

EPIC[®] SOLAR 4 Assembly instructions

Table of contents

Scope of delivery	1
Technical Data.....	2
Safety instructions	2
Required tools	3
EPIC [®] SOLAR 4 assembly	4
Cable analysis.....	4
Cable preparation	4
Crimping the contact	5
Body assembly	5
Plug and unplug.....	5
Laying of the cables	6

Scope of delivery

The EPIC[®] SOLAR 4 connector is shipped pre-assembled, the contacts are enclosed separately.

44428200	EPIC [®] SOLAR 4 M 2,5mm ²
44428201	EPIC [®] SOLAR 4 M 4...6mm ²
44428203	EPIC [®] SOLAR 4 F 2,5mm ²
44428204	EPIC [®] SOLAR 4 F 4...6mm ²



F female



M male

Technical Data

Rated voltage:	1.000VDC
Rated current:	22A (2.5mm ²) 30A (4.0mm ²) 30A (6.0mm ²)
Rated impulse voltage:	8kV
Ambient temperature range:	-40°C ... +85°C
Upper limiting temperature:	100°C
Degree of protection:	IP67
Connection method:	Crimping
Contact resistance:	<5mΩ
Protection class:	II
Insulation material:	PC
Plating Contact:	Silver

Safety instructions

Connected cable couplers must not be unplugged while under load. They can be placed in a no load state by switching off the DC/AC converter or breaking the DC circuit interrupter. Plugging and unplugging while under voltage is permitted.

ÖLFLEX[®] SOLAR cables and EPIC[®] SOLAR 4 cable couplers are designed for connection of stationary photovoltaic facilities. They can be used for fixed installation in dry and damp rooms or outdoors. EPIC[®] SOLAR products are not suitable for use in the soil. We offer special ÖLFLEX[®] SOLAR cables for direct burial.

Plugged parts are IP67 water-tight. Permanent use in water, e.g. water on the surface of a flat roof is not possible.

EPIC[®] SOLAR cable couplers must be only assembled with tools and utilities specified by Lapp. The assembly of cable and connector must be carried out by electrically qualified persons only. For protection against electric shock, connectors must be isolated from the power supply while being assembled or disassembled.

Disconnected cable couplers must be protected from intrusion of water and dirt. Prior to connecting, it must be verified that the mating areas are free of any contamination.

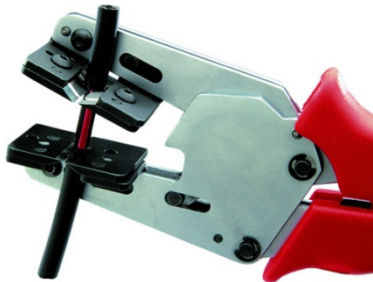
Required tools

Cable shear to cut ÖLFLEX® SOLAR cables:



LAPP Cable shear KS20, Part number 62120045

Universal stripping tool to strip ÖLFLEX® SOLAR cables:



LAPP Universal Strip Solar, Part number 21920120

Crimping tool



Crimping tool individual parts



Crimping tool CSC assembled

Crimping tool (11147000) with crimping insert (e.g. 44428995) and locator (44428996) to crimp EPIC® SOLAR contacts.

Alternatively the crimping tool can be fitted with the CSC insert which combines cutting, stripping and crimping (**C**ut, **S**trip, **C**rimp).

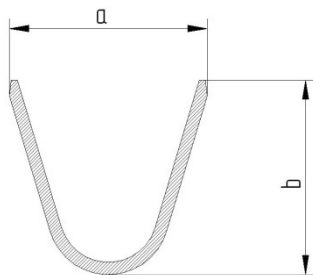
EPIC® SOLAR 4 assembly

Cable analysis

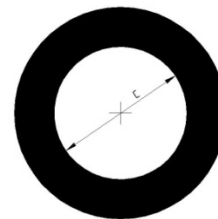
- Determine the conductor cross-section
- Determine the cable outer diameter



Table 1	2,5mm ² AWG 14	4,0mm ² AWG 12	6,0mm ² AWG 10
Diameter „d“	4.6mm ... 6.2mm	5.0mm ... 8.0mm	5.0mm ... 8.0mm
Crimp sleeve opening „a“	3.1mm	4.6mm	4.6mm
Crimp sleeve height „b“	4.5mm	5.9mm	5.9mm
Seal inner diameter „c“	6.2mm	7.5mm	7.5mm



Crimp contact terminal lug



Seal inner diameter

Cable preparation

- Cut the cable to the required length.
- The conductor wires should be tinned and must be free of oxidization and dirt.

Cable stripping

- Strip cable insulation L= 6 - 7mm.
- Remove the insulation completely. Do not cut individual strands.



Crimping the contact

Verify that cable and contact match according to table 1.
Insert the contact into the crimping tool with the contact opening facing upward.
Insert the cable neatly into the crimp sleeve of the contact.
Fully compress the plier until the full cycle crimp mechanism releases the contact again.
Remove the crimp and visually verify that all strands are fully enclosed.



(Contact M)

Body assembly

Push the crimped contact into the opening of the cable gland until it engages with a click.
Pull lightly on the lead to check that the metal part has engaged.
Screw on the cap nut hand-tight (3Nm) – Ready!



(EPIC[®] SOLAR 4 F)

Plug and unplug

Prior to plugging, check the mating area for any contamination and clean it if required.
The O-ring on the female connector in particular must be absolutely clean. Any surface moisture has to be removed. Plug the coupling together until the latches thoroughly click into place on both sides.

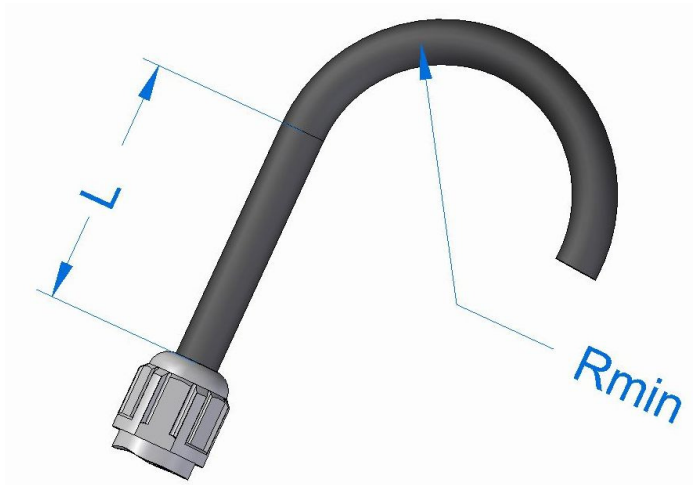


To unplug, compress the latches on both sides and pull the coupling apart assertively.

Laying of the cables

The cables must be laid in the photovoltaic system, securely fixed mounted and the minimum bending radius must not be exceeded. The cable must be routed out of the connector at least $L = 50\text{mm}$. The bending radius R must be at least 10 times off the cable diameter.

Example: ÖLFLEX SOLAR XLR-R 4mm^2 diameter: $5.2\text{mm} \rightarrow$, Minimum bending radius: 52mm



U.I. Lapp GmbH
Schulze- Delitzsch- Straße 25
70565 Stuttgart
Tel.: 0711 7838-01
Fax.: 0711 7838 2640
www.lappkabel.de
info@lappkabel.de