

5KW Single-Phase Hybrid Inverter

With the development of energy storage market, the traditional grid-connected inverter can no longer meet the needs of customers. According to different applications, some customers need grid-connected, someone requires off-grid. Especially for home energy storage markets. Both on-grid and off-grid states require inverters to provide electricity power to the loads.

Therefore, the demand of on/off-grid inverter (two-way energy storage inverter) is growing rapidly. It allows users to generate their own power, to get certain economic benefits. When the PV energy is sufficient, the inverter draws power from the PV station to power the loads, and the rest power will charge the battery and be on to the grid. When the PV energy is insufficient, but the battery energy is enough, the inverter automatically supply power to the load from the battery. When the battery energy exhausted, the Inverter takes power from the grid, supplies the load and recharges the battery. This on-off grid inverter could be installed in/outdoor.

Features

- **One-Key Setting**

- 1.APP setting
- 2.Automatic matching
- 3.Multi-languages
- 4.Self-diagnosis, maintenance-free

- **Simple Installation**

- 1.Operation manual&installation video
- 2.Modularization Installation
- 3.International standard cables

- **Variety**

- 1.Solar&High voltage battery compatible, various input sources
- 2.Compatible Life po4&Lead-acid Battery
- 3.Solar,grid and generator accessed
- 4.Multiple inverters in parallel
- 5.On&off-grid mode switching time less than 10ms, can be used as UPS
- 6.Single phase&three phase output for residential and commerical application

- **Efficiency**

- 1.High efficiency at 99%
- 2.Advanced tracking tech to improve efficiency of PV station
- 3.High-precision MPPT control algorithm and INV algorithm enabling grid connection with high efficiency and energy converting by itself.

- **Safety**

- 1.Self-protection Technology

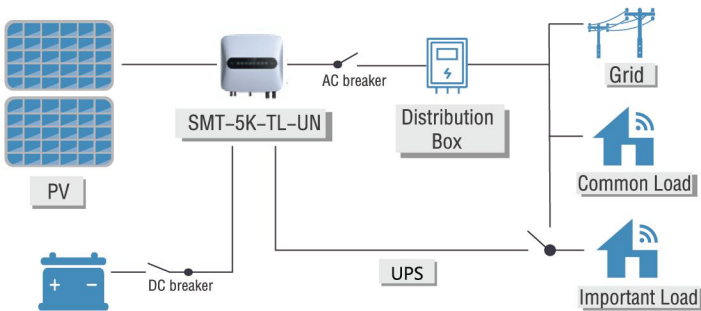
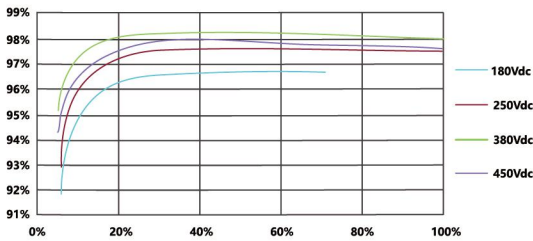


- 2. Wide voltage and frequency input
- 3. IP65 Protection
- 4. Automatically air cooling
- 5. Stable operation in high altitude, high temperature, high humidity environment

● **Intelligence**

- 1. Smart Management System enforces self-operation
- 2. WIFI, CAN, RS485, USB (optional), GPRS (optional) Multiple monitoring modes

5KW conversion efficiency



Technical Parameter

Model	SMT-5K-TL-LV	SMT-5K-TL-HV
PV INPUT(DC)		
Rated DC power (W)	5000	
Max.DC voltage (V)	580	
MPPT voltage range (V)	125-550	
Starting voltage (V)	90	
Max.input current (A)	11/11	
Max.overcurrent protection (A)	15	
Number of MPPT trackers	2	
OUTPUT DC (BATTERY)		

Battery Type	Lithium battery or lead acid battery	
Nominal Battery Voltage (V)	48	300
Battery voltage range (V)	40-60	80-400
Battery capacity (Ah)	programmable based on requirements	
Overcurrent protection (A)	32	22.8
Max charging efficiency (%)	95%	98%
Max discharging current (A)	100	20
Max discharging power (W)	4600	
Max discharging efficiency (%)	94%	98%
INPUT (AC)		
Grid voltage range (V)	170V~280V AC	
Grid frequency (HZ)	50Hz/60Hz	
Grid input power (W)	6000	
Max input current (A)	15	
OUTPUT (AC)		
Rated grid power (W)	5000	
Peak power (off-grid)	110% load:30mins 120% load:5mins 150% load:5S	
Rated output	50/60Hz; 230Vac	
Max output current (A)	22.8	21.7
Overcurrent protection (A)	32	22.8
Total harmonic distortion (THD, rated power) (%)	<3	
Displacement power factor	-0.9overexcited, 0.9underexcited	
BACKUP OUTPUT (WITH BATTERY)		
Rated backup power (W)	4600	
Rated output	50/60Hz	
Output range	45~55Hz/55~65Hz	
Max output current (A)	20	15.2
Overcurrent protection (A)	27.5	22.8
Peak power output (W)	4800W 5Mins 6000W 5S	
Total harmonic distortion (THD, rated power) (%)	<3	
Displacement power factor	-0.9overexcited, 0.9underexcited	
Instant recovery time	≤20ms	
Crest factor	3:1	
UPS Switching time (MS)	< 10 ms	
Efficiency		
MPPT efficiency (%)	99.9	
Europe efficiency (%)	97	

Max efficiency	97.6
Battery charge/discharge efficiency (%)	>95
Protection	
Anti-islanding protection	YES
DC switch (PV)	YES
Output overcurrent protection	YES
Output short circuit protection	YES
Output over voltage protection	YES
Certifications & Standards	
Grid Regulation	VDE 0126/VDE-AR-N4105/G83-2/ AS 4777.2/EN50438/CEI 0-21
Safety Regulation	IEC/EN 62109-1, IEC/EN 62109-2
EMC	IEC/EN 61000-6-2, IEC/EN 61000-6-3
General Data	
Size (Width*Height*Depth mm)	495*516*152
Weight (kg)	25 20
Installation method	Hanging way
Environment temperature range	-25~60°C
Relative humidity	0~95%
Max operation Altitude (m)	4000 (3000m scale down)
Protection degree	IP65
Environment Category	Outdoor & indoor
cooling	Natural cooling
Noise (db)	<25
Display	LED & APP
Communication style	Wi-Fi、RS485、CAN 、GPGS

Notes: 5kw hybrid Inverter could be connected in parallel to 10 sets maximum, 3 sets single phase Inverters in parallel could be configurated in 3phases mode.