INSTALLATION MAP

To Sheet_____

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							

To Sheet_____ (left)

To Sheet_____ (right)

IQ Gateway serial label number:

INSTALLATION MAP

To Sheet_____

Compliance with EU Directives

This product complies with the following EU Directives and can be used in the European Union without any restrictions.

- Electro Magnetic Compatibility (EMC) directive 2014/30/EU
- 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 the following internet address https://enphase.com/en-gb/installers/resources/documentation

Enphase Support: https://enphase.com/contact/support

Manufacturer:
Enphase Energy Inc., 47281 Bayside Pkwy., FREMONT, CA, 94538, UNITED STATES of AMERICA, PH: +1 (707) 763-4784

Importer Europe:
Enphase Energy NL B.V., Het Zuiderkruis 65, 5215MV, 's-HERTOGENBOSCH, THE NETHERLANDS, PH: +31 73 3035859

Importer Australia:
Enphase Energy Aust. Pty/Ltd., 88 Market St., South Melbourne VIC 3205. PH : +61 3 86691679

Revision History

REVISION	DATE	DESCRIPTION
140-00251-07	September 2023	Initial revision

QUICK INSTALL GUIDE

ENPHASE.

Install IQ8 Series Microinverters with integrated MC4 connectors

To install IQ8 Series Microinverters, read and follow all warnings and instructions in this guide and in the *IQ8 Series Microinverters Installation and Operation Manual* at: https://enphase.com/en-gb/installers/resources/documentation. Safety warnings are listed on the back page of this guide.

IMPORTANT: The IQ8 Series Microinverters include both AC and DC connectors integrated into the bulkhead. The AC port connects to IQ Cable or Enphase Field Wireable connector. The DC port has been evaluated by TUV for intermateability with Stäubli made MC4 connectors, whose cable coupler 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 made MC4 connectors.

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 PV array and racking.

IQ8 Series Microinverters require the IQ Cable. An IQ Gateway is required to monitor performance of the IQ8 Series Microinverters.

NOTE: 1) After you log in to your Enphase account from Enphase Installer App, scan the microinverter serial numbers (standard 1D bar code) and connect to the IQ Gateway to track the system installation progress. Please ensure you are using the latest version of Enphase Installer App 3.28 (3.28.0 and above).
2) Installer must check the manufacturing date of the products to ensure that the installation date is within one year of the manufactured date of the products. Contact your local distributor to validate the date code.

PREPARATION

A) Download the Enphase Installer App and open it to log in to your Enphase Installer Portal account. With this app, scan microinverter serial numbers (standard 1D bar code) and connect to the IQ Gateway to track system installation progress. To download, go to https://enphase.com/installers/apps or scan the below QR code:

Android iOS

B) Refer to the following table and check PV module compatibility at:
UK: https://enphase.com/en-gb/installers/microinverters/calculator
ANZ: https://enphase.com/en-au/installers/microinverters/calculator
You can check the intermateable cable coupler models of Stäubli made MC4 connectors at: https://enphase.com/en-gl/support/staubli-mc4

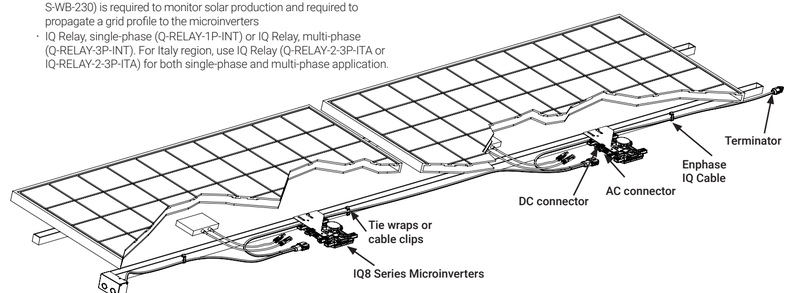
Model	DC connector	PV module* cell count
IQ8MC-72-M-INT** IQ8AC-72-M-INT*** IQ8HC-72-M-INT	Stäubli MC4	Pair with 54 cell / 108 half-cell, 60 cell / 120 half-cell, 66 cell / 132 half-cell, or 72 cell / 144 half-cell

* IQ8 Series Microinverters are compatible with bi-facial PV modules if the temperature adjusted electrical parameters (maximum power, voltage and current) 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.
** IQ8MC is not available for ANZ, South Africa and India.
*** IQ8AC is not available for South Africa and India.

C) In addition to the PV modules, racking and Enphase microinverters you will need these Enphase items:
- An IQ Gateway (model ENV-S-EM-230 or ENV-S-WM-230 or ENV-S-WB-230) is required to monitor solar production and required to propagate a grid profile to the microinverters
- IQ Relay, single-phase (Q-RELAY-1P-INT) or IQ Relay, multi-phase (Q-RELAY-3P-INT). For Italy region, use IQ Relay (Q-RELAY-2-3P-ITA or IQ-RELAY-2-3P-ITA) for both single-phase and multi-phase application.
- The mutli-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 multi-phase system for phase coupling if IQ Relay is not installed in the multi-phase system.
  NOTE: 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.
- IQ RAW cable (single-phase: Q-25-RAW-300), (Multi-phase: Q-25-RAW-3P-300)
- Tie wraps or cable clips (ET-CLIP-100 - works with both multi-phase and single-phase cable)
- IQ Sealing Caps (Q-SEAL-10): for any unused connectors on the IQ Cable
- IQ Terminator (Q-TERM-R-10 for single-phase or Q-TERM-3P-10 for multi-phase): typically 1 Terminator (End feeding branch circuit) or 2 Terminator (Centre feeding branch circuit) required per branch circuit
- IQ Disconnect Tool (Q-DISC-3P-10)
- IQ Cable for single-phase or multi-phase:

Cable model	Connector spacing*	PV module orientation	Connectors per box
Single-phase			
Q-25-10-240	1.3 m	Portrait (all)	240
Q-25-17-240	2.0 m	Landscape (60-cell)	240
Q-25-20-200	2.3 m	Landscape (72-cell)	200
Multi-phase			
Q-25-10-3P-200	1.3 m	Portrait (all)	200
Q-25-17-3P-160	2.0 m	Landscape (60-cell)	160
Q-25-20-3P-160	2.3 m	Landscape (72-cell)	160

* Allows for 30 cm of cable slack.



140-00251-07

D) Check that you have these other items:

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

E) Protect your system with lightning and/or surge suppression devices. It is also important to have insurance that protects against lightning and electrical surges.

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

	Maximum* IQ8 Series Microinverters per AC branch circuit		
Breaker	**IQ8MC*** **	**IQ8AC**** **	**IQ8HC**
20A Single-phase	11	10	9
20A Multi-phase	33 (11 per phase)	30 (10 per phase)	27 (9 per phase)
25A Multi-phase**	39 (13 per phase)	36 (12 per phase)	36 (12 per phase)

* Refer to local regulations for OCPD sizing and to define the number of microinverters per branch in your area.

** This breaker option is not available in Europe

*** IQ8MC is not available for ANZ and India.

**** IQ8AC is not available for India.

G) Size the AC conductor to account for 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 switch board. Refer to the Voltage Rise Technical Brief **ANZ:** Single-phase and Multi-phase for details.

Best practice: Centre-feed the branch to minimise voltage rise.

INSTALLATION

1 Position the IQ Cable

A) Plan each cable section to allow connectors on the IQ Cable to align with each PV module. Allow extra length for slack, cable turns, and any obstructions.

B) Mark the approximate centers of each PV module on the PV racking.

C) Lay out the cabling along the installed racking for the AC branch circuit.

D) Cut each section of cable to meet your planned needs.

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

2 Position the Junction Box/AC Isolator

A) Verify that AC voltage at the site is within range:

Microinverter models:	Single-phase service	
	L1 to N	184 to 276 VAC*
	Multi-phase service	
IQ8MC-72-M-INT IQ8AC-72-M-INT IQ8HC-72-M-INT	L1 to L2 to L3	319 to 478 VAC*
	L1, L2, L3 to N	184 to 276 VAC*

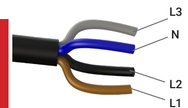
* Nominal voltage range can be extended beyond nominal if required by the utility.

B) Install a junction box/AC isolator at a suitable location.

C) Provide an AC connection from the junction box/AC isolator back to the electricity network connection using equipment and practices as required by local jurisdictions.

D) For three phase installations, verify the IQ Cable wiring colour codes are correctly terminated: L1-Brown, L2-Black, L3-Grey, N-Blue.

WARNING: Blue Conductor in IQ Cable should be used only for neutral connection. Incorrect termination may irrecoverably damage any connected microinverters.



3 Mount the microinverters

A) The microinverters can be mounted beneath the modules either horizontal or vertical orientation to the module and must be mandatorily protected from direct exposure to rain, UV, and other harmful weather events. Please refer below image for clearance requirements during vertical mounting.

B) Mount the microinverter horizontally bracket side up or vertical. Always place it under the PV module, protected from direct exposure to rain, sun, and other harmful weather events. Allow a minimum of 1.9 cm (3/4") between the roof and the microinverter. Also allow 1.3 cm (1/2") between the back of the PV module and the top of the microinverter.

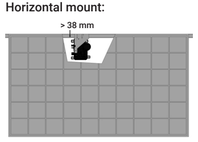
For vertical mount also maintain >300 mm (12") clearance from the edges of the PV module to protect the microinverter from direct exposure to rain, UV, and other harmful weather events.

WARNING: Install the microinverter under the PV module to avoid direct exposure to rain, UV, and other harmful weather events. Do not mount the microinverter upside down.

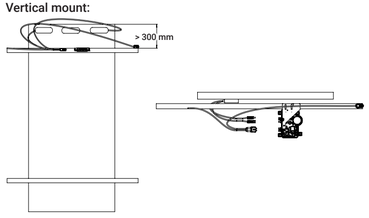
C) Torque the mounting fasteners as follows. Do not over torque.

- 6 mm mounting hardware: 5 N·m
- 8 mm mounting hardware: 9 N·m
- When using mounting hardware, use the manufacturer's recommended torque value

Horizontal mount:



Vertical mount:



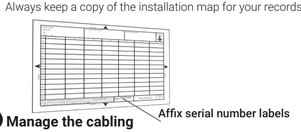
4 Create an installation map

Create a paper installation map to record microinverter serial numbers and position in the array.

A) Peel the removable serial number label from each microinverter and affix it to the respective location on the paper installation map.

B) Peel the label from the IQ Gateway and affix it to the installation map.

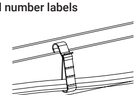
C) Always keep a copy of the installation map for your records.



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.

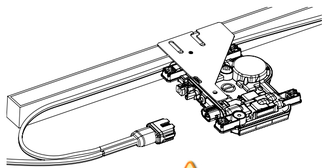
B) Dress any excess cable in loops so that it does not contact the roof. Do not form loops smaller than 12 cm in diameter.



6 Connect the microinverters

A) Connect the microinverter. Listen for a click as the connectors engage.

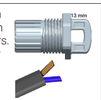
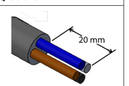
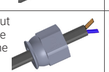
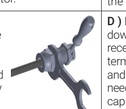
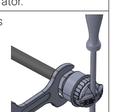
B) Cover any unused connectors on the IQ Cable with Sealing Caps. Listen for a click as the sealing caps engage.



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.

To remove a sealing cap or AC connector, you must use an IQ disconnect tool.

7 Terminate the unused end of the cable

Single-phase IQ Cable	Multi-phase IQ Cable
A) Remove 13 mm of the cable sheath from the conductors. Use the terminator body loop to measure. 	**A)** Remove 20 mm of the cable sheath from the conductors. 
B) Slide the hex nut onto the cable. The grommet inside the terminator body must remain in place. 	**B)** Slide the hex nut onto the cable. The grommet inside the terminator body must remain in place. 
C) Insert the cable into the terminator body so that the two wires land on opposite sides of the internal separator. 	**C)** Insert the cable into the terminator body so that the four wires land on separate sides of the internal separator. 
D) Insert a screwdriver into the slot on the top of the terminator to hold it in place. Hold the 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 7.0 N·m. 	**D)** Bend the wires down into the recesses of the terminator body and trim as needed. Place the cap over the terminator body. Insert a screwdriver into the slot on the 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. 
E) Attach the terminated cable end to the PV racking with a cable clip or tie wrap so that the cable and terminator do not touch the roof.	**E)** Attach the terminated cable end to the PV racking with a cable clip or tie wrap so that the cable and terminator do not contact the roof.

WARNING: The terminator can not be re-used. If you unscrew the nut, you must discard the terminator.

8 Complete installation of the junction box/AC isolator

A) Connect the IQ Cable into the junction box/AC isolator.

WARNING: To prevent irreversible damage to the system confirm colour codes at connections before energising the AC Supply. Failure to comply voids the warranty.

B) Note that IQ Cable uses the following wiring colour code:

Single-phase	Multi-phase
Brown – L1 Blue - N	Brown – L1 Black – L2 Grey – L3 Blue - N

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

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, it creates a phase imbalance on the branch circuit. If multiple cable connectors are skipped over multiple branch circuits, the imbalance can multiply.

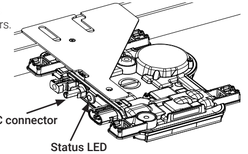
9 Connect the PV modules

DANGER! Electric shock hazard. The DC conductors of this PV system are ungrounded and may be energised.

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 six times when DC power is applied.

C) Mount the PV modules above the microinverters.



10 Energise the System

A) Turn ON the AC disconnect or circuit breaker for the branch circuit.

B) Turn ON the main utility-grid AC circuit breaker. Your system will ramp up to full producing power after grid profile propagation and device provisioning is completed. It may take 20-30 minutes for full power production based on number of microinverters in the system.

C) Check the LED on the connector side of the microinverter:

LED	Indicates
Flashing green	Normal operation. AC grid function is normal and there is communication with the IQ Gateway. IQ8 Sereis Microinverter's LED will be Flashing 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.
Solid red	There is an active "DC Resistance Low, Power Off" condition. To reset, refer to the ***IQ Gateway Installation and Operation Manual*** at: https://enphase.com/en-gb/installers/resources/documentation. If problem persists, measure resistance between PV+ to EARTH and then PV- to EARTH on PV module and then inverter. Anything less than ~7 kΩ will trigger "DC Resistance Low, Power Off" condition. Usually the value is in MΩ on inverter or PV module. Swap out faulty PV module or microinverter.

ACTIVATE MONITORING AND SELECT GRID PROFILE

After you have installed the microinverters, follow the procedures in the *IQ Gateway Quick Install Guide* to activate system monitoring, set up grid management functions, and complete the installation.

- Connect the IQ Gateway, detect devices, and select grid profile
- Connect to Enphase Installer Platform, register the system, and build the virtual array

SAFETY

IMPORTANT SAFETY INSTRUCTIONS SAVE THIS INFORMATION.

This guide contains important instructions to follow during installation of the IQ8MC, IQ8AC and IQ8HC Microinverters.

	WARNING: Hot surface.
	WARNING: Refer to safety instructions.
	DANGER: Risk of electric shock.
	Refer to manual
	Double-insulated

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 installation of this equipment includes 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 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 20A (single-phase and multi-phase) or 25A (multi-phase) maximum breaker or fuse, as appropriate.
⚠	**DANGER**: Risk of electric shock. Risk of fire. Only competent personnel may connect the Enphase microinverter to the utility grid.
⚠	**DANGER**: Risk of electric shock when 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 of the 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.

General safety, continued

⚠	**WARNING**: Incorrect phase wiring can cause irreversible damage to the microinverter installation. Check all wiring before energising.
⚠	**WARNING**: IQ8 Series Microinverters cannot be mixed together with previous generations of Enphase microinverters (IQ7 Series, IQ6 Series, etc) on the same IQ Gateway.
✓	**NOTE**: Commissioning of IQ8 Series Microinverters systems requires Installer app version 3.28.0 or higher.
✓	**NOTE**: To ensure optimal reliability and to meet warranty requirements, install the Enphase microinverters and IQ Cable according to the instructions in this guide.
✓	**NOTE**: Provide support for the IQ Cable at least every 30 cm.
✓	**NOTE**: Perform all electrical installations in accordance with all applicable local electrical codes and standards.
✓	**NOTE**: The AC and DC connectors on the cable are rated as a disconnect only when used with an Enphase microinverter.
✓	**NOTE**: Protection against lightning and resulting voltage surge must be in accordance with local electrical codes and standards.

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 an RMA (return merchandise authorisation) number and start the replacement process. Tampering with or opening the Enphase microinverter will void the warranty.
⚠	**DANGER**: Risk of fire. The DC conductors of the PV module must be labeled "PV Wire" or "PV Cable" when paired with the Enphase microinverter.
⚠	**WARNING**: You must match the DC operating voltage range of the PV module with the allowable input voltage range of the Enphase microinverter.
⚠	**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 microinverter. Use IQ8 Series Microinverters only with compatible PV modules as per Enphase compatibility calculator. Using electrically incompatible PV module voids Enphase warranty.
⚠	**WARNING**: Risk of equipment damage. Install the microinverter under the PV module to avoid direct exposure to rain, UV, and other harmful weather events. Always install the microinverter bracket side up. Do not mount the microinverter upside down. Do not expose the AC or DC connectors (at the IQ Cable connection, PV module, or the microinverter) to rain or condensation before mating the connectors.
⚠	**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.
⚠	**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, and non-Enphase batteries, etc. These devices do not behave like standard PV modules, so operation and compliance is 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 could be 20°C above ambient, but under extreme conditions the microinverter can reach a temperature of 90°C. To reduce 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. Only an authorized installer with the permission and following requirements of the local electrical authorities should make adjustments.

IQ Cable safety

⚠	**DANGER**: Risk of electric shock. Do not install the IQ Cable terminator while 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 terminator following installation, the latching mechanism is destroyed. Do not reuse the terminator. If the latching mechanism is defective, do not use the terminator. Do not circumvent or manipulate the latching mechanism.
⚠	**WARNING**: When installing the IQ Cable, secure any loose cable to minimise tripping hazard
✓	**NOTE**: When looping the IQ Cable, do not form loops smaller than 12 cm in diameter.
✓	**NOTE**: If you need to remove a sealing cap, you must use the Enphase disconnect tool.
✓	**NOTE**: When installing the IQ Cable and accessories, adhere to the following: • Do not expose the terminator or cable microinverter, it contains no user-serviceable parts. If it fails, contact Enphase customer service to obtain an RMA (return merchandise authorisation) number and start the replacement process. Tampering with or opening the Enphase microinverter will void the warranty. • Do not expose the terminator or cable connections to continuous immersion. • Do not expose the terminator or cable connections to continuous tension (e.g., 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 with parts that are present and intact. • Do not install or use in potentially explosive environments. • Do not allow the terminator to come into contact with 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.

DC Cable safety

✓	**NOTE**: Ensure proper routing of PV module DC cable using the clips to prevent the leads from resting on the roof. Do not wrap excess DC Cable around microinverter.
✓	**NOTE**: Avoid direct exposure to sunlight.
✓	**NOTE**: Avoid sharp edges on racking.
✓	**NOTE**: Avoid cable contacting rough surfaces or moving parts within racking system.
✓	**NOTE**: Avoid overly tight bending radii. Minimum bend radii for the DC Cable is 8 X Cable Outer Diameter.
✓	**NOTE**: Avoid overly tightly sized cable clips for routing.

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 EEA (European Economic Area). It is the responsibility of the installer to confirm that all such products are labelled correctly and have the required compliant supporting documentation.