



# MCS-T300

## Description & Specifications

MADE IN USA



Part # **MCS-T300**

### Specifications

Standard Temperature Range ..... -22°F to 125°F  
 (-30°C to 51.7°C)  
 Standard Temperature Accuracy .. ±0.4°F (±0.2°C)  
 Resistance Range ..... 9,640 to 134,900 ohms  
 Response (32°F to 122°F) ..... 40 sec. (in liquid)  
 Response (122°F to 32°F) ..... 75 sec. (in liquid)  
 Input Voltage..... 5 Vdc  
 Output Resistance ..... 20,772 ohms @ 77°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

### 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 ±0.4°F (±0.2°C) which allows the units to be interchanged in the field.

The unit is a double thermistor providing a linear response over the range. The unit input is 5.00 vdc. The voltage output over the range is .726 to 3.523. At 50°F the voltage output is 2.123 vdc. The table below provides a cross reference between °F/°C, ohms, and vdc at a sensor input pin (S1) of a MCS micro controller.

**Temp to Resistance to VDC Chart**  
 (Partial temperature conversion chart)

Temp (°F/°C)	Resist (ohms)	S1 (Vdc)
-22/-30	134,900	0.707
-13/-25	105,944	0.866
-4/-20	85,993	1.036
5/-15	69,557	1.210
14/-10	57,945	1.385
23/-5	49,002	1.559

Temp (°F/°C)	Resist (ohms)	S1 (Vdc)
32/0	41,935	1.731
41/5	36,199	1.901
50/10	31,425	2.070
59/15	27,363	2.240
68/20	23,848	2.411
77/25	20,772	2.583

Temp (°F/°C)	Resist (ohms)	S1 (Vdc)
86/30	18,064	2.757
95/35	15,678	2.931
104/40	13,578	3.103
113/45	11,736	3.271
122/50	10,129	3.434
125/51.7	9,640	3.486