The smart residential battery energy storage system

FENECON

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)



Battery energy storage systems for the 100% energy transition

System and inverter

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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.



Inputs for ripple control receiver

Model	FHI-10-DAH	FHI-10-DAH 16A		
DC PV connection				
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, 3	L/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	1	0,000		
Max. apparent power output in VA	11,000			
Max. apparent power from the grid in VA	15,000			
Cos(Phi)	-0.8	8 to +0.8		
Back-up power				
Back-up power capability		Yes		
Grid shape	400/380 V. 3	L/N/PE. 50/60 Hz		
Max, back-up load (per phase) in VA	10.00	00 (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	transf	ormerless		
DC-surge protection	Т	ype 2		

Yes



Battery and system configuration

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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 tov	ver 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
lisable canacity in kWh**							
1 tower with x modulos	0 0	11.0	12 7	15 /	17.6	10.9	77
	0.0	11.0	15.2	13.4	17.0	19.0	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 ***	4.48	5.60	6.72	7.84	8.96	10.00	10.00
(Charging and discharging powe	r)						
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

1,186

System variant - 1 tower with 4 modules

506 mm

1,317

1,448

 * 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

Approx. height of the tower in mm 924

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

шш 924

1,055





System variant - 3 towers each with 10 modules

1,579

1,710



FEMS energy management system

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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

Advanced charging and discharging strategy

Grid optimized charging Time-of-use tariffs

Feed-in management

Updates

Included in standard delivery scope Optional (compatible electricity tariff required)

Unrestricted, automatical and free of charge

0 % to 100 %







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

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Presented by:

