

MAGNO 11

SINGLE PHASE DIN-RAIL
SMART PREPAID METER
WITH LCD DISPLAY



Powering the Future
with Precision and Control

Magno 11 is a single-phase DIN-Rail prepaid meter with an LCD display, designed for power grid monitoring, load control, tamper detection, and vending. It features a **plug-and-play** module and advanced anti-tamper solutions to help utilities reduce losses and increase revenue. Compliant with **STS/CTS standards** and using the **DLMS/COSEM** open protocol, it ensures seamless integration with existing systems, making it ideal for residential electricity metering.



ELECTRICITY

SINGLE PHASE DIN-RAIL SMART PREPAID METER WITH LCD DISPLAY

■ Main Functionalities

Standards & Compliance

- IEC 31 ,21 ,11-62052
- IEC ,23-62053
- EN23-62053
- EN3-50470

Measurement

- Active and Reactive Energy
- Import and Export Energy
- Absolute and Algebra Active Energy

LCD Display

- Large display with 10x5mm size and eight digits
- OBIS code and functional icon, easy to read
- Up to 8 digits number (0+1,8+2,7+6)
- Wide viewing angle
- Highlighting Backlight

Multi TOU Tariff

- Up to 4 TOU tariffs
- Up to 8 switch-time tables and 8 day-tables
- Up to 12 week-tables and 12 season- tables
- Up to 50 holiday-tables

Prepayment

- STS, CTS and STS6
- Prepaid and Post-paid switchover
- Local and remote charge
- LED and Buzzer for low credit alarm
- Emergency credit and friendly mode

Load control

- Multi control mode
- Local and remote load control
- Disconnection scheme can be configurable
- Relay status indicator
- Relay malfunction self-check

Load Profile

- Up to 2 Megabytes of Non-volatile memory
- Up to 3 channels profiles
- Up to total 100 days records
- Capture period and members can be configurable

Communication

- Up to 4 independent communication ports
- Optical Port for local communication
- MC171 Port for the data recovery maintenance
- Plug and play modem for remote communication: GPRS/3G/4G/Ethernet/NB-IoT/PLC/RF/Lora (Optional)
- HAN modem for home area network communication wireless RF

■ Additional Functionalities

Event

- Up to 100 standard event records with occurred date and time: low battery, clock sync, clock malfunction, NV memory malfunction, watchdog reset, meter malfunction, MD reset, high temperature, firmware upgrade etc.
- Up to 225 tamper event records with occurred date and time: meter cover open, terminal cover open, module cover open, strong magnetic interference, unauthorized login, parameter configuration etc.
- Up to 100 control event records with occurred date and time: disconnect the breaker, connect the breaker, breaker control failure etc.
- Up to 225 power grid event records with occurred date and time: power on, power off, under voltage, over voltage, over current, overload, current polarity reversal, current bypass, low power factor, neutral disturbance etc.

- Up to 50 charge event records with occurred date and time: charging value, charging TOKEN etc.
- Up to 50 management TOKEN event records with occurred date and time: Management TOKEN type, management TOKEN etc.

Anti Tamper

- Up to 3 sealing positions
- Terminal cover, meter cover and module cover sealing
- Self-protection under Overload control, Abnormal voltage control, Arrearage control, Tamper control,
- Malfunction control, Fire disaster control etc.

Alarm

- Alarms with LED/Buzzer and LCD on CIU
- Alarm can be configurable

Tariff Expense (Optional)

- Up to 10 steps tariff
- Up to 5 steps Monthly service charge
- Up to 5 kinds subsidy
- Up to 3 kinds fixed charge
- Up to 5 kinds levies charge
- Up to 3 kinds VAT charge

Communication Protocol

- International open protocol
- IEC21-62056 E mode DLMS
- HDLC DLMS and TCP/IP DLMS
- STS/CTS TOKEN and SMS

Billing Record

- Up to 12-month billing data
- Calculate monthly net consumption of energy
- Up to 31 days daily data
- Calculate daily net consumption of energy

Firmware Upgrade

- Firmware upgrade
- Fast and stable solution

Rated Nominal Voltage

- 220V~240V

Operating Voltage Range

- 60 %Un~130 %Un

Rated Current & Starting Current

- (100)5A,(80)5A, (60)5A and 0.4 %Ib

Rated Frequency

- 50Hz $\pm 5\%$

Pulse Constant (Configurable)

- 1000imp/kWh | 1000imp/kvarh (Default)
- 1000imp/kvarh (Default)

Accuracy Class

- Cl.1 for Active | Cl.2 for Reactive

Power Consumption

- Voltage circuit $< 1W$ or 5VA, Current circuit $< 0.2VA$

Battery and Life

- Replaceable Lithium battery, life more than 15 years

Normal Operation Range

- $-25^{\circ}C$ to $+70^{\circ}C$, Humidity is up to 95 %

Limit Operation Range

- $-40^{\circ}C$ to $+70^{\circ}C$ Humidity is up to 95 %

EMC Performance

- Impulse voltage $> 8kV$, AC voltage $> 4kV$, Short circuit
- Current $> 3kA$, Electrostatic Discharge contact: 8kV & air: 15kV

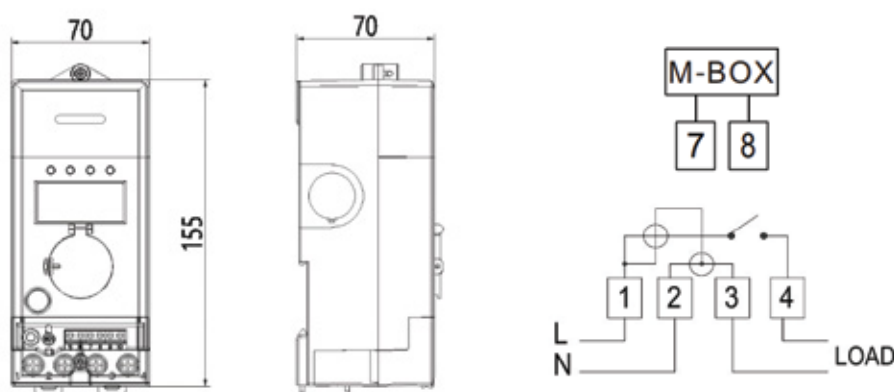
Protection Class

- IP54 comply with IEC60529
- Insulation grade II15kV

Housing Material

- Polycarbonate with non-conductive, high impact, smooth finish, durable, non-flammable, UV stabilized, UV resistant and high resistance to weathering

Diagram





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