



# Mk10A

The EDM I range of innovative products includes digital meters, advanced infrastructure and energy management systems.

With over 30 years industry experience, we ensure all of our products are technologically proven and manufactured to the highest quality. The entire EDM I product range is reliable, upgradable and accurate.

The Mk10A is a member of our Atlas series and enhances the reliable Mk10 meter with additional communications capabilities for use in power quality indication, advanced commissioning functionalities and larger memory storage.

## Advanced Three Phase Electronic Revenue Meter

Atlas Series — Class 1 and Class 2



**AMI**  
AMI  
READY

  
CT/WC  
CONNECTED

  
LARGE DATA  
STORAGE

  
LARGE  
DISPLAY

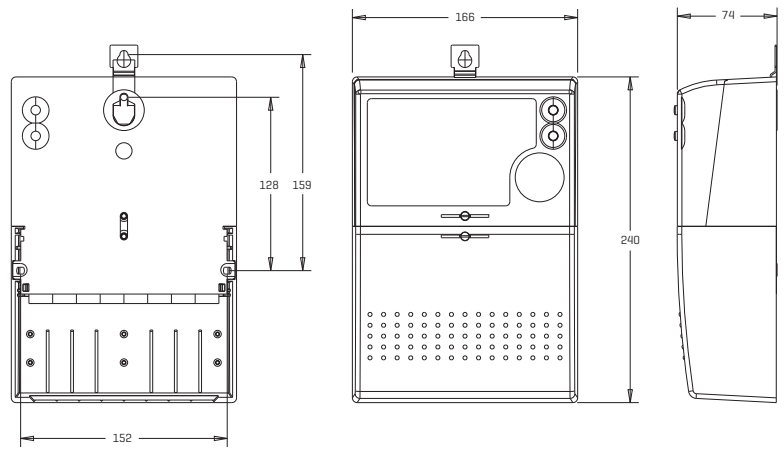
  
MEASURE  
EVERYTHING

  
UPGRADABLE

# Mk10A

## Advanced Three Phase Electronic Revenue Meter

Atlas Series — Class 1 and Class 2



### Measurement

- Class 1 and Class 2 (MID Class B and Class A)
- Compliance with IEC 62052-11, 62053-21, 62053-23
- Compliance with AS 62052.11, 62053.21, 62053.23

### Voltage and Power Supply

- Nominal voltage: 220V – 240V
- Operating range: 180V – 290V
- Burden: <10VA/phase @ Vn (Two Phase)
- Frequency range: 45Hz – 65Hz

### Current

- CT Range: 1/6A, 5/20A
- CT Limit: 20 times I<sub>max</sub> for 0.5 seconds
- WC range: 5/100A, 10/100A
- WC limit: 30 times I<sub>max</sub> for 0.5 cycles, 7000A for three cycles
- Burden: <0.5VA/phase

### Measured Energy Values

- Three element four quadrant
- Import/Export Wh, varh and VAh
- Per quadrant Wh, varh and VAh
- Absolute Wh, varh and VAh
- Phase A,B,C and total

### Other Measured and Displayed Values

- Power: W, var, VA, V<sub>RMS</sub>, I<sub>RMS</sub>
- Power factor, frequency, phasor angles

### Power Quality Indication

- Total Harmonic Distortion (THD)
- Unbalance [sequence components]
- Waveform download

### SAG/SWELL

- Five cycle resolution
- Records time/date/phase/duration/average and worst excursion
- Programmable trigger levels

### Inputs/Outputs Configuration

- Up to four I/O total in three isolated groups (maximum two relay outputs)
- Options include: passive/active inputs, SO/BOSFET/relay outputs
- Passive input voltage: 5V, 12V, 48V, 110V, 240V
- Active input voltage: 12V
- BOSFET Output: 240V, 100mA maximum
- SO output: 27V, 27mA maximum
- Relay output: 240V, 2A
- Two LED indicators, independent of I/O
- Programmable output pulse width: 1ms to 100ms

### Environmental

- Operating range: -25°C to 60°C
- Limit range: -40°C to 70°C
- Storage range: -40°C to 80°C
- Relative humidity: Up to 75% mean, 95% non-condensing for 30 days
- Ingress protection: IP54, UL50 [3R]
- Salt spray resistant [IEC 60068-2-11]

### Load Survey/Profile

- AMI Ready
- Up to 2.1 megabytes of non-volatile memory
- Over 7200 days [20 years] storage (two channels, 30-minute intervals)
- Up to 32 channels
- Intervals programmable from one to 60 minutes
- Two independent surveys
- Energy, instantaneous readings, pulsing inputs as channel sources
- Ability to store average/minimum/maximum values for interval duration

### Physical Dimensions

- Standard version: approx. 240mm [H] x 166mm [W] x 74mm [D]
- Weight: approx. 2 kg for WC, approx. 1.8 kg for CT

### Time Clock And Calendar

- Accuracy [internal] within 15 seconds per month
- Backup time of 10 years without power [lithium battery]
- Supports Daylight Saving Time
- Supports Gregorian or Persian calendars

### Large LCD Display

- Large seven segment display
- Display digit size: 10.7mm [H]
- Up to 60 user-defined screens of any meter parameter
- Definable enunciators
- Display available without mains power

### Time of Use

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

### Security

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

### Tamper Detection and Alarms

- Provision for sealing with conventional wire or plastic seals
- Bypassing current and reverse current
- 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

### Communications

- Three independently working communication ports
- Option for DLMS COSEM [IEC 62056]
- Optical port: FLAG [IEC 62056-21] or ANSI Type 2 [ANSI C12.18]
- RS-232 with modem power supply [2G/3G supported]
- RS-485 multi-drop (two or four wire RJ45 or two wire Screw terminal) or second RS-232
- UDP/IP/PPP/GPRS capable
- Compatible with ZigBee SEP 1.x.
- Compatible with MV-90™

### Battery Options

- Internal battery
- Replaceable external battery

### Software

- EDMI EziView software available for meter programming and reading [Windows Vista/XP/2000]
- EDMI MultiDrive software available for large scale AMI and AMR Solutions [Windows Vista/XP/2000]
- Supported by many popular third-party multi-vendor AMR systems



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