SolisStorage

FlexHome-L

5-40kWh Stackable Low-Voltage Energy Storage System (ESS)

Low-Voltage Stackable Storage
Safe, Flexible & Expandable

- Uses A+ grade cells, ≥8,000+ cycle life ①
- Standard with five-layer hardware redundancy safety protection
- Supports a max. 21A string input current, perfectly matching high-power PV modules
- Supports 160% usable PV power, maximizing solar energy utilization
- Supports 200% overload in off-grid mode, ensuring stable startup of loads
- Supports seamless on-grid and off-grid switching with transfer times <10ms
- Designed for all environments: IP66 protection & C5-M anti-corrosion. Optional intelligent heating enables operation down to -20°C
- Low-voltage stackable system: flexible installation, strong safety protection
- Supports up to 4 units in parallel, expanding capacity up to 160kWh
- Solis AI – smart energy management with generator support
- Supports OTA remote upgrades for efficient operation and maintenance

FlexHome-L 5-40 kWh ESS



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DATASHEET

FlexHome-(5-40)kWh-L

Models	5kWh	10kWh	15kWh	20kWh	25kWh	30kWh	35kWh	40kWh
Performance								
Battery type	$LiFePO_4$							
Nominal energy	5 kWh	10 kWh	15 kWh	20 kWh	25 kWh	30 kWh	35 kWh	40 kWh
Operating voltage	44.8-57.6 V							
Cell capacity	100 Ah							
Recommended charge & discharge current	50 A	100 A	150 A	200 A	210 A			
Max. discharge current	100 A	200 A	210 A	210 A	210 A			
Depth of discharge	Max. 100 % DOD							
Display	SOC indicator, Status indicator							
Communication	CAN/RS485							
Cycle life ①	≥8000							
Protection								
Over/under voltage protection	Yes							
Over current protection	Yes							
Over/under temperature protection	Yes							
DC breaker	Yes							
DC overcurrent fuses	Yes							
Aerogel thermal insulation plate	Yes							
Fire protection function	Yes							
Explosion release valves	Yes							
General Specification								
Dimensions (W × H × D)	800 × 494 × 285 mm	800 × 683 × 285 mm	800 × 872 × 285 mm	800 × 1061 × 285 mm	800 × 1250 × 285 mm	800 × 1439 × 285 mm	800 × 1628 × 285 mm	800 × 1817 × 285 mm
Weight	76 kg	126 kg	176 kg	226 kg	276 kg	326 kg	376 kg	426 kg
Cooling	Natural convection							
Ingress protection	IP66							
Anti-corrosion class	C5M							
Operating ambient temperature range	-20~55 °C (Smart heating function)							
Storage temperature range	-10~45 °C							
Relative humidity range	5~95 %							
Max. operating altitude	4000 m							
Installation method	Floor standing / Wall-mounted							
Scalability	Up to 4 units in parallel							
Compatible inverters	S6-EH1P(3-6)K-L-EU/S5-EH1P(3-6)K-L(Smart)/S6-EH1P(3-10)K-L-PLUS/S6-EH1P(9.9-18)K03-NV-YD-L/ S6-EH2P(5-8)K02-SV-YD-L/S6-EH2P(9.6-16)K03-SV-YD-L-US/S6-EH3P(8-18)K02-NV-YD-L/S6-EH3P(7-10)K02-LV-YD-L/ S5-EA1P3K-L/S6-EA1P(3.6-6)K-L/S6-EO1P(4-6)K-48/S6-EO1P(4-5)K-48-EU							
Standard Compliance								
Certificates	IEC 62619, IEC 63056, ISO13849, VDE 2510-50, UN 38.3, EN/IEC61000-6-1/2/3/4, IEC 60730-1, IEC 60529(IP), INMETRO 140, RoHS, REACH							

Preliminary

① Provided by battery cell manufacturer based on cell test condition of 25°C, 0.2C charge and discharge rate, 90% DOD and SOH = 70%.

Check the following parts list to ensure all accessories are complete. (Example for installing one battery packs)

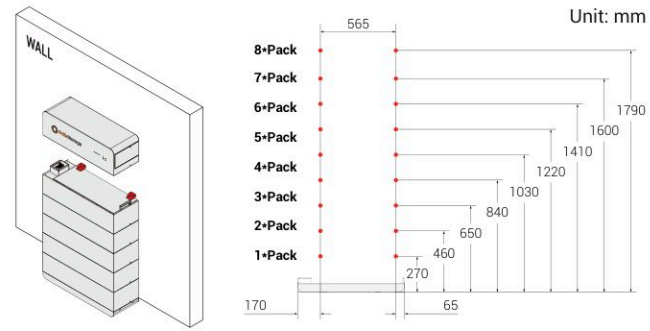
Connection BOX & Base List			
			
Connection BOX*1	Base*1	B+ to PCS power cable*1	B- to PCS power cable*1
			
Communication line*1	Ground Wire*1	Side cover plate*1	Bracket*2
			
Expansion Bolt M8×80*2	Screws M5×10*1	Screws M5×16*3	Screws M6×12*2
			
Spirit level*1	Quick Installation Manual*1	SolisCloud Quick Commission Guide	Drilling Location Drawing*1
			
Connection BOX & Base List*1			

Battery Packing List			
			
Battery Pack	M5×16 * 2	Battery Packing List*1	

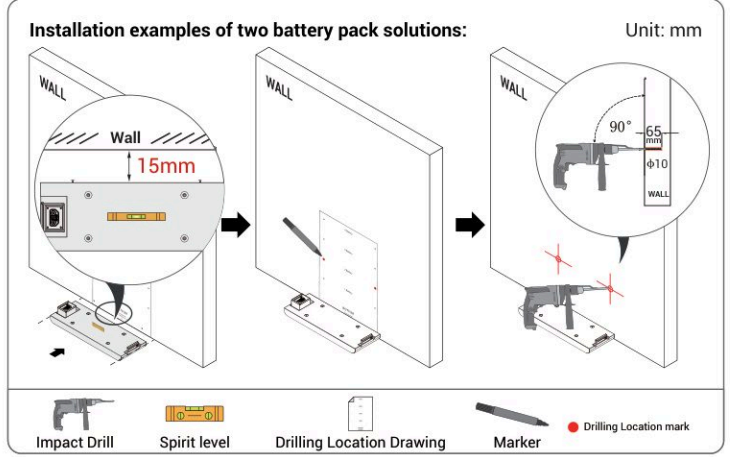
*The above are standard configurations; Please choose the configuration based on the actual shipment!

03-A Floor Standing Installation

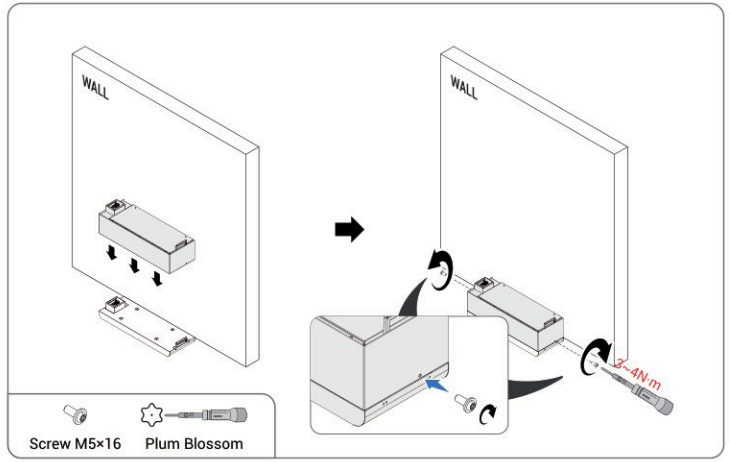
01 Select Drilling Location:



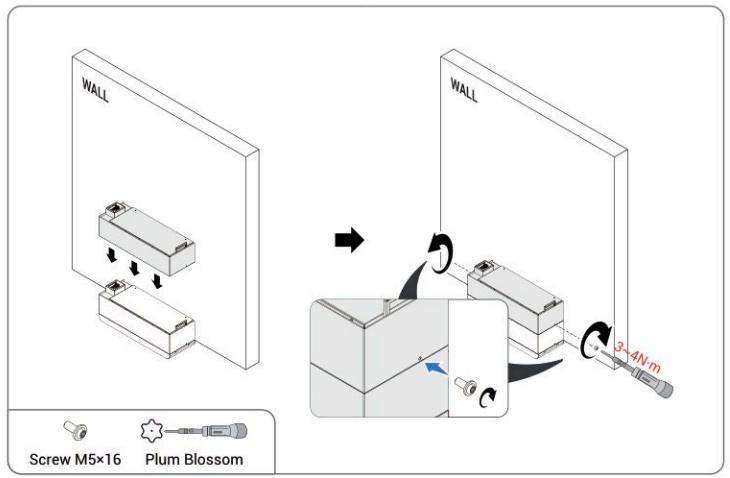
Attention: Refer to mounting hole location drawing fot installation, the red coordinates indicate the drilling position Select the corresponding punching size for different battery pack quantities

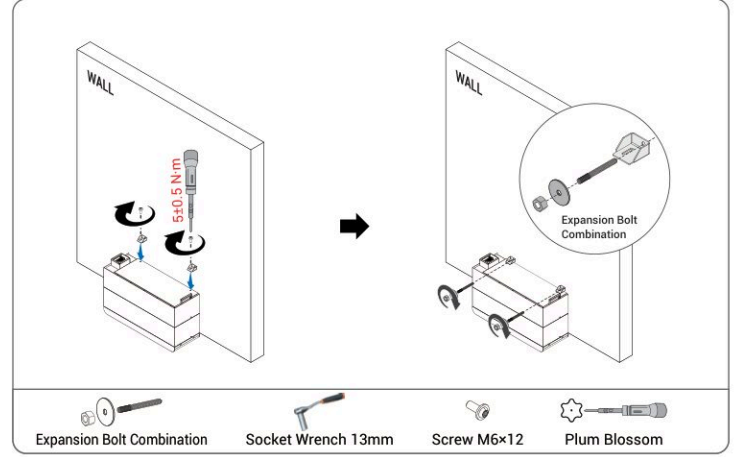


03 Install The First Battery System:

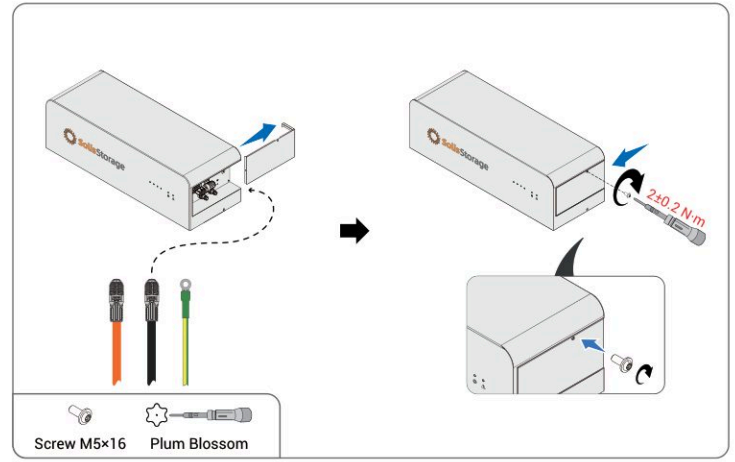


04 Install The Second Battery System:

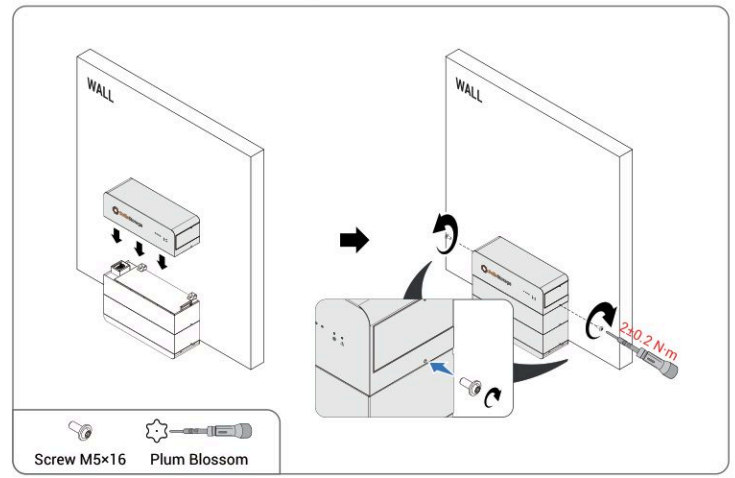




06 Install The Wiring Harness:



07 Install The Connection BOX:



08 Product Parameter

Pack	FlexHome-BAT5kWh-L
Nominal Energy	5.0kWh
Usable Energy	5.0kWh
Nominal Capacity	100Ah
Max. Charge Power	2.56kW
Max. Dicharge Power	5kW
Series And Parallel Connections	1P16S
Sizes (W*D*H)	≈ 800mm(W)×285mm(D)×236.7mm(H)
Wight	≈ 49.8kg
Battery Cell System	LFP
Max. Continuous Charge Current (@25°C)	50A
Max. Continuous Discharge Current (@25°C)	100A
Peak Charge Current (@25°C,10s)	75A
Peak Discharge Current (@25°C,10s)	150A
DOD	90%
Rated Voltage	DC 51.2V
Voltage Range	DC 44.8V, ..., 57.6V
Temperature Range for Charging	-20°C ~ +55°C (Below 0°C, the heating function is activated)
Temperature Range for Discharging	-20 ~ +55°C
Battery Designation	IFpP51/161/120[16S]M/-20+60/90
Optimal Operating Temperature	25 ~ 35°C
Operating Ambient Humidity	5~95%RH
Warranty	10 Years
Cooling	Natural Heat Dissipation
Altitude	≤4000m, >2000m load shedding
Communication Port (Between Parallel Battery Systems)	RS485
Communication Between PCS And Battery System	CAN
UN Transportation Test Standard	UN38.3
Environment Protection Standard	ROHS, REACH
Mounting	Stacking on the ground against the wall / wall-mounted

Performance parameters								
Battery type	$LiFePO_4$							
Nominal energy	5kWh	10kWh	15kWh	20kWh	25kWh	30kWh	35kWh	40kWh
Operating Voltage	DC 44.8,..., 57.6V							
Rated cell capacity	100Ah	200Ah	300Ah	400Ah	500Ah	600Ah	700Ah	800Ah
Recommended charge & discharge rate	0.5C/0.5C							
Maximum charge & discharge rate	0.5C/1C							
Recommended charge & discharge current	50A	100A	150A	200A	210A	210A	210A	210A
Maximum sustainable charging current	50A	100A	150A	200A	210A	210A	210A	210A
Maximum sustainable discharge current	100A	200A	210A	210A	210A	210A	210A	210A
Depth of discharge (DOD)	100%							
Charging temperature range	-20~55°C(with heating function)(> 45°C, derating)							
Discharging temperature range	-20~55°C(> 45°C, derating)							
Communication interface	CAN/RS485							
Cycle life ①	>6000 Cycles/10Years							
Round trip efficiency	≥95%							
Ish (short circuit current)	450A,3ms（Single Battery Pack）							
Expansion capability	Up to 4 units in parallel							
Standard parameters								
Cooling method/Heating method	Natural cooling/Smart heating system							
Certifications & safety standards	IEC 62619、IEC 63056、ISO13849、VDE 2510-50、UN 38.3、EN/IEC61000-6-1/2/3/4、IEC 60730-1、IEC 60529（IP）、INMETRO 140							
Compatible inverters	S6-EH1P(3-6)K-L-EU/S5-EH1P(3-6)K-L(Smart)/S6-EH1P(3-10)K-L-PLUS/S6-EH1P(9.9-18)K03-NV-YD-L/S6-EH2P(5-8)K02-SV-YD-L/S6-EH2P(9.6-16)K03-SV-YD-L-US/S6-EH3P(8-18)K02-NV-YD-L/S6-EH3P(7-10)K02-LV-YD-L/S5-EA1P3K-L/S6-EA1P(3.6-6)K-L/S6-EO1P(4-6)K-48/S6-EO1P(4-5)K-48-EU							
Dimensions [W×H×D]/mm	≈800 ×494 ×285	≈800 ×683 ×285	≈800 ×872 ×285	≈800 ×1061 ×285	≈800 ×1250 ×285	≈800 ×1439 ×285	≈800 ×1628 ×285	≈800 ×1817 ×285
Wight (kg)	≈75kg	≈124.8kg	≈174.6kg	≈224.4kg	≈274.2kg	≈324kg	≈373.8kg	≈423.6kg
Ingress protection	IP66							
Pollution level	IEC60664-1 Level III							
Anti-corrosion grade	C5M							
Installation method	Floor-mounted (default) / Wall-mounted							
Environmental protection standards	ROHS，Reach							
Transportation	Shipping, Land transportation							
Storage temperature range	0~35°C (6~12 months)							
Maximum operating altitude	≤4000m							
Operating ambient humidity	5~95%RH							
Noise level	≤30db							
Control box parameters								
Operating voltage	DC 40,..., 60V							
Recommended charge & discharge current	DC 210A							
Dimensions [W×H×D]/mm	800×245×285							
Weight/kg	16							
Compatible inverters	Solis							
Communication interface	CAN/RS485							

Remark: ①Test conditions: @25°C,0.2C/0.2C,70%EOL@100%DOD

The system cabinet is packed in cardboard packaging and the internal PE packaging bag is moisture-proof and waterproof.

Use EPE pearl cotton foam pad in the middle to prevent damage to the system during handling and transportation.

Transportation must comply with UN3480's dangerous goods transportation and local laws and regulations.

The system is heavy and must use the mechanical handling.

Storage temperature requirements for single cells:
The cell shall be kept at approximately 30~40% SOC.

For short-term storage (within 1 month), store in a clean and ventilated indoor environment at -20 °C to 45 °C.

For long-term storage (within 1 year), it is recommended to store in an environment with a temperature of 0 °C to 35 °C and a relative humidity of 65% ± 20%.

Single cells shall be kept away from contact with corrosive chemicals or gases to prevent corrosion of cell bodies and connectors, which may affect appearance and service life.

Keep away from fire and heat sources, and take effective moisture-proof measures.
Ensure proper insulation, waterproofing and dustproofing during storage.

The State of Charge (SOC) of single cells shall be maintained at 30~40% during storage. For long-term storage (more than 3 months), recharge periodically to avoid over-discharge. Storage time after receipt is recommended not to exceed half a year.

10 SolisCloud Quick Commission Guide

Please refer to the SolisCloud Quick Commission Guide document for quick startup instructions.

Scan the left side QR-Code below to download the digital version of SolisCloud Quick Commission Guide document.

Scan the right side QR-Code below to download the "SolisCloud" app on your mobile phone.

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