

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

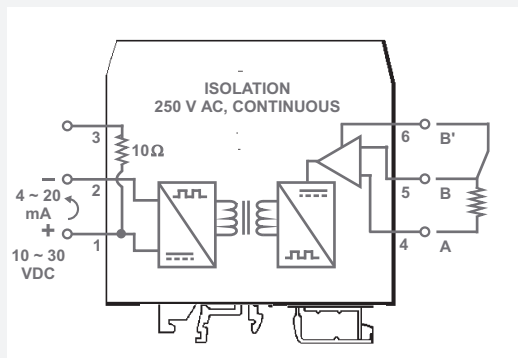
TX2DR is a DIN rail mounted high performance, 2-wire isolated temperature transmitter. It provides isolation between the input and the 4~20 mA output current.

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.

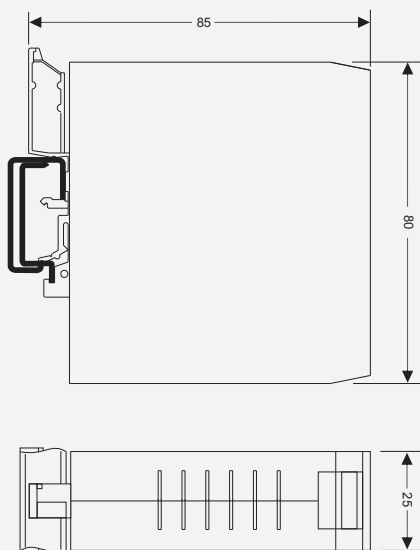
CONNECTION DIAGRAM

Fig 1



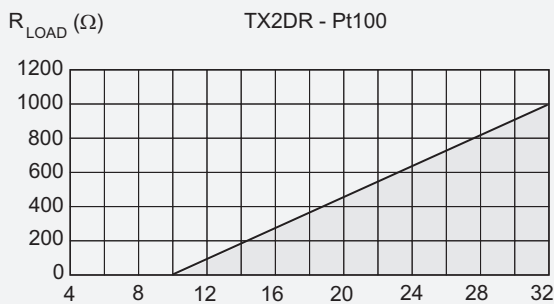
ENCLOSURE

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 ($\alpha = 0.00385$),
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 Ω @ 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 $\pm 0.1\%$ of span
Temperature effect on accuracy $\pm 0.02\%$ of span / °C
or 0.05°C/°C whichever is greater
Supply voltage / load effect $\pm 0.002\%$ 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
 $\leq 2.5 \text{ mm}^2$, AWG 14

Connection, single / stranded wires

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

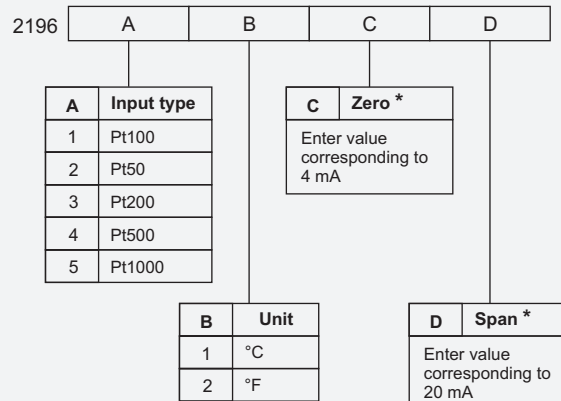
TABLE 2

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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