# Calibration Report:
# Temperature/Relative Humidity Sensor

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## Summary

Calibration date: 2014 June          Next Calibration date: 2015 June


The Campbell Scientific Temperature/Relative Humidity (Temp/RH) sensor had its RH chip replaced.  The RH chips do not specifically have calibration information associated with them, but they are tested to be within the published specifications.  Regarding the temperature part of this sensor, nothing was done, and for most applications, it is unnecessary to calibrate.

Manufacturer: Campbell Scientific
Type: Humitter
Serial Number: T0420065
Part number of Temp/RH chip: 15778HM

The published specifications for the RH chip and a picture of the box (with information) the new RH chip arrived in will be displayed on the following pages.

Application: The Campbell Scientific Temp/RH sensor is programmed via a Campbell Scientific data logger and collects raw voltage data.  Calibration adjustments (e.g. multipliers and offsets) are applied during processing of raw data.

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## Recommended Cable Lengths

| 2 m Height | | Atop a tripod or tower via a 2 ft crossarm such as the CM202 | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Mast/Leg | CM202 | CM106B | CM110 | CM115 | CM120 | UT10 | UT20 | UT30 |
| 2.7 m (9 ft) | 3.3 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) |
| Note: Add 1 m (2 ft) to the cable length if mounting the enclosure to the leg base of a CM106B, CM110, CM115, or CM120 tripod. | | | | | | | | |

## 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 a connector for attachment to a prewired enclosure.

**-CWS**  Cable terminates in a connector for attachment to a CWS900-series interface. Connection to a CWS900-series interface allows this sensor 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 Gill Radiation Shield with U bolts for attachment to a Campbell Scientific crossarm or mast.

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

**9598**  Replacement chip for the HMP60.



41303-5A

Tripod or Tower Mast

HMP60
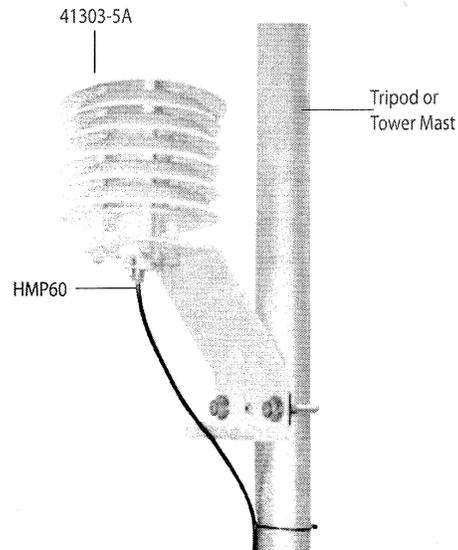
Above is a sensor housed in the 41303-5A radiation shield. The U-bolt is placed in the holes on the side of the bracket to allow the 41303-5A to be attached to a mast or vertical pole.

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## 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

➤ Accuracy at 25°C

| | 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% |

15778HM
Intercap
K221        1 pcs
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New sensor design
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