



# Mk10D

## Smart 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 adds a 100A UC3 compliant relay into the meter which allows for disconnection and reconnection of electrical services remotely.



### KEY FEATURES

**AMI**

AMI READY



DISCONNECT  
RELAY



MULTIPLE  
COMMS OPTIONS



LARGE  
LCD DISPLAY



MEASURE  
EVERYTHING



UPGRADEABLE



ANTI  
TAMPER

**P-PAY**

PREPAYMENT

# Mk10D



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### 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
- 3 phase 4 wire
- Option for neutral current measurement

#### Voltage

- Nominal voltage: 220V – 240V
- Operating range: 176V – 276V
- Burden: IEC 62053-61 compliant

#### Current

- WC range: 5/100A, 10/100A
- WC Limit: 7000A for 3 cycles
- Burden: <0.5VA/phase

#### Frequency

- 45Hz – 65Hz

#### Relay

- 100A IEC 62055-31 Annex C UC3

#### Inputs/Outputs Configuration

- Up to 4 I/O total, independent common ground with 4kV isolation
- Options include: Passive/Active inputs, S0/BOSFET/Relay outputs
- Passive input voltage: 5V, 12V, 48V, 110V, 240V
- Active input voltage: 12V (common ground)
- S0 Output: 27V, 27mA maximum
- BOSFET output: 240V, 2A
- Relay output: 240V, 2A
- 2 Programmable LED indicators
- Programmable output pulse width: 1ms to 100ms

#### Battery

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

#### Data Memory

- 2.1 MB of non-volatile memory

#### LCD Display

- Large 7 segment display
- Display digit size: 10.7mm x 4.67mm
- Up to 60 user-defined screens of any meter parameter
- Definable enunciators
- Display available without main power

#### Real-time Clock

- Accuracy (internal) within 15 seconds per month at 23°C

#### Measured Values

- 3 element 4 quadrant
- Import/Export/Absolute Wh, varh and VAh
- Fundamental Wh
- Per quadrant Wh, varh and VAh
- Phase A,B,C and Total
- W, var, VA, Vrms, Irms
- Power factor, frequency, phasor angles
- 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

#### Load Survey/Profile

- Over 7200 days (20 years) storage (2 channels, 30-minute intervals)
- Up to 32 channels and 2 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
- 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
- Option for 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-232 with modem power supply (2G/3G supported)

- RS-485 multi-drop (2 or 4-wire RJ45 or 2-wire screw terminal)
- UDP/IP/PPP/GPRS capable
- Compatible with ZigBee RF
- Compatible with MV-90™
- Supports EDM1 command line, DLMS protocol
- Option for Silver Spring Network (SSN) modem

#### Software

- EDM1 EziView software available for meter programming and reading (Windows® compatible)
- EDM1 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
- Salt spray resistant (IEC 60068-2-11)

#### Dimensions and Weight

- Dimensions: Standard version: 262mm (L) x 175mm (W) x 95mm (D)
- Dimensions: Extended version: 290mm (L) x 175mm (W) x 95mm (D)
- Weight: 2.5 kg

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