

Manual



Shoe-Shoe Tester SST 200

Easy check from conductive shoes. The resistor is measured above both shoes.
The result is displayed by two LED's.

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Product description

Generally

Shoe test for testing conductive footwears in the chemistry -, pharmaceuticals- and electronics industry.

Everywhere where conductive shoes, (for example EX - Areas) are required, the resistance should be tested for correct function at regular times.

The SST 200 is a reliable and advantageous solution for doing this.

The appliances are mobile and everywhere employable by battery power.

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

Description

The shoe Tester looks like a personal scales. It is completely closed and can be cleaned very easily.

On the bottom side, a nonslip mat is affixed.

On a plastic plate 440mm x 370mm there are 2 shoe electrodes for the left and right shoe.

These consist of stainless - steel.

The display consists of 2 LED's, a green LED for o.k., and a red LED for error < (too low) = LED blinking and > (too high) = LED permanent light.

The appliance switches on and off automatically.

The appliance is powered by 4 x Alkaline Batteries Type Mignon (AA), optional NiHM.

If the type of Battery is changed, the appliance must be recalibrated.

Contamination

Should after the end of measuring (both electrode are free) the value of the open resistor not be high enough, both LED's flash alternately.

After 5 minutes the red LED flashes every 2 seconds for a short time.

In this case you have to clean the tester immediately and then a new "ON" calibration is required. (see Adjust the limits => point 1 - Plates dirty, new „ON“ Value !)

Before use

Before using the appliance pull out the pink isolation strip at the back !

Specifications

| | |
|----------------------------------|---|
| Dimensions (L x B x H): | 440mm x 370mm x 35mm |
| Weight: | app. 2 kg |
| Battery: | 4 x Mignon (AA) Alkaline |
| Display: | 1 LED (5mm) green, 1 LEDs (5mm) red |
| principle of measurement: | Current / Voltage Converter |
| Measure Voltage: | 20V \pm 5% |
| Limits: | The limits are adjustable by resistors. |

Limits : lower limit range 0....2M Ω m

Upper limit range 5....200M Ω m

Other limits possible, ask about it.

Function

As soon as the isolation strip is pulled out from the batteries, the appliance is ready for operation. Then it tests every second whether a person is standing on the tester. The recognition takes place over a resistance alteration between the Measure Electrodes.

With very high impedance shoes > 2x10¹¹ Ohms (200G Ω m) it can occur that the appliance doesn't switch on.

The appliance recognizes if a person steps on the shoe electrode. Then, the resistance is measured from the left to the right shoe and is tested whether the resistance value is within the chosen limits.

The appliance tests between the chosen limits. With the first measurement, the low limit is tested. It is recognized by if the shoes are too low impedances. Then the upper limit is tested. Here a ">" (to high) result can be detected, if both shoes lie over 10 % above the chosen upper limit. Both shoe resistances are in series connection this must be taken into account when choosing the calibrated limits.

If the impedance value is within the limits, the green LED lights up.

If the impedance is beyond of the limits, the red LED lights up if the measured value is > (too high), or flashes if the measured value is < (too low).

If the person leaves the electrodes, the appliance display the measuring result for further 2 seconds, then it switches off. Wait until all LED's are off before starting a new measurement.

IMPORTANT! Shoes with such high impedance that the appliance doesn't switch on aren't allowed to enter ESD - secured areas.

For checking the function of the appliance, bridge by hand the two electrodes until the measuring starts.

The life duration of the batteries (Alkaline) amounts to approximately 1 year with 100 measurements per day. The batteries must be exchanged after this time.

Limits

The lower and upper limits are adjusted by lower and upper calibrated resistors..

| | | | |
|-------------------|-----------|-------------|----------------------------------|
| Factory setting : | Shoe Test | lower limit | 200k Ω (2x100k Ω) |
| | | upper limit | 70 M Ω (2x35M Ω) |

Other limits are possible without further costs. The limits can be changed by the customer very easily → Calibration of the limits (separate paper).

Analysis option

| | | | |
|-------------|------------------------------|---|----------------|
| lower limit | Calibration Value (LL) | → | LED >< flashes |
| | Calibration Value (LL) + 10% | → | LED o.k. |
| upper limit | Calibration Value (UL) – 10% | → | LED o.k. |
| | Calibration Value (UL) + 10% | → | LED >< lights |

Battery exchange



Two screws are on the bottom side of the appliance, loosen them **and the middle part can be opened**. There is a battery bracket for 4 Mignon Batteries. Look for the correct polarity. Pull the batteries slowly out of the bracket and set in the new batteries. Then put it back and screw the middle part back onto the electrode.

Battery supervision

The appliance possesses permanent battery supervision. If both LED flash alternately after stepping on the tester, the batteries must be replaced.

Calibration

By using calibrated resistors when doing a new calibration the result is saved in the EEPROM, this is a calibration.

With these calibrated resistors you can calibrate all your units at the user's site...

recommended test cycle time: annually

This offers great advantages:

Change of standard !

By using the new resistor values, you can change the limits at the user's site !

Calibration !

By using calibrated resistors, you have only to recalibrate this. Then calibrate your instruments by yourself.

No shutdown period and very inexpensive !!