



# ACTIVE ENERGY TRANSDUCER



This transducer is used for measurement of Active Energy for single phase (STE-A-8T) system as well as for 3-phase, 3-wire (STE-B-8T) system and 3-phase 4-wire (STE-C-8T) systems with balanced and unbalanced load. This is fully solid-state instrument, which can be interfaced directly with Digital Data Acquisition System. The Input Voltages and currents are galvanically isolated and suitably scaled down by transformer T1, T2 etc. Depending on the system one or more electronic multipliers M1, M2 etc are used. The multiplying circuit used is the popular time division multiplication method. The implementation of the TDM technique as designed by SITU, makes the accuracy of multiplication dependent only on a few precision resistors and a low temperature coefficient reference zener.

The outputs of the multipliers are summed up and fed to a precision voltage to frequency converter F. The frequency converter converts the input voltage to a proportional frequency by using "State-of-the-art" charge feedback technique. The output of the frequency converters in the form of pulses, which is then divided by using digital technique, the division factor depending on the input transformation ratios. The divided pulse rate is then output either as an open collector output or as a potential free contact.

## Features

- Available in accuracy class index - 0.5, 1.0 & 2.0
- Withstands wide temperature variations.
- VA burden on CT/PT very low. - < 0.5 VA
- Low internal consumption
- Wide range of Input / Output to meet National / International requirements.
- Comply with 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.
- High input / Output isolations - 4.0 KV.

## Characteristics

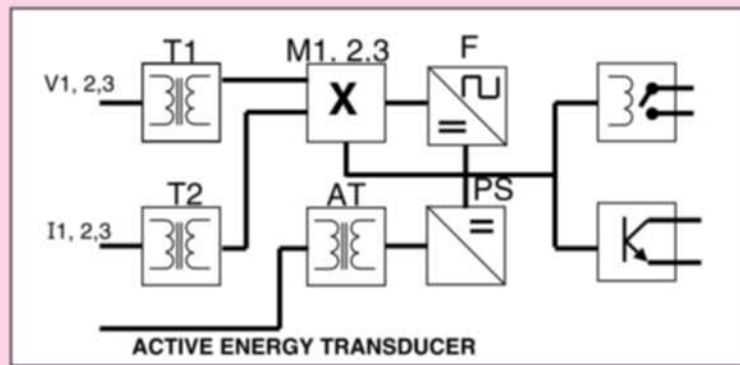


*Creating Solutions For Challenging Needs !*

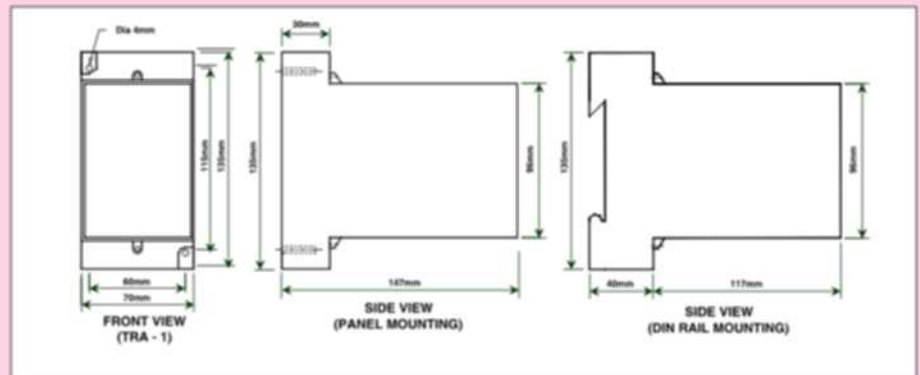
## Technical Data

- Measuring Range : 0-0.8-1.2 Vn x In
  - Rated Input : 110/415V AC, 1/5A AC
  - Input Frequency : 50Hz +/- 10%
  - Internal Consumption : < 0.5 VA for each input < 4VA for ry voltage if self powered
  - Auxiliary Power Supply : 110 / 240 V AC  
24 / 48 / 110 / 220V DC  
Self Powered
  - Nominal Output : Potential Free Contact  
Or open collector  
Transistor
- Over Load capacity
- Continuous: 1.2 Vn, 2.0 In
  - Momentary : 2.0 Vn for 1 sec.  
20 In for 1 sec.
- Accuracy Class : 0.5/1.0/2.0
  - Input - output Isolation : 4 KV
  - Operating Temperature : 0 - 50°C
  - Impulse Voltage Test : Confirms to IEC 251- 5KV having waveform of 1.2/50 microseconds.
  - HF Interference : Confirms to IEC 255-4
  - Environment Condition : User group II as per IEC 60688
  - Configuration : 1-Phase,3-Phase/  
3-wire, 3-Phase/4-wire

## Block Diagram



## Dimensional Drawing



## Other Products

- Supervisory Remote Control & Data Acquisition Systems - Total turnkey.
- Remote terminal Units (RTU).
- Micro RTU.
- 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.
- Position Indicating Transducers.
- Static Energy Meters.
- Digital Flow Meters.
- Digital Power Monitor Cum Controllers.



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