



# **SOLARLOK**

## **Interconnection System**

### **Installation Manual**

Installation Manual

## 1. Safety Note



- The SOLARLOK connector is to be used only to interconnect firmly fixed cables.
- **Do not disconnect under electrical load!**
- Electrical current path should only be disconnected using approved devices.
- Only cables released from Tyco Electronics are permitted to be used with SOLARLOK component cable assemblies.
- SOLARLOK component cable shall be labelled with label PN 1718077-1 “Do not disconnect under load”.
- To protect against shock, ensure that conductors and their associated connectors are separated from opposite polarity components.
- Unconnected connectors **must** always be protected from pollution (e.g. dust, humidity, foreign particles, etc.), prior to installation. Do not leave unconnected (unprotected) connectors exposed to the environment. The usage of TE connector dust caps is strongly recommended.
- Connectors that are unmatned in the field should also be protected from pollutants.
- Do **NOT** use any **oil or lubricants** during mounting.



## 2. Tools

(1) Stripping Tool	1.5 mm <sup>2</sup> - 6.0 mm <sup>2</sup> , 10 AWG	PN 4-1579002-2
(2) Crimping Tool	4.0 mm <sup>2</sup> and 6.0 mm <sup>2</sup> , 10-12 AWG	PN 1-1579004-2
(3) Extraction Tool	all terminals	PN 1102855-3
(4) Field Service Kit	all in one	PN 1534858-1



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### 3. Assembly Steps

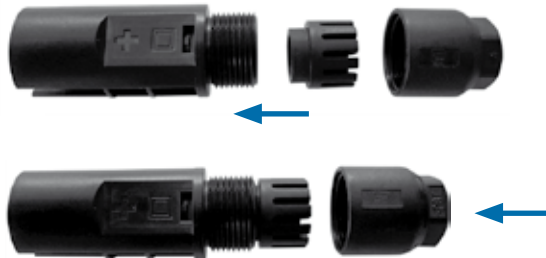
- 3.1** Using the appropriate wire stripping tool, strip the wire **9 mm ± 1 mm** without damaging the strands.



- 3.2** Insert the stripped wire into the terminal wire crimp barrel until it stops. While holding the wire in place, squeeze the crimp tool handles together until the ratchet releases.



- 3.3** Press the seal and cable pinch ring assembly into the connector housing until it stops. **If you use the pre-assembled connector kit, please go to 3.5!**



- 3.4** Screw back shell nut onto connector housing.



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## Pre-Assembled (Connector Kit)

- 3.5** Push contact with cable into the connector housing until you hear the contact give an audible click and you feel the contact reach the end position. To verify contact engagement, give a slight gentle pull back on the cable, to be sure that the contact is locked.



- 3.6** Tighten the cable screw lock. The initial assembly tightening torque is **1.3 + 0.2 Nm**. For this, a slotted socket wrench with wrench size 13 mm, is recommended.



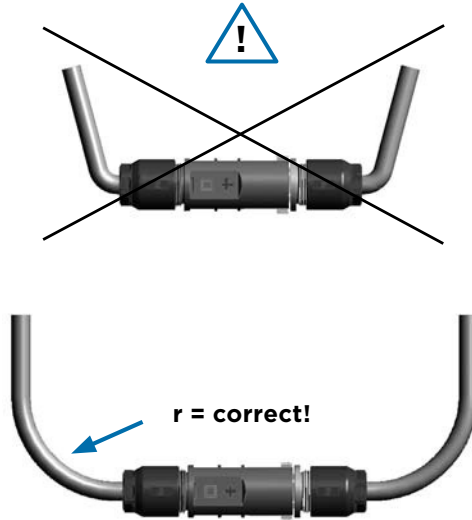
## 4. Connector Mating

- When mating the SOLARLOK connectors, connectors labelled with a “+” or “-” are keyed and can only be mated with equally (same polarity) marked and keyed connectors.
- The connector system is fully latched only when the latches have clicked onto the mating connector.
- The “neutral” designated male connector incorporates no keying features and may be freely mated to either “+” or “-” keyed plug connectors. The neutral product should not be used when maintaining polarity is critical. It is only permitted for serial connections.

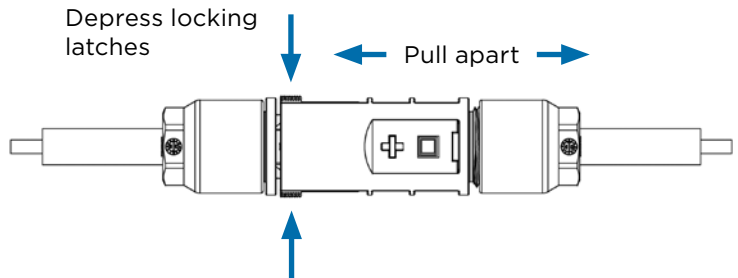
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## 5. Wiring

Radius ( $r$ ) min. 5x cable  $\emptyset$



## 6. Connector Unmating



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**Table 1**

Available Connector Kits for SOLARLOK Interconnection System			
Female Cable Connectors			
Part Number	Description	Wire Size	Insulation O.D. Range
4-1394462-6	Plus Female	2.5mm <sup>2</sup> / 14AWG	4.5 to 6.0 mm / 0.177-0.236 in
4-1394462-8	Plus Female	4.0mm <sup>2</sup> / 12AWG	4.5 to 6.0 mm / 0.177-0.236 in
6-1394462-3	Plus Female	6.0mm <sup>2</sup> / 10AWG	4.5 to 6.0 mm / 0.177-0.236 in
4-1394462-7	Minus Female	2.5mm <sup>2</sup> / 14AWG	4.5 to 6.0 mm / 0.177-0.236 in
4-1394462-9	Minus Female	4.0mm <sup>2</sup> / 12AWG	4.5 to 6.0 mm / 0.177-0.236 in
6-1394462-4	Minus Female	6.0mm <sup>2</sup> / 10AWG	4.5 to 6.0 mm / 0.177-0.236 in
Male Cable Connectors			
1394461-7	Plus Male	2.5mm <sup>2</sup> / 14AWG	4.5 to 6.0 mm / 0.177-0.236 in
7-1394461-0	Plus Male	4.0mm <sup>2</sup> / 12AWG	4.5 to 6.0 mm / 0.177-0.236 in
7-1394461-3	Plus Male	6.0mm <sup>2</sup> / 10AWG	4.5 to 6.0 mm / 0.177-0.236 in
1394461-8	Minus Male	2.5mm <sup>2</sup> / 14AWG	4.5 to 6.0 mm / 0.177-0.236 in
7-1394461-1	Minus Male	4.0mm <sup>2</sup> / 12AWG	4.5 to 6.0 mm / 0.177-0.236 in
7-1394461-4	Minus Male	6.0mm <sup>2</sup> / 10AWG	4.5 to 6.0 mm / 0.177-0.236 in
6-1394461-3	Neutral Male	2.5mm <sup>2</sup> / 14AWG	4.5 to 6.0 mm / 0.177-0.236 in
7-1394461-2	Neutral Male	4.0mm <sup>2</sup> / 12AWG	4.5 to 6.0 mm / 0.177-0.236 in
7-1394461-5	Neutral Male	6.0mm <sup>2</sup> / 10AWG	4.5 to 6.0 mm / 0.177-0.236 in



Male housing

Female housing