

PV Logic[®] Flexi

Step 5: Fitting the fuse

- 5.1 The fuse is fitted on the positive cable (red) on the cable section between the charge controller and the battery.
- 5.2 Cut the red cable and strip 5mm of the red insulation from both the cut ends. Twist the bare wire ends tightly. Fit into the screw terminals on each of the fuse holder pieces.

Step 6: Connecting to the battery

- 6.1 Take the cable end coming from the charge controller, strip the red and black insulation (6cm) from the inner cable ends, twist the bare wire, wrap around the battery terminals and fix into position using your battery clamps.
- 6.2 When connecting to a battery always observe correct polarity.
- 6.3 If a second battery is being connected to the solar system see the instructions contained within the charge controller or, refer to point 8.1.

NOTE: RED = POSITIVE (+) BLACK = NEGATIVE (-)

- 6.4 Refit the fuse into the holder and reassemble the fuse holder. The controller should now be powered up.

Step 7: Testing the system

- 7.1 Testing can also be completed with a digital volt meter. Solar Technology International can supply special test instructions if required – please email orders@solartechtechnology.co.uk

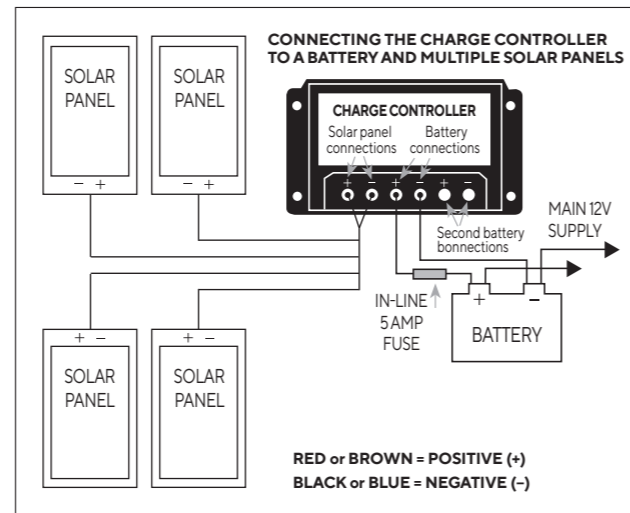
Options

Adding a second battery to a dual battery charge controller

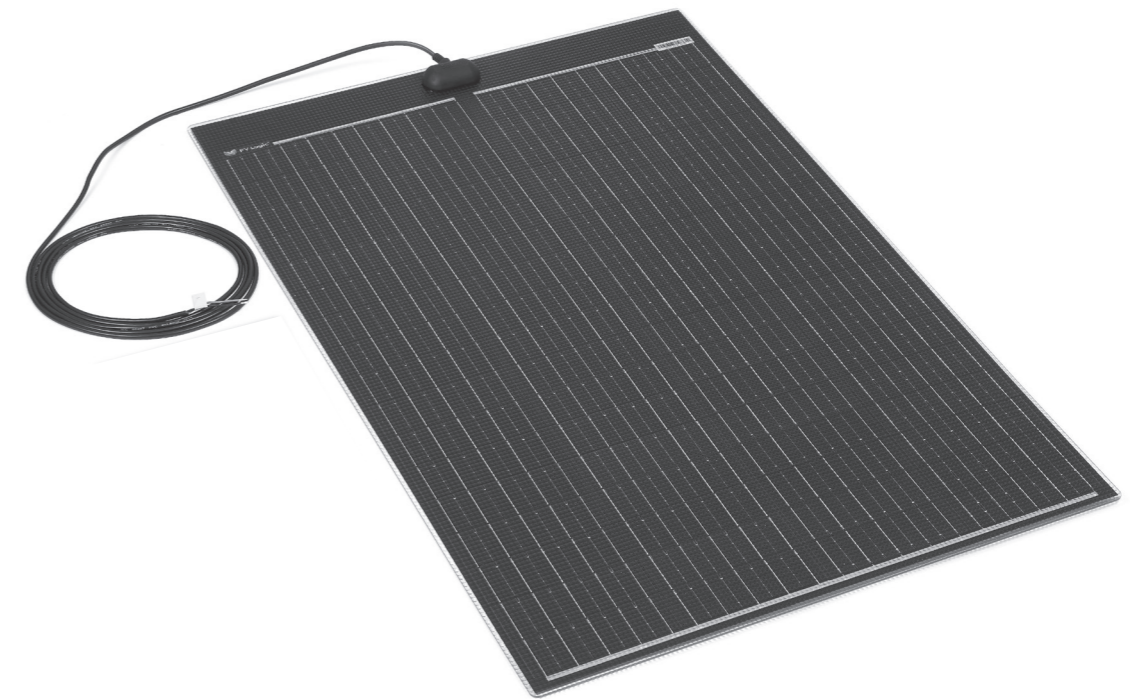
- 8.1 Connect a second battery to the dual battery charge controller terminals **(1)** with an additional piece of 2-core, 1.5mm² cable (not supplied) and follow Steps 1, 2 & 3 above (not forgetting to add a fuse on the positive line as described in Step 2). Power from the charge controller will be diverted to the second battery only when the primary battery is fully charged.

Expanding the Flexi PV system

- 9.1 If multiple panels will be joined to form a mini solar array, please contact orders@solartechtechnology.co.uk for a document titled 'Expanding a solar system' or call the Tech Help Desk on 01684 774000.



User manual



Warranty

PV Logic flexi solar panels are supplied with a two year panel build warranty from the date of purchase from Solar Technology International. This 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 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.

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. We will not accept any costs associated with the return of faulty product.

Semi-Flexible ETFE Solar Panels

55Wp/60Wp/125Wp/180Wp



PV Logic Flexi kit contents

Letters after item descriptions refer to the picture below.

STPVF055ET - 55Wp Solar Panel

1x 55Wp Flexi PV panel with 4m pre-wired cable (a)
1x Fuseholder and fuse (b)

STPVF055ETMA - 55Wp Solar Panel including Charge Controller

As STPVF055ET above but including:
1x 10A Charge controller (c)

STPVFRT055ET - 55Wp Complete Solar Roof / Deck Top Kit

As STPVF055ET above but including:
1x 10A Charge controller (c)
1x Tube bonding agent (d)
1x Waterproof cable feed gland (e)

STPVF060ET - 60Wp Solar Panel

1x 60Wp Flexi PV panel with 4m pre-wired cable (a)
1x Fuseholder and fuse (b)

STPVF060ETMA - 60Wp Solar Panel including Charge Controller

As STPVF060ET above but including:
1x 10A Charge controller (c)

STPVFRT060ET - 60Wp Complete Solar Roof / Deck Top Kit

As STPVF060ET above but including:
1x 10A Charge controller (c)
1x Tube bonding agent (d)
1x Waterproof cable feed gland (e)

STPVF125ET - 125Wp Solar Panel

1x 125Wp Flexi PV panel with 4m pre-wired cable (a)
1x Fuseholder and fuse (b)

STPVF125ETMA - 125Wp Solar Panel including Charge Controller

As STPVF125ET above but including:
1x 20A Charge controller (c)

STPVFRT125ET - 125Wp Complete Solar Roof / Deck Top Kit

As STPVF125ET above but including:
1x 20A Charge controller (c)
1x Tube bonding agent (d)
1x Waterproof cable feed gland (e)

STPVF125RET - 125Wp Solar Panel

1x 125Wp Flexi PV panel with 90cm pre-wired cable and 3m cable (a)
1x Diode box (not shown)
1x Fuseholder and fuse (b)

STPVF125RETMA - 125Wp Solar Panel including Charge Controller

As STPVF125RET above but including:
1x 20A Charge controller (c)

STPVFRT125RET - 125Wp Complete Solar Roof / Deck Top Kit

As STPVF125RET above but including:
1x 20A Charge controller (c)
1x Tube bonding agent (d)

STPVF180ET - 180Wp Solar Panel

1x 180Wp Flexi PV panel with 4m pre-wired cable (a)
1x Fuseholder and fuse (b)

STPVF180ETMA - 180Wp Solar Panel including Charge Controller

As STPVF180ET above but including:
1x 20A Charge controller (c)

STPVFRT180ET - 180Wp Complete Solar Roof / Deck Top Kit

As STPVF180ET above but including:
1x 20A Charge controller (c)
1x Tube bonding agent (d)
1x Waterproof cable feed gland (e)

Special note

The PV Logic Flexi ETFE panels are **NOT** highly flexible. They are designed to fit flush to a surface with a curve of no greater than 3 degrees or 3cm per 1m panel length.

Therefore, when handling the panel during delivery, storage and prior to installation please be very careful not to allow the panel to bend. Once installed, the panel is extremely tough and resilient but before the panel is fitted it is vulnerable to solar cell breakage if the panel bends excessively. Therefore, we recommend using two people to handle the panel and box at all times prior to, and during, installation. Failure to follow this guidance will invalidate the warranty.

STPVF180RET - 180Wp Solar Panel

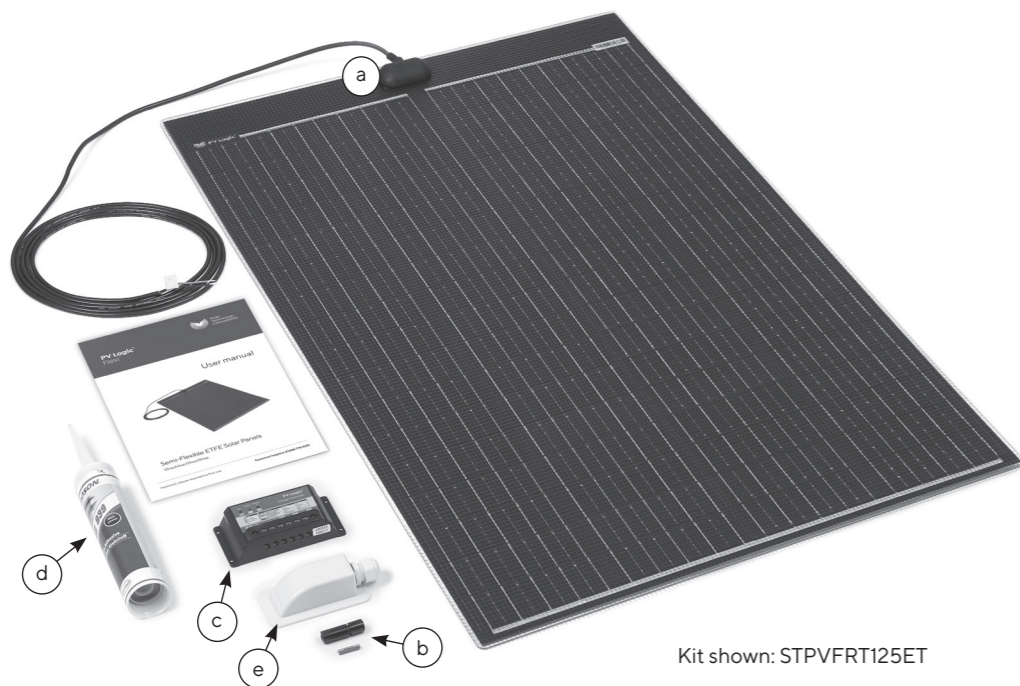
1x 180Wp Flexi PV panel with 90cm pre-wired cable and 3m cable (a)
1x Diode box (not shown)
1x Fuseholder and fuse (b)

STPVF180RETMA - 180Wp Solar Panel including Charge Controller

As STPVF180RET above but including:
1x 20A Charge controller (c)

STPVFRT180RET - 180Wp Complete Solar Roof / Deck Top Kit

As STPVF180RET above but including:
1x 20A Charge controller (c)
1x Tube bonding agent (d)



Kit shown: STPVFRT125ET

Please read all instructions carefully before work begins.

Please refer to circuit diagram and at all times observe correct polarity; POSITIVE = RED (or brown) cable; NEGATIVE = BLACK (or blue) cable.

Step 1: Positioning the Flexi panel(s)

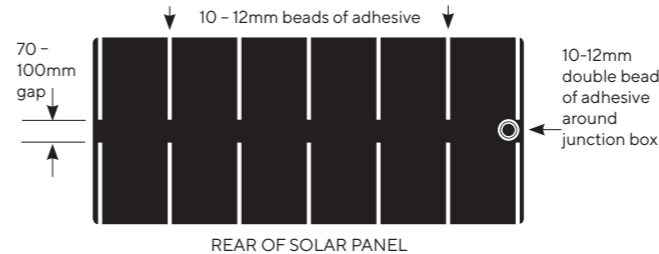
- 1.1 Select a location that is generally free from shade, has a solid surface and is within 3-4m of the charge controller and/or battery. If the Roof Top Kit has been selected please also refer to Step 3.1
- 1.2 If the panel is to be free standing, go to Step 2.
- 1.3 Ensure all panel(s) can be sited close to one another (if a multi panel system has been selected), and that the cables can be correctly positioned. Note - cables from a multi panel system will be all fed directly to the charge controller.
- 1.4 If fixing using a bonding agent prepare the underside of the panel for the adhesive using a light key sandpaper followed by a clean with an alcohol wipe. Mark the area with a pencil line where the panel(s) are to be fixed (the bonding agent is very strong and instantly bonds, so there is **only one chance** to get the location correct). Clean the area well and ensure any grease or other film is removed.

If fitting a panel to a flat roof, run a 10mm thick bead of adhesive (as per the pattern shown below) at about 150mm to 200mm spacing, leaving a 70 to 100mm gap in the centre of the panel. This allows water to exit and air to travel between the roof and panel. Apply even pressure to the panel to compress the adhesive from 10mm to 5mm.

On a ribbed roof use the same method but apply double lines of adhesive on the peak of each rib, leaving the rib base open.

If the panel has a rear cable exit, apply a circle (or two circles if space permits) around the junction box to ensure the roof hole is well sealed.

Please check the manufacturer's recommended curing time if using another bonding agent.



Please note

- Once the panel is fixed to the roof allow the adhesive 24 hours to cure before moving the vehicle.
- Do not put excessive pressure on the roof when bonding panel to surface - a 10mm bead will be compressed to 5mm. Try to avoid pushing down unevenly, apply gentle pressure across the panel when setting the panel down then leave it to set off.

Step 2: Prepare the cable

- 2.1 The black outer sheath should be removed approximately 20mm and the inner red and black cables will be revealed. Remove this sheath and the copper cable will be visible (red is positive and black is negative).
- 2.2 If a charge controller is being used please read Step 4.

Step 3: Fix the cable feed gland (only for roof top kits)

- 3.1 If a roof top kit containing two Flexi panels has been selected a double cable feed gland has been supplied where two cables can fit through each gland grommet.
- 3.2 The cable feed gland is a completely waterproof unit designed to cover a hole that has been drilled to channel the Flexi cable from the outside to inside. The location of the Flexi panel(s) (as discussed in Step 1.1) will have been determined, to a certain extent, by the desired location of the cable feed hole. The cable entry point should allow the cable(s) to be easily routed to the charge controller (if used) and the battery.
- 3.3 Now slacken the feed grommet(s) on the cable feed gland to allow the cable to be easily threaded through it and allow the cable(s) to pass through the drilled hole.

- 3.4 Mark the area around where the gland is to be fixed and squeeze a 6mm line of adhesive on the underside of the gland ensuring there are no gaps. Now fix the gland onto the dry, clean surface. The bonding agent will take 24 hours to cure. Ensure this process is completed at roughly the same time as Step 1.4.
- 3.5 Now push the cable(s) from the solar panel(s) through the gland grommet so that it is reasonably taught. The threaded grommet can now be tightened ensuring a perfect seal is made around the cable itself.

Special note -

Rear exit panels have cables that exit rear of the panel allowing the panel to be fitted with no protrusions on the top surface. This will require a hole drilled in the roof to allow the bell cap to fit. Ensure this hole is adequately applied with silicon, or similar, prior to fixing the panel in position to ensure weather resistance.

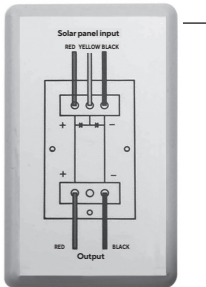
The shading diode for the 125Wp and 180Wp rear exit panels must be fitted.

Please wire as per picture.

TOP Connections
(+) = Red / Centre = Yellow / (-) = Black

Bottom connections
(+) = Red and (-) = Black

These go to the panel connections of the voltage regulator using the additional 4m, 2-core cable supplied.



Step 4: Connecting the Flexi cable to a charge controller (if supplied)

- 4.1 Position the charge controller as close as possible to the battery (must be a dry location).
- 4.2 Measure the distance between your battery terminals and the charge controller.
- 4.3 Cut the measured length of cable from the 4m cable fitted to the panel so that there is sufficient cable length from the Flexi panel to reach the charge controller. * Additional cable can be supplied by Solar Technology International - www.solartechology.co.uk
- 4.4 Now connect the cable end fixed to the Flexi to the charge controller. Strip back 20mm of the black outer sheath of the cable end to be connected to the charge controller.
- 4.5 Strip back 20mm of the black and red inner sheaths to reveal the bare cable.
- 4.6 Using the cut section of cable as described in Step 4.3, attach one end to the terminals H (see image above) in the same way as described in Step 4.5.

