

SMART ENERGY CONTROLLER

SUN5000-17/25K-MB0



Saferoof

Multiple-protection technologies
always keeps rooftop safe



Higher Yields

Up to 30% More Energy
with Optimizer ¹



Battery Ready

2 Battery Terminals;
Compatible with LUNA2000-S0

SUN5000-17/25K-MB0

Technical Specification

Technical Specification	SUN2000-17K- MB0	SUN2000-25K- MB0
Efficiency		
Max. efficiency	98.4%	98.4%
European weighted efficiency	98.1%	98.2%
DC Input		
Recommended max. PV power	22,500 Wp	37,500 Wp
Max. input voltage ¹	1,100 V	
Max. input current per MPPT	30 A (two strings) / 20 A (single string)	
Max. short-circuit current	40 A	
Start-up voltage	200 V	
MPPT operating voltage range ²	200 V ~ 1,000 V	
Full-load MPPT voltage range	410 V ~ 800 V	530 V ~ 800 V
Rated input voltage	600 V	
Max. number of inputs	4	
Number of MPP trackers	2	
Smart String Energy Storage System Terminal		
Compatible Smart String ESS	LUNA2000-5/10/15-S0	
Number of terminals	2	
Max. charging power	21 kW (Single string) / 25 kW (Two strings)	
Max. discharge power	18.7 kW	25.0 kW
Max. operating current	26.25 A (per string)	
Operating voltage range	600 V ~ 980 V	
Output		
Rated output power	17,000 W	25,000 W
Max. apparent power	18,700 VA	27,500 VA
Max. active power (cosφ = 1)	18,700 W	27,500 W
Rated output voltage	220 Vac / 380 Vac, 230 Vac / 400 Vac, 240 Vac / 415 Vac; 3 W / N + PE	
Rated output current	25.8 A / 380 Vac	38.0 A / 380 Vac
	24.5 A / 400 Vac	36.1 A / 400 Vac
	23.7 A / 415 Vac	34.8 A / 415 Vac
	28.6 A / 380 Vac	42.0 A / 380 Vac
Max. output current	27.1 A / 400 Vac	39.9 A / 400 Vac
	26.1 A / 415 Vac	38.5 A / 415 Vac
Rated AC grid frequency	50 Hz / 60 Hz	
Adjustable power factor	0.8 leading ... 0.8 lagging	
Max. total harmonic distortion	≤ 3%	
Feature & Protection		
Overvoltage category	PV II / AC III	
Input-side disconnection device	Yes	
Anti-islanding protection	Yes	
AC over-current protection	Yes	
DC reverse-polarity protection	Yes	
DC surge protection	TYPE II	
AC surge protection	Yes, compatible with TYPE II protection class according to EN/IEC 61643-11	
DC insulation resistance detection	Yes	
Residual current monitoring unit	Yes	
Arc fault protection	Yes	
General Data		
Operating temperature range	-25 ° C ~ +60 ° C (-13 ° F ~ 140 ° F)	
Relative humidity	0 % RH ~ 100 % RH	
Max. operating altitude	4,000 m (13,123 ft.) (Derating above 2,000 m)	
Cooling	Smart air cooling	
Display	LED indicators, Integrated WLAN + FusionSolar APP	
Communication	RS485; WLAN / Ethernet via Smart Dongle-WLAN-FE (Optional) 4G / 3G / 2G via Smart Dongle-4G (Optional); EMMA (Optional)	
Weight	21 kg	
Dimensions (W x H x D)	546 x 460 x 228 mm (21.5 x 18.1 x 9.0 inch)	
Protection level	IP66	
Max. number of paralleled unit (with Smart String ESS)	3	
Optimizer Compatibility		
Compatible optimizer	SUN2000-450W-P2, SUN2000-600W-P, MERC-1100W-P, MERC-1300W-P	
Certificates	Standards Compliance (More Available Upon Request)	
Grid connection standards	EN/IEC62109-1, EN/IEC62109-2	
	IEC61727, IEC62116, IEC61683, EN50530, ABNT NBR 16149/16150, MEA/PEA, G99, IRR-DCC-MV/IRR-TIC, Philippine Grid Code Resolution No. 07, NRS 097-2-1, EN50549-1, VDE4105, UTE15-712-1/VFR 2019, UNE217002, NTS631, RD244(UNE217001), PPDS, ROGA, TOR Erzeuger, CEI 0-21:2020-12 V1, CEI-016, C10/C11, EN50549-2, VDE4110	

*1 The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter.

*2 Any DC input voltage beyond the operating voltage range may result in inverter improper operating.

Disclaimer: the preceding values are measured by an internal laboratory of Huawei in a specific environment. The actual values may vary with products, software versions, usage conditions, and environmental factors.