SH5/10T

Hybrid Three Phase Inverter

FULL BACKUP

- Built-in 63A bypass for whole home backup
- 10ms seamless switch
- Peak output up to 15000VA(10s) in backup mode(SH10T)

FLEXIBLE APPLICATION

- Support 100% unbalance output in backup and on grid mode
- Max. 16A DC input current per string
- 50A 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	SH10T
Input (DC)		
Max. PV input power	10000 Wp	20000 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	30 A	
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	15000 W / 5000 W	15000 W / 10000 W
Input and Output (AC)		
Max. AC power from grid ****	43000 VA	
Rated AC output power	5000 W	9999 W
Max. AC output apparent power	5000 VA	9999 VA
Max. AC output current	7.6 A	15.2 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	45Hz - 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	50 Hz / 60 Hz (± 0.2 %)	
THDV(@Linear load)	< 2 %	
Backup switch time	< 10 ms	
Rated output power	5000 W / 5000 VA	10000 W / 10000 VA
Peak output power *****	10000 W / 10000 VA , 10 s	15000 W / 15000 VA , 10 s
Efficiency		
Max. efficiency / European efficiency	97.9 % / 97.2 %	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	
Protective class	Protective class I	
Overvoltage category	III[AC] ; II[PV] ; [BATTARY]	
Active anti-islanding method	Frequency shift	
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	Plug and play connector (PV, Max.6 mm^2 / battery, Max.10 mm^2)	
AC connection type	Plug and play connector (Max.16 mm^2)	
Compliance	IEC / EN 62109, IEC 61000-6, EN 62477-1, IEC 61727, IEC62116, IEC62920, EN55011, CISPR 11, VDE-AR-N-4105, EN50549-1, 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	
Country of manufacture	China	

* 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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