

MAGNO 31

ADVANCE THREE PHASE
STANDALONE ENERGY METER



Powering the Future
with Precision and Control

The **Magno 31** is a standalone energy meter designed to offer both efficiency and convenience for energy management. Its user-friendly interface and robust design make it ideal for large residential and commercial users.

Built with a focus on security and durability, the **Magno 31** features high-level data protection, optional **built-in battery** or **supercapacitor** for power resilience, and ultrasonic welding for a tamper-resistant enclosure.



ELECTRICITY

ADVANCE THREE PHASE STANDALONE ENERGY METER

■ Main Functionalities

Standards & Compliance

- IEC 62052-11
- IEC 62053-21
- IEC 62053-23
- IEC 62056-21
- IEC 62056-61

Connection Type

- 3 Phase, 4 Wire

Measurement

- KWH as principal unit of measurement
- Active and Reactive energy measurement
- Instantaneous VRMS, IRMA, Frequency
- Time of Use, Load Profile, Maximum Demand, Event Logs, etc.

Load Profile

- Data recorded for 60 days (15min intervals)
- Data recorded: KW, KVAR, KWH, Voltage, Current

Demand

- Demand cycle configurable, the default is 15 minutes

Tariff

- Up to 4 tariff rates
- Easy configuration
- Accumulated energy of different tariffs

Billing

- Billing data including energy and maximum demand
- Monthly settlement of max 12 months

Real Time Clock

- Clock accuracy (daily deviation): $\leq 0.5s/day$

Communication

- Optical Port
- Protocol: IEC62056-21 mode C
- Built in RF module (for meter data reading)

Security

- Communication is password protected

Protocol

- Open standard protocol: IEC62056-21

■ Additional Functionalities

Event Records

- Overvoltage, low voltage, power failure
- External magnetic tamper, Record 25 events
- Meter Cover Open, Record 25 events
- Terminal Cover Open, Record 25 events
- Current reverse, Record 25 events
- Phase Absence
- Reverse Current
- Password error detection
- Time Calibration
- Memory Error
- Demand reset

LCD

- Large digit LCD display for easy reading
- Display available during power on
- LCD Backlight
- Wide viewing angle

LED

- Phase Absence indication
- Reverse current indication

Memory

- Non-volatile memory which can support over 10 years

Battery

- Support power on display
- Support RTC clock

Terminals

- Two screws for fixing the terminal conductor
- The terminals are made of copper
- Connection cross-sectional area over 25mm²

Protection Class

- IP54 compliant with IEC60529
- Insulation grade II

Housing Material

- PC+10%GF material, Fire retardant, flame resistant,
- Anti-UV, thermal deformation engineering plastic, Transparent meter cover and terminal cover
- Option for ultrasonic welding

Design Life

- ≥ 10 years

Dimensions

- 195.5 x 160.6 x 57.5 mm

Weight

- 800g

■ Technical Specification

Rated Nominal Voltage

- 3x120V/208V
- 3x127/220 V (-20% to +20%)

Operating Voltage Range

- 80%Un~115% Un

Rated Current & Starting Current

- 5(100)A 0.4% Ib

Rated Frequency

- 50Hz, 60Hz $\pm 2\%$

Pulse Constant (Configurable)

- 3200imp/kWh, 3200imp/kvarh (Congurable)

Accuracy Class

- Cl.1 for Active, Cl.2 for Reactive

Power Consumption

- Voltage circuit ≤ 2 W or 10VA (for each phase)
Voltage circuit
- Current circuit ≤ 4 VA @Ib

Temperature Ranges

Normal Operation Range:

- -25°C to +55°C, Humidity is up to 95%

Limit Operation Range:

- -25°C to +60°C Humidity is up to 95%

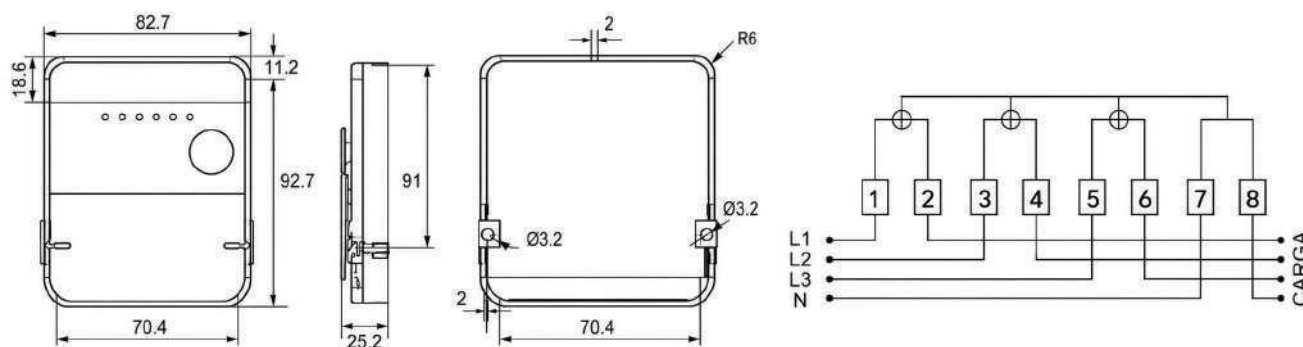
Limit range for Storage:

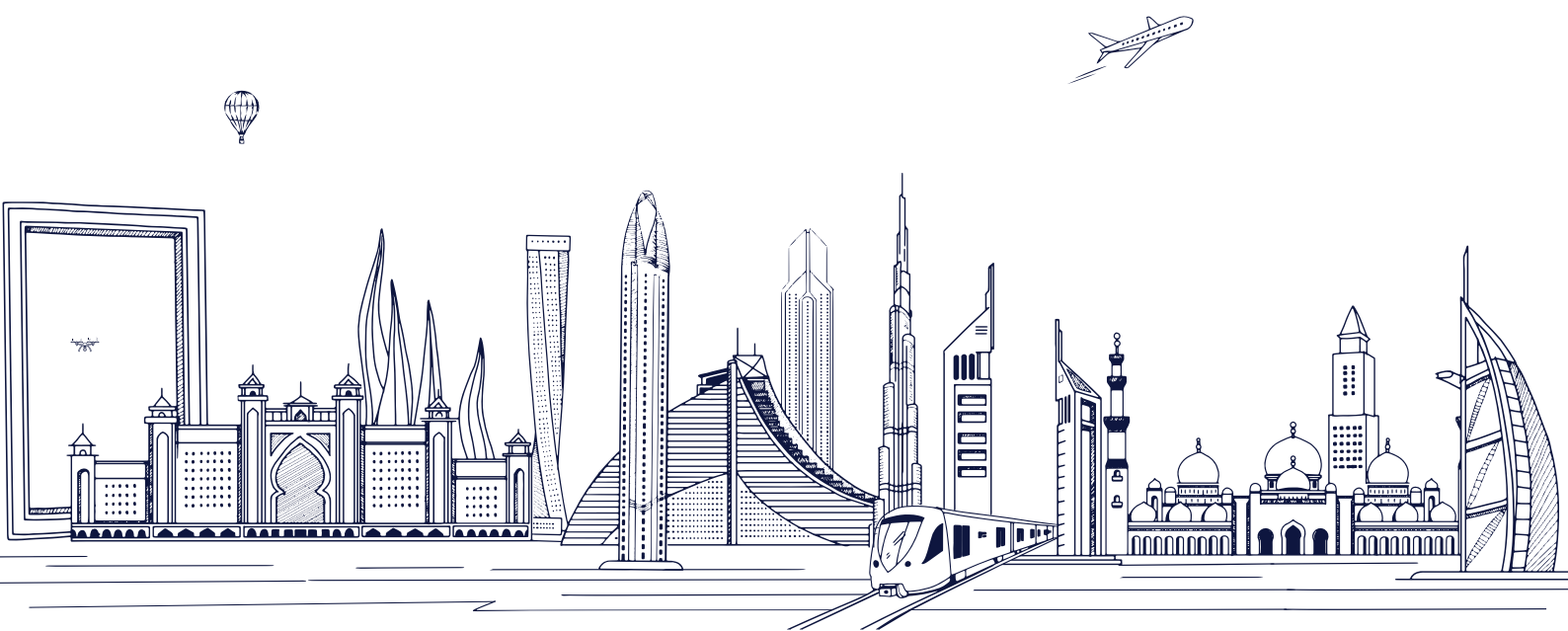
- -40°C to +70°C Humidity is up to 95%

EMC Performance

- Voltage > 6KV, AC Voltage > 4KV, Short circuit, Current > 3KA,
- Electrostatic Discharge contact: 8KV & air: 15KV, Immunity (IEC61000-2-2),
- High frequency electromagnetic eld immunity, (IEC61000-4-3)
- Electric fast transient pulse group immunity (IEC61000-4-4)
- Surge immunity (IEC61000-4-5); 6KV

■ Diagram





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