

SAFETY

IMPORTANT SAFETY INSTRUCTIONS. SAVE THIS INFORMATION.

Follow all safety and assembly instructions when installing SunPower 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.
	NOTE: This indicates information particularly important for optimal system operation.

Safety Instructions	
	DANGER: Risk of electric shock. Do not use SunPower 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 SunPower 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 SunPower 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 SunPower 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. SunPower male and female connectors must only be mated with the matching male/female connector.

Safety Instructions, Continued	
	WARNING: Risk of equipment damage. This product is intended for operation in an environment having a maximum ambient temperature of 55°C (131°F).
	WARNING: When installing the cabling, secure any loose cable to minimize tripping hazard
	WARNING: Before installing or using the SunPower Field-Wireable Q Connector, read all instructions and cautionary markings in the technical description, on the SunPower System, and on the photovoltaic (PV) equipment.
	NOTE: Using unapproved attachments or accessories may result in damage or injury.
	NOTE: When looping the SunPower Q Cable, do not form loops smaller than 4.75 inches (12 cm) in diameter.
	NOTE: 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.
	NOTE: To ensure optimal reliability and to meet warranty requirements, install the SunPower 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 with UL 6703 only when assembled in the manner specified by these assembly instructions.
	NOTE: Cable used with SunPower Field-Wireable Q Connectors must meet the following requirements: <ul style="list-style-type: none"> • Min/max outer insulation diameter (including the clear 2nd insulator): 3.45mm / 3.65mm • Number of conductor strands/size: 19 strands of 0.47 mm • Wire size: 12 AWG

PREPARATION

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

- Field-Wireable Q connector (female): (Q-CONN-10F)
- Field-Wireable Q connector (male): (Q-CONN-10M)

Make sure you have the following recommended tools:

- Diagonal cutter
- Wire stripper
- Crimp tool: Multi-Contact PV-CZM-18100, -19100, or -22100
- Torque wrench
- SunPower disconnect tool



When to Use Field-Wireable Q Connectors

Use SunPower Field-Wireable Q Connectors with SunPower Q Cable or field cable to:

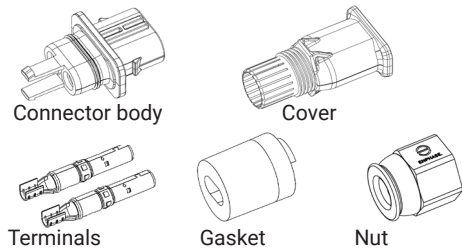
- Easily connect Q cables on the roof without complex wiring
- Use male connectors to make connections from a Field-Wireable female connector
- Use female connectors to make connections from any Q Cable open connector
- Make a jumper to connect with a remote part of the array: Use female to female for cable-to-cable connections
- Use a mated pair of connectors to splice two cut ends of cable



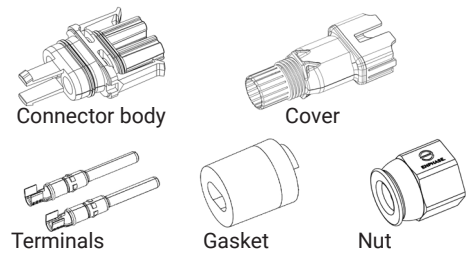
148-88141-81

PARTS

FEMALE CONNECTOR PARTS



MALE CONNECTOR PARTS



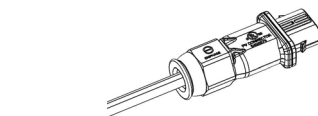
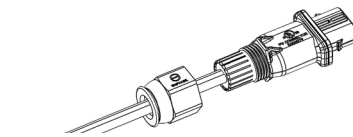
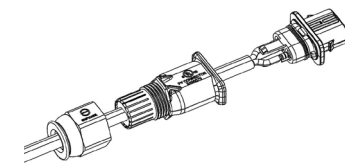
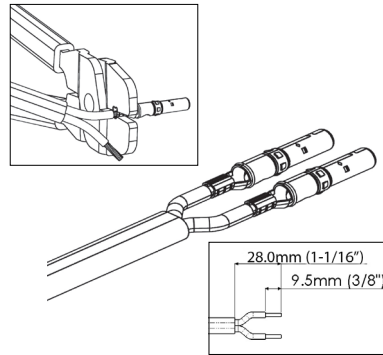
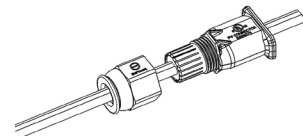
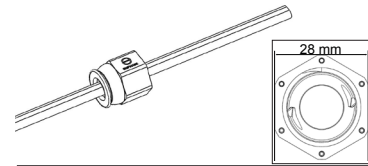
⚠ WARNING: Risk of equipment failure. Do not mix male and female connector parts when assembling connectors.

⚠ IMPORTANT: Use SunPower Field-Wireable Q Connectors only with SunPower Q Cable.

ASSEMBLY

Follow the steps to assemble SunPower Field-Wireable Q Connectors.

FEMALE



- A)** Take the connector parts out of the bag and do the following:
- Use the nut to mark the cable at 28 mm (1.1") in preparation for step C. The nut is 28 mm (1.1") wide.
 - Slide the nut over the cable.

- B)** Make sure the gasket is pre-installed inside the cover, then slide the cover and gasket over the cable.

- C)** Attach the terminals to the cable as follows:
- Strip the outer jacket to 28 mm (1 1/16").
 - Strip the conductor insulation to 9.5 mm (3/8").
 - Load the open end of each terminal in the 12 gauge slot of the crimp tool, flush with the edge of the slot.
- ⚠ WARNING:** The jacket must extend completely through the gasket when the body is assembled, and the gasket must fully cover the cable jacket to prevent moisture from entering the connector.
- Crimp the end of the terminal over the stripped wires.
 - Do **NOT** crimp over conductor insulation.

- D)** Insert terminals into connector body. Each terminal should click into place.

- E)** Assemble connector body and cover. Listen for a click as they engage.

- F)** Tighten the nut to 7 N-m (62 in-lb). Do **NOT** over-tighten.

MALE

