CAMPBELL SCIENTIFIC®
WHEN MEASUREMENTS MATTER

HMP60

Temperature and Relative Humidity Probe

Accurate, Rugged

Ideal for long-term, unattended applications

Overview

The HMP60, manufactured by Vaisala, measures air temperature for the range of -40° to 60°C, and relative humidity for the range of 0 to 100% RH. It uses the INTERCAP® capacitive RH chip. This field-replaceable chip eliminates the downtime typically required for the recalibration process.

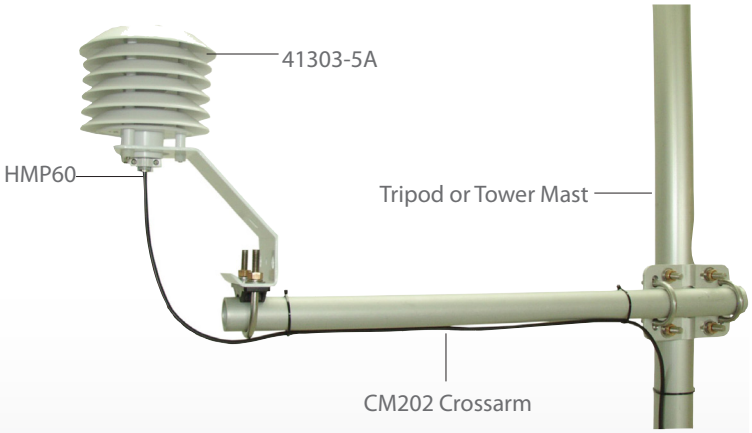
Benefits and Features

- Field-replaceable humidity chip eliminates recalibration down time
- Compatible with all Campbell Scientific dataloggers
- Can be mounted to a tower/tripod mast or crossarm
- Compatible with the CWS900-series interfaces, allowing it to be used in a wireless sensor network

Sensor Mounts

When exposed to sunlight, the HMP60 must be housed in a 41303-5A, 41303-5B, or RAD06 6-plate naturally aspirated radiation shield. The 41303-5A and RAD06 attaches to a crossarm, mast, or user-supplied pipe with a 2.5 to 5.3 cm (1.0 to 2.1 in) outer diameter. The 41303-5B attaches to a CM500-series pole or a user-supplied pole with a 5.1 cm (2.4 in) outer diameter.

The RAD06 uses a double-louvered design that offers improved sensor protection from driving rain, snow, insect intrusion and has lower self-heating in bright sunlight combined with higher temperatures (> 24°C (~75°F)) and low wind speeds (< 2 m s^{-1} (~4.5 mph)) giving a better measurement.



Ordering Information

Air Temperature and Relative Humidity Probe

HMP60-L Vaisala Temperature/RH Probe with user-specified cable length. Enter cable length, in feet, after the -L. Must choose a cable termination option (see below).

Cable Termination Options (choose one)

-PT Cable terminates in stripped and tinned leads for direct connection to a datalogger's terminals.

-PW Cable terminates in connector that attaches to a prewired enclosure.

-CWS Cable terminates in a connector for attachment to a CWS900-series interface, which allows it to be used in a wireless sensor network.

-C Cable terminates in a connector for attachment to a CS110 Electric Field Meter or ET107 weather station.

Accessories and Replacement Parts

41303-5A 6-Plate R. M. Young Radiation Shield with U bolts for attachment to a Campbell Scientific crossarm or mast.

41303-5B 6-Plate R. M. Young Radiation Shield with Band Clamp for attachment to a CM500-series or similar pole.

RAD06 6-Plate MetSpec Radiation Shield with U bolts for attachment to a Campbell Scientific crossarm or mast.

9598 Replacement chip for the HMP60.

Cable Length Recommendations[1]

2 m Height	CM106B[2]	CM110[2]	CM115[2]	CM120[2]	UT10	UT20	UT30
3.4 m (11 ft)	4.3 m (14 ft)	4.3 m (14 ft)	5.8 m (19 ft)	7.3 m (24 ft)	4.3 m (14 ft)	7.3 m (24 ft)	11.3 m (37 ft)

Notes:
1. The lengths assume the sensor is mounted at the end of a 2 ft crossarm.
2 The lengths assume the enclosure is mounted to the tripod mast. If it is mounted to the leg base, add 0.6 m (2 ft) to the cable length.

Specifications

- Supply Voltage: 5 to 28 Vdc (typically powered by the datalogger's 12 V supply)
- Current Consumption
  Typical: 1 mA
  Maximum: 5 mA
- Filter Description: 0.2 µm Teflon membrane
- Settling Time: 1 s
- Length: 7.1 cm (2.8 in)
- Sensor Diameter: 1.2 cm (0.5 in)
- Filter Diameter: 1.2 cm (0.5 in)
- Weight with 6 ft cable: 0.05 kg (0.1 lb)
- Housing
  Body Material: AISI 316 stainless steel
  Filter Cap Material: Chrome-coated ABS plastic
  Classification: IP65

Air Temperature

- Temperature Sensor: 1000 Ω Platinum Resistance Thermometer (PRT)
- Measurement Range: -40° to +60°C
- Accuracy: ±0.6°C

Relative Humidity (RH)

- Sensor: Vaisala's INTERCAP capacitive chip
- Measurement Range: 0 to 100% RH, non-condensing
- Typical Accuracy

	0 to 90% RH	90 to 100% RH
-40° to 0°C	±5%	±7%
0° to +40°C	±3%	±5%
+40° to +60°C	±5%	±7%