



MODELS OFFERED

TF-1: Frequency

- Accurate measurement of the Frequency of a single or three phase system with balanced or unbalanced loads.
- The output signals are isolated load independent DC mA or DC V, representing the measured value of the Frequency.

FEATURES

- High accuracy $\pm 0.05\%$ of Rated Output (R.O.).
- Frequency range from 45 Hz to 10KHz.
- High immunity to external noise.
- Quick and easy mounting to 35mm DIN Rail (DIN46277) or screw mounting.
- Many input and output signal combinations.

GENERAL SPECIFICATIONS

Accuracy	$\pm 0.2\%$ R.O. Standard for 10 to 100% of rated output $\pm 0.1\%$ R.O. (Special Option)
Temp. coefficient.....	$\leq 100\text{ppm}/^\circ\text{C}$ of span $\leq 60\text{ppm}/^\circ\text{C}$ for ambient temperature of $25^\circ\text{C} \pm 10^\circ\text{C}$
Temp. range	Storage temperature range -20°C to 60°C (-4°F to 140°F) Operating temperature range 0°C to 50°C (32°F to 122°F)
Humidity range	Up to 95% RH non condensing
Isolation.....	Between Input/Output/Power/Case
Dielectric test.....	DIN-IEC 688 2K Vrms/1 min, Between terminal to terminal 2.8K Vrms/1 min, Between terminal to case
Surge test.....	DIN-IEC 255-4, ANSI C37 90a/1974 5KV($1.2 \times 50 \mu\text{s}$)
Insulation Resistance	Greater than 100 M Ω at 500V DC
Housing material	ABS Resin(94V-0) or metal
Mounting	Screw mount on metal case or Plastic case on DIN Rail 35mm
Auxiliary Power.....	AC 115/230V $\pm 15\%$, 50/60Hz, 3VA DC 24V $\pm 20\%$ (optional) 125V DC $\pm 20\%$ (optional)

INPUT SPECIFICATIONS

AC Voltage Input range.....	2V to 200V AC or 30 to 600V AC
Frequency	60Hz ± 3 Hz, 50Hz ± 3 Hz, 400Hz ± 3 Hz
Burden	≤ 0.2 VA per current circuit, ≤ 0.1 VA per voltage circuit.
Response Sensitivity	$\leq 0.5\%$ of measuring range to maximum input range
Input Voltage.....	600V AC rms continuous (absolute maximum)
Overload Capacity	1.25 times the rated input Voltage continuously. 2 times the rated input Voltage for 10 secs. 4 times the rated input Voltage for 5 secs.

OUTPUT SPECIFICATIONS

Output Variables.....	DCmA or DCV
Ripple.....	< 0.5% of rated output. Peak to Peak (maximum)
Response Time	< 400 milliseconds to go from 0 to 99% of output
Zero Adjustment.....	$\pm 5\%$ of rated output (minimum)
Span Adjustment.....	$\pm 10\%$ of rated output (minimum)
Load Resistance.....	10 k Ω maximum for 0 to 1mA output 500 Ω maximum for 4 to 20mA output 500 Ω minimum for 0 to 10V output

CONNECTION DIAGRAM

