

BALCONY SOLAR AND STORAGE
SUN-BK(80-250)-5.12KWH-EU-AM4-18L-32L

Balcony solar system · 0.8 – 2.5 kW · 10 models


0.8 – 2.5 kW

RATED POWER

5.12 kWh

ENERGY CAPACITY

51.2 V

NOMINAL VOLTAGE

IP65

PROTECTION CLASS

Parameter	Unit	Common to all models
PV input		
Rated PV input voltage	V	42.5
MPPT voltage range	V	20 – 55
Start-up voltage	V	25
Number of MPPT trackers		4
PV strings per MPPT		1
AC output		
Rated AC voltage	V	230
Phase		Single-phase
Rated AC frequency	Hz	50/60
Power factor		0.8 leading – 0.8 lagging
Backup output power	W	2500
Peak power (off-grid)		2 x rated power, 10 s
On-grid/off-grid switchover time		<=4 ms
Max. parallel units		3
Max. rated output power when paralleled	W	7500
Max. continuous AC pass-through (grid to load)	A	30
DC injection current		<0.5% I _n
Battery		
Battery type		LiFePO ₄
Battery voltage range	V	44.8 – 57.6
Max. charge current	A	50
Max. discharge current	A	50
Charging strategy for Li-ion battery		Self-adaption to BMS

Parameter	Unit	Common to all models
Nominal energy capacity	Wh	5120
Nominal voltage	V	51.2
Operating voltage range	V	44.8 – 57.6
Cell type		LiFePO4
Cycle life	cycles	≥6000
Max. expandable energy	Wh	81920
Max. battery modules stacked	pcs	3
Max. battery modules in parallel	pcs	16
Efficiency		
Max. efficiency	%	96.5
European efficiency	%	96
MPPT efficiency	%	>99
Protection		
Protection functions		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		
Dimensions (W x H x D)	mm	560 × 510 × 210
Weight	kg	52
Battery module dimensions (W x H x D)	mm	450 × 420 × 210
Battery module weight	kg	40±3
Ingress protection (IP rating)		IP65
Operating temperature range	°C	–10 – 55
Operating temperature range with optional heating	°C	–20 – 55
Derating above	°C	45
Relative humidity	%	0 – 95
Max. operating altitude	m	2000
Installation		Floor-mounted, stacked-mounted
Warranty	years	10
Communication		
Communication interfaces		Wi-Fi; Bluetooth; LoRa
Display		LED (SOC, alarm)
Monitoring		Cloud app (remote monitoring and control); local Bluetooth (offline control)
Battery module communication interface		LoRa
Optional interfaces		Parallel communication port and load port; RS485 port; CT port (must be selected at order, not field-upgradable)
Optional accessory		Wireless CT (SUN-SMART-CT02-L) for wireless zero-export control

Parameter	Unit	Common to all models
Certifications		
Certifications and standards		IEC 62619; UN38.3; IEC/EN 62109-1; IEC/EN 62109-2; IEC/EN 61000-6-1/2/3/4
Battery module certification		UN38.3; IEC 62619; CE
Grid codes		VDE 4105; IEC 61727/62116; VDE 0126; AS 4777.2; CEI 0-21; EN 50549-1; G98; C10-11; UNE 217002

Parameter	Unit	SUN-BK80-5.12KWH-EU-AM4-18L	SUN-BK100-5.12KWH-EU-AM4-18L	SUN-BK160-5.12KWH-EU-AM4-18L	SUN-BK200-5.12KWH-EU-AM4-18L	SUN-BK250-5.12KWH-EU-AM4-18L
PV input						
Max. PV input power	W	4400				
Max. input current per MPPT	A	18				
Max. short-circuit current per MPPT	A	27				
AC output						
Rated output power	W	800	1000	1600	2000	2500
Max. AC input/output active power	W	880	1100	1760	2200	2750
Rated AC output current	A	3.5	4.4	7	8.7	10.9
Max. AC output current	A	3.9	4.8	7.7	9.6	12

Parameter	Unit	SUN-BK80-5.12KWH-EU-AM4-32L	SUN-BK100-5.12KWH-EU-AM4-32L	SUN-BK160-5.12KWH-EU-AM4-32L	SUN-BK200-5.12KWH-EU-AM4-32L	SUN-BK250-5.12KWH-EU-AM4-32L
PV input						
Max. PV input power	W	5760				
Max. input current per MPPT	A	32				
Max. short-circuit current per MPPT	A	48				
AC output						
Rated output power	W	800	1000	1600	2000	2500
Max. AC input/output active power	W	880	1100	1760	2200	2750
Rated AC output current	A	3.5	4.4	7	8.7	10.9
Max. AC output current	A	3.9	4.8	7.7	9.6	12

Specifications are subject to change without notice. Values are typical at 25 °C unless stated.

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