The compact and versatile EQ meter C13 is a three phase meter with outstanding performance. It can be used in most of the common applications for reliable and trustworthy metering of energy usage.

EQ meters C13 is mainly intended for stand-alone applications.

General features
C13 is a three phase direct connected meter up to 40 A. The C13 is measuring active energy with accuracy class B (Cl. 1). The low rated or base currents of this product ensures high dynamic performance with superior accuracy even at low currents. Navigation of the meter is easily done via the push-button below the display. The low power consumption of the meter, less than 1.5 VA, makes it economical in the long run - an important feature specially for large meter populations.

Instrumentation
The C13 meter supports reading of instrument values. A large number of electrical properties can be read.

- Active power - Total and per phase
- Voltage - Total and per phase
- Current - Total and per phase
- Power factor

Output
The C13 meter has one solid state relay output that can be used for S0 pulses or as alarm output. C13 can generate pulses proportionally to the measured energy and the pulses can be used for various applications such as automatic meter reading systems etc. When used as alarm the quantity and levels are easily configured on the meter with the push button. When used as alarm the output can control an external apparatus like a contactor (connected via an external relay) or an alarm indicator.

Approvals
The C13 meters are type approved according to IEC as well as type approved and optionally verified according to MID. MID is the Measure Instruments Directive 2004/22/EC from European Commission. The type approval is according to standards that covers all relevant technical aspects of the meter. These include climate conditions, electromagnetic compatibility (EMC), electrical requirements, mechanical requirements and accuracy.

Ordering details
40 A direct connected, 3 DIN

<table>
<thead>
<tr>
<th>Voltage V</th>
<th>Accuracy Class</th>
<th>Type</th>
<th>Order code</th>
<th>Weight 1 pc</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 x 230/400 V AC</td>
<td>Cl. 1</td>
<td>C13 110 – 100</td>
<td>2CMA100191R1000</td>
<td>0.17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Class 1</td>
<td>C13 110 – 300</td>
<td>2CMA100192R1000</td>
</tr>
</tbody>
</table>

* MID approval
**Technical data**

### Voltage/current inputs

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal voltage</td>
<td>3 x 230/400 V AC</td>
</tr>
<tr>
<td>Voltage range</td>
<td>3 x 220 - 240 V AC (20% - +15%)</td>
</tr>
<tr>
<td>Power dissipation voltage circuits</td>
<td>1.5 VA (0.6 W) total</td>
</tr>
<tr>
<td>Power dissipation current circuits</td>
<td>0.04 VA (0.04 W) per phase at 230 V AC and Ib</td>
</tr>
<tr>
<td>Base current Ib</td>
<td>5 A</td>
</tr>
<tr>
<td>Reference current Ib</td>
<td>5 A</td>
</tr>
<tr>
<td>Transition current Ib</td>
<td>3.5 A</td>
</tr>
<tr>
<td>Maximum current Ib</td>
<td>40 A</td>
</tr>
<tr>
<td>Minimum current Ib</td>
<td>0.25 A</td>
</tr>
<tr>
<td>Starting current Ib</td>
<td>&lt; 20 mA</td>
</tr>
<tr>
<td>Terminal wire area</td>
<td>0.5 - 10 mm²</td>
</tr>
<tr>
<td>Recommended tightening torque</td>
<td>0.3 Nm</td>
</tr>
</tbody>
</table>

### Pulse indicator (LED)

- **Pulse frequency**: 1000 imp/kWh
- **Pulse length**: 40 ms

### General data

- **Frequency**: 50 or 60 Hz ± 5%
- **Accuracy Class**: B (Cl. 1)
- **Active energy**: 1%
- **Display of energy**: 6 digit LCD

### Environmental

- **Operating temperature**: -25°C - +70°C
- **Storage temperature**: -25°C - +85°C
- **Humidity**: 75% yearly average, 95% on 30 days/year
- **Resistance to fire and heat**: Terminal 960 °C, cover 650°C (IEC 60695-2-1)
- **Resistance to water and dust**: IP20 on terminal block without protective enclosure and IP51 in protective enclosure, according to IEC 60529.
- **Mechanical environment**: Class M1 in accordance with the Measuring Instrument Directive (MID), (2004/22/EC).
- **Electromagnetic environment**: Class E2 in accordance with the Measuring Instrument Directive (MID), (2004/22/EC).

### Outputs

- **Current**: 2 - 100 mA
- **Voltage**: 5 - 40 V DC
- **Pulse output frequency**: 100 (imp/kWh)
- **Pulse length**: 200 ms
- **Terminal wire area**: 0.5 - 6 mm²
- **Recommended tightening torque**: 0.3 Nm

### EMC compatibility

- **Impulse voltage test**: 6 kV 1.2/50μs (IEC 60060-1)
- **Surge voltage test**: 4 kV 1.2/50μs (IEC 61000-4-5)
- **Fast transient pulse test**: 4 kV (IEC 61000-4-4)
- **Immunity to electromagnetic FF-fields**: 80 MHz - 2 GHz at 10 V/m (IEC 61000-4-3)
- **Immunity to conducted disturbance**: 150 kHz - 80 MHz (IEC 61000-4-6)
- **Immunity to disturbance with harmonics**: 2 kHz - 150 kHz
- **Radio frequency emission**: EN 55022, class B (CISPR 22)
- **Electrostatic discharge**: 15 kV (IEC 61000-4-2)
- **Standards**: IEC 62052-11, IEC 62053-21 class 1, GB/T 17215.211-2006, GB/T 17215.321-2008 class 1, GB 4208-2008, EN 50470-1, EN 50470-3 category B

### Mechanical

- **Material**: Glass reinforced polycarbonate
- **Width**: 54 mm
- **Height**: 122 mm
- **Depth**: 65 mm
- **DIN modules**: 3

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**Wiring diagram C13**

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**Dimensions**

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**ABB AB**

**Meters**

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