

# sunways

## Sunways Three Phase Storage Inverter with Two MPPT

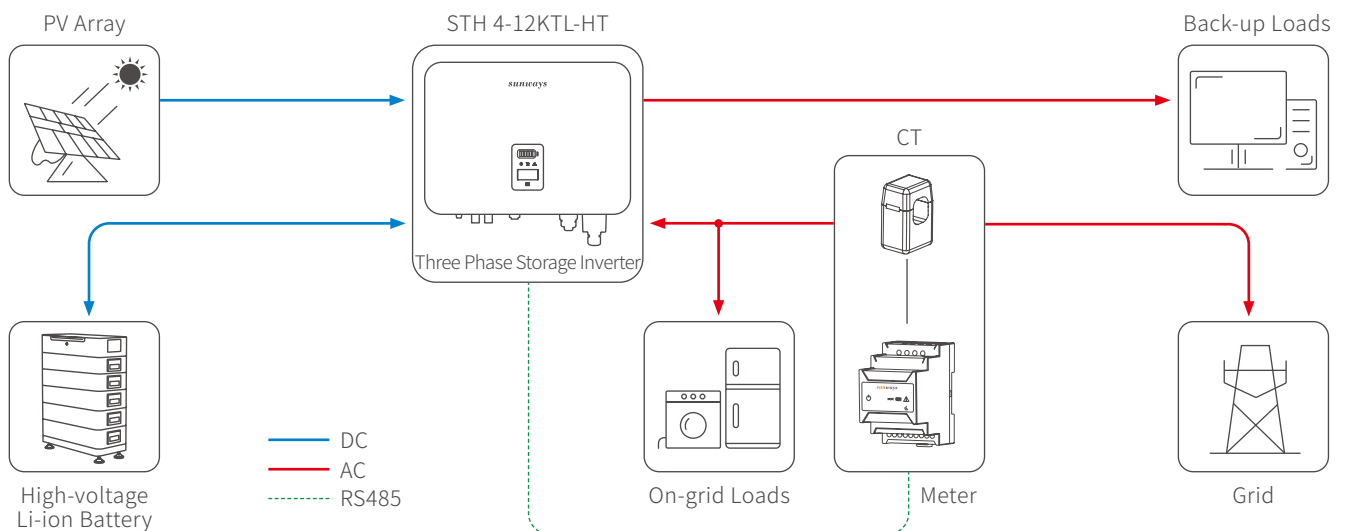
STH-4K~12KTL-HT



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)	135-750					
	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 <sup>①</sup>	10,000 <sup>①</sup>	12,000 <sup>①</sup>	16,000 <sup>①</sup>	16,500 <sup>①</sup>	16,500 <sup>①</sup>
	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 Power (VA)	4,400	5,500	6,600	8,800	11,000	13,200
	Peak Output Apparent Power (VA)	8,000 <sup>②</sup> , 60s	10,000 <sup>②</sup> , 60s	12,000 <sup>②</sup> , 60s	16,000 <sup>②</sup> , 60s	20,000 <sup>②</sup> , 60s	20,000 <sup>②</sup> , 60s
	Peak Output Apparent Power/per Phase (VA)	1,600 <sup>③</sup>	2,100 <sup>③</sup>	2,600 <sup>③</sup>	3,300 <sup>③</sup>	4,000 <sup>③</sup>	5,000 <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	
DC Reverse Polarity Protection	Integrated
Battery Input Reverse Connection Protection	Integrated
Insulation Resistance Protection	Integrated
DC Switch	Optional
Surge Protection	Integrated
Over-temperature Protection	Integrated
Residual Current Protection	Integrated
Islanding Protection	Frequency Shift, Integrated
AC Over-voltage Protection	Integrated
Overload Protection	Integrated
AC Short-circuit Protection	Integrated

General Data	
Dimensions (mm)	550W*410H*175D
Weight (KG)	26-28
Protection Degree	IP65
Self-consumption at Night (W)	< 15
Topology	Transformer less
Operating Temperature Range (° C)	-30~60
Relative Humidity	0~100%
Operating Altitude (m)	4000 (derating@ > 3000)
Cooling	Natural Convection
Noise Level (dB)	< 25
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 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 Only one of the three phases can reach up to 1.25 times, and the other two phases should be less than 1.1.