

## **Metriso<sup>®</sup> 3000 – TEST-KIT** (Part No.: 7100.3000.MK)

- Suitable for resistance to ground and point-to-point resistance measurements according to IEC 61340-4-1 Ed. 2.0 and IEC 61340-2-3
- Suitable for measuring the electrical resistance of footwear and flooring in combination with a person according to IEC 61340-4-5.
- Integrated data logger for 50.000 test values and USB communication port for data transmission
- Clip-on humidity and temperature sensors
- Report generating software "ETC" for data acquisition, recording and managing. A complete test report can be generated and archived.
- Menu driven measurement with ESD test point selection and automatic limit value allocation.
- A barcode scanner can be used to identify test points before testing
- Low ohmic measurement range  $1\Omega$  -  $10k\Omega$  to measure the resistance of grounded objects
- Built-in  $10\text{ M}\Omega$  test resistor to check the instrument before use
- Special guard socket reduces distortion at high value resistance measurements
- Includes two Probes Model 850 according to IEC 61340-4-1 Ed. 2.0 / IEC 61340-2-3 and a handheld probe according to IEC 61340-4-5



Clip-on humidity and temperature sensor



Probe Model 850



Probe Model 45

## Technical Information

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Part No.: 7100.3000.MK

◆ Untere Gießwiesen 21 ◆ 78247 Hilzingen ◆ Tel.: +49-7731-86880 ◆ Fax: +49-7731-868830

### Technical data:

Test voltage: DC 10V, 100V, 500V  
Test range  
Resistance:  $1\Omega$  to  $1,2T\Omega$   
Temperature:  $-10^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$   
Humidity: 10% to 90%  
Operation: Battery operated or with rechargeable batteries  
Probes: 2 x Model 850  
1 x Handheld probe Model 45  
Size: 225 x 130 x 140 mm (WxHxD)  
Weight: 1,4 kg

### Supplied with:

- Digital high resistance tester Metriso 3000
- USB cable
- Software "ETC" on CD-ROM
- Humidity and temperature sensor
- 2 probes Model 850 acc. to IEC 61340-4-1 /2-3
- 1 handheld probe Model 45 acc. to IEC 61340-4-5
- Connecting cables
- Conductive carrying case
- User's manual in German / English / French

### Technical specifications

| Meas. Qty.  | $U_M^2$                                       | Range                     | Measuring Range                     | Resolution   | Intrinsic Error <sup>1</sup>                       | Measuring Uncertainty                   | Overload Capacity |
|-------------|---|---------------------------|-------------------------------------|--------------|--|---|-------------------|
| $R_{ESD}$   | 10 V <sup>3</sup><br>100 V<br>500 V<br>3<br>3 | 10 k $\Omega$             | 1.0 k $\Omega$ ... 9.99 k $\Omega$  | 0.01 k       | $\pm(5\% \text{ rdg.} + 10 \text{ d})$             | $\pm(7\% \text{ rdg.} + 10 \text{ d})$  | 500 V AC/DC TRMS  |
|             |   | 100 k $\Omega$            | 10.0 k $\Omega$ ... 99.9 k $\Omega$ | 0.1 k        | $\pm(5\% \text{ rdg.} + 3 \text{ d})$ <sup>5</sup> | $\pm(7\% \text{ rdg.} + 3 \text{ d})$   |                   |
|             |   | 1 M $\Omega$ <sup>4</sup> | 100 k $\Omega$ ... 999 k $\Omega$   | 1 k          | $\pm(5\% \text{ rdg.} + 3 \text{ d})$              | $\pm(7\% \text{ rdg.} + 3 \text{ d})$   |                   |
|             |   | 10 M $\Omega$             | 1.00 M $\Omega$ ... 9.99 M $\Omega$ | 10 k         | $\pm(5\% \text{ rdg.} + 3 \text{ d})$              | $\pm(7\% \text{ rdg.} + 3 \text{ d})$   |                   |
|             |   | 100 M $\Omega$            | 10.0 M $\Omega$ ... 99.9 M $\Omega$ | 100 k        | $\pm(5\% \text{ rdg.} + 3 \text{ d})$              | $\pm(7\% \text{ rdg.} + 3 \text{ d})$   |                   |
|             |   | 1 G $\Omega$              | 100 M $\Omega$ ... 999 M $\Omega$   | 1 M          | $\pm(5\% \text{ rdg.} + 3 \text{ d})$              | $\pm(7\% \text{ rdg.} + 3 \text{ d})$   |                   |
|             |   | 10 G $\Omega$             | 1.00 G $\Omega$ ... 9.99 G $\Omega$ | 10 M         | $\pm(5\% \text{ rdg.} + 3 \text{ d})$              | $\pm(10\% \text{ rdg.} + 3 \text{ d})$  |                   |
|             |   | 100 G $\Omega$            | 10.0 G $\Omega$ ... 99.9 G $\Omega$ | 100 M        | $\pm(8\% \text{ rdg.} + 3 \text{ d})$              | $\pm(10\% \text{ rdg.} + 3 \text{ d})$  |                   |
|             |   | 1 T $\Omega$              | 100 G $\Omega$ ... 999 G $\Omega$   | 1 G          | $\pm(25\% \text{ rdg.} + 5 \text{ d})$             | $\pm(50\% \text{ rdg.} + 20 \text{ d})$ |                   |
| $U_{AC/DC}$ |   | 100 V                     | 10.0 V ... 99.9 V                   | 0.1 V        | $\pm(2.5\% \text{ rdg.} + 3 \text{ d})$            | $\pm(5\% \text{ rdg.} + 3 \text{ d})$   | 500 V AC/DC TRMS  |
|             |   | 500 V                     | 100 V ... 499 V                     | 1 V          |  |   |                   |
| $R$         | Display range as of 01.0 $\Omega$             | 100 $\Omega$              | 1.0 ... 99.9 $\Omega$               | 0.1 $\Omega$ | $\pm(2.5\% \text{ rdg.} + 3 \text{ d})$            | $\pm(5\% \text{ rdg.} + 3 \text{ d})$   | 500 V AC/DC TRMS  |
|             |   | 1 k $\Omega$              | 100 ... 999 $\Omega$                | 1 $\Omega$   |  |   |                   |
|             |   | 10 k $\Omega$             | 1.00 ... 9.99 k $\Omega$            | 10 $\Omega$  |  |   |                   |

### Power supply, battery life expectancy:

The instrument is supplied including the batteries (8 x 1,5 V mignon cells)

Battery life is about 3000 measurements at  $R_{ESD}$  with one set of rechargeable batteries.

(With 5 sec. from one measurement until automatic shutdown of the measuring procedure)

Product video link:

[http://www.warmbier.com/en/metriso3000\\_mov1.htm](http://www.warmbier.com/en/metriso3000_mov1.htm)

Short version:

[http://www.warmbier.com/en/metriso3000\\_mov2.htm](http://www.warmbier.com/en/metriso3000_mov2.htm)



- ▶ 1 year limited warranty
- ▶ Recommended calibration interval: 2 years

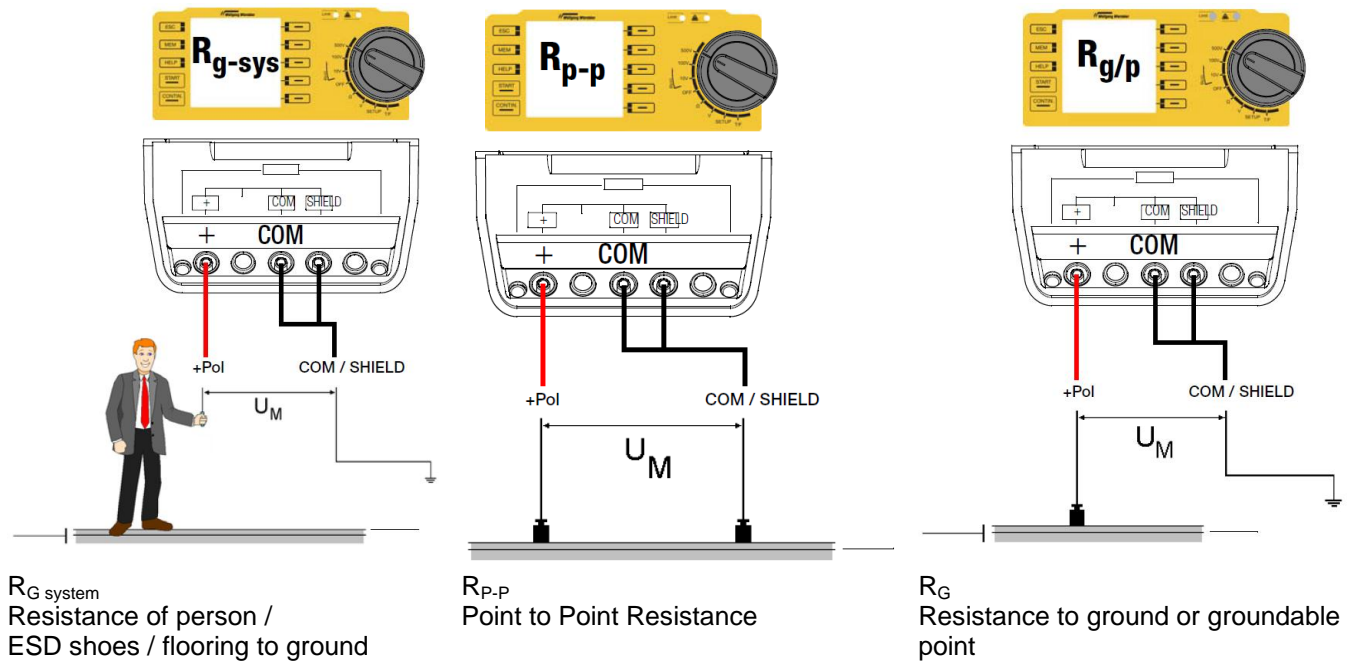
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### Possible measurements with the MetrISO 3000 Test-Kit



### Accessories (optional):



**Part No.**  
**7100.3000.SC.2D**  
1D/2D Barcode Scanner



**Part No.**  
**7100.2000.TR50**  
50m Cable reel with unroll  
handle for floor  
measurement

### Menu driven Measurement

|              |              |   |
|--------------|--------------|---|
| 1/1          |              | ↑ |
| Verification | Verification | ↓ |
| wristb_cord  | Qualificatio | → |
| MP_003       |              | ✓ |
|              |              |   |
|              |              |   |
|              |              |   |
|              |              |   |
|              |              |   |

#### 1. Measurement type selection

Select Qualification or Verification for the ESD control element

|              |             |   |
|--------------|-------------|---|
| 1/3          |             | ↑ |
| Verification | wristb_cord | ↓ |
| wristb_cord  | wristb_lint | → |
| MP_003       | wristb_ext  | ✓ |
|              | wristb_sys  |   |
|              | shoe_con    |   |
|              | shoe_diss   |   |
|              | per_systA   |   |
|              | per_systB   |   |
|              | per_Met_A   |   |
|              | per_Met_B   |   |

#### 2. ESD control element selection

Example: Wrist strap.  
The upper limits are already predefined in the instrument.

|              |        |   |
|--------------|--------|---|
| 1/10         |        | ↑ |
| Verification | MP_001 | ↓ |
| wristb_cord  | MP_002 | → |
| MP_003       | MP_003 | ✓ |
|              | MP_004 |   |
|              | MP_005 |   |
|              | MP_006 |   |
|              | MP_007 |   |
|              | MP_008 |   |
|              | MP_009 |   |
|              | MP_010 |   |

#### 3. Number of measurements

Enter the amount of measurements.

|           |            |   |
|-----------|------------|---|
| 1/1       |            | ↑ |
| R: ---Ω   | R: ---Ω    | ↓ |
| R: <100GΩ | R: >10.0kΩ | → |
|           | R: >100kΩ  | ✓ |
|           | R: >10.0MΩ |   |
|           |            |   |
|           |            |   |
|           |            |   |

#### 4. Lower Limit

If required, a lower limit value can be entered.