

## 1500W HF/PFC Battery Charger

### Advantages

1. Internal integrated PFC, no pollution to electric network, avoid shocking on electric network from heavy current.
2. Wide input voltage range AC85V~AC265V available for worldwide requirements, convenient for electric-network fluctuation and vehicles exportation.
3. High with 93% above efficiency while only about 80% efficiency the traditional chargers can meet.
4. Intelligent temperature compensation function in the charging process, preventing the damage to battery caused by charge-off or charge due, greatly extending the lifespan of the battery.
5. Fully-sealed and water-proof, protection class IP46. Shock resistance treatment made inside makes vibration-proof level up to SAEJ1378 that can fully meet the standard of automobile appliance usage.
6. Available for various kinds batteries like lead-acid, LiFePO4 battery etc., Flexible and programmable of the charging mode and preset in 10 unique algorithms. Equipped with CAN communication interface to realize real-time communication with BMS.

### Specification

Spec Model	Output Voltage -Nominal	Output Voltage -Maximum	Output Current -Maximum
TCCH-24-40	24V	35V	40A
TCCH-36-33	36V	51V	33A
TCCH-48-25	48V	65V	25A
TCCH-60-20	60V	90V	20A
TCCH-72-16	72V	104V	16A
TCCH-84-14	84V	114V	14A
TCCH-96-12	96V	130V	12A
TCCH-120-10	120V	161V	10A
TCCH-144-08	144V	203V	8A
TCCH-156-07	156V	217V	7A
TCCH-192-6.2	192V	258V	6.2A
TCCH-240-05	240V	320V	5A



### Technical Target

AC Input Voltage Range	AC85V~AC265V
AC Input Frequency	45~65 Hz
AC Power Factor	≥0.98
Full Load Efficiency	≥93%
Mechanical Shock & Vibration Resistance Level	Conformance to SAEJ1378 Standard
Environmental Enclosure	IP46
Operating Temperature	-40℃~+55℃
Storage Temperature	-40℃~+100℃
Mechanical Dimensions(mm)	352(L)×175(W)×139(H)
Net Weight	6.33kg

### LED Indicator

Red-Green flash (one second interval)	Battery Disconnected
Red flash (three seconds interval)	Repair Battery
Red flash (one second interval)	<80% Charge Indicator
Yellow flash (one second interval)	>80% Charge Indicator
Green flash (one second interval)	100% Charge Indicator

### Protection Features

1. Thermal Self-Protection: When the internal temperature of the charger exceeds 75℃, the charging current will reduce automatically. If exceeds 85℃, the charger will shutdown protectively. When the internal temperature drops, it will resume charging automatically.
2. Short-circuit Protection: When the charger encounters unexpected short circuit across the output, charging will automatically stop. When fault removes, the charger will

re-start in 10 seconds.

3. Reverse Connection Protection: When the battery is polarity reversed, the charger will disconnect the internal circuit and the battery, the charging will stop and avoid been damaged.

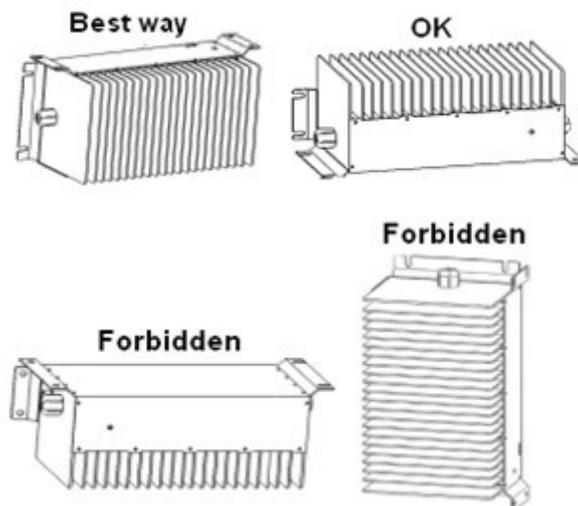
4. Input Low-voltage Protection: When the input AC Voltage is lower than 85V, the charger will shutdown protectively and automatically resume working after the voltage is normal again.

**Alarms**

**Note:**

1. R—red G—green
2. “\_” denotes one second stop
3. Above LED flashing sequence is one cycle, the LED will flash repeatedly when in fault.

Never install in the vertical position with fins facing down.



	LED Flashing Sequence (One Cycle)	Indication
1	R G _ _ _ _ _	Wrong Battery
2	R G R _ _ _ _	Overcharged
3	R G R G _ _ _	Battery Overheated
4	R G R G R _ _	Incorrect AC Input Voltage
5	R G R G R G _ _	External Thermal Sensor Fault
6	R G R G R G R _	Communication Interface Fault
7	G R _ _ _ _ _	Charger Overheated
8	G R G _ _ _ _	Charger Relay Fault; Repair
9	G R G R _ _ _	Charger Fault; Repair

**Choice of Charging Curve (curve 1~10)**

1.The LED will flash red several times when AC is first connected, then the LED will flash green once. The number of red flashes denotes the present curve. E.g. If the red flashes three times, it means the present curve is curve 3.

2.To choose another curve, please cut off the power supply first, then unpeel the label, pressing the button while connecting the power. If you want to choose curve 3, release the button after the 3<sup>rd</sup> LED Flash. Now the selected curve (e.g. curve 3) will be recorded in memory. If you want the charger to work with the selected curve (e.g. curve 3), cut off the power and reconnect it.

3. Factory customizes 10 charging curves before delivery according to customer demand. These are 10 combinations of voltage and battery size for the same battery type.

**Installation & Safety Instructions**

1. Preferably the charger should be installed in the vertical position with radiator fins vertical. A space of 10cm above ground should be open to ensure airflow.

2. Ensure all heat dissipating parts are not obstructed to avoid overheating. Do not put the battery charger near any heat sources. Make sure that free space around the charger is enough to provide adequate ventilation & easy cable socket access.

3. Ensure the consistency between the alternating supply voltage and the allowable voltage input of the charger. Please approach a retailer or local Power Supply Bureau for enquiry.

4. For safety and electromagnetic compatibility, the battery charger has a 3-prong plug that apply to the socket with grounded outlet.

5. If you are using an extension cord for alternating current power supply, make sure that it is affordable to the maximum input current.

6. The voltage-drop between the charger and connection wire of the battery should be as less than 1% of the battery voltage as it can. Otherwise, it affects charging effect possibly. Meanwhile, the diameter of the wire should satisfy the output current value.

7. The thermal compensation probe for the battery voltage must be placed in the area of the highest battery temperature, such as between 2 batteries near the center of the pack.

8.If the charger does not work correctly or if it has been damaged, unplugged it immediately from the supply socket, from the battery and contact a retailer.

9. Do not try to service the charger yourself. Opening the cover may expose you to shock or other hazards.

10. To avoid damaging the power cord, do not put anything on it or place it where it will be walked on. If the cord becomes damaged or frayed, replace it

immediately.

**Installation Dimension(mm)**

