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)			
Recommended 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 ,10 s	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	
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		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, NRS 097, AS/NZS 4777.2:2020, TOR Type A, R25, 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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