NRG

NewRealGreen

Validation and inspection of electric car charging stations

Validation and inspection of electric car charging stations

Recharging stations:
a new way to use electric energy.

MACROEVTEST and COMBI521EV, **HT'S new instruments** for **validation** and **inspection** of **electric car charging stations** (EVSE) in compliance with standards IEC/EN 61851-1 and IEC/EN60364-7-722, and for **safety tests** in **private** and **industrial** environments. Thanks to the brand new **HTAnalysis App**, free to download for iOS and Android systems, **MACROEVTEST** and **COMBI521EV** are capable of transferring measured and recorded data onto tablets and smartphones, thus giving the operator the possibility to customize and share through HTCloud the result of their tests.

EV-TEST

EVSE ADAPTER FOR ELECTRIC
VEHICLE CHARGER TESTING

› Suitable for **charging stations with charging mode 2 and 3**
› **Vehicle simulation** with **Control Pilot (CP State)**
› **Cable capacity simulation** with **Proximity Pilot (PP State)**
› **Ground fault simulation (Fault PE)**
› **Error simulation** on the **Control pilot** signal **(Fault E)**
› **Phase presence** indication via **three LEDs**
› **Connection terminals for connecting external load**, in order to verify the correct operation of the energy meter of the charging station
› **Measurement terminals L1-L2-L3-N-PE** to connect HT verification tools, perform **safety and functional tests** (such as RPE, RCD, ISO)
› Verification of the **conformity of charging stations to the IEC 61851-1 and IEC 60364-7-722 standards**

HT charging s

COMBI521**EV**

MULTIFUNCTION INSTRUMENT FOR ELECTRICAL INSTALLATION SAFETY TESTING, POWER QUALITY ANALYSIS AND EVSE SAFETY TESTING

AUTOMATIC SEQUENCE OF TESTS FOR THE VERIFICATION OF EVSE STATIONS

› Check of the output voltage value
› Continuity check of the protective conductor
› Insulation resistance measurement
› Check of the status:
  • Standby (status A)
  • Vehicle detected (status B)
  • Mechanical interlock verification (status B)
  • Ready (charging) (status C) with ventilation (status D)
  • Fault simulation on the protective conductor (fault PE)
  • Fault on CP signal (fault E)
› Global earth resistance measurement
› Measurement of RCD tripping time (type A, type B and type DD 6ma)

SEE THE TECHNICAL DATA SHEET

stations EVSE

MACROEV**TEST**

MULTIFUNCTION INSTRUMENT FOR ELECTRICAL INSTALLATION SAFETY TESTING, POWER QUALITY ANALYSIS AND EVSE SAFETY TESTING

AUTOMATIC SEQUENCE OF TESTS FOR THE VERIFICATION OF EVSE STATIONS

› Check of the output voltage value
› Continuity test of the recharging station's protection conductor
› Insulation test of the recharging station
› Verification of the statuses of the recharging station
  • Vehicle not present (status A)
  • Vehicle present but not being charged (status B)
  • Mechanical interlock verification (status B)
  • Mechanical interlock verification (status B)
  • Fault simulation on the protective conductor (fault PE)
  • Fault on CP signal (fault E)
› Global earth resistance measurement
› Measurement of RCD tripping time (type A, AC, F, B 6ma, DD)

TOUCH SCREEN SYSTEM

WiFi

AUTO TEST

OK CALIBRATION REPORT

SEE THE TECHNICAL DATA SHEET

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ACCESSORIES PROVIDED

- › **C2033X**
  Three wire cable with Schuko plug
- › **UNIVERSALKITG3**
  Set of 4 cables + 4 alligator clips + 3 test leads (MACROEVTEST)
- › **UNIVERSALKITCOMBI**
  Set of 3 cables + 3 alligator clips + 3 test leads (COMBI521EV)
- › **KITTERRNE**
  Set of 4 cables + 4 earth probes + carrying bag (MACROEVTEST)
- › **PT400**
  Touchscreen stylus (included inside meter) (MACROEVTEST)
- › **PR400**
  Remote START/STOP switch probe (optional for COMBI521EV)
- › **ZEROLOOP**
  Loop zero adapter (MACROEVTEST)
- › **EV-TEST100**
  EVSE test adapter
- › **RCDX10**
  Accessory to test earth leakage relay (MACROEVTEST)
- › **SP-5100**
  Carrying straps
- › **TOPVIEW2006**
  PC Windows software + optical/USB connection cable (order code: C2006)
- › **VA507**
  Hard carrying case (optional for COMBI521EV)
- › **YABAT0003000**
  Rechargeable battery NiMH, 1.2V, type AA 6 pcs (MACROEVTEST)
- › **YABAT0004001**
  External charger (MACROEVTEST)
- › **YAMUM0058HT0**
  Quick reference guide
- › **YAMUM0057HT0**
  User's manual on CD-ROM
- › ISO calibration report

OPTIONAL ACCESSORIES

- › **HT4005K**
  Standard clamp with 200A/1V AC full scale
- › **HT96U**
  Standard clamp with 1/100/1000A full scale
- › **IMP57**
  Accessory for Loop impedance measurement with high resolution
- › **T2100**
  Clamp for earth probe resistance measurement
- › **HT52/05**
  Temperature/Humidity probe
- › **HT53/05**
  Illuminance (lux) probe
- › **BORSA2051**
  Carrying bag (Standard for COMBI521EV)
- › **606-IECN**
  Connector with magnetic tip
- › **1066-IECN**
  Connector for extension of banana cables 4mm

TECHNICAL SPECIFICATIONS

Specification	COMBI521EV	MACROEVTEST
Compatibility with EV-TEST100, sequence of tests for the verification of electric columns	●	●
Integrated WiFi connection and compatibility with HTANALYSIS App	●	●
Internal memory for measured data saving with TOPVIEW software	●	●
Insulation with voltage 50, 100, 250, 500, 1000VDC	●	●
Continuity of protective conductors with 200mA	●	●
Continuity of protective conductors with 10A	● With optional accessory	●
Tripping time of RCDs type B, A, AC, F, Standard, Selective and Delayed	● A, AC, F standard, selective up to **1A** B/B+ up to **300mA**	● A, AC, F standard, selective up to **1A** B/B+ up to **300mA**
Tripping current of RCDs type B, A, AC, F, Standard, Selective and Delayed	● A, AC, F standard, selective up to **1A** B/B+ up to **300mA**	● A, AC, F standard, selective up to **1A** B/B+ up to **300mA**
Tripping time and current of RCDs type B, A, AC, F, Standard, Selective and Delayed with auto/ramp/manual mode	●	●
Tripping time and current of RCDs with separate clamp jaws type B, A, AC Standard, Selective and Delayed		●
Non-trip earth resistance	●	●
Earth resistance by voltammetric method		●
Resistance of the single earth rods with clamp		● **
Ground resistivity by 4-wire method		●
Loop/Line impedance, Phase-Phase, Phase-Neutral, Phase-PE	●	●
Loop/Line impedance Phase-Phase, Phase-Neutral, Phase-PE with high resolution (0.1mΩ)	● ***	● ***
Measurement of percentage voltage drop on the line	●	●
Contact voltage	●	●
Phase sequence	●	●
Leakage current with optional clamp meter	●	●
Measurement of Voltage, Current, Active, Reactive, Apparent Power	● (real time) (1)	● (real time) (1)
Measurement of Cosphi, Power Factor	● (real time) (1)	● (real time) (1)
Measurement of environmental parameters (°C,°F, %RH, Lux)	● (real time)	● (real time)
Voltage and current harmonics up to the 25th and THD%	● 25a	● 25a

(**)With optional accessory T2100   (***)With optional accessory IMP57