

FEATURES

- Thin film construction
- High stability and accurate output
- Linear output over a wide operating range
- A fast thermal response time of 0.1s
- Resistant to vibration and shock
- Temperature measurement range from -50°C to 500°C
- 10mm lead wires

RS PRO 2 wire PT100 Sensor, -50°C min +500°C max, 2.3mm Probe Length x 2mm Probe Diameter

RS Stock No.: 362-9834



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

From RS Pro a high-quality and reliable Pt100 and Pt1000 PRT (Platinum Resistance Thermometer) or RTD (Resistance Temperature Detector). These temperature sensors have a thin film construction for accurate and reliable temperature measurement along with a fast response time to temperature changes. This design is also resistant to both vibration and shock. The flat design of these PRTs makes them ideal for measuring temperatures on surfaces

General Specifications

| | |
|----------------------------|---|
| Sensor Type | PT100 |
| Probe Material | Platinum |
| Number Of Wires | 2 |
| Accuracy | Class A |
| Response Time | 0.1s |
| Construction | Thin film, 10mm tails |
| Vibration Resistant | Yes |
| Tolerance | Class A |
| Applications | These thin film PRT temperature sensors are suitable for surface and immersion applications where protected. Their flat design means they offer a minimally intrusive means of measuring temperatures on flat surfaces. Applications include the following: Automotive industry, Chemical industry, Micro-electronics, Air conditioning and refrigeration, Air, gas and liquid temperature measurement, Food processing, Laboratories |

Electrical Specifications

| | |
|--|-----------------|
| Ice point resistance | 100Ω |
| Fundamental interval (0°C to 100°C) | 38.5Ω (nominal) |
| Self-heating | <0.5°C/mW |
| Stability | ±0.05% |
| Measuring current | 1mA |

Mechanical Specifications

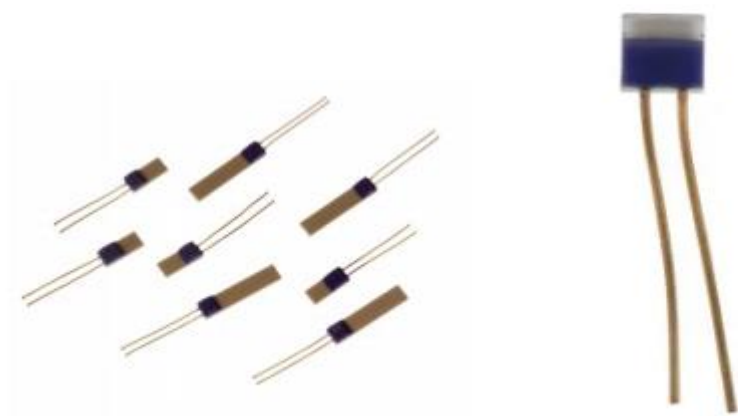
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|--------------------|---|
| Probe Length | 2.3mm |
| Probe Diameter | 2mm |
| Termination Type | Solder |
| Process Connection | Chip |
| Immersion Effect | Suitable for surface & immersion applications where protected |

Operation Environment Specifications

| | |
|----------------------------|-------|
| Minimum Temperature Sensed | -50°C |
| Maximum Temperature Sensed | 500°C |

Approvals

| | |
|---------------------------|--------|
| Compliance/Certifications | IEC751 |
|---------------------------|--------|





| Resistance | Dimensions (width x length) | Tolerance Class | Allied code | RS order code |
|------------|-----------------------------|-----------------|-------------|-------------------------------|
| Pt100 | 2 x 5.0mm | Class A | 70646146 | 611-7788 |
| Pt100 | 2 x 5.0mm | Class B | 70646148 | 611-7801 |
| Pt100 | 2 x 5.0mm | Class B | 70642888 | 290-5070 (Packet of 5) |
| Pt100 | 2 x 10mm | Class A | 70643577 | 362-9799 |
| Pt100 | 2 x 10mm | Class B | 70641762 | 237-1607 |
| Pt100 | 2.0 x 10mm | 1/3DIN | 70643578 | 362-9812 |
| Pt100 | 2.0 x 2.3mm | Class A | 70643579 | 362-9834 |
| Pt100 | 2.0 x 2.3mm | Class B | 70643580 | 362-9840 |
| Pt100 | 2.0 x 2.3mm | 1/3DIN | 70643581 | 362-9856 |

Pt100 Elements (continued)

| Resistance | Dimensions (width x length) | Tolerance Class | Allied code | RS order code |
|------------|-----------------------------|-----------------|-------------|-----------------|
| Pt100 | 1.2 x 1.6mm | Class A | 70646834 | 666-7362 |
| Pt100 | 1.2 x 1.6mm | Class B | 70646831 | 666-7353 |
| Pt100 | 1.0 x 3.0mm | Class A | 70646833 | 666-7359 |
| Pt100 | 1.0 x 3.0mm | Class B | 70646832 | 666-7356 |
| Pt100 | 2.0 x 5.0mm | 1/3 Din | 70656467 | 814-0162 |
| Pt100 | 1.2 x 4.0mm | Class B | 70656468 | 814-0165 |
| Pt100 | 1.2 x 4.0mm | Class A | 70656469 | 814-0169 |

