



# TW304

## THERMOCOUPLE INPUT TWO-WIRE TRANSMITTER

### FEATURES

- Provides DC Output Proportional to any Thermocouple Input
- Cold Junction Compensated
- 5 mV Minimum Input Span
- Unlimited\* Choice of Input Ranges
- 50 mm X 50 mm Case
- Upscale Burnout Protection
- Low-Drift Chopper Stabilized Input
- NEMA-4 Connection Head and Explosion-Proof Housing Available
- Low Cost
- 5 Year Warranty

### DESCRIPTION

The TW304 is a low cost, reliable, thermocouple input, 2-wire transmitter for field or panel mounting in various industrial housings and enclosures. It provides a DC output current proportional to any thermocouple input signal.

All Wilkerson products are designed with RFI filters and lightning protection to reduce susceptibility to electrical noise and damage by lightning. Optional coating of the electronic components makes the TW304 extremely reliable and resistant

to the corrosion, moisture and fungus associated with many industrial environments.

The output ZERO and SPAN controls are accessible through the top of the case. Terminations are made to screw terminal connectors on the top of the case. Cold junction compensation is provided by a solid state temperature sensor embedded in the thermocouple terminal strip. Upscale burnout protection is provided as standard. In the event the thermocouple

opens, the transmitter output will go offscale high.

### TYPICAL APPLICATION

Remote temperature data acquisition.

### SPECIFICATIONS

#### INPUT RANGE

select any type thermocouple  
(min span 5 mV)

#### OUTPUT RANGE

4/20 mA

#### MAX LOAD RESISTANCE

$R_{max} = [(V_{supply} - 12V) / .020mA]$   
kilohms

#### RESPONSE TIME

150 ms typical

#### ACCURACY

±0.1% of span

#### COMMON MODE REJECTION

120 dB, DC to 60 Hz

#### OPERATING TEMPERATURE

-13°F to 176°F / -25°C to 80°C

#### TEMPERATURE STABILITY

±0.02% of span or 0.025°C/°C,  
whichever is greater

#### POWER REQUIRED

12 to 48 VDC, polarity protected

#### SUPPLY VOLTAGE EFFECT

0.02% of span max,  
12 to 48 VDC

\* Within specified range limits.

**ORDERING INFORMATION**

**INPUT**

**Select Units**

Deg C  Deg F

**Enter Input**

Zero Scale

Full Scale

**Select Sensor**

- J TC
- K TC
- R TC
- S TC
- T TC
- E TC
- N TC
- B TC
- Other - Specify in Notes

**Open Sensor Response**

Upscale  Downscale

**OPTIONS**

Conformal Coating

**TAGS**

**Specify Tag Numbers**

Tag number is typed on product label at no charge.

**Enter Tag Number(s)**

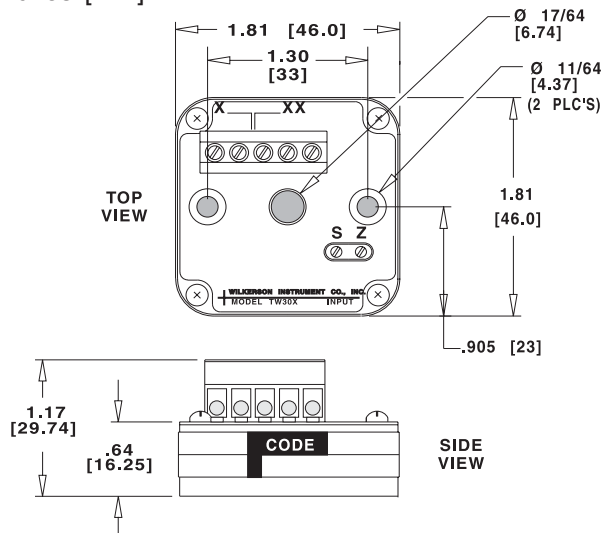
**ACCESSORIES**

**TW304**

DMP2000	Mounting Plate, DIN-Rail & Surface (SR2000 & TW300)	QTY _____
TSH-A6L	NEMA-4 Aluminum Connection Head (SR2000 & TW300)	QTY _____
DR1	DIN-Rail, 35 mm Symmetrical, 39 inches (1 meter)	QTY _____
XJAY	Explosion-Proof Housing (SR2000 & TW300 Series)	QTY _____

**DIMENSIONS**

Inches [mm]



**CONNECTIONS**

PIN P.S. +	Power Supply +
PIN P.S. -	Power Supply -
PIN T/C +	Input +
PIN T/C -	Input -



2915 Parkway Street  
Lakeland, FL 33811-1391 · USA  
**800-234-1343**  
Tel: 863-647-2000 · Fax: 863-644-5318  
www.wici.com · Email: sales@wici.com