



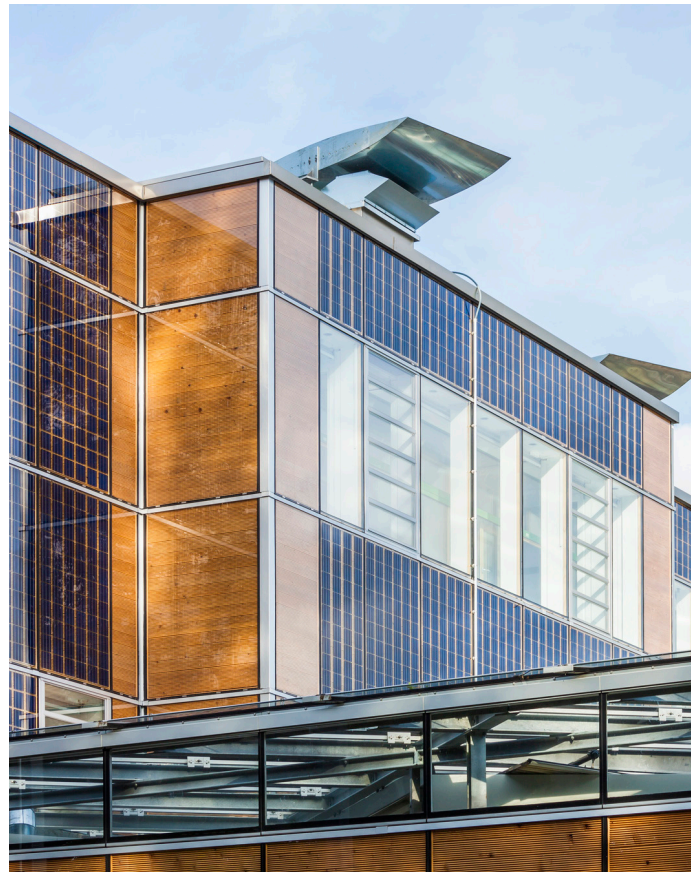
E-Building Energy Solutions

Innovative energy solutions, safe und reliable



E-Building applications

Powerful lithium-ion batteries for an independent energy supply



Energy solutions for buildings: modular & scalable

The demand for energy storage solutions in buildings is increasing in domestic buildings, the users primary focus is reduction of electricity running costs with the goal of autarky and independence. On the other hand, commercial building users require a reliable power supply by reducing the cost and impact of power outages i.e., during critical production processes. Growing E-mobility, and therefore the need for more charging stations, in private as well as in public, demands for a better and smarter power supply infrastructure. The electricity storages are responsible for saving the energy produced by PV-plants, and regardless of the time of the energy generation, they must also submit the energy.

The process of storing the energy intermediately, lets the power be submitted for load peaks at daylight, in the evening or at nights. Electrical autonomy allows users to be energy self-sufficient by maximizing the self-usage of home generated energy from the sun or wind sources. aentron, with its modular and scalable lithium-ion batteries, offers the perfect scalable energy solution in wide spectrum of application. With our standard 2 kWh and 10 kWh lithium-ion modules, individual storage solutions from 48 Vdc to 900 Vdc, can be implemented. The 360-degree integration ability of the robust modules enables a space saving installation on ceilings, walls or rack solutions.

E-Building application scenarios

OFF-GRID SOLUTIONS

10 - 30 kWh
48 Vdc



E-MOBILITY SOLUTIONS

2 - 50 kWh
24/48 Vdc



COMMERCIAL SOLUTIONS

10 kWh - 1 MWh
48 - 900 Vdc



ISLAND GRID SOLUTIONS

10 kWh - 1 MWh
48 - 400 Vdc



Flexible energy storage solutions for individual demands

Off-grid solutions

The trend of private solar systems keeps on growing. aentron is meeting the expectations of the customer spot-on with the 10 kWh module, which can be easily upgraded to a 20 kWh or 30 kWh system. The modules can be installed on walls or ceilings in order to save space. With the 2 kWh module, smaller expansion stages can be realised individually.

Charging infrastructure solutions

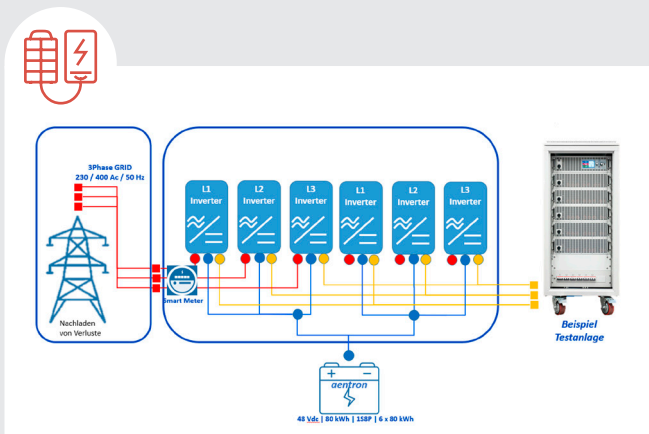
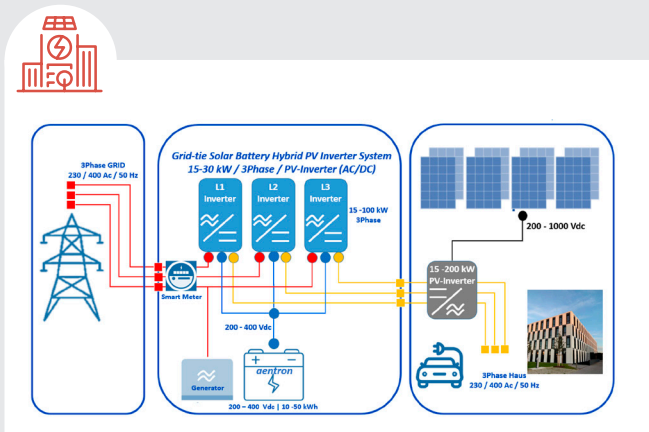
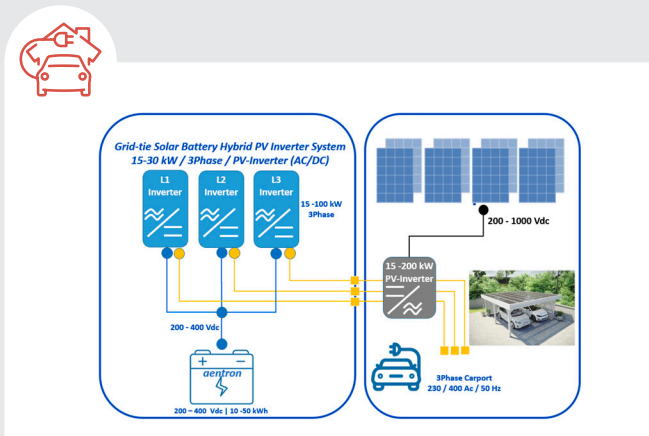
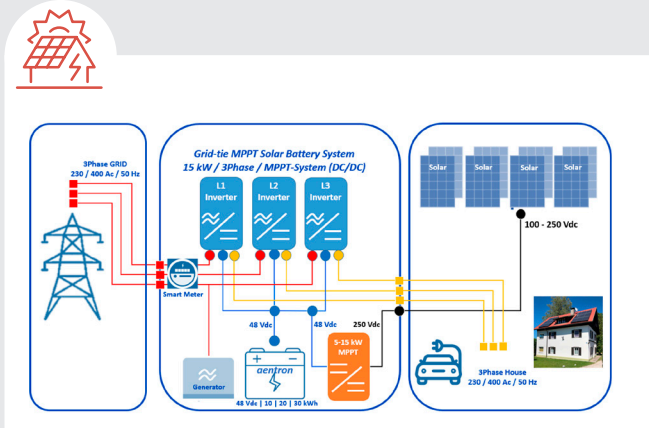
E-Mobility heavily relies on the distribution of charging stations. Therefore, a self-sufficient standalone carport can be realised, depending on the power supply. Looking at Hybrid solutions, the stored sun energy can be used to reduce local grid connection peak load, for example to provide the needed capacity for fast-charging stations. The electricity demand of a VW e-Golf with an average mileage of about 37 km, is set at around 5,2 kWh. At this rate, three 2 kWh aentron modules would be able to cover the typical daily electricity required need.

Commercial solutions

For industrial use, residential buildings or district-solutions, higher storage capacities and higher voltage ranges, up to 900 Vdc are needed. aentron is able to adapt to all individual needs with scalable modules and powerful HV-energy storages.

Island grid solutions

For specialized industrial use, for example a testing area for batteries, the aentron batteries can also be used in a closed loop energy cycle. The system is designed in a way where the aentron modules can not only provide power, but also recycle it. With an efficiency rate up to 96% of the system, the draw on the grid on minimal Individual requirements can be efficiently implemented. Reliable emergency power supplies can easily be provided and safely installed by aentron.



Innovative energy storage solutions



Robust metal housing



Recyle- and reusable



Modular and scalable configuration



Safety: Integrated BMS



Bluetooth & CANopen interface



Plug & play



360° mechanical integration



Made in Germany



Technical Data

Application	Off-grid, Charging infrastructure , Commercial solutions, Island grid solutions
Cell chemistry	Lithium-Ion – Li-NMC – 3,6 V DC – 2,9 Ah
Energy	2 kWh to 1 MWh
Nominal voltage	48 - 900 Vdc
Configuration	OPEN-CANBus
System efficiency (DC)	> 96 %
Temperature range (discharge)	0°C - +60 °C / -20°C - +60 °C (optional with heater)
Dust and water protection	Modules: IP66
Humidity/operational elevation	5 - 95 % / < 4.000 m
Functions	Overcharge-/ Deep Discharge Protection, Temperature monitoring, Cell balancing (150 mA)
Safety detection	BMS: Module and cell series monitoring



aentron ENERGY SOLUTIONS

aentron lithium-ion energy storage systems provide modular and scalable battery solutions with capacities from 1 kWh to 1 MWh. aentron, with its modular lithium-ion batteries, offers a safe power supply not only for private buildings, but also for hospitals, hotels and public institutions. aentron specializes in the development and production of energy storage devices for maritime, industrial, e-mobility and building power storage applications.

aentron

ENERGY
SOLUTIONS

aentron GmbH - Energy Solutions
Dornierstraße 21
82205 Gilching
Germany

Phone: +49 8105 39898-0
Fax: +49 8105 39898-29
Mail: info@aentron.com
www.aentron.com

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E-Maritime



E-Mobility



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