



Single-Phase Hybrid Inverter(LV)

STH3.6-6KSH-L



Sonnex Energie low voltage hybrid inverters are designed to improve energy independence for home owners. Energy management is based on time-of-use and demand charge rate structures, reduces amount of electricity purchasing from the grid. With less than 10ms switching time from on-grid to off-grid model, it ensures crucial loads power on during outage.

Max.

Optimal Power & Storage

- ❑ 97.6% Max. Efficiency.
- ❑ DC 16A current input, compatible with high power PV module.
- ❑ 90-135A charge/discharge current.
- ❑ UPS switching time.



Strong Load & Back-up

- ❑ 130% Max.back-up output overloading@60s.
- ❑ 110% continuous AC output overloading.
- ❑ DC/AC ratio up to 1.3.
- ❑ Support diesel generator to charge battery directly, compatible with Li-ion and lead-acid batteries.



Convenient Installation & Operation

- ❑ Touch free commissioning with smartphone.
- ❑ Color LCD touch screen and App for setting and data management.
- ❑ Compact size and elegant appearance.



Smart Management

- ❑ Remote firmware update and customisable settings.
- ❑ Free online monitoring to enhance energy management for end user, installer and retailer.
- ❑ Programmable supply priority for PV, Battery or Grid.

MODEL	STH3.6KSH-L	STH5KSH-L	STH6KSH-L
Recommended Max. PV Input Power	4680 Wp	6500 Wp	7800 Wp
Max. Input Voltage*		500 V	
Start-up Voltage		125 V	
Rated Input Voltage		370 V	
MPPT Input Voltage Range*		125-500 V	
MPPT Max. Input Current		16 A	
MPPT Short-circuit Current		20 A	
No. of MPPT		2	
No. of Strings per MPPT		1	
Grid (AC)			
Max. Input Apparent Power**	7590 Wp	7590 Wp	9200 Wp
Rated Output Power	3600 Wp	5000 Wp	6000 Wp
Max. Output Apparent Power	3960 Wp	5500 Wp	6600 Wp
Rated AC Voltage		L/N/PE, 220 / 230 / 240 V	
Input/Output Voltage Range		180-300 V	
Rated Output Voltage Frequency		50 / 60 Hz	
Input/Output Voltage Frequency Range		(45-55) / (55-65) Hz	
Rated Output Current	15.7 A	21.7 A	26.1 A
Max. Input/Output Current	17.2 A	23.9 A	28.7 A
Power Factor (Rated)		>0.99	
Power Factor (Adjustable)		0.8 leading ... 0.8 lagging	
Total Harmonic Distortion		<3% (Rated Power)	
Grid Connection Mode		L/N/PE	
AC Load Output (Off-grid)			
Rated Output Power	3600 Wp	5000 Wp	6000 Wp
Max. Output Apparent Power	3960 Wp	5500 Wp	6600 Wp
Rated Output Voltage		L/N/PE, 220 / 230 / 240 V	
Output Voltage Range		200-240 V	
Rated Output Frequency		50/60 Hz	
Rated Output Current	15.7 A	21.7 A	26.1 A
Max. Output Current	17.2 A	23.9 A	28.7 A
Total Harmonic Distortion		<3% (R Load)	
On-grid/Off-grid Switching Time		<10ms	
Battery (DC)			
Rated Output Power	3600 Wp	5000 Wp	6000 Wp
Max.Charge/Discharge Power	3600 Wp	5000 Wp	6000 Wp
Battery Voltage		48 Vdc	
Battery Voltage Range		40-60 Vdc	
Max. Charge/Discharge Current	90 A	120 A	135 A
Communication Port		CAN / RS485	
Efficiency			
Max. Efficiency		97.6%	
Max. MPPT Efficiency		99.9%	
Max. Euro Efficiency		96.5%	
Protection			
Integrated Protection	Anti-flow Protection, DC Reverse Protection, DC Circuit Breaker, Insulation Resistor Detection, GFCI Leakage Current Monitoring, Output Shorted Protection, Output Over Current Protection, Grid Monitoring, Anti-islanding Protection, Residual Current Monitoring, Reverse Polarity Protection, Off-grid Overload Protection.		
Surge Protection	DC Type II, AC Type II		
Display and Communication			
Display	LCD+LED+APP		
Communication	RS485, 4G (Optional), WiFi (Optional)		
General Data			
Dimensions (W×H×D)	580×330×232 mm		
Weight	20.5 kg		
Operating Temperature Range	-25~60°C		
Noise	<35 dB		
Cooling	Smart Cooling		
Installation Style	Wall-mounted		
Protection Rating	IP66		
Warranty	5 Years		
Standards Compliance			
Grid Connection	IEC 62116, IEC61727, NRS 097-2-1, EN50549, EN 50438, C 10/11, CEI 0-21, AS 4777.2, UNE 206006/206007, VDE 4105		
Safety Regulation	IEC/EN 62109-1/2		
Others	EN/IEC 61000-6-1/3, IEC 60068, IEC 61683		