

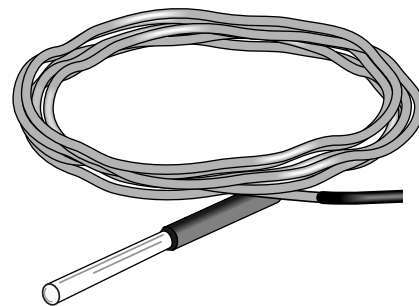
# Temperature Probes

## Models 107 and 108

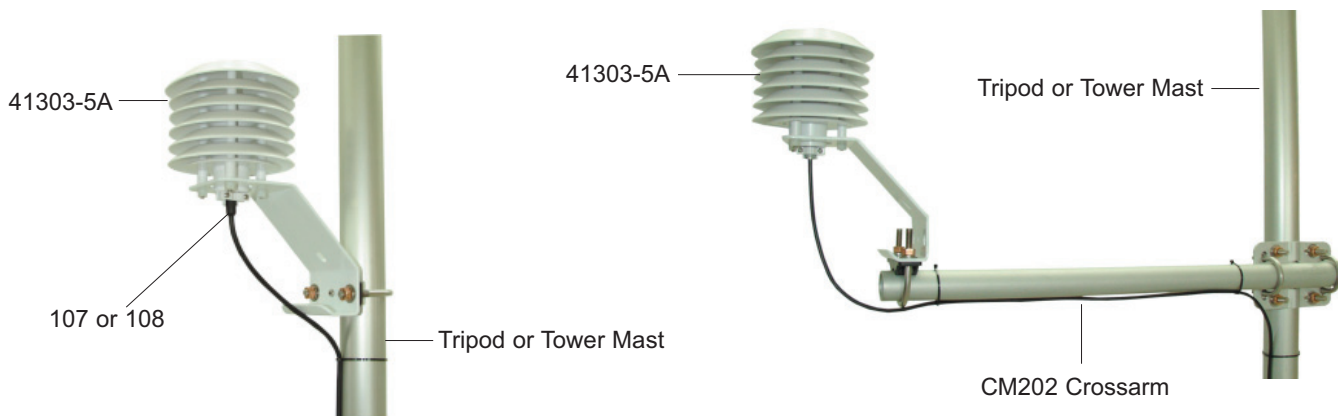
The 107 and 108 are rugged, accurate probes that measure air, soil, and water temperature in a variety of applications. These probes consist of a thermistor encapsulated in an epoxy-filled aluminum housing. The housing protects the thermistor allowing the probes to be buried or submerged. The 107 measures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

### 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.



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



### Ordering Information

- 107-L      107 Temperature Probe with user-specified lead length; enter the lead length (in feet) after L. For example, a 107-L6 specifies a 6' lead length.
- 108-L      108 Temperature Probe with user-specified lead length; enter the lead length (in feet) after L. For example, a 108-L6 specifies a 6' lead length.
- 41303-5A    6-Plate Gill Radiation Shield that houses a 107 or 108.



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## Specifications

Weight:	0.3 lbs
Length:	3.125"
Diameter:	< 0.375"
Sensor:	BetaTherm 100K6A1 Thermistor

### 107 Probe

Temperature measurement range:	-35° to +50°C
Polynomial linearization accuracy:	Typically <±0.5°C over -38° to +50°C range, <±0.1°C over -24° to +48°C range
Interchangeability error:	Typically <±0.2°C over 0° to 50°C range increasing to ±0.4°C at -40°C
Time constant in air:	Between 30 and 60 seconds in a wind speed of 5 m sec <sup>-1</sup>

### 108 Probe

Temperature measurement range:	-5° to +95°C
Polynomial linearization accuracy:	Typically <±0.5°C at the -5° to +90°C range
Interchangeability error:	Typically <±0.2°C over 0° to 70°C range increasing to ±0.3°C at 95°C
Time constant in air:	Between 30 and 60 seconds in a wind speed of 5 m sec <sup>-1</sup>

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



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