

Failure to read this manual carefully before installation, maintenance and operation may lead to a danger of death, injury, and damage to the device, WEIYU cannot accept any liability for claims resulting from this.

1. SAFETY NOTES

1.1. Warning Signs



CAUTION: Warning of electrical hazards.

This sign is intended to alert the user that severe personal injury or substantial property damage can result if the device is not operated as requested.



ATTENTION: Warning of a danger spot or dangerous situation.

This sign is intended to alert the user that minor personal injury or material damage can result, if the device is not operated as requested.

1.2. Installation



Installation and wiring should be done by personnel with professional qualification, otherwise, hazardous electric shock may result.



Make sure input power supply is entirely disconnected before wiring; otherwise, hazardous electric shock may result.

1.3. Operating



Failure to read this manual carefully before operation may lead to improper operation.

1.4. Maintenance



Maintenance should be done by personnel with professional qualification, otherwise, hazardous electric shock may result.

2. PRODUCT INFORMATION

2.1. General

When the EV- Charger products are used in homes, in order to avoid the situation of Charger competing with other household electrical equipment for power supply during peak household electricity consumption, we developed the Charge-Mate. This product can only be used to manage the EV-Charger through RS485. And it always monitors the user's total household input current online.

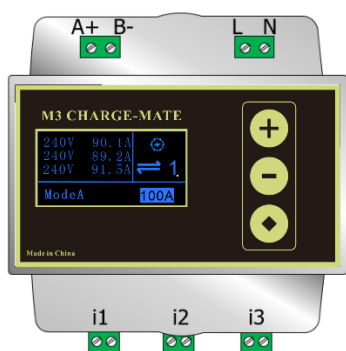


Fig. 2-1 Charge-Mate outline diagram

During the EV- Charger in the charging process, if the total input current is detected to exceed the limit value, the Charge-Mate will automatically decrease EV-Charger output current to ensure the stable operation of household electrical equipment; And if the total input current is detected a margin, the Charge-Mate will automatically increase the output current of EV-Charger.

2.2. Current sensors

Charge-Mate chose an open type CT (current transformer) as the current sensor, which has the advantage of open and close installation, convenient and fast wiring. A Charge-Mate companion can be equipped with 3 open CT's for total input current detection..



Fig. 2-2 Open type CT outline diagram

2.3. Technical Parameters

1	Model No.	APCC-1R / APCC-3R
2	Installation	TH35mm standard din rail mounted
3	Dimension	L × W × H = 76mm × 89mm × 76mm
4	Weight	< 0.5kg
5	Display	1.3-inch OLED screen
6	CT's hole diameter	16mm
7	Current detection	0 ~ 200A
8	Communication	RS485
9	Matching quantity	≤ 5
10	Installation location	Indoor
11	Altitude	≤ 2000m
12	OTR	-20~55°C
13	Humidity	≤ 95%RH, without condensation
14	IP code	IP00

3. Parameters Setting

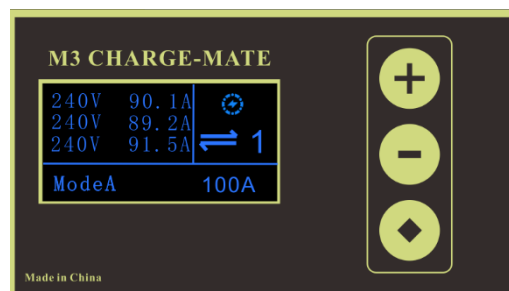





Fig. 3-1 OLED screen and buttons

3.1. Display information description

1	240V	Phase voltage display area
2	90.1A	Total input current display area (phase current)
3	100A	Total input current limitation setting value
4		Connection status flag. The number behind it indicates the current number of connected EV-Charger(es)
5		Limitation status flag. When this sign appears, it means that the EV-Charger(es) is/are in a state of limiting current output
6	ModeA	Power limiting strategy, At present, only ModeA

3.2. Parameters setting description

a) Total input current limitation setting

Press the  button once, you can select the total input current limitation setting area (as shown in Fig. 3-2).

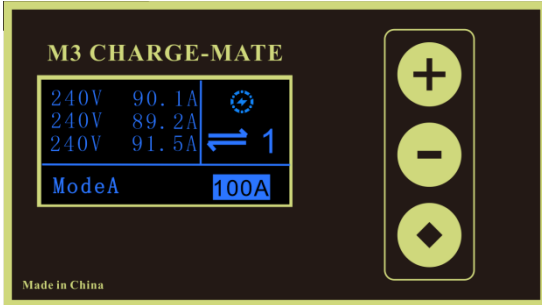








Fig. 3-2 Total input current limitation setting

You can set total input current limitation value in the range of 0~200A through press button  or .

b) Communication match function

EV charger needs to set the device address (1-5) through the offline webpage in advance. The default address of each EV-Charger is 1. Each Charge-Mate can manage up to 5 piles. After the RS485 communication line is connected, Charge-Mate can quickly establish communication with the pile under normal conditions

c) Matching list

Press and hold buttons  and  simultaneously, the Charge-Mate will display the matching list of EV-Charger's code number. Press the button  and  simultaneously, the Charge-Mate will exiting the match List .

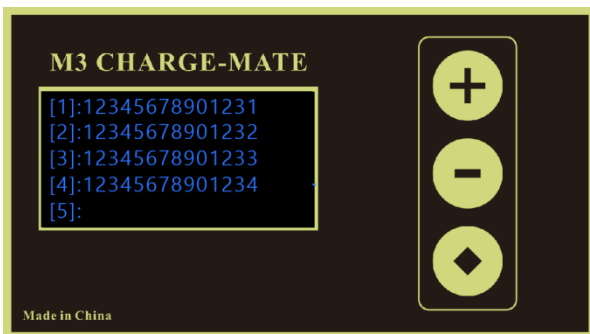





Fig. 3-5 Matching list

d) Restore factory setting

Press and hold buttons ,  and  simultaneously, The Charge-Mate will be restored to factory Settings and restarted

4. Control Mode

Working principle: Charge-Mate and EV-Charger exchange information through RS485. In the charging status, when detects that the system current is too large through CT(s), Charge-Mate will issue a current reduction instruction to the EV-Charger.

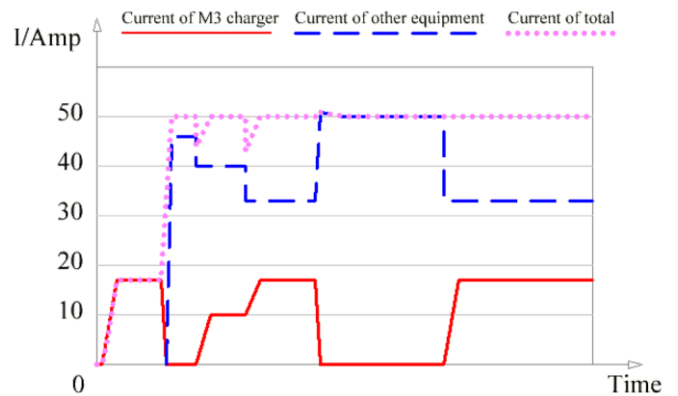


Fig. 4-1 Matching list

As shown in Fig. 4-1, if the limit current value is set to 50A, when the current of other equipment rises, Charge-Mate will control the EV-Charger current to drop rapidly, and when there is enough margin for the current drop of other equipment, Charge-Mate will control the EV-Charger current to rise slowly.

5. System wiring

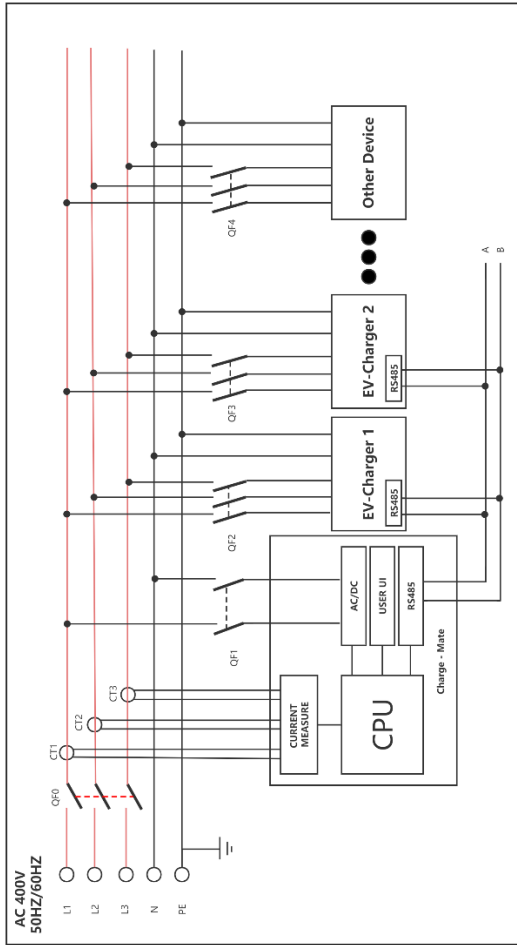


Fig. 5-1 System Wiring

?Note:

- 1) QF0 is main breaker (MCB or MCCB);
- 2) CT1~3 are open type current transformers they are must install at the output end of QF0;
- 3) QF1~QF4 are branch breakers (MCB), supply for general household electrical equipment or EV-Charger;
- 4) Communication length of RS485 (from Charge-Mate to EV-Charger): $\leq 300\text{m}$;
- 5) Rating power of Charge-Mate: $< 5\text{W}$;

6. WARRANTY

- A. The scope of warranty refers to the product itself.
- B. The warranty period is 12 months. During the warranty period, the company will repair the product free of charge in case of failure or damage (determined by the company's technical personnel) under normal use.
- C. The starting time of warranty period is the date of product manufacture.
- D. Even in the warranty period, a certain maintenance fee will be charged in case of the following situations.

- a) Equipment failure caused by not following the user's manual.
 - b) Equipment damage caused by fire, flood, abnormal voltage, etc.
 - c) Equipment damage caused by using the product for abnormal functions.
 - d) Equipment damage caused by foreign matter entering.
 - e) Equipment damage caused by other human external factors.
- E. The service fee shall be calculated according to the actual cost. If there is another contract, the contract shall prevail.
 - F. Please be sure to keep this card and show it to the maintenance personnel during the warranty period.
 - G. If you have any questions, please contact the agent or our company directly.