductwork. SuperDuct detectors and controllers feature a unique modular design that speeds installation and simplifies maintenance. Separate housings enable access to either the controller or detector without affecting the other. The detector assembly provides easy access to the smoke sensor, its wiring connections, sample and exhaust tube fittings, and the smoke chamber itself. Air enters the assembly by means of an air sampling tube (ordered separately), and exits by means of a six-inch exhaust tube (included). The controller can accommodate up to two detectors. One or both detectors may be installed remotely from the controller. A Category 5 wiring harness is used for interconnection when detectors are installed remotely from the controller.

Sensitivity testing and diagnostics reveal some of the most exciting innovations built into SuperDuct. With the ingenious SuperDuct remote test station, a sensitivity test can be performed at any time from the safety and comfort of a maintenance office or utility room.

Remote Test/Reset Station

The Remote Test/Reset Station provides alarm test or dirty test capability from a remote location. It includes a one-gang plate, momentary SPST switch, red alarm LED, yellow trouble LED, green power LED, and terminal block. Magnetically operated or key-operated models are available.

Test Magnet

Used to activate test routine from either a SD-TRM4 Remote Test/Reset Station, or the detector.

Four-wire Photoelectric Duct Smoke Detector

SuperDuct Series ESD-4WJ



Standard Features

- Less than 2" deep for easy installation and applications where space is tight
- PCB mounted photoelectric detector with on-board intelligence
- Environmental compensation with patented differential sensing for reliable, stable, and drift-free sensitivity
- -29°C to 49°C operating range with 100 to 4,000 ft/min. air velocity rating assures reliability under harsh environmental conditions
- Status LEDs remain visible through clear assembly cover
- Magnet-activated test/dirty/reset switch – ideal for enclosed spaces and hard-to-reach locations
- Alarm contact, trouble contact, and two robust 10 amp auxiliary contacts
- Optional one controller for up to two detectors
- Ability to interconnect up to 15 controllers for multiple fan shutdown

Ordering Information

Catalog Number	Description
ESD-4WJ	Controller w/sensor (RJ45)
SD-T*	Sampling tube, one required per detector
* specify length in inches example SD-T36 = 36" tube. Available tubes sizes: 8, 18, 24, 36, 42, 60, 78 & 120.	
Accessories	
SD-TRM4	Remote test/reset station, magnetic—single gang
SD-TRK4	Remote test/reset station, keyed—single gang
5956A	Remote LED Alarm Indicator—single gang

Specifications

Voltage	24VAC/dc, 120VAC, 220/240VAC
Wire Size	120/230 VAC 12-22 AWG, 24 VAC/DC 14-22 AWG
Air Velocity	100-4000 ft/min
Sensitivity	.67 – 2.46 % smoke obs per foot
LEDs	Power (green), Alarm (red), Trouble (amber) & Dirty (amber)
Alarm Relay	One NO, 2.0 A @ 30Vdc
Supervision Relay	One form C, 2A@30Vdc
Aux Relays	two form C, 10A @ 30Vdc/250VAC
Operating Environment	-29°C to 70°C (-20°F to 158°F), 93% humidity

