

MAGNO 33 CTVT

FOR COMMERCIAL AND INDUSTRIAL USE

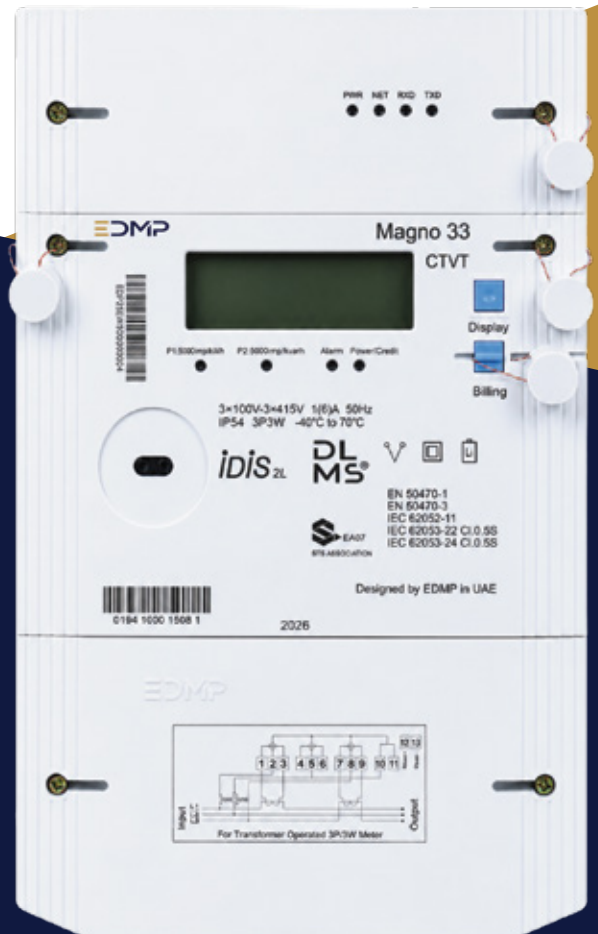


**Powering the Future
with Precision and Control**

The **Magno 33 CTVT** is a highly versatile three-phase smart meter designed specifically for commercial and industrial energy management, offering a flexible and scalable solution for your Advanced Metering Infrastructure (AMI) initiatives. This meter is engineered for large-scale applications where high accuracy, reliability, and real-time data are critical to efficient energy management.

The **Magno 33 CTVT** provides robust functionality, including enhanced energy measurement, power quality monitoring, load management, and automated reporting, ensuring that businesses can optimize energy consumption and improve operational efficiency. Furthermore, the **Magno 33 CTVT** offers the flexibility to work seamlessly in both prepaid and postpaid billing systems, providing utilities with adaptable solutions to meet diverse customer needs. Fully compliant with **STS**, **DLMS/COSEM** and **IDIS Standards**.

Built with a focus on exceptional accuracy, the **Magno 33 CTVT** integrates a high-grade measurement engine that delivers precise and reliable data, making it an invaluable tool for utilities.



ELECTRICITY

THREE PHASE CTVT SMART ENERGY METER

■ Main Functionalities

Standards & Compliance

- IEC62052-31, 21, 11
- IEC62053-24, 23
- IEC62059-1, 31
- IEC62059-1, 32
- EN62053-23
- EN50470-3

Measurement

- 3 elements 4 quadrants
- Import/Export Absolute/Q1/Q2/Q3/Q4:
Wh, varh and Vah
- Power (per phase / total): W, var, VA
- Vrms, Irms
- Power factor, frequency
- V-V and V-I phase angles
- Voltage THD, Current THD

Multi TOU Tariff

- Up to 8 tariff
- Up to 200 programmable special days Daily, Weekly, Monthly, Yearly & Special
- Up to 32 separate import and export registers
- Up to 12 seasons
- Up to 100 Previous period plus Period totals

Prepayment

- Configurable prepayment and post-payment mode
- Three levels for remaining credit alarm
- Emergency credit, friendly time and friendly days support
- Dual wallet

Auxiliary Power

- 100 to 240 VAC / 140 to 340 VDC

Load Profile

- At least 50 channels
- Support 3 independent surveys
- 24hrs daily survey
- Intervals programmable from 1 to 60 minutes
- Storage 8 channels (15 min) for a year

Communication Ports

- **WAN:** Plug and play module to support various communication technology
- **WAN:** G3-PLC, WiSUN, Cellular (GPRS, 3G, 4G/LTE, NB-IoT), or Ethernet
- **RF or PLC module** – For communication with CIU (Customer Interface Unit)
- **Optical:** Comply with IEC 21-62056 standard, DLMS (IEC 21-62056 mode E)
- **Additional:** 2x RS485 (with Power Supply), RS232 Port, VTC interface

Input/Output Ports (Optional)

- Pulse Output
- Dual Resource Signal (Tariff change)
- Meter enclosure opening/tamper detection (Active input)
- External Relay output
- Pulse Input

■ Additional Functionalities

Standards & Compliance

- 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

- 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

- Alarms with LED/Buzzer and LCD on CIU
- Alarm can be configurable

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
- IEC21-62056 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

- 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

- 3x 100/57.7V~480/277V

Operating Voltage Range

- 80%Un~120%Un

Rated Current & Starting Current

- (20)5A and 0.1 % Ib

Rated Frequency

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

Pulse Constant (Configurable)

- 1000imp/kWh
- 1000imp/kvarh (Default)

Accuracy Class

- Cl.0.5s for Active kWh
- Cl.0.1 for Reactive kvarh

Power Consumption

- Voltage circuit ≤ 2 W or 10VA, Current circuit ≤ 1 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 $+60^{\circ}\text{C}$, Humidity is up to 95%

Limit Operation Range

- -40°C to $+70^{\circ}\text{C}$ Humidity is up to 95%

EMC Performance

- Impulse voltage $> 6\text{KV}$, AC voltage $> 4\text{KV}$, Short circuit current $> 3\text{KA}$, Electrostatic Discharge contact: 8KV & air: 15KV

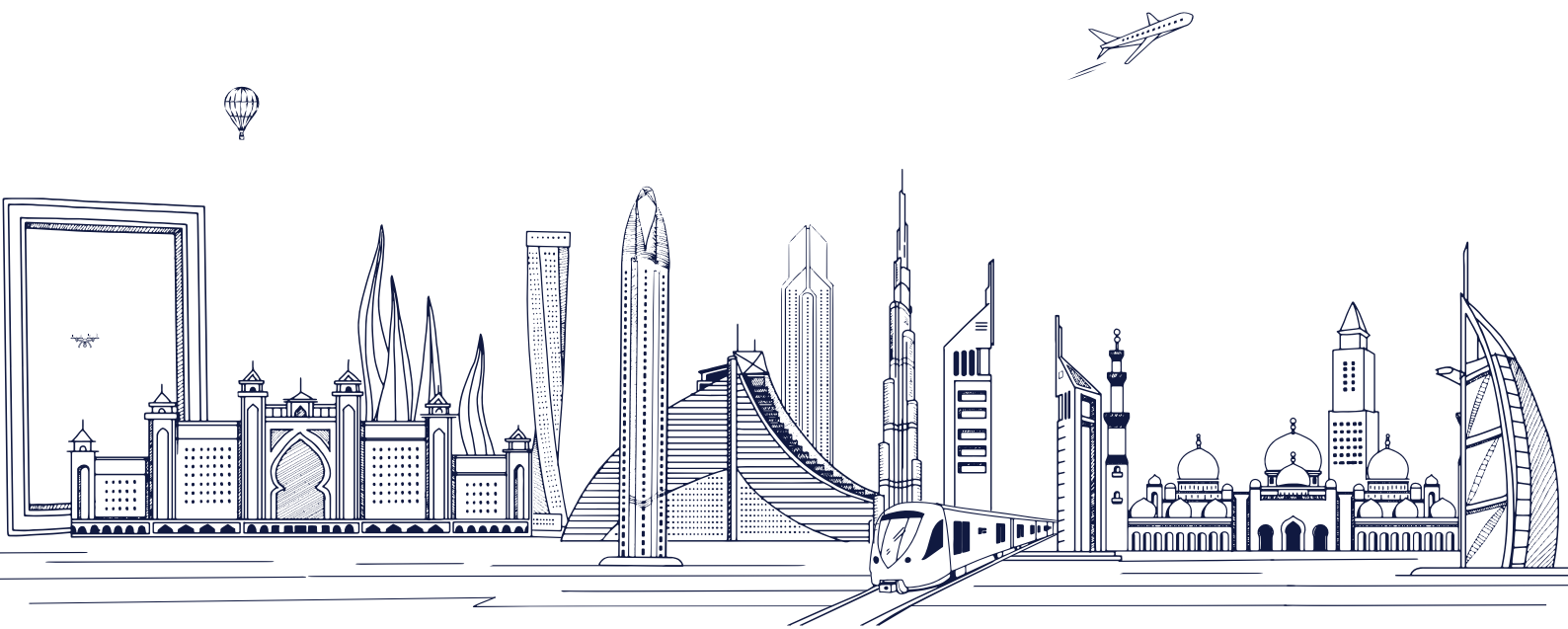
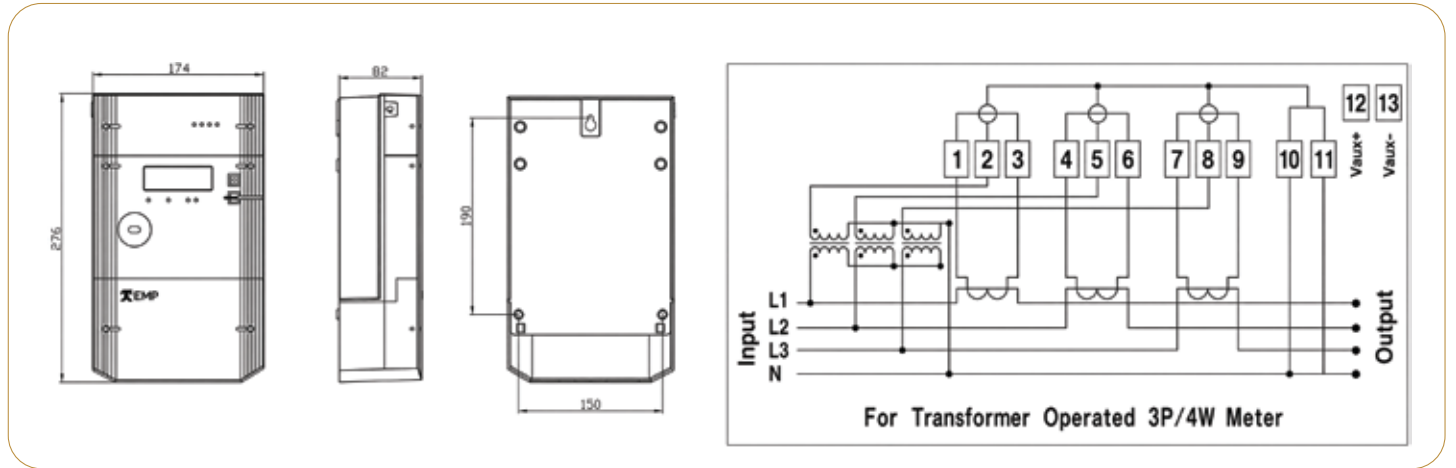
Protection Class

- IP54 comply with IEC60529
- 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



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