

# 2-WIRE ISOLATED TEMPERATURE TRANSMITTER TX2DR

Input : Pt100, Mounting : DIN Rail



- Solder jumpers for
  - Span
  - Zero
  - Upscale / Downscale
- Multirange : 8 SPAN ranges, 25 to 600 C° / 45 to 1080 F°  
4 ZERO ranges, -100 to +70°C / -148 to +158°F
- 0.1% temperature linear 4~20 mA output
- Upscale / downscale selectable sensor break detection
- ON LED shows state
- Pt50, Pt200, Pt500, Pt1000 also available

## GENERAL

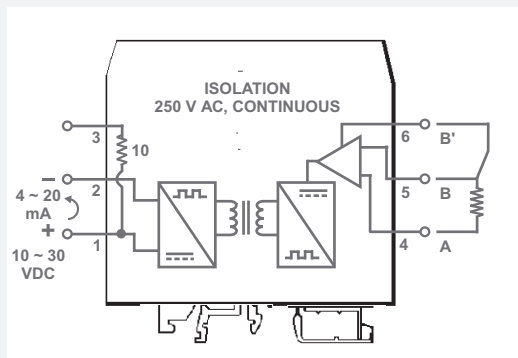
TX2DR is a DIN rail mounted high performance, 2-wire isolated temperature transmitter. It provides isolation between the input and the 4~20 mA output current.

TX2DR with Pt100 input is adjustable for 8 overlapping ranges in C or F and gives a temperature linear output. All selections are made by solder jumpers. 'Fine' ZERO/SPAN potentiometers are provided for calibration.

The product design gives easy access to terminals & adjustments.

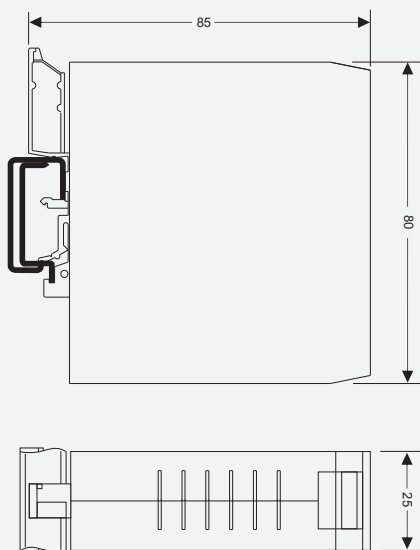
## CONNECTION DIAGRAM

Fig 1



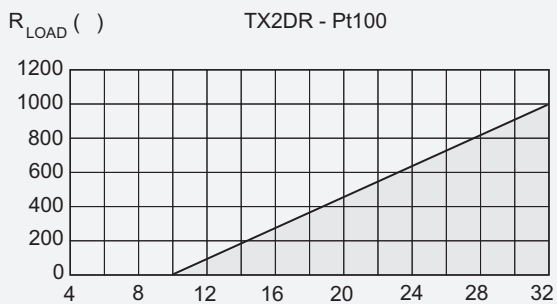
## ENCLOSURE

Fig 3



## OUTPUT LOAD

Fig 2



$$R_{LOAD} = (U-10)/0.022 \quad \text{Supply voltage } U \text{ (VDC)}$$

# 2-WIRE ISOLATED TEMPERATURE TRANSMITTER — TX2DR

Input : Pt100, Mounting : DIN Rail

## SPECIFICATIONS All specifications at ambient of 25 °C, unless specified otherwise

### INPUT

**Input type** Pt100 (  $\pm 0.00385$ ),  
3-wire connection  
**Sensor current** 0.3 mA  
**Other input types** Pt50, Pt200, Pt500, Pt1000

### MONITORING

**Sensor break detection, selectable** Upscale ~ 25 mA,  
Downscale ~ 3.5 mA  
**On LED** Provided

### ADJUSTMENTS

**Zero selection** -100 to +70°C (-148 to +158°F) in  
4 overlapping ranges (see Table 1)  
**Span selection** 25 to 600 °C (45 to 1080 °F),  
8 overlapping ranges (see Table 2)

### OUTPUTS

**Current output** 4~20 mA  
**Linearity** Temperature linear  
**Current limit** ~25 mA  
**Permissible load** 600  $\Omega$  @ 24 VDC, 22 mA  
(see Fig 2)

### ISOLATION

**Mutual isolation between input & output**  
a) 1500 V AC RMS, 50 hz/1 minute  
b) 250 V AC RMS, 50 hz,

### ACCURACY

**Linearity & calibration** 0.1% of span  
**Temperature effect on accuracy** 0.02% of span / °C  
or 0.05°C/°C whichever is greater  
**Supply voltage / load effect** 0.002% of span / V

### POWER SUPPLY

**Supply voltage** 10 to 30 VDC

### ENCLOSURE

**Din rail mount** See Fig 3  
**Material** ABS plastic  
**Dimensions (in mm)** 80(H) x 25(W) x 85(D)  
**Mounting** Snap on for 35 mm DIN rail to  
DIN 46277

**Connection, single / stranded wires** 2.5 mm<sup>2</sup>, AWG 14

**Weight** <200 grams  
**Protection** IP 20

### TEMPERATURE, HUMIDITY

**Ambient, storage** -20 to +85 °C (-5 to +185 °F)  
**Ambient, operation** -20 to +55 °C (-5 to +160 °F)  
**Relative humidity** 0 ~ 95%

TABLE 1

#### Zero selection

°C	°F
-102 to -65	-150 to -85
-68 to -21	-90 to -5
-28 to +29	-18 to +84
-6 to +73	+21 to +163

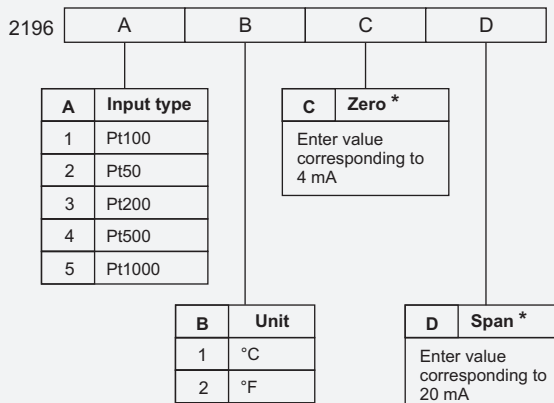
TABLE 2

#### Span selection

°C	°F
25	45
50	90
100	180
200	360
300	540
400	720
500	900
600	1080

The above zero & span selections are done using solder jumpers. The calibration for a given range is then done using the 'ZERO' & 'SPAN' mA potentiometers on the instrument front.

## ORDERING INFORMATION



#### Examples

- Input Pt100, Range : 50 to 400 °C, Output : 4~20 mA  
A = 1, B = 1, C = 50, D = 400
- Input Pt1000, Range : -50 to 200 °F, Output : 4~20 mA  
A = 5, B = 2, C = -50, D = 200

\* When a range (zero & span) is specified in the order, the calibration will be done for this range before despatch.  
The user can change the range using suitable calibration equipment.



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### SALES INQUIRIES

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