Smart Energy Center

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

Efficiency Curve

Load [%]

260V 360V 480V

88% 89% 90% 91% 92% 93% 94% 95% 96% 97% 98% 99% 100%

Circuit Diagram

SUN2000-2/3/3.68/4/4.6/5/6KTL-L1
## Technical Specification

### SUN2000-2KTL-L1

- **Max. efficiency:** 98.2%
- **European weighted efficiency:** 96.7%
- **Input (PV):**
  - Recommended max. PV power: 3,000 Wp
  - Max. input voltage: 600 V
  - Start-up voltage: 100 V
  - MPPT operating voltage range: 90 V – 560 V
  - 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: 2,200 W @ 7H_R / 3,300 W @ 10H_R

### SUN2000-3KTL-L1

- **Max. efficiency:** 98.3%
- **European weighted efficiency:** 97.3%
- **Input (PV):**
  - Recommended max. PV power: 4,500 Wp
  - Max. input voltage: 600 V
  - Start-up voltage: 100 V
  - MPPT operating voltage range: 90 V – 560 V
  - 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: HUAWEI Smart ESS Battery 5kWh – 30kWh
  - Battery cell technology: Lithium Iron Phosphate
  - Operating voltage range: 350 ~ 560 Vdc
  - Max. operating current: 15 A
  - Max. charge power: 5,000 W
  - Max. discharge power: 2,200 W

### SUN2000-4KTL-L1

- **Max. efficiency:** 98.4%
- **European weighted efficiency:** 97.7%
- **Input (PV):**
  - Recommended max. PV power: 6,000 Wp
  - Max. input voltage: 600 V
  - Start-up voltage: 100 V
  - MPPT operating voltage range: 90 V – 560 V
  - 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: HUAWEI Smart ESS Battery 5kWh – 30kWh
  - Battery cell technology: Lithium Iron Phosphate
  - Operating voltage range: 350 ~ 560 Vdc
  - Max. operating current: 15 A
  - Max. charge power: 5,000 W
  - Max. discharge power: 2,200 W

### SUN2000-4.6KTL-L1

- **Max. efficiency:** 98.4%
- **European weighted efficiency:** 98.4%
- **Input (PV):**
  - Recommended max. PV power: 7,500 Wp
  - Max. input voltage: 600 V
  - Start-up voltage: 100 V
  - MPPT operating voltage range: 90 V – 560 V
  - 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: HUAWEI Smart ESS Battery 5kWh – 30kWh
  - Battery cell technology: Lithium Iron Phosphate
  - Operating voltage range: 350 ~ 560 Vdc
  - Max. operating current: 15 A
  - Max. charge power: 5,000 W
  - Max. discharge power: 2,200 W

### SUN2000-5KTL-L1

- **Max. efficiency:** 98.4%
- **European weighted efficiency:** 97.8%
- **Input (PV):**
  - Recommended max. PV power: 9,000 Wp
  - Max. input voltage: 600 V
  - Start-up voltage: 100 V
  - MPPT operating voltage range: 90 V – 560 V
  - 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: HUAWEI Smart ESS Battery 5kWh – 30kWh
  - Battery cell technology: Lithium Iron Phosphate
  - Operating voltage range: 350 ~ 560 Vdc
  - Max. operating current: 15 A
  - Max. charge power: 5,000 W
  - Max. discharge power: 2,200 W

### SUN2000-6KTL-L1

- **Max. efficiency:** 98.4%
- **European weighted efficiency:** 97.8%
- **Input (PV):**
  - Recommended max. PV power: 9,000 Wp
  - Max. input voltage: 600 V
  - Start-up voltage: 100 V
  - MPPT operating voltage range: 90 V – 560 V
  - 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: HUAWEI Smart ESS Battery 5kWh – 30kWh
  - Battery cell technology: Lithium Iron Phosphate
  - Operating voltage range: 350 ~ 560 Vdc
  - Max. operating current: 15 A
  - Max. charge power: 5,000 W
  - Max. discharge power: 2,200 W

### General Data

- **Operating temperature range:** -25 ~ +60 °C
- **Relative operating humidity:** 0 %RH ~ 100 %RH
- **Operating altitude:** 0 ~ 2,000 m
- **Cooling:** Natural convection
- **Display:** LED indicators; integrated WLAN + FusionSolar APP
- **Communication:** RS485, WLAN via inverter built-in WLAN module
- **Weight:** 120 kg (265 lb)
- **Dimension:** 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

### Standard Compliance

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

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*1 Available in 2020Q3.
*2 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.
*3 The maximum input voltage and operating voltage upper limit will be reduced to 495 V when inverter connects and works with LG battery.
*4 2,500 W @ 5kWh HUAWEI ESS battery.
*5 AS4777: 4999W.
*6 AS4777: 4999VA.
*7 AS4777:21.7A.
*8 AS4777: 21.7 A.
*9 4,250 W @ 5kWh HUAWEI ESS battery.

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