

— SINGLE-PHASE BS SMART ENERGY METER

Magno 22



The Magno 22 is an advanced single-phase smart meter for residential and commercial applications, combining high-accuracy energy measurement with flexible billing, load management and revenue protection. It supports prepaid and postpaid operation, dual-wallet functionality, remote disconnect/reconnect and multiple communication options including G3-PLC, Wi-SUN, cellular and Ethernet.

- Single-phase
- 5(100)A
- Class 0.5S accuracy
- STS/CTS
- Dual wallet
- Remote load control
- Neutral-current monitoring
- DLMS communications
- MID

Technical specification

/ ELECTRICAL CHARACTERISTICS

Rated nominal voltage	220 V – 240 V · 110 V – 120 V
Operating voltage range	50–120% Un (Un 220–240 V) · 80–120% Un (Un 110–120 V)
Rated & starting current	5(100) A · 5(80) A · starting current 0.4% Ib
Rated frequency	50 Hz or 60 Hz ±5%
Accuracy class	Class 0.5S for active energy · Class 1 for reactive energy
Pulse constant (configurable)	1000 imp/kWh · 1000 imp/kvarh (default)
Power consumption	Voltage circuit ≤2 W or 5 VA · current circuit ≤0.5 VA

/ MEASUREMENT & DATA

Measurement	4-quadrant import/export – Wh, varh, VAh (absolute / Q1–Q4) · Vrms, Irms · power factor, frequency · V–I phase angle · neutral-current measurement
Multi-TOU tariff	Up to 8 tariffs · 200 programmable special days (daily/weekly/monthly/yearly & special) · up to 8 import/export registers · 12 seasons · 24 periods
Load profile	Up to 60 channels · 3 independent surveys · 24-hr daily survey · programmable 1–60 min intervals · 8 channels (15 min) stored for a year
Billing records	Up to 13-month billing data and 31-day daily data, with monthly and daily net-consumption calculation
Event logs	Fraud detection (covers, current reverse, magnetic, neutral mismatch) · failure · power quality (sag/swell, over-current) · security & standard logs

/ PREPAYMENT & LOAD CONTROL

Prepayment	Configurable prepaid / postpaid · STS/CTS token & SMS vending · dual wallet · three-level credit alarm · emergency credit, friendly time & days · optional keypad
Load control	1-pole internal relay (100A) or 2-pole relay (80A) · over-current and power-limit control · disconnect / reconnect locally or remotely

/ COMMUNICATIONS & SECURITY

WAN	Plug-and-play module – G3-PLC, Wi-SUN, Cellular (GPRS, 3G, 4G/LTE, NB-IoT) or Ethernet
HAN / CIU & local ports	RF or PLC link to Customer Interface Unit (STS-compliant tokens) · optical port (IEC 62056-21 mode E, DLMS) · RS485 (2-wire), VTC interface
I/O ports (optional)	Pulse output · dual-source (tariff-change) signal · enclosure-opening / tamper input (active)
Protocols & firmware	HDLC DLMS and TCP/IP DLMS (suites 0 & 1) · IEC 62056-21 mode E · STS/CTS token & SMS · upgradeable via local & WAN
Security & anti-tamper	LLS with 3-level passwords · HLS authentication and encryption · more than 4 sealing points across terminal, meter & module covers · self-protection controls

/ MECHANICAL & ENVIRONMENTAL

Operating temperature	Normal –25 to +60 °C · limit –40 to +70 °C · humidity up to 95%
EMC performance	Impulse voltage >6 kV · AC voltage >4 kV · short-circuit current >3 kA · ESD 8 kV contact / 15 kV air
Protection & battery	IP54 compliant with IEC 60529 · insulation grade II · replaceable lithium battery, life >15 years · optional supercap (5 yr)
Housing & dimensions	Polycarbonate – non-conductive, high-impact, smooth-finish, durable, non-flammable and UV-stabilised

/ STANDARDS & COMPLIANCE

Standards	IEC 62052-11 / -21 / -31 · IEC 62053-23 / -24 · IEC 62059-31-1 / -32-1 · EN 62053-23 · EN 50470-3 · MID 2014/32/UE
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