

Temperature Sensor

KMT100 NTC



- Industrial NTC Sensor
- Range from 168.8K Ω to 398 Ω (-40°C to 125°C)
- M20 Standard Connection
- IP65 Protection Class
- 27 mm Copper Probe
- Super Thermal Characteristics and Response Time
- High Temperature Accuracy
- Dedicated for HVAC Application

Specification

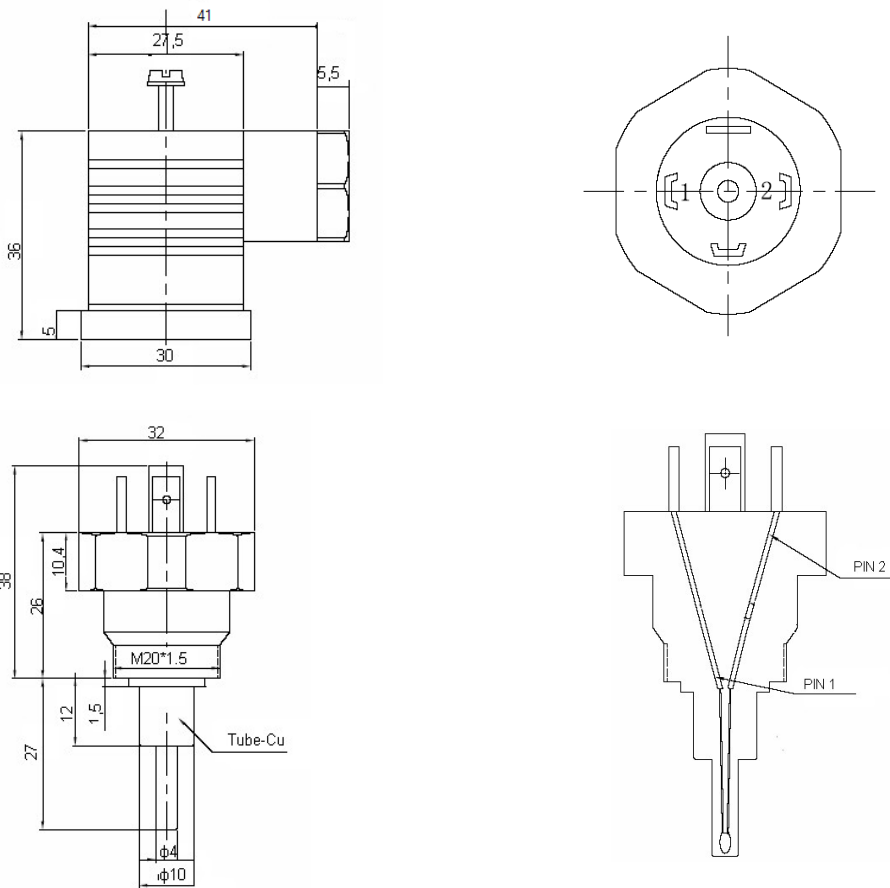
Temperature Sensor Type	NTC
Proble temperature range	168.8K Ω to 398 Ω (-40°C to 125°C)
Temperature Accuracy	$\pm 0.3\%$
Value B	R25°C=5K $\Omega \pm 0.5\%$ B25/50°C=3970K $\pm 0.5\%$
Thermal Dissipation Factor	Min 2.0mW/°C (in air)
Temperature Response Time	$\leq 3s$
Cable gland	PG 9
Conductor size	Max. 1.5 mm ²
Standard	DIN EN 175 301-803-A
Standard	Black
Construction type	A
Pin dimensions	6.3 mm x 0.8 mm, 4.8 mm x 0.8 mm
Rated voltage	AC/DC 250 V
Rated current	16 A
Contact resistance	≤ 4 mOhm
Suitable cables	4.5 mm to 7 mm diameter
Mounting	M20 screw
Contact surface material	Sn
Contact bearer material	PA
Housing material	PA

R-T Table

R-T (R25°C=5KΩ±0.8% B25/85°C=3790K±0.5%)											
T(°C)	Rmin(KΩ)	Rcent(KΩ)	Rmax(KΩ)	DR(%)	DT(°C)	T(°C)	Rmin(KΩ)	Rcent(KΩ)	Rmax(KΩ)	DR(%)	DT(°C)
-40	168.8	176.671	184.9	4.67%	0.67	1	15.31	15.639	15.98	2.16%	0.42
-39	157.8	165.039	172.6	4.59%	0.66	2	14.55	14.861	15.17	2.11%	0.41
-38	147.6	154.252	161.2	4.52%	0.66	3	13.84	14.126	14.42	2.05%	0.4
-37	138.1	144.244	150.7	4.45%	0.65	4	13.17	13.432	13.7	2.00%	0.4
-36	129.3	134.954	140.9	4.38%	0.65	5	12.53	12.776	13.03	1.95%	0.39
-35	121.1	126.325	131.8	4.31%	0.64	6	11.93	12.156	12.39	1.90%	0.38
-34	113.5	118.307	123.3	4.25%	0.64	7	11.36	11.57	11.78	1.85%	0.37
-33	106.4	110.851	115.5	4.18%	0.63	8	10.82	11.016	11.21	1.80%	0.37
-32	99.8	103.915	108.2	4.11%	0.62	9	10.31	10.491	10.67	1.75%	0.36
-31	93.7	97.46	101.4	4.04%	0.62	10	9.83	9.994	10.16	1.70%	0.35
-30	87.94	91.449	95.09	3.98%	0.61	11	9.37	9.524	9.68	1.65%	0.34
-29	82.61	85.849	89.21	3.91%	0.61	12	8.93	9.079	9.22	1.60%	0.33
-28	77.63	80.629	83.73	3.85%	0.6	13	8.52	8.657	8.79	1.56%	0.33
-27	72.99	75.761	78.63	3.78%	0.6	14	8.13	8.257	8.38	1.51%	0.32
-26	68.66	71.219	73.87	3.72%	0.59	15	7.76	7.878	7.99	1.46%	0.31
-25	64.61	66.979	69.43	3.66%	0.59	16	7.41	7.518	7.62	1.41%	0.3
-24	60.83	63.019	65.28	3.59%	0.58	17	7.08	7.177	7.27	1.37%	0.29
-23	57.29	59.319	61.41	3.53%	0.57	18	6.76	6.853	6.94	1.32%	0.29
-22	53.98	55.861	57.8	3.47%	0.57	19	6.46	6.546	6.63	1.27%	0.28
-21	50.89	52.626	54.42	3.41%	0.56	20	6.18	6.254	6.33	1.23%	0.27
-20	47.99	49.6	51.26	3.34%	0.56	21	5.91	5.977	6.05	1.18%	0.26
-19	45.28	46.767	48.3	3.28%	0.55	22	5.65	5.714	5.78	1.13%	0.25
-18	42.73	44.114	45.54	3.22%	0.54	23	5.4	5.464	5.52	1.09%	0.24
-17	40.35	41.629	42.95	3.16%	0.54	24	5.17	5.226	5.28	1.04%	0.24
-16	38.11	39.299	40.52	3.10%	0.53	25	4.95	5	5.05	1.00%	0.23
-15	36.01	37.115	38.24	3.05%	0.53	26	4.74	4.785	4.83	1.04%	0.24
-14	34.05	35.065	36.11	2.99%	0.52	27	4.53	4.58	4.63	1.09%	0.25
-13	32.2	33.142	34.11	2.93%	0.51	28	4.34	4.386	4.44	1.13%	0.26
-12	30.46	31.337	32.24	2.87%	0.51	29	4.15	4.2	4.25	1.18%	0.27
-11	28.83	29.641	30.47	2.81%	0.5	30	3.97	4.024	4.07	1.22%	0.29
-10	27.29	28.047	28.82	2.76%	0.49	31	3.81	3.856	3.9	1.26%	0.3
-9	25.85	26.549	27.27	2.70%	0.49	32	3.65	3.695	3.74	1.31%	0.31
-8	24.49	25.14	25.81	2.64%	0.48	33	3.5	3.543	3.59	1.35%	0.32
-7	23.21	23.815	24.43	2.59%	0.47	34	3.35	3.397	3.44	1.39%	0.33
-6	22.01	22.568	23.14	2.53%	0.47	35	3.21	3.259	3.31	1.43%	0.35
-5	20.87	21.394	21.92	2.48%	0.46	36	3.08	3.126	3.17	1.48%	0.36
-4	19.81	20.288	20.78	2.42%	0.45	37	2.95	3	3.05	1.52%	0.37
-3	18.8	19.245	19.7	2.37%	0.45	38	2.84	2.88	2.92	1.56%	0.38
-2	17.85	18.263	18.69	2.32%	0.44	39	2.72	2.765	2.81	1.60%	0.4
-1	16.95	17.337	17.73	2.26%	0.43	40	2.61	2.655	2.7	1.64%	0.41
0	16.106	16.463	16.827	2.21%	0.42						

R-T (R25°C=5KΩ±0.8% B25/85°C=3790K±0.5%)											
T(°C)	Rmin(KΩ)	Rcent(KΩ)	Rmax(KΩ)	DR(%)	DT(°C)	T(°C)	Rmin(KΩ)	Rcent(KΩ)	Rmax(KΩ)	DR(%)	DT(°C)
41	2.508	2.55	2.593	1.68%	0.421	81	0.587	0.605	0.624	3.16%	0.99
42	2.408	2.45	2.492	1.72%	0.434	82	0.568	0.586	0.605	3.19%	1.01
43	2.314	2.355	2.396	1.76%	0.447	83	0.55	0.568	0.586	3.22%	1.03
44	2.223	2.263	2.304	1.80%	0.46	84	0.532	0.55	0.568	3.25%	1.04
45	2.136	2.176	2.216	1.84%	0.473	85	0.516	0.5328	0.55	3.29%	1.06
46	2.053	2.092	2.132	1.88%	0.486	86	0.5	0.516	0.533	3.32%	1.07
47	1.974	2.013	2.051	1.92%	0.499	87	0.484	0.5	0.517	3.35%	1.09
48	1.899	1.936	1.974	1.96%	0.513	88	0.469	0.485	0.501	3.38%	1.11
49	1.826	1.863	1.9	2.00%	0.526	89	0.455	0.47	0.486	3.42%	1.12
50	1.757	1.793	1.83	2.04%	0.539	90	0.441	0.456	0.472	3.45%	1.14
51	1.691	1.726	1.762	2.08%	0.553	91	0.427	0.442	0.458	3.48%	1.16
52	1.628	1.662	1.697	2.12%	0.566	92	0.414	0.429	0.444	3.51%	1.17
53	1.567	1.601	1.635	2.16%	0.58	93	0.402	0.416	0.431	3.54%	1.19
54	1.509	1.542	1.576	2.20%	0.594	94	0.39	0.404	0.418	3.57%	1.21
55	1.453	1.486	1.519	2.23%	0.608	95	0.378	0.392	0.406	3.60%	1.22
56	1.4	1.432	1.464	2.27%	0.622	96	0.367	0.38	0.394	3.64%	1.24
57	1.349	1.38	1.412	2.31%	0.635	97	0.356	0.369	0.383	3.67%	1.26
58	1.3	1.331	1.362	2.35%	0.65	98	0.346	0.359	0.372	3.70%	1.27
59	1.253	1.283	1.314	2.38%	0.664	99	0.336	0.348	0.361	3.73%	1.29
60	1.208	1.238	1.267	2.42%	0.678	100	0.326	0.3381	0.351	3.76%	1.31
61	1.165	1.194	1.223	2.46%	0.692	101	0.316	0.328	0.341	3.79%	1.33
62	1.124	1.152	1.181	2.49%	0.706	102	0.307	0.319	0.331	3.82%	1.34
63	1.084	1.112	1.14	2.53%	0.721	103	0.298	0.31	0.322	3.85%	1.36
64	1.046	1.073	1.1	2.57%	0.735	104	0.29	0.301	0.313	3.88%	1.38
65	1.009	1.036	1.063	2.60%	0.75	105	0.282	0.293	0.304	3.91%	1.4
66	0.974	1	1.027	2.64%	0.765	106	0.274	0.285	0.296	3.94%	1.41
67	0.941	0.966	0.992	2.67%	0.779	107	0.266	0.277	0.288	3.97%	1.43
68	0.908	0.933	0.958	2.71%	0.794	108	0.259	0.269	0.28	4.00%	1.45
69	0.877	0.902	0.926	2.75%	0.809	109	0.251	0.262	0.272	4.02%	1.47
70	0.848	0.871	0.895	2.78%	0.824	110	0.244	0.254	0.265	4.05%	1.49
71	0.819	0.842	0.866	2.82%	0.839	111	0.238	0.247	0.258	4.08%	1.5
72	0.791	0.814	0.837	2.85%	0.854	112	0.231	0.241	0.251	4.11%	1.52
73	0.765	0.787	0.81	2.88%	0.87	113	0.225	0.234	0.244	4.14%	1.54
74	0.74	0.761	0.783	2.92%	0.885	114	0.219	0.228	0.237	4.17%	1.56
75	0.715	0.736	0.758	2.95%	0.9	115	0.213	0.222	0.231	4.20%	1.58
76	0.692	0.712	0.734	2.99%	0.916	116	0.207	0.216	0.225	4.22%	1.6
77	0.669	0.689	0.71	3.02%	0.931	117	0.201	0.21	0.219	4.25%	1.62
78	0.647	0.667	0.687	3.06%	0.947	118	0.196	0.204	0.213	4.28%	1.63
79	0.626	0.646	0.665	3.09%	0.962	119	0.191	0.199	0.208	4.31%	1.65
80	0.606	0.625	0.644	3.12%	0.978	120	0.186	0.194	0.202	4.34%	1.67

Connector Wiring



Pin 1 and pin 2 are the temperature signal output terminals.

