

TEMPERATURE TRANSMITTER

2-wire, Programmable, Isolated



FLAMEPROOF - SURFACE MOUNT



FLAMEPROOF - PIPE MOUNT



FLAMEPROOF - DUAL CAVITY

ABOUT TX3DR

TX3DR is a microcontroller based user programmable high performance, 2-wire temperature transmitter. Its high reliability industrial design offers some rare functions.

TX3DR has an integral 4-digit LED display. TX3DR can be configured using PC based utility software or three keys on front panel.

It is available in compact FLP pipe mount / wall mount / dual cavity & din rail mounting.

FEATURES

- 14~32 V DC loop supply
- Isolation : 1000 V AC RMS, 50 hz/1 minute
- 4~20 mA or 20~4 mA selection for output
- Linear mode & Square root mode option for linear input
- Upscale/downscale selection
- Input & output calibration possible through keys
- Internal cold junction compensation
- DIN Rail, pipe mount FLP & wall mount FLP versions
- 7-segment LED light intensity varies as output current change

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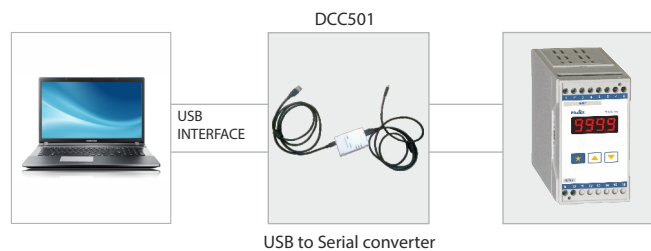
SPECIFICATIONS

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

INPUT Input type Thermocouple RTD Linear voltage input Linear current input Range Display Din Rail Flameproof	B, E, J, K, N, R, S, T Pt100, Pt500, Pt1000, Cu53, Ni100, Ni500, Ni1000, 0~400R, 0~2000R, 0~5000R -75~75 mV, -200~200 mV, -500~500 mV, 0~1000 mV 4~20 mA See Table 1 4 digit, 0.3" (7.6 mm), red LED 4 digit, 0.56" (14.2 mm), red LED	TEMPERATURE, HUMIDITY Ambient, storage Ambient, operation Relative humidity	-22 ~ +85 °C 0 ~ 60 °C 0 ~ 95% RH non-condensing
MONITORING Sensor break detection Upscale current Downscale current	20~22mA (user programmable) 3.8~3.9mA (user programmable)	ENCLOSURE - DIN RAIL Material Dimensions Mounting Connection, single/stranded wires Weight Protection	ABS plastic 75(H) x 45(W) x 109.5(D) mm See fig. 1 Snap on for 35 mm DIN rail to DIN 46277 2.5 mm ² , AWG 14 < 200 grams IP 20
OUTPUT Current, selectable Permissible load	4~20 mA, 20~4 mA 500 Ω @ 24 V DC, 20 mA	ENCLOSURE FLAMEPROOF - WALL/PIPE MOUNT Dimensions Material Protection Certification Cable gland	142(H) x 84(D) mm See fig. 2 Light Alloy (Lm6) IP66 as per IS/IEC:60529-2009 IS/IEC:60079-1-2007 for gas groups IIA & IIB Two 1/2" NPT cable entry
ACCURACY Linearity & calibration Cold junction compensation Temperature effect on accuracy Supply voltage effect Supply ripple effect, 50/60 hz, 5 Vp - p CMRR Stability Max input resistance for TC K Max lead resistance for RTD	See Table 1 ± 1 °C ± 0.006% of span / °C ± 0.002% of span / V ± 0.005% of span <130db 0.025% / 6 months 1000 ohms <0.1 °C upto 50 Ω individual lead resistance	ENCLOSURE FLAMEPROOF - DUAL CAVITY Dimensions Mounting Housing material Protection Certification Cable entry Cable gland Weight	245(H) x 145(W) x 90(D) mm See fig.3 Wall Die cast Al. Alloy IP66 Flameproof, Gr IIA, IIB, IIC 2 or 3 1/2" NPT, 2/3 cable entries available Approx 1.8 kg
POWER SUPPLY Supply voltage	14 to 32 VDC loop supply	PROGRAMMABLE PARAMETERS Unit Low scale High scale Preset current (Sensor break) Resolution Output type Digital filter	°C, °K, °F, EU See Table 1 See Table 1 20 to 22 mA (user programmable) TC, RTD - 0.01, 0.01, 0.1, 1 Linear - 0.001, 0.01, 0.1, 1 4~20, 20~4 mA A, B, C, D, E, F
ISOLATION Between input & loop supply	1000 V AC RMS / 1 minute		
CALIBRATION Zero & span	Through PC using DCC501 USB-to-Serial converter or via keys		

PC CONFIGURATOR FOR TX3DR

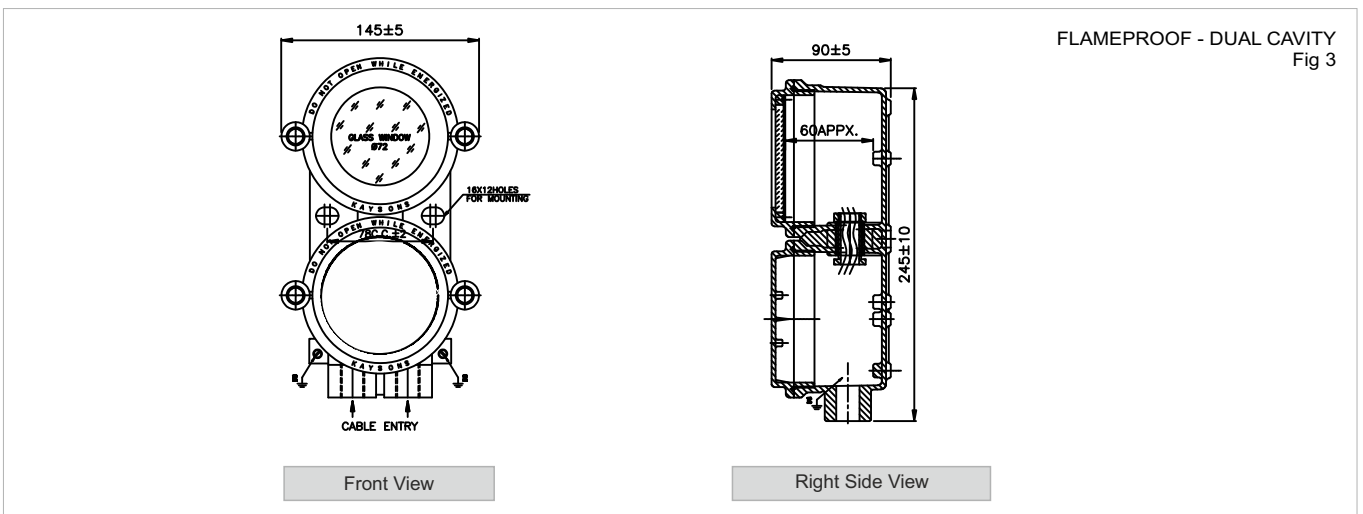
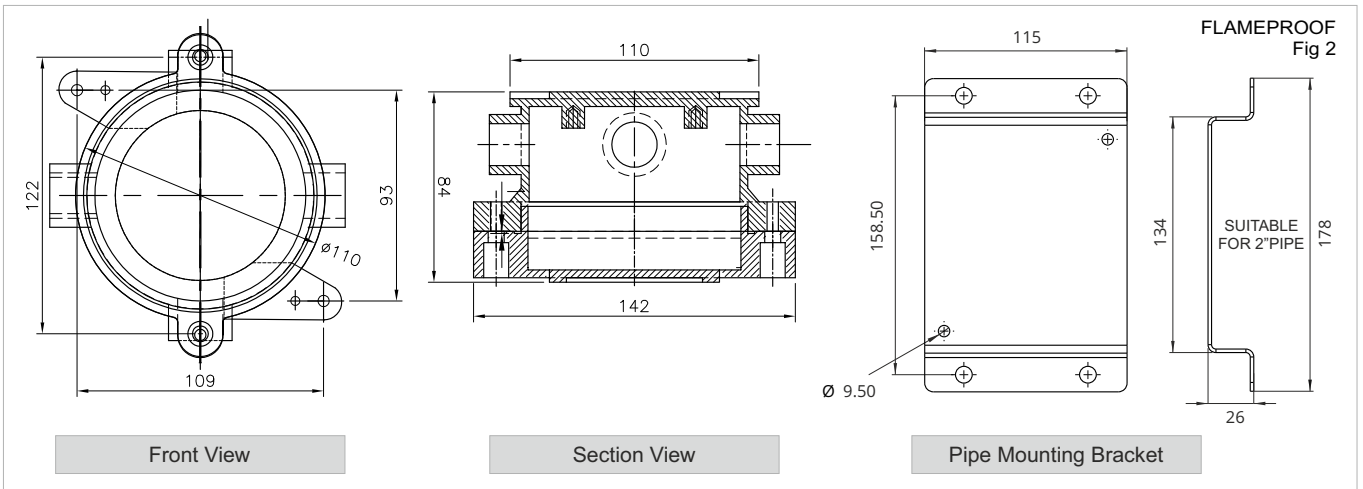
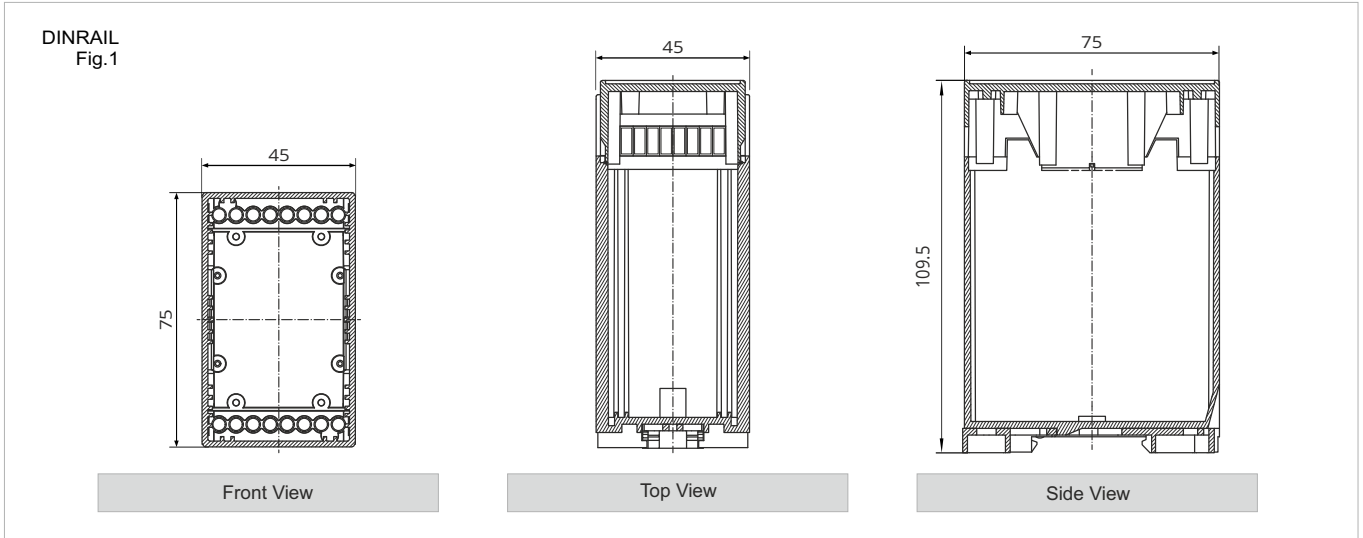
DCC501 USB to Serial converter can be used to program the parameters. The Programmer DCC501 must be purchased separately.



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DIMENSIONS mm



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TABLE 1

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)	-200	1000	0	1000	± 2	± 3
Iron / Constantan (J)	-210	1200	0	760	± 2	± 3
Chromel / Alumel (K)	-200	1372	-50	1200	± 2	± 3
Nicrosil / Nisil (N)	-200	1300	-50	1200	± 2	± 3
Pt / Pt - 13% Rh (R)	0	1768	0	1760	± 4	± 6
Pt / Pt - 10% Rh (S)	0	1768	0	1760	± 4	± 6
Copper / Constantan (T)	-200	400	-200	400	± 2	± 4
Pt100, 3-wire	-200	850	-200	400	± 0.2	± 0.5
Cu53, Cu100	0	180	0	180	± 0.3	± 0.5
Ni100	-60	180	-60	180	± 0.3	± 2.0
Linear resistance (0~400R)	-1999	9999	-1999	9999	± 5 EU	± 20 EU
Linear voltage (-75~75 mV, -200~200 mV, -500~500mV)	-1999	9999	-1999	9999	± 0.1%	± 0.25%
Linear current (4~20 mA)	-1999	9999	-1999	9999	± 0.1%	± 0.25%
Linear scale Square rooted	-1999	9999	-1999	9999	± 0.2%	± 0.5%

* Accuracy specified is for 2,3 and 4-wire RTD & resistance inputs. For 2-wire, lead resistance is taken as '0' ohms.

CONNECTION DIAGRAM

ORDERING INFORMATION

Example	2797	0	
Product code	2797		
Mounting		0	Din Rail
		1	Flameproof - Surface Mount
		2	Flameproof - Pipe Mount
		3	Flameproof - Dual Cavity #

keys can be accessed without opening

EXAMPLE

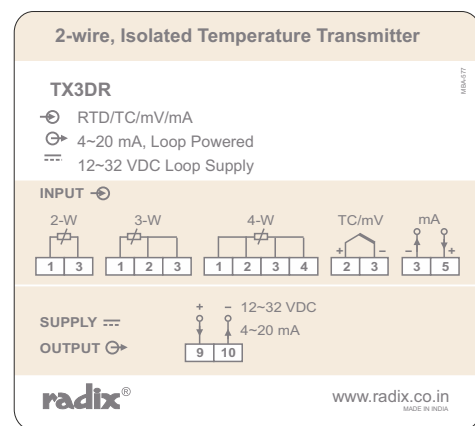
2797 0
 ↳ Mounting : Din Rail

ACCESSORIES**	RADIX PART NO.
1/2" NPT CABLE GLAND*	AMA-365

CONVERTER**	MODEL	ORDER CODE
USB TO SERIAL CONVERTER - ISOLATED	DCC501	2555 0

* For FLP Enclosure

**Accessories & Converter to be purchased separately



CAT#174R13/A

ENQUIRIES

Instruments: sales@radix.co.in
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Gauges: gauges@radix.co.in
Automation: automation@radix.co.in
Level: level@radix.co.in

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