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NANOVIP PLUS
Hand-Held Power & Harmonic Analyzer

More than 100 measures including Harmonic Analysis

Highest Performance in a Compact Package

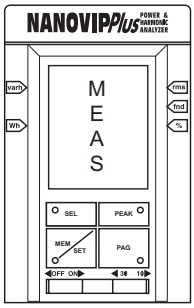
NANOVIP PLUS is a truly hand-held portable power analyser for single-phase and balanced three-phase systems.

NANOVIP PLUS is capable of measuring over 100 fundamental parameters for display via a large, high-contrast LCD. Measurements include full Harmonic Analysis up to the 24th order and DC measures (with a suitable DC current clamp).

Moreover, the high-speed serial port and the included PC software NANOWIN add further power to Nanovip Plus, allowing full graphical display and analysis of all measurement data, both as real-time measures or by performing measuring campaigns storing data on the PC's hard-disk.

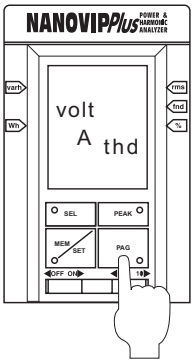
The extreme portability, the excellent performances -not only in terms of available functions but also for accuracy and reliability- and the unbeatable price/performance ratio: Nanovip Plus should be included in every electrician's toolkit!

Instantaneous Measurements



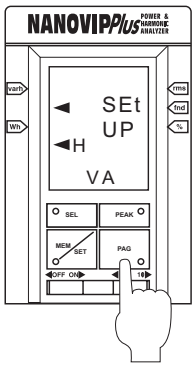
Volt, Amps, Watts, VAr, VA,W, Hz pos/neg kWh (import/export), pos/neg kvarh (inductive/capacitive)
All measurements are True-RMS, with accuracy class 1.0.
DC measurement capability (requires Hall effect clamp for current).
Automatic recognition of clamp type in use (200A or 1000A) - removes the need for additional set-up by the user.
- PEAK feature captures max current/power values or min voltage value (user selectable).
- MEM function provides data hold and allows realtime comparison of new readings against stored values.

Harmonic Analysis



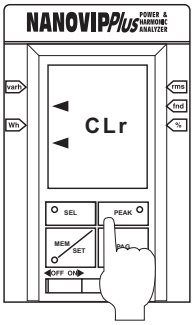
- Measurement of harmonic values of V & I (1 st to 24th) expressed as absolute and percentage values, plus their DC component and displacement values
- Total Harmonic Distortion (THD) of V & I with reference to the fundamental or total RMS value
- Crest factor for V & I expressed as absolute and percentage values
- DC ripple component for V & I as RMS percentage values
- V & I ripple as RMS value

User-friendly Set-up



- Auto set-up for standard current clamps
- Manual override facility for non-standard ratios - fully programmable for any CT
- Standard or co-generation energy metering
- 50/60Hz fundamental selection for harmonics analysis
- DC selection
- RS232 parameter set-up for serial communication to PC

Reset



- Reset of energy meters

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NANOVIP PLUS MEM

Hand-Held Power & Harmonic Analyzer with Memory

* Optional power supply, part no 4AAQI.

Unbeatable Performance in a Compact Package

NANOVIP PLUS MEM has all the capabilities and advantages of Nanovip Plus, but adds further functions and a large 1Mb integrated Flash-Memory for extended measuring surveys.

All the performance of the Nanovip Plus and:

- Automatic data storage to 1MB internal memory (4032 records)
- Internal clock/calendar
- Backlit LCD with auto/manual control
- kW for each harmonic frequency
- Fast data download to PC via 38.4kbaud serial port.
- "One touch" set-up for default values (CT set-up, VT set-up, fundamental frequency, comms set-up etc)
- Realtime link to PC in addition to memory download
- Nanowin software included.

PARAMETERS	1F/3
Voltage [V]	•
Current [A]	•
Power Factor	•
Active Power [kW]	•
Reactive Power [kvar]	•
Apparent Power [kVA]	•
Frequency [Hz]	•
Positive (Imported) Active Energy [kWh]	•
COG-negative (Expo) Active Energy [kWh]	•
Positive Reactive Energy [kvarh]	•
COG-negative Reactive Energy [kvarh]	•
Apparent Energy [kvah]	•
Voltage Thdf%	•
Voltage Thdrms%	•
Current Thdf%	•
Current Thdrms%	•
Vi (I=0-24@50Hz, I=0-20@60Hz)	•
Ai (I=0-24@50Hz, I=0-20@60Hz)	•
Cosf I (I=0-24@50Hz, I=0-20@60Hz)	•
Kwi** (I=0-24@50Hz, I=0-20@60Hz)	•
Crest Factor V	•
Crest Value V	•
Crest Factor A	•
Crest Value A	•
DC Voltage Ripple dU	•
DC Current Ripple dA	•
* Single-phase Or Balanced Three-phase	
Nanovip Plus Mem Only	

Main Technical Data:

- Power supply
  Battery: 4 1,5V AA Batteries
  Autonomy: 50 ÷ 60h (40 ÷ 50h with PEAK-function)
  (Optional power supply available for Nanovip Plus MEM)

- Inputs
  Voltage: L1 - N: 600 Volt AC between phase and neutral @ 0÷ 600 Hz; or 600 Volt DC Input Impedance: 4MOhm

- Current: L1: 1 Volt AC at 0 ÷ 600 Hz
  Input Impedance: 10kOhm

- Display:
  Nanovip Plus: LCD
  Nanovip Plus MEM: LCD with backlight

- Accuracy Class 1.0 (EN 62053-21)

- Overload of voltage inputs: Max 825 Vrms - Peak voltage 1,17kVolt

- Overload of current inputs: 5 times full scale value (cut-out tripped at limit values)

- Number of scales: 3 voltage scales, 3 current scales
- Automatic scale change

- Scale change response time: 1 sec.

- Display refresh rate: 1 sec.

- Internal Memory: 1Mb non-volatile Flash (only Nanovip Plus MEM)

- Instrument dimensions: 80 x 175 x 32,5 mm.

- Weight 400g (including batteries)

- Protection level: IP40

- Operative temperature range: -10°C +50°C

- Storage temperature range: -20°C +60°C

- Relative Humidity Range (RH%): 20% - 80%

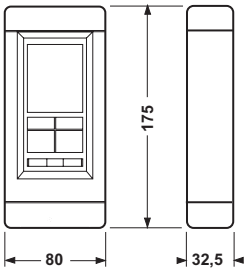
- Condensation: not allowed

NANOVIP - Hand-Held Power Analyzer

PARAMETERS	1F/3F*
Voltage [V]	•
Current [A]	•
Active Power [kW]	•
Power Factor	•
Reactive Power [kvar]	•
Apparent Power [kVA]	•
Frequency [Hz]	•

* Single-phase Or Balanced Three-phase

DIMENSIONS (mm)



NANOVIP/PLUS/MEM KIT

Simple and Cost-Effective Power Analyser

NANOVIP is the most simple and cost-effective solution providing just the 7 most important measures of a single-phase or balanced three-phase system. In addition it allows recording of the measurements in correspondance with peaks of voltage, current or power and measurement of parameters respective to recorded values.

7 MEASUREMENT FUNCTIONS IN THE PALM OF YOUR HAND

- Volt (rms), Amp (rms) P.F, W Cosϕ, var, VA, Hz
- PEAK function for storing the measurements in correspondence to the V, A, W peaks (selectable)
- MEM functions for measurements of deviations of V, A, W, Cosϕ with respect to the recorded values.
- Measurements from 7W to 150kW (750kW with 1000A clamp meter)
- Measurements as true RMS value
- Automatic voltage and current scale change
- AC and DC measurements (with DC clamp meters)
- High accuracy.
- Very user-friendly.

Standards and Regulations

Nanovip conforms to Directive 73/23/CEE (LVD) and 2004/108/CE (EMC). It has been designed with reference to EN 61010-1, EN 61326 including append. A1/A2/A3, EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 61000-3-3/A1, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-5/A1, EN 61000-4-6, EN 61000-4-6/A1, EN 61000-4-8, EN 61000-4-8/A1, EN 61000-4-11, EN 61000-4-11/A1.

NANOVIP PLUS KIT
NANOVIP PLUS MEM KIT

KIT complete with:

n.1 NANOVIP PLUS / PLUS MEM
n.1 NANOVIP carrying case
n.1 Set of voltage meas. leads with crocodile clips
n.1 Nanowin software Windows
n.1 RS232 PC cable
n.4 1,5V AA Batteries
n.1 Warranty certificate
n.1 Calibration certificate
n.1 User manual

NANOVIP KIT

KIT complete with:

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n.1 User manual

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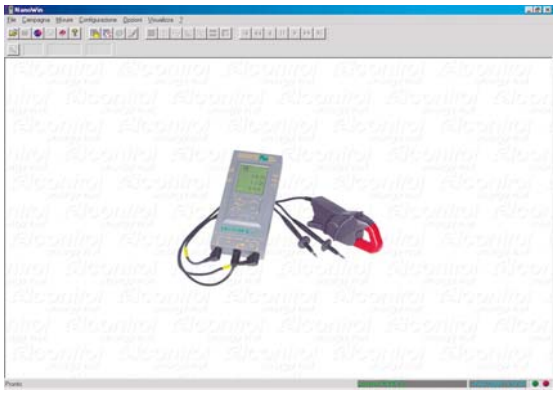
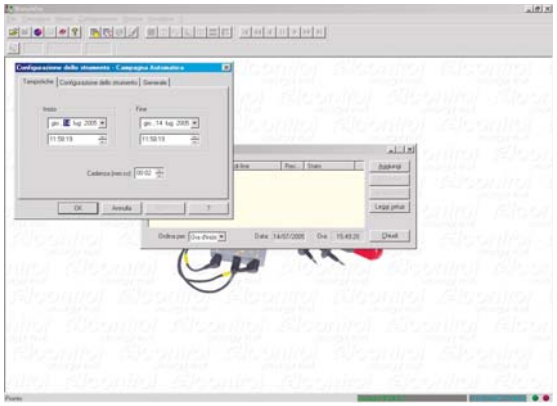
NANOWIN

Data management software for Windows 9x, NT, 2000 and XP for hand-held analysers NANOVIP Plus and NANOVIP Plus MEM

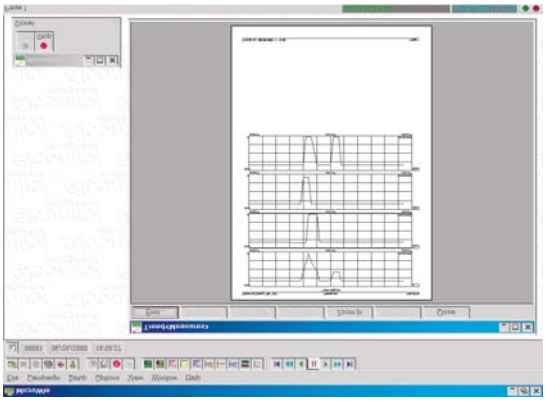


NanoWin is a Windows 9x,NT4.0, 2000, XP data visualization, management and processing software for Nanovip Plus and Nanovip Plus Men instruments. It allows visualization of all measurements on the instruments and performing measuring surveys in both Manual and Automatic (scheduled) modes. Measurement trends over time, waveforms, voltage and current harmonics spectrum etc. can be displayed.

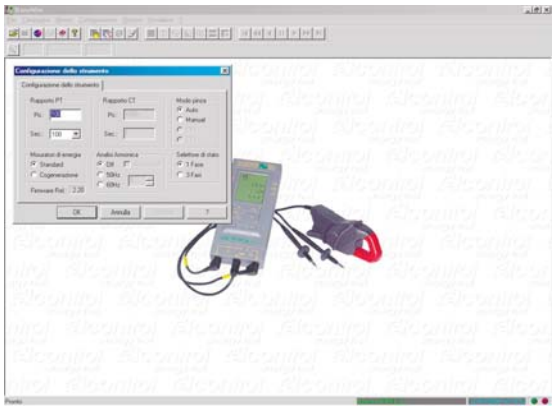
Harmonic Spectrum display. The Voltage, Current and CosPhi of each harmonic (0-24) are displayed both as a numerical value and as a percentage with respect to the basic one.



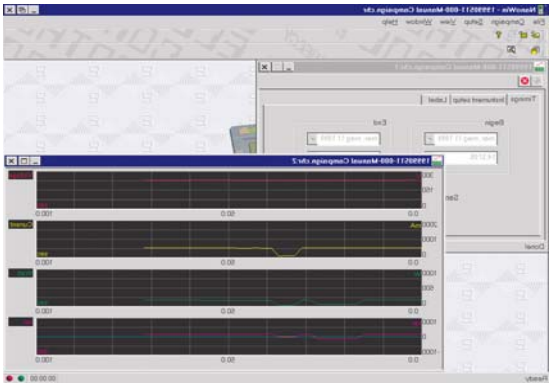
Configuration of surveys is very straightforward. A single configuration window allows the main parameters to be set, e.g. campaign beginning and end date and time, frequency time, instrument set-up and label describing each measuring campaign.



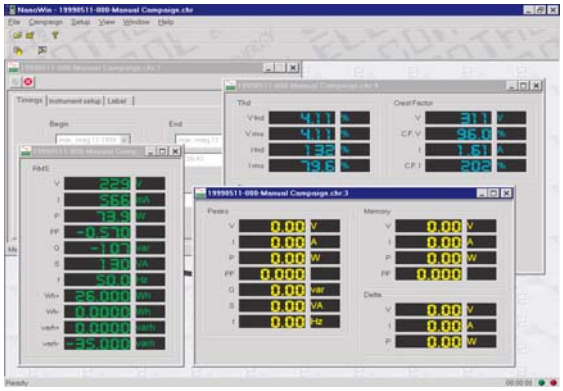
During a campaign, it is possible to display the real-time trend of up to measurement parameters.



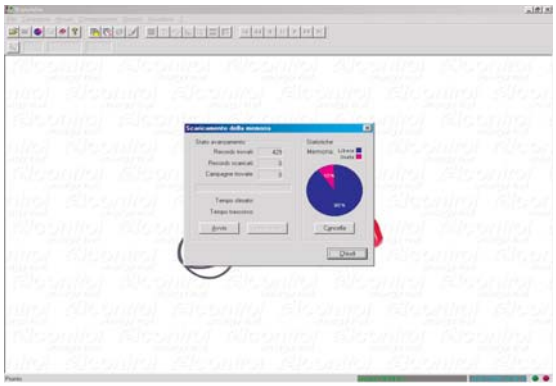
Instrument set-up Window



It is also possible to carry out waveform campaigns, by displaying the voltage and current measured by the instrument in the Graphic mode.



The digital format measurement display is divided according to four types of data: RMS, Peaks-Memory-Sweep, Thd-Crest Factor-Ripple and Harmonics Spectrum. Each one of the listed windows can be displayed or hidden independently.



When Nanowin is used with NANOVIP *Plus* MEM, the program enables to download, classify and file measuring campaigns' data stored in the instrument's internal memory. Such campaigns are handled just like numerical campaigns executed on PC by the NanoWin program in the remote mode.