

Smart Energy Controller SUN2000-3-10KTL-M1 (High Current Version)



Active Safety

AI Powered
Active Arcing Protection



Higher Yields

Upto 30% More Energy
with Optimizer 1



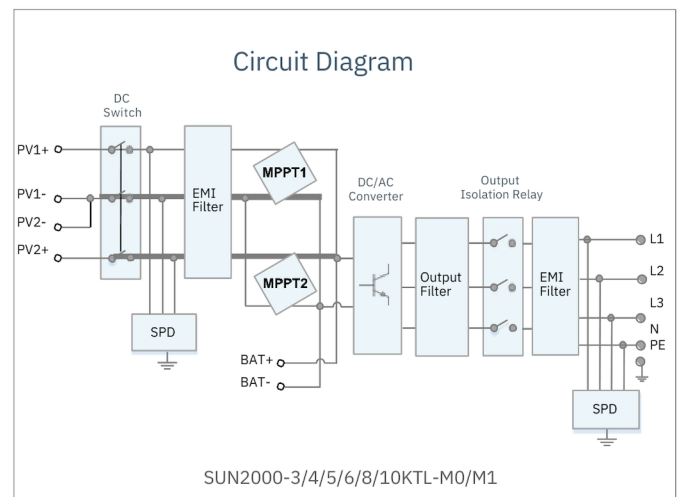
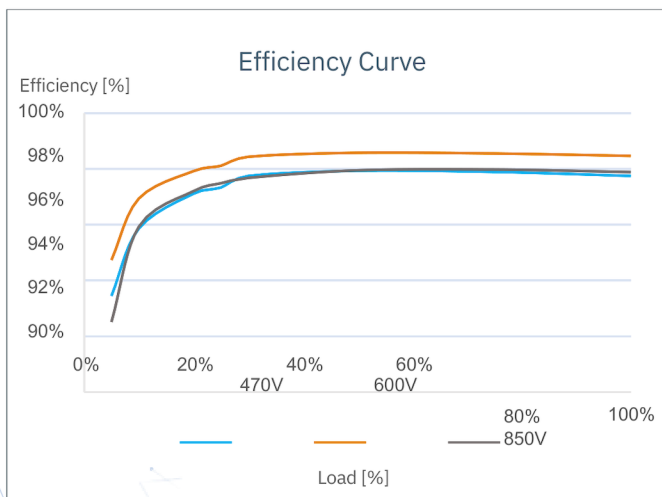
Battery Ready

Plug & Play battery interface 2



Flexible Communication

WLAN, Fast Ethernet, 4G
Communication Supported



*1. Only applicable to SUN2000-3/4/5/6/8/10KTL-M1 smart energy center.
*2. SUN2000-3/4/5/6/8/10KTL-M0 will be compatible with HUAWEI smart string ESS in Q1, 2021.

SUN2000-3/4/5/6/8/10KTL-M1 (High Current Version)
Technical Specification

Technical Specification	SUN2000-3KTL-M1	SUN2000-4KTL-M1	SUN2000-5KTL-M1	SUN2000-6KTL-M1	SUN2000-8KTL-M1	SUN2000-10KTL-M1
Efficiency						
Max. efficiency	98.2%	98.3%	98.4%	98.6%	98.6%	98.6%
European weighted efficiency	96.7%	97.1%	97.5%	97.7%	98.0%	98.1%
Input (PV)						
Recommended max. PV power 1	4,500Wp	6,000Wp	7,500Wp	9,000Wp	12,000 Wp	15,000 Wp
Max. input voltage 2	1,100 V					
Operating voltage range 3	140 V ~ 980 V					
Start-up voltage	200V					
Rated input voltage	600V					
Max. input current per MPPT	13.5 A					
Max. short-circuit current	19.5 A					
Number of MPP trackers	2					
Max. input number per MPP tracker	1					
Input (DC Battery)						
Compatible Battery	HUAWEI SmartString ESS 5kWh~30kWh					
Operating voltage range	600 V ~ 980 V					
Max operating current	16.7 A					
Max charge Power	10,000 W					
Max discharge Power	3,300 W	4,400 W	5,500W	6,600W	8,800 W	10,000 W
Output (On Grid)						
Grid connection	Three-phase					
Rated output power	3,000 W	4,000 W	5,000W	6,000W	8,000 W	10,000 W
Max. apparent power	3,300 VA	4,400 VA	5,500VA	6,600VA	8,800 VA	11,000 VA 4
Rated output voltage	220Vac/380 Vac, 230Vac/400Vac, 3W /N+PE					
Rated AC grid frequency	50 Hz / 60 Hz					
Max. output current	5.1A	6.8A	8.5A	10.1A	13.5 A	16.9 A
Adjustable power factor	0.8 leading ... 0.8 lagging					
Max. total harmonic distortion	≤ 3 %					
Output (Off Grid)						
Backup Box	Backup Box-B1					
Maximum apparent power	3,000 VA	3,300 VA	3,300VA	3,300VA	3,300 VA	3,300 VA
Rated output voltage	220 V / 230 V					
Maximum output current	13.6 A	15A	15A	15A	15A	15A
Power factor range	0.8 leading ... 0.8 lagging					
Features & Protections						
Input-side disconnection device	Yes					
Anti-Islanding protection	Yes					
DC reverse polarity protection	Yes					
Insulation monitoring	Yes					
DC surge protection	Yes, compatible with TYPE II protection class according to EN/IEC 61643-11					
AC surge protection	Yes, compatible with TYPE II protection class according to EN/IEC 61643-11					
Residual current monitoring	Yes					
AC overcurrent protection	Yes					
AC short-circuit protection	Yes					
AC overvoltage protection	Yes					
Arc fault protection	Yes					
Ripple receiver control	Yes					
Integrated PID recovery 5	Yes					
Battery reverse charging from grid	Yes					
General Data						
Operating temperature range	-25~ +60C (-13F ~ 140F)					
Relative operating humidity	0 %RH~100 %RH					
Max. operating altitude	4,000m (13,123ft.)(Derating above 2000m)					
Cooling	Natural convection					
Display	LED Indicators; Integrated WLAN + FusionSolar App					
Communication	RS485; WLAN/Ethernet via Smart Dongle-WLAN-FE; 4G/3G/ 2G via Smart Dongle-4G(Optional)					
Weight (incl. mounting bracket)	17 kg (37.5 lb)					
Dimension (incl. mounting bracket)	525x470x146.5mm(20.7x18.5x 5.8inch)					
Degree of protection	IP65					
Nighttime Power Consumption	<5.5W6					
Optimizer Compatibility						
DC MBUS compatible optimizer	SUN2000-450W -P					
Standard Compliance (more available upon request)						
Certificate	EN/IEC62109-1, EN/IEC62109-2, IEC 62116					
Grid connection standards	G98, G99, EN 50438, CEI 0-21, VDE-AR-N-4105, AS 4777, C10/11, ABNT, UTE C15-712, RD 1699, TOR D4, NRS 097-2-1, IEC61727, IEC62116, DEWA					

*1 Inverter max input PV power is 20,000Wp when long strings are redesigned 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 C10/11: 10,000VA

*5 SUN2000-3-10KTL-M1 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). *6. <10 W when PID recovery function is activated.