

FENECON Commercial 50

Commercial battery energy storage system
for indoor & outdoor applications



Compact. Extendable. Reliable.

- Powerful battery
- Efficient inverter
- Open-source based energy management FEMS

Complete integrated system

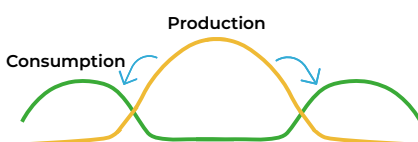
- AC power output: from 50 to 250 kW
- Capacity: scalable from 70 up to 1,400 kWh
- For indoor & outdoor applications*
- Expandable in capacity and power
- Including 3-phase sensor for the grid-connection point
- Sector coupling: heat, e-mobility

*with optional outdoor housing

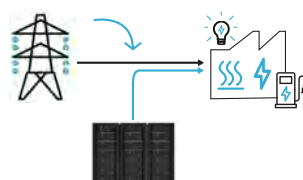
(50 kW / 70 kWh configuration)



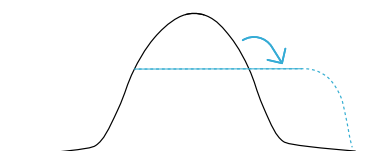
Self-consumption optimization



Avoiding grid expansion



Peak shaving



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System and inverter



SYSTEM

Product warranty	5 years
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Installation / Ambient conditions

	Indoor	Outdoor
PV connection	AC	
Grid connection	400/380 V, 3L/N/PE, 50/60 Hz	
IP classification	21	55
Operating altitude in m	<= 2,000	<= 3,000
Installation/Operating temperature in °C	0 to +55	-35 to +55
Battery operating temperature* in °C	0 to +40	
Optimal battery operating temperature in °C	+15 to +30	

Certifications / Guidelines

Overall system	CE
Inverter	VDE 4105:2018-11 VDE 4110:2018-11 TOR Erzeuger Typ A:2019-12 OVE-Richtlinie R25:2020-03 EN 50549-1:2019
Battery	UN38.3 IEC 62619:2017



(50 kW / 70 kWh configuration)

* At cells temperature outside the optimum operating range, the charging/ discharging power is reduced.



INVERTER

Kaco blueplanet gridsave 50.0 TL3-S

AC connection

Grid connection	400/380 V, 3L/N/PE, 50/60 Hz
Voltage range (Ph-Ph) in V	286-500
Max. output current in A	90
Nominal AC output power in VA	50,000
Max. AC output power in VA	52,000

Back-up Power

Back-up power capability	No
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Efficiency

Max. efficiency in %	98.4
European efficiency in %	98.2

General information

IP classification	65
Ambient temperature in °C	-20 to +60
Relative humidity in %	0 to 100
Dimensions (W D H) in	500 425 760
Weight in kg	75

More details: see KACO data sheet

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Battery and system configuration



BATTERY

Cells technology	Lithium Iron Phosphate (LiFePO4)
Module weight in kg	37.5
Nominal module capacity in kWh	3.84
Usable module capacity in kWh	3.5
Expandable	Yes
Battery rack dimensions (W D H) in mm	1,875 430 1,471
Outdoor cabinet dimensions (W D H) in	2,100 750 1,850
Weight of battery rack (empty) in kg	3 x 40
Weight for outdoor cabinet (empty) in kg	425
Capacity guarantee*	12 years or 6,000 cycles



SYSTEM VARIANTS

Single inverter and battery side parallel connection - Nominal power 50 kW**				
Number of modules per system	20	40	60	80
Usable capacity in kWh	70	140	210	280
Inverter and battery side parallel connection - Nominal power 100 kW**				
Number of modules per system	40	80	120	160
Usable capacity in kWh	140	280	420	560
Inverter and battery side parallel connection - Nominal power 150 kW**				
Number of modules per system	60	120	180	240
Usable capacity in kWh	210	420	630	840
Inverter and battery side parallel connection - Nominal power 200 kW**				
Number of modules per system	80	160	240	320
Usable capacity in kWh	280	560	840	1,120
Inverter and battery side parallel connection - Nominal power 250 kW**				
Number of modules per system	100	200	300	400
Usable capacity in kWh	350	700	1,050	1,400

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

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

FEMS Box
315 mm



450 mm

Inverter
500 mm



760 mm

Optional outdoor cabinet instead of Indoorracks

3 x 625 mm



1,471 mm

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FEMS energy management system



Hardware

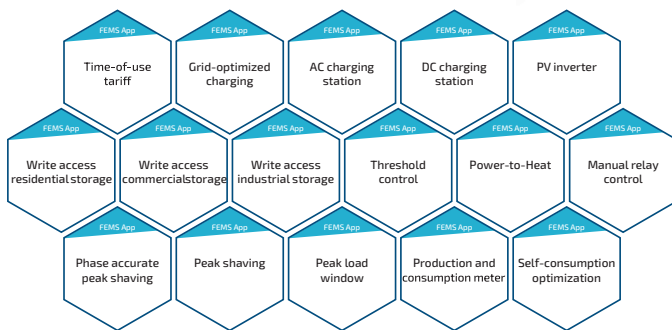
Dimensions (W D H) in mm	315 155 450
Weight in kg	4.5
Outputs (FEMS relay board)	3 x load switch contacts (10 A per channel)
Parallel connection	CAN
Communication of components	RS485 – Modbus RTU / RJ45 – Modbus TCP IP

Communication interfaces

Connection to internet	LAN
Local	Modbus/TCP-API (read, optional write), REST-API (read, optional write)
Online	Cloud-Rest-API (read, optional)

Basis and sustainability

Operating system	FEMS based on (OpenEMS)
Classification	OpenEMS Ready Gold
Updates	Unrestricted, automatic and free of charge



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
- Purchase apps optionally as bundle
- Fast and convenient installation process

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