

2-Wire Air Duct Smoke Detector



A UTC Fire & Security Company

Models DH-60 (2W)

F-70.06

FEATURES

- Approvals/Listing
 - UL 268A Listed File S1064
 - Factory Mutual Approved
 - CSFM Listed #3240-1076:121
 - NYC MEA Listed #134-95-E
 - City of Los Angeles Approved #RR8318
- 24 Vdc Operation
- Connects to Fire Alarm Control Panel Initiating Circuit
- Compatible with Fenwal Advanced Smoke Detectors
- In-place Sensitivity Measurement (in % per foot obscuration)
- Remote Indication, Test and Reset Capabilities
- Easily Mounts to Round or Rectangular Ducts
- Wide Range of Duct Sizes and Air Velocities
- Clear Lexan Cover for Easy Viewing of Smoke Detector Status and Cleanliness

DESCRIPTION

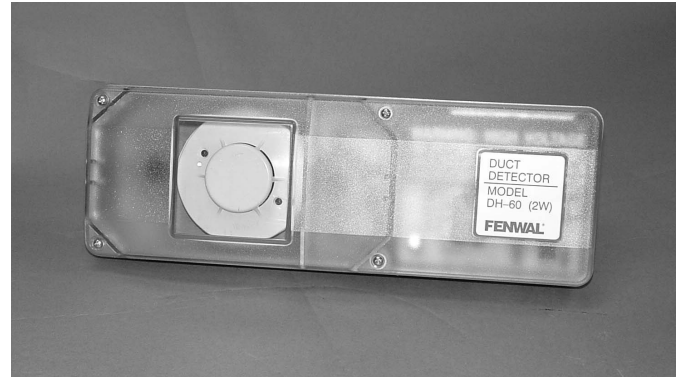
The Fenwal Series DH-60 (2W) Air Duct Smoke Detector is designed for detecting particles of combustion in air handling systems. The DH-60 (2W) Duct Detector housing accepts the Fenwal Advanced CPD-7054D Ionization and PSD-7157D Photoelectric Smoke Detector Heads.

The DH-60 (2W) Detector connects to the Initiating Circuit of a UL Listed compatible Fire Alarm Control Panel and upon detection of pre-set smoke levels, puts the panel in a state of alarm. The panel may then control a variety of devices, such as HVAC fans and dampers to prevent the spread of smoke throughout the facility. A transparent Lexan cover over the detection chamber allows visual inspection of the duct detector's chamber and the internal smoke detector status. Sampling is accomplished by sampling tubes that extend into the HVAC duct. Outputs provided can accommodate remote alarm and power indication, remote test and remote reset. Fenwal offers a range of remote accessories that operate in conjunction with the duct detectors.

APPLICATION

The Fenwal Series DH-60 Duct Detectors are suited for use with HVAC systems in commercial, industrial and institutional fire alarm applications.

The DH-60 is easily mounted to both rectangular and round ducts from 8 inches (200 mm) to 12 feet (3.6 m) wide and is compatible with all ducts with air velocities between 500 and 4000 feet per minute (2.5 to 20 m/s).



The Ionization and Photoelectric Smoke Detector heads listed above operate over this entire air velocity range.

SAMPLING TUBES

The operation of the DH-60 (2W) Duct Detector is based upon an air sampling principle. Two tubes extend into the HVAC duct to transport air from inside the duct into the duct detector sensing chamber and back out to the duct. If the sampled air contains a concentration of smoke greater than or equal to the alarm threshold of the internal smoke detector, the unit will alarm. The duct detector inlet supply sampling tube is selected according to the size of the HVAC duct. A separate exhaust tube is not required since an integral exhaust tube is molded into the housing to simplify installation.

REMOTE INDICATORS/CONTROLS

A series of easily installed remote indicators are available to add versatility and flexibility to the Fenwal Series DH-60 (2W) Duct Detectors. These attractive and functional devices provide convenient status information along with remote Test/Reset capabilities. The remote indicators are helpful when the detector is out of view or located in relatively inaccessible locations. Figure 2 shows the faceplates of the RA 911 and RA 914 remote indicator controls.

FUNCTIONAL TESTING AND SENSITIVITY MEASUREMENT

The Fenwal DH-60 (2W) Duct Detectors should be tested upon installation and once a year thereafter as stated in NFPA 72. All alarm signal devices, releasing devices, and extinguishing systems, as applicable should be disengaged before the test is performed and re-engaged at the conclusion of testing.

The DH-60 Duct Detector may be functionally tested either by introducing smoke into the detector or activating the magnet test. Two separate magnet-locating slots are provided on the outside of the duct detector housing.

Further, as stated in NFPA 72, Detector sensitivity should be checked within one year of installation and every alternative year thereafter. Fenwal offers the Model DST-003 handheld wireless infrared sensitivity tester that allows the sensitivity of installed operating detectors to be measured from the floor level. For details, please refer Fenwal Document 06-236524-001.

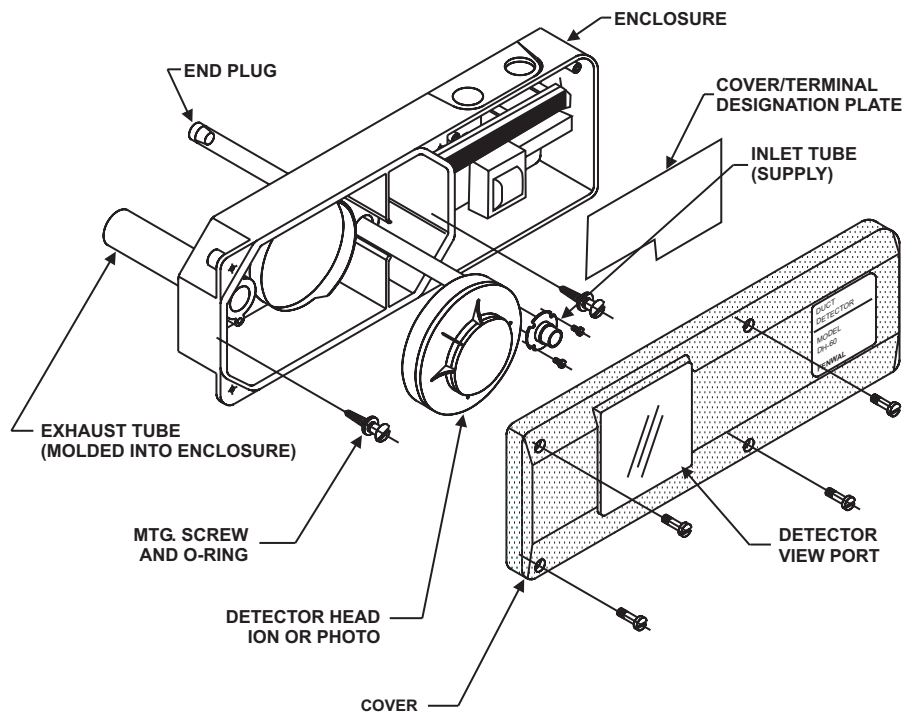


Figure 1. DH-60 (2W) Parts Breakdown

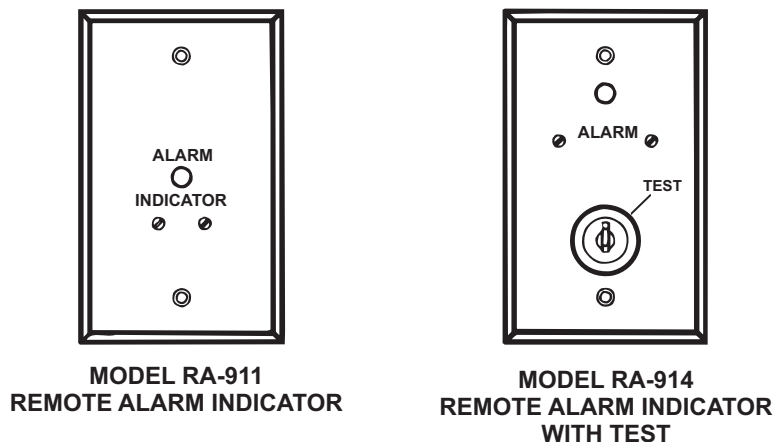


Figure 2. Remote Alarm Indicators

TECHNICAL SPECIFICATIONS

Tables 1 and 2 list the technical specifications of the DH-60 (2W) Duct Detector.

Table 1: DH-60 (2W) Input Voltage and Current Ratings

Power Source	Input Voltage Range	Average Standby Current	Maximum Standby Current	Maximum Alarm Current
24 Vdc	10.2 - 36.8	PSD-7157D 55 mA CPD-7054D 60 mA	70 mA	100 mA

Notes:

- For a list of UL Listed compatible Fire Alarm Panels, please refer to Fenwal Document F-70-63
- UL Compatibility ID # FE52A
- The maximum alarm current is limited by the panel

Table 2: Remote Indicator Ratings

Model	Description	Standby	Alarm
RA-911	Remote Alarm Indicator	0 mA	20 mA
RA-914	Remote Alarm Indicator with Test	0 mA	20 mA

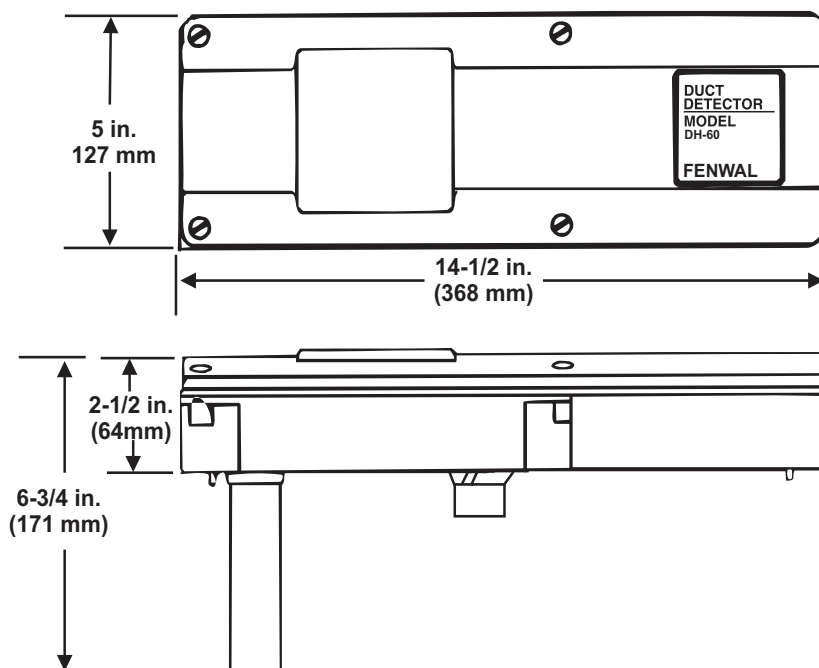


Figure 3. DH-60 (2W) Dimensions

Table 3: Ordering Information

Part Number	Model	Description
Duct Detector and Housings		
70-600000-200	DH-60 (2W)	2-Wire Duct Housing less Detector with Integral Exhaust Tube
70-600000-257	DH-60-2APD	DH-60 (2W) with <i>Advanced</i> Photoelectric Detector PSD-7157D
70-600000-254	DH-60-2ACD	DH-60 (2W) with <i>Advanced</i> Ionization Detector CPD-7054D
Duct Detector Sampling Tubes		
06-129500-001		12 in. (305 mm) Long Air Sampling Tube
06-129500-002		24 in. (610 mm) Long Air Sampling Tube
06-129500-003		48 in. (1219 mm) Long Air Sampling Tube
06-129500-004		72 in. (1829 mm) Long Air Sampling Tube
06-129500-005		96 in. (2438 mm) Long Air Sampling Tube
06-129500-006		120 in. (3048 mm) Long Air Sampling Tube
06-129554-001		Optional Exhaust Tube Assembly
Duct Detector Accessories and Test Equipment		
06-117883-001		Test Magnet
70-500000-003	DST-003	Sensitivity Tester for <i>Advanced</i> CPD-7054D and PSD-7157D Heads
Remote Indicators		
70-200000-911	RA-911	Remote Alarm Indicator
70-200000-914	RA-914	Remote Alarm and Test Indicator
Spare Parts		
06-118012-001		Key for RA-914
06-235201-001	06-235201-001	DH-60 (2W) Manual
70-540000-002	CPD-7054D	<i>Advanced</i> Ionization Detector Head
71-570000-002	PSD-7157D	<i>Advanced</i> Photoelectric Detector Head

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