



## MODEL TBU-00 | TEMPERATURE TRANSMITTER

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### FEATURES/BENEFITS

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- Configurable measurement range
- Standard temperature sensor head enclosure mounting
- Pt100 connection for 2, 3, or 4 wires

### APPLICATIONS

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- Process applications where a 4-20 mA signal is required
- Food processing equipment
- Boiler equipment
- Refrigeration equipment

### DESCRIPTION

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The **Model TBU-00 Temperature Transmitter** is a high precision temperature transmitter designed to easily mount in most temperature sensor instrument enclosures. The universal input reduces inventory while the micro-USB port facilitates easy configuration, and calibration in the lab or in the field. The versatile TBU model allows for selection and configuration of input type, measurement range, and calibration. The output can be set as either direct 4-20mA, or reverse 20-4 mA, through easy to use configuration software.

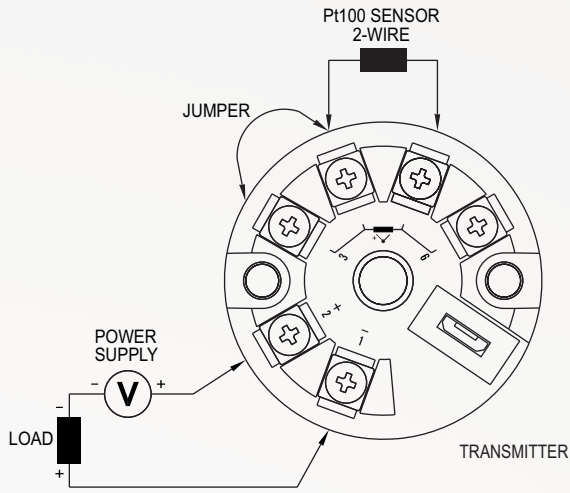
## SPECIFICATIONS

<b>Input</b>	Thermocouples J, K, R, S, T, N, E, and B; 2, 3, or 4 wire Pt100 RTD, 2 or 3 wire Pt1000 RTD, 2 wire NTC thermistor, or 0-50 mV voltage.
<b>Output</b>	Linearized 4-20 mA, 2 wire or 20-4 mA loop powered.
<b>Transmitter Type</b>	2, 3, or 4 wire.
<b>Temperature Limits</b>	-40°F to 185°F (-40 to 85°C).
<b>Power Requirements</b>	10-35 VDC.
<b>Accuracy</b>	See chart below.
<b>Temperature Drift</b>	< ±0.16% / 25°C.
<b>Response Time</b>	1.6 s, typical.
<b>Weight</b>	1.4 oz (40 g).
<b>Agency Approvals</b>	CE.
<b>Note:</b> Factory set to Pt100 Ω RTD, 0 to 100°C, direct acting	

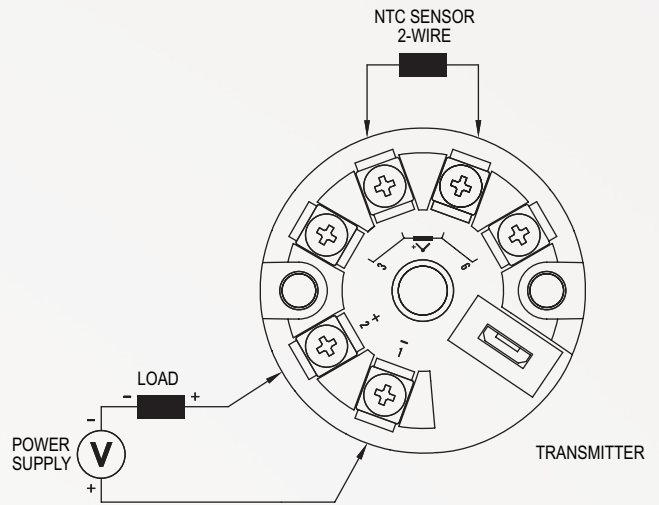
## ACCURACY CHART

Input Type	Max. Temperature Range	Min. Temperature Range	Accuracy (Typical)
Voltage	0 to 50 mV	5 mV	±0.1% FS
Thermocouple J	-148 to 1400°F (-100 to 760°C)	212°F (100°C)	±0.1% FS
Thermocouple K	-238 to 2498°F (-150 to 1370°C)	212°F (100°C)	±0.1% FS
Thermocouple R/S	-58 to 3200°F (-50 to 1760°C)	752°F (400°C)	±0.1% FS
Thermocouple T	-256 to 752°F (-160 to 400°C)	212°F (100°C)	±0.1% FS
Thermocouple N	-454 to 2372°F (-270 to 1300°C)	212°F (100°C)	±0.1% FS
Thermocouple E	-130 to 1328°F (-90 to 720°C)	212°F (100°C)	±0.1% FS
Thermocouple B	932 to 3308°F (500 to 1820°C)	752°F (400°C)	±0.1% FS
Pt100/Pt1000 RTDs	-328 to 1202°F (-200 to 650°C)	104°F (40°C)	±0.13% FS
NTC Thermistor	-22 to 248°F (-30 to 120°C)	104°F (40°C)	±0.3°C

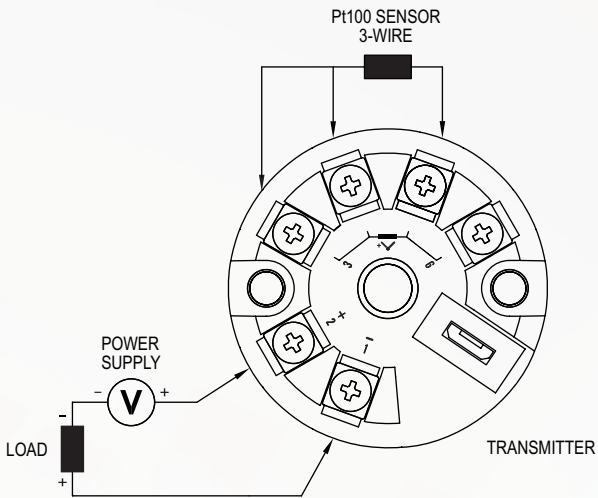
# WIRING DIAGRAM



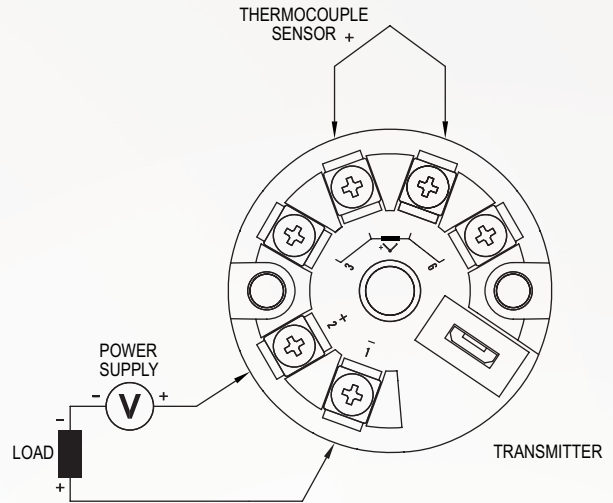
Pt100 2-wire configuration



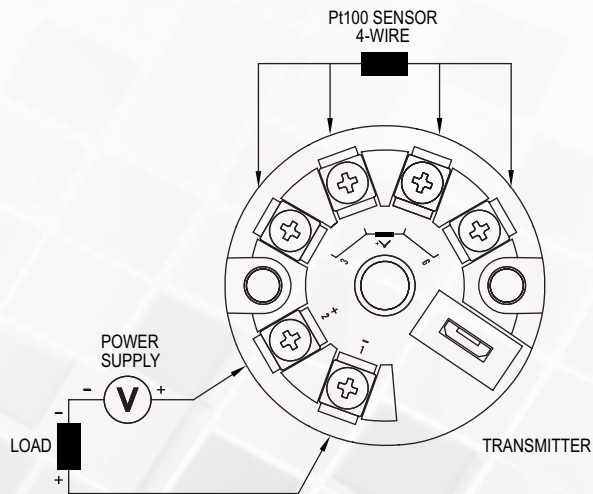
NTC 2-wire configuration



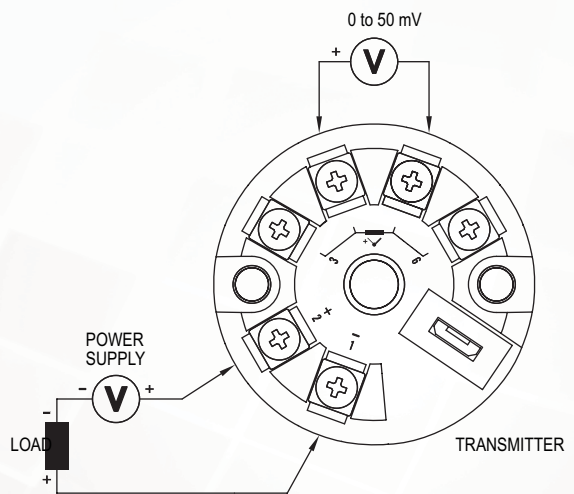
Pt100 3-wire configuration



Thermocouple configuration



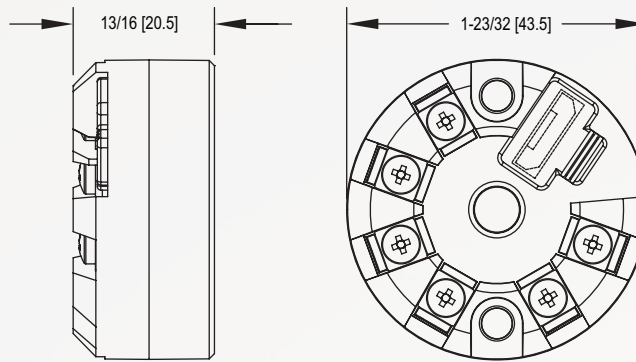
Pt100 4-wire configuration



Voltage (0-50 mV) configuration

## DIMENSIONS

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## HOW TO ORDER

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Use the **bold** characters from the chart below to construct a product code.

**MODEL** \_\_\_\_\_ **TBU-00**  
TBU-00: Temperature transmitter

**ORDER ONLINE TODAY!**

[dwyer-inst.com/Product/ModelTBU-00](http://dwyer-inst.com/Product/ModelTBU-00)



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DS-TBU-00 Rev. 1

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