



# TW301

## POTENTIOMETER POSITION INPUT TWO-WIRE TRANSMITTER

### FEATURES

- Provides DC Output Proportional to a Potentiometer Position Input
- Potentiometer values from 1 kilohm to 50 kilohms
- Low-Drift Chopper-Stabilized Input
- 50 mm X 50 mm Case
- NEMA-4 Connection Head and Explosion-Proof Housing Available
- Low Cost for OEM Applications
- 5 Year Warranty

### DESCRIPTION

The TW301 is a low cost, reliable, potentiometer input, 2-wire transmitter for field or panel mounting in various industrial housings and enclosures. It provides a DC output current proportional to the slide position of a potentiometer.

All Wilkerson products are designed with RFI filters and lightning protection to reduce susceptibility to electrical

noise and damage by lightning. Optional conformal coating of the electronic components makes the TW301 extremely reliable and resistant to the corrosion, moisture and fungus associated with many industrial environments.

The module utilizes a stable 1.2 V power supply to excite the potentiometer. Any value potentiometer

from 1 kilohm to 50 kilohms can be used. 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.

### TYPICAL APPLICATIONS

Remote tank level, valve or actuator position data acquisition.

### SPECIFICATIONS

#### INPUT POTENTIOMETER RESISTANCE

any value from 1 kilohm to 50 kilohms

#### SPAN ADJUSTMENT

50% to 100% of pot rotation

#### OFFSET ADJUSTMENT

0 to 50% of pot rotation

#### INPUT IMPEDANCE

>10 megohms

#### EXCITATION

1.2 V

#### OUTPUT RANGE

4/20 mA

#### MAX LOAD RESISTANCE

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

#### RESPONSE TIME

100 ms typical

#### ACCURACY

±0.1% of span

#### LINEARITY

±0.05% 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/°C max

#### POWER

12 to 48 VDC, polarity protected

#### SUPPLY VOLTAGE EFFECT

0.02% of span max,  
12 to 48 VDC

**ORDERING INFORMATION**

**INPUT**

**Specify Input**

Potentiometer input products are calibrated assuming 0 to 100% rotation. Final calibration should be done using the actual system potentiometer.

**OPTIONS**

Conformal Coating

**TAGS**

**Specify Tag Numbers**

Tag Number is typed on product label at no charge.

Enter Tag Number(s)

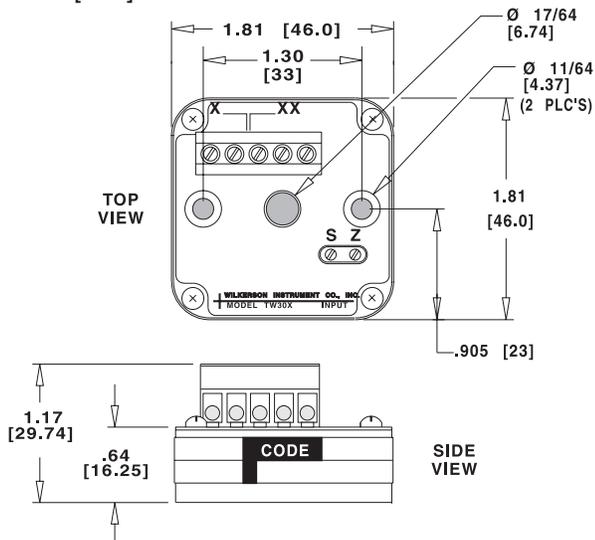
**ACCESSORIES**

**TW301**

|         |   |           |
|---------|---|-----------|
| DMP2000 | Mounting Plate, DIN-Rail (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 for SR2000 and TW300 Series | QTY _____ |

**DIMENSIONS**

Inches [mm]



**CONNECTIONS**

|                |                          |
|----------------|--------------------------|
| PIN P.S. +     | Power Supply +           |
| PIN P.S. -     | Power Supply -           |
| PIN Pot. FS    | Potentiometer Excitation |
| PIN Pot. Wiper | Potentiometer Wiper      |
| PIN Pot. Zero  | Potentiometer Common     |



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