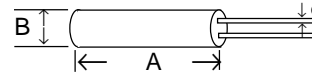


# PLATINUM, NICKEL, NICKEL IRON RTD's TEMPERATURE RATING UP TO 500°C

## PTC SERIES - Ceramic Case PTS SERIES - Stainless Steel



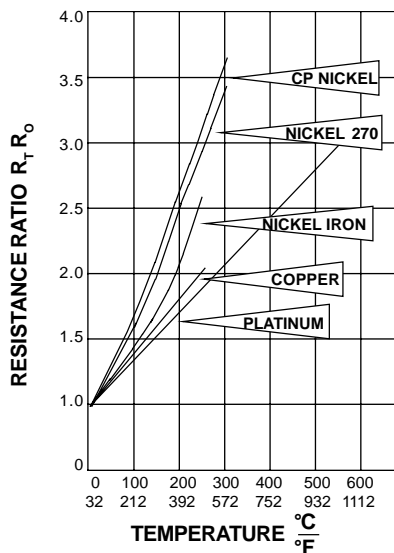
- Inherent wirewound stability
- Resistance range: 1Ω to 1000Ω
- Tolerance available to ±0.1%
- Wide selection of TC's (+3850 to +6720ppm)
- Excellent linearity and thermal response time

RCD's Resistance Temperature Detectors are designed for tough industrial applications, and are utilized to sense or regulate air (PTC) or liquid (PTS) environments. Series PTC feature an all-welded wirewound construction for increased durability under stress and vibration, and exceptional stability. PTS probes are encased in a stainless steel sheath and are available with WW or film elements.

RCD Type	Resistance Wire	TCR 0° to 100°C	TC 3-digit code	Resistance Range (Ω)	A ±.060 [1.5]	B ±.01 [.25]	C* Typ. [.05]
PTC100PT	Platinum	3850ppm	392	1 - 200	.575 [14.6]	.096 [2.44]	.016 [.4] Lead Length 0.5 [12.7] min.
PTC100CPN	Chem. Pure Nickel	6720ppm	672	1 - 120			
PTC100N	Nickel 270	6000ppm	603	1 - 120			
PTC100NF	Nickel Iron	5150ppm	522	1 - 500			
PTC150PT	Platinum	3850ppm	392	1 - 400	.575 [14.6]	.125 [3.18]	.016 [.4] Lead Length 0.5 [12.7] min.
PTC150CPN	Chem. Pure Nickel	6720ppm	672	1 - 200			
PTC150N	Nickel 270	6000ppm	603	1 - 200			
PTC50NF	Nickel Iron	5150ppm	522	1 - 1000			
PTC200PT	Platinum	3850ppm	392	1 - 400	.675 [17.1]	.170 [4.32]	.020 [.5] Lead Length 1.0 [25.4] min
PTC200CPN	Chem. Pure Nickel	6720ppm	672	1 - 200			
PTC200N	Nickel 270	6000ppm	603	1 - 200			
PTC200NF	Nickel Iron	5150ppm	522	1 - 1000			

\* Lead material is nickel for minimal oxidation at high temperature on platinum elements, tinned copperweld is standard on others.

### LINEARITY



### WIRE COMPARISON

Wire Alloy	Cost	Temp. Range	Linearity	R/T Curve Repeatability
Platinum	Medium	-55 to +500°C	Excellent	Excellent
CP Nickel	High	-55 to +300°C	Fair	Good
Nickel 270	Low	-55 to +300°C	Fair	Fair
Nickel Iron	Low	-55 to +260°C	Fair	Good

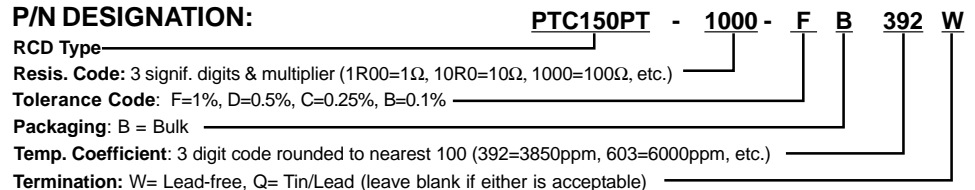
**THERMAL RESPONSE (TIME CONSTANT)** varies with different element sizes, resistance values, and wire alloy. Typical time constant for PTC 150 PT 100 ohm is 2.2 seconds in water moving 3ft./sec. Consult factory for details.

**SELF-HEATING** is contingent upon resistance value, alloy, and element size. Typical self-heating for PTC 150 PT 100 ohm is 65 mW/°C in water moving at 3ft./sec. Consult factory for particular specifications.

**INTERCHANGEABILITY** - The strain-free design of RCD sensors insures maximum repeatability. This characteristic is degraded by lot-to-lot inconsistencies of the various wire alloys. Platinum being extremely consistent allows the best interchangeability characteristics. Consult factory for specific data based on particular alloy and tolerance.

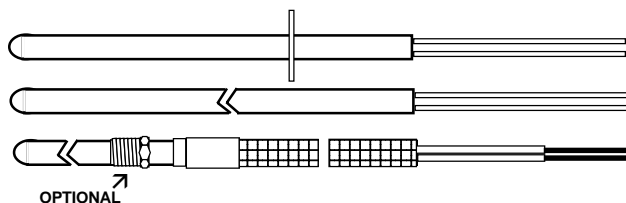
**SHOCK AND VIBRATION** - PTC elements withstand 100 G's sinewave shock for 3 cycles at 10 milliseconds, and withstand vibration 10Hz to 2200Hz at 20 G's.

### P/N DESIGNATION:



## RTD PROBES, TEMPERATURE RATING UP TO 500°C

### PTS SERIES



Series PTC (wirewound) and PT (thin-film) RTD elements can be assembled into stainless steel sheaths for severe environmental requirements. These probes (PTS Series) are moistureproof and pressure tight and in many instances may be directly inserted into process lines or thermowells for precise temperature readings. Series PTS are available in any standard PTC resistance value and temperature coefficient, in .125" [3.18], .187 [4.75], .250 [6.35] diameters. Teflon insulated leads are standard (other insulations available). 2-terminal, 3-terminal, or 4-terminal configurations available. Probe lengths available from 0.5" [12.7] to 18" [457]. **Consult factory for list of standard probe styles including surface measurement, flange mount, screw mount, etc.**