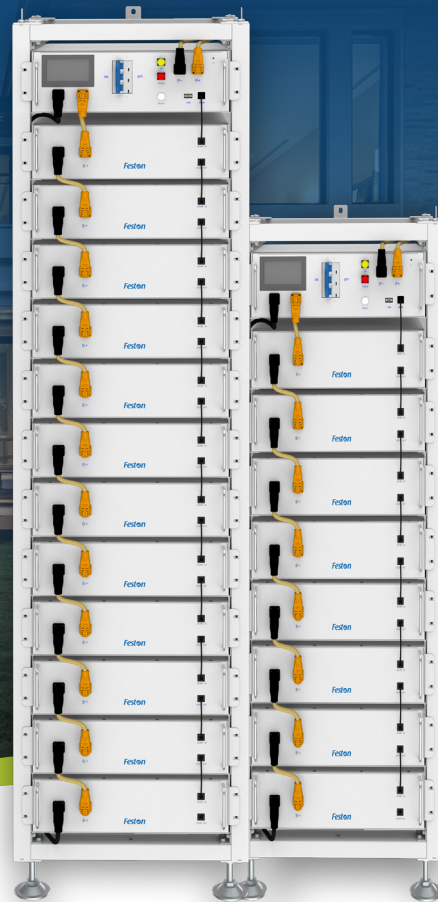


Small-Scale C&I ESS Solution



Feston FERRO - HV

- **Convenient**

Quick installation standard of 19-inch embedded designed module is comfortable for installation and maintenance.

- **Safe and reliable**

Cathode material is made from LiFePO₄ with safety performance and long cycle life, The module has less self- discharge, up to 6 months without charging it on shelf, no memory effect, excellent performance of shallow charge and discharge.

- **Intelligent BMS**

It has protection functions including over-discharge, over-charge, over-current and over-high or low temperature. The system can automatically manage charge and discharge state and balance current and voltage of each cell.

- **Eco-friendly**

The whole module is non-toxic, non-polluting and environmentally friendly.

- **Flexible configuration**

Multiple battery modules can be in parallel for expanding capacity and power. Support USB upgrade, remote upgrade.

- **Wide temperature**

Working temperature range is from -20°C to 55°C, with excellent discharge performance and cycle life.



+91 89258 27701



sales@festonsev.com

Technical Data

Feston FERRO - HV

Main Parameter

Cell Chemistry	LiFePO ₄			
Module Energy (kWh)	5.12			
Module Nominal Voltage (V)	5.12			
Module Capacity (Ah)	100			
Battery Module Number	FES-HV-25	FES-HV-40	FES-HV-60	FES-HV-85
Battery Module Qty In Series (Optional)	5 (Min)	8	12	17 (Max)
System Nominal Voltage (V)	256	409.6	614.4	870.4
System Operating Voltage (V)	220~292	352~467.2	528~700.8	748~992.8
System Energy (kWh)	25.6	40.96	61.44	87.04
System Usable Energy (kWh) ¹	23.04	36.86	55.3	78.33
Rated DC Power	25.6	40.96	55.3	87.04
Charge/Discharge ² Current (A)	Recommend	50		
	Nominal	100		
	Peak Discharge (2 mins, 25°C)	125		
Working Temperature (°C)	Charge: 0~55/Discharge: -20~55			
Status Indicator	Yellow: Battery High Voltage Power On Red: Battery System Alarm			
Communication Port	CAN2.0/ RS485			
Humidity	5%~85%RH			
Altitude	≤3000m			
IP Rating of Enclosure	IP20			
Dimension (W×D×H,mm)	530×602×1629		530×602×2219	1060×602×1629
Weight Approximate (kg)	290	428	622	883
Installation Location	Rack Mounting			
Storage Temperature (°C)	0~35			
Recommend Depth of Discharge	90%			
Cycle Life	25±2°C, 0.5C/0.5C, EOL70%≥6000			
Warranty ³	10 years			
Certification	UN38.3/CE/CE-EMC/IEC62040/CEC/VDE			

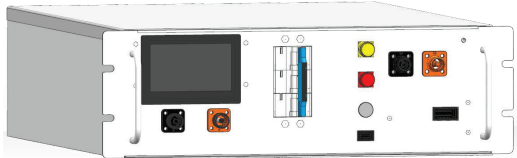
1. DC Usable Energy, test conditions: 90% DOD, 0.3C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.

2. The current is affected by temperature and SOC.

3. The warranty is due whichever reached first of warranty period or life cycle power.

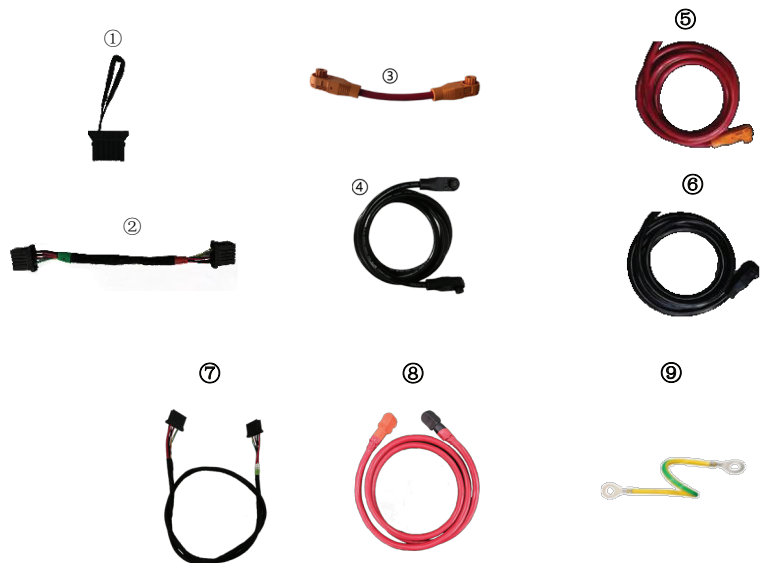
System Components


Feston FERRO - HV

FES-PDU-HV-1K	High Voltage Battery cluster control box conforming to European or British Standards	
Operating Voltage	200~000Vdc	
Nominal Charge/Discharge Current	100A	
Max.Charge/Discharge Current	120A	
DC Input Rating	12±2%V/4.15A	
Operating Temperature Range	-20~65°C	
Ingress Protection	IP20	
Dimension (W×D×H)	440×570×150mm	
Weight Approximate	19kg	

High voltage box Standard configuration:

- ① 120 ohm terminal resistance
- ② 250mm communication cable
- ③ 140mm power cable
- ④ 2.1m power cable
- ⑤ EPCable2.0
(Standard 2-meter power cable connected to the positive pole of the external PCS)
- ⑥ ENCable2.0
(Standard 2-meter power cable connected to the negative pole of the external PCS)
- ⑦ 1000mm communication cable between two battery racks
- ⑧ 1000mm power cable between the two battery racks
- ⑨ 140 mm ground wire



FES-5K-HV	5.12 kwh battery module	
Battery Type	LiFePO ₄ (LFP)	
Nominal Voltage	51.2Vdc	
Rated Capacity	100Ah	
Rated Energy	5.12KWh	
Nominal Charge/Discharge Current	100A	
Peak.Discharge Current	120A	
Charge Temperature	0~55°C	
Discharge Temperature	-20°C~55°C	
Storage Temperature	0°C~35°C	
Ingress Protection	IP20	
Dimension (W×D×H)	440×585×133mm	
Weight Approximate	46kg	

Battery module Standard configuration:

- ① 160mm communication cable
- ② 200mm power cable



System Components

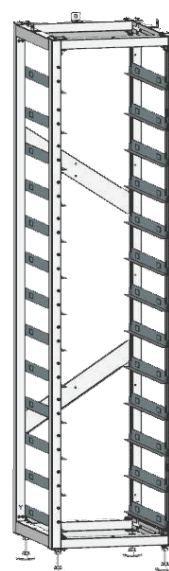
Feston FERRO - HV

FES-RCK-13L (Optional)

Standard 19inch rack, caninstall 12 pcs batteries and 1 pcs High Voltage Battery cluster control box

Dimension (W×D×H)
Weight Approximate

530×602×2219mm
51kg

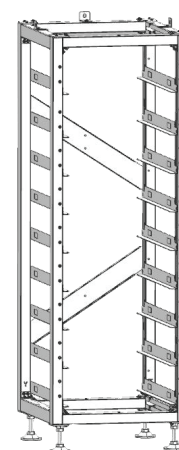


FES-RCK-9L (Optional)

Standard 19inch rack, caninstall 8 pcs batteries and 1 pcs High Voltage Battery cluster control box

Dimension (W×D×H)
Weight Approximate

530×602×1629mm
41kg



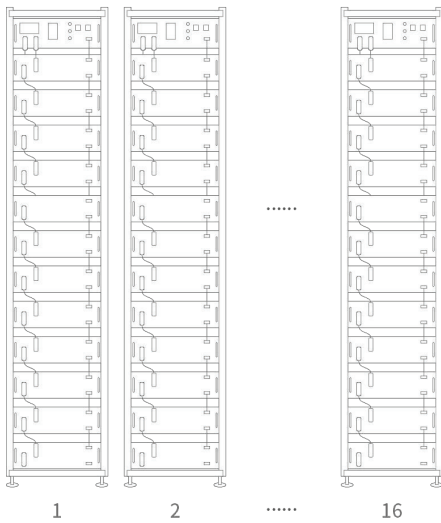
Note:

- ① 17 racks of batteries support up to an 80 kW powerclass inverter
- ② 12 racks of batteries support upto 50 kW powerclass inverter

Typical Application Scenarios

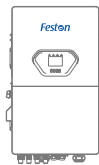
Feston FERRO - HV

FES-HV-60

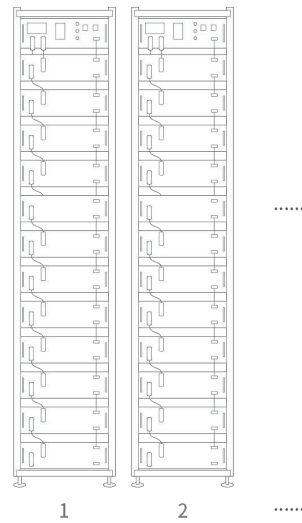


Maximum support for 16 racks of batteries in parallel

Inverter 50kW

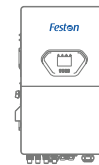


FES-HV-60



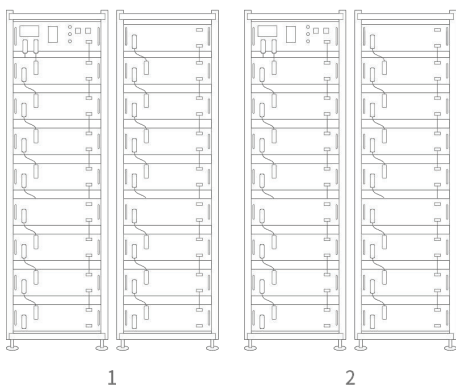
Maximum support for 10 inverters in AC parallel operation

Inverter 50kW



× 10

FES-HV-85

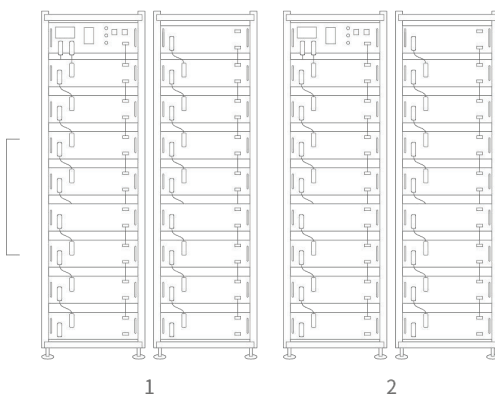


Maximum support for 16 clusters of batteries in parallel

Inverter 80kW



FES-HV-85



Maximum support for 10 inverters in AC parallel operation

Inverter 80kW



× 10

