DATA SHEET – Process Automation – Loop TX.

Subject to change without notice

MODEL:- LPSC-xxx
Loop Powered Signal Conditioner series 4-20mA Loop Powered

AUSTRALIAN MADE

GENERAL DESCRIPTION

The LPSC-xxx is a series of loop powered two wire transmitters, the LPSC draw energy from the 4-20mA loop to function and at the same time provides a proportional 4-20mA signal relative to the input.

The LPSC series accommodates inputs such as AC voltage, AC Current from CT, millivolts dc, Volts dc, milliamps dc, RTD, T/C and a SW (slide wire) inputs.

TECHNICAL DATA

Supply Voltage	12Vdc to 48Vdc
Supply Power	Loop powered
Two Port Isolation	1500V nominal

Input Types available:

ACI	CT secondary either 1Amp or 5Amp
ACV	0-300Vac
RTD	3 Wire PT-10, PT-100, PT-1000 - Min Span 30Deg C
SW (slide wire)	2 & 3 Wire 0-5k Ohm, 0-10k Ohm - Min Span 10 Ohms
T/C	E, J, K, N, S, T Min Span 8mV
VC	0-300V or 0-50mA – Min Span 5mV or 1mA
MV	0-5mV min span

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Output	4 to 20mA only
Loop Resistance	Approx. 250 ohms/loop maximum

FEATURES

- ♦ **Full galvanic isolation**
- ♦ **Both DIN and G Rail mounting**
- ♦ **External monitor points (40 to 200mV)**
- ♦ **External span and zero**
- ♦ **Very small footprint area 25mm wide**

GENERAL SPECIFICATION

Supply Voltage	12 to 48Vdc
Loop Resistance	250 ohms
Long term drift	< 0.1% of span per 10,000hrs
Isolation Level	1500V dc.
Creepage distance	≥2.5mm. (port to port)
Output Noise	3.2µA rms. (typical).
Accuracy	0.25% of span
Linearity	0.25% of span
Repeatability	0.25% over 10,000hrs
CMR (50/60Hz)	Typically 110dB
Response time	Nominally 250mS 10 to 90% step
Operating Temp	-25 to 75 Deg. C
Storage Temp	-55 to 85 Deg. C
Terminals	Self Opening 2.5mm^2
Housing Material	KRILEN
Dimensions	79mm X 85mm X 25mm
Weight	130 grams

Load Calculation: The LPSC series work on a wide voltage range, the maximum load can be calculated as below:

$$\text{Load (ohms)} = \frac{V_{Supply} - 12}{0.020}$$

INPUTS CONNECTIONS

CONNECTIONS
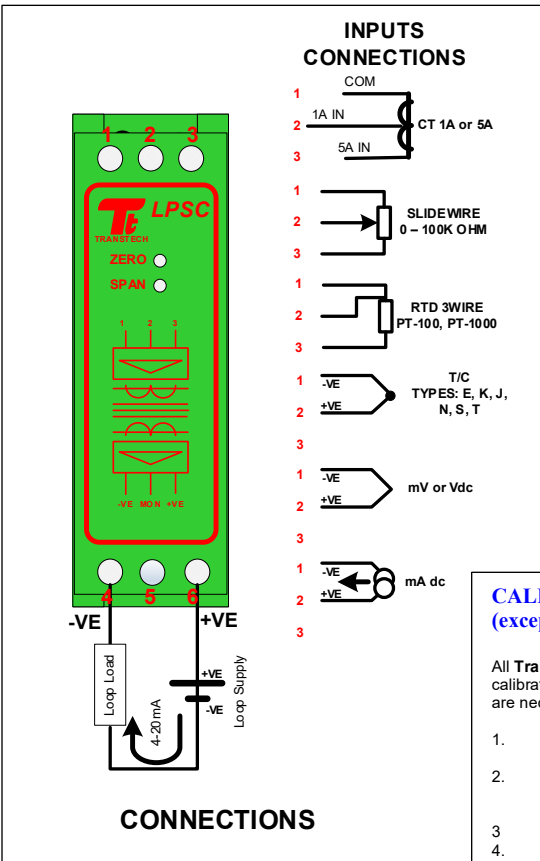
CALIBRATION & SET-UP INSTRUCTIONS (except LPSC-ACI):

All **TransTech** signal conditioners are normally factory set to calibration details supplied by the customer. If field adjustments are necessary, the following steps should be taken :-

1.   Apply the minimum signal to the input (0 Deg C)

2.   Adjust the output signal to its minimum level of 4 mA by adjusting the zero potentiometer.

3.   Apply the maximum signal to the input (max Deg C)

4.   Adjust the output signal to its maximum level of 20 mA by adjusting the span potentiometer.

HOUSING DIMENSIONS