



 **CAMILLE BAUER**
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**Multifunctional
power monitors with
system analysis**

UL - Selection

SINEAX A210, A220, A230s, A230

Multifunctional power monitors with system analysis

SINEAX A210 and A220

Rational and economic measurement

48 measurands, 8 energy meters, average and max./min. value functions.

The electrical system can be comprehensively assessed in all 4 quadrants.

Displays

The measurands are displayed by high-contrast, 14 mm high, dimmable LEDs with 3 digits and sign (energy meters 8 digits, frequency 4 digits).

Meters

The integrated energy meters record active energy (incoming/outgoing) and reactive energy (inductive/capacitive).

If the digital input of the extension module is used for switching the tariff, the number of active meters is doubled.

Outputs

There are 2 SO outputs that can be used for controlling relays. Energy impulses or as an alternative, the status of the programmable limits can be output.



SINEAX A230s and A230

Versatile and accurate measurement

134 measurands, 8 energy meters, comprehensive average and max./min. value functions, THD and harmonic analysis, asymmetric voltage and zero displacement voltage.

All these measurands form the basis for the comprehensive analysis and assessment of the electrical system in all 4 quadrants.

Displays

The measurands are displayed by high-contrast, 14 mm high, dimmable LEDs with 4 digits and sign (energy meters 8 digits). In USER mode, measurands that are not required can be suppressed. The LOOP mode displays from 2 to 10 programmable displays sequentially.

Analysis

A trend analysis is available for all the average values. The calculations of the harmonic content and the asymmetry of the system, gives important information on the system status for the operators.

| | A210 | A220 | A230s | A230 |
|--------------------------|--|--------------|-------------------------------------|--------------|
| Front dimensions | 96 x 96 mm | 144 x 144 mm | 96 x 96 mm | 144 x 144 mm |
| Connection types | Single phase, 3/4 wire balanced, 3/4 wire unbalanced | | | |
| Inputs | L-L: 0 – 500 V, L-N: 0 – 290 V, F: 45 – 65 Hz, I: 0 – 1/5A | | | |
| Accuracy | U, I: 0,5%; P, Q, S, meters: 1% | | U, I: 0,2%; P, Q, S, meters: 0,5% | |
| Display 14 mm | 3 digits + sign | | 4 digits + sign, programmable | |
| Power supply | 100 – 230 V AC/DC or 24 – 60 V AC/DC | | | |
| Outputs | 2 digital outputs as pulse or limit outputs | | | |
| Measurands | 85 | | 266 | |
| Energy meters | 8 | | 8 | |
| Mean values | 5 P, Q and S mean values each | | Various functions | |
| THD | No | | Yes | |
| Harmonic analysis | No | | Up to the 15 th harmonic | |
| Voltage unbalance | No | | Yes | |
| Connections | Spring clamps or screw clamp terminals | | | |
| Protection class (front) | IP66 | | | |

EMMOD 201, 202, 203, 204, 205

Extension modules

The extension modules enlarge the functionality of the A210, A220, A230s and A230 power monitors. They can be simply snapped onto the back of the basic instrument and take their power supply from it.

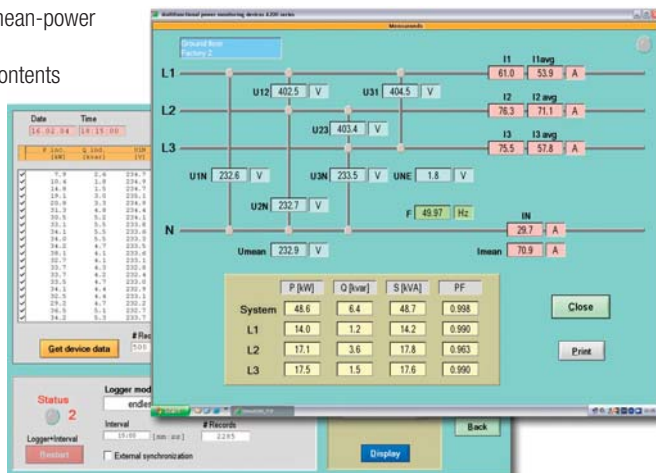


| Functionality EMMOD... | 201 | 202 | 203 | 204 | 205 typ A | 205 typ E |
|---|-----|-----|------|-----|--------------|--------------|
| Interface | | | | | | |
| • RS232/RS485 (Modbus/RTU) | • | | | | | |
| • Ethernet (Modbus/TCP) | | | • | | | |
| • Profibus DP (RS485) | | | | • | | |
| • LON (communication with U160x) | | | | | • | |
| • LON (standard) | | | | | | • |
| • M-Bus | | | | | | |
| Data logger | | | | | | |
| • Mean-values | ≤ 2 | | ≤ 14 | | | |
| • Min/max interval values (A230s / A230 only) | | | ≤ 9 | | | |
| • Time reference via PC time | • | | | | | |
| • Time reference via built-in RTC | | | • | | | |
| Outputs | | | | | | |
| • Analog outputs 0/4...20 mA | | 2 | | | | |
| • Digital output 125 V DC | | | | | 1 | |
| Digital inputs | | | | | | |
| • Synchronization pulse for mean-values | | | 1 | | | |
| • Tariff switching HT/LT | | | 1 | | | |
| • Synchronization or HT/LT | 1 | | | | | 1 |
| Parametrization of the module | | | | | | |
| • via software A200plus | • | | | | | |
| • via basic device | | • | | | • | • |
| • via GSD in the control system | | | | • | | |
| • via software A200plus and browser | | | • | | | |

PC-Software A200plus

The clear PC software allows to establish a communication with the devices of the A200 series:

- Upload and modification of all device features: Measuring input, digital outputs, mean-power values, digital input, logger
- Display of present measurands
- Acquisition of integrated mean-power values
- Display/Set/Reset meter contents
- Display/Reset of minimum/maximum values
- Acquisition of mean-power values stored in the logger
- Direct export of logger data to Microsoft Excel
- Store/load logger data on/from disk
- Executable under Windows 95, 98, ME, NT, 2000, XP, Vista



The benefits of the A series

- The good legibility, the simple operation, and the easy-to-use software, guarantee secure installation and operation.
- The flat design makes more space available in your cabinet.
- The high functionality saves costs for engineering, installation and documentation
- You only pay for the required functions, thanks to the modular extensibility.
- The settings and measurands are power fail-safe.

Product ranges of Camille Bauer



Heavy-current: State, Allocation, Quality.



Angular position: Angle, Inclination, Position, Volume.



Process control: Temperature, Signal conversion, Process management.

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