

EVCHECK Testing of charging for electric vehicles

Versione. 1.0 18.04-2024







DATASHEET

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Proximity Pilot (PP) State (Cable Simulation)

- With the PP State rotary switch various current capabilities of the charging cable can be simulated when the test adapter is connected to the charging station.
- By connecting various resistances between the PP and PE conductors, different current capabilities are simulated.
- Correlation between resistance and current capability of t the charging cable is shown in Table below:

Correlation between resistance and current capability of the charging cable		
Marking of cable current capability	Resistance between PP and PE	
No cable	Open (∞)	
13A	1.5kΩ	
20A	680Ω	
32A	220Ω	
63A	100Ω	

Control Pilot (CP) State (Vehicle Simulation)

- By using the CP State rotary switch selector while the test adapter is connected to the charging station, it is possible to simulate different vehicle states.
- Vehicle states are simulated with different resistances connected between CP and PE conductors.
- Correlation between resistance and vehicle is shown in Table below

Correlation between resistance, vehicle state and CP voltage signal			
Marking of Vehicle State	Vehicle State	Resistance between CP and PE	Voltage at CP terminal (1kHz)
А	Electric vehicle (EV) not connected	Open (∞)	±12V
В	Electric vehicle(EV) connected,not ready to charge	2.7kΩ	+9V/-12V
С	Electric vehicle (EV) connected, ventilation not required, ready to charge	1.3kΩ	+6V/-12V
D	Electric vehicle (EV) connected, ventilation required, ready to charge	270Ω	+3V/-12V





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Functions

PE Pre-Test	Yes
PP Simulation	NC/13A/20A/32A/63A
CP States	A(Electric vehicle not connected)
	B(Electric vehicle connected, not ready to charge)
	C(Electric vehicle connected, ventilation not required, ready to charge)
	D(Electric vehicle connected, ventilation required, ready to charge)
CP Error "E"	On/Off
PE Error (Earth Fault)	On/Off

Outputs (for test purpose only)

Measuring Terminals L1,L2,L3,N and PE	Max.250/430V,CAT III 600V,max.10A.
Mains Socket	Max.250V,CAT III 600V, allowed current max.10A.
Mains Socket Protection CP Signal Output	Note:Do not load mains socket simultaneously with measuring terminals!
Terminals	Fuse10A/250V,5x20mm.
	Approx, ±12V, CAT 0 (Under normal condition).
	In the event of incorrect wiring or charging station malfunction, these terminals may pose a potential hazard, with a maximum rating of CAT II 600V against PE.

General Features

Input Voltage	Up to 250V(Single phase system)/up to 430V(Three phase system), 50/60Hz, max 10A.
Type 2 Test Cable	AC charging mode 3, suitable to IEC62196-2 type 2 socket outlet or fixed cable with vehicle connector (Type 2, 7P three-phase).
Weight	450 gr.
Dimensions (LxWxH)	size:250x115x61mm (Length without connection cable)





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Safety

Measurement Category	600V CATIII
	IEC/EN61851-1
	IEC/HD 60364-7-722
IP-Rating	IP54
Pollution Degree	2
Protection Class	CAT III
Working Temperature Range	0 to 0°C
Storage Temperature Range	0 to 40°C
Reference Humidity Range	-10 to 50°C
Working Humidity Range	10 to 60% relative humidity w/o condensation
Altitude Above Sea Level	10 to 85% relative humidity w/o condensation Max. 2000m

