BENNING SDT 1 Socket Tester Instruction Manual

Contents

BENNING SDT 1 Socket Tester

Specifications

- Operating Manual: BENNING SDT 1
- Frequency: 50 Hz – 60 Hz
- PE-Test Threshold: < 50 V AC
- Response Time: < 1 s
- Compliance: DIN EN 61010-1 and DIN EN

Product Usage Instructions

Safety Notes:

This operating manual is intended for electricians and qualified electrotechnical persons. The socket tester cannot detect an inversion. Please follow all safety instructions to avoid risks.

Description of Unit:

After plugging the socket tester into the shock-proof socket, ensure that the LEDs for PE and L light up for correct status. Refer to the provided table for indications and status (OK – green, not OK – red).

Testing a Shock-Proof Socket:

If the LEDs do not indicate the correct status as per the table, immediately have the electrical system checked by a qualified electrician to ensure safety.

Technical Data:

The device operates at a frequency of 50-60 Hz with a PE-Test threshold of less than 50 V AC and a response time of less than 1 second. It complies with standards DIN EN 61010-1 and DIN EN for safety.

General Maintenance:

Regularly check the device for any physical damage. Do not use the device if it appears to be damaged. Keep the device clean and dry for optimal performance.

Environmental Protection:

Dispose of the device according to local regulations to minimize environmental impact. Follow proper recycling procedures for electronic systems.

FAQ

What should I do if the LEDs do not show the correct status?

If the LEDs do not indicate the correct status as per the table provided, it is recommended to immediately stop using the socket and have the electrical system checked by a qualified electrician to ensure safety.

Before using the BENNING SDT 1: Please read the operating manual and absolutely observe the safety instructions!

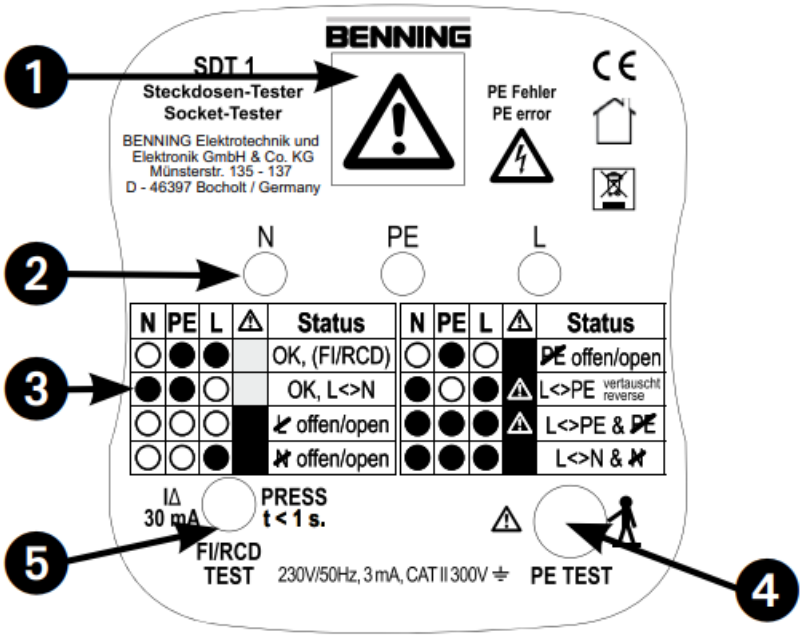
Safety notes

- This operating manual is intended for electricians and qualified electrotechnical persons.
- The socket tester cannot detect an inversion of the neutral conductor (N) and the protective conductor (PE).
- The socket tester is only intended for temporary connection (< 2 minutes) to shock-proof sockets. The tester is not intended for permanent operation!
- The socket tester is not intended for determining the absence of voltage on electrical systems. For this purpose, always use a two-pole voltage tester such as e. g. DUSPOL® testers.
- The socket tester is intended for measurements in dry environments.
- It must be used only in earthed mains and at a nominal voltage of 230 V AC. Insulating conditions on site (e. g. insulating mat, wooden ladder, insulating safety shoes) might impact the correct functioning of the PE test.
- The socket tester must be used in electrical circuits of overvoltage category II with a conductor for a maximum of 300 V to earth only.
- Please observe that work on live parts and electrical components of all kinds is dangerous! Even low voltages of 30 V AC and 60 V DC may be dangerous to human life!
- Check the socket tester for correct functioning at a correctly wired shock-proof socket immediately before and after using it (see chapter 3)! Do not use the socket tester, if one or more indications are not working, if it does not seem to be ready for operation or if the surface of the housing exhibits visible damage!
- Always check the device for damages before using it.
- Do not dismantle the device!
- The tester must be protected against contamination and damaging of the housing surface.

Symbols on the device

- Warning of electrical danger! Indicates instructions that must be followed to avoid danger to persons. Important, comply with the documentation!
- The symbol indicates that the information provided in the operating instructions must be followed with in order to avoid risks.
- This symbol on the BENNING SDT 1 means that the BENNING SDT 1 is intended for indoor use only.
- This symbol on the BENNING SDT 1 means that the BENNING SDT 1 complies with the EU directives.
- Earth (voltage to earth).

Description of unit



The display and operating elements shown in fig. 1 are as follows:

1. LC display, with “ ⚠ ” symbol for indicating PE errors
2. LED indication, with signal LEDs for N, PE and L
3. Table
4. Contact electrode for PE TEST
5. FI/RCD TEST key, for tripping a 30 mA RCD

N	PE	L	⚠	Status
⊗	●	●		OK, (FI/RCD)
●	●	⊗		OK, L<>N
⊗	⊗	⊗	■	L offen/open
⊗	⊗	●	■	N offen/open
⊗	●	⊗	■	PE offen/open
●	⊗	●	⚠	L<>PE vertauscht/reverse
●	●	●	⚠	L<>PE & PE
●	●	●	■	L<>N & N

Fig. 2: Table: ● LED ON, ⊗ LED OFF

Testing a shock-proof socket

The BENNING SDT 1 socket tester is intended for checking the correct connection of shock-proof sockets and for indicating wiring errors by means of three red LEDs. However, an inversion of the neutral conductor (N) and the protective conductor (PE) will not be detected.
The integrated PE TEST function using a contact electrode warns the user via the LC display 1 of a dangerous contact voltage at the PE contact of the shock-proof socket. In addition, the FI/RCD TEST function can be used to check the tripping function of a 30 mA RCD.

LED indication

- After plugging the socket tester into the shock-proof socket, the LEDs for “PE” and for “L” (external conductor/ phase is provided at the right contact of the shock-proof socket) 2 or the LEDs for “N” and “PE” (external conductor/phase is provided at the left contact of the shock-proof socket) 2 must light. See figure 2 table, status: OK (green).
- If another indication 2 according to the table 3 results (status: not OK (red)), the electrical system has to be checked immediately by a qualified electrician.

PE TEST:

- Then, touch the contact electrode 4 with your finger and check the PE contact for a dangerous contact voltage being applied. When you touch the electrode with your finger, the “m” symbol on the LC display 1 must not light!
- If the “m” symbol on the LC display 1 lights, a dangerous contact voltage (> 50 V) is applied to the PE contact of the shock-proof socket. In this case, the electrical system has to be checked immediately by a qualified electrician.

RCD TEST:

- Briefly (t < 1 s) press the FI/RCD TEST key 5 to check the tripping function of an upstream RCD (IΔ = 30 mA).
- For this, the external conductor/phase has to be provided at the right contact of the shock-proof socket. This is the case when only the signal LEDs PE and L light.
- In case of tripping, the signal LEDs for PE and L 2 will go out.

Technical data

- Regulation: DIN EN 61010-1 and DIN EN 61010-2-033
- Nominal voltage range: 230 V AC ± 10 %, 50 Hz – 60 Hz
- PE test response threshold: < 50 V AC to earth
- RCD testing current: approx. 30 mA
- Overload protection: 300 V AC/ DC
- Overvoltage category: CAT II 300 V ⏚
- Appliance dimensions: (L x W x H) = 80 x 72 x 78 mm
- Weight: 70 g
- Operating and storage temperature range: 0 °C to + 40 °C
- Air humidity: < 80 %

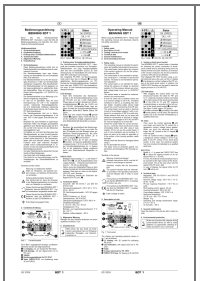
General maintenance

Clean the exterior of the device with a clean dry cloth.

Environmental protection

At the end of product life, dispose of the unserviceable device as well as used batteries via appropriate collecting facilities provided in your community.

Documents / Resources

	BENNING SDT 1 Socket Tester [pdf] Instruction Manual SDT 1 Socket Tester, SDT 1, Socket Tester, Tester

References

- User Manual