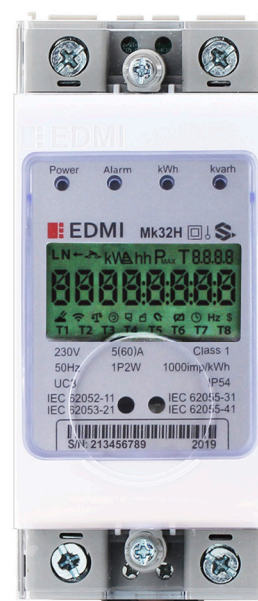


Mk32H

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 – MultiDrive 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

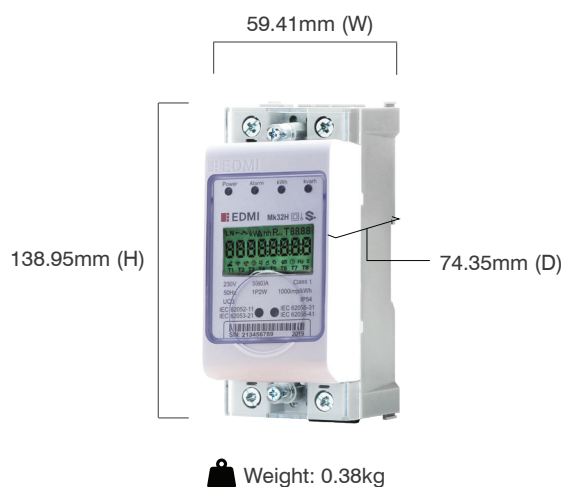
Additional Functionalities

Event	<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">• 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
Billing Record	<ul style="list-style-type: none">• 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	<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

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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