



Intelligent Non-Relay Duct Detector

DNR/DNRW

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

The DNR and 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 DNR and 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.

Features

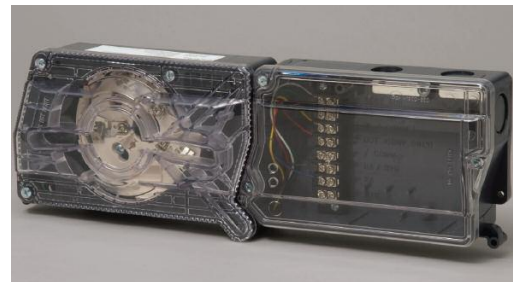
- Photoelectric, integrated low-flow technology (IDP-Photo detector head sold separately)
- Air velocity rating from 100 to 4000 feet per minute (0.5 to 20.32 meters per second)
- Support for Class B or Class A wiring
- Patented sampling tube installs from front or back of the detector with no tools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

Agency Listings



MEA

225-02-E Vol. V



DNR

Installation

The DNR and 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).

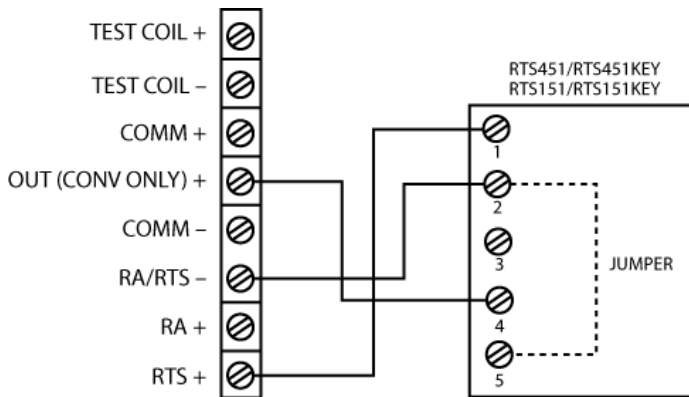
Compatibility

The DNR and DNRW are compatible with the following FACPs:

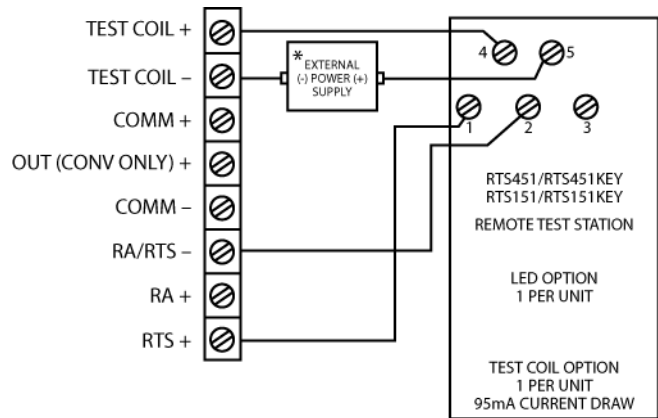
- IFP-2000 / RPS-2000 Intelligent Fire Panel
- IFP-1000 Intelligent Fire Panel
- IFP-100 Intelligent Fire Panel
- IFP-50 Intelligent Fire Panel
- IFP-25 Intelligent Fire Panel

Wiring for Intelligent Non-Relay Duct Smoke Detector

DNR to RTS451/RTS451KEY/RTS151/RTS151KEY with "R" Remote test capable detector head option:



DNR to RTS451/RTS451KEY/RTS151/RTS151KEY with DCOIL option *: (Non remote test capable housing)



*Important Notes:

(for non remote test capable housing)

- The use of either RTS151 or RTS151KEY requires the installation of an accessory coil, DCOIL, sold separately. Please refer to the DNR or DNRW installation manual for more information
- The RTS151/RTS151KEY test coil circuit requires an external 24VDC power supply which must be UL listed

Specifications

Physical

(Rectangular): 14.38 in (37 cm) Length; 5in (12.7 cm) Width; 2.5 in (6.6 cm) Depth

(Square): 7.75 in (19.7cm) Length; 9 in (22.9cm) Width ; 2.5 in (6.35cm) Depth

Weight: 1.6lb (0.73kg)

Environmental

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

Humidity: 0% – 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

DNR	Intelligent non-relay duct smoke detector
DNRW	Watertight non-relay duct smoke detector
IDP-PhotoR	Addressable Photoelectric Detector with remote test capability (not included with DNR)

IDP-Relay

Addressable Relay Module, must be added if relay function is required, (fits in housing)

Accessories

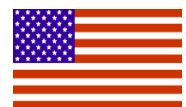
DST1	Metal Sampling Tube Duct Width up to 1'
DST1-5	Metal Sampling Tube Duct Widths 1' - 2'
DST3	Metal Sampling Tube Duct Widths 2' – 4'
DST5	Metal Sampling Tube Duct Widths 4' – 8'
DST10	Metal Sampling Tube Duct Widths 8' – 12'
DH400OE-1	Weatherproof Enclosure
EXT	Metal Exhaust Tube Duct width 1'
RA100Z	Remote LED Annunciator
DCOIL	Duct Accessory Coil. (see important note for detail)
RTS151	Magnetic Remote Test station
RTS151KEY	Key-Activated Remote Test station
M02-04-00	Test Magnet
P48-21-00	Replacement End Cap for Metal Sampling Tube
APA151	Remote annunciator with piezo alarm



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by Honeywell

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. For more information, contact Silent Knight 12 Clintonville Road, Northford, CT 06472-1610 Phone: (800) 328-0103, Fax: (203) 484-7118. www.farenhyt.com



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