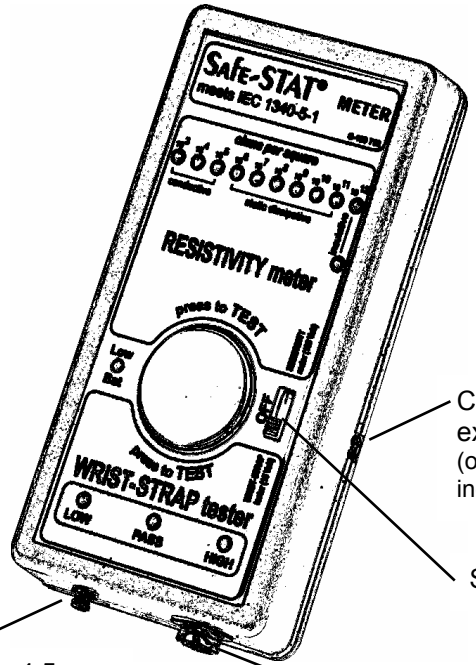
Before first use, please read carefully!

INSTRUCTION MANUAL SAFE-STAT - Kombimeter (order-no: **C-199 753)**

The new „SAFE-STAT“ meter from BJZ is the only pocket meter available which measures surface resistance and resistance to ground quickly and easily according to IEC 61340 using a test voltage of 100 Volt. The integrated wrist-strap-tester (test voltage 15 Volt) makes the „SAFE-STAT“ meter best suited for a quick and easy check of ESD-performance of working place, personnel grounding etc.



Connection for external probes (only use the testing-leads included in delivery)

Slide-switch

Connection for 4,5 mm stud

Connection for 10,3 mm stud and banana plug

Delivery:

- **1 meter, calibrated , 1 calibration certificate**
- **2 alligator clips, 2 testing leads (shielded)**
- **1 leather case**

„Resistivity – meter“ :

According to **IEC 61340** surface resistance and resistance to ground using a test voltage of 100 Volt have to be tested frequently.

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Function of the „Resistivity – Meter“:

To test the function of the „Resistivity-Meter“ please move the switch on/off to „**Resistivity-Meter“** and push the metallic surface on the front. If the meter works correctly it will show isolating (insulativ resistance > 10^{12}) .
Please put the meter with the two parallel probes flat on the surface to be measured. The surface resistance in Ω is shown on the measure scale. To connect external probes please link the probes with the testing leads (included in delivery) at the side sockets of the meter, the parallel probe which lies underneath will be switched off by plugging in the testing lead.

Measuring with Five Pound Electrodes:

To take measures according to IEC 61340 it is necessary to use the five pound electrodes which are available as accessories.
The electrodes are connected with the end of the testing leads over the jack bush (on the left and right side of the meter).
Put the electrodes on the surface to be measured and push the metallic surface on the front of the „Resistivity-Meter“.
The **surface resistance** in Ω will be shown on the measure scale.

Measuring with Parallel probes

The integrated parallel probes are suited for measuring the surface resistance in Ω/square according to ASTM-D-257.
Put the meter with the two parallel probes flat on the surface to be measured and press the metallic surface. The **surface resistance** in Ω/square will be shown.

Measuring resistance to ground:

By testing leads the meter is connected to ground and with the parallel probes or five pound probes the surface to be measured will be contacted.

Display

- The green area of the display shows the conductive area from >1x10^3 to <1x10^6 Ω.
- The yellow area of the display shows the static-dissipative-area from >1x10^6 to <1x10^{12} Ω.
- The red area of the display shows the insulative area >1x10^{12} Ω.

WRIST – STRAP –Tester

According to **IEC 61340** it is necessary to test wrist –straps and cords daily with a test voltage about >10 Volt and < 30 !

Function of the WRIST – STRAP – Tester:

Move the slide-switch to „**WRIST – STRAP – Tester**". Connect the wrist strap over the connection to ground with the corresponding connection at the „**SAFE-STAT**"**- kombimeter**. With the free hand push the metallic surface on the front.

⇒ The respective conditions during the test are shown by light-emitting diodes.

- **HIGH** (red LED)
  Shows the resistance of the connection between wrist-strap, cord and person is over **35 x 10^6 Ω*** .
- **PASS** (green LED)
  Shows the resistance of the unit tested is according to the requirements, the resistance between wrist-strap, cord and person is in the range of **0,75 x 10^6** und **35 x 10^6 Ω*** .
- **LOW** (red LED)
  Shows the resistance between wrist-strap, cord and person is below **0,75 x 10^6 Ω***

** 10^6 Ω = 1 Megaohm*

- **LOW BATTERY** (yellow LED)
  Shows the battery has to be changed.

Specifications:

dimensions: 130x65x27 mm
weight: ca. 180 g

Connections:

- **„Resistivity – Meter":** 2x jack bush 3,5 mm
- **Wrist – Strap – Tester:**
  - 1x 4,5 mm und 10,3mm stud
  - 1x banana socket adapter

test voltage according to IEC 61340:

- **WRIST – STRAP – tester** **15 Volt**
- **„RESISTIVITY – Meter"** **100 Volt**

Test range / accuracy:

- **„Resistivity – Meter":**
  - 10^3 – 10^{12} Ω
  - +/- 1 Dekade
- **Wrist – Strap – tester:**
  - 0,75 – 35 MΩ
  - +/- 10%

Power supply:

- 9V , battery (PP3).
- Use only new batteries.
  (The battery-box is on the back of the meter.)
- If the battery voltage is lower than 6,5 Volt the yellow LED will light up

Calibration:

- recommended: calibration-period of 12 months
- for calibration please ask your dealer

Caution:

- The operation voltage of the „**Resistivity – Meter**" is 100 Volt.
  The direct contact with both electrodes should be avoided.
  Special care for persons with for example cardiac pacemakers etc.
- For protection of the meter the electrodes may not be short-circuit if the meter is on.