410-QD1A-C0B10

410-QD1A-C0B10, Three-phase energy meters direct connection

Code: QB4D0

> Type Consumer: 4
> Communications: RS-485 | Ethernet
> Class (Active/Reactive): B (1) / 2
> System: Three-phase
> Measure: Direct
> Measurement Range (V): 3x230/400
> Measurement Range (A): 10 (100)
> Quadrants: 4
> Frequency (Hz): 50

Description

CIRWATT-B410D is a direct three-phase meter, ideal for three-phase industrial applications. It is classified as Class B for active energy as per the European MID Directive (EN 50470) or Class 1 as per IEC-62053-21. It offers multiple communication options and expansion modules, allowing it to adapt to any type of direct measurement installation.

Application

CIRWATT-B410D is suitable for low-voltage applications (for currents up to 100 or 120 A maximum). Offering solutions for a wide variety of installations such as: shopping centres, small industry and high-consumption residential areas (Consumer type 4). 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 230 (400) V - 3 x 127 (230) 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
Weight (kg)	0,388

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	3 x 230/400 V (Request for other configurations)

Current measurement circuit

Consumption	< 0,1 V·A
Reference current (Iref)	10 A
Maximum current	100 A
Minimum current measurement	< 0,5 x Itr

Communication Network

Protocol	REE, basado en IEC 870-5-102
Technology / Type	Ethernet

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Optical communication interface

Hardware	IEC 62056-21
Protocol	REE, based on IEC 870-5-113
Type	Serial;bi-directional

User interface

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

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Clock

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

Serial communication

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

CIRWATT B 410D

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CODE	TYPE	Measurement Range (V)	Measurement Range (A)	Communications	Class (Active/Reactive)	System	Measure
CIRWATT B 410D							
QB4B0D01	410-QD1A-90B10-TRIPLE TARIFA-3.0A	3x230/400	10 (100)	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect
QB4B0D60	410-QD1A-90B10-TRIPLE TARIFA-3.0TD	3x230/400	10 (100)	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect
QB4A0	410-QD1A-70B10	3x230/400	10 (100)	RS-232 | RS-232	B (1) / 2	Three-phase	Direct
QB4B0	410-QD1A-90B10	3x230/400	10 (100)	RS-232 | RS-485	B (1) / 2	Three-phase	Direct
QB4E0	410-QD1A-80B10	3x230/400	10 (100)	RS-485 | RS-485	B (1) / 2	Three-phase	Direct
QB4C0	410-QD1A-A0B10	3x230/400	10 (100)	RS-232 | Ethernet	B (1) / 2	Three-phase	Direct
QB4D0	410-QD1A-C0B10	3x230/400	10 (100)	RS-485 | Ethernet	B (1) / 2	Three-phase	Direct
QB4H0	410-QD1B-90B10	3x230/400	10 (100)	RS-232 | RS-485	B (1) / 2	Three-phase	Direct
QB7A0	410-ND1A-70B10	3x127/220	10 (100)	RS-232 | RS-232	B (1) / 2	Three-phase	Direct
QB4I0	410-QD1B-A0B10	3x230/400	10 (100)	RS-232 | Ethernet	B (1) / 2	Three-phase	Direct
QB7B0	410-ND1A-90B10	3x127/220	10 (100)	RS-232 | RS-485	B (1) / 2	Three-phase	Direct
QB7E0	410-ND1A-80B10	3x127/220	10 (100)	RS-485 | RS-485	B (1) / 2	Three-phase	Direct
QB7C0	410-ND1A-A0B10	3x127/220	10 (100)	RS-232 | Ethernet	B (1) / 2	Three-phase	Direct
QB7D0	410-ND1A-C0B10	3x127/220	10 (100)	RS-485 | Ethernet	B (1) / 2	Three-phase	Direct

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

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Dimensions

Connections