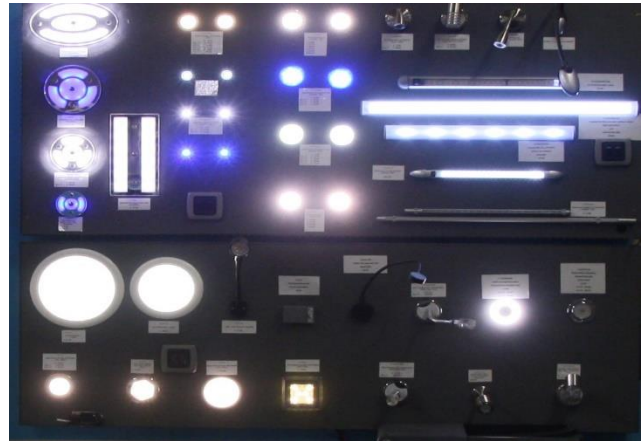


Change your view in a campervan

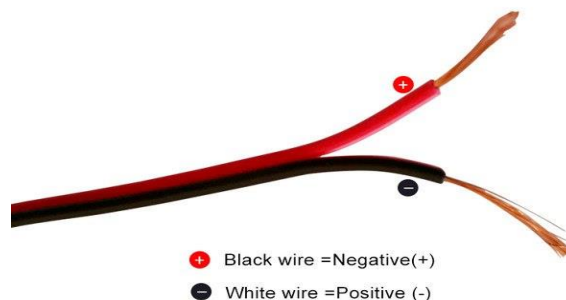
HOW TO GUIDE

Installing LED Lights

LED lighting in campervans can vary from a main central illumination through to atmospheric or mood lighting to jazz up the look of your van. There are a whole host of designs available including directional reading lights, LED ribbon lights and touch dimmable central lighting.



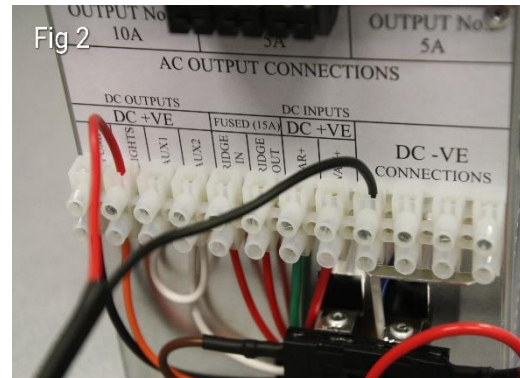
LED lighting has very low power consumption and little to no heat build-up, so cable sizes do not need to be anything more than 8-14 amp twin core cable.



INSTRUCTIONS

Your lighting wiring loom will require an in-line fuse usually a 5-10 amp fuse is fitted, either directly off the battery, or via the Power management system

- I. If you just have a single light, then the installation is very straight forward. The twin core cable is run from a power source via an in-line fuse to the light ①, or through a power management unit that incorporates built in fuses. ②



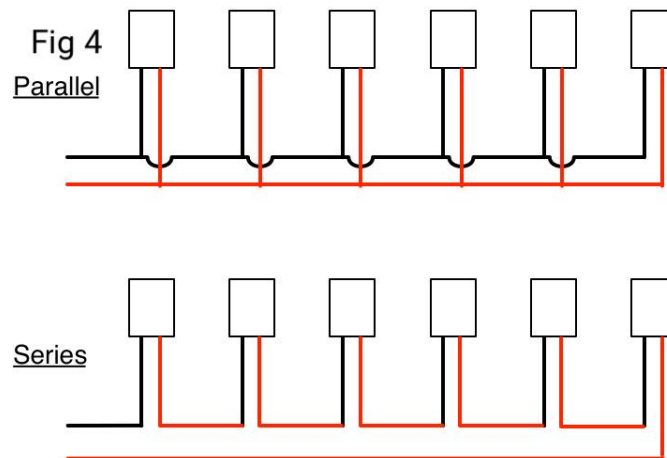
- II. The cable runs through a 12v switch (only if the light design is non-switched) Note that it is only the (+) cable that runs through the switch. To do this you will need to split the twin core cable sheath by the light switch, separate and cut the red (+) cable but leave the (-) cable untouched. ③



- III. Connect the two ends of the cable into the switch terminals and fix in position.
- IV. The twin core cable then routed to the light and connected to the (+) and (-) of the short cable length protruding from the light. In most circumstances (and with all the lights we sell) there is no requirement to use a voltage regulator (or Driver) as the LED lights can operate on voltage up to 19 volts.
- V. Once the installation is complete add the fuse to the fuse holder and check the light works correctly.

MULTIPLE LIGHT INSTALLATION

If you have more than one light to install then there are two options to the design of the lighting loom, these are either in "Parallel" or in "Series". ④

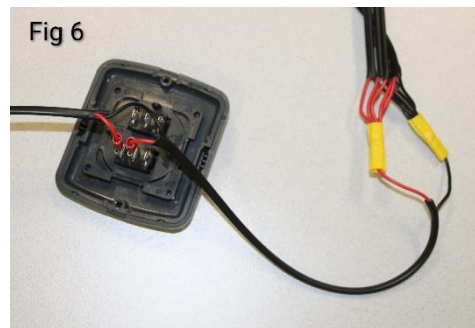
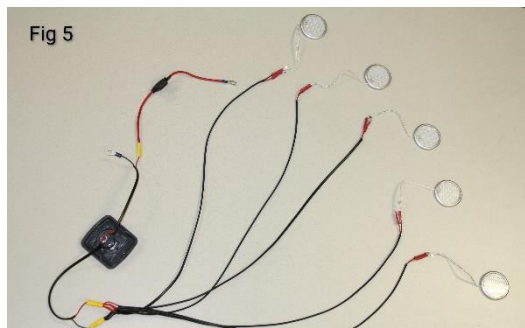


There are advantages to both and it will come down to the application, size and power of the lights installed. The Pros and Cons of both methods can be seen below.

PARALLEL	
PROS	CONS
<ul style="list-style-type: none"> ▪ Even current gives lights even illumination ▪ If one light stops working, then the others aren't affected ▪ The connections are generally all in one place so easier to access if there is a problem 	<ul style="list-style-type: none"> ▪ Likely to require more cable and take more time to install

SERIES	
PROS	CONS
<ul style="list-style-type: none"> ▪ More suitable for small lights with low power requirements ▪ Less cable required, and so cheaper and quicker to install ▪ Less complicated if a large number of lights are required 	<ul style="list-style-type: none"> ▪ If one light malfunctions, then all the lights go off. This also makes it more difficult to isolate the faulty light. ▪ The lights at the beginning of the circuit will be brighter than the ones at the end. This isn't as noticeable in small single LED spotlights but is more pronounced in larger multi LED spot lights.

- I. Campervan led lighting is generally wired in Parallel as it maintains bulb brightness though out the installation. It is also easiest to fault find as most of the connections are made in one place. In the vans we convert we tend to extend a length of twin core cable to the roof cavity via an in-line light switch. In the roof cavity we then branch off to individual spot lights. ⑤



- II. The wiring loom can be created with a range of connections these include purpose made crimps, junction boxes, soldered joints or chocolate block connections. The image above show wiring crimps being used ⑥ these are convenient to use but require a specialist crimping tool, for illustration purposes we have shown them exposed, however we would recommend they are further protected by a layer of heat shrink or electrical sealing tape.

Make sure that any cable running through metal holes run through insulation grommets and that cable wiring looms are secured in place.

The CBE range of switches and sockets are very adaptable as the modular components allow you to combine a whole host of combinations in single, double or triple matching frames. We sell all of these components separately as well as in combinations of the most popular variants.

01271 373853

www.clearcutconversions.co.uk

enquiries@clearcutconversions.co.uk


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