

NPM290 Series Panel Type Energy Analyzers



NPM290 Series

Panel Type Energy Analyzers

The measurement parameters include Voltage (V), Current (A), Frequency (Hz), Power Factor (PF), Active, Reactive, and Apparent Power (kW/kVA/kVAr), Import, Export, and Total Active Energy (kWh), Import, Export, and Total Reactive Energy (kVArh).

This analyzer also measures Maximum Demand Current and Maximum Demand Power within pre-determined time periods, which can extend up to 60 minutes.

NPM290 includes Pulse outputs and RS485 Modbus RTU communication; no additional modules are needed to add communication to this device.

NPM290 works with 1A or 5A Current Transformers and can be configured to work with a wide range of current transformers (CT). The unit can also be configured to work with a voltage transformer.

Instead of programming the analyzer via Modbus, it features a password-protected setup menu within the analyzer software, allowing for configuration without the need for communication-based integration.

NPM290 does not require a separate auxiliary power supply for operation. The self-powered auxiliary comes from any of the voltage inputs, meaning if one phase fails, the unit will draw power from another phase to continue meter measurements.

NPM290 analyzer comes with sealable terminal covers to ensure the installation is secure and tamper-resistant.

Application areas

- Shopping Malls
- Organized Industrial Zones
- Electrical Panel Manufacturing
- Projects Requiring Measurement Precision
- Marinas
- Residences
- Airports
- Factories
- Resorts

Standarts

- IEC 62053-21
- IEC 62053-22
- IEC 62053-23



Advantages

- Suitability for panel type application solutions,
- Class 0.5 and class 1 applications,
- Competitive prices,
- Compatibility with all software through Modbus RTU protocol communication,
- Bidirectional measurement capability,
- Proven reliability with unique design,
- Scaled display by entering the ratios of current transformers to which it is electrically connected into the interface,
- AC/DC supply capability with auxiliary supply terminal,
- Different electrical connection options for TT and TN,
- Optional multi-tariff,
- Pulse output feature,
- Wide measurement range.

Features

- Phase to Neutral Voltages 100 to 276V AC (not for 3P3W supplies).
- Phase to Phase Voltages 174 to 480V AC (3 Phase supplies only).
- Percentage total Voltage Harmonic Distortion (U THD%) foreach Phase to N (not for 3P3W supplies).
- Percentage Voltage THD% between Phases (3 Phase supplies only).
- Percentage total Current Harmonic Distortion (I THD%) foreach Phase.

Power factor and Frequency and Max. Demand

- Frequency in Hz (45-66Hz)
- Power 0 to 999MW
- Reactive power 0 to 999MVA
- Volt-amps 0 to 999MVA
- Maximum demanded power since last Demand reset
- Maximum neutral demand current, since the last Demand reset (for 3 Phase supplies only)

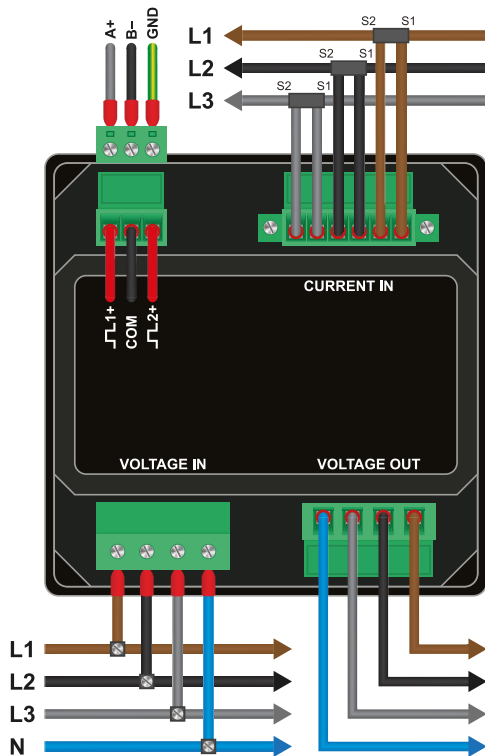
Energy Measurements

- Imported/Exported Active Energy: 0 to 9999999.9 kWh
- Imported/Exported Reactive Energy: 0 to 9999999.9 kVAh
- Total Active Energy: 0 to 9999999.9 kWh
- Total Reactive Energy: 0 to 9999999.9 kVAh

Measured Inputs

- Voltage input through 4-way fixed connector with 2.5mm² stranded wire capacity.
- Single Phase Two Wire (1P2W), Three

Wiring Diagram

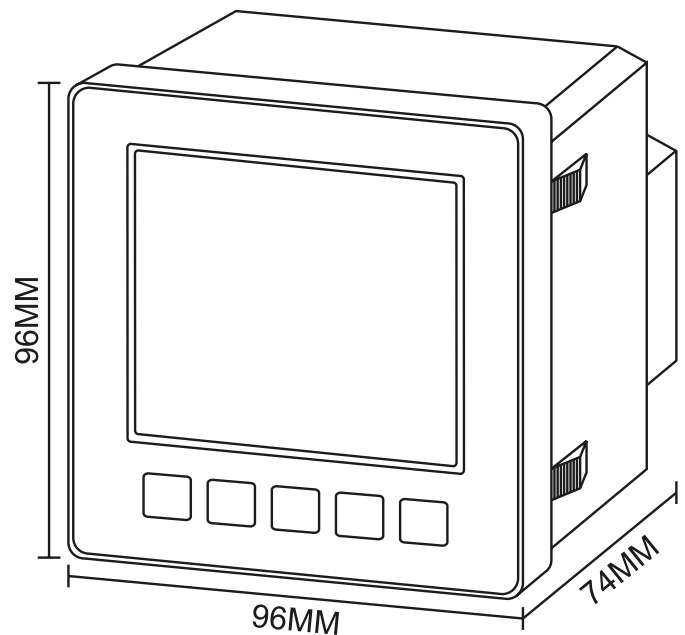


- Phase Three Wire (3P3W) or Three Phase Four Wire (3P4W)
- unbalanced. Line frequency measured from L1 Voltage or
- L3 Voltage. Three Current inputs (six physical terminals) with
- 2.5mm² stranded wire capacity for connection of external CTs.
- Nominal rated input Current 5A or 1A AC RMS.

Accuracy

- Voltage (L-N / L-L): 0.5% of range maximum
- Current: 0.5% of nominal
- Frequency: 0.2% of mid-frequency
- Power Factor: 1% of unity (0.01)
- Active Power: (W) ±1% of range maximum
- Reactive Power: (VA) ±1% of range maximum
- Apparent Power: (VA) ±1% of range maximum
- Active Energy (Wh): Class 1 IEC 62053-21 or Class 0.5 IEC 62053-22
- Reactive Energy (VAh): Class 2 IEC 62053-23
- Total Harmonic Distortion: 1% up to 63rd Harmonic

Dimensions





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