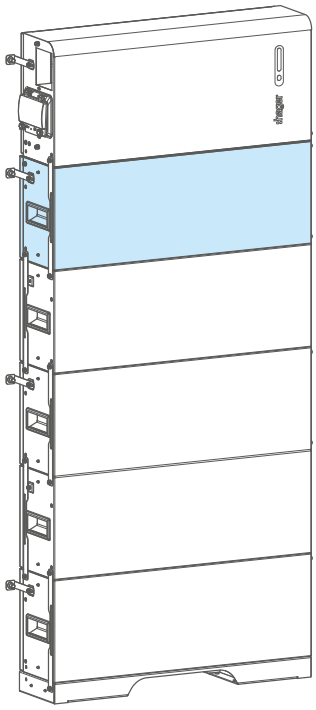
Technical information

Energy managment

Retrofitting HV batteries



Energy storage for retrofitting and capacity expansion – what must be considered?

XEMA400

CE

hager

EN

1 Battery voltages of the retrofit battery modules

The battery voltages of the retrofit battery modules must be measured prior to assembling. If several battery modules are to be retrofitted, the average voltage of the retrofit battery modules must be determined.

The qualified installer measures the battery voltages **before** assembling and installing the new battery modules. If the battery voltages are not measured and equalised, this may result in a balancing phase lasting several months between the connected energy storage systems, during which the generated energy can only be used to a limited extent.

2 Adjusting the battery voltages of existing battery modules

2.1 Preparation

The settings required to equalise the battery voltages must only be carried out by the installer or authorised service personnel.

The battery settings are only available for completed installations with battery modules.

The voltages of the existing battery modules must be adjusted to match the voltage level of the retrofit battery modules. This adjustment is performed via the Hager customer portal, which can be accessed from a PC or via the app.

Attention

Energy management systems with zero export!

If the energy management system is not permitted to export energy to the public grid, voltage adjustment is not readily possible.

- If necessary, manually discharge existing battery modules. This process is time-consuming and may take several days.
- In this case, please contact HagerEnergy GmbH for further support.

Example:

– The measured battery voltage of the existing battery modules is **104.0 V.** The system already has 5 battery modules (without the retrofit battery module).

2.2 Voltage equalisation

Adjust the voltage value manually

1. Multiply the calculated voltage value by the number of battery modules already in operation.

Calculation: 5 x 104 V= **520 V**

2. In the Hager portal at flow.hager.com, open the **Settings** menu and navigate to **Battery**.

   All commissioned batteries are displayed by name.

   Expand the entry for the relevant battery and enter the voltage value determined above as the **desired battery voltage**. The voltage must be specified to an accuracy of 0.1 V.

3. Click **Save** to confirm the entry or **Cancel** to discard.

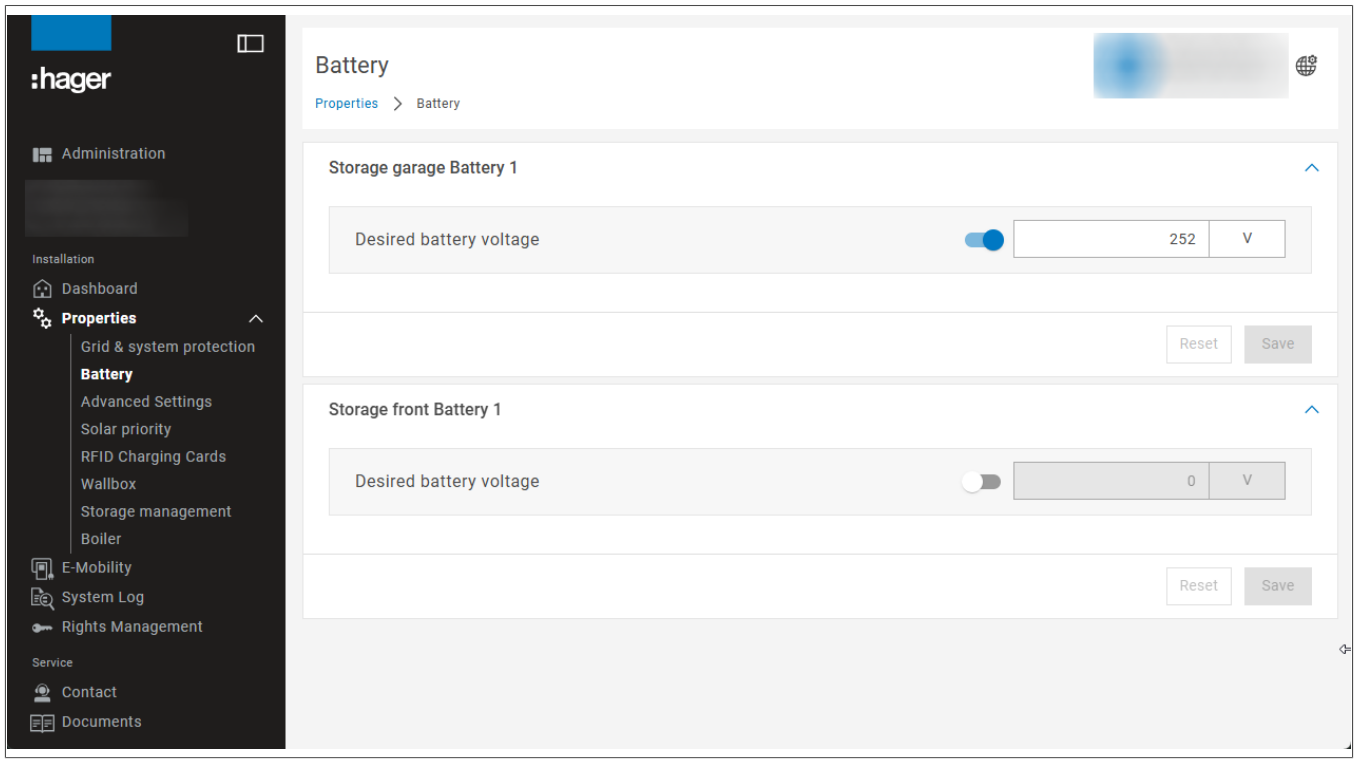


Fig. 1: Voltage adjustment in the Hager portal

System self-protection

The Battery Management System (BMS) monitors the entered voltage value and generates an error message if the value exceeds the permitted limit. In addition, the software checks whether the system exceeds the maximum permitted number of six modules in a stack system and, if necessary, trips the circuit breaker.

Note

Depending on the Internet browser setting, only commas or full stops are allowed as decimal separators.

3 After voltage adjustment

The voltages of the existing battery modules are then adjusted to match the voltage level of the retrofit battery modules. In most cases, the voltage level of the existing battery modules must be reduced to discharge the battery modules.

If household consumption is insufficient to discharge the batteries, energy from the batteries is exported to the grid.

When the process is complete, the battery disconnector trips. This interrupts the charging and discharging of the batteries. The system is now ready for battery retrofitting. The voltage adjustment is complete when the voltage display shows **0 Volt**.

Fig. 2: Voltage display in the Hager customer portal after the voltage equalisation

Note

Do not switch the battery disconnector back on until the retrofit battery modules have been installed.

HagerEnergy GmbH
Ursula-Flick-Straße 8

49076 Osnabrück
Germany

+49 541 7602680

info@hager.com
hager.com

2026-09

6LE090900A