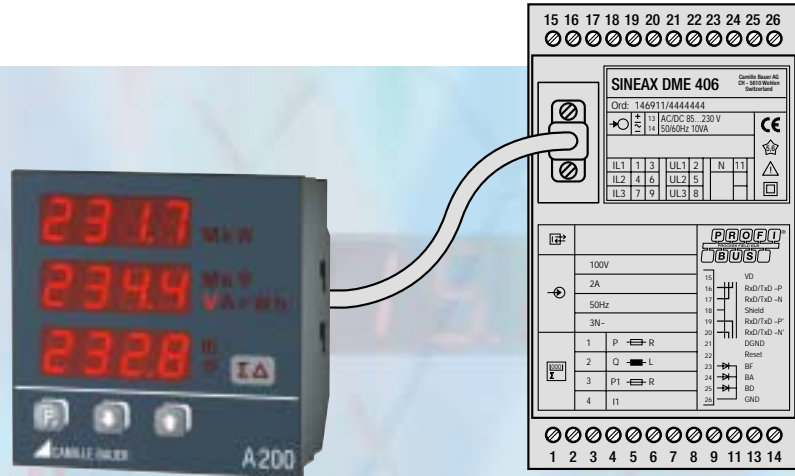


**The new A series
sees clearly.**

SINEAX A200

Display unit for the DME4 multi-transducer



Format 96 x 96 mm
Mounting depth 46 mm

Features/Benefits

- Easy extension of existing DME4
- Simple connection with RS232 cable
- No hot input wires on the cabinet door
- Replaces numerous analog displays
- Displays *all* the DME4 measurands locally

Simple and universal

The SINEAX A200 display unit is used in combination with the SINEAX/EURAX DME4 series multi-transducers. The connection is made with an RS232 cable.

The display can show all the measurands of the DME4 instrument. At the same time, the basic functions of the instrument, especially the output of the analog and digital values, and the bus functions for LON, Profibus or Modbus remain unchanged.

Displays

47 measurands with 4-quadrant display of the type of load, 4 energy meters. The measurands are displayed by high-contrast, 14 mm high, dimmable LEDs with 4 digits (energy meters 8 digits)

Resetting

The integrated energy meters and slave pointer values can be reset using the keys. This functionality can be blocked by a jumper at the back of the display.

SINEAX A210, SINEAX A220

Multifunctional power monitor



Format 96 x 96 mm (A210) or 144 x 144 mm (A220)
Mounting depth 46 mm, with the extension module 65 mm

Features/Benefits

- Replaces numerous analog instruments
- Simple, clear display matrix and programming dialog
- The settings and measurands are stored on a power failure
- Modular extendibility, e.g. with the EMMOD 201 extension module
- Compact high-accuracy instrument

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.

Recording

With the EMMOD 201 extension module installed, load profiles can be recorded. For example with one 15-min. measurand, recording is possible for 166 days.



The **EMMOD 201 extension** module extends the functionality of the A210, A220, and A230 power monitors. It simply clips onto the back of the main instrument and takes its power supply from it. All the measurands are then available at the RS232/RS485 interface for MODBUS or PC applications.

SINEAX A230

Multifunctional power monitor with system analysis



Format 144 x 144 mm.
Mounting depth 46 mm, with the extension module 65 mm.

Features/Benefits

- As the A210/A220 and in addition:
- Higher accuracy
- 4 digit displays
- Programmable displays
- System and load analysis

Versatile and accurate measurement

134 measurands, 12 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.

The clear **PC software A200plus** supports easy programming and reading out of measurands. A synchronizing input for the mean power value can be used alternatively for switching the high/low tariffs. The data logger records active and/or reactive mean power values (A210/A220) or up to 14 of any of the mean values (A230).

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.

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 counters is doubled.

Outputs

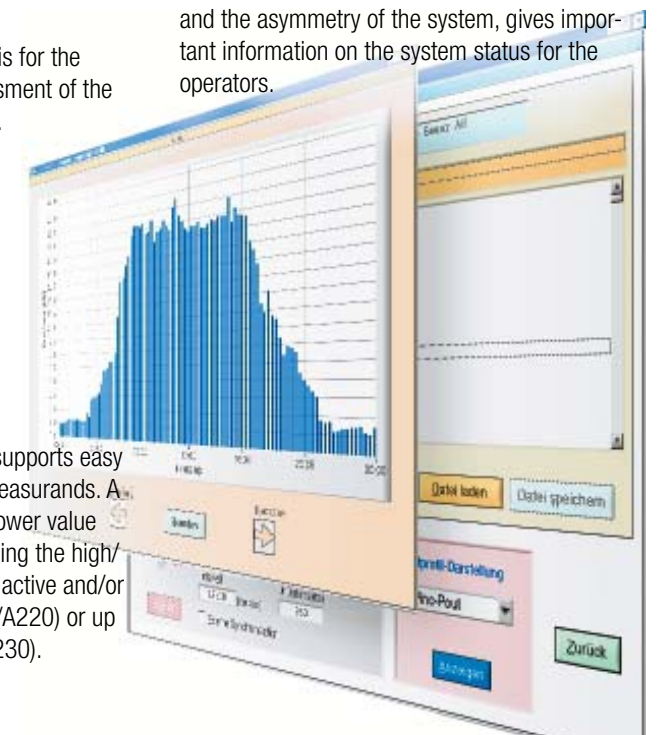
There are 2 SO outputs that can be used for controlling relays. Energy impulses or as an alternative, the status of the programmable limits can be output.

Recording

With the EMMOD 201 extension module installed, load profiles or mean value trends can be recorded for up to 14 measurands. For example with one 15-min. measurand, recording is possible for 166 days.

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.



Your Benefits

- 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 extendibility**.
- The **good legibility**, the **simple operation**, and the **easy-to-use software**, guarantee **secure installation and operation**.

Technical Data

	A200	A210	A220	A230
Housing	Synthetic material			
Front dimensions	96 x 96 mm		144 x 144 mm	
Mounting depth	46 mm			
Protection class (front)	IP66			
Connections	Spring clamps or screw clamp terminals			
Connection types	–	Single phase, 3/4 wire balanced, 3/4 wire unbalanced		
Inputs	–	L–L: 0 – 500 V, L–N: 0 – 290 V, I: 0 –1/5 A, F: 45 – 65 Hz		
Accuracy	–	F: 0,02 Hz U, I: 0,5 % P, Q, S, meters: 1 %		F: 0,02 Hz U, I: 0,25 % P, Q, S, meters: 0,5 %
Power supply	20 – 253 V AC/DC 45 – 400 Hz	85 – 253 V AC/DC, 45 – 400 Hz 20 – 70 V AC/DC, 45 – 400 Hz		
Outputs	–	2 digital outputs as pulse or limit outputs		
Extension module	–	EMMOD 201		EMMOD 201
Measurands	47	85		266
Energy meters	4	8		12
Mean values	–	5 P, Q, and S mean values each		Various functions
THD	–	–		Yes
Harmonic analysis	–	–		Up to the 15 th harmonic
Voltage unbalance	–	–		Yes
Display	4 digits	3 digits		4 digits

EMMOD 201 Extension Module

Interface:	RS485/RS232 switchable
Protocol:	MODBUS RTU for SCADA
Digital input:	Synchronizing input for mean power values or high/low tariff switching for energy meters
Mounting depth:	65 mm (basic instrument with EMMOD 201 mounted)
Power consumption:	≤ 4 VA (basic instrument with EMMOD 201)
Number of recorded values:	16'000 mean values
Reading and selection of the values:	With the A200 <i>plus</i> software

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