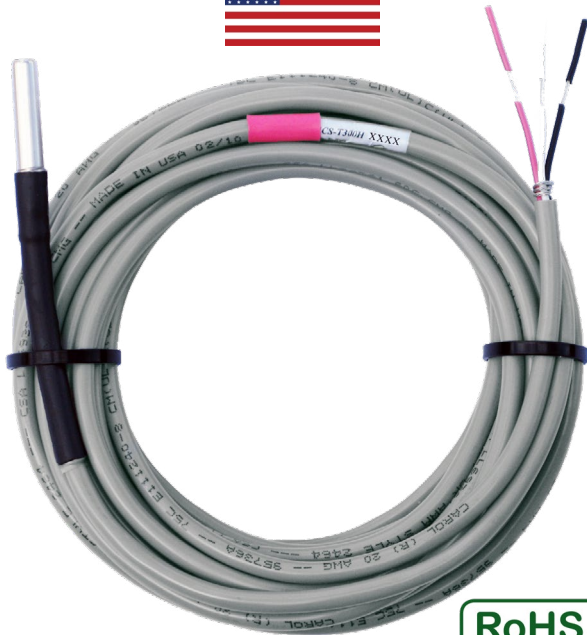




MCS-T300-H

Description & Specifications

MADE IN USA



Part # **MCS-T300-H**

Description

An extremely accurate thermistor packaged in a water tight thin walled nickel plated brass Deep Drawn Tube. The sensor is potted with a thermal transfer epoxy to guarantee durability and response. The accuracy of the sensor is $\pm 2.5^{\circ}\text{F}$ ($\pm 1.4^{\circ}\text{C}$) which allows the units to be inter-changed in the field.

Specifications

Standard Temperature Range 32°F to 250°F (0° to 121°C)
 Standard Temperature Accuracy .. $\pm 2.5^{\circ}\text{F}$ ($\pm 1.4^{\circ}\text{C}$)
 Resistance Range 1,180 to 24,771 ohms
 Response (32°F to 212°F) 40 sec. (in liquid)
 Input Voltage..... 5 Vdc
 Output Resistance 4,659 ohms @ 140°F
 Overall Length 1.750"
 Diameter (outside)..... 0.275"

Cable:

Length..... 20'
 Wire 3 conductor 20 awg stranded
 Shield..... Foil shield with 25% overlap
 Drain..... Stranded tinned copper drain

The unit is a double thermister providing a linear response over the range. The unit input is 5.00 vdc. The voltage output over the range is .668 to 3.820. At 140°F the voltage output is 2.252 vdc. The table below provides a cross reference between $^{\circ}\text{F}/^{\circ}\text{C}$, ohms, and vdc at a sensor input pin (S1) of a MCS micro controller.

Temp to OHMS to VDC Chart

(Partial temperature conversion chart below)

Temp. ($^{\circ}\text{F}/^{\circ}\text{C}$)	Resist (ohms)	S1 (Vdc)
32/0	24.771	0.668
41/5	20.317	0.791
50/10	16.918	0.921
59/15	14.290	1.054
68/20	12.230	1.190
77/25	10.591	1.325
86/30	9.264	1.459
95/35	8.170	1.593
104/40	7.253	1.724

Temp. ($^{\circ}\text{F}/^{\circ}\text{C}$)	Resist (ohms)	S1 (Vdc)
113/45	6.470	1.856
122/50	5.790	1.987
131/55	5.191	2.119
140/60	4.659	2.252
149/65	4.181	2.387
158/70	3.751	2.522
167/75	3.361	2.659
176/80	3.009	2.796
185/85	2.691	2.933

Temp. ($^{\circ}\text{F}/^{\circ}\text{C}$)	Resist (ohms)	S1 (Vdc)
194/90	2.404	3.068
203/95	2.146	3.201
212/100	1.914	3.331
221/105	1.706	3.456
230/110	1.521	3.575
239/115	1.357	3.689
248/120	1.210	3.797
250/121.1	1.180	3.820