

SUN2000-12/15/17/20/25KTL-M5 Smart PV Controller



Active Safety

AI Powered Arcing Protection



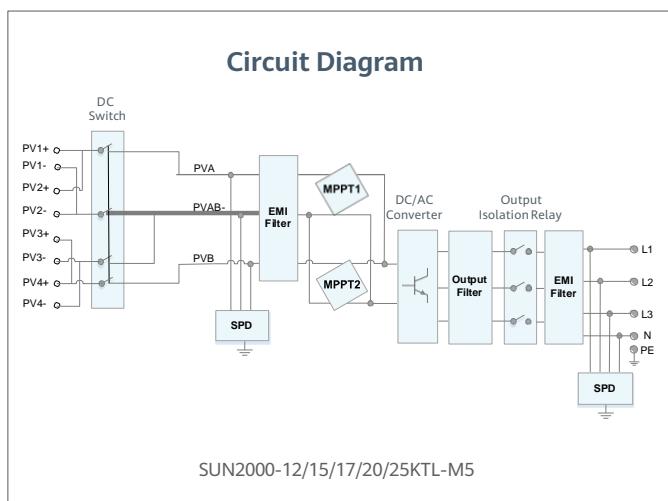
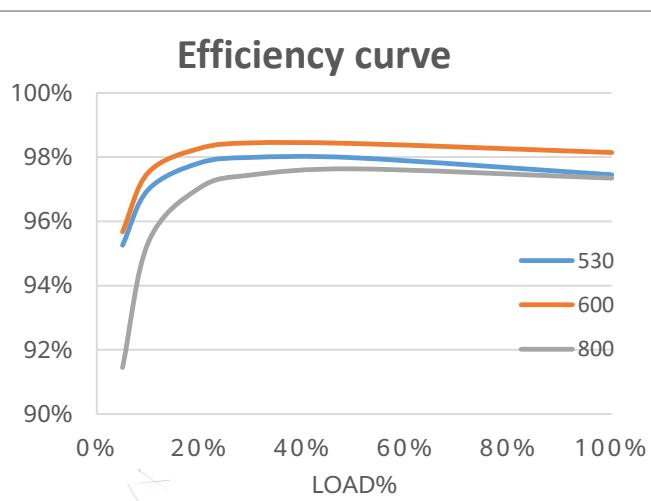
Higher Yields

Up to 30% More Energy with Optimizer



Flexible Communication

WLAN, Fast Ethernet, 4G
Communication Supported



Technical Specification

Technical Specification	SUN2000 -12KTL-M5	SUN2000 -15KTL-M5	SUN2000 -17KTL-M5	SUN2000 -20KTL-M5	SUN2000 -25KTL-M5
Efficiency					
Max. efficiency	98.4%	98.4%	98.4%	98.4%	98.4%
European weighted efficiency	97.9%	98.0%	98.1%	98.1%	98.2%
Input					
Recommended max. PV power ¹	18,000 Wp	22,500 Wp	25,500 Wp	30,000 Wp	37,500 Wp
Max. input voltage ²			1100 V		
Full-load MPPT voltage range	370V~800V	410V~800V	440V~800V	480V~800V	530~800V
MPPT Operating voltage range ³			200 V ~ 1000 V		
Start-up voltage			200 V		
Rated input voltage			600 V		
Max. input current per MPPT			30 A (two string) / 20 A (single string)		
Max. short-circuit current			40 A		
Number of MPP trackers			2		
Max. number of inputs			4		
Output					
Grid connection			Three phase		
Rated output power	12,000 W	15,000 W	17,000 W	20,000 W	25,000 W
Max. apparent power	13,200 W	16,500 VA	18,700 VA	22,000 VA	27,500 VA
Rated output voltage		220 Vac / 380 Vac, 230 Vac / 400 Vac, 239.6 Vac / 415Vac, 3W + N + PE			
Rated AC grid frequency			50 Hz / 60 Hz		
Max. output current	18.2A/380Vac 17.3A/400Vac 16.7A/415Vac	25.2A/380Vac 23.9A/400Vac 23.1A/415Vac	28.6A/380Vac 27.1A/400Vac 26.1A/415Vac	33.6A/380Vac 31.9A/400Vac 30.8A/415Vac	42.0A/380Vac 39.9A/400Vac 38.5A/415Vac
Adjustable power factor			0.8 leading ... 0.8 lagging		
Max. total harmonic distortion			≤ 3 %		
Features & Protections					
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		
String fault detection			Yes		
DC surge protection			TYPE II		
AC surge protection			CLASS II		
Residual current monitoring unit			Yes		
Arc fault protection			Yes		
Ripple control ripple control			Yes		
Integrated PID recovery ⁴			Yes		
General Data					
Operation temperature range			-25 ~ + 60 °C (-13 °F ~ 140 °F)		
Relative humidity			0 % RH ~ 100% RH		
Max. operating altitude			0 ~ 4,000 m (13,123 ft.) (Derating above 2000 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)		
Weight (with mounting plate)			21kg (46.4 lb)		
Dimensions (W x H x D) (incl. mounting plate)			546 x 460 x 228mm (21.5 x 18.1 x 9.0 inch)		
Degree of protection			IP66		
Optimizer Compatibility					
DC MBUS compatible optimizer			SUN2000-450W-P, SUN2000-450W-P2, SUN2000-600W-P, SUN2000-1300W-P, SUN2000-1100W-P		
Standard Compliance (more available upon request)					
Safety			EN/IEC 62109-1, EN/IEC 62109-2		
Grid connection standards			G99, EN 50549, CEI 0-21, CEI 0-16, VDE-AR-N-4105, VDE-AR-N-4110, C10/11, ABNT, VFR 2019, UNE 217001, UNE 217002, RD 244, TOR D4, IEC61727, IEC62116		

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)