

# **Teison Smart mini**

TS-EVC07-003S TS-EVC11-003S TS-EVC22-003S







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## **Product overview**

Smart charger, Small size, Stylish design
Easy control via mobile APP, always being the most reliable and safe home charger.



\* This product does not include incoming cables when leaving the factory , and this picture is only for display



## **Product features**



#### Solid design wallbox

Meet IP65 & IK10 standard by lab test excellent water protection.



### **Indicator light**

Showing real time charging status



#### **Smart mini**

Teison smart components highly integrated in a 234.4x233.6x147.7 mm Size mini body



#### **TUV** certified

All parts passed CE Certificates, and tested by TUV.



#### **Smart charging**

The smartphone App can realize the remote control and organize. Integration with OCPP 1.6 J-SON system.

#### **Real Smart**

- Control your smart wallbox through Teison App by Bluetooth, WIFI and 4G
- Developed based on OCPP 1.6 J-SON
- Automatic identification
- Max charging Current adjustable
- Remote reach out of every charging process
- Charging records in Cloud
- Scheduled charging to save on your electricity bill
- OTA for new features

#### **Highest safety**

- PCV 0 housing with 2.0~3.0 mm thick exudes robustness and protects inside components from external influences.
- The housing is made from materials specially developed fortop heat dissipation and with flame retardant coating.
- Completely meets all requirements of the CE applicable standards.
- AC + DC faults detection
- Real-time monitoring for heat and all instabilities during charging process

# **Parameter**

Specification					
Model	TS-EVC07-003S	TS-EVC11-003S	TS-EVC22-003S		
Electrical Properties					
Voltage	230V AC ±10%	400V AC ±10%	400V AC ±10%		
Output Current	32A	16A	32A		
Frequency	50/60Hz	50/60Hz	50/60Hz		
Output Power	7kW	11kW	22kW		
Residual current protection	TYPE A(30mA AC)		<u>'</u>		
Design	'				
Charging Outlet	Type2 socket				
Housing Material	PCV0 for outdoor				
Installation Method	Wall-mount / Floor-star	Wall-mount / Floor-stand			
Communication Protocol	OCPP 1.6 J-SON	OCPP 1.6 J-SON			
Safety Standard	EN IEC 61000-6-3:2021 ETSI EN 300 328 V2.2.2 ETSI EN 301 489-1 V2.2	EN IEC 61851-21-2:2021; EN IEC 61000-6-1:2019; EN IEC 61000-6-2:2019; EN IEC 61000-6-3:2021; EN IEC 61851-1:2019; EN IEC 61000-6-4:2019; ETSI EN 300 328 V2.2.2:2019; ETSI EN 300 330 V2.1.1:2017; ETSI EN 301 489-1 V2.2.3:2019; ETSI EN 301 489-3 V2.1.1:2019; ETSI EN 301 489-17 V3.2.4:2020; EN IEC 62311:2020, IEC 61851-1:2017			
Warranty	2 years	2 years			
Environmental Performance					
Protection Level	IP65	IP65			
Working Altitude	<2000M				
Application Site	Indoor/Outdoor	Indoor/Outdoor			
Working temperature	-30°C ~+50°C	-30 °C ~+50 °C			
Working humidity	5%~95%, No condensat	5%~95%, No condensation			
Atmospheric pressure	80kPa~101kPa	80kPa~101kPa			
Functionality					
Charging method	Plug and play as defaul	Plug and play as default			
Mobile APP (los and Android supported) functions under Bluetooth	Current adjustment (m	Scheduled charging Start charging Stop charging Current adjustment (memorable) plug and play charging switch on APP Charging status shown on APP			
Added APP functions under WIFI / 4G / Ethernet		Charging records shown on mobile APP、view and update the PIN code、firmware updating function(OTA)、multiple			
Packing Details					
Product Size	233.6*234.4*147.7mm	233.6*234.4*147.7mm	233.6*234.4*147.7mm		
Product Weight	4.4KG	5.2KG	5.4KG		
OptionalConfig					
Residual current protection	TYPE B ( AC 30MA + DC	TYPE B ( AC 30MA + DC 6 MA) as optional			
Network Gateway		Network Option 1: supports RS485+bluetooth+WIFI+ethernet+dial switch Network Option 2: supports RS485+bluetooth+WIFI+ethernet+dial switch+4G			
O-PEN detection	British standard ground staggered charging	British standard ground rod+cover opening alarm function+random delay+ staggered charging			
RFID	as optional ( with 3 RF	as optional (with 3 RFID cards)			
load balance	Optional function: CT C	Optional function: CT CLAMP single-phase / CT CLAMP three-phase			
Installation method	Stand-pile	Stand-pile Stand-pile			

# **OCPP function list**

No.	Message	Support or not
1	Authorize	√
2	BootNotification	√
3	Change Availability	√
4	Change Configuration	√
5	ClearCache	√
6	DataTransfer	Р
7	GetConfiguration	√
8	Heartbeat	√
9	MeterValues	√
10	RemoteStartTransaction	√
11	RemoteStopTransaction	√
12	Reset	√
13	StartTransaction	√
14	StatusNotification	√
15	StopTransaction	√
16	UnlockConnector	√
17	TriggerMessage	√
18	GetDiagnostics	√
19	DiagnosticsStatusNotification	√
20	FirmwareStatusNotification	√
21	UpdateFirmware	√
22	GetLocalListVersion	√
23	SendLocalList	√
24	ReserveNow	√
25	CancelReservation	√
26	ClearChargingProfile	√
27	GetCompositeSchedule	Р
28	SetChargingProfile	√

 $<sup>\</sup>sqrt{-Supported}$ 

P – Need to be combined with the back-end

# **Product size and packaging**

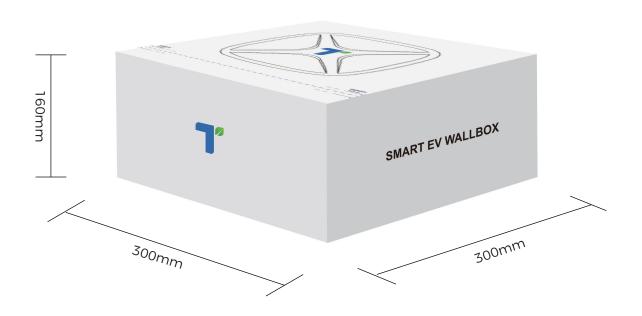
**Product size**: 233.6\*234.4\*147.7mm

Product weight: 4.4kg



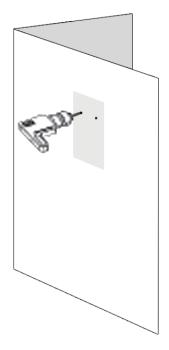
#### Package:

300\*300\*160mm

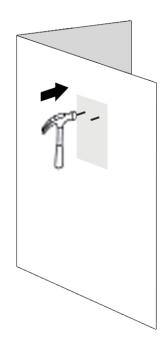


# **Product installation**

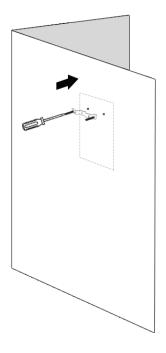
#### **Installation method**



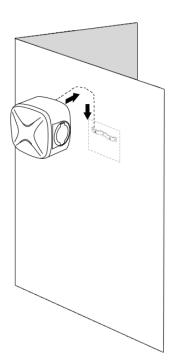
1. Use a drill to make mounting holes in suitable locations on the wall.



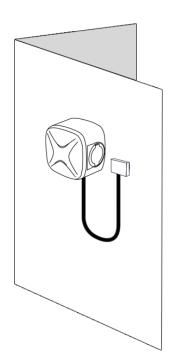
2. Tap the expansion bolts into the mounting holes.



3. Mounting the wallbox back plate on the wall.

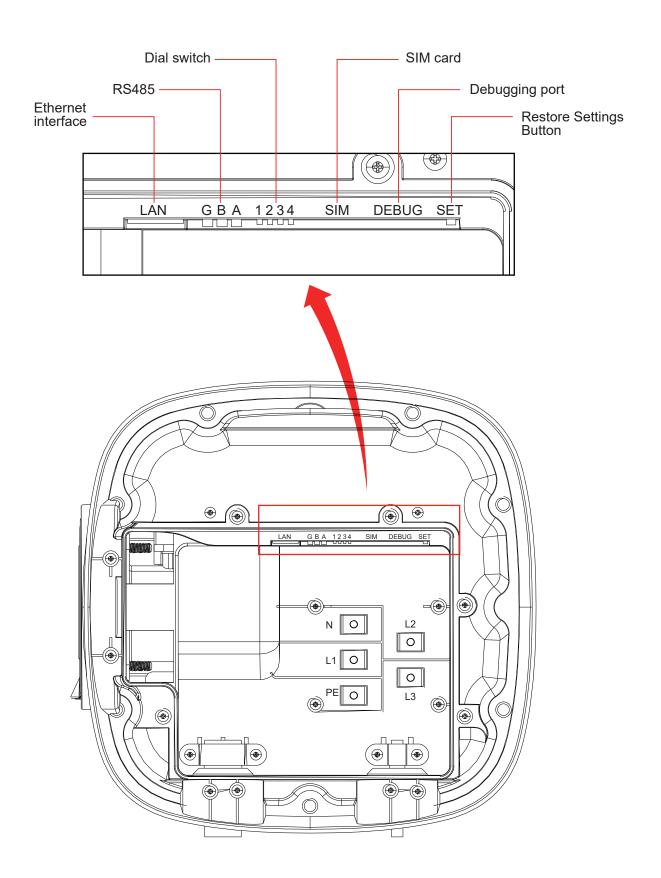


4. Place the wallbox in from the top down and fix it to the back plate.



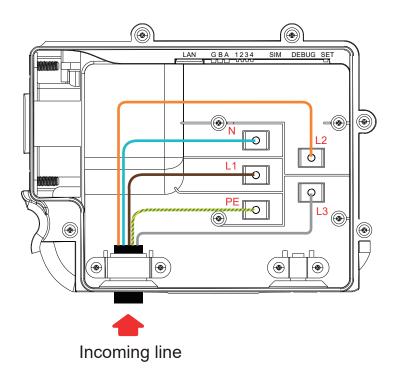
5. Organise and secure the incoming cables of the wallbox.

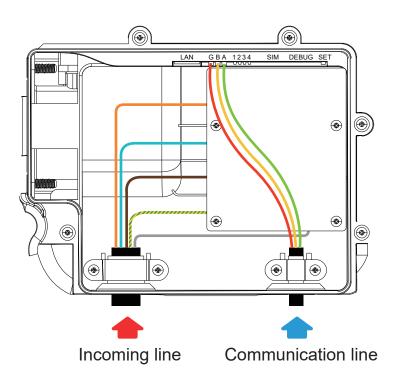
# **Interface Introduction**



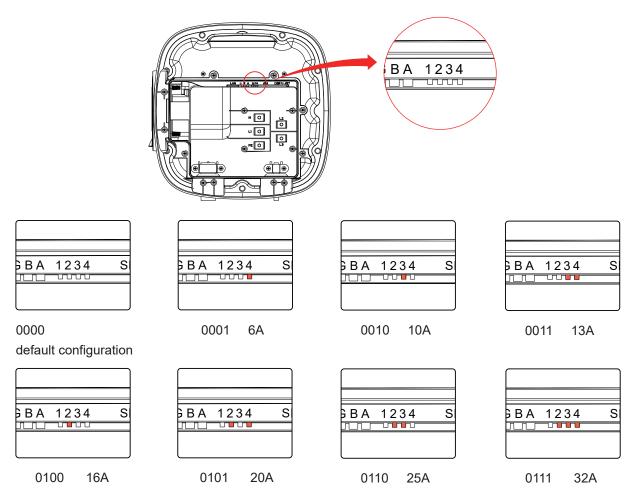
# **Wiring Diagram**

Please connect the power input line and signal line as shown in the following figure





# **Dial Switch**



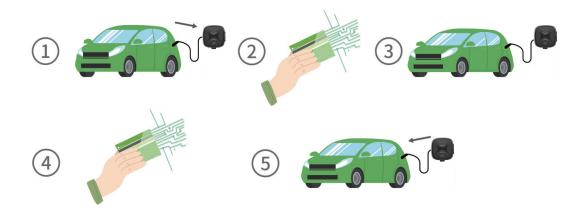
Serial Number	Function Points	Function Description	KEY1	Current Setting Gear KEY234	Meaning	Notes	Customer Applicable Status
1		Limit maximum n output current		000	Default Configuration	The default may be 40A, 32A, or 16A	Available
2				001	6A		Available
3	Current Regulation			010	10A		Available
4				011	13A		Available
5				100	16A	When the firmware is limited to 16A	Available
6				101	20A	When the firmware is limited to 16A,maintain 16A	Available
7				110	25A	When the firmware is limited to 16A,maintain 16A	Available
8				111	32A	When the firmware is limited to 16A,maintain 16A	Available
9			0		Default Configuration		
10			1		Toggle		

# Start to charge(plug and play)

This product is set to plug and play mode by default when leaving the factory, and can be directly connected when inserting cables.

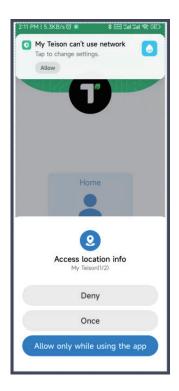
If you have selected the RFID card, please follow the steps below for charging:

- 1. The charging wallbox is ready. Connect the charging plug to the car.
- 2. Swipe the card and listen for the buzzer to confirm a successful card swipe.
- 3. Charging initiates, indicated by the green LED lighting up.
- 4. To stop charging, swipe the card again and unplug.
- 5. Safely disconnect the plug before leave.



# Start to charge(APP)

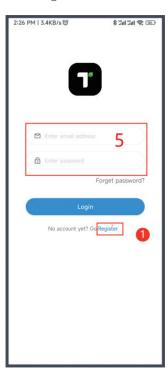
App need to be given the authority to use the GPS and Bluetooth, at the first to use.



Home(HOME):Support Smart Mini OCPP charger for home user, with Bluetooth and Remote Control Commercial:For commercial use in public area, realize charging and operation of the



Register your information and login



Moile App operation-Connection

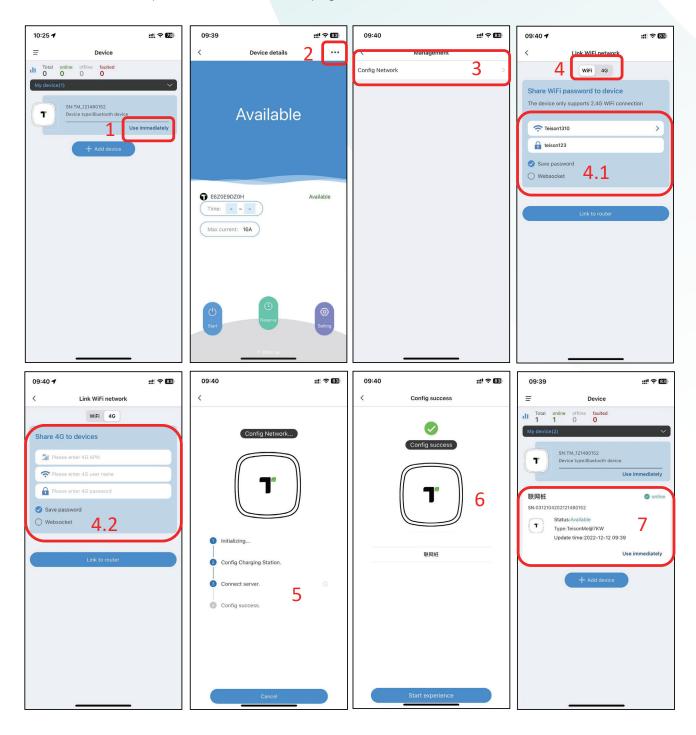
1.Local Devices list, press "Use immediately" enter into the user page.
2.Online Devices list, showing all the online chargers bonded by user.
Parameters: Device name, Serial No., Status, type etc. To press "Use immediately" enter into online charger User interface.

3. Press "+Add device" for web configuration.4. Devices selected area, to find out the correct charging station.



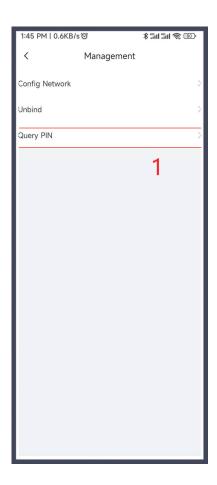
Mobile App operation- Connection:

- 1. Select: "Use immediately" to use local device.
- 2. Click the "..." button upper right side.
- 3. Click "Config Network"
- 4. By Wi-fi or 4G connection
- 4.1 ocpp1.6 If choose Wifi(Only supports 2.4G wifi), input your wifi password.
- 4.2 If choose 4G, input 4G network APN configuration.
- 5. Network Configuration will finish in 30seconds.( If you use the ocpp platform by the third-party, it will show success by step 2, have to confirm it by your platform)
- 6. Config. success. To name your online charger.
- 7. Back to homepage, the device after success configuring network will show in the list.(if not in the list, pull down to refresh the page).



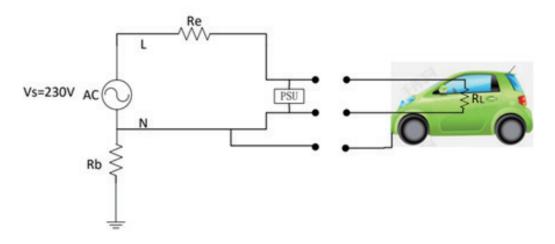
Moile App operation- Pin Code

- 1. You can check your PIN code by local device management (press "..."on your home page).
- 2. Copy PIN code or Refresh PIN code
- 3. Pin Code can be shared to others for the usage of charger





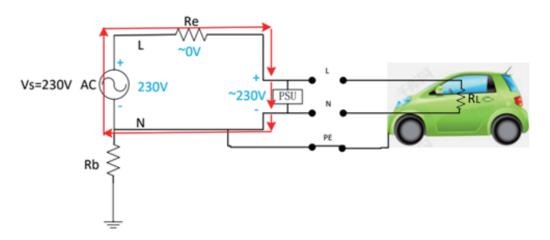
#### o-PEN: Earth rod solution



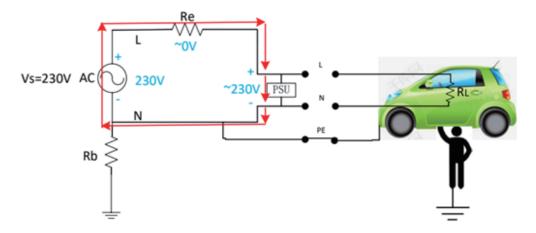
In line with BS 7671: 2018: Amendment 2: 2020 Regulation 722.411.4.1 (iv) Protection against electric shock in a single-phase installation is provided by a device which electrically disconnects the vehicle from the live conductors of the supply and from protective earth in accordance with regulation 543.3.3.101 (ii) within 5 s in the event of the utilisation voltage at the charging point, between the line and neutral conductors, being greater than 253 V rms or less than 207 V rms. The device shall provide isolation and be selected in accordance with Table 537.4. Equivalent means of functionality could be included within the charging equipment. Closing or resetting of the device shall be possible only if the voltage between line and neutral conductors is in the range 207 to 253 V rms.

Preconditions: Some use scenarios cannot provide a good ground (PE) for the charging box, and most cars themselves do not provide a conductive path to the ground, and the car body is generally connected to the PE:

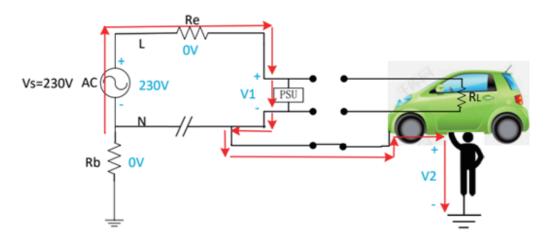
1. Under normal circumstances, the source end of the N line is well grounded, the car is insulated from the ground, and no circuit loop is formed. It is safe at this time.



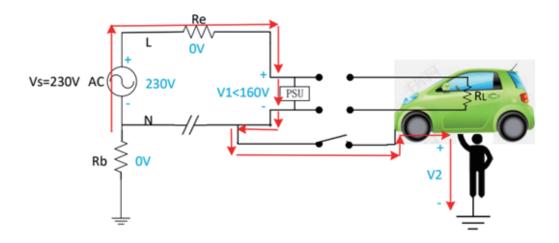
2. When the charging box plug is connected and the human body contacts the car body, it provides a conductive circuit between the car body and the ground. The human body is equivalent to a large resistance and provides a conductive circuit. At this time, there is already a risk. If the incoming line N of the charging pile is well grounded at this time, since Rb is much smaller than the equivalent resistance of the human body, the current flowing through the human body is very small and the human body does not perceive it. People are safe.



3. When the N line of the charging box is abnormally disconnected or presents a large impedance, the circuit loop will be conducted through the human body to the earth, which will cause the human body to get an electric shock. At this time, the usual L and N leakage protection will be invalid, and new methods are needed. protect.



4. Measure 1: V1+V2=230V, check V1, when V1<170V, disconnect all paths within 1S to avoid the risk of human electric shock.



# **Fault handling**

Red light flash times	Condition	LED Status		
1	Electric leakage			
2	Over-voltage (Input voltage is more than 280v)			
3	Under-voltage (Input voltage is less than 80V)			
4	Over-current (Output current is more than the rated value by 10%)			
5	Over-temperature (Temperature is more than 95°C)			
6	Electric leakage self-testing abnormal	Below indicator light flash slowly		
7	/			
8	CP pilot abnormal			
9	Relay abnormal	_		
10	Assist processor abnormal			
11	System 12v abnormal			
12	System -12v abnormal			



## **Teison Profile**

Teison Energy Technology Co., Ltd. is a high-tech enterprise dedicated to new energy products. With its industry-leading R&D and design team, it has advanced automobile charging technology and products that can solve energy management, load balancing, commercial operations, data transmission, remote upgrading, and operation and maintenance management in various application scenarios. It provides users with an integrated "Solar-storage-charge" solution.

Teison's products comply with national, European, American, and Japanese standards, including household intelligent charging series and high-power fast charging and supercharging direct current series for commercial operations that are available in AC and DC, mobile, and portable models. They have been certified by the OCPP1.6J certification of the OCA alliance, Germany's TUV Rheinland for CE, CB, WEEE, UKCA, TR25, and AZE certifications, and the national grid 16949 certification.

As a smart charging expert, Teison's products are sold worldwide. It has established more than 100 sales outlets in over 40 countries, and has set up subsidiaries, overseas warehouses, and after-sales service departments in Europe, the Middle East, South America, and Southeast Asia to provide users with efficient and fast technical support.

As a safety charging expert, Teison insists on putting safety first, and product quality is the essential guarantee of safety. It creates aesthetically designed, high-quality, and safety-friendly charging scenes for users, and together with Teison's technology, lets users enjoy a better life.

# **Factory history**

