

Installation location and position

Explanation of safety notices

DANGER!

Indicates immediate danger.

- ▶ If not avoided, death or serious injury will result.
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WARNING!

Indicates a potentially hazardous situation.

- ▶ If not avoided, death or serious injury may result.
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CAUTION!

Indicates a situation where damage or injury could occur.

- ▶ If not avoided, minor injury and/or damage to property may result.
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NOTE!

Indicates a risk of flawed results and possible damage to the equipment.

Safety

WARNING!

Danger due to incorrect operation and incorrectly performed work.

This can result in serious injury and damage to property.

- ▶ Only qualified personnel are authorised to commission your inverter and only within the scope of the respective technical regulations.
 - ▶ Read the Installation and Operating Instructions before installing and commissioning the equipment.
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WARNING!

Danger due to work that has been carried out incorrectly.

This may result in serious injury and damage to property.

- ▶ Surge protective devices must only ever be installed and connected by a qualified electrical installation engineer!
 - ▶ Follow the safety rules.
 - ▶ Ensure that both the AC side and the DC side of the inverter are de-energised before carrying out any installation and connection work.
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Fire prevention

CAUTION!

Danger due to poor or unprofessional installation.

This may result in damage to inverters and other live photovoltaic system components. Poor or unprofessional installation can cause overheating of cables and terminal connections and result in arcs. These can cause heat damage, which in turn may lead to fires.

Observe the following when connecting AC and DC cables:

- ▶ Tighten all terminals to the torque specified in the operating instructions
 - ▶ Tighten all grounding terminals (PE / GND), including free ones, to the torque specified in the operating instructions
 - ▶ Do not overload cables
 - ▶ Check cables for damage and verify that they are laid correctly
 - ▶ Take note of the safety instructions, Operating Instructions and any local connection regulations
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- ▶ Using fastening screws, always screw the inverter firmly to the mounting bracket to the torque specified in the Operating Instructions.
 - ▶ Ensure that the fastening screws are tight before starting the inverter!

Note! Fronius will not accept any costs associated with production downtimes, installer costs, etc., that may arise as the result of a detected arc and its consequences. Fronius accepts no liability for fires that can occur despite the presence of the integrated arc detection/extinguishing system (e.g. fires caused by a parallel arc).

Note! After an arc has been detected, the entire photovoltaic system must be checked for possible damage before resetting the inverter.

Observe the manufacturer's connection, installation and operating instructions at all times. To reduce the hazard potential to a minimum, perform all installation and connection work carefully according to the instructions and regulations. Refer to the device Installation Instructions for the tightening torques to be used at the relevant terminal connections.

Proper use/intended purpose

The inverter is intended exclusively to convert direct current from solar modules into alternating current and to feed this into the public grid.

Utilisation not in accordance with the intended purpose comprises:

- Any use above and beyond this purpose
- Making any modifications to the inverter that have not been expressly approved by Fronius
- the installation of components that are not distributed or expressly approved by Fronius.

Fronius shall not be liable for any damage resulting from such action. No warranty claims will be entertained.

Proper use also includes:

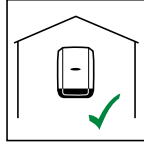
- Carefully reading and obeying all the instructions and all the safety and danger notices in the Operating Instructions and Installation Instructions
- Performing all stipulated maintenance work
- Installation as specified in the Installation Instructions

When designing the photovoltaic system, ensure that all components are operated within their permitted operating ranges at all times.

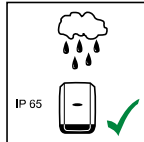
Observe all the measures recommended by the solar module manufacturer to ensure that the solar module retains its properties in the long term.

Obey the regulations of the power supply company regarding connection methods and energy fed into the grid.

Choosing the location of the inverter

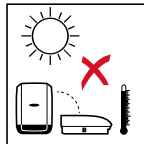


The inverter is suitable for indoor installation.

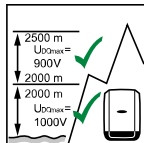
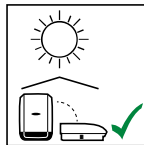


The inverter is suitable for outdoor installation.

Because of its IP 65 protection class, the inverter is resistant to water jets from any direction and can also be used in damp environments.

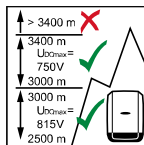


In order to minimise the heating up of the inverter, do not expose it to direct insolation. Install the inverter in a protected location, e.g. in the vicinity of the solar modules or beneath the eaves.

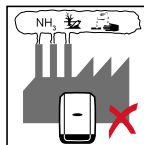


U_{DCmax} at an altitude of:

- 0 to 2000 m = 1000 V
- 2000 to 2500 m = 900 V
- 2500 to 3000 m = 815 V
- 3000 to 3400 m = 750 V

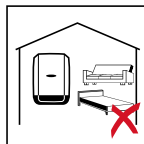


IMPORTANT! The inverter must not be installed or used at altitudes above 3400 m.

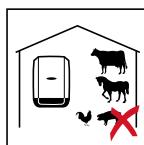


Do not install the inverter in:

- Areas where ammonia, corrosive vapours, acids or salts are present (e.g. fertiliser stores, ventilation openings from cattle sheds, chemical plants, tanneries, etc.)

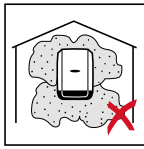


During certain operating phases the inverter may produce a slight noise. For this reason it should not be installed in an occupied living area.

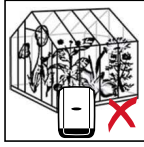


Do not install the inverter in:

- Places where there is an increased risk of damage from farm animals (horses, cattle, sheep, pigs, etc.)
- Stables or adjoining areas
- Storage areas for hay, straw, chaff, animal feed, fertilisers, etc.



All inverters are designed to be dust-tight. However, in areas with a heavy build-up of dust, the thermal efficiency may still be impaired by dust forming on the cooling surfaces. Regular cleaning is necessary in such situations. We therefore recommend not installing the inverter in areas and environments with high dust accumulation.



Do not install the inverter in:

- Greenhouses
- Storage or processing areas for fruit, vegetables or viticulture products
- Areas used in the preparation of grain, green fodder or animal feeds

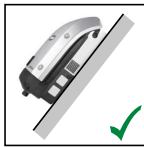
Installation position



The inverter is suitable for vertical installation on a vertical wall or column.



The inverter is suitable for a horizontal installation position.



The inverter is suitable for installation on a sloping surface.



Do not install the inverter on a sloping surface with its connection sockets at the top.



Do not install the inverter at an angle on a vertical wall or column.



Do not install the inverter horizontally on a vertical wall or pillar.



Do not install the inverter on a vertical wall or pillar with its connection sockets facing upwards.



Do not install the inverter overhanging with the connection sockets at the top.



Do not install the inverter overhanging with the connection sockets at the bottom.

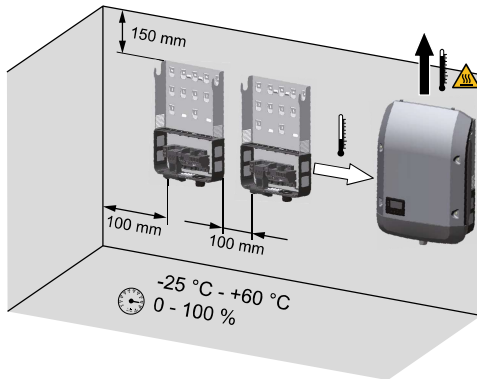


Do not install the inverter on the ceiling.

General comments regarding inverter installation location

Please note the following criteria when choosing a location for the inverter:

Install only on a solid, non-flammable surface



Max. ambient temperatures:
-25 °C / +60 °C

Relative humidity:
0-100%

The airflow within the inverter is from the left to the top (cold air taken in from the left, hot air dissipated out of the top). The exhaust air can reach a temperature of 70 °C.

If the inverter is installed in a switch cabinet or a similar sealed area, then forced-air ventilation must be provided to ensure adequate heat dissipation.

If the inverter is to be installed on the outer wall of a cattle shed, maintain a minimum all-round clearance of 2 m between the inverter and all ventilation and other openings in the building.

The installation location must not be exposed to ammonia, corrosive vapours, salts or acids.