FENECON Commercial 30

**Commercial battery energy storage system
with back-up power supply**

fenecon

Variable. Adaptable. Robust.

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

Complete integrated system

- AC power output: from 30 to 90 kW

- Capacity: scalable from 31.5 up to 357.0 kWh

- Modular expandable in capacity and power

- Back-up power*

- Including 3-phase sensor for the grid-connection point
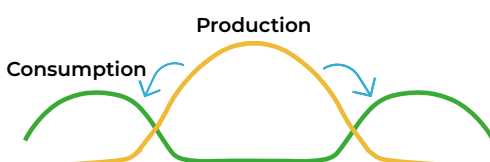
- Sector coupling: heat, e-mobility

  * with optional grid disconnection unit
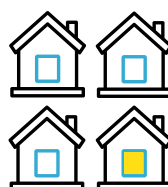
(30 kW / 35 kWh configuration)

RENT @ FERESTO

Self-consumption optimization

Production

Consumption

Back-up power

Activate sector coupling over-the-air

Battery energy storage systems for the 100% energy transition

FENECON Commercial 30

System and inverter

SYSTEM

Product warranty	5 years

Installation / Ambient conditions

PV connection	AC
Grid connection	400/380 V, 3L/N/PE, 50/60 Hz
IP classification	21
Operating altitude in m	<= 2,000
Installation/Operating temperature in °C	0 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
	TOR Erzeuger Typ A 1.0
	OVE-Richtlinie R25
	EN 50549-1:2019
Battery	UN38.3
	IEC 62619:2017

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

(30 kW / 59.5 kWh configuration)

INVERTER
Sinexcel (PWS2-30M-EX/CN)

AC connection

Grid connection	400/380 V, 3L/N/PE, 50/60 Hz
Max. output current in A	43.5
Nominal AC output power in kW	30
Max. AC output power in kW	33

Back-up power

Back-up power capability*	Yes (with grid disconnection unit)
Grid shape	400/380 V, 3L/N/PE, 50/60 Hz
Max. back-up load in kW	30
Unbalanced load in kW	10
Black start	No
Solar recharging	No

Efficiency

Max. efficiency in %	97.3
European efficiency in %	96.5

General information

IP classification	21
Dimensions** (W|D|H) in mm	600	225	910
Weight** in kg	79.5

* Back-up power only available for setup with one inverter (30 kW).
**Inverter incl. housing

More details: see Sinexcel data sheet

FENECON Commercial 30

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
Extendable	Yes
Battery rack dimensions (W|D|H) in mm	625-1250|430|2281
Weight of battery rack (empty) in kg	54
Capacity guarantee*	12 years or 6,000 cycles

SYSTEM VARIANTS

Single inverter system - Nominal power 30 kW**

Number of modules per system	9	10	11	12	13	14	15	16	17
Usable capacity in kWh	31.5	35	38.5	42	45.5	49	52.5	56	59.5

Battery side parallel connection - Nominal power 30 kW**

Number of modules per system	18	20	22	24	26	28	30	32	34
Usable capacity in kWh	63	70	77	84	91	98	105	112	119

Inverter side parallel connection - Nominal power 60 kW**

Number of modules per system	18	20	22	24	26	28	30	32	34
Usable capacity in kWh	63	70	77	84	91	98	105	112	119

Inverter side parallel connection - Nominal power 90 kW**

Number of modules per system	27	30	33	36	39	42	45	48	51
Usable capacity in kWh	94.5	105	115.5	126	136.5	147	157.5	168	178.5

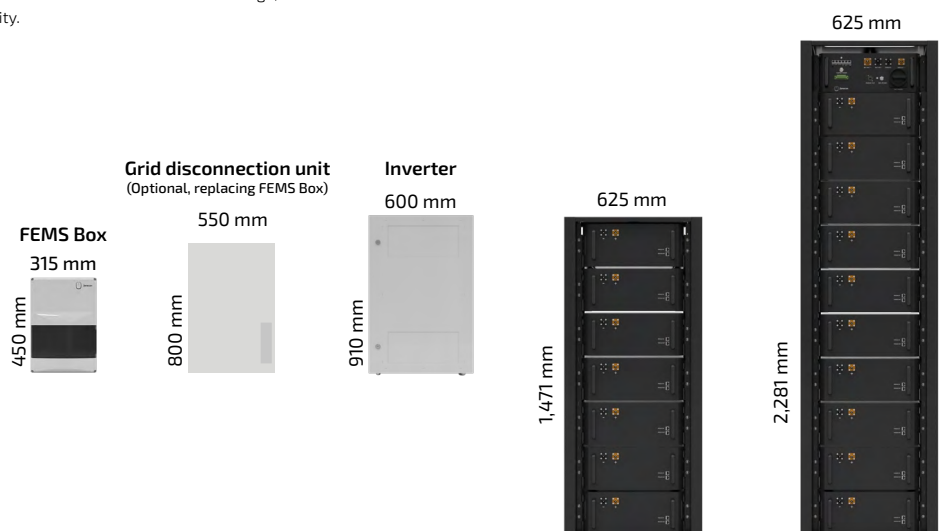**Inverter and battery side parallel connection - Nominal power 60 kW****

Number of modules per system	36	40	44	48	52	56	60	64	68
Usable capacity in kWh	126	140	154	168	182	196	210	224	238

Inverter and battery side parallel connection - Nominal power 90 kW**

Number of modules per system	54	60	66	72	78	84	90	96	102
Usable capacity in kWh	189	210	231	252	273	294	315	336	357

* 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

Grid disconnection unit
(Optional, replacing FEMS Box)
550 mm
800 mm

Inverter
600 mm
910 mm

625 mm
1,471 mm

625 mm
2,281 mm

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FEMS energy management system

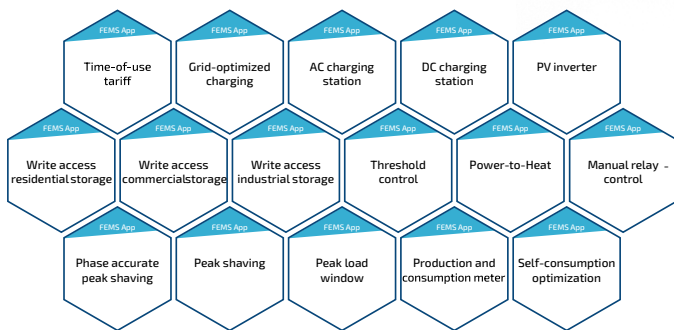| Hardware	FEMS-Box	Grid disconnection unit*
Dimensions (W|D|H) in mm	315 | 155 | 450	550 | 160 | 800
Weight in kg	4.5	23
Outputs (FEMS relay board)	5 x load switch contacts (10 A per channel)	
Parallel connection	CAN	
Communication of components	RS485 – Modbus RTU / RJ45 – Modbus TCP IP	

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

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

* Optional: for backup-power

FEMS App — Time-of-use tariff | FEMS App — Grid-optimized charging | FEMS App — AC charging station | FEMS App — DC charging station | FEMS App — PV inverter

FEMS App — Write access residential storage | FEMS App — Write access commercialstorage | FEMS App — Write access industrial storage | FEMS App — Threshold control | FEMS App — Power-to-Heat | FEMS App — Manual relay - control

FEMS App — Phase accurate peak shaving | FEMS App — Peak shaving | FEMS App — Peak load window | FEMS App — Production and consumption meter | FEMS App — Self-consumption optimization

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

FEMS App Center

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