

# Mk10E

(ATLAS SERIES)

**Class 0.5S & Class 1**

**Advanced Three Phase Electronic Revenue Meter**



# Mk10E – Advanced Three Phase Electronic Revenue Meter

## Basic Technical Specifications

### Measurement

- Class 0.5S and Class 1
- Compliance with IEC 62052-11, 62053-21, 62053-22, 62053-23
- Compliance with AS 62052.11, 62053.21, 62053.22, 62053.23
- Three Phase, Three Wire
- Three Phase, Four Wire

### Voltage & Power Supply

- Nominal Voltage: 57.7V – 240V
- Operating Range: 52V – 290V
- Burden: < 10VA / phase @ Vn (3 Phase) (IEC52053-61 Compliant)
- Frequency Range: 45 Hz – 65 Hz

### Current

- CT Range: 1/4A, 1/10A, 5/20A
- WC Range: 5/100A (Class 2 Only), 10/100A (Class 1 or 2)
- Short time over current: 20 times Imax for 0.5 Seconds
- Burden: <0.5VA/Phase

### 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 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

- Compliance with NEM
- Up to 2.1 Megabytes of Non-Volatile Memory
- Over 3600 days (10 years) Storage (2 channels, 30 Min Interval)
- Up to 32 Channels
- Interval Programmable from 1 to 60 Minutes
- 2 Independent Surveys
- Energy, Instantaneous Readings, Pulsing Inputs as Channel Sources
- Ability to Store Average/Minimum/Maximum Values for Interval duration

### Inputs / Outputs Configuration

- Standard Top Row I/O:
  - Up to 4 I/O Total, Independent Common Ground, 4KV Isolation
  - Options Include: Passive Inputs, Active Inputs, SO Output, BOSFET Output, Relay Output
  - Passive Input Voltage: 5V, 12V, 48V, 110V, 240V
  - Active Input Voltage: 12V
  - BOSFET Output: 240V, 100 mA maximum
  - SO Output: 27V, 27 mA maximum
  - Relay Outputs: 240V, 5A/2A
- Extended Bottom Row I/O: (Optional)
  - As per Standard IO
- Output Pulse Width: 1ms to 100ms

### 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

### LCD Display

- Large 7-Segment Display
- Up to 60 User Defined Screens of any Meter Parameter
- Definable Enunciators
- Display Accessible without Mains Power
- With Option for Chinese Character Version



### Time Of Use

- Up to 8 Rates Plus Unified Rate
- Up to 32 Separate Import and Export Registers
- Daily, Weekly, Monthly, Yearly & Special
- Up to 200 Programmable Special Days
- 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

- Options for either ANSI Type 2 Optical Port (ANSI C12.18), or
- Optical FLAG Port (IEC 62056-21) (IEC1107)
- RS-232 with Modem Power Supply (2G/3G Supported)
- RS-485 Multi-drop (4 or 2 wire, RJ45 or Screw Terminal)
- UDP / IP / PPP / GPRS Capable
- MV-90™ Compatible
- Zigbee

### MV-90™

- Compatible with MV-90 Reading System via EDMX TIM
- MV-90 TIM Enables Download of 90-day Data in 15 Seconds or Less
- Clock Synchronization via MV-RS and MV-90

### Sag / Swell

- 5 Cycle Resolution
- Records Time/Date/Phase/Duration/Worst Excursion
- Programmable Trigger Levels

### Tamper / 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 Comms Event
- Alarms are Stored in Event Logs

### Battery Options

- Internal Battery
- Replaceable External Battery
- Additional Supercap Option

### Software

- EDM I EziView Software Available for Meter Programming and Reading (Windows XP/2000/NT/ME/98)
- EDM I EziView MultiDrive Software Available for Large Scale AMR & AMI

