ABB Solar Inverters
Quick installation guide
MICRO-0.250/3.0/3HV-I-OUTD-230

In addition to what is explained in this guide, the safety and installation information provided in the technical manual must be read and followed. The technical data in this guide are for information purposes only, and the product specifications are available on the website. The device model is used in the manner described in the manual. In this case, the safety data must be followed by the inverter. Situations can arise where the inverter could be damaged.

Environmental checks
- Do not expose to direct sunlight to avoid overheating.
- Do not operate in temperatures above 40°C (90°F).
- Do not subject to deep freezing.
- Do not operate in atmospheres with dust or moisture.
- Do not subject to electromagnetic interference.

Installations above 2000 metres
- The inverter is designed to operate at 40°C (90°F) as a maximum ambient temperature. If the ambient temperature is higher, the inverter will self-protect by derating the DC input power and the AC output power.
- Use a filter to reduce noise levels above 0.006.
- Measure the dielectric resistance of the air to determine the risk of electric arcs (discharges).
- Reduce the risk by using an insulated cable to connect the inverter to the grid.

Installation position
- The inverter must be mounted on a stable and vertical surface.
- The inverter must be accessible for maintenance.
- The inverter must be protected from weather conditions.
- The inverter must be protected from direct sunlight.

Cable protection breaker (AC disconnect switch) and line cable sizing
- Use a cable protector to protect the cable from mechanical damage.
- Use a cable protector to protect the cable from environmental damage.
- Use a cable protector to protect the cable from voltage surges.

Differential protection downstream of the inverter
- The inverter is protected against short circuits, overcurrents, and ground faults.
- The inverter is protected against overvoltage and undervoltage.
- The inverter is protected against overcharging.

Interface protection system and device downstream of the inverter
- The inverter is protected against overvoltage and undervoltage.
- The inverter is protected against overcharging.
- The inverter is protected against overcurrents and ground faults.

Protection of the AC-TBUS cable
- Use a protective cap to protect the cable from environmental damage.
- Use a protective cap to protect the cable from mechanical damage.
- Use a protective cap to protect the cable from voltage surges.

To prevent electrical hazards, all the connections must be made with the disconnect switch downstream of the inverter and the AC cable is protected from a fuse and a circuit breaker.

power and productivity for a better world
ABB

The labels on the MICRO inverter have the Agency marking, main technical data and identification of the equipment and manufacturer.

The technical data shown in this quick installation guide does not replace those shown on the labels attached to the equipment.

Main systems used in the guide and on the products:

- The LED on the front panel is not present in the -IP67 version.
- The AC-TRUNK-BUS cable (and relevant accessories) available in 3 configurations, depending on the type of installation and PV panel used.

The distances between MICRO inverters installed in the same system array depend on the type of photovoltaic module used.

- Male connector for AC-TRUNK-BUS cable extension
- Female connector for AC-TRUNK-BUS cable extension

Male and female connectors are provided for connecting the AC cables to prevent the possibility of damaging the inverter.

Attention: In order to facilitate panel labeling, it could be useful to mark the appropriate position of each photovoltaic module on the frame.
The module has a connector on each end, simplifying the installation. The connector can be:

A. Extended with the extension connectors to reach the junction box or the AC distribution panel.
B. Covered with insulated and cap.
C. Extended with another AC TRUNK BUS cable.
D. Extended with the extension connectors to reach another AC TRUNK BUS cable.

Please map the system, ensuring the boxes placed or not are located in the appropriate position on the diagram.

For MICRO inverters with an LED on the front panel (old version), see table right for description of the LED indications. In this table, the Start up phase happens in the first ten seconds and includes steps 1 and 2. Followed by Steps 3-6, which are part of the final phases.

Acquire and configure the MICRO-inverters of the system using the CDD device.

The inverter will not begin to feed energy into the distribution grid until the association procedure by the CDD has been completed. It is required that a CDD (Concentrator Data Device) be installed with any MICRO inverter.

Refer to the CDD manual for a Quick Installation Guide to perform the system commissioning operations. Any malfunctions will be reported on the CDD device display.

To sheet .........

© Copyright 2013 ABB. All Rights Reserved.