

# Smart Energy Controller



## Active Safety

AI Powered  
Active Arcing Protection



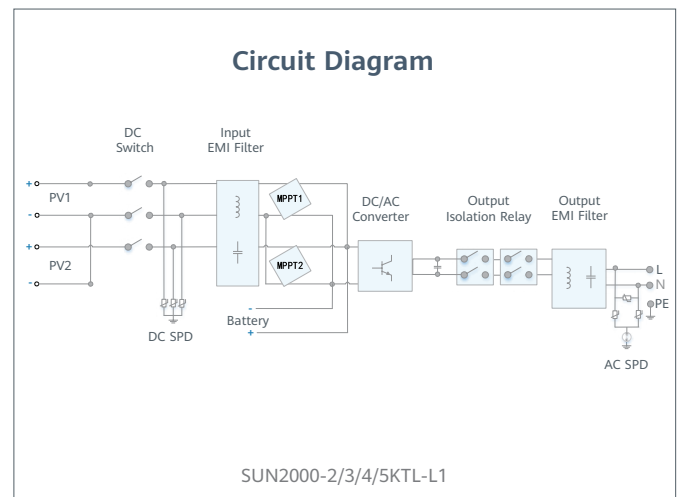
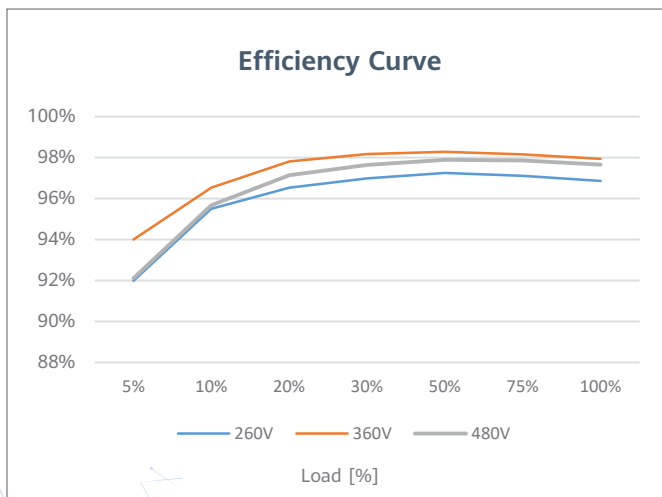
## Higher Yields

Up to 30% More  
Energy with Optimizer



## 2x POWER Battery Ready

5KW AC Output plus  
5KW Battery Charge



SUN2000-2/3/4/5KTL-L1  
**Technical Specification**

Technical Specification	SUN2000 -2KTL-L1	SUN2000 -3KTL-L1	SUN2000 -4KTL-L1	SUN2000 -5KTL-L1
<b>Efficiency</b>				
Max. efficiency	98.2 %	98.3 %	98.4 %	98.4 %
European weighted efficiency	96.7 %	97.3 %	97.5 %	97.8 %
<b>Input ( PV )</b>				
Recommended max. PV power <sup>2</sup>	3,000 Wp	4,500 Wp	6,000 Wp	7,500 Wp
Max. input voltage	600 V <sup>3</sup>			
Start-up voltage	100 V			
MPPT operating voltage range	90 V – 560 V <sup>3</sup>			
Rated input voltage	360 V			
Max. input current per MPPT	12.5 A			
Max. short-circuit current	18 A			
Number of MPP trackers	2			
Max. number of inputs	2			
<b>Input ( DC Battery )</b>				
Compatible Battery	LG Chem RESU 7H_R / 10H_R			
Operating voltage range	350 ~ 450 Vdc			
Max operating current	10 A @7H_R / 15 A @10H_R			
Max charge power	3,500 W @7H_R / 5,000 W @10H_R			
Max discharge Power @7H_R	2,200 W	3,300 W	3,500 W	3,500 W
Max discharge Power @10H_R	2,200 W	3,300 W	4,400 W	5,000 W
Compatible Battery	HUAWEI Smart ESS Battery 5kWh – 30kWh <sup>1</sup>			
Operating voltage range	350 ~ 560 Vdc			
Max operating current	15 A			
Max charge Power	5,000 W <sup>4</sup>			
Max discharge Power	2,200 W	3,300 W	4,400 W	5,000 W
<b>Output</b>				
Grid connection	Single phase			
Rated output power	2,000 W	3,000 W	4,000 W	5,000 W <sup>5</sup>
Max. apparent power	2,200 VA	3,300 VA	4,400 VA	5,500 VA <sup>7</sup>
Rated output voltage	220 Vac / 230 Vac / 240 Vac			
Rated AC grid frequency	50 Hz / 60 Hz			
Max. output current	10 A	15 A	20 A	25 A <sup>8</sup>
Adjustable power factor	0.8 leading ... 0.8 lagging			
Max. total harmonic distortion	≤ 3 %			
Backup power output	Yes (via Backup Box-B0 <sup>1</sup> )			
<b>Protection &amp; Feature</b>				
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			
Over-heat protection	Yes			
Arc fault protection	Yes			
Battery reverse charging from grid	Yes			
<b>General Data</b>				
Operating temperature range	-25 ~ +60 °C (Derating above 45°C @ Rated output power)			
Relative operating humidity	0 %RH ~ 100 %RH			
Operating altitude	0 ~ 4,000 m (Derating above 2,000 m)			
Cooling	Natural convection			
Display	LED indicators; integrated WLAN + FusionSolar APP			
Communication	RS485, WLAN via inverter built-in WLAN module Ethernet via Smart Dongle-WLAN-FE (Optional); 4G / 3G / 2G via Smart Dongle-4G (Optional)			
Weight (incl. mounting bracket)	12.0 kg (26.5 lb)			
Dimension (incl. mounting bracket)	365mm * 365mm * 156 mm (14.4 x 14.4 x 6.1 inch)			
Degree of protection	IP65			
<b>Optimizer Compatibility</b>				
DC MBUS compatible optimizer	SUN2000-450W-P			
<b>Standard Compliance (more available upon request)</b>				
Safety	EN/IEC 62109-1, EN/IEC 62109-2			
Grid connection standards	G98, G99, EN 50549-1, CEI 0-21, VDE-AR-N-4105, AS 4777, C10/11, ABNT, UTE C15-712, RD 1699, TOR D4, IEC61727, IEC62116			

<sup>1</sup> Available in 2021 Q1.

<sup>2</sup> Inverter max input PV power is 10,000 Wp when long strings are designed and fully connected with SUN2000-450W-P power optimizers.

<sup>3</sup> The maximum input voltage and operating voltage upper limit will be reduced to 495 V when inverter connects and works with LG battery.

<sup>4</sup> 2,500 W @ 5kWh HUAWEI ESS battery

<sup>5</sup> AS4777.2: 4,991W. <sup>6</sup> VDE-AR-N 4105: 4,600VA / AS4777.2: 4,999VA. <sup>7</sup> AS4777.2: 4,999VA / C10/11: 5,000VA <sup>8</sup> AS4777.2: 21.7A.

Version No.:01-(20190716)