

MAGNO 33+

For Residential and Commercial Use

Dual Source Three Phase Direct Current Smart Energy Meter



The **Magno 33+** is a three-phase **dual-source** meter designed for residential and commercial use. It features integrated 100A UC3-compliant relays for remote disconnection and reconnection of electrical services. This meter allows measurement of power consumption from multiple sources with flexible payment modes, including **dual-wallet** functionality for prepayment systems. Compliant with **STS/CTS** standards and utilizing the **DLMS/COSEM** protocol, the **Magno 33+** ensures seamless integration and reliable operation across diverse applications.



DLMS COMPLIANT



IDIS CERTIFIED



STS/CTS COMPLIANT



DUAL WALLET



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Main Functionalities:

Standards & Compliance	<ul style="list-style-type: none">IEC 62052-11, 21, 31IEC 62053-23, 24IEC 62059-31-1IEC 62059-32-1EN62053-23EN50470-3
Measurement	<ul style="list-style-type: none">3 elements 4 quadrantsImport/Export Absolute/Q1/Q2/Q3/Q4: Wh, varh and VAhPower (per phase / total): W, var, VAVrms, IrmsPower factor, frequencyV-V and V-I phase anglesVoltage THD, Current THDHarmonics up to 50th
Multi TOU Tariff	<ul style="list-style-type: none">Up to 8 tariffUp to 200 programmable special days Daily, Weekly, Monthly, Yearly & SpecialUp to 32 separate import and export registersUp to 12 seasonsUp to 100 Previous period plus Period totals
Prepayment	<ul style="list-style-type: none">Configurable prepayment and post-payment modeThree levels for remaining credit alarmEmergency credit, friendly time and friendly days supportDual walletMeter Keypad (Optional)
Load control	<ul style="list-style-type: none">Remote control command supportOver current control supportPower limit support3 poles internal relayRe-connect/Dis-connect by locally or remotely
Load Profile	<ul style="list-style-type: none">At least 50 channelsSupport 3 independent surveys24hrs daily surveyIntervals programmable from 1 to 60 minutesStorage 8 channels (15 min) for a year
Communication Ports	<ul style="list-style-type: none">WAN: Plug and play module to support various communication technologyWAN: G3-PLC, WiSUN, LoRaWAN, Cellular (GPRS, 3G, 4G/LTE, NB-IoT), or EthernetRF or PLC module – For communication with CIU (Customer Interface Unit)Optical: Comply with IEC 62056-21 standard, DLMS(IEC 62056-21 mode E)Additional: RS485 (2 wire), VTC interface
Input/Output Ports	<ul style="list-style-type: none">Pulse OutputDual Source Signal (Tariff change)Meter enclosure opening/tamper detection (Active input)External Relay output

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Additional Functionalities:

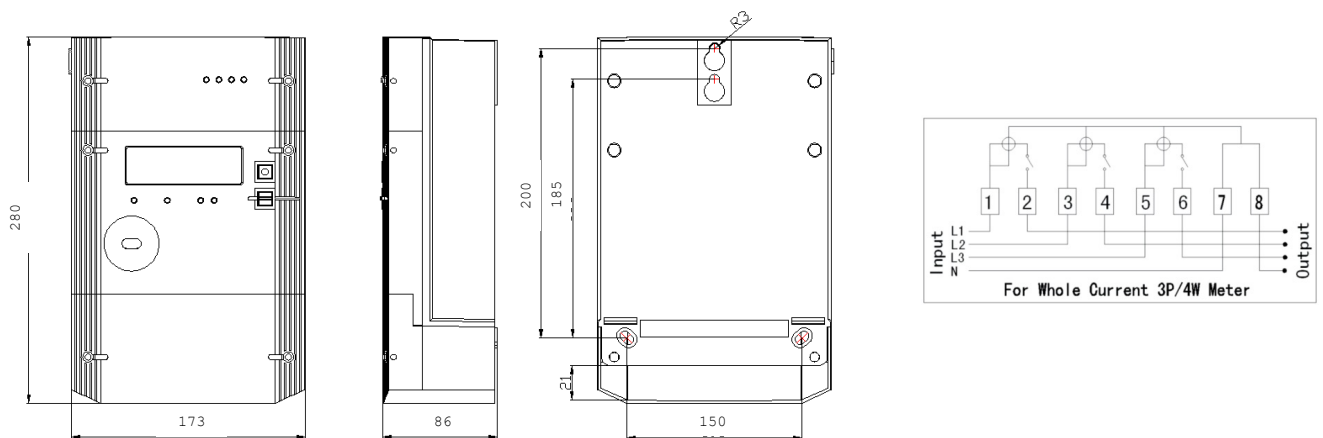
Event	<ul style="list-style-type: none">▪ Fraud detection log (Meter cover & terminal cover open detect with and without power, module cover open detect, current reverse, magnetic detect, neutral current mismatch etc.)▪ Failure detection log (Memory error, relay error, battery low voltage, clock invalid 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">▪ More than 4 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	<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▪ 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▪ IDIS Compliant
Billing Record	<ul style="list-style-type: none">▪ 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	<ul style="list-style-type: none">▪ The firmware can be upgraded via local interface and WAN interface.▪ Schedule activity image support
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

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Technical Specification:

Rated Nominal Voltage	3x 120/208V~277/480V
Operating Voltage Range	80%Un~120%Un
Rated Current & Starting Current	5(100)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 ≤0.5 VA
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 +60°C, Humidity is up to 95%
Limit Operation Range	-40°C to +70°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 compliant with IEC 60529 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:



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