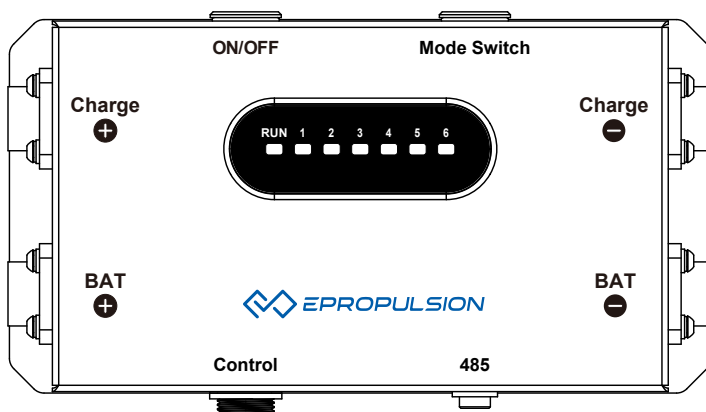


E Battery External Controller



MODEL: BEC4850
Suitable for E Battery

2024.11 Version 1.3

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Introduction

Thank you for purchasing ePropulsion E Battery External Controller.
This Controller is specially designed for E Battery and E Battery Solar Charger.

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:

Product: E Battery External Controller
Model: BEC4850

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

Electromagnetic Compatibility (EMC) 2014/30/EU
RoHS 2.0 Directive(RoHS) 2011/65/EU and 2015/863EU

Applied Standards:

EN IEC 61000-6-1:2019
EN 61000-3-3:2013+A1:2019+A2:2021
EN IEC 61000-3-2:2019/A1:2021
EN IEC 61000-6-3:2021



Manufacturer

Name: Guangdong ePropulsion Technology Limited
Address: Room 801, Building 1, 11 Daxue Road, Songshan Lake, Dongguan, Guangdong Province, China

Signature:  Date: 2024.9.3
Shizheng Tao, Chief Executive Officer & Cofounder of Guangdong ePropulsion Technology Limited

Statement

Operation is subject to the following three 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.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with

the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

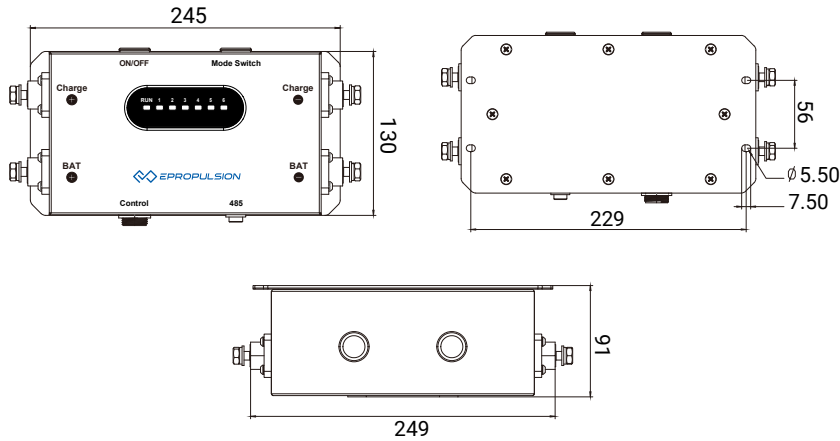
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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.

Interface description






Specifications

| | |
|-----------------|-------------------|
| Voltage range | 41.6 - 57.6 VDC |
| Maximum current | 50A |
| Weight | 2300 g |
| Dimensions | 245 x 130 x 91 mm |

Important Notes:

According to research in the UK, the average amount of sunlight per day is around 2.5 hours. This can vary depending on location, but it's the overall average. Based on this, we recommend a minimum panel output of 250Wp per battery, with an optimal output of 400Wp or more per battery.

Warning:

-  Do not reverse the positive and negative poles of the External Controller.
-  Before connecting the External Controller with the third party product, please contact ePropulsion authorized distributor.
-  If the E battery is charged by the solar charger without a communication cable, it may not be fully charged to 100%.


Packing List

| Item | Qty. |
|--------------------------------------|-------|
| E Battery External Controller | 1 pcs |
| E Battery External Controller Manual | 1 pcs |

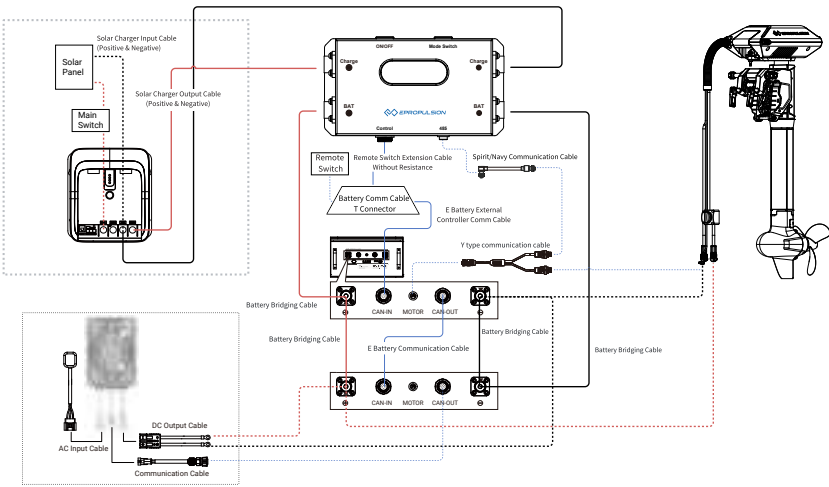
Operations

 **Recommendation:** Charge the system via shore power after every five cycles.

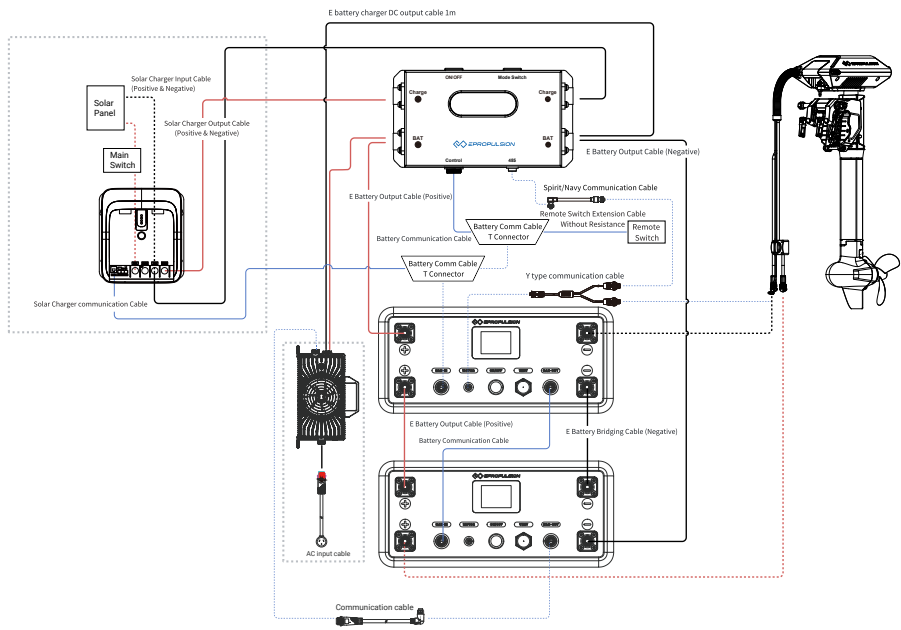
Wiring Guide

 If you are unsure about wiring the system, do not attempt it yourself.

Connect E40/E80/E175




Connect E60/E163



💡 For different E battery connections, you will need to purchase the following additional materials:

| Connection | Item | | NO. | Qty | Note |
|-------------------------------|--|------------|------------|-----|---|
| Connect E40/E80/ E175 | Battery Remote Switch 5m | | EB-AC02-01 | 1 | To connect the remote switch, you need to prepare |
| | Battery Comm Cable T Connector | | EB-AC05-00 | 1 | |
| | Remote Switch Extension Cable Without Resistance | | / | 1 | It is needed to connect the remote switch, which is included in the E Battery Solar Charger 48V 1600W |
| | E Battery External Controller Comm Cable | | 00-0601-50 | 1 | / |
| | Spirit/Navy Y Type Communication Cable 0.3m | | 00-0601-12 | 1 | / |
| | Spirit/Navy Communication Cable | | 00-0601-01 | 1 | / |
| | Battery Bridging Cable | 0.5m | 00-0601-28 | 4 | / |
| | | 1.0m | 00-0601-29 | | |
| | | 2.0m | 00-0601-30 | | |
| E Battery Communication Cable | 1.5m | 00-0601-10 | 1 | / | |

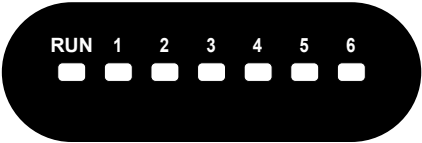
| Connection | Item | | NO. | Qty | Note |
|------------------|--|-------|------------|-----|---|
| Connect E60/E163 | Battery Remote Switch 5m | | EB-AC02-01 | 1 | Non-essential |
| | Battery Comm Cable T Connector | | EB-AC05-00 | 2 | At least prepare 1pcs To connect the remote switch, you need to prepare 2pcs |
| | Remote Switch Extension Cable Without Resistance | | / | 1 | It is needed to connect the remote switch, which is included in the E Battery Solar Charger 48V 1600W |
| | Solar Charger communication Cable | | / | 1 | Included in the E Battery Solar Charger 48V 1600W |
| | E Battery Output Cable (Positive & Negative) | 1.5m | EB-CP04-00 | 1 | / |
| | Spirit/Navy Y Type Communication Cable 0.3m | | 00-0601-12 | 1 | / |
| | Spirit/Navy Communication Cable | | 00-0601-01 | 1 | / |
| | E battery charger DC output cable 1m | 1m | 00-0601-69 | 1 | / |
| | E Battery Bridging Cable (Positive & Negative) | 0.45m | EB-CP01-00 | 1 | / |
| | | 1.5m | EB-CP02-00 | | / |
| | | 5.0m | EB-CP03-00 | | / |
| | Battery Communication Cable Kit | 0.5m | EB-CP10-00 | 2 | / |
| | | 1.5m | EB-CP11-00 | | / |
| | | 5.0m | EB-CP12-00 | | / |

1. Connecting to E Battery, E Battery Solar Charger and NAVY.
 2. For turning on the controller, please press and hold the power button on the controller for 1 second (no more than 3 seconds). In this case, the controller is in Standby Charge Mode by default.
-  You can also turn on the system using the power button on the battery or the remote switch. In this case, the controller is in Mode 1 (No Control Mode) by default.
3. For switching modes of the controller, please press and hold the mode switch button on the controller for 1 second (no more than 3 seconds).
 4. For turning off the controller, please press and hold the power button on the battery for 3 seconds, then the system will turn off automatically.

Modes

- Mode 1 (No Control Mode) : For normal vessel operation. In this mode, the battery will charge and discharge at the same time.
- Mode 2 (Standby Charge Mode) : Use this mode when the boat is left idle for more than one hour. It optimises battery charging.
- For additional modes, please refer to the manual.

LED Indicator



| Item | Indicating method | Description |
|------|--------------------------|---|
| RUN | / | The steady light is for the controller to work, the flash light is for the battery communication lost |
| 1 | No Control Mode | Turn on the system using the power button on the battery or the remote switch. In this mode, the controller will not control the system. |
| 2 | Standby Charge Mode | Keep the battery power on until the battery is fully charged and automatically turn off the battery, In this mode, when the charging current is less than 2A and exceeds 10 minutes, the controller will control the battery to shut down for 1 hour and then restart to detect the charging current. When the charging current is greater than 2A, the controller will keep charging. The system will shut down when the battery is fully charged. |
| 3 | Standby Discharge Mode A | Turn the battery on to discharge for 1 hour and then turn it off for 1 hour, repeating the cycle until the battery is less than 10%. |
| 4 | Standby Discharge Mode B | Turn the battery on to discharge for 3 hours and then turn it off for 6 hours, repeating the cycle until the battery is less than 10%. |

| Item | Indicating method | Description |
|------|--------------------------|---|
| 5 | Standby Discharge Mode C | Turn the battery on to discharge for 6 hours and then turn it off for 12 hours, repeating the cycle until the battery is less than 10%. |
| 6 | Standby Discharge Mode D | Turn the battery on to discharge for 8 hours and then turn it off for 24 hours, repeating the cycle until the battery is less than 10%. |

Notes



If you want the battery to be fully charged and automatically shut down to save power, please switch to the Standby Charge Mode before leaving the boat.



If you want the battery to automatically turn on and use electricity, please switch to the Standby Discharge Mode before leaving the boat.

Warranty

ePropulsion E Battery External 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.

WARRANTY CARD

(*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

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E-Mail: service@epropulsion.com