

MAGNO 12m

Modular Single Phase DIN
Rail Smart Energy Meter



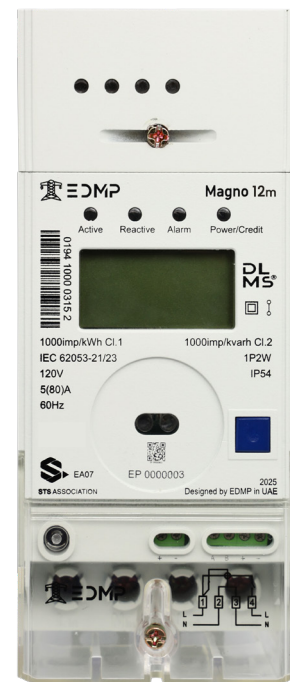
Powering the Future with
Precision and Control

Magno 12m is a modular single-phase DIN-Rail energy meter with LCD designed for advanced commercial and industrial applications. It supports both prepaid (**STS/CTS**) and postpaid metering modes. The meter is equipped with an 80A or 100A UC3-compliant relay and offers flexible communication options including **G3-PLC**, **RF Wi-SUN**, **Hybrid**, and **Cellular**.

It can function as a split meter with the **MeterLink CIU** or integrate seamlessly into centralized systems via the **Magno Collector** or **TeleMag**. Utilizing the **DLMS/COSEM** protocol, **Magno 12m** ensures secure, interoperable, and future-ready energy metering.



ELECTRICITY



DL
MS®

The logo for the STS Association, featuring a stylized 'S' made of two overlapping shapes.
STS ASSOCIATION

G3-PLC
Alliance



Main Functionalities

Standards & Compliance	<ul style="list-style-type: none"> • IEC 62052-11, 21, 31 • IEC 62053-23, 24 • IEC 62059-31-1 • IEC 62059-32-1 • EN62053-23 • EN50470-3
Measurement	<ul style="list-style-type: none"> • 1 elements 4 quadrants • Import/Export Absolute/Q1/Q2/Q3/Q4: Wh, varh and Vah • Power (per phase / total): W, var, VA • Vrms, Irms • Power factor, frequency • V-I Phase angle • Absolute value $Ai = +A + -A$ $Ae = -A$
Multi TOU Tariff	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Configurable prepayment and post-payment mode • Three levels for remaining credit alarm • Emergency credit, friendly time and friendly days support
Load control	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 – Wide Area Network (WAN)	<ul style="list-style-type: none"> • G3-PLC • RF WiSUN • G3 Hybrid (PLC and WiSUN) • Cellular (CAT1, 4G, 3G, 2G)
Communication Ports – Others	<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • Dual Resource Signal (Tariff change) • Meter enclosure detection

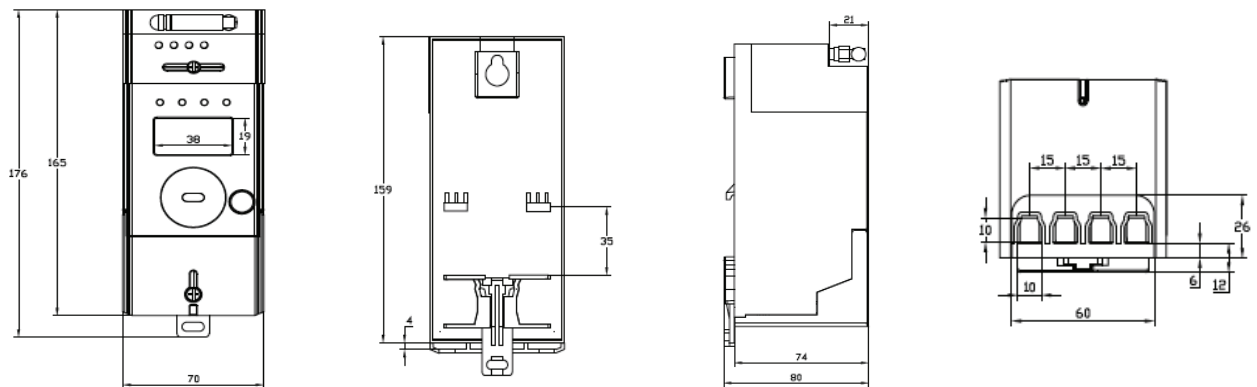
Additional Functionalities:

Event	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Alarms with LED/Buzzer and LCD on CIU • Alarm can be configurable 	
Tariff Expense (Optional)	<ul style="list-style-type: none"> • Up to 10 steps tariff • Up to 5 steps Monthly service charge • Up to 5 kinds subsidy 	<ul style="list-style-type: none"> • Up to 3 kinds fixed charge • Up to 5 kinds levies charge • Up to 3 kinds VAT charge
Communication Protocol	<ul style="list-style-type: none"> • International open protocol • IEC62056-21 E mode DLMS • HDLC DLMS and TCP/IP 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 	
Billing Record	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • The firmware can be upgraded via local interface and WAN interface. • Schedule activity image support 	
LCD	<ul style="list-style-type: none"> • 8 segment liquid crystal display • Backlight (Optional) • 8 digits • 4 enunciators 	
CIU unit	<ul style="list-style-type: none"> • 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 	

Technical Specification:

Rated Nominal Voltage	220V~240V, 110V~120V
Operating Voltage Range	40%Un~130% Un (When Un = 220V – 240V) 80%Un~130% Un (When Un = 110V – 120V)
Rated Current & Starting Current	5(100)A, 5(80)A, 5(60)A and 0.4% Ib
Rated Frequency	50Hz or 60Hz ±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	-25°C to +70°C, Humidity is up to 95%
Limit Operation Range	-40°C to +80°C Humidity is up to 95%
EMC Performance	Impulse voltage > 6kV, 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
Dimensions	L70 x W 80 x H170 For Wisun L70 x W 90 x H170

Diagram



EDMP

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