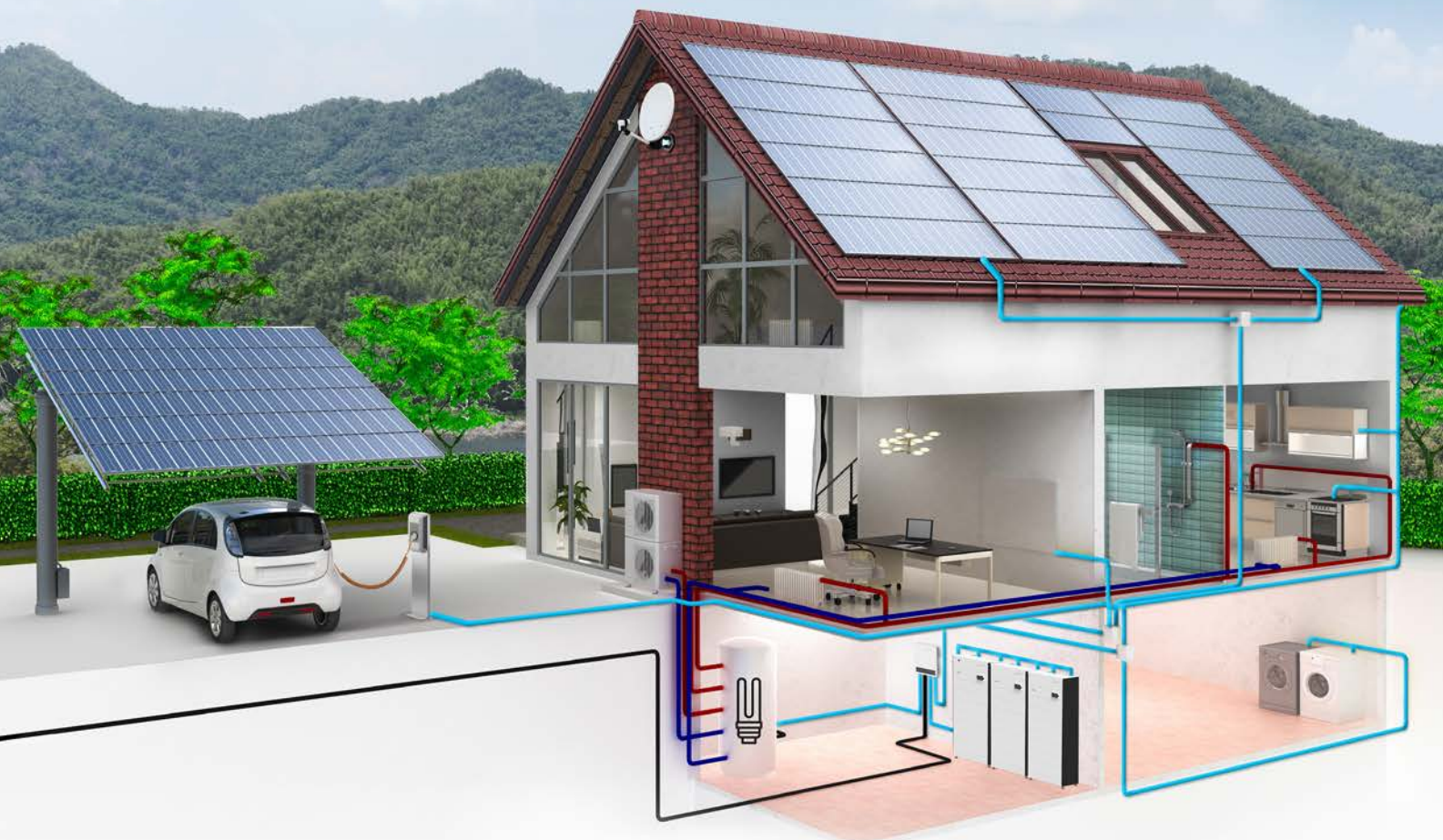


Define own parameters reflecting your priorities and control behavior for each consumer and energy source: e.g. the minimum and maximum charging power of the wallbox, threshold values, electricity tariff-based actions and other individual settings.

Get a real-time overview of your energy consumption by using our online monitoring.  
<https://portal.fenecon.de/m/index>

Sign in and experience the live demo:  
E-mail: [demo@fenecon.de](mailto:demo@fenecon.de)  
Password: **femsdemo**



Our products support actively the idea of energy transition and create a foundation for the sustainable, decentralized energy supply. FEMS, built on unique future-proof concept, grows with your needs, as new power sources and consumers can be integrated at later stage. In addition, FEMS optimizes the interaction between the FENECON energy storage system and random AC generator, such as PV inverter.

FEMS Box is the central element of FENECON energy storage system, regulating the energy flows. The FEMS relay board offers up to 8 channels for digital signals or direct control of the external devices. If more than 8 channels are required, an additional FEMS relay board can be simply installed. High switching power of the relay, ranging from 24 VDC / 15 A to 250 VAC / 10 A is the guarantee of an efficient energy management.

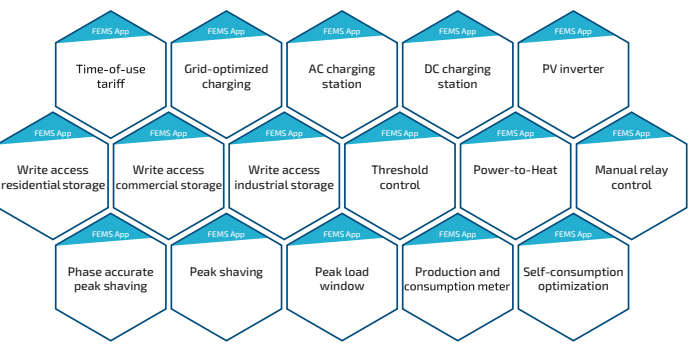
Find the pre-wired FEMS connection box within the scope of delivery of each FENECON energy storage system. Our vision is a future, where energy comes 100 % from renewable resources. Join us on our journey and profit from our commitment!


FEMS connection box

Software	Open EMS based
System architecture	Apps expandable on demand
Product warranty	5 Years

Dimensions (W/D/H)	
Home	Internal part of battery sto-
Industrial S   M   L	Internal part of battery
Commercial	315   155   450

Weight Commercial in kg	4,5
Relay contact rating	12 VDC / 15 A 24 VDC / 15 A 125 VAC / 15 A 250 VAC / 10 A



 FEMS is based on the open source operating system for the energy transition „OpenEMS“ - Open Energy Management System - initiated by FENECON. The source code of OpenEMS is being continuously developed together with an international community of private individuals, companies, scientific institutes and universities in the OpenEMS Association.

Intelligence for the energy transition

- OpenEMS-based
- Online monitoring with intuitive UI
- Integral part of FENECON Home, Commercial and Industrial series
- Customizable functionality via apps

The energy management for every storage size and application

- Multifunctional energy management
- Self-consumption optimization
- Peak shaving
- Avoid a grid connection expansion
- Electricity costs reduction
- Heat pump control
- Single or multi charging point management
- And much more!



(FEMS connection box Commercial)



(FEMS connection box Home)

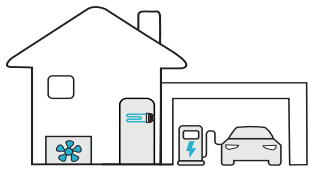
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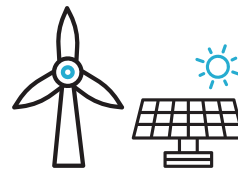


Presented by:

FEMS optimizes:  
Energy consumption



FEMS optimizes:  
Energy production



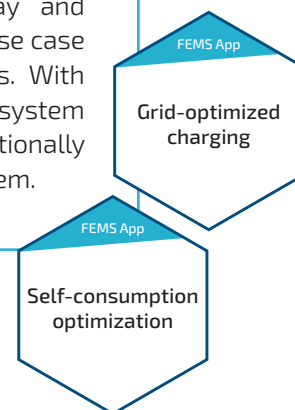
FEMS optimizes:  
Energy distribution





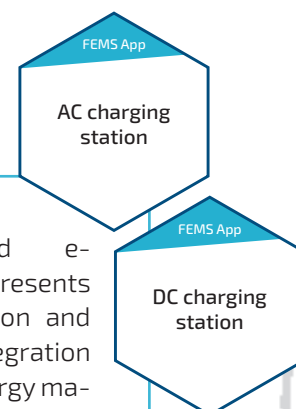
## PV self-consumption

„Energy is being produced during the day and consumed at night“ - this is the conventional use case scenario for battery energy storage systems. With FEMS, even higher energy yield from the PV system can be achieved. Grid-optimized charging additionally enables a DC-sided overbuilding of the PV system.



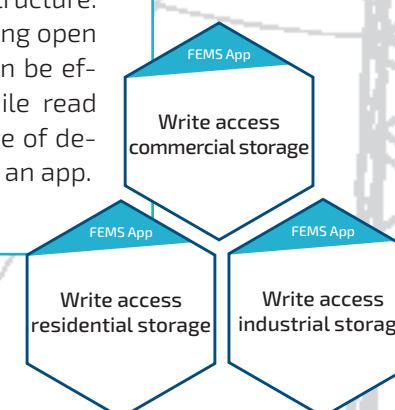
## E-mobility

The intelligent sector coupling of battery storage and e-mobility is economically interesting, as well as it represents an active contribution to environmental protection and CO<sub>2</sub>-neutral mobility. Our FEMS apps allow the integration of selected AC and DC charging stations into the energy management - individually or interconnected as an EV charging park.



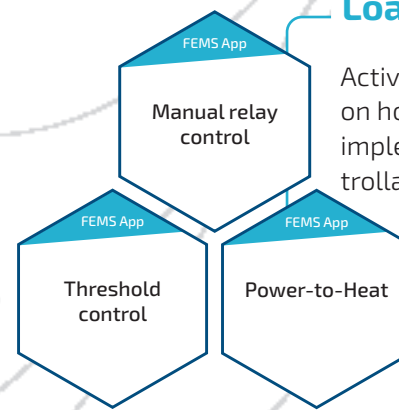
## Open interfaces

FEMS integrates perfectly into your existing infrastructure. Whether network control station or smart home. Using open APIs (Modbus/TCP, REST/JSON), data from FEMS can be effectively processed in different environments. While read access is included already within the standard scope of delivery, write access can be purchased additionally as an app.



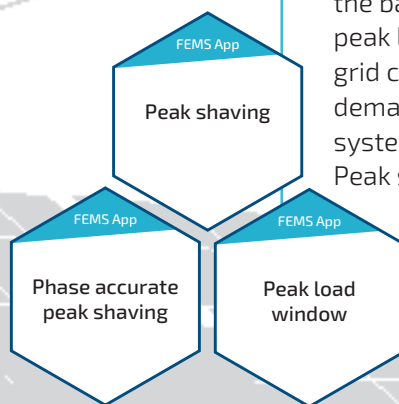
## Load management

Active energy management represents a solution on how to increase the self-consumption rate via implementing of switching strategies for controllable loads (e.g. heat pump, heating element,



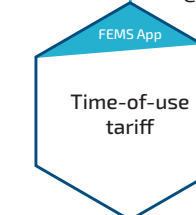
## Peak shaving

FEMS controls the energy storage system in such a way that the battery is discharged during high peak times - also in the peak load time window - in order to keep the power at the grid connection point below a defined value. When the load demand drops below the lower threshold, the energy storage system recharges again in order to be ready for the next peak. Peak shaving can be also performed on individual phases.



## Time-of-use tariff

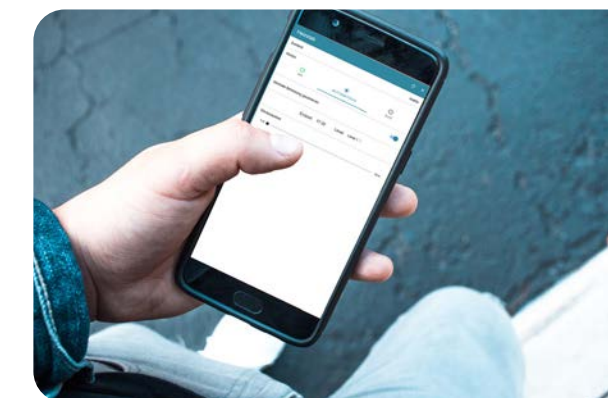
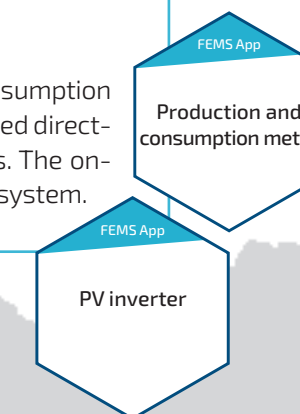
The FEMS app uses self-learning algorithms to forecast the local electricity production and consumption. The electricity price data for the upcoming 24 - 36 hours are retrieved through the communication interface with data provider. During the time slots with low electricity prices, cheap electricity is purchased from the grid in order to cover the forecasted consumption at night. As a result, FEMS optimizes not only self-consumption based on the dynamic electricity price, but also the effective purchase from the grid.



## PV inverter and energy meters

For most energy management applications, only the measurement at the grid connection point is required. For the proper display of energy flows in the online monitoring and forecast-based use cases, all producer must be measured to ensure a correct consumption forecast.

Selected energy meters for production and consumption monitoring, as well as PV inverters, can be integrated directly into the energy environment via our FEMS apps. The online monitoring offers a real-time overview of the system.



### Easy Installation of energy management apps

FEMS apps are important building blocks of the future energy world, where users can adapt their FENECON energy storage system according to their individual needs.

- Use the advantages of FEMS on your energy journey even more efficiently with FENECON
- Simply download apps and install them via license keys
- Purchase apps optionally as bundle
- Fast and convenient installation process