

- Compact Size, 1.75" (44.5mm) in Diameter For Quick Fit in Most Industrial Protection Heads
- High Precision (Accuracy = 0.1% of Span), Low Cost
- Enhanced RFI and EMI Protection for Better Measurement Stability
- Universal Input Capability Accommodating Thermocouple Types J, K and T
- Fixed-Range Units Offered in Standard or Special
- DIN Rail Mounting Bracket

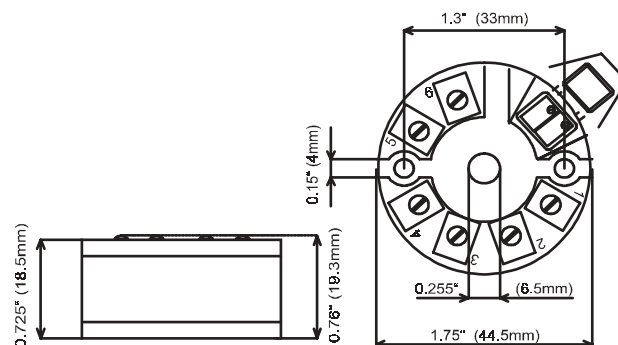


Simpson's model TR700 is a high precision, low cost transmitter designed to control an output current (4-20mA) in a linear relationship with a low level input signal for accurate transmission over long distances.

The TR700 provides isolated, 2-wire, 4-20mA amplification of low level process signals, including J, K and T.

Each transmitter offers ice point reference compensation for thermocouples that are voltage linear. The TR700 provides 1000 VDC input/output isolation preventing ground loops and operational errors. This assures a stable 4-20mA output signal transmitted directly from the measuring source.

### Dimensions and Installation



## Typical Application

### PERFORMANCE

**Accuracy:** ±0.1% of span

**Adjustability:** ±15% for both zero and span

**Burnout Detection:** Upscale-standard

### INPUT

**TC:** all known types

**Linearity:** Better than ±0.1% of span

### Stability (For Both Zero & Span):

TC (25mV input): 0.02% of span/°C

**T/C Cold Junction Compensation:** <0.05°C/°C of ambient temperature

### INPUT SPAN

TC: 5mV min span

### OUTPUT

**Range:** 4-20mA DC

**Limit:** 2.5 to 28mA

**Maximum Load:**  $R_{max} = (V \text{ supply} - 10V) \div 20mA$

### ENVIRONMENTAL

**Ambient Temperature:** -20 + 70°C (-4 + 160°F)

**Humidity:** 0-95% RH, non-condensing

**Isolation:** 1000 VDC or peak AC

### ELECTRICAL

**Supply Voltage:** 10-40 VDC polarity protected

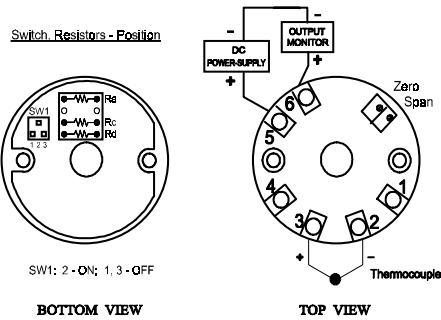
RFI and EMI immunity from 20MHz to 500MHz

## Standard Range Selection Chart - Sensor Type

°C	°F	K	J	T
-50+50	-50+125			
0+50	0+125			
0+100	0+212			
0+200	0+300	*	*	*
0+400	0+500	*	*	*
0+500	0+750	*	*	*
0+600	0+1000	*	*	
0+800	0+1500	*	*	
0+1000	0+2000	*	*	
0+1200	0+2200	*		

## Wiring Diagrams

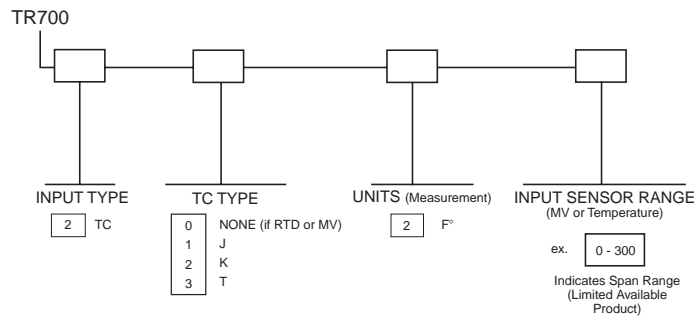
### THERMOCOUPLE CONFIGURATION



### CONFIGURATION:

1. Connect the positive supply lead to terminal five.
2. Connect the negative supply lead to output monitor.
3. Connect leads from output monitor to terminal six.
4. For thermocouple inputs, connect the thermocouple leads to input terminals 2 and 3, according to the thermocouple wiring diagram.

## Ordering Information



For quickest delivery please choose sensor type and range from the Standard Range Selection Chart. If special ranges are required please contact Simpson for ordering information.