

CUSTOMIZED

Industry: E-Mobility

Test system for charging stations, wallboxes & charging interfaces of electric cars: E 3000



Task

Within just a few years there is a new challenge that set new standards for the industrial landscape worldwide:

The challenge is called electric mobility. This includes the development and production of charging points for the necessary charging infrastructure. Whether for private households, in housing estates, in the public sector or at classic charging stations: More charging capacity is needed everywhere and thus a market with undreamt-of possibilities is growing, which also brings with it the challenge of cost-efficient production. At the same time, charging technology continues to develop and more and more functions are being integrated into charging stations and wallboxes. In the future, vehicles should even be able to function as mobile energy storage units. At the end of production, the electrical safety and function of the devices must be tested within the shortest possible cycle times. It was important for the customer to be able to test as much product variance as possible.

Solution

As versatile as the charging stations and wallboxes and their functions are, as adaptable and modular is our test system E 3000, which is perfectly suited for electrical safety and functional testing of the charging infrastructure. Whether the DUT has AC or DC output voltage, at one or more charging points, with pilot signal (IEC 61851) or additional communication via the supply lines (in accordance with ISO 15118), the E 3000 adapts flexibly to any situation. Controlled by a powerful industrial PC, the equipment and test sequences can be flexibly designed. Both the electrical safety tests in accordance with the relevant standards and the functional test of all charging points can be performed automatically. For the function test, sinks for AC charging points as well as DC charging points are integrated and match the performance requirements, including the recuperation of the required energy.

Advantages

- + Modular test system tailored to the DUT
- + Flexibly expandable for future requirements
- + Shortened testing times and reduced handling times through complete testing in one station

Specifications

- Safety testing according to all applicable standards
- Function test of each charging point with automatic switchover
- Loading of the DUT in AC or DC according to the customers requirements, incl. recuperation
- Communication with the DUT with all common protocols (IEC 61851, ISO 15118)
- Control of all tests via a touch monitor
- Including parameterization of the test sample