FENECON Commercial 50

Commercial battery energy storage system for indoor & outdoor applications

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Compact. Extendable. Reliable.

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

Complete integrated system

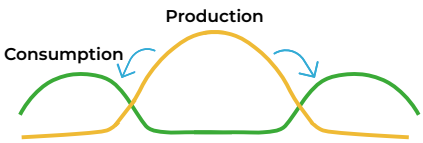
- AC power output: from 50 to 250 kW
- Capacity: scalable from 70 up to 1,400 kWh
- For indoor & outdoor applications*
- Expandable in capacity and power
- Including 3-phase sensor for the grid-connection point
- Sector coupling: heat, e-mobility

*with optional outdoor housing

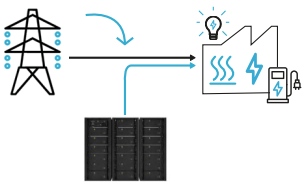
(50 kW / 70 kWh configuration)

RENT @ FERESTO

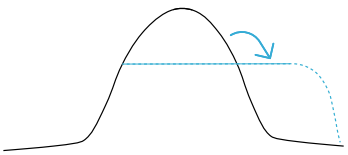
Self-consumption optimization



Avoiding grid expansion



Peak shaving



Battery energy storage systems for the 100% energy transition

FENECON Commercial 50

System and inverter

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SYSTEM

Product warranty	5 years

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

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

(50 kW / 70 kWh configuration)

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

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

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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

Inverter
500 mm

Optional outdoor cabinet instead of Indoorracks 3 x 625 mm

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FEMS energy management system

Hardware

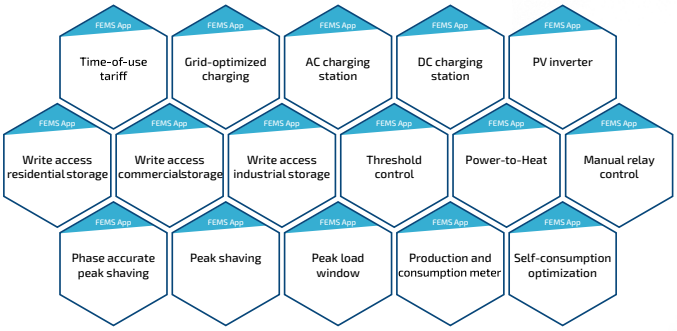
Dimensions (W|D|H) in mm	315 | 155 | 450
Weight in kg	4.5
Outputs (FEMS relay board)	3 x load switch contacts (10 A per channel)
Parallel connection	CAN
Communication of components	RS485 – Modbus RTU / RJ45 – Modbus TCP IP

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, automatical and free of charge



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

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