

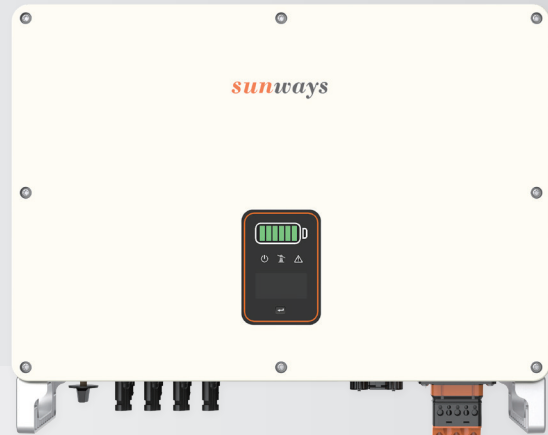
# sunways

## Sunways Three Phase Storage Inverter with Two MPPT

STH-15K~33KTL-HT

MAX 98.2% EFFICIENCY

IP66 PROTECTION



Max. efficiency up to 98.2%



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



Back-up paralleling available of up to 3 units



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



135~800V wide battery connection range to store more energy and optimize self-sufficiency rate.



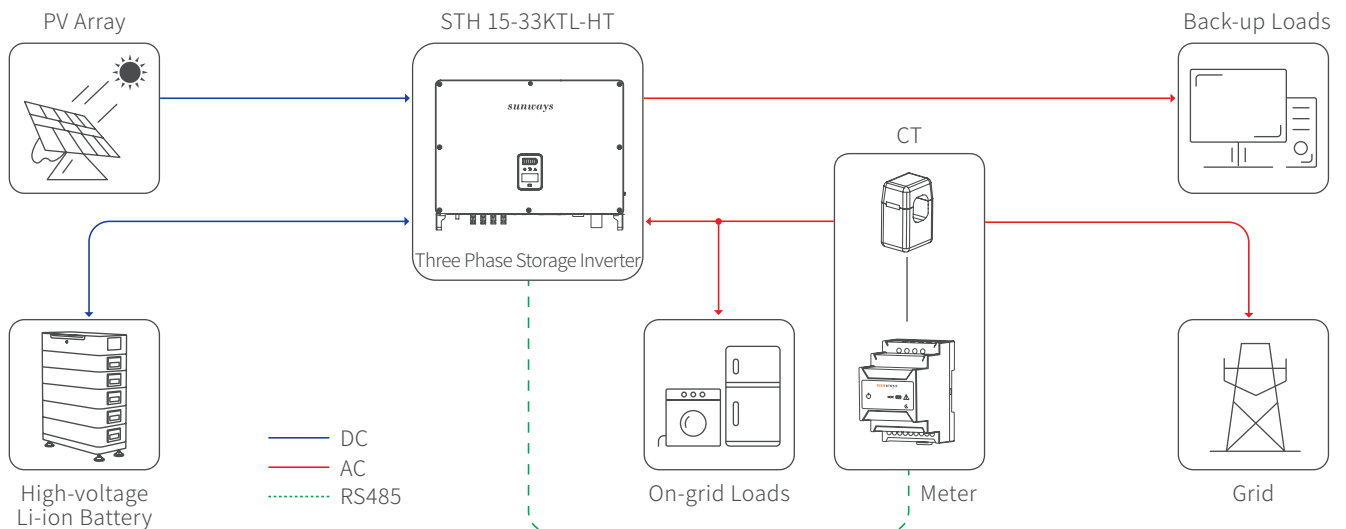
Support continuous 110% AC output overloading on both on-grid and back up sides



Diversified work modes that are compatible with the majority of application scenarios.



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



Model		STH-15KTL-HT	STH-17KTL-HT	STH-20KTL-HT	STH-25KTL-HT	STH-29.9KTL-HT	STH-30KTL-HT	STH-33KTL-HT
PV Input	Max. Input Power (W)	24,000	27,200	32,000	40,000	47,840	48,000	52,800
	Start-up Voltage (V)	135	135	135	135	135	135	135
	Max. DC Input Voltage (V)	1000	1000	1000	1000	1000	1000	1000
	Rated DC Input Voltage (V)	620	620	620	620	620	620	620
	MPPT Voltage Range (V)	200-850	200-850	200-850	200-850	200-850	200-850	200-850
	No. of MPP Trackers	2	2	2	2	2	2	2
	No. of DC Inputs per MPPT	2/2	2/2	2/2	2/2	2/2	2/2	2/2
	Max. Input Current (A)	26/26	26/26	26/26	26/26	26/26	26/26	26/26
Max. Short-circuit Current (A)	40/40	40/40	40/40	40/40	40/40	40/40	40/40	
backfeed current to the array (A)	0	0	0	0	0	0	0	
Battery	Battery Type	Lithium battery (with BMS)						
	Battery communication mode	CAN / RS485						
	Battery voltage range (V)	135-800						
	Maximum charging current (A)	50						
	Maximum discharge current (A)	50						
Rated current of built-in fuse (A)	125							
Output (Grid)	Rated Output Power (W)	15,000	17,000	20,000	25,000	29,900	30,000	33,000
	Max. Output Power (W)	16,500	18,700	22,000	27,500	29,900	33,000	36,300
	AC output rated apparent power (VA)	15,000	17,000	20,000	25,000	29,900	30,000	33,000
	Max. Apparent Power (VA)	16,500	18,700	22,000	27,500	29,900	33,000	36,300
	Max. Input Apparent Power (VA)	20,000 <sup>①</sup>	22,000 <sup>①</sup>	26,000 <sup>①</sup>	33,000 <sup>①</sup>	39,000 <sup>①</sup>	39,000 <sup>①</sup>	42,000 <sup>①</sup>
	Rated Output Voltage (V)	3L / N / PE, 230 (400)						
	Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60
	AC output rated current (A)	21.7	24.6	29.0	36.2	43.3	43.5	47.8
	Max. Output Current (A)	25.0	28.3	33.3	41.7	49.8	50.0	55.0
	Power Factor	0.8 leading ...0.8 lagging						
	Max. total harmonic distortion	<3% @Rated Output Power						
DCI	<0.5%In							
Output (Back-up)	Rated Output Power (W)	15,000	17,000	20,000	25,000	29,900	30,000	33,000
	Max. Output Power (W)	16,500	18,700	22,000	27,500	29,900	33,000	36,300
	Back-up output rated apparent power (VA)	15,000	17,000	20,000	25,000	29,900	30,000	33,000
	Max. Apparent Power (VA)	16,500	18,700	22,000	27,500	29,900	33,000	36,300
	Back-up output rated current (A)	21.7	24.6	29.0	36.2	43.3	43.5	47.8
	Max. Output Current (A)	25.0	28.3	33.3	41.7	49.8	50.0	55.0
	UPS switching time	<10ms	<10ms	<10ms	<10ms	<10ms	<10ms	<10ms
	Rated Output Voltage (V)	3L/N/PE, 230 (400)						
	Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Voltage harmonic distortion	<3% @Linear load							
Efficiency	Max. Efficiency	98.1%	98.1%	98.1%	98.2%	98.2%	98.2%	98.2%
	European Efficiency	97.3%	97.3%	97.3%	97.4%	97.4%	97.4%	97.4%
	MPPT Efficiency	99.9%	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%	97.3%
	Max battery discharge conversion efficiency	97.2%	97.2%	97.2%	97.3%	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	
Over voltage category	PV: II ; Main: III
Dimensions (mm)	600W*400H*280D
Weight (KG)	45
Protection Degree	IP66
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	Smart Fan Cooling
Noise Level (dB)	<50
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.