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Sunways Single Phase Storage Inverter with Two MPPT

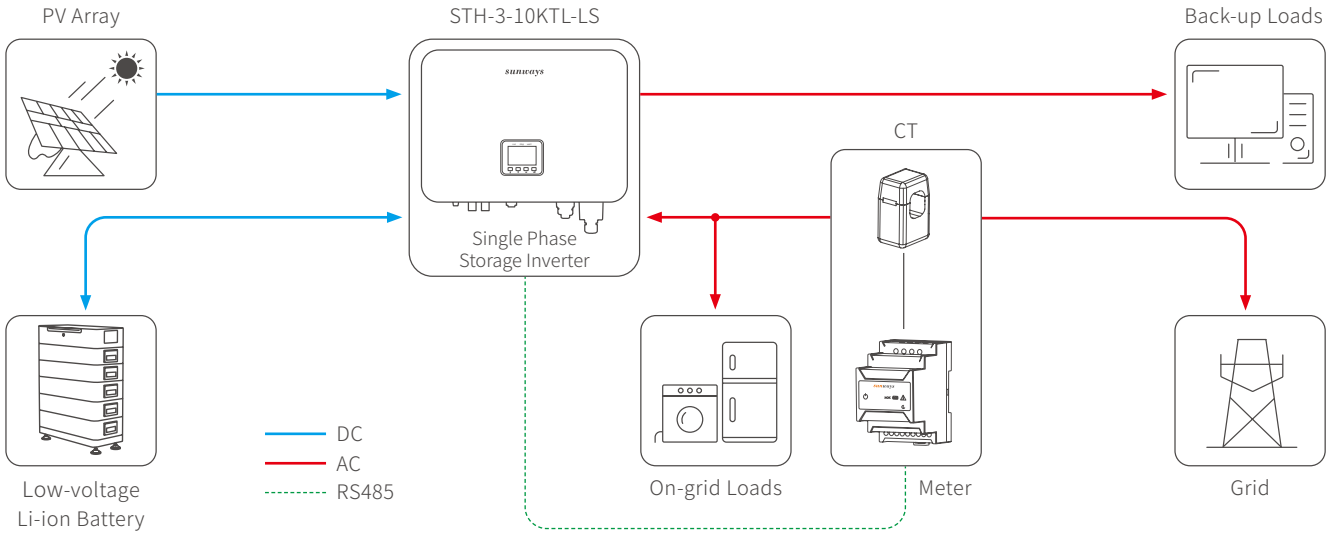
STH-3-10KTL-LS



MAX 97.6% EFFICIENCY

IP65 PROTECTION

- 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 100A to meet the demand of higher consumption and energy trading.
- Up to 16A 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
- Friendly & Thoughtful Design: Easy installation，Elegant and compact design



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TECHNICAL PARAMETERS

SINGLE PHASE:STH-3-10KTL-LS

Model		STH-3KTL-LS	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)	80	80	80	80	80	80	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)	100-550	100-550	100-550	100-550	100-550	100-550	100-550	100-550	100-550
	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)	16/16	16/16	16/16	16/16	16/16	16/16	16/16	16/16	16/16
	Max. Short-circuit Current (A)	20/20	20/20	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)	42-58								
	Max. Charge/Discharge Current (A)	100/100								
	Rated Current Of Built-in Fuse (A)	150								
Output (Grid)	Rated Output Power (W)	3,000	3,600	4,200	4,600	5,000/4,990 ①	6,000	7,000	8,000	10,000
	Max. Output Power (W)	3,300	3,960	4,600	4,600	5,500/4,990 ①	6,600	7,700	8,800	11,000
	AC output rated apparent power (VA)	3,000	3,600	4,200	4,600	5,000/4,990 ①	6,000	7,000	8,000	10,000
	Max. Apparent Power (VA)	3,300	3,960	4,600	4,600	5,500/4,990 ①	6,600	7,700	8,800	11,000
	Max. Input Apparent Power (VA)	6,000 ②	7,200 ②	8,400 ②	9,200 ②	10,000 ②	12,000 ②	12,000 ②	12,000 ②	12,000 ②
	Rated Output Voltage (V)	3L/N/PE, 220/230/240V								
	Rated AC Frequency (Hz)	50/60								
	AC output rated current (A)	13	15.7	18.3	20	21.7	26.1	31.8	36.3	45.5
	Max. Output Current (A)	15	18	21	21	25/21.7 ①	28.7	35	40	50
	The measured Inrush current (A)	8.8A@28μs	8.8A@28μs	8.8A@28μs	8.8A@28μs	8.8A@28μs	25A@22μs	25A@22μs	25A@22μs	25A@22μs
	Maximum output fault current (A)	50	50	50	50	50	80	80	80	80
	Maximum output overcurrent protection (A)	50	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	3,600	4,200	4,600	5,000/4,990 ①	6,000	7,000	8,000	10,000
	Max. Output Power (W)	3,300	3,960	4,600	4,600	5,500/4,990 ①	6,600	7,700	8,800	11,000
	Back-up output rated apparent power (VA)	3,000	3,600	4,200	4,600	5,000/4,990 ①	6,000	7,000	8,000	10,000
	Max. Apparent Power (VA)	3,300	3,960	4,600	4,600	5,500/4,990 ①	6,600	7,700	8,800	11,000
	Back-up output rated current (A)	13	15.7	18.3	20	21.7	26.1	31.8	36.3	45.5
	Max. Output Current (A)	15	18	21	21	25/21.7 ①	28.7	35	40	50
	UPS switching time	<10ms	<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	50/60
	Peak output apparent power (VA)	3,900 ③, 60s	4,700 ③, 60s	5,500 ③, 60s	6,000 ③, 60s	6,500 ③, 60s	7,800 ③, 60s	9,100 ③, 60s	10,000 ③, 60s	10,000 ③, 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)	550W*410H*175D
Weight (kg)	26
Protection Degree	IP65
Self-consumption at Night (W)	< 15
Topology	Transformer less
Operating Temperature Range (° C)	-30~60
Relative Humidity (%)	0~100
Operating Altitude (m)	4000 (derating@ > 3000)
Cooling	Natural Convection
Noise Level (dB)	< 25
Display	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.

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