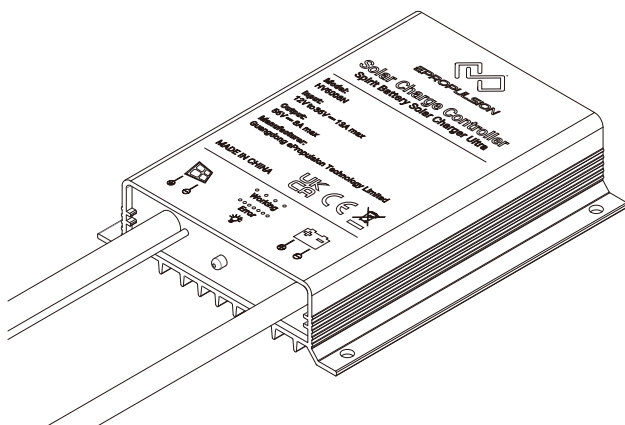


Solar Charge Controller Manual

Suitable for Spirit Battery Ultra



Introduction

Thank you for purchasing ePropulsion Solar Charge Controller. This solar charge controller is specially designed for SPIRIT Battery Ultra. Fast Maximum Power Point Tracking (MPPT) technology (efficiency $\geq 99.9\%$) precisely positions the maximum power point of PV cells thus drawing more Photovoltaic energy. With improved system efficiency, the charging conversion efficiency reaches as high as 90%. The controller is not only designed to work perfectly with a wide variety of solar panels with input voltage $\leq 36V$ eg. ePropulsion Foldable Solar Panel, but also can get power from other sources with input voltage of 12V DC.

EU Declaration of Conformity

We Guangdong ePropulsion Technology Limited, hereby, declares that this equipment is compliance with the applicable Directives and European Norms, and amendments.

Object of the Declaration:

Product: Solar Charge Controller

Model: HV6008N

The object of the declaration is in conformity with the following directives and regulation:

Electromagnetic Compatibility (EMC) Directive 2014/30/EU

Restriction of Hazardous Substances Directive 2011/65/EU and Delegated Directive (EU) 2015/863

EC REACH Regulation (EC 1907/2006)

Regulation on General Product Safety 2023/988



Applied Standards:

EN IEC 61000-6-3:2021

EN IEC 61000-6-1:2019

This declaration of conformity is issued under the sole responsibility of the manufacturer:
Guangdong ePropulsion Technology Limited.

Address: Room 801, Building 1, 11 Daxue Road, Songshan Lake, Dongguan, Guangdong Province, Chinaa

Signature: 陶师正

Date: 2026.1.20

Shizheng Tao, Chief Executive Officer & Cofounder of
Guangdong ePropulsion Technology Limited

FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Disposal and environment

This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

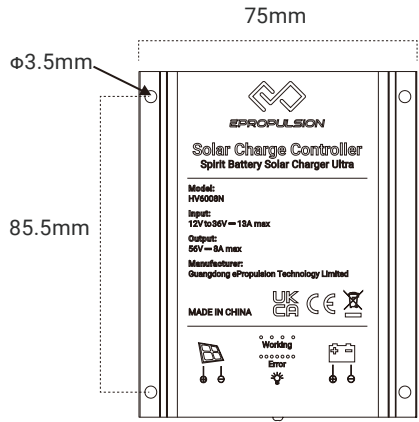


Specifications

Battery	
Rated system voltage	56V
Charging Voltage Range	40~56V
MPPT Charging Voltage @ 25 C	≤56V
CV Charging Voltage @25 C	56V
Maximum CC Charging Current	8A
PV	
Power	400W
Maximum Input Charging Current	13A
Open Voltage	<45V
MPPT Tracking Range	10.5V≤Vp≤36V
System	
MPPT Efficiency	99%
Power Consumption	< 15mA
Temperature Protection	>70°C
Storage/Operation Temperature	-35 to 65°C
Storage/Operation Humidity	65%±25%RH
Altitude	3000m
Protection Grade	IP67
Certification	CE-EMC ROHS FCC-SDOC UKCA-EMC UKCA-ROHS
Power Display	1 Bi-colored LED
Weight	403g
Dimensions	100X82X23.5mm
12V Cable length	Appro X 1.3m

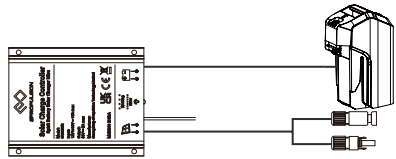
Installation Instructions:

Remove the rubber strip and fix the Solar Charger with screws.



Operations

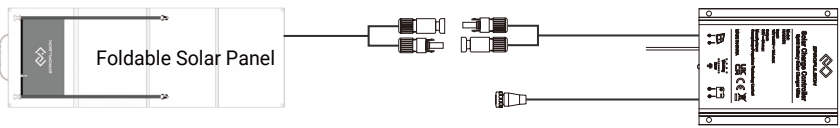
Step 1: Connecting to SPIRIT Battery Ultra.



Step 2: Connecting to Power Source

a. Connecting to a Solar Panel

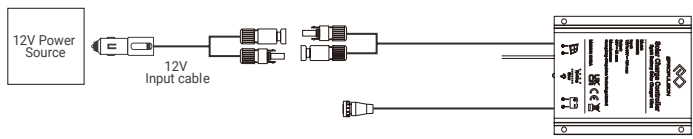
Connect the solar charge controller to the solar panel.



💡 Input voltage of solar panel should be $\leq 36\text{V}$

b. Connecting to 12V Power Source

First Connect the solar charge controller with the 12V Input Cable, then connect the 12V Input Cable to the 12V power source on your boat or car.



- 💡 If the red light blinks slowly when well connected, it indicates the charger is in charging mode. When fully charged, the light turns steady red.
- 💡 The maximum input charging current is 13A, so if connected to a 12V power source, the maximum input power will be 156w.

LED Indicator

There is a bio-colored LED indicating mode of the solar charger.

LED Color	LED Status	Mode
Red	Flashing Light slowly	Working
	Flashing Light quickly	Error

Notes

- Do not puncture, throw, drop, bend or modify the Solar Charge Controller.
- The controller should be used in well ventilated, dry, particle free environment.
- The controller should avoid direct sun exposure.
- The aluminum case is an important means of heat dissipation, thus should not be covered.
- Opening the housing of the charger without prior written consent of the manufacturer voids the manufacturer's warranty immediately.

Warranty

ePropulsion Solar Charge Controller is guaranteed against any manufacturing defects for TWO years from date of delivery of products to end customers.

Free warranty is only validated upon the presentation of legal serial number, Warranty Card, and evidence of purchase from an authorized ePropulsion dealer.

Conditions:

Valid date of purchase should be established by the first-hand purchaser with original sales slip.

Free warranty is not transferable and will not be reissued.

The warranty is valid only when the information is correct and complete.

Warranty does not cover:

Minor faults producing no influence on the intended function of the product.

Faults resulting from any improper operation that contradicts the user manual.

Accessories supplied with the product.

Damage caused by accident, misuse or unauthorized repair.

Damage caused by dropping, improper care or storage.

If warranty expires, users can still enjoy maintenance services from ePropulsion authorized dealers with minimum maintenance charge.

Packing List

Item	Qty.
Solar Charge Controller	1 Set
12V Input Cable	1 PC
Manual	1 PC
MC4 Connector Spanner	1 PC

ePropulsion

(*In order to validate warranty, please fill in this form first and read the Warranty Policies.)

|| OWNER INFO. ||

Owner Name			
Address			
Phone		Email	

|| DEALER INFO. ||

Store Name			
Address			
Phone		Email	

|| PRODUCT INFO. ||

Date of Purchase (mm/dd/yyyy)	
Serial No.	



Thanks for reading this user manual.

If you have any concerns or find any problems while reading, please don't hesitate to contact us. We are delighted to offer service for you.

Guangdong ePropulsion Technology Limited

Webseite: www.epropulsion.com

E-Mail: service@epropulsion.com