

MAGNO 30

HIGH-ACCURACY ANSI METERING FOR
SMART GRID APPLICATIONS



**Powering the Future
with Precision and Control**

The **Magno 30** is a cutting-edge smart electricity meter designed on **ANSI Standards** for residential and industrial energy management, providing a flexible solution for AMI initiatives. It offers a comprehensive set of features, including **power grid monitoring**, **load control**, **tamper detection**, and vending functions, making it an ideal solution for residential and industrial applications. The **Magno 30** enhances utility operations by providing real-time insights into energy usage, allowing for more effective **energy management**. It is equipped with **advanced anti-tamper capabilities** that protect against fraud and minimize line losses, which in turn boosts utility revenues and improves overall grid integrity. Fully compliant to **DLMS/COSEM** and **ANSI C12.18, C12.19**.

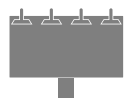


ELECTRICITY

HIGH ACCURACY ANSI SMART ENERGY METER



MULTI
COMMUNICATION



LARGE
LCD DISPLAY



HIGH
SECURITY



RELAY
CONTROL

■ Main Functionalities

Measurement

- Import/Export Active Energy, Reactive Energy
- Q1/Q2/Q3/Q4 for Reactive Energy
- High accuracy per ANSI Class 0.2 / 0.5

Instantaneous Value

- Real-time voltage, current, and power factor.
- Active, reactive, and apparent power monitoring.
- Detect abnormal load behavior.

Billing

- Total and tier registers for energy and demand.
- ANSI C12.19 billing tables supported.
- Remote, local, and scheduled billing.

Time of Use

- Up to 4 tariffs and 4 seasons programmable.
- Holiday, weekend, and weekday schedules supported.
- Daylight Saving Time adjustment available

Load control

- Relay disconnect/reconnect for over/under-voltage and overload.
- Remote tamper-based disconnection.
- Supports reconnection via system command.

Load Profile.

- Configurable intervals (5, 15, 30, 60 min).
- Stores energy and instrumentation profiles.
- Multiple channels supported with extended memory.

Self-Read

- Up to 40 blocks of stored self-read data.
- Scheduled, remote, or local initiation
- Ensures data retention during outages.

Demand

- Block or rolling demand measurement.
- Programmable demand window intervals.
- Supports local, remote, and scheduled reset.

Communication.

- According to ANSI C12.18, C12.19
- Cellular: GPRS, 3G, 4G
- RF: Wi-SUN.
- Transparent DLMS/ANSI data exchange.
- Remote Communication with GridLynk HES system.

Ports

- Optical port (ANSI C12.18 Type 2).
- Sealed and software-blocked options.
- Optional eSIM.
- Remote communication modules embedded.

Protocol

- IPv4 and/or IPv6
- DHCP
- TCP, UDP
- ANSI C12.21 / 12.22

Firmware Upgrade

- Over-the-Air (OTA) upgrades supported.
- Local upgrade with rollback option.
- Broken-download recovery and scheduling.

■ Additional Functionalities

Events

- Up to 300 items logs, with up to 80 different event types
 - Standard Event log
 - Fraud Detection log
 - Disconnect Control log
 - Power Quality Event log
 - Communication log
 - Security event log

Detection & Alarm

- Tamper detection and alarm
- Meter and Terminal cover detection alarm
- Power quality, reverse current detection and alarm

Display

- Configurable Auto Cycling Display (Obis Codes or Text)
- Energy and instantaneous power are displayed on LCD
- Three display modes:
 - Normal: Display energy and instantaneous power
 - Test: Display data for testing purposes
 - Alternate: Display all measurement items

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 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

- Up to 13-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

■ Technical Specification

Rated Nominal Voltage

- 120V~240V / 120V~480V interface.

Operating Voltage Range

- 80%Un~120% Un

Basic Current

- 2.5A, 15A, 30A

Maximum Current

- up to 200A (without Relay), or 100A (with Relay)

Starting Current

- 10mA for Class 20
- 50mA for Class 100
- 100mA for Class 200

Accuracy

- ANSI Class 0.2, 0.5 for active/reactive energy

Rated Frequency

- 50Hz or 60Hz $\pm 5\%$

Pulse Constant (Configurable)

- Multiple Options: 3.6, 7.2, 14.4, 21.6 Wh/Pulse)

Power Consumption

- Voltage circuit ≤ 5 W, Apparent ≤ 20 VA, Current circuit ≤ 1 VA

Lifetime

- ≥ 10 years

Normal Operation Range

- -25°C to $+65^{\circ}\text{C}$, Humidity is up to 95%

Limit Operation Range

- -40°C to $+85^{\circ}\text{C}$, Humidity is up to 95%

EMC Performance

- Electrostatic Discharge >8 kV contact, 15kV air
- Fast transient burst >4 kV
- Surge Withstand 6-8kV
- RF Immunity 10V/m at load, 30V/m without current.

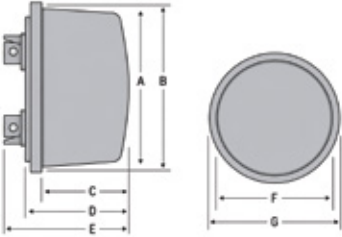
Protection Class

- IP54 compliant with UL50-Type3

Meter Forms

Form	Voltage Range / Wiring Type	Meter Phase Type	Accuracy Class	Test Current (A)	Max Current (A)	Energy Constant (Kh)
1S	240/120V, 2-wire, 1 element	SP	0.5	30/15	200	3.6
2S	240/120V, 3-wire, 1 element	SP	0.5	30/15	200	7.2
9S	480-120V, 4-wire, 3 element	TP	0.2	2.5	20	1.8
12S	240/120V, 3-wire, 2 element	SP	0.5	30/15	200	14.4
16S	480-120V, 4-wire, 3 element	TP	0.2	30/15	200	21.6

Diagram

	A	B	C	D	E	F	G
	6.29	6.95	3.93	4.93	5.93	6.29	6.95
	16	17.7	10	12.54	15.08	16	17.7

EDMP GROUP

71-75 Shelton Street, Covent Garden, London, WC2H 9JQ, United Kingdom

EDMP JAFZA

PO Box 125428, Plot No. MO0147C, Junction of N400 & N406 Streets Jebel Ali Free Zone, Dubai, United Arab Emirates
info@edmpgroup.com www.edmpgroup.com