

TTS95

TEMPERATURE ELEMENT & SENSOR



General Flyer Catalog

FLYR-TTS95-2110B (Oct-21)

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Temperature transmitters feature significant advances over the direct-wired counterparts. Eliminate special cabling requirements; simplify engineering and maintenance while enabling advanced diagnostics. **REGAMOUNT™** offers head-mount and field-mount devices to cover different temperature applications.

The more common sensors used in industrial applications are **TTS95** Resistive Temperature Detectors (RTD) and Thermocouples (T/C).

What are the differences between an RTD and a Thermocouple?

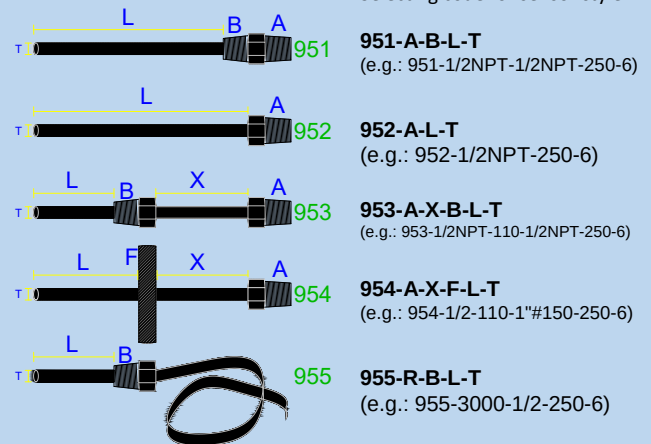
RTDs are made from a single material whose electrical resistance changes as temperature changes. Knowing the relationship between resistance and temperature allows us to infer the temperature measured. A common material used for RTDs is Platinum; but, other materials are used as well. Platinum has a stable well-defined resistance change per degree temperature change over a wide temperature envelope. The advantage of RTDs is the stable accurate output over a long period of time. Disadvantages are their initial higher cost and limited measurement envelope when compared to thermocouples.

Thermocouples are made from two dissimilar electrical conductors that are joined at one end. Changes in temperature at the connection point of the two materials cause a voltage to be generated between them. Knowing the relationship between the generated voltage and temperature allows us to infer the temperature measured. Thermocouples are made out of several different materials combinations. Each combination has a different temperature envelope. Thermocouples are more rugged, less expensive, faster responding and have larger measurement envelopes when compared to RTDs; but, are not as stable and accuracy degrades over time.

TTS95 RTDs and Thermocouples are the latest model of Temperature Element we developed for **STEX15** and **STEX25** Temperature Transmitters.

Sensor Type		Measurements	Minimum	Accuracy
Thermocouples	T	-200~400°C	25°C	±0.4°C
	E	-200~1000°C	25°C	±0.4°C
	J	- 210~1200°C	25°C	±0.4°C
	K	-200~1372°C	25°C	±0.4°C
	N	-200~1300°C	25°C	±0.4°C
	R	0~1768°C	100°C	±0.8°C
	S	0~1768°C	100°C	±0.8°C
mV input	B	150~1820°C	100°C	±1.0°C
		-120~120mV	10mV	±10µV
RTD		-1000~1000mV	50mV	±100µV
	PT50	-200~850°C	10°C	±0.15°C
	PT100	-200~850°C	10°C	±0.15°C
	PT500	-200~850°C	10°C	±0.1°C
Ohm input	PT1000	-200~850°C	10°C	±0.1°C
		0~500 Ω	100Ω	±0.2 Ω
		0~4500 Ω	100Ω	±1.0 Ω

Selecting code for sensor style:

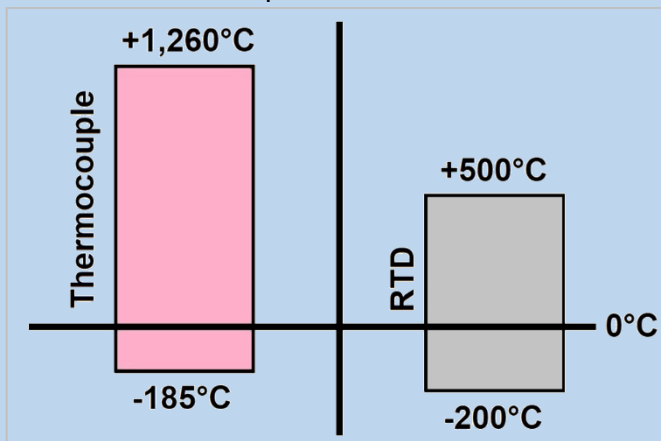


Sensor Ordering Codes Instruction:

Structure: Element/Type-Material-Style

PT100/2WIRE-SS316-951-1/2NPT-1/2NPT-250-6

Element/Type Material Style



Comparison of applicable range between RTD & Thermocouple

We reserve the right to change all of these data at any time without prior notice.

