

Mk7M

Class 1

Single Phase Smart Meter

Designed for residential use, the Mk7M is a single phase meter with integrated 100A UC3 compliant relays which allows disconnection and reconnection of electrical services remotely. It is able to operate in either STS compliant prepaid mode or post-paid mode. Flexible communication options are possible with modular pods design.



Key Features

AMI

AMI READY



DUAL DISCONNECT RELAY



STS COMPLIANT



MODULAR COMMUNICATIONS



NEUTRAL CURRENT MEASUREMENT



UPGRADEABLE



ANTI TAMPER

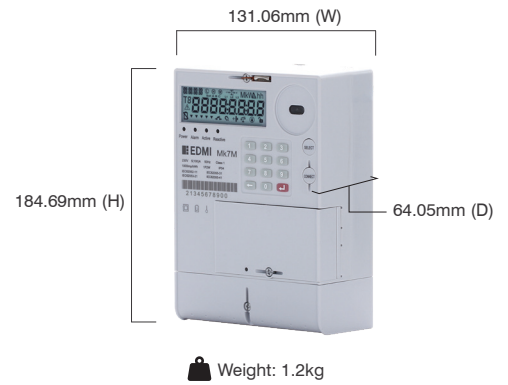


LARGE DATA STORAGE

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Class 1

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Standards and Compliance

- Class 1
- IEC 62052-11, 62053-21, 62053-23, 62055-31, 62055-41, 62055-51

Measurement

- 1 phase 2 wire (optional neutral current measurement)

Voltage

- Nominal voltage: 220V to 240V
- Operating range: 0.5Un to 1.2Un
- Impulse voltage: 6kV

Current

- WC range: 5/100A
- WC limit: 30 times I_{max} for 0.5 cycles
- Phase current measurement sensor: Shunt
- Neutral current measurement sensor: CT

Terminal

- Terminal cross-section: 70.85mm²

Power Consumption

- Voltage circuit: <10VA/phase, 2W @ V_n
- Current circuit: <2.5VA/phase @ I_n

Frequency

- 50Hz/60Hz

Inputs/Outputs Configuration

- Up to 4 x LED indicators
- Up to 2 x outputs

Relay

- Up to two internal disconnect relays (100A)

Battery

- Internal lithium battery (1200 mAh, 3.6V)
- Internal super capacitor
- Backup time: 5 years without power (lithium battery)
- Backup time: Up to 7 days without power (super capacitor)
- Option of external replaceable battery

Real-time Clock

- Precision clock accuracy: <5ppm (15 seconds per month) at 23°C

Data Memory

- 2MB of non-volatile memory

Display

- Eight-segment alphanumeric display with 8.5mm x 5mm digit size
- Display available without main power
- Option for backlight

Keypad

- Option of silicone keypad

Measured Values

- 1 element 4 quadrants
- Import/Export/Absolute Wh, varh and VAh
- Per quadrant Wh, varh and VAh
- Power: W, var, VA, Vrms, Irms
- Power factor, frequency

Load Survey/Profile

- Up to 8 channels and 2 independent surveys
- Intervals programmable from 1 to 60 minutes
- Energy, instantaneous readings, pulsing inputs as channel sources
- Ability to store average/minimum/maximum values for interval duration
- Over 2400 days storage (2 channels and 30 minutes interval)

Time of Use

- Up to 8 rates plus unified rate
- Up to 8 separate import and export registers
- Daily, weekly, monthly, yearly and special days
- Up to 12 previous periods plus period totals
- Block or rolling maximum demand
- Time of maximum demand

Calendar

- Supports Daylight Saving time

Tamper Detection and Alarms

- Provision for sealing with conventional wire or plastic seals
- Reverse current detection
- Line and neutral current unbalance detection

- Meter cover and terminal cover detection
- Faulty load relay detection
- Overload detection
- Magnetic tamper detection
- Alarms are stored in event logs

Security

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

Operation Mode

- Postpaid/Prepaid

Communications

- 3 independently working communication ports:
 - 1) Optical port: FLAG (IEC 62056-21)
 - 2) Built-in communication
 - Radio frequency
 - RS-485 screw terminal (2-wire)
 - 3) Pluggable communication module

Protocol

- EDMI command line
- DLMS
- iDIS*
- M-Bus*

Environmental

- Specified operating range: -25°C to +70°C
- Operating range limit: -40°C to +70°C
- Storage range limit: -40°C to +80°C
- Relative humidity: Up to 75% mean, 95% non-condensing for 30 days
- Ingress protection: IP54 (without suction)

*For future

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