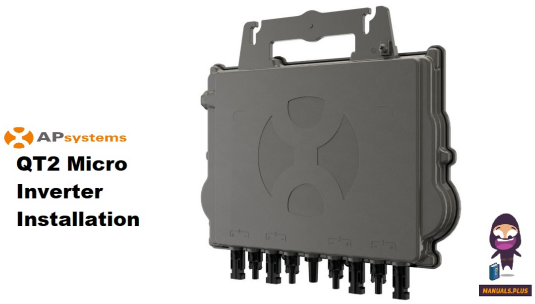


APsystem QT2 Micro Inverter Installation Guide

Contents

APsystem QT2 Micro Inverter

Specifications

- Product Name: QT2 Microinverter
- Manufacturer: APsystems
- Model: QT2 Series
- Input Voltage: DC
- Output Voltage: AC
- Warranty: Check with the manufacturer for details

Product Usage Instructions

Step 1: Scan the QR Code for the Mobile App and Support
Scan the QR code provided to download the mobile app for installation support and more information.

Step 2: Pre-Installation Checks
Verify wiring color codes according to local regulations. Ensure all wires match before connecting to the AC bus.

Step 3: Attaching Microinverters to Racking
Install the microinverters under PV modules to avoid exposure to weather. Allow air to flow around the microinverter casing. Ground the racking per local electrical code.

- Mark the microinverter location on the rack.
- Mount microinverters using recommended hardware.

Step 4: Grounding the System
Ground the system using either the grounding washer or grounding copper wire as instructed.

Step 5: Connecting Microinverter to AC Bus Cabl Insert the microinverter AC connector into the trunk cable connector ensuring a secure connection. Cover any unused connectors with a Bus Cable T-CONN Cap.

Step 6: Installing Bus Cable End Cap
Follow the provided instructions to install the Bus Cable End Cap at the end of the AC bus cable.

Step 7: Placing PV Modules and Connecting Microinverters
Connect each QT2 microinverter to the PV modules, ensuring proper connection and functionality.

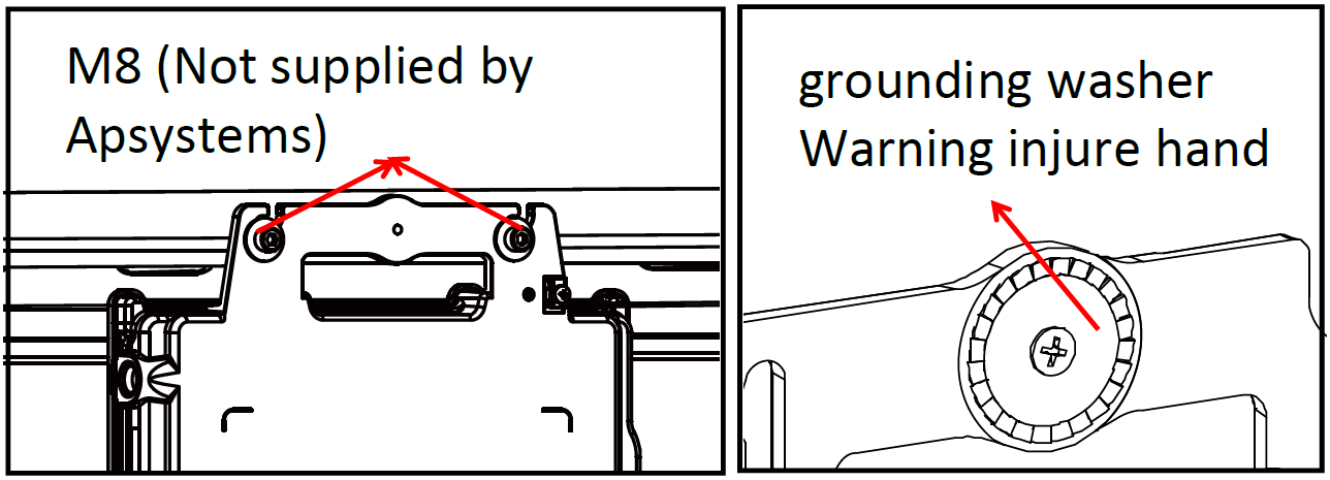
FAQ

Q: What should I do if the microinverter does not blink green ten times when plugging in the DC cables?
A: If the microinverter does not blink green as expected, double-check all AC and DC wiring connections to ensure they are correct and not damaged. Pay close attention to the lights for indications of correct operation.

Installation

Step 1. Verify that grid voltage matches the microinverter rating
Step 2. AC Bus Cable distribution

- One end of the AC bus cable is used to access the junction box into the power grid.
- Wire the conductors of the AC bus: L1- BROWN; L2 – BLACK; L3 – GRAY; N – BLUE; PE – YELLOW GREEN.



NOTE: Wiring color code can be different according to the local regulation. Check all the wires of the installation before connecting to the AC bus to be sure they match. Wrong cabling can damage irreparably the microinverters: such damage is not covered by the warranty.

Step 3. Attach the APsystems Microinverters to the Racking
NOTE: Install the microinverters (including DC and AC connectors) under the PV modules to avoid direct exposure to rain, UV, or other harmful weather events. Allow a minimum of 1.5cm (3/4'') below and above the casing of the microinverter to allow proper airflow. The racking must be properly grounded as per the local electrical code.

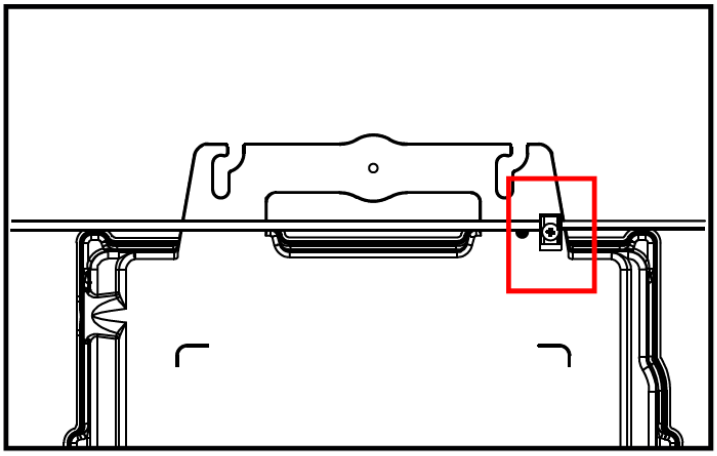
ATTENTION: Do NOT carry the microinverter by the AC cable. This may cause the AC cable to partially or fully disconnect from the unit, resulting in no or poor operation.

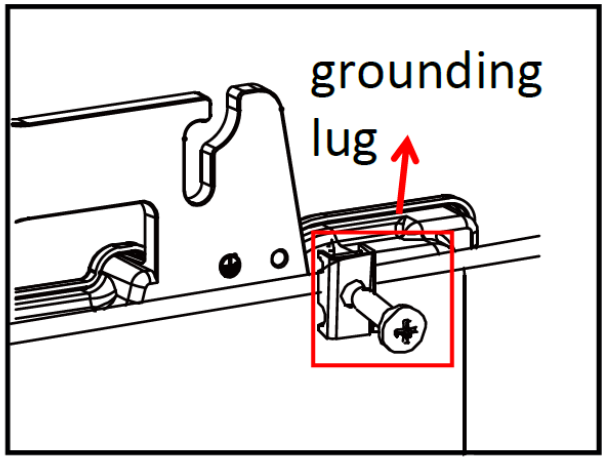
- Mark the location of the microinverter on the rack, concerning the PV module junction box or any other obstructions.
- Mount one microinverter at each of these locations using hardware recommended by your module racking vendor.

Step 4. Ground the system

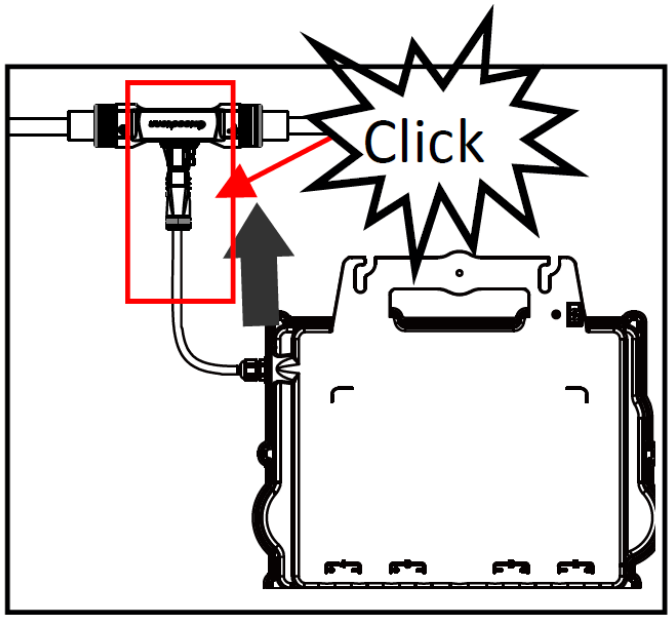
There are 2 ways to ground the QT2 series microinverters.

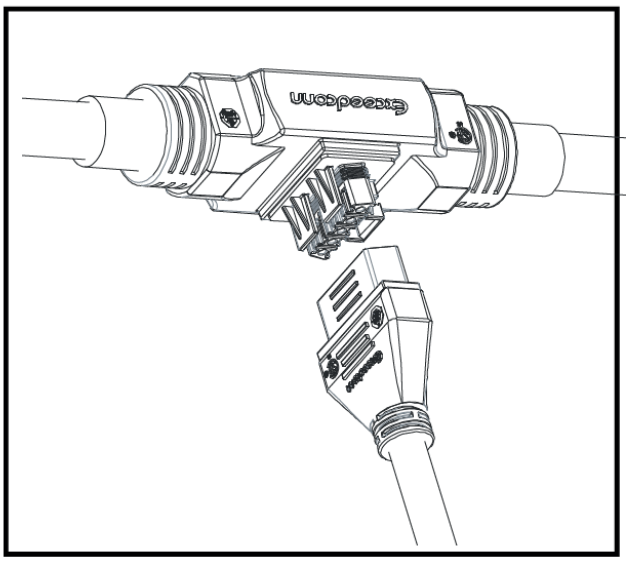
- **By grounding washer attached.** After the microinverters and racking are reliably installed, the microinverter's grounding washer can connect to the racking to ensure proper earthing.





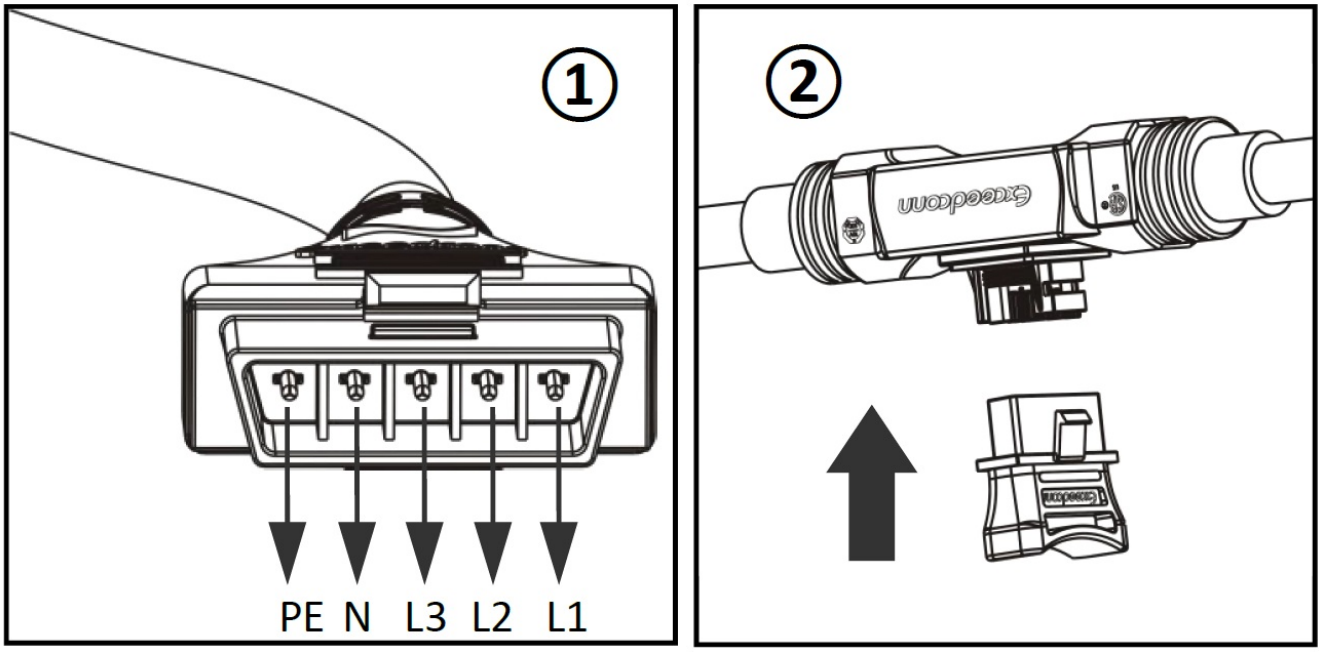
- **By grounding copper wire.** Fix the grounding copper wire with the grounding lug.



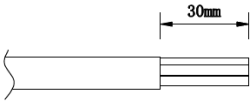
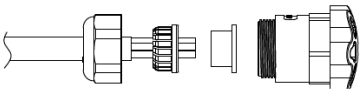
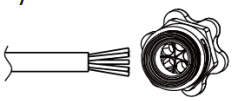
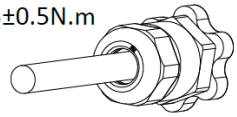


Step 5. Connect the APsystems microinverter to the AC bus cable Insert the microinverter AC connector into the trunk cable connector. Make sure to hear the "click" as proof of a robust connection.

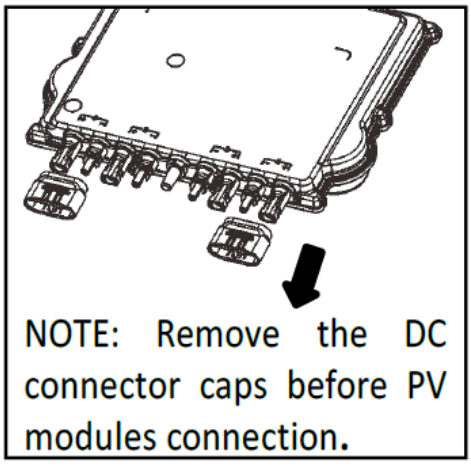
- NOTE: AC connector interface from left to right.
- NOTE: Cover any unused connectors with a Bus Cable T-CONN Cap to protect the unused connectors.

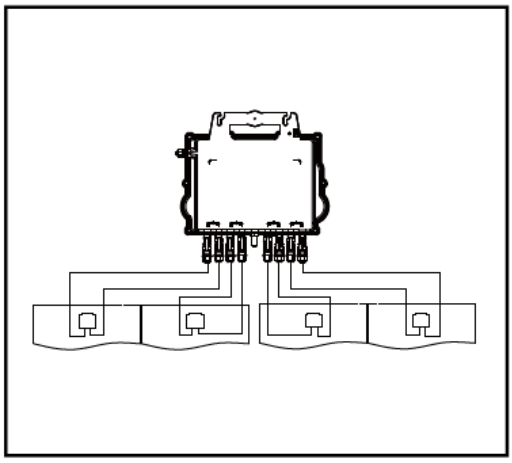


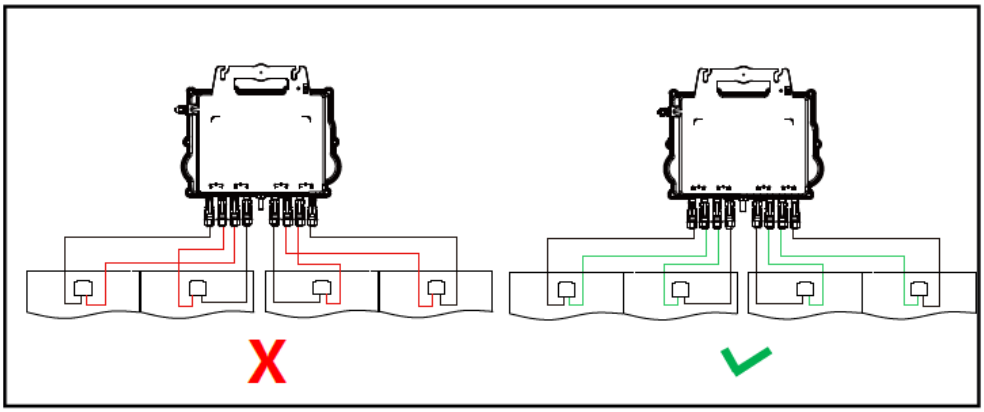
Step 6. Install a Bus Cable End Cap at the end of the AC bus cable

A. Wire stripping	**B.** Set the parts on the cable	**C.** Insert five wires into the core wires hole of the body	**D.** Insert seal and Clamp Finger into the body, then tighten the nut, torque 2.5±0.5N.m
	 Nut/Claw Seal/body/Body		

Step 7. Place the PV modules and connect each QT2 to the PV modules





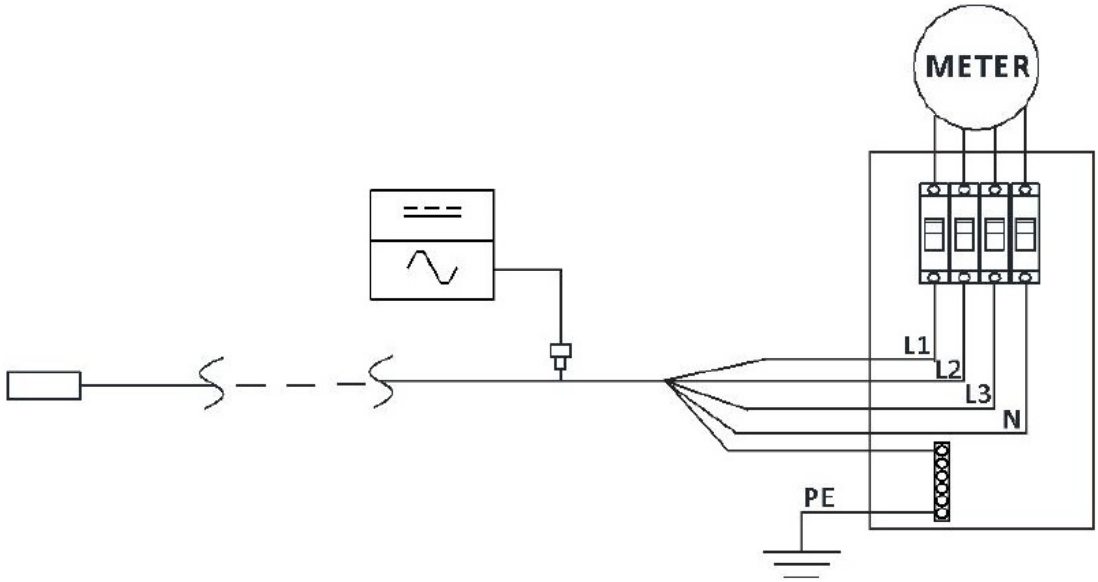


NOTE: When plugging in the DC cables, the microinverter should immediately blink green ten times. This will

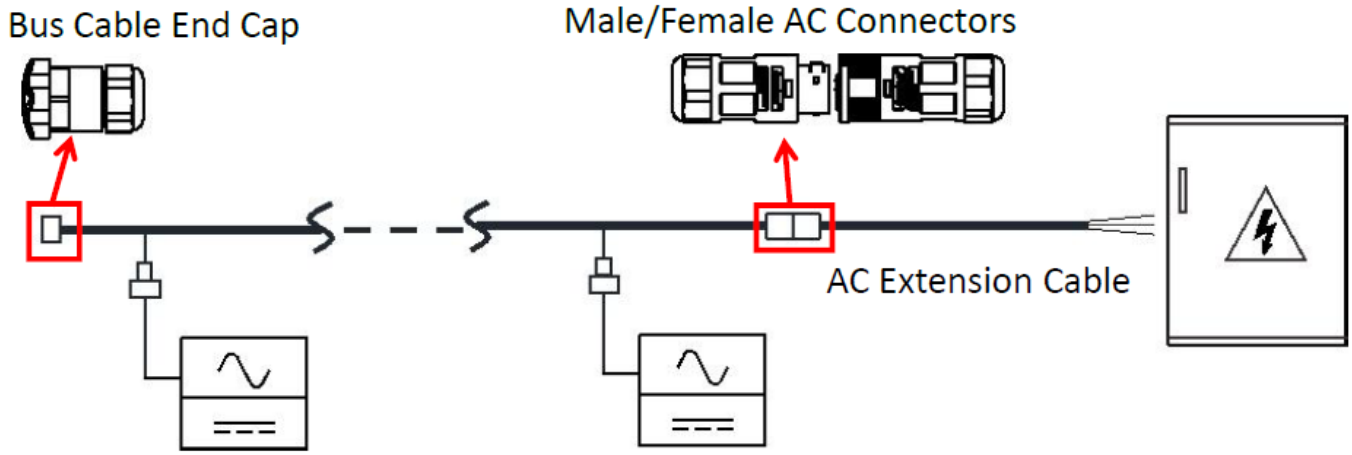
happen as soon as the DC cables are plugged in and will show that the microinverter is functioning correctly. This entire check function will start and end within 10 seconds of plugging in the unit, so pay careful attention to these lights when connecting the DC cables.
WARNING! Double-check to make sure all of the AC and DC wiring has been correctly installed. Ensure that none of the AC and/or DC wires are pinched or damaged. Make sure that all of the junction boxes are properly closed.
WARNING! Each PV panel must be carefully connected to the same channel. Never split positive and negative cables into two different channels, otherwise, the inverter will be damaged and the warranty will not apply.
NOTE: The neutral wire is not mandatory to be connected to the grid.Compatible with both Delta and Wye 3-phase grid.

Step 8. Connect APsystems Microinverters to Grid

- Please install bi-polar circuit breakers with properly rated current or according to the local regulation, which is mandatory to connect to the grid.
- Leakage current breakers or AFCI/GFCI breakers are not recommended to install



Step 9. AC Extension Cable

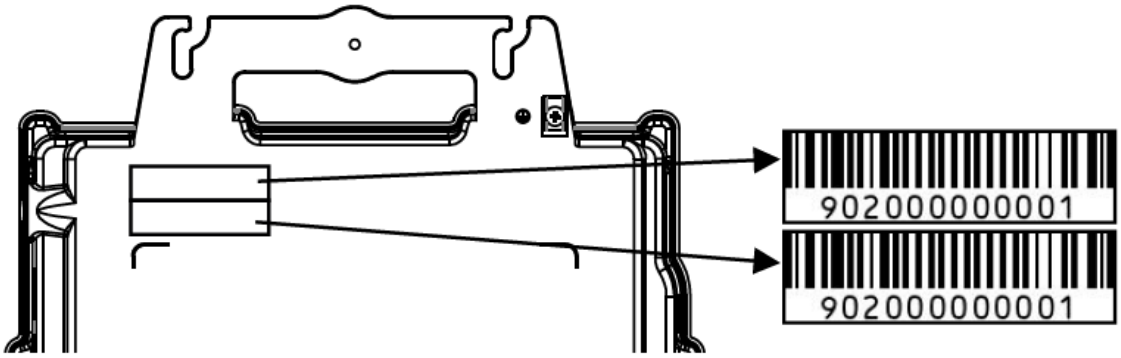


When an AC extension cable is needed, users could connect the AC bus cable and AC extension cable in a junction box or use a pair of male/female AC connectors that APsystems provides as an optional accessory.

Step 10. Complete the APsystems installation map

- Each APsystems Microinverter has 2 removable serial number labels.

- Complete the installation map by sticking the ID label of each microinverter at the right location.
- The second serial number label could be stuck on the solar module frame, which could help later confirm the position of the microinverter without dismantling the PV module.



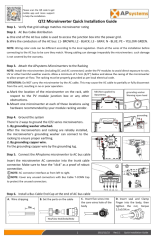
NOTE:

- The layout of the microinverters' serial numbers installation map is only suitable for typical Installation.
- Installation Map is available in the last page appendix of this manual.
- Use ECU_APP (available in the EMA Manager) to scan the serial numbers on the map when setting up the ECU (see the ECU instruction manual for more info).

Please scan the QR code to get a mobile app and more support to help with the installation.

Product information is subject to change without notice. (Please download manuals at www.APsystems.com).

Documents / Resources

	[APsystem QT2 Micro Inverter] [pdf] Installation Guide QT2, QT2 Micro Inverter, Micro Inverter, Inverter

References

- APsystems | The global leader in multi-platform MLPE technology
- User Manual