FENECON

The efficient commercial battery energy storage system

COMMERCIAL 92

Key Facts

92 – 460

Power in kW

84 – 1.050

Capacity in kWh

Benefits

- Self-consumption optimization 2.0 with AI-optimized time-of-use tariffs*
- Peak Shaving: avoiding high power prices and grid expansion*
- PV-optimized integration of electric vehicle charging stations, heat-pumps and heating element*
- Including 3-phase sensor for the grid-connection point
- Plug & Play installation
- All-in-one system with compact high-voltage battery, efficient battery inverter, intelligent FEMS energy management and full service from one manufacturer
- Ready for the Energy Journey of your own: Increase your battery capacity, or add new functionality via FEMS Apps

* FEMS App Self-Consumption Optimization and FEMS App Grid Optimized Charge included. Further apps optional.

System

Product warranty 10 years

Installation / Ambient conditions	
IP classification	IP55
Operating altitude in m	≤ 2,000
Installation temperature in °C	-20 to +45
Operating temperature in °C*	-20 to +55
Optimal battery operating temperature in °C*	+15 to +30

* Outside the optimal operating temperature, the charging/discharging capacity is reduced.

Meter	
Communication interface	Modbus RTU
Transducer ratio	x/5 & x/1

Certifications / Guidelines	
Overall system	CE VDE 2510-50
Inverter	VDE 4105 VDE 4110
Battery	UN38.3 IEC62619 EMV (complete)

Battery module

Battery	
Cells technology	Lithium Iron Phosphate (LiFePO4)
Module weight in kg	29.6
Nominal module capacity in kWh	2.87
Usable module capacity in kWh	2.8
Optimal operating temperature in °C	+15 to +30

Battery tower	
Dimensions (W|D|H) in mm	506 | 401 | 2550
Double socket Dimensions (W|D|H) in mm	1,312 I 401 I 1,406
Nominal capacity in kWh	43.01
Usable capacity in kWh	42
Weight in kg	487
Capacity warranty	12 years or 6.000 cycles
Extendable via parallel connection	yes

Inverter

KACO blueplanet gridsave 92.0 TL3-S

AC connection	
Grid connection	400 V, 3L/PE, 50/60 Hz
Operating voltage range (Ph-Ph) in V	300 - 580
Nominal AC Output Power in VA	92,000
Max. AC Output Power in VA	92,000

General information	
IP classification	IP66
Humidity in %	0 to 100
Dimensions (W|D|H) in mm	699 | 450 | 719
Weight in kg	80
Max. efficiency in %	charging: 98.5 discharging: 98.7

For further details, see the KACO data sheet.

Parallel switch box

General	
Max. Operating Voltage	800 V DC
Max. Continuous Current	145 A
Operating Ambient Temperature in °C	-20 to +45
Ingress Protection	IP55
Protection class	I
Dimensions (W|D|H) in mm	606 | 162.5 | 639
Weight in kg	27

System configurations

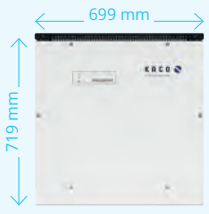
Towers per inverter	2	3	4	5
Usable capacity in kWh*				
1 inverter	84	126	168	210
2 inverter	168	252	336	420
3 inverter	252	378	504	630
4 inverter	336	504	672	840
5 inverter	420	630	840	1.050
Nominal power in kW**				
1 inverter	67		92	
2 inverter	134		184	
3 inverter	201		276	
4 inverter	268		368	
5 inverter	335		460	
Weight in kg	974	1,461	1,948	2,435

* From DC side at 25°C and 0.2 C

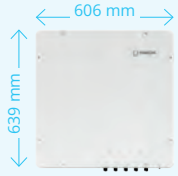
** Average power at nominal voltage; actual power depends on other factors such as state of charge, ambient temperature, cells temperature and residual capacity.

Detailed information about the cluster system can be found here on our website.

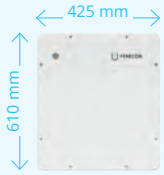
Inverter



Parallel switch box

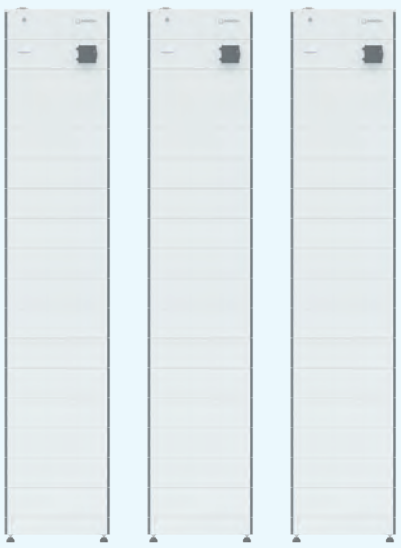


FEMS cluster box



System variant
2 towers, each with 15 modules

Expansion possible up to a system variant of 5 towers with 15 modules each



FEMS Hardware

Hardware interfaces	
Inputs	4 digital inputs
Output (FEMS relay board)	3 wet contacts (10 A per channel & measured) 2 potential free switch 1 analog Output (0 to 10 V)
DC-Parallelschaltung	CAN
Communication with external components	RS485 - Modbus RTU & LAN - Modbus TCP
components	RS485 - Modbus RTU & LAN - Modbus TCP

Communication interfaces	
Internet connection	LAN
Local	Modbus/TCP-API, REST-API (read, optional write)
Operating System	FEMS based on OpenEMS (Open Source)
Classification	OpenEMS Ready Gold
Updates	Unlimited, automatic, and free of charge

Advanced charging and discharging strategy	
Grid optimized charging	Standard
Time-off-use tariffs	Optional (compatible electricity tariff required)

Options for sector coupling	
Heating element controller	Optional
Heat pump control „SG-Ready“	Optional
Threshold controller	Optional
Manual relay controller	Optional
EV charging stations controller	Optional

FEMS

FENECON Energy Management System

A system that selects the best route every day.

Included

FEMS is the heart of your energy system and is fully integrated into the storage unit as a compact box right from the start.

Future-proof

Thanks to FEMS, your storage unit remains open for whatever the future may bring. Optional FEMS apps allow you to expand your energy system with new devices, ideas, and possibilities at any time. This is no problem thanks to the manufacturer-independent open-source approach.

Proactive

FEMS ensures that your energy doesn't just run – it follows your life. The AI-based forecast creates a holistic, customized energy roadmap in real time that takes into account weather data, consumption profiles, tariffs, and grid conditions.

More info about FEMS

Test it yourself with our demo access

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More info about the product