

NanoVIP® TWO WF™



Analizzatore della Qualità dell'Energia per sistemi monofase e trifase bilanciati, dotato di connettività wifi.

Power Quality analyzer for mono and three phases balanced systems, that includes wifi connectivity.



NanoVIP® TWO WF™ è un analizzatore della Qualità dell'energia portatile, compatto e potente per uso professionale; può essere utilizzato su reti monofase, bi-fase, trifase bilanciate, in bassa e media tensione.

Grazie alla connettività WiFi può essere totalmente pilotato e monitorato da remoto così come scaricare autonomamente i dati sul Cloud Elcontrol.

EN NanoVIP® TWO WF™ is a portable Power Quality Analyzer, compact and powerful for professional use; it can work on single-phase, bi-phase and three-phase balanced, low and medium voltage networks.

Thanks to its WiFi connectivity it can be monitored and driven by remote as well as upload data autonomously on the Elcontrol Cloud.

Potenza di analisi e connettività wifi

- ✓ Leggero, maneggevole, multilingua, con performance al top della sua categoria
- ✓ 1 canale di misura della tensione (1 fase + neutro) fino a 600V CAT III, con la possibilità di misurare anche tensioni continue
- ✓ 1 canale per le correnti con la possibilità di misurare anche correnti continue
- ✓ Precisione in corrente e tensione 0,25% + errore FS
- ✓ 4 canali indipendenti per trasduttori (4..20mA, 0..1V, PT)
- ✓ 4 modalità precaricate per analisi di sistemi/impianti: chiller, pump, supply and sensors
- ✓ Batteria ad alta capacità per garantire la totale copertura lavorativa sotto batteria
- ✓ 20 allarmi (5 generici, 5 swells, 5 dips and 5 interruptions)
- ✓ Calcolo della spesa elettrica con fino a 4 tariffe
- ✓ Misurazione dell'energia in 4 fasce orarie (tariffe) impostabili
- ✓ Connessione gratuita al cloud NanoVIP

Precise in measure, versatile and wifi

- ✓ Lightweight, handy, multilingual, with top performance in its category
- ✓ 1 voltage measuring channel (1 phase + neutral) up to 600V CAT III, with the possibility to measure even continuous voltages
- ✓ 1 current channel with the possibility of measuring even continuous currents
- ✓ Currents and voltages accuracy 0.25% + FS error
- ✓ 4 independent channels for transducers (4..20mA, 0..1V, PT)
- ✓ 4 preloaded mode for system / plant analysis: chiller, pump, supply and sensors
- ✓ High-capacity battery to provide total under battery cover
- ✓ 20 alarms (5 generics, 5 swells, 5 dips and 5 interruptions)
- ✓ Calculation of electric charge with up to 4 rates
- ✓ Free connectivity to NanoVIP cloud

Caratteristiche tecniche

Technical details

STANDARD:	IEC61000-4-30 Class S
CASE:	
Dimensions	203x116x53mm
Material	ABS with self-extinguishing V0 grade
Protection class	IP30
Weight	580 g
DISPLAY:	
Dimensions	68x68mm
Type	128x128 FSTN Negative dot matrix graphic LCD
Backlight	White LED
Languages	English - Spanish - Italian - German - French
KEYPAD:	
Type	Membrane keypad with 10 double-function keys
POWER SUPPLY:	
External power supply	wall-plug switching; input 100-240VAC $\pm 10\%$ 47-63Hz with interchangeable plug; output 7.5VDC - 12W
Battery pack	4 x AA NiMH 2100mAh
Duration of the battery charge	>24h (wireless off)
CONNECTABLE SYSTEMS:	
Systems frequencies	50Hz – 60Hz – 400Hz
Single phase	✓
Two phase	✓
Three-phase, 3-wires, balanced	✓
Three-phase, 3-wires, unbalanced	-
4-phase, 4-wires, balanced	✓
4-phase, 4-wires, unbalanced	-
CONNECTIONS:	
Voltages	Flexible cables L = 1.5m; 2.5mm ² - 36A; 1000V CAT III - 600V CAT IV with a 4mm, 90° protected blade plug connector, crocodile clips with a 45mm opening (for sections up to 32mm) and magnetic captors
Currents	Elcontrol Energy Net interchangeable amperometric sensors
Solar radiation	-
PT100	-
Anemometer	-
Transducers	Up to 4 independent (4..20mA, 0..1V, PT)
FUNCTIONS:	
Traditional electrical analysis	V, I, P, Q, S, F, PF, THD(V)%, THD(I)%, $\cos\phi$, ϕ , peaks, minimums, maximums, averages, max. demands, etc.
Neutral current	Measured
Three phase counters	kWh, kVAh, kVAh, both absorbed that generated
Counters for each single phase	kWh, kVAh, kVAh, both absorbed that generated
Cogeneration	✓
Waveforms	V & I
Harmonics	Values and histograms up to the 50 th order; up to 7 th at 400Hz
Sags	Dips, swells & interruptions
Transients	Overvoltages & overcurrents
Unbalance	-
Test EN 50160	✓
Inrush current	✓
DC measures	✓
K factor	Up to the 25 th order
Alarms	Displayed
Alarms log	5 at display
Tariff bands	4
Energy costs	✓
IEC 61724 network parameters	✓

NanoVIP[®] TWO WF[™]

Test EN 82.25	-
OSU [™] (One Shot UPS)	-
Measurement campaigns	unlimited, up to fill the memory card
MEASUREMENTS:	
Sampling frequency	128 samples per cycle (adaptive in 40Hz-70Hz range) 16 samples per cycle at 400Hz
Data record rate	1 sec.
Data storage rate	User selectable: 1", 5", 3", 1', 5', 15'
Type of connections available	Three-phase (3 or 4 leads balanced), two-phase (2 leads), and single phase grid
Type of grid which can be connected	Low and medium voltage (LV and MV)
VOLTAGE (TRMS)	
Channels	2 channels with common neutral
Input impedance	4 Mohm
Scales	2
Direct measurement	Phase-phase: 7-1000VAC 40-70Hz Phase-neutral: 5-600VAC 40-70Hz Aux: 5-1000VAC 40-70Hz, 10-1400VDC
Measurement with VT	Ratio: 1-60000 Maximum value which can be displayed: 20MV
Permanent overload	Phase-phase: 1200VAC Phase-neutral: 700VAC Aux: 1200VAC, 1700VDC
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	$\pm 0.25\% + 0.1\%FS^{(2)}$ @ RMS V < 350VAC ⁽¹⁾
Scale 2	$\pm 0.25\% + 0.05\%FS^{(2)}$ @ RMS V > 350VAC ⁽¹⁾
RMS currents:	
Scale 1	$\pm 0.25\% + 0.1\%FS^{(2)}$ @ RMS I < 5% IN clamp ⁽¹⁾
Scale 2	$\pm 0.25\% + 0.05\%FS^{(2)}$ @ 5% < RMS I < 20% IN clamp ⁽¹⁾
Scale 3	$\pm 0.25\% + 0.05\%FS^{(2)}$ @ 20% < RMS I < 50% IN clamp ⁽¹⁾
Scale 4	$\pm 0.25\% + 0.05\%FS^{(2)}$ @ > 50% IN clamp ⁽¹⁾
Power	$\pm 0.5\% + 0.05\%FS^{(2)}$
Power Factor (PF)	$\pm 0.5^\circ$
Frequency	± 0.01 Hz (40-70Hz)
Active power count (kW)	Class 0.5
Reactive power count (kVar)	Class 1
HARMONIC ANALYSIS	Up to 50 th order Up to 7 th at 400Hz
ANALYSIS of EN50160 parameters	
Interruptions	>500mS
Dips	>500mS
Swells	>500mS

Caratteristiche tecniche

Technical details

Transient ANALYSIS	
Swells and overcurrents	>150uS
Inrush current analysis	RMS continuous sampling every 2 periods – Duration 1, 2, 5, 10 sec.
COMMUNICATION:	
MRH™	✓
Server mode	-
Connectable MRH™ clients	-
Client mode	✓
Zigbee®	✓
Maximum distance outdoor	600m (point to point)
Maximum distance indoor	60m (point to point)
Mesh network	✓
WiFi	✓
3G	-
Wireless to PC	✓
Cloud connectivity	✓
Remote control	✓
USB	to PC
DATA STORAGE:	
Internal memory	64kB
External memory	Micro SD (2GB included)
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