

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



Active Safety

AI Powered Arcing Protection



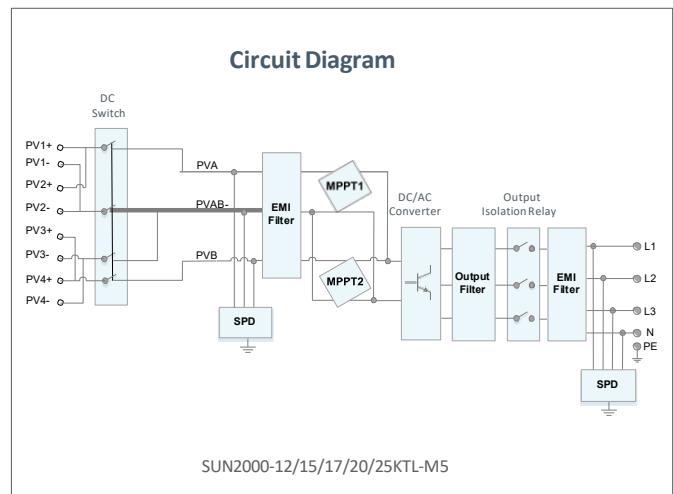
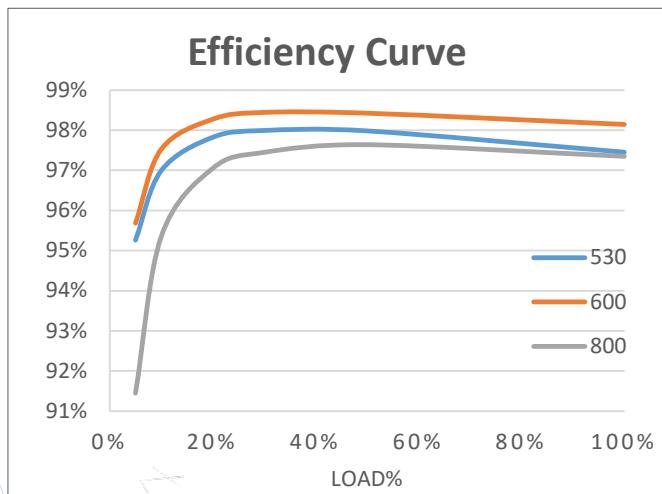
Higher Yields

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 1100 V	30,000 Wp	37,500 Wp
Max. input voltage ²	370V~800 V	410V~800 V	440V~800 V	480V~800 V	530~800 V
Full-load MPPT voltage range			200 V ~ 1000 V		
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 VA	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	18.2 A / 380 Vac 17.3 A / 400 Vac 16.7 A / 415 Vac	25.2 A / 380 Vac 23.9 A / 400 Vac 23.1 A / 415 Vac	28.6 A / 380 Vac 27.1 A / 400 Vac 26.1 A / 415 Vac	33.6 A / 380 Vac 31.9 A / 400 Vac 30.8 A / 415 Vac	42.0 A / 380 Vac 39.9 A / 400 Vac 38.5 A / 415 Vac
Adjustable power factor	0.8 leading ... 0.8 lagging				
Max. total harmonic distortion	$\leq 3\%$				
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					
Compatible optimizer	SUN2000-450W-P2, SUN2000-600W-P, MERC-1100W-P, MERC-1300W-P				
Standard Compliance (more available upon request)					
Certificates	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 SUN2000-12~25KTL-M5 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)