SH5/6/8/10/12T

Hybrid Three Phase Inverter



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

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SUNGROW
Clean power for all

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 ℃ - 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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