



410-VT7A-90B10

410-VT7A-90B10, Three-phase energy meter indirect connection

Code: QBN0J

- > Communications: RS-232 | RS-485
- > Class (Active/Reactive): B (1) / 2
- > System: Three-phase
- > Measure: Indirect
- > Measurement Range (V): 3x57/100 ... 3x230/400
- > Measurement Range (A): ... / 1
- > Quadrants: 4
- > Frequency (Hz): 50

Description

CIRWATT-B410T is an indirect multi-rate three-phase meter and logger, Class B in active energy as per the European MID Directive (EN 50470), or Class 1 as per IEC-62053-21 and Class 2 reactive energy as per IEC-62053-23, with multiple communications options and expansion modules that allow it to be adapted to any type of industrial and tertiary sector installation.

Application

CIRWATT B-410T is perfect for low- and medium-voltage supplies using external current transformers. Offering solutions for a wide variety of installations such as: shopping centres, industries and high-consumption residential areas (Consumer type 3). Available in 2 quadrants for energy consumption or 4 quadrants for photovoltaic plants (energy generation and consumption).



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Specifications

AC power supply

| | |
|-----------------|-----------------------------------|
| Tolerance | 80 % ... 115 % Un |
| Consumption | < 2 W; < 10 VA |
| Frequency | 50 / 60 Hz |
| Nominal voltage | 3 x 57 (100) V... 3 x 230 (400) V |

Battery specification

| | |
|-----------------------|--------------------|
| Performance-guarantee | > 20 years @ 30 °C |
| Type | Lithium |

Mechanical characteristics

| | |
|----------------------------------|---------------------|
| Size (mm) width x height x depth | 172 x 255 x 67 (mm) |
| Envelope | DIN 43859 |

Environmental characteristics

| | |
|--|----------------|
| Relative humidity (without condensation) | 95 % max. |
| Storage temperature | -40 ... +85 °C |
| Working temperature | -40 ... +70 °C |

Voltage measurement circuit

| | |
|-------------------|--------------------------|
| Connection | Asymmetrical |
| Consumption | < 2 W; 10 VA |
| Nominal frequency | 50 / 60 Hz |
| Nominal voltage | 3x57/100 ... 3x230/400 V |

Current measurement circuit

| | |
|-----------------------------|-------------|
| Consumption | < 0,1 V·A |
| Reference current (Iref) | .../ 5 A |
| Maximum current | 10 A |
| Minimum current measurement | < 0,5 x Itr |

Optical communication interface

| | |
|----------|-----------------------------|
| Hardware | IEC 62056-21 |
| Protocol | REE, based on IEC 870-5-151 |
| Type | Serial;bi-directional |

User interface



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| | |
|---------------------------|-----------------------|
| Resolution of the display | up to 8 digits (8 mm) |
| Display type | LCD |

Memory

| | |
|-----------------|---|
| Memory capacity | Data: non-volatile memory, Setup and events: serial-flash |
| Write time | 4000 |
| Type | Serial flash |

Standards

| | |
|-----------|--|
| Standards | UNE-EN 50470-1 Electricity metering equipment (a.c.) -- Part 1: General requirements, tests and test conditions - Metering equipment -class indexes B-) UNE-EN 50470-3 Electricity metering equipment (a.c.) -- Part 3: Particular requirements - Static meters for active energy -class indexes B-) IEC 62052-11, IEC 62053-21, IEC 62053-22 (Standards for static active energy meters for alternating current of class 0.2s, 0.5s) UNE-EN 55022 (Conducted Emissions: Class B, Radiated Emissions: Class B) UNE-EN 61000-4-2, UNE-EN 61000-4-3, UNE-EN 61000-4-4, UNE-EN 61000-4-5, UNE-EN 61000-4-6, UNE-EN 61000-4-8, UNE-EN 61000-4-11 |
|-----------|--|

PLC

| | |
|-------------------|--|
| Hardware | CENELEC A or CENELEC B |
| Protocol | CirPLC & PEP (PLC Encapsulated Protocol) |
| Modulation system | DSCK with repeater system |

Measurement accuracy

| | |
|-------------------------------------|---|
| Reactive energy measurement (kvarh) | IEC 62053-23 (Class 2) |
| Active energy measurement (kWh) | EN 50470 (Class B) IEC 62053-21 (Class 1) |

Features / performance

| | |
|--------------------|---|
| Billing closures | 12 locks per contract. Programable date and hour |
| Load curve | 2 load curves, programmable integration time (1 ... 253 min) |
| Optional | Communications: RS-232 / PLC ,RS-485 / PLC, RS-232 / RS-232 , RS-485 / RS-485, RS-232 / RS-485, RS-232 / Ethernet, R-485 / Ethernet. Expansion boards: No inputs / outputs, 4 relay outputs (Rate Indicator), 2 relay inputs / 4 pulse outputs, 4 pulse inputs, Differential current measurement, 2 relay outputs / 2 pulse outputs, / 2 pulse inputs |
| Tariff programming | 12 days 10 types of data 9 types of tariffs 30 public holidays 12 special days |

Clock

| | |
|---------------------|------------------------------------|
| Source | Temperature compensated oscillator |
| Accuracy (EN 61038) | < 0,5 s / day (23 °C) |
| Type | Gregorian calendar |



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Serial communication

| | |
|-------------------|------------------------------|
| Protocol | REE, basado en IEC 870-5-102 |
| Technology / Type | RS-232 RS-485 |

CIRWATT B 410T

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| CODE | TYPE | Measurement Range (V) | Measurement Range (A) | Communications | Class (Active/Reactive) | System | Measure |
|----------------|-----------------------------------|------------------------|-----------------------|-------------------|-------------------------|-------------|----------|
| CIRWATT B 410T | | | | | | | |
| QB860 | 410-QT5A-70B10 | 3x230/400 | .../5 | RS-232 RS-232 | B (1) / 2 | Three-phase | Indirect |
| CIRWATT B 505 | | | | | | | |
| QBN40 | 410-VT7B-A0B10 | 3x57/100 ... 3x230/400 | .../ 1 | RS-232 Ethernet | C (0,5S)/1 | Three-phase | Indirect |
| CIRWATT B 410T | | | | | | | |
| QB8A0 | 410-QT5A-80B10 | 3x230/400 | .../5 | RS-485 RS-485 | B (1) / 2 | Three-phase | Indirect |
| QB870 | 410-QT5A-90B10 | 3x230/400 | .../5 | RS-232 RS-485 | B (1) / 2 | Three-phase | Indirect |
| QB870T21 | 410-QT5A-90B10-TRMC210-100-3.0.TD | 3x230/400 | .../5 | RS-232 RS-485 | B (1) / 2 | Three-phase | Indirect |
| QB870T22 | 410-QT5A-90B10-TRMC210-200-3.0.TD | 3x230/400 | .../5 | RS-232 RS-485 | B (1) / 2 | Three-phase | Indirect |
| QB870T23 | 410-QT5A-90B10-TRMC210-500-3.0.TD | 3x230/400 | .../5 | RS-232 RS-485 | B (1) / 2 | Three-phase | Indirect |
| QB880 | 410-QT5A-A0B10 | 3x230/400 | .../5 | RS-232 Ethernet | B (1) / 2 | Three-phase | Indirect |
| QB890 | 410-QT5A-C0B10 | 3x230/400 | .../5 | RS-485 Ethernet | B (1) / 2 | Three-phase | Indirect |
| QBJ10 | 410-VT5A-90B10 | 3x57/100 ... 3x230/400 | .../5 | RS-232 RS-485 | B (1) / 2 | Three-phase | Indirect |
| QBG60 | 410-NT5A-70B10 | 3x127/220 | .../5 | RS-232 RS-232 | B (1) / 2 | Three-phase | Indirect |
| QBJ20 | 410-VT5A-A0B10 | 3x57/100 ... 3x230/400 | .../5 | RS-232 Ethernet | B (1) / 2 | Three-phase | Indirect |
| QBG70 | 410-NT5A-90B10 | 3x127/220 | .../5 | RS-232 RS-485 | B (1) / 2 | Three-phase | Indirect |
| QB8D0 | 410-QT5B-90B10 | 3x230/400 | .../5 | RS-232 RS-485 | B (1) / 2 | Three-phase | Indirect |
| QBG A0 | 410-NT5A-80B10 | 3x127/220 | .../5 | RS-485 RS-485 | B (1) / 2 | Three-phase | Indirect |
| QBG80 | 410-NT5A-A0B10 | 3x127/220 | .../5 | RS-232 Ethernet | B (1) / 2 | Three-phase | Indirect |
| QB8E0 | 410-QT5B-A0B10 | 3x230/400 | .../5 | RS-232 Ethernet | B (1) / 2 | Three-phase | Indirect |
| QBG90 | 410-NT5A-C0B10 | 3x127/220 | .../5 | RS-485 Ethernet | B (1) / 2 | Three-phase | Indirect |
| QBJ60 | 410-VT5B-90B10 | 3x57/100 ... 3x230/400 | .../5 | RS-232 RS-485 | B (1) / 2 | Three-phase | Indirect |
| QBH20 | 410-MT5A-70B10 | 3x63,5/110 | .../5 | RS-232 RS-232 | B (1) / 2 | Three-phase | Indirect |
| QBJ70 | 410-VT5B-A0B10 | 3x57/100 ... 3x230/400 | .../5 | RS-232 Ethernet | B (1) / 2 | Three-phase | Indirect |
| QBH30 | 410-MT5A-90B10 | 3x63,5/110 | .../5 | RS-232 RS-485 | B (1) / 2 | Three-phase | Indirect |
| QBN0B | 410-QT7A-90B10 | 3x230/400 | .../ 1 | RS-232 RS-485 | B (1) / 2 | Three-phase | Indirect |
| QBH61 | 410-MT5A-80B10 | 3x63,5/110 | .../5 | RS-485 RS-485 | B (1) / 2 | Three-phase | Indirect |
| QBH40 | 410-MT5A-A0B10 | 3x63,5/110 | .../5 | RS-232 Ethernet | B (1) / 2 | Three-phase | Indirect |
| QBN1B | 410-QT7A-A0B10 | 3x230/400 | .../ 1 | RS-232 Ethernet | B (1) / 2 | Three-phase | Indirect |
| QBH50 | 410-MT5A-C0B10 | 3x63,5/110 | .../5 | RS-485 Ethernet | B (1) / 2 | Three-phase | Indirect |
| QBN0J | 410-VT7A-90B10 | 3x57/100 ... 3x230/400 | .../ 1 | RS-232 RS-485 | B (1) / 2 | Three-phase | Indirect |
| QBN1J | 410-VT7A-A0B10 | 3x57/100 ... 3x230/400 | .../ 1 | RS-232 Ethernet | B (1) / 2 | Three-phase | Indirect |
| QBN2B | 410-QT7B-90B10 | 3x230/400 | .../ 1 | RS-232 RS-485 | B (1) / 2 | Three-phase | Indirect |
| QBN3B | 410-QT7B-A0B10 | 3x230/400 | .../ 1 | RS-232 Ethernet | B (1) / 2 | Three-phase | Indirect |



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|-------|----------------|------------------------|-----------------------|-------------------|-------------------------|-------------|----------|
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| QBN3J | 410-VT7B-A0B10 | 3x57/100 ... 3x230/400 | .../ 1 | RS-232 Ethernet | B (1) / 2 | Three-phase | Indirect |

Please contact us for other configurations (Inputs, outputs and other communications)



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Dimensions



Connections

