VAISALA

HMP115 Humidity and Temperature Probe

Features

- Humidity and temperature probe designed for use with RFL100, CWL100, and VDL200 data loggers
- Measurement temperature range: −40 ... +60 °C (−40 ... +140 °F)
- Proven Vaisala HUMICAP® 180R sensor for excellent stability
- Fast thermal response time
- Low power consumption
- Temperature-only model HMP115T available
- Compatible with Vaisala Insight PC software and Vaisala Indigo80 Handheld Indicator
- Comes with calibration certificate: ±1.5 %RH measurement accuracy (0–90 %RH)

Vaisala HUMICAP® Humidity and Temperature Probe HMP115 is a highly accurate and cost-effective humidity probe with plastic enclosure. It is designed for indoor measurements with compatible Vaisala data loggers.

Designed for use with Vaisala data loggers

HMP115 provides an ideal solution for ambient measurement as it can be directly connected to the housing of Vaisala RFL100, CWL100, and VDL200 data loggers. It can also be connected using a cable for remote probe use.

High performance

HMP115 has a PC/ABS plastic enclosure and is suitable for non-condensing environments with fast temperature changes and a need for high-accuracy measurements with traceability. HMP115 also has excellent chemical tolerance thanks to the proven Vaisala HUMICAP® 180R sensor.

Plastic grid filter provides the fastest response time. For added protection, select the membrane filter or the PTFE filter.

Low power consumption

HMP115 is suitable for battery-powered applications due to its very low power consumption. It also has an extremely fast start-up time.

Variety of calibration options

A quick field calibration can easily be carried out using a handheld device, for example, Vaisala Indigo80 Handheld Indicator or Vaisala Handheld Meter HM40. Alternatively, the probe can be calibrated using a PC with Vaisala Insight PC software and a compatible USB connection cable, or sent to Vaisala for calibration. Vaisala Service Centers offer both ISO 9001 and ISO 17025 calibrations.

Technical data

Measurement performance

Relative humidity	
Measurement range	0–100 %RH
Accuracy [1]	
at 0 … +40 °C (+32 … +104 °F)	±1.5 %RH (0–90 %RH) ±2.5 %RH (90–100 %RH)
at −40 … 0 °C (−40 … +32 °F) and +40 … +60 °C (+104 … +140 °F)	±3.0 %RH (0–90 %RH) ±4.0 %RH (90–100 %RH)
Typical factory calibration uncertainty	±0.8 %RH
Humidity sensor	HUMICAP® 180R
Stability	±2 %RH over 2 years
Temperature	
Measurement range	−40 … +60 °C (−40 … +140 °F)
Accuracy	
at +15 … +25 °C (+59 … +77 °F)	±0.1 °C (±0.18 °F)
at 0 … +40 °C (+32 … +104 °F)	±0.2 °C (±0.36 °F)
at −40 … 0 °C (−40 … +32 °F) and +40 … +60 °C (+104 … +140 °F)	±0.4 °C (±0.72 °F)
Typical factory calibration uncertainty	±0.12 °C (±0.22 °F)
Temperature sensor	Pt1000 RTD Class F0.1 IEC 60751

1) *Including non-linearity, hysteresis, and repeatability.*

Operating environment

Operating temperature	−40 … +60 °C (−40 … +140 °F)
Operating humidity	0–100 %RH, non-condensing
IP rating [1]	IP54

1) *Not applicable with the plastic grid filter.*

Compliance

EU directives and regulations	RoHS Directive (2011/65/EU) as amended by 2015/863
Electromagnetic compatibility (EMC)	EN 61326-1, industrial environment
Compliance marks	CE, RCM

Inputs and outputs

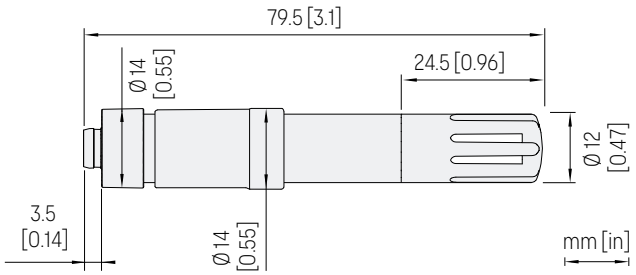
Power consumption	1 mA average, max. peak 5 mA
Operating voltage	5–28 V DC
Start-up time	1 s
Digital output	RS-485 2-wire half duplex, supports Modbus RTU

Output parameters

Output parameter	HMP115	HMP115T
Temperature (°C)	✓	✓
Relative humidity (%RH)	✓	

Mechanical specifications

Cable connector	4-pin M8 (IEC 60947-5-2)
Weight	9 g (0.3 oz)
Materials	
Body	PC/ABS blend
Grid filter	PC (glass reinforced)



HMP115 dimensions

Accessories

Probe holder, 5 pcs	ASM213382SP
USB cable for PC connection	219690
Connection cable for Indigo80 handheld indicator	262195SP
Connection cable for MI70 indicator	219980SP
Connection cable for HM40 handheld meter	HMT120Z300

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