

FENECON Home 10

The smart residential battery energy storage system



Unique. Efficient. Innovative.

- Compact high voltage battery
- Variable DC, AC and hybrid inverter
- Open-source based energy management FEMS

More than a battery storage

- Max. AC power output: 10 kW
- Capacity: scalable from 8.8 up to 66 kWh
- Two integrated DC inputs for PV up to 15 kWp
- 3-phase back-up power supply with solar recharging and black start function (< 10 ms UPS-standard switching)
- Plug & Play assembly
- All-in-one system
- Suitable for outdoor installation

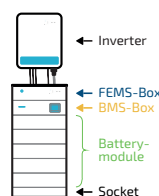


(15.4 kWh configuration)

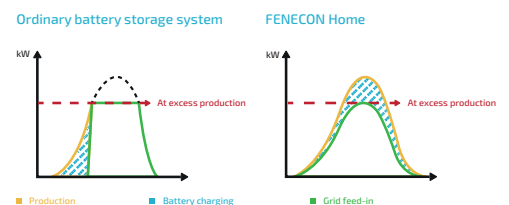
Activate sector coupling over-the-air



Room-efficient



Grid optimized charging



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System and inverter



SYSTEM

Product warranty	10 years
Installation / Ambient conditions	
IP classification	55
Operating altitude in m	<= 2,000
Installation/Operating temperature in °C	-30 to +60
Battery operating temperature* in °C	-10 to +50
Optimal battery operating temperature in °C	+15 to +30
Cooling	fanless
Max. grid connection in A	120
Certifications / Guidelines	
Overall system	CE
Inverter	VDE 4105:2018-11 TOR Erzeuger Typ A 1.1
Battery	UN38.3 VDE 2510-50 EMC; IEC62619



* Reduced charging and discharging power below 5 °C and over 45 °C; no charging and discharging power below -10 °C and 50 °C.

INVERTER

Model	FHI-10-DAH	FHI-10-DAH 16A
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DC PV connection

	FHI-10-DAH	FHI-10-DAH 16A
Max. DC input power in kWp	15	
Number of MPP trackers	2	
Number of inputs per MPPT	1 (MC4)	
Start-up voltage in V	180	
Min. DC input voltage in V	210	
Max. DC input voltage in V	1,000	
MPPT operating voltage range in V	200 - 850	
Nominal input voltage in V	620	
Max. input current per MPPT in A	12.5	16
Max. short circuit current per MPPT in A	15.2	21.2

AC connection

Grid connection	400/380 V, 3L/N/PE, 50/60 Hz	
Max. output current in A	16.5	
Max. input current in A	22.7	
Nominal apparent power output in VA	10,000	
Max. apparent power output in VA	11,000	
Max. apparent power from the grid in VA	15,000	
Cos(Phi)	-0.8 to +0.8	

Back-up power

Back-up power capability	Yes	
Grid shape	400/380 V, 3L/N/PE, 50/60 Hz	
Max. back-up load (per phase) in VA	10,000 (3,333)	
Unbalanced load in VA	3,333	
Black start	Yes	
Solar recharging	Yes	

Efficiency

Max. efficiency in %	98.2	
European efficiency in %	97.5	

General information

Dimensions (W D H) in mm	415 180 516	
Weight in kg	24	
Topology	transformerless	
DC-surge protection	Type 2	
Inputs for ripple control receiver	Yes	



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Battery and system configuration



Cells technology	Lithium Iron Phosphate (LiFePO4)
Module weight in kg	26.5
Nominal module capacity in kWh	2.33
Usable module capacity in kWh	2.2
Extendable	Yes
Tower width Tower depth in mm	506 397
Capacity guarantee*	12 years or 6,000 cycles



SYSTEM VARIANTS

Number of modules per tower	4	5	6	7	8	9	10
Nominal capacity in kWh							
1 tower with x modules	9.3	11.7	14.0	16.3	18.6	21.0	23.3
2 towers, each with x modules			28.0	32.6	37.3	41.9	46.6
3 towers, each with x modules				48.9	55.9	62.9	69.9
Usable capacity in kWh**							
1 tower with x modules	8.8	11.0	13.2	15.4	17.6	19.8	22
2 towers, each with x modules			26.4	30.8	35.2	39.6	44
3 towers, each with x modules				46.2	52.8	59.4	66
Nominal power in kW *** (Charging and discharging power)	4.48	5.60	6.72	7.84	8.96	10.00	10.00
Weight in kg							
1 tower with x modules	133.5	160.0	186.5	213.0	239.5	266.0	292.5
2 towers, each with x modules			373.0	426.0	479.0	532.0	585.0
3 towers, each with x modules				639.0	718.5	798.0	877.5
Approx. height of the tower in mm	924	1,055	1,186	1,317	1,448	1,579	1,710

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

** From DC side at 25 °C and 0.2 C

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

AVU (optional)

486 mm



Inverter

415 mm



System variant
- 1 tower with 4
modules



System variant - 3 towers each with 10 modules

506 mm



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FEMS energy management system



Hardware interfaces

Inputs	4 x potential free contacts
Outputs (FEMS relay board)	3 x load switch contacts (10 A per channel)
Parallel connection	CAN
Communication of components	RS485 – Modbus RTU

Communication interfaces

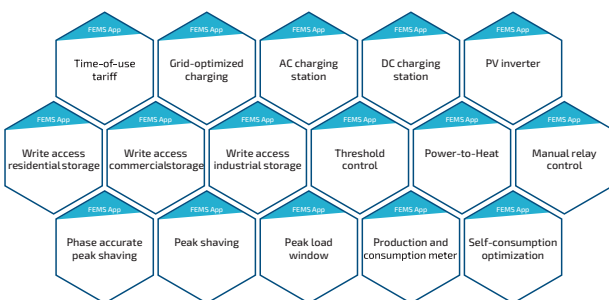
Connection to internet	LAN
Local	Modbus/TCP-API (read, optional write), REST-API (read, optional write)
Online	Cloud-Rest-API (read, optional write)

Basis and sustainability

Operating system	FEMS (based on OpenEMS)
Classification	OpenEMS Ready Gold
Updates	Unrestricted, automatic and free of charge
Feed-in management	0 % to 100 %

Advanced charging and discharging strategy

Grid optimized charging	Included in standard delivery scope
Time-of-use tariffs	Optional (compatible electricity tariff required)



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 bundles
- Fast and convenient installation process

FENECON GmbH
Brunnweisenstr. 4
94469 Deggendorf
Germany

Phone +49 9903 6280-0
Fax +49 9903 6280-909
Web www.fenecon.de
E-Mail info@fenecon.de

Presented by:

