

RTD SPECIFICATIONS

Standard RTD Element Availability

MATERIAL	TYPE	RESISTANCE @ 0 °C	TEMP. COEF.	ACCURACY @ 0 °C
Platinum	Thin film	100 Ω	0.003 85 °C ⁻¹	± 0.12%

Above table indicates initial accuracy only. Lead resistance has a large effect on RTD temperature measurement accuracy. A two wire circuit provides no compensation and can provide large measurement errors. The leadwire resistance table shows the effects of leadwire resistance on a two wire circuit using copper leadwire.

Leadwire Resistance

LEADWIRE GAUGE	RESISTANCE OHMS PER FOOT	UNCOMPENSATED 2 WIRE CIRCUITS	
		MAX. LENGTH FOR 1 °F ERROR	ERROR IN °F PER DOUBLE FT.
30	0.110	0.97 Ft.	1.03 °F
28	0.0679	1.58 Ft.	0.63 °F
24	0.0259	4.13 Ft.	0.24 °F
22	0.0160	6.68 Ft.	0.15 °F
20	0.0097	11.03 Ft.	0.09 °F

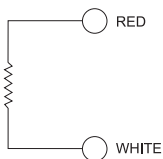
RTD Leadwire Table

WIRE CODE	CONDUCTOR	INSULATION	OUTER COVERING	MAXIMUM TEMP.
F3	Stranded	Fiberglass	None	482 °C [900 °F]
F3A	Stranded	Fiberglass	Stainless steel flex armor	482 °C [900 °F]
F3B	Stranded	Fiberglass	Stainless steel overbraid	482 °C [900 °F]
F3J	Stranded	Fiberglass	None (individual leads)	482 °C [900 °F]
T3	Stranded	Teflon®	None	204 °C [400 °F]
T3A	Stranded	Teflon®	Stainless steel flex armor	204 °C [400 °F]
T3J	Stranded	Teflon®	None (individual leads)	204 °C [400 °F]
K3	Stranded	Kapton®	None	316 °C [600 °F]
K3A	Stranded	Kapton®	Stainless steel flex armor	316 °C [600 °F]
K3B	Stranded	Kapton®	Stainless steel overbraid	316 °C [600 °F]
C3	Stranded	Polyurethane cord set	None	104 °C [220 °F]

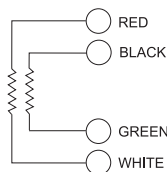
All sensors are constructed in accordance with the above wire code table using 24 ga. leadwire. Exceptions are duplex elements which use 28 ga. leadwire.

RTD WIRING DIAGRAMS

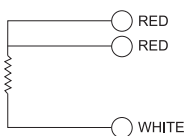
2 WIRE SINGLE



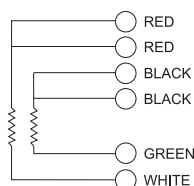
2 WIRE DUPLEX



3 WIRE SINGLE



3 WIRE DUPLEX



CONSTRUCTION SPECIFICATIONS

SHEATHS: Sheaths are 316 stainless steel and are available in 1/8", 3/16", and 1/4" OD tube diameters.

PLUGS and JACKS: Both standard and miniature size plugs and jacks are rated at 350 °F maximum temperature.

FLEXIBLE ARMOR: Constructed of 300 Series stainless steel with diameters of 0.275" OD on 3/16" and 1/4" OD sheath sizes and 0.207" OD on 1/8" OD sheath size.