DH-98 ANALOG DUCT DETECTOR

Duct housing with an ALG-DH analog photoelectric sensor.

STANDARD FEATURES

- Detects and limits the spread of smoke throughout building HVAC ducts
- Compatible with building automation and fire alarm systems
- Installs quickly and easily
- No screens or filters to clean
- Rugged gray steel back box with clear cover
- Accessories - Remote LED alarm indication capability (DH-98-AR only)
- Meets UL 268A Requirements

APPLICATION

The HOCHIKI AMERICA DH-98 Analog duct smoke detector provides early detection of smoke and products of combustion present in air moving through HVAC ducts in Commercial, Industrial and Residential applications. The DH-98 is designed to prevent the recirculation of smoke in areas by the air handling systems, fans and blowers. Complete systems may be shut down in the event of smoke detection. The HOCHIKI AMERICA DH-98-A and the DH-98-AR operate on a DCP powered loop (24 VDC source required for DH-98-AR)

PRODUCT DESCRIPTION

The DH-98 is designed and built to meet all local requirements, as well as the NFPA regulations regarding duct smoke detectors. The DH-98-AR is provided with output terminals for remote accessories such as a horn, strobe, remote status indicators and reset key switches or push buttons. Air sampling is accomplished by two tubes which protrude into the duct. An exhaust tube of one standard length (7.5") is supplied in the installation kit with the smoke duct unit. Once the duct width has been determined the air intake sampling tubes must be ordered. Sampling tubes are supplied in three standard lengths 2.5 ft., 5 ft. and 10 ft. and cut to size to fit the duct.

SPECIFICATIONS

Duct Detector Model #	DH-98-A	DH-98-AR
Detector Head model	ALG-DH	
Detector Head Type	Analog Photoelectric	
Communication	DCP Powered Loop	
Input Voltage	DCP Powered Loop	DCP Powered Loop/ 24V DC
Standby Current	390µA	390µA
Alarm Current	540µA	540µA
Alarm Contacts	N/A	2 form C rated at 10A@250V AC
Sensitivity Test Method	Control Panel	
Remote Indication Compatibility (Refer to DH-98 Accessories)	N/A	Power, Alarm, Horn/Piezo Test
Air Velocity	300 to 4000 ft/min.	
Ambient Temperature	32°F to 100°F (0°C to 38°C)	
Humidity	10% to 85% Relative Humidity (non-condensing)	
Housing Material	18 G.A. steel backbox, clear plastic cover	
Finish	Grey Paint	
Dimensions	91/8"L x 71/4"W x 21/4"H	
Maximum Net Weight	3lbs.	
Sampling Tubes	2.5ft., 5ft. or 10ft.	

Specifications subject to change without notice.

PRODUCT LISTINGS

SIGNALING
UL LISTED
S1383

FM APPROVED
3022559

MEA
NYC Department of Building
284-91-E Vol. 4

California State Fire Marshal
7272-0410:149

Find latest revision at **www.hochiki.com**

Assembled in the USA

ISO 9001:2000 REGISTERED

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PRODUCT DESCRIPTION, *continued*

Mounting the duct smoke unit is accomplished by the use of a template and 4 sheet metal screws, which are provided. Mounting can be achieved without the removal of the clear cover which is secured by 4 capture screws.

The compact DH-98-AR contains 2 sets of form "C" contacts rated at 10 amps.

The pilot and alarm visual indicators, provided on the front of the DH-98-AR duct unit, signal the operating status of the device. A manual test/ reset switch is located along side the visual indicators.
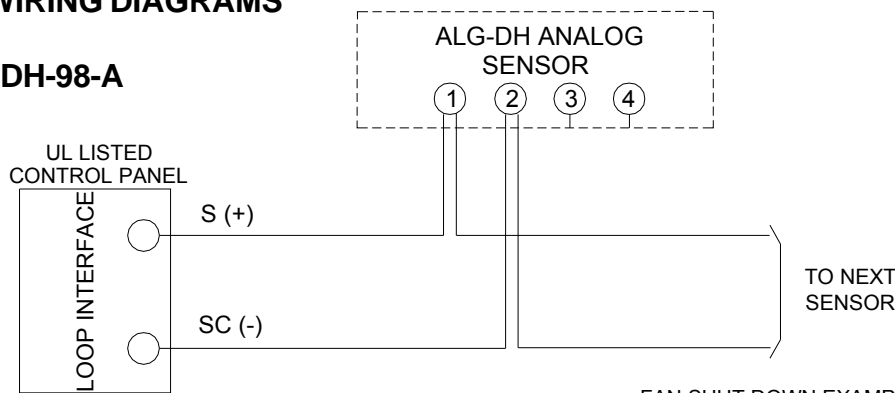
ENGINEERING SPECIFICATIONS

Air duct smoke detectors shall be HOCHIKI AMERICA DH-98 Series. The detectors shall be listed by Underwriters Laboratories per UL 268A. The detectors shall operate at air velocities from 300 feet per minute to 4000 feet per minute.

The duct detector housings shall be of metal construction and complete mechanical installation may be performed without removal of the detector cover. The duct detector shall not require additional filters or screens which must be maintained. The housing shall contain a base which will accept an analog photoelectric sensor head. Terminal connections shall be of the screw type and be a minimum of #6 screw. For installations requiring relay functions, terminals shall be provided for remote pilot, remote alarm indication, strobe/ horn and remote key switch. For installation not requiring relay functions, visual indication of alarm and power must be provided on detector front. A manual reset switch shall be located on the front of the device (DH-98-AR only). All wiring must comply with local codes and regulations.

WIRING DIAGRAMS

DH-98-A

ALG-DH ANALOG SENSOR
① ② ③ ④

UL LISTED CONTROL PANEL
LOOP INTERFACE
S (+)
SC (-)
TO NEXT SENSOR

Note . . . .

The DH-98-A and DH-98-AR are not self-contained sensors. This product is compatible only with fire alarm control panels that utilize Hochiki's Digital Communications Protocol, DCP. For example the FireNET Control Panel.

FAN SHUT DOWN EXAMPLE

DH-98-AR

OBSERVE POLARITY
INPUT VOLTAGE
24 V.D.C.
10 mA Standby
55mA Alarm
(+) (-)

SUPPLY VOLTAGE

FAN

REMOTE ALARM LED
+ +

ADDRESSABLE LOOP
① ② ③ ④ ⑤ ⑥
-

REMOTE PILOT LED

REMOTE TEST SWITCH
(Test function only. does not reset.)

⑦ ⑧ ⑨ ⑩ ⑪ ⑫
NC C NO | NC C NO
ALARM CONTACTS 10.0A @ 250VAC | ALARM CONTACTS 10.0A @ 250VAC

UL LISTED CONTROL PANEL
LOOP INTERFACE
S (+)
SC (-)
ANALOG ADDRESSABLE FIELD LOOP WIRING
TO NEXT SENSOR OR RETURN TO CONTROL PANEL

Terminate Remote Accessories as indicated above (if required).
This is not a self-contained stand alone detector.
A U.L. Listed Analog Addressable Fire System is required.