



**Active Safety**

AI Powered Arcing Protection



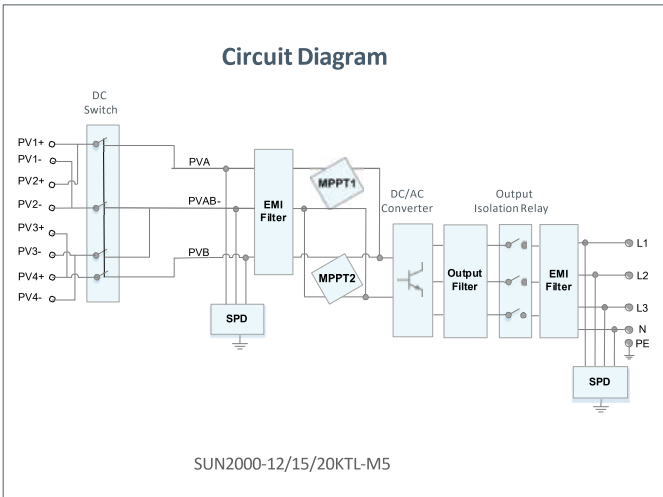
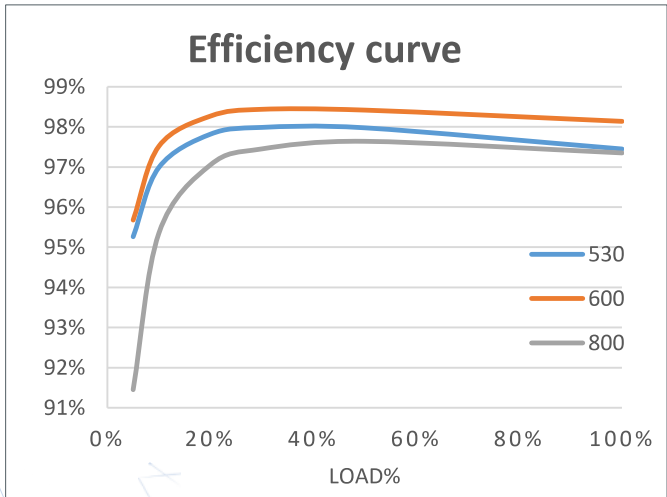
**Higher Yields**

Up to 30% More Energy with Optimizer



**Flexible Communication**

WLAN, Fast Ethernet, 4G  
 Communication Supported



SUN2000-12/15/20KTL-M5

SUN2000-12/15/20KTL-M5  
**Technical Specification**

Technical Specification	SUN2000 -12KTL-M5	SUN2000 -15KTL-M5	SUN2000 -20KTL-M5
<b>Efficiency</b>			
Max. efficiency	98.4%	98.4%	98.4%
European weighted efficiency	97.9%	98.0%	98.1%
<b>Input</b>			
Recommended max. PV power <sup>1</sup>	18,000 Wp	22,500 Wp	30,000 Wp
Max. input voltage <sup>2</sup>		1100 V	
Full-load MPPT voltage range	370V~800V	410V~800V	480V~800V
MPPT Operating voltage range <sup>3</sup>		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	
<b>Output</b>			
Grid connection		Three phase	
Rated output power	12,000 W	15,000 W	20,000 W
Max. apparent power	13,200 W	16,500 VA	22,000 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	25.2A/380Vac 23.9A/400Vac	33.6A/380Vac 31.9A/400Vac
Adjustable power factor	0.8 leading ... 0.8 lagging		
Max. total harmonic distortion	≤ 3 %		
<b>Features &amp; Protections</b>			
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	Yes		
Integrated PID recovery <sup>4</sup>	Yes		
<b>General Data</b>			
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		
<b>Optimizer Compatibility</b>			
DC MBUS compatible optimizer	SUN2000-600W-P, MERC-1100/1300W-P		
<b>Standard Compliance (more available upon request)</b>			
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,MEA		

\*1 Inverter max input PV power will be changed when long strings are designed and fully connected with 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-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)

