

# NanoVIP® ONE™



**EN** NanoVIP® ONE™ is an analyzer equipped with a wide range of measurements for monitoring both electricity consumption and power quality. Particularly compact and light, it uses commercial AA batteries (rechargeable or not), has a considerable internal storage capacity (4Gb) and a graphic display. An economic analyzer but suitable for professional use.

## COMPACT, LIGHT AND POWERFULL

- ✓ 128x128 graphic LCD that allows a wide display flexibility (multilingual menu, waveforms, histograms, diagrams, images, etc.)
- ✓ Dedicated NanoStudio PC software through which it is possible to perform advanced analyzes of stored data
- ✓ 1 voltage measurement channel (1 phase + neutral) up to 600V CAT III, with the possibility of measuring also the DC voltage, with an accuracy of  $\pm 0.5\% + FS$  error
- ✓ 1 current input with the possibility of measuring also the DC current, with the accuracy of  $\pm 0.5\% + FS$  err
- ✓ Capability to use flexible clamps up to 6000A or other sensors with full scale set by the user
- ✓ Can be used with AA commercial batteries (rechargeable or not) or with external power supply (optional) for prolonged campaigns.
- ✓ 10 alarms (generic, swells, dips and interruptions)
- ✓ 4Gb internal memory for measurements savings
- ✓ Multifunction keyboard
- ✓ USB output for download/upload measurements, setup and remote control
- ✓ Buzzer for errors and alarms
- ✓ Harmonic analysis up to the 25th degree
- ✓ Oscillo function for continuous capture of a channel (rms voltage or current)
- ✓ Start/Stop counters function for quick

# NanoVIP® ONE™

<b>CASE:</b>	
Dimensions	175x80x32mm
Material	ABS with self-extinguishing V0 grade
Protection class	IP30
Weight	220 g (315g including batteries)
<b>DISPLAY:</b>	
Dimensions	42x50mm
Type	128x128 STN Negative dot matrix graphic LCD
Backlight	White LED
Languages	English - Spanish - Italian - German - French
<b>KEYPAD:</b>	
Type	Membrane keypad with 7 double-function keys
<b>POWER SUPPLY:</b>	
External power supply (Optional)	wall-plug switching; input 100-240VAC ±10% 47-63Hz with interchangeable plug; output 7.5VDC - 12W
Battery	4 x AA commercial 1.5V Alkaline or rechargeable NiMH
Duration of the battery charge	Up to 24h (depending from AA battery type)
<b>CONNECTABLE SYSTEMS:</b>	
Systems frequencies	50Hz – 60Hz
Single phase	✓
Two phase	-
Three-phase, 3-wires, balanced	✓
Three-phase, 3-wires, unbalanced	-
Three-phase, 4-wires, balanced	✓
Three-phase, 4-wires, unbalanced	-
<b>CONNECTIONS:</b>	
Voltages	Flexible cables L = 1.5m; 2.5mm <sup>2</sup> - 36A; 1000V CAT III - 600V CAT IV with a 4mm, protected blade plug connector, crocodile clip with a 45mm opening (for sections up to 32mm)
Currents	Elcontrol Energy Net interchangeable amperometric sensors
Solar radiation	-
PT100	-
Anemometer	-
Transducers	-
<b>FUNCTIONS:</b>	
Traditional electrical analysis	V, I, P, Q, S, F, PF, THD(V)%, THD(I)%, cosφ, φ, peaks, minimums, maximums, averages, max. demands, etc.
Three phase counters	kWh, kVArh, kVAh, both absorbed that generated
Cogeneration	✓
Waveforms	V & I
Harmonics	Values and histograms up to the 25 <sup>th</sup> order
Oscillo	✓
Sags	-
Transients	-
Unbalance	-
Test EN 50160	-
Inrush current	-
DC measures	✓
K factor	-
Alarms	Displayed and acustic output
Alarms log	5 at display
Tariff bands	-

# NanoVIP® ONE™

Energy costs	-
IEC 61724 network parameters	-
Test EN 82.25	-
OSU™ (One Shot UPS)	-
Measurement campaigns	Up to 68800 records
<b>MEASUREMENTS:</b>	
Sampling frequency	128 samples per cycle (adaptive in 40Hz-70Hz range)
Data record rate	1 sec.
Data storage rate	User selectable: 1", 5", 10", 30", 1', 5', 10', 15'
Type of connections available	Three-phase (3 or 4 leads balanced), single phase grid and DC
Type of grid which can be connected	Low and medium voltage (LV and MV)
<b>VOLTAGE (TRMS)</b>	
Channels	1 channel
Input impedance	4 Mohm
Scales	2
Direct measurement	Phase-phase: 7-690VAC 40-70Hz Phase-neutral: 5-400VAC 40-70Hz
Measurement with VT	Ratio: 1-60000 Maximum value which can be displayed: 20MV
Permanent overload	Phase-phase: 900VAC Phase-neutral: 600VAC
Sensitivity	5VAC Phase-neutral, 7VAC Phase-phase, 10VDC
<b>CURRENT (TRMS)</b>	
Channels	1 channel
Input impedance	10KOhm
Scales	4
Measurement with current clamps	Ratio: 1-60000 Maximum value which can be displayed: 500KA
Sensitivity	0,2% of F.S.
<b>POWERS</b>	
Single phase power	Values < 999 GW, Gvar, GVA
Total power	Values < 999 GW, Gvar, GVA
<b>POWER COUNTERS</b>	
Maximum value before reset	99999999 kWh, kvarh, kVAh
<b>ACCURACY</b>	
RMS voltages:	
Scale 1	$\pm 0.5\% + 0.2\%FS^{(2)}$ @ RMS V < 350VAC <sup>(1)</sup>
Scale 2	$\pm 0.5\% + 0.1\%FS^{(2)}$ @ RMS V > 350VAC <sup>(1)</sup>
RMS currents:	
Scale 1	$\pm 0.5\% + 0.2\%FS^{(2)}$ @ RMS I < 5% IN clamp <sup>(1)</sup>
Scale 2	$\pm 0.5\% + 0.1\%FS^{(2)}$ @ 5% < RMS I < 20% IN clamp <sup>(1)</sup>
Scale 3	$\pm 0.5\% + 0.1\%FS^{(2)}$ @ 20% < RMS I < 50% IN clamp <sup>(1)</sup>
Scale 4	$\pm 0.5\% + 0.1\%FS^{(2)}$ @ > 50% IN clamp <sup>(1)</sup>
Power	$\pm 1.0\% + 0.2\%FS^{(2)}$
Power Factor (PF)	$\pm 0.5^\circ$
Frequency	$\pm 0.01$ Hz (40-70Hz)
Active power count (kW)	Class 1
Reactive power count (kVar)	Class 2
HARMONIC ANALYSIS	Up to 25 <sup>th</sup> order
<b>COMMUNICATION:</b>	

# NanoVIP® ONE™

MRH™	-
Server mode	-
Connectable MRH™ clients	-
Client mode	-
Zigbee®	-
Maximum distance outdoor	-
Maximum distance indoor	-
Mesh network	-
Wireless to PC	-
USB	to PC
<b>DATA STORAGE:</b>	
Internal memory	4Gb
External memory	-
<b>OPERATING CONDITIONS:</b>	
Operating temperature	-10 to +55 °C
Storage temperature	-20 to +85 °C
Relative humidity	Max 95%
Maximum altitude a.s.l. (600V CAT III)	2000 m
<b>EC COMPLIANCE:</b>	
Directives	93/68/EEC (Low Voltage Electrical Equipment); 89/336/EEC and 2004/108/EC (EMC - Electromagnetic Compatibility); 2006/95/EC - 72/23/EEC (LVD - Low Voltage Directive); 2002/95/EC (RoHS - Restriction of Hazardous Substances); 2002/96/EC and 2003/108/EC (WEEE - Waste Electrical and Electronic Equipment); IEC 61724
<b>REFERENCE STANDARDS:</b>	
Safety	EN 61010-1
Electromagnetic Compatibility (EMC)	EN 61326 EN 61326/A1 EN 61326/A2 EN 61326/A3
Temperature	IEC 60068-2-1 (Operating temperature) IEC 60068-2-2 (Storing temperature)
Vibrations	IEC 60068-2-6
Humidity	IEC 60068-2-30 (Humidity)
Overload	IEC 60947-1