innovatek

Data sheet

Properties and technical information

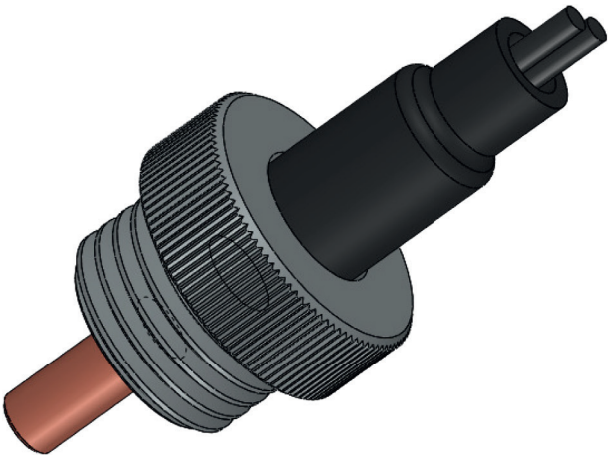
Water temperature sensor - G1/4“ screw-in sensor
801149 / 500836

Anwendung

Medium	Wasser und Ethandiolmischungen

Application:

Medium	water and ethanediol mixtures
Measuring principle	Resistance
Measuring accuracy	3
Measuring range	-50 °C ... 90 °C
Temperature range	-10 °C ... 100 °C
Pressure range	max. 10 bar
Repeatability	< 0.5 %



Material:

Housing	nickel-plated brass (MS56)
Encapsulation	Bonding of strain relief
Transducer	pure copper (media contact)
Seal	Viton (media contact)

Dimensions / Weights:

Connection	G1/4“ (DIN ISO 228-1)
Dimensions	L x W x H Ø 16mm
Weight	approx. 40g

Electrical data:

Supply voltage	-
Current consumption	-
Output resistance	10 KOhm (+- 3%)
Max-DC	100 V
Connection	1,000 mm cable, 2-Pin Female Crimp Connector, Single Row, 2.54mm (0.100 Inch) Pitch
Definition line	25 °C
Tolerance (60K diff)	3,4 K
Response time	8 sec

Temperature °C	Rmax. (kOhm)	Rst. (kOhm)	Rmin. (kOhm)	Tolerance °C	
-50	392.6	367.7	344	1.1	
-49	369.2	346	323.9	1.1	
-48	347.4	325.7	305.1	-1.1	1.1
-47	327	306.8	287.6	-1.1	1.1
-46	308	289.1	271.2	-1.1	1.1
-45	290.2	272.6	255.8	-1.1	1.1
-44	273.6	257.2	241.5	-1.1	1.1
-43	258.1	242.7	228.1	-1.1	1.1
-42	243.6	229.2	215.5	-1.1	1.1
-41	230	216.6	203.7	-1.1	1.1
-40	217.3	204.7	192.7	-1.1	1.1
-39	208.2	193.4	182.1	-1.1	1.1
-38	193.9	182.8	172.3	-1.1	1.1
-37	183.2	172.9	163	-1.1	1.1
-36	173.3	163.6	154.3	-1.1	1.1
-35	163.9	154.9	146.2	-1.1	1.1
-34	155.2	146.7	138.5	-1.1	1.1
-33	146.9	139	131.3	-1.1	1.1
-32	139.2	131.7	124.5	-1.1	1.1
-31	131.9	124.9	118.1	-1.1	1.1
-30	125.1	118.5	112.1	-1.1	1.1
-29	118.6	112.4	105.4	-1.1	1.1
-28	112.4	106.6	101	-1.1	1.1
-27	106.7	101.2	95.91	-1.1	1.1
-26	101.2	96.08	91.11	-1.1	1.1
-25	96.11	91.27	86.59	-1.1	1.1
-24	91.28	86.73	82.33	-1.1	1.1
-23	86.74	82.46	78.31	-1.1	1.1
-22	82.46	78.42	74.52	-1	1.1
-21	78.41	74.62	70.94	-1	1.1
-20	74.6	71.02	67.55	-1	1
-19	70.9	67.53	64.27	-1	1
-18	67.41	64.24	61.17	-1	1
-17	64.12	61.13	58.24	-1	1

Temperature °C	Rmax. (kOhm)	Rst. (kOhm)	Rmin. (kOhm)	Tolerance °C	
-16	61.01	58.2	55.47	-1	1
-15	58.08	55.43	52.88	-1	1
-14	55.3	52.81	50.38	-1	1
-13	52.68	50.33	48.04	-1	1
-12	50.21	47.99	45.82	-1	1
-11	47.86	45.77	43.72	-1	1
-10	45.65	43.67	41.74	-1	1
-9	43.53	41.66	39.84	-1	1
-8	41.52	39.76	38.04	-1	1
-7	39.62	37.96	36.33	-1	1
-6	37.82	36.25	34.72	-1	1
-5	36.12	34.63	33.18	-1	1
-4	34.5	33.1	31.73	-1	1
-3	32.97	31.64	30.34	-1	1
-2	31.52	30.26	29.03	-1	1
-1	30.14	28.95	27.78	-1	1
0	28.83	27.7	26.6	-1	1
0	28.83	27.7	26.6	-1	1
1	27.57	26.51	25.46	-0.9	1
2	26.38	25.37	24.38	-0.9	1
3	25.24	24.29	23.36	-0.9	1
4	24.17	23.27	22.38	-0.9	1
5	23.14	22.29	21.45	-0.9	1
6	22.17	21.36	20.56	-0.9	1
7	21.24	20.48	19.72	-0.9	0.9
8	20.36	19.64	18.92	-0.9	0.9
9	19.52	18.83	18.15	-0.9	0.9
10	18.72	18.07	17.43	-0.9	0.9
11	17.96	17.34	16.73	-0.9	0.9
12	17.23	16.64	16.05	-0.9	0.9
13	16.53	15.98	15.43	-0.9	0.9
14	15.87	15.34	14.82	-0.9	0.9
15	15.24	14.74	14.24	-0.9	0.9
16	14.54	14.16	13.69	-0.9	0.9

Temperature °C	Rmax. (kOhm)	Rst. (kOhm)	Rmin. (kOhm)	Tolerance °C	
17	14.06	13.61	13.16	-0.9	0.9
18	13.52	13.09	12.66	-0.9	0.9
19	12.99	12.59	12.18	-0.9	0.9
20	12.49	12.11	11.72	-0.9	0.9
21	12.01	11.55	11.28	-0.9	0.9
22	11.56	11.21	10.86	-0.8	0.9
23	11.12	10.79	10.45	-0.8	0.9
24	10.7	10.38	10.07	-0.8	0.9
25	10.3	10	9.7	-0.8	0.9
26	9.922	9.63	9.337	-0.8	0.9
27	9.561	9.276	8.99	-0.9	0.9
28	9.214	8.936	8.658	-0.9	0.9
29	8.883	8.611	8.34	-0.9	0.9
30	8.565	8.301	8.037	-0.9	0.9
31	8.26	8.001	7.744	-0.9	0.9
32	7.967	7.715	7.464	-0.9	1
33	7.686	7.44	7.196	-0.9	1
34	7.417	7.177	6.939	-1	1
35	7.159	6.925	6.693	-1	1
36	6.911	6.683	6.457	-1	1
37	6.674	6.451	6.23	-1	1
38	6.446	6.229	6.014	-1	1.1
39	6.228	6.015	5.806	-1	1.1
40	6.018	5.811	5.606	-1.1	1.1
41	5.815	5.513	5.413	-1.1	1.1
42	5.619	5.422	5.228	-1.1	1.1
43	5.432	5.24	5.05	-1.1	1.1
44	5.252	5.064	4.879	-1.1	1.2
45	5.079	4.896	4.715	-1.1	1.2
46	4.913	4.734	4.558	-1.2	1.2
47	4.753	4.579	4.407	-1.2	1.2
48	4.599	4.429	4.261	-1.2	1.2
49	4.482	4.285	4.122	-1.2	1.2
50	4.309	4.147	3.988	-1.2	1.2

Temperature °C	Rmax. (kOhm)	Rst. (kOhm)	Rmin. (kOhm)	Tolerance °C	
51	4.171	4.013	3.857	-1.2	1.3
52	4.038	3.884	3.732	-1.2	1.3
53	3.911	3.76	3.611	-1.3	1.3
54	3.788	3.64	3.496	-1.3	1.3
55	3.669	3.525	3.384	-1.3	1.3
56	3.555	3.415	3.277	-1.3	1.4
57	3.445	3.308	3.173	-1.3	1.4
58	3.339	3.205	3.074	-1.3	1.4
59	3.237	3.106	2.978	-1.4	1.4
60	3.139	3.011	2.886	-1.4	1.4
61	3.044	2.919	2.797	-1.4	1.4
62	2.952	2.83	2.711	-1.4	1.5
63	2.864	2.744	2.628	-1.4	1.5
64	2.778	2.652	2.548	-1.4	1.5
65	2.696	2.582	2.471	-1.5	1.5
66	2.616	2.505	2.397	-1.5	1.5
67	2.54	2.431	2.325	-1.5	1.5
68	2.466	2.36	2.256	-1.5	1.6
69	2.395	2.291	2.19	-1.5	1.6
70	2.325	2.224	2.125	-1.6	1.6
71	2.259	2.16	2.063	-1.6	1.6
72	2.194	2.097	2.003	-1.6	1.6
73	2.132	2.037	1.944	-1.6	1.7
74	2.071	1.979	1.888	-1.6	1.7
75	2.013	1.922	1.834	-1.6	1.7
76	1.957	1.868	1.782	-1.7	1.7
77	1.902	1.815	1.731	-1.7	1.7
78	1.85	1.765	1.682	-1.7	1.7
79	1.799	1.716	1.636	-1.7	1.8
80	1.749	1.668	1.59	-1.7	1.8
81	1.701	1.622	1.545	-1.7	1.8
82	1.655	1.577	1.502	-1.8	1.8
83	1.61	1.534	1.46	-1.8	1.8
84	1.566	1.492	1.42	-1.8	1.8

Temperature °C	Rmax. (kOhm)	Rst. (kOhm)	Rmin. (kOhm)	Tolerance °C	
85	1.524	1.451	1.381	-1.8	1.9
86	1.483	1.412	1.343	-1.8	1.9
87	1.444	1.374	1.307	-1.9	1.9
88	1.405	1.337	1.271	-1.9	1.9
89	1.368	1.301	1.237	-1.9	1.9
90	1.332	1.267	1.204	-1.9	2