



## CEM-C31-T1

CEM-C31-T1, Indirect three-phase energy meter

Code: Q23511.

- > Módulos: 4
- > Tariff: 1
- > Certification: IEC
- > Transistor output: 1
- > System: Three-phase
- > Measure: Indirect
- > Measurement Range (V): 3 x 57/100...3 x 230/400
- > Measurement Range (A): .../ 5 (10) A
- > Max. Current (A): 10

### Specifications

#### AC power supply

|                       |                  |
|-----------------------|------------------|
| 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 | 70 x 90 x 64 (mm) |
| Weight (kg)                      | 0,37              |

#### Environmental characteristics

|  |            |
|--|------------|
| Relative humidity (without condensation) | 5 ... 95 % |
|--|------------|

#### Current measurement circuit

|                             |                 |
|-----------------------------|-----------------|
| Consumption                 | 0.3 VA ... 10 A |
| Reference current (Iref)    | 5 A             |
| Maximum current             | 10 A            |
| Minimum current measurement | 0.050 A         |
| Transition current          | 0.25 A          |

#### Voltage measurement circuit

|                   |                                 |
|-------------------|---------------------------------|
| Consumption       | < 2W , < 10VA (In, Vref)        |
| Nominal frequency | 50 / 60 Hz                      |
| Nominal voltage   | 3 x 127/220 ... 3 x 230/400 V ~ |

#### Electrical characteristics

|                             |                              |
|-----------------------------|------------------------------|
| Insulation voltage, circuit | 4 kV RMS 50 Hz durante 1 min |
|-----------------------------|------------------------------|

#### Communications

|          |        |
|----------|--------|
| Protocol | ModBus |
| Speed    | 9600   |



## CEM-C31-T1

Energy meter for DIN rail mounting

Code: Q23511.

### Standards

|                                       |   |
|---------------------------------------|---|
| Electrical safety, Maximum height (m) | 2000  |
| Standards                             | EN 50470-1, EN 50470-3, IEC 62053-21, IEC 62053-23, EN 62056-21 |

### User interface

|               |   |
|---------------|---|
| LED           | 2 LED: kWh, 20000 imp/kWh, kvarh, 20000 imp/kvarh |
| Keyboard      | 2 Keys  |
| Display type  | LCD   |
| Maximum value | 999999.9 kWh                                      |

### Digital transistor outputs

|  |             |
|--|-------------|
| Quantity                               | 1           |
| Pulse output, time period (Ton / Toff) | Ton: 200 ms |
| 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)   |

### CEM-C

| CODE                        | TYPE               | Measurement Range (V)     | Measurement Range (A) | Communications | Protocol   | Transistor output | Digital inputs | Tariff | Certification |
|-----------------------------|--------------------|---------------------------|-----------------------|----------------|------------|-------------------|----------------|--------|---------------|
| <b>Direct three-phase</b>   |                    |                           |                       |                |            |                   |                |        |               |
| Q22411.                     | CEM-C21-T1         | 3 x 127/220...3 x 230/400 | 5 (65) A              | -              | -          | 1                 | -              | 1      | IEC           |
| Q22421.                     | CEM-C21-485-T1     | 3 x 127/220...3 x 230/400 | 5 (65) A              | RS-485         | Modbus/RTU | 1                 | -              | 1      | IEC           |
| Q22431.                     | CEM-C21-485-DS     | 3 x 127/220...3 x 230/400 | 5 (65) A              | RS-485         | Modbus/RTU | 0                 | 1              | 2      | IEC           |
| Q22412.                     | CEM-C21-T1-MID     | 3 x 127/220...3 x 230/400 | 5 (65) A              | -              | -          | 1                 | -              | 1      | MID           |
| Q22422.                     | CEM-C21-485-T1-MID | 3 x 127/220...3 x 230/400 | 5 (65) A              | RS-485         | Modbus/RTU | 1                 | -              | 1      | MID           |
| Q22432.                     | CEM-C21-485-DS-MID | 3 x 127/220...3 x 230/400 | 5 (65) A              | RS-485         | Modbus/RTU | 0                 | 1              | 2      | MID           |
| <b>Indirect three-phase</b> |                    |                           |                       |                |            |                   |                |        |               |
| Q23511.                     | CEM-C31-T1         | 3 x 57/100...3 x 230/400  | .../ 5 (10) A         | -              | -          | 1                 | -              | 1      | IEC           |
| Q23521.                     | CEM-C31-485-T1     | 3 x 57/100...3 x 230/400  | .../ 5 (10) A         | RS-485         | Modbus/RTU | 1                 | -              | 1      | IEC           |
| Q23531.                     | CEM-C31-485-DS     | 3 x 57/100...3 x 230/400  | .../ 5 (10) A         | RS-485         | Modbus/RTU | 0                 | 1              | 2      | IEC           |
| Q23512.                     | CEM-C31-T1-MID     | 3 x 57/100...3 x 230/400  | .../ 5 (10) A         | -              | -          | 1                 | -              | 1      | MID           |
| Q23522.                     | CEM-C31-485-T1-MID | 3 x 57/100...3 x 230/400  | .../ 5 (10) A         | RS-485         | Modbus/RTU | 1                 | -              | 1      | MID           |
| Q23532.                     | CEM-C31-485-DS-MID | 3 x 57/100...3 x 230/400  | .../ 5 (10) A         | RS-485         | Modbus/RTU | 0                 | 1              | 2      | MID           |



## CEM-C31-T1

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Energy meter for DIN rail mounting

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### Dimensions

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### Connections

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