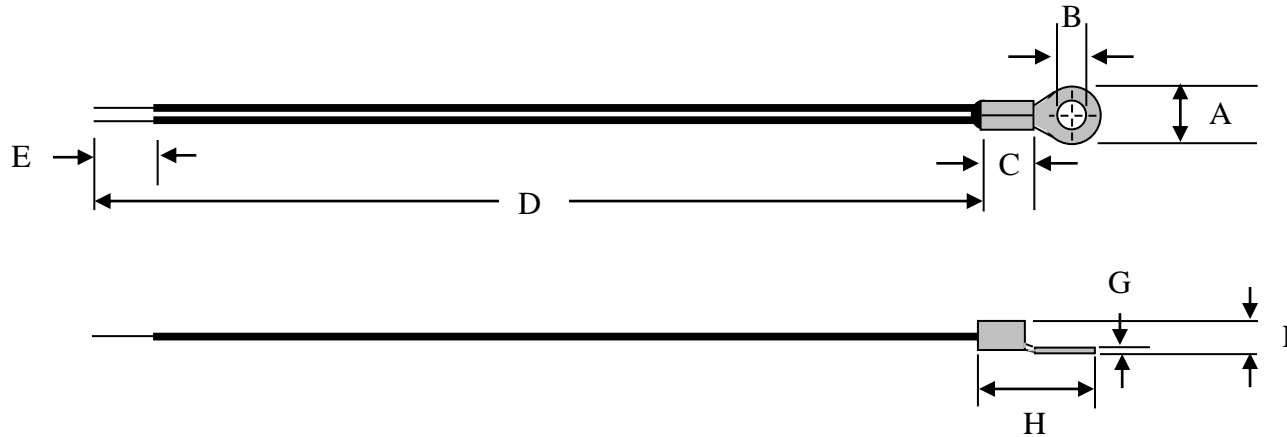


Part Number: PANR 103395-627




Electrical Specifications

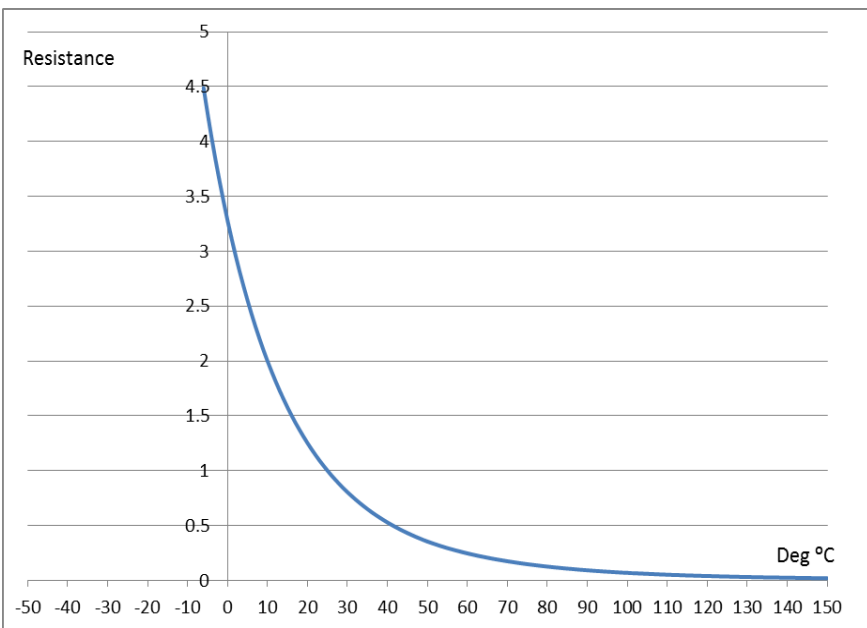
| | |
|--|------------------|
| Resistance @ 25° C | 10 kΩ ±5% |
| Isolation Voltage between Lead and Lug | 2500 VAC |
| Operating Temperature Range | -50 °C to 150 °C |
| Dissipation Constant | 8 mW / °C |
| Thermal Time Constant | 10 seconds |
| Material Constant (Beta) | 3950 °K ±1% |
| ROHS Compliant | Yes |
| MSL (moisture sensitivity level) | 1 |

Mechanical Specifications

| | |
|-----------------|--|
| A | 9.5mm ±0.5mm |
| B | 4.4mm ±0.2mm |
| C | 6.5mm ±0.5mm |
| D | 152.4mm ± 10.0mm |
| E | 5.0 mm Nom |
| F | 5.8mm ±1.0mm |
| G | 1.0mm Nom |
| H | 19.5mm ±1.0mm |
| Lead Wire Gauge | 28 AWG Solid, Teflon Insulated, Tinned |
| Ring Lug | #8 (M4) Stud |

| | | |
|------|---------|----------|
| Rev: | Date: | Change: |
| 0 | 3/12/20 | Re-issue |

| | | |
|--------------------|----------------|--|
| DRAWN BY: C. Terry | |  Circuit Protection Thermistors |
| DATE: 3/12/20 | REV: 0 | |
| ORIG. C. Terry | APPR: M. Samii | NTC THERMISTOR PROBE |
| SHEET 1 of 2 | | PANR 103395-627 |



| Deg C | R _T /R ₂₅ | Deg C | R _T /R ₂₅ | Deg C | R _T /R ₂₅ | Deg C | R _T /R ₂₅ | Deg C | R _T /R ₂₅ | Deg C | R _T /R ₂₅ |
|-------|---------------------------------|-------|---------------------------------|-------|---------------------------------|-------|---------------------------------|-------|---------------------------------|-------|---------------------------------|
| -50 | 66.9745 | -15 | 7.3476 | 20 | 1.2515 | 55 | 0.2948 | 90 | 0.0924 | 125 | 0.0353 |
| -49 | 62.3986 | -14 | 6.9470 | 21 | 1.1960 | 56 | 0.2844 | 91 | 0.0897 | 126 | 0.0344 |
| -48 | 58.1649 | -13 | 6.5704 | 22 | 1.1432 | 57 | 0.2743 | 92 | 0.0870 | 127 | 0.0336 |
| -47 | 54.2458 | -12 | 6.2164 | 23 | 1.0931 | 58 | 0.2646 | 93 | 0.0845 | 128 | 0.0328 |
| -46 | 50.6159 | -11 | 5.8834 | 24 | 1.0454 | 59 | 0.2554 | 94 | 0.0820 | 129 | 0.0320 |
| -45 | 47.2520 | -10 | 5.5700 | 25 | 1.0000 | 60 | 0.2465 | 95 | 0.0796 | 130 | 0.0312 |
| -44 | 44.1331 | -9 | 5.2751 | 26 | 0.9568 | 61 | 0.2379 | 96 | 0.0773 | 131 | 0.0304 |
| -43 | 41.2398 | -8 | 4.9975 | 27 | 0.9157 | 62 | 0.2297 | 97 | 0.0751 | 132 | 0.0297 |
| -42 | 38.5544 | -7 | 4.7359 | 28 | 0.8766 | 63 | 0.2219 | 98 | 0.0729 | 133 | 0.0290 |
| -41 | 36.0608 | -6 | 4.4895 | 29 | 0.8393 | 64 | 0.2143 | 99 | 0.0708 | 134 | 0.0283 |
| -40 | 33.7440 | -5 | 4.2572 | 30 | 0.8038 | 65 | 0.2070 | 100 | 0.0688 | 135 | 0.0277 |
| -39 | 31.5905 | -4 | 4.0382 | 31 | 0.7700 | 66 | 0.2001 | 101 | 0.0669 | 136 | 0.0270 |
| -38 | 29.5877 | -3 | 3.8317 | 32 | 0.7378 | 67 | 0.1933 | 102 | 0.0650 | 137 | 0.0264 |
| -37 | 27.7243 | -2 | 3.6368 | 33 | 0.7071 | 68 | 0.1869 | 103 | 0.0632 | 138 | 0.0258 |
| -36 | 25.9897 | -1 | 3.4529 | 34 | 0.6778 | 69 | 0.1807 | 104 | 0.0615 | 139 | 0.0252 |
| -35 | 24.3743 | 0 | 3.2791 | 35 | 0.6498 | 70 | 0.1747 | 105 | 0.0598 | 140 | 0.0246 |
| -34 | 22.8691 | 1 | 3.1165 | 36 | 0.6232 | 71 | 0.1690 | 106 | 0.0581 | 141 | 0.0240 |
| -33 | 21.4660 | 2 | 2.9628 | 37 | 0.5978 | 72 | 0.1634 | 107 | 0.0566 | 142 | 0.0235 |
| -32 | 20.1574 | 3 | 2.8176 | 38 | 0.5735 | 73 | 0.1581 | 108 | 0.0550 | 143 | 0.0230 |
| -31 | 18.9365 | 4 | 2.6802 | 39 | 0.5503 | 74 | 0.1530 | 109 | 0.0535 | 144 | 0.0224 |
| -30 | 17.7969 | 5 | 2.5504 | 40 | 0.5282 | 75 | 0.1481 | 110 | 0.0521 | 145 | 0.0219 |
| -29 | 16.7327 | 6 | 2.4275 | 41 | 0.5071 | 76 | 0.1433 | 111 | 0.0507 | 146 | 0.0215 |
| -28 | 15.7384 | 7 | 2.3111 | 42 | 0.4869 | 77 | 0.1388 | 112 | 0.0494 | 147 | 0.0210 |
| -27 | 14.8091 | 8 | 2.2010 | 43 | 0.4677 | 78 | 0.1344 | 113 | 0.0481 | 148 | 0.0205 |
| -26 | 13.9402 | 9 | 2.0968 | 44 | 0.4492 | 79 | 0.1301 | 114 | 0.0468 | 149 | 0.0201 |
| -25 | 13.1273 | 10 | 1.9980 | 45 | 0.4316 | 80 | 0.1261 | 115 | 0.0456 | 150 | 0.0196 |
| -24 | 12.3666 | 11 | 1.9044 | 46 | 0.4148 | 81 | 0.1221 | 116 | 0.0444 | | |
| -23 | 11.6544 | 12 | 1.8157 | 47 | 0.3987 | 82 | 0.1183 | 117 | 0.0433 | | |
| -22 | 10.9874 | 13 | 1.7315 | 48 | 0.3833 | 83 | 0.1147 | 118 | 0.0422 | | |
| -21 | 10.3624 | 14 | 1.6518 | 49 | 0.3686 | 84 | 0.1111 | 119 | 0.0411 | | |
| -20 | 9.7765 | 15 | 1.5761 | 50 | 0.3545 | 85 | 0.1077 | 120 | 0.0400 | | |
| -19 | 9.2271 | 16 | 1.5043 | 51 | 0.3415 | 86 | 0.1045 | 121 | 0.0390 | | |
| -18 | 8.7118 | 17 | 1.4361 | 52 | 0.3291 | 87 | 0.1013 | 122 | 0.0381 | | |
| -17 | 8.2281 | 18 | 1.3714 | 53 | 0.3172 | 88 | 0.0982 | 123 | 0.0371 | | |
| -16 | 7.7741 | 19 | 1.3099 | 54 | 0.3058 | 89 | 0.0953 | 124 | 0.0362 | | |

Temperature Vs Resistance Curve

The general equation for measurement to reduce error in Temperature by using Stein Hart & Hart equation.

$$T = 1 / a + b (\ln R_T / R_{25}) + c b (\ln R_T / R_{25})^2 + d (\ln R_T / R_{25})^3$$

| R _T / R ₂₅ Range | a | b | c | d |
|--|--------------|---------------|-----------------|----------------|
| 3.279 – 66.97 | 3.357296E-03 | 2.508334E-04 | 4.189372 E-06 | -6.240867E-08 |
| 0.3507-3.363 | 3.354016E-03 | 2.541522 E-04 | 3.730922 E-06 | -7.881561E-08 |
| 0.0637-0.3507 | 3.361395E-03 | 2.582266 E-04 | 5.885012 E-07 | -2.823586 E-08 |
| 0.0169-0.0637 | 3.351295E-03 | 2.500181 E-04 | -1.7255607 E-07 | -4.356943 E-08 |

This equation is for Beta 3950 °K

R @0°C/ R@50°C = 9.20

R@25°C/ R @125°C = 28.30

| | | |
|--------------------|---------------|----------------------|
| DRAWN BY: C. Terry | | |
| DATE: 3/12/20 | REV: 0 | |
| ORIG. C. Terry | APPR: M Samii | NTC THERMISTOR PROBE |
| SHEET 2 of 2 | | PANR 103395-627 |

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