

## 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 purchase.

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.

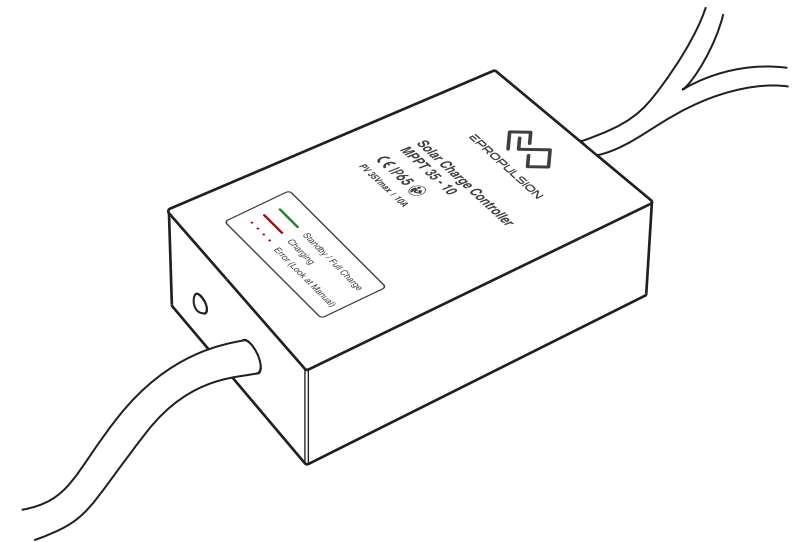
Damage caused by dropping, improper care or storage.

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

# Solar Charge Controller Manual

## MPPT 35 - 10

### Suitable for SPIRIT Battery Plus



## Packing List

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

Please read this manual carefully before use.

## Introduction

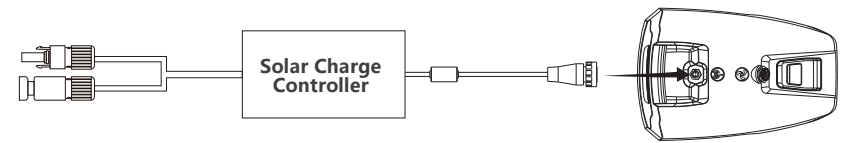
Thank you for purchasing ePropulsion Solar Charge Controller. This solar charge controller is specially designed for SPIRIT Battery Plus. Fast Maximum Power Point Tracking (MPPT) technology (efficiency  $\geq 99.9\%$ ) precisely positions the maximum power point of PV cells thus drawing more Photovoltaic 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  $\leq 35V$  eg. ePropulsion Foldable Solar Panel, but also can get power from other sources with input voltage of 12V DC.

## Specifications

Battery	
Rated system voltage	52.2V
Charging Voltage Range	39 ~ 52.2V
MPPT Charging Voltage @25 °C	$\leq 52.2V$
CV Charging Voltage @25 °C	52.2V
Maximum CC Charging Current	3A
PV	
Power	180W
Maximum Input Charging Current	10A
Open Voltage	$\leq 35V$
MPPT Tracking Range	$12V \leq V_p \leq 35V$
System	
MPPT Efficiency	$\geq 99.9\%$
Power Consumption	$< 20mA$
Temperature Protection	$> 80^\circ C$
Storage/Operation Temperature	$-35 \sim 60^\circ C$
Storage/Operation Humidity	$65\% \pm 25\% RH$
Altitude	3000m
Protection Grade	IP65
Certification	CE
Power Display	
	1 Bi-colored LED
Weight	
	1.25kg
Dimensions	
	$153 \times 101 \times 49 \text{ mm}$
12V Cable length	
	Approx. 0.5m

## Operations

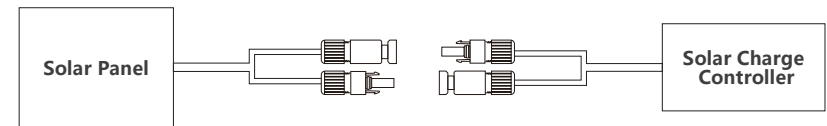
### Step 1: Connecting to SPIRIT Battery Plus.



### Step 2: Connecting to Power Source

#### a. Connecting to a Solar Panel

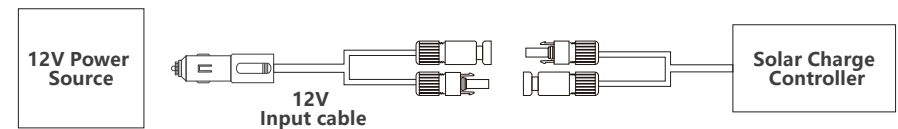
Connect the solar charge controller to the solar panel.



💡 Input voltage of solar panel should be  $\leq 35V$

#### 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 when well connected, it indicates the charger is in charging mode. When fully charged, the light turns steady green.

💡 The maximum input charging current is 10A, so if connected to a 12V power source, the maximum input power will be 120w.

## LED Indicator

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

LED Color	LED Status	Mode
Green	Steady light	Standby / Fully Charged
Red	Flashing Light	Abnormal
Red	Steady Light	Charging