

AM170

212-ES4A-B0B17, Single-phase energy meter

Code: Q1F110.

> Discon. relay: Yes
> Communications: PRIME
> Class (Active/Reactive): B / 2
> System: Single-phase
> Measure: Direct
> Measurement Range (V): 230
> Measurement Range (A): 10 (60)
> Quadrants: 4
> Frequency (Hz): 50

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 / PRIME (Power Line Carrier) Communications through power cable and an optical communications port. Both use **DLMS** 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-1000** concentrator or any other PRIME 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

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AM170

Single-phase active and reactive energy meter with internal disconnection relay

Code: Q1F110.

Specifications

AC power supply

Tolerance	80 % ... 115 % Un
Consumption	< 2 W; < 10 VA
Frequency	50 ... 60 Hz
Nominal voltage	110 ... 230 V (80 ... 115 %)

Environmental characteristics

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

Mechanical characteristics

Envelope	DIN 43859

Voltage measurement circuit

Connection	Asymmetrical
Consumption	< 2 W; 10 VA
Nominal frequency	50 / 60 Hz
Nominal voltage	230 V

Current measurement circuit

Consumption	0,024 VA @ 10 A
Reference current (Iref)	10 A
Maximum current	60 A
Minimum current measurement	25 mA

Communication Network

Protocol	230 V

Battery specification

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

Optical communication interface

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



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User interface

Resolution of the display	up to 6 digits (9 mm)
Display type	LCD

Memory

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

PLC

Hardware	CENELEC A
Protocol	DLMS / PRIME
Modulation system	OFDM with repeater system

Measurement accuracy

Reactive energy measurement (kvarh)	UNE-EN 62053-21 (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 days24 types of data6 types of tariffs30 public holidays

Clock

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

CIRWATT B II PRIME
Single-phase energy meters with PLC system (measuring, load profiling, multi configurable billing calendar)

CODE	TYPE	Communications	N° relays	Class (Active/Reactive)	Measure	Measurement Range (V)	Measurement Range (A)	Discon. relay	Hourly discrimination
CIRWATT B 200RCP									
Q1F110.	AM170	PRIME	0	B / 2	Direct	230	10 (60)	1	-