



## Flanged Duct Mounting Probes HPP4 HP40 HP140

**Function:** The HPP4, HP40 and HP140 are Heavy Duty duct mounting Relative Humidity and Temperature probes with military style connectors. The insertion probe is made from stainless steel and the method of duct mounting is by Table E flange. The insertion depth below the flange is 180mm as standard but other lengths are available as an option. The sensor head is separated from the electronics allowing it to operate at temperatures of up to 100°C and pressures of up to 10 bar. The electronics however should not exceed 70°C. The Relative Humidity and Temperature sensors are protected by a sintered bronze guard as standard.

**Application:** The HPP4, HP40 and HP140 are ideally suited for measuring relative humidity and temperature in air conditioning ducts, environmental chambers, drying tunnels, etc.

### SPECIFICATIONS

Please note that the following are typical standard output ranges. We will manufacture instruments to cater for other output ranges within certain limitations. Please contact our internal sales department for further clarification.

#### HPP4 (DC Powered)

**Supply**  
12 Volt DC  $\pm 25\%$ , 10mA max

#### OUTPUTS:

**Relative Humidity**  
0 to 1mA into 5K ohms max representing 0 to 100% RH

**Temperature**  
3 wire PT100 to BS1904

**NB** Connector and 2 metres of lead supplied with the probe

#### HP40 (Mains Powered)

**Supply**  
100 to 120 Volt AC, or  
200 to 240 Volt AC 50/60Hz

**Power Required**  
3 Watts maximum

#### OUTPUTS:

**Relative Humidity**  
4 to 20mA into 1K ohms max representing 0 to 100% RH

**Temperature**  
4 to 20mA into 1K ohms max representing 0 to 100°C

**NB** Each probe comes with mating connectors for supply and signal fittings

#### HP140 (Loop Powered)

**Supply**  
15 to 48 Volt DC loop power supply. The probe takes 10 volts from the loop

#### OUTPUT:

**Relative Humidity**  
4 to 20mA representing 0 to 100% RH

**Temperature**  
No temperature sensor fitted to the HP140

**NB** Each probe comes with a mating connector

#### GENERAL:

**RH Measuring Range**  
0 to 98% RH

**Temperature Measuring Range**  
0 to 100°C

**Accuracy**  
Relative Humidity:  $< \pm 2.0\%$  for 0 to 95% RH  
Temperature:  $< \pm 0.3^\circ\text{C}$

**Operating Temperature Range**  
Sensor:  $-10$  to  $+100^\circ\text{C}$  (with limited excursions up to  $125^\circ\text{C}$ )  
Electronics:  $-10$  to  $+70^\circ\text{C}$

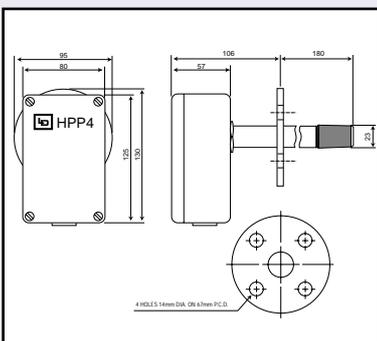
**Storage Temperature Range**  
 $-20$  to  $+70^\circ\text{C}$

**Operating/Storage Humidity Range**  
0 to 95% RH non-condensing

**Weight**  
HPP4 1.1 Kg  
HP40 1.3 Kg  
HP140 0.8 Kg

### MECHANICAL DETAILS

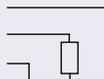
#### HPP4



### TERMINATION DETAILS

#### HPP4

- Terminal
- 1 Red Common Supply/ Output +ve
  - 2 Blue Supply -ve
  - 3 Green Output -ve
  - 4 Yellow
  - 5 White
  - 6 Black



#### HP40

- Terminal
- 1 Live
  - 2 Neutral
  - y Earth

- A RH output +ve
  - B RH output -ve
  - C Temperature output -ve
  - D Temperature output +ve
- (Note: Terminals B & C are commoned within the instrument)

#### HP140

- Terminal
- 1 Supply +ve
  - 2 Not used
  - 3 R<sub>LOAD</sub> to Supply -ve

### ORDERING DETAILS

- (a) Specify probe type required; i.e. HP40
- (b) Specify power supply, i.e. 120 Volt 50 Hz
- (c) Specify if alternative probe length required
- (d) Specify if alternative output ranging required