

# Dispenser



## Single-phase/three-phase energy meter with dispenser function and built-in cutoff relay

### Description

The Dispenser is a single-phase/three-phase meter with an electrical energy dispenser function to control demand. The two functions it performs are to control the maximum power allowed and to regulate the daily energy consumption of users of a permanently powered microgrid. Its four built-in working modes enable maximum energy optimisation of the microgrid. It also allows users to intelligently manage the energy available in networks, with limited or pulsed generation, such as the energy available from renewable energy sources. It features a main switch that controls maximum power and an auxiliary relay that can be used to connect or disconnect non-essential consumption.

The meter is according to the current European regulations (**MID**), **EN 50470-1** and **EN 50470-3**, using class B for the measurement of active energy and class 2 for the measurement of reactive energy. It has an optical port and RS-485 port for network connections used for read/write parameters and creating databases. It features a wireless RFID card reader with configuration parameters that match the network to which it will be connected, also used as a contract and prepayment control. The LCD screen and the LEDs let the user view energy availability. The universal dispenser includes software that enables management through the recording of the contracts associated with each dispenser in the corresponding RFID card.

### Applications

- Microgrids with solar energy, wind energy or other sources of renewable energy.
- Microgrids with fuel generators that need to limit the available energy.
- Standalone installations with power control and Energy Daily Allowance.
- Installations with EDA (Energy Daily Allowance) systems or prepay systems
- Installations with difficult access and/or reduced consumption.

### Technical features

		Single-phase	Three-phase
<b>Power supply circuit</b>	Rated voltage (Tolerance)	230/120 Vac (80...115% $U_n$ )	3 x 230/400 Vac
	Frequency	50...60 Hz	50...60 Hz
	Consumption	<2 VA	<3 VA
<b>Voltage measurement circuit</b>	Rated voltage	230 Vac	400 Vac
	Voltage measurement margin	$\pm 20 U_n$	$\pm 20 U_n$
<b>Current measurement circuit</b>	Nominal current $I_n$	10 A Direct	10 A
	Maximum current	60 A	100 A
	Minimum current	$< 0.04 \times I_n$	$< 0.04 \times I_n$
	Start-up current	$< 20 \text{ mA}$	$< 40 \text{ mA}$
<b>Accuracy class</b>	Active energy	Class B ( <b>EN 50470</b> ) Class 1 ( <b>IEC 62053-21</b> )	
	Reactive energy	Class 2 ( <b>IEC 62053-23</b> )	
<b>Auxiliary relay</b>	Maximum voltage, open contacts	250 Vac	250 Vac
	Maximum current	3 Aac	5 Aac
	Maximum switching power	750 VA	750 VA
<b>Insulation</b>	Alternating voltage	4 kV RMS 50 Hz for 1 minute	
<b>Battery</b>	Type	Lithium	
	Useful life	> 14 years with permanent connection to the network 10 years approx. without permanent connection to the grid	
	Useful storage life	10 years approx. @ 25° without connection to the unit network.	
<b>Communications</b>	Optical	<b>IEC 62056-21</b> / Modbus	<b>IEC 62056-21</b> / Modbus
	RFID	Mifare MF1 ICS 50	Mifare MF1 ICS 50
	RS-485	Modbus / RTU	Modbus / RTU
<b>Mechanical features</b>	IP protection degree	IP 53	IP 53
	Weight	2 kg	2.5 kg
	Enclosure	In compliance with the <b>DIN 43859</b> standard	In compliance with the <b>DIN 43859</b> standard
<b>Environmental conditions</b>	Operating temperature	-25...+70 °C	-25...+70 °C
	Relative humidity	95% without condensation	95% without condensation
<b>Safety</b>	Designed for CAT II installations, in accordance with <b>EN 61010</b> . Double-insulated electric shock protection, class II		
<b>Standards</b>	According to ( <b>MID</b> ) <b>EN 50470-1:2007</b> , <b>EN 50470-3:2007</b> , <b>IEC 620552-11</b>		

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## Single-phase/three-phase energy meter with dispenser function and built-in cutoff relay

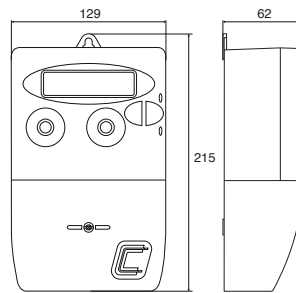
### References

Type	Code	Description
Dispenser-101	E41111	Single-phase universal dispenser with measurement of absolute value
Dispenser-104	E41311	4-quadrant single-phase universal dispenser
Dispenser-301	E41422	Three-phase universal dispenser with measurement of absolute value
Dispenser-304	E41622	4-quadrant three-phase universal dispenser
Reader writer	Q31100	RFID card writer
RFID CARD	E20001	RFID card for <b>universal dispenser</b>
DISPENSER-SOFT*	E42001	USB Licensed Management Software
DISPENSER-SOFT*	E42002	Virtual Licensed Management Software

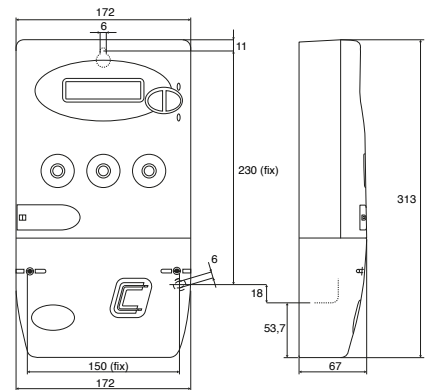
\* Windows minimum requirements:  
Windows 8 64-bit, Windows 8 Pro 64-bit, Windows 7 SP1 64-bit Ultimate, Enterprise, and Professional editions, Windows Server 2008 SP2 64-bit Datacenter, Enterprise, Standard, Foundation, and Web editions, Windows Vista SP2 64-bit Ultimate, Enterprise, and Business editions.

### Dimensions

#### Single-phase

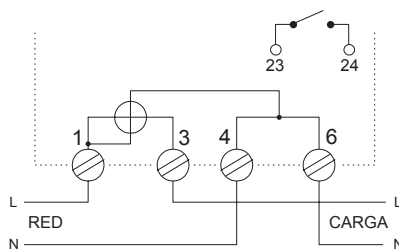


#### Three-phase



### Connections

#### Single-phase



#### Three-phase

