



TRINITY

MAKING ENERGY MATTER

EMPOWER PLUS

DIGITAL MULTIFUNCTION METER

The EMPOWER PLUS from Trinity is an easy-to-use, cost effective electrical power meter that offers all the basic measurement capabilities required to monitor an electrical installation. In addition to measuring the instantaneous parameters, it also measures all three energies, thus helping to measure energy costs.

Over the basic metering, it provides RS485 port supporting MODBUS RTU protocol, THD measurements, Phase angle, Unbalance % for Voltage and Current, On Hour & Run Hour, Power Interruption recording. These parameters are available over RS485 only.

The CT Primary, Secondary and PT ratios are site selectable.



FEATURES

- ✓ Class 1.0s accuracy as per IS13779
- ✓ Microcontroller Based
- ✓ Seven Segment LED Based Display
- ✓ Measures all important Electrical Parameters
- ✓ Compact 96 X 96 DIN enclosure
- ✓ Rs485 port for connection to SCADA/EMS

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TECHNICAL DATA

Parameters		
Type	Name	Statistics
INPUT	Supply	Three Phases and Neutral of a 3P4W system
	Voltage	Direct Voltage Input : 25 to 500V L-L, 25 to 300V L-N
		PT Ratio : Site Selectable
	Current	Burden : 0.5VA
		Secondary Current Input : 5A or 1A (Site Selectable)
		CT Ratio : Site Selectable
		Range of Reading : 5 - 5000A
	Power Supply	Burden : < 1.0VA
		Overload : 5A CT → 6A RMS Continuous
		1A CT → 1.2A RMS Continuous
		Auxiliary Supply (AC) : 80VAC to 270VAC 50-60Hz
MEASUREMENT	True RMS Basic Parameters	Voltage (Volts L-N & L-L) : VL-N - Accuracy : 0.5% of Reading
		VL-L - Accuracy : 1.0% of Reading
		Current (Amps IR, IY, IB) : Accuracy : 0.25% of Reading
	Power	Line Frequency : 45 to 65 Hz, Accuracy : 0.3% of Reading
		Active Power (P) : Accuracy (For IPFI>0.5) : 1% of Reading
		Reactive Power (Q) : Accuracy (Between 0.5 Lag to 0.8 Lead) : 1.5% of Reading
		Apparent Power (S) : Accuracy : 1% of Reading
	Energy	Power Factor : For Individual phases and System
		Accuracy : 1.0% of Reading (IPFI≥0.5)
		Range of Reading : 0.05 to 1.00 Lag/Lead
		Total Active Energy (KWh) : Range of Reading : 0 to 9999999.9
	Power Quality	Accuracy : Class 1.0s as per IS13779
		Total Apparent Energy (KVAh) : Range of Reading : 0 to 9999999.9
		Accuracy : 1.0% of Reading
		Total Apparent Energy (KVARh) : Range of Reading : 0 to 9999999.9
MISCELLANEOUS	Dimensions	Accuracy : 1.5% of Reading
		THD for each phase current
		THD for each phase voltage
		Bezel : 96 X 96 mm
		Panel Cutout : 92 X 92 mm
		Depth of installation : 65mm
		Display : 4x3 7-Segment
		Operating temp : 10°C to 50°C
		Weight : 0.35 Kgs (Approx.)
		Min. Operating Current : 0.4% of CT primary
Comm.	RS485	Modbus-RTU protocol

