

Innovair™

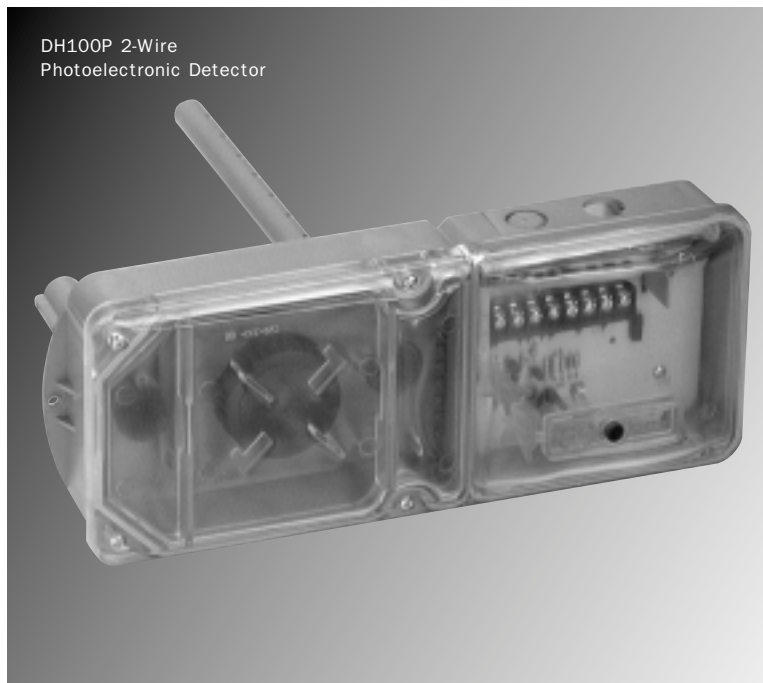
2-Wire Low-Profile Duct Smoke Detector



Model

DH100P 2-Wire Photoelectronic
Detector

DH100P 2-Wire
Photoelectronic Detector



Product Overview

Outside mounting tabs

Patented plastic sampling tube

**UL recognized field-replaceable power
and sensor boards**

Built-in reset button

Easy to clean

12/24 VDC operation

Photoelectronic models available

Remote test station option

**Air velocity rating from 500 to
4000 FPM**

Remote annunciator option

**Easy and quick mounting to round or
rectangular ducts from 1'-12' wide**

**Textured cover for convenient visual
inspection**

UL 268A listed

3-year warranty

The System Sensor DH100 2-wire duct smoke detector is available as a photoelectronic model. This new design allows for simplified cleaning and maintenance. The DH100 samples air currents passing through a duct and gives dependable performance for management of fans, blowers, and air conditioning systems, preventing the spread of toxic smoke and fire gases through the protected area.

WARNING: Duct smoke detectors have specific limitations.

DUCT SMOKE DETECTORS ARE:

NOT a substitute for an open area smoke detector,
NOT a substitute for early warning detection, and
NOT a replacement for a building's regular fire
detection system.

Refer to NFPA 72 and 90A for additional duct smoke detector
application information.



Architectural/Engineering Specifications

The air duct smoke detector shall be a System Sensor Model DH100 Series Duct Smoke Detector. The detector housing shall be UL listed per UL 268A specifically for use in air handling systems. The detector shall operate at air velocities of 500 feet per minute to 4000 feet per minute. It shall be capable of local testing via magnetic switch or remote testing using the RTS451KEY Remote Test Station. The unit shall be reset by local reset button or RTS451KEY. The duct detector housing shall incorporate an airtight smoke chamber in compliance with UL 268A, Standard for Smoke Detectors for Duct Applications. The housing shall be capable of mounting to either rectangular or round ducts without adapter brackets. An integral filter system shall be included to reduce dust and residue effects on detector and housing, thereby reducing maintenance and servicing. Sampling tubes shall either be plastic or be easily installed after the housing is mounted to the duct by passing through the duct housing. The enclosure shall meet all applicable NEC and NFPA standards regarding electrical junction boxes. Terminal connections shall be of the strip and clamp method suitable for 12-18 AWG wiring.

Standard Specifications

Size

14³/₈" (37 cm.)L

5¹/₂"(14 cm.)W

2³/₄"(7 cm.)D

Shipping Weight

3¹/₄ lbs.

Operating Temperature Range

32° to 131° F (0° to 55° C)

Operating Humidity Range

10% to 93% relative humidity

Air Duct Velocity

500 to 4000 ft./min.

Electrical Ratings

System Voltage

12/24 VDC

Ripple Voltage

4 Volts peak to peak

Start-up Capacitance

0.02μF maximum

Standby Ratings

8.5 VDC minimum

35 VDC maximum

120μA maximum

Alarm Ratings

4.2 VDC minimum at 10mA

6.6 VDC maximum at 100mA

Alarm current must be limited to 100mA or less by the control panel. If used, the RA400Z remote lamp operates within the specified alarm currents

Reset Voltage:

2.50 VDC minimum

Reset Time:

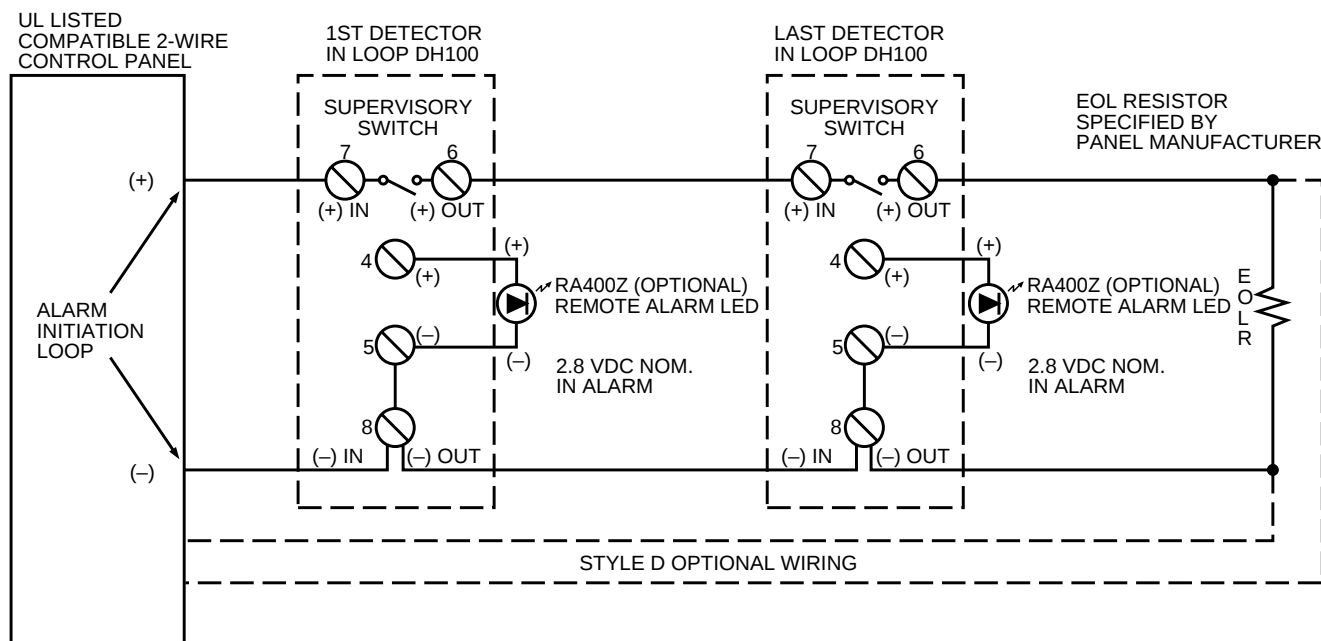
0.3 Sec. maximum

Start-up Time

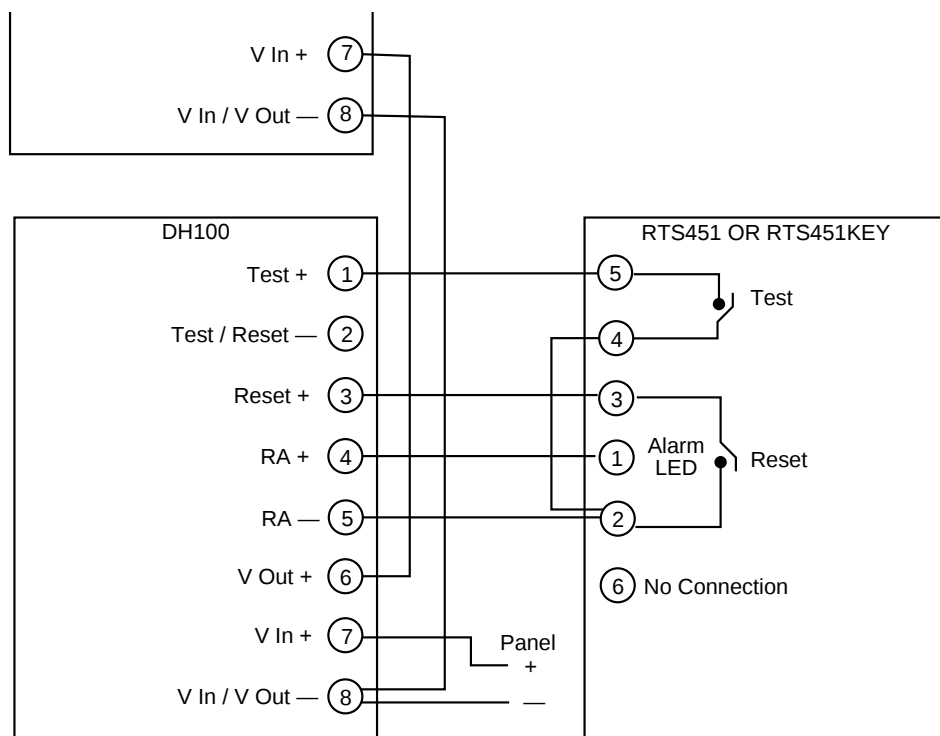
34.0 Sec. maximum

DH100 Wiring Guide

System wiring diagram for 2-wire duct smoke detectors (detectors powered from initiating device circuit)



Wiring diagram for RTS451KEY Remote Test Station to 2-wire duct smoke detectors



Coil Note

Please note that the magnetic coil supplied with the RTS451/RTS451KEY **is not required** when these accessories are used with the DH100 detectors. The functionality of the magnetic coil has been designed into the circuitry of the Innovair™ duct smoke detectors.

Ordering Information

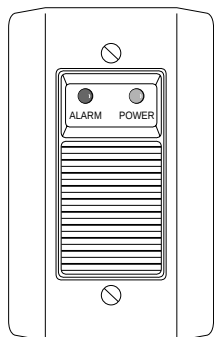
Part Number	Description
DH100P	2-wire photoelectronic duct smoke detector
A5069	Replacement photoelectronic detector head
A5061	Replacement 2-wire power board

Accessories

ST-1.5	Metal sampling tube duct widths 1'-2'	MOD400R	Sensitivity test module
ST-3	Metal sampling tube duct widths 2'-4'	F36-09-00	Replacement air filters (two per package)
ST-5	Metal sampling tube duct widths 4'-8'	M02-04-00	Test magnet
ST-10	Metal sampling tube duct widths 8'-12'	P48-21-00	End cap for metal sampling tubes
T80-71-00	Replacement telescoping sampling tube	S08-39-01	Photo replacement screen
P48-55-00	Replacement end cap for T80-71-00	PA400	Mini-Alert sounder
RTS451KEY	Remote test station with key lock (see below)	PS24LO	Mini-Alert add-on strobe
RTS451	Remote test station	PS12/24SLENSC	Ceiling-mount "SMOKE" lens
RA400Z	Remote annunciator alarm LED (see below)	PS12/24SLENSW	Wall-mount "SMOKE" lens
APA451	Remote annunciator with piezo alarm		

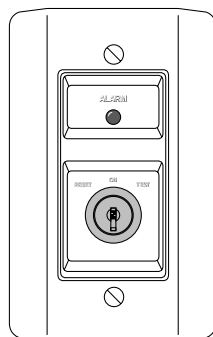
Accessories

System Sensor provides system flexibility with a variety of accessories, including two remote test stations, and several different means of visible and audible system annunciation. As with our duct detectors, all duct smoke detector accessories are UL listed.



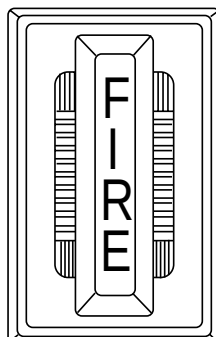
APA451

Piezo Annunciator
(UL S4011)



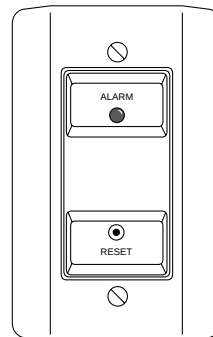
RTS451KEY

Remote Test Station with
Key (UL S2522)



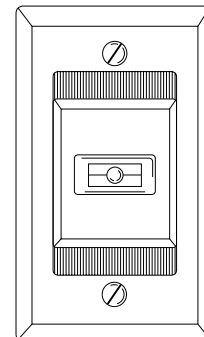
PA400

with PS24LOW Add-on
Strobe (PS12/24SLENSW
smoke lens option available)
(UL S3593)



RTS451

Remote Test Station
(UL S2522)



RA400Z

Remote
Annunciator
(UL S2522)

System Sensor Sales and Service

System Sensor Headquarters

3825 Ohio Avenue
St. Charles, IL 60174
Ph: 800-SENSOR2
Fx: 630/377-6495
Documents On Demand
1-800-736-7672 x3
www.systemsensor.com

System Sensor Canada

Ph: 905.812.0767
Fx: 905.812.0771

System Sensor UK

Ph: 011.44.1403.276500
Fx: 011.44.1403.276501

System Sensor in China

Ph: 011.86.29.524.6253
Fx: 011.86.29.524.6259

System Sensor in Singapore

Ph: 011.65.273.2230
Fx: 011.65.273.2610

System Sensor- Far East

Ph: 011.852.2191.9003
Fx: 011.852.2736.6580

System Sensor- Australia

Ph: 011.613.54.281.142
Fx: 011.613.54.281.172