SH5K-30

Residential Hybrid Single Phase Inverter

FLEXIBLE APPLICATION

- Convenient for new installation and retrofit
- Compatible with both lithium-ion and leadacid batteries
- Energy trading ready with 3rd-party EMS to maximise ROI

SAFE AND RELIABLE

- Built-in surge arresters and residual current protection
- Durable finish with high anti-corrosion enclosure

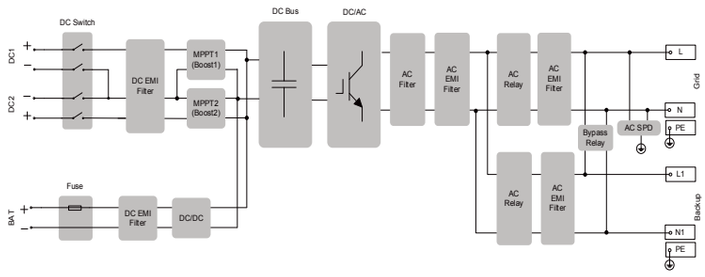
SMART MANAGEMENT

- High self-consumption with optimised built-in EMS
- Free online monitoring to enhance energy management for end user, installer and retailer
- Remote firmware update and customisable settings

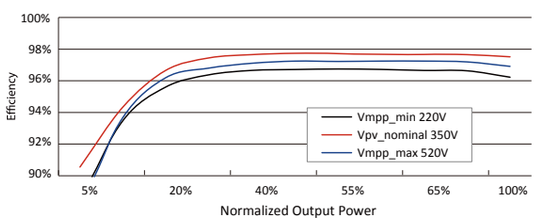
EASY INSTALLATION

- Cleaner and simpler install with EPS built-in to inverter
- Custom-fit mounting plate with built-in level
- Fast and easy commissioning via front panel LCD or App

CIRCUIT DIAGRAM



EFFICIENCY CURVE



SUNGROW
Clean power for all

Type designation	SH5K-30		
DC Input Data		**Backup Data**	
Max. PV input power	6500 W	Nominal voltage	220 Vac / 230 Vac / 240 Vac (±2 %)
Max. PV input voltage	600 V	Total hamonic factor output voltage	2 % (full resistive load)
Startup voltage	125 V	Frequency range	50 Hz / 60 Hz (±0.2 %)
Nominal input voltage	350 V	Switch time to emergency mode	<20 ms
MPP voltage range	125 V – 560 V	Power factor	0.8 overexcited / leading to 0.8 underexcited / lagging
MPP voltage range for nominal power	240 V – 520 V		
No. of MPPTs	2	Backup nominal AC output power	3000 W / 3000 VA
Max. number of PV strings per MPPT	1 / 1	Max. output power	5000W / 5000 VA
Max. PV input current	22 A (11 A / 11 A)	Max. output power (battery)	3000 W / 3000 VA
Max. current for input connector	12 A	Peak output power, Duration	6000 VA, 10S
Short-circuit current of PV input	24 A (12 A / 12 A)		
AC Input and Output Data			
Nominal AC output power	5000 W *1		
Nominal AC ouput current	22.7 A *2		
Max. AC output apparent power	5000 VA		
Max. AC output current	22.7 A *2		
Max. AC input power	8000 W		
Max. AC input current	36.4 A *3		
Nominal AC voltage	220 Vac / 230 Vac / 240 Vac		
AC voltage range	176 Vac–276 Vac		
Nominal grid frequency	50 Hz / 60 Hz		
Grid frequency range	45–55 Hz / 55–65 Hz (this may vary with grid standards)		
THD (Total Harmonic Distortion)	<3 % (of nominal power)		
DC current injection	<0.5 % (of nominal current)		
Power factor	>0.99 at default value at nominal power (adj. 0.8 overexcited / leading to 0.8 underexcited / lagging)		
Protection			
Anti-islanding protection	Yes		
AC short circuit protection	Yes		
Leakage current protection	Yes		
DC switch (solar)	Optional		
DC fuse (battery)	Yes		
Overvoltage Category	III [MAIN], II [PV] [BATTERY]		
Battery Data			
Battery type	Li-ion battery / Lead-acid battery		
Battery voltage	48 V (32 V–70 V)		
Max. charge / discharge current	65 A / 65 A		
System Data			
Max. efficiency	> 97.7 %		
Max. European efficiency	> 97.1 %		
Max. charge / discharge efficiency	> 94.0 %		
Isolation method (solar)	Transformerless		
Isolation method (battery)	HF		
Degree of protection	IP65		
Operating ambient temperature range	-25 ℃–60 ℃ (>45 ℃ derating)		
Relative humidity range	0%–100%		
Cooling method	Natural convection		
Max. operating altitude	2000m		
Display	Graphic LCD		
Communication	2 × RS485, WLAN , CAN, Ethernet		
Power management	1 × Digital Output		
Earth alarm	Email, buzzer inside		
PV connection type	MC4		
AC connection type	Clamping yoke connector		
Certification	AS4777,IEC 62109-1, IEC62109-2,IEC62477-1, IEC 62040-1, EN 61000-6-1/-3, ABNT NBR 16149: 2013 ABNT NBR 16150: 2013		
Mechanical Data			
Dimensions (W * H * D)	457 mm * 515 mm * 170 mm		
Mounting method	Wall-mounting bracket		
Weight	22 kg		

*1: AS4777 : 4990 W, 4990 VA
*2: AS4777 : 21.7 A
*3: AS4777 : 34.8 A