

# Install the three phase Field Wireable QD Connectors

Use Enphase three-phase Field Wireable QD Connectors with an Enphase QD Cable or a 10 AWG or a 12 AWG field extension cable to:

- Easily connect QD Cables on the roof without complex wiring.
- Use a mated pair of connectors to end-feed the branch circuit with an AC connection.
- Use a male connector along with a QD-LINKFW-10 center tap adapter cable to center-feed the branch circuit with an AC connection.
- Use mated pairs of connectors to connect with a remote part of the array.

## PREPARATION

For full installation instructions of the Enphase three-phase Field Wireable QD Connectors, read and follow all warnings and instructions in this guide and in the IQ8 Commercial Microinverter grid-tied PV System Design Guide at: [enphase.com/support](https://enphase.com/support).

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

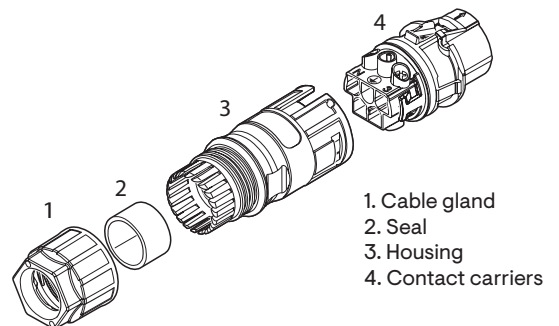
- Three-phase Field Wireable QD Connector (female): (QD-CONN-10F)
- Three-phase Field Wireable QD Connector (male): (QD-CONN-10M)

Make sure you have the following recommended tools:

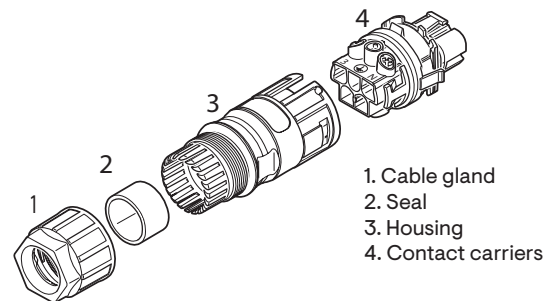
- Screwdriver blade width 4 mm to 3.2 mm (1/8") (recommended tool to torque the screw on contact carrier and to disconnect field wireable connector).
- 30 mm wrench

## PARTS

### FEMALE CONNECTOR PARTS



### MALE CONNECTOR PARTS



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

### Corporate headquarters contact information

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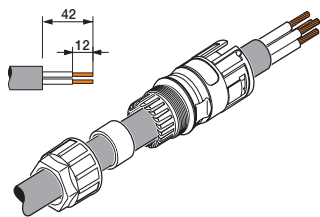
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# ASSEMBLY

Follow the steps to assemble the Field Wireable QD Connectors for three-phase.

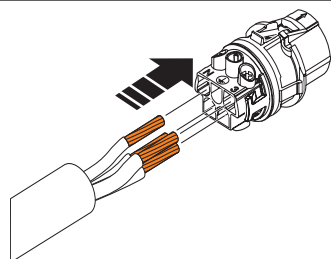
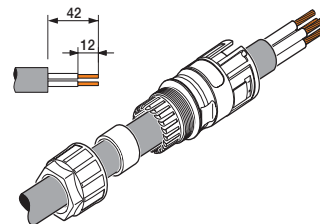
## FEMALE



- A) Prepare the cable:**
- Push the cable gland over the cable.
  - If there are multiple seals, select a seal that fits your cable diameter. Seal ranges are: 8–12 mm/12–16 mm/16–21 mm.
  - Push the housing with a seal over the cable.
  - Strip 42 mm from the cable.
  - Strip 12 mm from the conductors.

**NOTE:** Do not use a PE pin when using a connector with four core QD Cable.

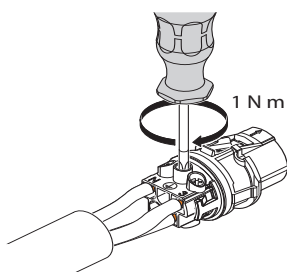
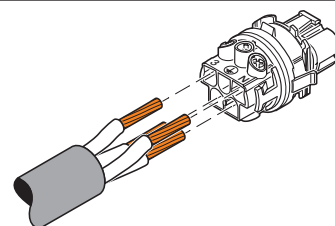
## MALE



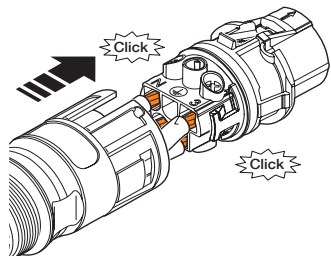
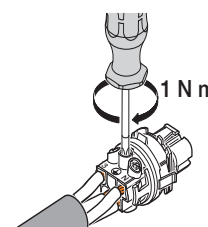
- B) Connect the conductors to the contact carrier. Match the assignment according to the label on the contact carrier.**

**⚠ WARNING:** Ensure that the correct connection for Line, Neutral, matches according to the label on the contact carrier. In case of a mismatch, the phase balance of the system will be affected.

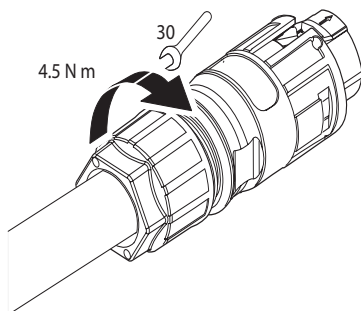
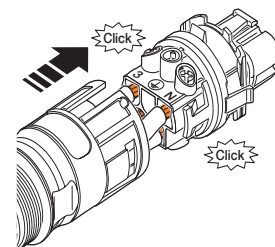
**NOTE:** For flexible wires, we recommend using ferrules acc. to DIN 46228 that are crimped with a jointing clamp.



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

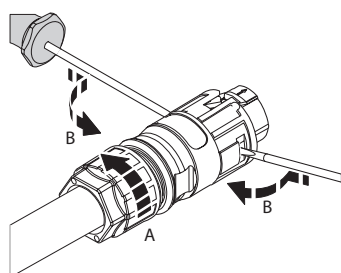
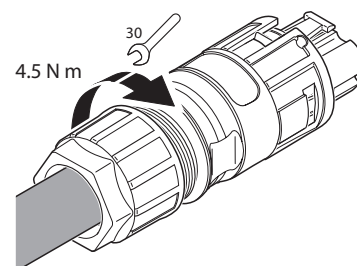
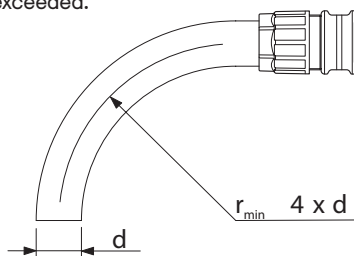


- D) Push the contact carrier into the housing until it snaps in audibly.**



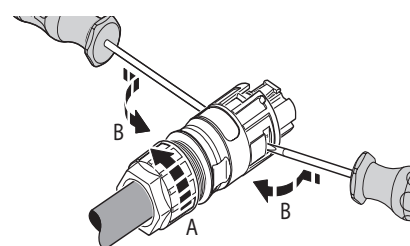
- E) Tighten the cable gland to a torque of 4.5 N m.**

**⚠ WARNING:** Observe the permitted bending radius during installation. The degree of protection might fail if the bend radius is exceeded.



### Loosening the cable

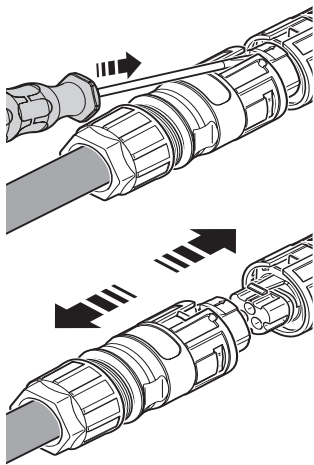
- Loosen the cable gland.
- Use the screwdriver to release the contact carrier on both sides.
- Pull the contact carrier from the housing.
- Loosen the screws on the contact carrier, and loosen the wires.



## DISCONNECT (if needed)

To disconnect the Enphase three-phase Field Wireable QD 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.



## SAFETY

### IMPORTANT SAFETY INSTRUCTIONS. SAVE THIS INFORMATION.

Follow all safety and assembly instructions when installing the Enphase three-phase Field Wireable QD Connectors.

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

Safety instructions	
<b>⚠</b>	<b>DANGER:</b> 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.
<b>⚠</b>	<b>DANGER:</b> Risk of electric shock. Be aware that installation of this equipment includes the 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.
<b>⚠</b>	<b>DANGER:</b> Risk of electric shock. Never plug in or disconnect the connectors under load. The connectors are not suitable for interrupting the current.
<b>⚠</b>	<b>DANGER:</b> 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.
<b>⚠</b>	<b>DANGER:</b> Risk of electric shock. Risk of fire. Only use electrical system components approved for wet locations, including but not limited to conduit fittings.
<b>⚠</b>	<b>DANGER:</b> Risk of electric shock. Risk of fire. Only qualified personnel should install, troubleshoot, or replace the Enphase three-phase Field Wireable QD Connector.
<b>⚠</b>	<b>DANGER:</b> Risk of electric shock. Improper use of the three-phase Field Wireable QD Connector or its components may result in a shock, fire, or explosion. To reduce these risks, disconnect all wiring before attempting any maintenance.
<b>⚠</b>	<b>DANGER:</b> 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.
<b>⚠</b>	<b>DANGER:</b> Risk of electric shock. Risk of fire. Do not attempt to repair or alter the Enphase three-phase Field Wireable QD Connector.
<b>⚠</b>	<b>DANGER:</b> 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.
<b>⚠</b>	<b>WARNING:</b> Risk of equipment damage. Enphase male and female connectors must only be mated with the matching male/female connector.
<b>⚠</b>	<b>WARNING:</b> Risk of equipment damage. This product is intended for operation in an environment having a maximum ambient temperature of 105°C (221°F).
<b>⚠</b>	<b>WARNING:</b> When installing the cabling, secure any loose cable to minimize tripping hazard
<b>⚠</b>	<b>WARNING:</b> Before installing or using the Enphase three-phase Field Wireable QD Connector, read all instructions and cautionary markings in the technical description, on the Enphase system, and on the photovoltaic (PV) equipment.
<b>⚠</b>	<b>WARNING:</b> For field connections, use 10 or 12 AWG wires insulated for a minimum of 75°C.
<b>✓</b>	<b>NOTE:</b> Using unapproved attachments or accessories may result in damage or injury.
<b>✓</b>	<b>NOTE:</b> When looping the Enphase QD Cable, do not form loops smaller than 3.62 inches (9.2 cm) in diameter.
<b>✓</b>	<b>NOTE:</b> Perform all electrical installations in accordance with all applicable local electrical codes: the Canadian Electrical Code, part 1; the National Electrical Code (NEC); ANSI requirements; and NFPA 70.
<b>✓</b>	<b>NOTE:</b> To ensure optimal reliability and to meet warranty requirements, install the Enphase three-phase Field Wireable QD Connectors according to the instructions in this guide.
<b>✓</b>	<b>NOTE:</b> Protection against lightning and resulting voltage surges must be in accordance with local standards.
<b>✓</b>	<b>NOTE:</b> For flexible wires, we recommend using ferrules acc. to DIN 46228 that are crimped with a jointing clamp.
<b>✓</b>	<b>NOTE:</b> Cable used with Enphase three-phase Field Wireable QD Connectors must meet the following requirements: <ul style="list-style-type: none"> <li>• Min/max outer insulation diameter (including the clear second insulator): 8 mm/21 mm</li> <li>• Wire size: 12 AWG to 10 AWG</li> </ul>

## Revision history

REVISION	DATE	DESCRIPTION
140-00190-04	October 2023	Editorial updates.
Previous releases		