



410-ND1A-90B10, Three-phase energy meters direct connection

Code: QB7B0

> Type Consumer: 4

> Communications: RS-232 | RS-485 > Class (Active/Reactive): B (1) / 2

> System: Three-phase

> Measure: Direct

> Measurement Range (V): 3x127/220 > 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
Туре	Lithium
Mechanical characteristics	
Size (mm) width x height x depth	172 x 255 x 67 (mm)
Envelope	DIN 43859
Weight (kg)	1,3
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 127/220 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 ltr
Optical communication interface	
Hardware	IEC 62056-21
Protocol	REE, based on IEC 870-5-104
Туре	Serial;bi-directional







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Jser		

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

4000

Serial flash

Туре
Standards
Stallgaigs

Write time

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)
Туре	Gregorian calendar







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Serial communication

Protocol	REE, basado en IEC 870-5-102
Technology / Type	RS-232 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						
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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Connections **Dimensions**







