



## Active Safety

AI Powered  
Active Arcing Protection



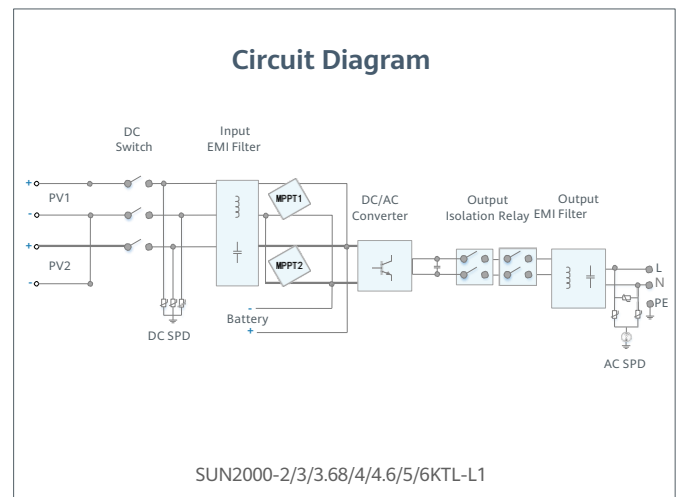
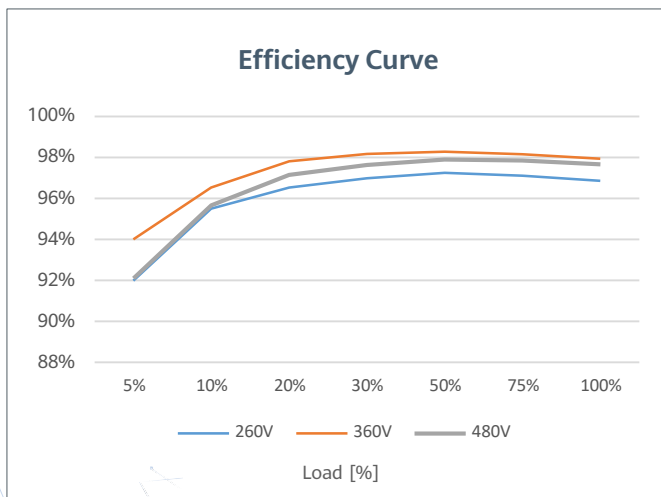
## Higher Yields

Up to 30% More  
Energy with Optimizer



## 2x POWER Battery Ready

5KW AC Output plus  
5KW Battery Charge



# SUN2000-2/3/4/4.6/5/6KTL-L1 Technical Specification

Technical Specification	SUN2000 -2KTL-L1	SUN2000 -3KTL-L1	SUN2000 -4KTL-L1	SUN2000 -4.6KTL-L1	SUN2000 -5KTL-L1	SUN2000 -6KTL-L1 <sup>1</sup>
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### Efficiency

Max. efficiency	98.2 %	98.3 %	98.4 %	98.4 %	98.4 %	98.4 %
European weighted efficiency	96.7 %	97.3 %	97.5 %	97.7 %	97.8 %	97.8 %

### Input ( PV )

Recommended max. PV power <sup>2</sup>	3,000 Wp	4,500 Wp	6,000 Wp	6,900 Wp	7,500 Wp	9,000 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					

### Input ( DC Battery )

Compatible battery	LG Chem RESU 7H_R / 10H_R					
Battery cell technology	Lithium Iron Phosphate					
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	3,500 W	3,500 W
Max discharge Power @10H_R	2,200 W	3,300 W	4,400 W	4,600 W	5,000 W	5,000 W

Compatible battery	HUAWEI Smart ESS Battery 5kWh – 30kWh <sup>1</sup>					
Battery cell technology	Lithium Iron Phosphate					
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	4,600 W	5,000 W	5,000 W

### Output

Grid connection	Single phase					
Rated output power	2,000 W	3,000 W	4,000 W	4,600 W	4,991 W <sup>5</sup>	6,000 W
Max. apparent power	2,200 VA	3,300 VA	4,400 VA	4,999 VA	4,999 VA <sup>6</sup>	6,000 VA
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	20.9 A	21.7 A <sup>7</sup>	27.3 A
Adjustable power factor	0.8 leading ... 0.8 lagging					
Max. total harmonic distortion	≤ 3 %					
Backup power output	Yes (via Backup Box-5000 <sup>1</sup> )					

### Protection & Feature

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

### General Data

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

### Optimizer Compatibility

DC MBUS compatible optimizer	SUN2000-450W-P
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### Standard Compliance (more available upon request)

Safety	EN/IEC 62109-1, EN/IEC 62109-2, IEC 62116
Grid connection standards	AS/NZS 4777:2015

<sup>1</sup> Available in 2020Q3.

<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. Only recommended max PV power, if the string design is under voltage and current limit of MPPT, higher oversizing is also acceptable.

<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> AS4777:4999W. <sup>6</sup> AS4777:4999VA. <sup>7</sup> AS4777:21.7A.