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Code:

Description

The **CIRWATT B 410RCP** is a digital multifunction three-phase class-B/Class-1 meter for active energy and Class-2 for reactive energy. This meter complies with the international IEC 62053-21 and IEC 62053-23 standards, and with the European regulations on energy meters, EN 50470-1 and EN 50470-3 (MID), which allows them to be installed in any European Union country.
It features PLC (Prime Line Carrier) PRIME communications via the electrical grid, as well as an optical port. Both communications use the DLMS protocol. It also has a logger for up to 3 months of time records for the 6 types of energy. It also allows the data to be read in the absence of voltage. It includes a circuit breaker, which allows the user to control the electricity demand, which can be managed remotely using PLC communications.

Application

The main application of the **CIRWATT B410RCP** meter is to measure active and reactive energy for invoicing in those cases where a high-performance meter is required at an optimized cost. PLC communication allows all the data recorded by the meter to be downloaded remotely via the Compact DC concentrator with PLC PRIME communication.
The circuit breaker integrated into the meter allows the supply to be managed remotely by interrupting or restoring the electricity to any user. It is also used to program the power contracted. If the programmed power exceeds its threshold, the circuit breaker will trip, cutting the supply or restoring it safely once the consumption is below the programmed threshold, thus ensuring the end user's safety at all times.

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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

Battery specification

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

Mechanical characteristics

Size (mm) width x height x depth	172 x 230 x 67 (mm)
Envelope	DIN 43859
Weight (kg)	0,67

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	3x230/400 V

Current measurement circuit

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

Optical communication interface

Hardware	IEC 62056-21
Protocol	DLMS
Type	Serial;bi-directional

User interface

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

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Memory

Memory capacity	Data: non-volatile memory, Setup and events: serial-flash
Write time	90 days
Type	Serial flash

PLC

Hardware	CENELEC
Protocol	DLMS / PRIME
Modulation system	OFDM

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	1 load curves, programmable integration time (1 ... 60 min)
Tariff programming	12 days 24 types of data 6 types of tariffs 30 public holidays

Clock

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

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Dimensions

Connections