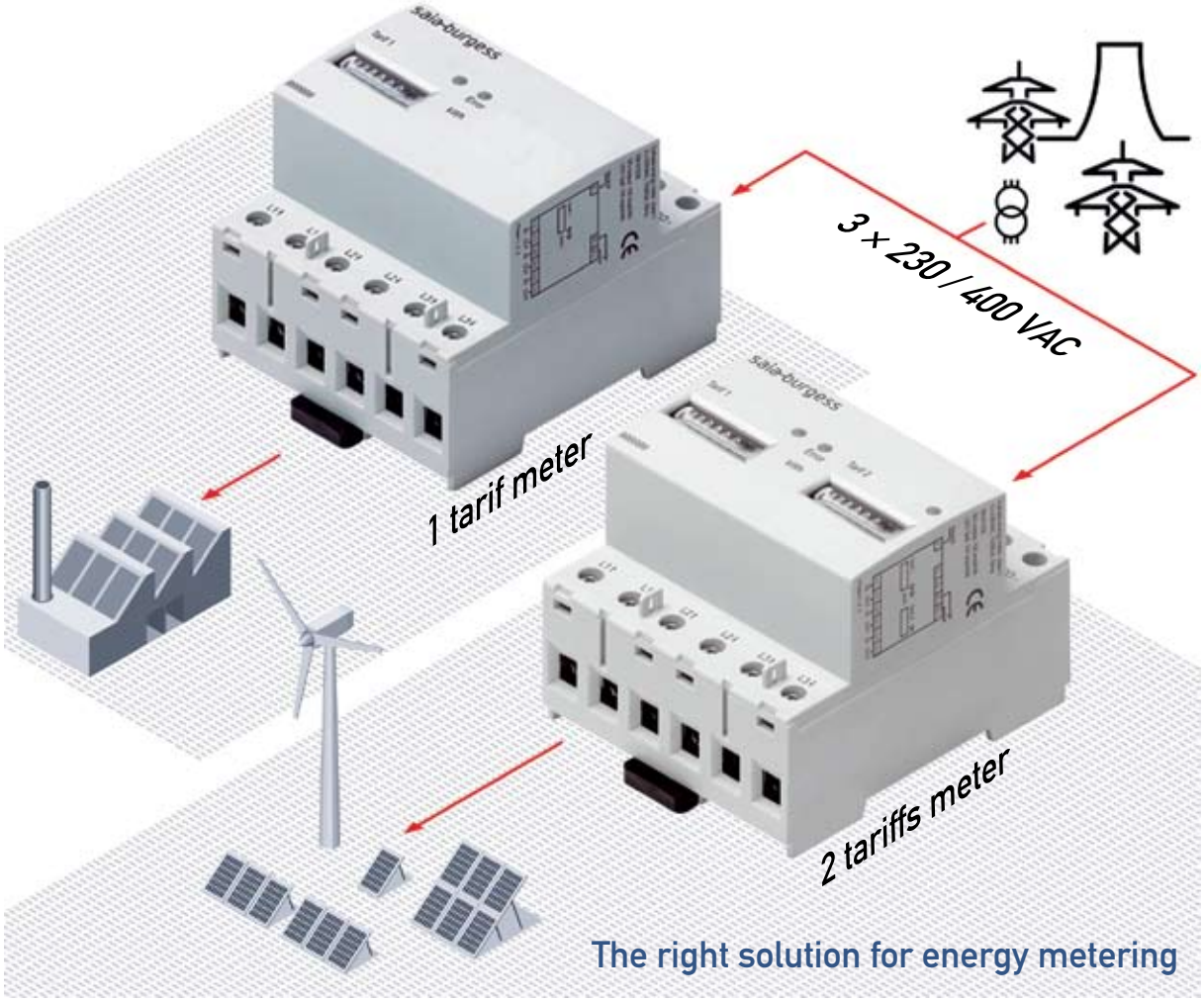
Technical information



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

Division Controls

AAE3, the 65 Amps 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-conditionned 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 S0 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

saia-burgess
Control Systems and Components

Technical data | Function of LEDs | Dimensions

AAE3, 3×10 (65) A, 1 tarif

AAE3, 3×10 (65), 2 tariffs

Technical data

Approvals	PTB or MID approval
Precision Class	1 (1%) according to IEC 62053-21, B according to EN 50470-3
Protection class	IP 50 | Connections IP 20
Current	
Nominal current	In = 10 A,
Maximum current	I max. = 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 capacitiy	0…999'999.9 kWh
Mechanical counter	4 mm high digits, decimal places in red
Open collector output (S0)	
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 measurment 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 S0	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 (according to IEC 62053-21, class 1)
Extended temperature range	-20°C…+55°C (outside accuracy class 1)
Humidity	25…40°C 95 % R.H. (according to IEC 60068-2-30)
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 S0 ■ Burst according to IEC 61000-4-4, level 4 (4 kV) ■ ESD according to IEC 61000-4-2, contact (8 kV), air (15 kV)

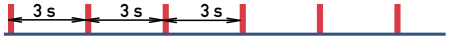
LED functions

Tarif control LED = Counter in normal operation

Measured power Zero	Low	High	Pulses per kWh	Puls pause	Pmomentarily in kW
			100	150 ms	1,7 × imp./min.

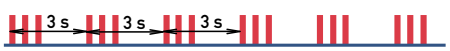
Error LED = Line errors
(lines interchanged / not connected)

L1 not connected

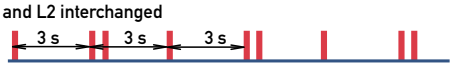


L2 not connected

L3 not connected



L1 and L2 interchanged

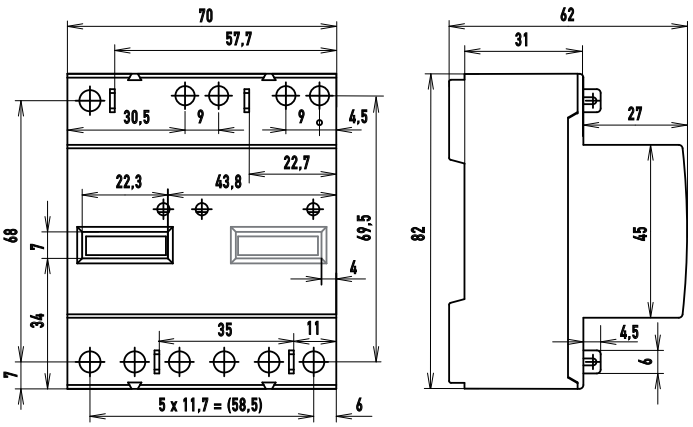


L1 and L3 interchanged

L1, L2 and L3 interchanged

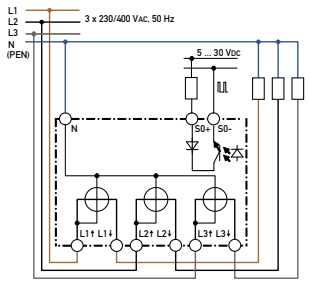
Dimensions

for 1 and 2 tariffs meters

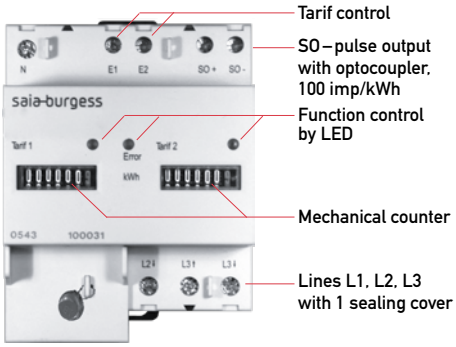


Connections | External pulse counting, energy metering

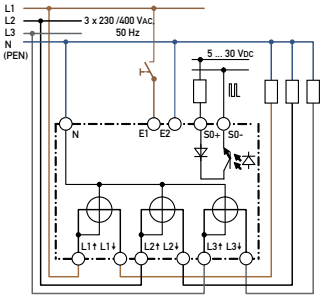
Connections and display elements



Connections AAE3,
1 tarif meter

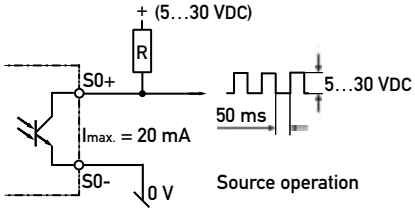


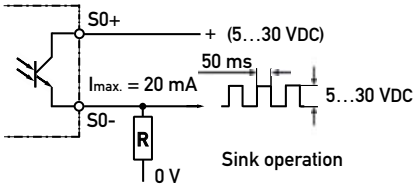
AAE3, 65A,
2 tariffs meter



Connections AAE3,
2 tariffs meter

External pulse counting/energy metering with Saia® PCD





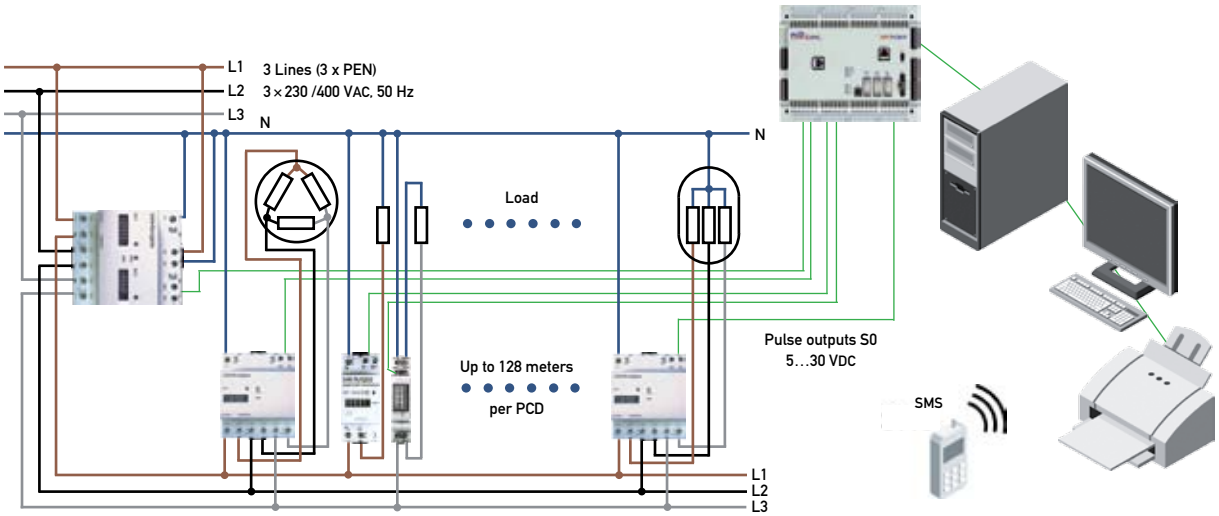
Connection to I/O module PCD2/3.E110
Example see www.sbc-support.ch

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

SPS-IPC-Drives, Nürnberg

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

Energy distribution and consumption in computing centres

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

By courtesy of: Schweiz. Vereinigung für Sonnenenergie »SSES«

Photovoltaic panels on exposition building, Basel

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

Novotel, Bern | BEA Expo

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

Ordering information

Type	Description	Dimensions	Weight
AAE3D5F10PR2A00	3 × 10 (65) A, 1 tarif	70 × 82 × 62 mm	190 g
AAE3D5F10PR3A00	3 × 10 (65) A, 1 tarif, MID approval	70 × 82 × 62 mm	190 g
AAE3D5F11PR2A00	3 × 10 (65) A, 2 tariffs	70 × 82 × 62 mm	200 g
AAE3D5F11PR3A00	3 × 10 (65) A, 2 tariffs, MID approval	70 × 82 × 62 mm	200 g
4 104 7485 0	Sealing cover for AAE3 65A [1]	35.0 × 28 × 39 mm	5 g

[1] For full protection against contact four pieces are recommended

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