ESS Solution

SE-F5 Pro & SE-F12 & SE-F12 Max & SE-F16 & SE-F16 Max



- SE-F5 Pro
- SE-F12
- SE-F16
- SE-F12 Max — IP65
- SE-F16 Max — IP65

SE-F5 Pro & SE-F12 & SE-F12 Max & SE-F16 & SE-F16 Max

Comprehensive Protection
Advanced BMS with active fuse

Superior Performance
Support Max. 1C charge & discharge (SE-F5 Pro), GaN MOSFETs: 50% loss reduction, high-temp resistance

Optimized Energy Density
Integrated PACK: reduced line loss, enhanced energy density

Flexible Expansion
Max. 32 units in parallel

Easy Maintenance
Auto-networking, Local monitoring mode for battery, remote monitoring mode for ESS

Reliable Durability
Operates reliably in -20℃ to 55℃, natural cooling

ESS Solution



Model

Main Parameters		SE-F5 Pro
Battery Chemistry		$LiFePO_4$
Capacity		100 Ah
Scalability [1]		Max. 32 pcs in parallel
Nominal Voltage		51.2 V
Operating Voltage		44.8 V ~ 57.6 V
Nominal Energy		5.12 kWh
Charge Current [2]	Recommend	50 A
	Max. Continuous	100 A
	Peak	150 A (120 sec)
Discharge Current [2]	Recommend	50 A
	Max. Continuous	100 A
	Peak	150 A (120 sec)
Other Parameter		
Recommend Depth of Discharge		90% DoD
Dimension (W × H × D) (Without hanging board)mm		404 × 547 × 141 mm
Weight Approximate		44 kg
LED Indicator		LED (SOC, working, protecting) & Buzzer
IP Rating of Enclosure		IP21
Operating Temperature		Charge: 0°C～55°C Discharge: -20°C～55°C
Storage Temperature		0°C~35°C
Relative Humidity		95% (non-condensing)
Altitude		≤3000m
Cycle Life		≥6000(25°C±2°C ,70%EOL)
Installation		Wall-Mounted, Floor-Mounted, Stack-Mounted
Communication		CAN2.0, RS485, Optional module, (WiFi+Bluetooth+APP)
Warranty Period [3]		10 years
Energy Throughput [3]		16 MWh
Certification		UN38.3, MSDS, CE, CB, VDE2510-50, CEC

[1] Max. 64 pcs can parallel with CAN-Bridge.

[2] Operating current is affected by temperature and SOC.

[3] Conditions apply, refer to Deye Warranty Letter.

ESS Solution



Model

Main Parameters		SE-F12	SE-F12 Max	SE-F16	SE-F16 Max
Battery Chemistry		$LiFePO_4$			
Capacity		230 Ah		314 Ah	
Scalability [1]		Max. 32 pcs in parallel			
Nominal Voltage		51.2 V			
Operating Voltage		44.8 V ~ 57.6 V			
Nominal Energy		11.8 kWh		16 kWh	
Charge Current [2]	Recommend	115 A		157 A	
	Max. Continuous	230 A		160 A	
	Peak	280 A (10 sec)			
Discharge Current [2]	Recommend	115 A		157 A	
	Max. Continuous	230 A			
	Peak	280 A (10 sec)			
Other Parameter					
Recommend Depth of Discharge		90% DoD			
Dimension (W × H × D) (Without hanging board)mm		400 × 559 × 233	464 x 767 x 244.5	400 × 708 × 233	464 x 914 x 244.5
Weight Approximate		84 kg	93 kg	109 kg	118 kg
LED Indicator		LED (SOC, working, protecting) & Buzzer	LCD(SOC, Alarm)	LED (SOC, working, protecting) & Buzzer	LCD(SOC, Alarm), LED (Working)
IP Rating of Enclosure		IP21	IP65	IP21	IP65
Operating Temperature		Charge: 0～55°C (-20~55°C, 12 Max/16 Max with Optional heating) Discharge: -20～55°C			
Storage Temperature		0°C~35°C			
Relative Humidity		95% (non-condensing)			
Altitude		≤3000m			
Cycle Life		≥6000(25°C±2°C ,70%EOL)			
Installation		Wall-Mounted, Floor-Mounted, Stack-Mounted			
Communication		CAN2.0, RS485, Bluetooth+APP	CAN2.0, RS485, Bluetooth+APP	CAN2.0, RS485, Bluetooth+APP	CAN2.0, RS485, Bluetooth+APP
Warranty Period [3]		10 years	10 years	10 years	10 years
Energy Throughput [3]		37 MWh	37 MWh	50 MWh	50 MWh
Certification		UN38.3, CE, CB	UN38.3, CE, CB	UN38.3, CE, CB	UN38.3, CE, CB, UL1973, UL9540A, UL9540-DC, FCC

[1] Max. 64 pcs can parallel with CAN-Bridge.

[2] Operating current is affected by temperature and SOC.

[3] Conditions apply, refer to Deye Warranty Letter.

Product comparison

Model	Nominal Energy	Charge / Discharge Rate	DoD	Warranty	Size
SE-F5 Pro	5.12kWh, 51.2V, 100Ah	1C/1C	90%	10years	404 × 547 × 141 mm
SE-F12	11.8kWh, 51.2V, 230Ah	1C/1C	90%	10years	400 x 559 x 233 mm
SE-F12 Max	11.8kWh, 51.2V, 230Ah	1C/1C	90%	10years	464 x 767 x 244.5 mm
SE-F16	16kWh, 51.2V, 314Ah	0.5C/0.7C	90%	10years	400 x 708 x 233 mm
SE-F16 Max	16kWh, 51.2V, 314Ah	0.5C/0.7C	90%	10years	464 x 914 x 244.5 mm

Mounting example

Stacked

Supports 6 layers in parallel (4 layers for SE-F16/F12 Max/F16 Max), allows multiple clusters in parallel



SE-F5 Pro



SE-F12



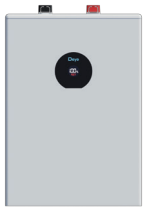
SE-F16

Wall mounted

All support wall mounted installation, and support for multiple packs in parallel



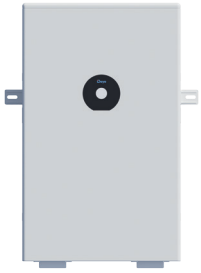
SE-F5 Pro



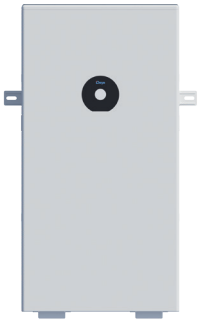
SE-F12



SE-F16



SE-F12 Max



SE-F16 Max

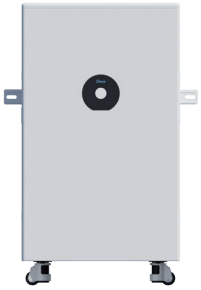
Optional wheels available for SE-F12 & SE-F12 Max & SE-F16 & SE-F16 Max



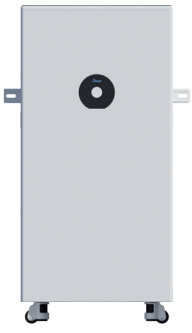
SE-F12



SE-F16

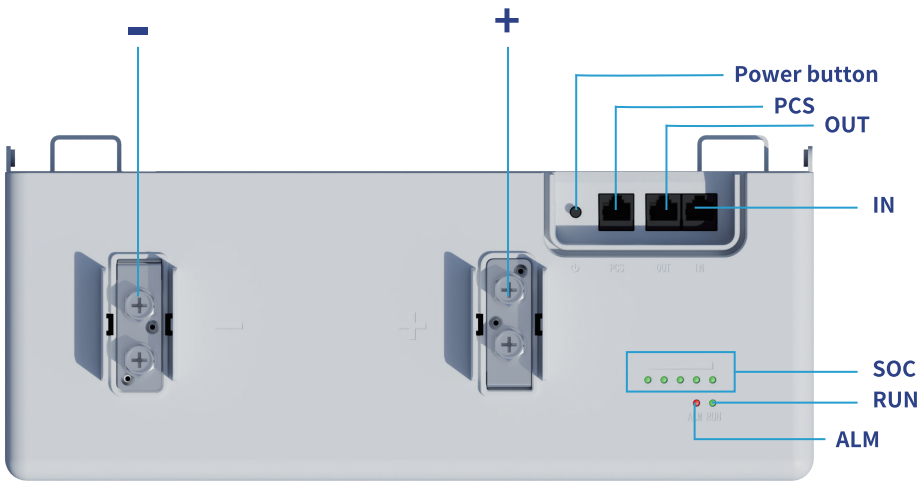


SE-F12 Max



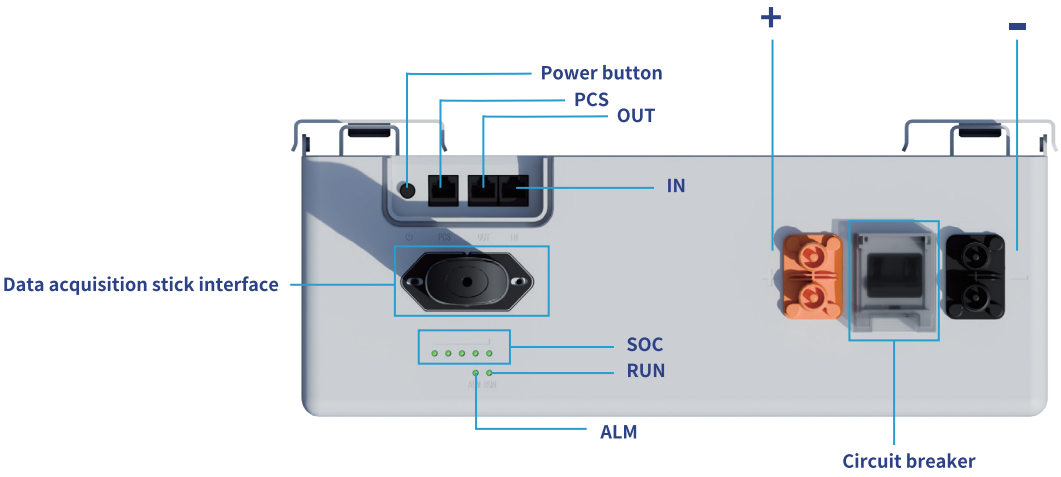
SE-F16 Max

Model	SE-F12 & SE-F16



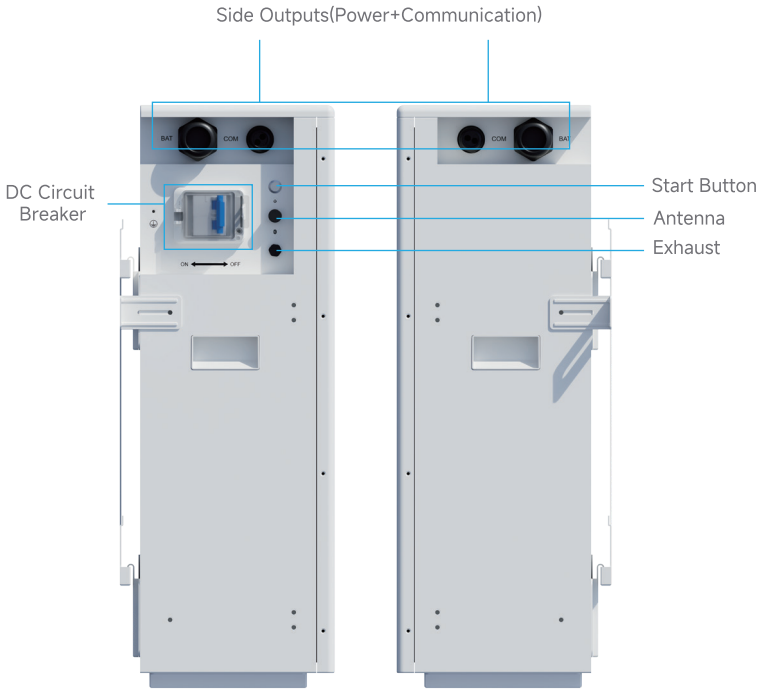
◎ -: Battery negative terminal connection position.
◎ +: Battery positive terminal connection position.
◎ SOC: These 5 LEDs are used to display the pack SOC and charge or discharge state.
◎ RUN light: green LED lighting to show the battery running status.
◎ ALM light: red LED lighting to show the battery has been alarmed .
◎ Power button: Power on or off the control battery.
◎ PCS: Inverter communication terminal:(RJ45port) follow the CAN protocol (baud rate:500kbps),and RS485(baud rate:9600bps),used to output battery information to the inverter.
◎ OUT: parallel Communication Terminal:(RJ45port) Connect "IN"Terminal of Next battery,for Communication between multiple parallel batteries.
◎ IN: parallel Communication Terminal: (RJ45 port) Connect "OUT" Terminal of Previous battery,for Communication between multiple parallel batteries.

Model	SE-F5 Pro



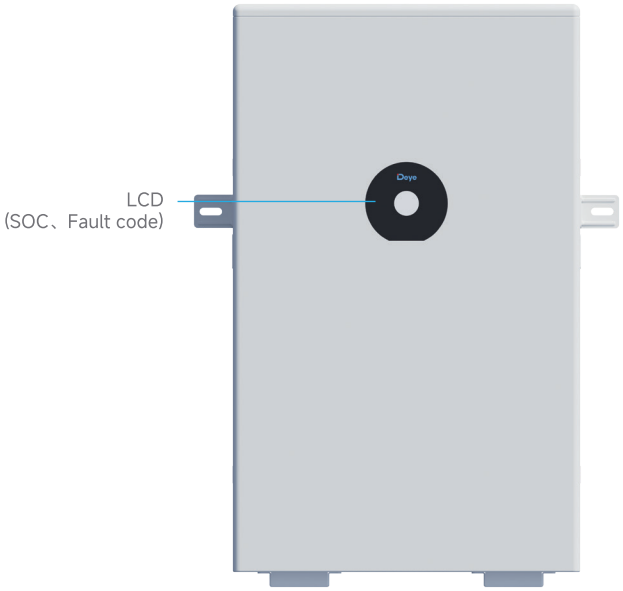
◎ -: Battery negative terminal connection position(Quickly plug and unplug).
◎ +: Battery positive terminal connection position(Quickly plug and unplug).
◎ SOC: These 5 LEDs are used to display the pack SOC and charge or discharge state.
◎ RUN light: green LED lighting to show the battery running status.
◎ ALM light: red LED lighting to show the battery has been alarmed .
◎ Power button: Power on or off the control battery.
◎ PCS: Inverter communication terminal:(RJ45port) follow the CAN protocol (baud rate:500kbps),and RS485(baud rate:9600bps),used to output battery information to the inverter.
◎ OUT: parallel Communication Terminal:(RJ45port) Connect "IN"Terminal of Next battery,for Communication between multiple parallel batteries.
◎ IN: parallel Communication Terminal: (RJ45 port) Connect "OUT" Terminal of Previous battery,for Communication between multiple parallel batteries.
◎ Circuit breaker: Used to manually control the connection between the battery rack and external devices.
◎ Data acquisition stick interface: The location to connect with your Data Logger that is used for data acquisition via WIFI or Bluetooth.

Without Junction Box(SE-F12 Max & F16 Max)(For EU、 AS、 AF、LATAM)



Left View

Right View



Front View

SE-F Series Model Selection and Appearance Reference

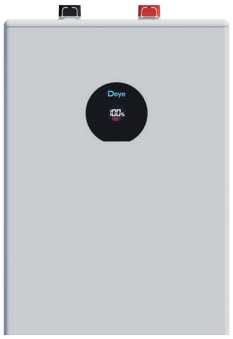
Common version



LED strip version



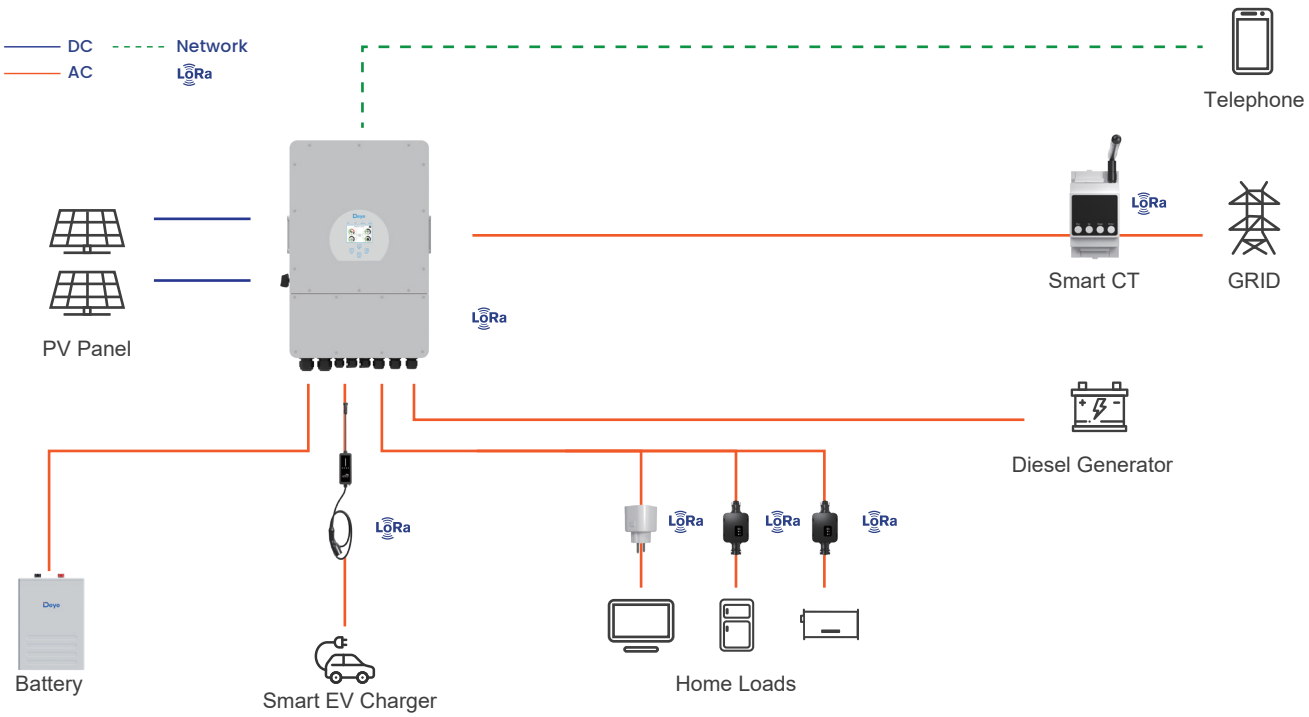
Display screen version



Model	Config Version	Reference
F5 Pro/F12/F16	L	
F5 Pro/F12/F16	E	
F5 Pro/F12/F16/F12 Max/F16 Max	C	

Deye Smart Energy Management System(Optional)

The Deye Smart Energy Management System enables seamless control with smart CT, smart plug, smart switch and solar EV charging, ensuring efficiency and full compatibility with Deye inverters.



Key Features

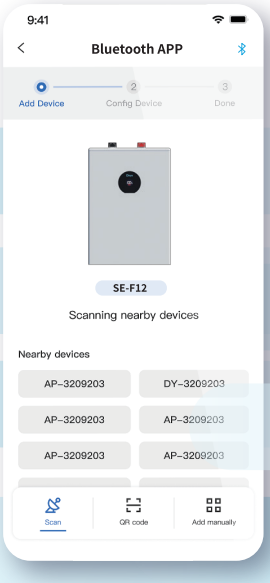
- **Wireless Zero Export Control**
  Enables seamless zero export without the need for complex wiring, simplifying installation.
- **Intelligent Load Control**
  Automatically manages loads based on time schedules and battery SOC, optimizing energy distribution.
- **Solar-Powered EV Charging**
  Supports 100% solar charging with dynamic power adjustment for enhanced efficiency and sustainability.
- **Full Compatibility**
  All Deye hybrid inverters can be upgraded to support this system, ensuring seamless integration with existing setups.
- **Precise Off-Grid Load Management**
  Ensures that only non-essential loads are disconnected during off-grid operation, maintaining power supply for critical applications.

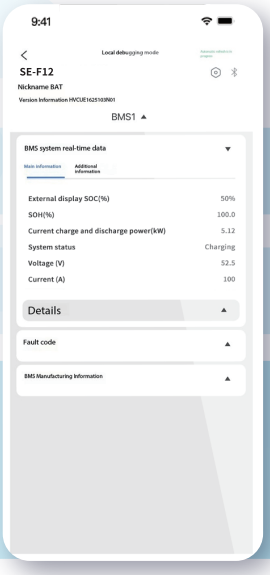


Deye APP

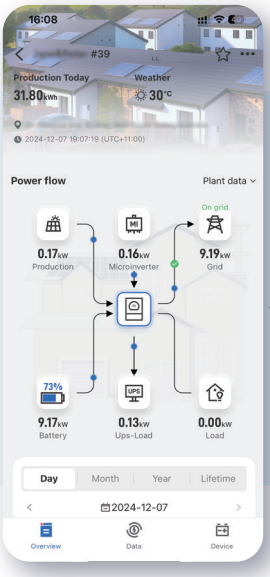
Local monitoring mode for battery

- Bluetooth APP Monitoring
- Low Power (Bluetooth LE)
- Automated upgrade
- Quick Pairing
- No Internet Needed
- Portable Control





Remote monitoring mode for ESS(Inverter&Battery)





- Real-time Equipment Monitoring
- Intelligent Charging/Discharging Strategies
- AI Data Analytics
- Customized Maintenance

Smarten Up Your Home Energy

Download Deye APP to join us!

Embrace a seamless, effortless energy experience that's both ecofriendly and budget-friendly with our intelligent assistant

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