Commercial

FENECON

The efficient commercial battery energy storage system

Key Facts:

- Power: up to 92 kW
- Capacity: 84 up to 210 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: extendable with
  battery modules and FEMS apps

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

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System and Inverter

SYSTEM

Product warranty	10 years

Installation / Ambient conditions

IP classification	IP55
Operating altitude in m	≤ 2,000
Installation temperature in °C	-30 to +60
Operating temperature in °C*	-20 to +55
Optimal battery operating temperature in °C*	+15 to +30

* Outside the optimum operating range, charging/discharging power is reduced.

Meter

Max. grid connection in A	KDK (meter range)
Communication interface	Modbus RTU
Transducer ratio (Product sheet KDK)	9995/5 & 995/1

Certifications / Guidelines

Overall system	CE
Inverter	VDE 4105
Battery	UN38.3 VDE 2510-50 EMC; IEC62619

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

Efficiency

Max. efficiency in %	charge: 98.5 % discharge: 98.7 %

General information

IP classification	IP66
Humidity in %	0 to 100
Dimensions (W|D|H) in mm	699 | 450 | 719
Weight in kg	80

See KACO data sheet for further details.

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 battery operating temperature in °C	+15 to +30

Battery Tower

Dimensions (W|D|H) in mm	506 | 401 | 2,550
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

* For more information, please refer to our warranty terms and conditions at www.fenecon.de

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Battery and system configuration

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BATTERY VARIANTS

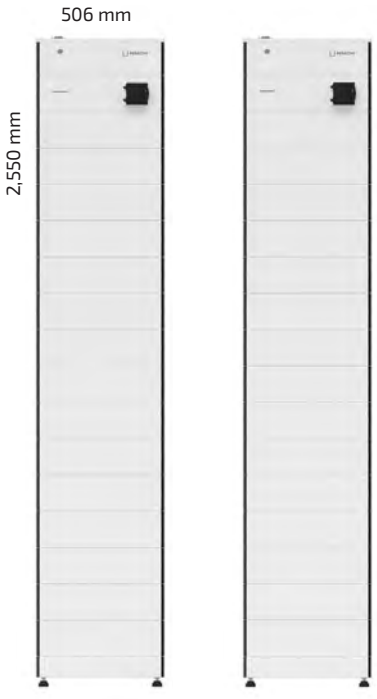
Towers per inverter	2	3	4	5
Usable capacity in kWh				
1 Inverter	84	126	168	210
2 Inverter*	168	252	336	420
3 Inverter*	252	378	504	630
4 Inverter*	336	504	672	840
5 Inverter*	420	630	840	1,050
Nominal power in kW				
1 Inverter	67	92		
2 Inverter*	134	184		
3 Inverter*	201	276		
4 Inverter*	268	368		
5 Inverter*	335	460		
Weight in kg				
	974	1,461	1,948	2,435

*availability to be announced

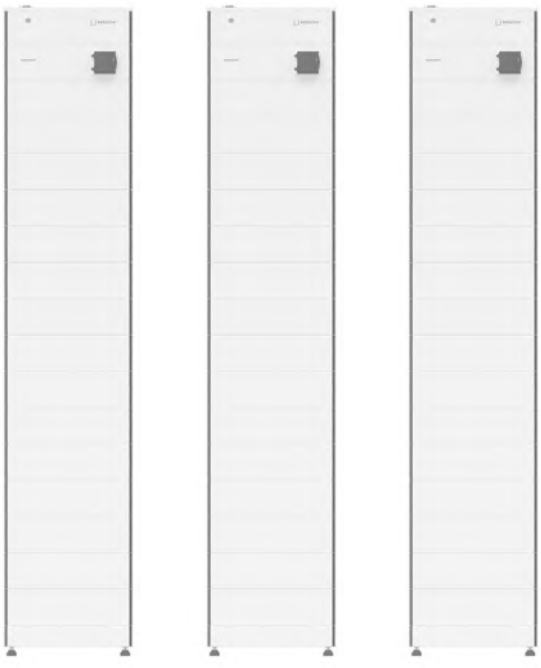
Parallel switch box

*availability to be announced

System variant 2 towers with 15 modules each



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



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FEMS Energy Management System

Hardware interfaces

Inputs	4 digital inputs
Outputs (FEMS relay board)	3 load switch contacts (10 A per channel & measured) 2 potential free switch 1 analog Output (0 to 10 V)
DC-Parallel connection	CAN
Communication with internal components	RS485 - Modbus RTU & LAN - Modbus TCP
Communication with external 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	Unrestricted, automatical and free of charge
Feed-in-management	0% to 100%

Advanced charging and discharging strategy

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

Options for sector coupling

Heating element control	Optional
Heat pump control „SG-Ready“	Optional
Threshold control	Optional
Manual relay control	Optional
EV charging stations control	Optional
Control of several EV charging stations	Optional

FEMS App Center

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 key
- Fast and convenient installation process

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