



# Humidity and Temperature

## HMP60

The HMP60 for extreme conditions.

### 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.

### 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.

### 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.

### 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.





## Technical Data

### 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	
(Use lowest available operating voltage to minimize heating.)	
5 ... 28 VDC / 8 ... 28 VDC with 5 V output	
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	RL min 10 kΩ
0 ... 2.5 V / 0 ... 5 V	RL min 50 kΩ

### 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
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.

### Options and Accessories

Vaisala INTERCAP® Sensor, 1 piece
Vaisala INTERCAP® Sensor, 10 pcs
15778HM
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)

