**Shenzhen Timxon Energy Technology Co., Ltd.**

# CCS Simulator

--V2.0

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# 1. Simulator display

# 2. component introduction


| Num | Name | Num | Name |
|---|---|---|---|
| 1 | Product Name | 11 | Brand |
| 2 | AC power supply | 12 | Output negative terminal block |
| 3 | Power supply switch | 13 | Tuyere |
| 4 | COM1 Communication port | 14 | Output positive terminal block |
| 5 | Ethernet Communication port | 15 | CP/PP/PE banana terminal wiring port |
| 6 | COM2 Communication port | 16 | High precision electric meter |
| 7 | Tuyere | 17 | Status Indicator |
| 8 | CCS2 AC Type2 Connector | 18 | Power Indicator |
| 9 | CCS2 DC Vonnector | 19 | |
| 10 | Nameplate | 20 | |

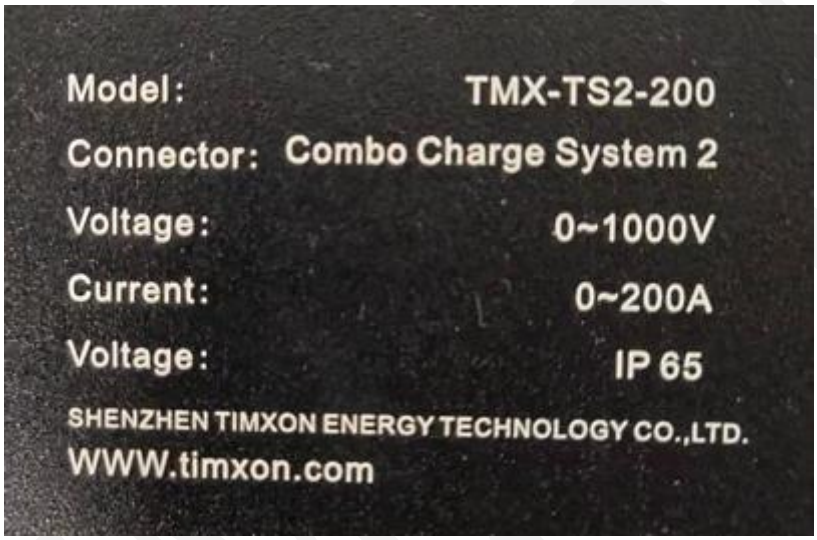
# Features:

- CCS combined charging system DC test simulator
- ISO15118, DIN70121 protocol verification
- 7 inch touch display
- Simulate all stages of charging, especially pre-charging conditions and sequence verification
- Accurate sampling and intuitive comparison of electric meters (voltage, current)
- 200A power circuit and molded case circuit breaker, can be connected to 200A test load
- 1000V withstand voltage design
- Portable and convenient

# 4. Specification Introduction

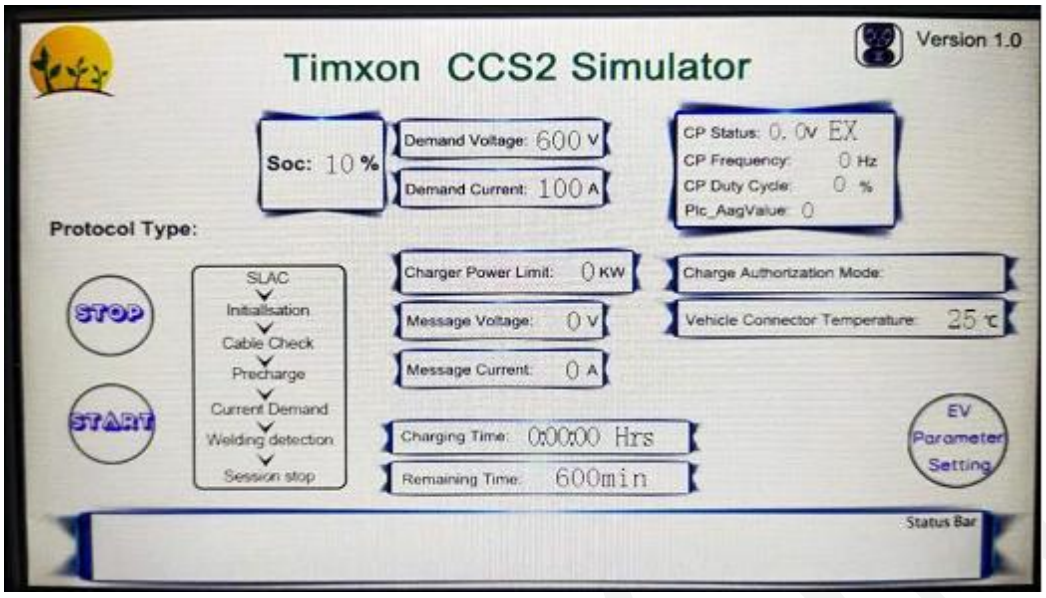
| Specification | Model |
|---|---|
| CCS1 Simulator | TMX-TS1-200 |
| CCS2 Simulator | TMX-TS2-200 |

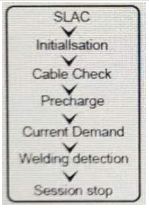
For example, the CCS2 American standard test specification model is as follows:

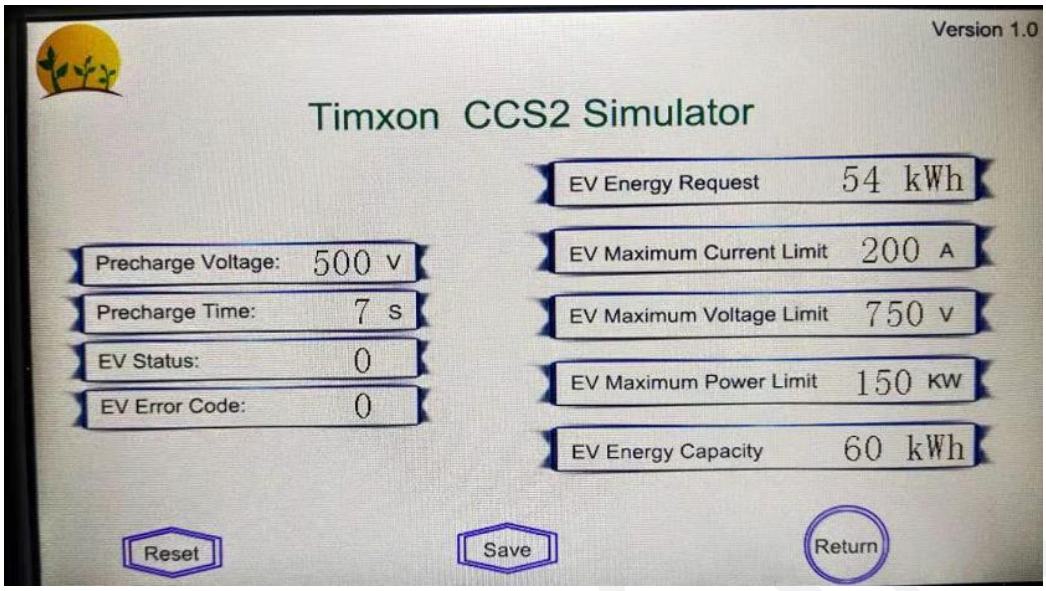



- SAE standard CCS1 DC charging test simulator, dedicated to SAE standard DC charging point test
- IEC standard CCS2 DC charging test simulator, dedicated to IEC standard DC charging point test
- 200A input and output main circuit (300A capacity design)
- 1000V test and inspection meter

# 5. LCD display introduction

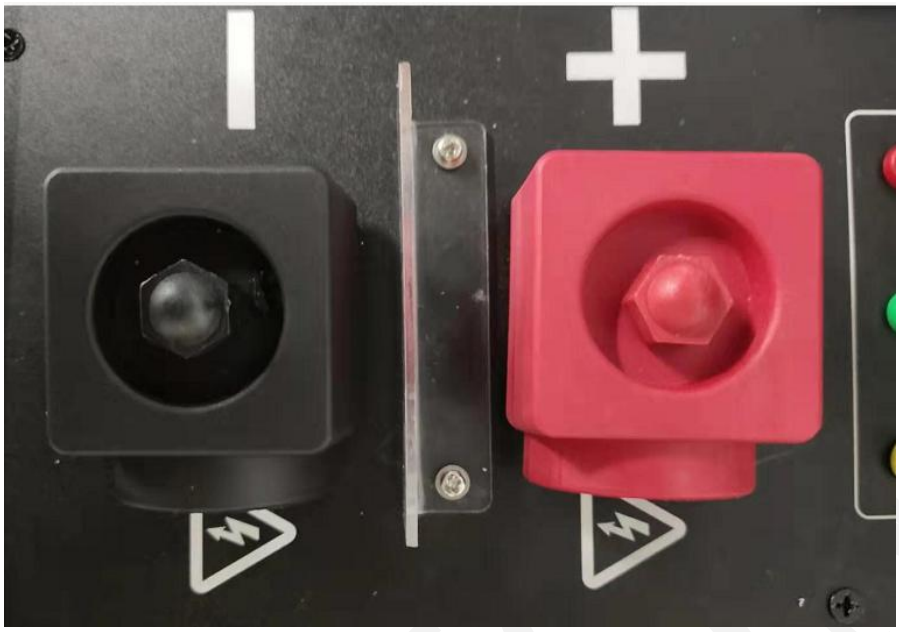



| Item | Description |
|---|---|
| START | With automatic start, the button can not be operated |
| STOP | Stop simulation test button |
| EV Parameter Setting | EV related settings |
| Protocol Type | Agreement type ISO15118/DIN70121 |
| Soc | EV current SOC |
| Demand Voltage | EV demand voltage |
| Demand Current | EV demand current |
| CP Status | CP voltage value |
| CP Frequency | CP Frequency value |
| CP Duty Cycle | CP Duty Cycle value |
| PLC Aag_Value | PLC average signal quality attenuation value |
| Chager Power Limit | Maximum power of charger |
| Message Voltage | Message Voltage |
| Message Current | Message current |
| Charging Time | Charging time for a simulation test |
| Remarning Time | Settable remaining charging time |
| Charge Authorization Mode | Authorization method EIM or PnC |
| Vehicle Connector Temperature | Simulator socket connector temperature |
|  | Charging process display |




| Item | Description |
|---|---|
| Precharge Voltage | Settable precharge voltage |
| Precharge Time | Settable precharge time |
| EV Status | EV current status |
| EV Error Code | EV error code value |
| EV Energy Request | EV power |
| EV Maximum Current Limit | Maximum charging current allowed by EV |
| EV Maximum Voltage Limit | Maximum charging voltage allowed by EV |
| EV Maximum Power Limit | Maximum charging power allowed by EV |
| EV Energy Capacity | EV battery capacity |
| Reset | Restore data to factory settings |
| Save | Save and modify settings button |
| Return | Back to main page button |

# 6. Load Interface



Red connect to positive pole +

Black connect to negative pole-

The load can be R load, battery, RCD load, etc.

Load wiring method: unscrew the red nut on the top and remove the protective cover. The copper plate of the conductor is exposed and the load cable is screwed on. After connecting, install back the protective cover.

Please pay attention to the safety of high-voltage wiring, non-electrical personnel are prohibited to operate! ! !

# 7. Test Content

a. Complete simulation of ISO15118/DIN70121 protocol;

b. Simulate and verify the complete charging process;

c. Check precharge, precharge voltage and sequence check;

d. It can be tested with 200A and 1000V load;

e. Stable and reliable long-term communication test, stress test, success rate test

f. LED indicator of charging status, LCD display of each charging stage and charging sequence

g. Air-cooled fan heat

h. High-precision electric meter 300A, 1000V range 0.2% accuracy comparison test output performance

# 8. Electrical Structure

Size: 52CM*42CM*23CM

Weight 10Kg

# 9. Operation Method

A. Power on and start the CCS simulator

B. Familiarize with the various parameters of the simulator, set the matching parameters with the charger, and save the settings.

C. Plug in the CCS Plug header

D. CCS simulator automatically detects CP status and initiates SLAC

E. The charging pile starts charging and starts the SLAC matching process

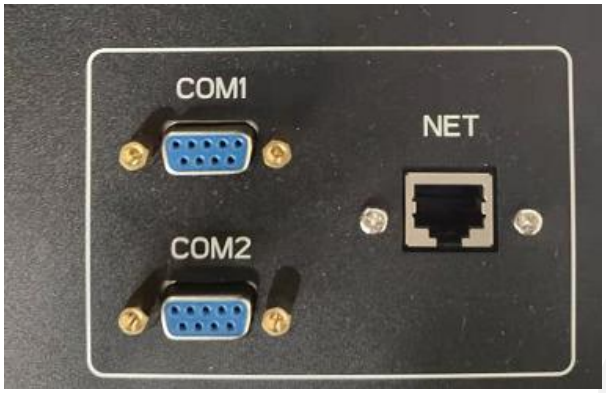
F. LCD displays communication interaction parameters and corresponding status. The yellow LED indicator indicates the current charging communication establishment status. Slow flashing means communication is started, fast flashing means pre-charging, and steady light means cyclic charging.

G. Click STOP to stop the simulated charging test

# 10. Partial introduction

COM1 and COM2 are log printing and upgrade ports

NET is the PC computer connection port (not enabled yet)




Serial port properties

115200/ N/8/1


Power indicator, always on when power on; Status indicator, flashing and always on when charging

Electricity meter: display the true output voltage and current, the basis for pre-charge judgment

CP/PP/PE: Banana terminal test port