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Code:

## Description

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The **CIRWATT B101** invoicing meter is a single-phase meter for residential use. It is IEC certified to invoice electricity to end users. It features Class-1 accuracy for active energy and up to 3 programmable tariffs.

The meter has a load profile with more than 400 days of data, 12 end-of-billing periods and the option to record any tampering or fraud in a special event and service quality file.

For easier reading, these meters have a backlit display that makes it easy to see the electricity consumption in places with low lighting.

## Application

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Official electricity meter via on-screen verification or by data download via optical port.

The device has, depending on the version, a digital input for forced tariff changes, especially designed for installations with dual supply sources, accumulating in tariff 1 the energy from the grid and in tariff 2 the power from the second source based on the status of the digital input.

Depending on the version, the meter can be integrated with LM devices via pulse output to collect pulses, which allow the energy consumption to be centralized and sent remotely to the PowerStudio data management system.



Code:

Specifications

AC power supply

|                 |                   |
|-----------------|-------------------|
| Tolerance       | 80 % ... 115 % Un |
| Consumption     | < 2 W; < 10 VA    |
| Frequency       | 50 / 60 Hz        |
| Nominal voltage | 127 / 230 V       |

Battery specification

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

Mechanical characteristics

|                                  |                    |
|----------------------------------|--------------------|
| Size (mm) width x height x depth | 125 x 93 x 44 (mm) |
| Envelope                         | DIN 43859          |
| Weight (kg)                      | 0,28               |

Environmental characteristics

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

Voltage measurement circuit

|                   |                            |
|-------------------|----------------------------|
| Connection        | Asymmetrical or Symetrical |
| Consumption       | < 2 W; 10 VA               |
| Nominal frequency | 50 / 60 Hz                 |
| Nominal voltage   | 127 / 230 V                |

Current measurement circuit

|                             |        |
|-----------------------------|--------|
| Reference current (Iref)    | 5 A    |
| Maximum current             | 65 A   |
| Minimum current measurement | 250 mA |

Optical communication interface

|          |                       |
|----------|-----------------------|
| Protocol | IEC 62056-21 mode C   |
| Type     | Serial;bi-directional |

User interface

|                           |                |
|---------------------------|----------------|
| Resolution of the display | up to 8 digits |
| Display type              | LCD            |

Memory



Code:

|                 |               |
|-----------------|---------------|
| Memory capacity | Simple tariff |
| Type            | FIFO          |

Measurement accuracy

|                                 |   |
|---------------------------------|---|
| Active energy measurement (kWh) | Class 1 - IEC 62053-21 Class B - EN 50470 |
|---------------------------------|---|

CIRWATT B101  
Single-phase energy meter

| CODE         | TYPE           | Communications | Impulse output | Class (Active/Reactive) | Measurement Range (V) | Measurement Range (A) | Quadrants | Entrada cambio tarifa |
|--------------|----------------|----------------|----------------|-------------------------|-----------------------|-----------------------|-----------|-----------------------|
| CIRWATT B101 |                |                |                |                         |                       |                       |           |                       |
| QBM03        | 210-ES7A-01B20 | -              | 1              | B (1)                   | 230                   | 5 (65)                | Abs.      | 0                     |
| QBM07        | 210-ES7A-0EB20 | -              | 0              | B (1)                   | 230                   | 5 (65)                | Abs.      | 1                     |



Code:

## Dimensions



## Connections

