

NanoVIP® ONE™

Analizzatore portatile della Qualità dell'Energia per sistemi monofase (AC/DC) e trifase bilanciati, in bassa e media tensione fino a 600V fase-neutro.

Portable Power Quality analyzer for mono (AC/DC) and three phases balanced, medium and low voltages systems up to 600V neutral-phase



NanoVIP® ONE™ è un analizzatore compatto e leggero ma dotato di tutte le funzioni necessarie alla misurazione ed il monitoraggio sia dei consumi elettrici che della power quality.

La capacità di memorizzazione ed esportazione dei dati lo rendono uno strumento potente per un uso professionale in molteplici ambiti industriali.

Può essere utilizzato su reti monofase, trifase (3 o 4 fili equilibrato) in bassa e media tensione con tensioni fase-neutro fino a 600V.

EN NanoVIP® ONE™ is a compact and light analyzer that has all the functions required to measure and monitor the electrical consumption and the power quality of a network.

A huge data storage capacity makes it a valuable tool for professional use in many industrial applications.

It can be used on single-phase, three-phase networks (3 or 4-wire balanced) in low and medium voltage.

Piccolo, leggero e potente

- ✓ LCD grafico che permette un'ampia duttilità nella visualizzazione (menu multilingua, forme d'onda, istogrammi, disegni, schemi, immagini, etc.)
- ✓ **Software PC NanoStudio** dedicato tramite il quale è possibile effettuare analisi evolute dei dati memorizzati
- ✓ 1 canale di misurazione della tensione (1 fase + neutro) fino a 600V, con la possibilità di misurare anche tensione continua (DC), con la precisione dello $\pm 0,5\% + \text{err.FS}$
- ✓ 1 ingresso di corrente con la possibilità di misurare anche la corrente continua (DC), con la precisione dello $\pm 0,5\% + \text{err.FS}$
- ✓ Possibilità di utilizzare pinze amperometriche flessibili fino a 6000A o altri captori con fondo scala impostabile dall'utente
- ✓ Armoniche fino alla 25^a
- ✓ Ampia memoria interna che consente il mantenimento di un buffer di misure degli ultimi 5 minuti di misura per una rapida valutazione dei fenomeni.
- ✓ Funzione di verifica in tempo reale del fabbisogno di rifasamento
- ✓ Funzione Start/Stop di misura delle energie con contatori parziali
- ✓ Utilizzabile con normali pile stilo AA o ricaricabili
- ✓ 4Gb di memoria interna

Compact, light and powerful

- ✓ LCD graphic display that allows wide flexibility in the (multilingual menu, waveforms, histograms, personalized pages, drawings, diagrams, pictures, etc.)
- ✓ PC Software **NanoStudio** dedicated through which you can make advanced analysis of the data stored on uSD
- ✓ 1 voltage measuring channel (1 phase + neutral) up to 600V, with the possibility to also measure the DC voltage, with the precision of the $0,5\% + \text{err.FS}$
- ✓ 1 current input with the possibility to also measure the DC current, with the precision of the $0,5\% + \text{err.FS}$
- ✓ Possibility to use flexible current probe up to 6000A or other captors with full scale set by the user
- ✓ Harmonics up to the 25th
- ✓ Large internal memory; it keeps online last 5 minutes main measures for a quick analysis of phenomena
- ✓ Realtime calculation of Power Factor Correction balance
- ✓ Start/Stop function on Energies consumption with partial counters
- ✓ Usable with standard AA batteries as well as rechargeable ones
- ✓ 4Gb internal storage memory

Caratteristiche tecniche

Technical details

CASE:	
Dimensions	175x80x32mm
Material	ABS with self-extinguishing V0 grade
Protection class	IP30
Weight	220 g (315g including batteries)
DISPLAY:	
Dimensions	42x50mm
Type	128x128 STN Negative dot matrix graphic LCD
Backlight	White LED
Languages	English - Spanish - Italian - German - French
KEYPAD:	
Type	Membrane keypad with 7 double-function keys
POWER SUPPLY:	
External power supply (Optional)	wall-plug switching; input 100-240VAC $\pm 10\%$ 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)
CONNECTABLE SYSTEMS:	
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	-
CONNECTIONS:	
Voltages	Flexible cables L = 1.5m; 2.5mm ² - 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	-
FUNCTIONS:	
Traditional electrical analysis	V, I, P, Q, S, F, PF, THD(V)%, THD(I)%, cos ϕ , 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 th order
Oscillo	✓
Sags	-
Transients	-
Unbalance	-
Test EN 50160	-
Inrush current	-
DC measures	✓
K factor	-
Alarms	Displayed and acoustic output
Alarms log	5 at display
Tariff bands	-
Energy costs	-
IEC 61724 network parameters	-
Test EN 82.25	-
OSU™ (One Shot UPS)	-

NanoVIP[®] ONE[™]

Measurement campaigns	Up to 68800 records
MEASUREMENTS:	
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)
VOLTAGE (TRMS)	
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
CURRENT (TRMS)	
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.
POWERS	
Single phase power	Values < 999 GW, Gvar, GVA
Total power	Values < 999 GW, Gvar, GVA
POWER COUNTERS	
Maximum value before reset	99999999 kWh, kvarh, kVAh
ACCURACY	
RMS voltages:	
Scale 1	$\pm 0.5\% + 0.2\%FS^{(2)}$ @ RMS V < 350VAC ⁽¹⁾
Scale 2	$\pm 0.5\% + 0.1\%FS^{(2)}$ @ RMS V > 350VAC ⁽¹⁾
RMS currents:	
Scale 1	$\pm 0.5\% + 0.2\%FS^{(2)}$ @ RMS I < 5% IN clamp ⁽¹⁾
Scale 2	$\pm 0.5\% + 0.1\%FS^{(2)}$ @ 5% < RMS I < 20% IN clamp ⁽¹⁾
Scale 3	$\pm 0.5\% + 0.1\%FS^{(2)}$ @ 20% < RMS I < 50% IN clamp ⁽¹⁾
Scale 4	$\pm 0.5\% + 0.1\%FS^{(2)}$ @ > 50% IN clamp ⁽¹⁾
Power	$\pm 1.0\% + 0.2\%FS^{(2)}$
Power Factor (PF)	$\pm 0.5^\circ$
Frequency	± 0.01 Hz (40-70Hz)
Active power count (kW)	Class 1
Reactive power count (kVar)	Class 2
HARMONIC ANALYSIS	
	Up to 25 th order
COMMUNICATION:	
MRH [™]	-
Server mode	-
Connectable MRH [™] clients	-
Client mode	-
Zigbee [®]	-
Maximum distance outdoor	-
Maximum distance indoor	-
Mesh network	-

Caratteristiche tecniche

Technical details

Wireless to PC	-
USB	to PC
DATA STORAGE:	
Internal memory	4Gb
External memory	-
OPERATING CONDITIONS:	
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
EC COMPLIANCE:	
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
REFERENCE STANDARDS:	
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