

NEW

COMBINED MINI-CHARGER- TESTER

Generation 3.1



THE EASY-TO-USE CHARGING STATION TESTER.

The all new combined Mini-Charger-Tester can be used at the service application and maintenance. New in Generation 3.1: Now with intuitive touch screen, so no more additional hardware like a laptop required!



comemso covers new challenges of aftersales application.

Developments and aftersales services for e-mobility present new challenges for vehicle- and charging-system manufacturers. The number of chargers in the field increases and therefore also the efforts in the service applications. After each service of chargers, a final test is required to confirm the charger is still working properly and to ensure that nothing has

been forgotten at the service call or maintenance. To test this, either one or two real EVs are required or a small mobile automatic tester such as the comemso combined Mini-Charger-Tester. The benefit of a small mobile tester even increases on a service for multi-charger-systems, where CCS and CHAdeMO have to be tested at the same service call or maintenance.

Global features.



Intuitive touchscreen interface

Notebook not required
for on-site testing

Simulation of conductive EV according
to DIN 70121 (optional with ISO 15118)
and CHAdeMO 1.1 (or lower) or optional
AC, all with the aim to get the EVSE charging

Fully automatic EV-Simulation on
communication to get EVSE charging

Fully automatic EV-Simulation on DC load
circuit, which fits to communication

Safety test of EVSE (DC-CCS only) to
check isolation fault recognition

Optional: Special Fault Injection on
DC-CCS signal lines (PE cut, CP short)

Test of EVSE / Charger in field application
Power consumption max. 500 VA

Output of measured DC voltage and DC current (not calibrated)

Output of rough communication progress

Output of test result (pass / fail)

Result reports can be downloaded via USB output as PDF

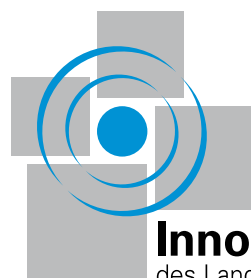
Rugged carrying case housing for mobile outdoor application with
IP67 at closed lid (IP30 with open lid)

Dimensions: ca. 560 x 420 x 250 mm (L x W x H); Weight about 15 kg

Very easy to use, no knowledge of standard required.
You don't have to be an engineer!

An innovation that inspires.

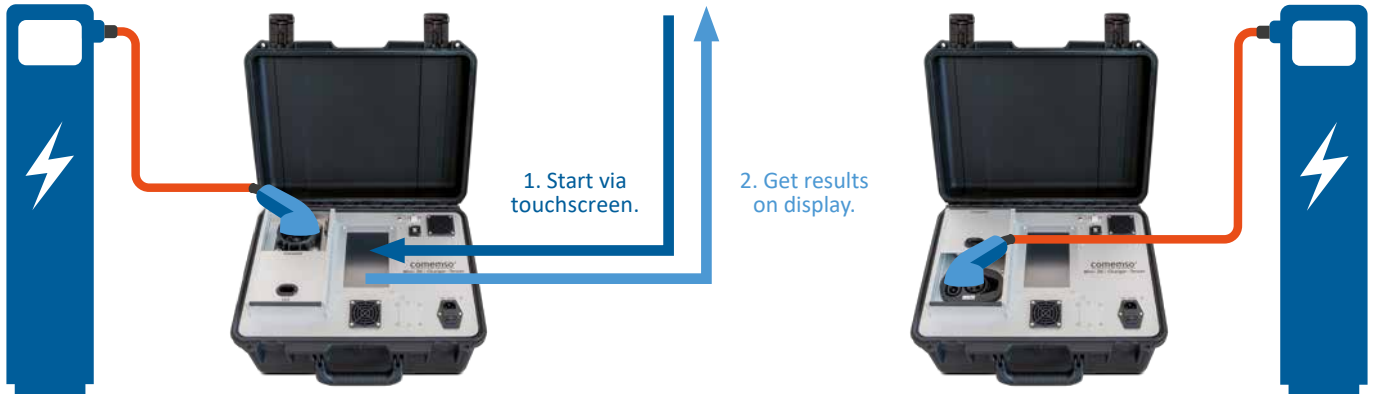
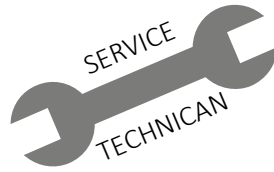
comemso is a winner of the 2019 Innovation
Prize of the district of Esslingen (Baden-
Wuerttemberg) with the portable quick tester.



Innovationspreis 2019
des Landkreises Esslingen

CHAdeMO charger test setup:

DC-CCS EVSE test setup:



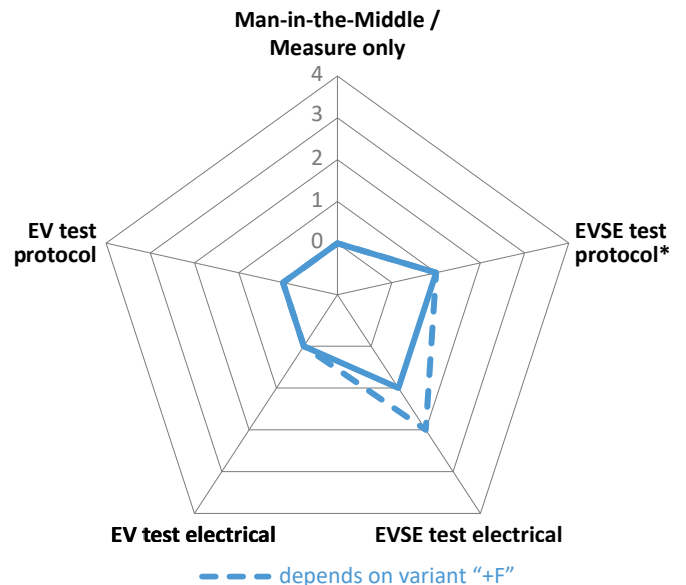
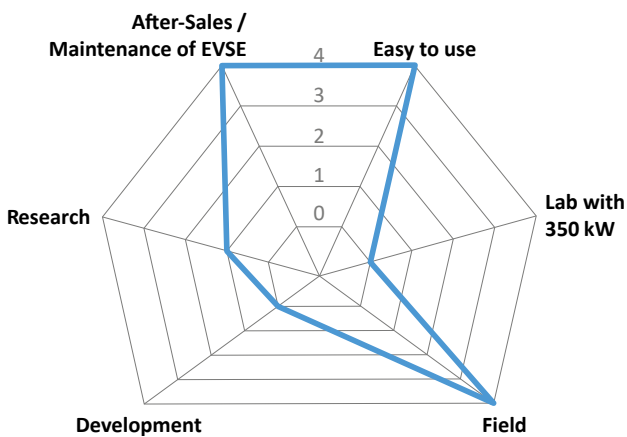
Product categorization matrix.

The product categorization matrix from comemso gives you an overview of the features and possibilities of the system presented in this brochure. This

helps you to find the right comemso system for your application.

General

Applications



*full protocol emulation of EV and tolerant judgement, but no detailed analysis provided.

Overview of possible Mini-Charger-Tester combinations.

| Model | Item number | DC-CCS Combo 1 | DC-CCS Combo 2 | CHAdeMO | DC-China GB/T | AC Type 1 | AC Type 2 | Suitcase | Lab Rack | EV Simulation | Isolation Fault Sim. | Ext. Fault Simulation | Report file |
|---------------------------|-------------|----------------|----------------|---------|---------------|-----------|-----------|----------|----------|-------------------|----------------------|-----------------------|-------------|
| Combined 1 | 061-1-022 | • | | • | | | | • | | approx. 300 V, 5A | • | | • |
| Combined 2 | 061-1-021 | | • | • | | | | • | | approx. 300 V, 5A | • | | • |
| DC-CCS 1 | 061-1-024 | • | | | | | | • | | approx. 300 V, 5A | • | | • |
| DC-CCS 2 | 061-1-023 | | • | | | | | • | | approx. 300 V, 5A | • | | • |
| DC-CCS 1 + DC-CCS 2 | 061-1-029 | • | • | | | | | • | | approx. 300 V, 5A | • | | • |
| CHAdeMO | 061-1-025 | | | • | | | | • | | approx. 300 V, 5A | | | • |
| DC-China GB/T | 061-1-028 | | | | • | | | • | | approx. 300 V, 5A | | | • |
| Combined 1, AC+F | 061-1-026 | • | | • | | • | | • | | approx. 300 V, 5A | • | • | • |
| Combined 2, AC+F | 061-1-027 | | • | • | | | • | • | | approx. 300 V, 5A | • | • | • |
| DC-CCS 1, AC+F | 061-1-030 | • | | | | • | | • | | approx. 300 V, 5A | • | • | • |
| DC-CCS 2, AC+F | 061-1-031 | | • | | | | • | • | | approx. 300 V, 5A | • | • | • |
| DC-CCS 1 + DC-CCS 2, AC+F | 061-1-032 | • | • | | | • | • | • | | approx. 300 V, 5A | • | • | • |



Field setup in the trunk with 12V car cigarette lighter, connected through a pure-sine wave 1kW power inverter. The inverter is not part of the comemso scope of delivery.

Technical data.

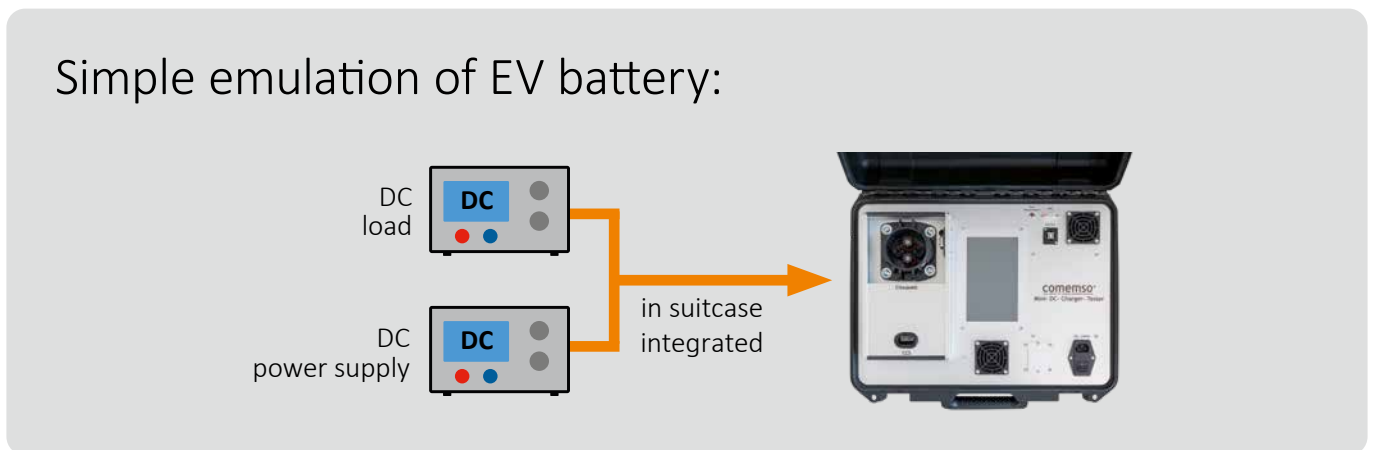
| General | |
|--|---|
| AC power supply voltage: | 100 .. 240 V AC (Input), can be connected to a 12 V DC cigarette lighter via an inverter (inverter not included) |
| Weight: | ca. 15kg |
| Size (L x W x D): | ca. 560mm x 420mm x 250mm |
| Operating temperature: | -15 .. +40 °C |
| Water resistance acc. to IEC standard 60529: | closed lid: IP67 open lid: IP30 |
| Results: | on display and PDF report stored in device |
| Test/analysis standards: | CHAdeMO: Ver. 0.9.1, 1.0.0, 1.0.1 and 1.1 (1.2 and 2.0 coming soon) DC-CCS: DIN 70121 or ISO 15118 on demand. Can be changed by configuration via the USB interface of the PC. |
| Power consumption: Inrush current: | max. 500VA, in rush current higher CHAdeMO: about 10.7A DC-CCS: about 8.3A |

| Measuring range, accuracy etc. | |
|--------------------------------|------------|
| Voltage measurement | |
| Range: | 0 .. 1000V |
| Resolution (Display): | +/- 1V |
| Accuracy (not calibrated): | +/- 1V |
| Current measurement | |
| Range: | 0 .. 7A |
| Resolution (Display): | +/- 100mA |
| Accuracy (not calibrated): | +/- 0,5A |

| EV Simulation | |
|---------------|---|
| Voltage: | ca. 300V (output) |
| Current: | ca. 5A |
| Duration: | ca. 7 sec. (enough time to check whether the EVSE works in general, can be changed on demand in a small range) |

| Others | |
|--------------|---|
| Accessories: | Notebook not required for test (only for configuration and report download) |
| Usage: | very simple with "Start"-Button on integrated touchdisplay; fully automated EV simulation |


| NEW FEATURE | |
|--|----------|
| <i>Isolation Fault Simulation for DC-CCS</i> | |
| EVSE warning check | |
| DC+ to PE: | 475 kOhm |
| DC- to PE: | 475 kOhm |
| EVSE alert/switch off test | |
| DC+ to PE: | 95 kOhm |
| DC- to PE: | 95 kOhm |
| Optional: Special Fault Injection on DC-CCS signal lines (PE cut, CP short) | |



Space for your notes.

For details and individual configurations, please contact: sales@comemso.de

A large grid area for taking notes, consisting of 20 columns and 40 rows of small squares.



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