⚡ ELECTRICITY

Mk10A

🌐 **ATLAS** – Class 1 and Class 2

Three Phase CT/WC Smart Meter

The Mk10A is another addition to the Atlas series which enhances the Mk10 meter with additional communications capabilities for use in Power Quality indication, advanced commissioning functionalities and larger memory storage.

I Key Features

AMI	CT-WC	LARGE DATA	LARGE LCD	MEASURE	UPGRADEABLE	UP TO 4
AMI READY	CT-WC CONNECTED	LARGE DATA STORAGE	LARGE LCD DISPLAY	MEASURE EVERYTHING	UPGRADEABLE	UP TO 4 IO OPTIONS

Mk10A

🌐 **ATLAS** - Class 1 and Class 2

Three Phase CT/WC Smart Meter

166mm (W)

210mm (H)

74mm (D)

⚖ Weight: 2kg
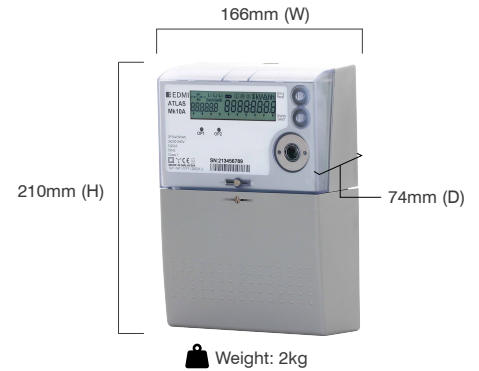
Standards and Compliance
- Class 1 and Class 2
- IEC 62052-11, 62052-31, 62053-21, 62053-23
- AS 62052-11, 62053-21, 62053-23
- EN 50470-1, 50470-3
- NMI M6

Measurement
- 1 phase 2 wire
- 3 phase 4 wire
- 3 phase 3 wire

Voltage
- Nominal voltage: 220V - 240V
- Operating range: 0.8Un to 1.15Un
- Withstand range: 0V to 290V

Current
- CT range: 1/6A, 5/20A
- CT limit: 20 x Imax for 0.5 seconds
- WC range: 5/100A, 10/100A
- WC limit: 7000A for 3 cycles

Power Consumption
- Voltage burden: IEC 62053-61 compliant
- Current burden: <0.5VA/phase

Frequency
- 45Hz - 65Hz

Inputs/Outputs Configuration
- Up to 4 x I/O total in 3 isolated groups (maximum 2 relay outputs)
- Option include: Passive/Active input, S0/BOSFET/relay output
- Passive input voltage: 5V, 12V, 48V, 110V, 240V
- Active input voltage: 12V (common ground)
- BOSFET output: 240V, 100mA maximum
- S0 output: 27V, 27mA maximum
- Relay output: 240V, 2A
- 2 Programmable LED indicators
- Programmable output pulse width: 1ms to 100ms

Battery
- Internal lithium battery (3V)
- Replaceable external battery
- Backup time: 10 years without power

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

Data Memory
- 2.1MB of non-volatile memory

Display
- 8 Characters of seven-segment display (10.7mm x 4.67mm)
- Display available without main power

Measured Values
- Import/Export/Absolute Wh, varh and VAh
- Fundamental Wh
- W, var, VA, Vrms, Irms
- Power factor, frequency, phase angle
- Supports ripple control/AFLC

Power Quality Indication
- Total Harmonic Distortion (THD)
- Unbalance (sequence components)
- Sag/Swell
  - 5 Cycle resolution
  - Records time/date/phase/duration/ average and worst excursion
  - Programmable trigger levels

LCD Configuration
- Up to 60 user-defined screen of any meter parameter
- Up to 4 display set
- Definable enunciators

Load Survey/Profile
- AMI ready
- Up to 32 channels and 2 independent surveys
- Interval programmable from 1 to 60 minutes
- Over 3600 days (10 years) storage (2 channels, 30-minute intervals)
- Energy, instantaneous readings, pulsing input 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 and 8 seasons
- Up to 61 previous billing periods plus billing totals
- Block or rolling maximum demand
- Energy, pulsing inputs
- Time of maximum demand

Calendar
- Supports Daylight Saving time
- Supports Gregorian or Persian calendars
- RTC and frequency synchronisation

Tamper Detection and Alarms
- Provision for sealing with conventional wire or plastic seals
- Reverse current detection
- Advanced tamper detection and logging
- Case and terminal cover tamper
- Pre-programmed alarms for meter self-check
- Alarms trigger LEDs, enunciators, relay output or communications event
- Alarms are stored in event logs

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

Communications
- Up to 3 independently working communication ports:
  - Optical port: FLAG (IEC 62056-21) or ANSI type 2 (ANSI C12.18)
  - RS-232 with modem power supply (2G/3G/4G LTE supported)
  - RS-485 multi-drop (2 or 4-wire RJ45 or 2-wire screw terminal)
- Option for passive RS-232 or second RS-232 port

- UDP/IP/PPP/GPRS capable
- MV-90™ compatible

Protocol
- EDMI command line
- MODBUS

Software
- EDMI EziView software available for meter programming and reading (Windows® compatible)
- EDMI MultiDrive software available for large scale AMI and AMR solutions (Windows® compatible)
- Supported by many popular third-party multi-vendor AMR systems

Environmental
- Specified operating range: -25°C to +60°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 (Outdoor), UL50 (3R)
- Salt spray resistant (IEC 60068-2-11)

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