



## 1. TECHNICAL SPECIFICATIONS – DMM FUNCTIONS

Accuracy is indicated as  $\pm$  [% readings + (no. of digits\*resolution)] at 23°C  $\pm$  5°C, relative humidity <70%HR

### DC/AC TRMS VOLTAGE (Autorange)

Range	Resolution	DC Accuracy	Accuracy (30 ÷ 70Hz)	Accuracy (70 ÷ 400Hz)	Input impedance
1.0 ÷ 999.9mV	0.1mV	$\pm(0.5\%rdg+2dgt)$	$\pm(1.0\%rdg+2dgt)$	$\pm(2.0\%rdg+2dgt)$	1M $\Omega$
1.000 ÷ 9.999V	0.001V				
10.00 ÷ 99.99V	0.01V				
100.0 ÷ 605.0V	0.1V				

### AC/DC VOLTAGE: MAX / MIN / AVG / PEAK

Function	Range	Resolution	Accuracy	Response time
MAX, MIN, AVG	1.0mV ÷ 999.9mV	0.1mV	$\pm(5.0\%rdg + 10dgt)$	500ms
	1.000V ÷ 9.999V	1mV		
	10.00V ÷ 99.99V	10mV		
	100.0V ÷ 605.0V	100mV		
PEAK	10.0mV ÷ 999.9mV	0.1mV		1ms
	1.000V ÷ 9.999V	1mV		
	10.00V ÷ 99.99V	10mV		
	100.0V ÷ 605.0V	100mV		

### DC/AC CURRENT TRMS (with external clamp)

Range	Resolution	DC Accuracy	Accuracy (30 ÷ 70Hz)	Accuracy (70 ÷ 400Hz)	Crest factor	Overload protection
1.0 ÷ 999.9mV	0.1mV	$\pm(0.5\%rdg+2dgt)$	$\pm(1.0\%rdg+2dgt)$	$\pm(2.0\%rdg+2dgt)$	3	605Vrms max
1.000 ÷ 1.200V	1mV				1.5	

**Note:** accuracy indicated don't consider clamp accuracy. Please refer also to transducers clamp user's manual.

### AC/DC CURRENT: MAX / MIN / AVG / PEAK (with external clamp)

Function	Range	Resolution	Accuracy	Response time	Overload protection
MAX, MIN, AVG	1.0mV ÷ 999.9mV	0.1mV	$\pm(5.0\%rdg+10dgt)$	500 ms	605Vrms max
	1.000V ÷ 1.200V	1mV			
PEAK	10.0mV ÷ 999.9mV	0.1mV		1ms	
	1.000V ÷ 3.000V	1mV			

### RESISTANCE AND CONTINUITY TEST

Range	Resolution	Accuracy	Continuity test	Overload protection
0.00 $\Omega$ ÷ 39.99 $\Omega$	0.01 $\Omega$	$\pm(1.0\%rdg+5dgt)$	R $\leq$ 40 $\Omega$	605Vrms max for 1 minute
40.0 $\Omega$ ÷ 399.9 $\Omega$	0.1 $\Omega$			
400 $\Omega$ ÷ 3999 $\Omega$	1 $\Omega$			
4.00k $\Omega$ ÷ 39.99k $\Omega$	10 $\Omega$			

### FREQUENCY (with test leads)

Range	Resolution	Accuracy	Input voltage	Overload protection
30.0 ÷ 199.9Hz	0.1Hz	$\pm(0.5\%rdg+2dgt)$	1.0mV ÷ 605V	605Vrms max
200 ÷ 400Hz	1Hz			

### FREQUENCY (with external clamp)

Range	Resolution	Accuracy	Input voltage	Overload protection
30.0 ÷ 199.9Hz	0.1Hz	$\pm(0.5\%rdg+2dgt)$	1.0mV ÷ 1.000V	605Vrms max
200 ÷ 400Hz	1Hz			



## 2. TECHNICAL SPECIFICATIONS – VERIFY TESTS & LAN TEST

### Continuity test on protective and equalizing conductors

Range ( $\Omega$ )	Resolution ( $\Omega$ )	Accuracy	Overload protection
0.01 ÷ 19.99	0.01	$\pm(5.0\%rdg + 3dgt)$	605Vrms max
20.0 ÷ 99.9	0.1		

Test current: > 200mA DC for  $R \leq 5\Omega$  (included calibration); Resolution on current measurement: 1mA  
 Open-circuit voltage:  $4V \leq V_0 \leq 24V$

### Insulation Resistance

Range (M $\Omega$ )	Resolution (M $\Omega$ )	Accuracy	Overload protection
0.00 ÷ 19.99	0.01	$\pm(5.0\%rdg + 2dgt)$	605Vrms max
20.0 ÷ 199.9	0.1		
200 ÷ 999 (*)	1	$\pm(10.0\%rdg + 2dgt)$	

(\*) For 500VDC test voltage. For 250VDC test voltage the range is: 200 ÷ 499M $\Omega$

Test Voltage: 250V, 500VDC  
 Test voltage accuracy: -0% ÷ +10% rdg  
 Short circuit current: <3.0mA  
 Nominal test current: 1mA @ 1k $\Omega$  x Vnom ; 1mA @ 500 k $\Omega$

### Tripping time test for RCD type AC and A

Range (ms)	Resolution (ms)	Accuracy	Overload protection
2 ÷ 300	1	$\pm(2.0\% rdg + 2dgt)$	605Vrms max

Nominal trip-out currents: 30mA, 30x5mA, 100mA, 300mA (Type AC), 30mA (Type A)  
 RCD type: AC (⌚), A (⌚), General  
 Phase-Earth / Phase-Neutral voltage: 100V ÷ 265V  
 Frequency: 50Hz  $\pm$  0.5Hz / 60Hz  $\pm$  0.5Hz

### Tripping current test for RCD type AC and A

RCD Type	$I_{\Delta N}$	Range $I_{\Delta N}$ [mA]	Resolution	Accuracy
AC, A (General)	30mA	6.0 ÷ 33.0	0.5mA	- 0%, +10% $I_{\Delta N}$

Phase-Earth / Phase-Neutral voltage: 100V ÷ 265V  
 Frequency: 50Hz  $\pm$  0.5Hz / 60Hz  $\pm$  0.5Hz

### Global Earth Resistance

Test current	Range ( $\Omega$ )	Resolution ( $\Omega$ )	Accuracy	Overload protection
15mA	1 ÷ 1999	1	$\pm(5.0\% rdg + 2dgt)$	605Vrms max
100mA	0.1 ÷ 199.9	0.1	$\pm(5.0\% rdg + 3dgt)$	

Phase-Earth voltage: 110V ÷ 265V  
 Frequency: 50Hz  $\pm$  0.5Hz / 60Hz  $\pm$  0.5Hz  
 Limit contact voltage: 50V

### Phase sequence / conformity

Type of measure	Voltage range (V)	Frequency range (Hz)	System type
1 Wire	90 ÷ 315 (Phase – Earth)	45 ÷ 65	up to 315 (Phase – Earth) up to 550V (Phase – Phase)
2 Wire	110 ÷ 315 (Phase – Neutral)	45 ÷ 65	up to 315 (Phase – Earth) up to 550V (Phase – Phase)

Max crest factor :1.5

**NOTE:** the two-wire measurement can be performed also phase to phase in plants without neutral, even with one phase to earth, but always with phase to phase voltage up to 550V

### Wire mapping test on LAN networks (RJ45)

Length of the cable: 1÷100m  
 Remote units recognized: max 8 units  
 Wire mapping detected conditions: OPEN Pairs, REVERSED pairs, SHORT pairs, SPLIT pairs, CROSSED pairs, MISWIRING  
 Reference standard: TIA568B (UTP/STP)



### 3. GENERAL SPECIFICATIONS

**DISPLAY:**

Features:	Dual numeric, 9999 points
Display update:	2 times/sec
Visible area:	73x73 mm

**POWER SUPPLY:**

Batteries:	4 batteries 1.5V type LR6-AA-AM3-MN 1500
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**ELECTRICAL FEATURES:**

Conversion:	AC 16 Bit, TRMS
Sample frequency:	64 sample/period

**MECHANICAL FEATURES:**

Dimensions (L x W x H):	240 x 100 x 45mm
Weight (included batteries):	approx 630 g

**ENVIRONMENTAL CONDITIONS:**

Reference temperature:	23°C ± 5°C
Working temperature:	0°C ÷ 40°C
Allowed relative humidity:	<70%RH
Storage temperature:	-10°C ÷ 60°C
Storage humidity:	<70%RH

**TEST VERIFIES REFERENCE STANDARDS:**

Continuity test with 200mA:	IEC/EN61557-4
Insulation resistance:	IEC/EN61557-2
Global earth resistance:	IEC/EN61557-3
RCDs test:	IEC/EN61557-6
Phase sequence indication:	IEC/EN61557-7

**REFERENCE STANDARDS:**

Safety of measuring instruments:	IEC/EN61010-1 + A2(1997)
EMC:	IEC/EN61326-1
Product type standard:	IEC/EN61557-1, 2, 3, 4, 6,7
Insulation:	double insulation
Pollution degree:	2
Overvoltage category:	CAT III 550V AC Phase - Ground CAT III 550V AC Phase - Phase
Max height of use:	2000m

**This instrument satisfies the requirements of Low Voltage Directive 2014/35/EU (LVD) and of Directive 2014/30/EU (EMC)**

**This instrument satisfies the requirements of 2011/65/CE (RoHS) directive and the requirements of 2012/19/CE (WEEE) directive**

# 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 laboratoria 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. Uw kalibratiecertificaten zijn digitaal beschikbaar via Mijn KWS (gratis webportaal en app).

## 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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