MCS-T100-L-xx
Description & Specifications

Part # **MCS-T100-L**

Specifications

Standard Temperature Range .....-60ºF to +48ºF (-51º to 9ºC)
Standard Temperature Accuracy ..±0.36ºF (±0.2°C)
Resistance Range .....743K to 21.0 K
Response Time (–60ºF to 48ºF) ...22 sec (in liquid)
Response Time (48ºF to –60ºF) ...30 sec (in liquid)
Input Voltage.....5vdc
Sensor Resistance .....10,000 ohms @ 77ºF (25°C)

Cable:

Length.....20’ or 40’
Wire .....2 conductor 22 awg stranded
Shield.....Foil shield with 25% overlap
Drain.....Stranded tinned copper drain

Part number description when ordering (MCS-T100-xx)
xx.....20’, 40’ wire length

Description

The **MCS-T100-L** probe is an extremely fast acting thermistor packaged in a watertight stainless steel deep drawn tube. The sensor is potted with thermally conductive RTV Cure Silicon Adhesive to guarantee durability and response. Its high accuracy allows for interchangeability in the field.

The large resistance range allows the use of over 1000’ of cable with no noticeable effect. By placing a 100,000 ohms resister between signal and ground the sensor may be used in a three wire input mode. The table below provides a cross reference between °F, ohms, and vdc at sensor input pin (S1) of MCS micro controller.

Temperature to Resistance to VDC Chart

Temp (°F / °C)	Resist (kΩ)	S1 (vdc)	Temp (°F)	Resist (kΩ)	S1 (vdc)	Temp (°F)	Resist (kΩ)	S1 (vdc)	Temp (°F)	Resist (kΩ)	S1 (vdc)	Temp (°F)	Resist (kΩ)	S1 (vdc)	Temp (°F)	Resist (kΩ)	S1 (vdc)
-60/-51	743.4	0.593	-42/-41.1	368.9	1.066	-24/-31.1	192.0	1.712	-6/-21.1	104.4	2.446	12/-11.1	59.1	3.143	30/-1.1	34.7	3.713
-59/-50.5	714.1	0.614	-41/-40.5	355.3	1.098	-23/-30.5	185.4	1.752	-5/-20.5	101.1	2.487	13/-10.5	57.3	3.179	31/-0.5	33.7	3.740
-58/-50	686.0	0.636	-40/-40	342.3	1.131	-22/-30	179.1	1.792	-4/-20	97.8	2.582	14/-10	55.6	3.214	32/0	32.7	3.767
-57/-49.4	659.1	0.659	-39/-39.4	329.8	1.163	-21/-29.4	173.0	1.832	-3/-19.4	94.7	2.568	15-9.4	53.9	3.248	33/0.5	31.8	3.793
-56/-48.9	633.4	0.682	-38/-38.9	317.8	1.197	-20/-28.9	167.1	1.872	-2/-19	91.7	2.608	16/-8.9	52.3	3.283	34/1.1	30.9	3.819
-55/-48.3	608.8	0.705	-37/-38.3	306.3	1.231	-19/-28.3	161.4	1.913	-1/-18.3	88.8	2.648	17/-8.3	50.8	3.316	35/1.7	30.1	3.844
-54/-47.8	585.2	0.730	-36/-37.8	295.2	1.265	-18/-27.8	156.0	1.953	0/-17.8	86.0	2.688	18/-7.8	49.3	3.350	36/2.2	29.2	3.869
-53/-47.2	562.7	0.755	-35/-37.2	284.6	1.300	-17/-27.2	150.8	1.994	1/-17.2	83.3	2.728	19/-7.2	47.8	3.383	37/2.8	28.4	3.893
-52/-46.7	541.1	0.780	-34/-36.7	274.4	1.335	-16/-26.7	145.7	2.035	2/-16.7	80.7	2.767	20/-6.7	46.4	3.415	38/3.3	27.6	3.917
-51/-46.1	520.4	0.806	-33/-36.1	264.6	1.371	-15/-26.1	140.9	2.076	3/-16.1	78.2	2.806	21/-6.1	45.1	3.447	39/3.9	26.9	3.940
-50/-45.5	500.6	0.833	-32/-35.5	255.2	1.408	-14/-25.5	136.2	2.117	4/-15.5	75.7	2.845	22/-5.5	43.7	3.478	40/4.4	726.2	3.963
-49/-45	481.6	0.850	-31/-35	246.2	1.444	-13/-25	131.7	2.158	5/-15	73.4	2.884	23/-5	42.5	3.509	41/5	25.4	3.986
-48/-44.44	463.4	0.888	-30/-34.4	237.5	1.482	-12/-24.4	127.3	2.199	6/-14.4	71.1	2.922	24/-4.4	41.2	3.540	42/5.5	24.7	4.008
-47/-43.89	445.9	0.916	-29/-33.9	229.1	1.519	-11/-23.9	123.1	2.241	7/-13.9	68.9	2.960	25/-3.9	40.1	3.570	43/6.1	24.1	4.030
-46/-43.33	429.2	0.945	-28/-33.3	221.1	1.557	-10/-23.3	119.1	2.282	8/-13.3	66.8	2.997	26/-3.3	38.9	3.600	44/6.7	23.4	4.051
-45/-42.78	413.1	0.974	-27/-32.8	213.4	1.595	-9/-22.8	115.2	2.323	9/-12.8	64.8	3.034	27/-2.8	37.8	3.629	45/7.2	22.8	4.072
-44/-42.22	397.8	1.005	-26/-32.2	206.0	1.634	-8/-22.2	111.5	2.364	10/-12.2	62.8	3.071	28/-2.2	36.7	3.657	46/7.8	22.2	4.092
-43/-41.67	383.0	1.035	-25/-31.7	198.9	1.673	-7/-21.7	107.9	2.405	11/-11.7	60.9	3.107	29/-1.7	35.7	3.685	47/8.3	21.6	4.112
															48/8.9	21.0	4.131

Revision-2017-12-11

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