

10K Thermistor Resistance Values

For Troubleshooting Thermistor Response

Troubleshooting 10K thermistors is a simple task and requires only a basic handheld ohmmeter or digital multi-meter. The resistance of the thermistor will change according to temperature, and should track with the following table.

For a given temperature, the resistance should be accurate +/- 1%. For a given resistance, the temperature should be accurate to +/- 0.5°F.

The thermistor MUST be disconnected from the control for proper measurement. We also recommend disconnecting the thermistor from any extension wire (if equipped) to further rule out any possible wiring issues.

The thermistor will read 10 K ohms at 25°C/77°F. Refer to the chart below for the resistance at other temperatures.

°F	Ohms	Volts	°F	Ohms	Volts	°F	Ohms	Volts	°F	Ohms	Volts
1	82,719	4.46	41	25,391	3.59	81	9,076	2.38	121	3,679	1.34
2	80,142	4.45	42	24,704	3.56	82	8,861	2.35	122	3,602	1.32
3	77,656	4.43	43	24,037	3.53	83	8,651	2.32	123	3,527	1.30
4	75,255	4.41	44	23,391	3.50	84	8,447	2.29	124	3,454	1.28
5	72,937	4.40	45	22,764	3.47	85	8,249	2.26	125	3,382	1.26
6	70,698	4.38	46	22,156	3.45	86	8,056	2.23	126	3,312	1.24
7	68,535	4.36	47	21,566	3.42	87	7,867	2.20	127	3,244	1.22
8	66,447	4.35	48	20,993	3.39	88	7,684	2.17	128	3,177	1.21
9	64,428	4.33	49	20,438	3.36	89	7,506	2.14	129	3,112	1.19
10	62,479	4.31	50	19,900	3.33	90	7,333	2.12	130	3,049	1.17
11	60,595	4.29	51	19,377	3.30	91	7,164	2.09	131	2,987	1.15
12	58,774	4.27	52	18,870	3.27	92	6,999	2.06	132	2,926	1.13
13	57,014	4.25	53	18,377	3.24	93	6,839	2.03	133	2,867	1.11
14	55,313	4.23	54	17,899	3.21	94	6,683	2.00	134	2,809	1.10
15	53,669	4.21	55	17,435	3.18	95	6,530	1.98	135	2,752	1.08
16	52,078	4.19	56	16,985	3.15	96	6,382	1.95	136	2,697	1.06
17	50,541	4.17	57	16,548	3.12	97	6,238	1.92	137	2,643	1.05
18	49,054	4.15	58	16,123	3.09	98	6,097	1.89	138	2,591	1.03
19	47,616	4.13	59	15,711	3.06	99	5,960	1.87	139	2,539	1.01
20	46,225	4.11	60	15,310	3.02	100	5,827	1.84	140	2,489	1.00
21	44,879	4.09	61	14,921	2.99	101	5,697	1.81	141	2,440	0.98
22	43,577	4.07	62	14,543	2.96	102	5,570	1.79	142	2,392	0.97
23	42,318	4.04	63	14,176	2.93	103	5,446	1.76	143	2,345	0.95
24	41,099	4.02	64	13,820	2.90	104	5,326	1.74	144	2,299	0.93
25	39,919	4.00	65	13,473	2.87	105	5,208	1.71	145	2,254	0.92
26	38,777	3.97	66	13,136	2.84	106	5,094	1.69	146	2,210	0.90
27	37,671	3.95	67	12,809	2.81	107	4,982	1.66	147	2,167	0.89
28	36,601	3.93	68	12,491	2.78	108	4,873	1.64	148	2,125	0.88
29	35,565	3.90	69	12,182	2.75	109	4,767	1.61	149	2,084	0.86
30	34,561	3.88	70	11,882	2.72	110	4,664	1.59	150	2,044	0.85
31	33,590	3.85	71	11,589	2.68	111	4,563	1.57	151	2,005	0.84
32	32,648	3.83	72	11,305	2.65	112	4,464	1.54	152	1,966	0.82
33	31,737	3.80	73	11,029	2.62	113	4,368	1.52	153	1,929	0.81
34	30,853	3.78	74	10,761	2.59	114	4,274	1.50	154	1,892	0.80
35	29,998	3.75	75	10,500	2.56	115	4,183	1.47	155	1,856	0.78
36	29,169	3.72	76	10,246	2.53	116	4,094	1.45	156	1,821	0.77
37	28,365	3.70	77	9,999	2.50	117	4,007	1.43	157	1,787	0.76
38	27,587	3.67	78	9,758	2.47	118	3,922	1.41	158	1,753	0.75
39	26,832	3.64	79	9,525	2.44	119	3,839	1.39	159	1,720	0.73
40	26,100	3.61	80	9,297	2.41	120	3,758	1.37	160	1,688	0.72

Thermistor Values Table from Hayward/Goldline Controls



Sun Source Energy Products, Inc.

PO Box 31 • Netcong, NJ • 07857
973•691•6911

Revision 1: August 1, 2014
Copyright Sun Source Energy Products