Before starting installation, download the product manual from www.abb.com/solarinverters. Choose the correct country, string inverters, three phase, and read the safety and installation instructions to avoid disabling any safety features or making the warranty invalid.

The installer must be a professional technician who has a good knowledge of the installation conditions, the devices that will be installed next to the inverter, and whether it will eventually be integrated into an existing system.

Components included in mounting kit

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Model Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DCWB-2</td>
<td>DC wiring box (All models)</td>
</tr>
<tr>
<td>1</td>
<td>ACWB-2</td>
<td>AC wiring box (All models)</td>
</tr>
<tr>
<td>1</td>
<td>DCWB-2</td>
<td>Side view (DC)</td>
</tr>
<tr>
<td>1</td>
<td>ACWB-2</td>
<td>Side view (AC)</td>
</tr>
</tbody>
</table>

1. **Choice of installation location**
   - AC wiring box
   - DC surge protection device

2. **Installation site and position**
   - Do not install in closed spaces where it is not easy to access the wiring box.
   - Do not install near flammable substances (minimum distance: 0.10).
   - Do not install in a location subject to mechanical vibrations or other similar disturbances.
   - Do not install in a location where the ventilation is poor, or in a location subject to condensation of steam or similar conditions.

3. **Components included in wiring box models**
   - DCWB-2 12 inputs
   - DCWB-2 16 inputs
   - ACWB-2 12 inputs
   - ACWB-2 16 inputs

4. **Mounting and connecting**
   - Mounting on a vertical wall
   - Mounting on a horizontal wall

5. **Components included in mounting kit**
   - Acrylic hinge screws for ground module and box (vertical kit)
   - Distribution links to attach the conversion module to the wiring box
   - M12 cage nuts
   - M12 hex nuts for grounding cables to the wiring box
   - Black spacers for wall alignment (vertical installation)
   - Grounding bracket for wiring box power module connection
   - Grounding bracket for wiring box power module connection (horizontally)

6. **Mounting on a vertical wall**
   - The bracket is equipped in two separate parts; assemble them using the four M12 couplers (optional) M12 eyebolts
   - Attach the bracket to the wall with at least 10 attachment bolts. Depending on the type of anchor chains, until the required 10 have been installed. Attach the bracket to the wall with at least 10 attachment bolts. Depending on the type of anchor chains, until the required 10 have been installed.

7. **Components included in the wiring box models**
   - DCWB-1 12 inputs
   - DCWB-1 16 inputs
   - ACWB-1 12 inputs
   - ACWB-1 16 inputs

8. **Assembly instructions**
   - Place all four screws in the upper side of the bracket to prevent malfunctions.

9. **IMPORTANT SAFETY INSTRUCTIONS — SAVE THESE INSTRUCTIONS — KEEP IN A SAFE PLACE!**
   - Do not block access to the external AC and DC disconnects.
   - Do not block access to the external AC and DC disconnects.

10. **Packing list**
    - Mounting bracket
    - DC wiring box
    - AC wiring box
    - Grounding screw
    - Spacers
    - Conducting spring
    - Conducting spring
    - Conducting spring
    - Conducting spring
    - Conducting spring
    - Conducting spring
    - Conducting spring
    - Conducting spring

11. **Symbols used in the guide and on the products**
    - CAUTION
    - ATTENTION
    - SAVE THESE INSTRUCTIONS -- KEEP IN A SAFE PLACE!

12. **Use only high quality and long-lasting materials**
    - Use only high quality and long-lasting materials.

13. **Check the model code on the labels**
    - Check the model code on the labels.

14. **This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:**
    - (1) The device may not cause harmful interference, and (2) the device must accept any interference received, including interference that may cause undesired operation.
Before connecting the inverter to the distribution grid, set the country standard using the two a05 rotary switches. Depending on the country where the inverter is installed, there are two different grid standard parameters.

Switc h
   1. Voltage ride-through
   2. Country grid standard
   3. Normal/service mode toggle switch
   4. RS-485 line 1 termination on RJ-45 connector (requires special wiring)
   5. AFD (Arc Fault Detector) housing
   6. Screw terminal block
   7. Flush wipper
   8. Fuses
   9. SD Card socket

The following table shows the main components and connections available on the communication and control board. Each communication cable reaches the communication and control board connector on the communication and control board. See the product manual for details on the connections and functions available on the communication and control board.

<table>
<thead>
<tr>
<th>Component</th>
<th>Connection</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication board connector X1 (RS-485)</td>
<td>1, 2, 3, 4, 7</td>
<td>Communication RS-485 line 1, 2, 3, 4, 7</td>
</tr>
<tr>
<td>Communication board connector X2 (RS-485)</td>
<td>9</td>
<td>Communication RS-485 line 9</td>
</tr>
<tr>
<td>Communication board connector X3 (RS-485)</td>
<td>10, 11, 12</td>
<td>Communication RS-485 line 10, 11, 12</td>
</tr>
<tr>
<td>Communication board connector X4 (RS-485)</td>
<td>13</td>
<td>Communication RS-485 line 13</td>
</tr>
<tr>
<td>Communication board connector X5 (RS-485)</td>
<td>14, 15, 16</td>
<td>Communication RS-485 line 14, 15, 16</td>
</tr>
<tr>
<td>Communication board connector X6 (RS-485)</td>
<td>17</td>
<td>Communication RS-485 line 17</td>
</tr>
</tbody>
</table>

The following functions are equipped on this inverter:

- Voltage ride-through
- Slow ramp: The soft-start ramp defines the maximum rate at which the inverter can increase the output power when the inverter is first starting up. This startup may occur on a daily basis or when the inverter restarts after an abnormal grid event has ended.
- Power reduction - Variator
- Fault protection
- Inverter disconnects from the grid in the event of an abnormal voltage condition. The parameters that control voltage ride-through can be accessed from the Aurora Manager software.
- The grid support functions that are equipped on this inverter are described in the following sections.

The inverter is equipped with advanced grid support functionality that is useful to support reactive loads and also well suited in reliable operation of the utility grid in the case of temporary grid disturbances.

1. Power reduction
2. Fault protection
3. Grid support
4. Voltage ride-through
5. Slow ramp

The inverter is designed to comply with EN 50438-2-4 (IEC 62109) and EN 50725-1 standards. The inverter is equipped with advanced grid support functionality that is useful to support reactive loads and also well suited in reliable operation of the utility grid in the case of temporary grid disturbances.

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