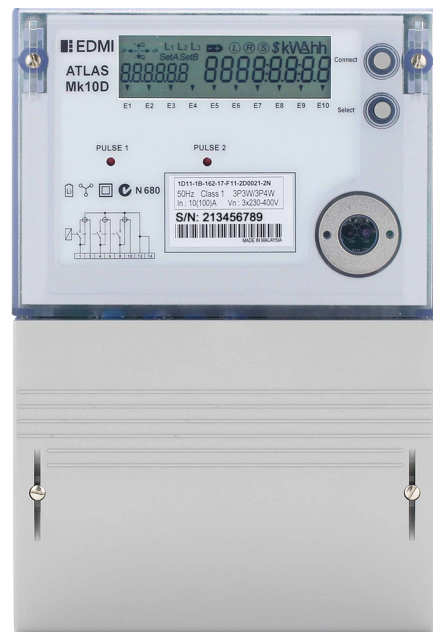# EDMI

⚡ ELECTRICITY

Mk10D

🌐 **ATLAS** – Class 1 and Class 2

Three Phase Smart Meter with Disconnect Feature

Built on the advanced Atlas metering platform, the Mk10D adds three 100A UC3 compliant relays into the meter which allows for disconnection and reconnection of electrical services remotely.

| Key Features

AMI READY	DISCONNECT RELAY	MULTIPLE COMMS OPTIONS	LARGE LCD DISPLAY	MEASURE EVERYTHING	UPGRADEABLE	ANTI TAMPER	LARGE DATA STORAGE

Mk10D

🌐 **ATLAS** - Class 1 and Class 2

Three Phase Smart Meter with Disconnect Feature

175mm (W)

262mm (H)

95mm (D)

🏋 Weight: 2.5kg

Standards and Compliance

- Class 1 and Class 2
- IEC 62052-11, 62052-21, 62053-21, *62052-31, 62053-23
- AS 62052.11, 62052.21, 62053.21, 62053.23, 62052.31
- NMI M6

Measurement

- 3 phase 4 wire
- Option for neutral current measurement

Voltage

- Nominal voltage: 120V, 220V – 240V
- Operating range: 110V – 130V, 176V – 276V
- Withstand: Up to 290V
- 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
- Relay fault detection
- *Option for individual supply switching at 100A
- *Enhanced relay switching time ≤10s
- *May be ordered without disconnect relays

Inputs/Outputs Configuration

- Up to 4 independently isolated I/O
- 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
- *Option for external battery
- *Option for additional supercap (72 hours)
- Backup time of 10 years without power (Lithium Battery)

Real-time Clock

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

Data Memory

- 2 MB of non-volatile memory

Display

- Large 7 segment alphanumeric display with 10.7mm x 6.67mm digit size
- *Large 14 segment alphanumeric display with 10.5mm x 5.1mm digit size
- Up to 60 user-defined screens of any meter parameter
- Definable enunciators
- Display available without main power
- LED Backlight Option

Measured Values

- 3 elements 4 quadrants
- 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)
- Option for live waveform display
- Sag/Swell
  - 5 Cycle resolution
  - Records time/date/phase/duration/ average and worst excursion
  - Programmable trigger levels

Load Survey/Profile

- Over 5000 days storage (2 channels, 30-minute intervals)
- Supports Advanced Demand Management (ADM) with prioritised rules
- AMI ready
- Up to 32 channels and 4 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 detection
- 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 fixed-threshold magnetic tamper detection
- *Option for high-sensitivity 3D magnetic tamper detection with configurable threshold
- Source impedance monitoring

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/4G LTE supported)
  - RS-485 multi-drop (2 or 4-wire RJ45 or 2-wire screw terminal)
- UDP/IP PPP/GPRS capable
- Compatible with MV-90™

Protocol

- EDMI command line
- DLMS
- 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
- Supports Function Based Setup

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
- Protective Class II
- Surge Test: 5kV
- Impulse Test: 10kV

*Specifications with * symbol available in manufacturing codes with prefix 1Dx3*

EDMI