

# CA 8220

## POWER ANALYSER



### Measurement of all power values

- Measurement of very low and very high currents
- Electric motor maintenance
- Analysis of phase shift and harmonics



# CA 8220

The **CA 8220** wattmeter is designed for companies' testing and maintenance teams. 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. Geared firmly towards the world of electrical engineering and the testing of rotating machines, the **CA 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. It automatically recognizes the type of sensor connected.

The **CA 8220** is suitable for use in the field or on a benchtop thanks to its retractable stand. It 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).

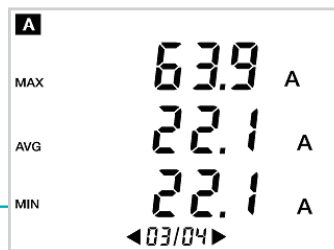
Offering significant accuracy, this instrument covers measurements from a few milli-amperes to several kilo-amperes thanks to a wide choice of sensors.



## MAIN MEASUREMENTS

### > Voltage and current:

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.



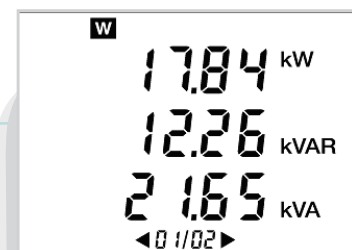
### > Inrush current:

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.



### > Comprehensive power analysis:

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



### > Energy values:

The total or partial energy metering is performed on all 4 quadrants.



### > Harmonics up to the 50th order:

The CA 8220 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.

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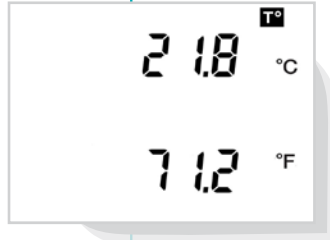
## > Rotation speed:

For predictive maintenance, it is crucial to check the rotation speed of rotating machines regularly. **As an all-in-one instrument, the CA 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 CA 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<br>6,500 A                | 10 A<br>6,500 A      | 1 A to 1,000 AAC<br>1 A to 1,300 Adc | 10 A<br>6,500 A      | 10 A<br>6,500 A                | 1 A to 1,000 AAC | 50 mA to 10 AAC/DC<br>100 mA to 100 AAC/DC |                              |
| Clamping Ø / length | 20 mm                        | 20 mm                | Ø 70 mm /<br>250 mm            | Ø 100 mm /<br>350 mm | 1 x Ø 39 mm<br>2 x Ø 25 mm           | Ø 140 mm /<br>450 mm | Ø 250 mm /<br>800 mm           | 52 mm            | 11.8 mm                                    |                              |
| IEC 61010           | 600 V CAT III / 300 V CAT IV |                      | 1,000 V CAT III / 600 V CAT IV |                      | 600 V CAT III / 300 V CAT IV         |                      | 1,000 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
- > Screenshots
- > Back-up and export to Excel
- > Operates with Windows® 7, 8 and 10
- > Available for download free of charge from our internet site ([www.chauvin-arnoux.com/support](http://www.chauvin-arnoux.com/support))



# TECHNICAL SPECIFICATIONS

## CA 8220

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

### COMPOSITION

**P01160620:** one CA 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 available for download.

### TO ORDER

• CA 8220 analyser alone ..... **P01160620**

### ACCESSORIES

|   |            |                                      |            |
|---|------------|--------------------------------------|------------|
| • 4 mm red and black test probes.....         | P01295454Z | • Mains adapter.....                 | P01160640  |
| • Red and black crocodile clips.....          | P01295457Z | • E3N clamp.....                     | P01120043A |
| • 4 mm red and black banana/banana leads..... | P01295451Z | • E3N adapter.....                   | P01102081  |
| • Pince MN93A BK clamp.....                   | P01120434  | • E3N power supply.....              | P01120047  |
| • MN93 BK clamp.....                          | P01120425  | • RPM sensor.....                    | P01102082  |
| • AmpFlex A193 450 mm BK.....                 | P01120526  | • Optical/USB cable.....             | HX0056-Z   |
| • AmpFlex A193 800 mm BK.....                 | P01120531  | • RS232/USB adapter.....             | HX0055B    |
| • PAC93 BK clamp.....                         | P01120079  | • DataView® processing software..... | P01102095  |
| • C193 BK clamp.....                          | P01120323  | • Carrying bag No 5.....             | P01298049  |



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

YOUR DISTRIBUTOR

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