

Environmental Duct Mounting Probes HP700 Series

Function: The HP700 Series comprises a range of duct mounting Relative Humidity and Temperature probes with plastic polycarbonate enclosures and stainless steel insertion probes. The method of duct mounting is by compression fitting as standard or by Table E flange as an optional extra. The probe length is 225mm as standard but other lengths are available upon request. The sensors are protected by a Sintered Bronze Guard as standard but can be fitted with a polypropylene cage 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 HP700 series probes are ideally suited for measuring relative humidity and temperature in air conditioning ducts, environmental chambers, drying tunnels, etc.



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Iss 3
8/09

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.

HP700 (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

HP700 RH & Temp outputs
HP702 RH output only
HP703 Temperature o/p only

HP710 (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 HP711 only)

Probe Type and Output Options

HP710 RH & Temp outputs
HP711 RH and PT100 outputs
HP712 RH output only
HP713 Temperature output only

HP720 (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

HP720 RH & Temp outputs
HP722 RH output only
HP723 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
Sensor: -10 to +100°C (with limited excursions up to 125°C)
Electronics: -10 to +70°C

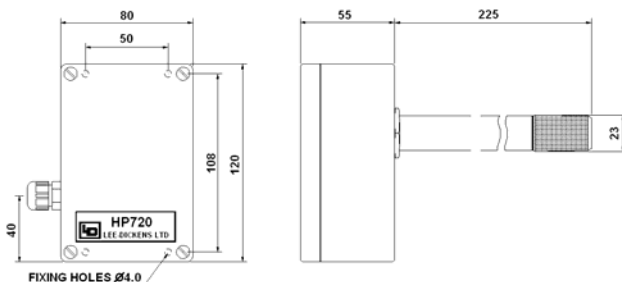
Storage Temperature Range
-20 to +70°C

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

Weights

(with compression fitting)
HP700 0.73 Kg HP720 0.63 Kg
HP702 0.69 Kg HP722 0.57 Kg
HP703 0.69 Kg HP723 0.56 Kg
HP710 0.63 Kg
HP711 0.62 Kg
HP712 0.62 Kg
HP713 0.62 Kg

MECHANICAL DETAILS



COMPRESSION FITTING

HP700 Series probes come as standard with a 22mm x 3/4" BSP male bulkhead / tank compression fitting.

TERMINATION DETAILS

Terminations for the HP700 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. HP700
- b) Specify power supply, i.e. 115 Volt 50 Hz
- c) Specify if alternative probe length required

- d) Specify output type and range required for each channel, i.e. 4 to 20mA for both RH and Temperature
- e) Specify if optional Table E flange required
- f) Specify if sensor guard other than Sintered Bronze required