

SH15/20/25T

Hybrid Three Phase Inverter



FLEXIBLE APPLICATION

- 100~700V wide battery voltage range
- Supports parallel connection with master-slave control
- Provides 100% power to unbalance loads in backup and grid-tied mode



ENERGY INDEPENDENCE

- Seamless transition to backup mode for protection against power outages
- 50A fast charging / discharging for higher consumption
- Support each-phase export power control



SMART MANAGEMENT

- High self-consumption with optimised built-in EMS
- Free online monitoring to enhance energy management
- Remote firmware update and customisable settings



EASY INSTALLATION

- Whole home backup available
- Unique push-in connectors for time-saving installation
- Extra quiet for residential installation

Type designation	SH15T		SH20T	SH25T
Input (DC)				
Recommended max. PV input power	30000 W		40000 W	50000 W
Max. PV input voltage			1000 V	
Min. PV input voltage / Startup input voltage			150 V / 180 V	
Rated PV input voltage			600 V	
MPP voltage range			150 V - 950 V	
No. of independent MPP inputs			3	
No. of PV strings per MPPT	2 / 1 / 1		2 / 2 / 1	
Max. PV input current	64A(32A / 16A / 16 A)		80A (32A/32A/16A)	
Max. DC short-circuit current	80A(40A / 20A /20A)		100A (40A/40A/20A)	
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	30000 W / 15000 W		30000 W / 20000 W	30000 W / 25000 W
Input / Output (AC)				
Max. AC input power	15000 W		20000 W	25000 W
Max. AC power from grid			43000 W / 43000 VA(25°C)	
Rated AC output power	15000 W		20000 W	25000 W
Max. AC output apparent power	15000 VA		20000 VA	25000 VA
Rated AC output apparent power	15000 VA		20000 VA	25000 VA
Rated AC ouput current	21.8 A		29 A	36.3 A
Max. AC output current	22.8 A		30.4 A	37.9 A
Rated AC voltage	3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 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				
Rated voltage	3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 415 V			
Frequency range	50Hz / 60Hz			
Total hamonic factor output voltage(Linear load)	2%			
Back-up switching 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,10s		32000 W/ 32000 VA,10s	36500 W/ 36500 VA,10s
Rated output power for backup load during on grid mode	43000 W / 43000 VA (25°C)			
Efficiency				
Max. efficiency / European efficiency	98.1 % / 97.7 %			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 recovery function	Yes			
On-grid parallel	Master-slave mode			
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 °C - 60 °C			
Allowable relative humidity range(Non-condensing)	0% - 100%			
Cooling method	Natural convection			Fan cooling
Max. operating altitude	2000m			
Noise(Typical)	35 dB (A)			50 dB (A)
Display	LED			
Communication	RS485, WLAN, Ethernet, CAN, 4 × DI, 2 × DO			
DC connection type	MC4 (PV) / Plug and play connector (battery)			
AC connection type	Plug and play connector			
Compliance	IEC / EN 62109, IEC / EN 61000-6, EN 62477-1, IEC 61727, IEC62920, EN55011, CISPR 11, VDE-AR-N-4105, AS/NZS 4777.2:2020, EN50549-1, NRS 097-2-1, TOR Type A+R25, CEI 0-21,PEA,MEA			

SBR064/096/128/160/ 192/224/256

High Voltage LFP Battery



HIGH-PERFORMANCE

- Up to 30 A continuous charging and discharging current with high efficiency
- Up to 100% usable energy



SAFETY

- Lithium iron phosphate Battery
- Multi-stages protection design and extensive safety certification



FLEXIBILITY

- Extendable during lifetime
- Support 2-8 modules per unit, 6.4–25.6 kWh capacity range



EASY INSTALLATION

- Compact and Light, single person installation
- Plug and Play, no cables needed between battery modules



Type designation	SBR064 *	SBR096	SBR128	SBR160	SBR192	SBR224	SBR256
Technical properties	 2 modules	 3 modules	 4 modules	 5 modules	 6 modules	 7 modules	 8 modules
System data							
Battery type	LiFePO4 Prismatic Cell						
Battery module	3.2 kWh, 33 kg						
Energy (useable) **	6.4 kWh	9.6 kWh	12.8 kWh	16 kWh	19.2 kWh	22.4 kWh	25.6 kWh
Nominal voltage	128 V	192 V	256 V	320 V	384 V	448 V	512 V
Operating voltage	108 V – 146 V	162 V – 219 V	216 V – 292 V	270 V – 365 V	324 V – 438 V	378 V – 511 V	432 V – 584 V
Max. charging/discharging current: continuous ***	30 A						
Depth of discharge	Max. 100 % DOD (settable)						
Short circuit current	3500 A						
Display	SOC indicator, Status indicator						
Communication interface	CAN						
Protection							
Over/under voltage protection	Yes						
Over current protection	Yes						
Over/under temperature protection	Yes						
DC breaker	Yes						
General data							
Dimensions (W*H*D)	625*545*330 mm	625*545*330 mm	625*675*330 mm	625*805*330 mm	625*935*330 mm	625*1065*330 mm	625*1195*330 mm
Weight	89 kg	114 kg	147 kg	180 kg	213 kg	246 kg	279 kg
Installation location	Indoor / Outdoor						
Mounting method	Floor stand						
Operating ambient temperature range	Charge: 0 °C - 50 °C Discharge: -20 °C - 50 °C						
Degree of protection	IP55						
Allowable relative humidity range	0% - 95% non - condensing						
Max. operating altitude	Max. 4000 m						
Cooling method	Natural convection						
Certificates	CE, CEC, IEC 62619, IEC 62040, UN38.3, VDE 2510-50, IEC 62477, IEC 63056, IEC 61000, UKCA						

* SBR064 consists of 2 battery modules and 1 empty module.

** Test conditions: 25 °C, 100 % depth of discharge (DOD), 0.2C charge & discharge.

*** The maximum charging/discharging current of SBR064 is 20A when used with SHRT series inverter.



Tiger Neo N-type 60HL4-(V) 460-480 Watt MONO-FACIAL MODULE

N-Type

Positive power tolerance of 0~+3%

IEC61215(2016), IEC61730(2016)

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018

Occupational health and safety management systems



Key Features



SMBB Technology

Better light trapping and current collection to improve module power output and reliability.



PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



Durability Against Extreme Environmental Conditions

High salt mist and ammonia resistance.



Hot 2.0 Technology

The N-type module with Hot 2.0 technology has better reliability and lower LID/LETID.

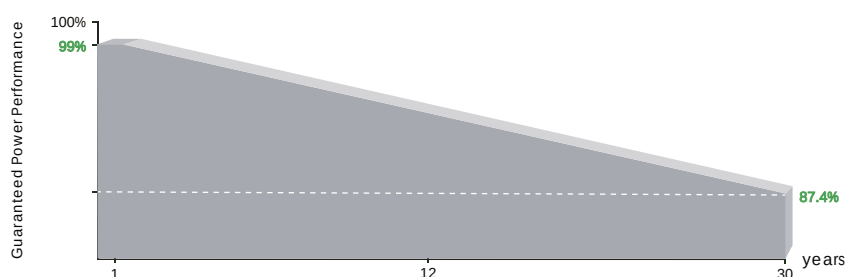


Enhanced Mechanical Load

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).



LINEAR PERFORMANCE WARRANTY

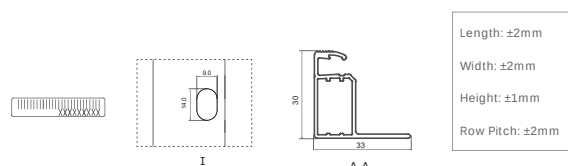
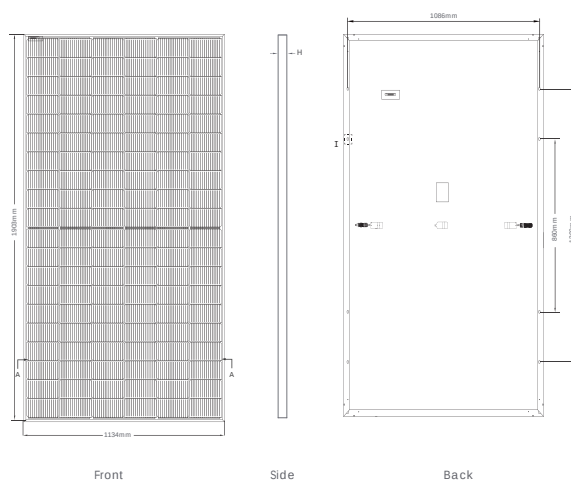


12 Year Product Warranty

30 Year Linear Power Warranty

0.40% Annual Degradation Over 30 years

Engineering Drawings

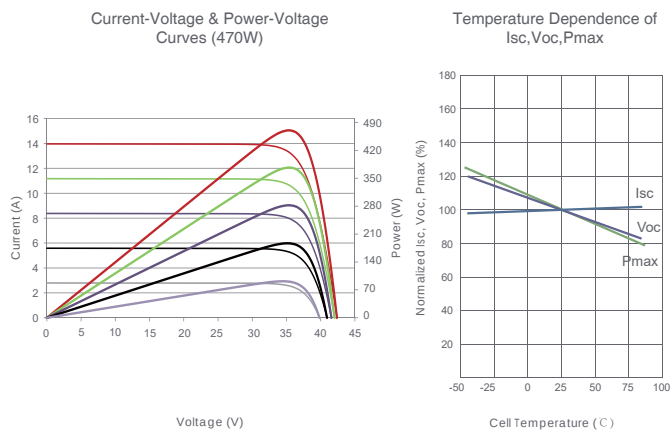


Packaging Configuration

(Two pallets = One stack)

36pcs/pallets, 72pcs/stack, 864pcs/ 40'HQ Container

Electrical Performance & Temperature Dependence



Mechanical Characteristics

Cell Type	N type Mono-crystalline
No. of cells	120 (6×20)
Dimensions	1903×1134×30mm (74.92×44.65×1.18 inch)
Weight	24.2 kg (53.35 lbs)
Front Glass	3.2mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Output Cables	TUV 1×4.0mm ² (+): 400mm, (-): 200mm or Customized Length

SPECIFICATIONS

Module Type	JKM460N-60HL4 JKM460N-60HL4-V		JKM465N-60HL4 JKM465N-60HL4-V		JKM470N-60HL4 JKM470N-60HL4-V		JKM475N-60HL4 JKM475N-60HL4-V		JKM480N-60HL4 JKM480N-60HL4-V	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	460Wp	346Wp	465Wp	350Wp	470Wp	353Wp	475Wp	357Wp	480Wp	361Wp
Maximum Power Voltage (Vmp)	34.72V	32.60V	34.89V	32.77V	35.05V	32.94V	35.21V	33.10V	35.38V	33.27V
Maximum Power Current (Imp)	13.25A	10.61A	13.33A	10.67A	13.41A	10.73A	13.49A	10.79A	13.57A	10.85A
Open-circuit Voltage (Voc)	42.05V	39.94V	42.22V	40.10V	42.38V	40.25V	42.54V	40.41V	42.71V	40.57V
Short-circuit Current (Isc)	13.99A	11.29A	14.07A	11.36A	14.15A	11.42A	14.23A	11.49A	14.31A	11.55A
Module Efficiency STC (%)	21.32%		21.55%		21.78%		22.01%		22.24%	
Operating Temperature(°C)	-40°C~+85°C									
Maximum system voltage	1000/1500VDC (IEC)									
Maximum series fuse rating	25A									
Power tolerance	0~+3%									
Temperature coefficients of Pmax	-0.30%/°C									
Temperature coefficients of Voc	-0.25%/°C									
Temperature coefficients of Isc	0.046%/°C									
Nominal operating cell temperature (NOCT)	45±2°C									

*STC: Irradiance 1000W/m² Cell Temperature 25°C AM=1.5
NOCT: Irradiance 800W/m² Ambient Temperature 20°C AM=1.5 Wind Speed 1m/s