

SUN2000-12/15/20KTL-M2 Smart PV Controller



Active Safety

AI Powered Arcing Protection



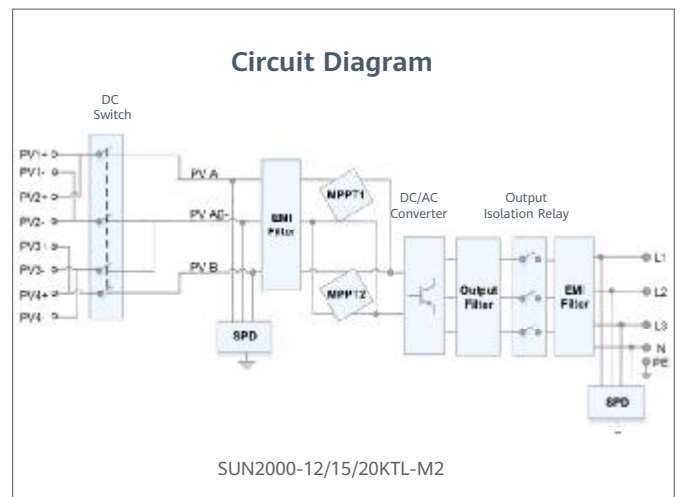
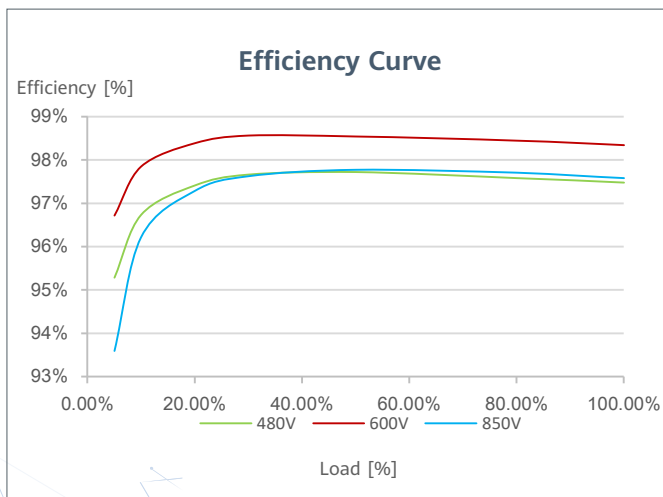
Higher Yields

Up to 30% More Energy with Optimizer



Flexible Communication

WLAN, Fast Ethernet, 4G
Communication Supported



SUN2000-12/15/20KTL-M2
Technical Specification

Technical Specification	SUN2000 -12KTL-M2	SUN2000 -15KTL-M2	SUN2000 -20KTL-M2
Efficiency			
Max. efficiency	98.50%	98.65%	98.65%
European weighted efficiency	98.00%	98.30%	98.30%
Input			
Recommended max. PV power ¹	18,000 Wp	22,500 Wp	30,000 Wp
Max. input voltage ²		1,080 V	
Operating voltage range ³		160 V ~ 950 V	
Start-up voltage		200 V	
Rated input voltage		600 V	
Max. input current per MPPT		27 A	
Max. short-circuit current		39 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	20,000 W
Max. apparent power	13,200 VA	16,500 VA	22,000 VA
Rated output voltage		220 Vac / 380 Vac, 230 Vac / 400 Vac, 3W + N + PE	
Rated AC grid frequency		50 Hz / 60 Hz	
Max. output current	20 A	25.2 A	33.5 A
Adjustable power factor		0.8 leading ... 0.8 lagging	
Max. total harmonic distortion		≤ 3 %	
Features & Protections			
Input-side disconnection device		Yes	
Anti-islanding protection		Yes	
AC over-current protection		Yes	
AC short-circuit protection		Yes	
AC over-voltage 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	
Residual current monitoring unit		Yes	
Arc fault protection		Yes	
Ripple receiver 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		Natural Convection	
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)		25 kg	
Dimensions (W x H x D) (incl. mounting plate)		525 x 470 x 262 mm (20.7 x 18.5 x 10.3 inch)	
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		G98, G99, EN 50549, CEI 0-21, CEI 0-16, VDE-AR-N-4105, VDE-AR-N-4110, AS 4777.2, C10/11, ABNT, VFR 2019, RD 1699, RD 661, PO 12.3, TOR D4, IEC61727, IEC62116, DEWA	

*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)