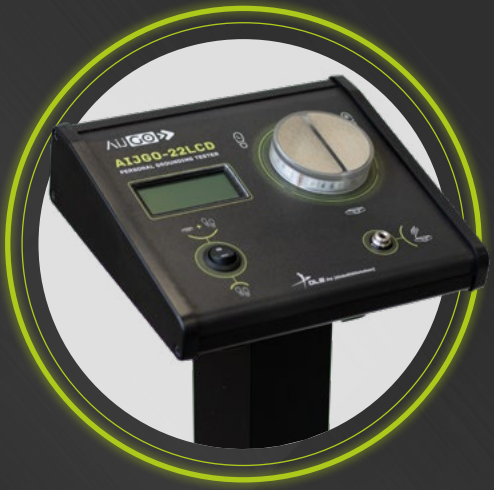
AIJGO-22LCD

PERSONAL GROUNDING TESTER WITH LCD DISPLAY AND DUAL FOOT ELECTRODE

INSTRUCTION MANUAL



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ABOUT THE PRODUCT

- Tester for checking personal grounding before entering an ESD protected area (EPA)
- Testing footwear system and wrist strap/groundable ESD smock system at the same time
- Can be used to test a groundable ESD smock system
- Test result indication on LCD display, with LED light and sound
- **Selectable test modes:** Footwear sytem test only, or footwear system and wrist strap/groundable ESD smock system combined test
- For indoor use only

The AIJGO-22LCD is an easy-to-use tester for checking personal grounding before entering an ESD protected area (EPA). High load-bearing construction, it may be a good choice if speed and security are important factors due to the large number of entrances. Tester with LIGHT BAR system – such AIJGO products have a steel touch button, the measured results are indicated by LED lights. The type of test can be changed according to the entrance regulations: only footwear system test or the combined test of the footwear system and wrist strap/groundable ESD smock system. Thanks to the dual foot electrode, the tester simultaneously measures the resistance of the right and left foot relative to the hand. After the test, the measured values are displayed on the built-in LCD display. The tester can be connected to a gate using the relay output (e.g. to a turnstile entrance gate, swing gate, etc.). It can be installed on an entrance gate, table, wall or stand.

The tester is supplied with manufacturer's calibration certificate, dual foot electrode, mounting plate and universal holder.

CE declaration

We declare that the AIJGO-22LCD product complies with the requirements of IEC 61340-5-1, ANSI/ESD S20.20 and Directive 2001/95/EC (General product safety).

Warning

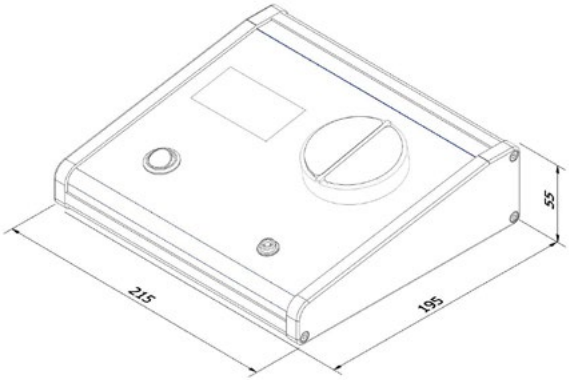
The device can deliver an effective output power of up to 20 µA or less at a maximum voltage of 100 V for 2-4 seconds at 0,5 second cycles. Therefore, persons with an implanted electronic device (e.g. insulin pump, pacemaker, etc.), known or acute hear rhythm disorders and other disorders of the heart's impulse generation and conduction, seizure disorders (e.g. epilepsy) should consult their doctor before using this device.

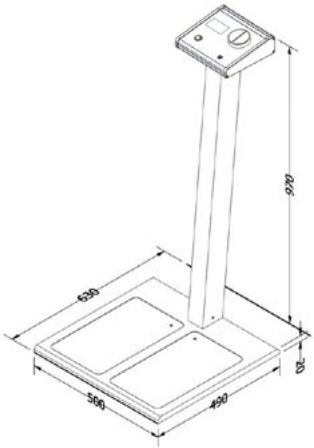
It is forbidden to modify the device, both in terms of hardware and software. Do not open the device. Any modification to the product will void the warranty.

TECHNICAL INFORMATIONS

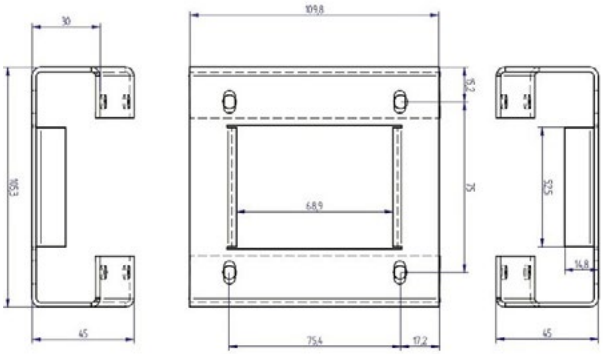
Resistance values indicated as acceptable by the tester	
Default setting when measuring footwear system	100 KΩ – 100 MΩ
An upper value of 35 MΩ can be set using the red switch at the bottom of the tester. However, after setting a different limit from the one used previously, the device must be restarted for the change to take effect.	
Default setting when measuring wrist strap/ groundable ESD smock system	750 KΩ – 35 MΩ

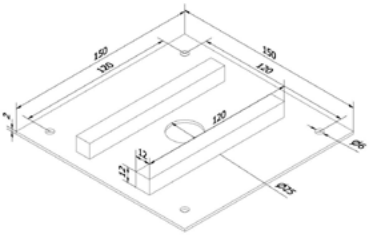
Test voltage	100 V DC
Wrist strap/groundable ESD smock system connection:	With a combined 10 mm snap, 4 mm banana plug socket
Power supply	12 V DC
Relay outputs	0,5 A/60 V *Pass relay (Normally Open) with green wire* *Fail relay (Normally Open) with red wire*
Sizes	215 x 195 x 55 mm (tester) 500 x 630 x 970 mm (tester+stand with dual foot electrode, assembled), the touch button emerges from it beyond this, the tester extends 14 cm backwards beyond the platform. The size of the platform itself (in case of a tester version with stand): 500 x 490 x 20 mm. Tilt angle of the stand: 5 degrees





Mounting plate sizes





Order codes

AIJGO-22LCD	Personal grounding tester with LCD display, dual foot electrode, mounting plate and universal holder
AIJGO-STA	Stand for AIJGO tester

PARTS OF THE TESTER

1.	Steel touch button with 9 RGB LEDs
2.	Combined 4 mm banana plug and 10 mm snap socket for connecting wrist strap/groundable ESD smock
3.	Switch for test type selection: if the upper position is selected, the footwear system and wrist strap/groundable ESD smock system are tested, if the lower position is selected, only the footwear system is tested
4.	LCD display

5.	Green 4 mm banana plug socket: calibration / verification test point

6.	8-pin socket which can be used to connect foot electrode wires and relay output wires, but if you place the tester on a stand, it is also worthwhile to connect the power supply through this.
7.	Switch for setting the footwear system measurement resistance limit value; after setting a different limit from the one used previously, the device must be restarted for the change to take effect
8.	12 V power supply connection socket

ITEMS SUPPLIED WITH THE TESTER

1. Dual foot electrode with wire and relay connector

In case of a tester version which is to be mounted on wall/table/entrance gate

In case of a tester version which is to be mounted on stand

2. Universal holder

In case of a tester version which is to be mounted on wall, fix the tester on the universal holder in the direction shown in the picture

In case of a tester version which is to be mounted on table/entrance gate, fix the tester on the universal holder in the direction shown in the picture

In case of a tester version which is to be mounted on stand, fix the tester on the universal holder in any of the two directions above

3. Mounting plate

PACKAGING DIMENSIONS AND WEIGHTS OF THE PRODUCT

	Size of the package	Weight of the package
AIJGO-22LCD with stand	94 x 18 x 50 cm	14,9 kg
AIJGO-22LCD without stand	21 x 51 x 43 cm	11,8 kg

AIJGO-22LCD with stand packaging

AIJGO-22LCD without stand packaging

ASSEMBLY INSTRUCTIONS

Stand version

1.	Retool the red switch on the bottom of the tester to the desired position, if necessary, to set the measurement resistance limit of the footwear system. *However, after setting a different limit from the one used previously, the device must be restarted for the change to take effect.*	
2.	Fix the tester with screws on the universal holder	
3.	Remove the protecion foil from the foot electrode plates	
4.	Connect the wires from the stand to the wires of the platform	
5.	Place the stand on the platform and fix it with screws	 
6.	Connect the wires of the dual foot electrode and the relays, also the adapter to the tester – all using the 8-pin connector	 

7.	Fix the tester with the universal holder on the stand	 
8.	Ask a qualified electrician to connect the gate to the EPH network of the building. For information on connecting the fire alarm wiring, see below.	 
9.	Connect the device to mains voltage	
10.	The tester is ready to use	

Wall version

1.	Retool the red switch on the bottom of the tester to the desired position, if necessary, to set the measurement resistance limit of the footwear system. *However, after setting a different limit from the one used previously, the device must be restarted for the change to take effect.*	
2.	Screw the mounting plate to the wall	
3.	Fix the tester to the universal holder with screws in the direction shown in the picture	
4.	Connect the wires of the dual foot electrode and the relays using the 8-pin connector and also the adapter	 
5.	Slide the tester with the holder onto the mounting plate	
6.	Remove the protecion foil from the foot electrode plates	

7.	Connect the device to mains voltage	
8.	The tester is ready to use	

Entrance gate or table top version

1.	Retool the red switch on the bottom of the tester to the desired position, if necessary, to set the measurement resistance limit of the footwear system. *However, after setting a different limit from the one used previously, the device must be restarted for the change to take effect.*	
2.	Fix the tester to the universal holder with screws in the direction shown in the picture	
3.	Connect the wires of the dual foot electrode and the relays using the 8-pin connector and also the adapter	 
4.	Remove the protecion foil from the foot electrode plates	
5.	Connect the device to mains voltage	
6.	The tester is ready to use	

OPERATION INSTRUCTIONS

1.	Step with both feet on the middle of the foot electrode plates	
2.	When testing a wrist strap/groundable ESD smock system, connect the wrist strap/ groundable ESD smock to the tester socket	
3.	Touch both halves of the steel touch button at the same time and keep your hand on it while testing is in progress	
4.	You can read the result on the LCD display, the tester will also give a light and sound signal	

Interpreting the colour coding of the touch button (WS: wrist strap/groundable ESD smock system, LF: footwear system – left foot RF: footwear system – right foot):

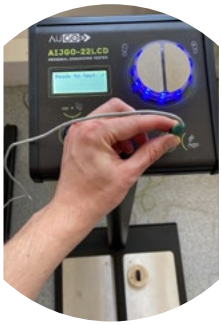
WS: **OK** LF: **OK** RF: **OK**	WS: **FAIL** LF: **OK** RF: **OK**	WS: **OK** LF: **FAIL** RF: **OK**	WS: **OK** LF: **OK** RF: **FAIL**	WS: **FAIL** LF: **FAIL** RF: **FAIL**	WS: **OK** LF: **FAIL** RF: **FAIL**	WS: **FAIL** LF: **OK** RF: **FAIL**	WS: **FAIL** LF: **FAIL** RF: **OK**
							

CALIBRATION / VERIFICATION GUIDE

Foot electrode calibration / verification

1.	Place a measuring electrode on the foot electrode you want to measure and connect it to a resistance decade	
2.	Connect the calibration / verification test point of the tester to the resistance decade	 
3.	To calibrate / verificate, adjust the knobs on the resistance decade and start testing by touching both parts of the touch button simultaneously	 

Wrist strap/groundable ESD smock connection calibration / verification

1.	Connect the wrist strap/groundable ESD smock connection to a resistance decade	
2.	Connect the calibration / verification test point of the tester to the resistance decade	 

3. To calibrate / verificate, adjust the knobs on the resistance decade and start testing by touching both parts of the touch button simultaneously

Table to evaluate the results

Calibration / verification parameters	Accepted maximum deviation downwards from expected value	Lower limit value	Expected value	Upper limit value	Accepted maximum deviation upwards from expected value
Footwear system test *(lower limit)*	- 20%	80 KΩ	100 KΩ	120 KΩ	+ 20%
Footwear system test *(upper limit)*	- 10%	90 MΩ	100 MΩ	110 MΩ	+ 10%
Footwear system test *(upper limit value can be set)*	- 10%	31,5 MΩ	35 MΩ	38,5 MΩ	+ 10%
Wrist strap/groundable ESD smock system test *(lower limit)*	- 20%	600 KΩ	750 KΩ	900 KΩ	+ 20%
Wrist strap/groundable ESD smock system test *(upper limit)*	- 10%	31,5 MΩ	35 MΩ	38,5 MΩ	+ 10%

If any of the measured values is out of the limit values above, please contact our colleagues.

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AijGO

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