SUNGROW
Clean power for all

SH5/6/8/10/12T

Hybrid Three Phase Inverter

NEW



FULL BACKUP

- Built-in 63 A bypass for whole home backup
- 10 ms seamless switch
- Peak output up to 16800 VA (10 s) in backup mode (SH12T)

FLEXIBLE APPLICATION

- Support 100% unbalance output in backup and on grid mode
- Max. 16 A DC input current per string
- 50 A fast charge / discharge current

FRIENDLY INSTALLATION

- Plug & Play installation
- Quiet operation for indoor or outdoor installation

SAFE AND DURABLE

- Support precise AFCI
- IP65/C5

EUROPE

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Type designation	SH5T	SH6T	SH8T	SH10T	SH12T
Input (DC)					
Recommended max. PV input power	10000 Wp	12000 Wp	16000 Wp	20000 Wp	24000 Wp
Max. PV input voltage *	1000 V				
Min. PV input voltage / Startup input voltage	150 V / 180 V				
Rated PV input voltage	600 V				
MPPT operating voltage range **	150 V - 950 V				
No. of independent MPP trackers	2				
No. of PV strings per MPPT	1 / 1			2 / 1	
Max. PV input current	32 A (16 A / 16 A)			48 A (32 A / 16 A)	
Max. DC short-circuit current	40 A (20 A / 20 A)			60 A (40 A / 20 A)	
Max. current for input connector	30A				
Battery data					
Battery type	Li-ion battery				
Battery voltage	100 V - 700 V				
Max. charge / discharge current ***	50 A / 50 A				
Max. charge / discharge power	15000W/5000W	15000W/6000W	15000W/8000W	15000W/10000W	15000W/12000W
Input and Output (AC)					
Max. AC power from grid ****	43000 VA				
Rated AC output power	5000 W	6000 W	8000 W	10000 W	12000 W
Max. AC output apparent power	5000 VA	6000 VA	8000 VA	10000 VA	12000 VA
Max. AC output current	7.6 A	9.1 A	12.1 A	15.2 A	18.2 A
Rated AC voltage	3 / N / PE , 220 V / 380 V ; 230 V / 400 V ; 240 V / 415 V				
AC voltage range	270 V - 480 V				
Rated grid frequency	50 Hz / 60 Hz				
Grid frequency range	45 Hz - 55 Hz / 55 Hz - 65 Hz				
Harmonic (THD)	< 3 % (of rated power)				
Power factor at rated power / Adjustable power factor	> 0.99 / 0.8 leading to 0.8 lagging				
Feed-in phases/connection phases	3 / 3-N-PE				
Backup data (on grid mode)					
Max. output power for backup load ****	43000 W				
Max. output current for backup load	3 * 63 A				
Backup data(off-grid mode)					
Rated voltage	3 / N / PE, 220 V / 380 V; 230 V / 400 V; 240 V / 415 V (± 2 %)				
Rated frequency	50Hz / 60Hz (± 0.2 %)				
THDV(@Linear load)	2 %				
Backup switch time	< 10 ms				
Rated output power	5000W / 5000VA	6000W / 6000VA	8000W / 8000VA	10000W / 10000VA	12000W / 12000VA
Peak output power *****	10000 W / 10000 VA,10 s	12000 W / 12000 VA,10 s	13500 W / 13500 VA,10 s	15000 W / 15000 VA,10 s	16800 W / 16800 VA,10 s
Efficiency					
Max. efficiency / European efficiency	97.9 % / 97.2 %	97.9% / 97.3 %	98.0 % / 97.4 %	98.0 % / 97.5 %	98.0 % / 97.5 %
Protection & Function					
Grid monitoring	Yes				
DC reverse polarity protection	Yes				
AC short-circuit protection	Yes				
Leakage current protection	Yes				
DC switch (solar)	Yes				
Surge protection	DC Type II / AC Type II				
PID zero	Yes				
Battery input reverse polarity protection	Yes				
General data					
Topology (solar / battery)	Transformerless / Transformerless				
Degree of protection	IP65				
Dimensions (W * H * D)	620 mm * 480 mm * 195 mm				
Weight	32 kg				
Mounting method	Wall-mounting bracket				
Operating ambient temperature range	-25 ℃ to 60 ℃				
Allowable relative humidity range(Non-condensing)	0 % - 100 %				
Cooling method	Natural convection				
Max. operating altitude	2000				
Noise(Typical)	35 dB (A)				
Display	LED				
Communication	RS485, WLAN, Ethernet, CAN				
DI / DO	DI * 4 / DO * 2 / DRM0				
DC connection type	MC4 compatible connector (PV, Max.6 mm²) /Plug and play connector (battery, Max.10 mm²)				
AC connection type	Plug and play connector (Max.16 mm²)				
Compliance	IEC / EN 62109, IEC 61000-6, EN 62477-1, IEC 61727, IEC 62116, IEC 62920, EN 55011, CISPR 11, VDE-AR-N-4105, EN 50549-1, AS/NZS 4777.2:2020, TOR Type A, R25, NC RFG, PSE 2018, NTS V2.1 Type A, UNE217001, UNE 217002, RD, CEI 0-21				

* Input voltage exceeding the MPPT operating voltage range triggers inverter protection
** Please refer to the user manual for the full load MPPT voltage range
*** Depending on the connected battery
**** Please refer to the user manual and modify the settings based on actual load power
***** Can be reached only if PV and battery power is sufficient

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