SG320HX-20

Multi-MPPT String Inverter for 1500 Vdc System



HIGH YIELD

- Up to 6 MPPTs with max. efficiency 99%
- 75A per MPPT, adapt to different PV module
- Max 30 inputs,adapt to different DC/AC ratios

LOW COST

- Q at night function, save investment
- Power line communication (PLC)
- Smart IV Curve diagnosis,active O&M

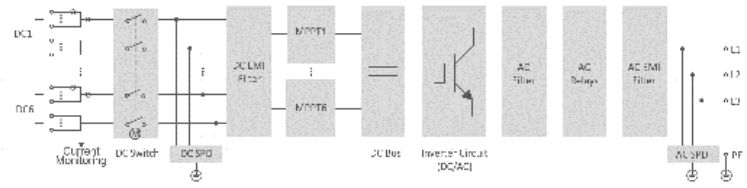
PROVEN SAFETY

- Intelligent DC switch, automatically cut off the fault
- 24h real-time AC and DC insulation monitoring
- IP66 protection, C5 design, adapt to all kinds of harsh environment
- Smart-cooled and dedusted fan with IP68 protection, low temperature rise, long lifecycle

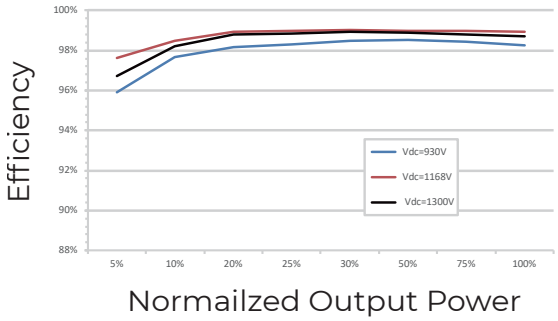
GRID-FRIENDLY

- SCR≥1.1 stable operation in extremely weak grid
- Fastest Reactive power response time 30ms
- Compliant with global grid code

CIRCUIT DIAGRAM



EFFICIENCY CURVE



© 2025 Sungrow Power Supply Co., Ltd. All rights reserved. Subject to change without notice. Version 8

SUNGROW
Clean power for all

Type designation	SG320HX-20
Input (DC)	
Max. PV input voltage	1500 V
Min. PV input voltage / Startup input voltage	500 V / 550 V
Nominal PV input voltage	1080 V
MPP voltage range	500 V – 1500 V
No. of independent MPP inputs	6
Max. number of input connector per MPPT	5
Max. PV input current	6 * 75 A
Max. DC short-circuit current per MPPT	6 * 125 A
Output (AC)	
AC output power	352 kVA @ 30 ℃ / 320 kVA @ 40 ℃ / 300 kVA @ 51 ℃ / 301.8 kVA @ 50 ℃
Max. AC output current	254 A
Nominal AC voltage	3 / PE, 800 V
AC voltage range	640 V – 920 V
Nominal grid frequency / Grid frequency range	50 Hz / 45 Hz – 55 Hz, 60 Hz / 55 Hz – 65 Hz
THD *	< 1 % (Rated Condition)
DC current injection	< 0.5 % In
Power factor at nominal power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / Connection phases	3 / 3
Efficiency	
Max. efficiency / European efficiency	99.02 % / 98.8 %
Protection	
DC reverse connection protection	Yes
AC short circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
Ground fault monitoring	Yes
DC switch / AC switch	Yes / No
PV string current monitoring	Yes
Q at night function	Yes
Anti-PID and PID recovery function	Optional
Surge protection	DC Type II / AC Type II
General data	
Dimensions (W*H*D)	1148 mm * 779 mm * 371 mm
Weight **	≤ 106 kg
Isolation method	Transformerless
Degree of protection	IP66
Power consumption at night	< 6 W
Operating ambient temperature range ***	-30 ℃ to 60 ℃
Allowable relative humidity range	0 % – 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	5000 m (> 4000 m derating)
Display	LED, Bluetooth+APP
Communication	RS485 / PLC
DC connection type	Evo2
AC connection type	Support OT/DT terminal (Max. 400 mm²)
Compliance	IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, EN 50549-2
Grid Support	LVRT, HVRT, active & reactive power control and power ramp rate control, Q-U control, P-f control

* Rated Condition: PV input voltage 1080V, AC voltage 800V, AC output power 300kW.
** Due to the multi-supplier for some key components, the actual weight may have a ± 8 % deviation, please refer to the actually delivered product.
*** The ambient temperature is determined as the average temperature obtained from at least four evenly distributed temperature monitoring points located at a distance of 1 meter from the equipment, at a height halfway up the machine. The temperature sensors must be shielded from airflow, thermal radiation, and rapid temperature fluctuations to prevent display inaccuracies.

© 2025 Sungrow Power Supply Co., Ltd. All rights reserved. Subject to change without notice. Version 8