

IQ9N Microinverter with integrated MC4 connectors

Quick Install Guide

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MODEL
IQ9N-A-INT

VERSION 2.0
AUGUST 2025



140-00567-02



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1. Introduction

To install IQ9N Microinverter, read and follow all warnings and instructions in this guide and in *IQ9N Microinverter installation and operation manual* at <https://enphase.com/en-gb/installers/resources/documentation/microinverters>. Safety warnings are listed in the section *Installation and safety* on page 10.

Compliance with EU Directives

- Electro Magnetic Compatibility (EMC) directive 2014/30/EU¹
- Low Voltage Directive (LVD) 2014/35/EU
- Restriction of Hazardous Substances (RoHS) 2011/65/EU
- The full text of the EU Declaration of Conformity (DoC) is available at <https://enphase.com/en-gb/installers/resources/documentation>

Go to <http://link.enphase.com/iq9n-mc4-connectors> to access the quick install guide (QIG) in other languages. Contact <https://enphase.com/contact/support> if you have any questions.

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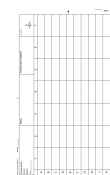
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2. What's in the box

IQ9N-A-INT × 18 microinverters



Quick install guide × 1



Installation map × 1

3. Preparing for installation

1. Check the microinverter manufacturing date to ensure the installation date is within one year of the manufacturing date. The manufacturing date can be found using the serial number associated with the microinverter through the following format:

Serial number format—LLYYWWNNNNNN
LL—manufacturing location
YY—year
WW—work week
NNNNNN—serial number

2. Check PV module compatibility² with our microinverter using our module compatibility calculator using the link s or QR code.



[UK](#)



[ANZ](#)

WARNING: You must match the DC operating voltage range of the PV module with the allowable input voltage range of the Enphase microinverter. Using an electrically incompatible PV module voids Enphase warranty.

3. IQ9N Microinverters require the IQ Cable and IQ accessories.

IMPORTANT: IQ9N Microinverters include AC and DC connectors integrated into the bulkhead. The AC port connects to the IQ Cable or the Enphase IQ Field Wireable Connector. TÜV has evaluated the DC port for intermateability with Stäubli MC4 connectors, whose cable coupler

¹ To comply with DC port emission requirements, the DC cable length must not exceed 3 meters (total DC cable loop length of 6 meters).

² IQ9N Microinverters are compatible with bifacial PV modules if the temperature-adjusted electrical parameters (open circuit voltage (V_{OC}), short circuit current (I_{SC})) of the modules, considering the electrical parameters, including the bifacial gain, are within the allowable microinverter input parameters range. In evaluating the amount of bifacial gain, follow the recommendations of the module manufacturers.

models are PV-KST4/...-UR, PV-KBT4/...-UR, PV-KBT4-EVO2/...-UR, and PV-KST4-EVO2/...-UR. The DC port of the inverter must be mated with Stäubli MC4 connectors.

4. Enphase IQ9 Microinverters must be connected to an IQ Gateway, or IQ Combiner, or IQ System Controller to ensure functionality. The system software periodically verifies this connection, and if an IQ Gateway is not connected, the microinverters may stop functioning. Additionally, an IQ Gateway, or IQ Combiner, or IQ System Controller is required to manage, monitor, and control the system, and receive software updates.
5. The system's functionality may be impacted if the IQ Gateway, or IQ Combiner, or IQ System Controller is not installed on-site or remains disconnected from the internet or microinverters. A flashing orange LED on the microinverter may indicate a communication issue with the IQ Gateway.
6. The microinverter has a Class II double-insulated rating, which includes ground fault protection (GFP). To support GFP, use only PV modules equipped with DC cables labeled PV wire or PV cable. Refer to local electrical codes and standards for grounding requirements of the PV array and racking.
7. Check the compatibility when expanding an IQ7 or IQ8 system with IQ9N Microinverters:
 - IQ9N Microinverters can be added to the existing IQ7 or IQ8 systems on the same IQ Gateway/IQ Combiner/IQ System Controller only in the following configurations:
 - Solar Only
 - Solar Plus Battery (IQ Battery 3T/10T or IQ Battery 5P or IQ Battery 5P with FlexPhase) grid-tied or Solar Plus Battery (IQ Battery 5P or IQ Battery 5P with FlexPhase) with backup, with IQ System Controller 3 INT.
 - The IQ7 Series Microinverters or IQ8 Series Microinverters cannot be added to a site with the existing IQ9N Microinverters on the same gateway.
 - The mixed system of IQ7, IQ8, and IQ9N will not support microinverter Sunlight Jump Start feature. However, the mixed system of IQ8 and IQ9N will support microinverter Sunlight Jump Start feature.
 - The combined peak power output of IQ7 Series Microinverters, IQ8 Series Microinverters, and IQ9N Microinverters in the system must not exceed 150% of the IQ Battery's rated power output. If this ratio is exceeded, PV shedding must be implemented to shade excess PV when the system switches to the off-grid mode. However, in systems using a mix of IQ8 Series Microinverters and IQ9N Microinverters, the allowable PV-to-battery (PV/ESS) ratio increases to 200%.
8. Download the Enphase Installer App and log in to your Enphase Account. To download, go to <https://enphase.com/en-gb/installers/apps> or scan the QR code.



NOTE: After you log in to your Enphase Account from the Enphase Installer App, scan the microinverter serial numbers (standard 1D bar code) and connect to the IQ Gateway to track the system installation progress. Ensure you are using the latest version of the Enphase Installer App.

9. Plan your AC branch circuits to meet the following limits for a maximum number of microinverters per circuit.

Circuit breaker	IQ9N
20 A single-phase	8
20 A multi-phase	24 (8 per phase)
25 A multi-phase (not applicable in Europe)	30 (10 per phase)

NOTE: Refer to local regulations for circuit breaker sizing and define the number of microinverters per branch in your area. 25 A multi-phase breaker option is not applicable in Europe.

NOTE: For a system containing mix of IQ7, IQ8, IQ9N or IQ8, IQ9N Microinverters on the same branch, ensure that the total output current of all microinverters on the branch does not exceed 16 A (20 A circuit breaker) or 20 A (25 A circuit breaker).

10. Size the AC conductor to account for the voltage rise. Select the correct conductor size based on the distance from the last microinverter in the circuit to the breaker in the electrical panel/AC switchboard. Center-feed the branch to minimize voltage rise.
11. Protect your system with lightning and/or surge suppression devices. It is also important to have insurance that protects against lightning and electrical surges.
12. Verify that the AC voltage³ on-site is within range:

Single-phase service	Multi-phase service
L1 to N: 184 to 276 VAC	<ul style="list-style-type: none"> • L1 to L2 to L3: 319 to 478 VAC • L1, L2, L3 to N: 184 to 276 VAC

13. The IQ Cable insulation colours codes for single-phase are Brown—L1 and Blue—N, and multi-phase are Brown—L1, Black—L2, Grey—L3, and Blue—N.

WARNING: Incorrect termination may irreparably damage any connected microinverters.

NOTE: Multi-phase IQ Cable internally rotates L1, L2, and L3 to provide balanced 400 VAC (multi-phase), thus alternating phases between microinverters.

³ Nominal voltage range can be extended beyond nominal if required by the utility.



NOTE: Minimise the number of unused multi-phase IQ Cable connectors with multi-phase systems. When cable connectors are left unused on a multi-phase system, they create a phase imbalance on the branch circuit. If multiple cable connectors are skipped over multiple branch circuits, the imbalance can multiply.

4. Additional components and tools

S.NO.	Component	SKU details
1	IQ Gateway or IQ Combiner	To manage and monitor solar production ENV-S-EM-230 or ENV-S-WM-230 or ENV-S-WB-230 or X-IQ-EURO-230-3P-4-2. This is required to apply the grid profile to microinverters. An IQ Gateway or IQ Combiner can manage and monitor up to 300 IQ9N Microinverters.
2	IQ System Controller 3 INT	Only required to enable back up functionality along with IQ Battery 5P or IQ Battery 5P with FlexPhase. It consolidates interconnection equipment and communication gateway into a single enclosure and streamlines grid independent capabilities of PV and storage installations SC100G-M230ROW.
3	IQ Battery	All-in-one AC-coupled storage solution that integrates seamlessly with your solar energy for maximum performance and energy savings. IQ Battery 3T/10T or IQ Battery 5P or IQ Battery 5P with FlexPhase.
4	IQ Relay ^{4, 5}	Physical disconnection relay. Q-RELAY-1P-INT, single-phase or Q-RELAY-3P-INT, multi-phase. For Italy, Q-RELAY-2-3P-ITA or IQ-RELAY-2-3P-ITA for single-phase and multi-phase application. The multi-phase IQ Relay also provides phase coupling to allow microinverters on all phases to communicate with the IQ Gateway. Use a Phase Coupler (LPC-01) for a multi-phase system for phase coupling if IQ Relay is not installed in the multi-phase system. An IQ Gateway or IQ Combiner can manage and monitor up to 10 IQ Relays.
5	Raw IQ Cable	Continuous 300 m cable. Q-25-RAW-300, single-phase or Q-25-RAW-3P-300, multi-phase.
6	Tie wraps or cable clips	Stainless steel cable clips to fasten IQ Cable. ET-CLIP-100
7	IQ Sealing Caps	For any unused connectors on the IQ Cable Q-SEAL-10.
8	IQ Microinverter Sealing Caps	Use IQ Microinverter Sealing Caps (Q-BA-CAP-10) to protect microinverters against moisture or water damage if the AC connector of the microinverter is not connected to the IQ Cable overnight. Remove the sealing cap and connect the IQ Cable when ready for cabling.
9	IQ Terminator	Cap for unused IQ Cable ends. Q-TERM-R-10 for single-phase or Q-TERM-3P-10 for multi-phase: Typically, one IQ Terminator (End-feeding branch circuit) or two IQ Terminators (Centre-feeding branch circuit) required per branch circuit.
10	IQ Disconnect Tool	To disconnect the IQ Cable Connectors. Q-DISC-10.
11	IQ Field Wireable Connectors (optional)	Connect IQ Cables without complex wiring. Q-CONN-R-10M and Q-CONN-R-10F for single-phase IQ Cable or Q-CONN-3P-10M and Q-CONN-3P-10F for multi-phase IQ Cable.

⁴ In Germany only, for PV systems greater than 30 kVA, an off-the-shelf DIN VDE V 0124-100 compliant central protection relay must be added to the system.

⁵ In UK only. Use a G99-approved third-party network protection relay for PV systems with a system size above 17 kW per phase.

S.NO.	Component	SKU details			
12	IQ Cable	2.5 mm² cable with pre-installed connectors for IQ Microinverters			
		Cable model	Connector spacing⁶	PV model orientation	Connectors per box
		Single-phase			
		Q-25-10-240	1.3 m	Portrait (all)	240
		Q-25-17-240	2.0 m	Landscape	240
		Q-25-20-200	2.3 m	Landscape	200
		Multi-phase			
		Q-25-10-3P-200	1.3 m	Portrait (all)	200
		Q-25-17-3P-160	2.0 m	Landscape	160
		Q-25-20-3P-160	2.3 m	Landscape	160

Additional materials and tools for installation:

- An AC junction box or AC isolator
- Screwdrivers, wire cutter, voltmeter, torque wrench, sockets, and wrenches for mounting hardware
- Crimp tool Multi-Contact PV-CZM-18100, -19100, or -22100 for single-phase IQ Field Wireable Connector
- Screwdriver blade width 4 mm–3.2 mm (1/8") (recommended tool to torque the screw on contact carrier and to disconnect multi-phase IQ Field Wireable Connector)

5. Installing IQ9N Microinverters

Install IQ9N Microinverters as follows. (See figure [IQ9N Microinverter installation](#)).

1. Position the IQ Cable.

- Count the required IQ Cable connectors for the branch circuit (considering voltage rise and branch circuit) and cut the cable accordingly, leaving at least 15 cm after the last connector for termination.
- Mark microinverter positions at fixed intervals along the PV racking, based on their connection sequence. The maximum spacing between two microinverters depends on the IQ Cable variant (as specified in its SKU), PV module DC cable lengths, and module dimensions.
- Align the IQ Cable along the rack, matching connector locations to the marked positions. Leave slack for individual IQ Cable drops, cable bends, and potential obstructions. Secure the cable using tie-wraps or IQ Cable Clips to avoid tension on connector.



WARNING: When transitioning between rows, secure the cable to the rail to prevent cable or connector damage. Do not put any connectors at the microinverter under tension.

2. Position the junction box/AC isolator.

- Install the junction box at a suitable location and provide an AC connection from the junction box/AC isolator or field wireable to the electricity network.
- For three-phase installations, verify the cable insulation colours.



WARNING: The blue conductor in the IQ Cable must only be used for neutral connection. Incorrect termination may irreparably damage any connected microinverters.

3. Mount the microinverters.

- Mount microinverters under the PV module, either horizontally (bracket facing towards the rear of the PV module is recommended) or vertically or in-plane with the vertical facade PV modules, while maintaining the necessary clearances. Microinverters must be protected from direct exposure to rain or directed, pressurized liquid (water jets). It is recommended to avoid direct exposure to sunlight/UV.
 - When mounted horizontally or in-plane with a vertical facade PV modules, allow a minimum of 19 mm (3/4") between the roof/wall (for facade) and the microinverter. Also, allow 13 mm (1/2") between the rear of the PV module and the top of the microinverter.
 - When mounted vertically to the roof, maintain at least 300 mm (12") clearance from the edges of the PV module to protect the microinverter from direct exposure to rain, UV, and other harmful weather events.
- Torque the mounting fasteners—6 mm mounting hardware: 5 N m or 8 mm mounting hardware: 9 N m.

⁶ Allows for 0.3 m of cable slack.



WARNING: Do not mount the microinverter with connectors oriented upwards.

4. Create an installation map.

- a. Peel the removable serial number label from each microinverter and IQ Gateway and apply them to the respective locations on the paper installation map.
- b. Keep a copy of the map for your records.

5. Manage the cabling.

- a. Use cable clips or tie wraps to attach the cable to the racking. The cable must be supported at least every 30 cm.
- b. Dress any excess cable in loops so that it does not contact the roof. Do not form loops smaller than 12 cm in diameter.

6. Connect the microinverters.

- a. Connect each microinverter. Listen for a click as the connectors engage.
- b. To remove a sealing cap or AC connector, use the IQ Disconnect Tool.

i. Cover any unused connectors on the IQ Cable with the IQ Sealing Caps (Q-SEAL-10). Listen for a click as the IQ Sealing Caps engage.



ii. Use IQ Microinverter Sealing Caps (Q-BA-CAP-10) to protect microinverters against moisture or water damage if the AC connector of the microinverter is not connected to the IQ Cable overnight. Remove the IQ Sealing Cap and connect the IQ Cable when ready for cabling.



WARNING: Install sealing caps on all unused AC connectors as these connectors become live when the system is energised. Sealing caps are required for protection against moisture ingress.



DANGER: Risk of electric shock. Risk of fire. Only competent personnel may connect the Enphase microinverter to the utility grid.

7. Terminate the unused end of the cable: See section 7 [Additional information for installation](#) on page 9, on how to terminate the cable for single-phase or multi-phase installations.

8. Complete the installation of the junction box/AC isolator/IQ Field Wireable Connectors: Connect the IQ Cable to the junction box/AC isolator/IQ Field Wireable Connectors.

WARNING: To prevent irreversible damage to the system, confirm cable insulation colours at connections before energising the AC supply. Incorrect termination may irreparably damage any connected microinverters.

9. Connect the PV modules

- a. Connect the DC leads of each PV module to the DC input connectors of the microinverter.
- b. Check the LED on the connector side of the microinverter. The LED flashes green six times when DC power is applied.
- c. Mount the PV modules above the microinverters.

10. Energise the system

- a. Before energizing the system, verify impedance across all conductors: Phase-to-phase (L1-L2, L2-L3, L3-L1) and each phase to neutral (L1-N, L2-N, L3-N) to confirm correct phase sequencing and to avoid miswiring.
- b. Turn on the AC disconnect or circuit breaker for the branch circuit.
- c. Turn on the main utility grid AC circuit breaker.
- d. Check the LED on the connector side of the microinverter.

LED	Indicates
Flashing green	Normal operation. The AC grid function is normal, and there is communication with the IQ Gateway. IQ9N Microinverter's LED will flash green only after provisioning.
Flashing orange	The AC grid is normal, but there is no communication with the IQ Gateway.
Flashing red	The AC grid is either not present or not within specification.

LED	Indicates
Solid red	There is an active DC Resistance Low, Power Off condition. To reset, refer to the IQ9 Microinverter installation and operation manual at https://enphase.com/en-gb/installers/resources/documentation/microinverters . If the problem persists, measure resistance between PV DC+ to EARTH and then PV DC- to EARTH at the PV module MC4 connectors and then at the microinverter MC4 connectors. Anything less than ~7 kΩ will trigger the DC Resistance Low, Power Off condition. Usually, this value is in MΩ for both the microinverter and the PV module. Where the measurement is lower, the faulty PV module or microinverter must be replaced.

⚠ WARNING: For shutting down the system, always de-energize the AC branch circuit breaker. Never disconnect the DC or AC connectors under load. For the Enphase Energy Systems that include IQ System Controller 3 INT and IQ Battery 5P, turn the System Shutdown Switch to the OFF position. Wait for at least a minute and use a multimeter to measure the AC voltage on all the following terminals—PV, IQ Battery, mains, and load. Ensure no voltage is detected on any of these terminals.

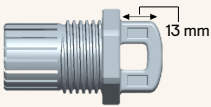
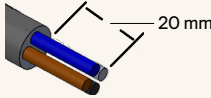

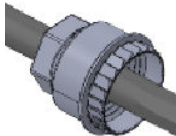
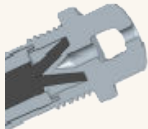
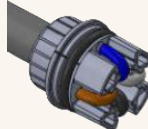


6. Commissioning the system

1. Open the Enphase Installer App and register a new system.
2. Scan the barcodes to add devices and set up the array.
3. Set the appropriate grid profile based on utility requirements.
4. Connect the IQ Gateway to the internet using the wizard in the Enphase Installer App.
5. Provision the devices and complete the commissioning flow.

Once provisioned, the system will ramp up to full producing power after grid profile propagation is completed. It may take 20–30 minutes for full power production based on the number of microinverters in the system.

7. Additional information for installation

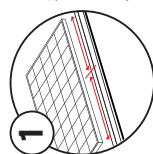
Terminate the unused end of the IQ Cable as follows.

Single-phase IQ Cable	Multi-phase IQ Cable
<p>Step 1: Remove 13 mm of the cable sheath from the conductors. Use the IQ Terminator body loop to measure.</p> 	<p>Step 1: Remove 20 mm of cable sheath from the conductors.</p> 
<p>Step 2: Slide the hex nut onto the cable.</p> 	<p>Step 2: Slide the hex nut onto the cable.</p> 
<p>Step 3: Insert the cable into the IQ Terminator body so the two wires land on opposite sides of the internal separator. The grommet inside the IQ Terminator body must remain in place.</p> 	<p>Step 3: Insert the cable into the IQ Terminator body so the four wires land on separate sides of the internal separator. The grommet inside the IQ Terminator body must remain in place.</p> 
<p>Step 4: Insert a screwdriver into the slot on the top of the IQ Terminator to hold it in place. Hold the IQ Terminator body stationary with the screwdriver and turn only the hex nut to prevent the conductors from twisting out of the separator. Torque the nut to 7 N m.</p> 	<p>Step 4: Bend the wires down into the recesses of the IQ Terminator body and trim as needed. Place the cap over the IQ Terminator body. Insert a screwdriver into the slot on the IQ Terminator cap to hold it in place. Rotate the hex nut with your hand or a wrench until the latching mechanism meets the base. Do not over-torque.</p> 
<p>Step 5: Attach the terminated cable end to the PV racking with a cable clip or tie wrap so that the cable and IQ Terminator cannot contact the roof.</p>	

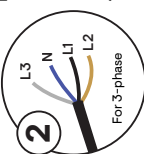
⚠ WARNING: Use the IQ Terminator only once. If you open the IQ Terminator following installation, the latching mechanism is destroyed. Do not reuse the IQ Terminator.

8. Installation and safety

IQ9N Microinverter installation

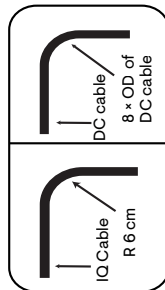


- Count connectors for branch circuit (based on V-rise and branch limits).
- Cut the IQ Cable, leaving at least 15 cm after the last connector.
- Mark microinverter positions at fixed intervals along PV racking.
- Align IQ Cable to marks, allow slack for drops/bends. Secure the cable using cable ties/clips.



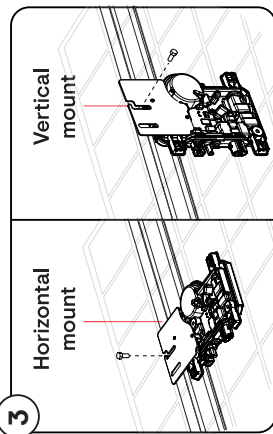
- Install a junction box/AC isolator at a suitable location and connect to the electricity network using best practices.
- Verify IQ Cable insulation colours.

WARNING: Blue Conductor in IQ Cable must only be used for a neutral connection. Incorrect termination may irreversibly damage any connected microinverter and void the warranty.

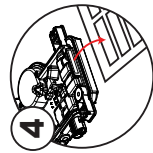


- Torque as follows:
 - 6 mm mounting hardware: 5 N m
 - 8 mm mounting hardware: 9 N m

WARNING: Do not mount the microinverter with connectors oriented upwards.



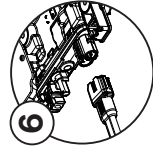
1 Mount microinverters under the PV module, either horizontally (bracket facing towards the rear of the PV module is recommended) or vertically or in plane with vertical facade PV modules while maintaining the necessary clearances. Microinverters must be protected from direct exposure to rain or directed, pressurized liquid (water jets). It is recommended to avoid direct exposure to sunlight/UV.



- Peel serial numbers from microinverters and gateway to create a map.
- Keep a copy of the map for records.



- Manage the cabling by using cable clips or tie wraps to attach cable to racking.
- Support cable every 30 cm.
- Do not form loops less than 12 cm in diameter.



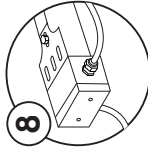
- Connect the microinverters and listen for a click.
- Seal any unused connectors on the IQ Cable.
- Use IQ Microinverter Sealing Caps (IQ-BA-CAP-10) to protect microinverters against moisture or water damage if the AC connector of the microinverter is not connected to the IQ Cable overnight.
- To remove a sealing cap or AC connector, use the IQ Disconnect Tool.

WARNING: Install sealing caps on all unused AC connectors as these connectors become live when the system is energised. Sealing caps are required for protection against moisture ingress.

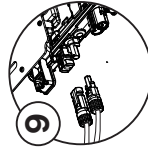


- Terminate the unused end of the IQ Cable using the IQ Terminator. See section 7 for details.

WARNING: The IQ Terminator cannot be reused. If you unscrew the nut, you must discard the terminator.

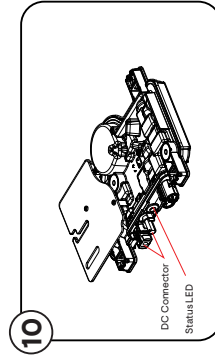
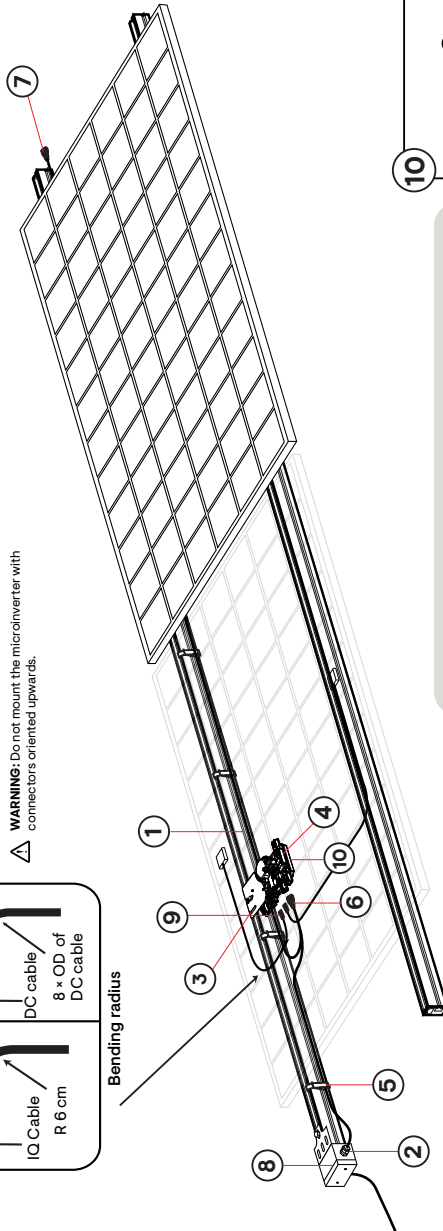


- Connect the IQ Cable to the junction box/AC Isolator.



- Mount the PV modules and connect the DC leads of PV modules to the DC input connectors* of the microinverters.

- Check the LED on the connector side of the microinverter. The LED flashes green six times when DC power is applied.







- Before energizing the system, verify impedance across all conductors: Phase-to-phase (L1-L2, L2-L3, L3-L1) and each phase to neutral (L1-N, L2-N, L3-N).
- Turn ON AC disconnect or circuit breaker for branch circuit and main utility.
- Check the LED on the connector side of the microinverter to be flashing green for normal operation. Refer to section 5 for additional details on LED indicators.

NOTE: After you have installed the microinverters, follow the instructions in Section 6 to commission the system to activate system monitoring, set up grid management functions, and complete the installation.














* IQ9N Microinverters include both AC and DC connectors. The DC port has been evaluated by TÜV for intermateability with Stäubli MC4 connectors. Cable coupler models are PV-KST4...-UR, PV-KBT4...-UR, and PV-KBT4-EVO2...-UR. Mate the DC port of the inverter with the Stäubli MC4 connectors.

IMPORTANT SAFETY INSTRUCTIONS. SAVE THIS INFORMATION. This guide contains important instructions to follow during the installation of IQ9N Microinverters.


Safety symbols

-  **DANGER:** Indicates a hazardous situation, which, if not avoided, will result in death or serious injury.
-  **WARNING:** Indicates a situation where failure to follow instructions may be a safety hazard or cause equipment malfunction. Use extreme caution and follow instructions carefully.
-  **WARNING:** Indicates a situation where failure to follow instructions may result in burn injury.
-  **NOTE:** Indicates information particularly important for optimal system operation.



General safety

-  **DANGER:** Risk of electric shock. Do not use Enphase equipment in a manner not specified by the manufacturer. Doing so may cause death or injury to persons or damage to equipment.
-  **DANGER:** Risk of electric shock. Be aware that the installation of this equipment includes the risk of electric shock.
-  **DANGER:** Risk of electric shock. The DC conductors of this photovoltaic system are ungrounded and may be energised.
-  **DANGER:** Risk of electric shock. Always de-energise the AC branch circuit before servicing. Never disconnect the AC/DC connectors under load.
-  **DANGER:** Risk of electric shock. Risk of fire. Only use electrical system components approved for wet locations.
-  **DANGER:** Risk of electric shock. Risk of fire. Only competent personnel should troubleshoot, install, or replace Enphase microinverters or the IQ Cable and accessories.
-  **DANGER:** Risk of electric shock. Risk of fire. Ensure that all AC and DC wiring is correct and that none of the AC or DC wires are pinched or damaged. Ensure that all AC junction boxes are properly closed.
-  **DANGER:** Risk of electric shock. Risk of fire. Do not exceed the maximum number of microinverters in an AC branch circuit as listed in this guide. You must protect each microinverter AC branch circuit with a 20 A (single-phase and multi-phase) or 25 A (multi-phase) maximum breaker or fuse, as appropriate.
-  **DANGER:** Risk of electric shock when the solid red light is flashing from the microinverter's LED.
-  **WARNING:** Risk of equipment damage. Enphase male and female connectors must only be mated with the matching male/female connector.
-  **WARNING:** Before installing or using the Enphase microinverter, read all instructions and cautionary markings in the technical description, on the Enphase microinverter System, and on the photovoltaic (PV) equipment.
-  **WARNING:** Do not connect Enphase microinverters to the grid or energise the AC circuit(s) until you have completed all installation procedures and have received prior approval from the electrical utility company/grid operator.
-  **WARNING:** When the PV array is exposed to light, DC voltage is supplied to the microinverter.


DC cable safety


-  **NOTE:** Ensure the following precautions:
 - Ensure proper routing of the PV module DC cable using the clips to prevent the leads from resting on the roof. Do not wrap an excess DC cable around the microinverter.
 - Avoid direct exposure to sunlight.
 - Avoid sharp edges on racking.
 - Avoid cable contacting rough surfaces or moving parts within the racking system.
 - Avoid overly tight bending radius. The minimum bend radius for the DC cable is eight times the cable's outer diameter.
 - Avoid overly tightly sized cable clips for routing.


Microinverter safety


-  **DANGER:** Risk of electric shock. Risk of fire. Do not attempt to repair the Enphase microinverter; it contains no user-serviceable parts. If it fails, contact Enphase customer service to obtain a return merchandise authorisation (RMA) number and start the replacement process. Tampering with or opening the Enphase microinverter will void the warranty.
-  **WARNING:** The maximum open circuit voltage of the PV module must not exceed the specified maximum input DC voltage of the

Enphase microinverter. Refer to the Enphase compatibility calculator to verify PV module electrical compatibility with the microinverter. Use IQ9N Microinverters only with compatible PV modules as per the Enphase compatibility calculator. Using an electrically incompatible PV module voids Enphase warranty.








-  **WARNING:** Risk of equipment damage. The Enphase microinverter is not protected from damage due to moisture trapped in cabling systems. Never mate microinverters to cables that have been left disconnected and exposed to wet conditions. This voids the Enphase warranty. Use the connector and microinverter sealing caps as required.

-  **WARNING:** Risk of equipment damage. The Enphase microinverter functions only with a standard, compatible PV module with appropriate fill factor, voltage, and current ratings. Unsupported devices include smart PV modules, fuel cells, wind or water turbines, DC generators, non-Enphase batteries, etc. These devices do not behave like standard PV modules, so operation and compliance are not guaranteed. These devices may also damage the Enphase microinverter by exceeding its electrical rating, making the system potentially unsafe.

-  **WARNING:** Risk of skin burn. The chassis of the Enphase microinverter is the heat sink. Under normal operating conditions, the temperature can be 20°C to 40°C above ambient, but under extreme conditions, the microinverter can reach a temperature of 100°C. To reduce the risk of burns, use caution when working with microinverters.

-  **NOTE:** The Enphase microinverter has field-adjustable voltage and frequency trip points that may need to be set, depending upon local requirements. Depending on the electricity network operator, a grid profile other than the profile set on the microinverter might be needed to set up. Only an authorized installer with permission and following the requirements of the local electrical authorities should make adjustments.

IQ Cable safety


-  **DANGER:** Risk of electric shock. Do not install the IQ Terminator while the power is connected.
-  **DANGER:** Risk of electric shock. Risk of fire. When stripping the sheath from the IQ Cable, make sure the conductors are not damaged. If the exposed wires are damaged, the system may not function properly.
-  **DANGER:** Risk of electric shock. Risk of fire. Do not leave AC connectors on the IQ Cable uncovered for an extended period. You must cover any unused connector with a sealing cap.
-  **WARNING:** Use the terminator only once. If you open the IQ Terminator following installation, the latching mechanism is destroyed. Do not reuse the terminator. If the latching mechanism is defective, do not use the IQ Terminator. Do not circumvent or manipulate the latching mechanism.
-  **WARNING:** When installing the IQ Cable, secure any loose cables to minimise tripping hazards.
-  **NOTE:** If you need to remove a sealing cap, you must use the Enphase IQ Disconnect Tool.
-  **NOTE:** When installing the IQ Cable and accessories, adhere to the following:

- Do not expose the terminator or cable connections to directed, pressurised liquid (water jets, and so on).
- Do not expose the terminator or cable connections to continuous immersion.
- Do not expose the terminator or cable connections to continuous tension (for example, tension due to pulling or bending the cable near the connection).
- Use only the connectors and cables provided.
- Do not allow contamination or debris, or moisture in the connectors.
- Use the terminator and cable connections only when all parts are present and intact.
- Do not install or use in potentially explosive environments.
- Do not allow the terminator to come into contact with an open flame.
- Fit the terminator using only the prescribed tools and in the prescribed manner.
- Use the terminator to seal the conductor end of the IQ Cable; no other method is allowed.

Note for third-party products: Any third-party manufacturer or importer product(s) used to install or commission Enphase product(s) shall comply with the applicable EU Directive(s) and requirements in the European Economic Area (EEA). It is the responsibility of the installer to confirm that all such products are labelled correctly and have the required compliant supporting documentation.

9. Enphase installation map

INSTALLATION MAP

Panel Group: Azimuth: Tilt: Sheet: ____ / ____	Client:	Installer:	N S E W 			
1	2	3	4	5	6	7
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						

IQ Gateway serial label number: _____

10. Revision history

Revision	Date	Description
140-00567-02	August 2025	Updated section “Preparing for installation”.
140-00567-01	August 2025	Initial release.

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140-00567-02-EN-2025-08-26
Applicable regions: INT

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