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SURFACE MOUNT RTD PLATINUM TEMPERATURE SENSORS FOR SPACE APPLICATIONS

GENERAL DESCRIPTION

RTD Platinum Sensors welded to 26AWG polyimide insulated twisted pair wires and encapsulated using thermally conductive epoxy resin on a flat aluminum housing. The construction is based on TE Connectivity's established ESA Qualified NTC Thermistor probe which has been used in the industry for over 25 years offering proven performance and outstanding reliability.

FEATURES

- High Reliability and Excellent Stability
- Flat Surface for ease of mounting
- 26AWG Twisted Pair ESCC 390101911 wire
- Various wire lengths available
- 100Ω and 1,000Ω nominal resistances at 0°C
- Individual serial numbering

SPECIFICATION

- Manufacturing and testing based on ESCC (European Space Components Coordination) Generic Specification No. 4006:
- Operating temperatures ranging from -170°C to +125°C
- Storage temperatures ranging from -170°C to +125°C
- 100Ω and 1,000Ω nominal resistances at 0°C
- Characteristic Curve 3850 ppm/K

APPLICATIONS

- Low Temperature Satellite Applications
- Temperature Control
- Temperature Monitoring
- Temperature Compensation
- Solar Panels
- Payload Equipment

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PRODUCT OVERVIEW

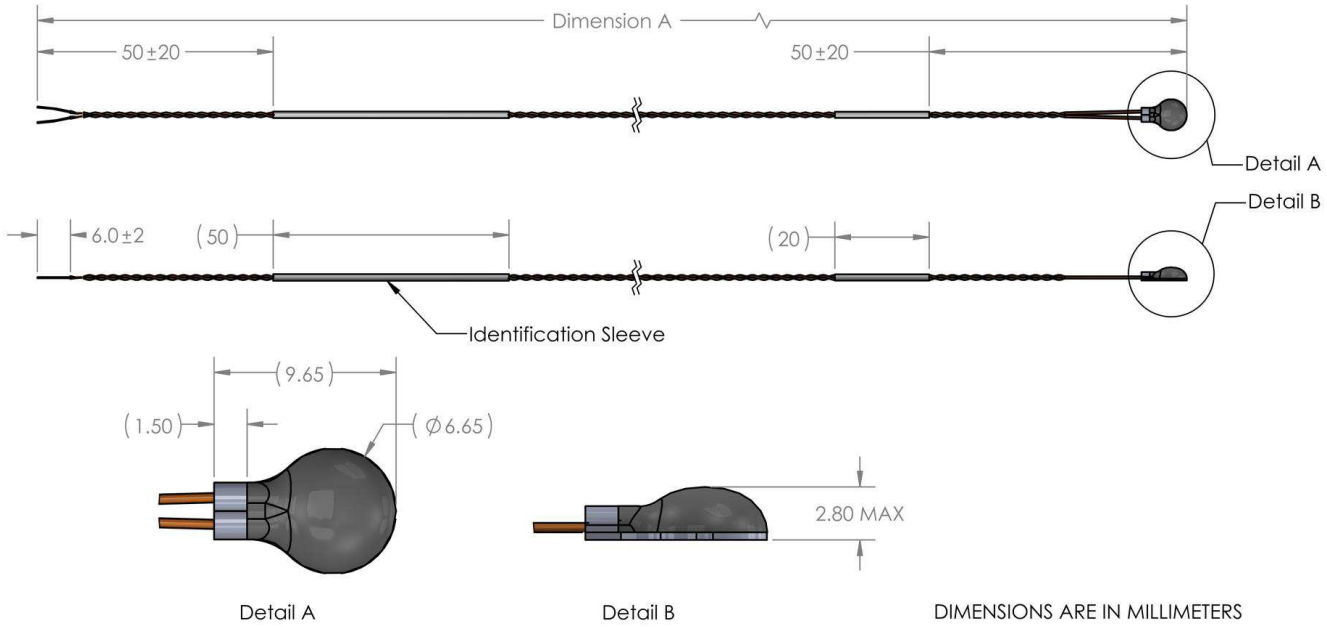
TE Connectivity Flight Model Part Number	Resistance (Ω) at 0°C	Wire Length (mm)	Wire Type	Operating Temperature (°C)	TE Connectivity Engineering Model Part No.
20016752-00	1,000	500 ± 10mm	26AWG Polyimide Insulated, ESCC 390101911	-95 to +125	10219128-00
20016752-01	1,000	1,000 ± 10mm	26AWG Polyimide Insulated, ESCC 390101911	-95 to +125	10219128-01
20016752-02	1,000	2,000 ± 10mm	26AWG Polyimide Insulated, ESCC 390101911	-95 to +125	10219128-02
20016752-03	1,000	3,000 ± 10mm	26AWG Polyimide Insulated, ESCC 390101911	-95 to +125	10219128-03
20030604-00	100	500 ± 10mm	26AWG Polyimide Insulated, ESCC 390101911	-170 to +125	20029981-00
20030604-01	100	1,000 ± 10mm	26AWG Polyimide Insulated, ESCC 390101911	-170 to +125	20029981-01
20030604-02	100	2,000 ± 10mm	26AWG Polyimide Insulated, ESCC 390101911	-170 to +125	20029980-00
20030604-03	100	3,000 ± 10mm	26AWG Polyimide Insulated, ESCC 390101911	-170 to +125	20029981-03

- **Flight Models:** All Flight Model part numbers listed above are tested equivalent to ESCC Generic Specification No. 4006, Chart F2 and Chart F3.
- **Non-Flight Models:** LVD (Lot Validation Testing) equivalent to ESCC Generic Specification No. 4006 Chart F4 can also be ordered. Parts subjected to LVT are called Non-Flight Models. For more information on ordering LVD and Non-Flight Models please contact a member of TE Connectivity's Sales Team.
- **Engineering Models:** Engineering Model versions of part numbers listed above are available. Engineering Models are typically used for testing and validation purposes. The corresponding Engineering Model part number for each Flight Model is listed in the last column of the table above.
- **Data Report:** A data report including full ESCC Generic Specification No. 4006, Chart F2 and Chart F3 test data is available to order. The orderable Data Report part number is 11016800-00 and the quantity always = 1 per order/batch.

RESISTANCE V TEMPERATURE TABLE

TE Connectivity Part No.	20016752-XX	20030604-XX
Temperature (°C)	**Nominal Resistance (Ω)**	**Nominal Resistance (Ω)**
-170	n/a	31.34
-125	n/a	50.06
-95	622.80	62.28
-60	763.28	76.33
-30	882.22	88.22
0	1000.00	100.00
25	1097.35	109.73
70	1270.75	127.07
125	1479.51	147.95

ASSEMBLY DRAWING



TE Connectivity Part Number	Dimension A (mm)
20016752-00	500 ± 10
20016752-01	1000 ± 10
20016752-02	2000 ± 10
20016752-03	3000 ± 10
20030604-00	500 ± 10
20030604-01	1000 ± 10
20030604-02	2000 ± 10
20030604-03	3000 ± 10

- Identification sleeve containing part number and serial number

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