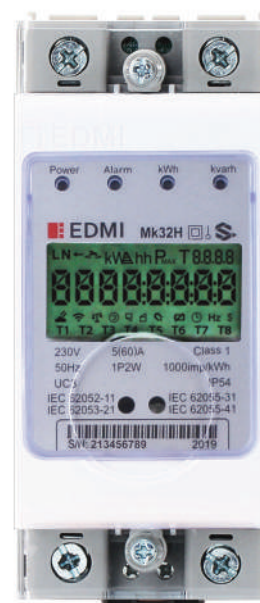


# Mk32H

## 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 IEC62056-21 standard

## Security

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

## Additional Functionalities

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Event</b>                     | <ul style="list-style-type: none"> <li>• Fraud detection log (Meter cover &amp; terminal cover open detect with and without power, module cover open detect, current reverse, magnetic detect, neutral current mismatch etc.)</li> <li>• Failure detection log (Memory error, relay error, battery low voltage, clock invalid etc.)</li> <li>• Power quality event log (Under voltage / Over voltage(Sag/Swell), Over current/current imbalance, Power up/down, etc.)</li> <li>• Security event log (Parameters change, clock adjust, etc.)</li> <li>• Standard event log (Power up/on, time synchronization, etc.)</li> </ul> |
| <b>Anti Tamper</b>               | <ul style="list-style-type: none"> <li>• Terminal cover, meter cover and module cover sealing</li> <li>• Self-protection under Overload control, Abnormal voltage control, Arrearage control, Tamper control, Malfunction control, Fire disaster control etc.</li> </ul>                                                                                                                                                                                                                                                                                                                                                       |
| <b>Alarm</b>                     | <ul style="list-style-type: none"> <li>• Alarms with LED/Buzzer and LCD on CIU</li> <li>• Alarm can be configurable</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Tariff Expense (Optional)</b> | <ul style="list-style-type: none"> <li>• Up to 10 steps tariff</li> <li>• Up to 5 steps Monthly service charge</li> <li>• Up to 5 kinds subsidy</li> <li>• Up to 3 kinds fixed charge</li> <li>• Up to 5 kinds levies charge</li> <li>• Up to 3 kinds VAT charge</li> </ul>                                                                                                                                                                                                                                                                                                                                                    |
| <b>Communication Protocol</b>    | <ul style="list-style-type: none"> <li>• International open protocol</li> <li>• IEC62056-21 E mode DLMS</li> <li>• HDLC DLMS and TCP/IP DLMS, Support suite 0 and suite 1</li> <li>• STS/CTS Token and SMS</li> <li>• LLS support 3 level passwords for local and remote communication</li> <li>• HLS support auth and encryption for local and remote communication</li> <li>• IDIS Compliant</li> </ul>                                                                                                                                                                                                                      |
| <b>Billing Record</b>            | <ul style="list-style-type: none"> <li>• Up to 12-month billing data</li> <li>• Calculate monthly net consumption of energy</li> <li>• Up to 31 days daily data</li> <li>• Calculate daily net consumption of energy</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Firmware Upgrade</b>          | <ul style="list-style-type: none"> <li>• The firmware can be upgraded via local interface and WAN interface.</li> <li>• Schedule activity image support</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>CIU unit</b>                  | <ul style="list-style-type: none"> <li>• The meter can communicate with the CIU via RF or PLC</li> <li>• Parameters transfer</li> <li>• Credit token, Key change token, clear balance token, clear tamper token, set power limit token, test token etc.</li> <li>• Fully complies with STS standard</li> </ul>                                                                                                                                                                                                                                                                                                                 |

# 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<br>1000imp/kvarh (Default)                                                                                                               |
| Accuracy Class                                     | Cl.1 for Active<br>Cl.2 for Reactive                                                                                                                 |
| Power Consumption                                  | Voltage circuit ≤2 W or 10VA, Current circuit ≤2.5VA                                                                                                 |
| Battery and Life                                   | Internal Lithium Battery (3.6V)<br>Backup Time: 5 years without battery (lithium Battery)                                                            |
| Specified Operation Range<br>Operating Range Limit | -25°C to +55°C, Humidity is up to 95%<br>-40°C to +70°C Humidity is up to 95%                                                                        |
| EMC Performance                                    | Impulse voltage > 6kV                                                                                                                                |
| Protection Class                                   | IP54 comply with IEC60529<br>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

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