

SUN2000-5/6/8/10/12KTL-M1

Smart PV Controller



Active Safety

AI Powered Arcing Protection



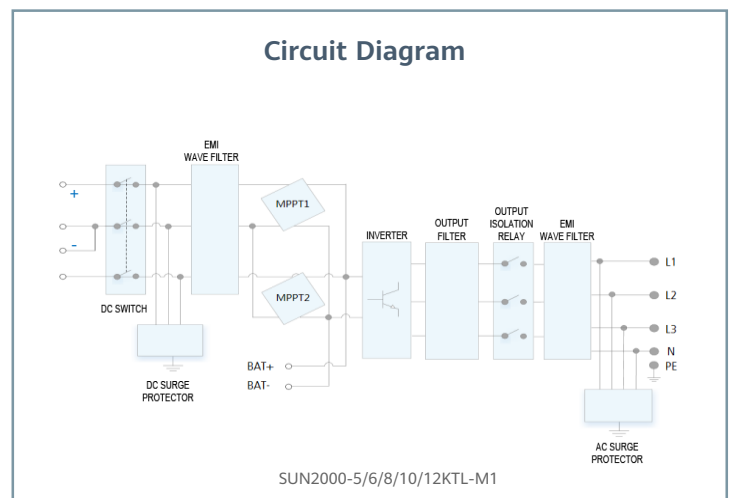
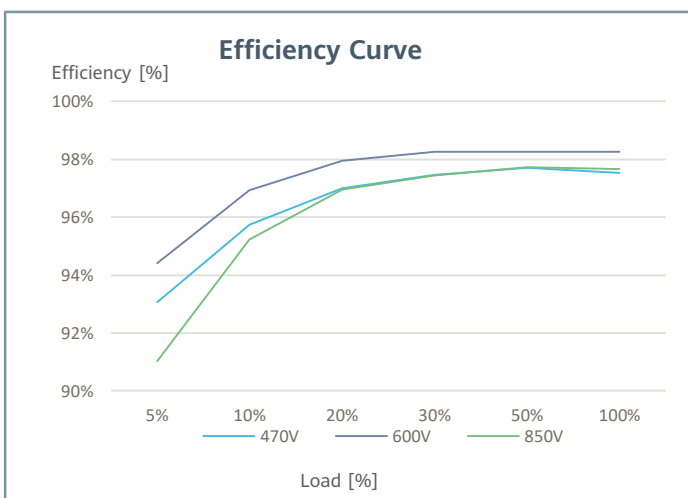
Higher Yields

Up to 30% More Energy with Optimizer



Flexible Communication

WLAN, Fast Ethernet, 4G
Communication Supported



SUN2000-5/6/8/10/12KTL-M1 Technical Specification

Technical Specification	SUN2000-5KTL-M1	SUN2000-6KTL-M1	SUN2000-8KTL-M1	SUN2000-10KTL-M1	SUN2000-12KTL-M1
Efficiency					
Max. efficiency	98.4%	98.6%	98.6%	98.6%	98.6%
European weighted efficiency	97.5%	97.7%	98.0%	98.1%	98.2%
Input(inverter)					
Recommended max. PV power ¹	7500 Wp	9000 Wp	12000 Wp	15000 Wp	18000 Wp
Max. input voltage ²	1100 V				
Operating voltage range ³	140 V ~ 980 V				
Start-up voltage	200 V				
Rated input voltage	600 V				
Max. input current per MPPT	13.5 A				
Max. short-circuit current	19.5 A				
Number of MPP trackers	2				
Max. number of inputs	2				
Input(energy storage battery)					
Adaptive energy storage system	Huawei Intelligent String Energy Storage System 5kWh – 30kWh				
Operating voltage range	600 V ~ 980 V				
Max. operating current	16.7 A				
Max. charging power	10000 W				
Max. discharge power	5500 W	6600 W	8800 W	10000 W	10000 W
Output					
Adapt to the power grid	three-phase				
Rated output power	5000 W	6000 W	8000 W	10000 W	12000 W
Max. output apparent power	5500 VA	6600 VA	8800 VA	11000 VA	12000 VA
Rated output voltage	220 Vac / 380 Vac, 230 Vac / 400 Vac, 3W / N+PE				
Output voltage frequency	50 Hz / 60 Hz				
Max. output current	8.5 A	10.1 A	13.5 A	16.9 A	18.4 A
power factor	0.8 leading ... 0.8 lagging				
Max. total harmonic distortion	≤ 3 %				
Off grid power output	Yes (via Backup Box-B1)				
Output (Off grid Box Backup Box-B1)					
Max. output apparent power	3300 VA				
Rated output voltage	220 V / 230 V				
Max. output current	15 A				
power factor	0.8 leading ... 0.8 lagging				
Protection&Features					
Input DC switch	yes				
Anti islanding protection	yes				
Input reverse protection	yes				
Insulation impedance detection	yes				
DC surge protection	Yes, equivalent to the TYPE II protection level in EN/IEC 61643-11				
AC surge protection	Yes, equivalent to the TYPE II protection level in EN/IEC 61643-11				
Residual current detection	yes				
AC overcurrent protection	yes				
AC short circuit protection	yes				
AC overvoltage protection	yes				
AFCI DC arc protection	yes				
Remote scheduling of dry nodes	yes				
Built-in PID repair ⁴	yes				
Grid AC reverse charging	yes				
General Data					
Operation temperature range	-25~+60 ° C (derated at rated load of 5-10KTL models above 45 , derated at rated load of 12KTL models above 40)				
Relative humidity	0 %RH ~ 100 %RH				
Max. operating altitude	4000 m (Derating above 2000 meters)				
Cooling	natural convection				
Display	LED indicator light; built-in WLAN + FusionSolar APP				
Communication	RS485 ; 4G intelligent communication stick WLAN FE intelligent communication stick				
Weight (with mounting plate)	17 kg				
Dimensions (W x H x D)	525 x 470 x 166 mm				
Degree of protection	IP65				
Optimizer Compatibility					
DC MBUS compatible optimizer	SUN2000-450W-P				
Standard Compliance (more available upon request)					
Safety	EN/IEC 62109-1, EN/IEC 62109-2				
Grid connection standards	NB/T 32004				

¹ Inverter max input PV power is 40,000 Wp when long strings are designed and fully connected with SUN2000-450W-P power optimizers.

² The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter.

³ Any DC input voltage beyond the operating voltage range may result in inverter improper operating.

⁴ SUN2000-12~20KTL-M2 raises potential between PV- and ground to above zero through integrated PID recovery function to recover module degradation from PID. Supported module types include: P-type (mono, poly)