

MAGNO 21

Advance Single Phase Prepaid Energy Meter with Keypad



The **Magno 21** is a energy meter built to combine efficiency, security, and ease of use for residential applications. Supporting DLMS/COSEM Protocol and featuring an intuitive **keypad**, it supports **STS prepayment** functionality, allowing consumers to conveniently enter credit tokens and manage their energy usage with full transparency and control.

Engineered with security and resilience in mind, the **Magno 21** ensures high-level data protection, a tamper-resistant **ultrasonic welded** enclosure, and optional built-in battery or supercapacitor backup for uninterrupted operation. With its keypad-based **STS prepayment** capability, the **Magno 21** offers utilities a reliable solution for revenue assurance while providing end-users with simple and direct energy management.



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Main Functionalities:

Standards & Compliance	▪ IEC 62052-11, IEC 62053-21 ▪ IEC 62058-11, IEC 62058-31 ▪ IEC 62053-52 ▪ IEC 62056-42, 46, 47, 61
Connection Type	▪ 1 Phase, 2 Wire ▪ Asymmetric / Symmetric Connection
Measurement	▪ kWh as principal unit of measurement ▪ Active and Reactive energy measurement ▪ Instantaneous Vrms, Irms, Frequency ▪ Time of Use, Load Profile, Maximum Demand, Event Logs, etc.
Load Profile	▪ Data recorded for 45 days (15min intervals) ▪ Data recorded: kW, kVAr, kWh, Voltage, Current
Demand	▪ Demand cycle configurable, the default is 15 minutes
Real Time Clock	▪ Clock accuracy (daily deviation): $\leq 0.5s/day$
Prepayment	▪ STS Protocol ▪ Keypad Functionality
Communication	▪ Protocol: IEC62056-21 mode C ▪ RS485
LCD	▪ Large digit LCD display for easy reading ▪ Display available during power off ▪ LCD Backlight ▪ Wide viewing angle
Relay	▪ Disconnect Relay
Security	▪ Communication is password protected
Protocol	▪ Open standard protocol: IEC62056-21
Event Records	▪ Bypass of mainline and load line, Record 25 events ▪ Current reverse, Record 25 events ▪ External magnetic tamper, Record 25 events
Memory	▪ Non-volatile memory which can support over 10 years
Battery	▪ Support power off display ▪ Support RTC clock
Terminals	▪ Two screws for fixing the terminal conductor ▪ The terminals are made of copper ▪ Connection cross-sectional area over 25mm²
Protection Class	▪ IP54 compliant with IEC60529 ▪ Insulation grade II

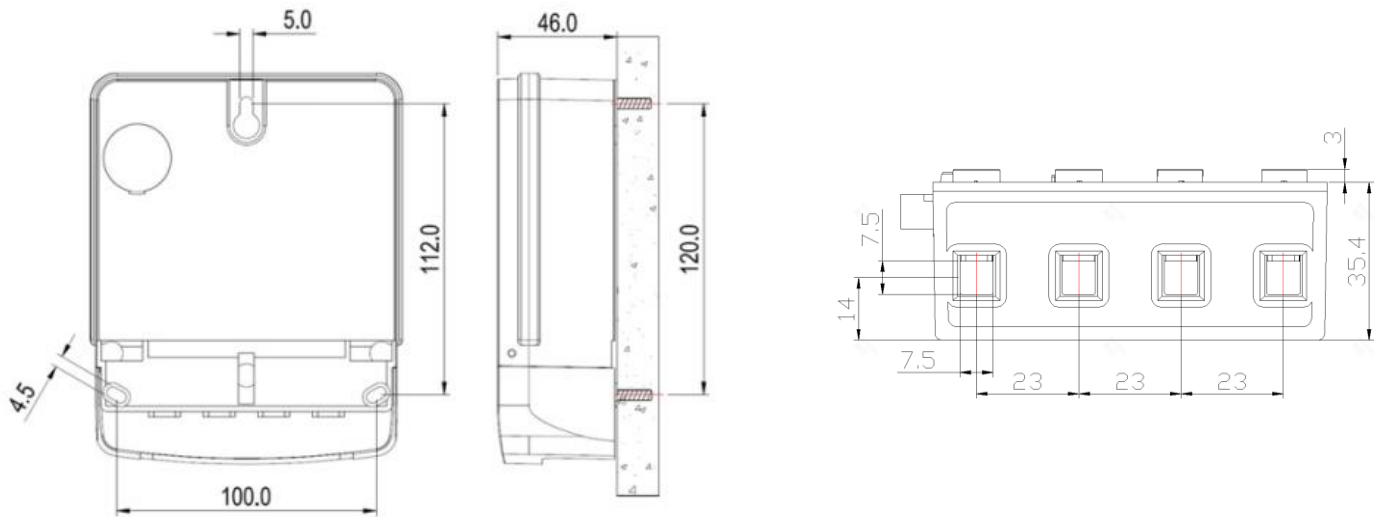
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Technical Specification:

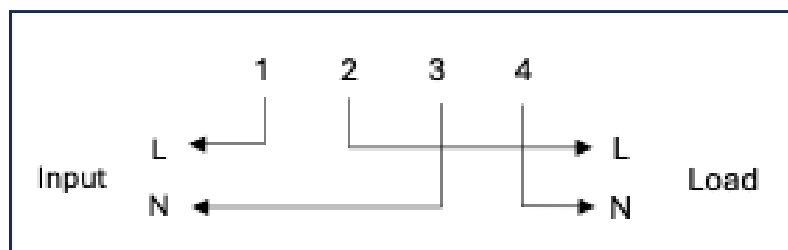
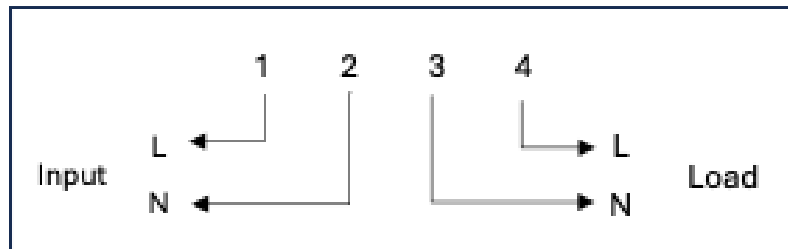
Rated Nominal Voltage	▪ 230V
Operating Voltage Range	▪ 0.8Un ~ 1.3Un
Rated Current & Starting Current	▪ 5(80)A
Rated Frequency	▪ 50Hz ±2%
Pulse Constant (Configurable)	▪ 1000imp/kWh, ▪ 1000iimp/kvarh (Configurable)
Accuracy Class	▪ Cl.1 for Active, ▪ Cl.2 for Reactive
Power Consumption	▪ Voltage circuit ≤2 W or 10VA, ▪ Current circuit ≤1 VA @Ib
Temperature Ranges	▪ Normal Operation Range: -40°C to +70°C, Humidity is up to 95% ▪ Limit Operation Range: -40°C to +75°C Humidity is up to 95% ▪ Limit range for Storage: -45°C to +75°C Humidity is up to 95%
EMC Performance	▪ Impulse voltage > 6kV, AC voltage > 4kV, Short circuit ▪ Current > 3kA, ▪ Electrostatic Discharge contact: 8kV & air: 10kV, ▪ Electrostatic discharge immunity (IEC61000-2-2), ▪ High frequency electromagnetic field immunity, (IEC61000-4-3), ▪ Electric fast transient pulse group immunity (IEC61000-4-4) ▪ Surge immunity (IEC61000-4-5); 6kV
Design Life	▪ ≥15 years
Dimensions	▪ 126 x 110 x 46.6 mm
Weight	▪ 400g
Housing Material	▪ PC+10%GF material, Fire retardant, flame resistant, Anti-UV, thermal deformation engineering plastic, Transparent meter cover and terminal cover ▪ Option for ultrasonic welding

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Dimensions:



Wiring Diagrams:



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