

MANUAL



Wrist Strap Tester WST 50

performance test for Electrostatic – Wrist Straps

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Description

The WST100 serves the function test of electrostatic wrist straps.

The WST-50 is a reliable and advantageous solution for this.

The appliance is portable and because of its battery power employable everywhere.

Specific feature !!

The setting of the limits and the calibration can be done by the customer himself, very simply.

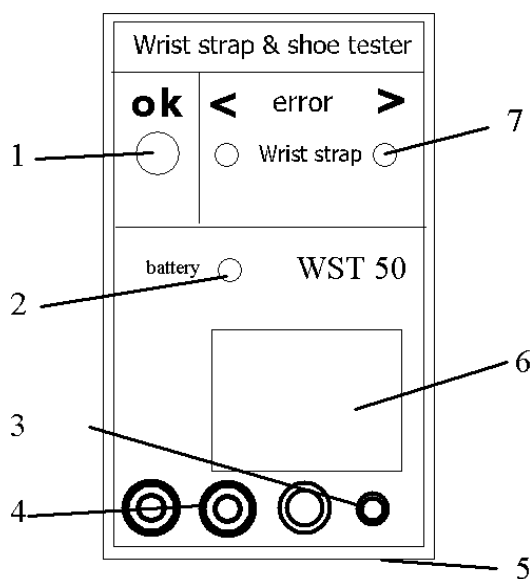
The limits values can be opposed by external resistors.

Doing this with calibrated resistors it is also a calibration of the instrument.

By changing the values you have to do this with resistors of the new limits.

The display includes 4 LEDs a green LED (8mm) for o.k. and 2 red LEDs for error message plus 1 red LED for low battery.

Legende



- | | |
|-------------------------|-----------------------|
| 1 LED o.k | 5 3,5mm handle socket |
| 2 LED Low battery | 6 TEST - plate |
| 3 10mm + 4mm Contact | 7 2 red LED „Error“ |
| 4 ESD-ID/S4 + MC Socket | |

Spezification

Dimension (L x B x H):	150mm x 88mm x 35mm
Weight:	ca. 220 g
Power supply	4 x Mignon (AA) Alkaline Batteries Alternativ: Plug power supply 7,5V= / 300mA with 4 x Mignon NiMH Batteries
Display:	1 LED (8mm) green, 3 LEDs (5mm) red, 1 Buzzer
Principle of Measurement:	Current / Voltage Converter
Measuring voltage:	20V= ±5%
Connection:	Power socket and + 3,5mm Socket
Limits:	The limits are separate adjustable for the wrist strap test and the shoe test
Lower Limit:	0....2MOhm
Upper Limit:	5....200Mohm

Function

The Wrist strap-cables are plugged into the measuring instrument. Then press and hold the Test -Plate on the appliance with a finger.

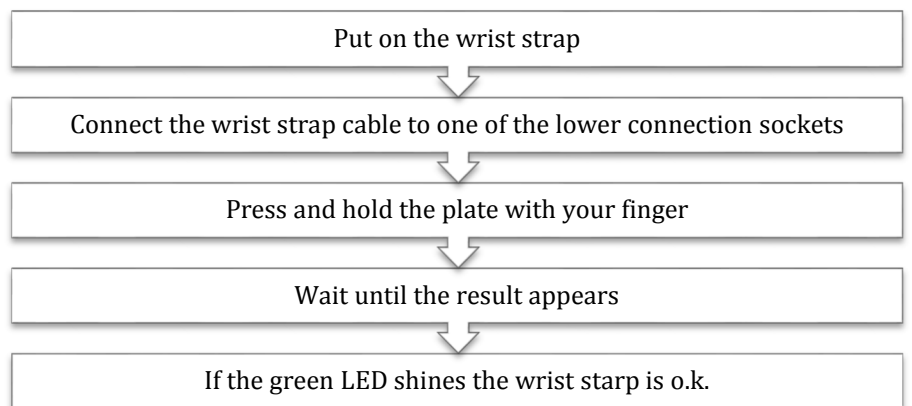
When starting the measurement, a short acoustic signal sounds.

It is tested whether the resistance values are within the lower and upper limits.

If the resistance values are between the lower and upper limits, a short acoustic signal sounds and the green LED lights up.

If the resistance values is outside of the lower or upper limit, no acoustic signal sounds, only the appropriate red < or > LED lights up.

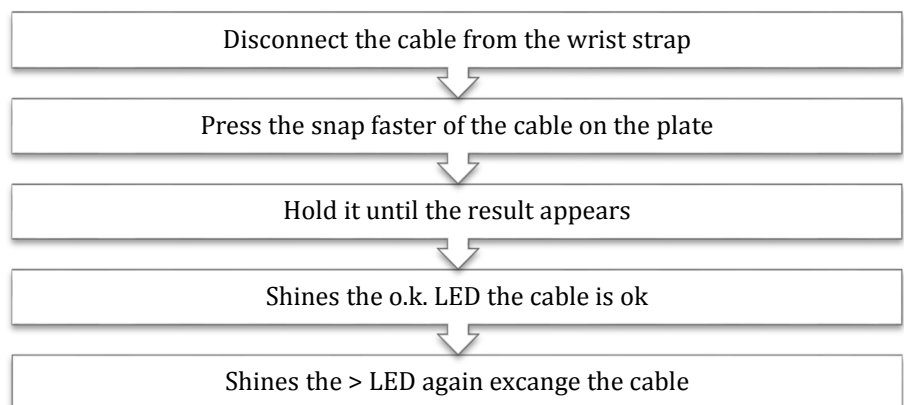
Expiry of wrist strap test



If the „<“ LED shines the resistor in the cable is defect. Exchange the cable !

If the „>“ LED shines the resistor in the cable ist o high or the wrist strap is defect or dirty. In this case test the cable separat

Expiry of cable test



If the cable is o.k. there is a problem between the wrist strap and the skin of the arm.

Cause for it may be a very dry skin or too long hairs.

A humidity lotion may solve this problem

If you have always this problem exchange the wrist strap !

Limits

The lower and upper limits are fixed by lower and upper calibrated resistor modules.

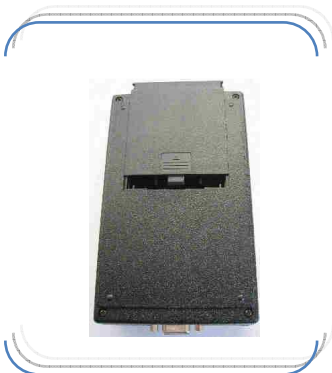
Factory default is:	wrist strap test	lower limit	750k Ω
		upper limit	35 M Ω

Other limits are possible without extra charge. The limits can be changed by the customer anytime → see adjustment of the limits.

Evaluation

lower limit	Calibrated Value (LCV)	→	LED <
	Calibrated Value (LCV) + 10%	→	LED o.k.
upper limit	Calibrated Value (UCL) - 10%	→	LED o.k.
	Calibrated Value (UCL) + 10%	→	LED >

Exchange Batteries



The appliance possesses battery supervision. If the battery voltage is below the limit, the red "low Battery" LED shines. In this case the batteries must be changed. The battery compartment is on the underside of the appliance. When installing in new batteries look for the polarity !!

Important ! Use alkaline batteries only !

Connection

The Reference resistors are in a 3.5mm Plug and will be connected to the 3.5mm Socket.

Scope of supply WST 100 SET

- Hand instrument WST 50
- 4 x Batteries AA Mignon Alkaline
- Manual
- Calibration Certification

Optional accessories



WST-50 NT

Power-Set including 4 x NiMH AA Batteries and a Plug power supply.

Important ! Before using the power supply replace the alkaline -batteries with rechargeable NiMH types.



WST-50 RE

Reference – Resistor modul RE-50

Reference – Resistor you need one for the lower and one for the upper Limit each with Calibration certification.

The reference- Resistor is mounted in a 3.5mm Plug

The standard values are :

A **lower Limit 750k Ω**

B **upper limit 35M Ω**

We can deliver each pair of limits into the limit range without extra charge !

¹Lower limit range 0... 2M Ω ; oberer Grenzwert 5... 200M Ω

Adjust the limits/calibrate the instrument WST-50



Needed are :

Reference resistors for the lower and upper limit.

Small screw driver

Sequence

- Press and hold button H (hidden), with a small screw driver
- Press the test plate shortly → buzzer sounds!
- Release the button H
- Release the test plate
- LED "<" shines
- Connect the resistor modul for the lower limit into the 3.5mm socket
- Press button "H" shortly
- If o.k. the green LED shines and the buzzer appears for 1 second.
- LED ">" shines
- Connect the resistor modul for the upper limit into the 3.5mm socket
- Press button "H" shortly
- If o.k. the green LED shines and the buzzer appears for 1 second.
- The new limit are stored.

By pressing the plate the instrument will switch off.

Error

If a connected calibration resistor is out of these ranges, all 6 red LEDs flash..

5 x → Error Calibration Value

After that the unit switches off.

Important! In this case you must repeat the complete Set – Up !!!

Calibration

Since the values are written directly with the adjustment into the EEPROM, the adjustment of the limits with calibrated resistors is also simultaneously the calibration of the appliance.

In order to return to the norms, the calibrated resistors can be calibrated by the manufacturer annually.

With these calibrated resistors, all appliances of the customer can then be calibrated again.

Suggested calibration cycles of the Reference Resistor moduls: annual

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