


# Mk6E

 **GENIUS** – Class 0.2S and Class 0.5S (MID Class C)

High Accuracy Three Phase  
Smart Meter

The Mk6E is an enhanced upgrade of the Mk6 meter, built with a higher class accuracy of 0.2S, catering to the high-end markets. The Mk6E is a high-precision meter created for generation and transmission applications, as well as for revenue metering at high-end consumer facilities.



## Key Features

**AMI**

AMI READY



HIGH ACCURACY

**DLMS**

DLMS READY



LARGE LCD DISPLAY



MEASURE EVERYTHING



UPGRADEABLE



ANTI TAMPER

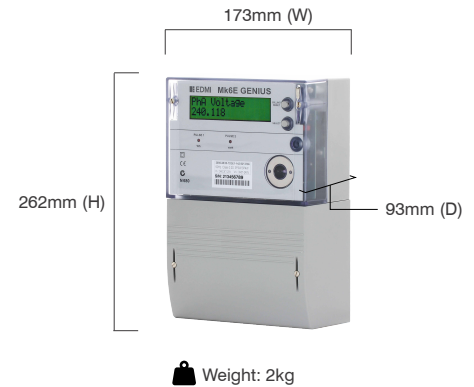


SCRIPT EXTENSION

# Mk6E

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## High Accuracy Three Phase Smart Meter



### Standards and Compliance

- Class 0.2S and Class 0.5S
- IEC 62052-11, 62053-22 (Class 0.2S and Class 0.5S), 62053-23 (Class 2)
- EN 50470-1, EN 50470-3
- NMI-M6

### Measurement

- 3 phase 3 wire
- 3 phase 4 wire

### Voltage

- Nominal voltage: 57V - 240V (phase to neutral)
- Burden: <10VA / phase @ Vn (3 phase), as per IEC 62053-61

### Current

- CT range:  
1/4A, 1/6A, 5/10A and 5/20A
- Short time over-current:  
20 x I<sub>max</sub> for 0.5 seconds
- Burden: <0.5VA/phase

### Auxiliary Supply Option

- 100 to 240 VAC

### Frequency

- 45Hz - 65Hz

### Inputs/Outputs Configuration

- Up to 10 I/O total, independent common ground with 4kV isolation
- Active input: 5V
- Passive input voltage:  
5V, 12V, 24V, 48V, 110V, 240V
- BOSFET output:  
240V, 100mA maximum
- 2 Programmable LED indicators
- Programmable output pulse width:  
1ms to 250ms
- Programmable output polarity
- Time synchronised (optional)

### Battery

- Backup type: Optional lithium battery 1200mAh, 3.6V and SuperCap (single/dual)
- Backup time: 2 years without power

- Battery shelf life of 10 plus years at room temperature

### Real-time Clock

- Accuracy: 0.5 seconds per day (over full temperature range)
- Mains synchronised or internal crystal (TCXO) time keeping. Mains synchronised reverts to internal crystal (TCXO) on loss of all phase volts

### Data Memory

- Configuration, TOU data and load survey data
  - Flash RAM
  - Battery backed up RAM

### Display

- 16 Characters by 2 lines alphanumeric display
- Programmable units, multipliers and leading zeros
- Up to 64 user-defined screen displays
- Displays any available meter parameter

### Measured Values

- 3 elements, 4 quadrants
- Import/Export/Absolute Wh, varh and VAh
- Phase A, B, C or Total
- W, var, VA
- True RMS voltage (3 phase)
- True RMS current (3 phase)
- Power factor, frequency, phasor angles

### Power Quality Indication

- Total Harmonic Distortion (THD)
- Unbalance
- Fundamental voltage, current and watt measurement
- Harmonics (up to the 50th)
- Sag/Swell
  - 5 Cycle resolution
  - Records time/date/phase/duration/average and worst excursion
  - Programmable trigger levels
- Waveform capture (voltage and current only)

### Load Survey/Profile

- NEM compliant
- Over 900 kilobytes of flash data storage space.
  - 3100 day-channel capacity at 30 minute intervals
  - 1875 day capacity at 30 minute intervals/2 channels
  - 520 day capacity at 15 minute intervals/3 channels
- Up to 50 channels
- Interval programmable from 1 minute to 1 month
- Multiple independent surveys
- Energy, instantaneous readings, pulsing inputs, average/min/max readings

### Time of Use

- 8 rates plus unified rate
- Up to 12 separate import and export registers
- Up to 200 programmable special days
- Daily, weekly, monthly, yearly and special days
- 13 or more previous periods
- Block or rolling maximum demand
- Time of maximum demand
- Configurable billing rest button

### Extensions for Customer Applications

Mk6E GENIUS plus® meter continues the successful concept of meter "Extensions" introduced in the original Mk6 Genius® using "EziScript", complex register manipulations can be performed allowing sophisticated meter functions. New extensions are constantly under development, contact us to find out the latest updates.

*Some examples of currently available extensions are:*

- Send SMS at percentage of maximum demand, or equipment failure alarm
- Maximum demand control of loads via pulsing outputs
- Time of use history, etc

### Communications

- Up to 3 independently working communication ports:
  - Optical port: FLAG (IEC 62056-21) or ANSI Type 2 (ANSI C12.18)
  - RS-232 (RTS/CTS and DTR/DCD)
  - RS-485 multi-drop (4-wire with RJ45 or screw terminal)
- Option for SCADA card
- Option for internal modem power supply
- PSTN, UDP/IP, GPRS/PPP capable
- Compatible with MV-90™
- Master/Slave arrangement with up to 31 'Slave' meters accessed through one 'Master' gateway meter

### Protocol

- EDML command line
- MODBUS
- DNP3 level 2
- IEC 870-5-102
- DL/T 645-2007
- DLMS

### Software

- EziView Windows® software (optional), can be used for programming and reading the meter
- EziView also allows offline configuration of tariff programs and all meter parameters, for later upload to meters

### Environmental

- Specified operating range:  
-25°C to +60°C
- Storage range limit:  
-25°C to +80°C
- Relative humidity:  
Up to 95% non-condensing

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