

The high-power residential energy storage system

# HOME 20 | 30



## Key Facts

# 30

Power in kW

# 14- 168

Capacity in kWh

# 45

Integrated PV connection  
in kWp and for up to three  
orientations

## Benefits

- PV-optimized integration of wallboxes, heat pumps and a heating elements\*
- Self-Consumption Optimization 2.0 with AI-optimized utilization of time-of-use tariffs\*
- 3-phase emergency power supply with solar recharging and black-start capability
- Plug-&-Play installation
- All-in-one system featuring a compact high-voltage battery, a flexible DC, AC and hybrid inverter, intelligent energy management system FEMS and full service by FENECON
- Ready for your Energy Journey: Expand your battery capacity and add new functionality with FEMS apps

\* FEMS App Self-Consumption Optimization and FEMS App Grid-Optimized Charging included. Further apps available optionally.

## System

Product warranty 10 years



### Installation / Ambient conditions

IP classification	IP55
Operating altitude in m	≤ 2,000
Installation/operating temperature in °C	-20 to +50
Operating temperature in °C*	-20 to +55
Optimal battery operating temperature in °C*	+15 to +30
Max. grid connection in A**	120

\* Outside of the optimal operating temperature range, the (dis-)charging performance may be reduced.

\*\* Higher supply currents are possible through optional meters.

### Certifications and Directives

Overall system	CE VDE 2510-50
Inverter	VDE 4105:2018-11 TOR Generator Type A 1.1
Battery	UN38.3 IEC62619 EMV (complete)
Other countries	Sweden (registered Rikta Rätt), Netherlands (Synergrid C10/11 planned)

## Battery module



Cell technology	Lithium iron phosphate (LiFePO4)
Module weight in kg	29.6
Nominal capacity per battery module in kWh	2.87
Usable capacity per battery module in kWh	2.8
Expandable capacity	Yes
Tower - Width   Depth in mm	506   401
Capacity warranty*	12 years or 6,000 cycles

\* Find further information in our warranty terms at [www.fenecon.com](http://www.fenecon.com).

## Inverter



Product name	Home 20 FHI-20-DAH	Home 30 FHI-29,9-DAH
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### DC connection

Max. DC input power in kWp	30	45
MPP Trackers	2	3
Inputs per MPPT	2 (MC4)	
Starting voltage MPPT in V	200	
Max. DC input voltage in V	1,000	
MPPT voltage range in V	200 - 850	
Nominal input voltage in V	620	
Max. effective input current per MPPT in A	30	
Max. short circuit current per MPPT in A	38	

### AC connection

Grid connection	400/380 V, 3L/N/PE, 50/60 Hz	
Max. output current (400 V) in A	29	43.3
Max. input current (400 V) in A	45	50
Nominal apparent power output in VA	20,000	29,900
Max. apparent power of the grid in VA	22,000	29,900
Cos(Phi)	-0.8 to +0.8	

### Emergency power

Emergency power capability	Yes	
Electrical network configuration	400/380 V, 3L/N/PE, 50/60 Hz	
Loads supplied with emergency power (per phase) in VA	20,000 (6,666)	29,900 (9,966)
Unbalanced load in VA	6,666	9,966
Black start capability	Yes	
Solar recharging	Yes	

### Efficiency

Max. efficiency in %	98.0	
Europ. efficiency in %	97.5	

### General specifications

Dimensions (W   D   H) in mm	520   220   660	
Weight in kg	48	54
DC surge protection	Type 2	
Ripple control receiver inputs	Yes	
Cooling	Adaptive fan	

# System configurations

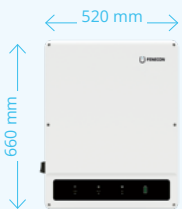


Battery modules per tower	5	6	7	8	9	10	11	12	13	14	15
<b>Nominal capacity in kWh</b>											
1 tower with x modules	14.34	17.20	20.07	22.94	25.8	28.67	31.46	34.41	37.27	40.14	43.01
2 towers with x modules each				45.88	51.61	57.34	62.92	68.81	74.55	80.28	86.02
3 towers with x modules each							94.38	103.22	111.82	120.42	129.02
4 towers with x modules each								137.63	149.09	160.56	172.03
<b>Effective capacity in kWh*</b>											
1 tower with x modules	14.0	16.8	19.6	22.4	25.2	28.0	30.8	33.6	36.4	39.2	42.0
2 towers with x modules each				44.8	50.4	56.0	61.6	67.2	72.8	78.4	84.0
3 towers with x modules each							92.4	100.8	109.4	117.6	126.0
4 towers with x modules each								134.4	145.6	156.8	168.0
<b>Nominal power in kW**</b>											
Nom. power in kW (20 kW Inv.)	11.20	13.44	15.68	17.92	20.00	20.00	20.00	20.00	20.00	20.00	20.00
Nom. power in kW (30 kW Inv.)	11.20	13.44	15.68	17.92	20.16	22.40	24.64	26.88	29.12	30.00	30.00
<b>Weight in kg</b>											
1 tower with x modules	187	217	247	277	307	337	367	397	427	457	487
2 towers with x modules each				554	614	674	734	794	854	914	974
3 towers with x modules each							1,101	1,191	1,281	1,371	1,461
4 towers with x modules each								1,588	1,708	1,828	1,948
<b>Height in mm (approx.)</b>											
	<b>1,120</b>	<b>1,263</b>	<b>1,406</b>	<b>1,549</b>	<b>1,692</b>	<b>1,835</b>	<b>1,978</b>	<b>2,121</b>	<b>2,264</b>	<b>2,407</b>	<b>2,550</b>

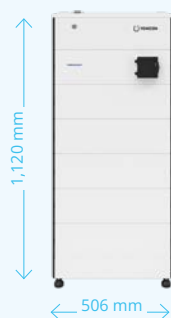
\* DC-side at 25 °C and 0.2 C

\*\* Average DC power at nominal voltage; The actual power depends on factors like state of charge, ambient and cell temperature and the operating mode.

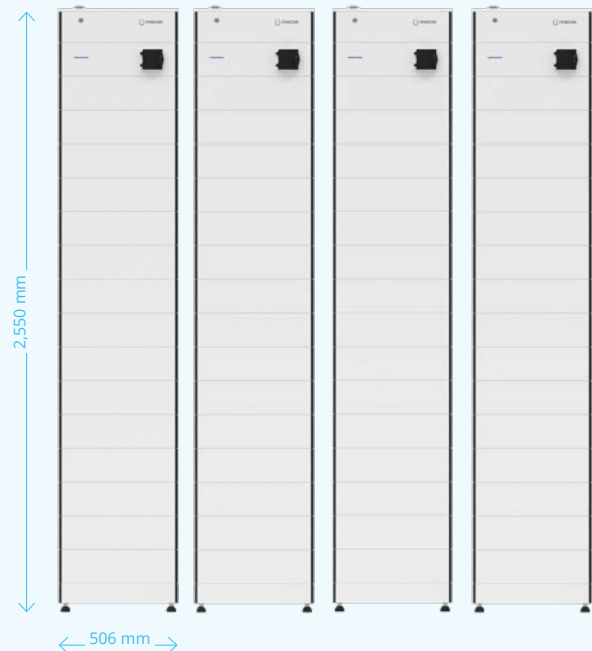
## Inverter



## System variant 1 tower with 5 modules



## System variant 4 towers with 15 modules each



# FEMS Hardware



## Hardware interfaces

Inputs	4 digital inputs
Outputs (FEMS relay board)	3 wet inputs (10 A per channel & metered), 2 dry contacts 1 analog output (0 to 10 V)
Parallel connection	CAN
Communication with internal components	RS485 – Modbus RTU
Communication with external components	RS485 – Modbus RTU/LAN Modbus TCP

## Communication interfaces

Internet connection	LAN
Local interface	Modbus TCP API, REST API (read access, write access optional)
Online interface	Cloud Rest API (read access, write access optional)

## Software & future capability

Operating system	FEMS, based on OpenEMS (Open Source)
Classification	OpenEMS Ready Gold
Updates	Unlimited, automatic & free of charge
Feed-in management	0% (e.g., outside EEG) up to 100%

## Advanced charging & discharging

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

## Options for sector coupling

Heating element controller	Optional
Heat pump control „SG-Ready“	Optional
Threshold controller	Optional
Manual relay controller	Optional
Wallbox controller	Optional
Controller for multiple wallboxes	Optional

# FEMS

FENECON Energy Management System



A system that selects the best route every day.

## Essential

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

## Future-proof

Thanks to FEMS, your energy storage system remains ready for whatever the future may bring. Optional FEMS apps allow you to expand your system with new devices, ideas, and possibilities at any time. All easily implemented thanks to our manufacturer-independent open-source approach.

## Intelligent

FEMS ensures optimal utilization of the energy you have generated. 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

