

TH14:

Resistor calculation for range selection.

Definitions:

Pt - 100 RTD mode: TH14/1

Ts = Temperature at high end of range

Tz = Temperature at low end of range

Tin = (Ts - Tz)

Res 5 = 21.5 KΩ

Res 3 (KΩ) = Value of Pt - 100 at low end of range

For range in °C:

Res 1 (KΩ) = 0.133 • Tin

For range in °F:

Res 1 (KΩ) = 0.074 • Tin

Thermocouple mode: TH14/2

1. Without linearization

Res 4 = according to the following table:

TC Type	Rtc (Ω)	Vcj (mV)
E	374	16.6
J	442	14.0
N	845	7.35
K	562	11.1
R	3.83K	1.63
S	3.83K	1.63
T	562	11.1
L	422	14.7

Vin = Vs - Vz (mV)

Res 5 = 21.5 KΩ

Res 1 (KΩ) = 0.51 • Vin

Res 2 (KΩ) = 250 / (Vz + Vcj)

2. With linearization

Contact factory for complete form of instructions including all plug in linearization resistor list.

Wiring instructions :

1. Connect the positive supply lead to terminal 1.
2. Connect the negative supply lead to terminal 2.

For Pt - 100 RTD:

3. Connect the Pt - 100 leads to input terminals 4, 5 and 6 according to the RTD wiring diagram

For Thermocouple:

4. Connect the thermocouple leads to input terminals 4 and 5 according to the T/C wiring diagram.

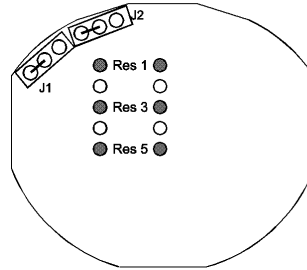
Calibration and adjustments :

It is assumed that the unit undergoing calibration has been properly ranged at the factory or workshop.

1. Pt - 100 RTD : Connect the Pt - 100 sensor simulator to the TH14/1 input terminals according to the wiring diagram.
2. Thermocouples : Connect the Thermocouple sensor simulator to the TH14/2 input terminals according to the wiring diagram.
3. Connect a digital current monitor to the TH14 output terminals, observe for proper polarity.
4. Set the input to the desired minimum signal and adjust the Zero potentiometer until the output minimum signal is at 4.00 mA.
5. Set the input to the desired maximum signal and adjust the Span potentiometer until the output maximum signal is at 20.00 mA.
6. Repeat steps 4 & 5 until no further adjustment is needed.

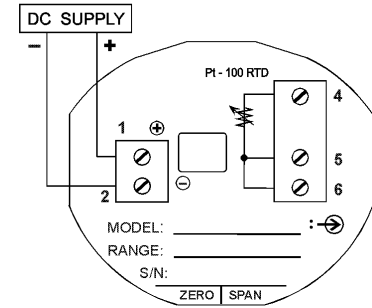
RTD CONFIGURATION

Resistor - Placement



COVER BOTTOM VIEW

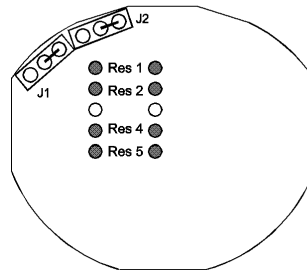
RTD wiring diagram



COVER TOP VIEW

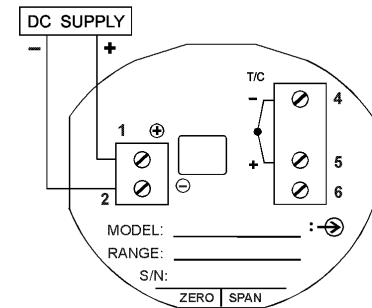
T/C CONFIGURATION

Resistor - Placement



COVER BOTTOM VIEW

T/C wiring diagram



COVER TOP VIEW