

## Vaisala INTERCAP® Humidity and Temperature Probe HMP63



*The HMP63 with plastic enclosure for indoor environments*

### Features/Benefits

- 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 RS485 digital output
- Optional dew point output

The Vaisala INTERCAP® Humidity and Temperature Probe HMP63 is a cost-effective humidity probe with plastic enclosure. It is designed for non-condensing 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

The 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 RS485 output with Modbus support is also available.

### Fast Thermal Response Time

The 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

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

### 上海博众测量技术有限公司

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# 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 <sub>L</sub> min 10 kΩ
0 ... 2.5 V / 0 ... 5 V	R <sub>L</sub> 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 – Basic immunity test requirements.

## Mechanics

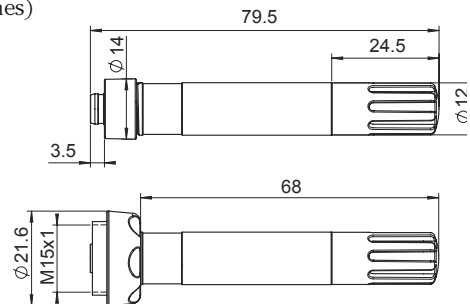
Materials	
body	PC/ABS blend
grid filter	PC (glass reinforced)
cable	polyurethane or FEP
Housing classification	IP54
Cable connector	4-pin M8 (IEC 60947-5-2)
Weight	
probe	9 g
probe with 0.3 m cable	20 g

## Options and Accessories

Vaisala INTERCAP® Sensor, 1 piece	15778HM
Vaisala INTERCAP® Sensor, 10 pcs	INTERCAPSET-10PCS
Sensor protection	
plastic grid for use with HM40	DRW236214SP
membrane filter	230727SP
stainless steel sintered filter	HM47280SP
porous PTFE filter	219452SP
4 ... 20mA loop power converter	UI-CONVERTER-1CB
Mounting bracket for converter	225979
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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