

# Dynamic Limit strategy configuration for carpentry workshop

Original text as published before the redesign of this article. Wording unchanged.

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In carpentry workshop we have devices which consume 200A. From the electrical main grid, we can only get 150A. We also know we only need 200A on the device power on and not whole-time during device operation. In this case we get 150A from the main electrical grid and 50A from the battery. We also smooth electrical peak with this strategy.

We can smooth peak power using two following methods:

1. Our object should not reach over 100kw in total consumption, otherwise, we need to get additional power from the battery
2. Our object should not reach 150A on each fuse, otherwise, we need to get additional electrical current from the battery

An additional benefit of smoothing peak power is also in the optimization of costs. For example, if we need full power for only 15 minutes a day, this will be translated to peak power which is then billed on our electrical bill. In case we have a battery, which smooths peak power and saves us costs on our electrical bill due to lower peak power.

|                                     |                                                      |                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dischard Soc Min                    | D<br>e<br>f<br>a<br>u<br>l<br>t:<br>0<br>%           | We do not want to discard the battery if the battery is charged below 20%.                                                                                                                                                                                                                                                                                                                   |
| Charge Soc Max                      | D<br>e<br>f<br>a<br>u<br>l<br>t:<br>1<br>0<br>0<br>% | We do not want to charge the battery if the battery is charged over 80%.                                                                                                                                                                                                                                                                                                                     |
| Dischard above Current – L1, L2, L3 | /                                                    | When do we discard the battery on each electrical fuse? When the main current will go over 150A, we want to start discharging the battery. For example, when the main current reaches 150A, the battery gets a command to help with 50A.                                                                                                                                                     |
| Charge Bellow Current – L1, L2, L3  | /                                                    | When the current is below 150A on the main meter, we want to charge the battery from the main electrical grid. For example, when the current is lower than 140A, the battery will be charged with 10A from the main grid.                                                                                                                                                                    |
| Dischard Above Power Active         | /                                                    | We want to discard the battery when the total power consumption is over 50KW on the main meter.                                                                                                                                                                                                                                                                                              |
| Charge Bellow Power Active          | /                                                    | We want to charge the battery when the power consumption is lower than 40KW on the main meter.                                                                                                                                                                                                                                                                                               |
| Affects Main Currents               | /                                                    | Does the main current go over the main meter or not? This means that our main meter is connected to the battery. However, in some cases, the battery and main meter are connected with two different cables to the main electrical grid. We can also mention electrical divides which are used in larger objects for measuring sub-locations, for example, kitchen, garage, and boiler room. |