ภาคพันธ์
String Inverter (SUN2000-25KTL-US)

Smart
- 6 strings intelligent monitoring and 80% time saving for fault detection
- Real-time operation monitoring
- Adaptive Edge MPPT for fast tracking

Efficient
- Max. efficiency 98.6%. CEC efficiency 98.0%
- Saving AC cable investment up to 20% without N-Line

Safe
- DC AFCI compliant to UL 1699B
- DC disconnect integrated, safe and convenient for maintenance
- Ground fault protection
- Category C surge arresters for both DC and AC

Reliable
- No need for external fans with natural cooling technology
- Outdoor application of NEMA 4X

Efficiency Curve

Circuit Diagram

SUN2000-25KTL-US

Inverter@Huawei.com
String Inverter (SUN2000-25KTL-US)

Technical Specifications

Max. Efficiency
CEC Efficiency

Max. DC Voltage
Max. Current per MPPT
Min. Operating Voltage
Full Power MPPT Voltage Range
MPPT Operating Voltage Range
Rated Input Voltage
Max. Number of Inputs
Number of MPP Trackers

Rated AC Power
Max. AC Apparent Power
Max. AC Active Power (cosφ=1)
Rated Output Voltage
Rated AC Grid Frequency
Max. Output Current
Adjustable Power Factor
Max. Total Harmonic Distortion

DC AFCI Compliant to UL 1699B
Input-side Disconnection Device
Anti-Islanding Protection
AC Overcurrent Protection
DC Overcurrent Protection
DC Reverse-Polarity Protection
PV-array String Fault Monitoring
DC Surge Arrester
AC Surge Arrester
Insulation Monitoring
Residual Current Detection

RS485
USB

Dimensions (W×H×D )
Weight

Operation Temperature Range
Cooling
Operating Altitude
Relative Humidity
DC Connector
AC Connector

Protection Rating

Internal Consumption at Night
Topology
Noise Emission (Typical)

Safety/EMC

Grid Code

SUN2000-25KTL-US

Efficiency
98.6%
98.0%

Input
1,000 V
25 A
200 V
550 V–850 V
200 V–950 V
730 V
6
3

Output
25,000 W
27,500 VA
25,000 W

277V/480V, 3W+PE/3W+N+PE
60 Hz
33 A
0.8 LG ... 0.8 LD
< 3%

Protection
Yes
Yes
Yes
Yes
Fuseless
Yes
Yes
Category C
Category C
Yes
Yes

Communication
Yes
Yes

General
550×770×270 mm (21.7 × 30.3 × 10.6 inch)
55 kg (121 lb)

-25 °C – 60 °C (-13°F – 140°F)
Natural Convection
4,000 m (13,123 ft)
0–100%
Amphenol H4

Waterproof PG Terminal + OT Connector
NEMA 4X
< 1 W
Transformerless
< 33 dB

Standards Compliance

UL 1741, UL 1699B, UL 1998, IEEE 1547, CSA C22.2 #107.1-01, FCC Part 15
IEEE 1547, IEEE 1547 1

Inverter@Huawei.com
String Inverter (SUN2000-30KTL-US)

Smart
- 6 strings intelligent monitoring and 80% time saving for fault detection
- Real-time operation monitoring
- Adaptive Edge MPPT for fast tracking

Efficient
- Max. efficiency 98.6%, CEC efficiency 98.0%
- Saving AC cable investment up to 20% without N-Line

Safe
- DC AFCI compliant to UL 1699B
- DC disconnect Integrated, safe and convenient for maintenance
- Ground fault protection
- Category C surge arresters for both DC and AC

Reliable
- No need for external fans with natural cooling technology
- Outdoor application of NEMA 4X

Efficiency Curve

Circuit Diagram

SUN2000-30KTL-US
### Technical Specifications

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<thead>
<tr>
<th>Specification</th>
<th>SUN2000-30KTL-US</th>
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</thead>
<tbody>
<tr>
<td><strong>Max Efficiency</strong></td>
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<tr>
<td><strong>CEC Efficiency</strong></td>
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<tr>
<td><strong>Max. DC Voltage</strong></td>
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<td><strong>Max. Current per MPPT</strong></td>
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<td><strong>Min. Operating Voltage</strong></td>
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<td><strong>Full Power MPPT Voltage Range</strong></td>
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<td><strong>MPPT Operating Voltage Range</strong></td>
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<td><strong>Rated Input Voltage</strong></td>
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<tr>
<td><strong>Max. Number of Inputs</strong></td>
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<td><strong>Number of MPP Trackers</strong></td>
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<td><strong>Rated AC Power</strong></td>
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<tr>
<td><strong>Max. AC Apparent Power</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Max. AC Active Power (cosθ=1)</strong></td>
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<tr>
<td><strong>Rated Output Voltage</strong></td>
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<td><strong>Rated AC Grid Frequency</strong></td>
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<td><strong>Max. Output Current</strong></td>
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<td><strong>Adjustable Power Factor</strong></td>
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<td><strong>DC AFCI Compliant to UL 16998</strong></td>
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<td><strong>DC Overcurrent Protection</strong></td>
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<td><strong>DC Reverse-Polarity Protection</strong></td>
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<td><strong>PV-array String Fault Monitoring</strong></td>
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<td><strong>DC Surge Arrester</strong></td>
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<td><strong>AC Surge Arrester</strong></td>
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<tr>
<td><strong>Insulation Monitoring</strong></td>
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<td><strong>Residual Current Detection</strong></td>
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<td><strong>RS485</strong></td>
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<td><strong>USB</strong></td>
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<td><strong>Dimensions ( W×H×D )</strong></td>
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<td><strong>Weight</strong></td>
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<td><strong>Operating Altitude</strong></td>
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<td><strong>Relative Humidity</strong></td>
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<td><strong>AC Connector</strong></td>
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<td><strong>Safety/EMC</strong></td>
<td></td>
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<tr>
<td><strong>Grid Code</strong></td>
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</tr>
</tbody>
</table>

#### SUN2000-30KTL-US Specifications

- **Efficiency**
  - 98.6%
  - 98.0%

- **Input**
  - 1,000 V
  - 25 A
  - 200 V

- **Output**
  - 560 V~850 V
  - 200 V~950 V
  - 730 V
  - 6
  - 3

- **Protection**
  - Yes
  - Yes
  - Yes
  - Yes

- **Communication**
  - Yes
  - Yes

- **General**
  - 55 kg (121 lb)
  - -25 °C ~ 60 °C (-13°F ~ 140°F)
  - 4,000 m (13,123 ft)
  - 0~100%
  - Amphenol H4
  - NEMA 4X
  - < 1 W
  - Transformerless
  - <33 dB

- **Standards Compliance**
  - UL 1741, UL 16998, UL 1998, IEEE 1547, CSA C22.2 #107.1-01, FCC Part 15
  - IEEE 1547, IEEE 1547.1

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Inverter@Huawei.com
String Inverter (SUN2000-36KTL)

Smart
- 4 MPPTs for versatile adaptions to different layouts
- 8 strings intelligent monitoring and 80% time saved for fault detection
- Power Line Communication (PLC) supported

Efficient
- Max. efficiency 98.6%, European efficiency 98.3%
- Hand-in-hand design supported for flexible layouts

Safe
- DC disconnect integrated, safe and convenient for maintenance
- Type II surge arresters for both DC and AC
- Ground fault protection
- Residual Current Detection (RCD) protection

Reliable
- No need for external fans with natural cooling technology
- Protection rating of IP65

Efficiency Curve

Circuit Diagram

Always Available for Highest Yields
String Inverter (SUN2000-36KTL)

Technical Specifications

- Max. Efficiency
- European Efficiency
- Max. DC Usable Power
- Max. Input Voltage
- Max. Current per MPPT
- Max. Short Circuit Current per MPPT
- Min. Operating Voltage / Start Input Voltage
- Full Power MPPT Voltage Range
- MPPT Operating Voltage Range
- Rated Input Voltage
- Max. Number of Inputs
- Number of MPP Trackers
- Rated AC Active Power
- Max. AC Apparent Power
- Max. AC Active Power (cosφ=1)
- Rated Output Voltage
- Rated AC Grid Frequency
- Max. Output Current
- Adjustable Power Factor
- Max. Total Harmonic Distortion
- Input-side Disconnection Device
- Anti-islanding Protection
- DC Reverse-Polarity Protection
- PV-array String Fault Monitoring
- DC Surge Arrester
- AC Surge Arrester
- Insulation Monitoring
- Residual Current Detection
- Display
- USB / Bluetooth +APP
- RS485
- PLC
- Fast Ethernet

Dimensions (WxHxD):

- 930 x 550 x 260 mm (36.6 x 21.7 x 10.2 inch)
- 55 kg (121 lb)
- -25 °C – 60 °C (-13°F – 140°F)
- Natural Convection
- 0 – 4,000 m (13,123 ft)
- 4 – 100%
- Amphenol H4
- Waterproof FG Terminal + OT Connector
- IP65
- < 1 W

General

Standards Compliance:
- EN50670-1, EN50608-2, EN50608, EN50608-4, EN50619-1, EN50619-2
- VDE-AR-N4105, VDE0126-1-1, BDEW 2008, G593
- UTE C 15-712-1

Always Available for Highest Yields

www.huawei.com/solar
Smart String Inverter
SUN2000-33/36/40KTL-US

Smart
- 8 strings intelligent monitoring and fast trouble-shooting
- Power Line Communication (PLC) supported
- Smart I-V Curve Diagnosis supported

Efficient
- Max. efficiency 98.9%, CEC efficiency 98.5%
- 4 MPPTs for versatile adaptations to different layouts

Safe
- DC AFCI compliant to UL 1699B Type I
- Type II surge arresters for both DC and AC
- Residual Current Monitoring Unit (RCMU) integrated inside
- Fuse free design

Reliable
- Natural cooling technology
- Protection rating of NEAMA Type 4X

Always Available for Highest Yields
Smart String Inverter (SUN2000-33/36/40KTL-US)

### Technical Specifications

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Max. Efficiency</td>
<td>98.9%</td>
<td>98.9%</td>
<td>98.9%</td>
</tr>
<tr>
<td>CEC Efficiency</td>
<td>98.5%</td>
<td>98.5%</td>
<td>98.5%</td>
</tr>
<tr>
<td>Max. Input Voltage</td>
<td>1,000 V</td>
<td>1,000 V</td>
<td>1,000 V</td>
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<tr>
<td>Max. Current per MPPT</td>
<td>22 A</td>
<td>22 A</td>
<td>22 A</td>
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<tr>
<td>Max. Short Circuit Current per MPPT</td>
<td>30 A</td>
<td>30 A</td>
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<tr>
<td>Start Voltage</td>
<td>250 V</td>
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<tr>
<td>MPPT Operating Voltage Range</td>
<td>200 V – 1,000 V</td>
<td>200 V – 1,000 V</td>
<td>200 V – 1,000 V</td>
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<tr>
<td>Max. Number of Inputs</td>
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<td>Number of MPP Trackers</td>
<td>4</td>
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<tr>
<td>Rated AC Active Power</td>
<td>33,300 W</td>
<td>36,000 W</td>
<td>40,000 W</td>
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<td>Max. AC Apparent Power</td>
<td>36,600 VA</td>
<td>40,000 VA</td>
<td>44,000 VA</td>
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<tr>
<td>Rated Output Voltage</td>
<td>277 V (480 V, 3W+PE / 3W+N+PE)</td>
<td>277 V (480 V, 3W+PE / 3W+N+PE)</td>
<td>277 V (480 V, 3W+PE / 3W+N+PE)</td>
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<td>Rated Output Current</td>
<td>40.1 A</td>
<td>43.4 A</td>
<td>48.2 A</td>
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<tr>
<td>Max. Output Current</td>
<td>44.1 A</td>
<td>48.2 A</td>
<td>53 A</td>
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<tr>
<td>Adjustable Power Factor</td>
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<td>0.8 LG...0.8 LD</td>
<td>0.8 LG...0.8 LD</td>
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<td>Max. Total Harmonic Distortion</td>
<td>&lt; 3%</td>
<td>&lt; 3%</td>
<td>&lt; 3%</td>
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<tr>
<td>DC Arc Fault Circuit Interrupter</td>
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<td>Yes</td>
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<tr>
<td>Input-side Disconnection Device</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Anti-islanding Protection</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>DC Reverse-polarity Protection</td>
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<tr>
<td>AC Overcurrent Protection</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>PV-array String Fault Monitoring</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>DC Surge Arrester</td>
<td>Yes</td>
<td>Yes</td>
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<td>AC Surge Arrester</td>
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<td>Yes</td>
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<tr>
<td>DC Isolation Detection</td>
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<tr>
<td>Residual Current Monitoring Unit</td>
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<td>Display</td>
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<td>USB</td>
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<tr>
<td>RS485</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Power Line Communication (PLC)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</tbody>
</table>

### Efficiency Curve

#### SUN2000-33KTL-US

#### Circuit Diagram

### Dimensions (W x H x D, with mounting plate)

- Weight (with mounting plate)
- Operation Temperature Range
- Cooling
- Relative Humidity
- DC Connector
- AC Connector
- Protection Rating
- Topology
- Safety & EMC
- Grid Code

### Communication
- LED Indicators, Bluetooth + APP
- Yes
- Yes
- Yes

### General
- 930 x 550 x 283 mm (36.6 x 21.7 x 11.1 inch)
- 62 kg (137 lb.)
- -25 °C to 60 °C (-13 °F to 140 °F)
- Natural Convection
- 0 – 100%
- Amphoteric Helix H4 or MC4
- Waterproof PG Terminal + OT Connector
- NEMA Type 4K
- Transformerless
- Standards Compliance
- UL 1741, UL 1699B, CSA C22.2 #107.1-01, FCC Part 15
- IEEE 1547, IEEE 1547a, UL 1741 SA

[Image of Efficiency Curve]

[Image of Circuit Diagram]
SunPower® Performance Series 1500 Volt | P19

Increased Energy Production
The Performance Series modules' linear shading response enables true-tracking in single-axis tracking systems, generating more energy than conventional systems that require backtracking.


Higher Efficiency
The Performance Series design minimizes white space between solar cells, eliminates reflective metal lines on the cells, and lowers electrical resistance between cells, increasing efficiency compared to Conventional Commercial Panels.

Optimized for the Oasis Power Plant
From the mounting hardware to the electrical design within the panel, to the connectors and the 1500 V rating, everything is designed as an integral part of the Oasis Power Plant.

High Reliability
Innovative panel design uses flexible and redundant electrical connections between solar cells to deliver enhanced reliability.

SunPower Quality
Tested to SunPower's rigorous quality standards, and backed by the industry's best Combined Power and Product Warranty.

High Performance & Excellent Reliability

25 Year Combined Warranty
Protect your investment

Product Warranty Length

SunPower provides the best 25 year Combined Power and Product warranty in the industry, providing coverage regardless of product defect or power loss.

Power Warranty Length

SunPower's Performance Series is warranted to produce more than 97% power in the first year, then declining by 0.6% per year, ending at 82.6% power after 25 years.
### Electrical Data, PV String

<table>
<thead>
<tr>
<th></th>
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<td>Nominal Power (Active)</td>
<td>395 W</td>
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<td>398 W</td>
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<td>Power Tolerance</td>
<td>+5% / -0 W</td>
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<td>+5% / -0 W</td>
<td>+5% / -0 W</td>
<td>+5% / -0 W</td>
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<td>Efficiency</td>
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<td>Open Circuit Voltage (Vcc)</td>
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<td>42.7 V</td>
<td>43.5 V</td>
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<td>43.0 V</td>
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<td>9.26 A</td>
<td>9.17 A</td>
<td>9.10 A</td>
<td>9.06 A</td>
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<td>Open Circuit Voltage (Vcc)</td>
<td>61.9 V</td>
<td>62.7 V</td>
<td>62.5 V</td>
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<td>Short Circuit Current (Isc)</td>
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<td>7.64 A</td>
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<td>0.37% / °C</td>
<td>0.39% / °C</td>
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<td>Area Temp. Coef.</td>
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<td>0.29% / °C</td>
<td>0.29% / °C</td>
<td>0.29% / °C</td>
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<td>Maximum Operating Voltage</td>
<td>1000 V UL &amp; 600 V IEC</td>
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<tr>
<td>Nominal Operating Current</td>
<td>5 A</td>
<td>5 A</td>
<td>5 A</td>
<td>5 A</td>
<td>5 A</td>
</tr>
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</table>

### Operating Condition And Mechanical Data

- **Temperature:** -40°F to 125°F (-40°C to 55°C)
- **Salt Spray:** 355 ppm NaCl solution, 3000 ppm acetic acid, 50°C ± 5°C (121°F ± 9°F)
- **Operating:** Class E
- **Module: MC4 Connector
- **Tilt:** 61° (34.45°)
- **Max. Load:**
  - G6 Frame: Front: 50 psf, 2400 Pa Front & Back
  - Snow: 75 psf, 3500 Pa Front
  - G4 Frame: Front: 50 psf, 2400 Pa Front & Back
  - Snow: 112 psf, 5400 Pa Front
- **Flame:** Class 2 fiber, anodized, stacking only

### Tests And Certifications

- **Standard Tests:** UL 1703 Type 2, Fire Rating: IEC 62158, IEC 61730 Rated to 1500 V
- **EHS Compliance:** OSHA 1901.2007, FV Code
- **Ammeter Test:** IEC 62718
- **Desert Test:** I0 x 109/PVSC 2009 6744427
- **Salt Spray Test:** IEC 61703 (maximum seven)
- **PID Test:** Potential Induced Degradation free (1500 V)
- **Available Listings:** UL, CEC, TUV, IEC

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**AUSTRALIA WIDE SOLAR**

**02 9533 7444**

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