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SOLAR INVERTER AND MORE
2026 Hybrid Inverter Datasheet

German Heritage Since 1993

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Sunways Prodacuts Datasheet
V1.2 20260622

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STH SERIES

IP66
protection degree.

Support diesel generators
and charging piles.

Max. 3pcs parallel for
off-grid operation.

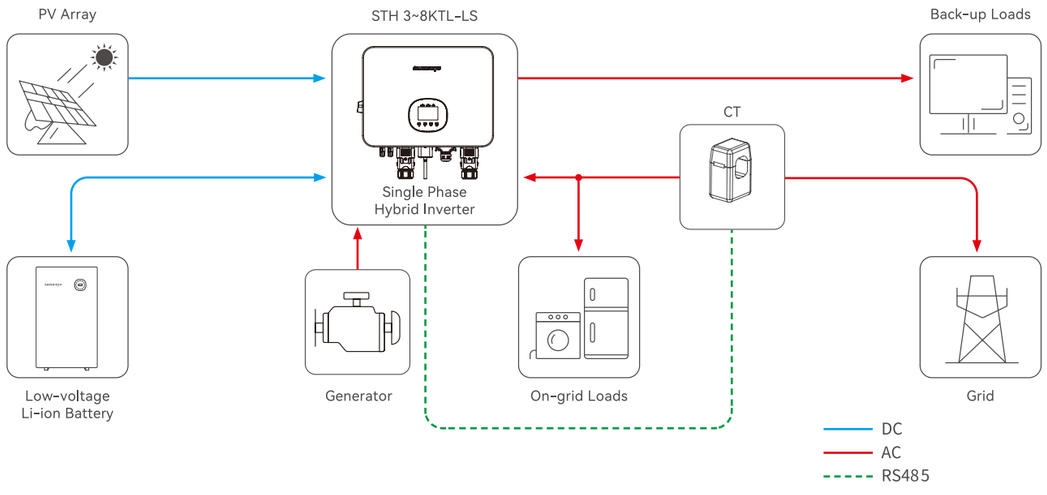
Fast and easy data checking
and commissioning.

Up to 160A
Fast charging/discharging.

Up to 20A
maximum PV input current.

Switch to off-grid mode
within 10ms.

Powering inductive & capacitive
backup load 2 times rated current.



Model	STH-3KTL-LSS	STH-3.6KTL-LSS	STH-4KTL-LS	STH-4.6KTL-LS	STH-5KTL-LS	STH-6KTL-LS	STH-7.5KTL-LS	STH-8KTL-LS
PV Input								
Start-up Voltage (V)	58	58	58	58	58	58	58	58
Max. input power (W)	6,000	7,200	8,000	9,200	10,000	12,000	12,000	12,000
Max. DC Input Voltage (V)	600	600	600	600	600	600	600	600
Rated DC Input Voltage (V)	360	360	360	360	360	360	360	360
MPPT Voltage Range (V)	80-550	80-550	80-550	80-550	80-550	80-550	80-550	80-550
No. of MPP Trackers	1	1	2	2	2	2	2	2
No. of DC Inputs per MPPT	1	1	1/1	1/1	1/1	1/1	1/1	1/1
Max. Input Current (A)	20	20	20/20	20/20	20/20	20/20	20/20	20/20
Max. Short-circuit Current (A)	25	25	25/25	25/25	25/25	25/25	25/25	25/25
Battery								
Battery Type	Lithium battery (with BMS)/Lead Acid							
Battery Communication Mode	CAN							
Battery Voltage Range (V)	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60
Max. Charge/Discharge Current (A)	80/80	80/80	100/100	100/100	120/120	120/120	160/160	160/160
Output (Grid)								
Rated Output Power (W)**	3,000	3,680	4,000	4,600	5,000	6,000	7,500	8,000
Max. Output Power (W)	3,300	3,680	4,400	5,060	5,500	6,600	8,250	8,800
AC Output Rated Apparent Power (VA)	3,000	3,680	4,000	4,600	5,000	6,000	7,500	8,000
Max. Apparent Power (VA)	3,300	3,680	4,400	5,060	5,500	6,600	8,250	8,800
Rated Output Voltage (V)**	L/N/PE, 220/230							
Rated AC Frequency (Hz)	50/60							
AC Output Rated Current (A)	13	16	17.4	20	21.7	26.1	32.6	34.8
Max. Output Current (A)	15	16	20	23	25	30	37.5	40
The measured Inrush current (A)	8.8A@28μs							
Max. Output Fault Current (A)	50	50	50	50	80	80	80	80
Max. Output Overcurrent Protection (A)	50	50	50	50	80	80	80	80
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)	3,000	3,680	4,000	4,600	5,000	6,000	7,500	8,000
Max. Output Power (W)	3,300	3,680	4,400	5,060	5,500	6,600	8,250	8,800
Back-up Output Rated Apparent Power (VA)	3,000	3,680	4,000	4,600	5,000	6,000	7,500	8,000
Max. Apparent Power (VA)	3,300	3,680	4,400	5,060	5,500	6,600	8,250	8,800
Back-up Output Rated Current (A)	13	16	17.4	20	21.7	26.1	32.6	34.8
Max. Output Current (A)	15	16	20	23	25	30	37.5	40
UPS Switching Time	<10ms							
Rated Output Voltage (V)	L/N/PE, 220/230							
Rated AC Frequency (Hz)	50/60							
Peak Output Apparent Power (VA)	6,000①, 10s	7,200①, 10s	8,000①, 10s	10,000①, 10s	10,000①, 10s	12,000①, 10s	12,000①, 10s	12,000①, 10s
Load Capacity of Motors	/	/	/	/	4HP	4HP	4HP	4HP
Efficiency								
Max. Efficiency	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%
European Efficiency	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%

Protection	
DC Reverse Polarity Protection	Integrated
Insulation Resistance Protection	Integrated
DC Switch	Integrated
AFCI	Optional
Surge Protection	Integrated
Over-temperature Protection	Integrated
Residual Current Protection	Integrated
Islanding Protection	Integrated
AC Over-voltage Protection	Integrated
Overload Protection	Integrated
AC Short-circuit Protection	Integrated

General Data	
Over Voltage Category	DC : II; AC :II
Dimensions (mm)	488*374*205
Weight (KG)	20 / 21
Protection Degree	IP66
Self-consumption at Night (W)	< 15
Topology	Transformerless
Operating Temperature Range (°C)	-25~60
Relative Humidity (%)	0~100
Operating Altitude (m)	3000
Cooling	Natural Convection / Fan
Noise Level (dB)	<40 / <50
Display	LCD/ OLED
Communication	WiFi/Bluetooth

** Due to differences in voltage values in various countries, minor variations may occur. The final interpretation rights belong to Sunways.

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STH SERIES

IP66
protection degree.

Support diesel generators
and charging piles.

Max. 3pcs parallel for
off-grid operation.

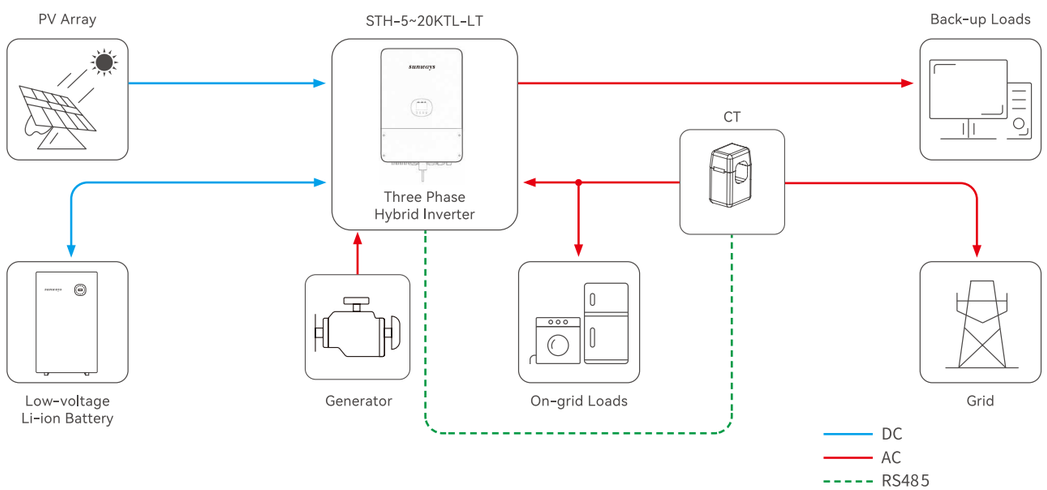
Fast and easy data checking
and commissioning.

Up to 430A
Continuous charging/discharging.

Up to 20A
maximum PV input current.

Switch to off-grid mode
within 10ms.

Powering inductive & capacitive
backup load 2 times rated current.



Model	STH-5KTL-LT	STH-6KTL-LT	STH-8KTL-LT	STH-10KTL-LT	STH-12KTL-LT	STH-15KTL-LT	STH-20KTL-LT
PV Input							
Max. Input Power (W)	10,000	12,000	16,000	20,000	24,000	30,000	40,000
Starting Voltage (V)	130	130	130	130	130	130	130
Max. DC Input Voltage (V)	1000	1000	1000	1000	1000	1000	1000
Rated DC Input Voltage (V)	600	600	600	600	600	600	600
MPPT Voltage Range (V)	160-850	160-850	160-850	160-850	160-850	160-850	160-850
No. of MPP Trackers	2	2	3	3	4	4	4
No. of DC Inputs per MPPT	1/1	1/1	1/1/1	1/1/1	1/1/1/1	1/1/1/1	1/1/1/1
Max. Input Current (A)	20/20	20/20	20/20/20	20/20/20	20/20/20/20	20/20/20/20	20/20/20/20
Max. Short-circuit Current (A)	30/30	30/30	30/30/30	30/30/30	30/30/30/30	30/30/30/30	30/30/30/30
Battery							
Battery Type	Lithium battery / Lead-acid battery						
Battery Communication Mode	CAN						
Number of Battery Inputs	1	1	1	1	2	2	2
Battery Voltage Range (V)	40-60	40-60	40-60	40-60	40-60	40-60	40-60
Max. Charge/Discharge Current (A)	120	140	180	215	140/140	160/160	215/215
Output (Grid)							
Rated Output Power (W)**	5,000	6,000	8,000	10,000	12,000	15,000	20,000
Max. Output Apparent Power (VA)	5,500	6,600	8,800	11,000	13,200	165,00	22,000
Max. Input Apparent Power (VA)	7,500	9,000	12,000	15,000	18,000	22,500	30,000
Rated Output Voltage (V)**	3L/N/PE, 380/400						
Rated AC Frequency (Hz)	50/60						
Max. Output Current (A)	8.3	10	13.4	16.7	20	25	33.4
Power Factor	> 0.99 (0.8 leading ...0.8 lagging)						
Max. Total Harmonic Distortion	<3% @Rated Output Power						
Output (Back-up)							
Rated Output Power (W)	5,000	6,000	8,000	10,000	12,000	15,000	20,000
Max. Output Apparent Power (VA)	5,500	6,600	8,800	11,000	13,200	165,00	22,000
Max. Output Current (A)	8.3	10	13.4	16.7	20	25	33.4
Max. Bypass Current(Grid to Backup Load) (A)	11.4	13.6	18.2	22.7	27.3	34	45
UPS Switching Time	<10ms						
Rated Output Voltage (V)	3L/N/PE, 380/400						
Rated AC Frequency (Hz)	50/60						
Peak Output Apparent Power (VA)	10,000①, 10s	12,000①, 10s	16,000①, 10s	20,000①, 10s	24,000①, 10s	30,000①, 10s	40,000①, 10s

Efficiency							
Max. Efficiency	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%
European Efficiency	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%
Max. Charging and Discharging Efficiency	95%	95%	95%	95%	95%	95%	95%

Protection	
PV Reverse Polarity Protection	Integrated
Insulation Resistance Protection	Integrated
DC Switch	Integrated
AFCI	Optional
Surge Protection	Integrated
Over-temperature Protection	Integrated
Residual Current Protection	Integrated
Islanding Protection	Integrated
AC Over-voltage Protection	Integrated
Overload Protection	Integrated
AC Short-circuit Protection	Integrated

General Data	
Over Voltage Category	DC : II; AC :III
Dimensions (mm)	782*572*219
Weight (KG)	38
Protection Degree	IP66
Topology(Solar/Battery)	Transformerless / High-frequency isolation
Operating Temperature Range (°C)	-25~60 (> 45°C derating)
Relative Humidity (%)	0~100
Operating Altitude (m)	3000
Cooling	Intelligent Air Cooling
Noise Level (dB)	<50
Display	LCD
Communication	RS485/LAN/Bluetooth/WiFi,4G(Optional)

①The 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.

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STH SERIES

Max. Efficiency up to 97.6%.

With AC output ranging from 3kW to 8kW.

Powerful load adaptability, support loads stable access.

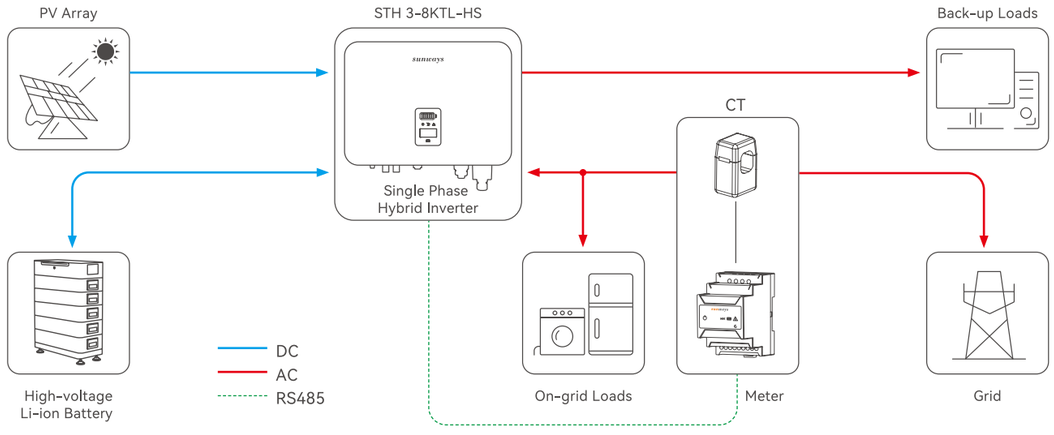
Fast and easy data checking and commissioning via App or OLED display.

Wide battery voltage range allows more battery modules connection and increases self consumption rate.

Fast charging/discharging of up to 30A to meet the demand of higher consumption and energy trading.

Up to 15A maximum PV input current allows most higher current PV panels connection and lowers the system LCOE.

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



Model	STH-3KTL-HSS	STH-3.6KTL-HSS	STH-4.2KTL-HS	STH-4.6KTL-HS	STH-5KTL-HS	STH-6KTL-HS	STH-7KTL-HS	STH-8KTL-HS
PV Input								
Max. Input Power (W)	4,800	5,760	6,720	7,360	8,000	9,600	11,200	12,800
Start-up Voltage (V)	80	80	80	80	80	80	80	80
Max. DC Input Voltage (V)	600	600	600	600	600	600	600	600
Rated DC Input Voltage (V)	360	360	360	360	360	360	360	360
MPPT Voltage Range (V)	100-550	100-550	100-550	100-550	100-550	100-550	100-550	100-550
Number of MPP Trackers	1	1	2	2	2	2	2	2
Number of DC Inputs per MPPT	1	1	1	1	1	1	1	1
Max. Input Current (A)	15	15	15/15	15/15	15/15	15/15	15/15	15/15
Max. Short-circuit Current (A)	20	20	20/20	20/20	20/20	20/20	20/20	20/20
Battery								
Battery Communication Mode	CAN / RS485							
Battery Voltage Range (V)	85-500							
Max. Charge/Discharge Current (A)	30/30							
Rated Current of Built-in Fuse (A)	63							
Output (Grid)								
Rated Output Power (W)**	3,000	3,600	4,200	4,600	5,000	6,000	7,000	8,000
Max. Output Power (W)	3,300	3,960	4,600	4,600	5,500	6,600	7,700	8,000
Max. Apparent Power (VA)	3,300	3,960	4,600	4,600	5,500	6,600	7,700	8,000
Max. Input Apparent Power (VA)	6,000①	7,200①	8,400①	9,200①	10,000①	12,000①	12,000①	12,000①
Max. Charging Power of Battery (W)	3,000	3,600	4,200	4,600	5,000	6,000	7,000	8,000
Grid Type (V)**	L/N/PE, 220/230/240V							
Rated AC Frequency (Hz)	50/60							
Max. Output Current (A)	15	18	21	21	25/21.7	28.7	35	36.3
Power Factor	0.8 leading...0.8 lagging							
THDi @ Rated Power	<3%							
DCI	<0.5%In							
Output (Back-up)								
Rated Output Power (W)	3,000	3,600	4,200	4,600	5,000	6,000	7,000	8,000
Max. Output Power (W)	3,300	3,960	4,600	4,600	5,500	6,600	7,700	8,000
Back-up Output Rated Apparent Power (VA)	3,000	3,600	4,200	4,600	5,000	6,000	7,000	8,000
Max. Apparent Power (VA)	3,300	3,960	4,600	4,600	5,500	6,600	7,700	8,000
Back-up Output Rated Current (A)	13	15.7	18.3	20	21.7	26.1	31.8	36.3
Max. Output Current (A)	15	18	21	21	25/21.7	28.7	35	36.3
UPS Switching Time (ms)	<10							
Grid Type (V)	L/N/PE, 220/230/240							
Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Peak Output Apparent Power (VA)	3,900②, 60s	4,700②, 60s	5,500②, 60s	6,000②, 60s	6,500②, 60s	7,800②, 60s	9,100②, 60s	10,000②, 60s
THDi @ Rated Power	<3%							
Efficiency								
Max. Efficiency	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%
Euro Efficiency	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%
Max. Battery Charging Conversion Efficiency	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%
Max. Battery Discharge Conversion Efficiency	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%

Protection	
DC Reverse Polarity Protection	Integrated
Battery Input Reverse Connection Protection	Integrated
Insulation Resistance Detection	Integrated
DC Switch	Optional
Surge Protection	Integrated
Over-temperature Protection	Integrated
Residual Current Protection	Integrated
Anti-islanding Protection	Integrated
AC Over-voltage Protection	Integrated
Overload Protection	Integrated
AC Short-circuit Protection	Integrated

General Data	
Over Voltage Category	PV : II; Main : III
Dimensions [W*H*D] (mm)	550*410*175
Weight (kg)	26
Protection Degree	IP65
Self-consumption at Night (W)	< 15
Topology	Transformerless
Operating Temperature Range (℃)	-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)

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.

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STH SERIES

Max. Efficiency up to 98.2%.

Up to110% phase unbalanced output available on both on-grid and back-up outputs.

Powerful load adaptability, support loads stable access.

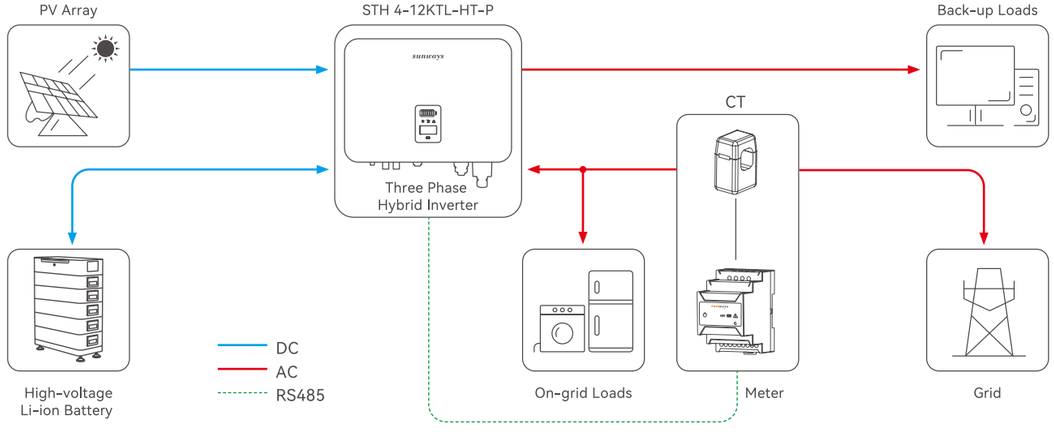
Oled display+App, two ways for data checking and management.

140-750V 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-P	STH-5KTL-HT-P	STH-6KTL-HT-P	STH-8KTL-HT-P	STH-10KTL-HT-P	STH-12KTL-HT-P
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
Number of MPP Trackers	2	2	2	2	2	2
Number of PV Inputs	1	1	1	1	1	1
Max. Input Current (A)	16/16①	16/16①	16/16①	16/16①	16/16①	16/16①
Max. Short-circuit Current (A)	18/18	18/18	18/18	18/18	18/18	18/18
Battery						
Battery Communication Mode	CAN / RS485					
Battery Voltage Range (V)	140-750					
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)	8,000②	10,000②	12,000②	16,000②	16,500②	16,500②
Max. Charging Power of Battery (W)	4,000	5,000	6,000	8,000	10,000	12,000
Grid Type**	3L/N/PE, 230/400V					
Rated AC Frequency (Hz)	50/60 45-55/55-65					
Max. Output Current (A)	6.7	8.3	10	13.3	16.5	20
Power Factor	0.8 leading...0.8 lagging					
THDi @ Rated Power	<3%					
DCI	< 0.5%In					
Output (Back-up)						
UPS Switching Time (ms)	< 10					
Grid Type	3L/N/PE, 230/400V					
Rated AC Frequency (Hz)	50/60 45-55/55-65					
Max. Apparent Power (VA)	4,400	5,500	6,600	8,800	11,000	13,200
Peak Output Apparent Power (VA)	8,000③, 60s	10,000③, 60s	12,000③, 60s	16,000③, 60s	20,000③, 60s	20,000③, 60s
Peak Output Apparent Power/per Phase (VA)	1,600④	2,100④	2,600④	3,300④	4,000④	5,000④
THDi @ Rated Power	< 3%					
Efficiency						
Max. Efficiency	98.1%	98.1%	98.1%	98.2%	98.2%	98.2%
Euro 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 Detection	Integrated
DC Switch	Optional
Surge Protection	Integrated
Over-temperature Protection	Integrated
Residual Current Protection	Integrated
Anti-islanding Protection	Integrated
AC Over-voltage Protection	Integrated
Overload Protection	Integrated
AC Short-circuit Protection	Integrated

General Data	
Dimensions [W*H*D] (mm)	550*410*175
Weight (kg)	26~28
Protection Degree	IP65
Self-consumption at Night (W)	< 15
Topology	Transformerless
Operating Temperature Range (℃)	-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)

① STH-4K~12KTL-HT series maximum input current per string is 16A, products deliver upon the order.

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.

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STH SERIES

Max. Efficiency up to 98.2%.

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

Powerful load adaptability, support loads stable access.

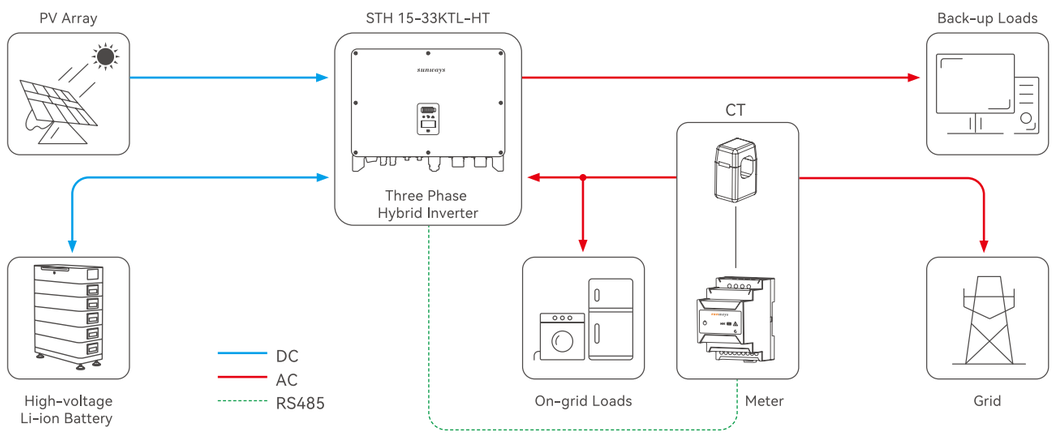
Fast and easy data checking and commissioning via App or OLED display.

200~800V 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)	22,500	25,500	30,000	37,500	44,850	45,000	49,500
Start-up Voltage (V)	190	190	190	190	190	190	190
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
Number of MPP Trackers	2	2	2	2	2	2	2
Number of DC Inputs per MPPT	2	2	2	2	2	2	2
Max. Input Current (A)	40/40	40/40	40/40	40/40	40/40	40/40	40/40
Max. Short-circuit Current (A)	50/50	50/50	50/50	50/50	50/50	50/50	50/50
Battery							
Battery Communication Mode	CAN / RS485						
Battery Voltage Range (V)	200-800						
Max. Charge/Discharge Current (A)	80/80						
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. Input Apparent Power (VA)	22,500①	25,500①	30,000①	37,500①	44,850①	44,850①	44,850①
Grid Type**	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						
THDi @ Rated Power	<3%						
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 (ms)	<10						
Grid Type	3L/N/PE, 230 (400)						
Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60
THDi @ Rated Power	<3%						
Efficiency							
Max. Efficiency	98.1%	98.1%	98.1%	98.2%	98.2%	98.2%	98.2%
Euro 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 Detection	Integrated
DC Switch	Optional
Surge Protection	Integrated
Over-temperature Protection	Integrated
Residual Current Protection	Integrated
Anti-islanding protection	Integrated
AC Over-voltage Protection	Integrated
Overload protection	Integrated
AC Short-circuit Protection	Integrated

General Data	
Over Voltage Category	PV: II, Main: III
Dimensions [W*H*D] (mm)	640*490*290
Weight (kg)	48
Protection Degree	IP66
Self-consumption at Night (W)	<15
Topology	Transformerless
Operating Temperature Range (℃)	-30~60
Relative Humidity (%)	0~100
Operating Altitude (m)	3000
Cooling	Smart Fan Cooling
Noise Level (dB)	<50
Display	OLED & LED
Communication	WiFi/LAN (Optional)

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.

** Due to differences in voltage values in various countries, minor variations may occur. The final interpretation rights belong to Sunways.

sunways

STH SERIES

Max. Efficiency up to 98.2%.

Maximum 44A input current per MPPT, support high power solar panel.

AFCI optional.

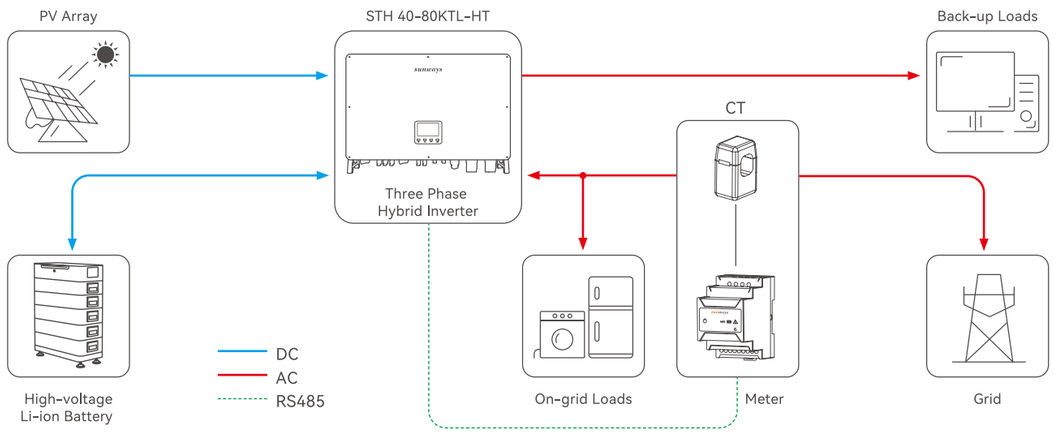
Fast and easy data checking and commissioning via App or OLED display.

180~820V wide battery connection range to store more energy and optimize self-sufficiency rate.

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

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

Powerful load adaptability, support loads stable access.



Model	STH-40KTL-HT	STH-50KTL-HT	STH-60KTL-HT	STH-70KTL-HT	STH-80KTL-HT
PV Input					
Start-up Voltage (V)	180	180	180	180	180
Max. DC Input Voltage (V)	1100①	1100①	1100①	1100①	1100①
Rated DC Input Voltage (V)	620	620	620	620	620
MPPT Voltage Range (V)	180-1000②	180-1000②	180-1000②	180-1000②	180-1000②
Number of MPP Trackers	4	5	5	5	5
Number of DC Inputs per MPPT	2/2/2/2	2/2/2/2/2	2/2/2/2/2	2/2/2/2/2	2/2/2/2/2
Max. Input Current (A)	44/44/44/44	44/44/44/44/44	44/44/44/44/44	44/44/44/44/44	44/44/44/44/44
Max. Short-circuit Current (A)	55/55/55/55	55/55/55/55/55	55/55/55/55/55	55/55/55/55/55	55/55/55/55/55
backfeed current to the array (A)	0	0	0	0	0
Battery					
Battery communication mode	CAN / RS485				
Battery voltage range (V)	200-850				
Number of battery input	2				
Max. charge / discharge current(A)	180 (90x2)				
Output (Grid)					
Rated Output Power (kW)	40	50	60	70	80
Max. Output Power (kW)	44	55	66	77	88
AC output rated apparent power (kVA)	40	50	60	70	80
Max. Apparent Power (kVA)	44	55	66	77	88
Max. Input Apparent Power (kVA)	60(Max charging power of battery 40KW)	75(Max charging power of battery 50KW)	90(Max charging power of battery 60KW)	105(Max charging power of battery 70KW)	120(Max charging power of battery 80KW)
Rated Output Voltage (V)	3 / N / PE, 230 (400)				
Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60
AC output rated current (A)	58	72.5	87	101.4	115.9
Max. Output Current (A)	66.7	83.3	100	116.7	133.3
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)	40	50	60	70	80
Max. Output Power (W)	44	55	66	77	88
Back-up Output Rated Apparent Power (VA)	44 (48 @ 60sec, 60 @ 10sec)	55 (60 @ 60sec, 75 @ 10sec)	66 (72 @ 60sec, 90 @ 10sec)	77 (84 @ 60sec, 105 @ 10sec)	88 (96 @ 60sec, 120 @ 10sec)
AC output rated current (A)	58	72.5	87	101.4	115.9
Max. Output Current (A)	66.7	83.3	100	116.7	133.3
UPS switching time	<10ms				
Rated Output Voltage (V)	3/N/PE，230 (400)				
Rated AC Frequency (Hz)	50/60				
Voltage harmonic distortion	<3% @Linear load				
Efficiency					
Max. Efficiency	98.1%	98.1%	98.1%	98.2%	98.2%	98.2%
Euro 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 Detection	Integrated
DC Switch	Optional
Surge Protection	Integrated
Over-temperature Protection	Integrated
Residual Current Protection	Integrated
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Overload protection	Integrated
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Cooling	Smart Fan Cooling
Noise Level (dB)	<50
Display	OLED & LED
Communication	WiFi/LAN (Optional)

① The maximum input voltage is the maximum DC input voltage that the inverter can withstand，exceeding this voltage may cause damage, and such damage is not covered under warranty.

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