

# EN31B

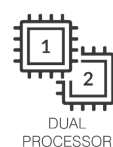
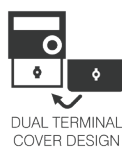
**NEOS** – Class 1 and Class 2

Three Phase Smart Meter with  
Three-Element Feature

Built on the advanced NEOS metering platform, the EN31B is a three phase smart meter with integrated 100A UC3 compliant relays allowing remote disconnection and reconnection of electrical services. Flexible communication and I/O options are possible with the modular POD design.



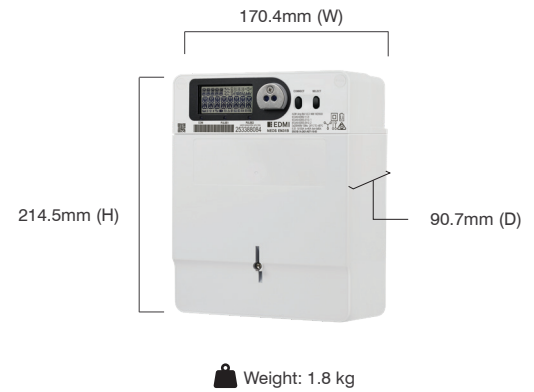
## Key Features



# EN31B

NEOS - Class 1 and Class 2

## Three Phase Smart Meter with Three-Element Feature



### Standards and Compliance

- Class 1 Wh and Class 2 varh
- IEC 62052-11, 62052-21, 62052-31, 62053-21, 62053-24, 62054-21, 62059-32
- AS 62052.11, 62052.21, 62052.31, 62053.21, 62053.24, 62054.21
- EIPC 2010 Part 10 Schedule 10.8 (Data storage clauses)
- NM1 M13-1 2022

### Measurement

- 3 phase 4 wire, 3 element

### Voltage

- Nominal voltage: 220V to 240V
- Operating range: 176V to 276V

### Current

- WC range: 5/100A, 10/100A
- Max voltage: 456V

### Safety

- Temperature monitoring
- Overvoltage category III (up to 4000m)
- Overvoltage category IV (up to 2000m)
- Insulation protective class II
- Surge voltage 6 kV
- Impulse voltage 12 kV (as per SPM1618)
- Overload current 128A (as per IEC 62052-31)
- Two terminal covers segregating mains terminals and SELV circuits
- Disconnect relay - failure detection

### Terminal

- Terminal hole diameter: 9.5mm
- Maximum 35mm<sup>2</sup> cable

### Power Consumption

- Voltage circuit:
  - Maximum consumption with full POD load: less than 12W or 20 VA | maximum consumption without accessories: less than 2W or 10VA
- Current circuit (Burden): <0.5VA/phase

### Frequency

- 50Hz/60Hz +/- 6% variation from fn for accuracy

### Inputs/Outputs Configuration

- Up to 3 x LED indicators
- Expandable I/O with PODs

### Relay

- 3 x 100A SCS, 80A LCS

### Battery

- Replaceable lithium battery (550 mAh, 3.0V)
- Internal super capacitor\*
- Backup time: 10 years without power (lithium battery)

### Real-time Clock

- Clock accuracy: 15 seconds per month at 23°C
- High accuracy clock\*
- Supports Daylight Saving Time

### Data Memory

- 8MB of non-volatile memory
- EEPROM\*

### Display

- Starburst-segment alphanumeric display
- Display available without main power
- White LED backlight

### Measured Values

- 3 element 4 quadrants
- Import / Export
- Wh, varh and VAh
- Fundamental / Total power
- Vrms, Irms, Phase Angle, Frequency

### Load Survey/Profile

- Up to 64 channels and 4 independent surveys
- Intervals programmable from 1 to 60 minutes
- Energy, instantaneous readings, pulsing inputs, temperature as channel sources
- Ability to store average/minimum/maximum/boundary 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

### Tamper Detection and Alarms

- Terminal sealing with conventional wire or plastic seals
- Reverse current detection
- Cover removal
- Magnetic field detection

### Security

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

### Communications

- Optical port: FLAG / ANSI (IEC 62056-21)
- Multiple communication options available

### Protocol

- EDML command line

### 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
- Solar Radiation IEC 62052-11 / 60068-2-5

\* Optional

#### EDMI Limited (Singapore)

47 Yishun Industrial Park A,  
Singapore 768724

#### EDMI Pty Ltd (Australia)

Level 7, 51 Alfred Street,  
Fortitude Valley, Queensland  
Australia 4006

#### EDMI Europe Limited (United Kingdom)

Form 1, 17 Barley Wood  
Business Park, Bartley Way,  
Hook, Hampshire RG27  
9AXA, United Kingdom

#### EDMI America Inc. (USA)

One City Plaza, Suite 1301,  
421 Fayetteville Street,  
Raleigh, North Carolina,  
27601 United States

[www.edmi-meters.com](http://www.edmi-meters.com)



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