

# The experience of the Qualistar

*ensuring high performance*

## POWER AND ENERGY QUALITY ANALYSERS



*Measure all the necessary voltage, current and power parameters for full diagnosis of an electrical installation.*

*Capture and record all the parameters, transients, alarms and wave forms simultaneously.*

*Proven simplicity of use.*

## **QUALI**STAR+

- + 4 voltage inputs & 4 current inputs
- + Inrush mode
- + Unprecedented memory capacity
- + Voltage and current ratios <sup>(NEW)</sup>

# Power and energy quality analysers

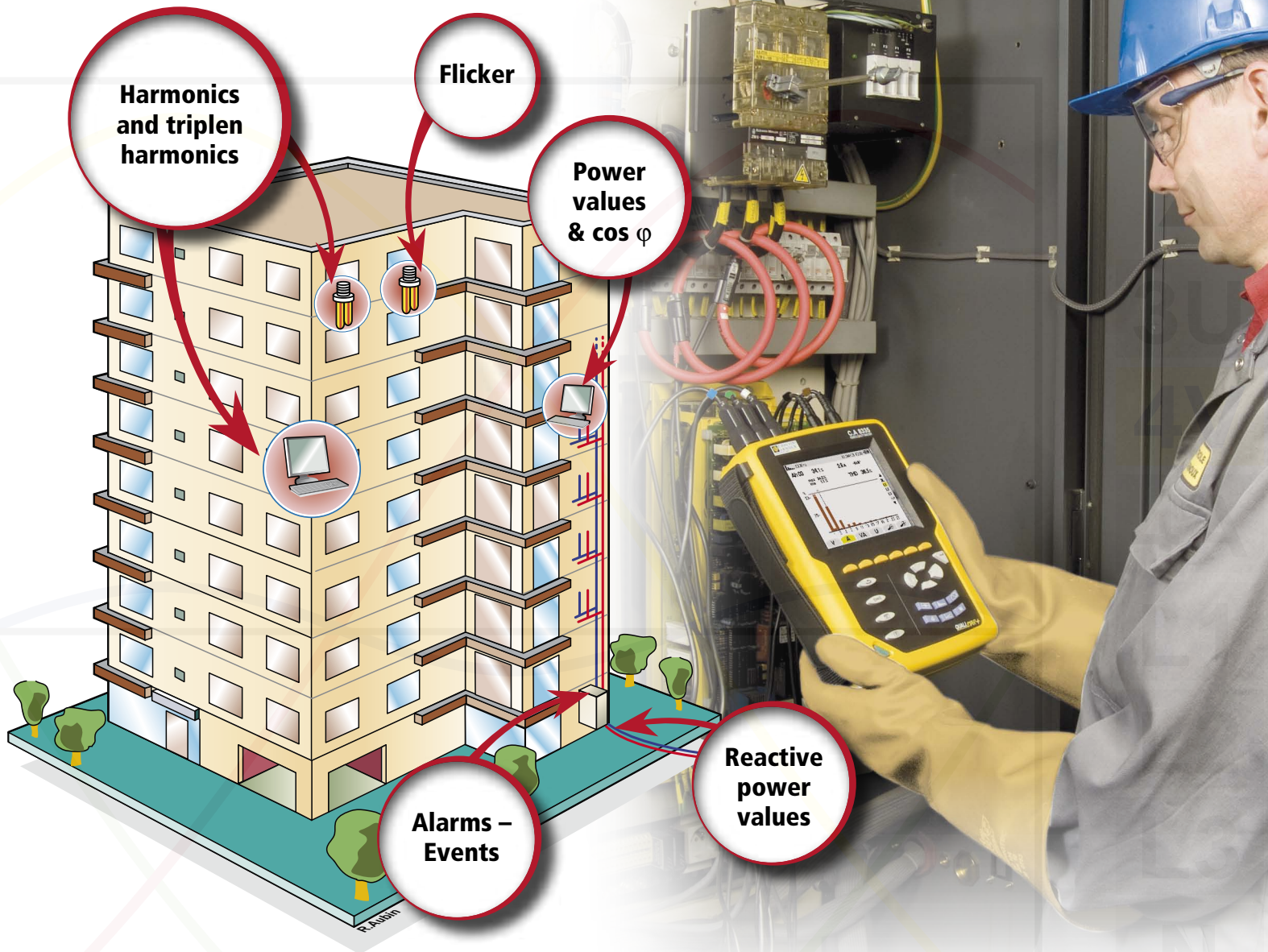
Designed for inspection and maintenance teams in industrial or administrative buildings, the Qualistar can provide a snapshot of the main electrical network quality characteristics.

Easy to handle and precise, these instruments also offer a large number of calculated values and several processing functions.





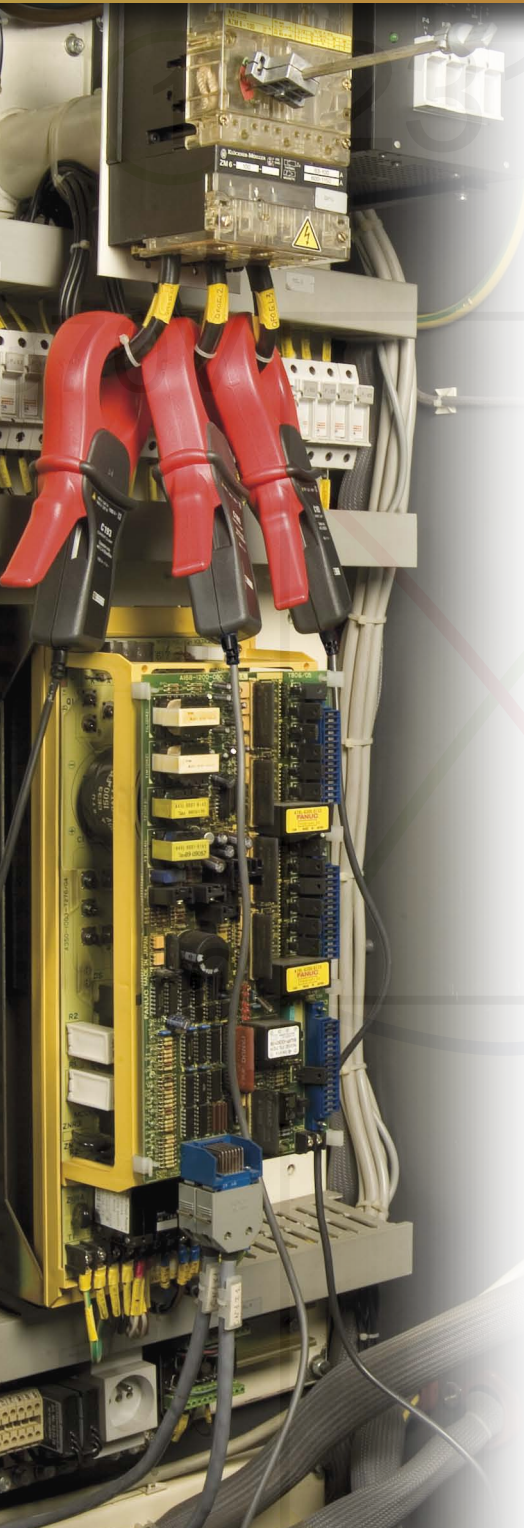
## FUNCTIONS



- ✓ Real-time display of wave forms (4 voltages and 4 currents)
- ✓ Half-period RMS measurements of voltages and currents
- ✓ Intuitive use
- ✓ Automatic recognition of the different types of current sensors
- ✓ Integration of all the DC components
- ✓ Measurement, calculation and display of harmonics up to the 50<sup>th</sup> order, with their phase information
- ✓ Calculation of Total Harmonic Distortion (THD)
- ✓ Capture of transients as short as one sample (1/256<sup>th</sup> of a period)
- ✓ Display of phasor diagram
- ✓ Measurement of the total VA, W and var power values, as well as the values per phase
- ✓ Measurement of total VAh, Wh and varh values, as well as the values per phase

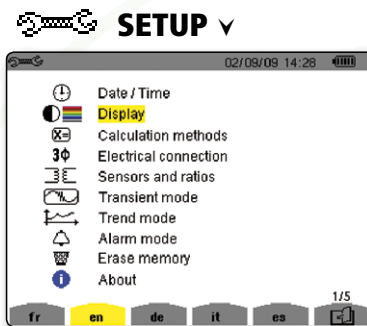
- ✓ Calculation of the K-Factor
- ✓ Calculation of the  $\cos \varphi$  displacement power factor (DPF) and the power factor (PF)
- ✓ Capture of up to 210 transients
- ✓ Flicker calculation
- ✓ Unbalance calculation (current and voltage)
- ✓ Monitoring of the electrical network with setting of alarms
- ✓ Back-up and recording of screenshots (image and data)
- ✓ Recording and export on PC
- ✓ Software for data recovery and real-time communication with a PC.

# Power and energy quality analysers



## SETUP

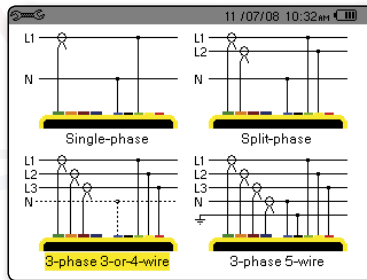
Users enter the instrument's general parameters (date and time, display contrast, etc.) directly. They then select the type of network to which the Qualistar is connected. The sensors connected are recognized automatically. Verification is possible on the corresponding screen.



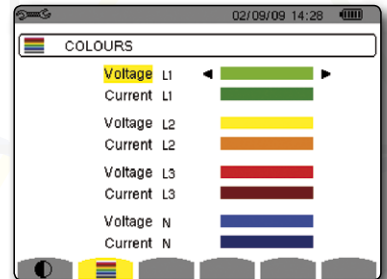
**NEW FEATURE OF THE C.A 8335 menus available in 25 languages!**



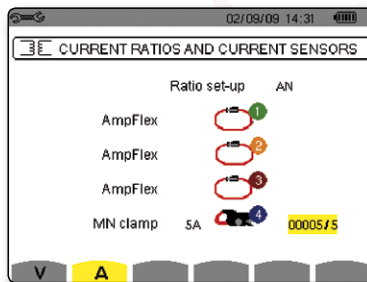
## CONNECTIONS



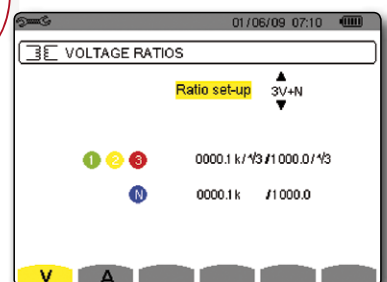
## DISPLAY



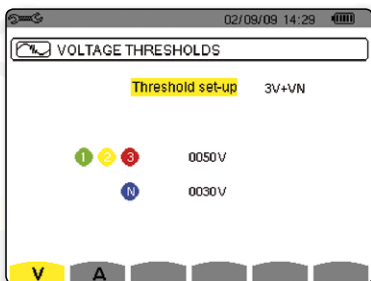
## RATIOS AND SENSORS



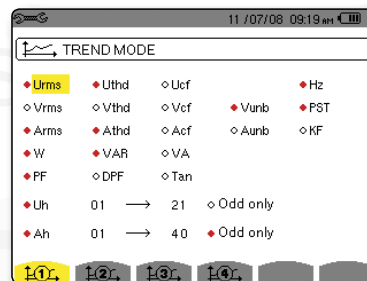
**NEW FEATURE OF THE C.A 8335**



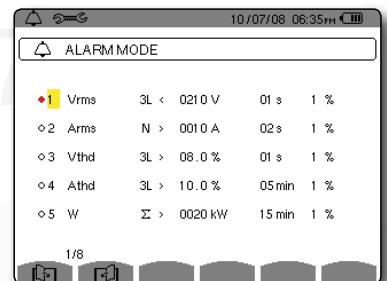
## TRANSIENTS



## RECORDINGS



## ALARMS





## INSTANTLY VIEW THE CHARACTERISTICS OF A NETWORK

### OBSERVATION



GRAPH ▾

**NEW FEATURE OF THE C.A 8335**  
View all 4 inputs simultaneously!

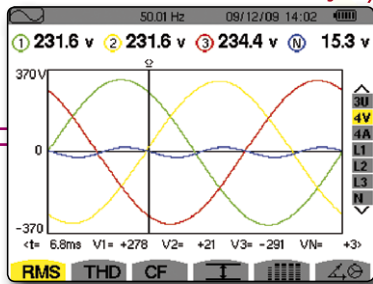
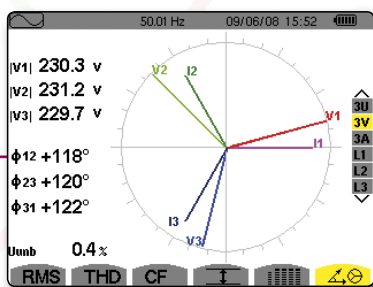


TABLE ▾

	1	2	3
MAX	402.1	404.7	404.4
RMS	400.2	402.8	402.7
MIN	397.9	401.0	400.7
PEAK+	+566.3	+569.3	+569.6
PEAK-	-566.0	-569.6	-569.4

VECTORIAL ▾



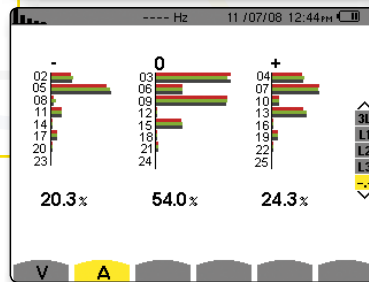
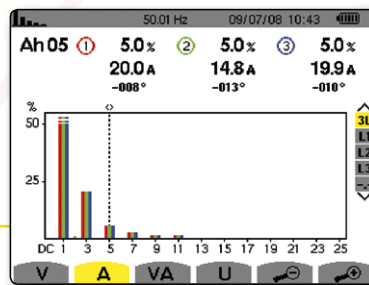
### DIAGNOSIS



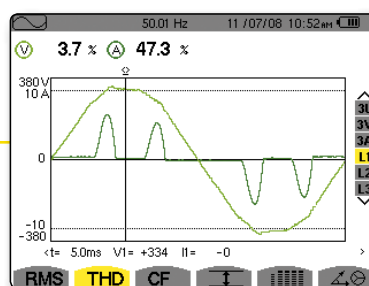
Harmonics mode

Global THD and phase by phase in U, I, V, VA in %, and RMS value, phase shift of harmonics. Only the C.A 8334 & C.A 8335 models have the function for harmonics in VA and the "expert mode"  
This mode can be used to analyse the influence of the harmonics on heating of the neutral or on rotating machines.

GLOBAL THD ▾ ▾



THD PHASE BY PHASE ▾



Power/Energy mode

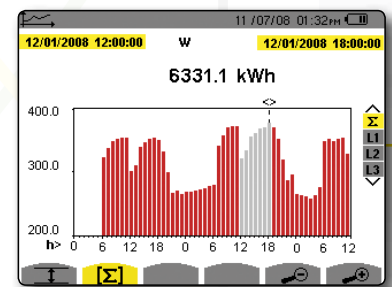
This mode displays all the values concerning power and energy. The "start" and "stop" keys can be used to activate and deactivate totalizing of the energies.

Measurements of: W, var, VA  
Wh, varh, VAh  
PF, DPF or cos φ  
AND tan φ

POWER MEASUREMENT ▾

	1	2	3
kW	+10.25	+6.44	+6.41
Wh	0000238	0000149	0000146
kVAR	± -0.03	± -0.02	± +0.04
VARh	±0000000	±0000000	±0000001
kVA	10.25	6.44	6.41
VAh	0000238	0000149	0000146

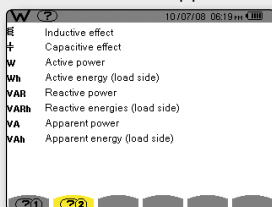
INTEGRATION OF POWER / ENERGY OVER A PERIOD OF TIME ▾ ▾



### Practical advantages

#### Help

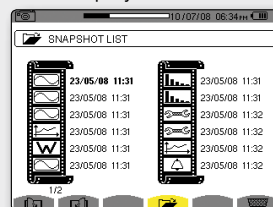
If you have any hesitations, the **Help** key clearly explains the functions applicable to the screen display.



Accessible on the front panel of the Qualistar®, screenshots can be produced simply by pressing a key. The Help function is available at every stage when you use the Qualistar®.

#### Screenshot

When this key is pressed, the instrument takes a screenshot. The screen displayed is then saved automatically with time/date-stamping.



#### Deletion

To avoid overloading the memory, the user can select the type of file to delete and only keep what is useful.



# Power and energy quality analysers



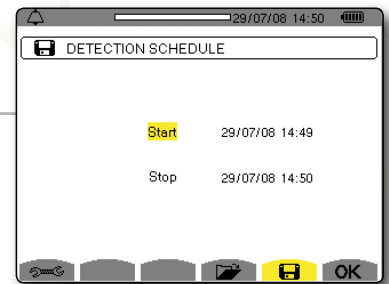
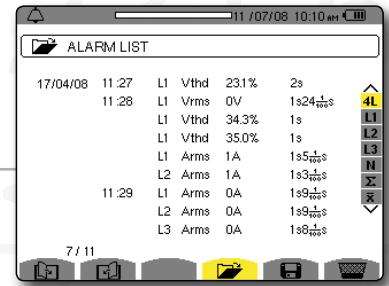
## MONITORING

All the monitoring operations are applied to all the characteristics **simultaneously!**



### Alarms mode

The alarms are defined when setting up the instrument. Users directly define all the thresholds to be monitored when measuring. Every time there is an alarm threshold overrun, the instrument time/date-stamps the event and records its duration, as well as its Min and Max values.



### Recording mode

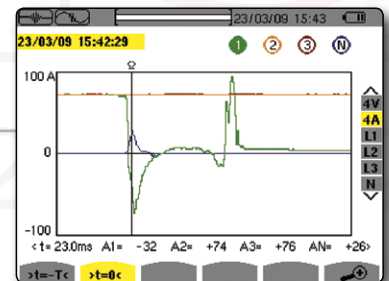
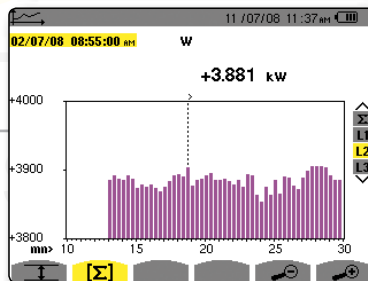
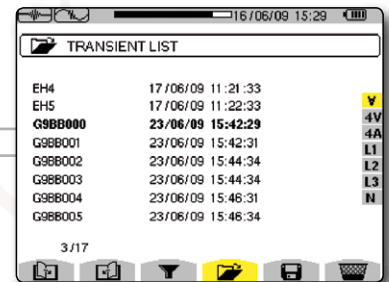
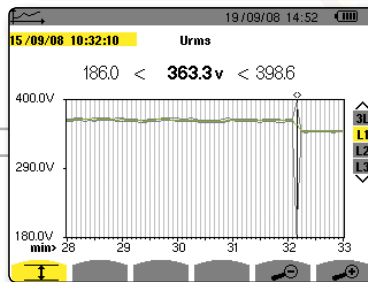
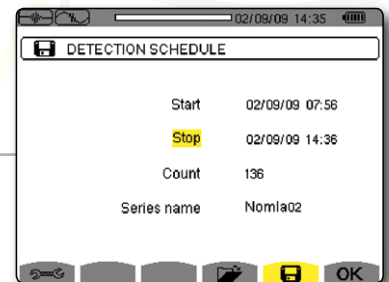
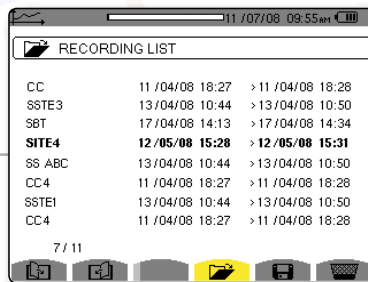
(Min / Max only on C.A. 8335)

When a recording is made, all the parameters required are saved with graphic display of all the parameters selected. In addition, a bargraph at the top of the window indicates the total recording time. The recording period and storage rate are both programmable.



### Transient mode

Transient mode can be used to capture events on the voltage and current, triggered according to thresholds. They are displayed over 4 periods of the event captured at a rate of 256 points/period, with the possibility of zooming in or out.





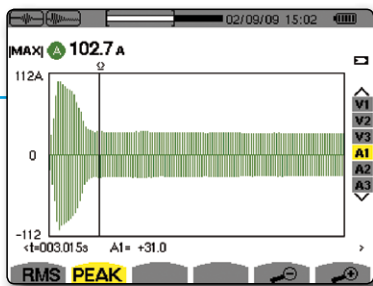
# C.A 8335

## INRUSH

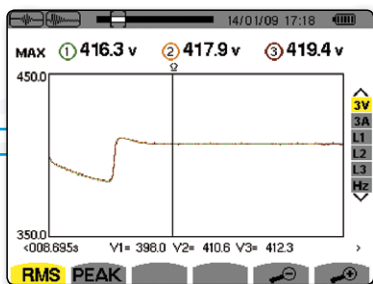
**(NEW FEATURE  
C.A 8335)**

The Inrush current is the maximum input current drawn by an electrical device when it is powered up. This measurement helps to size the electrical installation correctly.

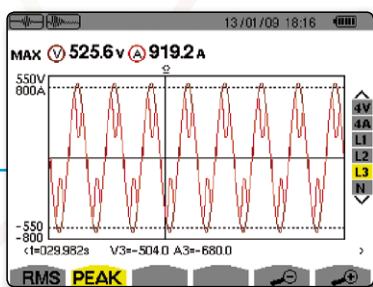
### Envelope mode



### RMS values



### Wave form

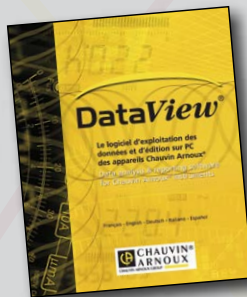


## SOFTWARE

Measurements made with the *Qualistar* can be processed with 2 software products; *Power Analyzer Transfer* for basic processing, and *DataView* for more comprehensive processing.

### Power Analyzer Transfer

- Configuration of the instrument: setup, recording, alarms
- Processing of recorded data and alarms
- Transfer of screenshots and transients
- Export of the data into Excel spreadsheet
- Export of the data in graphic form in Windows™



### DataView®

The easy-to-use *DataView* software automatically recognizes the instrument connected to the PC and opens the corresponding menu.

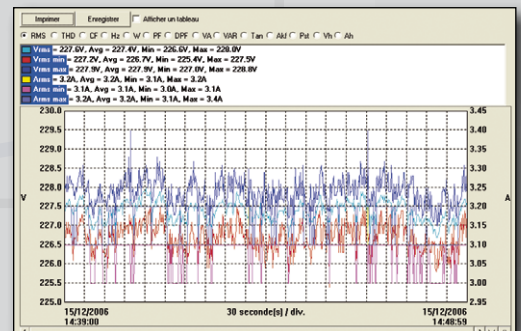
Users have direct access to:

- ✓ the data recorded in the instrument
- ✓ its configuration
- ✓ the various real-time measurements
- ✓ printing of reports
- ✓ database management

These instruments are connected to the PC via a USB link or RS232 interface. *DataView* is compatible with other Chauvin Arnoux® products.

Minimum Operating System requirements:

- ✓ Windows® 2000
- ✓ Windows® XP
- ✓ Windows® Vista
- ✓ Windows® 7



## ACCESSORIES

In its standard configuration, the *Qualistar* is supplied in a carrying bag with its measurement leads and crocodile clips, its mains power supply, a PC connection cable and processing software.

Users can then choose the current clamps as required.

New with the C.A 8335! Colour-coded rings can be fitted at each end of the measurement leads, making it easier to identify your connections.



	C.A 8332B	C.A 8334B	Qualistar+ C.A 8335
<b>MEASUREMENTS</b>			
<b>Number of channels</b>	3U / 4I		4U / 4I
<b>Voltage (TRMS AC+DC)</b>	<i>Phase-Phase</i>	6 V to 960 V	10 V to 1,000 V
	<i>Phase-Neutral</i>	6 V to 480 V	10 V to 1,000 V
	<i>Voltage ratio</i>	-	up to 500 kV
<b>Current (TRMS AC+DC)</b>	100 mA to 6,500 A		
	<i>MN clamps</i>	MN93: 2 to 240 AAC ; MN93A: 0.005 AAC to 5 AAC / 0.1 AAC to 120 AAC	
	<i>C193 clamp</i>	3 A to 1,200 AAC	
	<i>AmpFLEX or MA clamps</i>	30 A to 6,500 AAC	
	<i>PAC93 clamp</i>	10 A to 1,000 AAC / 10 A to 1,400 ADC	
	<i>E3N clamp</i>		50 mA to 10 AAC/DC 100 mA to 100 AAC/DC 10 mA to 50 kA
	<i>Current ratio</i>		
<b>Frequency</b>	40 Hz to 69 Hz		
<b>Power values</b>	W, VA, var, PF, DPF, cos φ, tan φ		
<b>Energy values</b>	Wh, varh, VAh		
<b>Harmonics</b>	yes		
	<i>THD</i>	yes, orders 0 to 50, phase	
	<i>Expert mode</i>	-	yes
<b>Transients</b>	-	50	210
<b>Flicker</b>	-	yes	
<b>Inrush mode</b>	-	yes, on 4 periods	yes, > 1 minute
<b>Unbalance</b>	-	yes	
<b>Recording</b>	<i>Min/Max recording</i>	no	yes
	<i>of all parameters at max. sampling rate</i>	21 minutes	42 minutes
	<i>of a selection of parameters with acquisition every 10 min</i>	> 17 days	> 37 days
			1 month
			several years
<b>Alarms</b>	4,000 of 10 different types		10,000 of 40 different types
<b>Recognition of current sensors</b>	8		9
<b>Peak</b>	yes		
<b>Vectorial representation</b>	automatic		
<b>Display</b>	Colour ¼ VGA LCD screen, 320 x 240, diagonal 148 mm		
<b>Capture of screens and curves</b>	8	12	50
<b>Electrical safety</b>	IEC 61010 1,000 V CAT III / 600 V CAT IV		
<b>Languages</b>	6		25+
<b>Communication interface</b>	Optical RS232 / USB		USB type B
<b>Power supply</b>	9.6 V NiMH rechargeable battery or external mains charger		
<b>Dimensions</b>	240 x 180 x 55 mm		
<b>Weight</b>	2.1 kg		1.9 kg

**STATE AT DELIVERY**

**C.A 8332B and C.A 8334B:** delivered with 1 carrying bag No. 22, an optical RS232 lead, a mains power cable, 4 x 3 m voltage leads with 4 mm banana connectors, 4 crocodile clips, 1 safety plug, 1 operating manual, PC software for data recovery. Plus the set of current sensors chosen.

**C.A 8335:** delivered with 1 carrying bag No. 22, 1 USB lead, 1 power supply charger, 1 mains power cable, 5 x 3 m voltage leads with Ø 4 mm banana connectors, 5 crocodile clips, 1 x 12-colour identification set for leads and inputs, 1 protective film for screen, 1 safety plug, 1 multilingual operating manual, PC software for data recovery.

**REFERENCES FOR ORDERING ACCESSORIES**

C.A 8335 alone.....	P01160577	MN93 clamp .....	P01120425B	Battery pack .....	P01296024
C.A 8332B-F MN93A clamp.....	P01160522	MN93A clamp.....	P01120434B	Qualistar screen film .....	P01102059
C.A 8334B-F MN93A clamp.....	P01160552	C193 clamp.....	P01120323B	Set of id. rings/inserts*.....	P01102060
C.A 8332B-F AmpFLEX™ 450 mm.....	P01160523	PAC93 clamp.....	P01120079B	Carrying bag no.21.....	P01298055
C.A 8334B-F AmpFLEX™ 450 mm.....	P01160553	AMP450 clamp.....	P01120526B	Carrying bag no.22.....	P01298056
C.A 8332B-INT MN93A clamp.....	P01160525	AMP800 clamp.....	P01120531B	RS232 optical lead**.....	P01295190A
C.A 8334B-INT MN93A clamp.....	P01160555	Mini-AmpFLEX™ MA193, 200 mm..	P01120580	USB-A USB-B lead* .....	P01295291
C.A 8332B-INT AmpFLEX™ 450 mm.....	P01160526	E3N clamp*.....	P01120043A	5 A box .....	P01101959
C.A 8334B-INT AmpFLEX™ 450 mm.....	P01160556	E3N adapter*.....	P01120081	C.A8335 mains power pack* ..	P01102057
<b>Other models: please contact us.</b>		E3N mains power pack*.....	P01120047	Software DataView.....	P01102095

\* C.A8335 only, \*\* C.A 8334B/C.A 8332B



**FRANCE**  
**Chauvin Arnoux**  
 190, rue Championnet  
 75876 PARIS Cedex 18  
 Tel: +33 1 44 85 44 38  
 Fax: +33 1 46 27 95 59  
 export@chauvin-arnoux.fr  
 www.chauvin-arnoux.fr

**UNITED KINGDOM**  
**Chauvin Arnoux Ltd**  
 Unit 1 Nelson Ct, Flagship Sq, Shaw Cross Business Pk  
 Dewsbury, West Yorkshire - WF12 7TH  
 Tel: +44 1924 460 494  
 Fax: +44 1924 455 328  
 info@chauvin-arnoux.co.uk  
 www.chauvin-arnoux.com

**MIDDLE EAST**  
**Chauvin Arnoux Middle East**  
 P.O. BOX 60-154  
 1241 2020 JAL EL DIB - LEBANON  
 Tel: +961 1 890 425  
 Fax: +961 1 890 424  
 camie@chauvin-arnoux.com  
 www.chauvin-arnoux.com

For assistance and ordering

