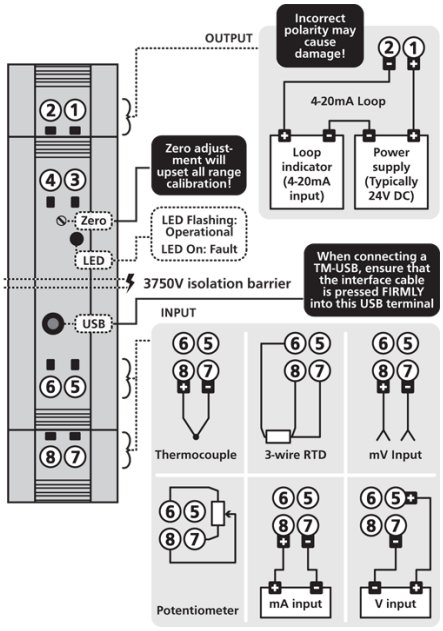
TXDU2 Isolated DIN Rail Mounting Universal Input 4~20mA Transmitter

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



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

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

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

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

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

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

Order Code	TXDU2