



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



TAMPER
PROOF

Mk10D



Atlas Series - Class 1 Class 2

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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
- 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_{max} for 0.5 cycles
- Burden: <0.5VA/phase
- Disconnect Relay: 120A
- Disconnect Rating: IEC62055-31 UC3@I_{max}, 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% noncondensing 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 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. 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 reversecurrent
- 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

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