FEMS

FENECON energy management system

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Intelligence for the energy transition

- OpenEMS based
- Live online-monitoring with intuitive user interface
- Perfect for home, commercial and industrial storage facilities
- Individualise the scope of services with apps

Perfect energy management for any storage size and environment

- Multifunctional energy management
- Optimise self-consumption
- Peak shaving
- Avoid grid extension
- Reduce energy costs
- Heat pump control
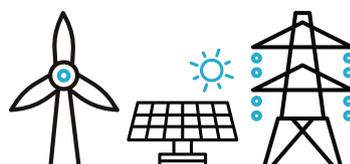- Control single or multiple chargingpoints
- And much more!

Peak shaving. Grid services. Live-Monitoring.

FEMS optimises energy consumers

FEMS optimises energy generators

FEMS optimises energy distribution

For a better future with 100% renewable energies

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PV self-consumption

„Producing energy during the day and consuming it at night" - that is the basic area of application for energy storage systems and the first step towards your personal energy transition. At the same time, you save money. But for FEMS it is more. It regulates the charging and discharging of the storage so that you get even more output from your PV system. This increases the efficiency of your entire system and also protects the grid.

Self-consumption optimisation

Grid-optimised charging

Emergency power supply

In the event of a power failure, your PV system cannot supply you with power on its own. To ensure an emergency power supply from the storage, a reserve must be retained in the battery, as well as grid disconnection and accurate control specifications must be met. FEMS takes care of that for you with this app.

Emergency power supply

E-mobility

Charging electric vehicles requires a lot of electrical power. The integration into the energy management and thus the intelligent sector coupling of electricity and mobility is both economically interesting and an active contribution to environmental protection and CO_2-neutral mobility.

The FEMS solutions for e-mobility are modular in design so that they grow with your requirements.

EV charging station

Multi-charging point-management

FEMS-Apps

Software components

Open interfaces

FEMS fits perfectly into your existing infrastructure. Regardless of whether it is a grid control centre or a smart home, you can further process the data from FEMS via extensive, open interfaces. Read access is already included in the scope of delivery as standard. Write access can also be purchased as a corresponding app.

Modbus / TCP

Websocket / JSON

REST / JSON

Generators and load control

Through active energy management you can dynamically control generators and loads (e.g. CHP, heat pump or heating element) to reduce overall costs.

Manual relay-control

Threshold value control

„SG Ready" heat pump

Heating element

Combined heat power plant (CHP)

Peak shaving

The peak shaving app controls your energy storage system that the battery is discharged when there is a high grid demand in order to keep the power at the grid connection point below a defined value. As soon as the grid demand decreases again and falls below a second charging threshold, the battery charges again to be ready for the next load peak. The peak shaving can also be carried out with phase accuracy. It is also possible to implement it within the framework of the high-load time window.

Peak shaving

Phase-precise peak shaving

Time-slot peak shaving

Optimisation for flexible electricity tarrifs

The controller for the integration of flexible electricity tariffs uses self-learning systems to forecast local electricity generation and consumption. The electricity prices for the next 24 or 36 hours are queried via the interface of the tariff provider. If the capacity of the electricity storage system is not sufficient to cover electricity consumption at night, the app determines time windows with low electricity prices during which cheaper electricity is purchased from the grid instead of discharging the storage.

For the user, this means that the FENECON electricity storage system no longer only optimizes the self-consumption from the own photovoltaic system, but also optimizes the residual electricity purchase in a secondary function on the basis of the dynamic electricity price.

Awattar HOURLY

Tibber

STROMDAO Corrently

Consumption counter

PV inverter and meter

For most energy management functions, it is sufficient to perform a measurement at the grid connection point.

In order to display electricity production in online monitoring and for applications that work with forecasts, all generators must be measured.

FEMS can communicate directly with many PV inverters or alternatively integrate separate meters from different manufacturers.
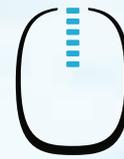
SMA PV inverter

KACO PV inverter

SolarEdge PV inverter

KOSTAL PV inverter

For a better future with 100% renewable energies

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

See how your electricity is flowing at any time. Watch the online monitoring live:
portal.fenecon.de/m/

Use this identifier to log in:
E-Mail: demo@fenecon.de
Password: femsdemo

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Individual hard- and software

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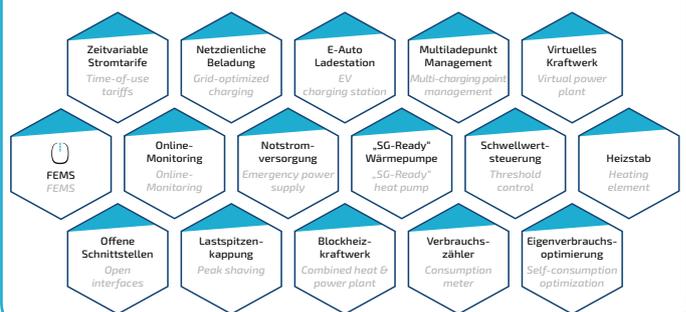
FENECON's vision is a future with 100% renewable energy. In the scope of delivery of your FENECON energy storagesystem, you will receive the ready-wired FEMS connection box. You should benefit from our commitment!

Our products actively support the energy transition and shape a sustainable, decentralised energy supply. FEMS is future-proof, because it grows with your requirements. It can also integrate new power sources and consumers later. In addition, FEMS optimises the cooperation of the battery storage units with the inverter that suits your needs.

The FEMS Box is the heart of your energy storage system.
It regulates the energy flows. The FEMS relay board provides you with up to 8 channels to control external devices and the output of digital signals. If you need more than 8 channels, simply connect additional FEMS relay boards.
The relays' high switching capacity of up to 24 VDC/15A and up to 250 VAC/10A are your guarantee for efficient energy management.

FEMS - Box

Software	Open source based
Estension concept	Apps flexibly extendable
Product warranty	5 years
Dimensions (H|W|D)	
Home	Integrated into the storage system
Industrial	Integrated into the storage system
Commercial	315 | 155 | 450 mm
Weight	
Commercial	4,5 kg
Switching capacity	12 VDC / 15 A
	24 VDC / 15 A
	125 VAC / 15 A
	250 VAC / 10 A

Zeitvariable Stromtarife *Time-of-use tariffs*	Netzdienliche Beladung *Grid-optimized charging*	E-Auto Ladestation *EV charging station*	Multiladepunkt Management *Multi-charging point management*	Virtuelles Kraftwerk *Virtual power plant*
FEMS *FEMS*	Online-Monitoring *Online-Monitoring*	Notstrom-versorgung *Emergency power supply*	„SG-Ready" Wärmepumpe *„SG-Ready" heat pump*	Schwellwert-steuerung *Threshold control*	Heizstab *Heating element*
Offene Schnittstellen *Open interfaces*	Lastspitzen-kappung *Peak shaving*	Blockheiz-kraftwerk *Combined heat & power plant*	Verbrauchs-zähler *Consumption meter*	Eigenverbrauchs-optimierung *Self-consumption optimization*

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