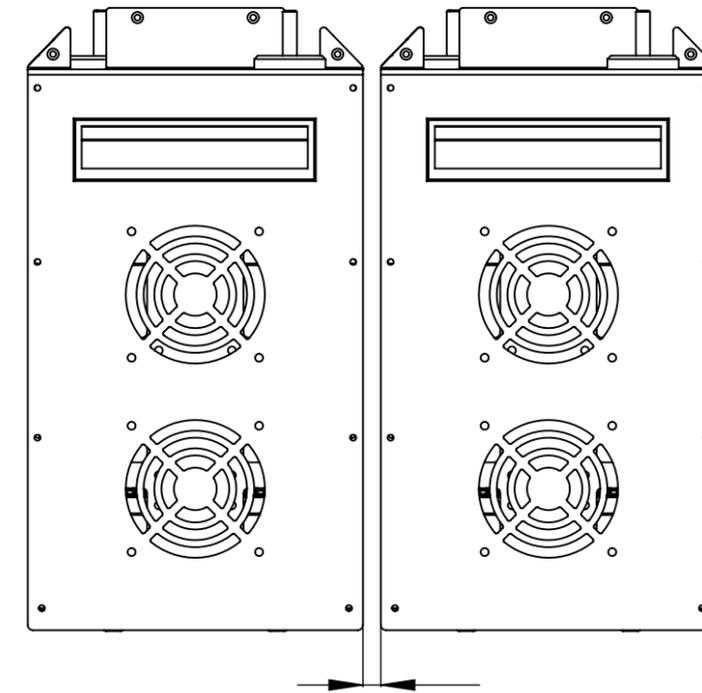
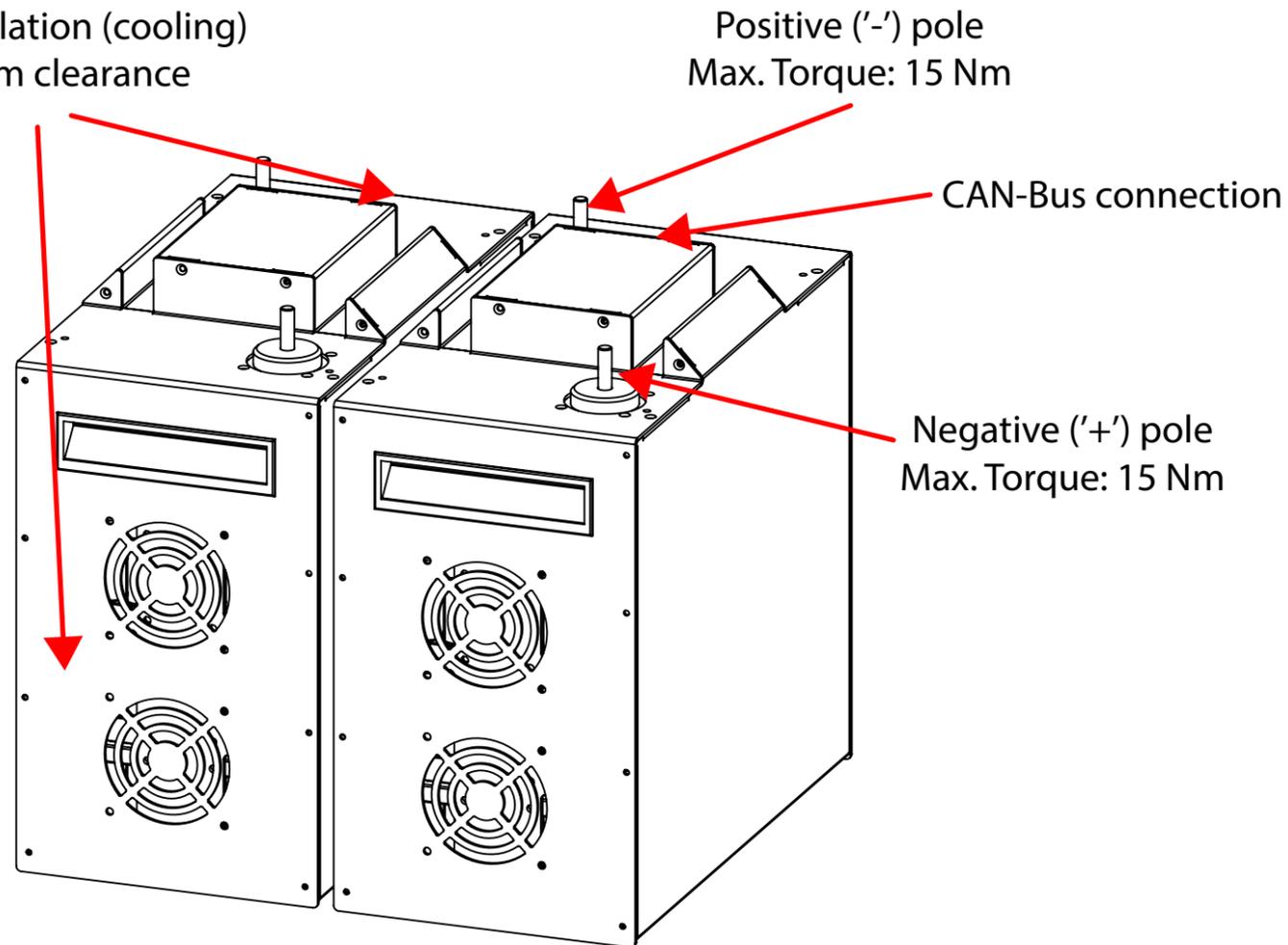
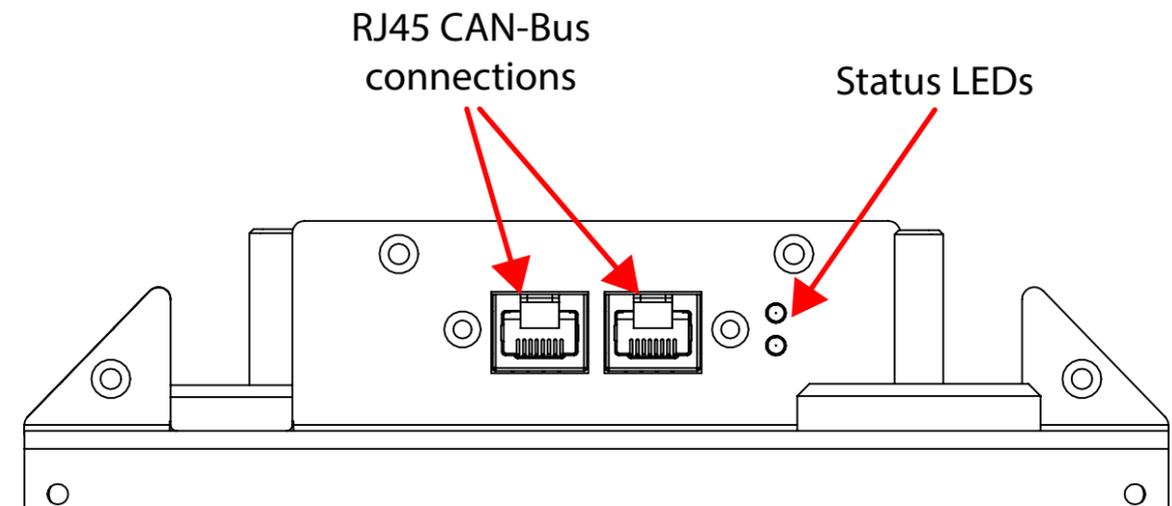
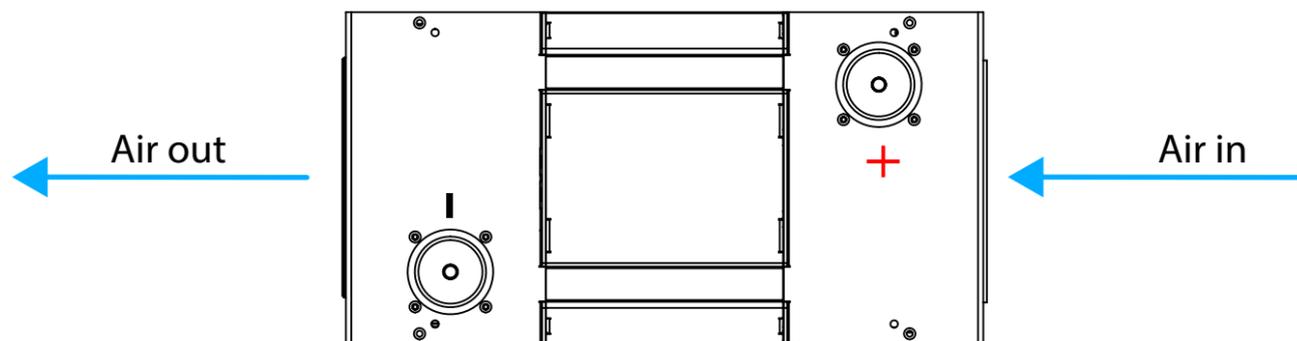
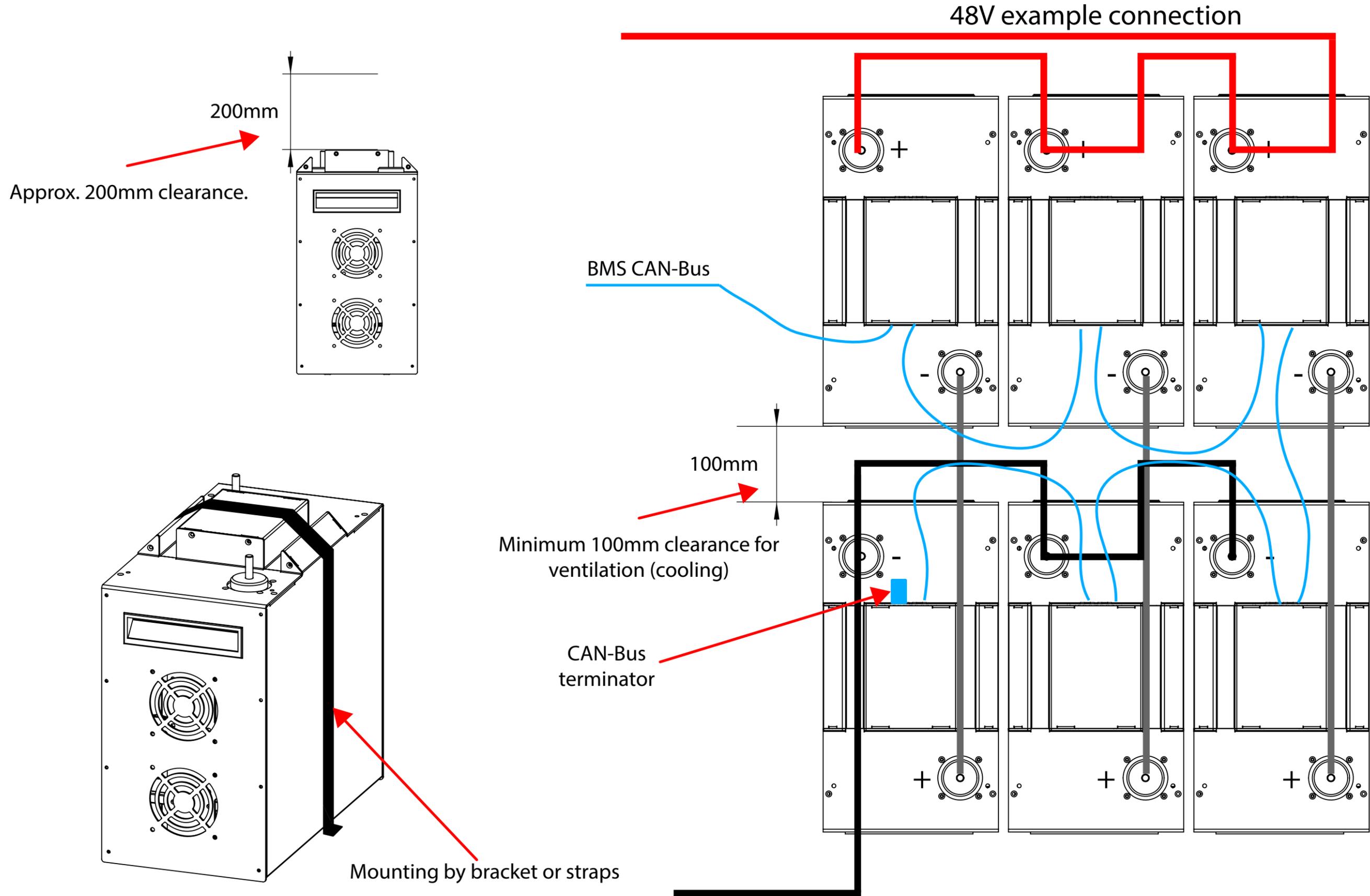


Front and back need to be clear  
for ventilation (cooling)  
50mm clearance



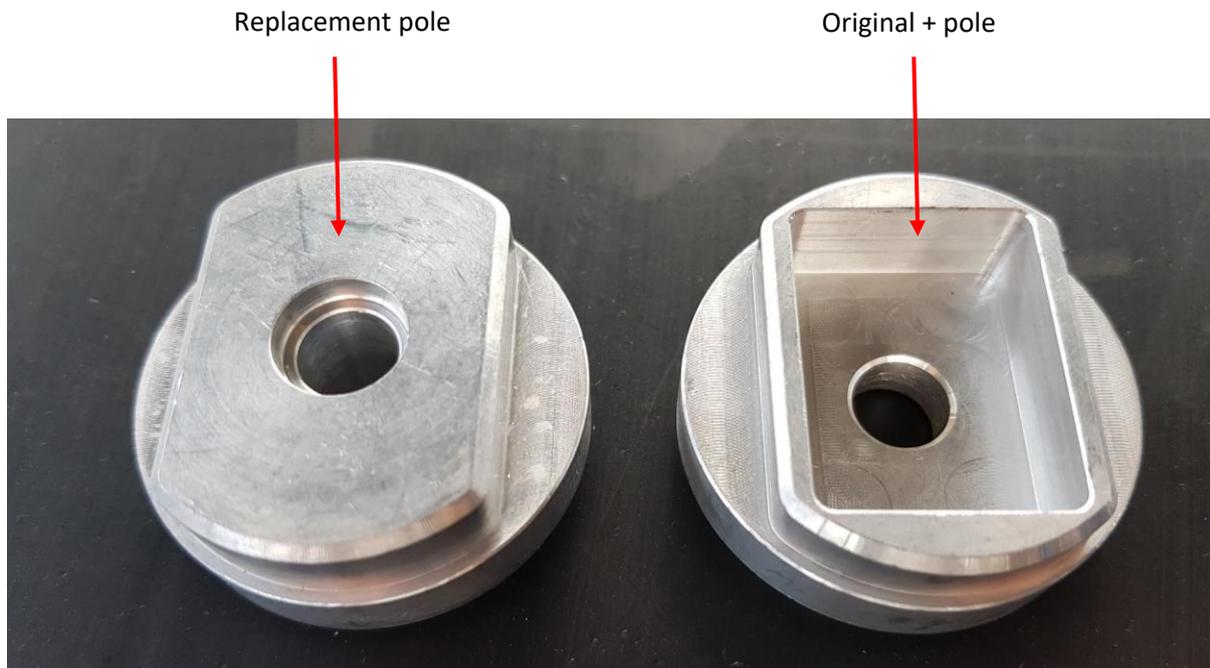
Minimum distance between  
modules is 10mm.





## Replacing battery pole of Lithium-Ion HE battery

The Lithium-Ion HE battery module has an integrated fuse for protection. In systems with more than 2 modules in series the fuse must be replaced with a dummy fuse or another type of battery pole. Please check if there are replacement battery pole with the shipment.



### Instructions of replacing the battery pole

Normally the battery modules are shipped with a fuse in the + pole of the battery. In the case the fuse cannot be used it need to be replaced by a dummy fuse or another type of battery pole.



The fuse for the string of batteries needs to be installed separately in the system.

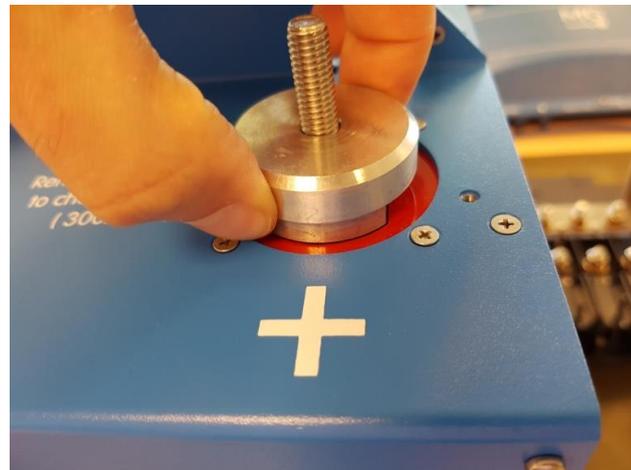
Please follow the below instruction to replace the + pole with fuse with a another type of pole that has no fuse capability.

## Instruction steps

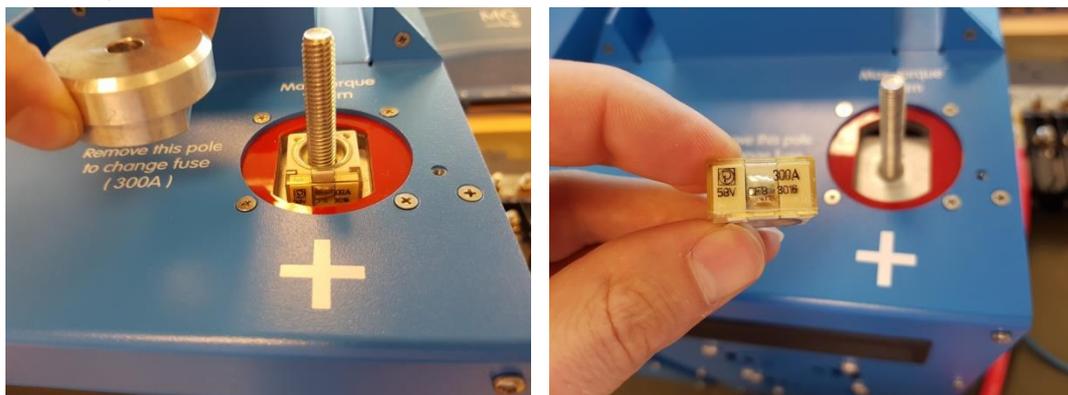
1. Remove the power cable from the + pole of the battery module;



2. Lift the aluminum battery pole;

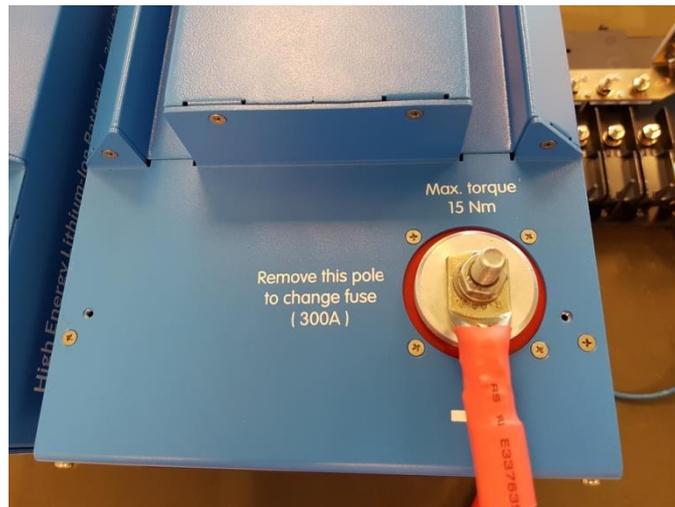


3. Remove pole and fuse;



4. Clean the replacement battery pole contact surface with a fine sanding block. Recommended is to add an electrical joint compound for better conduction.
5. Install the replacement battery pole (without fuse capability) in again;

6. Connect the power cables and the battery is ready for use;



## Replacing integrated fuse of Lithium-Ion HE battery

The Lithium-Ion HE battery module has an integrated fuse for protection. This fuse can be replaced easily when necessary. Below are the instruction for replacing this fuse.

### Fuse types

MG Battery type	MG Fuse article number	Fuse manufacturer article number
MGINRHE240100	MGFUSE1580150	Little fuse CF8 - 155.0892.6151
MGINRHE240200	MGFUSE1580300	Little fuse CF8 - 155.0892.6301

### When to change a fuse?

A fuse needs to be replaced in the following cases:

- Measuring on the terminals of the battery module gives no voltage. Fuse is broke.
- When using the Lithium-Ion HE battery module in series above 58VDC.

### Systems above 58VDC

When more than 2 HE battery modules are used in series the standard fuse must be replaced with a dummy fuse. The battery string will be fused separately.

Dummy Fuse (no fuse function):

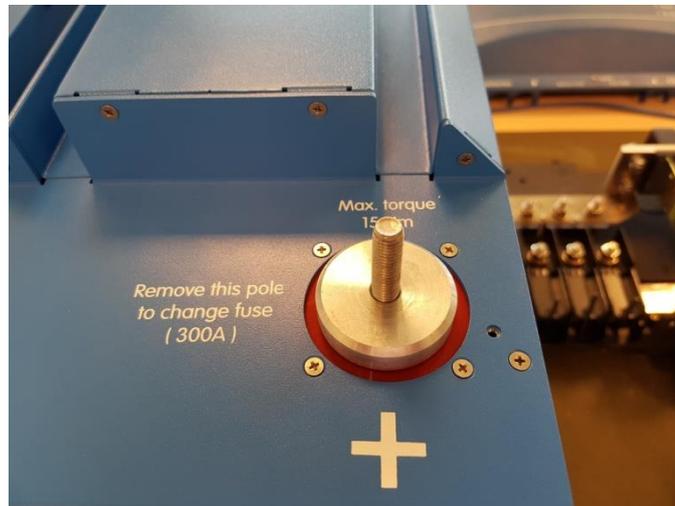


## Instructions of replacing the fuse

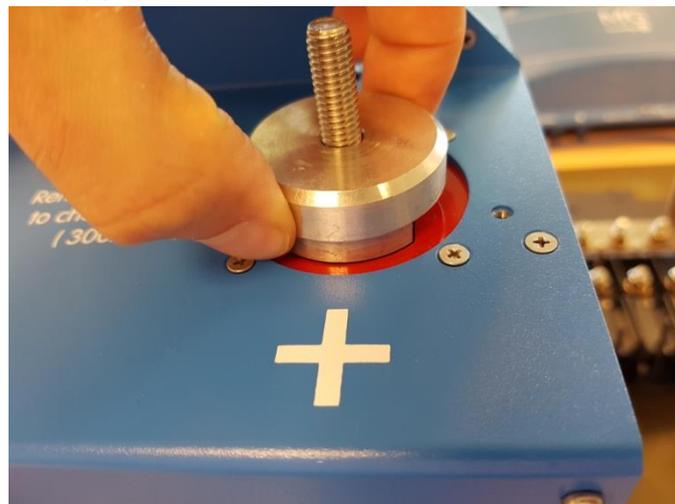
To replace the fuse you do need to switch of the MG Master LV. The complete system needs to be offline.

Instruction steps:

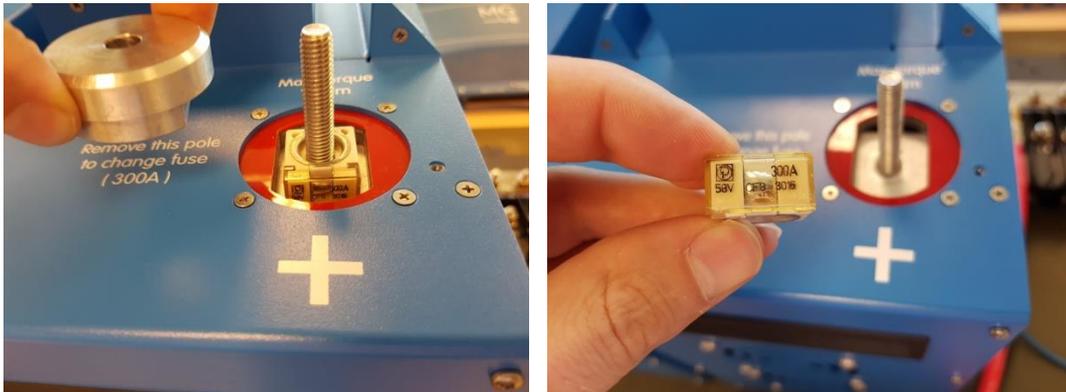
1. Remove the power cable from the + pole of the battery module;



2. Lift the aluminum battery pole;



3. Check the fuse. If it is blown, it need to be replaced;



4. After replacing the fuse, set the battery pole in place again;
5. Before connecting the power cable, the voltage of the battery needs to be measured to check if it is the same as the parallel connected batteries. If not then charge/discharge the batteries separately to the same level;
6. Connect the power cables and the battery is ready for use;

