










# sunways

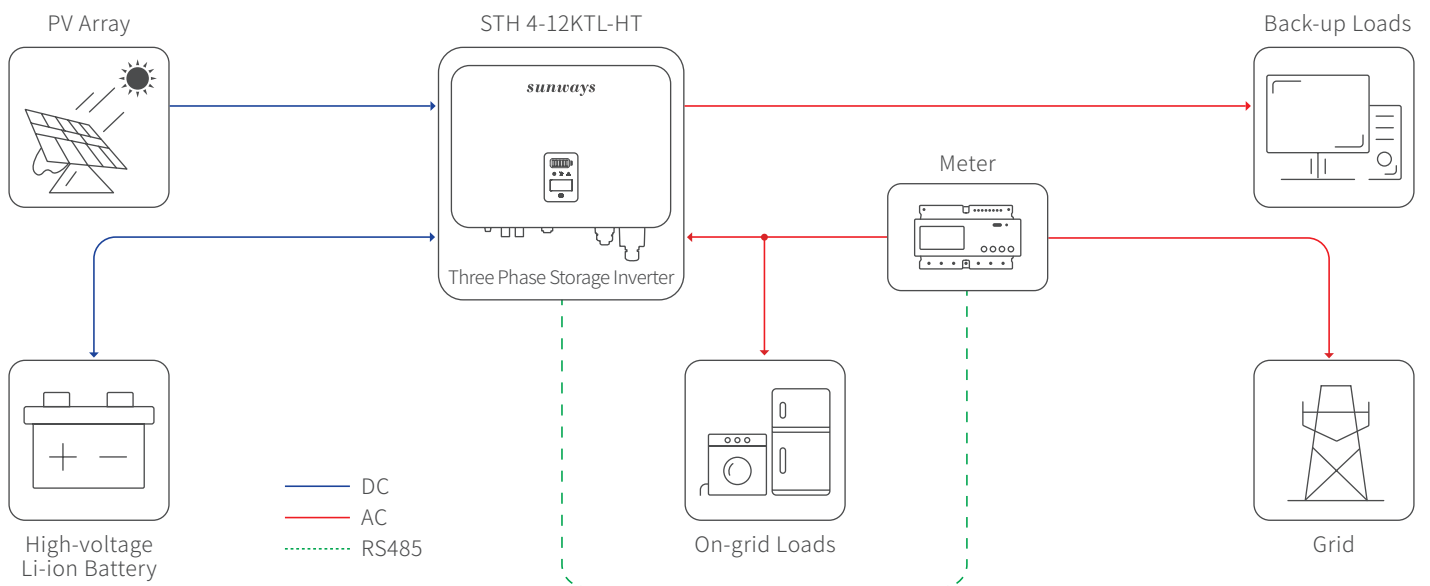
Sunways Three Phase Storage Inverter  
STH-4K/5K/6K/8K/10K/12KTL-HT

MAX 98.2% EFFICIENCY

IP65 PROTECTION



 <p>Max. efficiency up to 98.2%</p>	 <p>Support unbalance output on both on-grid and back-up side</p>	 <p>Fanless design, ultra-silence</p>
 <p>Powerful load adaptability, support multiple loads stable access</p>	 <p>Oled display+App, two ways for data checking and management</p>	 <p>180~750V super wide battery voltage range, adapt to bigger capacity battery</p>
 <p>New pin type AC connector introduced, easy to use and safer</p>	 <p>Intelligent BMS management, power dispatching from PV, Battery and Grid is more flexible</p>	 <p>Uninterruptible power supply, switch to off-grid mode within 10ms</p>



# TECHNICAL PARAMETERS

# THREE PHASE:STH-4K/5K/6K/8K/10K/12KTL-HT

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)	5,200	6,500	7,800	10,400	13,000	15,600
	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					
	Max. Charge/Discharge Current (A)	25/25					
	Rated Current of Built-in Fuse (A)	63					
Output (Grid)	Rated Output Power (kW)	4	5	6	8	10	12
	Max. Output Power (kW)	4.4	5.5	6.6	8.8	11	13.2
	Max. Apparent Power (kVA)	4.4	5.5	6.6	8.8	11	13.2
	Max. Input Apparent Power (kVA)	8 <sup>①</sup>	10 <sup>①</sup>	12 <sup>①</sup>	16 <sup>①</sup>	16.5 <sup>①</sup>	16.5 <sup>①</sup>
	Max. Charging Power of Battery (kW)	4	5	6	8	10	12
	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 (kVA)	4.4	5.5	6.6	8.8	11	13.2
	Peak Overload Apparent Power (kVA)	8 <sup>②</sup> , 60s	10 <sup>②</sup> , 60s	12 <sup>②</sup> , 60s	16 <sup>②</sup> , 60s	20 <sup>②</sup> , 60s	20 <sup>②</sup> , 60s
	Peak Output Apparent Power/per Phase (kVA)	1.6 <sup>③</sup>	2.1 <sup>③</sup>	2.6 <sup>③</sup>	3.3 <sup>③</sup>	4 <sup>③</sup>	5 <sup>③</sup>
	Voltage Harmonic Distortion	< 3% @Linear Load					
Efficiency	Max. Efficiency	98.1%	98.1%	98.1%	98.2%	98.2%	98.2%
	European Efficiency	97.3%	97.3%	97.3%	97.4%	97.4%	97.4%
	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 ( Type II )	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

- ① 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.  
 ② 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.  
 ③ Peak output apparent of power per phase is the max output apparent power that won't trigger the overload protection.