

What size fuse should I use for my PL installation?

The battery fuse size requirement depends on the maximum load or charge currents that will be seen in the system. The maximum load current can be found by adding all the maximum rated currents of attached equipment that is possible to have turned on at the same time.

The maximum charge current can be found by adding all the maximum rated currents of attached charge sources (eg. Battery chargers, wind generators, vehicle cranking batteries in dual battery systems, alternators, etc).

Whichever is the maximum of these numbers is what the battery fuses should be rated to.

Note:

In systems that have a dual battery, this charge current can be quite high as the cranking (vehicle) battery and 'house' (solar) battery are effectively connected in parallel (if one battery is in a low state of charge and the other is in a high state of charge the currents can be quite high for a short time until the voltages 'equalise' between the batteries).

Please keep in mind that the purpose of the fuse is to stop damage of wiring and components due to currents that are too high. Fuses are usually rated lower than the wire's current carrying capacity, so they blow/burn before the wire does.