SH5K-30 New

SUNGROW

Clean power for all

Residential Hybrid Single Phase Inverter for Low Voltage Battery

FLEXIBLE APPLICATION

- Convenient for new installation and retrofit
- Compatible with both lithium-ion and lead-acid 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

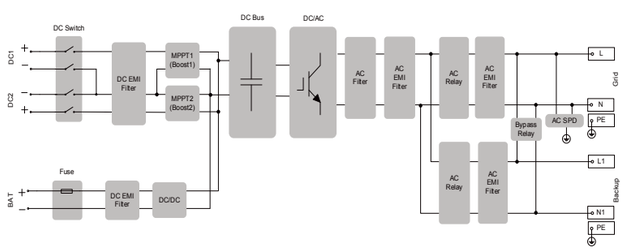
SMART MANAGEMENT

- 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

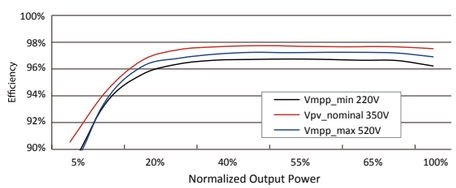
EASY INSTALLATION

- 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



Type designation	SH5K-30
DC Input Data	
Max. PV input power	6500 W
Max. PV input voltage	600 V
Startup voltage	125 V
Nominal input voltage	350 V
MPP voltage range	125 V – 560 V
MPP voltage range for nominal power	240 V – 520 V
No. of MPPTs	2
Max. number of PV strings per MPPT	1 / 1
Max. PV input current	22 A (11 A / 11 A)
Max. current for input connector	12 A
Short-circuit current of PV input	24 A (12 A / 12 A)

Backup Data	
Nominal voltage	220 Vac / 230 Vac / 240 Vac (±2 %)
Total hamonic factor output voltage	2 % (full resistive load)
Frequency range	50 Hz / 60 Hz (±0.2 %)
Switch time to emergency mode	<20 ms
Power factor	0.8 overexcited / leading to 0.8 underexcited / lagging
Backup nominal AC output power	3000 W / 3000 VA
Max. output power	5000W / 5000 VA
Max. output power (battery)	3000 W / 3000 VA
Peak output power,Duration	6000 VA, 10S

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
Ingress protection rating	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, WiFi , 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

*: sungrow provides Samsung SDI battery as standard solution.

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