ABB Solar inverters
Quick Installation Guide
TRIO-20.0/27.6-TL-OUTD

1. Installation position
Position on a solid and strong structure suitable for bearing the weight of the equipment.

2. Installation of the inverters

3. LEDS and BUTTONS

4. List of supplied components

5. Precautions

6. Components available for all models

7. Components available for all models

8. Additional components for (-S) models

9. Wall mounting

10. Glossary of technical terms

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The inverter is only to be used with photovoltaic units with grounded insulated input poles unless accessories allowing grounding of the inputs have been installed. In this case it is compulsory to install an isolation transformer at the AC side of the system.

- Connection of inputs to the Standard and S2 models

For those two models shown in the DC input connections (a) is made by inserting the cables in the DC cable gland. The maximum accepted cable cross-section ranges from 1.5 to 16 mm², whereas each individual terminal of the terminal block accepts a cable cross-section of up to 0.5 mm² (lightning protection).

- Connection of inputs to the S2 / S2D model

Reversing polarity may result in serious damage. Always check the polarity before connecting up each string.

Each input is equipped with protection devices that check if the sense current rating is properly used for the photovoltaic modules installed.

- Environmental sensors

Connect all the strings included in the house of the system and always check the tightness of the connection.

In these cases, the wiring box is used to connect the strings coming into the inverter (do not make external wiring for parallel strings). This is because the string wires, located on each input, are not able to be taken in parallel (open).

User Period

- SETTINGS>Modify the screen to be constantly monitored.

The values are calculated in nominal power conditions, taking into account:

- a loss of not more than 1% along the line.
- 2-clipper cable, with STEN/INPE insulation, laid in free air.

The inverter commissioning procedure is as follows:

Turn on the DC and disconnect the DC of the PV generator (disconnect the DC via the inverter or the DC of the DC and the other for AC). First place the AC disconnect switch, then the DC disconnect switch.

There is no order of priority for opening the disconnect switches.

- SETTINGS>Alarm

The settings become fixed after 24 hours of operation of the inverter (the PV generator simply has to be under power).

- Setting the label for grid connection

The standard for the grid label which must be back-etching installation is 7 × 14 (EN 590-2 - MEASUREMENTS, Protection).

- Local protection breaker (AC disconnect switch) and line size opening

In any case, connection of the inverter to ground is mandatory.

- Characteristic and sizing of the line cable

The following table shows the main components and the connections available on the control and communication board. Each cable that must be connected to the sequence of grid connection.

- Voltage/current rating

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