

Install the Enphase Three-Phase Field Wireable Connectors

Use Enphase Field Wireable Q Connectors with three-phase Enphase Q Cable or field cable to:

- Easily connect three-phase Q Cables without complex wiring
- Use a mated pair of connectors to end-feed the branch circuit with an AC connection
- Use mated pairs of connectors to connect with a remote part of the array

PREPARATION

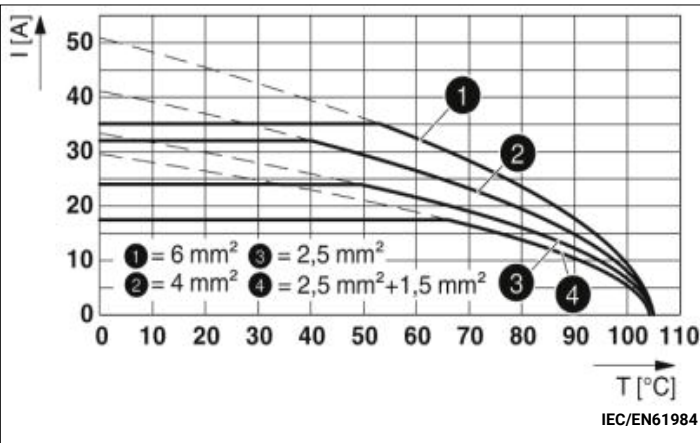
Check that you have Enphase Field Wireable Q Connectors for three-phase Q Cable as needed for your installation. Both female and male connectors are sold in packs of ten:

- Field Wireable Q connector for three-phase (female): (Q-CONN-3P-10F)
- Field Wireable Q connector for three-phase (male): (Q-CONN-3P-10M)

Make sure you have the following recommended tools:

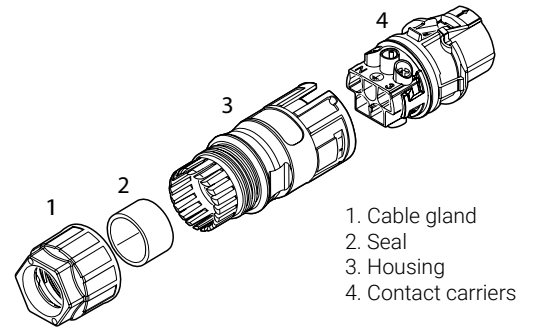
- Screwdriver blade width 3.5mm, PH1 Screwdriver
- 30mm wrench

| Technical Data | | |
|--------------------------------------------------------|-------------------------|---------------------|
| Degree of Protection | | IP66/IP68 (2m, 24h) |
| Nominal Current (Observe derating, see graph below) | Conductor cross section | IEC/EN61984 |
| | 6 mm ² | 35 A |
| | 4 mm ² | 32 A |
| | 2.5 mm ² | 24 A |
| Nominal Voltage | | 690 V |
| Rated Surge Voltage | | 6 kV |
| Pollution Degree | | 3 |
| Operating temperature | | -40°C to +110°C |
| Material | | PPE |

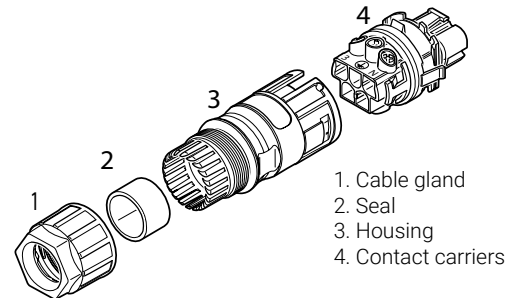


PARTS

FEMALE CONNECTOR PARTS



MALE CONNECTOR PARTS



WARNING: Risk of equipment failure. Do not mix male and female connector parts when assembling connectors.

Corporate Headquarters Contact Information

Enphase Energy Inc.
47281 Bayside Parkway
Fremont, CA 94538 USA

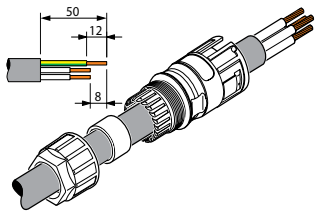
© 2021 Enphase Energy. All rights reserved. Enphase, the Enphase logo, Enphase Field Wireable Connector, and other trademarks or service names are the trademarks of Enphase Energy, Inc. Data subject to change. Rev02-11-12-2021.



ASSEMBLY

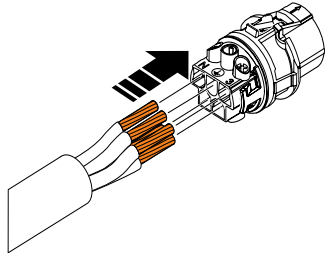
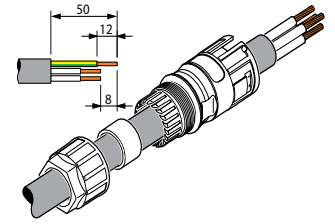
Follow the steps to assemble Enphase Field Wireable Q Connectors for three-phase connections.

FEMALE

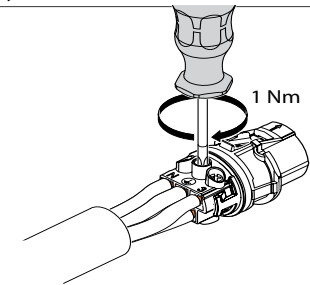
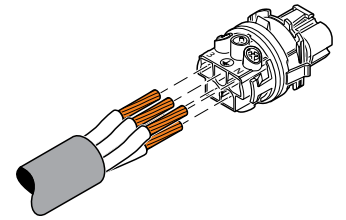


- A)** Prepare the cable:
- Push the cable gland over the cable.
 - If there are multiple seals, select a seal that fits your cable diameter.
 - Push the housing with seal over the cable.
 - Strip 50mm from the cable.
 - Shorten conductors N, L1, L2, and L3 by 8 mm, but keep PE (prot. earth) at 50mm.
 - Strip 12mm from the conductors.

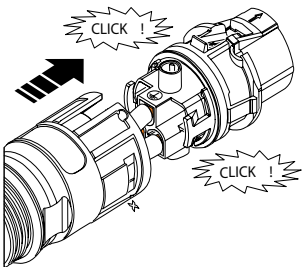
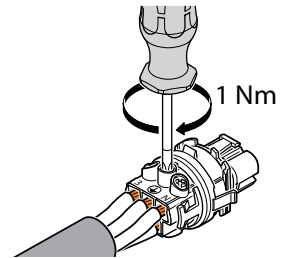
MALE



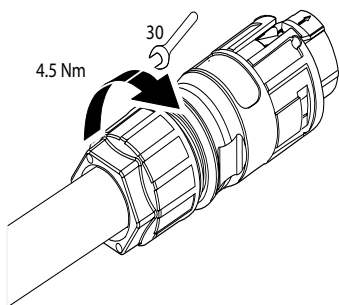
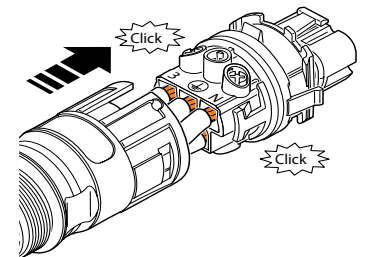
- B)** Connect the conductors to the contact carrier. Match the assignment according to the label on the contact carrier.
- ⚠ **WARNING:** Ensure that the correct connection for Line, Neutral, Earth match according to the label on the contact carrier. In case of mismatch, phase balance of system will be affected.
- NOTE:** For flexible wires, we recommend using ferrules acc. to DIN 46228 that are crimped with jointing clamp.



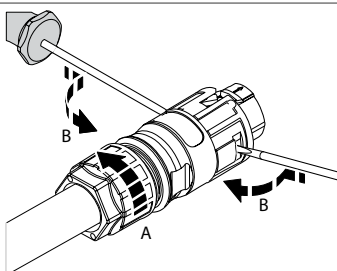
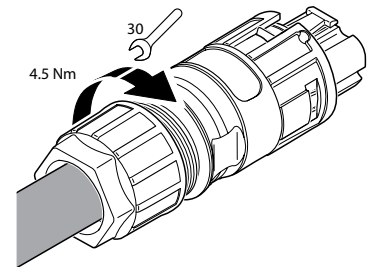
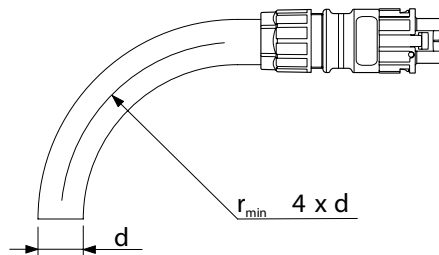
- C)** Torque the contact carrier screws to 1 Nm.



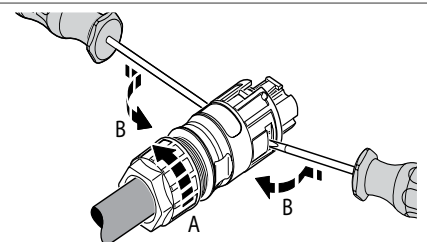
- D)** Push the contact carrier into the housing until it snaps in audibly.



- E)** Tighten the cable gland to a torque of 6.5 Nm.
- ⚠ **WARNING:** Observe the permitted bending radius during installation. The degree of protection might fail if the bend radius is exceeded.



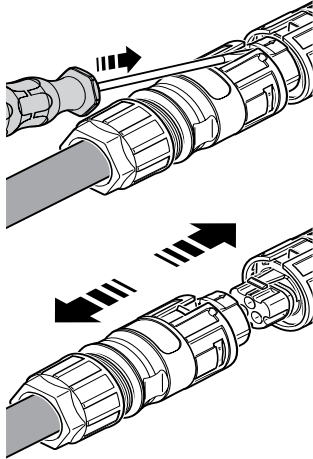
- Loosening the cable**
- Loosen the cable gland.
 - Use the screwdriver to release the contact carrier on both sides.
 - Pull the contact carrier from the housing.
 - Loosen the screws on the contact carrier, and loosen the wires.



DISCONNECT (if needed)

To disconnect Enphase three-phase Field Wireable Q Connectors, release the two connectors by pressing down the snap with a screwdriver. You can then separate the connectors.

⚠ WARNING: Never plug in or disconnect the connectors under load. The connectors are not suitable for interrupting the current.



| Enphase Article Number | Enphase Product SKU | Type Designation |
|------------------------|---------------------|------------------|
| 150-00094 | Q-CONN-3P-10F | PRC 5-FC-FS6... |
| 150-00093 | Q-CONN-3P-10M | PRC 5-FC-MS6... |

SAFETY

IMPORTANT SAFETY INSTRUCTIONS. SAVE THIS INFORMATION.

Follow all safety and assembly instructions when installing Enphase Field Wireable Q Connectors.

| Safety Symbols | |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ⚠ | DANGER: This indicates a hazardous situation, which if not avoided, will result in death or serious injury. |
| ⚠ | WARNING: This 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: Risk of burn. Failure to follow instructions may result in burn injury. |
| ✓ | NOTE: This indicates information particularly important for optimal system operation. |

| Safety Instructions | |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ⚠ | 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. Do not use without first removing AC power from the Enphase System. Disconnect the power coming from the photovoltaics before servicing or installing. |
| ⚠ | DANGER: Risk of electric shock. Risk of fire. Before making any connections verify that the circuit breakers are in the off position. Double check all wiring before applying power. |
| ⚠ | DANGER: Risk of electric shock. Risk of fire. Only use electrical system components approved for wet locations, including but not limited to conduit fittings. |
| ⚠ | DANGER: Risk of electric shock. Risk of fire. Only qualified personnel should install, troubleshoot, or replace the Enphase Field Wireable Q Connector. |
| ⚠ | DANGER: Risk of electric shock. Improper use of the Field Wireable Q Connector or its components may result in a shock, fire or explosion. To reduce these risks, disconnect all wiring before attempting any maintenance. |
| ⚠ | DANGER: Risk of electric shock. Risk of fire. Ensure that all AC and DC wiring is correct and that none of the AC wires are pinched, shorted, or damaged. |
| ⚠ | DANGER: Risk of electric shock. Risk of fire. Do not attempt to repair or alter the Enphase Field Wireable Q Connector. |
| ⚠ | DANGER: Risk of electric shock. Risk of fire. Make sure the conductors are not damaged. If the exposed wires are damaged, the system may not function properly. |
| ⚠ | WARNING: Risk of equipment damage. Enphase male and female connectors must only be mated with the matching male/female connector. |
| ⚠ | WARNING: Risk of equipment damage. This product is intended for operation with a maximum operating temperature of 110°C. |
| ⚠ | WARNING: When installing the cabling, secure any loose cable to minimize tripping hazard. |
| ⚠ | WARNING: Before installing or using the Enphase Field Wireable Q Connector, read all instructions and cautionary markings in the technical description, on the Enphase System, and on the photovoltaic (PV) equipment. |
| ⚠ | WARNING: Never plug in or disconnect the connectors under load. The connectors are not suitable for interrupting the current. |
| ⚠ | WARNING: Without earthing connection. |
| ✓ | NOTE: Using unapproved attachments or accessories may result in damage or injury. |
| ✓ | NOTE: When looping the Enphase Q Cable, do not form loops smaller than 12 cm in diameter. |
| ✓ | NOTE: Perform all electrical installations in accordance with all applicable local electrical codes. |
| ✓ | NOTE: To ensure optimal reliability and to meet warranty requirements, install the Enphase Field Wireable Q Connectors according to the instructions in this guide. |
| ✓ | NOTE: Protection against lightning and resulting voltage surge must be in accordance with local standards. |
| ✓ | NOTE: The connector is considered to be in compliance only when assembled in the manner specified by these assembly instructions. |
| ✓ | NOTE: For flexible wires, we recommend using ferrules acc. to DIN 46228 that are crimped with jointing clamp. |
| ✓ | NOTE: Cable used with Enphase Field Wireable Q Connectors must meet the following requirements: <ul style="list-style-type: none"> • Min/max outer insulation diameter (including the clear second insulator): 8mm / 21mm • Wire size: 2.5mm² to 6mm² |