

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	<ul style="list-style-type: none">▪ IEC 62052-11, IEC 62053-21▪ IEC 62058-11, IEC 62058-31▪ IEC 62053-52▪ IEC 62056-42, 46, 47, 61
Connection Type	<ul style="list-style-type: none">▪ 1 Phase, 2 Wire▪ Asymmetric / Symmetric Connection
Measurement	<ul style="list-style-type: none">▪ 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	<ul style="list-style-type: none">▪ Data recorded for 45 days (15min intervals)▪ Data recorded: kW, kVAr, kWh, Voltage, Current
Demand	<ul style="list-style-type: none">▪ Demand cycle configurable, the default is 15 minutes
Real Time Clock	<ul style="list-style-type: none">▪ Clock accuracy (daily deviation): $\leq 0.5s/day$
Prepayment	<ul style="list-style-type: none">▪ STS Protocol▪ Keypad Functionality
Communication	<ul style="list-style-type: none">▪ Protocol: IEC62056-21 mode C▪ RS485
LCD	<ul style="list-style-type: none">▪ Large digit LCD display for easy reading▪ Display available during power off▪ LCD Backlight▪ Wide viewing angle
Relay	<ul style="list-style-type: none">▪ Disconnect Relay
Security	<ul style="list-style-type: none">▪ Communication is password protected
Protocol	<ul style="list-style-type: none">▪ Open standard protocol: IEC62056-21
Event Records	<ul style="list-style-type: none">▪ Bypass of mainline and load line, Record 25 events▪ Current reverse, Record 25 events▪ External magnetic tamper, Record 25 events
Memory	<ul style="list-style-type: none">▪ Non-volatile memory which can support over 10 years
Battery	<ul style="list-style-type: none">▪ Support power off display▪ Support RTC clock
Terminals	<ul style="list-style-type: none">▪ Two screws for fixing the terminal conductor▪ The terminals are made of copper▪ Connection cross-sectional area over 25mm²
Protection Class	<ul style="list-style-type: none">▪ IP54 compliant with IEC60529▪ Insulation grade II

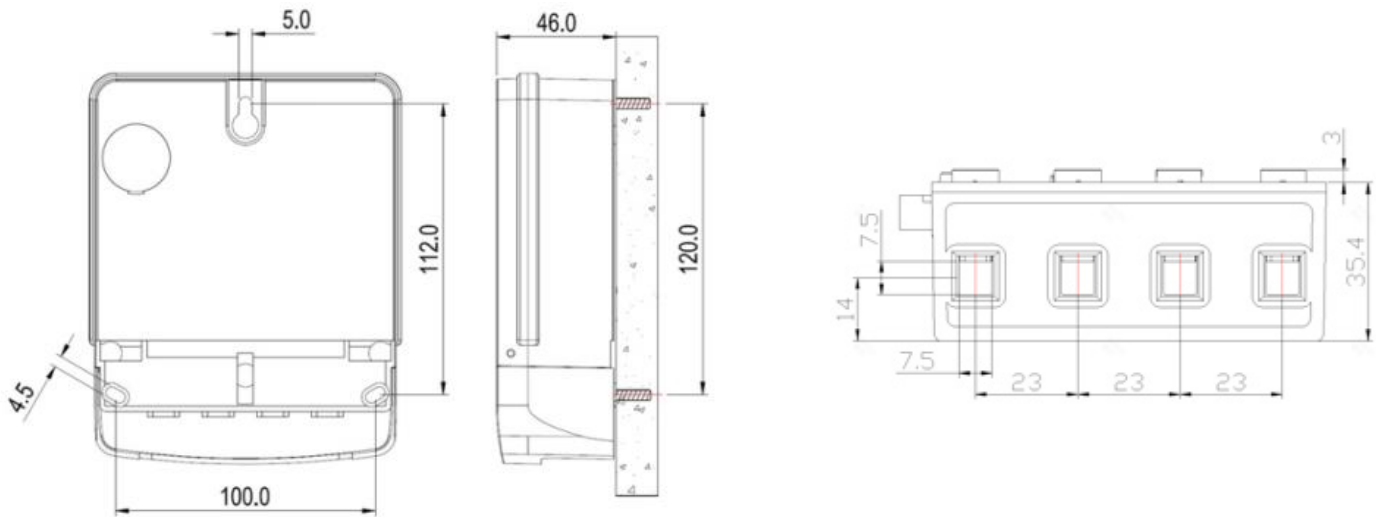
MAGNO 21

Technical Specification:

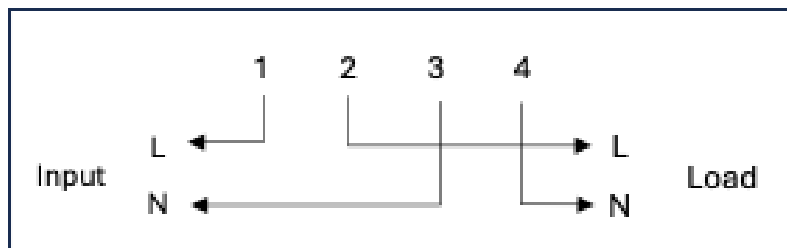
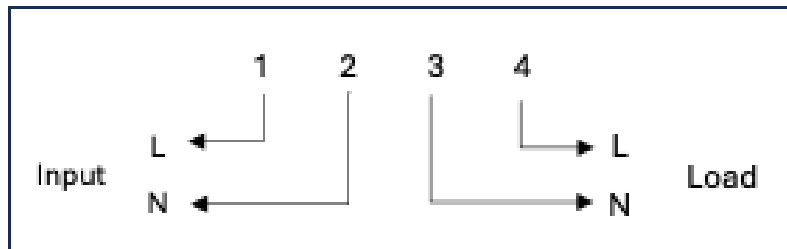
Rated Nominal Voltage	<ul style="list-style-type: none">▪ 230V
Operating Voltage Range	<ul style="list-style-type: none">▪ 0.8Un ~ 1.3Un
Rated Current & Starting Current	<ul style="list-style-type: none">▪ 5(80)A
Rated Frequency	<ul style="list-style-type: none">▪ 50Hz ±2%
Pulse Constant (Configurable)	<ul style="list-style-type: none">▪ 1000imp/kWh,▪ 1000iimp/kvarh (Configurable)
Accuracy Class	<ul style="list-style-type: none">▪ Cl.1 for Active,▪ Cl.2 for Reactive
Power Consumption	<ul style="list-style-type: none">▪ Voltage circuit ≤2 W or 10VA,▪ Current circuit ≤1 VA @Ib
Temperature Ranges	<ul style="list-style-type: none">▪ 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	<ul style="list-style-type: none">▪ 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	<ul style="list-style-type: none">▪ ≥15 years
Dimensions	<ul style="list-style-type: none">▪ 126 x 110 x 46.6 mm
Weight	<ul style="list-style-type: none">▪ 400g
Housing Material	<ul style="list-style-type: none">▪ 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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