

# 4000W HF/PFC Battery Charger



## ADVANTAGES

1. Internal integrated PFC, no pollution to electric network, protect 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 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 kinds batteries like lead-acid, LiFePO4 battery etc., Flexible and programmable of the charging module. Memory to store 10 unique algorithms. Equipped with CAN communication interface to realize real-time communication with BMS.

## 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.

## 4000W HF/PFC Battery Charger

### TECHNICAL TARGET

|   |                                  |
|---|----------------------------------|
| AC Input Voltage Range                        | AC85V~AC265V                     |
| AC Input Frequency                            | 45~65 Hz                         |
| AC Power                                      | ≥0.98                            |
| Full Load Efficiency                          | ≥93%                             |
| Mechanical Shock & Vibration Resistance Level | Conformance to SAEJ1378 Standard |
| Environmental Enclosure                       | IP65                             |
| Operating Temperature                         | -40°C~+55°C                      |
| Storage Temperature                           | -40°C~+100°C                     |
| Mechanical Dimensions (mm)                    | 365(L) x 352(W) x 139(H)         |
| Net Weight                                    | 13.80kg                          |

### SPECIFICATION

| Model       | Output Voltage Nominal | Output Voltage Maximum | Output Current Maximum |
|-------------|------------------------|------------------------|------------------------|
| TCCH-48-70  | 48V                    | 66V                    | 70A                    |
| TCCH-60-60  | 60V                    | 83V                    | 60A                    |
| TCCH-72-50  | 72V                    | 96V                    | 50A                    |
| TCCH-84-42  | 84V                    | 112V                   | 42A                    |
| TCCH-96-36  | 96V                    | 130V                   | 36A                    |
| TCCH-108-32 | 108V                   | 145V                   | 32A                    |
| TCCH-120-30 | 120V                   | 168V                   | 30A                    |
| TCCH-144-24 | 144V                   | 192V                   | 24A                    |
| TCCH-156-22 | 156V                   | 208V                   | 22A                    |
| TCCH-168-20 | 168V                   | 233V                   | 20A                    |
| TCCH-180-18 | 180V                   | 243V                   | 18A                    |
| TCCH-192-18 | 192V                   | 258V                   | 18A                    |
| TCCH-216-16 | 216V                   | 289V                   | 16A                    |
| TCCH-240-14 | 240V                   | 337V                   | 14.4A                  |
| TCCH-288-12 | 288V                   | 389V                   | 12A                    |
| TCCH-312-11 | 312V                   | 417V                   | 11A                    |

### 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 |

### ALARMS

|   | LED Flashing Sequence (One Cycle) | Indication                    |
|---|-----------------------------------|-------------------------------|
| 1 | RG_ _ _ _ _                       | Wrong Battery                 |
| 2 | RGR_ _ _ _ _                      | Overcharged                   |
| 3 | RGRG_ _ _ _                       | Battery Overheated            |
| 4 | RGRGR_ _ _                        | Incorrect AC Input Voltage    |
| 5 | RGRGRG_ _                         | External Thermal Sensor Fault |
| 6 | RGRGRGR_                          | Communication Interface Fault |
| 7 | GR_ _ _ _ _                       | Charger Overheated            |
| 8 | GRG_ _ _ _ _                      | Charger Relay Fault; Repair   |
| 9 | GRGR_ _ _ _                       | 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.

#### 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.
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.