The compact and versatile EQ meters A43 and A44 are three phase meters with outstanding performance. They can be used in most of the common applications for reliable and trustworthy metering of energy usage.

EQ meters A43 and A44 in Silver version can be used in stand-alone applications or metering network installations with the option of inbuilt M-Bus or Modbus.

General features
The A series meters are ideal for many applications and installations. The meters support a wide voltage range as well as a wide temperature range. The display is pixel-oriented and can display up to four quantities at the same time. Navigating the meter is easily done via the push-buttons below the display. To configure the meter settings, the set button must be accessed and this button is protected against unauthorized use when the transparent lid on the front of the meter is closed and sealed. The power consumption of the meter is very low, less than 0.8 VA, makes them economical in the long run - an important feature especially for large meter populations.

Communication
Data from A43 and A44 in Silver version can be collected via pulse output or serial communication. The meter is equipped with solid state outputs for 5-240 V AC/DC external supply. It can be used for pulses proportionally to the measured energy or various alarms. The meter is also available with built-in serial communication interfaces for Modbus RTU (RS-485) or M-Bus as option.

Tariff handling
The A43 and A44 have up to 4 tariffs that could be controlled either by the 2 inputs or through serial communication.

Approvals
The A43 and A44 meters are type approved according to IEC as well as type approved and 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.

Instrumentation
The A43 and A44 meters in Silver version support reading of instrument values.

A large number of electrical properties can be read.
- Active power - Total and per phase
- Reactive power - Total and per phase
- Apparent power - Total and per phase
- Current - Total and per phase
- Voltage - Total and per phase
- Power factor
- Frequency

Ordering details
80 A direct connected, 7 DIN

<table>
<thead>
<tr>
<th>Voltage V</th>
<th>Accuracy Class</th>
<th>Communication Type</th>
<th>Order code</th>
<th>Weight 1 pc</th>
</tr>
</thead>
<tbody>
<tr>
<td>288/500 V AC</td>
<td>Class B (Cl. 1)</td>
<td>A43 311 - 100</td>
<td>2CMA170524R1000</td>
<td>0.44</td>
</tr>
<tr>
<td>RS-485</td>
<td>A43 312 - 100</td>
<td>2CMA170525R1000</td>
<td>0.44</td>
<td></td>
</tr>
<tr>
<td>M-Bus</td>
<td>A43 313 - 100</td>
<td>2CMA170526R1000</td>
<td>0.44</td>
<td></td>
</tr>
</tbody>
</table>

6 A transformer CTVT connected, 7 DIN

<table>
<thead>
<tr>
<th>Voltage V</th>
<th>Accuracy Class</th>
<th>Communication Type</th>
<th>Order code</th>
<th>Weight 1 pc</th>
</tr>
</thead>
<tbody>
<tr>
<td>288/500 V AC</td>
<td>Class B (Cl. 1)</td>
<td>A44 311 - 100</td>
<td>2CMA170536R1000</td>
<td>0.35</td>
</tr>
<tr>
<td>RS-485</td>
<td>A44 352 - 100</td>
<td>2CMA170537R1000</td>
<td>0.35</td>
<td></td>
</tr>
<tr>
<td>M-Bus</td>
<td>A44 353 - 100</td>
<td>2CMA170538R1000</td>
<td>0.35</td>
<td></td>
</tr>
</tbody>
</table>
### Technical data

**Voltage/current inputs**

<table>
<thead>
<tr>
<th>A43</th>
<th>A44</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 57.7/100 ... 288 /500 V AC (-20% - +15%)</td>
</tr>
<tr>
<td>Power dissipation voltage circuits</td>
<td>0.8 VA (0.8 W) total</td>
</tr>
<tr>
<td>Power dissipation current circuits</td>
<td>0.007 VA (0.007 W) per phase at 230 V AC and Iₙ</td>
</tr>
<tr>
<td>Base current Iₑ</td>
<td>5 A</td>
</tr>
<tr>
<td>Rated current Iₑ</td>
<td>-</td>
</tr>
<tr>
<td>Reference current Iₑ</td>
<td>5 A</td>
</tr>
<tr>
<td>Transitional current Iₑ</td>
<td>0.5 A</td>
</tr>
<tr>
<td>Minimum current Iₑ</td>
<td>0.25 A</td>
</tr>
<tr>
<td>Starting current Iₑ</td>
<td>&lt; 20 mA</td>
</tr>
<tr>
<td>Terminal wire area</td>
<td>1 - 25 mm²</td>
</tr>
<tr>
<td>Recommended tightening torque</td>
<td>3 Nm</td>
</tr>
</tbody>
</table>

**Communication**

- Terminal wire area: 0.5 - 1 mm²
- Recommended tightening torque: 0.25 Nm
- Configurable current ratio (V/I): 1/999 - 999999/1
- Configurable current ratio (CT): - 1/9 - 9999/1

**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) or reactive Cl. 2
- Active energy: 1%
- Display of energy: Pixel oriented
- Immune to electromagnetic HF-fields: 80 MHz - 150 kHz
- Immune to disturbances with harmonics: 5 kHz - 150 kHz

**Environmental**

- Operating temperature: -40°C - +70°C
- Storage temperature: -40°C - +85°C
- Humidity: 75% yearly average, 95% on 30 days/year

**Mechanical**

- Material: Polycarbonate in transparent front glass, bottom case, upper case and terminal cover.
- Dimensions:
  - Width: 123 mm
  - Height: 97 mm
  - Depth: 65 mm

**EMC compatibility**

- Impulse voltage test: 6 kV (IEC 60664-1)
- Surge voltage test: 4 kV (IEC 61000-4-5)
- Fast transient burst test: 4 kV (IEC 61000-4-4)
- Immunity to electromagnetic HF-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: 5 kHz - 150 kHz
- Radio frequency emission: EN 55022, class B (CISPR22)
- Electrostatic discharge: 15 kV (IEC 61000-4-2)

**Standards**

- IEC 62053-11, IEC 62053-21 class 1 & 2, IEC 62053-22 class 0.5 S, IEC 62053-23 class 2, IEC 62054-21, IEC 17215-31-2008, GB 17215-321-2008 class 1 & 2, GB 17215-322-2008 class 0.5 S, GB 4206-2008, EN 50470-1, EN 50470-3 category B & C

**Mechanical environment**

- Class M2 in accordance with the Measuring Instrument Directive (MID).
- Class E2 in accordance with the Measuring Instrument Directive (MID).

**Dimensions**

- Width: 123 mm
- Height: 97 mm
- Depth: 65 mm
- DIN modules: 7

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### Wiring diagram

**A43**

- 3 wire connection, 2 elements
- 4 wire connection, 3 elements

**A44**

- 3 wire connection, 2 elements
- 4 wire connection, 3 elements

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**ABB AB**

Meters

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