



## CEM-D312 -MID

CEM-D312 -MID, Indirect three-phase energy meter with MID certification

Code: Q23622.

- > Protocol: MBUS
- > Módulos: 4
- > Certification: MID
- > Digital inputs: 2
- > System: Three-phase
- > Measure: Indirect
- > Measurement Range (V): 3x127(230)...3x230(400)V
- > Measurement Range (A): .../5A o .../1A

### Description

Three-phase electric energy meter with indirect measurement .../5 A and .../1 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.



## CEM-D312 -MID

Three-phase electricity meter with indirect measurement /5A and/or 1A.

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### 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 (5A)    |
| Maximum current             | .../5 A (10A)   |
| Minimum current measurement | .../5 A (0.05A) |
| Transition current          | 0.250 A         |

#### Voltage measurement circuit

|                 |  |
|-----------------|--|
| Consumption     | < 2 VA                                 |
| 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                                     |

#### Digital inputs

|          |                        |
|----------|------------------------|
| Quantity | 2                      |
| Type     | Potencial free contact |



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### 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) |
|-----------|---|

### Measurement accuracy

|                                     |                        |
|-------------------------------------|------------------------|
| Reactive energy measurement (kvarh) | Class 2 (IEC 62053-23) |
| Active energy measurement (kWh)     | Class B (UNE-EN-50470) |

### Serial communication

|          |      |
|----------|------|
| Protocol | MBUS |
|----------|------|

### CEM-D300

Three-phase indirect energy meter

| CODE                        | TYPE          | Measurement Range (V)    | Measurement Range (A)         | Transistor output | Certification | Módulos | Digital inputs | Communications | Protocol   |
|-----------------------------|---------------|--------------------------|-------------------------------|-------------------|---------------|---------|----------------|----------------|------------|
| <b>Indirect three-phase</b> |               |                          |                               |                   |               |         |                |                |            |
| Q23601.                     | CEM-D310      | 3x127(230)...3x230(400)V | .../5A <sup>o</sup><br>.../1A | 1                 | IEC           | 4       |                |                |            |
| Q23602.                     | CEM-D310 -MID | 3x127(230)...3x230(400)V | .../5A                        | 1                 | MID           | 4       |                |                |            |
| Q23611.                     | CEM-D311      | 3x127(230)...3x230(400)V | .../5A <sup>o</sup><br>.../1A |                   | IEC           | 4       | 2              | RS-485         | Modbus/RTU |
| Q23612.                     | CEM-D311 -MID | 3x127(230)...3x230(400)V | .../5A                        |                   | MID           | 4       | 2              | RS-485         | Modbus/RTU |
| Q23621.                     | CEM-D312      | 3x127(230)...3x230(400)V | .../5A <sup>o</sup><br>.../1A |                   | IEC           | 4       | 2              |                | MBUS       |
| Q23622.                     | CEM-D312 -MID | 3x127(230)...3x230(400)V | .../5A                        |                   | MID           | 4       | 2              |                | MBUS       |

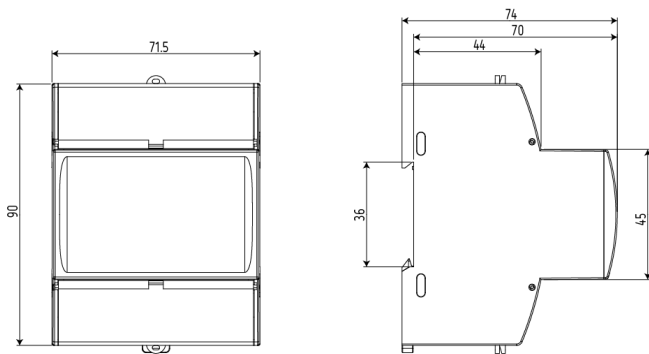


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### Dimensions



### Connections

