ABB small wind inverters

Quick installation guide

PVI-6000-TL-OUTD-W

In addition to what is explained below, the safety and installation information provided in the installation manual must be read and followed. The technical documentation and the interface and management software for the product must be used as well.

The device must be used in the manner described in the manual. If this is not the case the safety device guaranteed by the manufacturer may not achieve its protection effect.

According to what is indicated in the table below, the inverters can be installed:

- On the wall
- At the service cable inlet
- On a pole
- In a cabinet

Hazardous voltage located on the lower side (Step 3).

> **Bracket**

LED Panel

> **Display**

Internal battery

DC Input terminal block

Once the connection to the input terminal block is made, close the cover by tightening the 4 screws and open the front cover (Step 1). During installation, do not place the inverter with its front facing towards the ground. The means used for lifting must be suitable to bear the weight of the equipment. The transport and handling of the equipment, especially by road, must be carried out by with suitable ways and means for protecting the components from violent shocks, humidity, vibration, etc.


## List of supplied components

<table>
<thead>
<tr>
<th>Available components</th>
<th>Quantity</th>
<th>Available components</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bracket for wall mounting</td>
<td>1</td>
<td>L-key, TORD TX20</td>
<td>1</td>
</tr>
<tr>
<td>Bto3 screws for wall mounting</td>
<td>3</td>
<td>Technical documentation</td>
<td>1</td>
</tr>
<tr>
<td>M6x10 screw</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Environmental checks

Closed to the technical data to check the environmental parameters to be observed.

Installation of the unit in a location exposed to direct sunlight must be avoided as it may cause:

1. power limitation characteristic in the inverter (affecting the generated energy production by the system)
2. premature wear of the mechanical components (gaskets) and of the user interface (display)
3. during installation do not install in a closed indoor area where air cannot circulate freely
4. Do not install in places where gases or flammable substances may be present
5. do not install in contained areas where people can be or where the prolonged presence of people or animals is expected, because of the noise level (about 50dB(A) at 1 m) that the inverter makes during operation

## Lift ing

The means used for lifting must be suitable to bear the weight of the equipment.

The components of the packaging must be disposed in accordance with the regulations in force in the country of installation.

If you open the package, check that the equipment is undamaged and make sure all the components are present. If you find any defects or damage, stop unpacking and consult the carrier, and also promptly inform the Service ABB.

## Installation position

- In a wall or strong structure capable of bearing the weight of the equipment
- In a safe, easy to reach places
- If possible, installed at eye level so that the display and status LEDs can be seen easily
- Install the inverter in a location that does not exceed the horizontal and vertical limits indicated in the installation manual
- Select a site with enough space around the unit to permit easy installation and removal of the inverter

For further information regarding connections between the rectifier and the wind turbine, as well as installation of the protection devices required in the plant, please see the manual for the installation of the 700W-WIND-INTERFACE-E20 rectifier.
Load protection breaker (AC disconnect switch) and line-cable sizing

To protect the AC connection line of the inverter, we recommend installing a device for protection against over current and leakage with the following characteristics:

- Type: B or C
- Short circuit current (Ic): 50 kA
- Rated Operating Current (Io): 63 A
- Opening time (to open): ≤ 7 sec
- Lasting current (Iw) ≤ 15 kA

ABB declares that the ABB inverter is not a “safety-related equipment” in terms of its construction, as it does not contain any protective ground fault currents and therefore there is no requirement that the protective ground fault designed of the inverter be type II according to IEC 61730 A.2.

Characteristics and sizing of the line cable

- 3 core cables required: The cross section of the 3 core cables must be sized in order to prevent unwanted disconnections of the inverter from the grid during a power supply fault.
- Cross section of the line conductor (mm²): 10 mm²
- Minimum length of the line conductor (m): 20 m
- Rating of the air-gap insulation (kV): 5 kV
- White color code for the phase A
- Yellow color code for the phase B
- Green color code for the phase C

The values are calculated in nominal power conditions, taking into account:
1. a power loss of not more than 1% along the line
2. copper cable, with HDRP rubber insulation, laid in free air
3. A/AC connection to the terminal block
4. A/AC connection of the communication and control signals terminal block
5. A/AC connection of the communication and control signals to the inverter

Warning Before performing any of the operations described below, ensure the AC line downstream the inverter has been correctly disconnected.