

MAGNO 30

High-Accuracy ANSI Metering for Smart Grid Applications



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**.



Multi-Communication



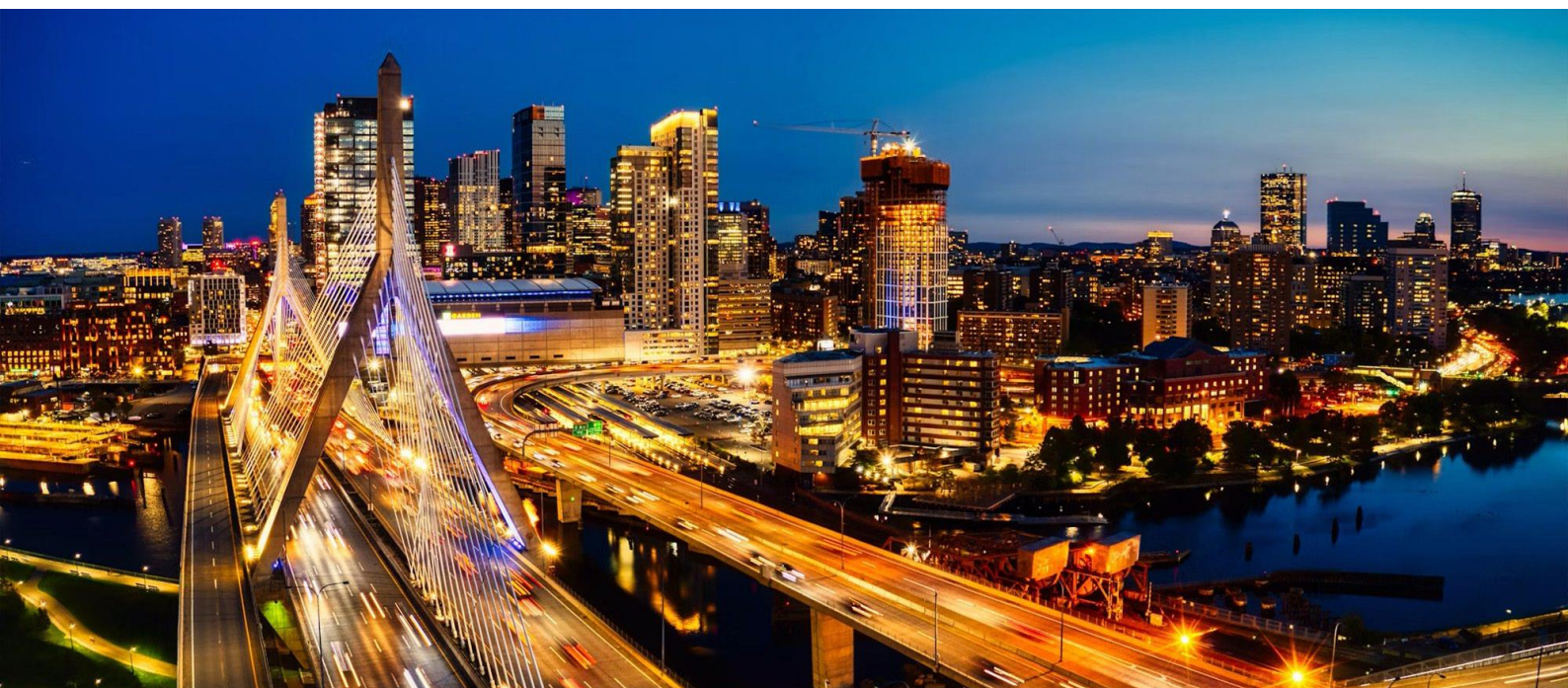
Large LCD Display



High Security



Relay Control



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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.

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Additional Functionalities:

Event	- Up to 300 items logs, with up to 80 different event types - Standard Event log, - Fraud Detection log, - Disconnecter 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

Technical Specification:

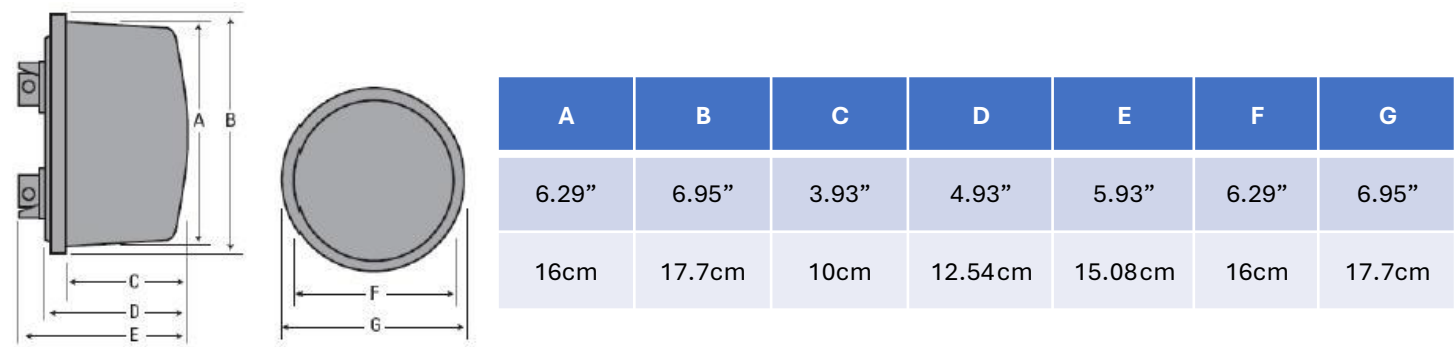
Rated Nominal Voltage	120V~240V / 120V~480V
Operating Voltage Range	80%Un~120% Un
Basic Current	2.5A, 15A, 30A
Maximum Current	up to 200A (without Relay), or 100A (with Relay)
Starting Current	10mA for Class 20 50mA for Class 100 100mA for Class 200
Accuracy	ANSI Class 0.2, 0.5 for active/reactive energy
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 ≤ 20VA, Current circuit ≤ 1 VA
Lifetime	≥ 10 years
Normal Operation Range	-25°C to +65°C, Humidity is up to 95%
Limit Operation Range	-40°C to +85°C Humidity is up to 95%
EMC Performance	- Electrostatic Discharge >8kV contact, 15kV air - Fast transient burst > 4kV - Surge Withstand 6-8kV - RF Immunity 10V/m at load, 30V/m without current.
Protection Class	IP54 compliant with UL50-Type3

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Meter Forms

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

Diagram:



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