

# TSUN Hybrid Inverter



TSOL-H3.0K/3.6K/4.0K/  
4.6K/5.0K/6.0K-H



## High-yield

- Real time precise MPPT algorithm for max power generation.
- Wide input voltage operation range.
- High battery voltage, higher efficiency.

## Reliable and Safe

- High efficiency, less maintenance.
- High frequency isolation between battery & PV/grid.
- Advanced battery management technology for better battery performance.

## Easier Operation

- Flexible installation site selection due to IP65.
- LCD Display, easy-to-read display.
- Easy monitoring by mobile phone (APP) & PC (web).

## Intelligent

- Reactive power capability.
- Limits AC output when grid frequency/voltage is too high or too low.
- Built-in anti-reflex function (optional).

CE VDE 0126 VDE 4105 CEI 0-21 G98 G99 AS4777 IEC/EN 62109



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# Technical Data

Model	TSOL-H3.0K-H	TSOL-H3.6K-H	TSOL-H4.0K-H	TSOL-H4.6K-H	TSOL-H5.0K-H	TSOL-H6.0K-H
<b>PV String Input Data</b>						
Max. DC Input Power [W]	5000	5500	6000	6500	7000	7200
Max. DC Input Voltage [V]				620		
MPP Voltage Range [V]				100~560		
MPPT Range for Full Load [V]	165~500	200~500	220~500	250~500	270~500	320~500
Nominal DC Input Voltage [V]				360		
Start Output Voltage [V]				125		
Number of PV Strings per MPP Tracker				A:1/B:1		
Max. Input Current [A]				A:10/B:10		
Max. Short Circuit Current [A]				A:12/B:12		
<b>AC Output Data (On-grid)</b>						
Max. AC Apparent Power [VA]	3000	3680	4000	4600	5000	6000
Max. AC Output Current [A]	14	16	18.6	21.4	23.2	27.9
Nominal AC Voltage [V]				220/230/240,L/N/PE		
AC Voltage Range [V]				180~270		
Rated AC Grid Frequency [Hz]				50/60		
Grid Frequency Range [Hz]				45~55/55~65		
Total Harmonic Distortion (THDi) (@Nominal Power)				<3%		
Displacement Power Factor				0.8leading - 0.8lagging		
<b>AC Output Data(Back-up)</b>						
Max. Output Apparent Power [VA](@Linear Load)	3000	3680	4000	4600	5000	6000
Rated AC Power(@230V/50Hz) [W]	3000	3680	4000	4600	5000	6000
Peak Output Apparent Power [VA]	5500,30sec	5500,30sec	5500,30sec	8000,30sec	8000,30sec	8000,30sec
Nominal Output Voltage [V] (@Linear Load)				230		
Nominal Output Frequency [Hz](@Linear Load)				50/60		
Max. Output Current [A](@Linear Load)	14	16	18.6	21.4	23.2	27.9
Switch Time [s]				<1.5s		
Output THDv (@Linear Load)				<3%		
Parallel Operation				NO		
<b>AC Input Data</b>						
Nominal Apparent AC Power[VA]	3000+3000(bypass)	3680+3680(bypass)	4000+4000(bypass)	4600+4600(bypass)	5000+5000(bypass)	6000+6000(bypass)
Rated Grid Voltage [V]				220/230/240,L/N/PE		
Rate frequency (Hz)				50/60		
Max. AC Current [A]	14+14(bypass)	16+16(bypass)	18.6+18.6(bypass)	21.4+21.4(bypass)	23.2+23.2(bypass)	27.9+27.9(bypass)
<b>Battery Internal Charger</b>						
Battery Type				Li-ion/Lead-acid		
Battery Voltage Range [V]				90-400		
Recommended Battery Voltage [V]				300		
Recommended Battery Capacity [kWh]				4.8-16.8		
Max. Charging/Discharging Current [A]				20(adjustable)		
<b>Efficiency</b>						
Max. Efficiency	97.8%	97.8%	97.8%	97.8%	97.8%	97.8%
MPPT Efficiency				99.9%		
Europe Efficiency	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%
Max. Battery Charge Efficiency(PV toBAT) (@Nominal Power)				98.5%		
Max. Battery Discharge Efficiency (BAT toAC) (@Nominal Power)				97.0%		
<b>Safety &amp; Protection</b>						
Protection				Residual Current Monitoring Unit (RCMU), Anti-islanding Protection, DC Isolation Impedance Monitoring, DC Reverse Polarity Protection, AC Short-circuit Protection, DC Surge Arrester/AC Surge Arrester		
DC Switch				Optional		
Grid Regulation (Additional on Request)				AS4777, G98, C10/26, RD1699, UTE C15-712-1, VDE 4105, CEI 0-21		
Safety Regulation				IEC/EN 62109-1/2, EN 62040		
EMC Regulation				IEC/EN 61000		
Standard Warranty [Years]				5		
<b>Communication &amp; Display</b>						
Communication				BMS:CAN, Meter:RS485, Monitor:Wi-Fi		
Display				LCD		
<b>General Data</b>						
Dimensions (W / H / D) (Include Inverter and Packing)				400mm*460mm*170mm		
Weight (Not Include Inverter and Packing)				17 kg		
Operating Temperature Range				-20~60 C (derating at 45)		
Storage Temperature				-20~60 C		
Humidity				0~95% (non-condensing)		
Altitude				<2000m		
Noise Emission (Typical)				<30dB		
Self-consumption (Night)				<3W		
DC Connection/Battery Connection				MC4/Phoenix		
Topology				Transformerless		
Cooling Concept				Natural		
Ingress Protection				IP65		
Battery Brand				Pylontech, Alpha ESS, Energy Depot, TSUN		