SH15/20/25T

Hybrid Three Phase Inverter

FULL BACKUP

- Built-in 63 A bypass for whole home backup
- 10 ms seamless switch
- Peak output up to 36500 VA (10 s) in backup mode (SH25T)

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	SH15T	SH20T	SH25T
Input (DC)			
Max. PV input power	30000 Wp	40000 Wp	50000 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	3		
No. of PV strings per MPPT	2 / 2 / 1		
Max. PV input current	80 A (32 A / 32 A / 16 A)		
Max. DC short-circuit current	100 A (40 A / 40 A / 20 A)		
Max. current for input connector	30 A		
Battery data			
Battery type	Li-ion battery		
Battery voltage range	100 V - 700 V		
Max. charge / discharge current ***	50 A / 50 A		
Max. charge / discharge power	30000 W / 15000 W	30000 W / 20000 W	30000 W / 25000 W
Input and Output (AC)			
Max. AC power from grid ****	43000 VA		
Rated AC output power	15000 W	20000 W	25000 W
Max. AC output apparent power	15000 VA	20000 VA	25000 VA
Max. AC output current	22.8 A	30.4 A	37.9 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 / 380 V; 230 / 400 V; 240 / 415 V (± 2 %)		
Rated frequency	50 Hz / 60 Hz (± 0.2 %)		
THDV(@Linear load)	< 2 %		
Backup switch time	< 10 ms		
Rated output power	15000 W / 15000 VA	20000 W / 20000 VA	25000 W / 25000 VA
Peak output power *****	25500 W / 25500 VA , 10 s	32000 W / 32000 VA , 10s	36500 W / 36500 VA , 10 s
Efficiency			
Max. efficiency / European efficiency	98.1 % / 97.6 %		98.2 % / 97.8 %
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 * 245 mm		
Weight	38 kg		40 kg
Mounting method	Wall-mounting bracket		
Operating ambient temperature range	-25 ℃ - 60 ℃		
Allowable relative humidity range(Non-condensing)	0 % - 100 %		
Cooling method	Natural convection		Fan cooling
Max. operating altitude	2000 m		
Noise(Typical)	35 dB (A)		50 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.6mm² / battery, Max.10mm²)		
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, NRS 097, AS/NZS 4777.2:2020, TOR Type A, R25, 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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