

Technical Note Power Optimizer Input Connectors: P-Series for North America

This document summarizes the input connectors available with the SolarEdge power optimizers. All output connectors are Amphenol Helios 4.

The following table refers to part numbers P300, P350, P400, P405, P600 and P700.

Connector Manufacturer	Connector Type	Manufacturer Part Numbers	Polarity of the wires at the input of the optimizer (module should have reverse polarity)	SolarEdge Part Numbers						Availability
				P300	P350	P400	P405	P600	P700	
Multi-Contact AG	MC4	PV-KBT4 PV-KST4	Male positive Female negative	P300-2NM4ARS	P350-2NM4ARM	P400-2NM4ARM	P405-2NM4ARM	P600-2NM4ARL	P700-2NM4ARX	North America
TE Connectivity	TE/SOLARLOK (Tyco)	1394462-3 6-1394461-2	Female positive Male negative	P300-2NTRARS	P350-2NTRARM	P400-2NTRARM	-	P600-2NTRARL	P700-2NTRARX	North America
Amphenol	Helios H4	H4CNC4DN H4CGC4DN	Male positive Female negative	P300-2NA4ARS	P350-2NA4ARM	P400-2NA4ARM	-	P600-2NA4ARL	P700-2NA4ARX	North America

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 shut down. To ensure mechanical compatibility of the SolarEdge power optimizers and the modules to which they are connected:

- Use identical connectors from the same manufacturer and of the same type on both the power optimizers and on the modules; or
- Verify that the connectors are compatible as follows:
 - The connector manufacturer should explicitly verify compatibility with the SolarEdge 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 connectors compatibility.