



INTERCAP[®] Humidity and Temperature Probe HMP60



Features

- Miniature-size humidity probe
- Low power consumption
- Measurement range: 0 ... 100 %RH; -40 ... +60 °C
- Cable detachable with standard M8 connector
- Rugged metal housing
- Interchangeable Vaisala INTERCAP[®] Sensor
- Optional RS-485 digital output supports Modbus RTU
- Optional dew point output

HMP60 is a simple, durable and cost-effective humidity probe. It is suitable for volume applications, integration into other manufacturers' equipment, incubators, glove boxes, greenhouses, fermentation chambers, and data loggers.

Easy Installation

The probe cable has a screw-on quick connector for easy installation. Different cable lengths are available. Also other compatible M8 series cables can be used. Accessories are available for different installation needs.

Low Current Consumption

HMP60 is suitable for battery-powered applications because of its very low current consumption.

Several Outputs

There are two configurable voltage outputs with relative humidity, temperature or dew point scaling. Four voltage output ranges are available. An optional RS-485 output with Modbus support is also available.

Rugged Design

HMP60 is designed for extreme conditions. The stainless steel body of HMP60 is classified as IP65. The probe has a sealed structure and the sensor is protected by a membrane filter and a plastic grid, or optionally by a stainless steel filter.

Recalibration Not Needed

The Vaisala INTERCAP Sensor is interchangeable. No recalibration is required; the sensor can simply be replaced, also in the field.

Technical Data

Measurement Performance

Relative Humidity

Measurement range	0 ... 100 %RH
Typical Accuracy:	
Temperature range	0 ... +40 °C
0 ... 90 %RH	±3 %RH
90 ... 100 %RH	±5 %RH
Temperature range	-40 ... 0 °C, +40 ... +60 °C
0 ... 90 %RH	±5 %RH
90 ... 100 %RH	±7 %RH
Humidity sensor	Vaisala INTERCAP®

Temperature

Measurement range	-40 ... +60 °C
Accuracy over Temperature Range:	
+10 ... +30 °C	±0.5 °C
-40 ... +10, +30 ... +60 °C	±0.6 °C

Dew Point

Measurement range	-40 ... +60 °C
Typical Accuracy:	
Temperature range	0 ... +40 °C
When dew point depression ¹⁾ < 15 °C	±2 °C
Temperature range	-40 ... 0 °C, +40 ... +60 °C
When dew point depression < 10 °C ¹⁾	±3 °C

Analog Outputs

Accuracy at 20 °C	±0.2 % of FS
Temperature dependence	±0.01 % of FS/°C

¹⁾ Dew point depression = ambient temperature - dew point

Operating Environment

Operating temperature	-40 ... +60 °C
EMC compliance	EN 61326-1, industrial environment

Mechanical Specifications

IP rating	IP65
Body thread	M12x1 / 10 mm
Cable connector	4-pin M8 (IEC 60947-5-2)
Materials	
Body	Stainless steel (AISI 316)
Grid filter	Chrome coated ABS plastic
Cable	Polyurethane or FEP
Weight	
Probe	17 g
Probe with 0.3 m cable	28 g

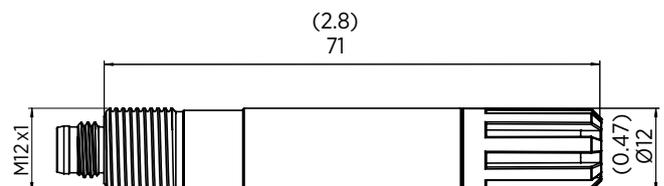
Inputs and Outputs

Power consumption	1 mA average, max. peak 5 mA
Operating Voltage¹⁾	
With 1 V / 2.5 V output	5 ... 28 VDC
With 5 V output	8 ... 28 VDC
With loop power converter	8 ... 28 VDC
With digital output	5 ... 20 VDC
Start-Up Time	
Probes with analog output	4 s at operating voltage 13.5 ... 16.5 VDC 2 s at other valid operating voltages
Probes with digital output	1 s
Outputs	
2 channels	0 ... 1 VDC / 0 ... 2.5 VDC / 0 ... 5 VDC / 1 ... 5 VDC
1-channel loop-power converter (separate module, compatible with humidity accuracy only)	4 ... 20 mA
Digital output (optional)	RS-485 2-wire half duplex, supports Modbus RTU
External Loads	
0 ... 1 V	R _L min. 10 kΩ
0 ... 2.5 V / 0 ... 5 V	R _L min. 50 kΩ

¹⁾ (Use Lowest Available Operating Voltage to Minimize Heating)

Spare Parts and Accessories

Vaisala INTERCAP® Sensor, 1 piece	15778HM
Vaisala INTERCAP® Sensor, 10 pcs	INTERCAPSET-10PCS
4 ... 20mA loop power converter	UI-CONVERTER-1CB
Mounting bracket for converter	225979
Plastic M12 installation nuts, pair	18350SP
USB cable for PC connection	219690
Probe mounting clamp set, 10 pcs	226067
Probe mounting flange	226061
Sensor Protection	
Plastic grid	DRW010522
Membrane filter	DRW010525
Stainless steel sintered filter	HM46670SP
PTFE sintered filter	DRW244938SP
Connection Cables	
0.3 m PU	HMP50Z032SP
3 m PU	HMP50Z300SP
180 °C 3 m FEP	226902SP



Dimensions in mm (inches)



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