

## Environmental Wall Mounting Probes HP800 Series

**Function:** The HP800 Series comprises a range of wall mounting Relative Humidity and Temperature probes housed in plastic polycarbonate enclosures. The relative humidity and temperature sensors are protected by a polypropylene cage as standard but can be fitted with a Sintered Bronze or Sintered Stainless Steel guard as an optional extra. This new range has a variety of output types that can be configured at time of order. Furthermore each output can be fed from a separate power supply if loop isolation is required.

**Application:** The HP800 series probes are ideally suited for measuring relative humidity and temperature in air conditioned rooms, clean rooms, computer rooms, laboratory environments, storage areas, etc.



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## 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.

### HP800 (Mains Powered)

#### Supply

100 to 120 Volt AC, or  
200 to 240 Volt AC 50/60 Hz  
(Link Selectable)

#### Power Required

3 Watts maximum

#### OUTPUTS:

representing 0 to 100% RH  
and/or representing 0 to 100°C

- a) 4 to 20mA into 1KΩ max
- b) 0 to 1mA into 20KΩ max
- c) 0 to 1 Volt DC into 62KΩ min

#### Probe Type and Output Options

HP800 RH & Temp outputs  
HP802 RH output only  
HP803 Temperature o/p only

### HP810 (DC Powered)

#### Supply

9 to 30 Volt DC  
25mA max per output channel

#### OUTPUTS:

representing 0 to 100% RH  
and / or representing 0 to 100°C

Output load capability is supply dependent per output channel

- a) 4 to 20mA into –  
typically per output channel  
for 12V DC supply 400Ω max  
for 24V DC supply 1KΩ max
- b) 0 to 1mA into –  
typically per output channel  
for 9V DC supply 6KΩ max  
for 20V DC supply 15KΩ max
- c) 0 to 1 Volt DC into 62KΩ min
- d) PT100, 3 wire to BS1904  
(used for temperature output on HP811 only)

#### Probe Type and Output Options

HP810 RH & Temp outputs  
HP811 RH and PT100 outputs  
HP812 RH output only  
HP813 Temperature output only

### HP820 (Loop Powered)

#### Supply

10 to 48 Volt DC loop power supply. The probe takes 9 volts from the loop

#### OUTPUTS:

representing 0 to 100% RH  
and/or  
representing 0 to 100°C

- a) 4 to 20mA loop powered

#### Probe Type and Output Options

HP820 RH & Temp outputs  
HP822 RH output only  
HP823 Temp output only

## GENERAL:

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

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

**Accuracy**  
Relative Humidity: < ±2.0%  
for 0 to 95% RH  
Temperature: < ±0.3°C

**Operating Temperature Range**  
Electronics: -10 to +70°C

**Storage Temperature Range**  
-20 to +70°C

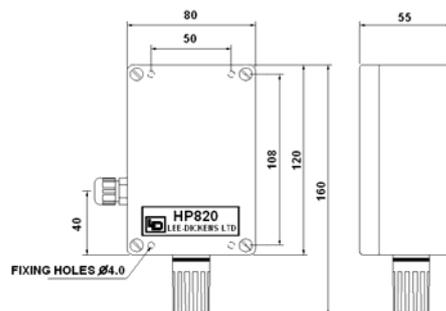
**Operating/Storage Humidity Range**  
0 to 95% RH non-condensing

#### Weights

HP800 0.37 Kg HP820 0.27 Kg  
HP802 0.33 Kg HP822 0.23 Kg  
HP803 0.33 Kg HP823 0.23 Kg

HP810 0.28 Kg  
HP811 0.27 Kg  
HP812 0.27 Kg  
HP813 0.27 Kg

## MECHANICAL DETAILS



## TERMINATION DETAILS

Terminations for the HP800 series comprise pcb mounted screw terminals which are located inside of the enclosure. Access to the terminals is gained by removing the front cover and a termination diagram for the particular model will be located in the lid.

## ORDERING DETAILS

- a) Specify probe type required; i.e. HP800
- b) Specify power supply, i.e. 115 Volt 50 Hz

- c) Specify output options required for both RH and Temperature as appropriate. i.e. 4 to 20mA for both RH and T