



- -40-200°C Operating Temperature
- +- 1% @ 25C
- NTC Polyimide Sheath probe
- Beta 4036 NTC
- Fast Response Time (<5 sec TC)
- IP67
- Media – Liquid, Air, & Gas



DESCRIPTION

The PTS30 temperature sensor was specifically designed for temperature applications in a medical device and also used in heater element applications. The Polyimide Sheath encapsulated NTC allows for protection against water ingress that cause traditional temperature sensors to fail. The small .040” diameter probe allows for use in the tightest of spaces. The low cost semi-automated manufacturing process allows for a cost effective solution.

APPLICATIONS

- Heaters
- Medical Devices
- SPAS

Maximum Environmental Ratings

Operating Temperature -40°C to 200°C

Storage Temperature Range -40°C to 200°C

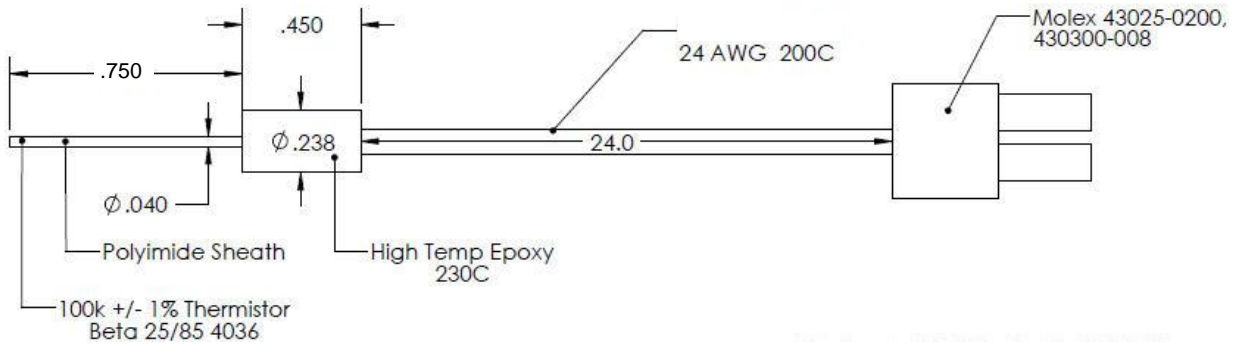
Resistance vs Temperature Chart

100Kohm NTC R vs. T

(other RT charts available)

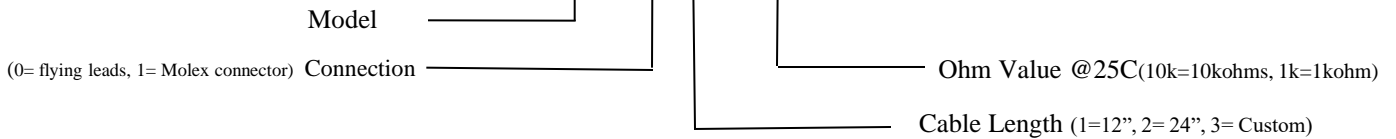
| T[-C] | R nom[Ohm] | R min[Ohm] | R max[Ohm] | deltaR/R [+-%] | deltaT [+--C] | alpha [%K] |
|-------|------------|------------|------------|----------------|---------------|------------|
| -55 | 9877500.0 | 8855700.0 | 10899000.0 | 10.3 | 1.4 | 7.4 |
| -50 | 6864800.0 | 6186000.0 | 7543500.0 | 9.9 | 1.4 | 7.1 |
| -45 | 4833700.0 | 4376800.0 | 5290600.0 | 9.5 | 1.4 | 6.9 |
| -40 | 3445800.0 | 3134300.0 | 3757200.0 | 9.0 | 1.4 | 6.7 |
| -35 | 2485200.0 | 2270400.0 | 2700000.0 | 8.6 | 1.3 | 6.4 |
| -30 | 1812400.0 | 1662600.0 | 1962100.0 | 8.3 | 1.3 | 6.2 |
| -25 | 1335600.0 | 1230100.0 | 1441200.0 | 7.9 | 1.3 | 6.0 |
| -20 | 994130.0 | 919000.0 | 1069300.0 | 7.6 | 1.3 | 5.8 |
| -15 | 747000.0 | 693030.0 | 800980.0 | 7.2 | 1.3 | 5.6 |
| -10 | 566390.0 | 527260.0 | 605510.0 | 6.9 | 1.3 | 5.4 |
| -5 | 433140.0 | 404540.0 | 461740.0 | 6.6 | 1.3 | 5.3 |
| 0 | 333960.0 | 312890.0 | 355030.0 | 6.3 | 1.2 | 5.2 |
| 5 | 258500.0 | 242920.0 | 274080.0 | 6.0 | 1.2 | 5.0 |
| 10 | 201660.0 | 190050.0 | 213270.0 | 5.8 | 1.2 | 4.9 |
| 15 | 158500.0 | 149790.0 | 167210.0 | 5.5 | 1.2 | 4.7 |
| 20 | 125470.0 | 118890.0 | 132050.0 | 5.2 | 1.1 | 4.6 |
| 25 | 100000.0 | 95000.0 | 105000.0 | 5.0 | 1.1 | 4.5 |
| 30 | 80223.0 | 76023.0 | 84422.0 | 5.2 | 1.2 | 4.3 |
| 35 | 64759.0 | 61222.0 | 68296.0 | 5.5 | 1.3 | 4.2 |
| 40 | 52589.0 | 49600.0 | 55578.0 | 5.7 | 1.4 | 4.1 |
| 45 | 42951.0 | 40418.0 | 45484.0 | 5.9 | 1.5 | 4.0 |
| 50 | 35272.0 | 33119.0 | 37426.0 | 6.1 | 1.6 | 3.9 |
| 55 | 29119.0 | 27282.0 | 30956.0 | 6.3 | 1.7 | 3.8 |
| 60 | 24161.0 | 22589.0 | 25732.0 | 6.5 | 1.8 | 3.7 |
| 65 | 20144.0 | 18796.0 | 21493.0 | 6.7 | 1.9 | 3.6 |
| 70 | 16874.0 | 15713.0 | 18035.0 | 6.9 | 2.0 | 3.5 |
| 75 | 14198.0 | 13196.0 | 15201.0 | 7.1 | 2.1 | 3.4 |
| 80 | 11998.0 | 11130.0 | 12867.0 | 7.2 | 2.2 | 3.3 |
| 85 | 10181.0 | 9427.2 | 10936.0 | 7.4 | 2.3 | 3.2 |
| 90 | 8674.4 | 8017.3 | 9331.5 | 7.6 | 2.4 | 3.2 |
| 95 | 7418.9 | 6844.9 | 7993.0 | 7.7 | 2.5 | 3.1 |
| 100 | 6368.8 | 5865.9 | 6871.7 | 7.9 | 2.6 | 3.0 |
| 105 | 5487.0 | 5045.3 | 5928.7 | 8.1 | 2.7 | 2.9 |
| 110 | 4743.7 | 4354.6 | 5132.7 | 8.2 | 2.9 | 2.9 |
| 115 | 4114.8 | 3771.3 | 4458.3 | 8.3 | 3.0 | 2.8 |
| 120 | 3580.8 | 3276.8 | 3884.9 | 8.5 | 3.1 | 2.7 |
| 125 | 3125.9 | 2856.1 | 3395.7 | 8.6 | 3.2 | 2.7 |
| 130 | 2737.0 | 2497.0 | 2977.0 | 8.8 | 3.3 | 2.6 |
| 135 | 2403.5 | 2189.6 | 2617.5 | 8.9 | 3.5 | 2.6 |
| 140 | 2116.7 | 1925.5 | 2307.8 | 9.0 | 3.6 | 2.5 |
| 145 | 1869.1 | 1697.9 | 2040.3 | 9.2 | 3.7 | 2.5 |
| 150 | 1654.9 | 1501.3 | 1808.6 | 9.3 | 3.9 | 2.4 |
| 155 | 1469.1 | 1330.9 | 1607.2 | 9.4 | 4.0 | 2.4 |
| 160 | 1307.3 | 1182.8 | 1431.8 | 9.5 | 4.1 | 2.3 |
| 165 | 1166.2 | 1053.7 | 1278.6 | 9.6 | 4.3 | 2.3 |
| 170 | 1042.7 | 941.0 | 1144.4 | 9.8 | 4.4 | 2.2 |
| 175 | 934.5 | 842.3 | 1026.7 | 9.9 | 4.5 | 2.2 |
| 180 | 839.3 | 755.6 | 923.0 | 10.0 | 4.7 | 2.1 |
| 185 | 755.4 | 679.3 | 831.6 | 10.1 | 4.8 | 2.1 |
| 190 | 681.4 | 611.9 | 750.8 | 10.2 | 5.0 | 2.0 |
| 195 | 615.8 | 552.4 | 679.2 | 10.3 | 5.1 | 2.0 |
| 200 | 557.6 | 499.7 | 615.6 | 10.4 | 5.3 | 2.0 |
| 205 | 505.9 | 452.9 | 559.0 | 10.5 | 5.4 | 1.9 |
| 210 | 459.9 | 411.2 | 508.6 | 10.6 | 5.6 | 1.9 |
| 215 | 418.8 | 374.0 | 463.5 | 10.7 | 5.8 | 1.9 |
| 220 | 382.0 | 340.8 | 423.2 | 10.8 | 5.9 | 1.8 |

Mechanical Dimensions (inches),



Part Number Configuration

PTS30-1-2-100K



Ph: (480) 462-1810 sales@PhoenixSensors.com

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