

## 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

### Electrical Ratings

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

## 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.



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

## 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

Electrical Ratings, Contact Ratings, & Accessory Current Information is the same as P270-3000PI

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

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.

### Totaline® Duct Smoke Detector Accessories and Ordering Information

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 Totaline® duct smoke detectors and accessories are UL listed.



| 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                    |

| 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                  |
| P271-DST-10  | 10 ft. Metal Sampling Tube   |
| P271-ETX     | Metal Exhaust Tube Extension |

| 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                                  |



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).

#### 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.