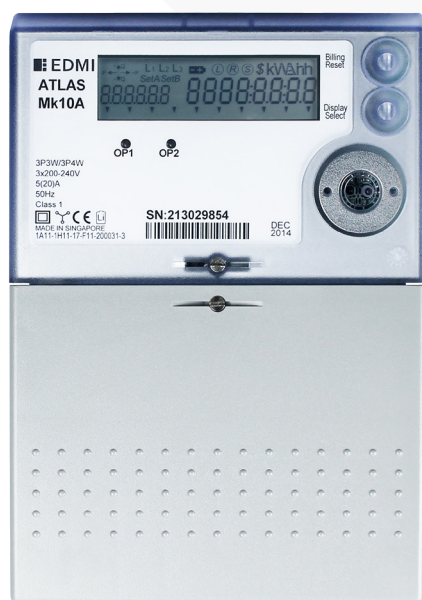




Mk10A

Three Phase Smart Meter



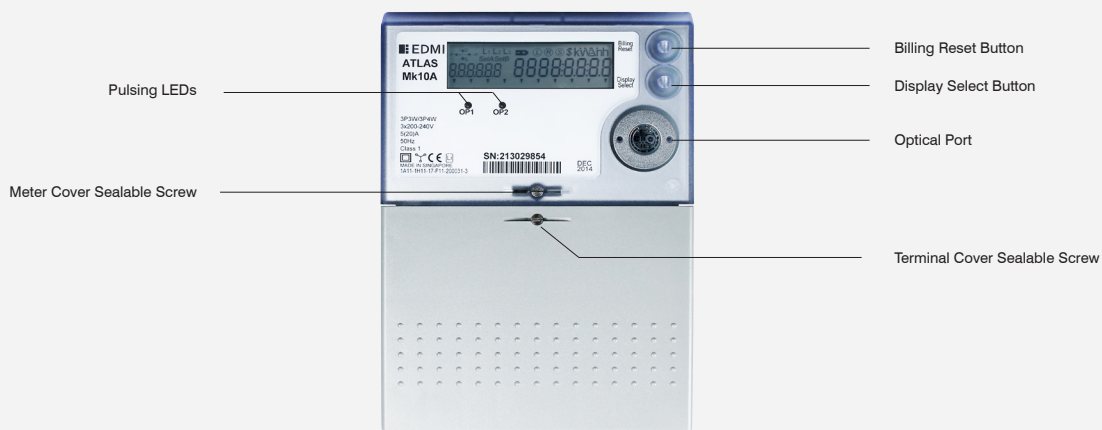
 **EDMI**

Mk10A

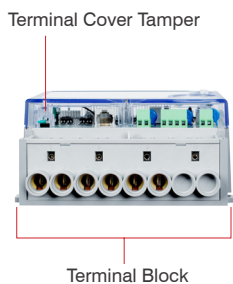


Atlas Series - Class 1 and Class 2

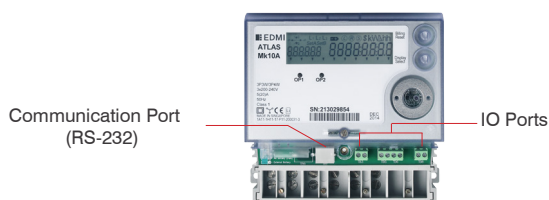
Meter Details



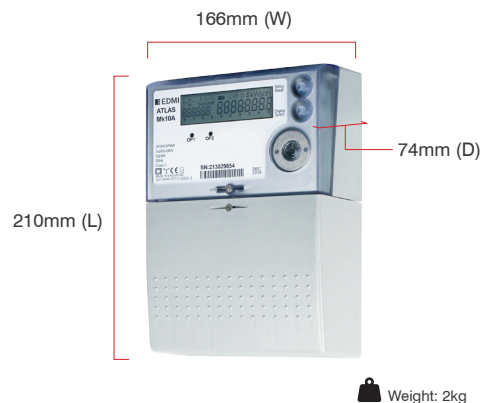
Meter Bottom View



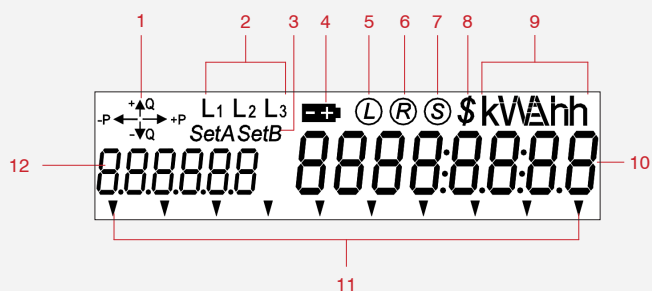
Meter Front View



Dimensions



LCD Display



- | | |
|---------------------------|---|
| 1 Energy Direction Arrow | 7 SCADA Communication |
| 2 Phase Voltage Indicator | 8 Currency Indicator |
| 3 LCD Display Set | 9 k Multiplier with Display of Units |
| 4 Low Battery Indicator | 10 8 Characters of Seven-Segment Display |
| 5 Local Communication | 11 10 Enunciators |
| 6 Remote Communication | 12 6-Character Label in Seven-Segment Character |

Specifications



Standards and Compliance

IEC 62052-11:2003 & AS 62052.11:2005

Electricity Metering Equipment (AC) - General requirements, tests and test conditions - Part 11: Metering equipment

IEC 62052-31 *New!*

Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 31: Product safety requirements and tests

IEC 62053-21:2003 & AS 62053.21:2005

Electricity Metering Equipment (AC) - Particular requirements - Part 21: Static Meters for active energy (classes 1 and 2)

NMI M6

Electricity Metering Part 1: Metrological and Technical Requirements

IEC 62053-23:2003 & AS 62053.23:2006

Electricity metering equipment (AC) - Particular requirements - Part 23: Static meters for reactive energy (classes 2 and 3)

EN 50470-1

Electricity metering equipment (AC) - Part 1: General requirements, tests and test conditions - metering equipment (class indexes A, B and C)

EN 50470-3

Electricity metering equipment (AC) - Part 3: Particular requirements - Static meters for active energy (class indexes A, B and C)

Measurement

1 phase 2 wire
3 phase 4 wire
3 phase 3 wire

Voltage

Nominal voltage (Un): 220V - 240V
Operating range: 0.8Un - 1.15Un
Withstand: Up to 290V

Current

CT range: 1/6A, 5/20A
CT limit: 20 x I_{max} for 0.5 seconds
WC range: 5/100A, 10/100A
WC limit: 7000A for 3 cycles

Power Consumption

Voltage burden: IEC 62053-61 compliant
Current burden: <0.5VA/phase

Frequency

45Hz - 65Hz

Inputs/Outputs Configuration

Up to 4 x I/O total in 3 isolated groups (maximum 2 relay outputs)
Option include: Passive/Active input, S0/BOSFET/relay output
Passive input voltage: 5V, 12V, 48V, 110V, 240V
Active input voltage: 12V (common ground)
BOSFET output: 240V, 100mA maximum
S0 output: 27V, 27mA maximum
Relay output: 240V, 2A
2 Programmable LED indicators
Programmable output pulse width: 1ms to 100ms

Battery

Internal lithium battery (3V)
Replaceable external battery
Backup time: 10 years without power

Data Memory

2.1MB of non-volatile memory

LCD Display

8 Characters of seven-segment display (10.7mm x 4.67mm)
Display available even without main power

Real-time Clock

Precision clock accuracy: <5ppm (15 seconds per month) at 23°C

Measured Values

Import/Export/Absolute Wh, varh and VAh
Fundamental Wh
W, var, VA, Vr_{rms}, Ir_{rms}
Power factor, frequency, phase angle
Supports ripple control/AFLC

Quality of Supply

Total Harmonic Distortion (THD)
Unbalance (sequence components)

Sag/Swell

5 Cycle resolution
Records time/date/phase/duration/average and worst excursion
Programmable triggers levels

LCD Configuration

Up to 60 user-defined screen of any meter parameter
Up to 4 display set
Definable enunciators

Load Profile

AMI ready
Up to 32 channels and 2 independent surveys
Intervals programmable from 1 to 60 minutes
Over 3600 days (10 years) storage (2 channels, 30-minute intervals)
Energy, instantaneous readings, pulsing input 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 exports registers
Daily, weekly, monthly, yearly and special days
Up to 200 programmable special days and 8 seasons
Up to 61 previous billing periods plus billing totals
Block or rolling maximum demand
Energy, pulsing inputs
Time of maximum demand

Calendar Clock

Supports Daylight Saving time
Supports Gregorian or Persian calendars
RTC and frequency synchronisation

Tamper Detection and Alarms

Provision for sealing with conventional wire or plastic seals
Reverse current detection
Advanced tamper detection and logging
Case and terminal cover tamper
Pre-programmed alarms for meter self-check
Alarms trigger LEDs, enunciators, relay output or communications event
Alarms are stored in event logs

Security

Multi-level security (username and password including encrypted log-in)
Up to 7 independent security levels
Up to 6 individual users

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)
Option for passive RS-232 or second RS-232 port
UDP/IP/PPP/GPRS capable
MV-90™ compatible

Protocol

EDMI command line
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

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 (Outdoor), UL50 (3R)
Salt spray resistant (IEC 60068-2-11)

More about EDM I

Since 1978 - for more than 30 years - energy companies all over the world have relied on EDM I to deliver the flexibility and reliability they need and the innovative solutions they demand. EDM I's experience, our proven track record, and millions of EDM I multi-functional smart meters installed worldwide, mean that our products are tried and tested and that you can trust EDM I to meet and exceed your expectations.

As the future of smart metering solutions, EDM I prides itself on its dedication to quality, compliance and customer service. Our focus on quality flows from the design phase through to our post-sales service, giving you the peace of mind that you can then pass onto your clients. We are international leaders in smart metering innovation and recognise our obligation to combine the best of cutting-edge technologies with a strong commitment to quality and reliability. We are dedicated to providing smarter solutions for our customers and are proud of our customer relationships. Our partnership approach ensures that we truly understand our customers' requirements now and into the future.

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