

## MODEL:- TSC-XXX

Powered Transmitter Series



### GENERAL DESCRIPTION

The TSC-XXX signal conditioner series accepts a range of inputs such as mA dc, mV dc, DC Volts/Current, RTD, TC and Slide wire and provides a proportional standard instrument output in mA dc or Volts dc.

The TSC-XXX series are mains powered devices offering true 3 port galvanic isolation between input – output - power supply and providing a transmitted output that gives true zero output or any standard instrument signal in mA dc or mV dc or Volts dc.

The TSC-XXX series can have an optional single additional trip – this is the TSCT-XXX series

### TECHNICAL DATA

#### Power Supply.

Nominal	24, 120 & 220/240 (40-60Hz) +/- 15%
	24Vdc (20 – 32Vdc), 48Vdc (18-60Vdc), 110Vdc
VA Rating	Typically 2VA

#### Available Inputs

ACV	Up to 600Vac
ACI	1 amp or 5 Amp input
mV dc	0-1mV up to 0-1000mV
V dc	0-1V, 0-2V, 0-5V, 0-10V up to 300V max
mA dc	0-1mA, 0-5mA, 0-10mA, 0-20mA, 0-50mA, 4-20mA, 10-50mA etc
	(Input Impedance varies with input type)
Slide wire	(2 or 3 wire 0 – 10kOhm max typically 0-1k / 0-5k / 0-10k)
Thermocouple	J, K, T, R, S, T Range 0 – 1000 Deg. C
RTD	PT-100, PT-1000 2 and 3 wire.
Frequency	Switch, Proximity or Frequency,

Others ranges and inputs upon request

#### Output (two as standard)

No 1 (selected)	0-10ma, 4-20mA etc. (max loop load 900 Ohms)
No 2 (fixed)	0-10Vdc fixed and <b>not isolated</b> from supply
Special Outputs (added cost)	Bi-polar output eg:- +10V to -10V for 0-10V Input

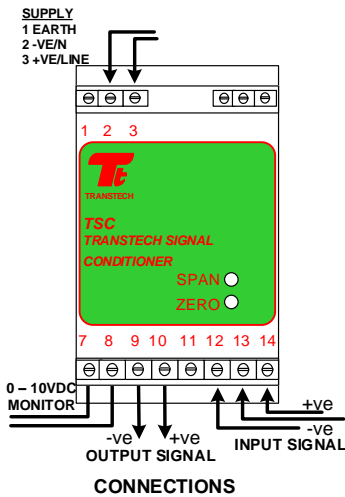
Other ranges and outputs upon request, (including bi-polar + / 0 / -).

### GENERAL SPECIFICATION

Accuracy	0.1% of span
Linearity	0.1% of span
Repeatability	0.1% over 10,000 hrs.
Common Mode RR	120dB
Response time	10 to 90% step in 250mSecs
Drift	0.03% of span per Deg. C
Isolation level	2500Vrms between input, output and power supply
Controls & Indication	External Span/Zero adjust and external Monitor 0-10Vdc
Operating Temp	0 to 60 Deg. C
Storage Temp	0 to 75 Deg. C
Terminals	Self-opening 2.5mm/12AWG
Housing Material	KRILEN (non-combustible)
Mounting Style	DIN (or G rail with adaptor)
Dimensions	105mm X 75mm X 45mm
Weight	130 grams

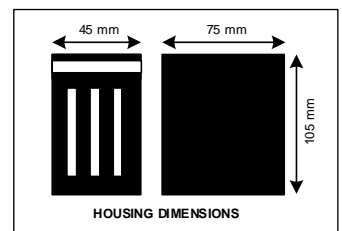
### FEATURES

- ◆ All standard inputs are link selectable
- ◆ Input monitor 0 - 10Vdc = 0 - 100%
- ◆ Full 3 Port galvanic isolation
- ◆ Externally accessible span/zero pot's (non-interactive)
- ◆ Plug off terminals for easy removal from service
- ◆ Two outputs as standard :- 0 to 10Vdc and a selected one (e.g. 4 - 20mA)
- ◆ Krilen housing non-combustible material
- ◆ Very small footprint area



Terminal #	INPUT TYPE												
	V/mV	mA	TWTX	TC	RTD 3 Wire	SW 3 Wire	HZ/Freq	N.Prox	3W Prox PNP	HZ/Sw	HZ/Electr	ACV	ACI
14	-	-	+ve	-	1	1	-	-ve	+ve	1	-ve	ACV	5A
13	+ve	+ve	-ve	+ve	2	2	+ve	+ve	switch	2	+ve	-	1A
12	-ve	-ve	-	-ve	3	3	-ve	-	-ve	-	-	COMM	COMM

**CONNECTION INFORMATION**



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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:-

**If the required input is within 10% of the calibration setting, then the unit may be recalibrated by the user (if meters of the required accuracy are to hand) by adjusting the front panel span and zero controls.**

**If the required input span is outside the adjustment range of the span and zero controls contact the factory.**

### FIELD CALIBRATION for TSC-XXX

1. Set the input signal to zero and adjust the zero-adjustment potentiometer on the top of the module to give 0.000V D.C at the 0-10V output (7-ve / 8+ve).
2. Set the input signal to maximum and adjust the span potentiometer on the top of the module to give 10.000V at the 0-10V output (7-/8+V).1

The input is now fully calibrated as the span and zero adjustments are not inter-reactive. The loop-current will be correct as it is directly linked to the 0 to 10V output.

**Note: Do not connect monitor 0V to Term 12.**