



*Manufacturers of Process  
Controls and Instrumentation*

# ***Instruction Manual***

Model: *TWI-RTX*

Function: *Two Wire RTD Transmitter*

Input Range:

- |  |   |
|--|---|
| <input type="checkbox"/> X=1: 0-300 Deg. F.  | <input type="checkbox"/> X=4: 0-750 Deg. F.         |
| <input type="checkbox"/> X= 2: 0-400 Deg. F. | <input type="checkbox"/> X=5: 0-1000 Deg. F.        |
| <input type="checkbox"/> X= 3: 0-500 Deg. F. | <input type="checkbox"/> X=6: -350 to +1100 Deg. F. |
|  | <input type="checkbox"/> X=7: _____                 |

Output:  4-20mA

Power:  12 to 60 VDC

Serial #: \_\_\_\_\_

(If special or required)

For Technical Assistance And Questions Call  
USA: (231) 788-2900 CANADA: (905) 660-5336

## Restocking Policy

All product returned to Pribusin Inc. in prime condition (not damaged, scratched or defaced in any way) within seven (7) months from the original date of shipment is subject to a 50% restocking charge. All product must be accompanied by a Return Authorization number (RA number) which must be obtained from Pribusin Inc. prior to returning any product.

After seven (7) months from the original date of shipment, products cannot be returned for restocking.

Custom designed products, modified products or all non-standard products may not be returned for restocking.

## Warranty Policy

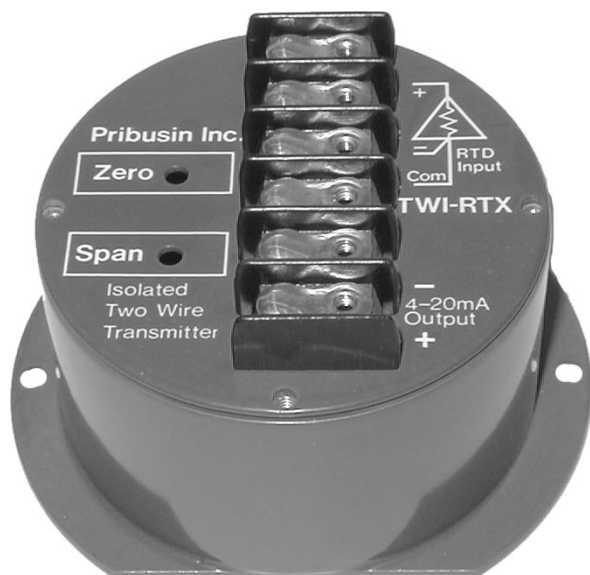
Pribusin Inc. warrants equipment of its own manufacture to be free from defects in material and workmanship, under normal conditions of use and service, and will replace any component found to be defective, on its return to Pribusin Inc., transportation charges prepaid, within one year of its original purchase. Pribusin Inc. will extend the same warranty protection on equipment, peripherals and accessories which is extended to Pribusin Inc. by the original manufacturer. Pribusin Inc. also assumes noliability, expressed or implied, beyond its obligation to prelace any component involved. Such warranty is in lieu of all other warranties, expressed or implied.

**Pribusin Inc.**

Manufacturers of Process  
Controls and Instrumentation

**Model: TWI-RTX**

**Two Wire Isolated RTD Transmitter**



### Standard features:

- High Input to Output Isolation (800 VAC Test)
- Small Size - Fits Standard Explosion Proof Housing
- Industry Standard 4-20 mA Output
- Standard Ranges for 100 Ohm Platinum
- Special Ranges and other RTD Types Available
- Wide Operating Range (12 to 60 VDC)
- High Noise Rejection
- CSA and NRTL Approved (LR 51078)

### Function:

The TWI-RTX is an isolated two wire RTD transmitter in a small, easy to install package. It has easily accessible screw terminals and is built in a rugged housing. The many different temperature ranges allow it to be used in a great variety of temperature measurement applications.

Temperature Conversion Equations:

$$^{\circ}\text{C} = \frac{5}{9} (^{\circ}\text{F} - 32)$$

$$^{\circ}\text{F} = \frac{9}{5} ^{\circ}\text{C} + 32$$

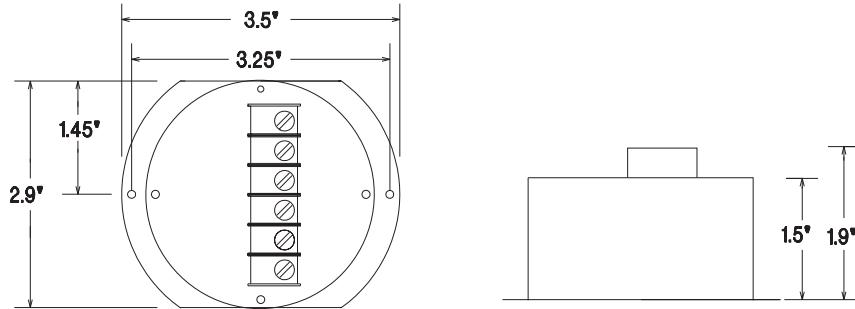
$$\text{Kelvin} = ^{\circ}\text{C} + 273.15 \quad \text{Rankin} = ^{\circ}\text{F} + 459.67$$

### Specifications:

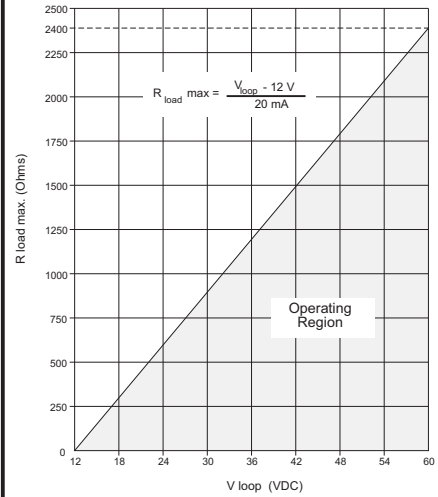
- Output: 4-20 mA
- Isolation: 800 VAC Test
- Operating Power: 12 to 60 VDC
- RTD Type: Platinum, 100 Ohms at 0 Deg.C., 0.0385 Alpha
- Accuracy/Linearity: +/-0.25% max., +/- 0.1% typ (Linearized to RTD Curve).
- Response Time: 100 msec to 63% of final value  
400 msec to 99% of final value
- Temperature Effects: +/- 0.025% per Deg.C.
- Span Drift: +/- 0.025% per Deg.C.
- Zero Drift: 1 milliohm per 1 ohm offset per Deg.C. or 1 milliohm per Deg.C. whichever is larger
- Line Effects: 0.03% per 10 VDC Line Change
- Operating Temperature: -20 Deg. C. to + 40 Deg. C.

# TWI-RTX

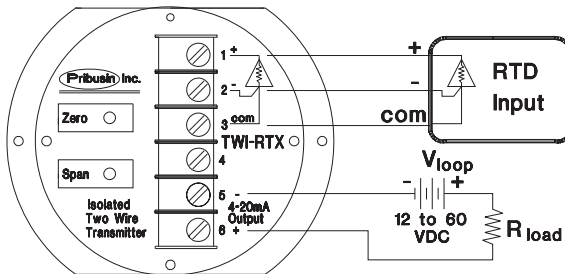
## Dimensions:



## Loop Characteristics:



## Connection:



## Model Designation:

TWI-RTX

Temperature Range

- 1: 0 to 300F (-18 to 150C)
- 2: 0 to 400F (-18 to 205C)
- 3: 0 to 500F (-18 to 260C)
- 4: 0 to 750F (-18 to 400C)
- 5: 0 to 1000F (-18 to 538C)
- 6: -350 to 1100F (-200 to 600C)
- 7: Special (must specify on order)

Example: Isolated RTD Transmitter for 100 Ohm Platinum RTD for 0-500 Deg.F. is designated by: TWI-RT3

Manufactured By:

**Pribusin Inc.**

www.pribusin.com  
info@pribusin.com

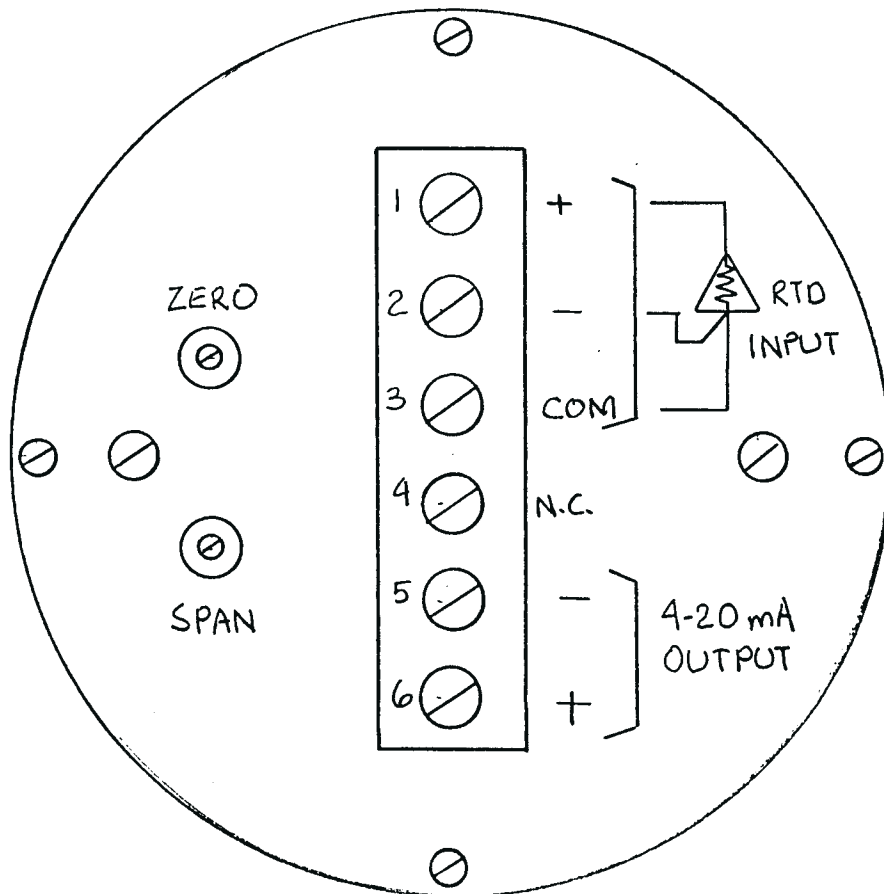
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TWO WIRE ISOLATED RTD TRANSMITTER  
 SERIES TWI-RTX FIELD CONNECTIONS

**Pribusin Inc.**

DATE OCT. 1 / 84

DRAWN BY V.S.

APPROVED

DRWG NO 101392

REV A

SERIES TWI-RTX AND TWI-SLX CALIBRATION PROCEDURE

- 1) Install components as per schematic 101368 for the input range.
- 2) Apply an input signal (RTD or Slidewire) equal to 100% of the input range.
- 3) Adjust the Span potentiometer for an output of 20.00 mA.  
  
Note:  
If the output will not go down to 20.00 mA, then adjust the zero potentiometer to get down to 20.00 mA.
- 4) Apply an input signal (RTD or Slidewire) equal to 0% of the input range.
- 5) Adjust the Zero Potentiometer for an output of 4.00 mA.
- 6) Repeat steps 3 to 6 until no further adjustments are required.
- 7) Apply an input signal (RTD or Slidewire) equal to 50% of the input range.
- 8) Check that the output is 12.00 mA.
  - a) If the output is too high, then negative linearization is required. (JLIN- and selection of RLIN).
  - b) If the output is too low, then positive linearization is required. (JLIN+ and selection of RLIN).
- 9) NOTE: If the linearization resistor RLIN or the Linearization jumpers (JLIN+ and JLIN-) are changed, then go back to step 3 and repeat the calibration.
10. Calibration is complete.

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