

HOME ENERGY STORAGE

ALL-IN-ONE HOME ESS

Stackable battery · 16 kWh · 16 models


16 kWh

ENERGY CAPACITY

51.2 V

NOMINAL VOLTAGE

≥8000 cycles

CYCLE LIFE

3.6 – 20 kW

RATED POWER

Parameter	Unit	Common to all models
AC output		
Rated AC frequency	Hz	50/60
Total harmonic distortion (THDi)	%	<3
Power factor		0.8 leading to 0.8 lagging
Generator input		Yes
Max. parallel units		3
DC injection current	% In	<0.5
Seamless on/off-grid switching time	ms	4
Battery		
Battery type		LiFePO4
Battery voltage range	V	41.6 – 58.4
Number of battery inputs		1
Battery module model		AI-W16; AI-W16-H
Cell type		LiFePO4
Nominal energy capacity	Wh	16000
Nominal capacity	Ah	314
Usable energy capacity	Wh	14400
Nominal voltage	V	51.2
Operating voltage range	V	44.8 – 57.6
Cycle life	cycles	≥8000
Depth of discharge (DoD)	%	90
Max. expandable energy	Wh	96000
Number of battery modules per system		1 – 6
Battery max. continuous charge current	A	160

Parameter	Unit	Common to all models
Battery peak charge current	A	192
Battery max. continuous discharge current	A	220
Battery peak discharge current	A	264
Battery max. round-trip efficiency (DC)	%	95
Battery module weight	kg	120
Battery module dimensions (W x H x D, without base)	mm	662 × 715 × 257
Battery built-in circuit breaker		250 A, 80 Vdc
Battery module display		LED (working, protecting, alarming)
Battery module communication		CAN 2.0
Battery energy throughput (warranty condition)	MWh	50
Battery warranty period	years	10
Efficiency		
Max. efficiency	%	97.6
MPPT efficiency	%	>99
Protection		
Protection functions		DC reverse polarity protection; AC output overcurrent protection; thermal protection; AC output overvoltage protection; AC output short circuit protection; DC component monitoring; arc fault circuit interrupter (AFCI, optional); anti-islanding protection; DC switch; insulation impedance detection; residual current detection; surge protection Type II (DC); surge protection Type II (AC)
General data		
Ingress protection (IP rating)		IP66
Cooling		Intelligent air cooling
Relative humidity	%	0 – 100
Max. operating altitude	m	3000
Topology		Non-isolated (PV); isolated (battery)
Installation		Floor-mounted, stack-mounted
Warranty	years	5
Charging temperature range	°C	1 – 55
Charging temperature range with heating (AI-W16-H)	°C	–20 – 55
Discharge temperature range	°C	–20 – 55
Power derating above (discharge)	°C	45
Battery storage temperature	°C	0 – 35
Battery relative humidity (non-condensing)	%	95
System cooling (system data table)		Natural cooling
Over-voltage category		OVC II (DC), OVC III (AC)
Short-term water immersion resistance		50 cm for 3 h

Parameter	Unit	Common to all models
Communication		
Display		LCD + LED
Communication interfaces		Wi-Fi; RS485; CAN; LoRa; Bluetooth
Monitoring		Remote monitoring via cloud platform, mobile app and web portal
Certifications		
Certifications and standards		IEC 62477; IEC 62619; SA TS 5398; IEC 62040; IEC 62109-1/-2; EN 61000-6-1; EN 61000-6; VDE 2510-50; VDE 2510-2
Grid codes		IEC 61727; IEC 62116; CEI 0-21; EN 50549; NRS 097; RD 140; UNE 217002; OVE-Richtlinie R25; G99; VDE-AR-N 4105; AS 4777.2
Battery certification		UN38.3; CE; CB; UL 9540A
System		
System energy capacity	kWh	16 – 96
EMS		LoRa-based wireless energy management with CT monitoring (no internet required)
Standard configuration		1 inverter + 1 battery module (16 kWh)
Max. system power with 3 inverters in parallel	kW	36 (single-phase); 60 (three-phase)
Time-of-use charge/discharge time slots		6

Parameter	Unit	SUN-3.6K-SG06LP1-EU-TM2	SUN-4K-SG06LP1-EU-TM2	SUN-4.6K-SG06LP1-EU-TM2	SUN-5K-SG06LP1-EU-TM2	SUN-6K-SG06LP1-EU-TM2	SUN-7.5K-SG06LP1-EU-TM3	SUN-8K-SG06LP1-EU-TM3	SUN-10K-SG06LP1-EU-TM3
PV input									
Max. PV input power	W	7200	8000	9200	10000	12000	15000	16000	20000
Max. usable PV input power	W	5760	6400	7360	8000	9600	12000	12800	16000
Max. PV input voltage	V	500							
Rated PV input voltage	V	370							
MPPT voltage range	V	150 – 425							
Start-up voltage	V	125							
Max. input current per MPPT	A	18					36		
Max. short-circuit current per MPPT	A	27					54		
Number of MPPT trackers		2					3		
PV strings per MPPT		1					2		
AC output									
Rated output power	W	3600	4000	4600	5000	6000	7500	8000	10000
Max. apparent power	VA	3960	4400	4600	5500	6600	8250	8800	11000
Rated AC voltage	V	230							
Rated AC output current	A	15.7	17.4	20	21.8	26.1	32.7	34.8	43.5
Max. AC output current	A	17.3	19.2	20	24	28.7	35.9	38.3	47.9
Phase		Single-phase							
Peak (surge) power	W	7200	8000	9200	10000	12000	15000	16000	20000

Parameter	Unit	SUN-3.6K-SG06LP1-EU-TM2	SUN-4K-SG06LP1-EU-TM2	SUN-4.6K-SG06LP1-EU-TM2	SUN-5K-SG06LP1-EU-TM2	SUN-6K-SG06LP1-EU-TM2	SUN-7.5K-SG06LP1-EU-TM3	SUN-8K-SG06LP1-EU-TM3	SUN-10K-SG06LP1-EU-TM3
Max. continuous AC pass-through current (grid to load)	A	50					65		
Battery									
Max. charge current	A	90	95	120		135	185		220
Max. discharge current	A	90	95	120		135	185		220
Efficiency									
European efficiency	%	96.5							
General data									
Dimensions (W x H x D)	mm	662 × 331 × 255					662 × 354 × 255		
Weight	kg	20.5					28		28.3
Noise level	dB	<45							

Parameter	Unit	SUN-12K-SG06LP1-EU-TM3	SUN-5K-SG06LP3-EU-TM2	SUN-6K-SG06LP3-EU-TM2	SUN-8K-SG06LP3-EU-TM2	SUN-10K-SG05LP3-EU-TM2	SUN-12K-SG05LP3-EU-TM2	SUN-15K-SG05LP3-EU-TM3	SUN-20K-SG05LP3-EU-TM3
PV input									
Max. PV input power	W	24000	10000	12000	16000	20000	24000	30000	40000
Max. usable PV input power	W	19200	8000	9600	12800	16000	19200	24000	32000
Max. PV input voltage	V	500	800						
Rated PV input voltage	V	370	550						
MPPT voltage range	V	150 – 425	200 – 650					160 – 650	
Start-up voltage	V	125	160						
Max. input current per MPPT	A	36	20			26		36	
Max. short-circuit current per MPPT	A	54	30			39		54	
Number of MPPT trackers		3	2					3	
PV strings per MPPT		2	1			2			
AC output									
Rated output power	W	12000	5000	6000	8000	10000	12000	15000	20000
Max. apparent power	VA	13200	5500	6600	8800	11000	13200	16500	22000
Rated AC voltage	V	230	400						
Rated AC output current	A	52.2	7.3	8.7	11.6	14.5	17.4	21.8	29
Max. AC output current	A	57.4	8	9.6	12.8	16	19.2	24	31.9
Phase		Single-phase	Three-phase						
Peak (surge) power	W	24000	10000	12000	16000	20000	24000	30000	40000
Max. continuous AC pass-through current (grid to load)	A	70	45					70	

Parameter	Unit	SUN-12K-SG06LP1-EU-TM3	SUN-5K-SG06LP3-EU-TM2	SUN-6K-SG06LP3-EU-TM2	SUN-8K-SG06LP3-EU-TM2	SUN-10K-SG05LP3-EU-TM2	SUN-12K-SG05LP3-EU-TM2	SUN-15K-SG05LP3-EU-TM3	SUN-20K-SG05LP3-EU-TM3
Battery									
Max. charge current	A	250	120	135	190	210	240	300	380
Max. discharge current	A	250	120	135	190	210	240	300	380
Efficiency									
European efficiency	%	96.5						97	
General data									
Dimensions (W x H x D)	mm	662 × 354 × 255				662 × 375 × 255		662 × 450 × 255	
Weight	kg	28.3	26.2			34		-	
Noise level	dB	<45				≤50		<55	

Specifications are subject to change without notice. Values are typical at 25 °C unless stated.
XUSION is a brand of Hunan New Lithium Aviation Technology Co., Ltd.

E-mail lidreamtec@163.com
WhatsApp +86 133 5280 0772