

PV Logic[®] SlimEdge MHD

User manual



SlimEdge MHD Rigid Solar Panels

100W/120W/150W/200W

PV Logic SlimEdge MHD Rigid kit contents

Letters after item descriptions refer to the picture below.



Panels

Basic kits are available with the following contents:

STPT100

1 x 100W Solar panel (a) 1 x 3m cable 1 x Fuse holder and fuse (b) 1 x User manual (c)

STPT120

1 x 12OW Solar panel (a) 1 x 3m cable 1 x Fuse holder and fuse (b) 1 x User manual (c)

STPT150

1x150W Solar panel (a) 1x3m cable 1x Fuse holder and fuse (b) 1x User manual (c)

STPT200

1x 200W Solar panel (a) 1x 4m cable 1x Fuse holder and fuse (b) 1x User manual (c)

Panel options

The panels listed are available with the following added options:

1. With Charge Controller

In addition to the panel contents noted to the left, a 10A PWM charge controller can be added for panels up to 120W. Use the 20A PWM charge controller for the 150W and 200W panels.

Part numbers are as the panels but with the suffix **MA**. Example: STPT100**MA** indicates a 100W panel with a charge controller included.

MPPT controllers are also available as an upgrade option.

2. PV Logic Rooftop Kits

In addition to the panel contents noted to the left, PV Logic Rooftop Kits include the following:

 $1\,x\,\text{PWM}$ charge controller - 10A for panels up to 120W and 20A for the 150W and 200W panels

1 x Scanstrut low-profile water-resistant cable feed gland (e)

1 x Tube of elastic adhesive (f).

Part numbers are the same as the panel contents but with one addition: an **MH** before the number. For example, STPT**MH**100 indicates a rooftop kit.

Charge Controller Upgrade

All PV Logic rooftop kits can be supplied with an upgraded 15A, 20A or 30A MPPT charge controller instead of the standard PWM controller.

MPPT controllers are more efficient at handling variable weather conditions and higher wattage panels.

Part numbers for these kits are the standard rooftop kit with an extra suffix of **PT**. For example, STPT**MH**100**PT** indicates a rooftop kit with a 15A MPPT charge controller (d).

3. Twin Pack Options

This option includes ONLY the solar panels and nothing else. The twin pack contains 2 panels.

The part numbers for these kits are the same as those for the standard panel but with a suffix of **BP**. For example, STPT100**BP** indicates a bulk pack of 2 x 100W solar panels.

Please read all instructions carefully before work begins

IMPORTANT: A charge controller is always required to prevent reverse current feed (at night) and battery overcharging when connecting a solar panel to a battery.







Step 1: Information for fitting as a Roof Top Kit

NOTE: Refer to the adhesive manufacturer's curing time to allow the adhesive to cure properly. We recommend not moving the caravan, motorhome, or boat during this curing period.

- 1.1 Clean the area on your motorhome, caravan, or boat where the panel brackets and the cable feed gland are to be fixed, ensuring they are clean, oil-free, and dry.
- 1.2 Place the panel on the roof position where it is to be fixed, and draw a pencil line around the footprint of the brackets.
- 1.3 Insert the cable trailing from the solar panel junction box into the cable feed gland (ensuring the locking nut is loose) and into the roof's entry hole. Do not fix the cable gland at this stage.
- 1.4 Apply the elastic adhesive (around 6mm thickness is ideal) to the grooved ends of the panel brackets shown in Fig 1. Then turn the panel so that the solar cells face upwards and bond the panel to the roof, positioning the panel brackets inside the previously marked pencil lines.
- 1.5 Pull the cable through the cable feed gland and follow the manufacturer's fitting instructions to fix the gland and form a watertight seal.
- 1.6 The cable can now be channelled into the roof lining, trunking, capping, or similar and down to the charge controller.

Step 2: Connecting cables to the solar charge controller - Note: red = positive (+), black = negative

- 2.1 Position the solar charge controller as close as possible to the battery (it must be in a dry location).
- 2.2 Route the cable from your solar panel to the charge controller position, ensuring it reaches the chosen location with some spare for slack.
- 2.3 Take the loose end of the cable(s) fitted to the solar panel and strip back the black outer insulation 4.5cm. Strip back the insulation of the red and black inner cables 5mm to expose bare wires.
- 2.4 Twist each bare wire end tightly and then insert the cable to the appropriate terminals (A) on the charge controller, observing polarity. Ensure the screws are securely tightened.

Step 3: Fitting the blade fuse holder

NOTE: You will need the appropriate length of 2-core cable (not supplied) to connect the controller via the fuse to the battery, e.g. 1.5mm2 for 100W / 120W panels or 2.5mm2 for 150W / 200W panels.

- 3.1 Strip back the outer insulation of the cable 4.5cm. Now, strip back 5mm of the red and black insulation to reveal the bare wires. Twist each bare wire end tightly and then insert the cable to the appropriate terminals **(B)** on the charge controller, observing polarity. Ensure the screws are securely tightened.
- 3.2 Remove the fuse from the fuse holder.
- 3.3 Strip 20 cm of the outer insulation from the battery end of the cable. Cut the red cable at the halfway point and strip 5mm of the red insulation from both the cut ends. Twist the bare wire ends tightly and fit into the screw terminals **(D)** on the fuse holder using a 1.5mm hex driver/ Allen key.

Step 4: Connecting the cable to your battery

- 4.1 When connecting to a battery, always observe correct polarity. **Note: red = positive (+),** black = negative (-).
- 4.2 Strip back the insulation of the red and black inner cables 5mm to expose bare wires.
- 4.3 Twist the bare wire ends tightly and insert the cable into ring terminals with an 8mm inner hole (not supplied).
- 4.4 Crimp the connectors to the wires and then attach them to the battery using the appropriate bolts.
- 4.5 Refit the fuse into the holder; the controller will power up.

Options

Connecting two or more solar panels together

Should you wish to increase the power and make a solar array or increase the voltage (to produce 24 Volts instead of 12 Volts) this can easily be achieved. Please contact Solar Technology on 01684 774000 and request a copy of our 'Creating a Solar Array' technical bulletin.

Adding a second battery to a dual battery charge controller

Connect a second battery to a dual battery charge controller with an additional piece of appropriate 2-core cable (not supplied) and follow steps 3.1 – 4.5 on the previous page, but connect the battery to terminals (C) in Fig 2. (Don't forget to add a fuse on the positive line as described in steps 3 and 4). Power from the charge controller will be diverted to the second battery only when the primary battery is fully charged.

NOTE FOR MOTORHOMES: The dual battery option is not currently compatible with smart alternators in Euro 5/Euro 6 vehicles made from 2015 onwards.





Warranty

PV Logic SlimEdge MHD rigid solar panels are supplied with a 10-year panel warranty from the date of purchase from Solar Technology International. This warranty guarantees the panel from mechanical failure and water ingress during this period. The warranty is void if the outer layers or edges of the panel have been penetrated, damaged, or cracked or if the recommended handling, storage, installation, and care procedures have not been followed. The warranty is also invalidated if the panel has been abused or not used for the purpose intended.

Neither the manufacturer nor any of its employees, agents, distributors or resellers are liable for any third-party damage howsoever caused. The extent to which the manufacturer is liable to a customer is limited to the purchase price paid by the customer for the product from Solar Technology. We will not accept any costs associated with the return of faulty products. Your statutory rights are not affected.

