

SINEAX A 210

Multifunctional power monitor for current and voltage, active, reactive and apparent power, active and reactive energy



Mechanical characteristics

Dimensions:	96 x 96 x 46 mm; panel cutout: 92 ^{+0.8} x 92 ^{+0.8} mm
Protection:	Front panel IP 66, terminals and housing IP 20 in accordance with IEC 60 529
Terminals:	Inputs: screw terminals power supply and outputs: clamps
Operating temperature:	- 10 to +55 °C
Storage temperature:	- 25 to +70 °C
Weight:	250 g

Inputs

Nominal frequency:	50, 60 Hz
Nominal voltage:	Phase-phase 500 V, phase-N 290 V
Nominal current:	5 A (1 A on request)

System/application

Single phase, 3-wire balanced or unbalanced, 4-wire balanced or unbalanced, 4-quadrant operation.

Measurements available

Phase voltages: U1, U2, U3	Maximum values: U1 _{max} , U2 _{max} , U3 _{max} Minimum values: U1 _{min} , U2 _{min} , U3 _{min}
Delta voltages: U12, U23, U31	Maximum values: U12 _{max} , U23 _{max} , U31 _{max} Minimum values: U12 _{min} , U23 _{min} , U31 _{min}
Phase currents: I1, I2, I3	Maximum values: I1 _{max} , I2 _{max} , I3 _{max}
Average values: I1 _{avg} , I2 _{avg} , I3 _{avg}	Max.average values: I1 _{avgmax} , I2 _{avgmax} , I3 _{avgmax}
Neutral current: IN	
Active power: P1, P2, P3	Maximum values: P1 _{max} , P2 _{max} , P3 _{max}
System active power: P	Maximum value: P _{max}
Reactive power: Q1, Q2, Q3	Maximum values: Q1 _{max} , Q2 _{max} , Q3 _{max}
System reactive power: Q	Maximum values: Q _{max}
Apparent power: S1, S2, S3	Maximum values: S1 _{max} , S2 _{max} , S3 _{max}
System apparent power: S	Maximum values: S _{max}
Power factor (cosφ): PF1, PF2, PF3	
System power factor (cosφ): PF	
System power factor: PF, cosφ	Minimum value power factor inductive Minimum value power factor capacitive
Frequency: F	
Active incoming energy high/low tariff	
Active outgoing energy high/low tariff	
Reactive energy inductive high/low tariff	
Reactive energy capacitive high/low tariff	
5 intervals for active, reactive and apparent power (avg. values)	

Digital outputs

2 SO outputs; ON = 10 to 27 mA, OFF ≤ 2 mA; Uext: 8 to 30 V DC pulse or trip point output

Pulse output:	Active energy and reactive energy
Trip point output:	Open collector

Power supply

AC/DC power supply	40 to 400 Hz
	85 to 253 V AC/DC or 20 to 70 V AC/DC
Power consumption:	≤ 3 VA



Display

14 mm LED digital display; adjustable brightness
3 digits with sign, Frequency: 4 digits, Energy: 8 digits

Programmable values

Trip points, Transformer ratio, Type of system, interval time
Programming can be locked with a jumper at the back of the instrument.

Accuracy acc. to IEC 688: frequency 0.1%, voltage/current 0,5%, other values 1%

Standards and regulations

Low voltage directive:	IEC 1010, EN 61 010
EMC directive:	EN 50 081-2, EN 50 082-2
	DIN 43 864

Electrical insulation

Inputs, outputs, and power supply are electrically isolated. The current inputs are electrically isolated from each other.

Additional features

It is possible to extend the A 210 with an interface module or an interface/data logger module without opening the housing.

Interface module

Interface:	RS 485/RS 232 switchable
Protocol:	MODBUS RTU
Digital input:	Synchronizing input for time stamp resp. tariff switching
Depth:	≤ 70 mm
Power consumption:	≤ 5 VA

Digital input, bus address, and parity are programmable

Interface and data logger module

Data logging of P, Q, S (avg. values) for the last 2 months.

For more detailed information please see: www.camillebauerag.ch or www.gmc-instruments.com