

INDOOR AIR QUALITY

Totaline® 4- Wire Duct Smoke Detectors - Photoelectric, Adjustable Mount



Totaline® 4-Wire Adjustable Mount Photoelectric Duct Smoke Detectors with System Sensor InnovairFlex technology combines an innovative collection of design enhancements and advancements to provide you with the flexibility you need to fit almost any application. Versatile, one unit can accommodate multiple installation footprints to overcome mounting constraints. The Totaline® P270-3000PL and the P270-D4120W Duct Smoke Detectors are both UL Listed.

Features

- Photoelectric, integrated low-flow technology
- Air velocity rating from 100 ft/min to 4,000 ft/min (0.5 m/s to 20.32 m/sec)
- Versatile mounting options: square or rectangular configuration
- Plug-in sensor offers superb false alarm immunity and the latest sensor technology
- Broad ranges for operating temperature (-4°F to 158°F) and humidity (0% to 95% non-condensing)
- Patented sampling tube installs from front or back of the detector with no tools required
- Increased wiring space with a newly added 3/4-inch conduit knockout
- One easy-access Test/Reset button and improved LED status
- System Sensor's patented interconnect feature for multi-fan shutdown.
- New high contrast terminal designations
- Built-in short circuit protection from operator wiring errors.
- Field selectable settings for configuring the detector
- Two DPDT Form-C relay contacts
- 24 VAC/DC or 120VAC.
- Watertight Model additional features;
- NEMA Type 4 UL listed for non-hazardous indoor and outdoor applications
- UV Resistant, UL listed housing and cover material

PART NO	Description
P27-3000PL	Totaline 4- Wire Duct Smoke Detectors Photoelectric, Adjustable Mount
P27-D4120W	Totaline 4- Wire Duct Smoke Detectors Photoelectric, Adjustable Mount Watertight

WARNING: Duct smoke detectors are **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. Refer to NFPA 72 and 90A for additional information.

NOTE: To maintain the watertight properties of the P270-D4120W watertight duct smoke detector, watertight conduit and fittings must be used. Mount the product with the conduit holes facing downward, if possible.

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Totaline® 4- Wire Duct Smoke Detectors - Photoelectric, Adjustable Mount

Totaline® P270-3000PL Duct Smoke Detector

The Totaline® P270-3000PL 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 -4°F to 158°F, and a humidity range of 0 to 95 percent (non-condensing). 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.



Physical Specifications

PART NO	Size		Weight	Operating Temperature Range	Storage Temperature Range	Operating Humidity Range	Air Duct Velocity
	(Rectangular Dimensions)	(Square Dimensions)					
P270-3000PL	14.38 in (37 cm) Length; 5 in (12.74 cm) Width; 2.5 in (6.36 cm) Depth	7.75 in (19.7 cm) Length; 9 in (22.9 cm) Width; 2.5 in (6.35 cm) Depth	2.5 lbs (1.14 kg)	-4° to 158°F (-20° to 70°C)	-22° to 158°F (-30° to 70°C)	0% to 95% relative humidity non-condensing	100 to 4000 ft/min (0.5 to 20.32 m/sec)

Electrical Ratings

Power supply voltage:	20–29 VDC	24 VAC 50–60 Hz	120 VAC 50–60 Hz
Input capacitance:	270 µF max.	270 µF max.	N/A
Reset voltage:	3.0 VDC min.	2.0 VAC min.	10 VAC min.
Reset time: (with P271-RTS151)	.03 to 0.3 sec.	.03 to 0.3 sec.	.03 to 0.3 sec.
Reset time: (by power down)	0.6 sec. max.	0.6 sec. max.	0.6 sec. max.
Power up time:	35 sec. max.	35 sec. max.	35 sec. max.
Alarm response time:	15 sec.	15 sec.	15 sec.
Sensitivity Test:	See detector label	See detector label	See detector label
Current Requirements: (Using No Accessories)			
Max. standby current:	21 mA @ 24VDC	65 mA RMS @ 24VAC 60Hz	20 mA RMS @ 120VAC 60Hz
Max. alarm current:	65 mA @ 24VDC	135 mA RMS @ 24VAC 60Hz	35 mA RMS @ 120VAC 60Hz

Contact Ratings

Alarm initiation contacts: (SPST)	2.0A @ 30 VDC (resistive)
Alarm auxiliary contacts: (DPDT)	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 initiation contact for this purpose.	
Supervisory contacts: (SPDT)	2.0A @ 30 VDC (resistive); 2.0A @ 125 VAC (resistive)

Accessory Current Loads at 24 VDC

Device	Standby	Trouble	Alarm
P271-APA151	12.5 mA	n/a	30 mA Max.
P271-MHW	0 mA	n/a	29 mA Max.
P271-RA100Z	0 mA	n/a	12 mA Max.
P271-RTS151/P271-RTS151KEY	0 mA/12 mA	n/a	12 mA Max.
P271-RTS2-AOS	30 mA Max.	16.0 mA Max.	55.0 mA Max. (with AOS strobe)

Note: Any combination of accessories may be used such that the given accessory loads are: 110 mA or less at the Aux output, and 50 mA or less at the Alarm output

WARNING: Duct smoke detectors are **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. Refer to NFPA 72 and 90A for additional information.

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Totaline® 4- Wire Duct Smoke Detectors - Photoelectric, Adjustable Mount

Totaline® P270-D4120W Watertight Duct Smoke Detector

The Totaline® P270-D4120W watertight 4-wire photoelectric duct smoke detector is UL listed as a watertight enclosure providing protection against falling dirt, rain, windblown dust, splashing and hose directed water. D4120W duct smoke detector features a pivoting housing that fits various applications: both square and rectangular footprints mount 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 -4°F to 158°F, and a humidity range of 0 to 95 percent (non-condensing). A plug-in sensor head offers superior false alarm immunity. These features, plus a NEMA 4 rating, allow operators to mount the detector to rooftop HVAC equipment or use the detector in other harsh environments.



Physical Specifications

PART NO	Size		Weight	Operating Temperature Range	Storage Temperature Range	Operating Humidity Range	Air Duct Velocity	NEMA Enclosure Rating
	(Rectangular Dimensions)	(Square Dimensions)						
P270-D4120W	14.38 in (37 cm) Length; 5 in (12.74 cm) Width; 2.5 in (6.36 cm) Depth	7.75 in (19.7 cm) Length; 9 in (22.9 cm) Width; 2.5 in (6.35 cm) Depth	2.5 lbs (1.14 kg)	-4° to 158°F (-20° to 70°C)	-22° to 158°F (-30° to 70°C)	0% to 95% relative humidity non-condensing	100 to 4000 ft/min (0.5 to 20.32 m/sec)	Type 4 – Watertight Indoor/Outdoor

Electrical Ratings

Power supply voltage:	20–29 VDC	24 VAC 50–60 Hz	120 VAC 50–60 Hz
Input capacitance:	270 µF max.	270 µF max.	N/A
Reset voltage:	3.0 VDC min.	2.0 VAC min.	10 VAC min.
Reset time: (with P271-RTS151)	.03 to 0.3 sec.	.03 to 0.3 sec.	.03 to 0.3 sec.
Reset time: (by power down)	0.6 sec. max.	0.6 sec. max.	0.6 sec. max.
Power up time:	35 sec. max.	35 sec. max.	35 sec. max.
Alarm response time:	15 sec.	15 sec.	15 sec.
Sensitivity Test:	See detector label	See detector label	See detector label
Current Requirements: (Using No Accessories)			
Max. standby current:	21 mA @ 24VDC	65 mA RMS @ 24VAC 60Hz	20 mA RMS @ 120VAC 60Hz
Max. alarm current:	65 mA @ 24VDC	135 mA RMS @ 24VAC 60Hz	35 mA RMS @ 120VAC 60Hz

Contact Ratings

Alarm initiation contacts: (SPST)	2.0A @ 30 VDC (resistive)
Alarm auxiliary contacts: (DPDT)	10A @ 30 VDC (resistive); 10A @ 250 VAC (resistive); 1/2 HP @ 240 VAC ; 1/4 HP @ 120 VAC
Note: Alarm auxiliary contacts shall not be connected to initiating circuits of control panels. Use the alarm initiation contact for this purpose.	
Supervisory contacts: (SPDT)	2.0A @ 30 VDC (resistive); 2.0A @ 125 VAC (resistive)

Accessory Current Loads at 24 VDC

Device	Standby	Trouble	Alarm
P271-APA151	12.5 mA	n/a	30 mA Max.
P271-MHW	0 mA	n/a	29 mA Max.
P271-RA100Z	0 mA	n/a	12 mA Max
P271-RTS151/P271-RTS151KEY	0 mA/12 mA	n/a	12 mA Max.
P271-RTS2-AOS	30 mA Max.	16.0 mA Max.	55.0 mA Max. (with AOS strobe)

Note: Any combination of accessories may be used such that the given accessory loads are: 110mA or less at the Aux output, and 50mA or less at the Alarm output.

Note: To maintain the watertight properties of the P270-D4120W watertight duct smoke detector, watertight conduit and fittings must be used. Mount the product with the conduit holes facing downward, if possible.

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Totalline® Duct Smoke Detector Accessories and Ordering Information



P271-RTS151 P271-RTS151KEY P271-APA151 P271-RA100Z P271-MHW P271-AOS P271-RTS2-AOS

Duct smoke detector accessories add functionality to the duct smoke detection system by allowing quick, convenient inspections at eye level and effective audible and visible notification options. All Totalline® duct smoke detectors and accessories are UL listed.

Part Number Ordering Information

Duct Detectors

Part No.	Duct Detectors
P270-3000PL	4-Wire Photoelectric Duct Smoke Detector
P270-3000C	4-Wire Photoelectric Duct Smoke Detector for Canada
P270-D4120W	4-Wire Watertight Photoelectric Duct Smoke Detector
P270-D4S	4-Wire Photoelectric Sensor Only
P270-D4P120	4-Wire Photoelectric Power Component Only
P271-2D51	4-Wire photoelectric Sensor Head

Sampling Tubes

Part No.	Sampling Tubes
P271-DST-1.5	1.5 ft. Metal Sampling Tube
P271-DST-3	3 ft. Metal Sampling Tube
P271-DST-5	5 ft. Metal Sampling Tube
P271-DST-10	10 ft. Metal Sampling Tube
P271-ETX	Metal Exhaust Tube Extension

Accessories

Part No.	Accessories
P271-APA151	Piezo Annunciator
P271-RTS2	Two Sensor Multi-signaling Accessory
P271-RTS2-AOS	Two Sensor Multi-signaling Accessory with Strobe
P271-AOS	Two Sensor Add-on Strobe for Multi-accessory
P271-RTS151	Remote Test Station
P271-RTS151KEY	Remote Test Station with Key
P271-RA100Z	Remote Annunciator
P271-MHW	Mini-Horn White

Sampling Tube Installation



The sampling tube may be installed from the front or back of the detector. The tube locks securely into place and can be removed by releasing the front or rear locking tab (front locking tab shown below right).