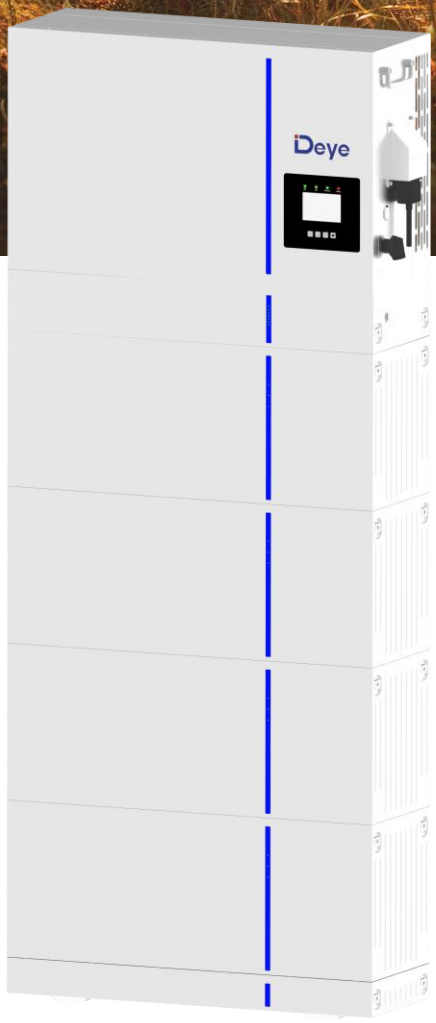
AI-W5.1-5/6/8/10/12P3-EU-ESS





All-in-one Energy Storage System

- All-in-one design, integrated 5kW~12kW hybrid inverter and battery
- Comfortable and easy control via App, PC or Touch-Display
- Leading smart application: peak-shaving, smart load, AC couple etc
- Modular lithium iron phosphate battery, capacity of 5kWh~30kWh, scalable and safety
- Flat and stackable design, floor mounted, no wiring and extra fixing screws, quick and easy installation.
- Fast switching time of 4ms, ensuring your energy security

Deye

Stock Code: 605117.SH

Technical Data

Model	AI-W5.1-5P3-EU	AI-W5.1-6P3-EU	AI-W5.1-8P3-EU	AI-W5.1-10P3-EU	AI-W5.1-12P3-EU
System Specification					
Nominal Output Power/UPS Power (W)	5000 / 5000	6000 / 6000	8000 / 8000	10000 / 10000	12000 / 12000
AC Output Frequency and Voltage	50/60Hz; 3L/N/PE 220/380, 230/400Vac				
Grid Type	Three Phase				
Recommended Energy Configuration	5kWh(Min.)		10kWh(Min.)		15kWh(Min.)
Max. Charging/Discharging Current (A)	120	150	190	210	240
Battery Operating Voltage (V)	43.2 ~ 57.6				
Battery Chemistry	$LiFePO_4$				
IP Rating of Enclosure	IP55				
System Certification	IEC62619, IEC60730, CE, VDE2510-50, CEI 0-21				
Warranty	Battery 10 years (Inverter 5 years)				
Inverter Technical Specification					
Max. PV Input Power (W)	6500	7800	10400	13000	15600
Rated PV Input Voltage (Vdc)	550 (160~800)				
Start Up DC Voltage (Vdc)	160				
MPPT Voltage Range (Vdc)	200~650				
Full Load DC Voltage Range (V)	350~650				
Max. PV Input Current (A)	13+13			26+13	
Max. PV Short-circuit Current (A)	17+17			34+17	
No. of MPP Trackers	2				
Peak Power (off grid)	2 time of rated power, 10s				
Power Factor	0.8 leading to 0.8 lagging				
DC injection current (mA)	THD<3% (Linear load<1.5%)				
Display	LCD				
Relative Humidity	15% ~ 85% (No Condensing)				
Dimension (W x D x H,mm)	720x255x440				
Weight (kg)	38				
Communication with BMS	CAN2.0				
EMC/Safety Regulation	IEC/EN 62109-1,IEC/EN 62109-2,IEC/EN 61000-6-1, IEC/EN 61000-6-2,IEC/EN 61000-6-3,IEC/EN 61000-6-4				
Grid Regulation	VDE4105,IEC61727/62116,VDE0126,AS4777.2,CEI 0-21,EN50549-1, G98,G99,C10-11,UNE217002,NBR16149/NBR16150				
Max. Efficiency	97.60%				
Max. charging/discharging efficiency	95.50%				
Battery Technical Specification					
Nominal Voltage (V)	51.2				
Battery Module Energy (kWh)	5.12				
Module Scalability	Max.36 pcs in parallel(Max. capacity of 184kWh)				
Battery Module Dimension	720*255*285(W x D x H,mm)				
Battery Base Dimension	720*255*90(W x D x H,mm)				
Battery PDU Dimension	720*255*110(W x D x H,mm)				
Battery Module Weight (kg)	53				
Operating Temperature Range	Charge: 0 ~ 55℃ / Discharge: -20℃ ~ +55℃				
Cycle Life	≥6000(25℃±2℃,0.5C/0.5C,70%EOL)				
Battery Module Certification	IEC62619, CE, UK, VDE2510-50, CEI 0-21, UN38.3, CE-LVD, CEC				

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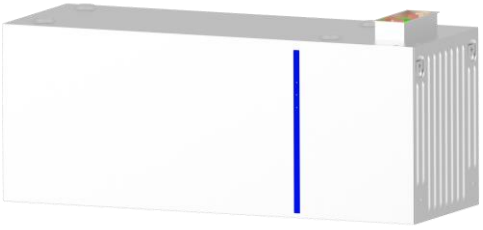
Battery Pack Accessories

Model	Accessories Parts Description	Remark
AI-W5.1 Module	5.12kWh Battery Module (Standard Configuration)	Stacked battery modules, each 5.12kWh, a single inverter can be stacked and installed 1~6 (battery capacity 5~30kWh), the maximum expansion of 36 modules to 184kWh.
AI-W5.1-PDU3	Power Distribute Unit Ⅲ (Recommended Configuration)	Battery power and communication quickly interface connect with Inverter and LED display system status, only support 2~6 modules expansion, capacity 10~30kWh.
AI-W5.1-Base	Battery Base (Standard Configuration)	The bottom support seat
AI-W5.1-PDU2	Power Distribute Unit Ⅱ (Optional)	Battery power and communication quickly interface connect with Inverter and LED display system status, If the system is configured with more than 6 modules and less than 36 modules, this accessory is required, and PDU3 is not required.
AI-W5.1-BCable	Battery expansion Cable (Optional)	Battery power and communication cable for external battery expansion. This line is not needed for 2~6 modules, and this line is required for parallel connection when there are more than 6 modules.



Model: AI-W5.1 (Battery Module)

Details: 5.12kWh, 720*255*285(W x D x H,mm), 53kg



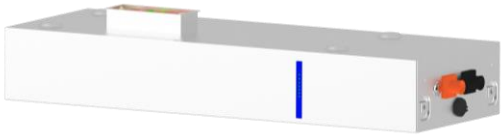
Model: AI-W5.1-PDU3

Details: 720*255*110(W x D x H,mm), 10kg



Model: AI-W5.1-Base

Details: 720*255*85(W x D x H,mm), 8kg



Model: AI-W5.1-PDU2

Details: 720*255*110(W x D x H,mm), 10kg



Model: AI-W5.1-BCable

Details: Pair of 2/0AWG DC power cable and RJ45 communication cable for external battery expansion of **AI-W5.1-PDU2**, power cable one end has a waterproof terminal, **communication cable both ends have waterproof terminals**. The cable length can be customized based on customer requirements, default length is 1500mm.



Model: Wi-Fi module(Optional)

Details: After connecting the device, check the status of NET lights, COM lights, and READY lights, and see if there is data on the platform.
When the router is connected to the network normally:
1.NET light is always bright (server connection is successful),
2.READY light is flashing (collection rod is working normally),
3.COM light is always bright (collection rod is connected to inverter successfully).