

C.A 8220 / C.A 8230

Measurement of all power values



Electrical network analysis

- › Measurement of very low and very high currents
- › Analysis of phase shift and harmonics
- › Measurement of motor Inrush current
- › Simultaneous access to all measurement modes
- › Excellent value for money



Electric motor maintenance



Measure up



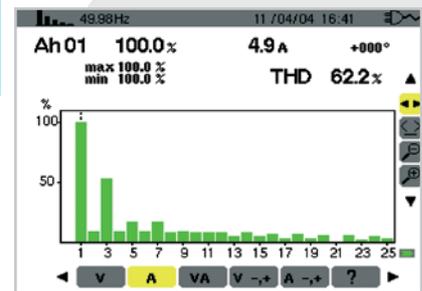
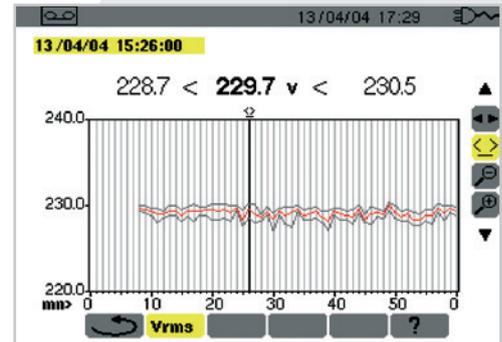
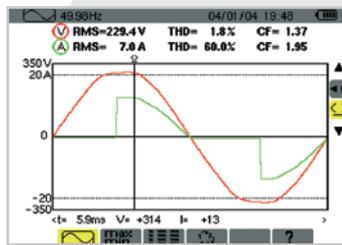
C.A 8230



The **C.A 8230** is designed for self-employed electricians and installers working in the construction industry and maintenance departments. The broad range of measurements which it provides also makes it ideal for technical and technological education.

Extremely easy to handle, it can be used to test electrical installations, particularly when they include systems based on power electronics. It is **suitable for use** in the field or on a benchtop thanks to its retractable stand.

Ergonomic and equipped with a wide graphic screen, it automatically recognizes the type of sensor connected.



MAIN MEASUREMENTS

> Voltage and current with instant display:

As well as measuring the TRMS AC+DC value at the half-period, peak values and THD, this instrument also offers instant display of the waveform. Short-term flicker measurement is also available.

> Comprehensive power and energy analysis:

All the measurements necessary for comprehensive power and energy analysis on both single-phase and three-phase systems.

> Harmonics up to the 50th order:

The C.A 8230 can be used to measure up to the 50th order of the different values. In addition, the expert mode allows you to determine the direction of the harmonics.

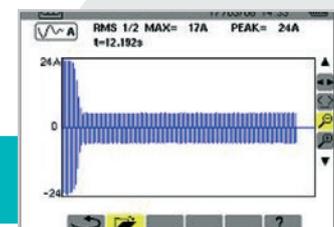
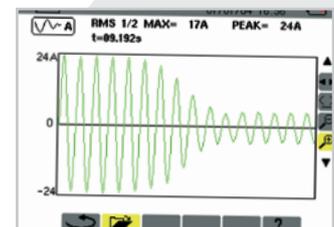
> Up to several days' recording:

Up to several days' recording for all the values measured!

> Customization of alarm settings:

More than 4,000 fully user-parameterizable alarms are available to capture each event.

> All these measurements are carried out in parallel!



INRUSH CURRENT

THE STARTING CURRENT...

- > Also called the starting current, the **Inrush** corresponds to the maximum input current drawn by an electrical device when it is powered up. For example, when they are first switched on, AC electric motors may draw several times their normal current at full load.

C.A 8220

Geared firmly towards the world of electrical engineering and the testing of rotating machines, the **C.A 8220** wattmeter is designed for companies' testing and maintenance teams.

With its liquid crystal segment display, the ergonomics of this compact, shockproof instrument's user interface make it intuitive, simple and comfortable to use.

Like the **C.A 8230**, the **C.A 8220** wattmeter can be used to obtain a snapshot of the main characteristics of a single-phase or balanced three-phase network.

In addition, it measures all the quantities required to test rotating machines (rotation speed/temperature). Offering significant accuracy, this instrument covers measurements from a few milli-amperes to several kilo-amperes thanks to a wide choice of sensors.



› **Rotation speed:** for predictive maintenance, it is crucial to check the rotation speed of rotating machines regularly. **As an all-in-one instrument, the C.A 8220 meets this requirement simply and effectively.**

› **Temperature:** today's motors and rotating machines are equipped with temperature probes which are easily accessible on a terminal block. **The internal temperature of the motor can be measured directly by connecting the C.A 8220 to this terminal block.**

SENSORS & CLAMPS FOR CURRENT MEASUREMENT



Model	MN93	MN 93A	MA193-250	MA193-350	PAC93	A193-450	A193-800	C193	E3N
Measurement range	500 mA to 200 Aac	0.005 Aac to 100 Aac	10 A to 6,500 A	10 A to 6,500 A	1 A to 1,000 Aac 1 A to 1,300 Adc	10 A to 6,500 A	10 A to 6,500 A	1 A to 1,000 Aac	50 mA to 10 Aac/Dc 100 mA to 100 Aac/Dc
Clamping Ø / length	20 mm	20 mm	Ø 70 mm / 250 mm	Ø 100 mm / 350 mm	1 x Ø 39 mm 2 x Ø 25 mm	Ø 140 mm / 450 mm	Ø 250 mm / 800 mm	52 mm	11.8 mm
IEC 61010	600 V CAT III / 300 V CAT IV		1000 V CAT III / 600 V CAT IV		600 V CAT III / 300 V CAT IV	1000 V CAT III / 600 V CAT IV		600 V CAT IV	600 V CAT III / 300 V CAT IV

POWER ANALYZER TRANSFER SOFTWARE

- › real-time measurement display
- › data retrieval
- › processing and analysis of the data saved on a PC
- › back-up and export to Excel
- › operates with Windows® 7, Vista, XP
- › available for download free of charge from our internet site (www.chauvin-arnoux.com/support)



TECHNICAL SPECIFICATIONS

	C.A 8230	C.A 8220
>> Voltage range	6 Vrms to 600 Vrms AC+DC $\pm(0.5\% + 2 \text{ counts})$	
>> AC current range	100 mA to 6,500 A $\pm(0.5\% + 1 \text{ count})$	
>> DC current range	100 mA to 1,700 A $\pm(1\% + 1 \text{ count})$	
>> Min, Max, Avg, and Peak values (+ and -), CF	Yes	
>> Fundamental frequency	40 Hz to 70 Hz	
>> Screen	¼ VGA colour LCD	173-segment backlit LCD
>> Single-phase and balanced three-phase	Yes	
>> W, VA and var power values, DF, THD, Cos ϕ	Yes	
>> varh and VAh energy values, Wh	Yes	
>> Harmonics	Up to 50th order	
>> Recordings	Up to several days	—
>> Alarms	4,096	—
>> PST flicker	Yes	—
>> Inrush	18 s	—
>> Motor rotation speed	—	6 RPM to 120 kRPM $\pm(0.5\%)$
>> Temperature (Pt100)	—	-200 °C to +850 °C $\pm(1\% + 10 \text{ counts})$
>> Resistance (winding)	—	0.0 Ω to 2,000 Ω $\pm(0.5\% + 2 \Omega)$
>> Phase rotation	Yes, with display of phase order in three-phase systems	
>> Storage of measurements	Yes	
>> Ambient temperature	23 °C ± 3 K	
>> Relative humidity	45 % ; 75 %	
>> Protection rating	IP54	
>> RS232/USB port	Yes	
>> IEC 61010-1	600 V, Cat. III	
>> Power supply	Batteries, charge life up to 40 hours	Batteries (6 x AA)
>> Weight	880 g (with rechargeable batteries)	840 g (with batteries)
>> Dimensions	211 x 108 x 60 mm	

COMPOSITION

P01160630 : one C.A 8230 instrument supplied with 1 carrying bag, 6 fitted 1.2 V rechargeable batteries, 1 red banana lead (straight-straight), 1 black banana lead (straight-straight), 2 x 4 mm test probes (1 red, 1 black), 2 crocodile clips (1 red, 1 black), 1 mains adapter, 1 optical USB cable and Power Analyzer Transfer software.

P01160620 : one C.A 8220 instrument supplied with 6 fitted AA batteries, 1 red banana lead (straight-straight), 1 black banana lead (straight-straight), 2 x 4 mm test probes (1 red, 1 black), 2 crocodile clips (1 red, 1 black), 1 optical USB cable and Power Analyzer Transfer software.



C.A 1711 no-contact RPM sensor for measuring rotation speeds (6 to 120,000 RPM)

TO ORDER

- C.A 8230 analyser alone..... P01160630
- C.A 8230 analyser with MN93A current sensor (120 A)..... P01160631
- C.A 8230 analyser with AmpFlex 450 flexible current sensor (6,500 A)..... P01160632
- C.A 8220 analyser alone..... P01160620
- C.A 8220 analyser with MN93A current sensor (120 A)..... P01160621
- C.A 8220 analyser with AmpFlex 450 flexible current sensor (6,500 A)..... P01160622

ACCESSOIRES

- 4 mm red and black test probes..... P01295454Z
- Red and black crocodile clips..... P01295457Z
- 4 mm red and black banana/banana leads..... P01295451Z
- MN93A BK clamp..... P01120434
- MN93 BK clamp..... P01120425
- AmpFlex A193 450 mm BK..... P01120526
- AmpFlex A193 800 mm BK..... P01120531
- PAC93 BK clamp..... P01120079
- C193 BK clamp..... P01120323
- Mains adapter..... P01160640
- E3N clamp..... P01120043A
- C.A 8220 / E3N adapter..... P01102081
- RPM sensor..... P01102082
- Optical/USB cable..... HX0056-Z
- DataVIEW processing software..... P01102095
- Carrying bag No 5..... P01298049

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