



# Mk10D

## Advanced Three Phase Electronic Revenue Meter with Disconnect and Reconnect Feature



*Atlas Series - Class 1 and Class 2*

### PRODUCT INFORMATION

Built on the advanced Atlas metering platform, the Mk10D is a variant of the reliable MK10. The Mk10D adds a 120 Amp relay into the meter which allows for disconnection and reconnection of electrical services remotely.



### KEY FEATURES

**AMI**

AMI READY



DISCONNECT  
RELAY



LARGE  
DATA STORAGE



LARGE  
LCD DISPLAY



MEASURE  
EVERYTHING



UPGRADEABLE

**P-PAY**

PREPAYMENT



ANTI  
TAMPER

# Mk10D



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## Advanced Three Phase Electronic Revenue Meter with Disconnect and Reconnect Feature



### SPECIFICATIONS

#### 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
- Three phase four wire with 120A disconnect switch

#### Voltage and Power Supply

- Nominal voltage: 220V – 240V
- Operating range: 176V – 276V
- Withstand: 0 - 290V
- Burden: <10VA/phase @ Vn (Three Phase)
- Frequency range: 45Hz – 65Hz

#### Current

- WC range: 10/100A
- Overcurrent: 30 times I<sub>max</sub> for 0.5 cycles
- Burden: <0.5VA/phase
- Disconnect Relay: 120A
- Disconnect Rating: IEC62055-31 UC3@I<sub>max</sub>, 264.5 VAC

#### 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 & Displayed Values

- Power: W, var, VA, VRMS, IRMS
- 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

- Standard top row I/O
- Up to four I/O total, independent with 4kV isolation
- Options include: passive/active inputs, S0/BOSFET/relay outputs
- Passive input voltage: 5V, 12V, 48V, 110V, 240V
- Active input voltage: 12V
- BOSFET output: 240V, 2A
- S0 Output: 27V, 27mA maximum
- Relay output: 240V, 2A
- 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 nonvolatile memory
- Over 7200 days (20 years) storage (two channels, 30-minute intervals)
- Up to 32 channels
- Intervals programmable from 1 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. 292.5mm (H) x 175mm (W) x 95mm (D)
- Weight: approx. 2.5 kg

#### 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

#### 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 billing periods plus billing totals
- Block or rolling maximum demand
- Energy, pulsing inputs
- Time of maximum demand

#### 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 even without mains power

#### 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)
- UDP/IP/PPP/GPRS capable
- Compatible with ZigBee SEP 1.x.
- Compatible with MV-90™

#### Battery Options

- Internal battery

#### Software

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

#### EDMI Limited

47 Yishun Industrial Park A, Singapore 768724

Tel: +65 6756 2938 | Fax: +65 6756 0125

Email: sgmarketing@edmi-meters.com | sgtechsupport@edmi-meters.com

[www.edmi-meters.com](http://www.edmi-meters.com)

