

**1 - ELECTRICAL SPECIFICATIONS (*)**Accuracy indicated as \pm [%rdg + (no. dgts * resolution)] at 23°C \pm 5°C, <80%HR**AC TRMS Voltage – Phase to Neutral**

Range [V]	Frequency [Hz]	Resolution [V]	Accuracy
10.0 ÷ 265.0	42.5 ÷ 69.0Hz	0.1	$\pm(0.5\% \text{ rdg} + 2\text{dgt})$

Max Crest Factor =1.5

AC TRMS Voltage – Phase to Phase

Range [V]	Frequency [Hz]	Resolution [V]	Accuracy
50.0 ÷ 460	42.5 ÷ 69.0Hz	0.1	$\pm(1.0\% \text{ rdg} + 5\text{dgt})$

Max Crest Factor =1.5

Voltage Anomalies – Phase to Neutral

Range [V]	Resolution Voltage [V]	Resolution Time	Accuracy Voltage	Accuracy [ms]
15.0 ÷ 265.0	0.2	10ms	$\pm(1.0\% \text{ rdg} + 2\text{dgt})$	$\pm \frac{1}{2}$ cycle

AC TRMS Current by external clamp transducer – STD clamps

Range [mV]	Frequency [Hz]	Resolution [mV]	Accuracy
5.0 ÷ 219.9	42.5 ÷ 69.0Hz	0.1	$\pm(0.5\% \text{ rdg} + 0.06\% \text{ FS})$
220.0 ÷ 999.9		0.5	$\pm(0.5\% \text{ rdg})$

AC TRMS Current by external clamp transducer – Flex (100A AC range – 85uV/A)

Range [A]	Resolution [A]	Accuracy
1.0 ÷ 99.9	0.1	$\pm(0.5\% \text{ rdg} + 0.7\text{A})$

Max Crest Factor =1.5

AC TRMS Current by external clamp transducer – Flex (1000A AC range – 85uV/A)

Range [A]	Resolution [A]	Accuracy
5 ÷ 999	1	$\pm(0.5\% \text{ rdg} + 1.5\text{A})$

Max Crest Factor =1.5

Power/Energy – (Vmeas>200v, Pf=1 for Active P. Pf=0 for Reactive P.)

Clamp FS [A]	Range [W] [VAr] [VA] [Wh]	Resolution [W] [VAr] [VA] [Wh]	Accuracy
1 < FS \leq 10	0.000k ÷ 9.999k	0.001k	$\pm(0.7\% \text{ rdg} + 3 \text{ dgt})$ (Imis < 10%FS)
	10.00k ÷ 99.99k	0.01k	
10 < FS \leq 200	0.00k ÷ 99.99k	0.01k	$\pm(0.7\% \text{ rdg})$ (Imis \geq 10%FS)
	100.0k ÷ 999.9k	0.1k	
200 < FS \leq 1000	0.0k ÷ 999.9k	0.1k	$\pm(0.7\% \text{ rdg})$ (Imis \geq 10%FS)
	1000k ÷ 9999k	1k	

Vmeas = Voltage Measured, Imeas = Current Measured, Active energy: Class 2 EN61036, Reactive Energy: Class 3 IEC1268

Power factor (Cosφ)

Range (cosφ)	Resolution	Accuracy (°)
0.20 ÷ 0.50	0.01	0.6
0.50 ÷ 0.80		0.7
0.80 ÷ 1.00		1.0

Harmonics (Real time values available only up to 32th harmonics)

Range	Maximum resolution	Base accuracy
DC ÷ 25 th	0.1V / 0.1A	$\pm(5.0\% \text{ rdg} + 2\text{dgt})$
26 th ÷ 33 th		$\pm(10\% \text{ rdg} + 2\text{dgt})$
34 th ÷ 49 th		$\pm(15\% \text{ rdg} + 2\text{dgt})$

Harmonics will be zeroed

- DC harmonics: DC value <2% 1st Harmonic value or if DC value < 0,2% Clamp FS
- 1st Harmonic: 1st Harmonic value < 0,2% Clamp FS
- 2nd ÷ 49th Harmonics: 2nd ÷ 49th values <2% 1st Harmonic value or < 0,2% Clamp FS

**ELECTRICAL SYSTEMS**

- Single Phase,
- 3 Phase without Neutral
- 3 Phase with Neutral

CHANNELS RECORDED SIMULTANEOUSLY

- Phase to Neutral and Phase to Phase voltages
- Voltage anomalies (sags, swells, breaks)
- Phase currents, neutral current
- Voltages and currents harmonics (DC,1,2,...49)
- Phase and Total Active, Reactive, Apparent power
- Phase and Total Power factor and $\cos\phi$
- Phase and Total Active energy (Class 2 EN61036), Reactive energy (Class 3 IEC1268)
- All channels concerning Powers, Pf, $\cos\phi$ and Harmonics are automatically managed as generated and consumed.
- Max N of parameters recorded: 383
- Max number of voltage anomalies: 65530
- Integration Period: 5 ÷ 3600 sec.
- Recording autonomy: > 30 days with integrated period of 10 minutes
- Memory capacity: 8Mbyte

POWER SUPPLY:

Internal rechargeable battery: Li-ION battery, battery life approx. 1 hour
External power supply: By mean Red/Yellow plugs, 100V ÷ 415V, 50/60Hz

COMMUNICATION INTERFACE

PC (Windows), Tablet/Smartphone(iOS, Android): USB (PC only) / WiFi

MECHANICAL FEATURES:

Dimensions (L x W x H): 245 x 210 x 110mm
Weight: 1.5kg

WORKING ENVIRONMENTAL CONDITIONS:

Reference temperature: 23°C ± 5°C
Working temperature: 0° ÷ 40°C
Allowed relative humidity: <80%HR
Storage temperature: -10 ÷ 60°C
Storage humidity: <80%HR

POWER/ENERGY MEASUREMENTS REFERENCE GUIDELINES:

Features of voltage supplied by public utilities: EN50160 (flicker and frequency analysis not performed)
Active energy static counters for AC current: EN61036 (Class 2)
Reactive energy static counters for AC current: IEC1268 (Class 3)

GENERAL REFERENCE GUIDELINES:

Safety of measuring instruments: IEC/EN61010-1
Insulation: double insulation
Pollution degree: 2
Encapsulation: IP65 (case board closed)
Measurement category: CAT III 300VAC to ground, max 460V between Inputs
Max height of use: 2000m

This instrument complies with the prescriptions of the European directive on low voltage 2006/95/EEC (LVD) and EMC directive 2004/108/EEC

(*) Technical specifications are subject to change without notice