MAGNO 13

Single Phase DIN-Rail Smart Energy Meter

Magno 13 is a single-phase DIN-Rail meter designed for commercial and industrial energy management, supporting both prepaid (**STS/CTS** compliant) and postpaid modes. Equipped with an 80A or 100A UC3-compliant relay, it operates wirelessly with the **Magno CIU** as a split meter or with the **Magno Collector**. Utilizing the **DLMS/COSEM** protocol, it ensures seamless integration, making it ideal for reliable and standardized electricity metering.

DLMS READY | IDIS | STS ASSOCIATION | G3-PLC Alliance

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Main Functionalities:

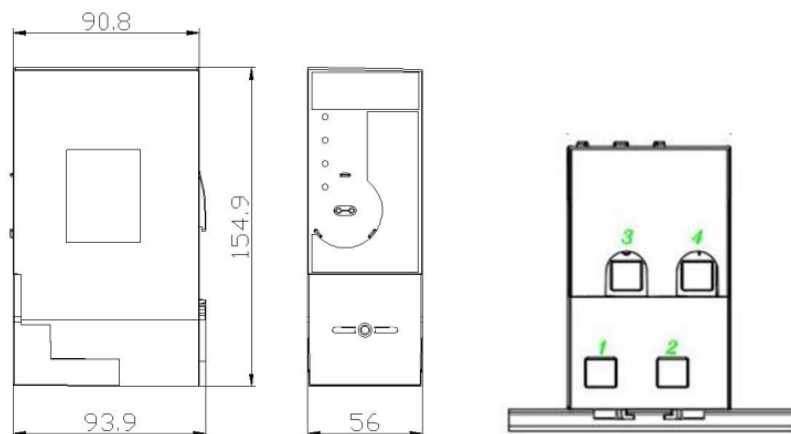|	
Standards & Compliance	- IEC 62052-11, 21, 31 - IEC 62053-23, 24 - IEC 62059-31-1 - IEC 62059-32-1 - EN62053-23 - EN50470-3
Measurement	1 elements 4 quadrants - Import/Export Absolute/Q1/Q2/Q3/Q4: Wh, varh and Vah - Power (per phase / total): W, var, VA - Vrms, lrms - Power factor, frequency - V-I Phase angle - Absolute value |Ai|=|+A|+|-A| |Ae|=|-A|
Multi TOU Tariff	- Up to 8 tariff - Multiple Seasons, Days, Weeks, Special Days - Up to 12 separate import and export registers - Up to 12 seasons - At least 12 periods
Prepayment	- Configurable prepayment and post-payment mode - Three levels for remaining credit alarm - Emergency credit, friendly time and friendly days support
Load control	- Remote control command support - Over current control support - Power limit support 2 poles internal relay (for 80A meter) 1 poles internal relay (for 100A meter) - Re-connect/Dis-connect by locally or remotely
Load Profile	- Multiple channels and Load Curves 24hrs daily survey - Intervals programmable from 1 to 60 minutes - Storage 8 channels (15 min) for a year
Communication Ports	- WAN: PLC or RF, in case of cellular, use external modem via RS485 - HAN: RF module - Communicate with UIU (User Interface Unit) - Optical: Comply with IEC62056-21 standard, DLMS(IEC62056-21 mode E) - Additional: RS485, VTC interface
Input/Output Ports (Optional)	- Dual Resource Signal (Tariff change) - Meter enclosure detection

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Event	▪ Fraud detection log (Meter cover & terminal cover open detect with and without power, module cover open detect, current reverse, magnetic detect, neutral current mismatch etc.) ▪ Failure detection log (Memory error, relay error, battery low voltage, clock invalid etc.) ▪ Power quality event log (Under voltage / Over voltage(Sag/Swell) ,Over current/current imbalance, Power up/down, etc.) ▪ Security event log (Parameters change, clock adjust, etc.) ▪ Standard event log (Power up/on, time synchronization, etc.)
Anti Tamper	▪ 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 ▪ IEC62056-21 E mode DLMS ▪ HDLC DLMS and TCPIP DLMS, Support suite 0 and suite 1 ▪ STS/CTS Token and SMS ▪ LLS support 3 level passwords for local and remote communication ▪ HLS support auth and encryption for local and remote communication ▪ IDIS Compliant
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	▪ The firmware can be upgraded via local interface and WAN interface. ▪ Schedule activity image support
CIU unit	▪ The meter can communicate with the CIU via RF or PLC ▪ Parameters transfer ▪ Credit token, Key change token, clear balance token, clear tamper token, set power limit token, test token etc. ▪ Fully complies with STS standard

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Technical Specification:

Rated Nominal Voltage	220V~240V
Operating Voltage Range	40%Un~130% Un
Rated Current & Starting Current	5(100)A, 5(80)A and 0.4% Ib
Rated Frequency	50Hz ±5%
Pulse Constant (Configurable)	1000imp/kWh 1000imp/kvarh (Default)
Accuracy Class	Cl.1 for Active Cl.2 for Reactive
Power Consumption	Voltage circuit ≤2 W or 5VA, Current circuit ≤0.5VA
Battery and Life	▪ Replaceable Lithium battery, life more than 15 years ▪ Supercap (Optional) – 5 yr lifetime with power off
Normal Operation Range Limit Operation Range	-25℃ to +70℃, Humidity is up to 95% -40℃ to +80℃ Humidity is up to 95%
EMC Performance	Impulse voltage > 10kV, AC voltage > 4kV, Short circuit current > 3kA, Electrostatic Discharge contact: 8kV & air: 15kV
Protection Class	IP54 comply with IEC60529 Insulation grade II
Housing Material	Polycarbonate with non-conductive, high impact, smooth finish, durable, non-flammable, UV stabilized, UV resistant and high resistance to weathering

Diagram: