

2-WIRE PROGRAMMABLE, ISOLATED TEMPERATURE TRANSMITTER — TRX30

Universal Input, 4 Digit LED display



- True 2-wire operation
- Universal input :
TC : B, E, J, K, N, R, S, T
RTD : Pt50, Pt100, Pt200
4~20 mA, linear/square root, 0~50 mV
- 0.1% linearisation accuracy
- Software calibration - no trimpots
- Upscale/downscale selection
- 11.5~32 V DC loop supply
- 4~20 mA or 20~4 mA selection
- 4-digit LED display enhances utility
- DIN Rail and FLP versions

TRX30 is a microcontroller based user programmable high performance, "all-in-one" 2-wire temperature transmitter. Its high reliability industrial design offers some rare functions.

TRX30 has an integral 4-digit LED display, which enhances utility greatly and also allows a large amount of programming.

TABLE 1 Tambient = 25°C

SENSOR / INPUT	RANGE LIMITS (°C / EU)		RANGE IN WHICH ACCURACY IS SPECIFIED		TYPICAL ACCURACY AT 30 °C (°C / EU)	WORST CASE ACCURACY (°C / EU)
	LOW SCALE	HIGH SCALE	LOW SCALE	HIGH SCALE		
Pt - 6% Rh / Pt - 30% RH (B)	400	1820	400	1820	± 5	± 6
Chromel / Constantan (E)	-270	1000	0	1000	± 2	± 3
Iron / Constantan (J)	-210	760	0	760	± 2	± 3
Chromel / Alumel (K)	-270	1372	-50	1200	± 2	± 3
Nicrosil / Nisil (N)	-270	1300	-50	1200	± 2	± 3
Pt / Pt - 13% Rh (R)	0	1760	0	1760	± 4	± 6
Pt / Pt - 10% Rh (S)	0	1760	0	1760	± 4	± 6
Copper / Constantan (T)	-270	400	-200	400	± 2	± 4
Pt100, 3-wire	-220	850	-200	400	± 0.2	± 0.5
Linear voltage (0~50 mV)	-1999	9999	-1999	9999	± 0.1%	± 0.25%
Linear current (4~20 mA, 0~20 mA)	-1999	9999	-1999	9999	± 0.1%	± 0.25%
Non-linear current (square rooted) - 4~20 mA	-1999	9999	-1999	9999	± 0.2%	± 0.5%

Note : Non-std inputs, such as 0 ~ 10 V DC, 0 ~ 100 V DC, etc. available on request

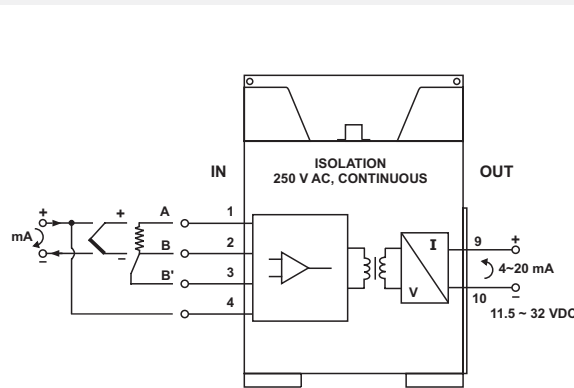
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SPECIFICATIONS All specifications at ambient of 25 °C, unless specified otherwise

INPUT			Temperature, Humidity	
Input type	Thermocouple RTD	B, E, J, K, N, R, S, T Pt50, Pt100, Pt200 4~20 mA, linear/square root 0~50 mV See Table 1	Ambient, storage Ambient, operation Relative humidity	-22 ~ +85 °C 0 ~ 60 °C 0 ~ 95%
Range			Enclosure - DIN Rail	
Display	DIN Rail Flameproof	4 digit, 0.3" (7.6 mm), red LED 4 digit, 0.56" (14.2 mm), red LED	Material Dimensions Mounting	ABS plastic 75(H) x 45(W) x 109.5(D) mm Snap on for 35 mm DIN rail to DIN 46277 2.5 mm ² , AWG 14
Monitoring			Connection, single/stranded wires	
Sensor break detection			Weight	< 200 grams
Upscale current		20~22 mA	Protection	IP 20
Downscale current		3.9 mA	Enclosure - Flameproof	
Output			Material	Aluminium alloy
Current, selectable		4~20 mA, 20~4 mA	Dimensions	100(H) x 100(W) x 152(D) mm
Permissible load		600 Ω @ 24 V DC, 20 mA	Mounting	2" pipe
Current limit		20~22 mA	Certification	Flameproof for gas groups I, IIA & IIB by CMRI Dhanbad Enclosure certified for gas group IIC also available
Accuracy			Programming	Through externally accessible membrane keypad
Linearity & calibration		See Table 1	Protection	IP 65
Cold junction compensation		± 1 °C	Programmable Parameters	
Temperature effect on accuracy		± 0.5% of span / 25 °C	Unit	°C, °F, EU
Supply voltage effect		± 0.002% of span / V	Autoranging	On, Off
Supply ripple effect, 50/60 hz, 5 Vp - p		± 0.005% of span	Low scale	-1999 to 9999
Power supply			High scale	-1999 to 9999
Supply voltage		11.5 to 32 VDC loop supply	Preset current (Sensor break)	20 to 22 mA
Isolation			Decimal point	0.001, 0.01, 0.1 or 1
Between input & loop supply		1000 V AC RMS / 1 minute 250 V AC RMS, continuous	Output type	4~20, 20~4 mA
Calibration			Digital filter	A, B, C, D, E, F
Zero & span		Through front panel keys & display		

CONNECTION DIAGRAM



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