EUROSENSOR | PITCH TECHNOLOGIES

20019223-00
NTC TEMPERATURE SENSOR

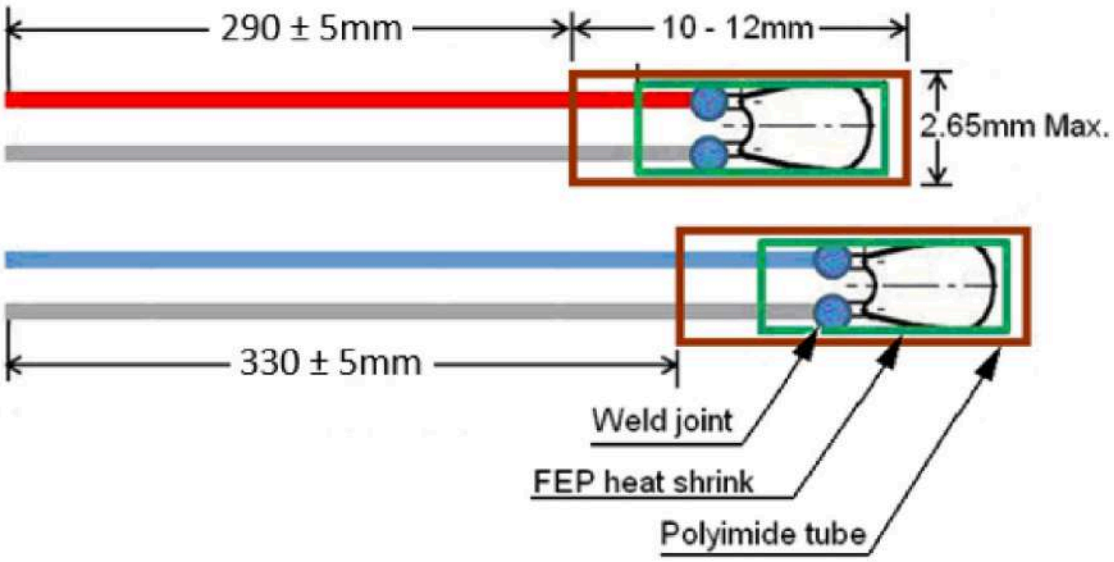
- **Thermally conductive epoxy potting compound**
- **Operating temperature -40° to +200° C**
- **Proven stability and reliability in the Automotive Industry**

Set (x2) of NTC probe assemblies designed for use in E-motor winding applications where space is limited and time response is critical. High temperature glass bead NTC thermistors are welded to 24 AWG (7/32) Silver Plated Copper wires with PTFE insulation. Thermistors are sleeved into FEP heatshrink and potted in an extruded polyimide tube using high temperature rated, thermally conductive potting compound.
This unique probe design provides the ideal sensing solution and offers the accuracy and fast temperature response required for demanding applications in the Automotive Industry and other temperature sensing, control and compensation applications.

Specifications	
Nominal Restance at +25°C	30.0000 Ω
Tolerance at +25°C	±1 %
Beta Value 25/85	3942 K
Tolerance on Beta Value	±2 %
Time Response in application	<7 sec
Dissipation Constant in still air	0.75 mW/°C
Operating temperature	-40° C to +200° C

Reliability Data			
Reliability Tests	Standard	Test Condition	Delta R
Storage in Dry Heat	IEC 60068-2-2	Storage temperature: +250° C Duration: 1000 hours	< 3%
Storage in Damp Heat	IEC 60068-2-3	Temperature of air is 50° C & RH 95% Duration: 56 days	< 2%
Rapid Temperature Cycling	IEC 60068-2-14	Lower Test Temperature -55°C Upper Test Temperature + 200°C Number of Cycles 1000	<2%

Dimensions


290 ± 5mm
10 - 12mm
2.65mm Max.
330 ± 5mm
Weld joint
FEP heat shrink
Polyimide tube

20019223-00
NTC TEMPERATURE SENSOR

PITCH TECHNOLOGIES

Resistance v. temperature table

Temp. °C	KΩ
-40	925
-39	867.9
-38	814.7
-37	765.1
-36	718.8
-35	675.5
-34	635.1
-33	597.3
-32	562
-31	529
-30	498.1
-29	469.1
-28	442.1
-27	416.7
-26	392.9
-25	370.6
-24	349.7
-23	330.1
-22	311.8
-21	294.5
-20	278.3
-19	263.1
-18	248.7
-17	235.3
-16	222.6
-15	210.7
-14	199.5
-13	189
-12	179.1
-11	169.7
-10	160.9
-9	152.6
-8	144.8
-7	137.4
-6	130.4
-5	123.9
-4	117.7
-3	111.8
-2	106.3
-1	101

Temp. °C	KΩ
0	96.09
1	91.41
2	86.98
3	82.8
4	78.84
5	75.09
6	71.54
7	68.17
8	64.99
9	61.96
10	59.1
11	56.38
12	53.81
13	51.36
14	49.04
15	46.84
16	44.74
17	42.76
18	40.87
19	39.07
20	37.37
21	35.74
22	34.2
23	32.73
24	31.33
25	30
26	28.73
27	27.53
28	26.37
29	25.28
30	24.23
31	23.24
32	22.29
33	21.38
34	20.52
35	19.69
36	18.91
37	18.15
38	17.44
39	16.75

Temp. °C	KΩ
40	16.09
41	15.47
42	14.87
43	14.3
44	13.75
45	13.22
46	12.72
47	12.24
48	11.78
49	11.35
50	10.92
51	10.52
52	10.14
53	9.765
54	9.41
55	9.07
56	8.744
57	8.432
58	8.132
59	7.844
60	7.568
61	7.303
62	7.048
63	6.804
64	6.57
65	6.344
66	6.128
67	5.92
68	5.72
69	5.527
70	5.343
71	5.165
72	4.994
73	4.829
74	4.674
75	4.519
76	4.372
77	4.231
78	4.095
79	3.964

Temp. °C	KΩ
80	3.838
81	3.717
82	3.6
83	3.487
84	3.379
85	3.274
86	3.173
87	3.075
88	2.981
89	2.891
90	2.803
91	2.719
92	2.637
93	2.559
94	2.483
95	2.409
96	2.339
97	2.27
98	2.204
99	2.14
100	2.078
101	2.019
102	1.961
103	1.905
104	1.852
105	1.799
106	1.749
107	1.7
108	1.653
109	1.607
110	1.563
111	1.52
112	1.479
113	1.439
114	1.4
115	1.362
116	1.362
117	1.291
118	1.257
119	1.223

Resistance v. temperature table

Temp. °C	KΩ
120	1.191
121	1.16
122	1.13
123	1.101
124	1.072
125	1.045
126	1.018
127	0.9923
128	0.9672
129	0.9428
130	0.9192
131	0.8962
132	0.874
133	0.8523
134	0.8313
135	0.811
136	0.7912
137	0.7719
138	0.7533
139	0.7351
140	0.7175
141	0.7004
142	0.6837
143	0.6675
144	0.6518
145	0.6365
146	0.6216
147	0.6072
148	0.5931
149	0.5795
150	0.5662
151	0.5532
152	0.5406
153	0.5284
154	0.5165
155	0.5049
156	0.4936
157	0.4826
158	0.4719
159	0.4615

Temp. °C	KΩ
160	0.4513
161	0.4414
162	0.4318
163	0.4224
164	0.4133
165	0.4044
166	0.3957
167	0.3873
168	0.3791
169	0.371
170	0.3632
171	0.3556
172	0.3482
173	0.3409
174	0.3338
175	0.327
176	0.3202
177	0.3137
178	0.3073
179	0.301
180	0.295
181	0.289
182	0.2832
183	0.2776
184	0.272
185	0.2667
186	0.2614
187	0.2563
188	0.2512
189	0.2463
190	0.2416
191	0.2369
192	0.2323
193	0.2279
194	0.2235
195	0.2193
196	0.2151
197	0.211
198	0.2071
199	0.2032
200	0.1994