

TW303

RTD INPUT

TWO-WIRE TRANSMITTER

FEATURES

- Provides DC Output Proportional to an RTD Input
- 50 mm X 50 mm Case
- 3-Wire or 2-Wire, 100 ohms to 2000 ohms RTDs
- Low-Drift Chopper-Stabilized Input
- Linearized for Platinum RTDs
- NEMA-4 Connection Head and Explosion-Proof Housing Available
- Unlimited* Choice of Input Ranges
- Low Cost
- 5 Year Warranty

DESCRIPTION

The TW303 is a low-cost, reliable, RTD input, 2-Wire transmitter for field or panel mounting in various industrial housings and enclosures. It provides a DC output current proportional to an RTD input signal.

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 TW303 extremely reliable and resistant to the corrosion, moisture and fungus associated with many industrial environments.

The module utilizes a single constant current source to excite the RTD. An accurate and stable leadwire compensation circuit uses the third lead of the 3-Wire RTD to compensate

for the RTD lead resistance. 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 APPLICATION

Remote temperature data acquisition.

SPECIFICATIONS

RTD INPUT

3-wire or 2-wire,
100 ohms to 2000 ohms

INPUT RANGE

max span RTD limit
min span 50°F/ 28°C

EXCITATION CURRENT

100 ohms	1 mA
500 ohms	1 mA
1000 ohms	0.5 mA
2000 ohms	0.2 mA

OUTPUT RANGE

4/20 mA

MAX LOAD RESISTANCE

$R_{max} = [(V_{supply} - 12)/20 \text{ mA}]$
kilohms

RESPONSE TIME

50 ms typical

OPEN SENSOR RESPONSE

Upscale

ACCURACY

±0.1% of span or 0.02 ohms,
whichever is greater

LINEARITY

(Pt RTD, output vs temp)
±0.05% of span
(temp > = 32°F/0°C)
±0.15% of span
(temp < 32°F/0°C)
(Others, output vs res)
±0.01% 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

12-48 VDC, polarity protected

SUPPLY VOLTAGE EFFECT

0.02% of span max, 12 to 48 V

* Within specified range limits

ORDERING INFORMATION

INPUT

Select Units

- Deg C
- Deg F

Enter Input

Zero Scale

Full Scale

Select Sensor

- 100 ohm Pt., .00385 Alpha
- 100 ohm Pt., .00392 Alpha
- 100 ohm Pt., .00375 Alpha
- 1000 ohm Pt., .00385 Alpha
- 1000 ohm Pt., .00392 Alpha
- 10 ohm Cu.
- Other - Specify in Notes

Open Sensor Response

- Upscale

OPTIONS

- Conformal Coating

TAGS

Specify Tag Numbers

Tag number is typed on product label at no charge.

Enter Tag Number(s)

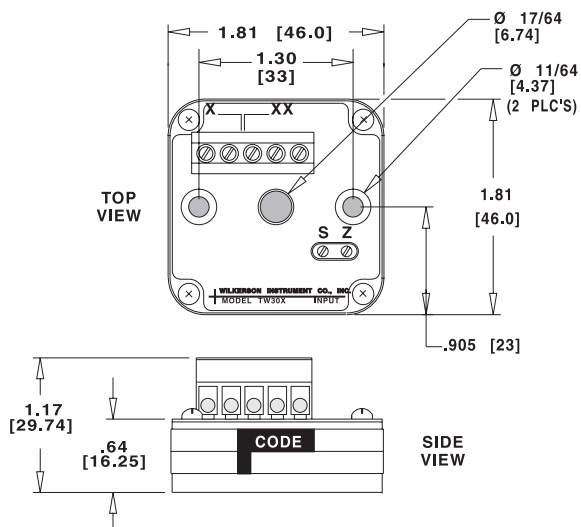
ACCESSORIES

TW303

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. 1	Power Supply +
PIN P.S. 2	Power Supply -
PIN RTD 1	Excitation/RTD Input
PIN RTD 2	Input -
PIN RTD 3	Lead Compensation



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