PFC 3000 Battery Charger

Advantages

1. Internal integrated PFC, no pollution to electric network, prevent 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 efficiency, above 93%, while traditional chargers can meet only about 80% efficiency.
4. Intelligent temperature compensation function in the charging process, preventing damage to the battery caused by charge-off or charge due, greatly extending the lifespan of the battery.
5. Fully-sealed and water-proof, protection class IP65. 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 kind of batteries like Lead-Acid, LiFePO4 etc., Flexible and programmable charging module. Memory to store 10 unique algorithms with ability to switch between algorithms. Equipped with CAN communication interface to realize real-time communication with BMS.

Specifications

Spec Model	Output Voltage -Nominal	Output Voltage -Maximum	Output Current -Maximum 230vac	Output Current -Maximum 115vac
TCCH-24-80	24V	34V	80A	A
TCCH-36-60	36V	51V	60A	A
TCCH-48-50	48V	68V	50A	A
TCCH-60-40	60V	85V	40A	A
TCCH-72-32	72V	102V	32A	A
TCCH-96-24	96V	136V	24A	A
TCCH-120-20	120V	170V	20A	A
TCCH-144-16	144V	203V	16A	A
TCCH-156-14	156V	217V	14A	A

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
EnvironmentalEnclosure	IP65
Operating Temperature	-40°C +55°C
Storage Temperature	-40°C +100°C
Mechanical Dimensions	352mm×252mm×168mm
Net Weight	10.24kg

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°C, the charging current will reduce automatically. If exceeds 85°C, 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.

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 3rd 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.

Alarms

	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

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.

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. Never install in the vertical position with fins facing down.

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 tothe 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.

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