

# DH500AC/DC

## ANALOGUE ADDRESSABLE DUCT SMOKE DETECTOR WITH RELAY AND 24V OUTPUTS

### FEATURES:

- *Powered outputs for remote LED, remote test and sounder*
- *Two changeover relay contacts*
- *24VAC/DC operation*
- *Continuous sensitivity monitoring from the panel*
- *Analogue addressable ion/photo heads with twist-in/twist-out removal*
- *Air velocity rating from 2.5 m/s to 20 m/s*
- *Remote test station and remote annunciator accessories*
- *Clear polycarbonate cover for easy visual inspection of sampling tube filters*

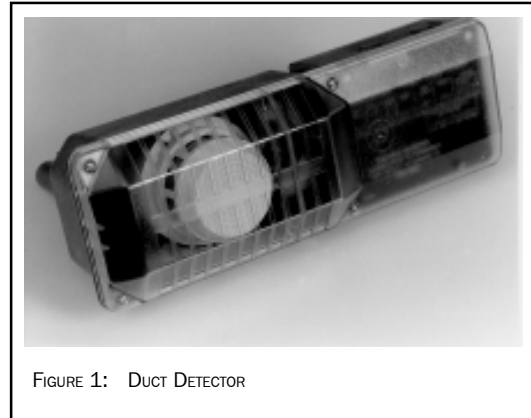


FIGURE 1: DUCT DETECTOR

### DESCRIPTION:

System Sensor's duct detector model DH500ACDC is a duct housing suitable for installation of System Sensor intelligent detectors. The DH500ACDC duct housing samples air currents passing through a duct and gives dependable performance for shutdown of fans, blowers, and air conditioning systems, preventing the spread of toxic smoke and fire gases through the protected area. Using an external 24V AC or DC supply, the unit also provides two changeover relay contacts suitable for electrical equipment shutdown and a powered output suitable for a sounder or a remote LED. If Jumper J5 is broken, then the external power supply is monitored, generating a fault signal at the control panel if the power supply fails. When power supply monitoring is enabled, the sensor does not function in case of a failure of the external power supply.

The DH500ACDC duct housing can accommodate either the 1551E or 2551HRE. The twist-in, twist-out heads allow for quick and easy cleaning or application changes without removing the duct housing.

### SPECIFICATIONS:

Operating Voltage Range (comm. line):	15 to 32 VDC
Max Avg. Standby Current (comm. line):	230µA at 24 VDC (no communication)
Max Avg. Standby Current (comm. line):	330µA (one communication every 5 sec. with LED blink enabled)
LED current (nominal):	6mA at 24VDC
Operating Humidity Range:	10% to 93% Relative Humidity, non-condensing
Operating Temperature Range:	-10°C to +60°C
Length:	367mm
Width:	127mm
Depth:	102mm
Weight:	1.8kg
Duct air velocity:	2.5m/s to 20m/s

### EXTERNAL SUPPLY CURRENT CONSUMPTION:

	Standby	Alarm
24VAC	65mA	182mA
24VDC	26mA	87mA

EUROPEAN HEADQUARTERS  
SYSTEM SENSOR EUROPE  
3 HORSHAM GATES  
HORSHAM  
WEST SUSSEX  
RH13 5PJ  
UNITED KINGDOM  
TEL. : +44 1403 276500  
FAX : +44 1403 276501  
e-mail: Sales@sseuk.com

EUROPEAN MANUFACTURING CENTRE  
PITTMAY TECNOLOGICA SPA  
VIA CABOTO 19  
34147 TRIESTE  
ITALY

TEL. : +39 40 9490 111  
FAX : +39 40 382137



# ACCESSORY DRIVE CURRENT

Maximum Auxiliary Current (Remote Test Station)

80mA (Alarm)

Maximum Alarm Output Current (Remote LED, sounder)

30mA (standby)

Remote Test Station Current (Standby)

20mA

Remote Test Station Current (Alarm)

0mA

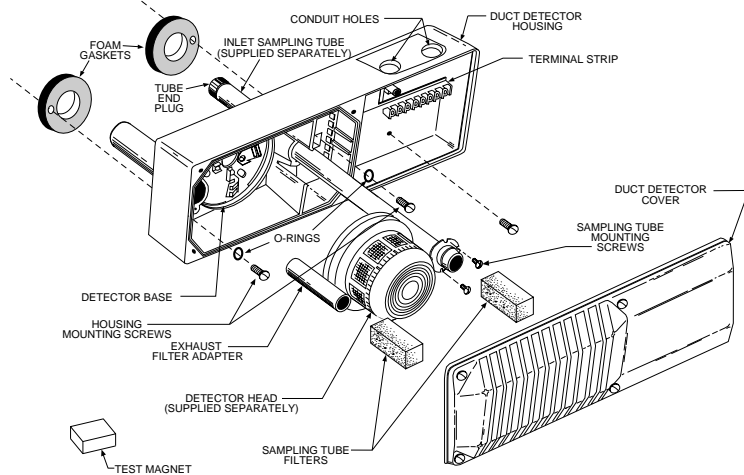
Remote Test Station Current (Magnet present)

7mA (continuous)

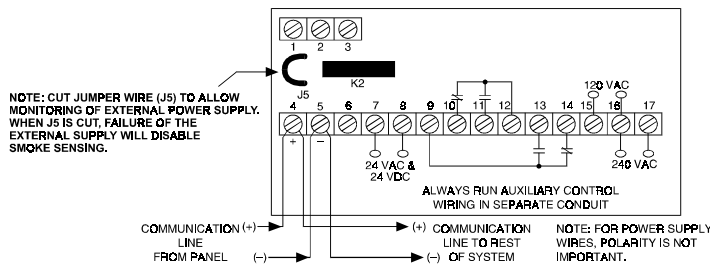
Alarm Output Voltage (Input Voltage 20V -29V)

78mA (max)

18 - 28V



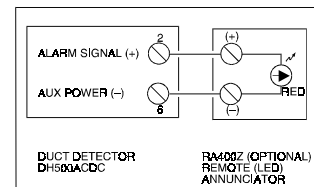
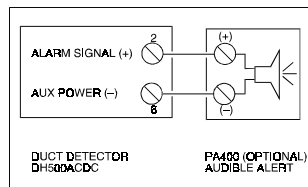
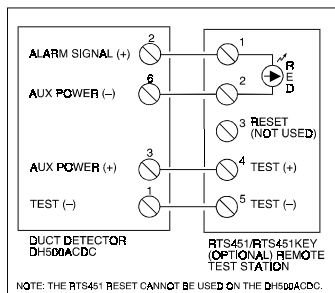
## Exploded View of DH500ACDC Duct Smoke Detector Components



ACCESSORY CURRENT LOADS AT 24VDC		
DEVICE	STANDBY	ALARM
PA400	0mA	15mA MAX
RA40BZ	0mA	7mA MAX
RTS451/RTS451KEY	0mA*	8mA MAX*

ANY COMBINATION OF ACCESSORIES MAY BE USED SUCH THAT THE GIVEN CURRENT LOADS TOTAL:  
 STANDBY STATE: 30mA OR LESS  
 ALARM STATE: 80mA MAX, 24 VDC (TERMINALS 3 & 6), 20mA MAX, AUXILIARY ALARM OUTPUT (TERMINALS 2 & 6).

\*NOTE: WHEN INITIATING AN ALARM, THE RTS451/RTS451KEY REQUIRES 85mA MAXIMUM IN PRE-ALARM AND 103mA MAXIMUM IN ALARM. NOMINAL STANDBY CURRENT IS 8mA, ALARM CURRENT IS 8mA MAXIMUM WHEN TEST MAGNET IS REMOVED.



## DH500ACDC Wiring Diagram