

**1 - ELECTRICAL SPECIFICATIONS**Accuracy indicated as  $\pm$  [%rdg + (no. dgts \* resolution)] at 23 °C  $\pm$  5 °C, <75%HR**DC Voltage**

Range [V]	Resolution [V]	Accuracy
10.0 ÷ 265.0	0.1	$\pm(0.7\% \text{rdg} + 0.4\text{V})$

Voltage values &lt;10.0V are zeroed

**AC TRMS Voltage – Phase to Neutral**

Range [V]	Frequency [Hz]	Resolution [V]	Accuracy
10.0 ÷ 265.0	42.5 ÷ 65.0	0.1	$\pm(0.5\% \text{rdg} + 0.2\text{V})$

Max Crest Factor =1.5, Voltage values &lt;10.0V are zeroed

**AC TRMS Voltage – Phase to Phase**

Range [V]	Frequency [Hz]	Resolution [V]	Accuracy
50.0 ÷ 460	42.5 ÷ 65.0	0.1	$\pm(1.0\% \text{rdg} + 0.2\text{V})$

Max Crest Factor =1.5, Voltage values &lt;10.0V are zeroed

**DC TRMS Current by external clamp transducer – STD clamps**

Range [mV]	Resolution [mV]	Accuracy	Overload protection
5.0 ÷ 219.9	1	$\pm(0.7\% \text{rdg} + 1\text{mV})$	10V
220.0 ÷ 999.9		$\pm 0.7\% \text{rdg}$	

Current values correspondent to a voltage &lt; 5mV are zeroed

**AC TRMS Current by external clamp transducer – STD clamps**

Range [mV]	Frequency [Hz]	Resolution [mV]	Accuracy	Overload protection
5.0 ÷ 219.9	42.5 ÷ 65.0	1	$\pm(0.5\% \text{rdg} + 0.6\text{mV})$	10V
220.0 ÷ 999.9			$\pm 0.5\% \text{rdg}$	

Current values correspondent to a voltage &lt; 5mV are zeroed

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

Range [mV]	Frequency [Hz]	Resolution	Accuracy	Overload protection
0.085 ÷ 8.50	42.5 ÷ 65.0	8.5 $\mu$ V	$\pm(0.5\% \text{rdg} + 0.007\text{mV})$	10V

Max Crest Factor =1.5, Current values &lt;1A are zeroed

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

Range [mV]	Frequency [Hz]	Resolution	Accuracy	Overload protection
0.425 ÷ 85.0	42.5 ÷ 65.0	85 $\mu$ V	$\pm(0.5\% \text{rdg} + 0.15\text{mV})$	10V

Max Crest Factor =1.5, Current values &lt;5A are zeroed

**Frequency**

Range [Hz]	Resolution [Hz]	Accuracy
42.5 ÷ 65.0	0.1	$\pm(0.2\% \text{rdg} + 0.1\text{Hz})$

**DC Power – (Vmeas>200V)**

Clamp FS [A]	Range [W] [Wh]	Resolution [W] [Wh]	Accuracy
1 < FS $\leq$ 10	0.000k ÷ 9.999k	0.001k	$\pm(1.0\% \text{rdg} + 5\text{W})$
	10.00k ÷ 99.99k	0.01k	$\pm(1.0\% \text{rdg} + 50\text{W})$
10 < FS $\leq$ 200	0.00k ÷ 99.99k	0.01k	$\pm(1.0\% \text{rdg} + 50\text{W})$
	100.0k ÷ 999.9k	0.1k	$\pm(1.0\% \text{rdg} + 500\text{W})$
200 < FS $\leq$ 1000	0.0k ÷ 999.9k	0.1k	$\pm(1.0\% \text{rdg} + 0.5\text{kW})$
	1000k ÷ 9999k	1k	$\pm(1.0\% \text{rdg} + 5\text{kW})$

Vmeas = Voltage in which the power is measured

**Power/Energy – (Vmeas>200V, Pf=1)**

Clamp FS [A]	Range [W] [Wh]	Resolution [W] [Wh]	Accuracy
1 < FS ≤ 10	0.000k ÷ 9.999k	0.001k	±(0.7%rdg + 3W/Wh)
	10.00k ÷ 99.99k	0.01k	±(0.7%rdg+30W/Wh)
10 < FS ≤ 200	0.00k ÷ 99.99k	0.01k	±(0.7%rdg+30W/Wh)
	100.0k ÷ 999.9k	0.1k	±(0.7%rdg+300W/Wh)
200 < FS ≤ 1000	0.0k ÷ 999.9k	0.1k	±(0.7%rdg+0.3kW/kWh)
	1000k ÷ 9999k	1k	±(0.7%rdg+3kW/kWh)

Vmeas = Voltage in which the power is measured

**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

**Voltage/Current harmonics (Real time values available only)**

Range	Maximum resolution	Base accuracy
DC ÷ 25 <sup>th</sup>	0.3V / 0.1% FS clamp	±(5.0% rdg + 2dgt)
26 <sup>th</sup> ÷ 33 <sup>th</sup>		±(10% rdg + 2dgt)
34 <sup>th</sup> ÷ 49 <sup>th</sup>		±(15% rdg + 2dgt)

Harmonics will be zeroed:

- DC harmonics: DC value <0.5% 1st Harmonic value or if DC value < 0.5% FS clamp
- 1st Harmonic: 1st Harmonic value <0.5% FS clamp
- 2nd ÷ 49th Harmonics: 2nd ÷ 49th values <0.5% 1st Harmonic value or <0.5% FS clamp



## 2. GENERAL SPECIFICATIONS

### ELECTRICAL SYSTEMS

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

### CHANNELS RECORDED SIMULTANEOUSLY

- Phase to Neutral and Phase to Phase voltages
- Phase currents
- THD% voltages and currents
- Phase and total active and reactive power
- Phase and total power factor and  $\text{Cos}\phi$
- Phase and total active and reactive energy
- Number of recorded parameters: 44 (fixed)
- Integration Period: 5, 10, 30s, 1, 2, 5, 10, 15, 60min.
- Recording autonomy: > 230 days with integrated period of 15 minutes
- Memory capacity: 8Mbyte

### POWER SUPPLY:

Internal power supply: Rechargeable battery, battery life approx. 1 hour  
External power supply: By mean Red/Yellow plugs, 100V ÷ 415V, 50/60Hz  
45mA@100V, 30mA@230V, 20mA@415V

### 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:  $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$   
Working temperature:  $0^{\circ} \div 40^{\circ}\text{C}$   
Allowed relative humidity: <80%HR  
Storage temperature:  $-10 \div 60^{\circ}\text{C}$   
Storage humidity: <80%HR

### POWER/ENERGY MEASUREMENTS REFERENCE GUIDELINES:

Features of voltage supplied by public utilities: EN50160 (only voltage and THDV%)

### GENERAL REFERENCE GUIDELINES:

Safety of measuring instruments: IEC/EN61010-1  
Insulation: double insulation  
Pollution degree: 2  
Encapsulation: IP65 (case board closed)  
Measurement category: CAT IV 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**

# Diensten van EURO-INDEX

EURO-INDEX is fabrikant, importeur en distributeur van diverse A-merken op het gebied van test- en meetinstrumenten. Daarnaast leveren wij een groot aantal diensten om het gebruik van deze instrumenten in uw bedrijfsvoering te optimaliseren. Dit omvat uiteraard onderhoud, reparatie en kalibratie van de instrumenten, maar ook kennisdeling via EURO-INDEX Academy en verhuur van instrumenten.

## Geautoriseerd Service Centrum

EURO-INDEX b.v. is van alle vertegenwoordigde merken een Geautoriseerd Service Centrum. Dit betekent dat uw instrumenten worden behandeld door technici die zijn opgeleid door de fabrikant en beschikken over de juiste gereedschappen en software. Er worden uitsluitend originele onderdelen toegepast en de garantie van uw instrument, evenals de certificering (ATEX, EN50379, etc.) blijven intact.

## Kalibratielaboratorium

Het laboratorium in Nederland beschikt over een RvA accreditatie naar EN-ISO/IEC 17025. Deze accreditatie geldt voor grootheden, zoals gespecificeerd in de scope bij accreditatienummer K105. RvA kalibratiecertificaten zijn internationaal geaccepteerd en is gelijkwaardig aan BELAC.



## Mobiele Service

Naast de vaste kalibratielaboratoria in Zaventem en Capelle aan den IJssel beschikken wij ook over een laboratorium op wielen met de naam "Mobiele Service". Dit biedt vertrouwde service en kwaliteit, bij u voor de deur!

## KWS®

KWS® is een uniek servicesysteem voor uw meetinstrumenten met periodiek onderhoud en kalibratie tegen vaste, lage kosten. Via een gratis webportal ([mijnkws.be](http://mijnkws.be)) heeft u altijd en overal beschikking over uw kalibratiecertificaten.

## Verhuur van meetinstrumenten

- Uitgebreid assortiment
- Nauwkeurigheid aantoonbaar door actueel kalibratiecertificaat
- Deskundig advies
- Complete levering inclusief accessoires

## EURO-INDEX Academy

- Trainingen, seminars en workshops
- Demonstratie- en instructievideo's
- Application notes



Servicebalie



Onderhoud, reparatie en kalibratie



Trainingen en seminars



Mobiele Service

Wijzigingen voorbehouden EURO-INDEX® VL 23001



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