



# AUTOMATIC TEST SYSTEM

## EV Charger ATS / T10000

### Features

- Modular design for building systems based on your requirements
- High-power electrical load fulfills a variety of charger tests
- Built-in international standard function and protocol tests
- Intuitive software interface for easy operation
- Supports customizable test reporting



AC Charger



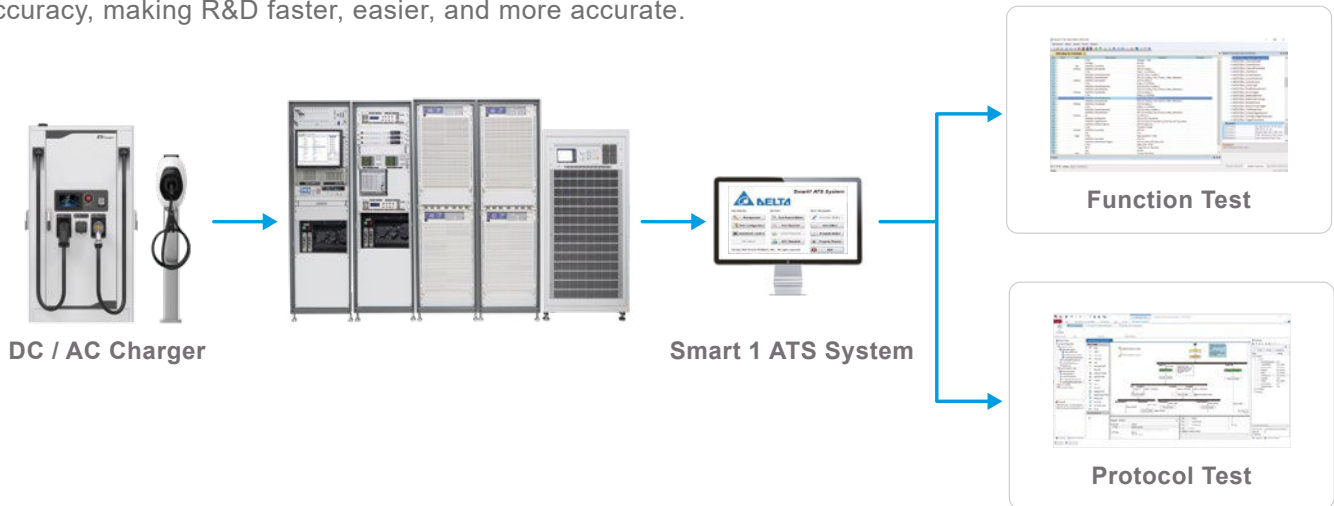
DC Charger



**DELTA**

## Improves EV Charger Development Process

In the past, EV charger testing was problematic due to limited test items, lengthy test times, and a lack of support for protocol testing, all of which slow development. Delta's T10000 EV Charger ATS integrates hardware and software to simulate charging scenarios for greater accuracy via Delta Smart 1 system, which has comprehensive safety and electronic function test items in addition to mainstream protocol test items. The T10000 helps to shorten test processes to only a few hours and improves testing quality and accuracy, making R&D faster, easier, and more accurate.



## Realistic Charging Scenarios, Improved Test Coverage

### Function and Protocol Tests

Includes standard function test items and mainstream protocol testing to improve testing accuracy.

- Supported communication protocols: DIN 70121, ISO 15118, CHAdeMO v0.9, v1.2, v2.0, V2H\_A/B, and GB/T
- Offers flexibility for test item expansion
- Scalable power electrical load (AC: max. 30kW; DC: max. 360kW)

### Dual Output Test

Simulate scenarios of two EVs charging simultaneously for realistic performance testing.

- Simultaneous charging
- Sequential charging
- Charging via different sockets

### Fault Injection

Injects fault signals via the Smart 1 system to enable pressure testing.

- Simulates abnormal states
- Behavioral response of virtual/real systems under pressure



Performing realistic simulations is more accurate than traditional testing methods

# Smart 1 ATS System

Delta Smart 1 ATS System can be utilized to perform complete tests or selected test items. The open architecture design also gives flexibility for software expansion.



## Integration

Integrates test equipment, processes, and interfaces



## Smart

Smart integration of automatic production line and MES system



## Quick

Quickly conducts standard power supply test items



## Customization

Customized design and test program to meet customer needs

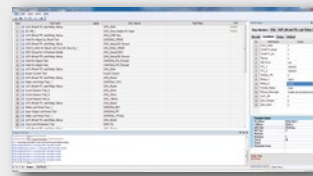


## Flexibility

Flexible test conditions and report template setting

## Main Functions

- Test equipment configuration
- System management
- Test item/program editor
- Test execution/report generation
- MES/shop floor system integration



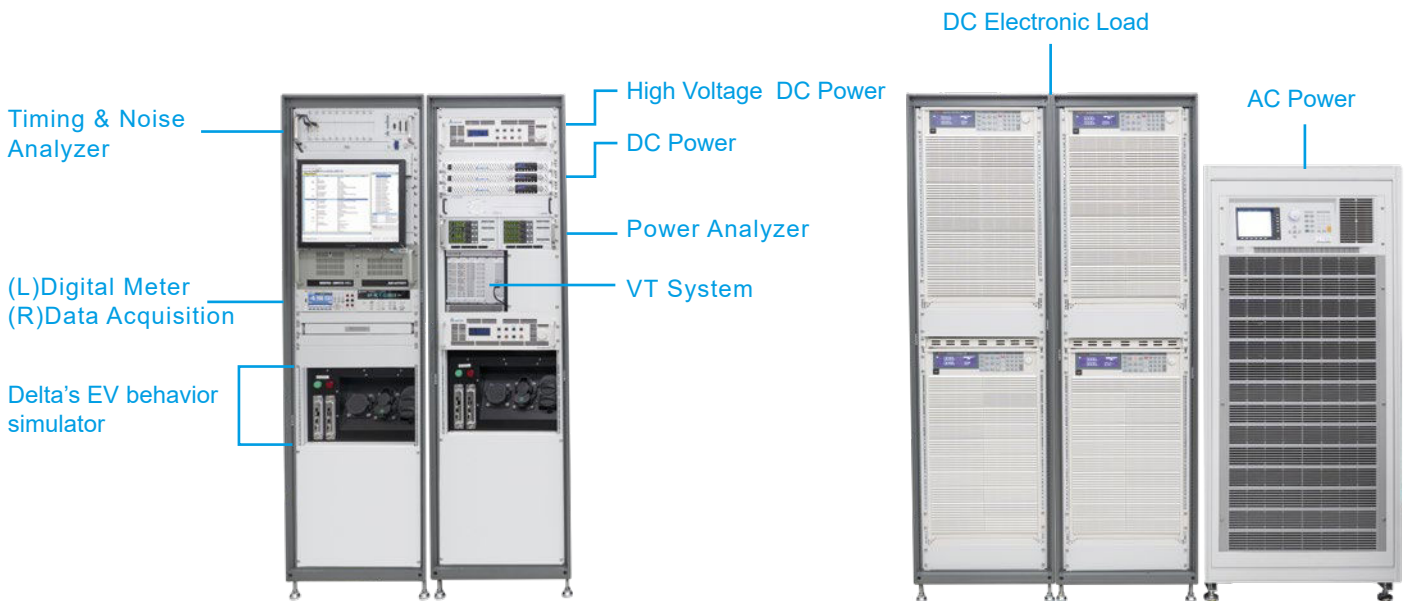
Operation



Report

# Equipment Configuration

Modular design allows customers to configure test equipment. Connect and control via the Smart 1 ATS system to meet the requirements of different EV charger types.



# Standard Function Test

## DC Charger Test Items

Input
THD Test
AC Drop Detection
Inrush Current

Output
Voltage Overshoot Test
Current Overshoot Test

EFF
Power Consumption
Power Efficiency

Regulation
Line Regulation
Load Regulation
Dynamic Load
Ripple & Noise Test

Timing
Cold -Load Pick up Time
Vout Start Up Time
Vout Turn Off Time
Hold Up Time (Aux Power)

Protection
Input UVP Test
Input OVP Test
Output OVP Test
Output UVP Test
Output OCP Test
GFD TEST
CP Short Test
RCD Test
Emergency Stop Test

## AC Charger Test Items

Input
THD Test
AC Drop Detection

EFF
Power Consumption
Power Efficiency

Regulation
Line Regulation
Load Regulation

Timing
Cold -Load Pick up Time
Vout Start Up Time
Vout Turn Off Time

Protection
Input UVP Test
Input OVP Test
Output OVP Test
Output UVP Test
Output OCP Test
Output UFP Test
Output OFP Test
GFD TEST
CP Short Test
RCD Test
CCID Leakage Test
Relay Welding Test



Delta



Wechat

**Delta Electronics Inc.**

G-DELTA-IE@deltaww.com

[www.deltaww.com](http://www.deltaww.com)

