

9 Technical Specifications

9.1 SUN2000-(5K-12K)-MAP0-ZH Technical Specifications

Efficiency

Item	SUN2000-5K-MAP0-ZH	SUN2000-6K-MAP0-ZH	SUN2000-8K-MAP0-ZH	SUN2000-10K-MAP0-ZH	SUN2000-12K-MAP0-ZH
Maximum efficiency ^a	98.40%	98.60%	98.60%	98.60%	98.60%
Efficiency in China ^a	96.50%	96.80%	97.30%	97.40%	97.50%
Note a: The efficiency test condition is three-phase three-wire mode.					

Input

Item	SUN2000-5K-MAP0-ZH	SUN2000-6K-MAP0-ZH	SUN2000-8K-MAP0-ZH	SUN2000-10K-MAP0-ZH	SUN2000-12K-MAP0-ZH
Recommended maximum input DC power	9000 W	11000 W	14600 W	18000 W	22000 W
Maximum input voltage ^b	1100 V				

Item	SUN2000-5K-MAP0-ZH	SUN2000-6K-MAP0-ZH	SUN2000-8K-MAP0-ZH	SUN2000-10K-MAP0-ZH	SUN2000-12K-MAP0-ZH
Maximum input current per MPPT	16 A				
Maximum short-circuit current per MPPT	22 A				
Minimum startup voltage	160 V				
MPPT voltage range	160–1000 V				
Full-load MPPT voltage range	400–850 V				
Rated input voltage	600 V				
Maximum number of inputs	2				
Number of MPPTs	2				
Rated battery voltage	600 V DC				
Battery voltage range	600–980 V DC				
Maximum battery current	20 A				
Battery type	Li-ion				

Item	SUN2000-5K-MAP0-ZH	SUN2000-6K-MAP0-ZH	SUN2000-8K-MAP0-ZH	SUN2000-10K-MAP0-ZH	SUN2000-12K-MAP0-ZH
Note b: The maximum input voltage is the maximum DC input voltage that the inverter can withstand. If the input voltage exceeds this value, the inverter may be damaged.					

Output

Item	SUN2000-5K-MAP0-ZH	SUN2000-6K-MAP0-ZH	SUN2000-8K-MAP0-ZH	SUN2000-10K-MAP0-ZH	SUN2000-12K-MAP0-ZH
Rated output power	5000 W	6000 W	8000 W	10000 W	12000 W
Maximum apparent power	5500 VA	6600 VA	8800 VA	11000 VA	13200 VA
Maximum active power (cosφ = 1)	5500 W	6600 W	8800 W	11000 W	13200 W
Rated output voltage	220 V/380 V, 3W/N+PE 230 V/400 V, 3W/N+PE 240 V/415 V, 3W/N+PE				
Maximum output voltage at long-term operation	Refer to the local power grid standards.				
Rated output current	7.6 A/380 V 7.2 A/400 V 6.9 A/415 V	9.1 A/380 V 8.7 A/400 V 8.3 A/415 V	12.1 A/380 V 11.6 A/400 V 11.1 A/415 V	15.2 A/380 V 14.5 A/400 V 13.9 A/415 V	18.2 A/380 V 17.3 A/400 V 16.7 A/415 V
Maximum output current	8.3 A/380 V 8 A/400 V 7.7 A/415 V	10 A/380 V 9.6 A/400 V 9.2 A/415 V	13.3 A/380 V 12.8 A/400 V 12.2 A/415 V	16.7 A/380 V 15.9 A/400 V 15.3 A/415 V	20.2 A/380 V 19.1 A/400 V 18.5 A/415 V

Item	SUN2000-5K-MAP0-ZH	SUN2000-6K-MAP0-ZH	SUN2000-8K-MAP0-ZH	SUN2000-10K-MAP0-ZH	SUN2000-12K-MAP0-ZH
Maximum input current	7.6A	9.1A	12.1A	15.2A	18.2A
Output voltage frequency	50 Hz/60 Hz				
Power factor	0.8 leading ... 0.8 lagging				
Output DC component (DCI)	< 0.25% of the rated output				
Maximum total harmonic distortion (AC THDi)	< 3% (rated conditions)				

Off-grid Output

Item	SUN2000-5K-MAP0-ZH	SUN2000-6K-MAP0-ZH	SUN2000-8K-MAP0-ZH	SUN2000-10K-MAP0-ZH	SUN2000-12K-MAP0-ZH
Rated output voltage	220 V/380 V, 3W/N+PE 230 V/400 V, 3W/N+PE 240 V/415 V, 3W/N+PE				
Rated output frequency	50 Hz/60 Hz				
Rated output power	5000 W	6000 W	8000 W	10000 W	12000 W
Long-term load power	5500 W	6600 W	8800 W	11000 W	13200 W

Item	SUN2000-5K-MAP0-ZH	SUN2000-6K-MAP0-ZH	SUN2000-8K-MAP0-ZH	SUN2000-10K-MAP0-ZH	SUN2000-12K-MAP0-ZH
Overload output power	110% load (three-phase): long-term operation 150% load (three-phase): 5 minutes 150% load (single-phase): 5 minutes 200% load (three-phase): 10 seconds			110% load (three-phase): long-term operation 150% load (three-phase): 1 minute 150% load (single-phase): 5 minutes 200% load (three-phase): 10 seconds	

Protection

Item	SUN2000-5K-MAP0-ZH	SUN2000-6K-MAP0-ZH	SUN2000-8K-MAP0-ZH	SUN2000-10K-MAP0-ZH	SUN2000-12K-MAP0-ZH
Overvoltage category	PV II/AC III				
Input DC switch	Supported				
Anti-islanding protection	Supported				
Output overcurrent protection	Supported				
Input reverse connection protection	Supported				
DC surge protection	TYPE II				
AC surge protection	Yes, compatible with TYPE II protection class according to EN/IEC 61643-11				
Insulation resistance detection	Supported				

Item	SUN2000-5K-MAP0-ZH	SUN2000-6K-MAP0-ZH	SUN2000-8K-MAP0-ZH	SUN2000-10K-MAP0-ZH	SUN2000-12K-MAP0-ZH
Residual current monitoring unit (RCMU)	Supported				

Display and Communication

Item	SUN2000-5K-MAP0-ZH	SUN2000-6K-MAP0-ZH	SUN2000-8K-MAP0-ZH	SUN2000-10K-MAP0-ZH	SUN2000-12K-MAP0-ZH
Display	LED indicators; WLAN+app				
WLAN-FE Dongle	Supported				
4G Smart Dongle	Supported				
EMMA	Supported				
SmartGuard	Supported				
RS485 communication	Supported				
Built-in WLAN	Supported				
DC MBUS	Supported				
AFCI	Supported				
PID recovery	Supported				

General Specifications

Item	SUN2000-5K-MAP0-ZH	SUN2000-6K-MAP0-ZH	SUN2000-8K-MAP0-ZH	SUN2000-10K-MAP0-ZH	SUN2000-12K-MAP0-ZH
Dimensions (W x H x D)	490 mm x 460 mm x 130 mm				
Net weight	≤ 21 kg				
Noise	≤ 29 dB (typical working condition)				
Operating temperature	-25°C to +60°C				
Relative humidity	0-100% RH				
Cooling mode	Natural cooling				
Maximum operating altitude	4000 m (derated when the altitude is greater than 2000 m)				
Storage temperature	-40°C to +70°C				
IP rating	IP66				
Topology	Transformerless				

Wireless Communication Parameters

Item	Inverter Built-in WiFi
Frequency	2400-2483.5 MHz
Protocols and standards	WLAN 802.11b/g/n
Bandwidth	≤ 20 MHz
Maximum transmit power	≤ 20 dBm EIRP