



SURFACE MOUNT SENSOR FOR CONSTELLATION AEROSPACE APPLICATIONS

P/N. 20012616-00

FEATURES

- NTC thermistor with 15K Ohms nominal resistance @ +25°C
- 26AWG 19/36 SPC with black cross-linked fluoropolymer insulation
- Proven stability and reliability
- Encapsulated in thermally conductive epoxy resin
- Operating Temperature range - 60°C to +90°C
- Storage Temperature range - 60°C to +125°C

APPLICATIONS

- Satellite electric motors.
- Monitoring of gearboxes in satellites.
- Temperature compensation.
- Battery power packs.
- Vision systems.
- Panel temperature measurement.
- Monitoring of actuators.

SPECIFICATIONS

- 15K Ohms Nominal Resistance at +25°C
- Tolerance: $\pm 1^{\circ}\text{C}$ from - 20°C to +50°C
- High precision accuracy across temperature range
- Excellent stability
- Robust construction
- Non-ITAR restrictive
- Flat surface for ease of mounting

SATELLITE SURFACE SENSOR

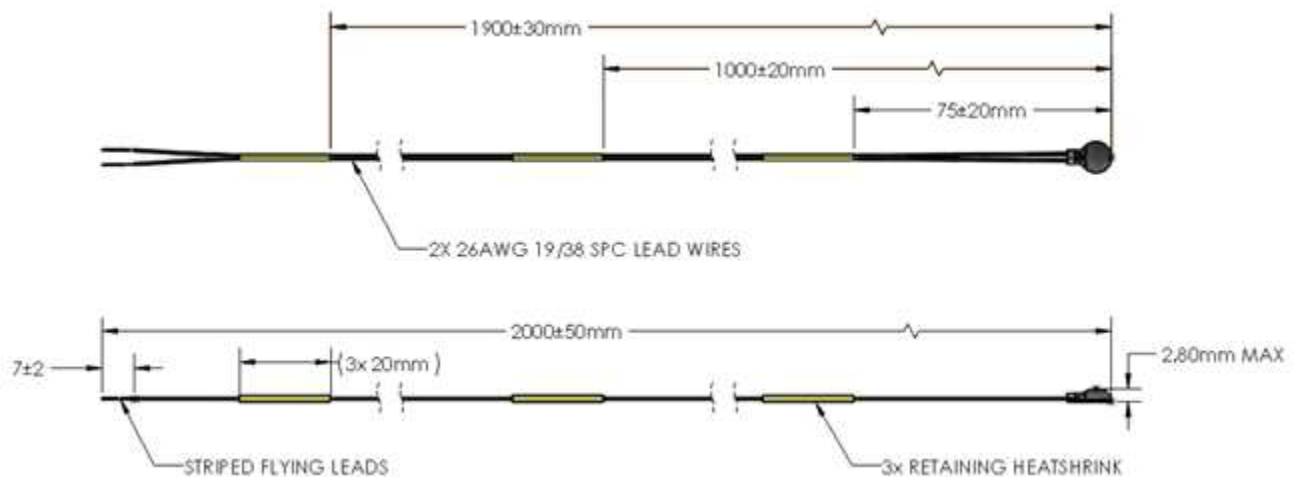
Glass Coated NTC Thermistor Bead with nominal resistance of 15K Ohms at +25°C, mounted on an aluminum housing and encapsulated using thermally conductive epoxy resin. Extension wire connection is 26 AWG stranded with black cross-linked fluoropolymer insulation leads.

NTC thermistor Aerospace probe construction is based on TE Connectivity's proprietary electroceramic formulation which has been used in the industry for over 25 years offering proven performance and outstanding reliability.

ELECTRICAL SPECIFICATION

Parameters	Units	Value
Resistance @ +25 °C	ohms	15,000
Tolerance from - 20°C to +50°C	°C	± 1
Tolerance from - 60°C to - 21°C	°C	± 2
Tolerance from +51°C to +90°C	°C	± 2
Beta Value 25/85	K	3664
Operating temperature range	°C	- 60 to +90
Storage temperature range	°C	- 60 to +125

SENSOR ASSEMBLY DRAWING



Notes:

1. Test end: Stripped flying leads
2. Wire: (2x) 26 AWG 19/36 Silver Plated Copper with black cross-linked fluoropolymer insulation
3. 3x 20mm heat shrink tubes used to secure the two leads together
4. Parts supplied coiled, cable tied and bulk in a plastic bag

RESISTANCE VS TEMPERATURE CHART

Temperature (°C)	Minimum Resistance (Ohm)	Nominal Resistance (Ohm)	Maximum Resistance (Ohm)	Tolerance (+/-°C)
-60	1139036	1304938	1397748	2
-55	817449	932164	1064927	2
-50	593285	673553	766017	2
-45	435225	492029	557172	2
-40	322547	363181	409583	2
-35	241378	270746	304147	2
-30	182320	203755	228039	2
-25	138938	154730	172556	2
-20	112479	118520	124927	1
-15	87010	91536	96328	1
-10	67837	71256	74870	1
-5	53287	55890	58637	1
0	42159	44156	46261	1
5	33585	35128	36753	1
10	26932	28133	29396	1
15	21734	22675	23663	1
20	17646	18388	19166	1
25	14411	15000	15616	1
30	11835	12305	12797	1
35	9773	10150	10544	1
40	8111	8416	8733	1
45	6766	7013	7271	1
50	5671	5873	6082	1
55	4616	4940	5291	2
60	3908	4175	4463	2
65	3322	3543	3782	2
70	2836	3020	3218	2
75	2431	2584	2749	2
80	2091	2220	2358	2
85	1806	1914	2030	2
90	1565	1656	1754	2
95		1438		
100		1253		
105		1096		
110		961		
115		845		
120		746		
125		660		

STEINHART-HART CALCULATIONS

Steinhart-Hart Coefficients*	
A	8.92253149E-04
B	2.43962905E-04
C	1.30313505E-07

Note: Steinhart-Hart Coefficients are generated from 0°C, +25°C & +70°C temperature reference points.

ORDERING INFORMATION

TE P/N.	Description	Ω @25°C	MOQ
20012616-00	15K Ohm NTC sensor	15,000	100*

*For orders less than 100, contact Sales

Orders for this part number to be placed with Customer Service in Galway, Ireland.

CUSTOMER APPROVAL

(The Customer signs acceptance of the mechanical/electrical specification for the NTC Thermistor)

Signature	Date

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