Model TEMP_U

1. Thermocouple input

Vs - thermocouple output at low end of range in mV

Vz - thermocouple output at high end of range in mV

For values of Rd and Vcj refers to table

For all thermocouple ranges:

V = Vs   Vz

Rf = 22.6 K

Rb = 100 Ω

Rc (KΩ) = 250/(Vcj Vz)

Ra (KΩ) = 250 + V/(800-V)

Re = open

Jumper position
C + D
G + I
J + H

TC	Rtc=Rd	Vcj
B	**Open**	**0 mV**
E	**375 Ω**	**16.6 mV**
J	**442 Ω**	**14.0 mV**
K	**562 Ω**	**11.1 mV**
N	**422 Ω**	**14.7 mV**
R	**3.83 KΩ**	**1.65 mV**
S	**3.83 KΩ**	**1.65 mV**
T	**562 Ω**	**11.1 mV**
W5	**1.62 KΩ**	**3.82 mV**

3. Rtd 3-4 wire input

Tz   Temperature at low end of range

Ts   Temperature at high end of range

4 wire Rtd
Jumper position
E + G
F + H

3 wire Rtd
Jumper position
A + B ; C + D
E + G ; F + H

T = Ts   Tz   Rd = Re = open

Ra = 118 KΩ ;   Rc = 13.7 KΩ

Rb (KΩ) = 23.7 • Rz/(1667-Rz)   Rz = Value of Pt   100 at low end of range

Rf (KΩ) = 0.0512*T(°C)

Rf (KOhm) = 0.0284*T(°F)

<u>A   for 2-wire transmitter output: Output fixed at 4   20 mA</u>

Rh = 110 Ω

Ri = short

<u>B   for 4-wire transmitter output:</u>

Use calculated value as follows:

1. **Current output**

   Ioz   Output current at low end of range (in mA)

   Ios   Output current at high end of range (in mA)

   Io = Ios   Ioz   (input span)

   Ri = open

   Rg = 57000 / (Ioz • Rh)   (in KΩ)

   Rh = 800 / Io   (in Ω)

2. **Voltage output**

   Voz   Voltage output at low end of range (in Volts)

   Vos   Voltage output at high end of range (in Volts)

   Vo = Vos   Voz   (input span)

   Rg = (65 • Vos) / Voz   (in KΩ)

   Rh = 40.2 Ω

   Ri = Vo / 20   (in KΩ)