

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.



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Main Functionalities:

Standards & Compliance	<ul style="list-style-type: none">▪ IEC 62052-11▪ IEC 62053-21▪ IEC 62053-23▪ IEC 62054-41
Measurement	<ul style="list-style-type: none">▪ 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	<ul style="list-style-type: none">▪ 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	<ul style="list-style-type: none">▪ Configurable prepayment and post-payment mode▪ Three levels for remaining credit alarm▪ Emergency credit, friendly time and friendly days support▪ STS Compliant
Load control	<ul style="list-style-type: none">▪ Over current control support▪ Power & current limit support▪ Internal disconnect relays (80A or 100A)▪ Re-connect/Dis-connect by locally or remotely
Load Profile	<ul style="list-style-type: none">▪ 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	<ul style="list-style-type: none">▪ 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	<ul style="list-style-type: none">▪ Multi-level security (username and password including encrypted log-in)▪ Up to 10 independent security levels▪ Up to 8 individual users

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Additional Functionalities:

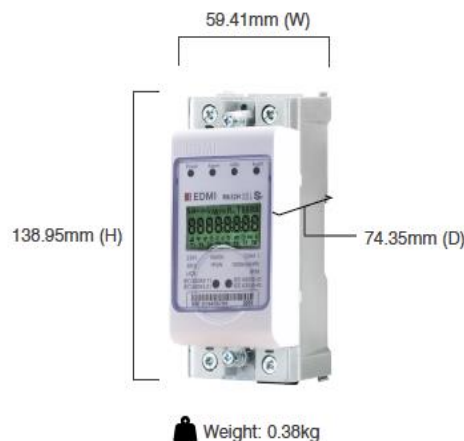
Event	<ul style="list-style-type: none">▪ Fraud detection log (Meter cover & terminal cover open detect with and without power, module cover open detect, current reverse, magnetic detect, neutral current mismatch etc.)▪ Failure detection log (Memory error, relay error, battery low voltage, clock invalid 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 TCPIP 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	<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

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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 $\pm 5\%$
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 ≤ 2.5 VA
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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