In addition to what is specified 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 are available at the website.

The device must be used in the manner described in the manual. If it is not in the safety devices guaranteed by the manufacturer the reference.

### Hazardous voltage

**WARNING!**

The installation of the inverters must not compromise access to any disconnect devices that may be located externally. Please refer to the warranty terms and conditions available on the website and evaluate any possible exclusion due to improper installation.

#### Environmental checks

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

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

1. **Loss of efficiency** caused by the presence of sunlight in the interior of the inverter, which causes the display and status LEDs to be seen easily.
2. **Instability** of the electronic/communication components

The installation site must be free from any obstructions that may cause the inverter to exceed its allowable ambient temperature range.

- **Ventilation** must be provided to ensure that the inverter operates within its specified temperature range.
- **Ingress Protection** must be provided to prevent the entry of dust and moisture into the inverter.

#### Final installation

- **Mounting** must be carried out by a qualified installer.
- **Cable management** must be taken into account to ensure that the cables are properly connected and not subject to damage.
- **Grounding** must be done in accordance with the requirements of the local electrical code.

#### Service cable inlet

- **Position the bracket** (1) so that it is perfectly level on the wall and use it as a boring template.
- **Drill two holes** using a drill with a 10 mm diameter bit. The depth of the holes should be about 75 mm. On the bracket there is a system with which to secure it just 2 are enough to support the inverter if installed on stable, robust supports.
- **Secure the bracket to the wall** or to the pole with the no. 2x 10 mm wall plugs supplied with the kit. (Step 1).
- **Position the inverter** to the bracket (2) by tightening the locking screw (3) located on the lower side (Step 2).
- **Insert the 4 screws** and open the front cover (4) in order to make all the necessary connections.
- **Once the connectors have been made**, close the cover by tightening the 4 screws on the front to a minimum tightening torque of 1.5 Nm.

### Assembly instruction

1. **Inverter model**
2. **Inverter Port Number**
3. **Inverter Serial Number**
4. **Date of manufacture**

#### Inverter Serial Number

- **Week/Year of manufacture**

#### PVI-4.2-TL-OUTD-W

**Equipment weight**

- **1.1 Kg**

#### Transport and handling

- **Choose a place** with enough space around the unit to permit easy installation and removal of the equipment.
- **Do not install** in places where gases or flammable substances may be present.
- **Do not install** in rooms where people live or where the prolonged presence of people or animals is expected, because of the noise (about 50dB(A) at 1 m) that the inverter makes during operation.
- **Avoid overheating**, always make sure the flow of air around the inverter is not blocked so that it is perfectly level on the wall and use it as a boring template.
- **Transport of the equipment**, especially by road, must be carried out with by suitable ways and means for protecting the components from violent shocks, humidity, vibration, etc.
- **Lifting** may be performed using means for lifting must be suitable to bear the weight of the equipment.
- **Unpacking and checking**

- **If you find any defects or damage**, stop unpacking and consult the carrier, and also promptly inform the Service ABB.

- **When you open the package**, check that the equipment is undamaged and make sure all the components are present.

#### Accessibility

- **Final installation of the inverter must not compromise access to any disconnection devices that may be located externally.** Please refer to the warranty terms and conditions available on the website and evaluate any possible exclusion due to improper installation.

#### Warning!

- **Rotation** of the wind turbine generates hazardous voltages in the cables coming from the wind generator. Before connecting up the cables to the inverter DC inputs you **must** feed the turbine into a safe state (mechanically blocked) and then disconnect the DC cables by setting the breakers of the turbine. This can be done by opening any external disconnecting switches.

- **Remove the protective plug** from the hole used for the DC cables (1) inserted on an M6 cable gland (compatible - hole diameter 3.8 mm) in the hole to be used for the DC input cables (2).

- **Ensure environmental protection** is necessary to fix the cable gland to the inverter chassis with the minimum tightening torque specified in the cable gland manufacturer’s data sheet.

- **For further information regarding connections between the rectifier and the wind turbine**, as well as installation of the protection devices required in the plant, see the manual for the inverter for the 7200-WIND INTERFACE-EU rectifier.

#### DSP Reprogramming

- **If possible, install at eye-level** so that the display and status LEDs can be seen easily.
- **Proceed to anchor the inverter** to the bracket (2) by tightening the locking screw (3) located on the lower side (Step 2).
- **Insert the 4 screws** and open the front cover (4) in order to make all the necessary connections.
- **Once the connectors have been made**, close the cover by tightening the 4 screws on the front to a minimum tightening torque of 1.5 Nm.

#### Service cable inlet

- **Position the bracket** (1) so that it is perfectly level on the wall and use it as a boring template.
- **Drill two holes** using a drill with a 10 mm diameter bit. The depth of the holes should be about 75 mm. On the bracket there is a system with which to secure it just 2 are enough to support the inverter if installed on stable, robust supports.
- **Secure the bracket to the wall** or to the pole with the no. 2x 10 mm wall plugs supplied with the kit. (Step 1).
- **Position the inverter** to the bracket (2) by tightening the locking screw (3) located on the lower side (Step 2).
- **Insert the 4 screws** and open the front cover (4) in order to make all the necessary connections.
- **Once the connectors have been made**, close the cover by tightening the 4 screws on the front to a minimum tightening torque of 1.5 Nm.

#### Available components

- **Available components**
- **Quantity**
- **D15 Waster**
- **L-6x, TORN T320**
- **Connector for the connection of the communication and control signals**
- **Technical documentation**
- **Bolts and screws for wall mounting**
- **Wall/Pole mounting**
- **Final installation of the inverter must not compromise access to any disconnection devices that may be located externally.** Please refer to the warranty terms and conditions available on the website and evaluate any possible exclusion due to improper installation.

#### Power and productivity for a better world

ABB small wind inverters

Quick installation guide

PVI-3.0/3.6/4.2-TL-OUTD-W
The inverter commissioning procedure is as follows:

1. Connect the input voltage to the inverter, ensuring the input voltage is greater than the minimum starting voltage.
2. When the inverter is turned on for the first time you will see the "HoldOn" message. This message allows the inverter to automatically configure its parameters to ensure that compliance with local standards, the desired language, and the selected "Network" will be set.

Warnings:
- After the grid standard was set you have 24 hours to make any changes to the grid standard value; 24 hours later the "Network Select." functionality will be blocked, and any subsequent changes can only be made using a password provided on request by ABB.

Loading the Power Curve of exciter generator
You can load the exciter's "Power curve", the exciter message "Waiting Eng. Tab" will be displayed. This message indicates that the wind turbine power curve has not yet been imported to the inverter. Thus, before connecting the inverter into the power grid, you must load the curve using the "Curve Import" function.

The procedure described below should be followed for applying the power curve:

1. Connect the neutral cable (normally blue) to the terminal labelled with the letter "N".
2. Connect the phase cable to the terminal labelled with the letter "L1".
3. Connect the service cable gland to the terminal labelled with the letter "W2".
4. Connect the AC line cable to the terminal labelled with the letter "L2".
5. Connect the AC line cable to the terminal labelled with the letter "L3".
6. Connect the DC line cable to the terminal labelled with the letter "L1".

Each cable which must be connected to the communication and control signals must pass through one of the two service cable glands.

The ALARM contact can be used only with systems that ensure a safety isolating additional at least (supplementary insulation in relation to the DC input voltage). For further information regarding the configuration and use of the communication and central signals terminal block, please see the manual "ABB 600 VDC Inverter Communication User Interface Manual".

The following parameters must be provided, with the power curve, by the turbine manufacturer. See below table for more details on the parameters:

- **Output Power Rating**: This is the maximum power of the inverter, expressed in kilowatts, that the inverter is capable of delivering.
- **Voltage (Vin Start)**: This is the input voltage above which the inverter connects to the grid. The value must be between 275V and 1000V.
- **Voltage (Pout Ramp)**: This is the input voltage below which the inverter disconnects from the grid. The value must be between 275V and 1000V.
- **Nominal Voltage**: This is the nominal voltage of the inverter, expressed in kilowatts.
- **Nominal Current**: This is the nominal current of the inverter, expressed in amperes.
- **Rated Output Frequency (f<br>acr r)} at P<br>acr r)}\text{max r),f}) at P<br>acr r)}\text{max r)}
- **Isolation Level**: This is the level of isolation of the inverter, expressed in kilovolts.
- **Safety**: This is the safety level of the inverter, expressed in kilovolts.
- **Operating performance**: This is the operating performance of the inverter, expressed in kilowatts.
- **Environmental**: This is the environmental performance of the inverter, expressed in kilowatts.
- **Parameters**: This is the parameters of the inverter, expressed in kilowatts.
- **Cooling**: This is the cooling system of the inverter, expressed in kilowatts.
- **Weight**: This is the weight of the inverter, expressed in kilos.
- **Dimensions**: This is the dimensions of the inverter, expressed in millimeters.

*The inverters and related accessories are designed to work within any one or a combination of the grid types listed.*