

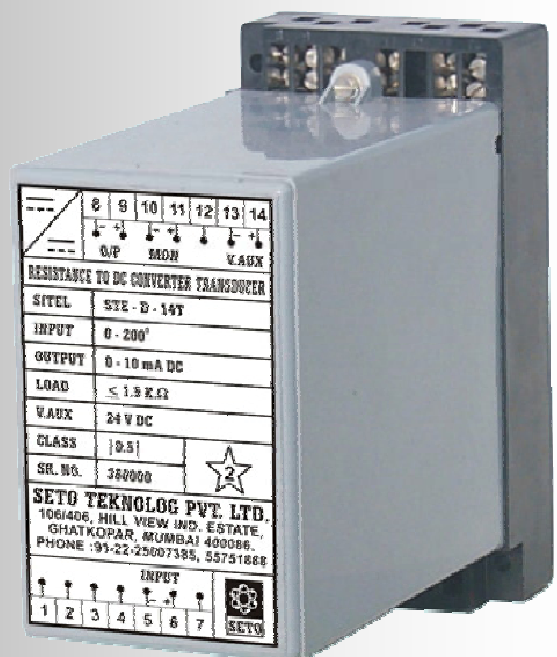
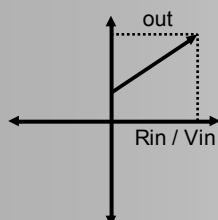
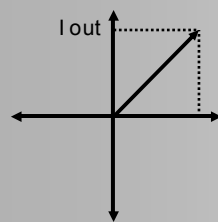
# RESISTANCE TO DC CONVERTER TRANSDUCER

In measuring and control circuits where a direct connection of field mounted sensors is not recommended and a galvanic separation is necessary to have an interference free operation. This transducer converts resistance of sensors into a proportional load independent DC Current or Voltage at output with galvanic isolation between input & output. This transducer is mainly used for converting the variation in resistance ( caused by position variations ) to a signal proportional to the rotation or position shift causing the variation. The resistance is sensed by a constant current source and a line resistance compensating circuit, which generates a voltage proportional to the variation in resistance. This voltage is fed to a chopper circuit which drives an isolating transformer. The output of the transformer is synchronously rectified and filtered. The filtered output is fed to a buffer driver which can be factory set to provide various types of load independent outputs proportional to the input. The input and output circuits are powered by an isolated supply derived either from an AC auxiliary transformer (for AC auxiliary supplies) or from a DC / DC power converter (for DC auxiliary supplies).

## FEATURES

- Available in accuracy class index 0.5
- Withstands wide temperature variations.
- Low internal consumption
- Wide range of Input / Output to meet National / International requirements.
- Complies to revised IEC 60688-(1997-10) standards.
- Flexibility in auxiliary power supply requirements - A.C. / D.C.
- Rugged and vibration resistant.
- Withstands seismic test as per IEC 344-1974 for Nuclear Power applications.
- Available in dust proof sheet plastic enclosures suitable for Back panel / Din rail mounting.
- Multiple outputs also available - upto 4.
- High input / Output isolations - 4.0 KV.

## CHARACTERISTICS



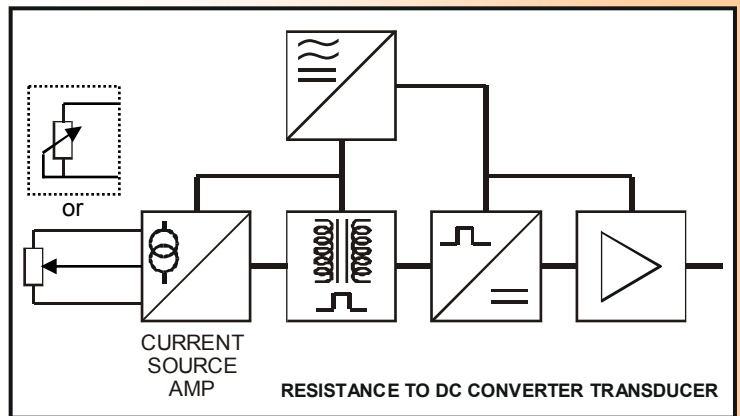
## TECHNICAL DATA

- Input : 0 – 10 Kilo ohm.
- Measuring Range : 0 – 1 / 2 / 5 / 10
- Input : Upto 15 ohm per wire.  
Cable Resistance Compensation
- Connection : 2 Wire / 3 Wire.
- Aux. Power Supply : 110/240V AC  
24/48/110/220V DC
- Nominal Output : 0 – 5 / 10 mA DC  
(Unipolar/Bipolar) 4 – 20 mA DC  
Proportional to resistance 0 – 10V DC
- Load Range (ohms)  
a) Current Output : Max 15 V/I out  
b) Voltage Output : Min 1K Ohms
- Residual A.C. Ripple : < 0.5% (P-P)
- Accuracy Class : 0.5
- Response Time : < 0.1 sec.
- Input-Output isolation : 4 KV
- Operating Temperature : 0 – 50°C
- Impulse Voltage Test : Confirms to IEC251 – 5KV  
having waveform of 1.2/50  
microseconds.
- HF Interference : Confirms to IEC 255-4
- Environment Condition : User group II as per  
IEC 60688
- Number of output : 1, 2, 3

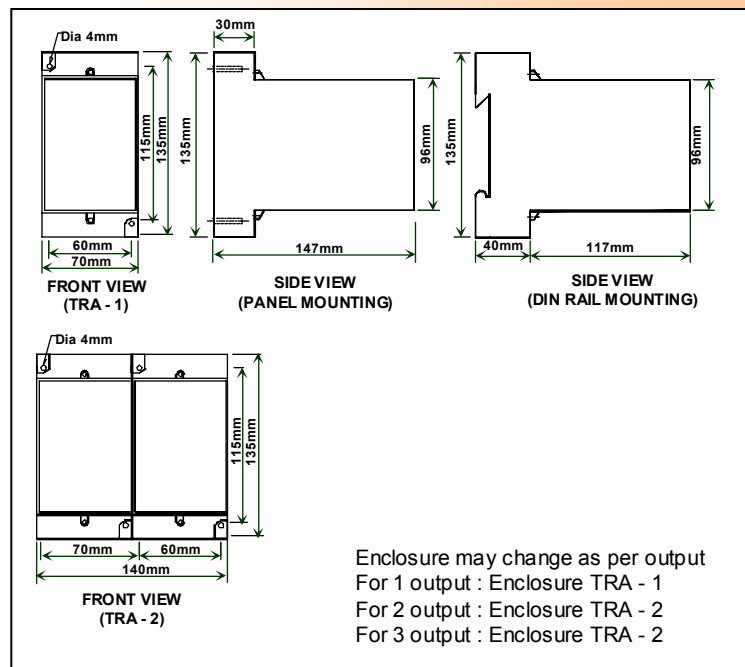
## OTHER PRODUCTS

- Supervisory Remote Control & Data
- Acquisition Systems – Total turnkey
- Remote terminal Units (RTU).
- Micro RTU
- Powerline Transducer
- Microprocessor Based Equipments –  
MCB Monitors, Beetle Monitors,  
Temperature Scanner etc.
- Custom Built Electronic Equipments.
- Digital A.C. Ammeter
- Digital A.C. Voltmeter
- Digital Volt, Amp, & Watt Meter –  
class 0.5 / 0.2
- RTD Transducers.
- Static Energy Meters.
- Digital Flow Meters.
- Digital Power Monitor Cum Controllers.

## BLOCK DIAGRAM



## DIMENSIONAL DRAWING



Enclosure may change as per output  
 For 1 output : Enclosure TRA - 1  
 For 2 output : Enclosure TRA - 2  
 For 3 output : Enclosure TRA - 2



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