

## 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 (M72E, M74E, M75E, M75L)

| 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 (M72E, M74E, M75E, M75L)

| 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:  $-0\% \div +10\% rdg$   
 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/F (M73E, M74E, M75E, M75L)

| 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/F)  
 RCD type: AC (⌚), A/F (⌚), 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/F (M73E, M74E, M75E, M75L)

| RCD Type          | $I_{\Delta N}$ | Range $I_{\Delta N}$ [mA] | Resolution | Accuracy                  |
|-------------------|----------------|---------------------------|------------|---------------------------|
| AC, A/F (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 (M73E, M74E, M75E, M75L)

| 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)<br>up to 550V (Phase – Phase) |
| 2 Wire          | 110 ÷ 315 (Phase – Neutral) | 45 ÷ 65              | up to 315 (Phase – Earth)<br>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 with RJ45 (M75E)

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 |
|------------|--|

**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 |

**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                                       |
| Insulation:                      | double insulation   |
| Pollution degree:                | 2   |
| Overvoltage category:            | CAT III 550V AC Phase - Ground<br>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

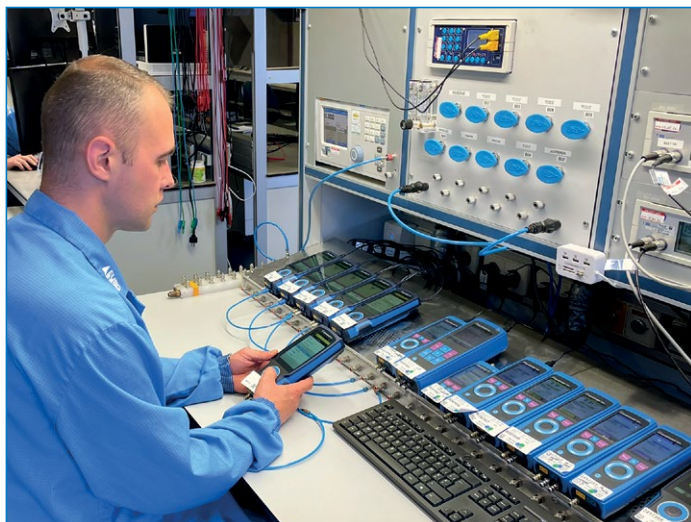
EURO-INDEX is fabrikant van BLAUWE LIJN en importeur/distributeur van diverse A-merken test- en meetinstrumenten. Daarnaast leveren wij een groot aantal diensten om het gebruik van deze instrumenten in uw bedrijfsvoering te optimaliseren. Dit omvat onderhoud, reparatie en kalibratie van de instrumenten,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

## Geautoriseerd Service Centrum

EURO-INDEX is van de meeste merken in het assortiment 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 blijft intact, net als de certificering (ATEX, EN50379, etc.).

## Kalibratielaboratorium

Ons service- en kalibratielaboratorium is BELAC-geaccrediteerd volgens de norm EN-ISO/IEC 17025. De accreditatie geldt voor grootheden en meetbereiken zoals vermeld in de gewaarmerkte bijlage met certificaatnummer [760-CAL](#).



## KWS®

KWS® is een kalibratieformule voor uw test- en meetinstrumenten met periodiek onderhoud en kalibratie tegen vaste, lage kosten. Uw kalibratiecertificaten zijn digitaal beschikbaar via Mijn KWS (gratis webportaal en app) en door de QR-code te scannen op de kalibratiesticker van het instrument.

## Verhuur van meetinstrumenten

Er zijn diverse situaties waarbij huren handig is:

- U heeft tijdelijk extra toestellen nodig.
- Uw eigen meetinstrument wordt onderhouden en/of gekalibreerd.
- U moet een eenmalige meting verrichten.

## EURO-INDEX Academy

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



Servicebalie



Onderhoud, reparatie en kalibratie



Trainingen en seminars



Kalibratielaboratorium

Wijzigingen voorbehouden EURO-INDEX® VL 26001



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