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Technical Support and E-Warranty Certificate

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PV COMBINER BOX

Model: SP-HL-P202010-10A

SP-HL-P202010-15A

SP-HL-P281913-15A

We continue to be committed to provide you tools with competitive price.

"Save Half", "Half Price" or any other similar expressions used by us only represents an estimate of savings you might benefit from buying certain tools with us compared to the major top brands and does not necessarily mean to cover all categories of tools offered by us. You are kindly reminded to verify carefully when you are placing an order with us if you are actually saving half in comparison with the top major brands.

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NEED HELP? CONTACT US!

Have product questions? Need technical support? Please feel free to contact us:


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This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves a clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.


| | |
|--|--|
|  | <p>Warning-To reduce the risk of injury, user must read instructions manual carefully.</p> |
|  | <p>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.</p> |
|  | <p>This product is subject to the provision of European Directive 2012/19/EC. The symbol showing a wheelie bin crossed through indicates that the product requires separate refuse collection in the European Union. This applies to the product and all accessories marked with this symbol. Products marked as such may not be discarded with normal domestic waste, but must be taken to a collection point for recycling electrical and electronic devices</p> |





Identification and Description

In order to better use product,please read the following instructions symbol:

| | |
|---|--|
|  | <p>WARNING! This symbol identification for informal operation might be in the safety of users dangerous or may cause significant hardware damage.</p> |
|---|--|

Installation before use, please read this manual.

| | |
|---|---|
|  | <p>WARNING! All the operation and line connection ask professional personage to operation.</p> |
|---|---|

| | |
|---|--|
|  | <p>WARNING! Please pay attention to personal and equipment safety.</p> |
|  | <p>WARNING! Please note that photovoltaic array input of positive and negative polarity and the total output of the positive and negative polarity.</p> |
|  | <p>WARNING! Installation or connection pv modules, please note pv modules high voltage, avoid produce shock hazard.</p> |
|  | <p>WARNING! Ensure that the connection of fastening, for the user to use improper or cable wiring the loss caused by unstable, vevor company does not undertake any responsibility.</p> |

Product Introduction

Photovoltaic power generation system, in order to reduce the photovoltaic module and inverter between the connecting cables, convenient maintenance, reduce the loss and improve the safety and reliability of the product, generally require in the photovoltaic module and inverter added between confluence device.

Photovoltaic junction box besides having the function of pv bus outside, and at the same time, should also have a current counter-attack, over current protection, over-voltage protection, lightning protection and a series of perfect protection function.

This company produces the photovoltaic junction box with the above various functional requirements, and photovoltaic (PV) grid, from network type inverter supporting the use can form a complete set of photovoltaic power generation system solutions.

Select photovoltaic junction box, the user can according to the back end inverter input voltage range, output power size, a certain number of specifications of the same pv module series, parallel composition pv module series coordinate access photovoltaic junction box (see Figure1) bus, and then after circuit breaker control and lightning protection device protection after output for level inverter use.

Figure 2 showed related parts and its specification.

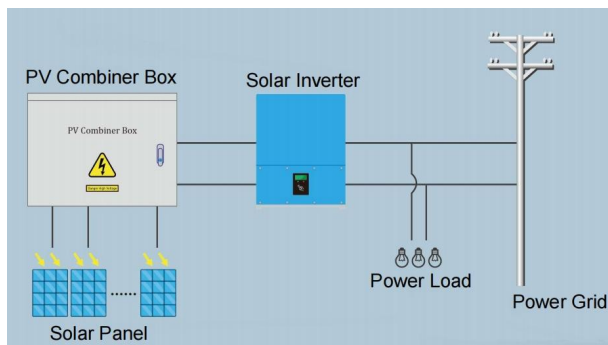


Figure 1

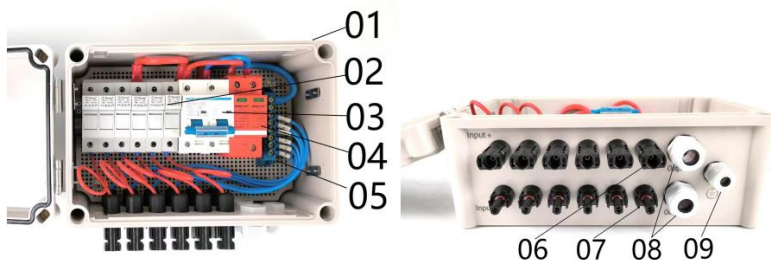


Figure 2

01---Waterproof Plastic Box

02---4pcs/6pcs DC500V Fuse holder with 10/15A fuse

03---63A/125A 2P DC500V MCB

04---SU6-40KA 2P DC500V SPD

05---Neutral Bar

06---4pcs/6pcs Solar Female Connector

07---4pcs/6pcs Solar Male Connector

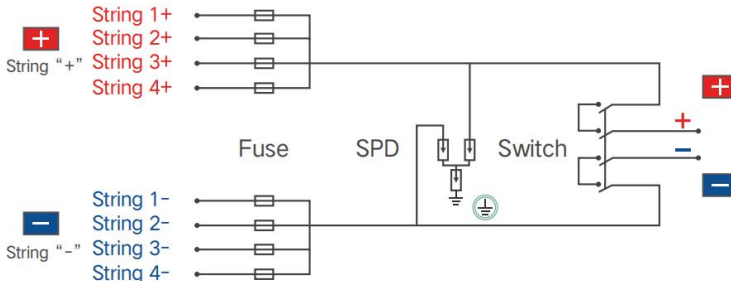
08---2pcs Output PG16 Cable Gland

09---Earthing PG9 Cable Gland

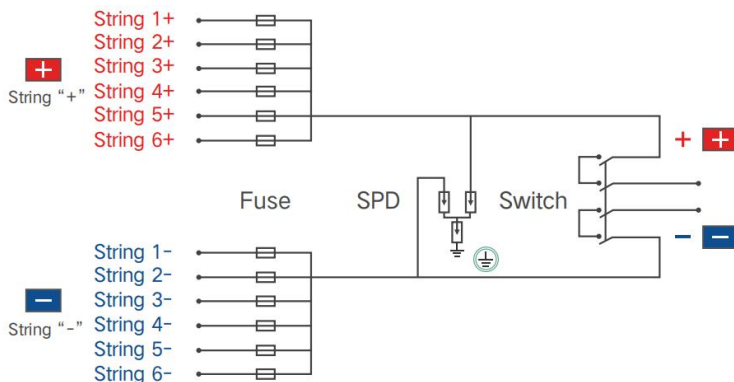
Production Specification

| Model | SP-HL-P20201 0-10A | SP-HL-P20201 0-15A | SP-HL-P28191 3-15A |
|-----------------------------|-----------------------|-----------------------|-----------------------|
| PV array input numbers | 4 | 4 | 6 |
| Max single PV array current | 10A | 15A | 15A |
| Single PV array fuse | 10A | 15A | 15A |
| Single PV array wire size | 2.5mm ² | | |
| Output numbers | 1 | | |
| Max output current | 40A | 60A | 90A |
| Output wire size | 10mm ² | 10mm ² | 16mm ² |
| Max output voltage | 500VDC | | |
| DC output circuit breaker | yes | | |
| Protection level | IP66 | | |
| Temperature range | -30 °C ~ +60 °C | | |
| Cooling way | Natural cooling | | |
| SPD protection | yes | | |
| Ground wire size | ≥2.5mm ² | | |

SP-HL-P202010-10A and SP-HL-P202010-10A 4 input 1 output PV combiner box wiring diagram as follows:



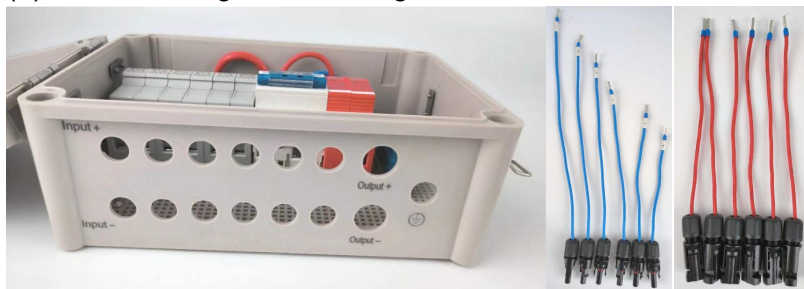
SP-HL-P281913-15A 6 input 1 output PV combiner box wiring diagram as follows:

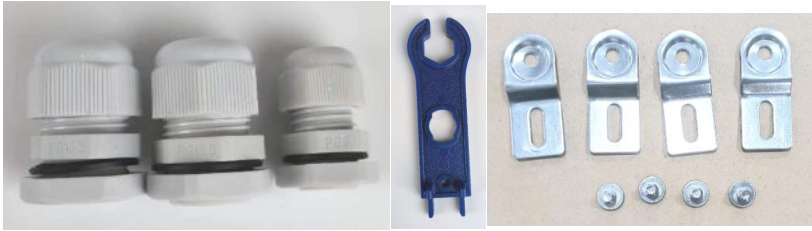


PV Combiner Box Assembly Process

1. Accessories list:

- (1) half-finished PV combiner box---1pcs;
- (2) Input- MC4 male connector with cable----4pcs(for 4ways PV combiner box)/6pcs(for 6ways PV combiner box);Tips:each cable is different length,there have number label on each cable,notice to distinguish.
- (3) Input+ MC4 female connector with cable----4pcs(for 4ways PV combiner box)/6pcs(for 6ways PV combiner box);Tips:each cable keep same length.
- (4) Output+ PG13.5 cable gland--1pcs;
- (5) Output- PG13.5 cable gland--1pcs;
- (6) Earthing PG9 cable gland--1pcs;
- (7) MC4 tool---1pcs;
- (8) Wall mounting brackets bag---1set;





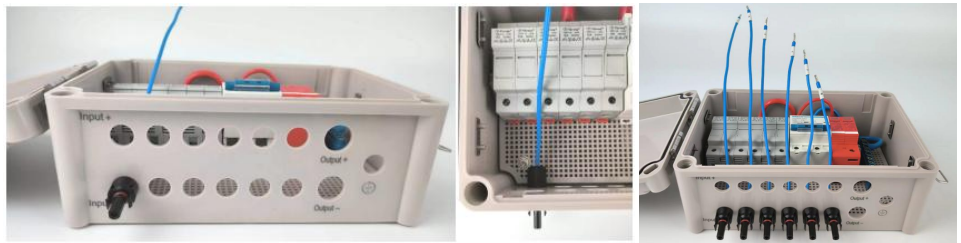
2. Preparatory work

- (1) Loose Input- MC4 female connector's mounting nut;
- (2) Loose Input+ MC4 female connector's mounting nut;
- (3) Loose 3pcs cable glands' mounting nut;
- (4) Loose terminal block's input terminals,make sure the following wiring process easy to fix;
- (5) Loose fuse holders' input fix screws,make sure the following wiring process easy to fix;



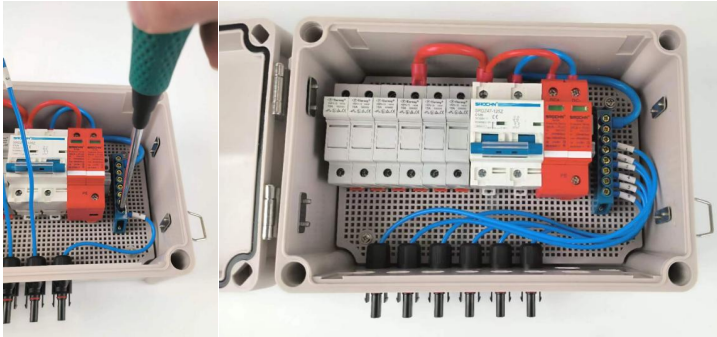
3. Wiring Input- MC4 male connector with cable

- (1) Mounting No.1 cable on the picture 8 showed position,fix with nut;
- (2) Mounting the rest of cables on the picture 9 showed position,fix with nut.the cable number from left to right shall is No.1-No.6;



- (3) Wiring No.6 cable with terminal block's position No.1;

(4) Wiring the rest of cables as (3) process step by step, the final status as follows picture showed.

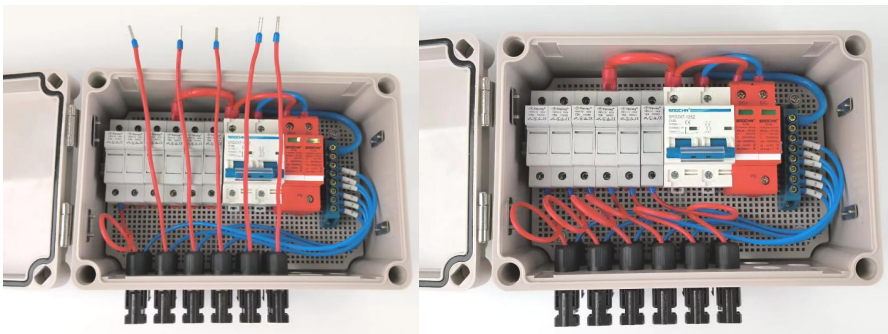


4. Wiring Input+ MC4 female connector with cable

- (1) Mounting No.1 cable on the picture 12 showed position, fix with nut;
- (2) Mounting the rest of cables on the picture 13 showed position, fix with nut.



- (3) Wiring No.1 cable with No.1 fuse holder, fix the fuse holder screw;
- (4) Wiring the rest of cables as (3) process step by step, the final status as follows picture showed.



5. Mounting output cable glands and earthing cable gland.

- (1) Mounting 2pcs PG13.5 cable glands on marked 2 positions;
- (2) Mounting 1pcs PG9 cable gland on marked position, the final status as follows picture showed



Tips: for 4ways PV combiner box, here have some different steps on wiring Input- MC4 male connector with cable compare with 6ways PV combiner box. the rest of process keep same.

- (1) Open terminal block's cover as follows:

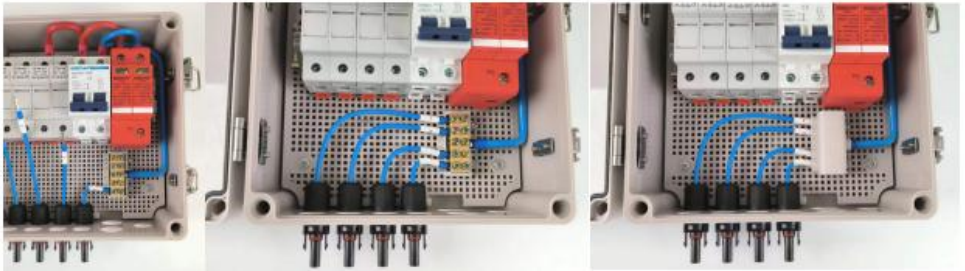


- (2) Mounting 4pcs Input- MC4 male connector with cable and fix with nut as same as the above process;



(3) Wiring No.4 cable with terminal block's position No.1;

(4) Wiring the rest of cables as (3)process step by step,close the terminal block cover,the final status as follows showed.



Installation & Use

Installation: Adopts matched screws fix 4 mounting buckles on box back side's 4 holes.Users can select correct position mount the combiner box on the wall or panel.

Fast connection

(1) In order to improve the connection of rapidity and convenience, use key to open the door of combiner box ,the photovoltaic array input wire connected to the corresponding terminal,pay attention to the photovoltaic array input line of the positive and negative polarity connection.

(2) The combiner is a independent one sets of photovoltaic array input/output design,through reasonable photovoltaic array input connection, output power will be one way, to match the one way independent input controller is used.

(3) When users connection system, please make sure that all the lines and equipment is reliable.

Over-current protection

When the pv module input current is too large, the fuse will break for protection; In addition, miniature circuit breaker also can prevent the system from current is too large, have over-current protection function.



WARNING!

It is strictly prohibited to work in touch fuse, inspection or replacement is required before the fuse will dc circuit breaker off; Must be replaced with the original model of the same magnitude fuse.

Over-voltage protection

When the pv module input voltage is high, the miniature circuit breaker will automatically disconnect, have overvoltage protection function.

Appendix

Quality assurance

This product quality assurance period 1 year, otherwise stipulated in the contract period of the contract shall prevail.

Evidence

Products in the quality assurance period require customers to buy the products show the invoice and date. At the same time the product of the trademark shall be clearly visible, or shall have the right to not be quality assurance.

The following situation, this company has the right to not to quality assurance:

1. Man-made damage to the equipment
2. Wrong installation and use
3. When using the maximum limit parameters beyond equipment requirements;
4. Abnormal natural environment damage caused;
5. Beyond that in this manual are very bad environment operation;
6. Beyond the relevant international standards specified in the installation and use of range.

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