

Smart Energy Controller

SUN2000-3-10KTL-M1 (High Current Version)



Active Safety

AI Powered
Active Arcing Protection



Higher Yields

Up to 30% More Energy
with Optimizer ¹



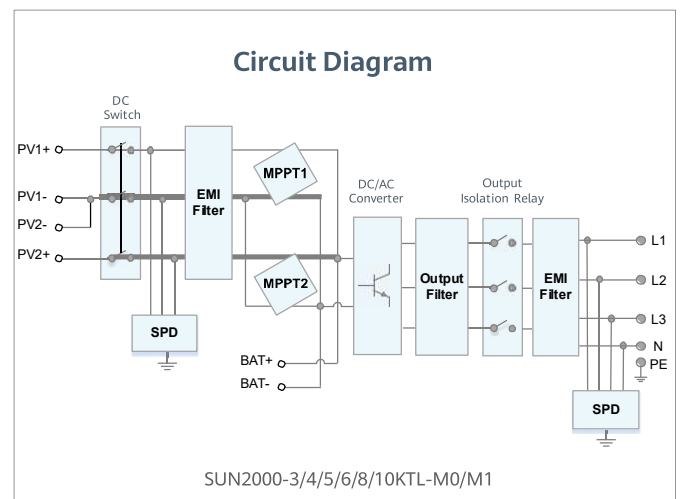
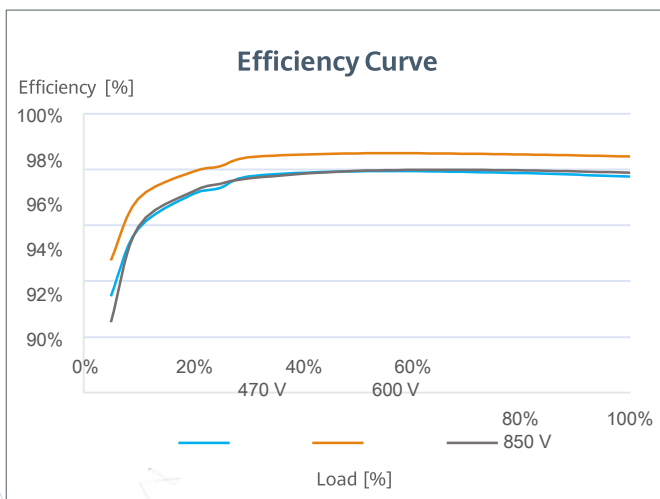
Battery Ready

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

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	4,500 Wp	6,000 Wp	7,500 Wp	9,000 Wp	12,000 Wp	15,000 Wp
Max. input voltage ²	1,100 V					
Operating voltage range ³	140 V ~ 980 V					
Start-up voltage	200 V					
Rated input voltage	600 V					
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 Smart String 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	5,500 W	6,600 W	8,800 W	10,000 W
Output (On Grid)						
Grid connection	Three-phase					
Rated output power	3,000 W	4,000 W	5,000 W	6,000 W	8,000 W	10,000 W
Max. apparent power	3,300 VA	4,400 VA	5,500 VA	6,600 VA	8,800 VA	11,000 VA ⁴
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	5.1 A	6.8 A	8.5 A	10.1 A	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	3,300 VA	3,300 VA	3,300 VA	3,300 VA
Rated output voltage	220 V / 230 V					
Maximum output current	13.6 A	15 A	15 A	15 A	15 A	15 A
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 ~ +60 °C (-13 °F ~ 140 °F)					
Relative operating humidity	0 %RH ~ 100 %RH					
Max. operating altitude	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; 4G / 3G / 2G via Smart Dongle-4G (Optional)					
Weight (incl. mounting bracket)	17 kg (37.5 lb)					
Dimension (incl. mounting bracket)	525 x 470 x 146.5 mm (20.7 x 18.5 x 5.8 inch)					
Degree of protection	IP65					
Nighttime Power Consumption	< 5.5 W ⁶					
Optimizer Compatibility						
DC MBUS compatible optimizer	SUN2000-450W-P, SUN2000-450W-P2, SUN2000-600W-P					
Standard Compliance (more available upon request)						
Certificate	EN/IEC 62109-1, EN/IEC 62109-2, 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 20,000 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 C10 / 11: 10,000 VA

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.

Smart String Batteriespeicher



Mehr Energie

100% Entladungstiefe
Ladeoptimierung auf Batteriemodulebene



Flexible Planung

Modulares Design (5kWh)
Erweiterbar bis 30 kWh



Sicher & Zuverlässig

Lithium-Eisenphosphat-Zelle
Mehrstufiges Sicherheitskonzept



Einfache Installation

Leistungsmodul = 12 kg
Batteriemodul = 50 kg





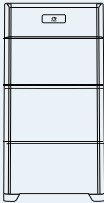
Schnelle Inbetriebnahme

Erkennung via APP



Perfekte Kompatibilität

Kombinierbar mit ein- und dreiphasigen
Huawei Wechselrichtern

	LUNA2000-5-S0	LUNA2000-10-S0	LUNA2000-15-S0
Technische Spezifikation			

Leistung			
Leistungsmodul	LUNA2000-5KW-C0		
Anzahl der Leistungsmodule	1		
Batteriemodul	LUNA2000-5-E0		
Batteriemodulkapazität	5 kWh		
Anzahl der Batteriemodule	1	2	3
Nutzbare Energie der Batterie ¹	5 kWh	10 kWh	15 kWh
Nominale Entladeleistung	2,5 kW	5 kW	5 kW
Maximale Entladeleistung	3,5 kW, 10 s	7 kW, 10 s	7 kW, 10 s
Nennspannung (1-phasiger WR/L1)	360 V		
Betriebsspannungsbereich (1-phasiger WR/L1)	350 – 560 V		
Nennspannung (3-phasiger WR/M1)	600 V		
Betriebsspannungsbereich (3-phasiger WR/M1)	600 – 980 V		

Kommunikation	
Display	SOC Status - LED, Status - LED
Kommunikation	RS485, CAN-BUS (nur in Parallelbetrieb)

Allgemeine Daten			
Abmessungen (B*T*H)	670 * 150 * 600 mm	670 * 150 * 960 mm	670 * 150 * 1320 mm
Gewicht (inkl. Standfuß)	63,8 kg	113,8 kg	163,8 kg
Leistungsmodul Abmessungen (B*T*H)	670 * 150 * 240 mm		
Leistungsmodul Gewicht	12 kg		
Batteriemodul Abmessungen (B*T*H)	670 * 150 * 360 mm		
Batteriemodul Gewicht	50 kg		
Installation	Standfuß (standard), Wandmontage (optional)		
Betriebstemperaturbereich	-10°C bis +55°C ²		
Betriebshöhe	0 – 4000 m (Derating über 2000 m)		
Rel. Luftfeuchtigkeit im Betrieb	5% bis 95%		
Kühlung	Konvektionskühlung		
Schutzart	IP 65		
Geräuschentwicklung	<29 dB		
Zelltechnologie	Lithium-Eisenphosphat (LiFePO4)		
Garantie	10 Jahre ³		
Skalierbarkeit	Parallelbetrieb von max. 2 Batterien		
Kompatible Wechselrichter	SUN2000L-2/3/3.68/4/4.6/5KTL ⁴ , SUN2000-2/3/3.68/4/4.6/5/6KTL-L1, SUN2000-3/4/5/6/8/10KTL-M0 ⁴ , SUN2000-3/4/5/6/8/10KTL-M1		

Normenkonformität (weitere auf Anfrage erhältlich)	
Zertifikate	CE, RCM, CEC, VDE2510-50, IEC62619, IEC 60730, UN38.3

Produktbezeichnungen	
Modellname ⁵	LUNA2000-5KW-C0, LUNA2000-5-E0, LUNA2000 Wandhalterung

*1. Testbedingungen: 100% Entladetiefe (DoD), Lade/Entladerate 0.2C bei 25°C

*2. Lade/Entladeleistungs-Derating bei Temperaturen von -10 bis +5°C & +45 bis +55°C. Empfohlene Betriebstemperatur +15 bis +30°C.

*3. Bitte Details in den gültigen Garantiebedingungen beachten.

*4. Verfügbar ab Q2, 2021.

*5. Leistungsmodul und Batteriemodul müssen separat in der entsprechenden Anzahl bestellt werden.