AIJGO-61

RESISTANCE METER

INSTRUCTION MANUAL

DLB

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Overview

The AIJGO-61 resistance meter can be used to measure the resistance of different materials, work surfaces and floors. The measured result can be viewed on an LCD display after the measurement.

CE declaration

We declare that the AIJGO-61 product complies with the requirements of IEC 61340-5-1, ANSI/ESD S20.20 and Directive 2001/95/EC (General product safety).

The product and accessories supplied with it

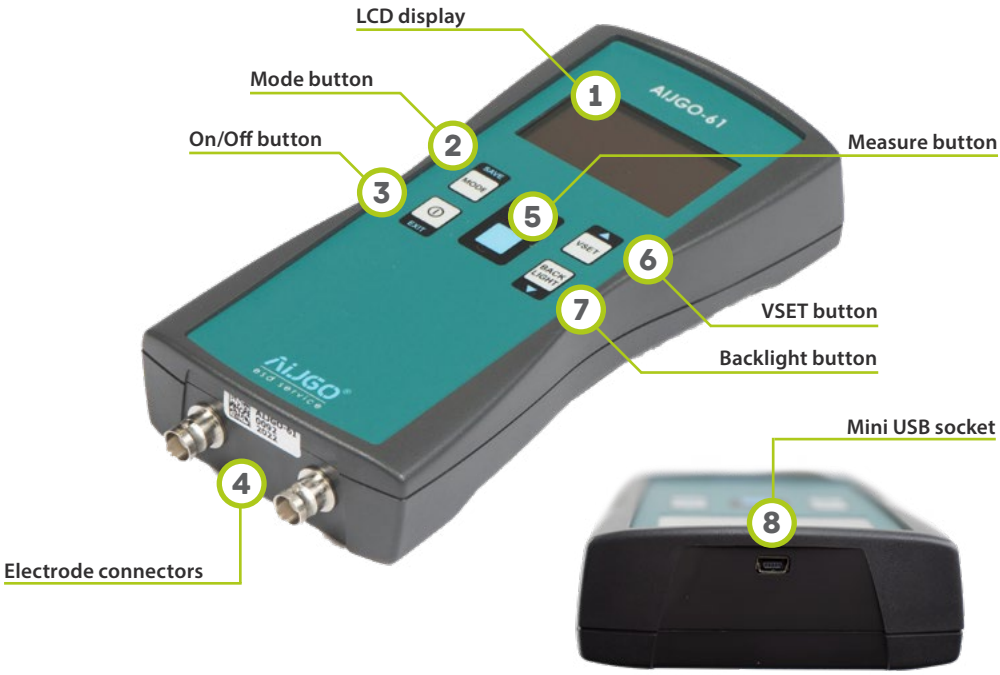
- AIJGO-61 resistance meter
- Electrodes (2 pieces)
- Wires with banana plug and BNC plug ends (2 pieces)
- Crocodile clips (2 pieces)
- Mini USB data cable
- Pendrive with softwares
- AA batteries (4 pieces)

Technical specifications

Sizes	93 x 185 x 35 mm (W x L x H)
Weight	ca. 370 g
Test voltage	10 V, 100 V, 500 V (±5% ±2 V)
Resistance measuring range	2 Ω – 1 TΩ
Resistance measuring accuracy	2 Ω – 109 Ω: ±10%, 109 Ω – 1012 Ω ±20%
Temperature measuring range	0 °C – 45 °C
Temperature measuring accuracy	±0,3%, max. ±0,5%
Temperature measuring frequency	~ 2 s
Humidity measuring range	10 – 85% RH
Humidity measuring accuracy	±2%, max. ±3,5%
Humidity measuring frequency	~ 2 s
Stored values	Resistance, temperature, humidity
Number of measurement data rows that can be stored	20 pieces
Standard weight of electrodes	2,25 ±0,25 kg
PC connection	Mini USB-B
Display	Graphic 128 x 64 pixel
Power supply	With 4 pieces of 1,5 V AA batteries or via USB cable
Operating time	ca. 12-14 hours

About construction and use

Parts of the product



Functions of the buttons

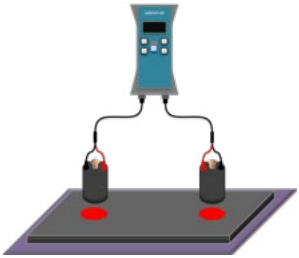
On/Off button (3)	With long keypress (3 sec.) you can turn the device on and off.
Backlight button (7)	With short keypress you can turn the backlight on and off.
VSET button (6)	With short keypress you can switch between the test voltage values.
Mode button (2)	With long keypress (3 sec.) you can store the measured values.
Measure button (5)	Keep the button pressed to take the measurement. When you release it, the measurement result remains on the display.

User instructions and information

Connecting accessories

Connect the instrument, cables, electrodes and, if necessary, grounding according to the measurement method to be used.

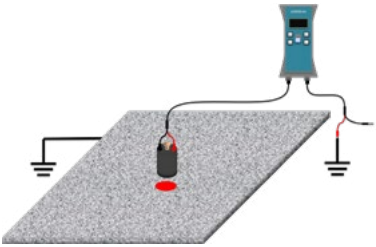
Measurement methods



Point-to-point measurement (Rp-p)

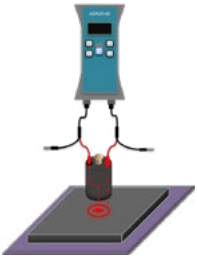
Connect the BNC plug ends of the wires to the instrument and the black shielding wire connectors to the black sockets of the electrodes and the red measuring wire connectors to the red sockets of the electrodes.

Measurement of resistance to ground (Rg)



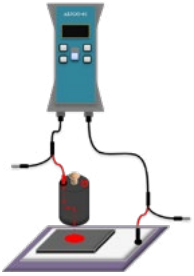
Connect the BNC plug ends of the wires to the device and the connector of one of the black shielding wires to the black socket of one of the electrodes. To the red socket of the same electrode, connect the red wire connected to the black shielding wire already in use. Connect the other red measuring wire to the ground. The use of the other black shielding wire is not necessary for this measurement method.

Surface resistance measurement (Rs)



Connect the BNC plug ends of the wires to the device and the two red measuring wires to a ring electrode. (Ring electrode is not provided in the AIJGO-61 product package.) The use of the two black shielding wires is not necessary for this measurement method.

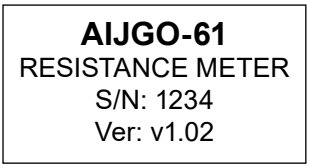
Measurement of volume resistance (Rv)



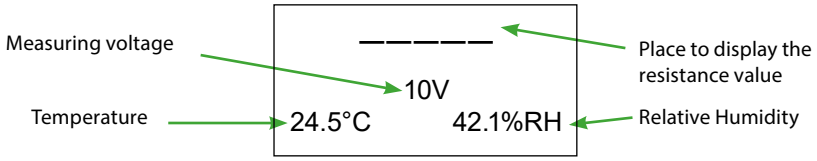
Connect the BNC plug ends of the wires to the device and the connector of one of the red measuring wires to the red socket of one of the electrodes. Connect the other red measuring wire to the conductive material under the measured item. The use of the black two shielding wires is not necessary for this measurement method.

Turning on

Turn on the device with the “On/Off” button. After switching on, a text similar to the following appears on the screen containing the device’s data:



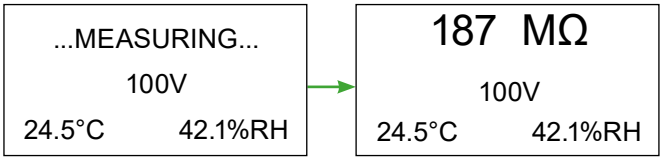
This is visible for 10 seconds. If you do not want to wait this time, but want to move on faster, press any button except “On/Off”. You will then see a screenshot similar to the one below:



Measurement

The AIJGO-61 is suitable for measuring a wide resistance range, between 2 Ω and 1 TΩ. This also enables the measurement of equipment grounding resistance and the resistance of ESD protective worksurfaces to ground. Thus there is no need to use other resistance meter during ESD qualification or compliance verification measurements.

Press and hold the “Measure” button until the measurement result is displayed. This will remain visible until you press the “Measure” button again.



When measuring temperature and humidity, make sure that you do not cover the sensor on the bottom of the device with your hands or other objects, and do not place the device on a cooled or heated surface, as this may affect the measurement results.

Storing measurement results

The measurement results can be stored by pressing and holding the “MODE” button, after this a message is shown on the display for 3 seconds. If any blank space is still available in the measurement list, a message similar to the following will be displayed:

VALUES STORED
LIST POS: x

The value of x indicates the position in the measurement list where the measured resistance value and the associated temperature and humidity data are placed. The list can contain up to 20 measurement positions. Once full, it is not possible to store any more results. In this case, the following message will appear after a long press on the “MODE” button:

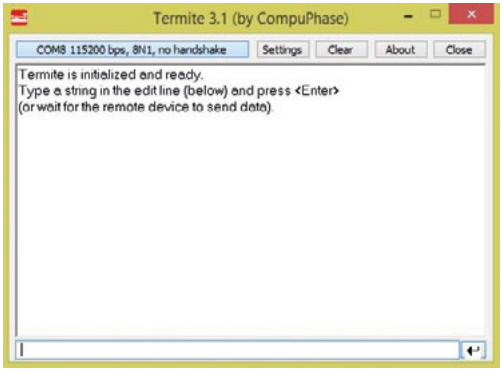
LIST FULL

When the list is full, it is only possible to store another measurement result after deleting the list, which can only be done by a computer.

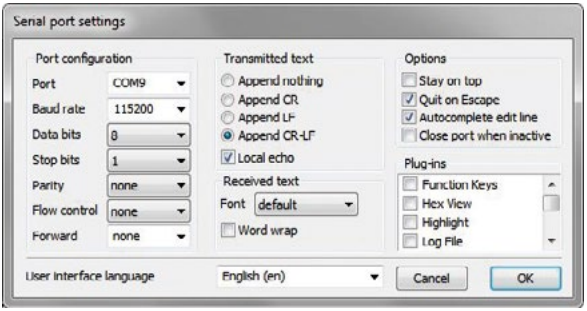
Management of measurement results on computer

An AIJGO-61 product can be connected to a computer with a USB-A to mini USB-B cable. To manage the measurement results on a computer, the driver program supplied with the device must be installed, which assigns a virtual serial port to the resistance meter. To do this, run the application „CDM v2.08.30 WHQL Certified.exe” as administrator which is on the supplied pendrive (Right mouse button -> Run as administrator). Once the installation is completed, launch the terminal program (termite-3.1.exe), also available from the pendrive. The application will start after the installation. You can use the shortcut in the Start menu to launch it later (it is listed under the name “Termite”).

When the terminal program is started, a window similar to the following picture appears:

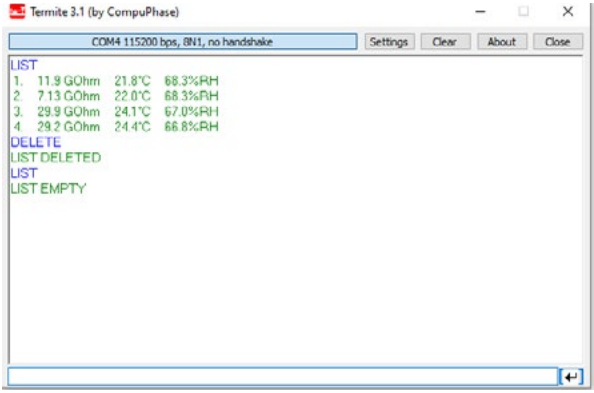


Click on the “Settings” button and configure your program as follows:



The “Port” field must contain the virtual serial port number assigned to the device for proper operation.

Two commands can be used in the program to manage the stored data of an AIJGO-61 product, these are “LIST” and “DELETE”. The commands can be sent by pressing the “enter” key after typing them. The following is a picture of the terminal program after the user has retrieved a stored list with the “LIST” command, deleted it with the “DELETE” command, and then started a new retrieval with a repeated “LIST” command.

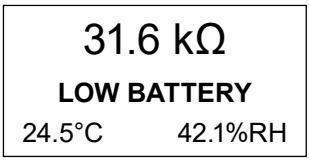


The listed data can be selected in the terminal program window and copied to somewhere else if necessary.

Maintenance

Replacement of the batteries

If the batteries are discharged, a screenshot similar to the following will be displayed:



In this case the measuring instrument is automatically set to 10 V measuring voltage.

You can remove the cover plate by unscrewing two screws on the back of the meter to change the batteries. Be sure to place them in the correct direction to avoid possible circuit damage.

Safety instructions

The measuring instrument uses 10 V, 100 V or 500 V measuring voltage between the electrode connections. The output current is limited to 1 mA, nevertheless do not touch the electrodes when measuring with the instrument.

Calibration

Calibration of the device is recommended once in every 2 years.

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