MCS-T300
Description & Specifications

Part # **MCS-T300**

Specifications

Standard Temperature Range ..... -22ºF to 125ºF
(-30ºC to 51.7ºC)
Standard Temperature Accuracy .. ±0.4ºF (±0.2ºC)
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 @ 77ºF
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 ±0.4ºF (±0.2ºC) which allows the units to be interchanged in the field.

The unit is a double thermister providing a linear responce 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

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Revision - 2017-11-28