Technical information

AAE3, 65 A
3-phase energy meters for 1 or 2 tariffs

Division Controls

AAE3, the 65Amps compact 3-phase energy meters for primary and secondary energy metering.

For individual charging or precise energy management in decentralized or jointly used premises, installations such as:
- Shopping malls, airports and railway stations
- Shared spaces in offices, factories, shops, air-conditioned areas, advertising and lighting
- Apartments, houses, bungalows, hotels, hospitals and schools
- Exhibitions, parish fairs etc.

Accurate measurement and secure reading for fair billing or correct energy management analysis
- Registers lowest electricity consumptions, even devices in stand-by operation
- No false reading, no cheating. Highest level of data integrity thank to Saia® High Level EMC Design allied with a robust mechanical construction
- Energy metering is affordable everywhere. Easy integration in existing and new electrical cabinets, thank compact and space saving design (only 70 mm wide)
- Impulse outputs SO for remote reading or centralized data collection. Accounting of various consumers
- LED signaling allow easy check of metering status even with inverted line connections
- PTB or MID certified
**Technical data**

**Approvals**
PTB or MID approval

**Precision Class**
1 (11) according to IEC 62053-21,
B according to EN 50470-3

**Protection class**
IP 50 | Connections IP 20

**Current**
Nominal current ln = 10 A.
Maximum current imax. = 65 A per phase
Minimum load current Ist = 40 mA

**Voltage**
Supply voltage 3 × 230/400 Vac, 50 Hz
3 × 115/200 Vac, 50 Hz as option
Tolerance -20%/+15%

**Consumption per line**
active 0.4 W

**Measurement**
direct

**Counting capacity**
0...999 999.9 kWh

**Mechanical counter**
4 mm high digits, decimal places in red

**Open collector output (SO)**
Optocoupler max. 30 V / 20 mA and 5 V min.
Impedance 100 Ω
Pulse duration 50 ms
Output pulses 100 imp./kWh
Communication distance maximum 1000 m (at 30 V / 20 mA)

**LED red**
On = correct connected, no current
Flashing = load measurement
Wrong connection, see LED functions

**Mounting**
Snap on DIN rail 35 mm

**Terminal connections**
For Pozidrive N°1, Philips N°1 or slot screw drivers N°1/N°2

**Mains**
max. 16 mm², M4, N°1/N°2

**Output SO**
max. 2.5 mm², M3.5, N°1

**Insulation characteristics**
4 kV/50 Hz test according to VDE 0435
6 kV 1.2/50 μs surge voltage according to IEC 61000-4-5
Protection class II

**Ambient Conditions**
Temperature -10°C...+45°C
temperature range -20°C...+55°C (outside accuracy class 1)
Humidity 25...40°C 95 % R.H.

**Extended temperature range**
-20°C...+55°C (outside accuracy class 1)

**EMC/Interference immunity**
4 kV 1.2/50 μs surge voltage (according to IEC 61000-4-5 on the mains)
1 kV 1.2/50 μs surge voltage (according to IEC 61000-4-5 on the output SO)
Burst according to IEC 61000-4-4,
level 4 (4 kV)
ESD according to IEC 61000-4-2,
contact (8 kV), air (15 kV)

**LED functions**
Tarif control LED = Counter in normal operation

<table>
<thead>
<tr>
<th>Error LED</th>
<th>Measured power</th>
<th>Pulses per kWh</th>
<th>Puls pause</th>
<th>Pr momentarily in kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>High</td>
<td>Pulses in kW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zero</td>
<td>Low</td>
<td>High</td>
<td>100</td>
<td>150 ms</td>
</tr>
</tbody>
</table>

**Dimensions**
for 1 and 2 tariffs meters

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www.start-controls.com
Connections | External pulse counting, energy metering

Connections and display elements

Connections AAE3, 1 tariff meter

AAE3, 65A, 2 tariffs meter

Connections AAE3, 2 tariffs meter

External pulse counting/energy metering with Saia® PCD

Centralized meter reading and billing with Saia® PCD and AAE3

Complete solutions for centralized data collection of several 100 of AAD and AAE energy meters are easy in combination with Saia® PCD controllers for:

- Data acquisition, data storage, data transmission to other systems
- Extraction of data for energy billing and automatic generation of invoices
- Transmission of energy data via modems, TCP/IP and all commonly used protocols
- Data visualization via direct access to integrated web server

Application example
... a wealth of applications

Consumption-based billing of energy used during industrial exhibitions and local trade fairs.

Individual billing of power consumption for jointly used premises in offices or industry.

Residential renewable energy generation with photovoltaic, wind, fuel cells etc.

Registering the energy consumption of users is an important part of energy management in hotels, hospitals, hostels, motels etc.

Ordering information

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Dimensions</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAE3D5F10PR2A00</td>
<td>3 x 10 (65) A, 1 tariff</td>
<td>70 x 82 x 62 mm</td>
<td>190 g</td>
</tr>
<tr>
<td>AAE3D5F10PR3A00</td>
<td>3 x 10 (65) A, 1 tariff, MID approval</td>
<td>70 x 82 x 62 mm</td>
<td>190 g</td>
</tr>
<tr>
<td>AAE3D5F11PR2A00</td>
<td>3 x 10 (65) A, 2 tariffs</td>
<td>70 x 82 x 62 mm</td>
<td>200 g</td>
</tr>
<tr>
<td>AAE3D5F11PR3A00</td>
<td>3 x 10 (65) A, 2 tariffs, MID approval</td>
<td>70 x 82 x 62 mm</td>
<td>200 g</td>
</tr>
<tr>
<td>4104 7485 0</td>
<td>Sealing cover for AAE3 65A</td>
<td>35 x 28 x 39 mm</td>
<td>5 g</td>
</tr>
</tbody>
</table>

1) For full protection against contact four pieces are recommended

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