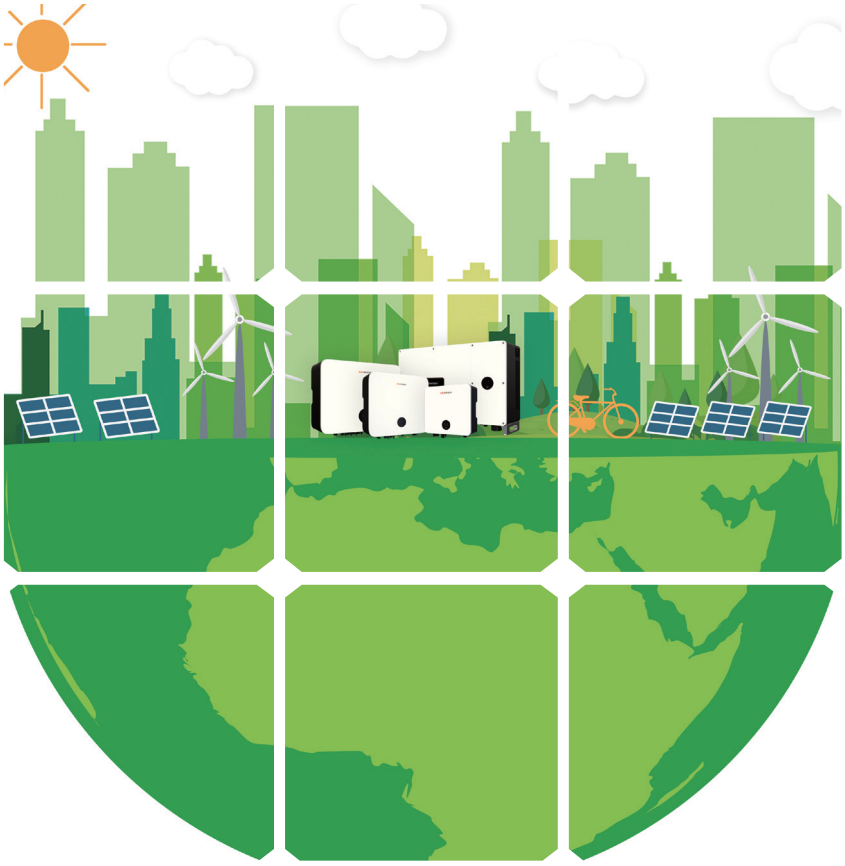
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Originated from Germany, Since 1993



SOLAR INVERTER
2024 All-in-One Datasheet

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STS Series



- MAX 97.5% EFFICIENCY
- IP65 PROTECTION

STS 1~3.3kW

Single Phase | 1 MPPT | ON Grid

SAFE & RELIABLE

- High reliability due to good heat dissipation design
- Integrated lightning protection for both DC and AC
- Adapt to complex power grid
- High anti-corrosion ability with aluminum alloy die casting technology
- Wider working temperature and altitude, adapt to various installation environments

HIGH YIELD

- High yield with Max. 97.5% efficiency
- European weighted efficiency 97%
- Wide MPPT voltage range
- Up to 10% continuous output overloading capacity
- Single MPPT design with precise MPPT algorithm

EASY TO USE

- Compact elegant design, light weight, one-person installation
- Plug and play connectors, easy for installation
- Support wireless and wired internet connection (RS485/WiFi/GPRS/LAN optional)
- Remote upgrading available
- Fast and easy configuration via App or OLED display

Model	STS-1KTL-S-P	STS-1.5KTL-S-P	STS-2KTL-S-P	STS-2.5KTL-S-P	STS-3KTL-S-P	STS-3.3KTL-S-P*
Input						
Max. Input Power (W)	1,600	2,400	3,200	4,000	4,800	4,800
Start-up Voltage (V)	60	60	60	60	60	60
Min. DC Voltage (V)	55	55	55	55	55	55
Max. DC Input Voltage (V)	500	500	500	500	500	500
Rated DC Input Voltage (V)	360	360	360	360	360	360
MPPT Voltage Range (V)	80-450	80-450	80-450	80-450	80-450	80-450
Number of MPP Trackers	1	1	1	1	1	1
Number of DC Inputs per MPPT	1	1	1	1	1	1
Max. Input Current (A)	16	16	16	16	16	16
Max. Short-circuit Current (A)	20	20	20	20	20	20
Output						
Rated Output Power (W)**	1,000	1,500	2,000	2,500	3,000	3,300
Max. Output Power (W)	1,100	1,650	2,200	2,750	3,300	3,300
Max. Apparent Power (VA)	1,100	1,650	2,200	2,750	3,300	3,300
Rated Output Voltage (V)**	220/230					
Rated AC Frequency (Hz)	50/60Hz 45-55Hz/55-65Hz					
Max. Output Current (A)	4.8	7.2	9.6	12	14.4	14.4
Power Factor	0.8 leading…0.8 legging					
Max. Total Harmonic Distortion	< 3% @Rated Output Power					
DCI	< 0.5%In					
Efficiency						
Max. Efficiency	97.3%	97.3%	97.5%	97.5%	97.5%	97.5%
European Efficiency	96.4%	96.4%	97.0%	97.0%	97.0%	97.0%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
Protection						
DC Reverse Polarity Protection	Integrated					
Insulation Resistance Protection	Integrated					
DC Switch	Optional					
Surge Protection	Integrated					
Over-temperature Protection	Integrated					
Residual Current Protection	Integrated					
Anti-islanding Protection	Integrated					
AC Short-circuit Protection	Integrated					
AC Over-voltage Protection	Integrated					
General Data						
Dimensions (mm)	327W*297H*114D					
Weight (kg)	6.5					
Protection Degree	IP65					
Self-consumption at Night (W)	< 1					
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	RS485/WiFi/GPRS/LAN (Optional)					
Compliance	IEC62109, EN61000, C10/11, IEC61727, IEC62116, IEC60068, IEC61683, VDE4105, VDE0126, UTEC15-712-1, EN50549, RD661, RD413, RD1699,UNE 217001, UNE 217002, RD647, CEI 021, IS16221, IS16169, ABNT NBR 16149, ABNT NBR 16150					

* : STS 3.3KTL-S-P available for India only.

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

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STS Series



- MAX 98.1% EFFICIENCY
- IP65 PROTECTION

STS 3~6kW

Single Phase | 2 MPPTs | ON Grid

SAFE & RELIABLE

- High reliability due to good heat dissipation design
- Integrated lightning protection for both DC and AC
- Adapt to complex power grid
- High anti-corrosion ability with aluminum alloy die casting technology
- Wider working temperature and altitude, adapt to various installation environments

HIGH YIELD

- High yield with Max. 98.1% efficiency
- European weighted efficiency 97.5%
- Wide MPPT voltage range
- Up to 10% continuous output overloading capacity
- With a max input current of 15A, compatible with high-power panels

EASY TO USE

- Compact elegant design, light weight, one-person installation
- Plug and play connectors, easy for installation
- Support wireless and wired internet connection (RS485/WiFi/GPRS/LAN optional)
- Remote upgrading available
- Fast and easy configuration via App or OLED display

Model	STS-3KTL-P	STS-3.6KTL-P	STS-4.2KTL-P	STS-4.6KTL-P	STS-5KTL-P	STS-6KTL-P
Input						
Max. Input Power (W)	4,800	5,760	6,720	7,360	8,000	9,600
Start-up Voltage (V)	80	80	80	80	80	80
Min. DC Voltage (V)	100	100	100	100	100	100
Max. DC Input Voltage (V)	600	600	600	600	600	600
Rated DC Input Voltage (V)	360	360	360	360	360	360
MPPT Voltage Range (V)	100-550	100-550	100-550	100-550	100-550	100-550
Number of MPP Trackers	2	2	2	2	2	2
Number of DC Inputs per MPPT	1	1	1	1	1	1
Max. Input Current (A)	15/15 ①	15/15 ①	15/15 ①	15/15 ①	15/15 ①	15/15 ①
Max. Short-circuit Current (A)	20/20	20/20	20/20	20/20	20/20	20/20
Output						
Rated Output Power (W)**	3,000	3,600	4,200	4,600	5,000/4,990 ② **	6,000
Max. Output Power (W)	3,300	3,960*	4,600	4,600	5,500/4,990 ② **	6,600
Max. Apparent Power (VA)	3,300	3,960*	4,600	4,600	5,500/4,990 ② **	6,600
Rated Output Voltage (V)**	220/230					
Rated AC Frequency (Hz)	50/60Hz 45-55Hz/55-65Hz					
Max. Output Current (A)	15	18***	21	21	25/21.7 ② ****	28.7
Power Factor	0.8 leading…0.8 legging					
Max. Total Harmonic Distortion	<3% @Rated Output Power					
DCI	<0.5%In					
Efficiency						
Max. Efficiency	98.1%	98.1%	98.1%	98.1%	98.1%	98.1%
European Efficiency	97.5%	97.5%	97.5%	97.5%	97.5%	97.5%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
Protection						
DC Reverse Polarity Protection	Integrated					
Insulation Resistance Protection	Integrated					
DC Switch	Optional					
Surge Protection	Integrated					
Over-temperature Protection	Integrated					
Residual Current Protection	Integrated					
Anti-islanding Protection	Integrated					
AC Short-circuit Protection	Integrated					
AC Over-voltage Protection	Integrated					
General Data						
Dimensions (mm)	410W*360H*120D					
Weight (kg)	13					
Protection Degree	IP65					
Self-consumption at Night (W)	<1					
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	RS485/WiFi/GPRS/LAN (Optional)					
Compliance	NB/T32004, IEC62109, IEC62116, VDE4105, VDE0126, UTE C15-712-1, AS4777, C10/11, CEI0-21, RD1699, NBR16149, IEC61727, IEC60068, IEC61683, EN50549, EN61000					

① STS-3~6KTL series maximum input current per string is 12.5A, and STS-3~6KTL-P version is 15A, products deliver upon the order.

② The grid feed in power for AS/NZS 4777.2 is limited 4.99kW & 4.99kVA & 21.7A.

* : 3680 for G98. ** : 5000 for C10/11. *** : 16 for G98. **** : 21.7 for C10/11.

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

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STS Series



- MAX 98.1% EFFICIENCY
- IP65 PROTECTION

STS 4.2~6kW

Single Phase | 2 MPPTs | ON Grid

SAFE & RELIABLE

- High reliability due to good heat dissipation design
- Integrated lightning protection for both DC and AC
- Adapt to complex power grid
- High anti-corrosion ability with aluminum alloy die casting technology
- Wider working temperature and altitude, adapt to various installation environments

HIGH YIELD

- High yield with Max. 98.1% efficiency
- European weighted efficiency 97.5%
- Wide MPPT voltage range
- Up to 10% continuous output overloading capacity
- With a max input current of 17A, compatible with high-power panels

EASY TO USE

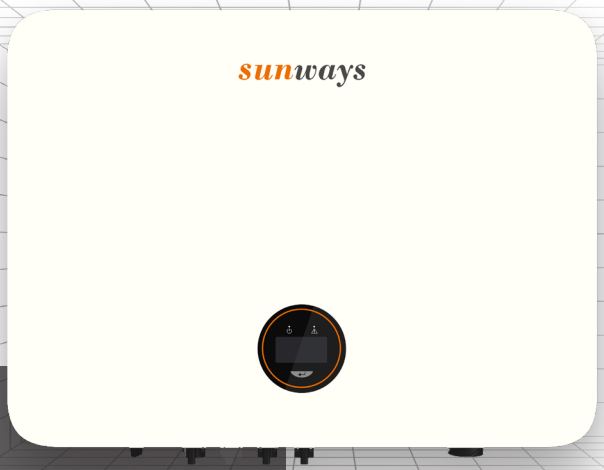
- Compact elegant design, light weight, one-person installation
- Plug and play connectors, easy for installation
- Support wireless and wired internet connection (RS485/WiFi/GPRS/LAN optional)
- Remote upgrading available
- Fast and easy configuration via App or OLED display

Model	STS-4.2KTL-SE	STS-4.6KTL-SE	STS-5KTL-SE	STS-6KTL-SE
Input				
Max. Input Power (W)	6720	7360	8000	9600
Start-up Voltage (V)	80	80	80	80
Min. DC Voltage (V)	100	100	100	100
Max. DC Input Voltage (V)	600	600	600	600
Rated DC Input Voltage (V)	360	360	360	360
MPPT Voltage Range (V)	100-550	100-550	100-550	100-550
No. of MPP Trackers	2	2	2	2
No. of DC Inputs per MPPT	1/1	1/1	1/1	1/1
Max. Input Current (A)	20/20	20/20	20/20	20/20
Max. Short-circuit Current (A)	25/25	25/25	25/25	25/25
Output				
Rated Output Power (W)**	4200	4600	5000/4990	6000
Max. Output Power (W)	4600	5060	5500/4990	6600
Max. Apparent Power (VA)	4600	5060	5500/4990	6600
Rated Output Voltage (V)**	220/230			
Rated AC Frequency (Hz)	50/60Hz 45-55Hz/55-65Hz			
Max. Output Current (A)	20	22	24/21.7	28.7
Power Factor	0.8 leading…0.8 legging			
Max. Total Harmonic Distortion	<3% @Rated Output Power			
DCI	<0.5%In			
Efficiency				
Max. Efficiency	98.1%	98.1%	98.1%	98.1%
European Efficiency	97.5%	97.5%	97.5%	97.5%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%
Protection				
DC Reverse Polarity Protection	Integrated			
Insulation Resistance Protection	Integrated			
AFCI	Optional			
Surge Protection	Integrated			
Over-temperature Protection	Integrated			
Residual Current Protection	Integrated			
Anti-islanding protection	Integrated			
AC Short-circuit Protection	Integrated			
AC Over-voltage Protection	Integrated			
General Data				
Dimensions (mm)	410W*360H*120D			
Weight (KG)	11.5			
Protection Degree	IP66			
Self-consumption at Night (W)	<1			
Topology	Transformerless			
Operating Temperature Range (° C)	-30~60			
Relative Humidity (%)	0~100			
Operating Altitude (m)	3000 (derating@ > 2000)			
Cooling	Natural Convection			
Noise Level (dB)	< 25			
Display	OLED(Optional)			
Communication	RS485/WiFi/GPRS/LAN (Optional)			
Compliance				

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STS Series



- MAX 98.1% EFFICIENCY
- IP65 PROTECTION

STS 7~11kW

Single Phase | 2 MPPTs | ON Grid

SAFE & RELIABLE

- High reliability due to good heat dissipation design
- Integrated lightning protection for both DC and AC
- Adapt to complex power grid
- High anti-corrosion ability with aluminum alloy die casting technology
- Wider working temperature and altitude, adapt to various installation environments

HIGH YIELD

- High yield with Max. 98.1% efficiency
- European weighted efficiency 97.6%
- Wide MPPT voltage range
- Up to 10% continuous output overloading capacity
- With a max input current of 15A, compatible with high-power panels

EASY TO USE

- Plug and play connectors, easy for installation
- Support wireless and wired internet connection (RS485/WiFi/GPRS/LAN optional)
- Remote upgrading available
- Fast and easy configuration via App or OLED display

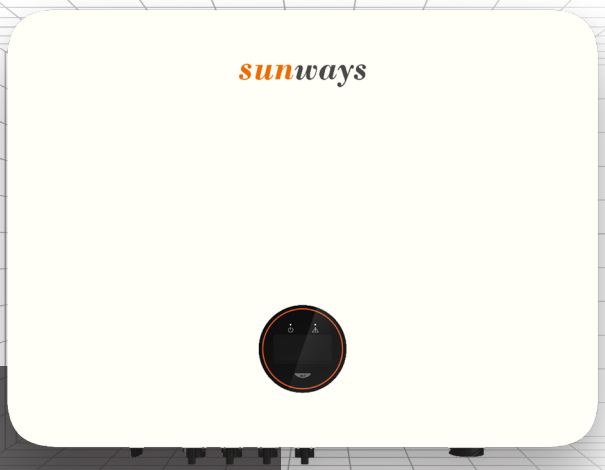
Model	STS-7KTL	STS-8KTL	STS-9KTL	STS-10KTL	STS-11KTL*
Input					
Max. Input Power (W)	11,200	12,800	14,400	16,000	16,000
Start-up Voltage (V)	80	80	80	80	80
Max. DC Input Voltage (V)	600	600	600	600	600
Rated DC Input Voltage (V)	360	360	360	360	360
MPPT Voltage Range (V)	80~550	80~550	80~550	80~550	80~550
Number of MPP Trackers	2	2	2	2	2
Number of DC Inputs per MPPT	1/2	1/2	1/2	1/2	1/2
Max. Input Current (A)	15/30	15/30	15/30	15/30	15/30
Max. Short-circuit Current (A)	20/40	20/40	20/40	20/40	20/40
Output					
Rated Output Power (W)**	7,000	8,000	9,000	10,000	11,000
Max. Output Power (W)	7,700	8,800	9,900	11,000	11,000
AC output rated apparent power (VA)	7,000	8,000	9,000	10,000	11,000
Max. Apparent Power (VA)	7,700	8,800	9,900	11,000	11,000
Rated Output Voltage (V)**	220/230				
Rated AC Frequency (Hz)	50/60				
AC output rated current (A)	30.4	34.8	39.1	43.5	47.8
Max. Output Current (A)	33.5	38.3	43	47.8	47.8
Power Factor	0.8 leading…0.8 legging				
Max. total harmonic distortion	<3% @Rated Output Power				
DCI	< 0.5%In				
Efficiency					
Max. Efficiency	98.1%	98.1%	98.1%	98.1%	98.1%
European Efficiency	97.6%	97.6%	97.6%	97.6%	97.6%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%
Protection					
DC Reverse Polarity Protection	Integrated				
Insulation Resistance Protection	Integrated				
DC Switch	Optional				
Surge Protection	Integrated				
Over-temperature Protection	Integrated				
Residual Current Protection	Integrated				
Anti-islanding Protection	Integrated				
AC Short-circuit Protection	Integrated				
AC Over-voltage Protection	Integrated				
General Data					
Dimensions (mm)	550W*410H*175D				
Weight (kg)	24		26		
Protection Degree	IP65				
Self-consumption at Night (W)	< 1				
Topology	Transformerless				
Operating Temperature Range (°C)	-30~60				
Relative Humidity (%)	0~100				
Operating Altitude (m)	4000 (depreciativo@>3000)				
Cooling	Natural Convection		Smart Fan Cooling		
Noise Level (dB)	< 25		< 40		
Display	OLED & LED				
Communication	RS485/WiFi/GPRS/LAN (Optional)				
Compliance	NB/T32004, IEC62109, IEC62116, VDE4105, VDE0126, UTE C15-712-1, AS4777, C10/11, CEI0-21, RD1699, NBR16149, IEC61727, IEC60068, IEC61683, EN50549, EN61000				

* : STS 11KTL available for Brazil only.

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

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STT Series



- MAX 98.6% EFFICIENCY
- IP65 PROTECTION

STT 4~25kW

Three Phase | 2 MPPTs | ON Grid

SAFE & RELIABLE

- High reliability due to good heat dissipation design
- Integrated lightning protection for both DC and AC
- Adapt to complex power grid
- High anti-corrosion ability with aluminum alloy die casting technology
- Wider working temperature and altitude, adapt to various installation environments

HIGH YIELD

- High yield with Max. 98.6% efficiency
- European weighted efficiency 98.2%
- Longer working hours due to the lower start-up voltage and wider MPPT range
- Up to 10% continuous output overloading capacity
- With a max input current of 15A, compatible with high-power panels

EASY TO USE

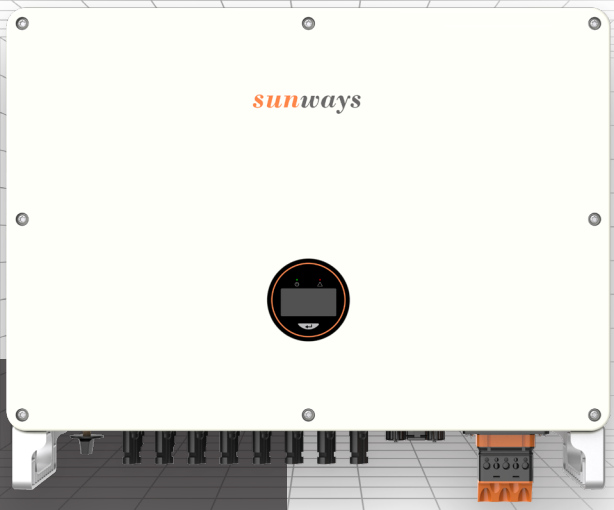
- Support wireless and wired internet connection (RS485, WiFi/GPRS/LAN optional)
- Remote upgrading available
- Fast and easy configuration via App or OLED display

Model	STT-4KTL-P	STT-5KTL-P	STT-6KTL-P	STT-8KTL-P	STT-10KTL-P	STT-12KTL-P	STT-15KTL-P	STT-17KTL-P	STT-20KTL-P	STT-25KTL-P
Input										
Max. Input Power (W)	6,400	8,000	9,600	12,800	16,000	19,200	24,000	27,200	32,000	40,000
Start-up Voltage (V)	180	180	180	180	180	180	180	180	180	180
Min. DC Voltage (V)	150	150	150	150	150	150	150	150	150	150
Max. DC Input Voltage (V)	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
Rated DC Input Voltage (V)	620	620	620	620	620	620	620	620	620	620
MPPT Voltage Range (V)	160-1000	160-1000	160-1000	160-1000	160-1000	160-1000	160-1000	160-1000	160-1000	160-1000
Number of MPP Trackers	2	2	2	2	2	2	2	2	2	2
Number of DC Inputs per MPPT	1	1	1	1	1	1	1/2	2	2	2
Max. Input Current (A)	15/15	15/15	15/15	15/15	15/15	15/15	15/30	30/30	30/30	30/30
Max. Short-circuit Current (A)	20/20	20/20	20/20	20/20	20/20	20/20	20/40	40/40	40/40	40/40
Output										
Rated Output Power (W)**	4,000	5,000	6,000	8,000	10,000	12,000	15,000	17,000	20,000	25,000
Max. Output Power (W)	4,400	5,500	6,600	8,800	11,000	13,200	16,500	18,700	22,000	25,000
Max. Apparent Power (VA)	4,400	5,500	6,600	8,800	11,000	13,200	16,500	18,700	22,000	25,000
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	8.4	10	13.3	16.5	20	25	28.4	31.9	39
Power Factor	0.8 leading…0.8 legging									
Max. Total Harmonic Distortion	< 3% @Rated Output Power									
DCI	< 0.5%In									
Efficiency										
Max. Efficiency	98.1%	98.1%	98.3%	98.3%	98.6%	98.6%	98.6%	98.6%	98.6%	98.6%
European Efficiency	97.9%	97.9%	98.0%	98.0%	98.2%	98.2%	98.2%	98.2%	98.2%	98.2%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
Protection										
DC Reverse Polarity Protection	Integrated									
Insulation Resistance Protection	Integrated									
DC Switch	Optional									
Surge Protection	Integrated									
Over-temperature Protection	Integrated									
Residual Current Protection	Integrated									
Anti-islanding protection	Frequency shift, Integrated									
AC Short-circuit Protection	Integrated									
AC Over-voltage Protection	Integrated									
General Data										
Dimensions (mm)	550W*410H*175D									
Weight (kg)	23						26	29		
Protection Degree	IP65									
Self-consumption at Night (W)	< 1									
Topology	Transformerless									
Operating Temperature Range (℃)	-30~60									
Relative Humidity (%)	0~100									
Operating Altitude (m)	4000 (derating@ > 3000)									
Cooling	Natural Convection							Smart Fan Cooling		
Noise Level (dB)	< 25							< 40		
Display	OLED & LED									
Communication	RS485, WiFi/GPRS/LAN (Optional)									
Compliance	NB/T32004, IEC62109, EN61000, AS/NZS 4777.2, AS60749.3, C10/11, IEC61727, IEC62116, IEC60068, IEC61683, VDE4105, VDE0126, UTEC15-712-1, NRS 097-2-1, PEA, MEA, EN50549, PN 50549-1RD661, RD413, RD1699, UNE 217001, UNE 217002, RD647, NTS631, CEI 021, CEI 016, IS16221, IS16169, G98, G99									

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

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STT Series



- MAX 98.8% EFFICIENCY
- IP66 PROTECTION

STT 30~60kW

Three Phase | 4 MPPTs | ON Grid

SAFE & RELIABLE

- High reliability due to good heat dissipation design
- Integrated lightning protection for both DC and AC
- Adapt to complex power grid
- High anti-corrosion ability with aluminum alloy die casting technology
- Wider working temperature and altitude, adapt to various installation environments

HIGH YIELD

- High yield with Max. 98.8% efficiency
- European weighted efficiency 98.3%
- Wide MPPT voltage range
- Up to 10% continuous output overloading capacity
- DC 2 in 1 connection enabled, compatible with high-power panels

EASY TO USE

- Plug and play connectors, easy for installation
- Support wireless and wired internet connection (RS485, WiFi/GPRS/LAN optional)
- Remote upgrading available
- Fast and easy configuration via App or OLED display

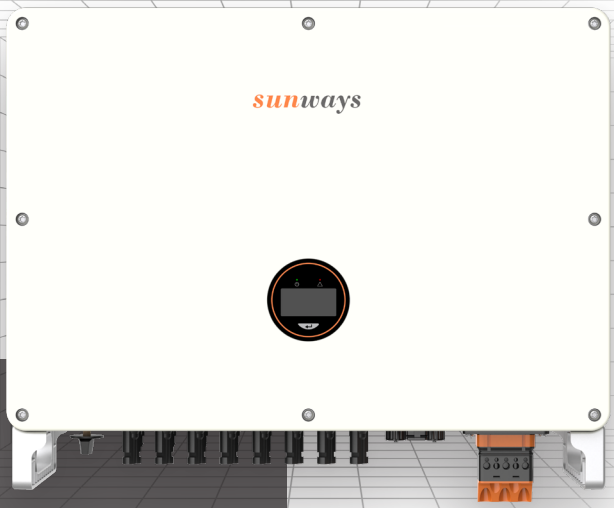
Model	STT-29.9KTL*	STT-30KTL	STT-33KTL	STT-36KTL	STT-40KTL	STT-45KTL	STT-50KTL-M	STT-60KTL-M
Input								
Max. Input Power (W)	47,840	48,000	52,800	57,600	64,000	72,000	80,000	96,000
Start-up Voltage (V)	180	180	180	180	180	180	180	180
Max. DC Input Voltage (V)	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
Rated DC Input Voltage (V)	620	620	620	620	620	620	620	620
MPPT Voltage Range (V)	180-1000	180-1000	180-1000	180-1000	180-1000	180-1000	180-1000	180-1000
Number of MPP Trackers	4	4	4	4	4	4	4	4
Number of DC Inputs per MPPT	2	2	2	2	2	2	2	2
Max. Input Current (A)	32/32/32/32	32/32/32/32	32/32/32/32	32/32/32/32	32/32/32/32	32/32/32/32	32/32/32/32	32/32/32/32
Max. Short-circuit Current (A)	40/40/40/40	40/40/40/40	40/40/40/40	40/40/40/40	40/40/40/40	40/40/40/40	40/40/40/40	40/40/40/40
Output								
Rated Output Power (W)**	29,900	30,000	33,000	36,000	40,000	45,000	50,000	60,000
Max. Output Power (W)	29,900	33,000	36,300	39,600	44,000	49,500	55,000	66,000
AC output rated apparent power (VA)	29,900	30,000	33,000	36,000	40,000	45,000	50,000	60,000
Max. Apparent Power (VA)	29,900	33,000	36,300	39,600	44,000	49,500	55,000	66,000
Rated Output Voltage (V)**	3 L/ N / PE, 380 / 400V							
Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
AC output rated current (A)	43.3	43.5	47.8	52.2	58.0	65.2	72.5	87.0
Max. Output Current (A)	43.3	47.8	52.6	57.4	63.8	71.7	79.7	95.7
Power Factor	0.8 leading…0.8 legging							
Max. total harmonic distortion	<3% @Rated Output Power							
DCI	<0.5%In							
Efficiency								
Max. Efficiency	98.8%	98.8%	98.8%	98.8%	98.8%	98.8%	98.8%	98.8%
European Efficiency	98.3%	98.3%	98.3%	98.3%	98.3%	98.3%	98.3%	98.3%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
Protection								
DC Reverse Polarity Protection	Integrated							
Insulation Resistance Protection	Integrated							
DC Switch	Integrated							
Surge Protection	Integrated							
Over-temperature Protection	Integrated							
Residual Current Protection	Integrated							
Anti-islanding protection	Frequency shift, Integrated							
AC Short-circuit Protection	Integrated							
AC Over-voltage Protection	Integrated							
General Data								
Dimensions (mm)	600W*400H*270D							
Weight (kg)	42							
Protection Degree	IP66							
Self-consumption at Night (W)	<1							
Topology	Transformerless							
Operating Temperature Range (℃)	-30~60							
Relative Humidity (%)	0~100							
Operating Altitude (m)	4000 (derating@ > 3000)							
Cooling	Smart Fan Cooling							
Display	OLED & LED							
Communication	RS485, WiFi/ GPRS/LAN(Optional)							
Compliance	NB/T32004, IEC62109, IEC62116, VDE4105, VDE0126, UTE C15-712-1, AS4777, C10/11, CEI0-21, RD1699, NBR16149, IEC61727, IEC60068, IEC61683, EN50549, EN61000							

* : STT 29.9KTL available for Australia only.

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STT Series



- MAX 98.8% EFFICIENCY
- IP65 PROTECTION

STT 15~25kW

Three Phase | 4 MPPTs | ON Grid (LV)

SAFE & RELIABLE

- High reliability due to good heat dissipation design
- Integrated lightning protection for both DC and AC
- Adapt to complex power grid
- High anti-corrosion ability with aluminum alloy enclosure
- Wider working temperature and altitude, adapt to various installation environments

HIGH YIELD

- High yield with Max. 98.8% efficiency
- European weighted efficiency 98.3%
- Up to 10% continuous output overloading capacity
- 4 MPPT design, lower PV string mismatch loss

EASY TO USE

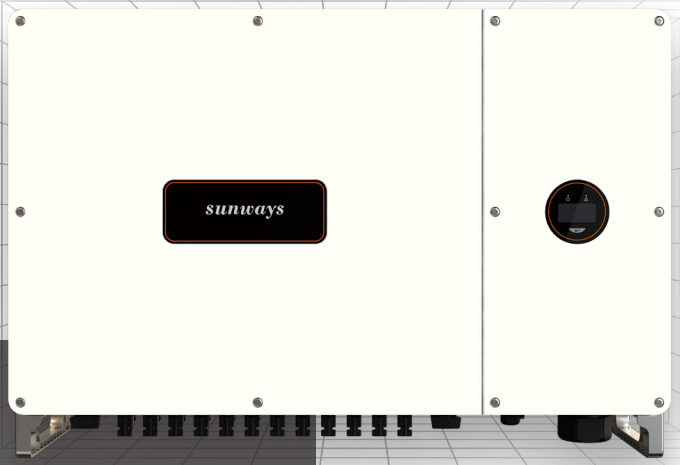
- String monitoring, improve O&M efficiency
- Support wireless and wired internet connection (RS485, WiFi/GPRS/LAN optional)
- Remote upgrading available

Model	STT-15KTL-LV	STT-20KTL-LV	STT-25KTL-LV
Input			
Max. Input Power (W)	24,000	32,000	40,000
Start-up Voltage (V)	180	180	180
Max. DC Input Voltage (V)	600	600	600
Rated DC Input Voltage (V)	360	360	360
MPPTVoltageRange(V)	180-550	180-550	180-550
No. of MPP Trackers	4	4	4
No. of DC Inputs per MPPT	2	2	2
Max.InputCurrent(A)	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
Output			
Rated Output Power (W)**	15,000	20,000	25,000
Max. Output Power (W)	18,210	21,870	27,317
AC output rated apparent power (VA)	15,000	20,000	25,000
Max. Apparent Power (VA)	18,210	21,870	27,317
Rated Output Voltage (V)**	3 L/N/ PE, 127/ 220V		
Rated AC Frequency (Hz)	50/60	50/60	50/60
AC output rated current (A)	40	52.5	65.7
Max. Output Current (A)	47.8	57.4	71.7
Power Factor	0.8 leading…0.8 legging		
Max. total harmonic distortion	<3% @Rated Output Power		
DCI	<0.5%In		
Efficiency			
Max. Efficiency	98.8%	98.8%	98.8%
European Efficiency	98.3%	98.3%	98.3%
MPPT Efficiency	99.9%	99.9%	99.9%
Protection			
DC Reverse Polarity Protection	Integrated		
Insulation Resistance Protection	Integrated		
DC Switch	Integrated		
Surge Protection	Integrated		
Over-temperature Protection	Integrated		
Residual Current Protection	Integrated		
Anti-islanding protection	Frequency shift, Integrated		
AC Short-circuit Protection	Integrated		
AC Over-voltage Protection	Integrated		
General Data			
Dimensions (mm)	600W*400H*270D		
Weight (kg)	42		
Protection Degree	IP65		
Self-consumption at Night (W)	<1		
Topology	Transformerless		
Operating Temperature Range (℃)	-30~60		
Relative Humidity (%)	0~100		
Operating Altitude (m)	4000 (derating@ > 3000)		
Cooling	Smart Fan Cooling		
Display	OLED & LED		
Communication	RS485, WiFi/ GPRS/LAN(Optional)		

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STT Series



- MAX 98.8% EFFICIENCY
- IP65 PROTECTION

STT 50~60kW

Three Phase | 6 MPPTs | ON Grid

SAFE & RELIABLE

- High reliability due to good heat dissipation design
- Integrated lightning protection for both DC and AC
- Adapt to complex power grid
- High anti-corrosion ability with aluminum alloy enclosure
- Wider working temperature and altitude, adapt to various installation environments

HIGH YIELD

- High yield with Max. 98.8% efficiency
- European weighted efficiency 98.3%
- Up to 10% continuous output overloading capacity
- Six MPPT design, lower PV string mismatch loss
- DC 2 in 1 connection enabled, compatible with high-power panels

EASY TO USE

- String monitoring, improve O&M efficiency
- Support wireless and wired internet connection (RS485, WiFi/GPRS/LAN optional)
- Remote upgrading available

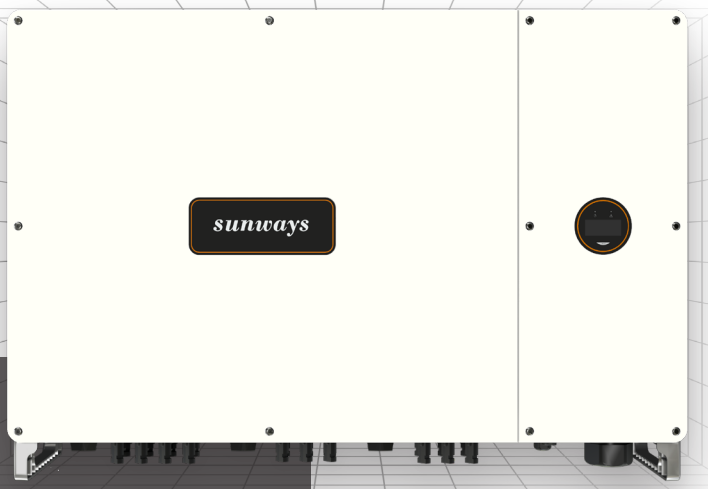
Model	STT-50KTL-P	STT-60KTL-P
Input		
Max. Input Power (W)	80,000	96,000
Start-up Voltage (V)	200	200
Max. DC Input Voltage (V)	1,100	1,100
Rated DC Input Voltage (V)	620	620
MPPT Voltage Range (V)	160-1000	160-1000
Number of MPP Trackers	6	6
Number of DC Inputs per MPPT	2	2
Max. Input Current (A)	26/26/26/26/26/26 ①	26/26/26/26/26/26 ①
Max. Short-circuit Current (A)	40/40/40/40/40/40	40/40/40/40/40/40
Output		
Rated Output Power (W)**	50,000	60,000
Max. Output Power (W)	55,000	66,000
Max. Apparent Power (VA)	55,000	66,000
Rated Output Voltage (V)**	3L/N/PE, 230/400V	
Rated AC Frequency (Hz)	50/60Hz 45-55Hz/55-65Hz	
Max. Output Current (A)	83.6	95.3
Power Factor	0.8 leading…0.8 legging	
Max. Total Harmonic Distortion	<3% @Rated Output Power	
DCI	< 0.5% In	
Efficiency		
Max. Efficiency	98.8%	98.8%
European Efficiency	98.3%	98.3%
MPPT Efficiency	99.9%	99.9%
Protection		
DC Reverse Polarity Protection	Integrated	
Insulation Resistance Protection	Integrated	
DC Switch	Optional	
Surge Protection	Integrated	
Over-temperature Protection	Integrated	
Residual Current Protection	Integrated	
Anti-islanding protection	Frequency shift, Integrated	
AC Short-circuit Protection	Integrated	
AC Over-voltage Protection	Integrated	
General Data		
Dimensions (mm)	850W*520H*290D	
Weight (kg)	58	
Protection Degree	IP65	
Self-consumption at Night (W)	< 1	
Topology	Transformerless	
Operating Temperature Range (℃)	-30~60	
Relative Humidity (%)	0~100	
Operating Altitude (m)	4000 (derating@ > 3000)	
Cooling	Smart Fan Cooling	
Noise Level (dB)	< 55	
Display	OLED & LED	
Communication	RS485, WiFi/GPRS/LAN (Optional)	
Compliance	NB/T32004, IEC62109, IEC62116, VDE0126, CEI0-21, RD1699, IEC61727, IEC60068, IEC61683, EN50549, EN61000	

① STT-50/60KTL series maxmium input current per MPPT is 22A, products deliver upon the oder.

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STT Series



- MAX 98.8% EFFICIENCY
- IP66 PROTECTION

STT 80~125kW

Three Phase | 8/10 MPPTs | ON Grid

INTELLIGENT

- Real-time fault curve recording, improve O&M efficiency
- IP68 intelligent fans, lower operation temperature, longer lifespan
- Intelligent quad-core processor, information processing more comprehensive, fast, and efficient

HIGH YIELD

- High yield with Max. 98.8% efficiency
- Up to 10% continuous output overloading capacity
- 8/10 MPPT design, lower PV string mismatch loss
- DC 2 in 1 connection enabled, compatible with high-power panels

CONVENIENCE

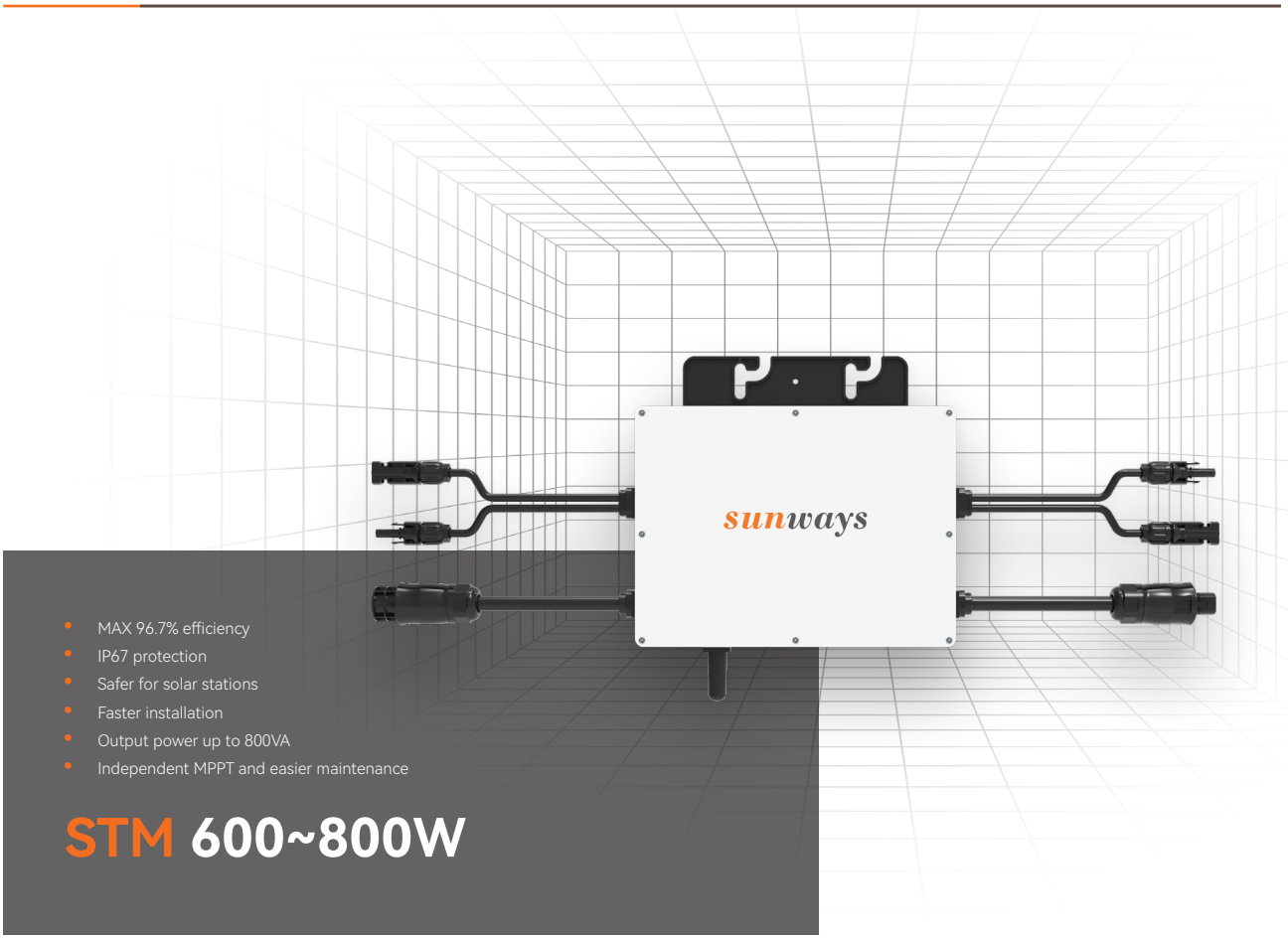
- Support wireless and wired internet connection (RS485, WiFi/GPRS/LAN optional)
- Remote upgrading available
- Fast and easy commissioning via App or OLED display

Model	STT-80KTL	STT-100KTL	STT-110KTL	STT-100KTL-HV	STT-125KTL-HV
Input					
Max. Input Power (W)	128,000	160,000	176,000	160,000	200,000
Start-up Voltage (V)	200	200	200	200	200
Max. DC Input Voltage (V)	1,100	1,100	1,100	1,100	1,100
Rated DC Input Voltage (V)	620	620	620	750	750
MPPT Voltage Range (V)	200-950	200-950	200-950	200-950	200-950
Number of MPP Trackers	8	10	10	10	10
Number of DC Inputs per MPPT	2	2	2	2	2
Max. Input Current (A)	8*32	10*32	10*32	10*32	10*32
Max. Short-circuit Current (A)	8*40	10*40	10*40	10*40	10*40
Output					
Rated Output Power (W)**	80,000	100,000	110,000	100,000	125,000
Max. Output Power (W)	88,000	110,000	121,000	110,000	137,500
Max. Apparent Power (VA)	88,000	110,000	121,000	110,000	137,500
Rated Output Voltage (V)**	3L/N/PE, 230/400V			3L/PE,288/500V	
Rated AC Frequency (Hz)	50/60Hz 45-55Hz/55-65Hz				
Max. Output Current (A)	127	158.8	174.8	127	158.8
Power Factor	0.8 leading…0.8 legging				
Max. Total Harmonic Distortion	<3% @Rated Output Power				
DCI	< 0.5% In				
Efficiency					
Max. Efficiency	98.8%	98.8%	98.8%	98.8%	98.8%
European Efficiency	98.3%	98.3%	98.3%	98.3%	98.3%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%
Protection					
DC Reverse Polarity Protection	Integrated				
Insulation Resistance Protection	Integrated				
DC Switch	Optional				
Surge Protection	Integrated				
Over-temperature Protection	Integrated				
Residual Current Protection	Integrated				
Anti-islanding protection	Frequency shift, Integrated				
AC Short-circuit Protection	Integrated				
AC Over-voltage Protection	Integrated				
General Data					
Dimensions (mm)	975W*680H*290D				
Weight (kg)	79	82			
Protection Degree	IP66				
Self-consumption at Night (W)	< 1				
Topology	Transformerless				
Operating Temperature Range (℃)	-30~60				
Relative Humidity (%)	0~100				
Operating Altitude (m)	4000 (derating@ > 3000)				
Cooling	Smart Fan Cooling				
Display	OLED & LED				
Communication	RS485, WiFi/GPRS/LAN (Optional)				
Compliance	NB/T 32004, IEC62109, IEC62116, VDE 4105, VDE 0126, AS4777, C10/11 CEI 0-21, RD1699, NBR16149, IEC61727, IEC60068, IEC61683, EN50549, EN61000				

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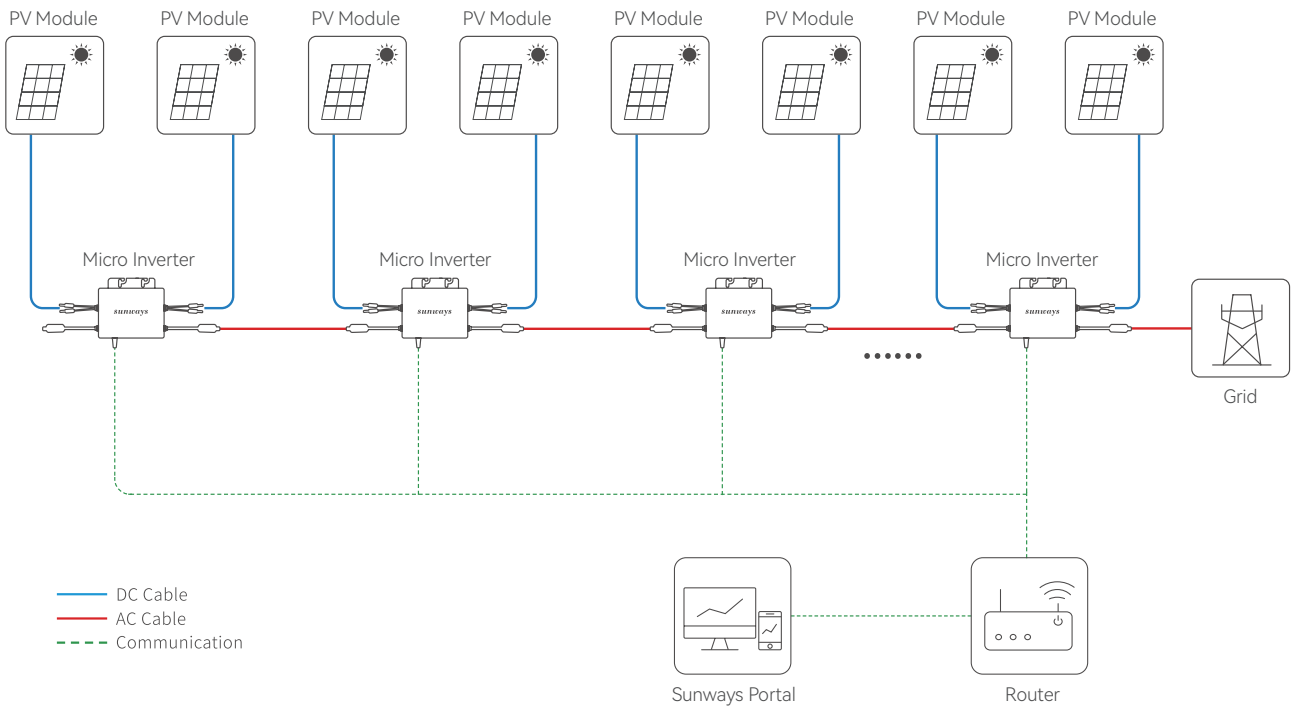
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STM Series



- MAX 96.7% efficiency
- IP67 protection
- Safer for solar stations
- Faster installation
- Output power up to 800VA
- Independent MPPT and easier maintenance

STM 600~800W



Model	STM-600W			STM-800W		
PV Inputdata						
PV module power per MPPT(W)	350-600			350-600		
Max.input voltage(V)	60					
Start up voltage(V)	16					
MPPT voltage range(V)	20-50					
Max. input current(A)	16			16/16		
Max. short current(A)	20			20/20		
Number of MPP trackers	2			2		
Number of DC inputs per MPPT	1			1		
AC Output Data						
Rated AC power(W)**	max 550			max 750		
Rated grid voltage(AC voltage range)(V)**	220/230/240					
Rated grid frequency(Hz)	50/60					
Rated grid voltage (V)	220	230	240	220	230	240
Max.AC output current(A)	2.73	2.61	2.50	3.63	3.48	3.33
Power factor	>0.99					
Total harmonic distortion(THDi, rated power)	<3%					
Grid connection	L/N/PE					
Efficiency						
MPPT efficiency(%)	>99.9%					
Max. efficiency(%)	96.70%			96.70%		
Protection						
Anti-islanding protection	Integrated					
PV string input reverse polarity protection	Integrated					
Output over current protection	Integrated					
Output short protection	Integrated					
Over voltage protection	DC:II / AC:III					
General Data						
Noise emmison(dB)	20					
User interface	LED					
DC connection type	MC4					
AC connection type	Plug-in connector					
Communication	WiFi					
Cooling method	Natural					
Operating ambient temperature range(℃)	-40℃ -+65℃					
Allowable relative humidity range(%)	0-100					
Max. operating altitude(m)	3000 (>3000 derating)					
Degree of protection	IP67					
Climatic Category (IEC 60721-3-4)	4K4H					
Topology	High frequency isolated					
Power Consumption At Night(W)	< 50mW					
Standard						
Safety	IEC62109-1/IEC62109-2 / IEC61727					
EMC	EN 61000-6-1 / EN 61000-6-2 / EN 61000-6-3					
Cetification	EN50549-1, VDE0126-1-1, VDE 4105, ABNT NBR 16149, ABNT NBR 16150, ABNT NBR 62116, UNE 206006 IN					

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STH Series



- MAX 97.6% EFFICIENCY
- IP66 PROTECTION

STH 3~10kW

Single Phase | Hybrid inverter (LV)

Max. efficiency up to 97.6%

With AC output ranging from 3kW to 10kW

Powerful load adaptability, support multiple loads stable access

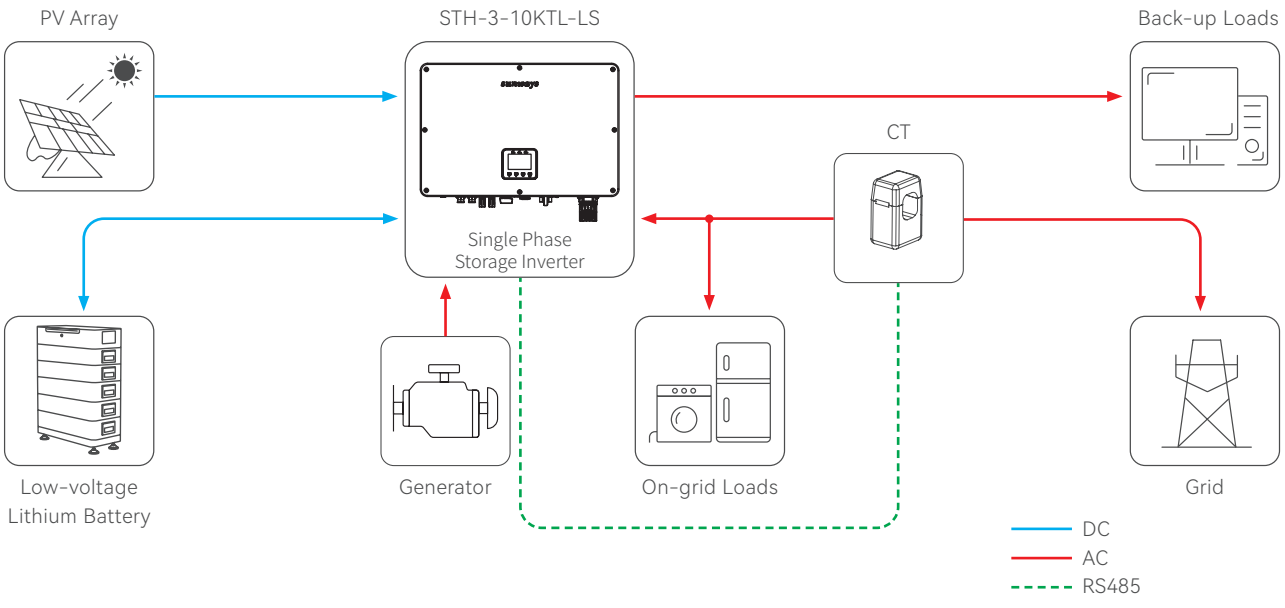
Fast and easy data checking and commissioning via App or OLED display

Fast charging/discharging of up to 190A to meet the demand of higher consumption and energy trading.

Up to 18A 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

Support Diesel Generator



Model		STH-3KTL-LSS	STH-3.6KTL-LS	STH-4.2KTL-LS	STH-4.6KTL-LS	STH-5KTL-LS	STH-6KTL-LS	STH-7KTL-LS	STH-8KTL-LS	STH-10KTL-LS
PV Input	Start-up Voltage (V)	125	125	125	125	125	125	125	125	125
	Max. DC Input Voltage (V)	600	600	600	600	600	600	600	600	600
	Rated DC Input Voltage (V)	360	360	360	360	360	360	360	360	360
	MPPT Voltage Range (V)	125-550	125-550	125-550	125-550	125-550	125-550	125-550	125-550	125-550
	No. of MPP Trackers	1	2	2	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	1/1	1/1
	Max. Input Current (A)	18	18/18	18/18	18/18	18/18	18/18	18/18	18/18	18/18
	Max. Short-circuit Current (A)	22	22/22	22/22	22/22	22/22	22/22	22/22	22/22	22/22
Battery	Battery Type	Lithium battery or lead-acid battery								
	Battery Communication Mode	CAN / RS485								
	Battery Voltage Range (V)	42-58								
	Max. Charge/Discharge Current (A)	100/100	100/100	100/100	100/100	100/100	120/120	150/150	190/190	190/190
	Rated Current Of Built-in Fuse (A)	150	150	150	150	150	150	300	300	300
Output (Grid)	Rated Output Power (W)**	3,000	3,600	4,200	4,600	5,000/4,990①	6,000	7,000	8,000	10,000
	Max. Output Power (W)	3,300	3,960	4,600	5,060	5,500/4,990①	6,600	7,700	8,800	11,000
	AC output rated apparent power (VA)	3,000	3,600	4,200	4,600	5,000/4,990①	6,000	7,000	8,000	10,000
	Max. Apparent Power (VA)	3,300	3,960	4,600	5,060	5,500/4,990①	6,600	7,700	8,800	11,000
	Max. Input Apparent Power (VA)	6,000②	7,200②	8,400②	9,200②	10,000②	12,000②	12,000②	12,000②	12,000②
	Rated Output Voltage (V)**	L/N/PE, 220/230V								
	Rated AC Frequency (Hz)	50/60								
	AC output rated current (A)	13	15.7	18.3	20	21.7	26.1	31	35	44
	Max. Output Current (A)	15	18	20	22	25/21.7①	28.7	34	38.3	48
	Maximum output overcurrent protection (A)	50	50	50	50	50	80	80	80	80
	Power Factor	0.8 leading…0.8 legging								
	Max. Total Harmonic Distortion	<3% @Rated Output Power								
	DCI	<0.5%In								
Output (Back-up)	Rated Output Power (W)	3,000	3,600	4,200	4,600	5,000/4,990①	6,000	7,000	8,000	10,000
	Max. Output Power (W)	3,300	3,960	4,600	5,060	5,500/4,990①	6,600	7,700	8,800	11,000
	Back-up output rated apparent power (VA)	3,000	3,600	4,200	4,600	5,000/4,990①	6,000	7,000	8,000	10,000
	Max. Apparent Power (VA)	3,300	3,960	4,600	5,060	5,500/4,990①	6,600	7,700	8,800	11,000
	Back-up output rated current (A)	13	15.7	18.3	20	21.7	26.1	31	35	44
	Max. Output Current (A)	15	18	20	22	25/21.7①	28.7	34	38.3	48
	UPS switching time	<10ms	<10ms	<10ms	<10ms	<10ms	<10ms	<10ms	<10ms	<10ms
	Rated Output Voltage (V)	L/N/PE, 220/230V								
	Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
	Peak output apparent power (VA)	3,900③, 60s	4,700③,60s	5,500③,60s	6,000③,60s	6,500③,60s	7,800③,60s	9,100③,60s	10,000③,60s	13,000③,60s
	Voltage harmonic distortion	<3% @Linear load								
Efficiency	Max. Efficiency	97.6%	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%	97.0%
	Battery Charged by PV Max. Efficiency	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%
	Battery Charged by AC Max. Efficiency	96.6%	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%	96.6%

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
Anti-islanding Protection	Frequency Shift, Integrated
AC Over-voltage Protection	Integrated
Overload Protection	Integrated
AC Short-circuit Protection	Integrated

General Data	
Dimensions (mm)	640W*430H*202D
Weight (kg)	34
Protection Degree	IP66
Self-consumption at Night (W)	< 15
Topology	Transformerless
Operating Temperature Range (°C)	-30~60
Relative Humidity (%)	0~100
Operating Altitude (m)	4000 (derating@ > 3000)
Cooling	Natural Convection
Noise Level (dB)	< 25
Display	TFT3.5 LCD/ OLED
Communication	WiFi/GPRS/LAN(Optional)

Compliance

IEC62109, EN61000, C10/C11, VDE 4105, UNE217001, UNE217002, RD647, RD1699, CEI021, G99, NRS097-2

① The grid feed in power for AS/NZS 4777.2 is limited 4.99kW & 4.99kVA & 21.7A.

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.

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

sunways

STH Series



- MAX 98.2% EFFICIENCY
- IP65 PROTECTION

STH 5~15kW

Three Phase | 2 MPPTs | Hybrid inverter (LV)

Max. efficiency up to 98.2%

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

Support paralleling connection

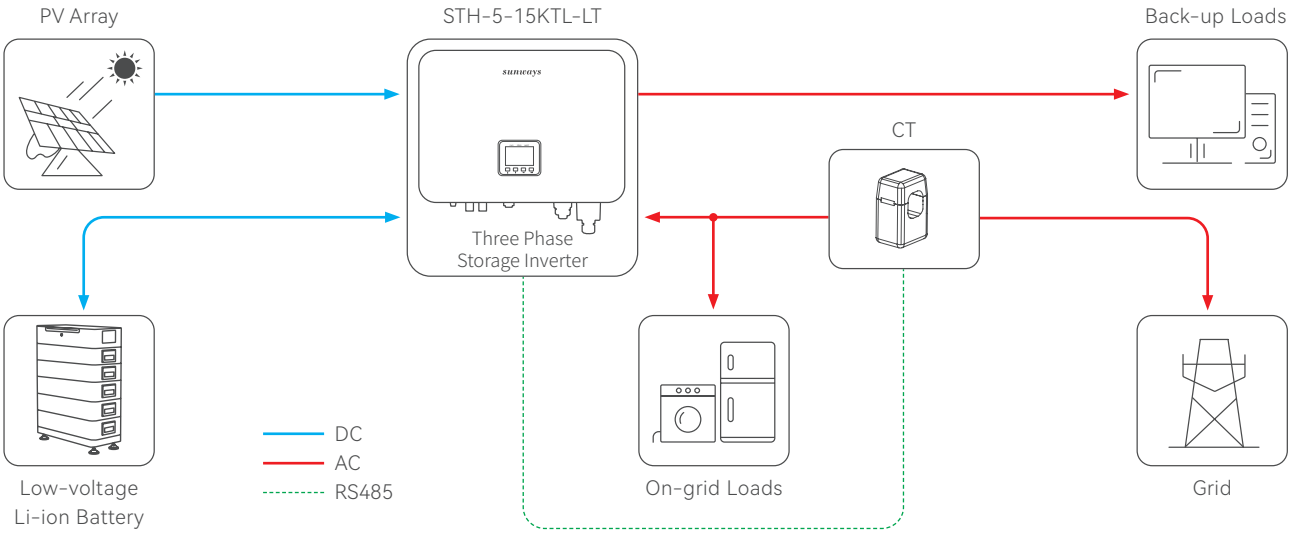
Fast charging/discharging of up to 200A to meet the demand of higher consumption and energy trading.

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

Support Diesel Generator



Model		STH-5KTL-LT	STH-6KTL-LT	STH-8KTL-LT	STH-10KTL-LT	STH-12KTL-LT	STH-15KTL-LT
PV Input	Start-up Voltage (V)	160	160	160	160	160	160
	Max. DC Input Voltage (V)	1000	1000	1000	1000	1000	1000
	Rated DC Input Voltage (V)	600	600	600	600	600	600
	MPPT Voltage Range (V)	200-850	200-850	200-850	200-850	200-850	200-850
	No. of MPP Trackers	2	2	2	2	2	2
	No. of DC Inputs per MPPT	1/1	1/1	1/1	1/1	1/1	1/1
	Max. Input Current (A)	18/18	18/18	18/18	18/18	18/18	18/18
	Max. Short-circuit Current (A)	22/22	22/22	22/22	22/22	22/22	22/22
Battery	Battery Type	Lithium battery or lead-acid battery					
	Battery Communication Mode	CAN / RS485					
	Battery Voltage Range (V)	42-58					
	Max. Charge/Discharge Current (A)	100/100	100/100	200/200	200/200	200/200	200/200
	Rated Current Of Built-in Fuse (A)	150	150	300	300	300	300
Output (Grid)	Rated Output Power (W)**	5,000	6,000	8,000	10,000	12,000	15,000
	Max. Output Power (W)	5,500	6,600	8,800	11,000	13,200	16,500
	AC output rated apparent power (VA)	5,000	6,000	8,000	10,000	12,000	15,000
	Max. Apparent Power (VA)	5,500	6,600	8,800	11,000	13,200	16,500
	Max. Input Apparent Power (VA)	10,000 ①	12,000 ①	16,000 ①	16,500 ①	16,500 ①	16,500 ①
	Rated Output Voltage (V)**	3L/N/PE, 230/400V					
	Rated AC Frequency (Hz)	50/60					
	AC output rated current (A)	7.3	8.7	11.6	14.5	17.4	21.7
	Max. Output Current (A)	8.3	10	13.3	16.5	20	25
	Maximum output overcurrent protection (A)	33	33	33	40	40	40
	Power Factor	0.8 leading…0.8 legging					
	Max. Total Harmonic Distortion	<3% @Rated Output Power					
	DCI	<0.5%In					
Output (Back-up)	Rated Output Power (W)	5,000	6,000	8,000	10,000	12,000	15,000
	Max. Output Power (W)	5,500	6,600	8,800	11,000	13,200	16,500
	Back-up output rated apparent power (VA)	5,000	6,000	8,000	10,000	12,000	15,000
	Max. Apparent Power (VA)	5,500	6,600	8,800	11,000	13,200	16,500
	Back-up output rated current (A)	7.3	8.7	11.6	14.5	17.4	21.7
	Max. Output Current (A)	8.3	10	13.3	16.5	20	25
	UPS switching time	<10ms	<10ms	<10ms	<10ms	<10ms	<10ms
	Rated Output Voltage (V)	3L/N/PE, 230/400V					
	Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60
	Peak output apparent power (VA)	10,000, 60s	12,000, 60s	16,000, 60s	20,000, 60s	20,000, 60s	20,000, 60s
	Voltage harmonic distortion	<3% @Linear load					
Efficiency	Max. Efficiency	98.1%	98.1%	98.2%	98.2%	98.2%	98.2%
	European Efficiency	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%
	Max battery charging conversion efficiency	97.2%	97.2%	97.3%	97.3%	97.3%	97.3%
	Max battery discharge conversion efficiency	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
Anti-islanding Protection	Frequency Shift, Integrated
AC Over-voltage Protection	Integrated
Overload Protection	Integrated
AC Short-circuit Protection	Integrated

General Data	
Dimensions (mm)	640W*430H*205D
Weight (kg)	34
Protection Degree	IP65
Self-consumption at Night (W)	< 15
Topology	Transformerless
Operating Temperature Range (° C)	-30~60
Relative Humidity(%)	0~100
Operating Altitude (m)	4000 (derating@ > 3000)
Cooling	Natural Convection
Noise Level (dB)	< 25
Display	TFT3.5 LCD/ OLED
Communication	WiFi/GPRS/LAN (Optional)

Compliance

IEC62109, EN61000, C10/C11, VDE 4105, UNE217001, UNE217002, RD647, RD1699, CEI021, G99, EN62477, NRS097-2-1, EN50549, NRS097-2-1, UE2016/631, TOR Erzeuger Type A, OVE-Richitlinie R 25

① 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.

② Only one of the three phases can reach up to 1.25 times, and the other two phases should be less than 1.1.

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

sunways

STH Series



- MAX 97.6% EFFICIENCY
- IP65 PROTECTION

STH 3~8kW

Single Phase | 2 MPPTs | Hybrid inverter (HV)

Max. efficiency up to 97.6%

With AC output ranging from 3kW to 8kW

Powerful load adaptability, support multiple loads stable access

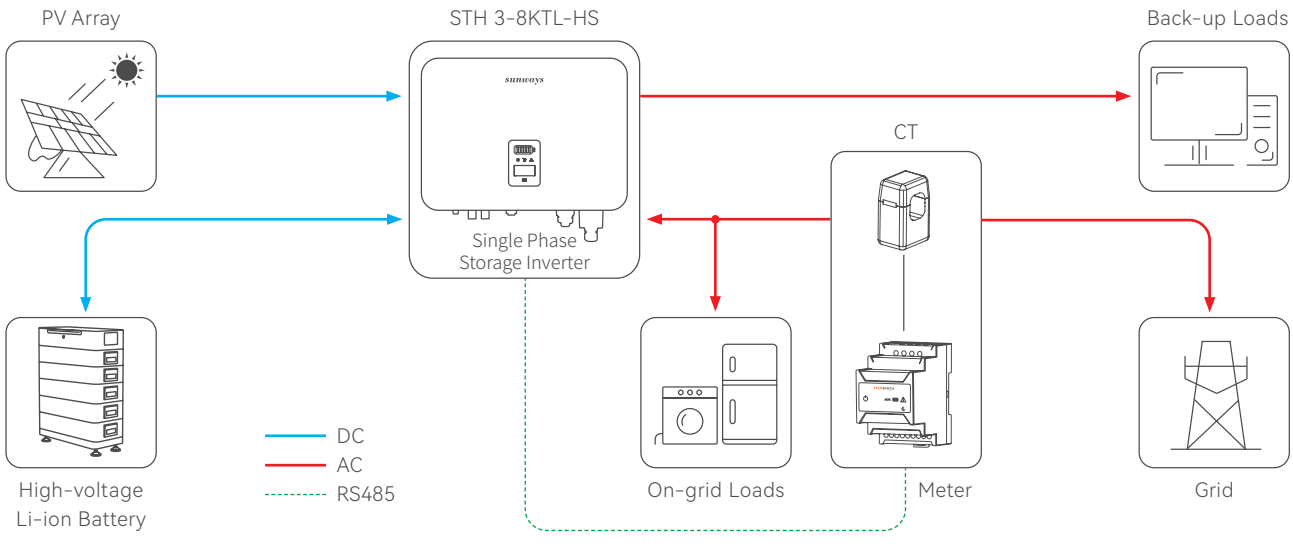
Fast and easy data checking and commissioning via App or OLED display

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 Type	Lithium Battery (with BMS)							
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)	6,000 ①	7,200 ①	8,400 ①	9,200 ①	10,000 ①	12,000 ①	12,000 ①	12,000 ①
Max. Charging Power of Battery (W)	3,000	3,600	4,200	4,600	5,000	6,000	7,000	8,000
Rated Output Voltage (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 legging							
Max. Total Harmonic Distortion	<3% @Rated Output Power							
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	<10ms	<10ms	<10ms	<10ms	<10ms	<10ms	<10ms	<10ms
Rated Output Voltage (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)	3,900 ②, 60s	4,700 ②, 60s	5,500 ②, 60s	6,000 ②, 60s	6,500 ②, 60s	7,800 ②, 60s	9,100 ②, 60s	10,000 ②, 60s
Voltage harmonic distortion	<3% @Linear load							
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%
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 Protection	Integrated
DC Switch	Optional
Surge Protection	Integrated
Over-temperature Protection	Integrated
Residual Current Protection	Integrated
Anti-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)	550W*410H*175D
Weight (kg)	26
Protection Degree	IP65
Self-consumption at Night (W)	< 15
Topology	Transformerless
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, EN61000, C10/C11, VDE 4105, UNE217001, UNE217002, RD647, RD1699, CEI021, G99, EN62477, NRS097-2-1, EN50549, NRS097-2-1, UE2016/631, TOR Erzeuger Type A, OVE-Richitlinie R 25

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.

** 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



- MAX 98.2% EFFICIENCY
- IP65 PROTECTION

STH 4~12kW

Three Phase | 2 MPPTs | Hybrid inverter (HV)

Max. efficiency up to 98.2%

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

Support paralleling connection

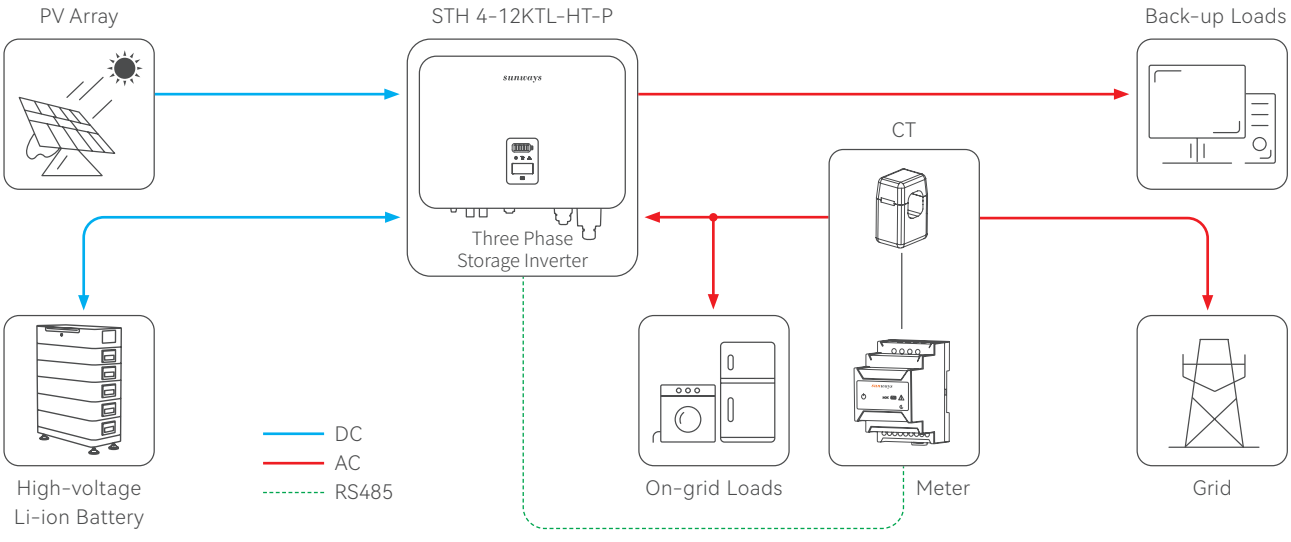
Oled display+App, two ways for data checking and management

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 Type	Lithium Battery (with BMS)					
	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
	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 legging					
	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)	8,000③, 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
	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
Anti-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	Transformerless
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, EN61000, C10/C11, VDE 4105, UNE217001, UNE217002, RD647, RD1699, CEI021, G99, EN62477, NRS097-2-1, EN50549, NRS097-2-1, UE2016/631, TOR Erzeuger Type A, OVE-Richitlinie R 25

① STH-4K~12KTL-HT series maximum input current per string is 13A, 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.

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

sunways

STH Series



- MAX 98.2% EFFICIENCY
- IP66 PROTECTION

STH 15~33kW

Three Phase | 2 MPPTs | Hybrid inverter (HV)

Max. efficiency up to 98.2%

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

Support paralleling connection

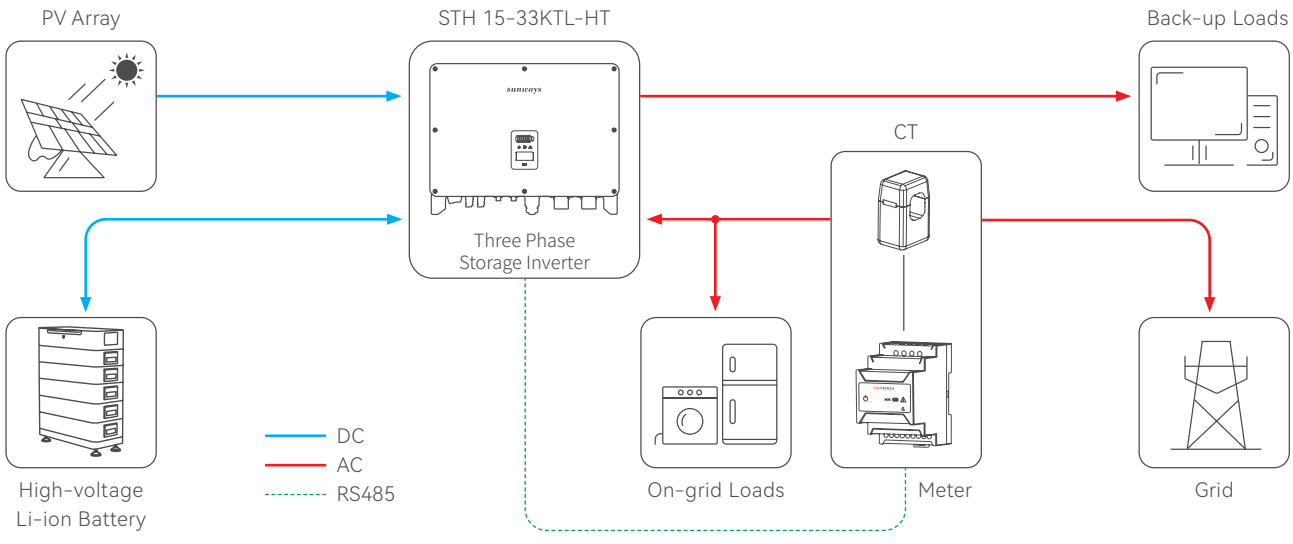
Fast and easy data checking and commissioning via App or OLED display

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)	32/32	32/32	32/32	32/32	32/32	32/32	32/32
	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)	200-800						
	Max. Charge/Discharge Current (A)	50/50						
	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. Input Apparent Power (VA)	22,500 ①	25,500 ①	30,000 ①	37,500 ①	44,850 ①	44,850 ①	44,850 ①
	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 legging						
	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
Anti-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)	640W*490H*290D
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)

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.

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

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STA Series



- MAX 97.6% EFFICIENCY
- IP54 PROTECTION

STA 3-8kW

UPS 10ms conversion time to UPS mode

AC Max 8.8kW AC output

Wiring pretreatment

Scalable battery capacity

Model	STA-3KTL-HSS	STA-3.6KTL-HSS	STA-4.2KTL-HS	STA-4.6KTL-HS	STA-5KTL-HS	STA-6KTL-HS	STA-7KTL-HS	STA-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								
Nominal Capacity of per module (kWh)	2.56							
Nominal Capacity (Ah)	50							
Nominal Voltage of per module (V)	51.2							
Max. Charge/Discharge Current (A)	25/25							
Number of battery modules supported	2-8							
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)	6,000	7,200	8,400	9,200	10,000	12,000	12,000	12,000
Max. Charging Power of Battery (W)	3,000	3,600	4,200	4,600	5,000	6,000	7,000	8,000
Rated Output Voltage (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 legging							
Max. Total Harmonic Distortion	<3% @Rated Output Power							
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	<10ms	<10ms	<10ms	<10ms	<10ms	<10ms	<10ms	<10ms
Rated Output Voltage (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)	3,900, 60s	4,700, 60s	5,500, 60s	6,000, 60s	6,500, 60s	7,800, 60s	9,100, 60s	10,000, 60s
Voltage harmonic distortion	<3% @Linear load							
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%
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 Protection	Integrated
DC Switch	Optional
Surge Protection	Integrated
Over-temperature Protection	Integrated
Residual Current Protection	Integrated
Anti-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)	696Wx(1197~2019)Hx315D
Weight (kg)	105~268
Protection Degree	IP54
Self-consumption at Night (W)	< 15
Topology	Transformerless
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, EN61000, C10/C11, VDE 4105, UNE217001, UNE217002, RD647, RD1699, CEI021, G99, EN62477, NRS097-2-1, EN50549, NRS097-2-1, UE2016/631, TOR Erzeuger Type A, OVE-Richitlinie R 25

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STA Series



- MAX 98.2% EFFICIENCY
- IP54 PROTECTION

STA 4-12kW

UPS 10ms conversion time to UPS mode

AC Max 13.2kW AC output

Wiring pretreatment

Scalable battery capacity

Model		STA-4KTL-HT	STA-5KTL-HT	STA-6KTL-HT	STA-8KTL-HT	STA-10KTL-HT	STA-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
	Number of MPP Trackers	2	2	2	2	2	2
	Number of PV Inputs	1	1	1	1	1	1
	Max. Input Current (A)	16/16	16/16	16/16	16/16	16/16	16/16
	Max. Short-circuit Current (A)	18/18	18/18	18/18	18/18	18/18	18/18
Battery	Nominal Capacity of per module (kWh)	2.56					
	Nominal Capacity (Ah)	50					
	Nominal Voltage of per module (V)	51.2					
	Max. Charge/Discharge Current (A)	25/25					
	Number of battery modules supported	3-8					
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	10,000	12,000	16,000	16,500	16,500
	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 legging					
	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, 60s	10,000, 60s	12,000, 60s	16,000, 60s	20,000, 60s	20,000, 60s
	Peak Output Apparent Power/per Phase (VA)	1,600	2,100	2,600	3,300	4,000	5,000
	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
Anti-islanding Protection	Frequency Shift, Integrated
AC Over-voltage Protection	Integrated
Overload Protection	Integrated
AC Short-circuit Protection	Integrated

General Data	
Dimensions (mm)	696Wx(1134~2019)Hx315D
Weight (kg)	105~270
Protection Degree	IP54
Self-consumption at Night (W)	< 15
Topology	Transformerless
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)

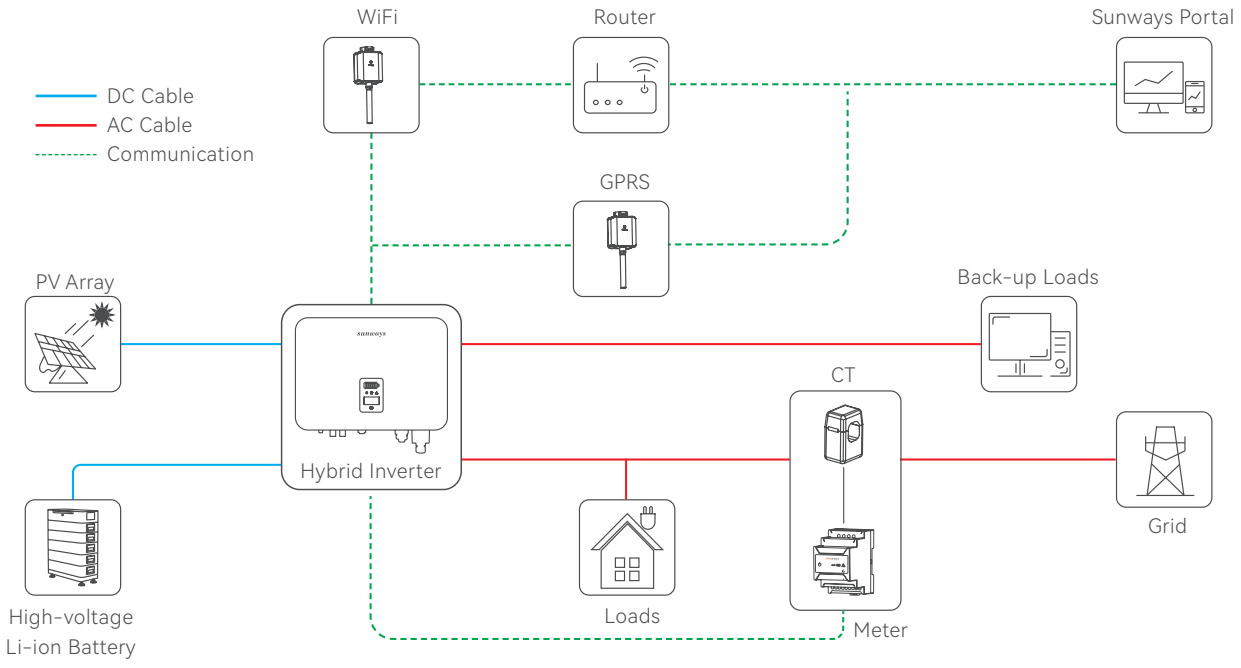
Compliance
IEC62109, EN61000, C10/C11, VDE 4105, UNE217001, UNE217002, RD647, RD1699, CEI021, G99, EN62477, NRS097-2-1, EN50549, NRS097-2-1, UE2016/631, TOR Erzeuger Type A, OVE-Richitlinie R 25



- Stack installation, time and cost-saving
- Longer cycle life battery(6,000 cycles)
- Support remote diagnosis & upgrade
- Charge your battery within one hour
- Optional battery capacity ranges from 5.12-20.48kWh
- Perfect match up with both residential and commercial inverter

STE-BS 5~20kWh

Sunways Stackable Lithium Battery

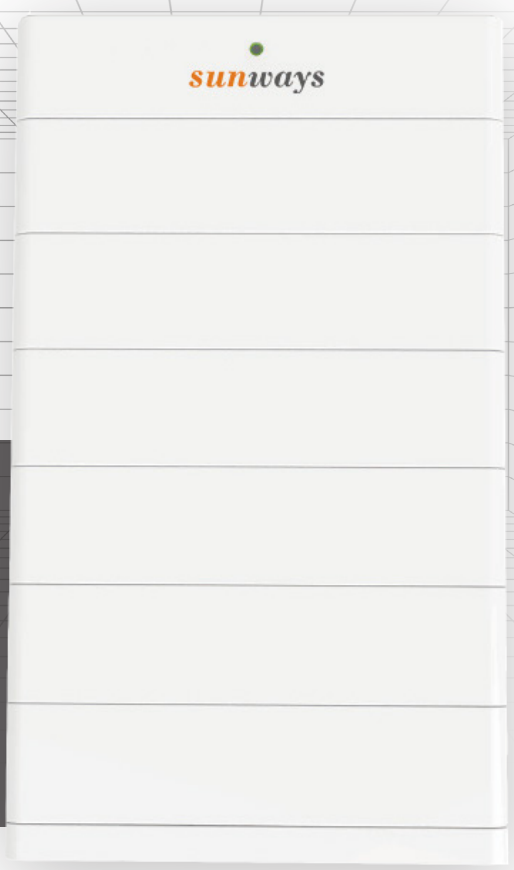


Model	STE-BS5	STE-BS7	STE-BS10	STE-BS12	STE-BS15	STE-BS17	STE-BS20
Battery Usable Energy (kWh)	5.12	7.68	10.24	12.8	15.36	17.92	20.48
Battery Capacity (Ah)	50	50	50	50	50	50	50
Nominal Voltage (V)	102.4	153.6	204.8	256	307.2	358.4	409.6
Maximum Charge/Discharge Current (A)	50	50	50	50	50	50	50
Recommend Continuous Charge/Discharge Current (A)	25	25	25	25	25	25	25
Weight (kg)	74.5	101.6	128.7	155.8	182.9	210	237.1
Dimension[W*H*D] (mm)	708*497*315	708*634*315	708*771*315	708*908*315	708*1045*315	708*1182*315	708*1319*315
Protection Degree	IP54						
Cycle Life	6,000 cycles @ 90%DOD						
Operating Temperature Range (℃)	0~50						
Storage Temperature (℃)	0~35						
Relative humidity	≤95%						
Altitude (m)	2000						
Internal Battery Module	STE-P2560						
Module Connection	Series / Hard Connection with Positioner						
Installation Method	Stackable						
Module Number	2	3	4	5	6	7	8
Communication Protocol/Connector Type	CAN/RJ45						
Certification	CE/IEC62619/UN38.3						

· Standard operating temperature for batteries is 25℃
· STH 3~8KTL-HS series suitable battery range from STE-BS5-BS20
· STH 4~12KTL-HT series suitable battery range from STE-BS7-BS20
· STH 15~33KTL-HT series suitable battery range from STE-BS10-BS20

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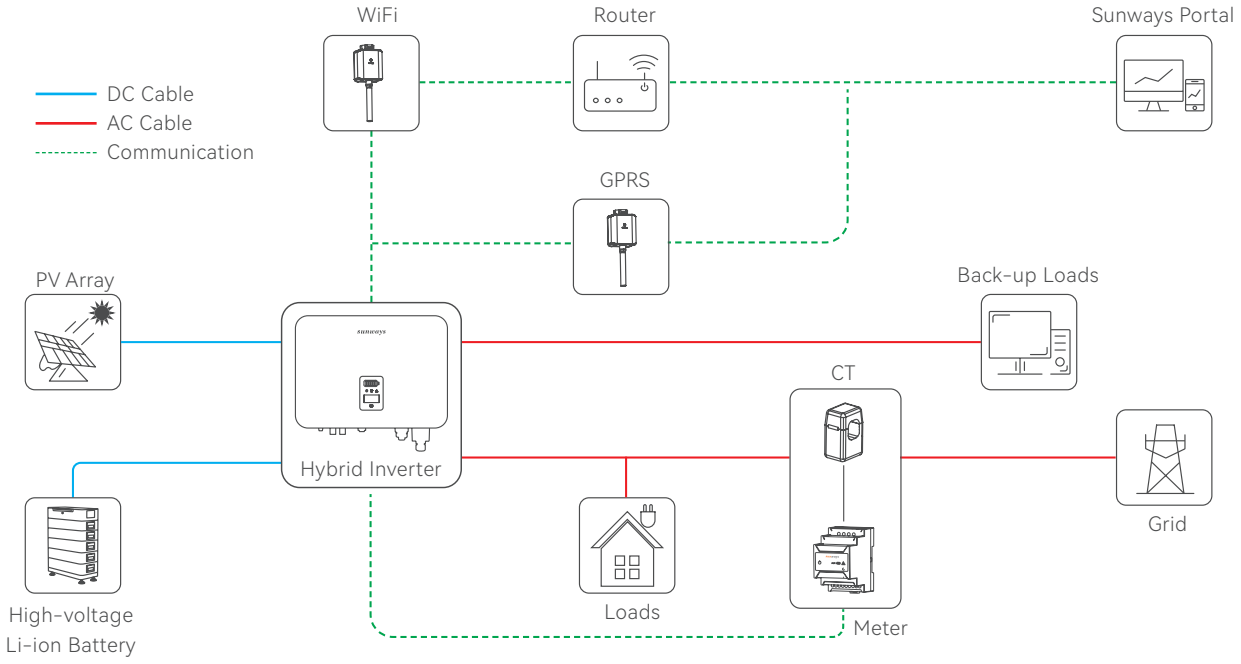
STE Series



- LiFeP04 Safe Battery Chemistry
- ≥6,000 Cycles at 90% DOD
- "Z" type cell craft, makes better thermostability
- Smart BMS for Safety Protection
- Charge Temperature: 0℃-50℃
- Discharge Temperature: 0℃-50℃

STE-ES 5~30kWh

Sunways Stackable Lithium Battery

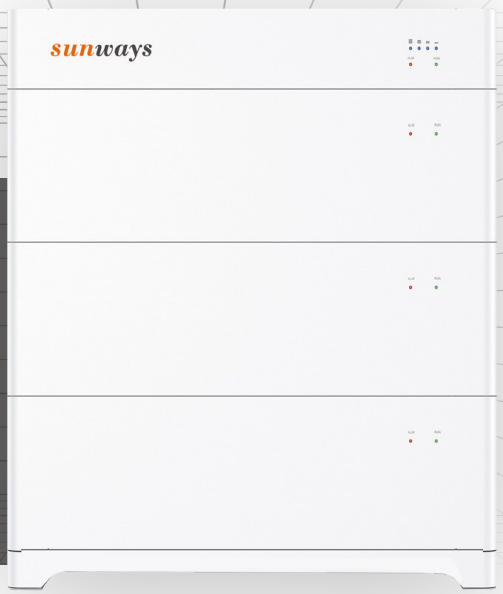


Model	STE-ES5	STE-ES10	STE-ES15	STE-ES20	STE-ES25	STE-ES30
Battery Usable Energy (kWh)	5.12	10.24	15.36	20.48	25.60	30.72
Battery Capacity (Ah)	50	50	50	50	50	50
Nominal Voltage (V)	102.4	204.8	307.2	409.6	512	614.4
Maximum Charge/Discharge Current (A)	50	50	50	50	50	50
Recommend Continuous Charge/Discharge Current (A)	25	25	25	25	25	25
Weight (kg)	73	119	165	211	257	303
Dimension[W*H*D](mm)	700*365*430	700*530*430	700*695*430	700*860*430	700*1025*430	700*1190*430
Protection Degree	IP54					
Cycle Life	6,000 cycles @90% DOD					
Operating Temperature Range(C	0~50					
Storage Temperature(C)	0~35					
Relative humidity	≤95%					
Altitude (m)	2000					
Internal Battery Module	STE-P5120					
Module Connection	Series / Hard Connection with Positioner					
Installation Method	Stackable					
Module Number	1	2	3	4	5	6
Communication Protocol/Connector Type	CAN/RJ45					
Certification	CE/IEC62619/UN38.3					

· Standard operating temperature for batteries is 25°C
· STH 3~8KTL-HS series suitable battery range from STE-ES5-ES20
· STH 4~12KTL-HT series suitable battery range from STE-ES10-ES30
· STH 15~33KTL-HT series suitable battery range from STE-ES10-ES30

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STE Series



STE-FS 10~50kWh

Sunways Stackable Lithium Battery

Safer

Cobalt Free Lithium Iron Phosphate(LFP)Battery, safety and long lifespan, high efficiency and high-power density. Intelligent BMS, providing complete protection.

Reliable

Support high discharge power, module level Auto-balancing, under-voltage Automatic Restart.

Flexible

Modular design, easy to expand, Max capacity of 51.2 kWh. Suited to residential and commercial applications for increasing the selfconsumption ratio.

Convenient

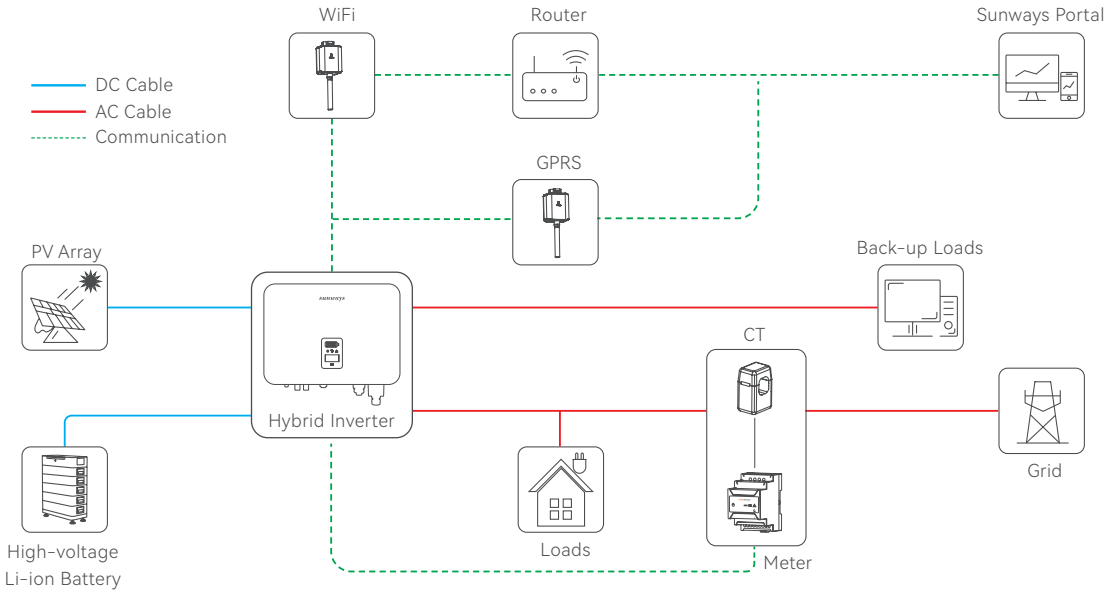
Battery module auto networking, Automatic IP addressing, easy maintenance, remotely monitoring and upgrade, support USB drive upgrade the firmware.

Eco-Friendly

Use environmental protection materials, the whole module non-toxic, pollution-free.

Floor-stand

Free stand design, floor-mounted, saving installation space.



Model	STE-FS10	STE-FS20	STE-FS30	STE-FS40	STE-FS50
Battery Usable Energy (kWh)	10.24	20.48	30.72	40.96	51.2
Battery Capacity (Ah)	100	100	100	100	100
Nominal Voltage (V)	102.4	204.8	307.2	409.6	512
Maximum Charge/Discharge Current (A)	70	70	70	70	70
Recommend Continuous Charge/Discharge Current (A)	50	50	50	50	50
Weight (kg)	105	194	283	372	461
Dimension[W*H*D](mm)	720*420*455	720*420*750	720*420*1045	700*420*1340	700*400*1635
Protection Degree	IP65				
Cycle Life	6,000 cycles @90% DOD				
Operating Temperature Range (C)	0~50				
Storage Temperature (C)	0~35				
Relative humidity	≤95%				
Altitude (m)	2000				
Internal Battery Module	STE-P10240				
Module Connection	Series / Hard Connection with Positioner				
Installation Method	Stackable				
Module Number	1	2	3	4	5
Communication Protocol/Connector Type	CAN/RJ45				
Certification	CE/IEC62619/UN38.3				

·Standard operating temperature for batteries is 25℃
·STH 3~8KTL-HS series suitable battery range from STE-FS10-FS40
·STH 4~12KTL-HT series suitable battery range from STE-FS20-FS50
·STH 15~33KTL-HT series suitable battery range from STE-FS20-FS50

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STE Series

STE-LS5
48V100AH

LIFEPO4 BATTERY
51.2V100Ah



HIGH SAFETY

The use of the most advanced lithium iron phosphate battery core technology

LONG LIFE

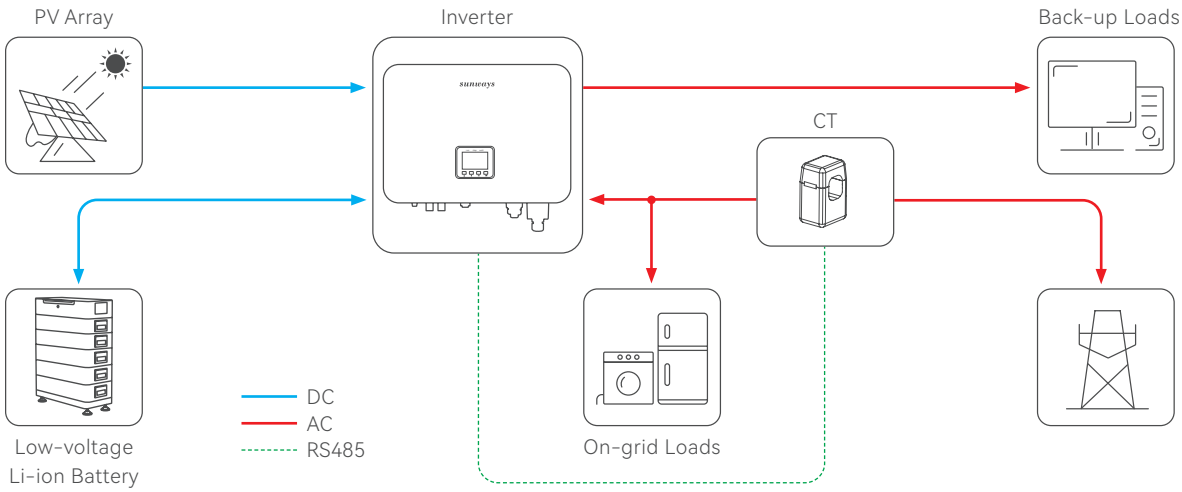
≧5000 cycles

STRONG PERFORMANCE

Cold resistance (-20-60 ℃)
high temperature
resistance (0-50 ℃)

MODULAR DESIGN

support for multiple modules used in parallel,
easy to install and maintain.



Model	STE-LS5
Battery Type	LiFePO4
Nominal Battery Energy	5.12kWh
Nomianl Capacity	100Ah
Nomianl Voltage	51.2V
Charging Cut-off voltage	57.6V
Discharging End-off voltage	40V
Recommended Charge / Discharge Current	50A
Max. Power Charge / Discharge Current	100A
Peak Power Charge / Discharge Current	200A(5s)
Weight	45kg
Max. Dimension[W*D*H]	480*460*155.5mm
Charging Temp. Range	0-50℃
Discharging Temp. Range	-20-60℃
Communication	CAN / RS485
Warranty Document Supplied	Yes
Calendar Life	≧5000 Cycles
Scalability	IP20
Pros	Can be used in both off-grid and hybrid setups,compact design
Certification & Safety Standard	TUV/CE/IEC62619/UN38.3

· Standard operating temperature for batteries is 25℃

- Monitoring of up to 90 devices
- Support of RS485, Ethernet, WiFi and GPRS communication
- Support of energy meter, meteo station, sensors and other equipment access
- Active and reactive power control
- 100% data availability through 24/7 operations
- Inverter batch parameter setting and firmware updates
- Plant maintenance by remote Web access, optimized OPEX

DATA LOGGER



Technical Parameters

General Data	
Max. number of Inverters	90 (30/RS485 Port)
Preference Setting	Remote Web、APP
Firmware Upgrade	Wireless upgrade
Working Voltage	DC 12V
Power Consumption	< 10W

Environmental Data	
Operating Temperature (°C)	-10~+60
Operating Humidity	0%-90% relative humidity, no condensation
Operating Altitude (m)	⩽ 4000m
Storage Temperature (°C)	-40~+85
Storage Humidity	< 40%
Protection Degree	IP20

Interface Specification	
RS485 Interface	4 ports (3 ports for inverters connection, 1 port for other devices connection), Baud 9600bps (Adjustable from 1200-57600 bps)
Ethernet Interface	1 port, 10/100Mbps Self-adaptive
Wireless Interface	WiFi/GPRS Alternative
Output Dry Contact	Two independent dry contacts, 230V/1A
Other Interface	CAN/USB/SD/SIM
Wireless Data	
WiFi Transmitting Power	802.11b: +16 +/-2dBm (@11Mbps)、802.11g: +14 +/-2dBm (@54Mbps)、802.11n: +13 +/-2dBm (@HT20, MCS7)
WiFi Receiving Sensitivity	802.11b: -87 dBm (@11Mbps , CCK)、802.11g: -73 dBm (@54Mbps, OFDM)、802.11n: -71 dBm (@HT20, MCS7)
WiFi Operating Frequency	2.412GHz-2.484GHz
Communication Distance	100M (without obstacles)

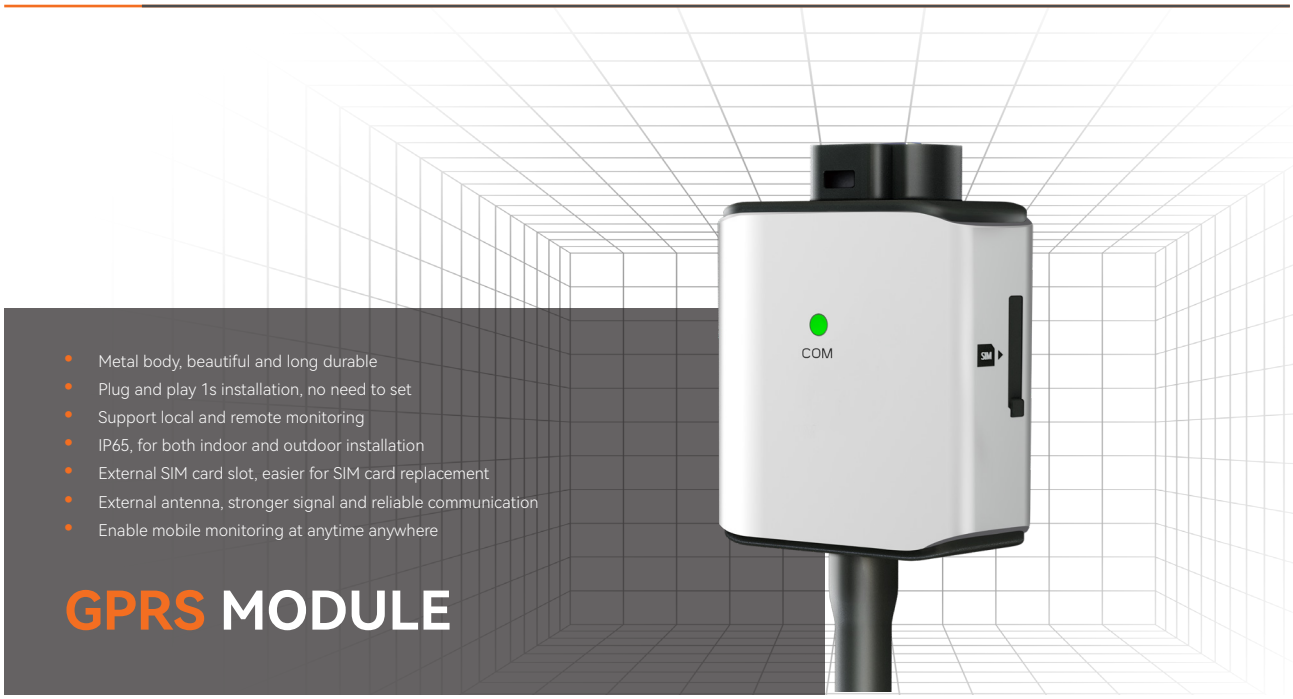


- Plug and play 1s installation
- Metal body, beautiful and long durable
- Easy to configure with Sunways Monitoring App
- Support local and remote monitoring
- IP65, for both indoor and outdoor installation
- Enable mobile monitoring at anytime anywhere

WIFI MODULE

Technical Parameters

General Data	
Max. number of Inverters	1
Inverter Communication	USB3.0
Remote Communication	WIFI (802.11 b/g/n)
Serial Port Communication Rate (bps)	115200
Communication Distance (M)	100 (without obstacles)
External Antenna	SMA water-proof glue stick antenna
Data Intervals	Remote configuration available
Preference Setting	Remote Web, APP
Data Access	Remote server
Working Voltage (V)	DC 5
Working Current (mA)	80 (200 Peak)
Wireless Data	
WiFi Transmitting Power	802.11b: +16 +/-2dBm (@11Mbps), 802.11g: +14 +/-2dBm (@54Mbps), 802.11n: +13 +/-2dBm (@HT20, MCS7)
WiFi Receiving Sensitivity	802.11b: -87 dBm (@11Mbps ,CCK), 802.11g: -73 dBm (@54Mbps, OFDM), 802.11n: -71 dBm (@HT20, MCS7)
WiFi Operating Frequency (GHz)	2.412-2.484
Environmental Data	
Operating Temperature (℃)	-10~+60
Operating Humidity	0%-90% relative humidity, no condensation
Storage Temperature (℃)	-40~+85
Storage Humidity (%)	< 40
Protection Degree	IP65
Other Data	
Dimensions (mm)	156L*52W*30H
Weight (g)	130
Certificates	CE
Warranty	2 years



- Metal body, beautiful and long durable
- Plug and play 1s installation, no need to set
- Support local and remote monitoring
- IP65, for both indoor and outdoor installation
- External SIM card slot, easier for SIM card replacement
- External antenna, stronger signal and reliable communication
- Enable mobile monitoring at anytime anywhere

GPRS MODULE

Technical Parameters

General Data	
Max. number of Inverters	1
Inverter Communication	USB3.0
External Antenna	SMA water-proof glue stick antenna
Data Intervals	Remote configuration available
Preference Setting	Remote Web, APP
Data Access	Remote server
Working Voltage (V)	DC 5
Working Current (mA)	130 (600 Peak)
Wireless Data	
WirelessTransmitting Power (dbm)	GSM850/EGSM900: 5~32.5, DCS1800/PCS1900: 0~29.5
Wireless Receiving Sensitivity (dBm)	< -108.5
Wireless Operating Frequency	GSM850, EGSM900, DCS1800, PCS1900
GPRS Connection Features	GPRS multi-slot class is 10 (default), GPRS mobile station class B
Environmental Data	
Operating Temperature (℃)	-10~+60
Operating Humidity (%)	0-90 relative humidity, no condensation
Storage Temperature (℃)	- 40~+85
Storage Humidity (%)	< 40
Protection Degree	IP65
Other Data	
Dimensions (mm)	156L*52W*30H
Weight (g)	140
Certificates	SRRC
Warranty	2 years



- Plug and play 1s installation
- Data encrypted to ensure data security
- Supports breakpoint retransmission
- Remote upgrade available
- Stable and reliable data transmission via wired internet cable
- Default dynamic IP mode and static IP commissioning available

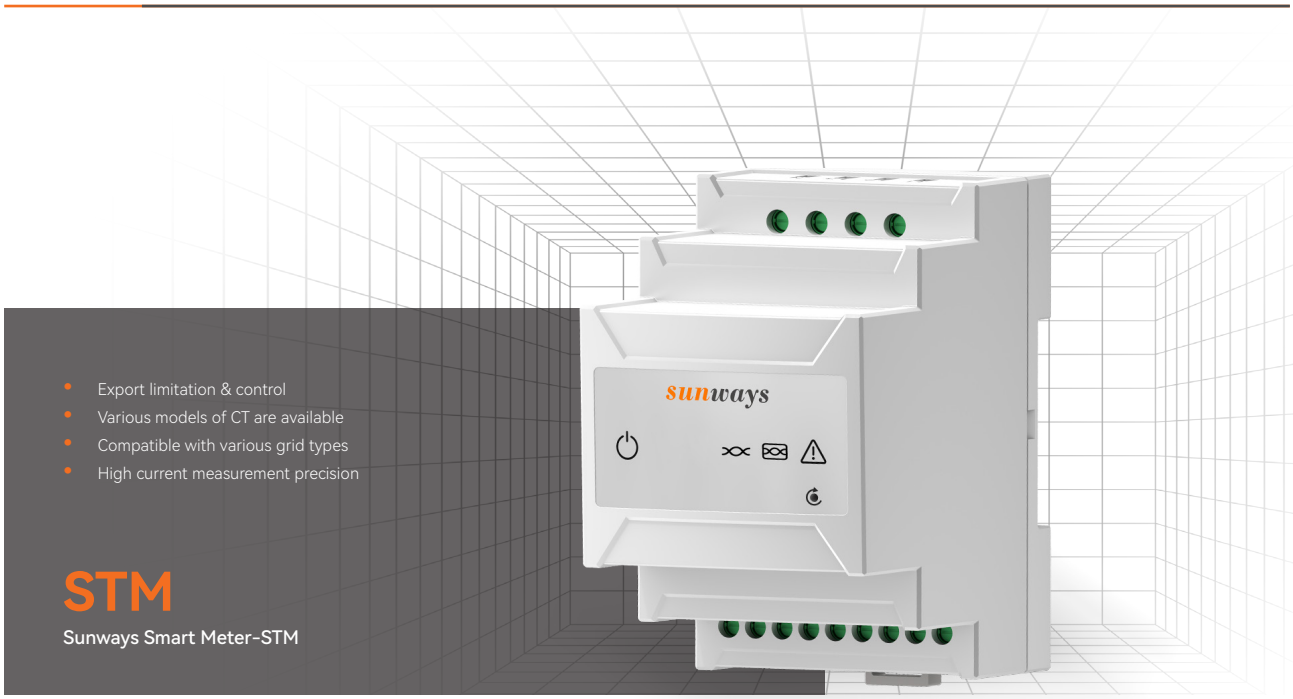
LAN MODULE

Technical Parameters

General Data	
Max. number of Inverters	1
Inverter Communication	USB3.0
Remote Communication	IEEE802.3 10
Serial Port Communication Rate(bps)	115200
Communication Distance(M)	100 (MAX)
Data Intervals	Remote configuration available
Preference Setting	Remote Web,APP
Data Access	Remote server
Working Voltage(V)	DC 5
Working Current (mA)	100 (220 Peak)
Environmental Data	
Operating Temperature (℃)	-30~+75
Operating Humidity	0%-90% relative humidity, no condensation
Storage Temperature (℃)	-40~+85
Storage Humidity	< 40%
Protection Degree	IP65
Other Data	
Dimensions (mm)	116L*52W*30H
Weight (g)	100
Certificates	CE
Warranty	2 years

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SUNWAYS SMART METER-STM



- Export limitation & control
- Various models of CT are available
- Compatible with various grid types
- High current measurement precision

STM

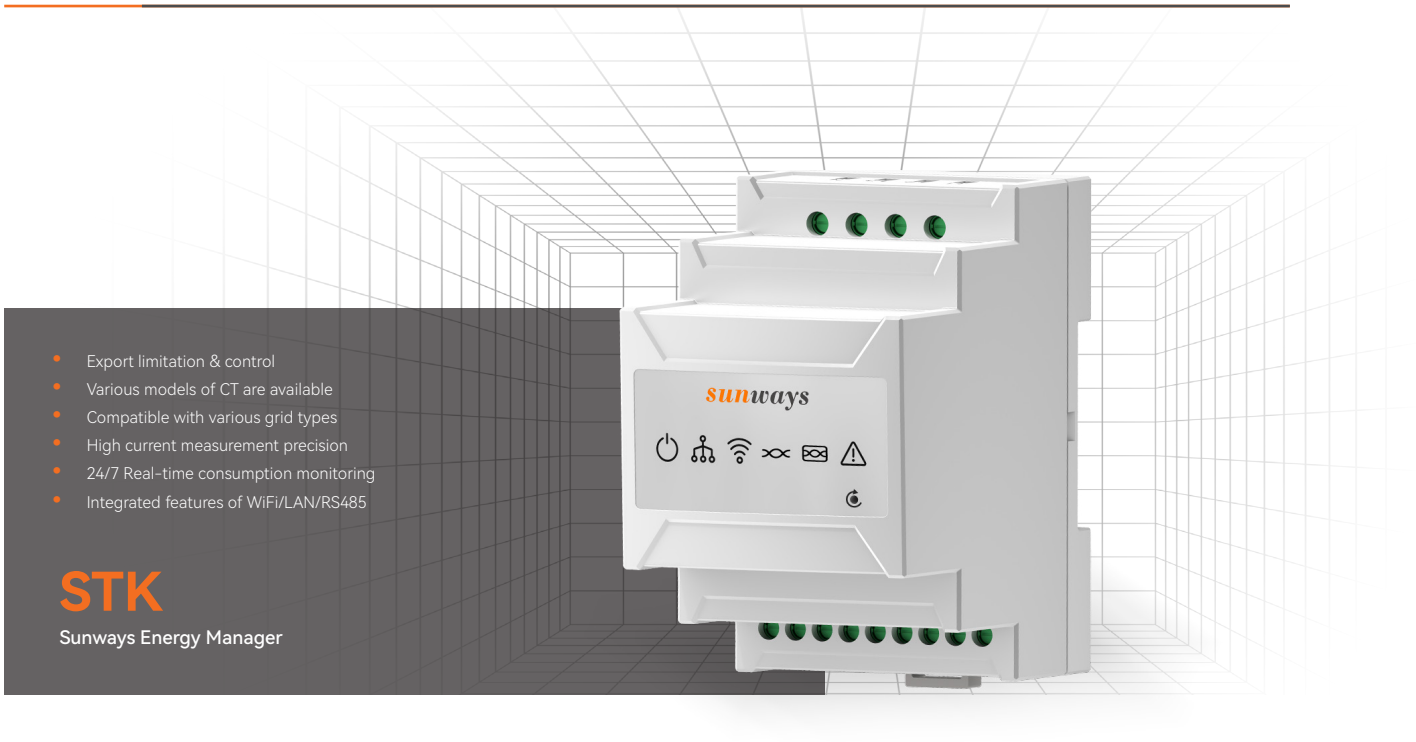
Sunways Smart Meter-STM

Technical Parameters

Model		STM
Voltage		85~280V
Frequency		50/60Hz
Rated Current		90A/120A/300A (With CT)
Self-consumption		<3W
Data Detection		Current/Voltage/Active Power/Reactive Power/Power Factor/Frequency
Energy Calculation		Bidirectional Active/Reactive Power Energy
Precision	Active Power	Class 1 (IEC 62053-22)
	Reactive Power	Class 1 (IEC 62053-23)
Communication		Modbus RTU (RS485)
Interface		3 LED, Reset Button
Mechanical Parameters	Terminal capacity	0.5~4mm^2
	Size (L*W*H)	85*54*75mm
	Weight	150g
	Protection Class	IP20 (For Indoor Use)
	Installation Method	35mm DIN Rail
Operating Temperature		-25 ~ +60℃
Operating Humidity		<95%, No Condensation
Altitude		<2500m

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SUNWAYS ENERGY MANAGER-STK



Technical Parameters

Model		STK
Voltage		85~280V
Frequency		50/60Hz
Rated Current		90A/120A/300A (With CT)
Self-consumption		<5W
Data Detection		Current/Voltage/Active Power/Reactive Power/Power Factor/Frequency
Energy Calculation		Bidirectional Active/Reactive Power Energy
Precision	Active Power	Class 1 (IEC 62053-22)
	Reactive Power	Class 1 (IEC 62053-23)
Communication		Modbus RTU (RS485), WiFi/LAN/Bluetooth
Interface		5 LED, Reset Button
Mechanical Parameters	Terminal capacity	0.5~4mm^2
	Size (L*W*H)	85*54*75mm
	Weight	150g
	Protection Class	IP20 (For Indoor Use)
	Installation Method	35mm DIN Rail
Operating Temperature		-25 ~ +60℃
Operating Humidity		<95%, No Condensation
Altitude		<2500m
Parallel Connection		Optional



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