METREL test and measurement accessories:

EVSE adapter

A 1532

Instruction manual

Version 1.1.1, Code no. 20 751 684

METREL®

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CE Mark on your equipment certifies that this equipment meets the requirements of the all applicable EU (European Union) regulations

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1 Preface

Congratulations for purchasing and using METREL A1532 EVSE test adapter accessory with METREL test and measuring instruments. The A1532 is an extender for interfacing **E**lectric **V**ehicle **S**upply **E**quipment (EVSE) to test socket of installation tester for verification of electrical safety and functional testing. It is intended for testing Mode 3 EV supply equipment with type 2 connector.
A1532 ESVE adapter is special accessory intended for using with METREL installation testers.

2 Safety and operational considerations

2.1 Warnings and notes

In order to reach high level of operator's safety while carrying out various tests and measurements using commanders as well as to keep the test accessory and equipment undamaged, it is necessary to consider the following general warnings:

- ⚠ **Warning on the A1532 means »Read the Instruction manual with special care to safety operation«. The symbol requires an action!**
- **If the A1532 is used in a manner not specified in this user manual or the manual of target test equipment, the protection provided by the A1532 and equipment may be impaired!**
- **Read this user manual carefully, otherwise use of the A1532 may be dangerous for the operator, for test equipment or for the tested object!**
- **Do not use the A1532 if any damage is noticed!**
- **Mains test sockets and banana sockets are intended for test purposes only! Do not connect any other devices except METREL installation test equipment.**
- **Service intervention is allowed to be carried out only by a competent authorized person!**
- **All normal safety precautions have to be taken in order to avoid risk of electric shock when working on electrical installations!**
- **Intermittent operation, maximum duty cycle is 10%! Maximum loading time is 10ms!**

2.2 Standards applied

The commanders are manufactured and tested according to the following regulations, listed below.

Safety (LVD)

EN 61010 - 1	Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements

Functional

EN 61851 - 1	Electric vehicle conductive charging system Part 1: General requirements

Note about EN and IEC standards:
Text of this manual contains references to European standards. All standards of EN 6xxxx (e.g. EN 61010) series are equivalent to IEC standards with the same number (e.g. IEC 61010) and differ only in amended parts required by European harmonization procedure.

3 A 1532 description

Figure 3.1: A 1532 components

Legend:

1	Banana socket outputs for connection to 3-phase installation tester. ⚠ **Banana socket outputs are intended for test purposes only!**
2	Voltage on EVSE output indicators.
3	Proximity Pilot resistance (current code) selector for simulation of EV cable presence and current rating detection.
4	Control Pilot resistance selector for simulation of electric vehicle status.
5	Socket output for connection to single-phase installation tester. ⚠ **Socket output is intended for test purposes only! Do not use it for power supply extender!**
6	Type 2 Male Plug connector for connection to EVSE.

Warning:

- **Socket output and banana socket outputs are energized when one or more indicators (2) lit.**

4 A 1532 operation

Testing procedure:

- Connect the A 1532 output to the installation tester (via mains test socket or via safety banana sockets)
- Select **PP State** (3) position **N.C.** and **CP State** (4) position **A**.
- Connect A 1532 plug (6) to the EVSE.
- **Run installation tests for non-energized installation circuits**.
- Simulate different charging conditions with PP State (3) and CP State (4). Verify the response of the EVSE.
- In PP State (3) position different to N.C. and CP State (4) position in C or D, the EVSE output is energized. **Installation tests for energized installation circuits.**

Note:

- Through test socket (5) only phase L1 of 3-phase EVSE is accessible.

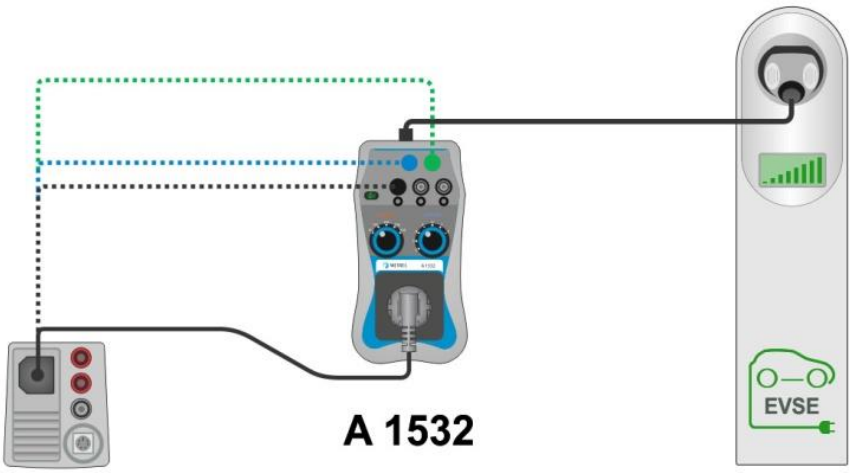

Figure 4.2: A 1532 connection

PP State options

Position	Simulates
N.C.	Error condition or disconnection of plug
13 A	Coding for maximum current of the EV cable. EVSE is connected and can operate in any of these coding position.
20 A	
32 A	
64 A	

CP State options

Position	Simulates	Comment
A	EV disconnected	EVSE in idle state, EV not ready to receive energy, EVSE does not supply energy
B	EV connected	EV detected, EV not ready to receive energy, EVSE does not supply energy
C	EV charged without ventilation	EV ready to receive energy, EVSE is supplying energy if ventilation is not required.
D	EV charged with ventilation	EV ready to receive energy and requires ventilation, EVSE is supplying energy only if ventilation exists.
E	Pilot fail	EVSE doesn't supply energy (no power). The EV supply equipment unlocks the socket outlet at maximum of 30 s.

Recommended sequences:

- **A-B-C** for non-ventilated charging
- **A-B-D** for charging with ventilation required
- **E** is required for simulating Pilot failure.

Note:

- With A1532 alone only proximity pilot and control pilot functions of EVSE can be checked.

5 Maintenance

Unauthorized person is not allowed to open the A1532. There are no user replaceable components inside the adapter.

5.1 Cleaning

No special maintenance is required for the housing. To clean the surface of the adapter use a soft cloth slightly moistened with soapy water or alcohol. Then leave the A1532 to dry totally before use.

Warnings:

- Do not use liquids based on petrol or hydrocarbons!
- Do not spill cleaning liquid over the adapter!

5.2 Service

For repairs under warranty, or at any other time, please contact your distributor.

6 Technical specifications

6.1 General data

Input voltage:.....400 V (3-phase)
Frequency: .....50 Hz
Maximum test current:.....267 A (10ms) intermittent operation

PP simulation: open, 13 A, 20 A, 32 A, 63 A
CP simulation: states A,B,C,D,E (CP short to PE via diode)

Protection classification.....double insulation
Pollution degree 2
Protection degree.....IP 40
Overvoltage category .....300 V CAT II
Altitude …….. up to 3000 meters above sea level

Dimensions (w × h × l).....10 cm × 7 cm × 20 cm
Test lead(s) length.....0.5 m
Weight .....0.82 kg

Operation conditions
Working temperature range.....0 °C ÷ 40 °C
Maximum relative humidity.....95 %RH (0 °C ÷ 40 °C), non-condensing

Storage conditions
Temperature range.....-10 °C ÷ +70 °C
Maximum relative humidity.....90 %RH (-10 °C ÷ +40 °C)
80 %RH (40 °C ÷ 60 °C)