

Mk32H

ABACUS – Advanced Single Phase DIN-Rail Meter

Designed for residential use, **Mk32H** is a DIN Rail single phase meter with integrated **100A UC3** compliant relay. It is able to operate in either **STS** compliant prepaid mode or post-paid mode. **Mk32H** can operate with the CIU (Customer Interface Unit) – **HD18** wirelessly as a split meter as well as operate with gateway – **GW30** and the Head End System – **GridLynk** as a complete AMI system.



Main Functionalities

Standards & Compliance

- IEC 62052-11
- IEC 62053-21
- IEC 62053-23
- IEC 62054-41

Measurement

- 1 Phase 2 Wire
- Neutral Current Measurement (Optional)
- 1 element 4 quadrants
- Import/Export/Absolute Wh, varh and VAh
- Per quadrant: varh
- W, var, VA, Vrms, Irms
- Power factor, frequency

Multi TOU Tariff

- Up to 8 separate import and export registers
- Daily, weekly, monthly, yearly and special days
- Up to 48 previous billing periods plus billing totals
- Block maximum demand
- Time of maximum demand

Prepayment

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

Load control

- Over current control support
- Power & current limit support
- Internal disconnect relays (80A or 100A)
- Re-connect/Dis-connect by locally or remotely

Load Profile

- Up to 8 channels and 2 independent surveys
- Interval programmable from 1 to 60 minutes
- Energy, instantaneous readings channel sources
- Average/minimum/maximum values for interval duration

Communication Ports

- RF (260MHz – 930MHz) – Communicate with Gateway (GW30)
- RS485(2-wire)
- RF 433 MHz – Communicate with CIU (User Interface Unit)
- Optical Port: Comply with IEC62056-21standard

Security

- Multi-level security (username and password including encrypted log-in)
- Up to 10 independent security levels
- Up to 8 individual users

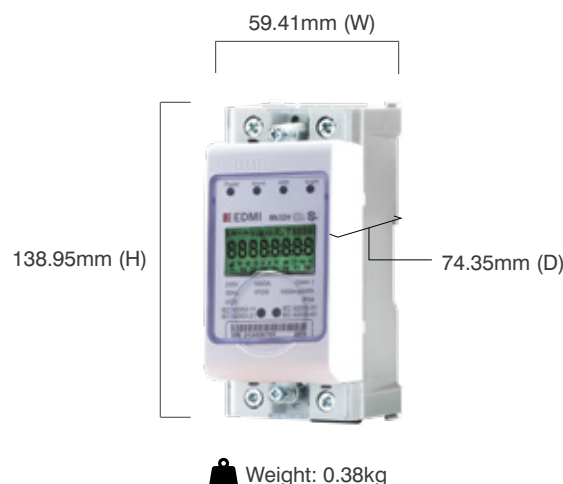
Additional Functionalities

Event	• 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	• 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 • 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	• Up to 12-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	220V – 240V
Operating Voltage Range	0.5Un to 1.2Un
Rated Current & Starting Current	5(100)A, 5(60)A
Rated Frequency	50Hz, 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 10VA, Current circuit ≤2.5VA
Battery and Life	Internal Lithium Battery (3.6V) Backup Time: 5 years without battery (lithium Battery)
Specified Operation Range Operating Range Limit	-25°C to +55°C, Humidity is up to 95% -40°C to +70°C Humidity is up to 95%
EMC Performance	Impulse voltage > 6kV
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



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