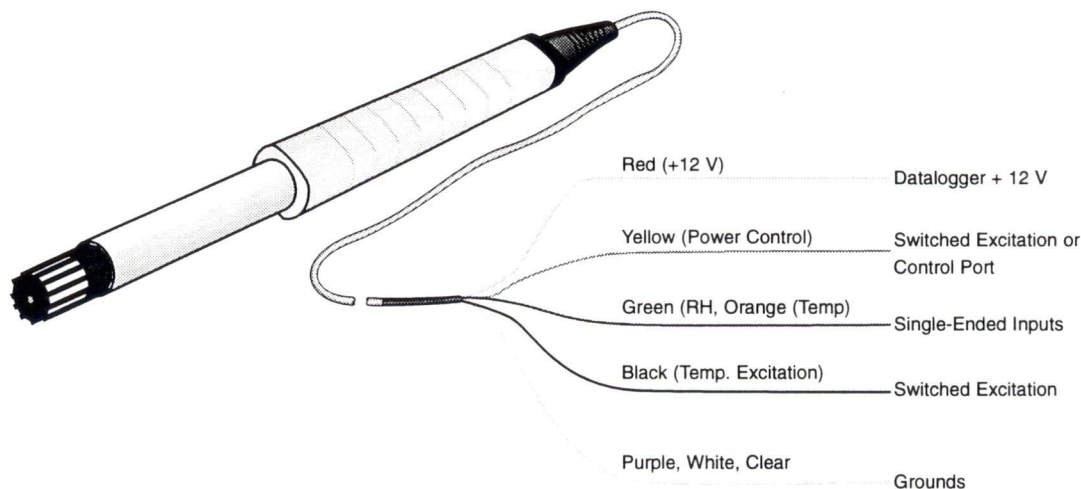


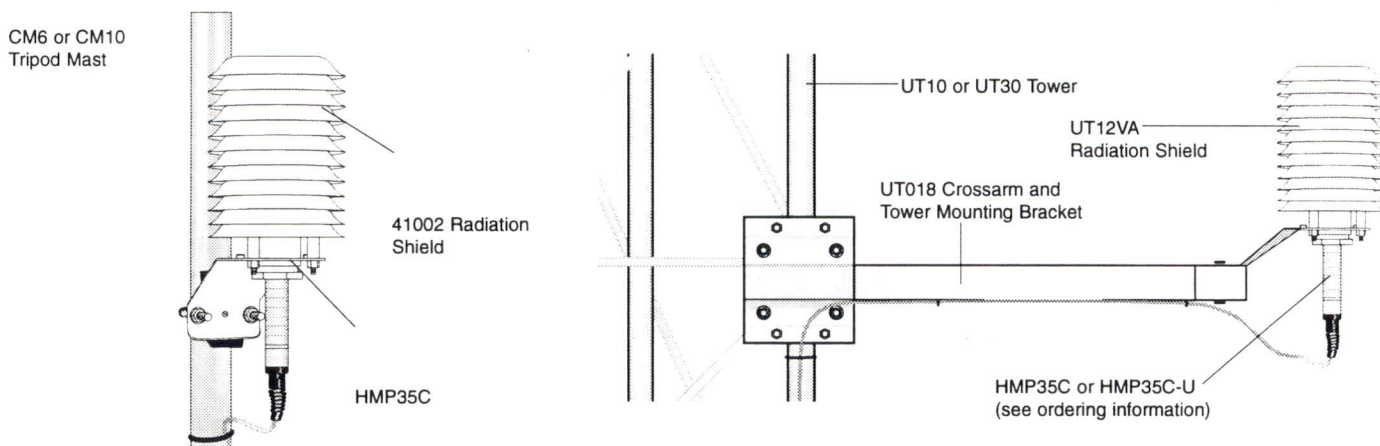
# Temperature and Relative Humidity Probe

## Model HMP35C

The HMP35C is a rugged, accurate temperature/RH probe designed for long-term, unattended applications. The sensor is compatible with Campbell Scientific CR10X, CR10, CR500, 21X, and CR7 dataloggers. The HMP35C is manufactured by Vaisala, Inc. and uses their capacitive polymer H chip for the RH measurement. Campbell Scientific installs a thermistor for measuring temperature and adds a switching circuit to supply power only during measurement. A radiation shield (Model 41002 or UT12VA) should be used when the probe is exposed to sunlight.



### Sensor Mounts



### Ordering Information

HMP35C = 5 ft lead length for use with Campbell Scientific's UT3 tower and CM6/CM10 tripods.

HMP35C-U = 9 ft lead length for use with ~~UT930~~ <sup>UT30 30</sup> 10 m tower.

HMP35C-L\_\_\_ = For specialized applications where sensor leads must be ordered to length. Maximum lead length is 1000 ft; enter lead length required (in feet) after L. Note: Each 100 ft of sensor cable increases the apparent RH reading by approximately 0.6% RH.



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## Specifications

Probe Length: 10 inches (25.4 cm)

Probe Body Diameter: 1 inch (2.5 cm)

Filter: 0.2  $\mu\text{m}$  Teflon® membrane

Filter Diameter: 0.75 inches (1.9 cm)

### RELATIVE HUMIDITY

RH Measurement Range: 0 to 100%

RH Output Signal Range: 0.002 to 1 VDC

RH Accuracy (at 20°C, including nonlinearity and hysteresis):  
 $\pm 2\%$  RH, 0 to 90%;  $\pm 3\%$  RH, 90 to 100%

Temperature Dependence of RH Measurement:  $\pm 0.04\%$  RH/°C

Typical Long-Term Stability: Better than 1% RH per year

Response Time (at 20°C, 90% response): 15 s with membrane filter

Settling Time: 0.15 s

Supply Voltage (via CSI switching circuit): 12 VDC Nominal

Current Consumption:  $\leq 4$  mA (Active)

Operating Temperature: -20° to 60°C

### TEMPERATURE

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

Thermistor Interchangeability Error: Typically  $< \pm 0.2^\circ\text{C}$  over 0°C to 60°C range,  $\pm 0.4$  @ -35°C.

Polynomial Linearization Error:  $< \pm 0.5^\circ\text{C}$  over -35°C to +50°C range.

**NOTE:** The black outer jacket of the cable is Santoprene® rubber. This compound was chosen for its resistance to temperature extremes, moisture, and UV degradation. However, this jacket will support combustion in air. It is rated as slow burning when tested according to U.L. 94 H.B. and will pass FMVSS302. Local fire codes may preclude its use inside buildings.



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