Testboy EVSE Adapter Instruction Manual

Contents

Testboy EVSE Adapter

FAQs

- **What are the key features of the EVSE Active Test Lead?**
  - The EVSE Active Test Lead allows for simulating different vehicle and cable states, ensuring accurate testing of electric vehicle supply equipment.
- **How can I ensure the safety of using the EVSE Active Test Lead?**
  - Adhere to all safety instructions provided in the manual, including proper handling to avoid potential hazards and damage.

Safety instructions

WARNING

- Sources of danger are e.g. mechanical parts that can cause serious injuries to persons.
- There is also a risk of damage to objects (e.g. damage to the unit).

WARNING

- Electric shock can cause death or serious injury to persons as well as a hazard to the function of objects (e.g. damage to the appliance).

WARNING

- Never point the laser beam directly or indirectly at the eye through reflective surfaces. Laser radiation can cause irreparable damage to the eye. When measuring near people, the laser beam must be deactivated.

General safety instructions

WARNING: For safety and approval reasons (CE), unauthorized conversion and/or modification of the unit is not permitted. To ensure the safe operation of the unit, it is essential to observe the safety instructions, warnings and the chapter “Intended use”.

WARNING

- Before using the appliance, please observe the following instructions:
- Avoid operating the unit near electric welders, induction heaters, and other electromagnetic fields.
- After abrupt temperature changes, the unit must be adjusted to the new ambient temperature for approx. 30 minutes to stabilize the IR sensor before use.
- Do not expose the unit to high temperatures for a long time.
- Avoid dusty and humid environmental conditions.
- Measuring instruments and accessories are not toys and do not belong in children’s hands!
- In commercial facilities, the accident prevention regulations of the Federation of Institutions for Statutory Accident Insurance and Prevention for electrical installations and equipment must be observed.

Intended use

The unit is only intended for the applications described in the operating instructions. Any other use is not permitted and may lead to accidents or destruction of the unit. These applications lead to an immediate expiry of any guarantee and warranty claims of the operator against the manufacturer.

- To protect the unit from damage, please remove the batteries if the unit will not be used for a long time.
- We accept no liability for damage to property or personal injury caused by improper handling or non-observance of the safety instructions. In such cases, any warranty claim becomes void. An exclamation mark within a triangle refers to safety instructions in the operating manual. Read the instructions completely before using the appliance. This unit is CE-approved and therefore complies with the required directives.
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Disclaimer

- In case of damage caused by non-observance of the instructions, the warranty claim is void! We accept no liability for consequential damage resulting from this!
- Testboy is not liable for damage resulting from
- failure to follow the instructions,
- changes to the product that have not been approved by Testboy, or
- Spare parts not manufactured or approved by Testboy
- Are caused by the influence of alcohol, drugs, or medication result.

Correctness of the operating instructions

- These operating instructions have been prepared with great care. No responsibility is taken for the correctness and completeness of the data, illustration,s and drawings. Changes, misprint,s and errors excepted.

Disposal

- Dear Testboy customer, with the purchase of our product you have the option of returning the device to suitable collection points for electronic waste at the end of its life cycle.

-  WEEE regulates the take-back and recycling of waste electrical equipment. Manufacturers of electrical appliances are obliged to take back and recycle electrical appliances that are sold free of charge. Electrical appliances may then no longer be placed in the “normal” waste streams. Electrical equipment must be recycled and disposed of separately. All appliances covered by this directive are marked with this logo.

Disposal of used batteries

- As the end user, you are legally obliged (Battery Act) to return all used batteries and rechargeable batteries; disposal with household waste is prohibited! Batteries/rechargeable batteries containing harmful substances are marked with the adjacent symbols, which indicate that they must not be disposed of with household waste. The designations for the decisive heavy metal are: Cd = cadmium, Hg = mercury, Pb = lead. You can hand in your used batteries/rechargeable batteries free of charge at the collection points of your municipality or wherever batteries/rechargeable batteries are sold!

Quality certificate

- All quality-relevant activities and processes carried out within Testboy GmbH are permanently monitored by a quality management system. Testboy GmbH further confirms that the test equipment and instruments used during calibration are subject to permanent test equipment monitoring.

Declaration of conformity

- The product complies with the latest directives. For more information, please visit **www.testboy.de**.

Operation

- Allow the unit to acclimatize before taking a measurement.
- Use the appliance only as described in this manual, otherwise, the protective devices of this appliance may be impaired.
- Only use the unit if the housing is in perfect condition.

- To avoid damage to the unit, do not exceed the maximum input values specified in the technical data.
- Pay attention to the function selector switch and make sure it is in the correct position before each measurement.
- Take special care when working on uninsulated conductors or busbars. (Wear protective clothing if necessary)
- Any accidental contact with the conductor may result in electric shock.
- Take care when working with voltages above 60 V DC or 30 V AC RMS. There is a risk of electric shock at such voltages.
- Before each measurement, make sure that the tester is in good working order. Check the function on a known, working power source before using the unit.
- Be careful when working near open exposed ladders or collection ladders. Individual protective equipment should be used.

Definition of the measurement categories

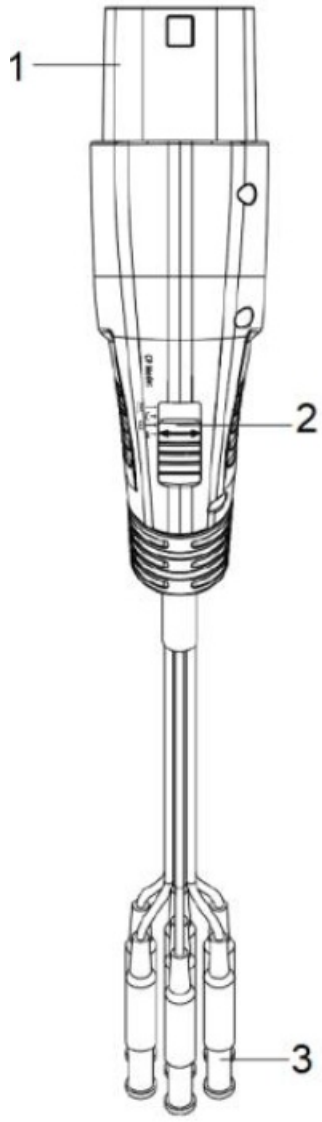
- **Measurement category II:** Measurements on circuits that are electrically connected directly to the low-voltage mains via plugs. Typical short-circuit current < 10 kA
- **Measurement category III:** Measurements within the building installation (stationary consumers with non-pluggable connection, distribution connection, permanently installed devices in the distribution board). Typical short-circuit current < 50 kA
- **Measurement category IV:** Measurements at the source of the low-voltage installation (meter, main connection, primary overcurrent protection). Typical short-circuit current >> 50 kA
- To determine the measuring category for a combination of measuring cable and measuring device, the lowest category of either the measuring cable or the measuring device always applies.
- When using this meter, the user must observe all the usual safety rules:
- Protection against hazards caused by electric current.
- Protection of the meter against misuse.

Maintenance and cleaning

- Clean the housing at regular intervals with a dry cloth without cleaning agents. Do not use abrasives, scouring agents or solvents.
- To avoid electric shocks, do not allow moisture to enter the housing.

Key Explanation

1. Type 2 plug
2. Slide switch for selecting the CP mode
3. Measuring leads with 4 mm safety plugs for L1, L2, L3, N and PE



Purpose of the EVSE Active Test Lead

- The EVSE measuring lead is an accessory to support all relevant measurements of a TV 456, which is simply connected between the EVSE charging point (type 2 plug) and the measuring inputs of the TV 456. All wires of the charging plug are available: L1, L2, L3, N and PE.
- Typical installation measurements can be carried out with it: Voltage, frequency, phase indication, phase sequence, various RCD tests and measurements, insulation resistance, low-impedance measurements, and line and loop impedances.

Test procedure

- Connect the required 4 mm test plugs of the EVSE test lead to your TV 456,
- Select CP mode “A” with the slide switch,
- Connect the EVSE test cable to the type 2 plug of the charging station,
- Select CP mode “B” with the slide switch, and the charging station should display “ready to charge”,
- Select CP mode “C” with the slide switch, the charging station should start charging,
- carry out all measurements in the active phase of the charging station (voltage and the like),
- after you have performed all measurements, select CP mode “A” with the slide switch to end the charging process,

- Disconnect the test cable from the charging station.

Proximity Pilot (PP) Status (Cable Simulation)

- The EVSE test lead is internally configured (680 Ohm between PP and PE) to carry a current of 20 A.

Control Pilot (CP) State (vehicle simulation)

- The CP mode slide switch can be used to simulate different vehicle states. The vehicle states are simulated with different resistors connected between the CP and PE conductors. The relationship between resistance and vehicle state is shown in the following table.

Vehicle condition	State-Creation	CP-PE Resistor	CP voltage
A	Vehicle not connected	Open (infinite)	± 12 V at 1 kHz
B	Vehicle connected, not ready for charging	2.74 kΩ	+9 V / -12 V at 1kHz
C	Vehicle ready for charging, connected, ventilation g not required	882 Ω	+6 V / -12 V at 1kHz
E	CP error "E	0 Ω	0 V

CP error “E” Simulation

- “E” – CP fault simulation can be realized by sliding the slide switch to the (spring-loaded) position [E]. This simulates the behavior of the station in the event of a short circuit between CP and PE through the internal diode (according to the IEC/EN 61851-1 standard). In the event of a CP error (“E” is pressed), the charging process should be aborted and a new charging process prevented.

Measuring / Terminals

- All terminals within the type 2 connector (L1, L2, L3, N, and PE) are available on 4 mm safety plugs with double insulated wires according to IEC 61010-031. These may only be used for measuring purposes. It is not permitted to draw current or supply anything else for an extended period. A suitable measuring device is required.

Cleaning

- If the unit is dirty after daily use, it is recommended to clean it with a damp cloth and a mild household cleaner. Before cleaning, make sure that the unit is switched off and disconnected from the external power supply and all other connected devices (e.g. test items, control instruments, etc.).
- Never use acidic cleaning agents or solvents for cleaning.

Technical data

- **Working temperature** 0-40 °C, < 80 % RH
- **Power supply** 230 / 400 V (50 / 60 Hz)
- **Overvoltage category** CAT II 300 V
- **Test standard** IEC/EN 61010-1 (DIN VDE 0411); IEC/EN 61010-2-031
- **Plug type** IEC62196-2 type 2
- **Storage temperature** -10 ~ +50 °C, < 80 % RH
- **PP simulation** Up to 20 A
- **CP simulation** States A, B, C
- **Error simulation** CP error “E“
- **Accessories** Operating instructions

CONTACT INFORMATION

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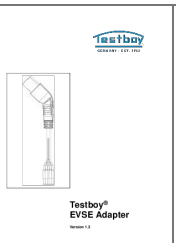
Documents / Resources

	Testboy EVSE Adapter [pdf] Instruction Manual EVSE Adapter, Adapter

References

- User Manual