

SUNLIFE POWER

USER MANUAL

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1. Electrical Specifications

power level	H6000-48 IP54	H12K-48 IP54
Max allowable access string Power (W)	6000	12000
Max. input voltage	500	500
MPPT operating voltage range	85-450	85-450
Rated voltage (V)	380	380
Starting voltage (V)	75	75
Max DC current (A)	27	27/27
Number of MPPT	1	2
Number of input strings per MPPT	1	1
DC terminal type	TBD	TBD
DC Switch(PV)	---	---
Battery		
Battery type	Lead-acid or LFP	Lead-acid or LFP
Rated voltage (V)	48	48
Voltage range (V)	40-60	40-60
Max charge and discharge power (W)	6000	12000
Max charge current (A)	120 (Can be set) (MPPT:120A,GRID : 120A)	210 (Can be set) (MPPT:210A,GRID : 210A)
Max discharge current (A)	130	230
Battery Capacity (Ah)	≥100(tailor)	≥100(tailor)
Charging mode	Three-stage form (Lead-acid)	Three-stage form (Lead-acid)
	According to BMS requirements (lithium)	According to BMS requirements (lithium)
Max charging voltage (V)	60(Can be set)	60(Can be set)
Battery temperature	Integrated (lithium	Integrated (lithium

compensation

battery)

battery)

Battery voltage detection	Integrated	Integrated
Battery current detection	Integrated	Integrated
AC input		
Max input power(W)	11500	20700
Max input current(A)	50	90
Rated input voltage(V)	220/230/240 (Optional)	220/230/240 (Optional)
Rated grid frequency(Hz)	50/60 (Optional)	50/60 (Optional)
THDi	< 3%(linear load)	< 3%(linear load)
Power factor	1	1
AC output (off-grid)		
Max AC power (W)	6000	12000
Rated frequency (Hz)	50/60 (Optional)	50/60 (Optional)
Frequency accuracy	±2%	±2%
Voltage level (V)	220/230/240 (Optional)	220/230/240 (Optional)
Max output current (A)	27.3A	54.5A
Voltage regulation accuracy	±1%	±1%
THDv	THDv < 3%(linear load)	THDv < 3%(linear load)
Overload capacity	105% < load rate ≤ 150%, 10.5s later alarm shutdown	105% < load rate ≤ 150%, 10.5s later alarm shutdown
	load rate ≥ 150%, 5.5s later alarm shutdown	load rate ≥ 150%, 5.5s later alarm shutdown
Efficiency		
Max efficiency of mains (100%R+50%CHG)	95%	95%
Max efficiency of battery inverter	93%	93%
Protection		
Over and under voltage protection	√	

Output overcurrent protection	√	√
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Output short circuit	√	√
Overtemperature protection	√	√
General parameters		
Dimensions (L * W * H) (mm)	120*346.6*444.7	125*535*630
Weight (kg)	15	25
Installation mode	wall-mounted	wall-mounted
Operating Temperature range	-10~55°C (>40°C Load reduction or derating)	-10~55°C (>40°C Load reduction or derating)
Relative humidity	5%~95%	5%~95%
Max working altitude (m)	>2000m derating	>2000m derating
Class of protection	IP54	IP54
Standby power consumption (W)	<10	<20
Cooling mode	Fan cooling	Fan cooling
Noise Index (DdB)	<60	<60
Display mode	LCD screen	LCD screen
Communication mode	RS232,dry contact ,WI-FI,RS485	RS232,dry contact ,WI-FI,RS485
Warranty Period (years)	3	3
Number of parallel	12	12

2. Insulation and Safety Specifications

No.	Items	Standard (or test condition)	Notes
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2.1	Dielectric Withstandin g Voltage	Battery input terminal with AC output terminal	1500Vac/10mA/1min (@GPEO-1K5L1/GPEO-4KL1/GPE O-6KL1)	(Impulse withstand electrical test, no-load impulse voltage test waveform is 1.2/50us, refer to NBT 32004-2018)
			3000Vac /10mA/1min (@GPEO-12KL1)	

	impulse withstand voltage	AC Input/output terminal with the earth	1500Vac/10mA/1min	
		AC Input/output terminal with communication interface	3000Vac/10mA/1min	
		DC(BAT/PV) terminal with communication interface	3000Vac/10mA/1min	
2.2	Insulation Resistance	Battery input terminal with AC output terminal	$\geq 0.2M\Omega@500Vdc$ (@GPEO-1K5L1/GPEO-4KL1/GPE O-6KL1)	Typical value (normal temperature and humidity)
			$\geq 50M\Omega@500Vdc$ (@GPEO-12KL1)	
		AC Input terminal with the earth	$\geq 50M\Omega@500Vdc$	
		AC Output terminal with the earth	$\geq 50M\Omega@500Vdc$	
2.3	Constant wet heat insulation resistance	AC Input terminal with the earth	$\geq 2M\Omega@500Vdc$	temperature : +60°C± 2°C humidity : 93%±3%
2.4	Safety certification	Safety of power converter for use in photovoltaic power systems Part 1: General requirements EN 62109-1: 2010 Safety of power converter for use in photovoltaic power systems Part 2: Particular requirements for inverters EN 62109-2: 2011		
2.5	DC (insulation) contact current	$\leq 30mA$ (Positive terminal with the earth and negative terminal with the earth)	Test refer to NBT 32004-2018, IEC62109-1	

3. Electromagnetic Compatibility(EMC)

No.	Items	Standard (or test condition)
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3.1	Conducted interference	EN IEC 61000-6-2,4 CLASS A(system verification)
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3.2	Radiation interference	EN IEC 61000-6-2,4 CLASS A(system verification)
3.3	Electrostatic immunity	The shell, which can be touched by the hand during normal operation: contact discharge $\pm 4\text{KV}$; Air discharge $\pm 8\text{KV}$ criterion B; (NBT 32004-2018 (GB/T 17626.2), IEC62109-1/2 or different regional regulations, power on during testing)
		The shell, which can be touched by the hand during normal operation: contact discharge $\pm 4\text{KV}$; Air discharge $\pm 8\text{KV}$ criterion B; (NBT 32004-2018 (GB/T 17626.2), IEC62109-1/2 or different regional regulations, no power on during testing)
3.4	Conducted immunity	NBT 32004-2018 (GB/T 17626.6) , IEC62109-1/2 or different regional regulatory criteria A (system)
3.5	Radiation immunity	NBT 32004-2018 (GB/T 17626.3) , IEC62109-1/2 or different regional regulatory criteria A (system)
3.6	Fast transient pulse group	NBT 32004-2018 (GB/T 17626.4) , IEC62109-1/2 or different regional regulatory criteria B (system)
3.7	surge	NBT 32004-2018 (GB/T 17626.5) , IEC62109-1/2 Criterion B (system) (common mode 1KV, differential mode 0.5KV)
3.8	Interruption in case of voltage drop and short circuit	NBT 32004-2018, IEC62109-1/2 or different regional regulations
3.9	Harmonic current	NBT 32004-2018, IEC62109-1/2 or different regional regulations (Class B inverters)

4. Operational Environment

No.	Items	technical index	Units	Notes
4.1	Operating temperature	-10 ~ +55	°C	typical value 25°C
4.2	Storage temperature	-15 ~ +60	°C	typical value 25°C
4.3	Working humidity	5%~95% relative humidity (non-condensing)		
4.4	Storage humidity	10 ~ 90% (frostless)		

4.5	Altitude	≤2000	M	Greater than 2000 meters derated use
4.6	Heat dissipation mode	Fan cooling		

5. Environmental Experiments and Reliability Requirements

No.	Items	technical index	Notes
5.1.1	High-temperature operation	+40°C 8hrs	standard
5.1.2	Normal temperature operation	+25°C 8hrs	standard
5.1.3	Low temperature operation	-10°C 8hrs	Standard,the machine can be started at -15°C
5.1.4	High temperature storage	+60°C 24hrs	standard
5.1.5	Low temperature storage	-15°C 24hrs	standard
5.1.6	High and low temperature cycle test	Refer to NBT 32004-2018, IEC62109-1/2 or different regional regulations	standard
5.1.9	Vibration test	Refer to NBT 32004-2018, IEC62109-1/2 or different regional regulations	standard
5.1.10	Impact test	Refer to NBT 32004-2018, IEC62109-1/2 or different regional regulations	standard

6. Mechanical Specifications

No.	Items	technical index	Units	Notes
6.1	Overall dimension	/	mm	(L *W * H)

6.2	Mounting dimension	/	/	/
6.3	Output connector definition	/	/	/
6.4	Process special treatment	/	/	/

6.5	Package	/	/	/
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7. Other Requirements

No.	Items	technical index	Units	Notes
7.1	Noise	≤ 60	dB	1 meter away from the machine
7.2	Pollution level	Pollution Level II according to NBT 32004-2018		