

# Mk10

(ATLAS SERIES)

Class 1 & Class 2  
Advance Three Phase Electronic Revenue Meter



# Mk10 – Advance Three Phase Electronic Revenue Meter

## Basic Technical Specification

### Measurement

- Class 1 and Class 2
- Compliance to IEC62052-11, IEC62053-21, IEC62053-23
- Single Phase (3 Circuits)
- Three Phase, Four Wire

### Voltage & Power Supply

- Nominal Voltage: 220V – 240V
- Operating Range: 140V – 290V
- Burden: < 10VA / phase @ Vn (3 Phase) (IEC52053-61 Compliant)
- Frequency Range: 45 Hz – 65 Hz

### Current

- CT Range: 1 / 6 A, 5 / 20 A
- WC Range: 5/100A (Class 2 only), 10/100A, 25/100A, 20/100A
- Short time over current: 20 times I<sub>max</sub> for 0.5 seconds
- Burden: < 0.5 VA / phase

### Environmental

- Operating Range: -40°C to +70°C
- Storage Range: -40°C to +85°C
- Relative Humidity: Up to 95% non-condensing

### Measured Energy Values

- 3 element, 4 quadrant
- Import/Export Wh, varh and VAh
- Absolute Wh, varh and VAh
- Phase A,B,C or Total

### Other Measured and Displayed Values

- Power: W, var, VA
- True RMS Voltage (3 phase)
- True RMS Current (3 phase)
- Power factor
- Frequency
- Phasor angles

### Load Survey / Profile

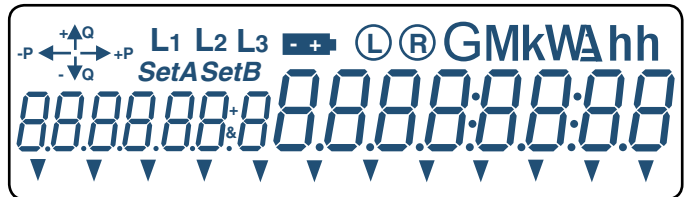
- NEM compliant
- Up to 256 Kilobytes of non-volatile memory
- Over 1800 days (5 years) storage (1 channel, 30 min interval)
- Up to 32 channels
- Interval programmable from 1 to 60 minutes
- 2 Independent surveys
- Energy, instantaneous readings, pulsing inputs as channels sources
- Ability to store average / minimum / maximum values for interval duration

### Inputs / Outputs Configuration

- Two Configurations Available:
- Standard:
  - Up to 6 I/O Total (Up to 2 Inputs, 6 Outputs)
  - Passive Input Voltages: 5V, 12V, 48V, 110V, 240V
  - Active Input Voltage: 5V
  - Outputs: BOSFET (240V, 90 mA maximum)
- Enhanced:
  - Up to 4 I/O Total (Max 2 Relay Outputs)
  - Options include: Passive Inputs, Active Inputs, S0 Output, BOSFET Output, Relay Output
  - Passive Input Voltage: 5V, 12V, 48V, 110V, 240V
  - Active Input Voltage: 5V
  - BOSFET Outputs: 240V, 90 mA maximum
  - S0 Outputs: 27V, 27 mA maximum
  - Relay Outputs: 240V, 5A / 2A
- Output Pulse Width: 1 ms to 100 ms

### LCD

- Large Digit Display
- Up to 60 User Defined Screens of any meter parameter
- Definable Enunciators
- Display Accessible without Mains Power
- Chinese Character Version Available



### Time Clock and Calendar

- Accuracy (internal) within 15 seconds per month
- Backup time of 10 years without power (lithium battery)
- Mains synchronised or internal crystal timing (selectable)
- Support Daylight Saving Time
- Support for Gregorian or Persian Calendar

### Time Of Use

- Up to 8 rates plus unified rate
- Up to 32 separate import and export registers
- Up to 200 programmable special days
- Daily, Weekly, Monthly, Yearly, Special
- 13 previous periods, plus period totals
- Block or Rolling Maximum Demand
- Energy, pulsing inputs
- Time of Maximum Demand

### Security

- Multi-Level Security (Username/Password including encrypted login)
- Up to 7 independent security levels
- Up to 6 individual users

### Communications

- Either ANSI Type 2 Optical Port (ANSI C12.18) or IEC62056-21 (IEC 61108) Optical FLAG Port
- RS-232 for modem connection (standard or 8V Modem Power Supply)
- RS-485 Multi-drop (2 or 4 wire, RJ45 or Screw Terminal)
- UDP / IP / PPP / GPRS Capable
- Distribution Line Carrier (LonWorks A Band & C Band)
- MV90™ Compatible

### MV90™

- Compatible with MV-90 Reading System via EDMX TIM
- MV-90 TIM able to download 90 days of data in less than 15 seconds
- Clock Synchronization via MVRS and MV-90

### Sag / Swell

- 5 cycle resolution
- Records time / date / phase / duration / worst excursion
- Programmable trigger levels

### Tamper / Alarms

- Provision for sealing using conventional wire or plastic seals
- Bypassing current and reverse current
- Advanced Tamper detection and logging
- Pre-programmed alarms for meter self check
- All alarms can trigger LEDs, Enunciators, Relay Outputs or Comms Event
- All alarms can be stored in Event Logs

### Software

- EDMi EziView software available for programming and reading the meter (Windows 98/ME/NT/2000/XP)
- EDMi EziView MultiDrive software available for large scale Automatic Meter Reading



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