

# CEM-D210

CEM-D210, Direct three-phase energy meter

Code: Q22601.

> Módules: 4
> Certification: IEC
> Transistor output: 1
> System: Three-phase
> Measure: Direct
> Measurement Range (V): 3x127(230)...3x230(400)V
> Measurement Range (A): (5) 100A

## Description

Three-phase electrical energy meter with direct measurement up to 100 A (depending on model), featuring sealable terminals and optional communication via Modbus RS-485 and M-BUS protocols (depending on model).

Main features include:

- MID certification, modules B+D (depending on model).
- Class 1 for active energy (Class B as per MID), Class 2 for reactive energy.
- Compliant with EN 50470 (European MID standard) or IEC 62052-11 (international standard), depending on the model.
- Compact size (4 DIN rail modules).
- Resettable partial energy counter.
- 1 programmable pulse output (depending on model).
- 1 digital input for tariff control and pulse counting (depending on model).
- Time-of-use tariff calendar.
- Modbus RS-485 and M-BUS communications (depending on model).
- Display of basic electrical parameters (V, A, kW, kWh, PF, etc.).

## Application

- Meter for energy sub-metering.
- Applications where certified MID meters are required for energy verification and billing.
- Meter used to verify the energy invoiced by the electricity distributor.
- Energy consumption reporting and connectivity with SCADA systems.
- Energy and cost control in industrial processes.



Creation date: 05/11/2026 - CIRCUTOR, SAU reserves the right to make technical changes or modify the content/images of this document without prior notice, in order to improve its reliability, functionality, design or for other reasons.
It accepts no liability for any errors, inaccuracies or possible lack of information in this document.



# CEM-D210

Three-phase electricity meter with direct measurement up to 100A

Code: Q22601.

## Specifications

### AC power supply

| | |
|---|---|
| Installation category | CAT III 300 V |
| Consumption | < 0.5 W, < 2 VA |
| Frequency | 50 ... 60 Hz |
| Nominal voltage | 3 x 127/220 ... 3 x 230/400 V ~ ± 20 % |

### Mechanical characteristics

| | |
|---|---|
| Size (mm) width x height x depth | 71.5 x 90 x 74 (mm) |
| Envelope | PC+ABS |
| Fastening | DIN rail (IEC 60715) |
| Weight (kg) | 0,38 |

### Environmental characteristics

| | |
|---|---|
| Protection class | IP 51 (instaled) IP 40 (terminal area) |
| Relative humidity (without condensation) | 5 ... 95 % |
| Storage temperature | -40 .. +85 °C |
| Working temperature | -40 ... +70 °C |

### Current measurement circuit

| | |
|---|---|
| Consumption | < 1 VA |
| Reference current (Iref) | 5 A |
| Minimum current measurement | 0.250 A |
| Transition current | 0.500 A |

### Voltage measurement circuit

| | |
|---|---|
| Nominal voltage | 3 x 127/220 ... 3 x 230/400 V ~ ± 20 % |

### User interface

| | |
|---|---|
| LED | 2 LED: kWh: 4000 imp/kWh, kvarh: 4000 imp/kvarh |
| Keyboard | 2 Keys |
| Display type | LCD |
| Maximum value | 4294967 kWh |

### Standards

| | |
|---|---|
| Standards | IEC-62053-21; IEC 62053-23; IEC 62053-52; IEC 62052-11; UNE-EN 50470-3; MID (EU Directive 2014/32/EU on Measuring Instruments Annex II, Module B |

### Digital transistor outputs



# CEM-D210

Three-phase electricity meter with direct measurement up to 100A

Code: Q22601.

| | |
|---|---|
| Type | Optocoupler |
| Pulse output, time period (Ton / Toff) | Ton: 200 ms / Toff:113.02 ms |
| Maximum current | ≤ 27 mA |
| Maximum voltage | ≤ 27 V |

**Measurement accuracy**

| | |
|---|---|
| Reactive energy measurement (kvarh) | Class 2 (IEC 62053-23) |
| Active energy measurement (kWh) | Class 1 (IEC 62053-21) |

**CEM-D200**

Three-phase direct energy meter up to 100A

| CODE | TYPE | Measurement Range (V) | Measurement Range (A) | Transistor output | Certification | Módules | Digital inputs | Communications | Protocol |
|---|---|---|---|---|---|---|---|---|---|
| **Direct three-phase** | | | | | | | | | |
| Q22601. | CEM-D210 | 3x127(230)...3x230(400)V | (5) 100A | 1 | IEC | 4 | | | |
| Q22602. | CEM-D210 -MID | 3x127(230)...3x230(400)V | (5) 100A | 1 | MID | 4 | | | |
| Q22611. | CEM-D211 | 3x127(230)...3x230(400)V | (5) 100A | | IEC | 4 | 2 | RS-485 | Modbus/RTU |
| Q22612. | CEM-D211 -MID | 3x127(230)...3x230(400)V | (5) 100A | | MID | 4 | 2 | RS-485 | Modbus/RTU |
| Q22621. | CEM-D212 | 3x127(230)...3x230(400)V | (5) 100A | | IEC | 4 | 2 | | MBUS |
| Q22622. | CEM-D212 -MID | 3x127(230)...3x230(400)V | (5) 100A | | MID | 4 | 2 | | MBUS |

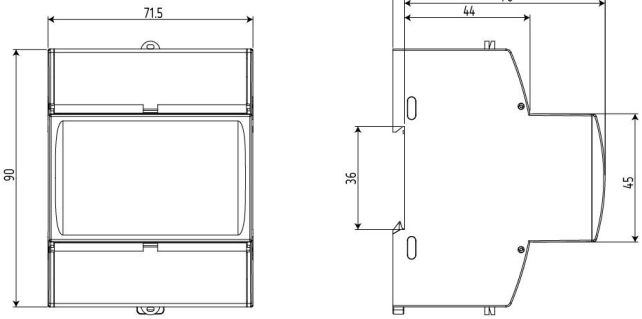


# CEM-D210

Three-phase electricity meter with direct measurement up to 100A

Code: Q22601.

## Dimensions




## Connections

