



Deye

Micro Hybrid Energy Storage System

MICRO HYBRID ESS

Suitable for on-grid, off-grid, and portable use

SUN-BK160/180/200-2.0KWH-EU-AM2



Hybrid Grid-Tied Mode
Self-consumption



Off-Grid Mode
Standalone & portable energy storage



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

96.5%

High Conversion Efficiency
DC-AC conversion efficiency of up to 96.5%

4ms

UPS-Grade Backup Power
Grid-tie and off-grid switchover time is less than 4ms



Quiet Operation
Fanless design with natural cooling



2000W Rated Power AC Charge/Discharge



Local Bluetooth Communication
Supports offline control
via the Deye Cloud APP

3200W

High-Power PV Input
Supports up to 4000W for PV access
and allows a maximum PV power input of 3200W

IP65

IP65 Protection Rating
10-year standard warranty

Deye
Wireless Energy Management System

Wireless Energy Management System
Smart plug, smart switch, wireless CT



Seamless Scalability
Easily expand the system with additional battery capacity





Micro Hybrid Energy Storage System



4000W PV
MPPT Input



2kWh
LFP Battery



2000W On-grid and
Off-grid Operation



Model	SUN-BK160-2.0KWH-EU-AM2	SUN-BK180-2.0KWH-EU-AM2	SUN-BK200-2.0KWH-EU-AM2
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AC Technical Specification

Nominal Input / Output Power / UPS Power	1600 / 1600W	1800 / 1800W	2000 / 2000W
AC Input / Output Frequency and Voltage	50Hz (45Hz ~ 55Hz) , 60Hz (55Hz ~ 65Hz) , L / N (PE) , 220 / 230 Vac		
Grid Type	Single phase		
Rated Grid Input / Output Current	7.3A / 7.0A	8.2A / 7.9A	9.1A / 8.7A
Max.Grid Input / Output Current	8.0A / 7.7A	9.0A / 8.7A	10.0A / 9.6A
Peak Power (off-grid)	2 time of rated power, 10s		
Power Factor Adjustment Range	0.8 leading to 0.8 lagging		
Max. Bypass (Grid to Load)	12A		
DC Injection Current	THD<3% (Linear load<1.5%) mA		

PV Technical Specification

Max. PV Access Power	3200W	3600W	4000W
Max. PV Input Power	2560W	2880W	3200W
Max. PV Input Current	32A+32A		
Max. PV Short-Circuit Current	48A+48A		
Rated PV Input Voltage	42.5V (20V ~ 55V)		
Start Up DC Voltage	25Vdc		
MPPT Voltage Range	20 ~ 55V		
Number of MPPT	2		
Battery Chemistry	LiFePO ₄		
Battery Nominal Voltage	51.2V		
Battery Nominal Energy	2000Wh		
Battery Operating Voltage	40V ~60V		
Battery Cycle Life	≥6000 (@25°C±2°C, 0.5C / 0.5C, 70%EOL)		

Other Technical Specification

Display	Colorful Touch LCD & APP & Battery LED (SOC, Alarm)
Communication Interfaces	Wi-Fi, Bluetooth, LoRa
Dimension (W × D × H)	560 × 210 × 331mm
Operating Temperature Range	-10°C ~ 50°C
Max. Operating Altitude	2000m
Relative Humidity	0% ~ 95% (No Condensing)
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2
Grid Regulation	IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G98, VDE-AR-N 4105
Battery Certification	UN38.3, IEC 62619
Installation Style	Floor-Mounted
Warranty	10 years



Model	AE-F2.0
Battery Technical Specification	
Battery Chemistry	LiFePO ₄
Battery Nominal Voltage	51.2V
Battery Nominal Energy	2000Wh
Max. Charging / Discharging Current	40A
Battery Operating Voltage	40V ~ 60V
Battery Cycle Life	≥6000 (@25°C±2°C, 0.5C / 0.5C, 70%EOL)
Parallel Capability	5 pcs*
Other Technical Specification	
Display	LED (SOC, Alarm)
Communication Interfaces	CAN2.0, LoRa
Dimension (W × D × H)	450 × 210 × 244mm
Weight Approximate (kg)	20
Operating Temperature Range	-10°C ~ 50°C
Max. Operating Altitude	2000m
Relative Humidity	0% ~ 95% (No Condensing)
Certification	UN38.3, IEC 62619, CE
Installation Style	Floor-Mounted
Warranty	10 years

*Maximum 5 Pieces AE-F2.0 Packs in Parallel, Up to 10kWh.



App Interface Subject to Change

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



SMARTEN-UP YOUR HOME ENERGY

Real-time monitoring, with data information at a glance.
Create scenario-based tasks that adapt to your daily routines.
A smarter way to manage your electricity bills.

CONNECT, MONITOR, CONTROL

Seamlessly integrated with Deye devices for a smarter,
more efficient energy experience.

User-friendly interface demystifies complex settings.
Clear menu hierarchy, key information at your finger tips.

