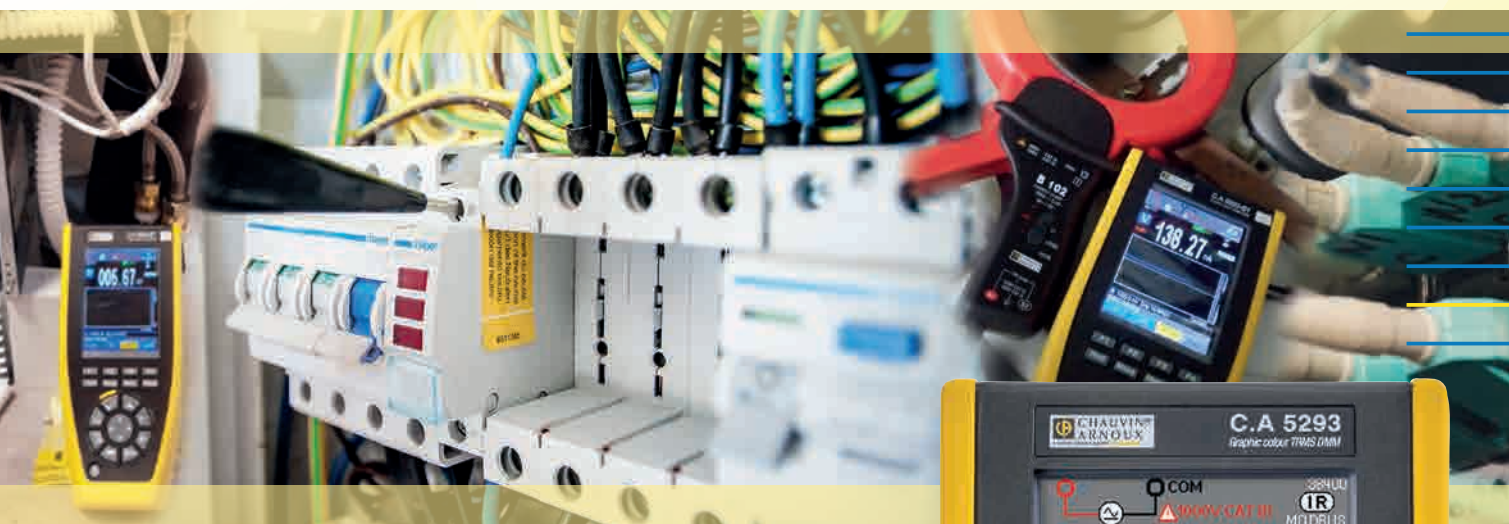


## CA 5292 & CA 5293

### RECORDER-MULTIMETERS WITH GRAPHICAL COLOUR SCREEN



### ASYC IV, the reference for multimeters in the lab and in the field!

- ▶ **Optimized display:**
  - Graphical display of trends and multiple parameters
  - 600 Hz waveform
- ▶ **Storage of up to 30,000 measurements with direct access [Mem]**
- ▶ **Power supply via USB charger**
- ▶ **Top-of-the-range specifications: 100 kcts, 200 kHz bandwidth and 0.02% accuracy**
- ▶ **Multiple analytical tools: time/date-stamped monitoring of Min/Max/Avg and Peak, filtering, duty cycle**

... While continuing to offer unrivalled simplicity of use!



600 V CAT IV  
1000 V CAT III

IP  
67



3-year  
warranty

Measure up



# ERGONOMICS AND ADVANTAGES

**S**imultaneously portable and benchtop multimeters, the ASYC IV models are simple and intuitive to use. Accessible directly, the various measurements are represented explicitly in the form of pictograms on the electronic switch.

The display allows users to view the measurement results either as numeric values or as graphs showing the trend over time. Recorded measurements can be displayed as traces, with the possibility of positioning cursors and zooming on a part of the recorded curve.

An integrated help function available in French and English provides information on the measurements in progress. USB or BT communication is provided to transfer the data onto a PC for saving and programming with the LV/LW drivers. Once the instrument is connected to the PC, the firmware can be updated by accessing the "Loader" program on the web.

## PROTECTED TERMINAL STRIP

The terminal strip for the measurements is located at the top of the instrument to ensure that the screen remains as easy to read as possible. If the cables are connected to the wrong inputs, there is an audible alert signal and the function is recognized automatically.

- 4 terminals: 3 measurement inputs + 1 isolated connection for USB communication



## DISPLAY WITH LARGE DIGITS

Multiple parameters with 3 levels of backlighting which vary automatically according to the lighting conditions for better visibility and more comfortable reading.



## GRAPHICAL SCREEN

Monitoring of the evolution of the main quantity or display of the waveform

## F1 - F4 FUNCTION KEYS

For direct access to the function menus

## SELECTION OF THE MEASUREMENT FUNCTION

By means of a function key which is lit to remind you of the function selected for intuitive configuration



Specific connector to USB for charging

## IP 67 MOULDED CASING

For instrument safety and comfortable handling





# APPLICATIONS

**A** SYNC IV multimeters are ideal for many applications in the industrial sector, telecommunications and Defence. Their multiple functions make them easy to use for electrical, electronics and machine maintenance.

In the electronics sector, the ASYC IV models can be used to test wiring, IT or medical equipment and SMDs. With their IP67 protection, they are designed to be dustproof and watertight for difficult environments. In industry, they are ideal for applications involving automation and processes in a wide variety of sectors: agri-food, plastics, concrete, metal, paper, wood, oil, nuclear.

ASYC IV multimeters can be used for the maintenance of many industrial machines: numerical control systems, motors, generators, etc.

These versatile instruments are also suitable for the needs of expert electrical installers and professionals in the transport and energy sectors.

The high-performance, affordable and ergonomic ASYC IV models also have their place in education and research.



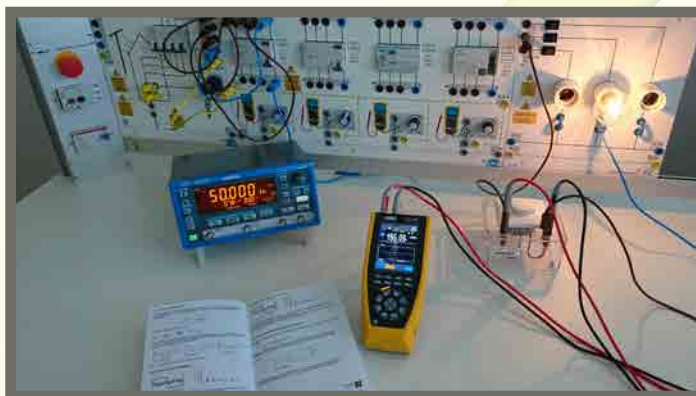
Temperature measurement on solar panels. The practical magnetized Multifix accessory allows you to work hands-free.



Measurements on heating and air-conditioning systems: current, voltage and temperature.



Measurement with leakage current clamp and recording of the fault.



High-performance functions for R&D and laboratory testing.

# MEASUREMENTS

The TRMS AC voltage and current measurements are also accurate on non-linear signals.

The status of the terminal strips is constantly shown at the top of the display as a reminder.

**AC, DC OR AC+DC VOLTAGE**  
Voltages can be measured up to 1,000 V in total safety.

**CURRENT**  
Direct AC, DC and AC+DC measurements up to 10 A permanent.

**FREQUENCY**  
The ASYC IV models measure frequency up to 5 MHz, as well as the duty cycle and power.

**TEMPERATURE**  
Temperatures can be measured using a J/K thermocouple or Pt100/ Pt1000 probe, depending on the model.

**RESISTANCE**  
Resistance can be measured up to 100 MΩ.

**CAPACITANCE**  
The range for capacitance measurements is quite wide: 1 nF to 60 mF depending on the model.

**CURRENT**  
ASYC IV multimeters allow direct reading of current measurements with a clamp, thus extending the measurement range.

**SETUP**  
General configuration and customization of the measurement functions. Possibility of protection with a password.

Parameterizable mV/A or A/A ratio on the CA 5292/3293

## Recording

Depending on the model, ASYC IV multimeters can record up to 30,000 values. The simplified parameterization concerns the number of measurements, the recording interval (0.2 s to 24 h), the duration and the storage capacity.

## File management

Display of the files with time/date stamp and campaign name.





# FUNCTIONS

Display of the trends of each main quantity with time base parameterizable from 1min28s to 1h13min20s.

## CONTROL OF THE MEASUREMENT BY MEANS OF SURV AND PEAK FUNCTIONS

Time/date-stamped capture of the minimum / maximum/ average and PEAK values enables you to record the transient values and variations automatically. This function can be used for effective detection of a signal's variations or anomalies.



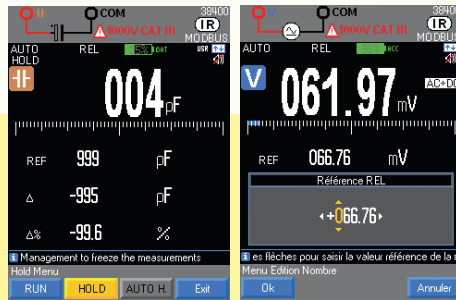
## STORAGE OF 30,000 RECORDED VALUES IN THE MULTIMETER'S MEMORY

Main and secondary values with graphical trace.



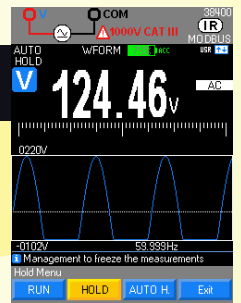
## RELATIVE VALUES FOR GREATER ACCURACY

The REL relative mode can be used to express the measurements in terms of their absolute and relative deviation from the reference measured.



## WAVEFORM DISPLAY

Display of a V or I signal up to 600 Hz, with automatic trigger. Practical when you want to find out the shape and evolution of a signal.



## MEASUREMENT WITH CURRENT CLAMP

Depending on the model, users can integrate the transformation ratio to allow direct reading of the current value, whether the clamp is equipped with a V output or an A output.



## MATH FUNCTION

This function is suitable for measuring any physical quantity by conversion into the appropriate unit and offers direct readings (Ax + B).



## ACCURATE MEASUREMENTS, INCLUDING ON VARIABLE SPEED DRIVES

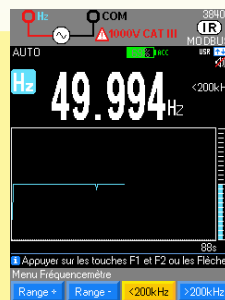
A 300 Hz low-pass filter guarantees accurate voltage and frequency measurements on PWM variable speed drives.

## FLEXIBILITY

The RANGE function automatically selects the most suitable measurement range for the measurements in progress.

## Hz FUNCTION

Frequency can be measured up to 5 MHz. This function can also be used to measure the +/- duty cycle for analysis of the active or inactive intervals of switching signals or logic signals. PW+/- pulse width measurement can be used to check electronic fuel injection systems and switching power supplies.



## USER-FRIENDLY & TIME-SAVING

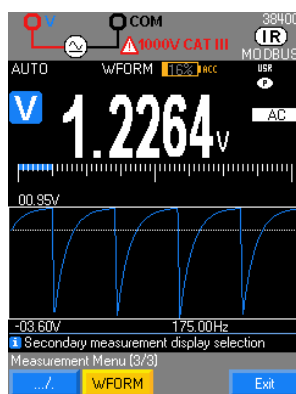
The "user/basic" function saves the setting preferences defined by the user when the instrument is powered down. This means you don't have to readjust the settings every time you switch on! This function is password-protected.

# CA 5292 & CA 5293

These portable multimeters with graphical colour display allow direct measurement of the main electrical quantities and instantaneous display of the trends. With their innovative design, they are compact, rugged, watertight and easy to grip. Other advantages include the product HMI, the advanced measurement functions and the measurement help function.

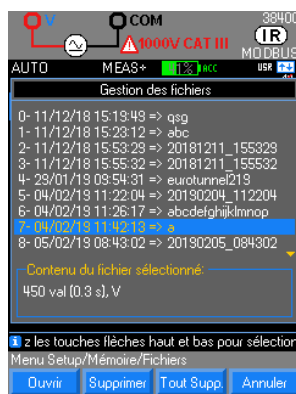
## High-performance graphical multimeters...

- Easy-to-read 320 x 240-pixel colour matrix screen with black background
- Graphical display of the trends in a summary screen
- Trace, cursors and zoom on the recordings
- Recording of up to 30 sequences
- Automatic waveform display



## Dynamic recorders...

- Storage of up to 30,000 measurements in memory. Simplified parameterization of the number of measurements, the interval, the duration and the storage capacity...
- Internal storage of 30 measurement sequences
- File manager: with date, time and name.
- Interactive zoom function and cursors on the recordings
- A simple monitoring mode displaying the time/date-stamped MIN/MAX and AVG values



## ...And more

- Contextual reminder of the connections
- Standard USB communication plus Bluetooth option
- IP67 ingress protection resistant to water projection and dust, suitable for outdoor use
- Commercially-available NiMH AA rechargeable battery, the best price-quality solution
- Battery life of up to 100 hours with management of the battery level
- No time wasted: the instrument operates while charging at the same time



	CA 5292	CA 5293
Display resolution (counts)	100 k	100 k
VAC/DC/AC+DC (BW)	100 kHz	200 kHz
VLowZ	•	•
IAC / I DC	•	•
IAC+DC	•	•
IAC/DC direct reading	•	•
Resistance	•	•
Capacitance	•	•
Frequency meter	•	•
Audible continuity / Diode test	•/•	•/•
K TC / Pt100 temperature	•/•	•/•
dBm (∕R) / dB (∕Vref)	•/•	•/•
Resistive power	•	•
Duty cycle / Pulse width / Pulse counting	•/•/•	•/•/•
HOLD / Auto- HOLD	•/•	•/•
Min / Max / Avg	•/•/•	•/•/•
Peak+ / Peak- / CF	•/•/•	•/•/•
Relative measurements	•	•
MATH function	•	•
Recording	10,000	30,000
USB / Bluetooth communication	•/• (option)	•/• (option)
CAT III / CAT IV	1,000 V / 600 V	1,000 V / 600 V
3-year warranty	•	•

## Documents available

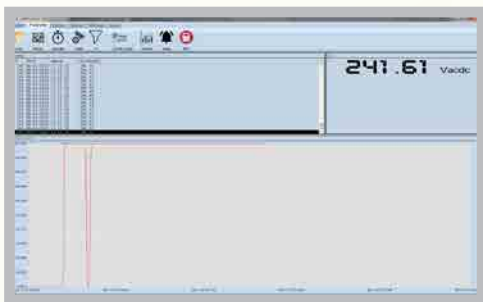
- Start-up guide in 20 languages
- User's manual in more than 11 languages
- SCPI programming guide in 2 languages
- and, as always, the HMI in 5 languages!

# CA 5292 & CA 5293

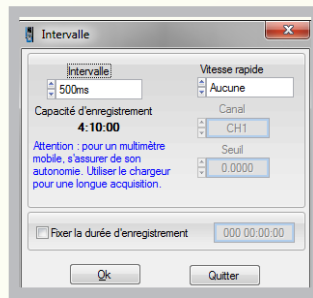
## Communication



- The ASYC IV models are equipped with a universal communication mode, based on the SCPI standard, via USB or Bluetooth. The SX-DMM software is a simple, effective tool for display, processing and analysis of the data. SX-DMM is delivered as standard with the product and updates are available to download free of charge from the Support website. The SX-DMM software can be used for real-time processing of the data on a PC, upgrading of the instrument and calibration, as well as offering a new function for automatic adjustment of the time on the instrument. It is also possible to display the storage capacity.
- The ANDROID application, available for download from the Google store, can be used to monitor measurement campaigns and view the measurements remotely.



Display of the data and the curve with the spreadsheet export function.



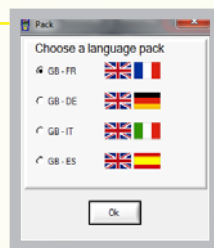
Parameterization of the recording campaigns



Mathematical functions applied to the data

## The loader! Choose your working language from the 5 languages available.

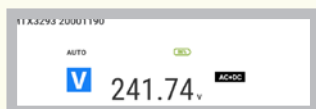
4 language packs available as firmware upgrades.



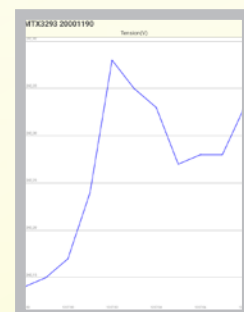
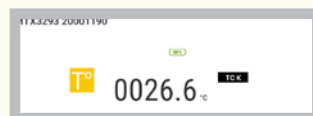
Translation of the messages

Translation of the interactive menus

## ANDROID application available on Google Play.



Main function in real time + data recording and use of tools such as email, SMS, etc



Curve plotted on a tablet

	CA 5292	CA 5293
<b>DC, AC and AC+DC voltages</b>		
	TRMS	
Range	100 mV * / 1000 mV / 10 V / 100 V / 1000 V	
Resolution	1 $\mu$ V / 10 $\mu$ V / 0.1 mV / 1 mV / 10 mV	
AC and AC+DC bandwidth	100 kHz	200 kHz
DC accuracy	0.03%	0.02%
AC and AC+DC (VLowZ) accuracy	0.3%	0.3%
<b>DC, AC and AC + DC TRMS current</b>		
Range	1000 $\mu$ A / 10 mA / 100 mA / 1000 mA / 10 A / 20 A (30s max on 100 A range)	
Resolution	10 nA / 0.1 $\mu$ A / 1 $\mu$ A / 10 $\mu$ A / 100 $\mu$ A / 1000 $\mu$ A	
DC / AC and AC+DC accuracy	0.08% / 0.3%	
AC and AC+DC bandwidth	50 kHz	
<b>Frequency</b>		
Frequency range	10 Hz / 100 Hz / 1 kHz / 10 kHz / 100 kHz / 1 MHz / 5 MHz	
Resolution	0.0001 Hz / 0.001 Hz / 0.01 Hz / 0.1 Hz / 1 Hz / 10 Hz / 100 Hz	
<b>Resistance and continuity</b>		
Ranges	100 $\Omega$ * / 1 k $\Omega$ / 100 k $\Omega$ / 1000 K $\Omega$ / 10 M $\Omega$ / 100 M $\Omega$	
Resolution	0.001 $\Omega$ / 10 m $\Omega$ / 100 k $\Omega$ / 10 $\Omega$ / 10 $\Omega$ / 1 k $\Omega$	
Basic accuracy	0.07%	
Protection	1000 V electronic protection	
Audible continuity detection	1000 $\Omega$ / SIGNAL <20 $\Omega$ < 3.5 V	
<b>Diode test</b>		
Threshold voltage measurement	Diode 0 -2.6 V <1 mA + Zener diode or LED 0-2.6 V <11 mA	
<b>Capacitance</b>		
Ranges	1 nF / 10 nF / 100 nF / 1000 nF / 10 $\mu$ F / 100 $\mu$ F / 1 mF / 10 mF	
Resolution*	1 pF / 10 pF / 0.1 nF / 1 nF / 0.01 $\mu$ F / 0.1 $\mu$ F / 1 $\mu$ F / 10 $\mu$ F	
<b>Temperature with Pt100/1000 and K/J thermocouples</b>		
Operating range	-200 $^{\circ}$ C to +800 $^{\circ}$ C with Pt and -40 to +1200 $^{\circ}$ C with K thermocouple	
Accuracy	0.1 %	
<b>Other Measurement functions</b>		
SURV MAX/MIN/AVG	Time/date-stamped on all the main positions	
REL	Reference-delta relative value on 3 displays + main measurement	
PWM filter	4th order 300 Hz low-pass filter for measurements on variable speed drives of asynchronous motors	
SPEC	Display of the measurement tolerance + Smin + Smax	
GRAPH	Trends of main measurements with max., variable time and display of waveform (50/60 and 600 Hz)	
Secondary measurements	3 measurements + main measurement	
Measurement storage	10,000	I 30,000

\*manual access

General specifications		OPTIONS
Type of display	Colour graphical (70x52) with backlighting and black background on 4 x 100,000-count displays	Calibration software.....PO1196770 Kit of 4 NiMH batteries.....HX00518
PC interfaces	Optical USB connector or Bluetooth (option)- SX-DMM software and ANDROID application	
Power supply	USB-type charger or 4 AA batteries or NiMH rechargeable batteries	
Safety / EMC	Safety as per IEC 61010-1, IEC 61010-2-033 1000 V-CAT III / 600 V-CAT IV EMC as per EN 61326-1	
Environment	Storage: -20 $^{\circ}$ C to +70 $^{\circ}$ C - Operation: 0 $^{\circ}$ C to +40 $^{\circ}$ C	
Mechanical specifications	Dimensions (L x W x H): 196x90x47.1 mm - Weight: 570 g	
Warranty	3 years	

#### STATE AT DELIVERY

4 x 1.5 V NiMH rechargeable batteries  
1.5 m straight/straight red cable  
1.5 m straight/straight black cable  
Red CAT IV 1 kV test probe  
Black CAT IV 1 kV test probe  
USB optical communication cable + SX-DMM software  
USB charger + USB connection cable  
User's Manual on CD and multilingual start-up guide on paper

#### REFERENCES

CA 5292.....PO1196802  
CA 5293.....PO1196803  
CA 5292BT.....PO1196812  
CA 5293BT.....PO1196813



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