



## Victron Orion-TR Smart 12-12-30 DC-DC charger.

**CAUTION:** Batteries can supply massive currents which can cause fire or explosion. Always take extra care when routing cables to avoid the possibility of damage. Never use naked flames or smoke near to batteries.

READ THESE INSTRUCTIONS FULLY BEFORE ATTEMPTING TO INSTALL THIS PRODUCT. READ IN CONJUNCTION WITH ANY INSTRUCTIONS PROVIDED BY THE EQUIPMENT MANUFACTURER. ANY APPARENT CONFLICTS MAY BE DUE TO VEHICLE SPECIFIC INFORMATION.

### T5 & T6

Remove drivers seat (or passenger seat if this is where you want to fit the battery) and seat base. If your van is Pre 2010 and has the convenience module under the drivers seat you will need to re locate this to fit the battery in. Remove the module from its bracket (2 screws). Once you have removed the seat base you can get to the 2 x screws that secure this bracket to the seat base. Discard the bracket and drill new fixing holes directly in the side of the seat base forward of the hand brake.

#### **T5 only**

Inside the van remove the lower dash panel on the passenger side. Begin by prying out the dash end panel with a screwdriver. Remove 6 x screws holding the lower dash panel in place. Top right corner is held with a clip and will have to be prised out with a screwdriver. Take care not to deform the plastic.



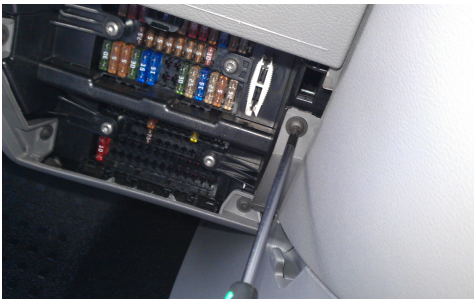
### **T6 only**

Remove dash end panel. Remove glove box. 3 screws along bottom edge. 4 screws along top edge inside glove box. Remove fuse box cover.



### **T5 only**

Remove the grey plastic cover from around the base of the gear stick. 1 x torx screw on passenger side by fuse box. 1 x torx screw in passenger footwell



You will also have to remove the black plastic panel above the pedals in the drivers foot well to access 2 x screws that hold the gear stick surround in place. The top corner of the gear stick surround on the drivers side is held with a clip. You may need to pry this out with a screwdriver.

### **T5 and T6**

Once you have removed these panels pull back the rubber floor mat in the top left hand corner of the passenger foot well. This will expose the sound deadening material around the top of the wheel arch. Find the cut out in the sound deadening material, there is a hole where will you see a black rubber grommet about 20 mm in dia.



Use a pair of long nosed pliers to remove this grommet. Turn the grommet inside out and cut off the hard centre nipple with a blade or side cutters. Re fit the grommet to the hole and feed the sheathed end of the long red cable through the grommet, about 500 mm of the cable is plenty.

**If this grommet is already occupied you will find another by pulling away the sound deadening material just below it.**

You should now be able to see this cable behind the battery under the bonnet. Attach the short sheathed cable with the fuse holder with the 50 amp midi fuse in to the cable that you just fed through.

Retrieve enough cable to allow it to pass to the left of the battery and reach to the + terminal of the battery.

Now return to the inside of the van.

Feed the red cable into the plastic cable tunnel that goes under the rubber mat (this is easier if you release the black plastic cover and raise it slightly) and follow the route of existing wiring into the area beneath the drivers seat (or passenger seat), securing with cable ties as you go.

At this point also feed in the thinner red wire with the twin fuse adaptor to the area in front of the vehicles fuse box. Run the other end of the thinner red wire to the area under the seat along with the thick red wire that you just fed through to the van battery.



**Long cable set only:** Route the long cable under the rubber mat towards the B pillar, following the existing wiring to the seat belt. Drill a 14mm hole next to seat belt wiring and fit the supplied grommet. Run the cables through this grommet into the cavity behind the seat belt mechanism and into the voids behind the side panels. Run the cables to where your battery is and proceed as above.

Use these instructions in conjunction with any that are supplied by the manufacturer of your equipment. If there are apparent conflicts it is because the instructions provided here are optimised for your vehicle and intended use. Pay particular attention to any instruction regarding the order in which cables are connected to the charger.

Mount the control unit to the seat base (or body work near to battery) where it will not interfere with battery location.

Connect one of the brown cables from the charger negative input (0v) terminal to the earth point on the van. Connect the other brown wire to the negative (0v) output terminal of the charger to the battery negative terminal. Connect the thick black cable from the battery negative terminal to the ground point on the vehicle floor under the seat.

If battery is at rear of van use earth point by rear light cluster.

Connect the fused blue cable from the charger output to the leisure battery positive terminal.

Connect the thinner red wire to the green connector pin 2 High.

Connect the long red cable from the vehicle battery to the input terminal of the charger and make sure that all fuses are inserted (leisure battery fuse first). You can now connect the cable at the van battery +

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Check that system functions with engine running in accordance with the LED display as per any manufacturers instructions.

### **ADDENDUM**

Please note that all kits supplied from 7/1/2019 will have midi fuses.

Any references to (or pictures of) maxi fuses should be ignored.

### **Option for solar panel input.**

Connect the + from your solar panel to the solar input terminal on the Ablemail AMS12-12-30

Connect the negative from your solar panel to any suitable ground point or to the battery negative terminal.

Travelvolts.net accepts no liability for damage or injury caused by the incorrect fitment or use of this product



