

(Please read it in details before installation or use)

## Product specification,instruction

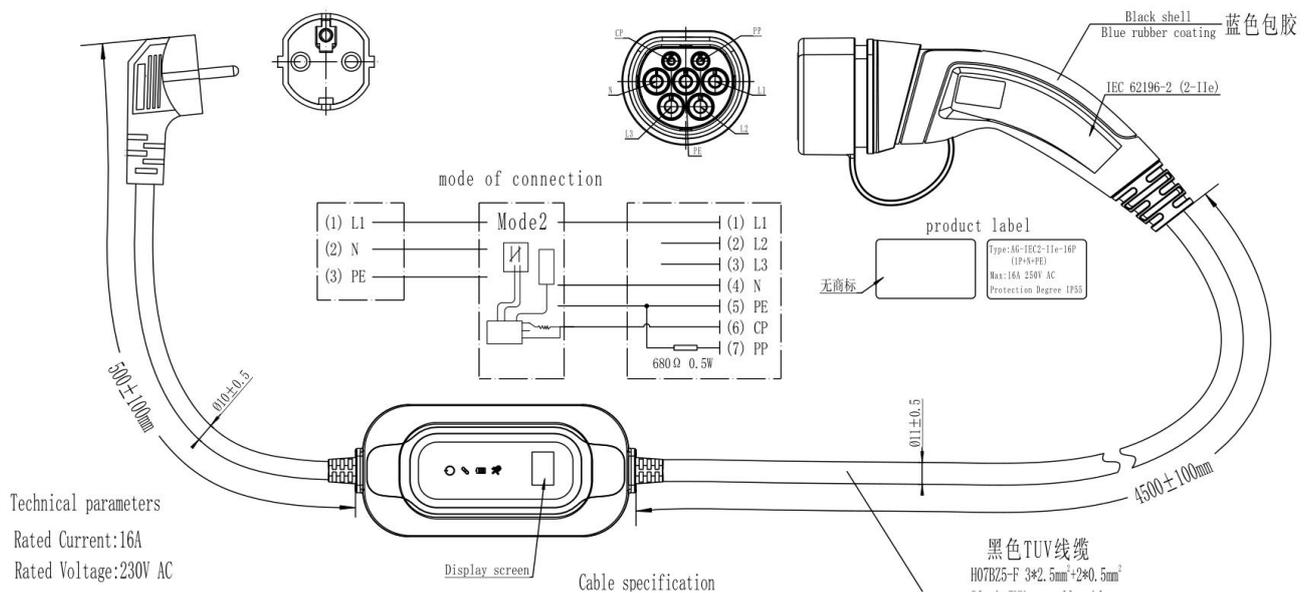
### 1.Use place and the environment

This series AC charging plug accords with 62196-2 IEC 2010 standard. Electric vehicle portable charger DSPSE is one portable electric vehicle charging device, it makes the owner can in any place, through the standard family power interface,

charging pure electric vehicles or plug-in hybrid electric vehicle safely and expediently. The suitable environment temperature of use is  $-30^{\circ}\text{C}$ -- $+50^{\circ}\text{C}$ , in the surrounding, no acid-base and other corrosive gas in order to avoid affecting product performance. Try to avoid in the directly rain or excessively high humidity environment and should try to prevent shell damage.

2.Product name: Electric vehicle portable charging control device

### 3.Product Features and Specifications





#### 4.Product part:

- EV charging control device
- Charging plug
- Charging cable

#### 5.Technical parameters

- Rated current : 16A 32A
- Rated voltage : **230V AC**
- Insulation resistance: **>1000M $\Omega$  (DC500V)**
- Product contact impedance : **0.5 m $\Omega$  Max**
- Withstand voltage: **2000V**
- Housing fire rating:**UL94 V-0**

## Wire harness

Model	standard specification
16A/32A	H07BZ5-F3x2.5mm <sup>2</sup> +2x0.5mm <sup>2</sup> ; H07BZ5-F3x6mm <sup>2</sup> +2x0.5mm <sup>2</sup>
EU/IEC	3×2.5 mm <sup>2</sup> ; 3×6 mm <sup>2</sup>
Remark	cable can customized

### 6.Product function & Controlling and guiding principle:

- 1) the power source offers suitable power and lightning protection for the whole system.
- 2) the voltage checking circuit is used to check the real voltage and send the result to central control unit. The relay driving circuit according to control the pick-up and disconnect to realize whether the power source plug connect the charging plug of vehicles.
- 3) the leakage and overcurrent checking circuit is used to detect whether the current circuit system leakage, overflowing and so on.
- 4) CP signal DAGEN is used to translate the PWM which from the central control unit into settle for the electric vehicle CP signal that accord with national standard.
- 5) the CP signal detecting circuit is used to detect the average value of real high and low voltage, to realize the effective communication among the same chargers.
- 6) LED indicating circuit is used to indicate the real-time statue of the electric vehicle portable battery charger.

### 7.Function specification:

- 1) Leakage protection: it's to protect when the leakage current over 20mA/DC6mA, it can't recovery automatically, need to shutdown/disconnect the charging connector for restart.
- 2) Overflowing protection: it'll protect delay 10s when the current over 10% than rated current, and recovery 5s later. The recovery time is 3 times, if it doesn't work after 3 times, need to shutdown/disconnect the charging connector for restart.
- 3) Short-circuit protection: the controlling box determines as short-circuit when the current over 30A/50A. It'll take protective action within 1s. the system need to shutdown/disconnect the charging connector for restart.
- 4) Lightning protection: according to the same kind of the product statues.

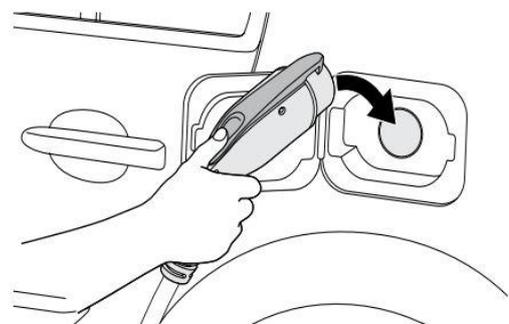
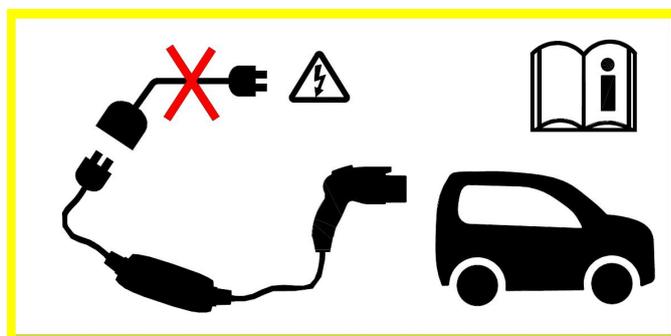
## 7. Controlling box status specification:

NO	Statue	Power Yellow	Connection Blue	Charging Green	Fault Red
1	Power off	Off	Off	Off	Off
2	Checking	Blink	Blink	Blink	Blink
3	Standby	On	Off	Off	Off
4	Connected	On	On	Off	Off
5	Charging	On	On	On	Off
6	Finished	On	Blink	Blink	Off
7	CP error	On	Blink	Blink	Blink
8	Over/Under Voltage	On	On	Blink	On
9	Overcurrent	On	Blink	Off	Blink
10	Leakage- Current	On	Blink	Off	On
11	Ungrounded	Blink	On	Blink	On

## 8. Operation environment

Operating ambient temperature is  $-40^{\circ}\text{C}$ -- $+65^{\circ}\text{C}$ , in the surrounding, no acid-base and other corrosive gas in order to avoid affecting product performance

Connection schematic program



## 9. Warning

 High Voltage

 WARNING

Please carefully read the following instructions before charging your electrical vehicle, be aware of the hazards involved with electrical circuitry and standard practices for preventing accidents.

- Please use the socket with the power cable diameter of not less than 2.5mm<sup>2</sup> for charging;
- For 16A :the plug must be plugged into 230VAC wall socket that is properly installed and grounded, the load capacity of the wall socket must be above 16A;  
For 32A :the plug must be plugged into 230VAC wall socket that is properly installed and grounded, the load capacity of the wall socket must be above 32A;
- Extension Cords, Multi Outlet Power Strips should not be used with the charging cord;
- Please use this product in cool, dry, well-ventilated area, avoid water pouring in the plug;
- Do not open the enclosure while the charging or power on;
- Improper connection of the equipment-grounding conductor is able to result in a risk of electric shock. Check and maintenance must be executed by qualified electrician or serviceman;

#### **10. Power adjustment -- touch the button with the capacitor at the bottom of the screen (add buzzer interaction)**

1) Keep pressing the touch button at the bottom of the screen for more than 2S (less than 5S), and the buzzer will sound once. At this time, release the touch button and you can enter the power adjustment mode. Charging cannot be started under the power adjustment mode

2) In the power adjustment mode, press the button again to switch the rated current of the equipment, and the buzzer will ring once for each switch.

- define standard values for: 32A: 32A/25A/20A/16A/13A/10A/8A. 16A: 16A/13A/10A/8A

maximum current shall not exceed the calibration equipment itself the biggest current-carrying capacity (maximum charging current main control board to send)

3) After the current switch is completed, press the touch button again for more than 2S to exit the power adjustment mode, the buzzer will ring and the current value will be set into effect

4) In the power regulation mode, if no operation is carried out for more than 5S, it will automatically exit the regulation mode, and the current value will not take effect at this time

Note: Power adjustment is only available in idle/standby mode

#### **11. Charging reservation -- touch the button with the capacitor at the bottom of the screen (add buzzer interaction)**

1) Keep pressing the touch button at the bottom of the screen for more than 5S (when pressing over 2S, the buzzer will sound first. At this time, keep pressing and do not let go, otherwise it will enter the power adjustment mode), then you can enter the charging reservation adjustment mode. The buzzer will sound twice, and charging can not be started under the charging reservation adjustment mode

2) In the charging reservation adjustment mode, press the button again to switch the time of delayed

starting and charging of the device, and the buzzer will ring for each switch.

-- The standard value is defined as: 1H/2H/4H/6H/8H/10H after starting charging

3) After the time setting is completed, press and touch the button again for more than 2S to exit the charging reservation adjustment mode. The buzzer will ring, and the current reservation time will be set into effect, and the charging reservation countdown will start

4) In the charging reservation mode, if you do not conduct any operation for more than 5 seconds, you will automatically exit the charging reservation adjustment mode. At this time, the current value will not take effect, nor will you enter the charging reservation countdown

5) In the countdown process, keep pressing the touch button at the bottom of the screen for more than 5S (when pressing over 2S, the buzzer will sound first. At this time, keep pressing and do not let go, otherwise it will enter the power adjustment mode), then you can cancel the pre-charging countdown state, the buzzer will sound twice, and the device can be restored instantly plugged in and charged

Note: Charging reservation function can only be entered when idle/standby mode

## **12. Charging Reservation Wake Up**

After the vehicle is turned off for a period of time, the charging system enters a dormant state. It is necessary to give the CP signal of the on-board charger a wake-up process from low level to high level when the pile end is booked, so as to improve the success rate of charging after the pile end is booked.