

# MegaGuard Easy

**SG9265055**

*Reference manual*



## EC CONFORMITY

Unit SG9265055 conforms to EC directives **EMC - 2014/30/EU** , the following harmonized standards are in use: EN 61000-6-1, EN 61000-6-3.

## SAFETY INSTRUCTIONS

**ATTENTION** : this instrument generates a 100V measuring voltage on the two measuring terminals or on the external probes if connected in the "EXTERNAL PROBE" sockets.

The current is limited to 10mA and cannot make any injury to the operator .  
For operator's security, avoid to touch the electrodes directly.

## WARRANTY

This unit is guaranteed against all defects due to faulty materials and workmanship, within 12 months from the date of purchase.

A use not conforming to what specified might be dangerous to the safety of the operator and may damage the instrument.

In such circumstances the manufacturer is relieved of any liability and the warranty itself will decay.

## REPAIR

Repairs have not been attempted by anyone other than authorized repair distributors.

Do not try to repair the unit by yourself.

**ATTENTION:** Dangerous voltage is present inside the instrument.

## TECHNICAL FEATURES

The MegaGuard Easy can measure surface resistance and resistance to the ground of mats, floors and other objects of the EPA area, and can also be used for point-to-point measurements.

> 10 <sup>12</sup> .....	1 TΩ – ∞
< 10 <sup>12</sup> .....	100 GΩ - 1 TΩ
< 10 <sup>11</sup> .....	10 GΩ - 100 GΩ
< 10 <sup>10</sup> .....	1 GΩ - 10 GΩ
< 10 <sup>9</sup> .....	100 MΩ - 1 GΩ
< 10 <sup>8</sup> .....	10 MΩ - 100 MΩ
< 10 <sup>7</sup> .....	1 MΩ - 10 MΩ
< 10 <sup>6</sup> .....	100 KΩ - 1 MΩ
< 10 <sup>5</sup> .....	10 KΩ - 100 KΩ
< 10 <sup>4</sup> .....	0-10KΩ

Resolution: 1 decade

Accuracy: ± 1 decade

Measuring voltage: ..... 10Vdc for R<100kΩ – 100Vdc for R>100kΩ

Dimensions: ..... 80x120x27mm

Weight. .... 200g

Battery ..... 9 V

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### PROBES AND ACCESSORIES



**SG9265065** ..... Shielded probe made to IEC 61340-5-1  
 ..... 63/30mm diameter, 2.5Kg weight (optional)



**SG9265070** ..... Concentric ring PROBE made to IEC 61340-5-1  
 ..... 63/30mm diameter, 2.5Kg weight (optional)

**SG9265013B** ..... Connection cable jack 3.5mm - banana 4mm

## **CONTENT OF THE PACKAGE**

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The code SG9265055 includes:

- 1 MegaGuard Easy with battery
- 1 connection cable SG9265013B, 3.5mm jack - banana4mm
- Manual
- ISO9000 traceable calibration certificate.
- Box

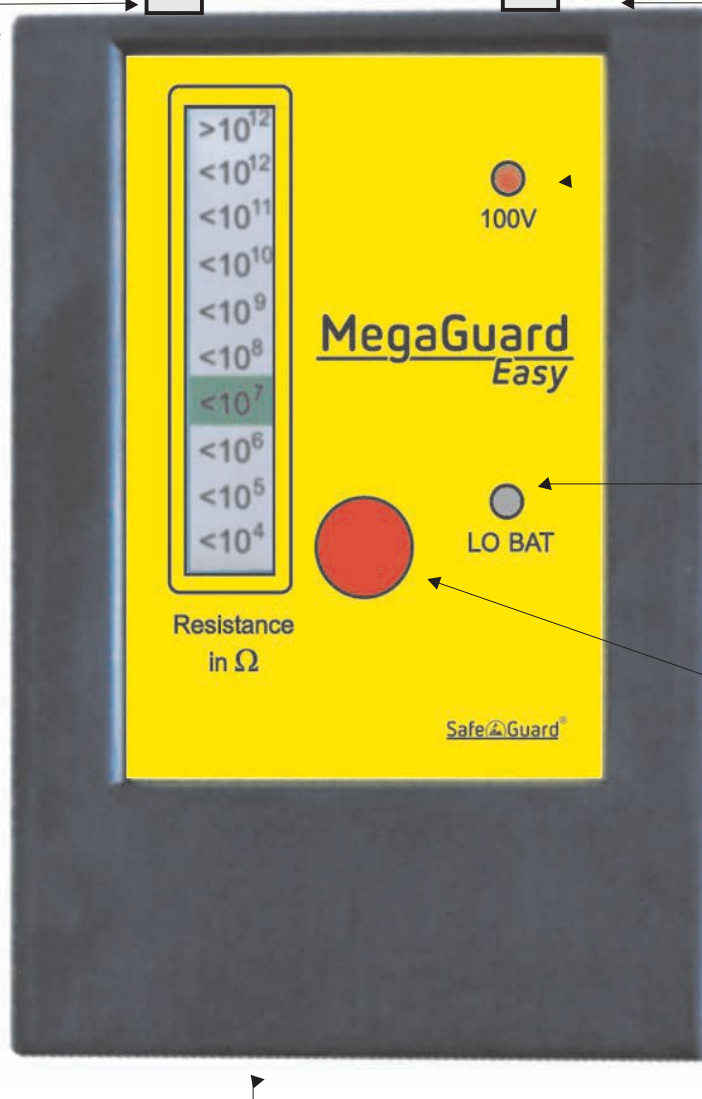
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## PANEL

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**LEFT SOCKET**  
Input for external probe

**RIGHT SOCKET**  
Input for external probe



100V MEASURING VOLTAGE

LOW BATTERY LED

MEASUREMENT BUTTON

BATTERY COVER

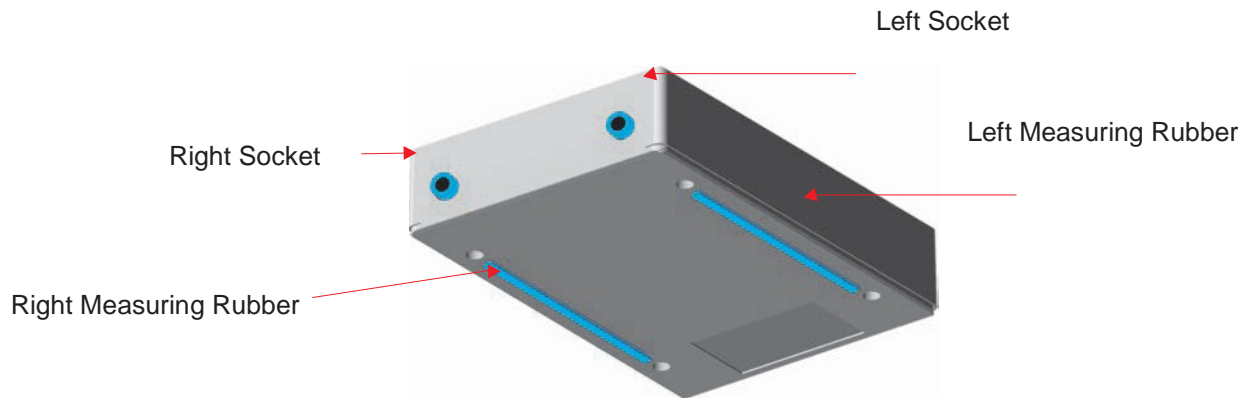
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## BATTERY REPLACEMENT

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- Open the battery cover, unscrewing the 2 fixing screws.
- Replace the battery.
- Close the battery cover.

## MEASURING ELECTRODES



"Right Socket" and "Right Measuring Rubber".

In one of these two points the HV measurement output is present.

The HV measurement output is connected to the "Right Measuring Rubber".

When the 3.5mm jack is inserted into the "Right Socket", the "Right Measuring rubber" is automatically disconnected and the HV measurement output connected to the 3.5mm jack

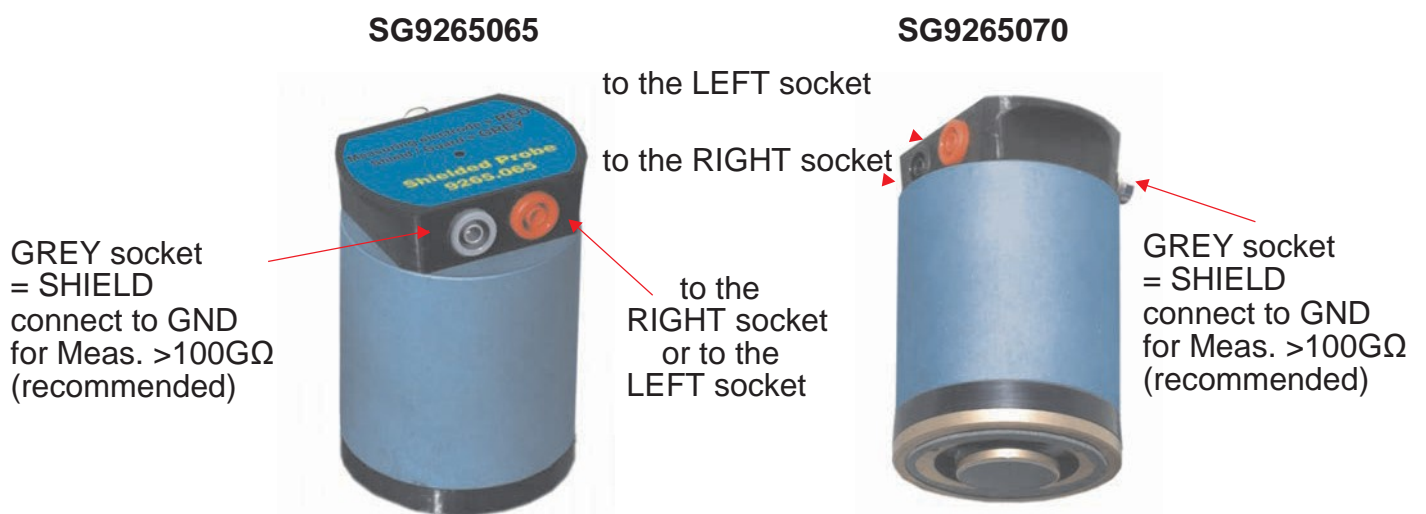
"Left Socket" and "Left Measuring Rubber".

In one of these two points the SIGNAL measurement input is present.

The SIGNAL measurement input is connected to the "Left Measuring Rubber".

When the 3.5mm jack is inserted into the "Left Socket", the "Left Measuring Rubber" is automatically disconnected and the SIGNAL measurement input connected to the 3.5mm jack.

## EXTERNAL PROBE CONNECTION



# OPERATIVE INSTRUCTIONS

## SURFACE RESISTANCE MEASUREMENT

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- Be sure that the surface under test is clean and free of grease or other chemicals than can create an isolant layer.
- In case of doubt clean the surface with a specific detergent, without alcohol or silicon, so that the non conductive layer will be removed.
- Place meter on test surface.
- Press the red pushbutton, and apply downward force of approximately 2Kg, hold the red pushbutton pressed for at least 5 seconds to a maximum of 10 seconds in order to get an accurate measure.
- When “100V” LED lights on, it means that the applied test voltage is 100V. When the LED is off, the applied test voltage is 10V.
- The displayed measure start always from the lower resistance value and gradually reaches the real resistance value. In order to get accurate measurements wait **5 seconds** more after the value seems to be stable.

## RESISTANCE TO GROUND MEASUREMENT

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- Be sure that the surface under test is clean and free of grease or other chemicals than can create an isolant layer.
- In case of doubt clean the surface with a specific detergent, without alcohol or silicon, so that the non conductive layer will be removed.
- Insert the 3.5mm jack of the connecting cable into the Left Socket (SIGNAL measurement input) and connect the banana 4mm to a safe ground point.
- Place meter on test surface.
- Press the red pushbutton, and apply downward force of approximately 2Kg, hold the red pushbutton pressed for at least 5 seconds to a maximum of 10 seconds in order to get an accurate measure.
- When “100V” LED lights on, it means that the applied test voltage is 100V. When the LED is off, the applied test voltage is 10V.
- The displayed measure-start always from the lower resistance value and gradually reaches the real resistance value. In order to get accurate measurements wait **5 seconds** more after the value seems to be stable.

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## POINT TO POINT RESISTANCE MEASUREMENT

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- Be sure that the surface under test is clean and free of grease or other chemicals than can create an isolant layer.
- Insert the 3.5mm jack of the connecting cable into the Right Socket (HV measurement output) and connect the banana 4mm to an eternal probe.
- Insert the 3.5mm jack of the connecting cable into the Left Socket (SIGNAL measurement input) and connect the banana 4mm to an external probe.
- Place meter on test surface.
- Press the red pushbutton, and apply downward force of approximately 2Kg, hold the red pushbutton pressed for at least 5 seconds to a maximum of 10 seconds in order to get an accurate measure.
- When “100V” LED lights on, it means that the applied test voltage is 100V. When the LED is off the applied test voltage is 10V.
- The displayed measure-start always from the lower resistance value and gradually reaches the real resistance value. In order to get accurate measurements wait **5 seconds** more after the value seems to be stable.

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## MEASURING PRECAUTIONS

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**ATTENTION:** DURING GROUND RESISTANCE MEASURING, if the earth reference point is faulty or unconnected, indefinite resistivity values may appear.

**IMPORTANT:** If there are devices connected to the mains power supply on the surface under test, and even power cords or other conductors under a.c. voltage, problems on the readings may occur, because 50Hz may cause an interference with the MegaGuard Easy measuring circuit especially when measuring high resistance values.

In case of doubt disconnect the mains power supply by opening the main switch.