



CEM C10 212, Single-phase energy meter

Code: Q21112. CONSULTAR DISPONIBILIDAD

> Módules: 2 > Tariff: 1

> Certification: IEC> Transistor output: 1> System: Single-phase

> Measurement Range (V): 1 x 230 > Measurement Range (A): 5 (65) A

> Max. Current (A): 65

> Measure: Direct

### Description

Three-phase electrical energy meter with indirect measurement, 5(10)A (, CEM-C31), direct measurement 65 A (CEM-C21) or single-phase energy meter (CEM-C10).

Built-in LCD display (7 digits) with rotating screen system. It can have integrated RS-485 communications, depending on the model.. Also features

2 buttons (1 sealable button) for viewing all the measured information.

Other features include:

- o MID certification, module B+D (depending on the type)
- o Class 1 active energy (Class B, in accordance with MID), Class 2 reactive energy
- Complies with the EN 50470 (MID European standards) or IEC 62052-11 standards (international standards), depending on the type.
- o Compact size (CEM-C10: 2 modules, 36 mm, CEM-C21 y CEM-C31: 4 modules, 72 mm)
- o Resettable partial meter
- 1 programmable impulse output, in accordance with DIN 43864 (CEM-C10, CEM-C31-T1, CEM-C21-T1 models)
- o 1 Digital input for Tariff selection and impulse count (CEM-C31-D, CEM-C21-DS)
- o Indicates bad connections on the screen
- o Energy storage, even in the case of bad connections

### **Application**

- $\circ$  Redundant meter for verifying the energy allocated by the energy provider.
- $\circ$  Energy consumption report sent to a remote system (PLC/BMS).
- $\circ$  Cost control for achieving a high consumption/unit ratio in industrial processes.
- O Display of electrical parameters (V, A, kW, kW-h, PF, etc.), per phase and three-phase.







Energy meter for DIN rail mounting

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### **Specifications**

Installation category	CAT III 300 V
Consumption	< 2 W, 10 VA
Frequency	50 60 Hz
Nominal voltage	230 V ~ ±20 %
Mechanical characteristics	
Size (mm) width x height x depth	35 x 90 x 61 (mm)
Weight (kg)	0,14
Environmental characteristics	
Relative humidity (without condensation)	5 95 %
Current measurement circuit	
Consumption	0.3 VA 10 A
Reference current (Iref)	5 A
Maximum current	65 A
Minimum current measurement	0.250 A
Transition current	0.500 A
Voltage measurement circuit	
Voltage measurement circuit  Nominal frequency	50 ó 60 Hz.
	50 ó 60 Hz.
Nominal frequency	50 ó 60 Hz. 4 kV RMS 50 Hz durante 1 min
Nominal frequency  Electrical characteristics	
Nominal frequency  Electrical characteristics  Insulation voltage, circuit	
Nominal frequency  Electrical characteristics  Insulation voltage, circuit  Standards	4 kV RMS 50 Hz durante 1 min
Nominal frequency  Electrical characteristics  Insulation voltage, circuit  Standards  Electrical safety, Maximum height (m)	4 kV RMS 50 Hz durante 1 min 2000
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Nominal frequency  Electrical characteristics  Insulation voltage, circuit  Standards  Electrical safety, Maximum height (m)  Standards  User interface	4 kV RMS 50 Hz durante 1 min  2000 IEC 62053-21, IEC 62053-23, EN 50470-1, EN 50470-3
Nominal frequency  Electrical characteristics  Insulation voltage, circuit  Standards  Electrical safety, Maximum height (m)  Standards  User interface  LED	4 kV RMS 50 Hz durante 1 min  2000  IEC 62053-21, IEC 62053-23, EN 50470-1, EN 50470-3  2 LED: kWh, 1000 imp/kWh, kvarh, 1000 imp/kvarh
Nominal frequency  Electrical characteristics  Insulation voltage, circuit  Standards  Electrical safety, Maximum height (m) Standards  User interface  LED  Keyboard	4 kV RMS 50 Hz durante 1 min  2000 IEC 62053-21, IEC 62053-23, EN 50470-1, EN 50470-3  2 LED: kWh, 1000 imp/kWh, kvarh, 1000 imp/kvarh 2 Keys
Nominal frequency  Electrical characteristics  Insulation voltage, circuit  Standards  Electrical safety, Maximum height (m)  Standards  User interface  LED  Keyboard  Display type	4 kV RMS 50 Hz durante 1 min  2000 IEC 62053-21, IEC 62053-23, EN 50470-1, EN 50470-3  2 LED: kWh, 1000 imp/kWh, kvarh, 1000 imp/kvarh 2 Keys LCD
Nominal frequency  Electrical characteristics  Insulation voltage, circuit  Standards  Electrical safety, Maximum height (m)  Standards  User interface  LED  Keyboard  Display type  Maximum value	4 kV RMS 50 Hz durante 1 min  2000 IEC 62053-21, IEC 62053-23, EN 50470-1, EN 50470-3  2 LED: kWh, 1000 imp/kWh, kvarh, 1000 imp/kvarh 2 Keys LCD







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Maximum current	50 mA
Maximum voltage	24 Vcc

#### Measurement accuracy

Reactive energy measurement (kvarh)	Class 2.0 (IEC 62053-23)
Active energy measurement (kWh)	Class 1 (IEC 62053-21)

#### Wireless communication

Technology / Type Optical IR port (additional external receiver required)

CEM-C10 and CEM-C21/C31 without built-in RS-485 communications can optionally communicate with CEM-M-ETH and CEM-M-RS485 modules. Devices with absolute measurements (Abs). For 2 or 4 quadrants, see the Aditional table Frecuency: 50/60 Hz. Parameters: V, A, kW, kVA, kWh, cos phi

CEM-XXX-TI encoding table - Devices with pulse output (transistor)
CEM-XXX-DS-Devices with digital input for tariff change and impulse meter







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**Dimensions** Connections





