

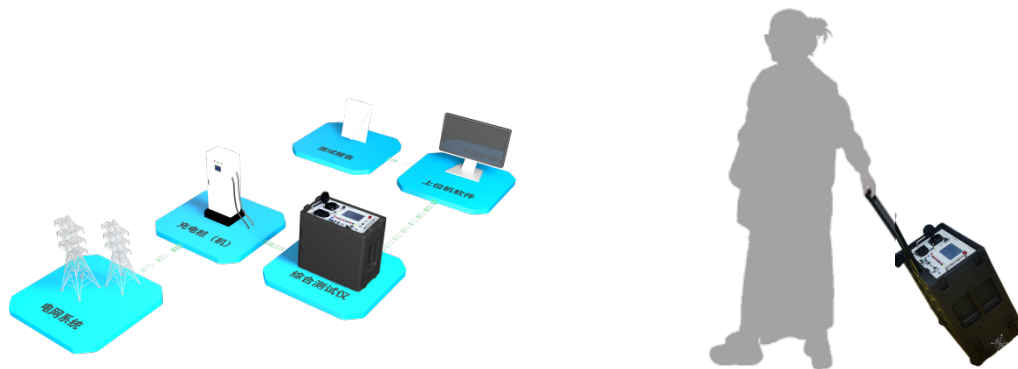
EV Charging Station Tester

ST-DH-99 EU



Product overview

Saiter EV Charging Station Tester ST-DH-99 EU is a field testing instrument specifically designed for European and Japanese standard (optional) electric vehicle AC and DC charging piles. Mainly used for on-site inspection and functional verification of European standard AC and DC charging piles, Japanese standard DC charging piles, and can be used for product acceptance and functional verification of non vehicle mounted conductive chargers for electric vehicles. Suitable for on-site testing by manufacturers of AC and DC charging stations, as well as buyers of AC and DC charging stations; By using testing instruments to detect charging piles on site instead of actual electric vehicle testing, the convenience and comprehensiveness of testing methods have been improved, and testing costs have been reduced.



Portable handle protective case (convenient for on-site operations)

Products feature

- CCS2/Type2: Develop charging station protocol based on European standard protocols ISO 15118-2, DIN SPEC 70121, IEC 61851-1;
- Equipped with multiple communication methods such as WIFI/ Lan ,RS-232 etc., and optional multi-channel high-precision high-speed waveform acquisition module, it can collect charging voltage, current, guidance signals, etc., to meet the needs of equipment interoperability testing
- The system allows for the setting of message transmission intervals and the storage of communication message data. Additionally, it supports the configuration of EVCC and EVSE parameters
- Can complete the 0.05% level metrological verification test function of JJG1149-2022 (optional metrological module) including working error and clock indication error; It can be equipped with a GPS receiving module, Equipped with a wired temperature probe, it can complete on-site temperature measurement
- Mains power input, cigarette lighter input
- Built in low-power load 3kw, equipped with an output load interface ($\leq 120A$)
- It can meet the needs of on-site operation and maintenance testing, using professional safety protection boxes (pull rod boxes) with good protection performance such as impact resistance, high temperature resistance, waterproof and dustproof, and corrosion resistance.

Operation panel



Product parameters table

Product Name	EV Charging Station Tester
model	ST-DH-99 EU
Number of gun seats	1pc (CCS2 AC240V 32A/ DC1000V 125A)
Detection object	CCS2 DC charging device , type2 AC charging device
AC Voltage/current sampling	$\pm 0.5\%RD(30V \leq U \leq 380V)/\pm 0.5\%RD(10A \leq I \leq 100A)$ optional 0.05% measurement function)
DC Voltage/current sampling	$\pm 0.5\%RD(200V \leq U \leq 1000V)/\pm 0.5\%RD(10A \leq I \leq 200A)$ Optional 0.05% measurement function)
Working power supply	100-240V AC,50-60Hz ;
Insulation resistance	15.3k Ω 、 20k Ω 、 75k Ω 、 100k Ω 、 200k Ω 、 300k Ω 、 600k Ω
Auxiliary source voltage	$\pm 0.5\%RD$ 3~30V
communication interface	WIFI /LAN , RS-232
Load power	Built-in load DC300V 10A/AC230V 7.6A (external load equipment $\leq 120A$)
Dimension	W615 * D585 * H345mm
Technical indicators for temperature and humidity measurement	Temperature measurement range: -25 ° C~+55 ° C; Temperature measurement accuracy: ± 0.3 ° C; Temperature measurement resolution: 0.1 ° C Humidity measurement range: 0% -100% RH; Humidity measurement accuracy: $\pm 4\%$ RH; Humidity measurement resolution: 1% RH
With or without upper computer software	Yes
Environment requirement	Working temperature: - 20°C~50°C Storage temperature: - 30°C~70°C Relative humidity: $\leq 90\%$ Rh (10°C to 30°C); $\leq 75\%$ Rh (30°C to 40°C); $\leq 45\%$ Rh (40 to 50°C)
Reference Standards	IEC-61851-1、 IEC-61851-23、 DIN SPEC 70121、 ISO 15118-2



Type 2 AC Interoperability test items (Optional)

No.	Test item	Standard
STE.A.1001	Normal charging loop test (must show all stage as standard)	IEC 61851-1 2017 Annex A.4.7.2
STE.A.1002	CP short test	IEC 61851-1 2017 Annex A.4.9
STE.A.1003	CP cut test	IEC 61851-1 2017 Annex Table A.6: Sequence 2.2
STE.A.1004	PE cut test	IEC 61851-1 2017 Annex A.4.8
STE.A.1005	PP cut test	IEC 61851-23 Annex CC.4.5
STE.A.1006	CP frequency test	IEC 61851-1 2017 Annex A.4.4
STE.A.1007	CP voltage test	IEC 61851-1 2017 Annex A.4.4
STE.A.1008	CP duty cycle test	IEC 61851-1 2017 Annex A.4.5
STE.A.1009	Starting and charging phase testing	IEC 61851-1 2017 Annex Table A.8
STE.A.1010	Normal charging end test	IEC 61851-1 2017 Annex A.4.7.2
STE.A.1011	Sequence test using the typical control pilot circuit	IEC 61851-1 2017 Annex A.4.7.2
STE.A.1012	Sequence test using the simplified control pilot circuit	IEC 61851-1 2017 Annex A.4.7.3
STE.A.1013	Output overcurrent test	IEC 61851-1, 2017 6.3.1.6
STE.A.1014	Disconnect switch S2 test	IEC 61851-1 2017 Annex Table A.6: Sequence 8.1

CCS2 DC Interoperability test items

No.	Test item	Standard
STEA.2001	Normal charging loop test (must show all stage as standard)	IEC 61851-23
STEA.2002	CP short test	IEC 61851-1 2017 Annex A A.4.9
STEA.2003	CP cut test	IEC 61851-23 Annex CC.4.4
STEA.2004	PE cut test	IEC 61851-23 6.4.3.and IEC 61851-1 A.4.8
STEA.2005	PP cut test	IEC 61851-23 Annex CC.4.5
STEA.2006	Low insulation DC+ (ISO check)	IEC 61851-23 6.4.3.106 and Annex CC 4.1
STEA.2007	Low insulation DC- (ISO check)	IEC 61851-23 6.4.3.106 and Annex CC 4.1
STEA.2008	Low insulation DC+ (During charging)	IEC 61851-23 6.4.3.106 and Annex CC 4.1
STEA.2009	Low insulation DC- (During charging)	IEC 61851-23 6.4.3.106 and Annex CC 4.1
STEA.2010	Self-test phase test	IEC 61851-23 Annex CC.4.6
STEA.2011	Charging connection control sequence test	IEC 61851-23 Annex CC Figure CC.1 and IEC 61851-23 Annex CC Table CC.3
STEA.2012	The output voltage exceeds the vehicle allowable value test	IEC 61851-23 6.4.3.107, CC.6.2
STEA.2013	Output voltage control error test	IEC 61851-23 101.2.1.2.2
STEA.2014	Output current control error test	IEC 61851-23 101.2.1.2.1
STEA.2015	Output current stop rate test	IEC 61851-23 101.2.1.4

Measurement verification test items (0.05 level)

No.	test project
1	Work error
2	Clock indication error

product accessories list:

Acessories	brand	Size	interopera bility test		Measurement test	
Function	●（have）○（optional）×（no）					
Network cable	Saiter	Double-headed crystal head-2 meters	●	●	●	-
power line	Saiter	National standard three-pin - 10A - 1.5m cable length & Thai standard plug - 10A - 1.5m cable length	●	●	●	-
Multi-channel oscillograph acquisition module	Saiter	-	×	●	×	-
Measurement module	Saiter	Pulse test line	×	×	●	-
Temperature and humidity sensor	Saiter	-	×	×	●	-
GPS module	Saiter	GPS pulse signal line	×	×	●	-