Smart String Inverter

Active Safety
AI Powered Arcing Protection

Higher Yields
Up to 30% More Energy with Optimizer

Flexible Communication
WLAN, Fast Ethernet, 4G Communication Supported

Efficiency Curve

- Efficiency [%]
- Load [%]
- Load: 0.00% to 100.00%
- Voltage: 480V, 600V, 850V

Efficiency [%]
- 93% to 99%

Circuit Diagram

SUN2000-12/15/17/20KTL-M0

*Only applicable to SUN2000-12/15/17/20KTL-M2 inverter.
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Efficiency</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Max. efficiency</td>
<td>98.50%</td>
<td>98.65%</td>
<td>98.65%</td>
<td>98.65%</td>
</tr>
<tr>
<td>European weighted efficiency</td>
<td>98.00%</td>
<td>98.30%</td>
<td>98.30%</td>
<td>98.30%</td>
</tr>
<tr>
<td><strong>Input</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Recommended max. PV power</td>
<td>18,000 Wp</td>
<td>22,500 Wp</td>
<td>25,500 Wp</td>
<td>30,000 Wp</td>
</tr>
<tr>
<td>Max. input voltage</td>
<td>1,080 V</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Operating voltage range</td>
<td>160 V ~ 950 V</td>
<td></td>
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<tr>
<td>Start-up voltage</td>
<td>200 V</td>
<td></td>
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<tr>
<td>Rated input voltage</td>
<td>600 V</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Max. input current per MPPT</td>
<td>22 A</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Max. short-circuit current</td>
<td>30 A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of MPP trackers</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. number of inputs</td>
<td>4</td>
<td></td>
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<tr>
<td><strong>Output</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Grid connection</td>
<td>Three phase</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated output power</td>
<td>12,000 W</td>
<td>15,000 W</td>
<td>17,000 W</td>
<td>20,000 W</td>
</tr>
<tr>
<td>Max. apparent power</td>
<td>13,200 VA</td>
<td>16,500 VA</td>
<td>17,800 VA</td>
<td>22,000 VA</td>
</tr>
<tr>
<td>Rated output voltage</td>
<td>220 Vac / 380 Vac</td>
<td>230 Vac / 400 Vac</td>
<td>3W + N + PE</td>
<td></td>
</tr>
<tr>
<td>Rated AC grid frequency</td>
<td>50 Hz / 60 Hz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. output current</td>
<td>20 A</td>
<td>25.2 A</td>
<td>28.5 A</td>
<td>33.5 A</td>
</tr>
<tr>
<td>Adjustable power factor</td>
<td>0.8 leading ... 0.8 lagging</td>
<td></td>
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<tr>
<td>Max. total harmonic distortion</td>
<td>≤ 3 %</td>
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<tr>
<td><strong>Features &amp; Protections</strong></td>
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<tr>
<td>Input-side disconnection device</td>
<td>Yes</td>
<td></td>
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<tr>
<td>Anti-islanding protection</td>
<td>Yes</td>
<td></td>
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<tr>
<td>AC over-current protection</td>
<td>Yes</td>
<td></td>
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<tr>
<td>AC short-circuit protection</td>
<td>Yes</td>
<td></td>
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<tr>
<td>AC over-voltage protection</td>
<td>Yes</td>
<td></td>
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<tr>
<td>DC reverse-polarity protection</td>
<td>Yes</td>
<td></td>
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<tr>
<td>DC surge protection</td>
<td>TYPE II</td>
<td></td>
<td></td>
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<tr>
<td>AC surge protection</td>
<td>Yes, compatible with TYPE II protection class according to EN/IEC 61643-11</td>
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<tr>
<td>Residual current monitoring unit</td>
<td>Yes</td>
<td></td>
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<tr>
<td>Arc fault protection</td>
<td>Yes</td>
<td></td>
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<tr>
<td>Ripple receiver control</td>
<td>Yes</td>
<td></td>
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<tr>
<td>Integrated PID recovery</td>
<td>Yes</td>
<td></td>
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<tr>
<td><strong>General Data</strong></td>
<td></td>
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<tr>
<td>Operation temperature range</td>
<td>-25 ~ +60 °C (-13 °F ~ 140 °F)</td>
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<tr>
<td>Relative humidity</td>
<td>0 % RH ~ 100% RH</td>
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<tr>
<td>Max. operating altitude</td>
<td>0 ~ 4,000 m (13,123 ft) (Derating above 2000 m)</td>
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<tr>
<td>Cooling</td>
<td>Natural Convection</td>
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<tr>
<td>Display</td>
<td>LED Indicators; Integrated WLAN + FusionSolar App</td>
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<tr>
<td>Communication</td>
<td>RS485; WLAN/Ethernet via Smart Dongle-WLAN-FE (Optional)</td>
<td>4G / 3G / 2G via Smart Dongle-4G (Optional)</td>
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<tr>
<td>Weight (with mounting plate)</td>
<td>25 kg</td>
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<tr>
<td>Dimensions (W x H x D)</td>
<td>525 x 470 x 262 mm (20.7 x 18.5 x 10.3 inch)</td>
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<tr>
<td>Degree of protection</td>
<td>IP65</td>
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</tbody>
</table>

**Optimizer Compatibility**
- DC MBUS compatible optimizer

**Standard Compliance (more available upon request)**
- SUN2000-450W-P

**Safety**
- EN/IEC 62109-1, EN/IEC 62109-2

**Grid connection standards**