

EN31B

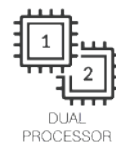
NEOS – Class 1 and Class 2

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.



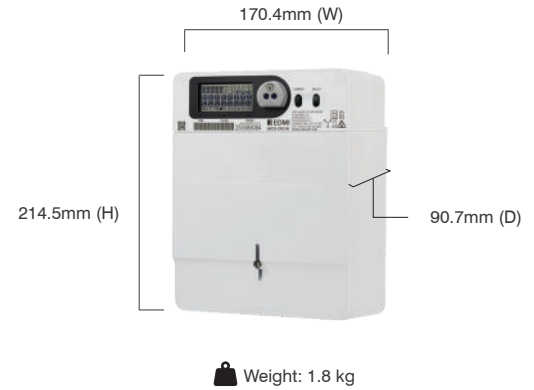
Key Features



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)
- NMI M13-1 2022

Measurement

- 3 phase 4 wire, 3 element
- 1 phase 3 element
- 2 phase 3 wire

Voltage

- Nominal voltage: 220V to 240V
- Operating range: 176V to 276V
- Withstand voltage: 456V

Current

- WC range: 5/100A, 10/100A

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)
- Inner terminal cover segregating LV and SELV circuits
- Disconnect relay - failure detection

Terminals

- Terminal hole diameter: 9.5mm
- Maximum 35mm² cable

Power Consumption

- Voltage circuit:
Maximum consumption with full POD load: less than 1.6W or 1.6VA per phase | maximum consumption without accessories: 0.39W or 0.48VA per phase
- Current circuit (Burden): max 0.12VA per phase

Frequency

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

Inputs/Outputs Configuration

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

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

- 64M-bit Flash
- 2k-bit 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 cover sealing with conventional wire or plastic seals
- Reverse current detection
- Cover removal
- Magnetic field detection
- Cover screw plugs

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

- EDM1 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

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