Smart Energy Center

SUN2000-2-6-KTL-L1

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

<table>
<thead>
<tr>
<th>Load [%]</th>
<th>5%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>50%</th>
<th>75%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>260V</td>
<td>88%</td>
<td>90%</td>
<td>92%</td>
<td>94%</td>
<td>96%</td>
<td>98%</td>
<td>100%</td>
</tr>
<tr>
<td>360V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>480V</td>
<td></td>
<td></td>
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</tbody>
</table>

Circuit Diagram

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

AI Powered
Active Arcing Protection
## Technical Specification

### Efficiency

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Max. efficiency</td>
<td>98.2 %</td>
<td>98.3 %</td>
<td>98.4 %</td>
<td>98.4 %</td>
<td>98.4 %</td>
<td>98.4 %</td>
</tr>
<tr>
<td>European weighted efficiency</td>
<td>96.7 %</td>
<td>97.3 %</td>
<td>97.3 %</td>
<td>97.5 %</td>
<td>97.8 %</td>
<td>97.8 %</td>
</tr>
</tbody>
</table>

### Input (PV)

- Recommended max. PV power: 3,000 Wp, 4,500 Wp, 5,520 Wp, 6,000 Wp, 6,900 Wp, 7,500 Wp, 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: LG Chem RESU 7H_R / 1OH_R
- Operating voltage range: 350 ~ 450 Vdc
- Max operating current: 15 A
- Max charge power: 5,000 W
- Max discharge Power @7H_R: 2,200 W, 3,300 W, 3,680 W
- Max discharge Power @10H_R: 2,200 W, 3,300 W, 3,680 W

### Output

- Grid connection: Single phase
- Rated output power: 2,000 W, 3,000 W, 3,680 W, 4,000 W, 4,600 W
- Max. apparent power: 2,200 VA, 3,300 VA, 3,680 VA, 4,400 VA, 5,000 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, 16 A
- Adjustable power factor: 0.8 leading ~ 0.8 lagging
- Max. total harmonic distortion: ≤ 3 %
- Backup power output: Yes (via Backup Box-5000)

### 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
- Over-voltage protection: Yes
- Over-heat protection: Yes
- AC fault protection: Yes
- Battery reverse charging from grid: Yes

### General Data

- Operating temperature range: -25 ~ 460 °C (Derating above 45°C at 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 + inverter built-in WLAN module
- 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

### Standard Compliance (more available upon request)

- Safety: EN/IEC 62190-1, EN/IEC 62190-2

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2. Inverter max input PV power is 10,000 Wp when long strings are designed and fully connected with SUN2000-450W-P power optimizers.
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 @ 5th HUAWEI ESS battery
5. AS4777.2-4999W:
   - 3.68KTL: 4999VA
   - 4.6KTL: 5000VA
   - 5KTL: 5000VA
   - 6KTL: 5000VA
6. 2,500 W @ 5th HUAWEI ESS battery
7. 3,300 W: 3,300 VA
   - 2,200 W: 2,200 VA
   - 3,680 W: 3,680 VA
   - 4,400 W: 4,400 VA
   - 5,000 W: 5,000 VA
8. AS4777.2: 21.7A.

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