



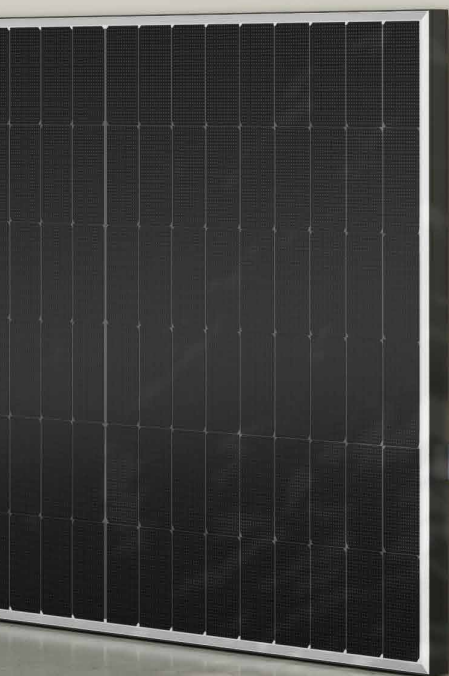
Micro Hybrid Energy Storage System

MICRO HYBRID ESS

Higher Capacity, Longer Backup

SUN-BK80/100-5.12KWH-EU-AM2-18L

SUN-BK80/100/160/200/250-5.12KWH-EU-AM2-32L



Hybrid Grid-Tied Mode
Self-consumption



Off-Grid Mode
Standalone & portable energy storage



AC-Coupled Mode
Upgrade the existing PV balcony system to ESS



Plug and Play

Installs easily with any standard socket



Wireless Zero-Export Function

Precise control & ultra-low latency



Time-of-Use Electricity Strategy

Sets up 6 time periods for charging/discharging



96.5% Conversion Efficiency

Low energy loss



UPS-Grade Backup Power

≤4ms on-grid/off-grid switchover



Strong Performance

Up to 2.5kW rated AC power



Intelligent Load Control

Supports smart plug, smart switch, smart EV charger



IP65 Protection Rating

10-year warranty



99% PV Module Compatibility

Max. 4400W PV access power



Higher Single-Unit Capacity

Longer backup time



Remote O&M

Control via Deye Cloud App



Local Bluetooth Communication

Supports offline control



Micro Hybrid Energy Storage System



Max. 2200W PV
Access Power



5.12kWh
LFP Battery



Max. 1000W On-grid
& Off-grid Operation



Model	SUN-BK80-5.12KWH -EU-AM2-18L		SUN-BK100-5.12KWH -EU-AM2-18L
Battery Input Data			
Battery Type	LiFePO ₄		
Battery Voltage Range(V)	44.8-57.6 V		
Battery Nominal Energy (Wh)	5120Wh		
Max.Charging/Discharging Current(A)	50A		
Charging Strategy for Li-ion Battery	Self-adaption to BMS		
PV String Input Data			
Max. PV access power (W)	2200W		
Max. Operating PV Input Current (A)	18+18A		
Max. Input Short-Circuit Current (A)	27+27A		
Rated PV Input voltage (V)	42.5V		
Start-up Voltage (V)	25Vdc		
MPPT voltage range (V)	20 ~ 55V		
No. of MPP Trackers/No. of Strings MPP Tracker	2/2+2		
AC Input/Output Data			
Rated AC Input/Output Active Power (W)	800W	1000W	
Max. AC Input/Output Active Power (W)	880W	1100W	
Max. off grid power (VA)	800VA	1000VA	
Rated AC Input/Output Current (A)	3.7A / 3.5A	4.6A / 4.4A	
Max. AC Input/Output Current (A)	4A / 3.9A	5A / 4.8A	
Peak Power (off-grid) (W)	2 times of rated power,10s		
AC Input / Output Frequency and Voltage	50Hz (45Hz ~ 55Hz) , 60Hz (55Hz ~ 65Hz) , L + N + PE , 220 / 230 Vac		
Power Factor Adjustment Range	0.8 leading-0.8 lagging		
Max. Continuous AC Passthrough (grid to load)(A)	30A		
DC Injection Current	<0.5%In		
Efficiency			
Max. Efficiency	96.5%		
Euro Efficiency	96.0%		
MPPT Efficiency	>99%		
Equipment Protection			
Integrated	DC reverse polarity protection, AC Output Overcurrent Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, Thermal Protection, Insulation Impedance detection, Anti-islanding protection		
Surge Protection Level	TYPE II(DC),TYPE II(AC)		
General Data			
Max. Inverter Parallel NO.	3 pcs (up to 2.4 kW rated output)	3 pcs (up to 3.0 kW rated output)	
Communication Interface	Wi-Fi, Bluetooth, LoRa		
Operating Temperature Range (°C)	-10°C ~ 55°C, >45°C Derating, (-20°C~55°C with heating, optional)		
Permissible Altitude (m)	2000m		
Ingress Protection(IP) Rating	IP 65		
Cabinet Size (W X H X D)	526 × 510 × 210mm		
Weight (kg)	/		
Permissible Ambient Humidity	0% ~ 95% (No Condensing)		
Warranty	10 years		
Grid Regulation	VDE 4105, IEC 61727/62116, VDE 0126, AS 4777.2, CEI 0-21, EN 50549-1, G98, C10-11, UNE 217002		
Safety EMC/Standard	IEC 62619, UN38.3, IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-6-1/2/3/4		



Micro Hybrid Energy Storage System



Max. 4400W PV
Access Power



5.12kWh
LFP Battery



Max. 2500W On-grid
& Off-grid Operation



Model	SUN-BK80-5.12KWH -EU-AM2-32L	SUN-BK100-5.12KWH -EU-AM2-32L	SUN-BK160-5.12KWH -EU-AM2-32L	SUN-BK200-5.12KWH -EU-AM2-32L	SUN-BK250-5.12KWH -EU-AM2-32L
Battery Input Data					
Battery Type	LiFePO ₄				
Battery Voltage Range(V)	44.8-57.6 V				
Battery Nominal Energy (Wh)	5120Wh				
Max.Charging/Discharging Current(A)	50A				
Charging Strategy for Li-ion Battery	Self-adaption to BMS				
PV String Input Data					
Max. PV access power (W)	4400W				
Max. Operating PV Input Current (A)	32+32A				
Max. Input Short-Circuit Current (A)	48+48A				
Rated PV Input voltage (V)	42.5V				
Start-up Voltage (V)	25Vdc				
MPPT voltage range (V)	20 ~ 55V				
No. of MPP Trackers/No. of Strings MPP Tracker	2/2+2				
Rated AC Input/Output Active Power (W)	800W	1000W	1600W	2000W	2500W
Max. AC Input/Output Active Power (W)	880W	1100W	1760W	2200W	2750W
Max. off grid power (VA)	2500W				
Rated AC Input/Output Current (A)	3.7A / 3.5A	4.6A / 4.4A	7.3A / 7.0A	9.1A / 8.7A	11.4A / 10.9A
Max. AC Input/Output Current (A)	4A / 3.9A	5A / 4.8A	8A / 7.7A	10A / 9.6A	12.5A / 12A
Peak Power (off-grid) (W)	2 times of rated power,10s				
AC Input / Output Frequency and Voltage	50Hz (45Hz ~ 55Hz) , 60Hz (55Hz ~ 65Hz) , L + N + PE , 220 / 230 Vac				
Power Factor Adjustment Range	0.8 leading-0.8 lagging				
Max. Continuous AC Passthrough (grid to load)(A)	30A				
DC Injection Current	<0.5%In				
Efficiency					
Max. Efficiency	96.5%				
Euro Efficiency	96.0%				
MPPT Efficiency	>99%				
Equipment Protection					
Integrated	DC reverse polarity protection, AC Output Overcurrent Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, Thermal Protection, Insulation Impedance detection, Anti-islanding protection				
Surge Protection Level	TYPE II(DC),TYPE II(AC)				
General Data					
Max. Inverter Parallel NO.	3 pcs (up to 7.5 kW rated output)				
Communication Interface	Wi-Fi, Bluetooth , LoRa				
Operating Temperature Range (°C)	-10°C ~ 55°C, >45°C Derating, (-20°C~55°C with heating, optional)				
Permissible Altitude (m)	2000m				
Ingress Protection(IP) Rating	IP 65				
Cabinet Size (W X H X D)	526 × 510 × 210mm				
Weight (kg)	/				
Permissible Ambient Humidity	0% ~ 95% (No Condensing)				
Warranty	10 years				
Grid Regulation	VDE 4105, IEC 61727/62116, VDE 0126, AS 4777.2, CEI 0-21, EN 50549-1, G98, C10-11, UNE 217002				
Safety EMC/Standard	IEC 62619, UN38.3, IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-6-1/2/3/4				



Battery Modules



Model

AE-F5.12

Battery Technical Specification

Battery Chemistry	LiFePO ₄
Battery Nominal Voltage	51.2V
Battery Nominal Energy	5120Wh
Max. Charging / Discharging Current	50A
Battery Operating Voltage	44.8V ~ 57.6V
Battery Cycle Life	≥6,000 (@25°C±2°C, 70%EOL)
Max. Stack NO.	3 pcs (up to 15.36kWh)
Parallel Capability	16 pcs*

Other Technical Specification

Display	LED (SOC, Alarm)
Communication Interfaces	LoRa
Dimension (W × D × H) (mm)	450 × 210 × 420 (without terminal)
Ingress Protection(IP) Rating	IP 65
Weight Approximate	40±3kg
Operating Temperature Range	-10°C~55°C (-20°C~55°C with heating, optional)
Max. Operating Altitude	2000m
Relative Humidity	0% ~ 95% (No Condensing)
Certification	UN38.3, IEC 62619, CE
Installation Style	Floor-Mounted, Stacked-Mounted
Warranty	10 years

*Maximum 16 AE-F5.12 packs in parallel, providing up to 81.92 kWh.

Optional Interfaces:

Parallel communication
port & load port

RS485 port

CT port

Note: Optional interfaces are not field-upgradable
and must be selected at the time of order with the
required hardware.



Optional Accessory:

Deye Wireless CT
(Model: SUN-SMART-CT02-L)

Installed in the distribution box to monitor power
consumption, enabling wireless zero-export control.





SCENARIO-BASED ENERGY MANAGEMENT SOLUTIONS

Utilize energy in every outdoor adventure or household needs. Embrace effortless energy experience that's both eco-friendly and budget-friendly with our intelligent assistant.

Scenario 1 :



Compact Balcony Solar Plant
Automated Energy-Saving Strategies

Scenario 2 :

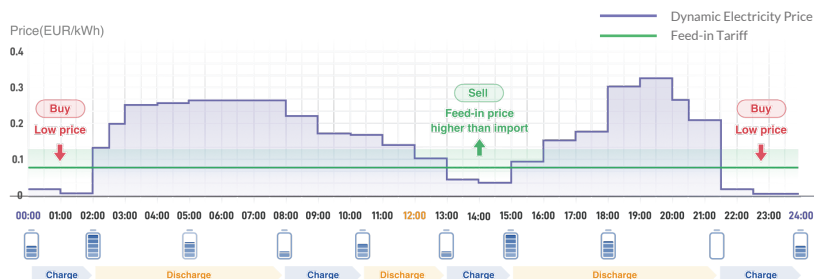


Camping Power Solution
Empower Your Outdoor Adventure

Scenario 3 :



Reliable Home Emergency Power Source
Ensure You Stay Powered Up When You Need It Most



* Selling electricity back to grid is available where local regulations permit.

One-Tap Setup, Real-Time Optimization

Flexible Scheduling

Sets up 6 customizable charging/discharging time slots to utilize time-of-use electricity pricing and reduce costs.

Deye Copilot Function

Enables Deye Cloud to access local dynamic electricity prices and intelligently decide the optimal time for electricity trading.





What Can It Power

Max. 2.5 kW/ 5.12 kWh

1 Inverter + 1 Battery Design



Typical Device Runtime

No Electricity Anxiety for Emergency Power Backup



Phone

270 Times



Laptop

46 Times



Light

6 Days



TV

15 Hours



Camera

266 Times



UAV

40 Times



Microwave

3.6 Hours



Mini Refrigerator

2-4 Days



Wi-Fi Router

6 Days



Space Heater

50 Hours

* The data above is for reference only. Actual runtime may vary with use.

Compatible Appliances



Kitchen Appliances

Electric kettle
1800W

Microwave oven
1000W

Blender
500W

Rice cooker
800W

Air fryer
1500W



Household Appliances

Hair dryer
1800W

Vacuum cleaner
1000W

Air purifier
100W

Space heater
1500W

Washing machine
500W



Office & Entertainment

Wi-Fi router
10W

Laptop
60W

Printer
50W

Projector
300W

Television
120W



Lighting & Small Electronics

Light
10W DC

Phone charger
25W

Fan
40W

Loudspeaker
60W

Tablet
45W

Key Power Note:

For AM2-32L Series: The rated powers above are for reference only. All devices with a rated power of $\leq 2500W$ are compatible.

Operational Safety: Ensure the total power of all devices running simultaneously stays under 2500W.

For AM2-18L Series: Refer to the maximum power for device compatibility.