Quick Installation Guide

1. Safety

The inverters are single-phase grid-connected PV string inverters without transformer, which can convert the DC power from the photovoltaic (PV) strings into alternating current (AC) power, and feed the power into the power grid.

1. This document provides important safety information on relating to the installation of single phase PV inverters. Both users and professional installers must read these guidelines carefully and strictly follow these instructions. Failure to follow these instructions may result in death, serious injury or property damage.
2. Only qualified professionals and service personnel can do the installation and operation (refer to 6.10.8-1). Installers must inform end-users (consumers) about the above-mentioned information accordingly.
3. A warning describes a hazard to equipment or personnel. It calls attention to procedure or practice.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
<th>Symbol</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>!</td>
<td>Danger</td>
<td>!</td>
<td>Observe the documentation</td>
</tr>
<tr>
<td>!</td>
<td>Hot surface</td>
<td>!</td>
<td>Turn off the inverter before commencing work</td>
</tr>
<tr>
<td>!</td>
<td>Hazardous voltage</td>
<td>!</td>
<td>WECC designation</td>
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2. Unpackaging and Inspection

1. Before unpacking the inverter, check the package appearance thoroughly, such as any holes and cracks, and check the inverter model accordingly. If discover any damage to the packaging which indicates the inverter may have been damaged, or the inverter model is not what you requested, do not unpack the product and contact your dealer immediately.
2. After opening the package, check all of the accessories carefully in the carton. If any damage is found or any component is missing, contact your dealer.

3. Installation Requirements

1. Do not install the inverter on the structures constructed of flammable or thermoplastics materials.
2. The installation surface must be strong enough to bear the inverter’s weight for a long period of time.
3. The inverter is protected to IP55, can be installed indoors and outdoors.
4. The humidity of the installation location should be below 100% without condensation.
5. The ambient temperature should be between -25°C to 60°C.
6. Install at eye-level for easy operation.
7. Do not install the inverter near television antenna or any other antennas and antenna cables.
8. Ensure the inverter is out of children’s reach.
9. Install inverter at the locations with some cover or protection, to ensure the optimum operation.
10. Do not install in small closed cabinet where air cannot circulate freely. Do not put any other objects on the inverter.
11. Comply with the Min. clearance to walls, other inverters, or objects to ensure the installation and maintenance, meanwhile for the good heat dissipation.

{table of minimum clearances

<table>
<thead>
<tr>
<th>Direction</th>
<th>Above</th>
<th>Below</th>
<th>Sides</th>
</tr>
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<tbody>
<tr>
<td>Min. clearance</td>
<td>50cm</td>
<td>50cm</td>
<td>30cm</td>
</tr>
</tbody>
</table>

12. Install the inverter vertically or at a maximum backward tilted angle of 15 degrees to facilitate heat dissipation.

4. Installation

1. Use the wall-mounting bracket as a template and mark the positions of the drill holes, then drill 4 holes (Ø11mm) to a depth about 55mm.

5. Wiring AC Output and Protective Ground

1. Before performing any work on the inverter, must disconnect both the AC and DC sides.
2. Take appropriate ESD precautions when replacing and installing the inverter.
3. Must install a separate single-phase circuit breaker or other load disconnection unit form each inverter.

Note: The PE point at the AC output point is used only as a PE equipotential point, and cannot substitute for the PE point on the enclosure.

1. Insert the grounding conductor into the suitable terminal lug and crimp the contact. Recommended wire size: Ø6
2. Fix terminal lug on external ground point by screw M4 x 0.7. Torque: 1.4 N x m.
8. Wiring CT/Meter (Optional)

1. CT and Meter sensors are accessories for optional functions.
2. More detailed information please refer to the Inverter user manual, CT Installation guide, or Meter Installation guide.

7. Wiring DC Input

Requirements for PV module strings:
The power, voltage (startup and open-circuit voltage) and operating current of each PV strings must meet the allowable value of the Inverter.

DC connections have two types—H4 or M4C, procedure steps:
1. Strip the insulation jacket of cable to about 7.5mm. Please note do not damage the conductor when do the stripping.
2. Clamp the contact pin to the conductor of the cable.
3. Plug the clamped contact pin into the connector housing back until one sound click audibly.
4. Pull lightly on the wire to ensure the contact pins of the connectors are engaged.
5. Pay attention to the polarity when assembling.

8. Communication

Two communication patterns for your option, RS485 and WFL, with the communication interface in 16 port.

9. Start up

Checking Electrical and Mechanical:
1. Check PE connections with multi-meter: To make sure all the bare metal surfaces of the Inverter grounded.
2. Check DC voltage value: Check if the DC voltage of the PV strings exceeds the allowable range.
3. Check the polarities of the DC voltage: To make sure the DC polarities are correct.
4. Check the ground insulation of PV array with multi-meter: Ensure the impedance value of ground insulation is more than 1MΩ.
5. Ensure the Inverter is installed properly, fixed with a wall-mounting bracket firmly and the upper cover is installed correctly.
6. Ensure the AC connectors are installed properly and fixed firmly.
7. Ensure the dust covers are sealed reliably which are used for the empty DC connectors.
8. Ensure all the cables are connected effectively, fixed firmly, and no visible damages to the insulation layer.

10. Panel Operation

LED Indicators:

<table>
<thead>
<tr>
<th>No.</th>
<th>Operate status</th>
<th>LED Indicator</th>
<th>Pinder frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wait</td>
<td>Green LED 8Sec</td>
<td>1s On, 1s Off</td>
</tr>
<tr>
<td>2</td>
<td>Normal</td>
<td>Green LED always on</td>
<td>/</td>
</tr>
<tr>
<td>3</td>
<td>Error</td>
<td>Red LED always on</td>
<td>/</td>
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