

sunways

Sunways Three Phase Storage Inverter with Two MPPT

STH - 4K ~ 12KTL-HT



MAX 98.2% EFFICIENCY

IP65 PROTECTION



Max. efficiency up to 98.2%



Up to 110% phase unbalanced output available on both on-grid and back-up outputs.



Support back-up paralleling connection of up to 10 units.



Fast and easy data checking and commissioning via App or OLED display



135~750V wide battery connection range to store more energy and optimize self-sufficiency rate.



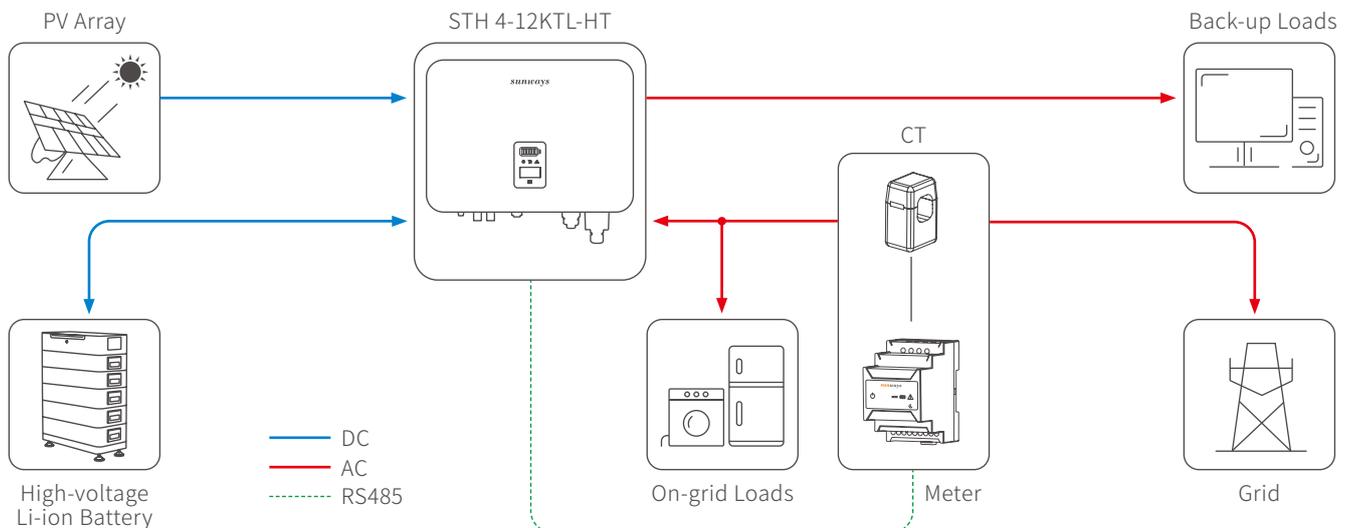
Arbitrary phase of back-up output allows up to 125% overloading ability.



Maximum 200% back-up output overloading @60s.



Uninterruptible power supply, switch to off-grid mode within 10ms



Model		STH-4KTL-HT	STH-5KTL-HT	STH-6KTL-HT	STH-8KTL-HT	STH-10KTL-HT	STH-12KTL-HT
PV Input	Max. Input Power (W)	6,400	8,000	9,600	12,800	16,000	19,200
	Start-up Voltage (V)	150	150	180	180	180	180
	Max. DC Input Voltage (V)	1,000	1,000	1,000	1,000	1,000	1,000
	Rated DC Input Voltage (V)	620	620	620	620	620	620
	MPPT Voltage Range (V)	150-850	150-850	200-850	200-850	200-850	200-850
	No. of MPP Trackers	2	2	2	2	2	2
	No. of PV Inputs	1/1	1/1	1/1	1/1	1/1	1/1
	Max. Input Current (A)	13/13	13/13	13/13	13/13	13/13	13/13
	Max. Short-circuit Current (A)	18/18	18/18	18/18	18/18	18/18	18/18
Battery	Battery Type	Lithium Battery (with BMS)					
	Battery Communication Mode	CAN / RS485					
	Battery Voltage Range (V)	180-750 ^①					
	Max. Charge/Discharge Current (A)	25/25					
	Rated Current of Built-in Fuse (A)	63					
Output (Grid)	Rated Output Power (W)	4,000	5,000	6,000	8,000	10,000	12,000
	Max. Output Power (W)	4,400	5,500	6,600	8,800	11,000	13,200
	Max. Apparent Power (VA)	4,400	5,500	6,600	8,800	11,000	13,200
	Max. Input Apparent Power (VA)	8,000 ^②	10,000 ^②	12,000 ^②	16,000 ^②	16,500 ^②	16,500 ^②
	Max. Charging Power of Battery (W)	4,000	5,000	6,000	8,000	10,000	12,000
	Rated Output Voltage (V)	3L/N/PE, 230/400V					
	Rated AC Frequency (Hz)	50/60Hz 45-55Hz/55-65Hz					
	Max. Output Current (A)	6.7	8.3	10	13.3	16.5	20
	Power Factor	0.8 leading ·· 0.8 lagging					
	Max. Total Harmonic Distortion	< 3% @Rated Output Power					
	DCI	< 0.5%In					
Output (Back-up)	UPS Switching Time	< 10ms					
	Rated Output Voltage (V)	3L/N/PE, 230/400V					
	Rated AC Frequency (Hz)	50/60Hz 45-55Hz/55-65Hz					
	Max. Apparent Output Power (VA)	4,400	5,500	6,600	8,800	11,000	13,200
	Peak Overload Apparent Power (VA)	8,000 ^③ , 60s	10,000 ^③ , 60s	12,000 ^③ , 60s	16,000 ^③ , 60s	20,000 ^③ , 60s	20,000 ^③ , 60s
	Peak Output Apparent Power/per Phase (VA)	1,600 ^④	2,100 ^④	2,600 ^④	3,300 ^④	4,000 ^④	5,000 ^④
	Voltage Harmonic Distortion	< 3% @Linear Load					
Efficiency	Max. Efficiency	98.1%	98.1%	98.1%	98.2%	98.2%	98.2%
	European Efficiency (PV-AC)	97.3%	97.3%	97.3%	97.4%	97.4%	97.4%
	European Efficiency (Battery-AC)	96.6%	96.6%	97.06%	97.06%	97.06%	97.06%
	European Efficiency (MPPT)	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
	Max. Battery Charging Conversion Efficiency	97.2%	97.2%	97.2%	97.3%	97.3%	97.3%
	Max. Battery Discharge Conversion Efficiency	97.2%	97.2%	97.2%	97.3%	97.3%	97.3%

Protection		General Data	
DC Reverse Polarity Protection	Integrated	Dimensions (mm)	550W*410H*175D
Battery Input Reverse Connection Protection	Integrated	Weight (KG)	26-28
Insulation Resistance Protection	Integrated	Protection Degree	IP65
DC Switch	Optional	Self-consumption at Night (W)	< 15
Surge Protection	Integrated	Topology	Transformer less
Over-temperature Protection	Integrated	Operating Temperature Range (° C)	-30~60
Residual Current Protection	Integrated	Relative Humidity	0~100%
Islanding Protection	Frequency Shift, Integrated	Operating Altitude (m)	4000 (derating@ > 3000)
AC Over-voltage Protection	Integrated	Cooling	Natural Convection
Overload Protection	Integrated	Noise Level (dB)	< 25
AC Short-circuit Protection	Integrated	Display	OLED & LED
		Communication	WiFi / LAN (Optional)

Compliance
IEC62109, IEC62116, VDE4105, VDE0126, AS4777, RD1699, NBR16149, IEC61727, IEC60068, IEC61683, EN50549, EN61000, NRS097-2-1, IEC/EN 62477-1

- ① The battery configuration range can be lowered to 135V in actual practice.
- ② Max apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery.
- ③ The output power will exceed the rated value only when the power in the PV array is sufficient, and the duration of the overload is relating to the overload power.
- ④ Only one of the three phases can reach up to 1.25 times, and the other two phases should be less than 1.1.