

CIRWATT B 200

Single-phase active energy meter, Class B* and reactive, Class 2

Description

CIRWATT B is a multi-function digital single-phase meter, Class B in active energy and Class 2 in reactive energy. The meter complies with European legislation related to energy meters (MID) **EN 50470-1** and **EN 50470-3**, which approves the installation of these meters in any country of the European Union.

It includes PLC (Power Line Carrier) Communications through power cable and an optical communications port. Both use **IEC-61870-5-102** protocol. In addition, it can display information in case of power loss just pressing the button, it can store up to 6 channels of energy registers with 3 months of hourly load profile and it can limit maximum power consumed by end-user, through an internal disconnection relay which can be remotely managed using PLC communications.

Application

The main application of the **CIRWATT B** meter is the metering of active and reactive energy for billing purposes, whenever a meter with high performance features is required at an optimised cost. **PLC** communications can be used for the remote download of all data recorded by the meter through a **PLC-800** concentrator.

The circuit breaker integrated in the meter can be used to manage the supply remotely, opening/closing the circuit breaker and programming the hired power above a value that will activate the circuit breaker, opening it and reclosing it to guarantee the safety for the final user.

Features

Power supply	
Nominal voltage	230 V
Tolerance	80 % ... 115 % U_n
Consumption	<2 W; 10 V·A
Frequency	50 Hz
Voltage measurement	
Connection	Asymmetrical
Reference voltage	230 V
Frequency	50 or 60 Hz
Voltage circuit consumption	< 2 W; 10 V·A
Current measurement	
Nominal reference current, I_{ref}	10A
Maximum current I_{max}	60A
Start-up current I_{st}	< 0.04 x I_{tr}
Minimum current I_{min}	< 0.5 x I_{tr}
Current circuit consumption	0.024 V·A at 10 A
Accuracy class	
Accuracy measured in active energy	EN 50470 - Class B*
Accuracy measured in reactive energy	UNE-EN 62053-21 - Class 2
Memory	
Data	Non-volatile memory
Setup and events	Serial flash



Battery	
Type	Lithium
Working Life	>20 years @ 30°C
Clock	
Type	Gregorian calendar
Source	Temperature compensated oscillator
Accuracy (EN61038)	< 0.5 s/day
Environmental influence	
Operating temperature range	-25°C to +70°C
Storage temperature range	-40°C to +85°C
Temperature coefficient	< 15 ppm/K
Humidity	95 % max.
Insulation	
Insulating voltage	4 kV to 50 Hz during 1 min
Impulse voltage 1.2/50 μ s - IEC 62052-11	6 kV
Protection degree (IEC 62052-11)	II
Display	
Type	LCD
Number of data digits	UP to 6
Size of data digits	9 mm
Display data reading when there is no voltage	Yes

* Class B is equivalent to a Class 1

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Features

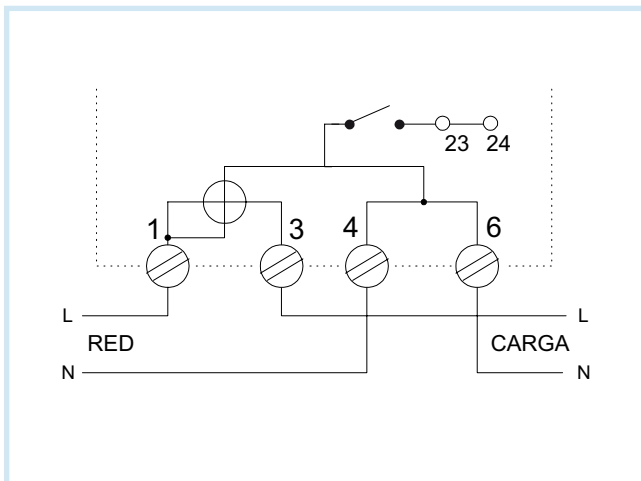
Optical communications interface	
Type	Serial, two-directional
Hardware	IEC 62056-21
Protocol	REE, based on IEC 870-5-102
Tampering detector	
Detection	Opening the terminal cover
Type	Micro-switch
Function	Detects intruders when there is no voltage.
Construction features	
Connection	Asymmetrical
External dimensions	DIN 43857
Enclosing features	DIN 43859
IP Degree (IEC 60529)	IP 51
PLC	
Modulation system	DSCK with repeater system
Hardware	CENELEC A or CENELEC B
Protocol	CirPLC and PEP (PLC Encapsulated Protocol)

Rate programming	
Number of days	4
Types of days	4
Contracts	1
Number of Tariffs	6
Discrimination	1 hour
Holidays/festivities	15
Special days	None
Load curve	
Number of load curves	1
Integration time	Programmable: 1 ... 253
Recording depth	2200
Events	
Number of events	200
Billing closures	
Number of locks	12, per contract
Type	Disabled / Programmable date and hour

References

Metering voltage 230 Vac	Current metering range (A)	Hourly discrimination	Quadrants	Relay outputs	Impulse outputs	Impulse inputs	Communication	Internal Circuit breaker	Type
•	10 (60)	DH 1	4	2			PLC A	•	CIRWATT B - 212-ES4-43B-12
•	10 (60)	DH 0	4	2			PLC A	•	CIRWATT B - 212-ED4-43B-12

Connections



Dimensions

