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# AIJGO-61 / AIJGO-61BT

## RESISTANCE METERS

# USAGE GUIDE


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# TABLE OF CONTENTS

**Overview** ..... **3**
**The product and accessories supplied with it** ..... **3**
**Technical specifications** ..... **3**
**About construction and use** ..... **4**
Parts of the product ..... 4
Functions of the buttons ..... 4

**User instructions and information** ..... **5**
Connecting accessories ..... 5
Turning on ..... 5

**Measure** ..... **6**
Storing measurement results ..... 6
Management of measurement results on computer ..... 7

**Maintenance** ..... **9**
Replacement of batteries ..... 9
Safety instructions ..... 9
Calibration ..... 9

## Overview

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

### CE declaration

We declare that the AIJGO-61 and the AIJGO-61BT 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/AIJGO-61BT resistance meter
- Electrodes (2 pieces)
- Wires with banana plug and BNC plug ends (2 pieces)
- Crocodile clips (2 pieces)
- Mini USB data cable (with AIJGO-61, AIJGO-61BT is packed without it)
- Pendrive with software and usage guide in the case of AIJGO-61, with only the usage guide in the case of AIJGO-61BT
- 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 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 |
| **Data output** | Via mini USB-B connection (AIJGO-61) or via Bluetooth connection (AIJGO-61BT) |
| **Display** | Graphic 128 x 64 pixel |
| **Power supply** | With 4 pieces of 1,5 V batteries or in the case of AIJGO-61 it is possible via USB cable as well |
| **Operating time** | ca. 12-14 hour in case of using with batteries |

# About construction and use

## Parts of the product


## Functions of the buttons

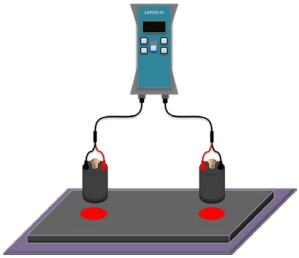
| | |
|---|---|
| **On/Off button (3)** | With long keypress (3 sec.) you can turn the device on and off. |
| **Backlight button (7)** | The brightness can be adjusted with a short press of the button. |
| **VSET button (6)** | With short keypress you can switch between the test voltage values and with long keypress between manual and automatic test voltage modes. |
| **Mode button (2)** | With long keypress (3 sec.) you can store the measured values in the case of AIJGO-61, if you use AIJGO-61BT, you can switch on and off the automatic measurement mode with this action. |
| **Measure button (5)** | For the AIJGO-61, hold the button to perform a measurement. Once released, the measurement result will remain displayed. Measure easily with one touch with AIJGO-61BT - in automatic measurement mode, a short press initiates a 5-second measurement. If the button is held down, the measurement will continue until the button is released. |

# User instructions and information

## Connecting accessories

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

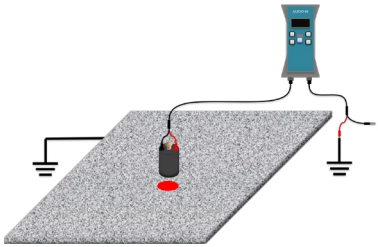
## Measurement methods



**Point-to-point measurement (Rp-p)**

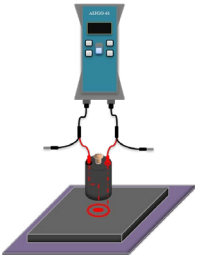
Connect the BNC plug ends of the wires to the instrument and the black shielding wire connectors to the black sockets of the electrodes and the red measuring wire connectors to the red sockets of the electrodes.

**Measurement of resistance to ground (Rg)**



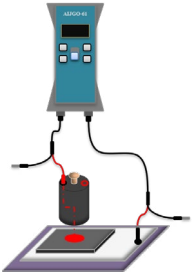
Connect the BNC plug ends of the wires to the device and the connector of one of the black shielding wires to the black socket of one of the electrodes. To the red socket of the same electrode, connect the red wire connected to the black shielding wire already in use. Connect the other red measuring 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.

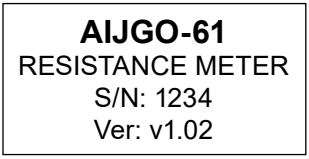
**Measurement of volume resistance (Rv)**



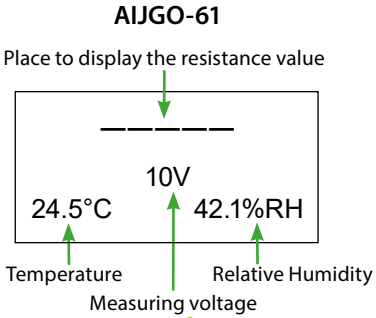
Connect the BNC plug ends of the wires to the device and the connector of one of the red measuring wires to the red socket of one of the electrodes. Connect the other red measuring wire to the conductive material under the measured item. The use of the black two shielding wires is not necessary for this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

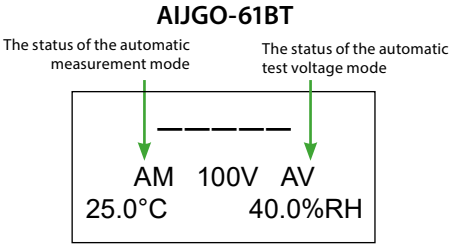
## Turning on

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 (of course with „AIJGO-61BT” text in the case of AIJGO-61BT):




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 and the AIJGO-61BT 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. The devices can be configured to automatically switch between 10 V and 100 V test voltages, based on whether the measured resistance falls within or outside the measurement ranges assigned to these test voltages.

In the case of AIJGO-61 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.

When using the AIJGO-61BT, if the automatic measurement mode is enabled, press the “Measure” button once to start a 5-second measurement. For a measurement of a different duration, hold the button for the desired amount of time, regardless of whether the automatic measurement mode is enabled or not.

## Storing measurement results in the case of AIJGO-61

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 what you can see on the right 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 message you can see on the right will appear after a long press on the “MODE” button:

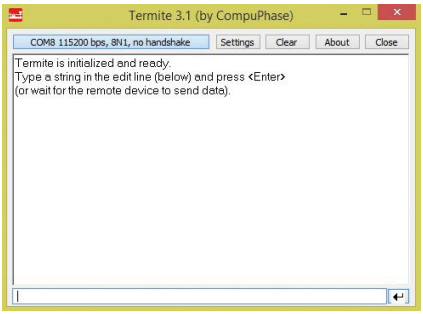
LIST FULL

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.

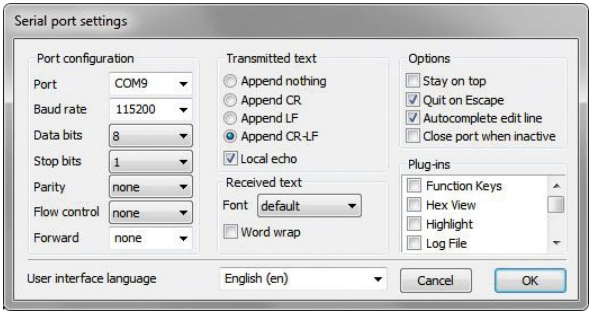
### Management of measurement results on computer in the case of AIJGO-61

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, you need to install the driver program (usable with Windows operation system) supplied on pendrive, 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:

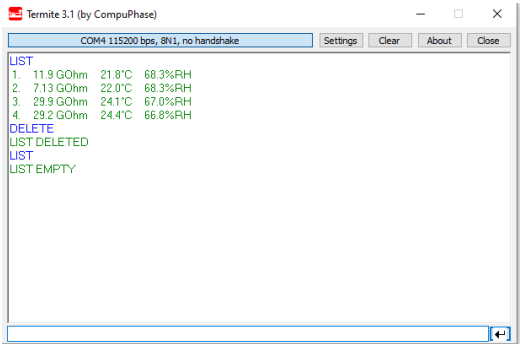


Click on the “Settings” button and configure your program as follows:




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.

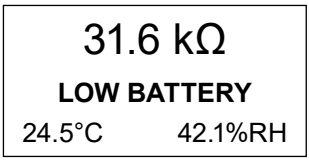
## Handling measurement results in the ESD Wise system in case of the AIJGO-61BT

The measured data from the AIJGO-61BT product can be received via Bluetooth on an Android smart device using the ESD Wise Android smart device application. This app can then wirelessly transmit the data to the ESD Wise management software. For more information about the ESD Wise management system, please contact the team at D és Tsa Bt., or visit the following website: www.esdwise.com.

# 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.

*The images in this document are for information purposes only. The design, the accessories, the technical specifications and various details of the product can be changed. We reserve the right to sell such changed product without notice. In case of improper use other than as described in this documentation or in case of modification of the product which D és Tsa Bt. has not given its written consent, our company may reject any warranty claims.*

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