

TXDU4 Isolated DIN Rail Mounting Universal Input/Output Transmitter

The TXDU4 DIN rail mounting isolated transmitters are microprocessor based and fully linearised. As standard they can be configured to have the following inputs/outputs:

Inputs

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

Outputs

- Voltage:
 - 0 to 10V DC or -10 to 10V DC
- Current:
 - 4~20mA, 0~20mA, 20~4mA, 20~0mA

The units accept a 21-300V DC or 85-265V AC direct power supply (not loop powered). For ease of installation we can supply with the inputs and outputs configured 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.

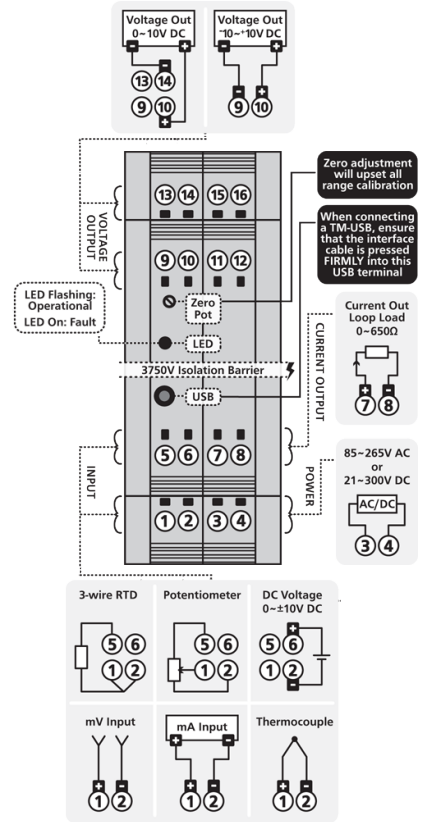


Technical Details (Common)	
Configuration	4-wire
Output	Voltage: 0 to 10V DC or -10 to 10V DC Current: 4~20mA, 0~20mA, 20~4mA, 20~0mA
Power Supply	21-300V DC or 85-265V AC
Isolation Test Voltages	Between input/output: 3750V AC for 1 minute
Accuracy	< ±0.03% FSO typical
Ambient Drift	< ±0.003%/°C FSO 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 span (Potentiometer Input N/A)
Operating Temperature	-20°C to +85°C
Storage Temperature	-20°C to +100°C
Operating Humidity	5-85% RH max (non-condensing)
Mounting	35mm symmetrical DIN rail
Dimensions	30mm (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 0.02% FSO for span inputs ≤ +200°C
Linearity (Pt100)	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

Order Code

TXDU4