VAISALA

Vaisala INTERCAP® Humidity and Temperature Probe HMP60

The HMP60 for extreme conditions.

Features/Benefits

- 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 RS485 digital output

  Optional dew point output
- Applications: volume applications, integration into other manufacturers' equipment, glove boxes, greenhouses, fermentation chambers, data loggers

HMP60

The 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

The 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 RS485 output with Modbus support is also available.

Rugged Design

The HMP60 is designed for extreme conditions. The stainless steel body of the 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

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 < 15 °C	±2 °C
temperature range	-40 ... 0 °C, +40 ... +60 °C
when dew point depression < 10 °C	±3 °C
dew point depression = ambient temperature - dew point	

ANALOG OUTPUTS

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

Inputs and Outputs

Operating voltage	5 ... 28 VDC / 8 ... 28 VDC with
(Use lowest available operating	5 V output
voltage to minimize heating.)	8 ... 28VDC with loop power
	converter
Current consumption	1 mA average, max. peak 5 mA
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)	RS485 2-wire half duplex
External loads	
0 ... 1 V	R_L min 10 kΩ
0 ... 2.5 V /0 ... 5 V	R_L min 50 kΩ

Operating Environment

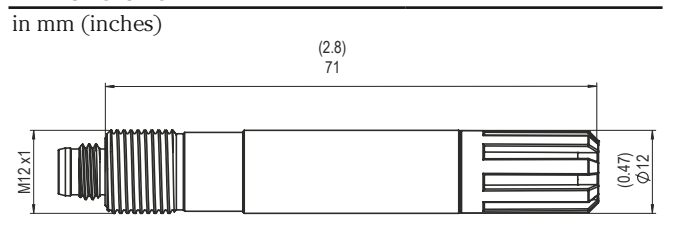|	
Operating temperature	-40 ... +60 °C
Electromagnetic compatibility	EN 61326-1: Electrical equipment for measurement, control and laboratory use – EMC requirements – for use in industrial locations.

Mechanics

Materials	
body	stainless steel (AISI 316)
grid filter	chrome coated ABS plastic
cable	polyurethane or FEP
Housing classification	IP65
Body thread	MI2x1 / 10 mm
Cable connector	4-pin M8 (IEC 60947-5-2)
Weight	
probe	17 g
probe with 0.3 m cable	28 g

Options and Accessories

Vaisala INTERCAP® Sensor, 1 piece	15778HM
Vaisala INTERCAP® Sensor, 10 pcs	INTERCAPSET-10PCS
Sensor protection	
plastic grid	DRW010522
membrane filter	DRW010525
stainless steel sintered filter	HM46670SP
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
Connection cables	
0.3 m PU	HMP50Z032SP
3 m PU	HMP50Z300SP
180 °C 3 m FEP	226902SP

Dimensions

in mm (inches)

VAISALA

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