Temperature probe
ETP-PC-O-200-10KC3

Variohm
Eurosensor

- NTC thermistor, PT100 and PT1000 versions available
- Robust, compact design
- Excellent insulation and performance
- UV resistant (black insulation)
- Protection class IP 67
- RoHS Compliant and Halogen free

The ETP-PC-O-200-10KC3 sensor is a IP67 temperature probe encapsulated with thermoplastic elastomer materials in overmoulding technology. The additional belt allows for quick and easy assembly. The excellent performance in extreme freeze-thaw conditions is resulting from a whide choice of insulation material. The cable remains flexible at minimum design temperature. The ETP-PC-O-200-10KC3 overmoulded probes are a perfect solution for pipes applications where the best waterproof and moisture protection is required.

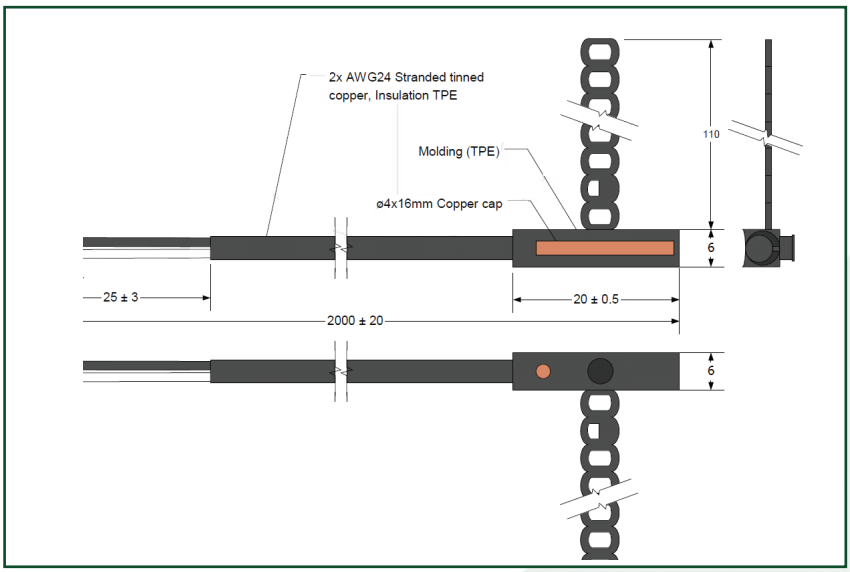
The sensor is particularly suitable for temperature monitoring applications on refrigeration applications, air conditioning, underfloor heating and climate control systems.

Specifications

Element:	NTC Thermistor 10KC3
Resistance at +25°C	10 kΩ
Tolerance from +0°C to +70°C	±0.2°C
Beta Value 25/85	3977K ± 1%
Temperature range	-40° C to +105° C
Dielectric strength	1000 V AC
Type of insulation	AWG24 TPE double insulated round cable, stripped ends

Dimensions

Overall sensor length: 2000 mm



Ordering Information

Order code standard model: **20045-ETP-PC-O-200-10KC3**

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Resistance vs. temperature table for 10KC3

TEMP	RESISTANCE (KΩ)			Temp Coef	Resist. Tolerance (%)		Temp. Tolerance (°C)	
(ºC)	MIN.	CENTER.	MAX.	(%/ºC)	MIN.	MAX.	MIN.	MAX.
-40	328.351	336.479	344.771	-6.8	-2.42	2.46	0.35	-0.36
-39	307.418	314.902	322.535	-6.8	-2.38	2.42	0.35	-0.36
-38	287.955	294.849	301.876	-6.7	-2.34	2.38	0.35	-0.35
-37	269.843	276.194	282.666	-6.7	-2.30	2.34	0.34	-0.35
-36	252.983	258.837	264.798	-6.6	-2.26	2.30	0.34	-0.35
-35	237.285	242.682	248.176	-6.6	-2.22	2.26	0.34	-0.34
-34	222.656	227.633	232.697	-6.5	-2.19	2.22	0.34	-0.34
-33	209.020	213.610	218.278	-6.5	-2.15	2.19	0.33	-0.34
-32	196.302	200.537	204.842	-6.4	-2.11	2.15	0.33	-0.33
-31	184.440	188.348	192.319	-6.4	-2.08	2.11	0.33	-0.33
-30	173.368	176.976	180.640	-6.3	-2.04	2.07	0.32	-0.33
-29	163.024	166.354	169.735	-6.3	-2.00	2.03	0.32	-0.32
-28	153.368	156.443	159.564	-6.2	-1.97	1.99	0.32	-0.32
-27	144.335	147.176	150.057	-6.2	-1.93	1.96	0.31	-0.32
-26	135.893	138.517	141.177	-6.1	-1.89	1.92	0.31	-0.31
-25	127.997	130.422	132.878	-6.1	-1.86	1.88	0.30	-0.31
-24	120.606	122.846	125.115	-6.1	-1.82	1.85	0.30	-0.31
-23	113.689	115.759	117.855	-6.0	-1.79	1.81	0.30	-0.30
-22	107.207	109.121	111.057	-6.0	-1.75	1.77	0.29	-0.30
-21	101.135	102.904	104.693	-5.9	-1.72	1.74	0.29	-0.29
-20	95.447	97.083	98.736	-5.9	-1.68	1.70	0.29	-0.29
-19	90.108	91.621	93.149	-5.8	-1.65	1.67	0.28	-0.29
-18	85.102	86.501	87.913	-5.8	-1.62	1.63	0.28	-0.28
-17	80.403	81.696	83.002	-5.8	-1.58	1.60	0.28	-0.28
-16	75.993	77.189	78.396	-5.7	-1.55	1.56	0.27	-0.27
-15	71.851	72.957	74.073	-5.7	-1.52	1.53	0.27	-0.27
-14	67.960	68.983	70.014	-5.6	-1.48	1.49	0.26	-0.27
-13	64.298	65.244	66.197	-5.6	-1.45	1.46	0.26	-0.26
-12	60.861	61.736	62.617	-5.6	-1.42	1.43	0.26	-0.26
-11	57.623	58.433	59.247	-5.5	-1.38	1.39	0.25	-0.25
-10	54.580	55.329	56.081	-5.5	-1.35	1.36	0.25	-0.25
-9	51.715	52.407	53.102	-5.4	-1.32	1.33	0.24	-0.24
-8	49.018	49.658	50.301	-5.4	-1.29	1.29	0.24	-0.24
-7	46.473	47.065	47.659	-5.4	-1.26	1.26	0.23	-0.24
-6	44.080	44.627	45.176	-5.3	-1.23	1.23	0.23	-0.23
-5	41.821	42.327	42.834	-5.3	-1.19	1.20	0.23	-0.23
-4	39.693	40.160	40.628	-5.3	-1.16	1.17	0.22	-0.22
-3	37.681	38.113	38.545	-5.2	-1.13	1.13	0.22	-0.22
-2	35.787	36.186	36.585	-5.2	-1.10	1.10	0.21	-0.21
-1	33.999	34.367	34.735	-5.1	-1.07	1.07	0.21	-0.21
0	32.313	32.650	32.987	-5.2	-1.03	1.03	0.20	-0.20
1	30.712	31.030	31.349	-5.1	-1.03	1.03	0.20	-0.20
2	29.198	29.498	29.799	-5.1	-1.02	1.02	0.20	-0.20
3	27.767	28.051	28.335	-5.1	-1.01	1.01	0.20	-0.20
4	26.415	26.683	26.951	-5.0	-1.01	1.01	0.20	-0.20
5	25.137	25.391	25.644	-5.0	-1.00	1.00	0.20	-0.20
6	23.930	24.170	24.409	-5.0	-0.99	0.99	0.20	-0.20
7	22.788	23.015	23.242	-4.9	-0.99	0.99	0.20	-0.20
8	21.704	21.918	22.133	-4.9	-0.98	0.98	0.20	-0.20

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Resistance vs. temperature table for 10KC3 (cont.)

TEMP	RESISTANCE (KΩ)			Temp Coef	Resist. Tolerance (%)		Temp. Tolerance (°C)	
(°C)	MIN.	CENTER.	MAX.	(%/°)	MIN.	MAX.	MIN.	MAX.
9	20.681	20.884	21.087	-4.9	-0.97	0.97	0.20	-0.20
10	19.710	19.902	20.095	-4.8	-0.97	0.97	0.20	-0.20
11	18.788	18.970	19.152	-4.8	-0.96	0.96	0.20	-0.20
12	17.918	18.091	18.263	-4.8	-0.95	0.95	0.20	-0.20
13	17.092	17.256	17.419	-4.7	-0.95	0.95	0.20	-0.20
14	16.306	16.461	16.616	-4.7	-0.94	0.94	0.20	-0.20
15	15.564	15.710	15.857	-4.7	-0.93	0.93	0.20	-0.20
16	14.861	15.000	15.139	-4.6	-0.93	0.93	0.20	-0.20
17	14.193	14.325	14.457	-4.6	-0.92	0.92	0.20	-0.20
18	13.556	13.681	13.807	-4.6	-0.92	0.92	0.20	-0.20
19	12.954	13.073	13.192	-4.6	-0.91	0.91	0.20	-0.20
20	12.378	12.491	12.604	-4.5	-0.90	0.90	0.20	-0.20
21	11.833	11.940	12.048	-4.5	-0.90	0.90	0.20	-0.20
22	11.319	11.421	11.523	-4.5	-0.89	0.89	0.20	-0.20
23	10.826	10.924	11.021	-4.4	-0.89	0.89	0.20	-0.20
24	10.357	10.448	10.540	-4.4	-0.88	0.88	0.20	-0.20
25	9.913	10.000	10.087	-4.4	-0.87	0.87	0.20	-0.20
26	9.491	9.574	9.657	-4.3	-0.87	0.87	0.20	-0.20
27	9.086	9.165	9.245	-4.3	-0.87	0.87	0.20	-0.20
28	8.703	8.779	8.854	-4.3	-0.86	0.86	0.20	-0.20
29	8.334	8.406	8.478	-4.3	-0.86	0.86	0.20	-0.20
30	7.987	8.055	8.124	-4.3	-0.85	0.85	0.20	-0.20
31	7.657	7.722	7.787	-4.2	-0.84	0.84	0.20	-0.20
32	7.340	7.402	7.464	-4.2	-0.84	0.84	0.20	-0.20
33	7.037	7.096	7.155	-4.2	-0.84	0.84	0.20	-0.20
34	6.751	6.807	6.864	-4.1	-0.83	0.83	0.20	-0.20
35	6.478	6.532	6.586	-4.1	-0.82	0.82	0.20	-0.20
36	6.214	6.266	6.317	-4.1	-0.82	0.82	0.20	-0.20
37	5.968	6.017	6.066	-4.1	-0.81	0.81	0.20	-0.20
38	5.730	5.777	5.824	-4.0	-0.81	0.81	0.20	-0.20
39	5.502	5.546	5.591	-4.0	-0.80	0.80	0.20	-0.20
40	5.282	5.324	5.367	-4.0	-0.80	0.80	0.20	-0.20
41	5.075	5.115	5.156	-4.0	-0.80	0.80	0.20	-0.20
42	4.877	4.916	4.954	-4.0	-0.79	0.79	0.20	-0.20
43	4.688	4.725	4.762	-3.9	-0.79	0.79	0.20	-0.20
44	4.507	4.543	4.578	-3.9	-0.78	0.78	0.20	-0.20
45	4.334	4.368	4.402	-3.9	-0.78	0.78	0.20	-0.20
46	4.169	4.201	4.234	-3.9	-0.77	0.77	0.20	-0.20
47	4.010	4.041	4.072	-3.8	-0.77	0.77	0.20	-0.20
48	3.858	3.888	3.918	-3.8	-0.76	0.76	0.20	-0.20
49	3.714	3.742	3.770	-3.8	-0.76	0.76	0.20	-0.20
50	3.575	3.602	3.629	-3.8	-0.75	0.75	0.20	-0.20
51	3.442	3.468	3.494	-3.7	-0.75	0.75	0.20	-0.20
52	3.315	3.340	3.365	-3.7	-0.74	0.74	0.20	-0.20
53	3.193	3.217	3.241	-3.7	-0.74	0.74	0.20	-0.20
54	3.076	3.099	3.122	-3.7	-0.74	0.74	0.20	-0.20
55	2.964	2.986	3.008	-3.7	-0.73	0.73	0.20	-0.20
56	2.857	2.878	2.899	-3.6	-0.73	0.73	0.20	-0.20
57	2.754	2.774	2.794	-3.6	-0.72	0.72	0.20	-0.20

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TEMP	RESISTANCE (KΩ)			Temp Coef	Resist. Tolerance (%)		Temp. Tolerance (°C)	
(°C)	MIN.	CENTER.	MAX.	(%/°)	MIN.	MAX.	MIN.	MAX.
58	2.656	2.675	2.694	-3.6	-0.72	0.72	0.20	-0.20
59	2.561	2.579	2.597	-3.6	-0.72	0.72	0.20	-0.20
60	2.470	2.488	2.506	-3.6	-0.71	0.71	0.20	-0.20
61	2.383	2.400	2.417	-3.5	-0.71	0.71	0.20	-0.20
62	2.300	2.316	2.332	-3.5	-0.70	0.70	0.20	-0.20
63	2.219	2.235	2.251	-3.5	-0.70	0.70	0.20	-0.20
64	2.142	2.157	2.172	-3.5	-0.70	0.70	0.20	-0.20
65	2.069	2.083	2.097	-3.5	-0.69	0.69	0.20	-0.20
66	1.997	2.011	2.025	-3.4	-0.69	0.69	0.20	-0.20
67	1.929	1.942	1.955	-3.4	-0.68	0.68	0.20	-0.20
68	1.863	1.876	1.889	-3.4	-0.68	0.68	0.20	-0.20
69	1.801	1.813	1.825	-3.4	-0.68	0.68	0.20	-0.20
70	1.740	1.752	1.764	-3.4	-0.67	0.67	0.20	-0.20
71	1.681	1.693	1.705	-3.4	-0.70	0.70	0.21	-0.21
72	1.625	1.637	1.649	-3.4	-0.72	0.72	0.21	-0.21
73	1.572	1.584	1.596	-3.3	-0.74	0.74	0.22	-0.22
74	1.520	1.532	1.544	-3.3	-0.76	0.76	0.23	-0.23
75	1.470	1.482	1.493	-3.3	-0.78	0.78	0.24	-0.24
76	1.422	1.434	1.445	-3.3	-0.80	0.80	0.24	-0.24
77	1.375	1.387	1.398	-3.3	-0.82	0.82	0.25	-0.25
78	1.330	1.342	1.353	-3.3	-0.84	0.84	0.26	-0.26
79	1.287	1.299	1.310	-3.2	-0.86	0.86	0.26	-0.27
80	1.245	1.256	1.267	-3.2	-0.88	0.88	0.27	-0.27
81	1.205	1.216	1.227	-3.2	-0.90	0.90	0.28	-0.28
82	1.168	1.179	1.189	-3.2	-0.92	0.92	0.29	-0.29
83	1.131	1.141	1.152	-3.2	-0.94	0.94	0.29	-0.30
84	1.095	1.105	1.116	-3.2	-0.95	0.96	0.30	-0.30
85	1.061	1.071	1.082	-3.1	-0.97	0.98	0.31	-0.31
86	1.028	1.038	1.048	-3.1	-0.99	1.00	0.32	-0.32
87	0.996	1.006	1.016	-3.1	-1.01	1.02	0.32	-0.33
88	0.965	0.975	0.985	-3.1	-1.03	1.03	0.33	-0.33
89	0.935	0.945	0.955	-3.1	-1.05	1.05	0.34	-0.34
90	0.907	0.917	0.927	-3.1	-1.07	1.07	0.35	-0.35
91	0.879	0.889	0.898	-3.0	-1.08	1.09	0.36	-0.36
92	0.852	0.862	0.872	-3.0	-1.10	1.11	0.36	-0.37
93	0.827	0.836	0.846	-3.0	-1.12	1.13	0.37	-0.37
94	0.802	0.811	0.821	-3.0	-1.14	1.15	0.38	-0.38
95	0.778	0.787	0.796	-3.0	-1.16	1.16	0.39	-0.39
96	0.755	0.764	0.773	-3.0	-1.17	1.18	0.40	-0.40
97	0.733	0.742	0.751	-3.0	-1.19	1.20	0.40	-0.41
98	0.712	0.721	0.729	-2.9	-1.21	1.22	0.41	-0.42
99	0.691	0.699	0.708	-2.9	-1.23	1.24	0.42	-0.42
100	0.671	0.679	0.688	-2.9	-1.24	1.25	0.43	-0.43
101	0.651	0.660	0.668	-2.9	-1.26	1.27	0.44	-0.44
102	0.633	0.641	0.649	-2.9	-1.28	1.29	0.44	-0.45
103	0.615	0.623	0.631	-2.9	-1.29	1.31	0.45	-0.46
104	0.598	0.605	0.614	-2.8	-1.31	1.32	0.46	-0.47
105	0.580	0.588	0.596	-2.8	-1.33	1.34	0.47	-0.47

Variohm EuroSensor - Williams' Barn - Tiffield Road -Towcester - Northants -NN12 6HP - UK
sales@variohm.com • www.variohm.com • +44 (0) 1327 351004