Tesla Solar Inverter
with Site Controller

Tesla Solar Inverter completes the Tesla home solar system, converting DC power from solar to AC power for home consumption. Tesla's renowned expertise in power electronics has been combined with robust safety features and a simple installation process to produce an outstanding solar inverter that is compatible with both Solar Roof and traditional solar panels. Once installed, homeowners use the Tesla mobile app to manage their solar system and monitor energy consumption, resulting in a truly unique ecosystem experience.

KEY FEATURES
• Built on Powerwall technology for exceptional efficiency and reliability
• Wi-Fi, Ethernet, and cellular connectivity with easy over-the-air updates
• Designed to integrate with Tesla Powerwall and Tesla App
• 0.5% revenue-grade metering for Solar Renewable Energy Credit (SREC) programs included
Tesla Solar Inverter Technical Specifications

**Electrical Specifications: Output (AC)**

- **Model Number**: 1538000-xx-y
- **Output (AC)**
  - 3.8 kW
  - 5 kW
  - 5.7 kW
  - 7.6 kW
- **Nominal Power**
  - 3,800 W
  - 5,000 W
  - 5,700 W
  - 7,600 W
- **Maximum Apparent Power**
  - 3,840 VA
  - 5,040 VA
  - 6,000 VA
  - 7,680 VA
- **Maximum Continuous Current**
  - 16 A
  - 21 A
  - 24 A
  - 32 A
- **Breaker (Overcurrent Protection)**
  - 20 A
  - 30 A
  - 30 A
  - 40 A
- **Nominal Power Factor**: 1 - 0.9 (leading / lagging)
- **THD (at Nominal Power)**: <5%

**Electrical Specifications: Input (DC)**

- **MPPT**: 4
- **Input Connectors per MPPT**: 1-2-1-2
- **Maximum Input Voltage**: 600 VDC
- **DC Input Voltage Range**: 60 - 550 VDC
- **DC MPPT Voltage Range**: 60 - 480 VDC
- **Maximum Current per MPPT (I_{MP})**: 13 A
- **Maximum Short Circuit Current per MPPT (I_{SC})**: 17 A

1Maximum current.
2Where the DC input current exceeds an MPPT rating, jumpers can be used to allow a single MPPT to intake additional DC current up to 26 A I_{MP} / 34 A I_{SC}.

**Performance Specifications**

- **Peak Efficiency**: 98.6% at 240 V
- **CEC Efficiency**: 98.0% at 240 V
- **Allowable DC/AC Ratio**: 1.7
- **Customer Interface**: Tesla Mobile App
- **Internet Connectivity**: Wi-Fi (2.4 GHz, 802.11 b/g/n), Ethernet, Cellular (LTE/4G)
- **Revenue Grade Meter**: Revenue Accurate (+/- 0.5%)
- **AC Remote Metering Support**: Wi-Fi (2.4 GHz, 802.11 b/g/n)
- **Protection**: Integrated arc fault circuit interrupter (AFCI), Rapid Shutdown
- **Supported Grid Types**: 60 Hz, 240 V Split Phase
- **Warranty**: 12.5 years

3Cellular connectivity subject to network operator service coverage and signal strength.
Tesla Solar Inverter Technical Specifications

Mechanical Specifications

Dimensions

- 660 mm x 411 mm x 158 mm (26 in x 16 in x 6 in)

Weight

- 52 lb

Mounting Options

- Wall mount (bracket)

*Door and bracket can be removed for a mounting weight of 37 lb.

Environmental Specifications

- Operating Temperature: 
  -30°C to 45°C (-22°F to 113°F)

- Operating Humidity (RH): Up to 100%, condensing

- Storage Temperature: 
  -30°C to 70°C (-22°F to 158°F)

- Maximum Elevation: 3000 m (9843 ft)

- Environment: Indoor and outdoor rated

- Enclosure Rating: Type 3R

- Ingress Rating: IP55 (Wiring compartment)

- Pollution Rating: PD2 for power electronics and terminal wiring compartment, PD3 for all other components

- Operating Noise @ 1 m: < 40 db(A) nominal, < 50 db(A) maximum

*Performance may be de-rated to 6.2 kW at 240 V when operating at temperatures greater than 45°C.

Compliance Information

- Grid Certifications: UL 1741, UL 1741 SA, UL 1741 SB, UL 1741 PCS, IEEE 1547-2018, IEEE 15471

- Safety Certifications: UL 1741 PVRSS, UL 1699B, UL 1998 (US), UL 3741

- Emissions: EN 61000-6-3 (Residential), FCC 47CFR15.109 (a)
The Solar Shutdown Device is a Mid-Circuit Interrupter (MCI) and is part of the PV system rapid shutdown (RSD) function in accordance with Article 690 of the applicable NEC. When paired with Tesla Solar Inverter, solar array shutdown is initiated by any loss of AC power.

### Electrical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>MCI-1</th>
<th>MCI-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Input DC Current Rating ($I_{np}$)</td>
<td>13 A</td>
<td>13 A</td>
</tr>
<tr>
<td>Maximum Input Short Circuit Current ($I_{sc}$)</td>
<td>19 A</td>
<td>17 A</td>
</tr>
<tr>
<td>Maximum System Voltage (PVHCS)</td>
<td>600 V DC</td>
<td>1000 V DC*</td>
</tr>
</tbody>
</table>

*Maximum System Voltage is limited by Tesla Solar Inverter to 600 V DC.

### RSD Module Performance

<table>
<thead>
<tr>
<th></th>
<th>MCI-1</th>
<th>MCI-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Number of Devices per String</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Control</td>
<td>Power Line Excitation</td>
<td>Power Line Excitation</td>
</tr>
<tr>
<td>Passive State</td>
<td>Normally Open</td>
<td>Normally Open</td>
</tr>
<tr>
<td>Maximum Power Consumption</td>
<td>7 W</td>
<td>7 W</td>
</tr>
<tr>
<td>Warranty</td>
<td>25 years</td>
<td>25 years</td>
</tr>
</tbody>
</table>

### Environmental Specifications

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<tr>
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<th>MCI-1</th>
<th>MCI-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>-40°C to 50°C (-40°F to 122°F)</td>
<td>-45°C to 70°C (-49°F to 158°F)</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-30°C to 70°C (-22°F to 158°F)</td>
<td>-30°C to 70°C (-22°F to 158°F)</td>
</tr>
<tr>
<td>Enclosure Rating</td>
<td>NEMA 4X / IP65</td>
<td>NEMA 4X / IP65</td>
</tr>
</tbody>
</table>

### Mechanical Specifications

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<tr>
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<th>MCI-1</th>
<th>MCI-2</th>
</tr>
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<tbody>
<tr>
<td>Electrical Connections</td>
<td>MC4 Connector Plastic</td>
<td>MC4 Connector Plastic</td>
</tr>
<tr>
<td>Housing</td>
<td>Plastic</td>
<td>Plastic</td>
</tr>
<tr>
<td>Dimensions</td>
<td>125 x 150 x 22 mm (5 x 6 x 1 in)</td>
<td>173 x 45 x 22 mm (6.8 x 1.8 x 1 in)</td>
</tr>
<tr>
<td>Weight</td>
<td>350 g (0.77 lb)</td>
<td>120 g (0.26 lb)</td>
</tr>
<tr>
<td>Mounting Options</td>
<td>ZEP Home Run Clip M4 Screw (#10) M8 Bolt (5/16&quot;) Nail / Wood screw</td>
<td>Wire Clip</td>
</tr>
</tbody>
</table>

### Compliance Information

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<tr>
<th>Certifications</th>
<th>UL 1741 PVRSE, UL 3741, PVRSA (Photovoltaic Rapid Shutdown Array)</th>
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<tbody>
<tr>
<td>RSD Initiation Method</td>
<td>PV System AC Breaker or Switch</td>
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UL 3741 PV Hazard Control (and PVRSA) Compatibility

See Tesla Solar Inverter Installation Manual