ELECTRICITY

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 READY	HIGH ACCURACY	DLMS READY	LARGE LCD DISPLAY	MEASURE EVERYTHING	UPGRADEABLE	ANTI TAMPER	SCRIPT EXTENSION

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High Accuracy Three Phase
Smart Meter

173mm (W)

262mm (H)

93mm (D)

Weight: 2kg

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 Imax for 0.5 seconds
- Burden: <0.5VA/phase

Auxiliary Supply Option

- 100V to 240V AC/DC

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
- Compatible with MV-90™
- Master/Slave arrangement with up to 31 'Slave" meters accessed through one 'Master' gateway meter

Protocol

- EDMI 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

Visit our website at www.edmi-meters.com to find our other locations.