

## Measurement of all power values

**Electric motor  
maintenance**

**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

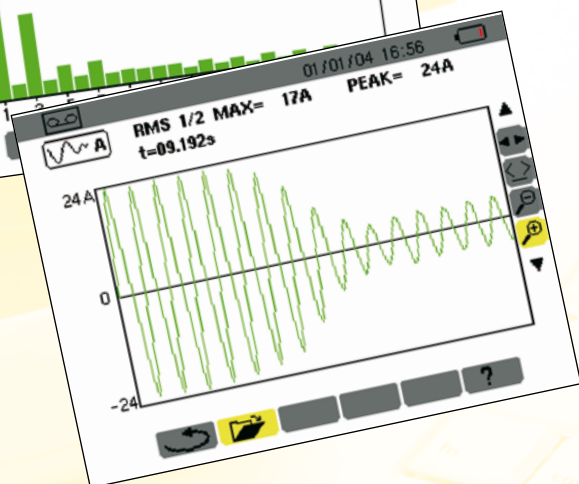
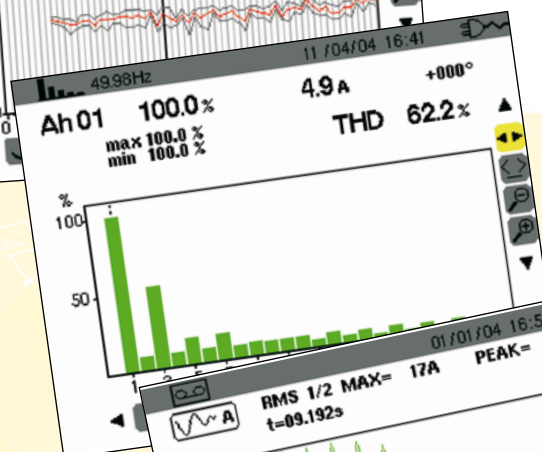
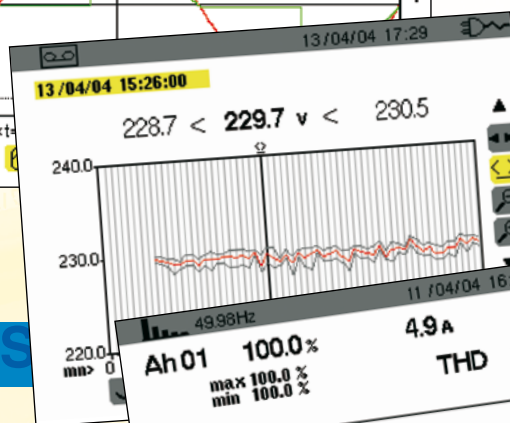
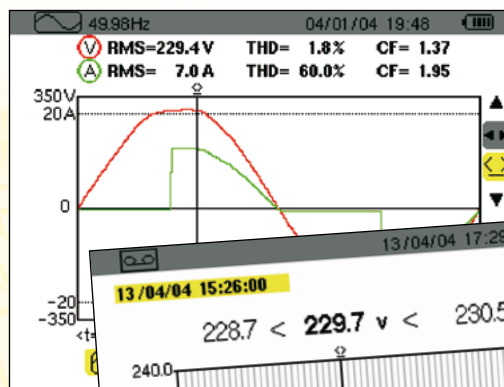




The **C.A 8230** is designed for self-employed electricians and installers working in the construction industry and maintenance departments. The broad range of measurements which it provides also makes it ideal for technical and technological education.

**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:

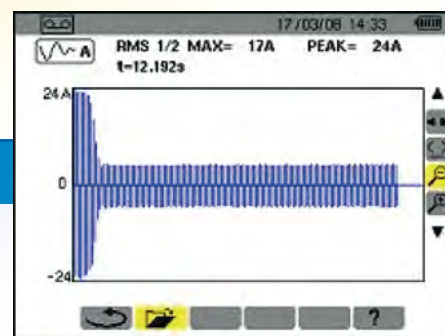
More than 4,000 fully user-parameterizable alarms are available to capture each event.

**> 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.



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.**

### POWER ANALYZER TRANSFER SOFTWARE

FOR THE C.A 8220, C.A 8230 & QUALISTAR

- 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](http://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	50 mA to 1,400 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, Cos $\phi$ , PF	Yes	
>> varh and VAh energy values, Wh	Yes	
>> Harmonics DF, THD	Up to the 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 $\Omega$ to 2,000 $\Omega$ $\pm(0.5\% + 2 \Omega)$
>> Phase rotation	Yes, with display of phase order in three-phase systems	
>> Storage of measurements	Yes	
>> Ambient temperature	23 °C $\pm 3$ 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	



## 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

## ACCESSORIES

• 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 .....	P01120047
• C.A 8220 / E3N adapter .....	P01102081
• RPM sensor .....	P01102082
• Optical/USB cable .....	HX0056-Z
• DataVIEW processing software .....	P01102095
• Carrying bag No 5 .....	P01298049
• Pt100 adapter .....	HX0091

## 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 clamps (1 red, 1 black), 1 optical USB cable and Power Analyzer Transfer software.

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