

**Dwyer**

SERIES TTW

**WEATHERPROOF IMMERSION TEMPERATURE TRANSMITTER**

Pt100 RTD, PC Programmable Transmitter



The **Series TTW Weatherproof Immersion Temperature Transmitter** offers a field adjustable temperature transmitter pre-assembled with an RTD sensor and weatherproof enclosure.

**FEATURES/BENEFITS**

- Preset to 32 to 212°F (0 to 100°C) output range
- USB port for easy output scale adjustment in the field

**APPLICATIONS**

- Immersion temperature sensing in HVAC systems

**MODEL CHART**

Model	Probe Length
TTW-104	4"
TTW-106	6"
TTW-108	8"
TTW-112	12"
TTW-118	18"

**THERMOWELLS - MACHINED**

Model	Material	Length	Connection (Internal/External) (NPT)
TE-TNS-N044N-14	304 SS	4"	1/4" / 1/2"
TE-TNS-N064N-14	304 SS	6"	1/4" / 1/2"
TE-TNS-N094N-14	304 SS	9"	1/4" / 1/2"
TE-TNS-N124N-14	304 SS	12"	1/4" / 1/2"

**SPECIFICATIONS****TEMPERATURE SENSOR**

**Accuracy:** ±3°F (±1.7°C).  
**Temperature Limits:** Operating: -40 to 302°F (-40 to 150°C).  
**Sensor Curves:** Pt100 RTD (TE Series Curve D).

**TEMPERATURE TRANSMITTER**

**Input Range:** -328 to 986°F (-200 to 530°C).  
**Output:** Two-wire 4-20 mA.  
**Output Impedance:** 600 Ω @ 24 VDC.  
**Power Requirements:** 12-35 VDC.  
**Accuracy:** ±0.2% FS.  
**Temperature Limits:** -40 to 185°F (-40 to 85°C).  
**Response Time:** <100 ms.

**ENCLOSURE**

**Temperature Limits:** -40 to 212°F (-40 to 100°C).  
**Rating:** NEMA 4X (IP65).  
**Material:** Painted aluminum housing.

FREE software download: See page 134 (Series TBU-00)



Machined thermowell

Technical Specifications and Additional Thermowell Models: See page 147 (Series TE-TNS)

**MODEL TBU-00****TEMPERATURE TRANSMITTER**

Field Selectable, Universal Input, In-Head Mounting



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 4-20 mA, or reverse 20-4 mA, through easy to use configuration software.

**FEATURES/BENEFITS**

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

**APPLICATIONS**

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

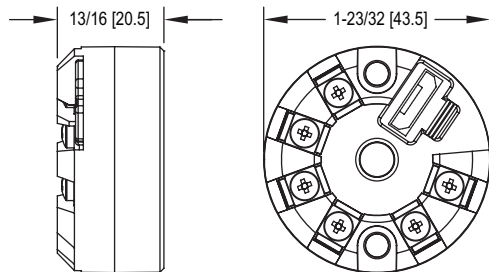
**MODEL CHART**

Model	Description
TBU-00*	Universal input temperature transmitter with customizable measurement ranges

\*TBU-00 FREE downloadable configuration software available at [www.dwyer-inst.com](http://www.dwyer-inst.com)

**ACCESSORIES**

Model	Description
A-709	NEMA 4X aluminum transmitter enclosure
UHH-CBL2	USB to micro-USB cable

**SPECIFICATIONS**

**Input:** 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.  
**Output:** Linearized 4-20 mA, 2 wire or 20-4 mA loop powered.  
**Transmitter Type:** 2, 3, or 4 wire.  
**Temperature Limits:** -40°F to 185°F (-40 to 85°C).  
**Power Requirements:** 10-35 VDC.  
**Accuracy:** See chart below.  
**Temperature Drift:** < ±0.16% / 25°C.  
**Response Time:** 1.6 s, typical.  
**Weight:** 1.4 oz (40 g).  
**Agency Approvals:** CE.

**Note:** Factory set to Pt100 Ω RTD, 0 to 100°C, direct acting

**ACCURACY CHART**

Input Type	Temperature Range	Accuracy (Typical)
Thermocouples and mV	Configured with software	±0.1% FS
Pt100/ Pt1000 RTDs	-328 to 1202°F (-200 to 650°C) -238 to 752°F (-150 to 400°C)	±0.13% FS ±0.1% FS

