Power Optimizer Input Connector Compatibility

Version History

- ◤ Version 1.6, Jun 3 2020: Staubli MC4 to Staubli MC4 EVO2 inter-mating added
- ◤ Version 1.5, Apr. 6 2020: Trina TS4 added.
- ◤ Version 1.4, Dec 26 2019: Changed Multi contact MC4 terminology to Staubli MC4

> **NOTE**
> SolarEdge is testing connectors periodically and retains the right to state at any time that a specific type of connector is no longer approved for use with power optimizers.

Input Connector Compatibility Options

PV modules use a variety of output connectors. To enable you to use the module of your choice, SolarEdge offers several options for supporting these connectors. This document lists these options and their respective warranty terms.

> **CAUTION!**
> Installing a SolarEdge system without ensuring compatibility of the module connectors with the power optimizer connectors may be unsafe and could cause functionality problems such as ground faults, resulting in inverter shutdown. To ensure mechanical compatibility of the power optimizer connectors with the PV module connectors to which they are connected, use one of the options described here.

> **NOTE**
> In case options 2 or 3 below deviate from local regulations requiring identical connectors, follow local regulations.

Option 1 – Identical Input Connectors, SolarEdge Verified

To ensure compatibility of the SolarEdge power optimizers and the modules to which they are connected, SolarEdge strongly recommends using identical connectors from the same manufacturer and of the same type on both the power optimizers and the modules. Refer to the list below for connector types verified and available from SolarEdge.
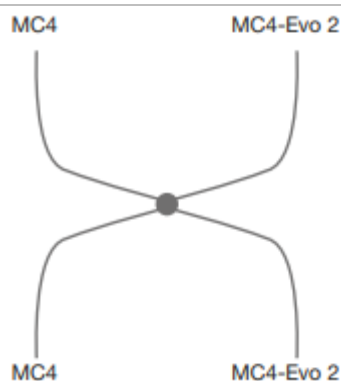
Optimizers with the following connectors may be ordered (minimum order quantity does not apply). Longer lead times may apply to non-MC4 options.

Table 1: Power optimizer connector types

Connector type	Part number
Staubli MC4*	Pxxx-xxM4xxx
Canadian Solar T4 (Tlian)	Pxxx-xxP4xxx
Amphenol H4	Pxxx-xxH4xxx
Amphenol UTX	Pxxx-xxU4xxx
Trina TS4	Pxxx-xxTRxxx

* Inter-mating between the following types of Staubli connectors is allowed:

Staubli - MC4	Staubli - MC4-EVO2
PV-KST4/2,5I-UR	PV-KST4-EVO2
PV-KBT4/2,5I-UR	PV-KBT4-EVO2

To add a connector type to the list, contact SolarEdge Sales representative. Connector type approval requires SolarEdge reliability testing and may take up to three months.

Option 2 – Compatible Input Connectors

Use a SolarEdge verified connector with a non-identical compatible connector.

Verify connector compatibility in the following way:

- ◢ The module connector manufacturer should explicitly verify compatibility with the SolarEdge optimizer connector; and

- ◢ A third-party test report by one of the listed external labs (TUV, VDE, Bureau Veritas, UL, CSA, InterTek) should be obtained, verifying the compatibility of the connectors. The test report should include the following tests:

  - Mechanical operation
  - Contact resistance
  - Wet leakage current

  NOTE

  Using non-identical connectors without verifying compatibility as detailed above will result in voiding the warranty for issues relating to the connectors and any problems arising from the connectors. Warranty will not be voided for other issues relating to optimizer failures.

Option 3 – Identical Input Connectors, non-SolarEdge Verified

If a certain connector type does not appear in Table 1 above, and compatibility cannot be verified as mentioned above, optimizers with the needed connectors can be ordered per request (minimum order quantity applies). They will be supplied with a part number ending in "C", for example: Pxxx-4xxxxxxC. SolarEdge warranty will not apply to issues relating to the connectors and any problems arising from the connectors of these optimizers. Warranty will not be voided for other issues relating to optimizer failures.