VAISALA

INTERCAP® Humidity and Temperature Probe HMP63

Features

- Fast thermal response time
- Low power consumption
- Start-up time < 2 s
- Measurement range: 0 ... 100 %RH; -40 ... +60 °C
- Detachable cable with standard 4-pin M8 connector
- Plastic enclosure with IP54 classification
- Interchangeable Vaisala INTERCAP® sensor
- Optional RS-485 digital output
- Optional dew point output

Vaisala INTERCAP® Humidity and Temperature Probe HMP63 is a cost-effective humidity probe with plastic enclosure. It is designed for noncondensing indoor environments or integration into other manufacturers' equipment.

Easy Installation

The probe fits into tight spaces. The cable has a threaded M8 connector for easy installation. Different cable lengths are available and other compatible M8-series cables can also be used. Accessories are available for different installation needs.

Low Power Consumption

HMP63 is suitable for battery powered applications thanks to its very low power consumption and fast start-up time.

Several Outputs

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

Fast Thermal Response Time

HMP63 has a PC/ABS plastic enclosure. It is ideal for conditions with fast temperature changes and when standard measurement accuracy is sufficient.

No Recalibration Required

HMP63 includes an interchangeable Vaisala INTERCAP® sensor. No recalibration is required – the humidity sensor can simply be replaced, even in the field.

Technical Data

Measurement Performance

Relative Humidity

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

Temperature

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

Inputs and Outputs

Power consumption	1 mA average, max. peak 5 mA
Operating Voltage[1]	
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
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)

Operating Environment

Operating temperature	-40 ... +60 °C
EMC compliance	EN 61326-1, basic immunity test requirements

Mechanical Specifications

IP rating	IP54
Cable connector	4-pin M8 (IEC 60947-5-2)
Materials	
Body	PC/ABS blend
Grid filter	PC (glass reinforced)
Cable	Polyurethane or FEP
Weight	
Probe	9 g
Probe with 0.3 m cable	20 g

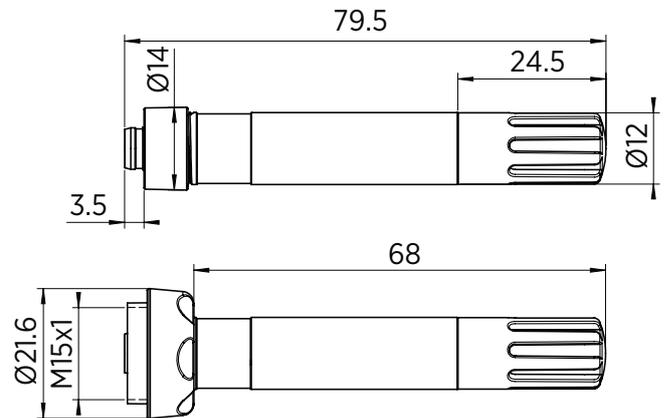## Spare Parts and Accessories

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 for use with HM40	DRW236214SP
Membrane filter	230727SP
Stainless steel sintered filter	HM47280SP
Porous PTFE filter	219452SP
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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