EDMI

ELECTRICITY

Mk7C

ATLAS – Class 1 and Class 2

Single Phase Smart Meter
with Disconnect and Reconnect
Feature

SERIES 3

Built on the advanced Atlas metering platform, the Mk7C is a single phase meter with an integrated 100A UC3 compliant relay which allows disconnection and reconnection of electrical services remotely.

| Key Features

AMI	DISCONNECT	MEASURE	LARGE LCD	ANTI TAMPER	MULTIPLE COMMS	UPGRADEABLE	LARGE DATA
AMI READY	DISCONNECT RELAY	MEASURE EVERYTHING	LARGE LCD DISPLAY	ANTI TAMPER	MULTIPLE COMMS OPTIONS	UPGRADEABLE	LARGE DATA STORAGE

Mk7C

ATLAS - Class 1 and Class 2

Single Phase Smart Meter with Disconnect and Reconnect Feature

134mm (W)

163.5mm (H)

51mm (D)

Weight: 1.1kg

Standards and Compliance

- Class 1 and Class 2
- IEC 62052-11, 62052-21, 62052-31, 62053-21, 62053-23, 62054-21
- AS 62052.11, 62052.21, 62053.21, 62053.23, 62054-21, 62052-31
- NMI M6

Measurement

- 1 phase 2 wire

Voltage

- Nominal voltage: 220V - 240V
- Operating range: 176V - 276V
- Withstand: 7Cx3 - Up to 456V
- Burden: IEC 62053-21/23 compliant

Current

- WC range: 5/100A, 10/100A
- WC limit: 7000A for 3 cycles
- Burden: <0.5VA/phase
- Overload Current: 128A

Frequency

- 50Hz ± 6%

Relay

- 100A IEC 62055-31 Annex C UC3
- Post-relay voltage detection - hardware capable
- Enhanced relay switching time ≤10s
- May be ordered without a disconnect relay

Inputs/Outputs Configuration

- Up to 4 I/O total in 2 isolated groups (maximum 1 relay output)
- Options include: Passive/Active inputs, S0/Relay outputs
- Passive input voltage: 5V, 12V, 48V
- Active input voltage: 16V (common ground)
- S0 output: 27V, 27mA maximum
- Relay output: 240V, 2A
- 2 Programmable LED indicators
- Programmable output pulse width: 1ms to 100ms

Battery

- Internal battery (optional)
- Backup time: 10 years without power (Lithium Battery)

Real-time Clock

- Accuracy (internal) within 15 seconds per month at 23˚C
- Internal clock or line synchronisation

Data Memory

- 4.2 MB of non-volatile memory

Display

- Large 7 segment display with 9.3mm x 4.35mm digit size
- 8 digit numerical value field
- 4 digit description field
- Up to 60 user-defined screens of any meter parameter
- Definable enunciators
- Display available without main power (requires internal battery option)

Measured Values

- 1 element 4 quadrants
- Import/Export/Absolute Wh, varh and VAh
- Fundamental Wh
- W, var, VA, Vrms, Irms
- Power factor, frequency, phasor angles
- Supports ripple control/AFLC

Power Quality Indication

- Total Harmonic Distortion (THD)
- Option for live waveform display
- Sag/Swell
  - 5 Cycle resolution
  - Records time/date/phase/duration/ average and worst excursion
  - Programmable trigger levels

Load Survey/Profile

- Over 10,000 days storage (2 channels, 30-minute intervals)
- Supports Advanced Demand Management (ADM) with prioritised rules

- AMI Ready
- Up to 32 channels and 4 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

Time of Use

- Up to 8 rates plus unified rate
- Up to 32 separate import and export registers
- Daily, weekly, monthly, yearly and special days
- Up to 200 programmable special days
- Up to 61 previous billing periods plus billing totals
- Block or rolling maximum demand
- Time of maximum demand
- Energy, pulsing inputs

Calendar

- Supports Daylight Saving time
- Supports Gregorian or Persian calendars

Tamper Detection and Alarms

- Provision for sealing with conventional wire or plastic seals
- Reverse current detection
- Advanced tamper detection and logging
- Pre-programmed alarms for meter self- check
- Alarms trigger LEDs, enunciators, relay outputs or communications event
- Alarms are stored in event logs
- Configurable threshold; 3D magnetic tamper detection

Security

- Multi-level security (username and password including encrypted log-in)
- Up to 7 independent security levels
- Up to 6 individual users
- AES128 bit encryption

Communications

- Up to 3 independently working communication ports:
  - Optical port: FLAG (IEC 62056-21) or ANSI Type 2 (ANSI C12.18)
  - RS-485 multi-drop (2 or 4-wire
  - RJ45 or wire screw terminal)
  - RS-232 with modem power supply (compatible with the majority of modems in the market)

Protocol

- EDMI command line
- DLMS
- MODBUS

Software

- EDMI AMI 2.0 (Storm)
- EDMI Storm mobile software available for meter programming and reading
- EDMI Energy Cloud software available for large scale AMI and AMR solutions
- Supported by many popular third-party multi-vendor AMR systems
- Supports Function Based Setup

Environmental

- Specified operating range: -25˚C to +60˚C
- Limit range of operation: -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

Safety

- Protective Class II
- Surge Test: 5kV
- Impulse Test: 10kV

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