D300A Photoelectric Duct Smoke Detector (24 VAC/VDC or 115 VAC)

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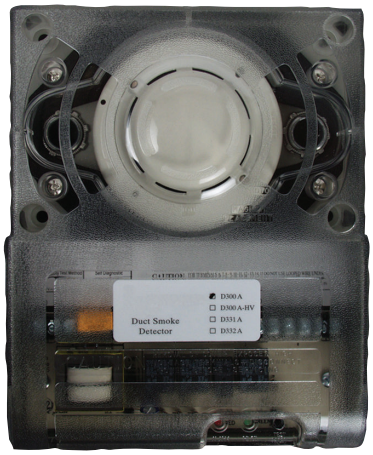

- Conventional duct detector (D300A)
- For use with Bosch D7022 and D7024 Conventional Fire Alarm Control Panels (FACPs)
- Comes complete with a conventional photoelectric smoke detector head
- Steel sampling tube

The D300A Duct Detector is an accessory device. It comes with a photoelectric smoke detector head and a housing for use in heating, ventilation, and air conditioning (HVAC) duct works. The D300A can be powered by 24 VAC, 24 VDC, or 115 VAC.
Use the provided output terminals for remote accessories such as remote status indicators and reset key switches or push buttons.

Notice
Do not use the D300A for open-air detection.

Notice
Refer to NFPA 90A and NFPA 72 for more information on the operation and installation of duct smoke detectors.

Functions

Air Sampling
A tube that protrudes into the duct samples the air through positive pressure to the detector head. An exhaust tube of one standard length is supplied in the installation kit with the duct detector housing unit. Once the duct width is determined, order the air sampling tube(s). Sampling tubes come in three standard lengths and can be cut to size to fit the duct.

Certifications and approvals

Region	Certification	
USA	UL	UROX: Smoke - Automatic Fire Detectors (UL268 and A)
	CSFM	3240-1615:0167
Hong Kong	HKFSD	

Installation/configuration notes

Compatible Products
The following products are compatible with the D300A and D300A-HV Photoelectric Duct Smoke Detectors:

Category	Product ID	Product Description
Control Panels	D7022	Two-zone FACP
	D7024	Conventional FACPs

	D7024-EXP	Conventional FACPs for export
Detector Head	D282A-DH	Replacement duct smoke detector head

Installation Considerations

Use the D300A detector in HVAC ducts with air velocities from 300 ft/min to 4000 ft/min (90 m/min to 1.2 km/min). Verify air velocity by checking the duct installation specifications, or by using an Alnor Model 6000P velocity meter or its equivalent.
Install the D300A in ducts ranging from 1 ft (0.3 m) to 10 ft (3 m) in diameter. To verify the correct sampling of air in the duct, use a Dwyer Model 4000 differential pressure gauge or its equivalent.

Mounting

Notice
To prevent false alarms, do not mount the duct detector in areas of extreme high or low temperature, high humidity, or where duct air might contain gasses or excess dust. See NFPA 90A, 72 and 101.

A mounting template and four sheet metal screws are packaged in the installation kit. Attach the template to the duct at the desired place. Drill or punch and clean the holes. Sampling tube connectors have set screws preventing mounting in the wrong airflow direction.

Wiring

Wire the detectors according to the engineering drawings. The terminals can use for wire up to 14 AWG (1.8 mm).

Technical specifications

Electrical

Current	
Alarm:	24 VAC: 95 mA 24 VDC: 60 mA 115 VAC: 28 mA
Standby:	24 VAC: 20 mA 24 VDC: 13 mA 115 VAC: 14 mA
Voltage	
Input:	24 VAC/VDC, or 115 VAC
Relay Contacts	
Rating	10 A maximum resistive

Environmental

Relative Humidity:	10% to 85%, non-condensing
Temperature (operating):	+32°F to +120°F (0°C to +49°C)

Mechanical

Duct Air Velocity:	300 ft/min to 4000 ft/min (90 m/min to 1.2 km/min)

Trademarks

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Alnor is a registered trademark of TSI Incorporated.

Dwyer is a trademark of Dwyer Instruments, Inc.

Ordering information

D300A Photoelectric Duct Smoke Detector (24 VAC/VDC or 115 VAC)
Photoelectric smoke detector head that can be powered by 24 VAC, 24 VDC, or 115 VAC and a housing for use in heating, ventilation, and air conditioning (HVAC) duct works.
Order number **D300A**

Accessories

D304 Remote Annunciator Plate
Brushed stainless steel annunciator plate with a red alarm LED and a green Pilot LED
Order number **D304**

D305 Remote Test/Reset Annunciator Plate
Brushed stainless steel annunciator plate; red alarm LED; green Pilot LED; key-operated Test/Reset switch
Order number **D305**

FAA-325-2.5 Sampling Tube (2.5 ft)
2.5 ft (762 mm) long sample tube for use with the FAD-325 and FAD-325-R Analog Duct Detectors
Order number **FAA-325-2.5**

FAA-325-5 Sampling Tube (5 ft)
5 ft (1.52 m) long sample tube for use with the FAD-325 and FAD-325-R Analog Duct Detectors
Order number **FAA-325-5**

FAA-325-10 Sampling Tube (10 ft)
10 ft (3.05 m) long sample tube for use with the FAD-325 and FAD-325-R Analog Duct Detectors
Order number **FAA-325-10**

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