

## TXDU2 Isolated DIN Rail Mounting Universal Input 4~20mA Transmitter

The TXDU2 DIN rail mounting isolated transmitters are microprocessor based and fully linearised. As standard they feature a universal 2-wire, 4~20mA output (loop power) and universal input which accepts the following:

- RTD (Pt100 or Pt1000)
- Thermocouple (Types K, J, T, N, E, R, S, B)
- Millivolts (mV)
- Milliamps (mA)
- Voltage (V)
- Potentiometer

The units are loop powered, 10-36 V DC and can be supplied pre-ranged to suit your application requirements.

Alternatively they can be easily configured using the TX-USB configuration kit (see page 86). Simply install the software (which is available for free download from our website), connect the USB configuration module and plug the lead into the transmitter. The software will then provide the necessary prompts.

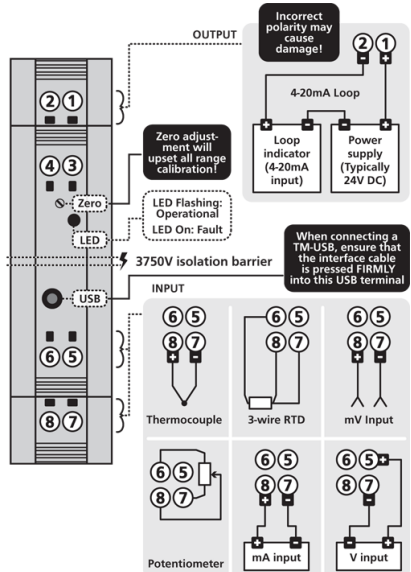


Technical Details (Common)	
<b>Output</b>	2-wire, 4~20mA (loop powered)
<b>Power Supply</b>	10-36V DC
<b>Isolation Test Voltages</b>	Between input/output: 3750V AC for 1 minute
<b>Output Load Resistance</b>	700Ω at 24V DC (50Ω/V above 10V DC)
<b>Maximum Output Current</b>	Limited to < 28mA (emission & immunity)
<b>Accuracy</b>	< ±0.03% FSO typical
<b>Ambient Drift</b>	to ±0.003%/°C FSO typical
<b>Noise Immunity</b>	125dB CMRR average (2.0kV DC limit)
<b>R.F. Immunity</b>	<1% effect FSO typical
<b>Response Time</b>	400ms typical (10-90% 300ms typical)
<b>USB Programmable Zero</b>	0 to ±99% of the span (Potentiometer Input n/a)
<b>Operating Temperature</b>	-20°C to +85°C
<b>Storage Temperature</b>	-20°C to +85°C
<b>Operating Humidity</b>	5-85% RH max (non-condensing)
<b>Mounting</b>	35mm symmetrical DIN rail
<b>Dimensions</b>	20mm (W) x 79mm (H) x 68mm (D)
<b>EMC Compliance</b>	Emissions (EN 61326) Immunity (EN 61326) Safety (EN 61010-1)

RTD Input Specifications	
<b>Input</b>	Pt100 or Pt1000 DIN 3-wire type (2-wire can be used with offset calibration)
<b>Sensor Current</b>	0.15mA nominal
<b>Lead Wire Resistance</b>	Pt100: 10Ω/wire max. Pt1000: 5Ω/wire max. 0.02% FSO offset error per Ω of lead resistance
<b>Accuracy</b>	≤ 0.1°C (0°C to +100°C) ≤ 0.3°C (-200°C to 0°C; +100°C to +850°C)
<b>USB Programmable Span</b>	-200°C to +850°C
<b>Sensor Break Output Drive</b>	Function high upscale/low downscale
<b>Linearity (Pt100)</b>	0.02% FSO for span inputs ≤ +200°C 0.1% FSO for span inputs ≤ +850°C
<b>Linearity (Pt1000)</b>	0.02% FSO for span inputs ≤ +200°C 0.2% FSO for span inputs ≤ +520°C

Thermocouple Input Specifications	
<b>Thermocouple Types</b>	K, J, T, N, E, R, S, B
<b>Input Impedance</b>	1MΩ min
<b>Thermocouple Lead Resistance</b>	100Ω max
<b>Cold Junction Compensation</b>	-20°C to +90°C
<b>Accuracy</b>	Types K, J, T, N, E: < ±1°C Types R, S, B: < ±2°C
<b>Temperature Drift</b>	Types K, J, T, N, E: < ±0.05°C Types R, S, B: < ±0.2°C
<b>Sensor Break Output Drive</b>	Function high upscale/low downscale
<b>CJC Error</b>	< ±1°C

TX-USB Configuration Kit for DIN Rail Mounting Transmitters  
See page 86 for further details



Current Input Specifications	
<b>Field Programmable Span</b>	1µA-24mA DC
<b>Input Resistance</b>	10Ω
<b>Maximum Over-Range</b>	50mA DC continuous
<b>Linearity and Repeatability</b>	< ±0.02% FSO typical

Voltage Input Specifications	
<b>USB Programmable Span</b>	100mV to ±10V DC (bipolar)
<b>Input Resistance</b>	300kΩ min
<b>Maximum Over-Range</b>	60V DC continuous
<b>Linearity and Repeatability</b>	< ±0.02% FSO typical

Potentiometer Input Specifications	
<b>Potentiometer Input</b>	3-wire potentiometer
<b>Excitation Voltage</b>	1.2V DC
<b>Potentiometer Resistance</b>	0-2KΩ low pot 0-1MΩ high pot
<b>Field Programmable Zero</b>	0-90% of the span
<b>Field Programmable Span</b>	0.1-100%
<b>Linearity and Repeatability</b>	< ±0.02% FSO typical

order code

TXDU2