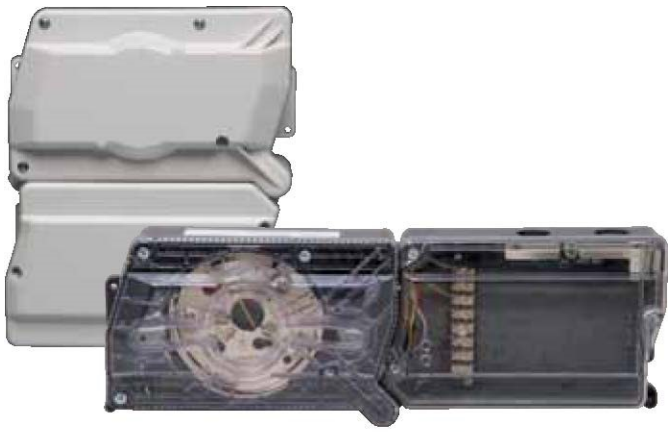
Kingfisher Company, inc.

Intelligent Non-Relay Photoelectric Duct Smoke Detector KFDNR



Description:

The **KFDNR** and **KFDNRW** are intelligent (addressable) non-relay photoelectric duct smoke detectors. The KFDNR and KFDNRW both feature an adjustable housing design that fits square and rectangular installation footprints, mounts to both round and rectangular ductwork, and utilizes tool-free, plug-in sampling tubes for increased application flexibility and installation ease.

These units sense smoke in 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). For even more extreme environments like rooftops, the KFDNRW's NEMA 4-rated watertight and UV-resistant housing protects against windblown dirt and dust, rain, and hose directed water, enabling it to be installed without a costly enclosure, saving time and money.

The KFDNR housing cover isolates the sensor head from the low-flow feature for simple maintenance, and a cover tamper feature initiates a trouble signal for a removed or improperly installed sensor cover.

The housing also provides a ¾-inch conduit knockout and ample space to facilitate easy wiring and mounting of a relay module to meet specific application requirements. These detectors can be customized to meet local codes and specifications without additional wiring.

WARNING: Duct smoke detectors have specific limitations.

Features:

- Photoelectric, integrated low-flow technology (detector head sold separately)
- Air velocity rating from 100 ft/min to 4,000 ft/min
- Adjusts to square and rectangular mounting configurations
- Broad ranges for operating temperature (−4°F to 158°F) and humidity (0% to 95% non-condensing)
- Patented tool-free, plug-in sampling tubes
- New cover tamper signal
- Increased wiring space with a new ¾-inch conduit knockout
- Housing has space for mounting a relay module
- Easily accessible code wheels on sensor head (sold separately)
- Clear cover for convenient visual inspection
- UL 268A listed
- Remote testing capability
- Requires com line power only
- NEMA Type 4 UL listed for non-hazardous indoor and outdoor applications (**DNRW only**)
- UV-resistant, UL-listed housing and cover material (**DNRW only**)

Specifications:

Air Duct Velocity:	100 to 4,000 ft/min (0.5 to 20.32 m/s)
Operating Temperature:	–4° to 158° F (–20° to 70° C); 32° F to 120° F (0° C to 49° C) with module installed in the DNR
Storage Temperature:	–22° to 158° F (–30° to 70° C)
Humidity:	0% to 93% Relative Humidity Non-condensing
Air Velocity:	100 to 4000 ft./min. (0.5 to 20.3 m/sec.)
Rectangular Footprint Dimensions:	14.38 in L × 5 in W × 2.5 in D (37 cm L × 12.7 cm W × 6.36 cm D)
Square Footprint Dimensions:	7.75 in L × 9 in W × 2.5 in D (19.7 cm L × 22.9 cm W × 6.35 cm D)
Weight:	1.6 pounds; 0.73 kg
Environmental Rating:	NEMA 4 (DNRW only)
Electrical	See applicable detector head installation manual for electrical specifications.

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Specifications continued:

Accessory Current Loads at 24VDC

ACCESSORY DEVICE	STANDBY	ALARM
KFRA100Z	0mA	12mA Max.
KFRTS151 / KFRTS151KEY	0mA	12mA Max.
RTS451KEY/RTS151KEY	0mA	12mA Max.

ORDERING INFORMATION

KCi #	Model #	Description
52833	KFDNR	Duct Smoke Detector Housing (Requires 52802 or 52851 Smoke Detector Head)
52834	KFDNRW	Duct Smoke Detector Housing Watertight, NEMA 4,(Requires 52802 or 52851 Smoke Detector Head)
52802	KF2251B	Smoke Detector Head (If used with KFRTS151 or KFRTS151 Key, DCOIL is re-quired.
52851	KF2251BR	Smoke Detector Head (Can use KFRTS151 or KFRTS151 Key, without DCOIL.
52836	KFDST3	Sampling Tube- 3', for 2'-4' Duct
52837	KFDST5	Sampling Tube- 5', for 4'-8' Duct
52838	KFDST10	Sampling Tube- 10', for 8'-10' Duct
52835	KFDCOIL	Remote Test Coil, 2-wire- required for use with 52842, 52843
52842	KFRTS151	Remote Test/Reset – Switch, Alarm and Power LED's
52843	KFRTS151KEY	Remote Test/Reset - Keyed, - Key switch, Alarm and Power LED's
52844	KFRA100Z	Remote Alarm Led
52833-DTS		Specification Data Sheet

Kingfisher Company, inc., products must be used within their published specifications and must be PROPERLY specified, applied, installed, operated, maintained and operationally tested in accordance with their installation instructions at the time of installation and at least twice a year or more often and in accordance with local, state and federal codes, regulations and laws. Specification, application, installation, operation, maintenance and testing must be performed by qualified personnel for proper operation in accordance with all of the latest National Fire Protection Association (NFPA), Underwriters' Laboratories (UL), National Electrical Code (NEC), Occupational Safety and Health Administration (OSHA), local, state, county, province, district, federal and other applicable building and fire standards, guidelines, regulations, laws and codes including, but not limited to, all appendices and amendments and the requirements of the local authority having jurisdiction (AHJ).

NOTE: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with King-Fisher Company, inc., standard terms and conditions

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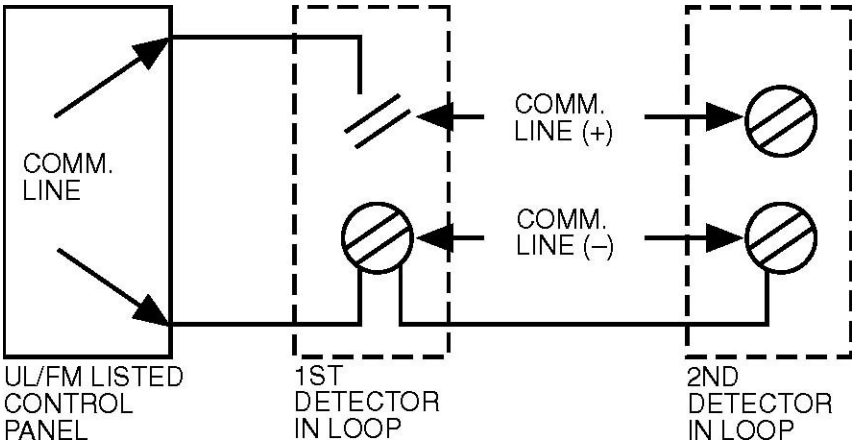
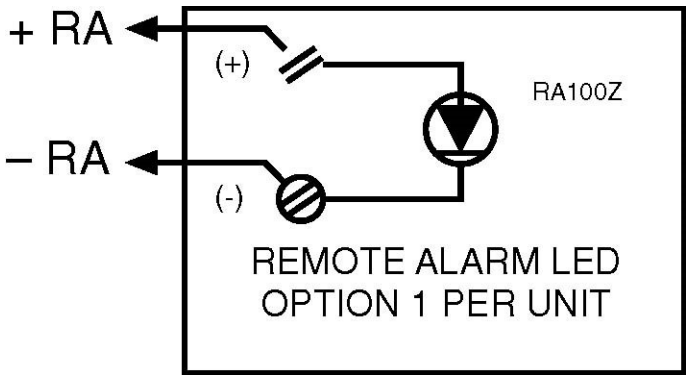
DRAWINGS OR DIAGRAMS

Wiring for Intelligent Non-Relay Duct Smoke Detector:

System Wiring diagram for KFDNR



KFDNR to KFRA100Z



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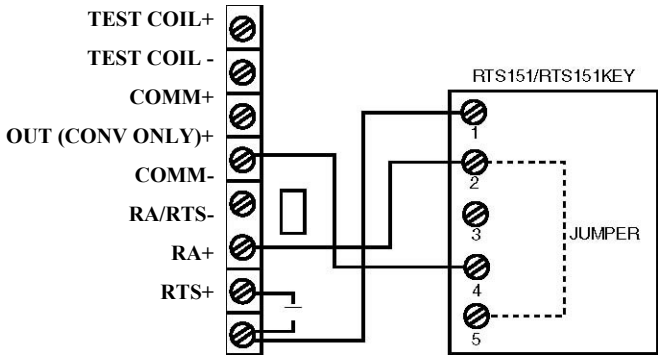
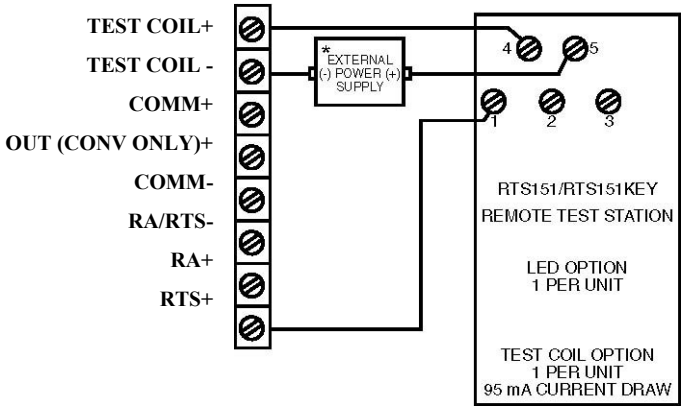
Wiring for Intelligent Non-Relay Duct Smoke Detector: continued

KFDNR to KFRTS151/KFRTS151KEY
With "R" Remote Test Capable Detector heat Option (KF2251BR)



KFDNR to KFRTS151/KFRTS151KEY with DCOIL Option



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