CHAUVIN® ARNOUX
CHAUVIN ARNOUX GROUP

F407
F607

Power clamps with unprecedented performance!

Clamp multimeters for power and harmonics

True InRush

1000 V CAT IV

IP 54

Eco Conception

- Measurements up to 3,000 A AC/DC/AC+DC
- 60 mm clamping diameter!
- True-Inrush function to measure all types of inrush!
- Complete analysis of harmonic orders
- Continuous recording & Bluetooth PC communication

Specially designed to simplify current measurement

The F407 and F607 clamps can be clamped around a conductor **with just one hand**.

With their measurement range up to 3,000 A, their ability to measure AC or DC currents and **their exceptional jaw opening capacity**, these clamps are ideal for use **on switchboards in small or large industrial installations**.

They are **particularly comfortable to read** because of their backlit LCD display, offering contrasts and a viewing angle which are unprecedented for this type of instrument.

Equipped with a protective shockproof band, the casing of these clamps is also **particularly resistant to falls**.

The rotary switch is specially moulded for **easy handling even with protective gloves**.

Quick, Safe Implementation

Users select the required measurement with the rotary switch and then clamp the conductor or hook up their measurement leads. To obtain further details on the measurement in progress, **all you have to do is press the corresponding function** on the front panel: HOLD, Min/Max, etc.

IEC 61010 1,000 V CAT IV

The CE standard imposes product design constraints for test and measurement instruments. Professional electrical environments are divided into 4 categories. **Category IV offers users the greatest safety.**

A Category IV instrument can be used on all parts of low-voltage installations.

The F407 and F607 clamps comply with all the specifications imposed by the standards to guarantee the best possible safety for users.

Measurements

- AC and DC voltage
- AC and DC current
- AC and DC power values on single-phase and balanced three-phase networks
- power factor, displacement power factor, crest factor
- THD
- current and voltage harmonics, order by order
- ripple factor

Harmonics

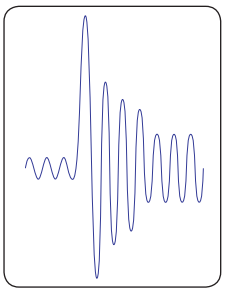
By monitoring voltage and current harmonics, **it is usually possible to determine which loads are polluting the electrical network**. With the F407 and F607 clamps, the harmonics mode enables you to:

- **determine the harmonic currents** produced by non-linear loads
- **analyse the problems** caused by these harmonics, depending on their order (heating of neutral, motors, etc.)

THD measurement (THD-f and THD-r) can be used to **quantify the harmonics present on the network**.

Triplen harmonics are usually due to loads such as switching power supplies (computer equipment, TV sets, etc.) or certain types of lighting (iodine lamps, etc.).
Harmonic orders 5, 7, 11 and 13 are caused by loads controlled by variable speed drives.

TrueInRush



To size an electrical installation correctly (main switch, relays, fuses, etc.), you need to know **the value of the inrush current, as it may be up to 20 times the steady-state rated current** and therefore requires suitable protective devices.

Unlike other instruments which measure the inrush when the installation is first powered up, **the F407 and F607 clamps measure all types of Inrush**, even those due to load increases on an installation which is already up and running. This feature means the following values can be measured:

- instantaneous current value
- maximum instantaneous current value
- RMS value of the current half-cycle on which the sensor is set up
- maximum RMS value of the current half-cycle
- motor inrush start and end time

Min/Max/Peak detection

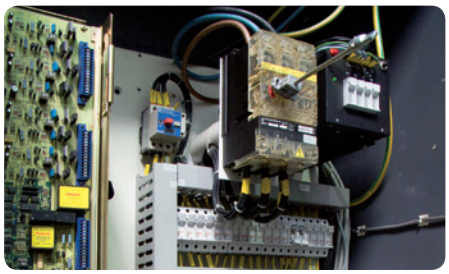
Min/Max measurements are useful for monitoring the variations of the values measured. You can then record the measurement fluctuations. **The instrument automatically stores the min. and max. values for the monitoring period in its internal memory**. In voltage and current modes, the peak samples for the measurement are also stored with the Peak+ and Peak- values (around one ms).

Recording to detect even intermittent faults

This is an important advantage for technicians in the field. In the event of random faults, they no longer have to wait for them to occur: the paperless recorder function enables them to record the relevant parameters over time at a rate which they can define. **The instrument automatically stores the average**, minimum and maximum values in all the modes (voltage, current, power, etc.).
All the parameters will be stored in the instrument's memory. The programmable acquisition rate allows users to define the recording duration possible on the instrument. **All the recordings will then be available as trend curves for analysis.**

Ripple

The Ripple is a parameter which can be used to assess the quality of the smoothing for currents that are rectified and then smoothed (DC). The lower the ripple factor, the greater the efficiency of the smoothing. When a switching power supply is used, the voltage supplied includes residual ripple, particularly at high frequency. This ripple is harmful for electrical equipment and should be kept to a minimum.



Technical Specifications

PAT and DataView® Software

Like all our new instruments, these 2 clamps are compatible with the PAT software and DataView® software (available as an option).
With this software, you can recover the data via a Bluetooth link. All the PC tools are then available to analyse and back up the data, export the measurements and produce a report.

		Best accuracy	F407	F607
Current (RMS)	AC	1% ±3 pts	1,000 A	2,000 A
	DC and AC+DC		1,500 Apeak	3,000 Apeak
Voltage (RMS)	AC	1% ±3 pts	200 mV to 1,000 V	
	DC and AC+DC		200 mV to 1,000 V	
Auto AC/DC			Yes (V and A)	
Ripple			Yes	
Résistance			100 kΩ	
Continuité/buzzer			Yes (<40 Ω)	
Power W, var, VA			Yes, single and total three-phase	
Crest factor (CF)			Yes	
PF and cos φ (DPF)			Yes / Yes	
Auto-shutdown			Yes	
“Hold” function			Yes	
“Backlighting” function			Yes	
“Min Max” key			Yes	
“Peak” +/- function			Yes / Yes	
True-Inrush function			Yes	
THD-f / THD-r harmonics function			Yes / Yes	
Breakdown into harmonic orders			Yes	
“REC” recording function			Yes	
Recordings (with Min Max)			Up to 3,000 measurements	
“BT” Bluetooth communication function			Yes	
“Hz” function			Yes	
Clamping diameter (mm)			Ø 48	Ø 60
Mechanical protection			IP54	
High electrical protection			IEC 61010 – 1,000 V CAT IV	
Warranty			3 years	

State at delivery

An F407 or F607 clamp multimeter delivered with 1 set of red/black banana/banana leads, 1 set of red/black crocodile clips, 1 set of red/black test probes, PC communication software, 1 multilingual operating manual.

References to order

• F407 Harmonics clamp	**P01120947**
• F607 Harmonics clamp	**P01120967**

Accessories

• DataView software	**P01102092**
• Bag	**P01298076**
• Multifix magnetic mounting kit	**P01102100Z**
• Set of red/black crocodile clips	**P01295457Z**
• USB-key Bluetooth kit	**P01637301**
• Set of red/black banana/banana leads	**P01295453Z**
• Set of red/black test probes	**P01295454Z**

For information and ordering

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