

RESISTANCE TEMPERATURE DETECTORS RTD GENERAL INFO AND TOOLS



Resistance Temperature Detectors (RTD's) come in a variety of different types and ranges. All Blaze RTD's come in platinum (Pt) with the standardized DIN/IEC 751, and an alpha coefficient of $\alpha = 0.00385$. All RTD's read in the standard unit of Ohms Ω . For example, Pt100 Ω RTD's have a nominal resistance of 100 Ohms at 0°C .

Blaze RTD's also come with various Ohm, class, and range values. Please refer to the RTD TABLE to help find the best element for your specific environment.

Pt Thin film RTD elements are designed for long term stability and accuracy over a large temperature range. Common applications include automotive, HVAC, energy management, industrial, as well as medical.

Cryogenic Thin film RTD elements are characterized by their long-term stability, shock resistance, and wide temperature range in low temp environments. Common applications include aerospace, chemical and power generation plants as well as analytical equipment.

RTD TABLE

TYPE	CLASS	ALPHA	RANGE
Pt100 Ω	A B	$\alpha = 0.00385$	-50 to $+300^{\circ}\text{C}$ -70 to $+500^{\circ}\text{C}$
Pt500 Ω	A B	$\alpha = 0.00385$	-50 to $+300^{\circ}\text{C}$ -70 to $+500^{\circ}\text{C}$
Pt1000 Ω	A B	$\alpha = 0.00385$	-50 to $+300^{\circ}\text{C}$ -70 to $+500^{\circ}\text{C}$
Cryogenic Pt100 Ω	B	$\alpha = 0.00385$	-196 - 150°C
Cryogenic Pt1000 Ω	B	$\alpha = 0.00385$	-196 - 150°C

RTD TEMPERATURE DEVIATION

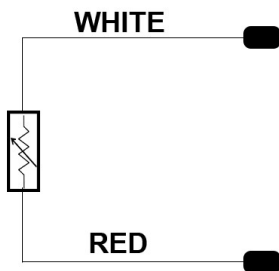
Platinum (Pt) IEC 751 | Class A | $\pm (0.15 + 0.002*|T|)^{\circ}\text{C}$

Platinum (Pt) IEC 751 | Class B | $\pm(0.3 + 0.005*|T|)^{\circ}\text{C}$

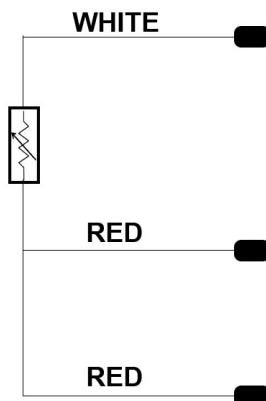
*The symbol “|T|” refers to the absolute value of the sensor temperature.

ELEMENT CONNECTIONS

2 – Wire
RTD



3 – Wire
RTD



4 – Wire
RTD

