

UNIVERSAL MEASURING INSTRUMENTS

TNM96-ETN-II - Power Quality and Energy Powermeter



TNM96-ETN-II energy powermeter is a compact, highly accurate 0.2% (0.1% optional), three-phase powermeter, especially designed to meet the needs of power and energy measurement in any electrical installation for monitoring the parameters of electrical network.

TNM96-ETN-II includes history data logging and supports standard communication protocols BACnet and Modbus with simple integration into building management systems over RS485 and ethernet TCP/IP communication.

An indispensable tool for the building engineer, it aids efficient use of electricity by showing power factor, max and min demand, current in neutral line, harmonics up to 64th, periodic energy and very important safety tool - a leakage current.

Technical Data

3 phase / 1 phase	yes
Accuracy	0.2% (optional 0.1%)
Sampling rate	1600 sample per cycle
Digital In / out	2 / 1
Harmonic resolution	64
Graphical display of the harmonics measurements	yes
Harmonic distortion	I-THD, U-THD
Waveform	Display only
Leakage (residual) current	yes
Simple operated menus	yes
Multilingual support	yes
Data logging	yes, up to 6 months
Build in T.O.U Energy meter	yes
Alarms	yes
Alarm log	yes
Minimum / Maximum	yes
History log for MIN/MAX values	yes
RS485 Communication Port Modbus	yes
Ethernet (TCP/IP) Modbus and BACnet	only TCP model
BACnet TCP/IP protocol	only TCP model
BACnet MS/TP protocol	yes
Web browser capability	only TCP model
LCD graphical display type	High resolution color LCD display
Display resolution	320x240 pixels
Fast trends	yes
Current transformers supported	5A / 1A / 0.333V
Power requirements	90 ∞ 250 VAC 110 ∞ 280 VDC
Frequency	50 / 60 Hz
Consumption	8 VA
Mounting	Frontal panel mounting
Dimensions (HxWxD)	96 x 96 x 80 mm
Weight	650 gr.
Environmental	Operation: -20 ∞ 70°C Storage: -20 ∞ 80°C Humidity: 0 ∞ 95 RH% non condensing
Measurement ranges	Voltage: 0 - 515 VAC Voltage(with transformer): up to 99999 KV Current (with transformer) : up to 99999 KA Maximum Input Voltage : 1000V Maximum Input Current : 6A
Measurement type	True RMS
Standard Approvals	EN62052-11, EN62053-22, EN62053-23, CE, UL61010, EN61000 -3-2, EN61000 -3-3, BTL

Measurement and Display values

Measurement Parameter	Display range
Current	0.001 - 99999 KA
Neutral current (calculated)	0.001 - 99999 KA
Voltage L-N	0.001 - 99999 KV
Voltage L-L	0.001 - 99999 KV
Frequency (Hz)	45.001 - 65.001 Hz
Active power total/phase	0.000 W - 99999 MW
Reactive power total/phase	0.000 VAR - 99999 MVAR
Apparent power total/phase	0.000 VA - 99999 MVA
Power factor (cap./ ind)	-1.000 ÷ 1.000
Active total/phase	0.001 WH - 99999999 MWH
Reactive total/phase	0.001 VARH - 99999999 MVARH
Apparent total/phase	0.001 VAH - 99999999 MVAH
Harmonic THD V/I	0.000 - 100%
Partial Harmonic V/I	0.000 - 100%
Operating hour meter	99999 - HH:MM:SS
Measurement Parameter	Measuring in direct connection
Current	0.001 - 6A
Neutral current (calculated)	0.001 - 6A
Voltage L-N	0.000 - 550V
Voltage L-L	0.000 - 950V
Frequency (Hz)	45.001 - 65.001 Hz
Power factor (cap./ ind)	-1.000 ÷ 1.000

Mechanical mounting:

