SafeGuard®

SAFEGUARD SGT PRO

PERSONAL GROUNDING TESTER WITH LCD DISPLAY AND DUAL FOOT ELECTRODE

INSTRUCTION MANUAL



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SAFEGUARD SGT PRO

- 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 SafeGuard SGT Pro 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 SafeGuard 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 SafeGuard SGT Pro product complies with the requirements of IEC 61340-5-1, ANSI/ESD S20.20 and Directive 2001/95/EC (General product safety).

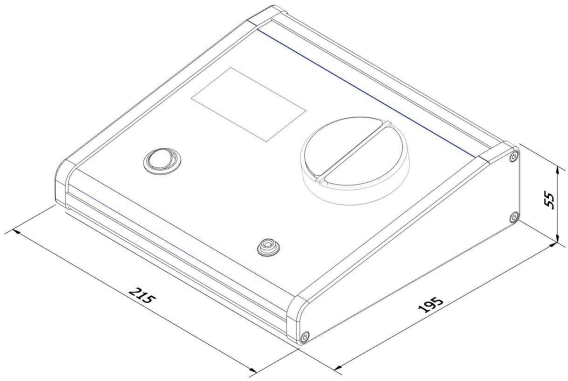
Warning

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.

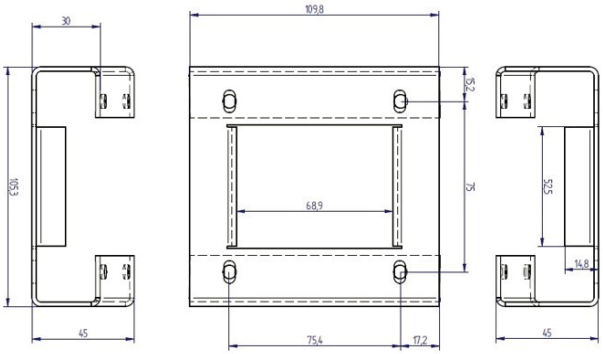
TECHNICAL INFORMATION

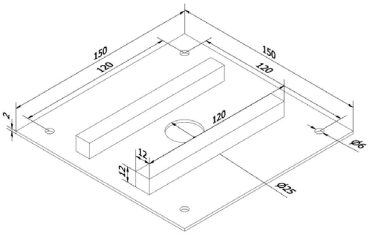
Resistance values indicated as acceptable by the tester	
Default setting when measuring footwear system	100 KΩ – 100 MΩ
An upper value of 35 MΩ can be set using the red switch at the bottom of the tester. However, after setting a different limit from the one used previously, the device must be restarted 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) - the touch button emerges from it beyond this, the tester extends 14 cm backwards beyond the platform. The size of the platform itself: 500 x 490 x 20 mm. Tilt angle of the stand: 5 degrees



Mounting plate sizes





Order code

SGT Pro	Personal grounding tester with LCD display, dual foot electrode, mounting plate and universal holder



COMPONENTS 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 test point

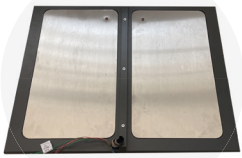


6.	8-pin socket which can be used to connect foot electrode wires and relay output wires, but if you place the tester on a stand, it is also worthwhile to connect the power supply through this.
7.	Switch for setting the footwear system measurement resistance limit value; after setting a different limit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



SCOPE OF DELIVERY

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

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



Assembly instructions

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 or use the adjustable holder.



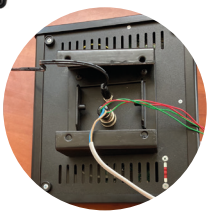


3. Fix the tester to the universal holder with screws in the direction shown in the picture



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



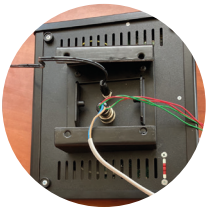
6. Remove the protecion foil from the foot electrode plates



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.	

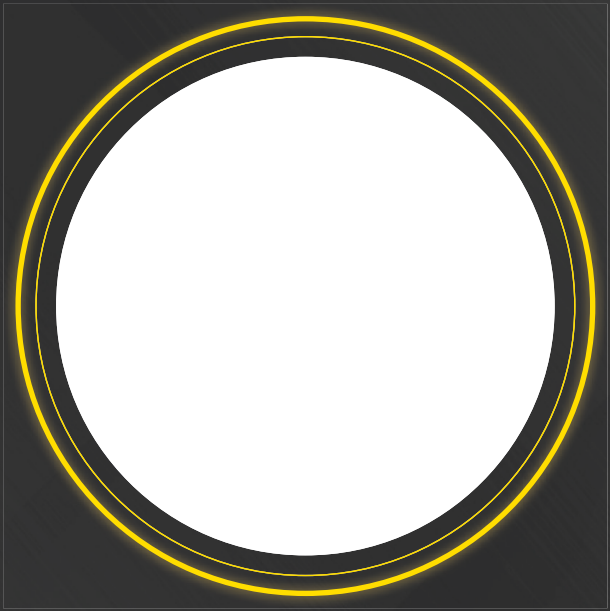
OPERATION INSTRUCTIONS

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**
							

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