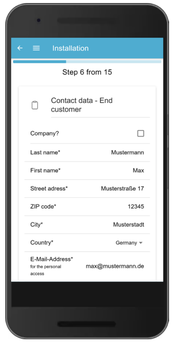
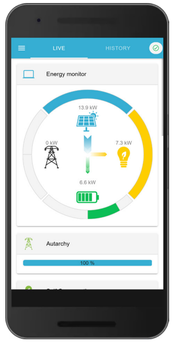
FEMS
Your daily companion

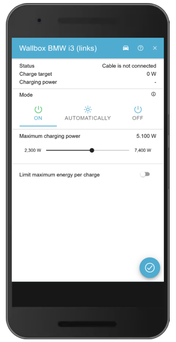
FENECON



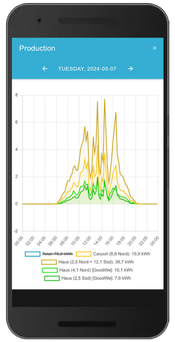
From commissioning



to real-time visualization.

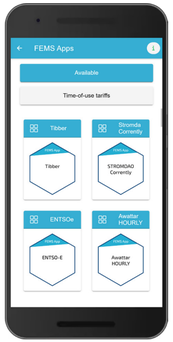


From control



to detailed historical data.

From service assistance



to Energy Journey.

Live demo
E-Mail: demo@fenecon.de
Password: femsdemo

FEMS
FENECON Energy Management System

Open interfaces
FEMS integrates perfectly into your existing infrastructure. Whether SCADA control system 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.

FEMS App: REST/JSON reading

FEMS App: Modbus/TCP reading

Load management
Experts can switch additional loads automatically or manually based on the grid feed-in, the state of charge or other threshold values.

FEMS App: Threshold control

FEMS App: Manual relay control

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

FEMS can communicate directly with a large number of PV inverters. Alternatively, all other AC generators can also be integrated into the energy management system using separate meters.

FEMS App: Socomec meter
FEMS App: KDK meter
FEMS App: Janitza meter
FEMS App: CARLO GAVAZZI Zähler
FEMS App: Discovergy Smart Meter
FEMS App: KACO PV inverter
FEMS App: SMA PV inverter
FEMS App: SolarEdge PV inverter
FEMS App: KOSTAL PV inverter
FEMS App: FRONIUS PV inverter

OpenEMS

FEMS is built on ‚OpenEMS' (Open Energy Management System), an open-source operating system designed for the energy transition and initiated by FENECON. The source code of OpenEMS is continuously developed in collaboration with an international community of private individuals, companies, scientific institutes and universities within the OpenEMS Association.

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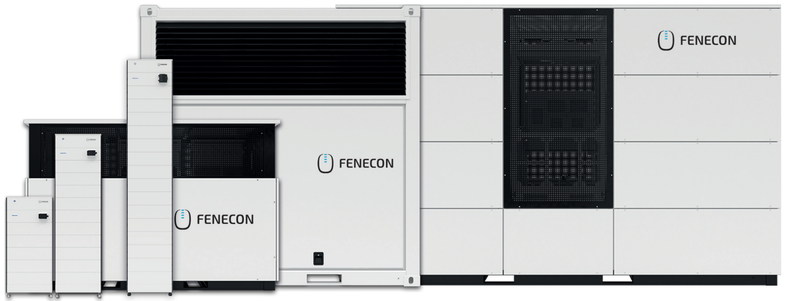
FEMS
FENECON Energy Management System

FENECON

„The brain of every FENECON energy storage system“

- **Full transparency**
  View historical and live data locally or via the Internet on your PC and cell phone at any time
- **High-performance hardware**
  Local artificial intelligence for consumption and production forecasts and AI-optimized energy plans
- **Energy Journey**
  Lifetime free updates and extendible with apps
- **Apps: buy once – use forever**
  One-time purchase, no recurring costs
- **Made in Germany**
  Development team and servers in Germany, data protection and IT security according to German law
- **Globally connected**
  Developed as open source together with the global OpenEMS community from 52 countries
- **Included in every storage system**
  For FENECON Home, Commercial and Industrial



Energy storage systems for the 100% energy transition

FEMS
Self-consumption optimization 2.0

PV self-consumption
„Energy is being produced during the day and consumed at night" - this is the conventional use case scenario for energy storage systems. With FEMS, even higher energy yield from the PV system can be achieved.
This increases the efficiency of your entire system and protects the power grid.

FEMS App: Self-consumption optimization

PV self-consumption
Optimize self-consumption and self-sufficiency

FEMS App: Grid-optimized charging

In summer
Avoid curtailment and charge batteries gently

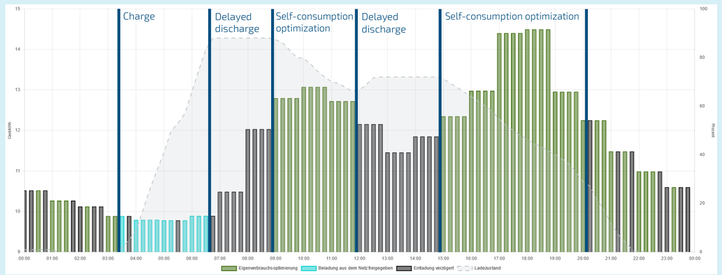
Optimized for time-of-use tariffs
The FEMS App Time-of-Use Tariff combines local production and consumption forecasts with the dynamic electricity prices provided by your energy supplier. Using AI, it automatically generates an energy plan to determine optimal times for consumers to draw power from the battery or the grid, and when to charge the battery from the grid. This ensures that FEMS not only maximizes self-consumption from your photovoltaic system but also optimizes the remaining electricity consumption based on real-time electricity pricing.

FEMS App: Tibber, STROMDAO Corrently, Awattar HOURLY, Stadtwerk Haßfurt, RabotCharge, Groupe E, ENTSO-E

FEMS App: Time-of-use tariff

In winter
Buy the remaining electricity at the best time

Fully automated through forecasts and AI-optimized schedules



Adjustable according to §14a EnWG (German energy law)
German Energy law (EnWG) §14a regulates the handling of controllable consumption devices such as heat pumps, wallboxes or energy storage systems. With this amendment, grid operators have been able to temporarily dim the output of these devices to 4.2 kW in the event of imminent grid overloads since January 1, 2024. Our residential storage systems are ready for this new regulation.

FEMS
Sector coupling

E-Mobility
Whether for solar-optimized home charging or semi-public and public EV charging parks, the FEMS apps for e-mobility offer comprehensive coverage. You can select from a range of compatible AC and DC wallboxes. With its modular design, the system can grow and adapt to meet your changing requirements.

FEMS App: AC charging station

FEMS App: DC charging station

FEMS App: Multi-charging point management

Heating
Integrating a heat pump or heating element into the energy management system allows you to further optimize self-consumption from your PV system, making you more independent of fossil energy sources.

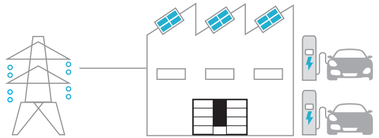
FEMS App: „SG-Ready" heat pump

FEMS App: Heating element

FEMS App: Combined heat & power plant

Example system configurations:

FENECON Home
optimizes self-consumption with PV system, wallbox, heat pump and uses dynamic electricity tariffs.



FENECON Industrial
avoids grid expansion with PV system, several charging stations and peak shaving app.

FEMS
Commercial and Industrial

FENECON

Standard apps for your individual project
Standardized FEMS apps transform a versatile FENECON Commercial or Industrial storage system into the perfect solution for various projects. The integrated App Centre allows for quick and easy switching and combination of applications.

In practice, a storage system can be used to avoid the need for short-term grid expansion for a charging park or to bridge the waiting period for a transformer. If necessary, the system can switch to phase-accurate blackout protection or peak-shaving to mitigate high power prices. Additionally, power and capacity can be marketed through the proven interface to various trading service providers.

For short-term demand, FERESTO rental energy storage systems offer an ideal solution.

FERESTO

Frequency stabilization
< 1 second

FEMS App: Fast Frequency Reserve (FFR)

Real-time control
< 30 seconds

FEMS App: Write access industrial storage

FEMS App: EZA-Regler

FEMS App: Fast Containment Reserve (FCR)

FEMS App: Peak shaving

Energy-Plan
15 minutes - 34 hours

FEMS App: Peak load window

FEMS App: Time-of-use tariff