



## 1. ELECTRICAL SPECIFICATIONS

Accuracy calculated as  $\pm[\% \text{reading} + (\text{num dgt} * \text{resolution})]$  ta 18°C ÷ 28°C, <75%HR

### DC VOLTAGE


Range (*)	Resolution	Accuracy	Input impedance	Overload protection
600.0mV	0.1mV	$\pm(0.9\% \text{rdg} + 5 \text{dgt})$	>10M $\Omega$	1000VDC/ACrms
6.000V	0.001V			
60.00V	0.01V			
600.0V	0.1V			
1000V	1V	$\pm(1.2\% \text{rdg} + 5 \text{dgt})$		

(\*) HIREs feature not active. With HIREs feature active, multiply x10 the dgts of the accuracy

### AC TRMS VOLTAGE

Range (*)	Resolution	Accuracy (**)		Overload protection
		50Hz ÷ 1kHz	1kHz ÷ 5kHz	
600.0mV	0.1mV	$\pm(1.0\% \text{rdg} + 5 \text{dgt})$	$\pm(3.0\% \text{rdg} + 5 \text{dgt})$	1000VDC/ACrms
6.000V	0.001V			
60.00V	0.01V			
600.0V	0.1V			
1000V	1V		Not specified	

(\*) HIREs feature not active. With HIREs feature active, multiply x10 the dgts of the accuracy

(\*\*) Accuracy specified from 5% to 100% of the measuring range and crest factors  $\leq 3$ , Input impedance: > 10M $\Omega$ Accuracy PEAK function:  $\pm(10\% \text{rdg} + 30 \text{dgt})$ , Response time PEAK function: 1msAccuracy  function:  $\pm(1.5\% \text{rdg} + 5 \text{dgt})$  ( $f \leq 60 \text{Hz}$ ),  $\pm(3.0\% \text{rdg} + 5 \text{dgt})$  ( $60 \text{Hz} \leq f \leq 1 \text{kHz}$ ), not specified ( $f: 1 \div 5 \text{kHz}$ )For not sinusoidal waveforms the accuracy is:  $\pm(4.5\% \text{rdg} + 10 \text{dgt})$  (50Hz÷1kHz),  $\pm(10.0\% \text{rdg} + 10 \text{dgt})$  (1kHz÷5kHz)

### AC+DC TRMS VOLTAGE

Range (*)	Resolution	Accuracy (50Hz ÷ 1kHz)	Input impedance	Overload protection
600.0mV (*)	0.1mV	$\pm(1.5\% \text{rdg} + 10 \text{dgt})$	>10M $\Omega$	1000VDC/ACrms
6.000V	0.001V			
60.00V	0.01V			
600.0V	0.1V			
1000V	1V			

(\*) HIREs feature not active. With HIREs feature active, multiply x10 the dgts of the accuracy


### DC/AC TRMS VOLTAGE WITH LOW IMPEDANCE (LoZ)

Range (*)	Resolution	Accuracy (**)	Input impedance	Overload protection
6.000V	0.001V	$\pm(3.0\% \text{rdg} + 40 \text{dgt})$	ca 3k $\Omega$	1000VDC/ACrms
60.00V	0.01V			
600.0V	0.1V			
1000V	1V			

(\*) HIREs feature not active. With HIREs feature active, multiply x10 the dgts of the accuracy

(\*\*) AC+DC accuracy:  $\pm(3.5\% \text{rdg} + 40 \text{dgt})$ 

### DIODE TEST

Range	Max test current	Open voltage
	<1.5mA	2.8V

### 4-20mA% READINGS

Range	Resolution	Accuracy	Readings
-25% ÷ 125%	0.1%	$\pm 50 \text{dgt}$	0mA=-25%, 4mA=0%, 20mA=100%, 24mA=125%



## DC CURRENT

Range (*)	Resolution	Accuracy	Overload protection
600.0μA	0.1μA	±(1.5%rdg+5dgt)	Fast Fuse 0.8A/1kVAC/DC (inputs mA, μA)
6000μA	1μA		
60.00mA	0.01mA		
600.0mA	0.1mA		
10.00A	0.01A		Fast Fuse 10A/1kVAC/DC (input 10A)

(\*) HIRES feature not active. With HIRES feature active, multiply x10 the dgts of the accuracy

## AC TRMS CURRENT

Range (*)	Resolution	Accuracy (**)		Overload protection
		50Hz ÷ 1kHz	1kHz ÷ 5kHz	
600.0μA	0.1μA	±(2.5%rdg+5dgt)	±(3.5%rdg+5dgt)	Fast Fuse 0.8A/1kVAC/DC (inputs mA, μA)
6000μA	1μA			
60.00mA	0.01mA			
600.0mA	0.1mA			
10.00A	0.01A			Fast Fuse 10A/1kVAC/DC (input 10A)

(\*) HIRES feature not active. With HIRES feature active, multiply x10 the dgts of the accuracy

(\*\*) Accuracy specified from 5% to 100% of the measuring range, Accuracy PEAK function: ±(10%rdg + 30dgt)

For not sinusoidal waveforms the accuracy is: ±(4.5%rdg + 10dgt) (50Hz÷1kHz), ±(10.0%rdg + 10dgt) (1kHz÷5kHz)

Accuracy AC+DC: ±(2.8%rdg+5dgt) (50Hz ÷ 1kHz)

## DC CURRENT WITH TRANSDUCER CLAMPS

Range (*)	Output ratio	Resolution	Accuracy (**)	Overload protection	
1000mA	1000mV/1000mA	1mA	±(1.5%rdg + 6dgt)	1000VDC/ACrms	
10A	100mV/1A	0.01A			
30A					
40A					
100A	10mV/1A	0.1A			±(1.5%rdg + 26dgt)
300A					±(1.5%rdg + 6dgt)
400A	1mV/1A	1A			±(1.5%rdg + 26dgt)
1000A					±(1.5%rdg + 6dgt)

(\*) HIRES feature not active. With HIRES feature active, multiply x10 the dgts of the accuracy

(\*\*) Accuracy referred to only instrument without transducer clamp

## AC TRMS CURRENT WITH TRANSDUCER CLAMPS

Range (*)	Output ratio	Resolution	Accuracy (**, ***)	Overload protection	
1000mA	1000mV/1000mA	1mA	±(2.5%rdg + 10dgt)	1000VDC/ACrms	
10A	100mV/1A	0.01A			
30A					
40A					
100A	10mV/1A	0.1A			±(3.5%rdg + 30dgt)
300A					±(2.5%rdg + 10dgt)
400A	1mV/1A	1A			±(2.5%rdg + 10dgt)
1000A					±(3.5%rdg + 30dgt)
3000A			±(2.5%rdgh + 10dgt)		

(\*) HIRES feature not active. With HIRES feature active, multiply x10 the dgts of the accuracy

(\*\*) Accuracy referred to only instrument without transducer clamp

(\*\*\*) Accuracy specified from 5% to 100% of the measuring range; For pulse waveforms the accuracy is: ±(10.0%rdg + 10dgt)

Accuracy PEAK function: ±(10%rdg + 30dgt), AC+DC TRMS current: accuracy (50Hz÷1kHz): ±(3.0%rdg + 10dgt)

For not sinusoidal waveforms the accuracy is: ±(4.5%rdg + 10dgt) (50Hz÷1kHz)

**RESISTANCE AND CONTINUITY TEST**

Range (*)	Resolution	Accuracy	Buzzer	Overload protection
600.0Ω	0.1Ω	±(2.0%rdg+9dgt)	<35Ω	1000VDC/ACrms
6.000kΩ	0.001kΩ	±(1.2%rdg+5dgt)		
60.00kΩ	0.01kΩ			
600.0kΩ	0.1kΩ			
6.000MΩ	0.001MΩ	±(2.0%rdg+10dgt)		
60.00MΩ	0.01MΩ			

(\*) HIRES feature not active. With HIRES feature active, multiply x10 the dgts of the accuracy

**FREQUENCY (Electrical circuits)**

Range (*)	Resolution	Accuracy	Sensitivity	Overload protection
40.00Hz ÷ 10.00kHz	0.01Hz	±(0.5%rdg)	15Vrms	1000VDC/ACrms

(\*) HIRES feature not active. With HIRES feature active, multiply x10 the dgts of the accuracy

**FREQUENCY (Electronic circuits)**

Range (*)	Resolution	Accuracy	Sensitivity	Overload protection
60.000Hz	0.001Hz	±(1.0%rdg+2dgt)	>2.0Vrms min (20% < duty < 80%, <100kHz) 5Vrms min (20% < duty < 80%, >100kHz)	1000VDC/ACrms
600.00Hz	0.01Hz			
6.0000kHz	0.0001kHz			
60.000kHz	0.001kHz			
600.00kHz	0.01kHz			
6.0000MHz	0.0001MHz			
10.000MHz	0.001MHz			

(\*) HIRES feature not active. With HIRES feature active, multiply x10 the dgts of the accuracy

**DUTY CYCLE**

Range (*)	Resolution	Accuracy	Overload protection
0.1 ÷ 99.9%	0.01%	±(1.2%rdg+2dgt)	1000VDC/ACrms

(\*) HIRES feature not active. With HIRES feature active, multiply x10 the dgts of the accuracy

Pulse width: 100μs ÷ 100ms ; Frequency: 5Hz ÷ 100kHz

**CAPACITANCE**

Range	Resolution	Accuracy	Overload protection
60.00nF	0.01nF	±(3.5%rdg+10dgt)	1000VDC/ACrms
600.0nF	0.1nF		
6.000μF	0.001μF	±(2.5%rdg+10dgt)	
60.00μF	0.01μF		
600.0μF	0.1μF		
6.000mF	0.001mF	±(3.5%rdg+10dgt)	

**TEMPERATURE WITH TYPE K PROBE**

Range	Resolution	Accuracy (*)	Overload protection
-40.0°C ÷ 600.0°C	0.1°C	±(2.0%rdg+3°C)	1000VDC/ACrms
600°C ÷ 760°C	1°C		
-58.0°F ÷ 600.0°F	0.1°F	±(2.0%rdg+5.5°F)	
600°F ÷ 1400°F	1°F		

(\*) Accuracy referred to instrument without probe



## 2. GENERAL SPECIFICATIONS

### Display:

- LCD, 3 ½ dgt (6000counts) and 4½dgt (60000 counts) decimal point and bargraph
- Automatic polarity indication
- Backlight
- "OL" over range indication
- Response time: 3/s
- Conversion: TRMS

### Features:

- Data HOLD, Auto HOLD
- MAX/MIN
- PEAK (Voltage and Current)
- RANGE
- REL
- DC 4-20mA% current readings

### Power supply:

- 4 x 1.5V alkaline batteries type AAA LR03
- Battery life: ca 18h (backlight ON), ca 60h (backlight OFF)
- Auto Power OFF after 15 minutes of idleness

### Mechanical specifications

- Dimensions (L x W x H): 175 x 85 x 55mm
- Weight (included batteries): 360g
- Mechanical protection: IP40

### Environmental conditions:

- Working temperature: 5°C ÷ 40°C
- Working humidity: <80%RH
- Storage temperature: -20°C ÷ 60°C
- Storage humidity: <80%RH
- Altitude max of use: 2000m

### Reference guidelines:

- Safety : IEC/EN61010-1
- EMC : IEC/EN61326-1
- Pollution degree: 2
- Insulation: double insulation
- Measurement category: CAT IV 600V – CAT III 1000V

**This product conforms to the prescriptions of the European directive on low voltage 2014/35/EU and to EMC directive 2014/30/EU**

**This product conforms to the prescriptions of the European directive 2011/65/EU (RoHS) and the European directive 2012/19/EU (WEEE)**

# 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 de 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

Ons moderne service- en kalibratielaboratorium beschikt over een RvA accreditatie naar NEN-EN-ISO/IEC 17025. Deze accreditatie geldt voor grootheden, zoals gespecificeerd in de scope bij accreditatienummer K105.



Kijk voor een overzicht van al onze diensten op [euro-index.nl/diensten](http://euro-index.nl/diensten)



## Mobiele Service

Naast de vaste kalibratielaboratoria in Capelle aan den IJssel en Zaventem 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.nl](http://mijnkws.nl)) 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 (individueel en klassikaal)
- Cursussen en workshops
- Demonstratie- en instructievideo's
- Whitepapers



Servicebalie



Onderhoud, reparatie en kalibratie



Cursussen en workshops



Mobiele Service

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