



Standard features:

- High Input to Output Isolation (800 VAC Test)
- Small Size - Fits in Standard Explosion Proof Housing
- Industry Standard 4-20 mA Output
- Standard Ranges for Type J,K,E,T,S,R
- Special Ranges and other Types available
- Cold Junction Compensated
- Standard Upscale Protection on all Units
- Wide Operating Range (12 to 60 VDC)
- High Noise Rejection
- CSA and NRTL Approved (LR 51078)

Function:

The TWI-TXX is an isolated two wire thermocouple transmitter that comes in a small, explosion proof housing compatible package. It has easily accessible screw terminals and is built into a rugged housing.. The many different Thermocouple types and ranges allow it to be used in a great variety of temperature measurement applications.

Upscale protection is standard on all units unless downscale protection is specified.

Temperature Conversion Equations:

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

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

$$\text{Kelvin} = ^{\circ}\text{C} + 273.15$$

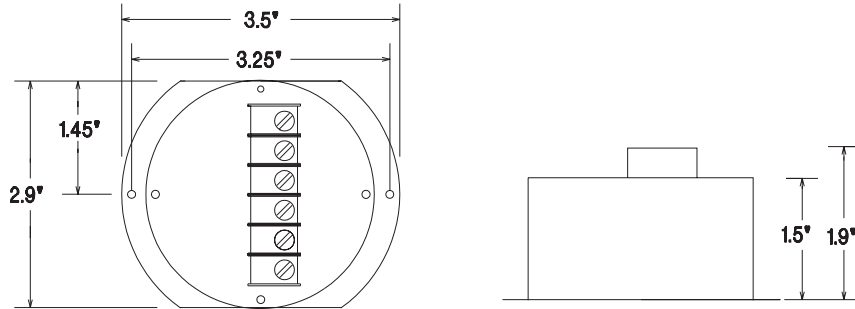
$$\text{Rankin} = ^{\circ}\text{F} + 459.67$$

Specifications:

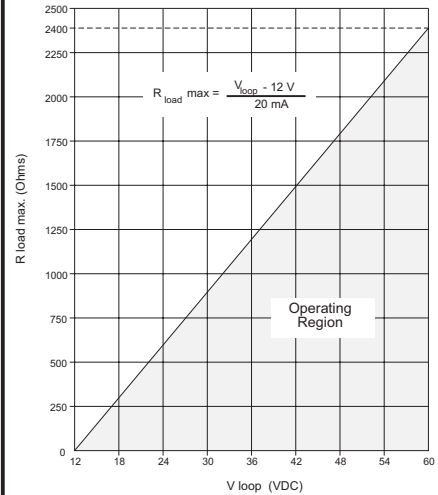
- Isolation: 800 VAC (Test)
- Operating Power: 12 to 60 VDC
- Accuracy/Linearity: +/-0.2% max., +/- 0.1% typ.
(Linear with Temperature for most Ranges)
- Response Time: 100 msec to 63% of final value
400 msec to 99% of final value
- T/C Compensation: Cold Junction Compensation
- Temperature Effects: +/- 0.025% per Deg.C.
- Span Drift: +/- 0.025% per Deg.C.
- Zero Drift: 1 uV per mV offset per Deg.C. OR
1 uV per Deg.C., whichever is greater
- Drift at 25 Deg. C.: 24 Hours: +/- 0.1%
30 Days: +/-0.2%
- Operating Temperature:-20 Deg. C. to + 50 Deg. C.
- Input Impedance: 1 Meg Ohm min.

TWI-TXX

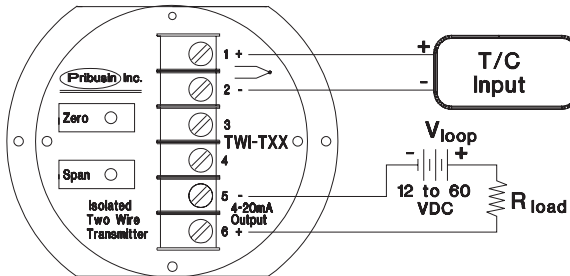
Dimensions:



Loop Characteristics:



Connection:



Model Designation: TWI-TXX

Example: An isolated thermocouple transmitter for a type 'K' thermocouple for 0-500F is designated by: TWI-TK2

| Range | J | K | E | T | R | S |
|----------------------------|-----|-----|-----|-----|-----|-----|
| 0 to 300F -18 to 150C | TJ1 | | TE1 | TT1 | | |
| 0 to 400F -18 to 204C | TJ2 | TK1 | TE2 | TT2 | | |
| 0 to 500F -18 to 260C | TJ3 | TK2 | TE3 | TT3 | | |
| 0 to 750F -18 to 400C | TJ4 | TK3 | TE4 | | TR1 | TS1 |
| 0 to 1000F -18 to 538C | TJ5 | TK4 | | | TR2 | TS2 |
| 0 to 1500F -18 to 816C | | TK5 | | | TR3 | TS3 |
| 0 to 2000F -18 to 1093C | | TK6 | | | TR4 | TS4 |
| 0 to 3200F -18 to 1760C | | | | | TR5 | TS5 |
| -350 to 1100F | TJ6 | TK7 | TE5 | | | |

Note: * not linearized with temperature - linear with material only

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