R3

SOLARLOK 2.0

The Revolutionary Plier & Play Connector System

January 2019

EVERY CONNECTION COUNTS

TE connectivity

PV4-S and Market Standard Crimp Connectors

Installation Steps:

STEP 1
Prepare cable with wire strippers to specific dimensions

STEP 2
Insert correct contact into crimp tool

STEP 3
Insert prepared wire into contact

STEP 4
Make correct crimp and remove from tool

STEP 5
Push crimped contact/cable into correct connector

STEP 6
Check the correct position in housing (slight pull back)

STEP 7
Screw nut into final seated position

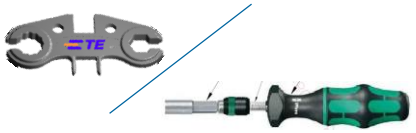
STEP 8
Torque to defined Nm (check specification)

Necessary Tools:

Cable stripper

Contact crimp tool

Connector tightening tool



Termination time approx. 4 minutes per set !

New SOLARLOK 2.0 Responds to Feedback and Experience From the Field

SOLARLOK 2.0 offers:

- SLK 2.0 is already fully preassembled and prelocked, no missing parts (contacts, pinch rings, hex nuts,…)
- SLK 2.0 is not bound to a handtool produced by the connector manufacturer (no custom handtool)
- SLK 2.0 can be processed with a prevalent parallel closing plumbering tool
- SLK 2.0 is working with insulation displacement technology, no chance of incorrect crimp (no proper F-crimp)
- SLK 2.0 is already equipped with contacts, inserting male contact into female housing is impossible (&vice versa)
- SLK 2.0 shows clearly visible where the cable has to be inserted; inserting contact via interface is not possible
- SLK 2.0 does not need to strip/remove insulation; this prevent incorrect stripping (too long or short)
- SLK 2.0 works with insulated wire, this avoids loosing strands by stripping (resistance increase, less power handling)
- SLK 2.0 housing is designed without seal & nut for IP protection; over-/under torquing is obviated
- SLK 2.0 is CE marked ➔ to be used by everyone, no skilled installer or electrician is required

SOLARLOK 2.0

SOLARLOK 2.0

Tool-less 1,500 V PV Connector

TE Connectivity's **SOLARLOK 2.0** is a field installable connector using Insulation Displacement Contact (IDC) technology to offer the solar panel installer a quick, easy and reliable connection from the PV cable to PV panel. Applicable cable outer diameters ranging from 5.5mm to 7.2mm and suitable for 14 AWG & 12 AWG & 10 AWG conductor sizes.

PRODUCT installation Process

INSERT Cable Close | **PUSH Button** | **FULLY**

PART NUMBERS

SOLARLOK 2.0	PIN	2315176-1
SOLARLOK 2.0	SKT	2308033-1

APPROVALS

UL 6703 – Approved
IEC 62852 – Pending (est. Apr. 2019)
CE – Pending

The reliable connection with IDC (Insulation Displacement Contact) technology, installation in 3 easy steps without custom tools

1. Insert cable
2. Press button down (terminate cable)
3. Ready (fully closed)

SOLARLOK 2.0

Features

Voltage

- True 1500V connector UL6703 / IEC 62852

Electrical

- 15A(UL) /25A (TUV) ~ 2.5mm2 / 14 AWG
- 20A(UL) /30A (TUV) ~ 4.0mm2 / 12 AWG
- 30A(UL) /35A (TUV) ~ 6.0mm2 / 10 AWG

Cable

- 2.5mm² & 4.0mm² & 6.0mm² in same connector
- 14 AWG & 12 AWG & 10 AWG in same connector
- 5.5mm up to 7.2mm outer cable diameter

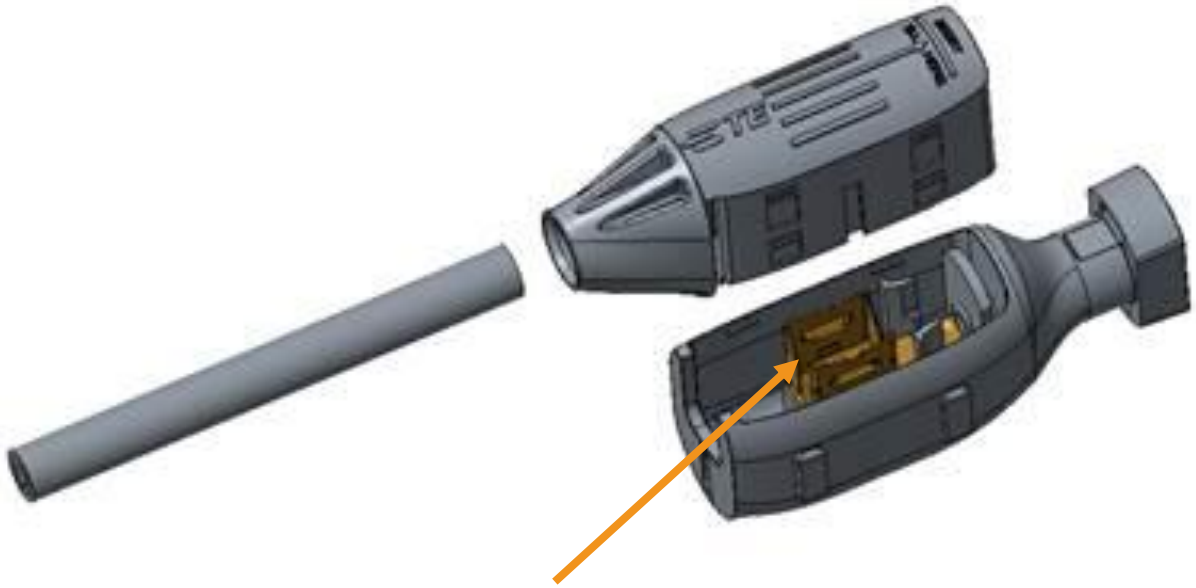
Materials

- PPE & PS
- Tinned copper alloy / stainless steel

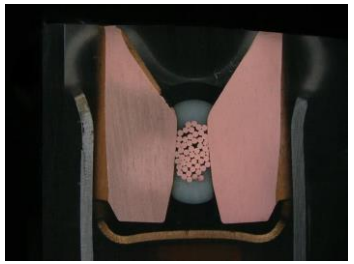
Benefits

- Reduces 80% or more installation time
  - Easy to use, plug-in, snap-on
  - Accelerates termination process
  - Avoids cable stripping
  - No custom tooling required
- Reduces total applied cost of value-chain
- Reliable Insulation Displacement Contact (IDC) technology
- Special gel-filling IPx8 water ingress protection (1m/24hours)
- Mates with TE PV4-S and PV4-PM series
  - PV4-S PN 2270024-1 / PN 2270025-1
  - PV4-PM PN 1971919-1 / PN 1971920-1

SOLARLOK 2.0 – IDC System



IDC (Insulation Displacement Contact)
with special designed points of contact to cut insulation & touch strands for a wide range of cable diameters (2,5mm² & 4mm² & 6mm² // AWG 14-10)

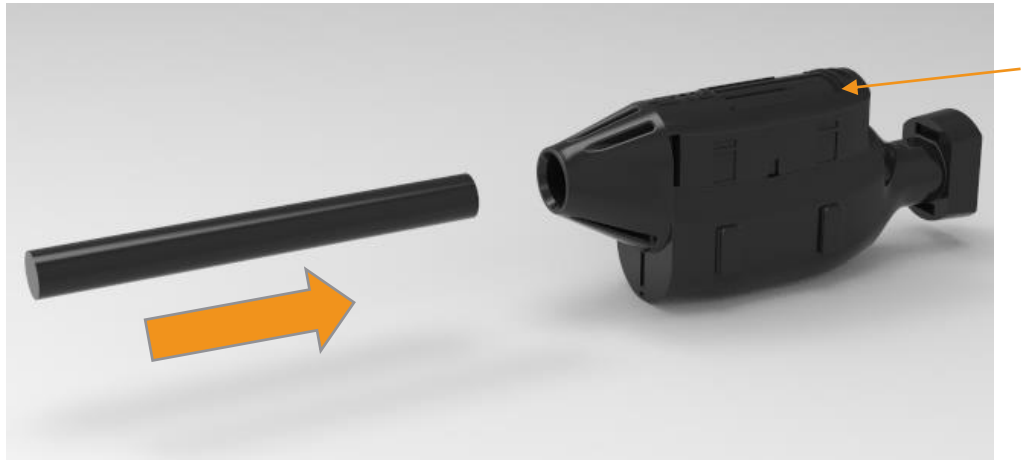


IDC passed critical parameter tests

- Cross-section
- No impact on resistance after temperature cycle
- T-rise

SOLARLOK 2.0

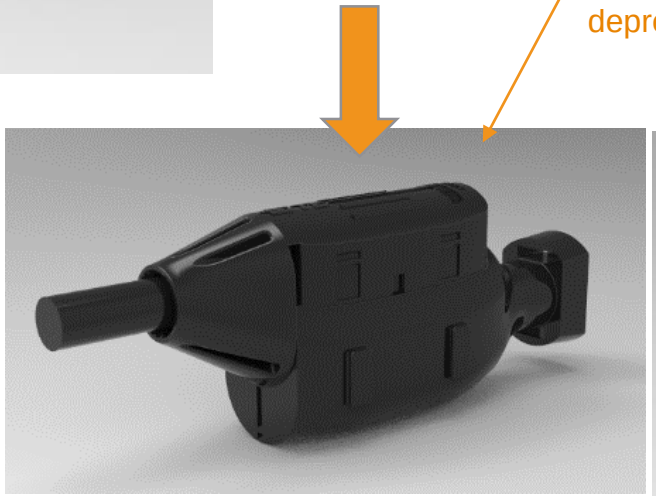
Termination Process



Button pre-staged in upward position until cable is correctly inserted

-80%
Installation time

1: INSERT CABLE



Approximately 9mm of travel is required to fully depress the button

2: DEPRESS BUTTON DOWNWARD

Termination time approx. 30 seconds per set !

SOLARLOK 2.0

Assembly Instructions

SLK 2.0

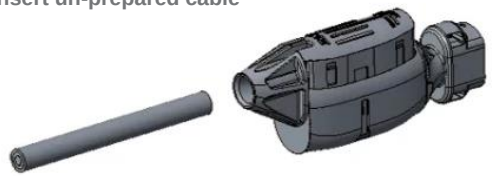
1 Tool required

SOLARLOK 2.0

1,500V PV Connector

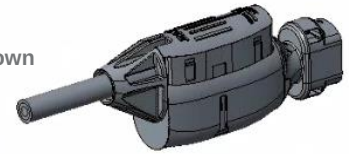
STEP 1

Insert un-prepared cable



STEP 2

Push button down



Termination time approx. 30 seconds per set !

The NEW Way

STEP 1
Prepare cable with wire strippers to specific dimensions

STEP 2
Insert correct contact into crimp tool

STEP 3
Insert prepared wire into contact

STEP 4
Make correct crimp and remove from tool

STEP 5
Push crimped contact/cable into correct connector

STEP 6
Check the correct position in housing (slight pull back)

STEP 7
Screw nut into final seated position

STEP 8
Torque to defined Nm (check specification)

Traditional

PV4-S

3 Tools required

Termination time approx. 4 minutes per set !

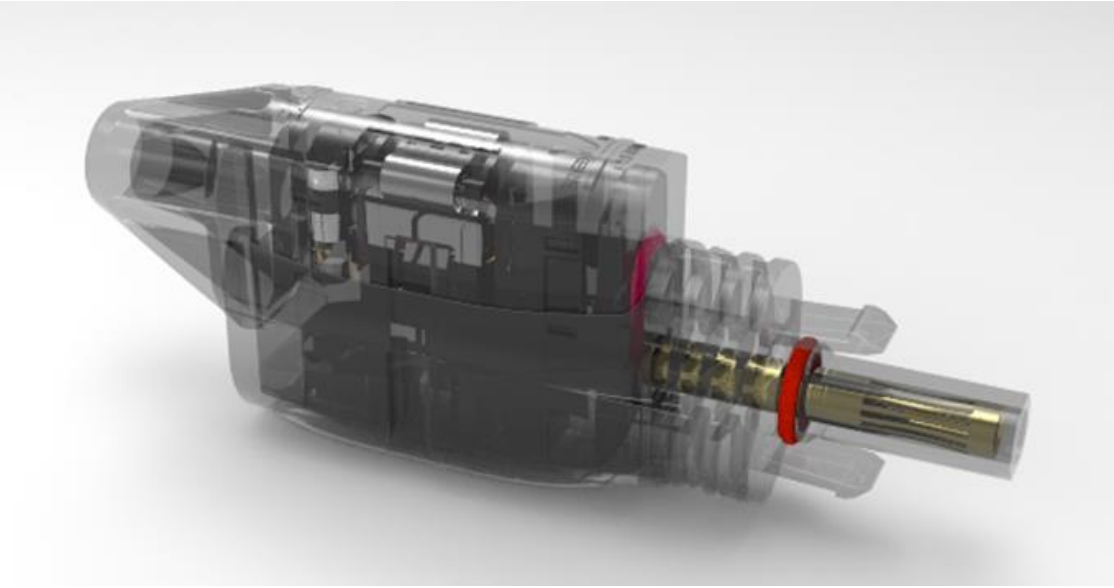
SOLARLOK 2.0

Unique locking feature

Traditional according NEC 2008/2011 requirements

IPx8 water ingress protection

Gel inside for IPx8 water ingress protection (1m / 24hrs)



SOLARLOK 2.0

Indicator to show when cap is properly closed
(glossy on matte connector surface)

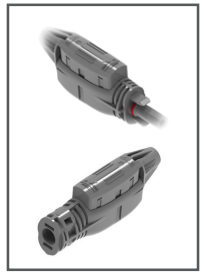
Defined glossy area
(normally empty, upon request it can be used for a QR code)

Dovetail feature to stagger connectors side by side
or lock connector to the frame of a PV panel/module or the racking system

SOLARLOK 2.0

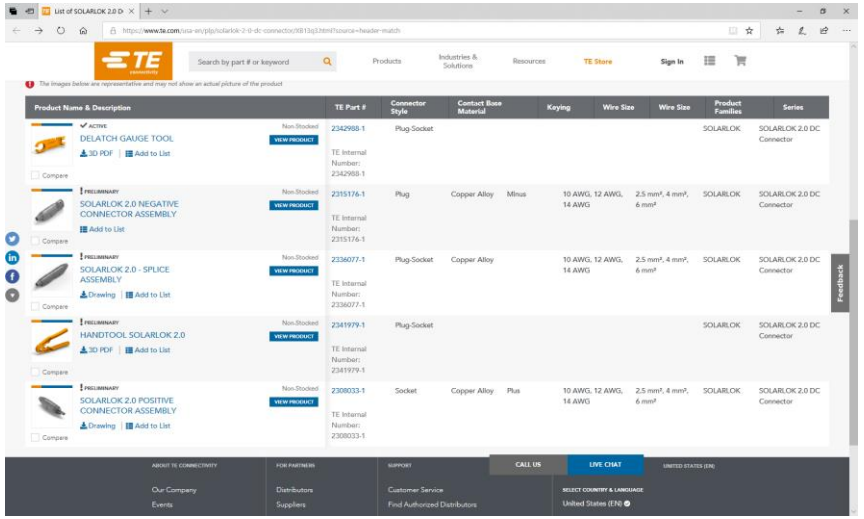
Promotion Materials

- TE.com/e-catalog [solarlok-2-0-dc-connectors]
- Renewables landing page/SOLARLOK
- TE Price Book
- TE Accessories
- TE Pitch-packs and Samples
- TE Installation Kit
- Datasheet



Where to Find…

- TE.com e-catalog solarlok-2-0-dc-connectors
- Datasheet 1-1773967-7
- Product Specification 108-133104
- Application Specification 114-133104



SOLARLOK 2.0 and Beyond

What's next…

We develop for CY2019

SOLARLOK splice

Tool-less 1.500 V PV Splice Connector

TE Connectivity's **SOLARLOK splice** is a field installable connector using Insulation Displacement Connector (IDC) technology to offer the solar panel installer an easy, quick and reliable connection from the PV cable to the PV cable. Applicable cable outer diameters ranging from 5.5mm to 7.2mm and suitable for 14 AWG, 12 AWG, 10 AWG conductor sizes

PART NUMBERS

SOLARLOK splice 2336077-1

APPROVALS

- **UL 6703 - Approved**
- **IEC 62852 – Pending**
- **CE - Pending**

On the roadmap for CY2020

SLK 2.0 Feed-Through

SLK 2.0 "Y" Splitter

SOLARLOK splice with Diode or Fuse

Value proposition

Feature	Advantage	Benefit EPC	Benefit Installer	Benefit End user
Pre-locked, 2 part housing	Avoid missing of parts (contacts, pinch rings, hex nuts,…)	easy handling (reduce cost of installation)	easy handling (reduce cost of installation)	
Pre-locked, 2 part housing	Application in just 15 seconds per connector	easy handling (reduce cost of installation)	easy handling (reduce cost of installation)	
Insulation Displacement Connection (IDC)	No special hand tool necessary (almost tool less application)	easy handling (reduce cost of installation)	easy handling (reduce cost of installation)	
Inserting mark	Only if the cable is fully inserted to this mark, it is possible to close the button (Top part)	easy handling (reduce cost of installation)	easy handling (reduce cost of installation)	
Cut & insert & close design	No incorrect stripping (too long or too short)	increased reliability	increased reliability	
Cut & insert & close design	No loosing strands (inacceptable temp. increase)	reduce risk of over heating	reduce risk of over heating	
No standard contact used (IDC)	No incorrect crimping	easy handling (reduce cost of installation)	easy handling (reduce cost of installation)	
No standard contact used (IDC)	No incorrect contact/cable insertion	easy handling (reduce cost of installation)	easy handling (reduce cost of installation)	
One connector fits 2,5-6mm² // AWG 14-10	Elimination of complexity (fits 2,5-6mm² // AWG 14-10)	easy handling (reduce cost of installation)	easy handling (reduce cost of installation)	
No hex nut design	NO under or over torquing of hex nut	increased reliability	increased reliability	
Polished surface area (specific defined position)	Optical marks for correct application (bottom closing)	increased reliability	increased reliability	
QR code marking	Easy check of product features and application with mobile phone	easy access to all important & relevant data	easy access to all important & relevant data	
Gel filled for IP 68 (1m/24h)	Allowed to be used in extreme environmental/moisture conditions	increased reliability	increased reliability	
CE signed	Fool proof installation possible by even untrained staff	easy installation by untrained staff (reduce cost of installation)	significant increase of reliable installation	as CE signed, installation by untrained is safely possible
Dove tail feature	Can stagger hsg side by side to get a multi pole connector			
Dove tail feature	Can be easy locked into frame counter part or installation rack (elimination of cable ty)	reduction of installation time higher reliability as no pre-damage by sharp cable ty possible	reduction of installation time higher reliability as no pre-damage by sharp cable ty possible	

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EVERY CONNECTION COUNTS

TE connectivity