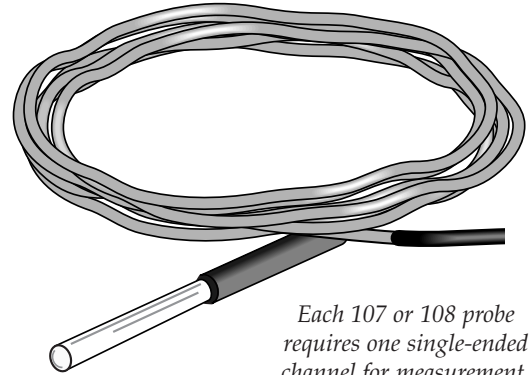


Temperature Probes

Models 107 and 108

The 107 and 108 are rugged, accurate probes that measure air, soil, and water temperature in a variety of applications. These probes consist of a thermistor encapsulated in an epoxy-filled aluminum housing. The housing protects the thermistor allowing the probes to be buried or submerged. The 107 measures from -35° to +50°C, the 108 from -5° to +95°C.

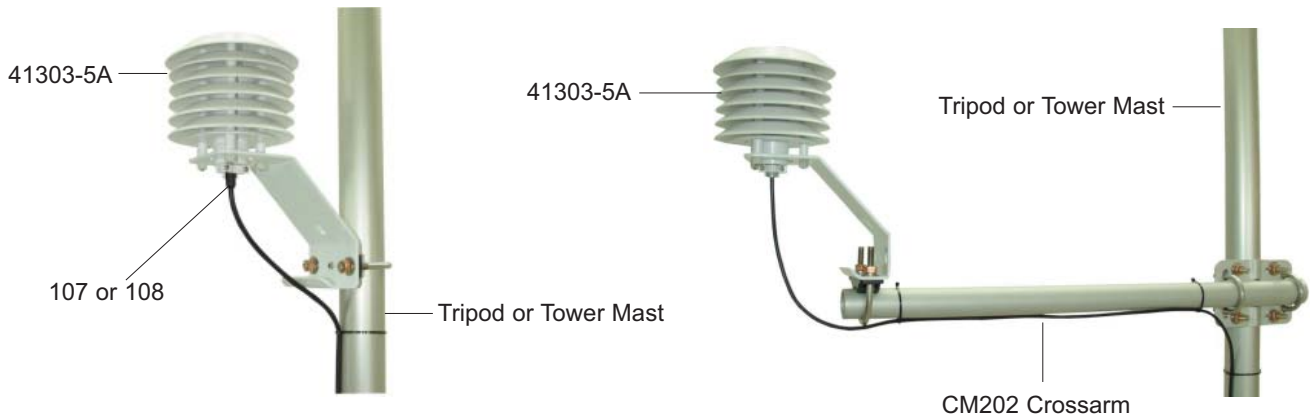
Please note that the 107 and 108 are not compatible with the CR200-series dataloggers. However, a similar thermistor, the 109, has been developed specifically for our CR200-series dataloggers.



Each 107 or 108 probe requires one single-ended channel for measurement.

Sensor Mounts

When exposed to sunlight, the 107 and 108 probes must be housed in a 41303-5A radiation shield. To attach the 41303-5A to a CM202, CM204, or CM206 crossarm, place the 41303-5A's u-bolt in the bottom holes. To attach the radiation shield directly to a tripod mast, tower mast, or tower leg, place the u-bolt in the side holes.



Ordering Information

- 107-L 107 Temperature Probe with user-specified lead length; enter the lead length (in feet) after L. For example, a 107-L9 specifies a 9' lead length.
- 108-L 108 Temperature Probe with user-specified lead length; enter the lead length (in feet) after L. For example, a 108-L9 specifies a 9' lead length.
- 41303-5A 6-Plate Gill Radiation Shield that houses a 107 or 108.

Recommended Lead Lengths

| 2 m Height | | Atop a tripod or tower via a 2 ft crossarm such as the CM202 | | | | | | | |
|------------|-------|--|------|-------|-------|-------|------|------|------|
| Mast/Leg | CM202 | CM6 | CM10 | CM110 | CM115 | CM120 | UT10 | UT20 | UT30 |
| 9' | 11' | 11' | 14' | 14' | 19' | 24' | 14' | 24' | 37' |

Note: Add two feet to the cable length if you are mounting the enclosure on the leg base of a light-weight tripod.

Specifications

Weight: 5 oz with a 10' cable (136 g with a 305 cm cable)

Length: 4.1" (10.4 cm)"

Diameter: <0.3" (0.5 cm)

Sensor: BetaTherm 100K6A1 Thermistor

107 Probe

Temperature Measurement Range: -35° to +50°C

Interchangeability Error: Typically $\pm 0.2^\circ\text{C}$ over 0° to 50°C range increasing to $\pm 0.4^\circ\text{C}$ at -40°C

Steinhart-Hart Equation Error (CRBasic dataloggers only): $\leq \pm 0.01^\circ\text{C}$ over -35° to +50°C

Polynomial Linearization Error (Edlog dataloggers only): Typically $\pm 0.5^\circ\text{C}$ over -38° to +50°C range,
 $\pm 0.1^\circ\text{C}$ over -24° to +48°C range

Time Constant in Air: Between 30 and 60 seconds in a wind speed of 5 m sec⁻¹

108 Probe

Temperature Measurement Range: -5° to +95°C

Interchangeability Error: Typically $\pm 0.2^\circ\text{C}$ over 0° to 70°C range increasing to $\pm 0.3^\circ\text{C}$ at 95°C

Steinhart-Hart Equation Error (CRBasic dataloggers only): $\leq \pm 0.01^\circ\text{C}$ over -5° to +95°C

Polynomial Linearization Error (Edlog dataloggers only): Typically $\pm 0.5^\circ\text{C}$ at the -5° to +90°C range

Time Constant in Air: Between 30 and 60 seconds in a wind speed of 5 m sec⁻¹

Note: The 107B and 108B probes have become obsolete because the 107 and 108 probes can now measure soil and water temperature.

