

# TR-DNR / TR-DNRW

## Intelligent Non-Relay Duct Detector

The TR-DNR Intelligent non-relay photoelectric duct smoke detector housing and TR-DNRW watertight non-relay photoelectric duct smoke detector housing (head not included) are for use with Triga Series fire alarm control panels (FACPs).

The TR-DNR and TR-DNRW feature a pivoting housing that is flexible enough to fit configurations from square to rectangular. They feature low-flow technology that enables duct smoke detection throughout a broad range of airflow environments. Many difficult to solve HVAC applications occur in low airflow duct applications where reliable smoke detection is critical. These duct detectors can detect smoke at air speed velocities of 100 feet per minute or greater, while continuing the same reliable performance to 4000 feet per minute.

By sampling air currents passing through a duct and giving dependable performance for shutdown of fans, blowers, and air conditioning systems, the TR-DNR and TR-DNRW prevent the spread of toxic smoke and fire gases through the protected area.

The intelligent duct detectors communicate and are continuously monitored through the FACP signaling line circuit (SLC) loop. Detector sensitivity changes caused by dirt, temperature, or humidity are reported to the FACP, allowing compensation algorithms to maintain the detector's set sensitivity. An advanced indication at the panel identifies the detector address, allowing for selected maintenance to be performed as needed.

### INSTALLATION

The TR-DNR and TR-DNRW are designed for use in air handling systems that have air velocities or 100 to 4000 feet per minute (0.5-20.3 m/s).



**TR-DNR**

## FEATURES & BENEFITS

- Photoelectric, integrated low-flow technology
- Air velocity rating from 100 to 4000 feet per minute (0.5 to 20.32 meters per second)
- Support for Class B or Class A wiring
- Sampling tube installs from front or back of the detector with no tools required
- Available space within housing to accommodate mounting of relay module
- Easy to clean
- Provides trouble signal in the event the sensor cover is removed or improperly installed
- Easily accessible code wheels on sensor head (TR-PHOTO-R-W/ TR-PHOTO-R-IV sold separately)
- UL recognized field replaceable power and sensor boards
- Transparent cover for convenient visual inspection
- UL 268A listed
- Remote testing capability
- TR-DNRW is listed as a watertight enclosure allowing for use in the most extreme environments



## Technical Specifications

### PHYSICAL

**(Rectangular):** 14.38" (37 cm) L x 5" (12.7 cm)

W x 2.5" (6.6 cm) D

**(Square):** 7.75" (19.7cm) L x 9" (22.9cm)

W x 2.5" (6.35cm) D

**Weight:** 1.6 lb.

### ENVIRONMENTAL

**Operating Temperature:** -4°F to 158°F (-20°C to 70°C)

**Humidity:** 0 to 95% non-condensing

### AIR VELOCITY

100 to 4000 ft/min (0.5 - 20.3 m/s)

### ELECTRICAL

Please see detector head installation manual for electrical specifications

### ORDERING INFORMATION

**TR-DNR:** Intelligent non-relay duct smoke detector

**TR-DNRW:** Watertight non-relay duct smoke detector

**TR-PHOTO-R-W/TR-PHOTO-R-IV:** Addressable Photoelectric Detector

with remote test capability (not included with TR-DNR)

**TR-RELAY:** Addressable Relay Module, must be added if relay function is required, (fits in housing)

### ACCESSORIES

**DST1:** Metal Sampling Tube Duct Width up to 1'

**DST1-5:** Metal Sampling Tube Duct Widths 1' - 2'

**DST3:** Metal Sampling Tube Duct Widths 2' - 4'

**DST5:** Metal Sampling Tube Duct Widths 4' - 8'

**DST10:** Metal Sampling Tube Duct Widths 8' - 12'

**DH400OE-1:** Weatherproof Enclosure

**EXT:** Metal Exhaust Tube Duct width 1'

**TR-RA100Z:** Remote LED Annunciator

### COMPATIBILITY

The TR-DNR and TR-DNRW are compatible with the following Triga Series FACPs:

- TR-2100R / TR-2100B
- TR-2100ECSR / TR-2100ECSB
- TR-R2100R / TR-R2100B

This document is not intended to be used for installation purposes. We try to keep our product information up-to date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.

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