



44428235	ASSEMBLY INSTRUCTION	
Valid from: 17.07.2019	EPIC [®] SOLAR 4 PLUS	

EPIC[®] SOLAR 4 PLUS ASSEMBLY INSTRUCTION

Contents

Scope of delivery	2
Contacts :	2
Technical Specifications	3
Safety Instructions	4
Necessary Tools	5
Mounting of EPIC [®] SOLAR 4 PLUS	6
Analyzing the cable	6
Preparing the cable	6
Stripping the cable	6
Crimping the contacts	7
Mounting	8
Connecting and Disconnecting	8
Laying the cable	9

44428235	ASSEMBLY INSTRUCTION	
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Trade Mark on the Product : EPIC®

Scope of delivery

The Connector EPIC® SOLAR 4PLUS is delivered pre-assembled, the necessary contacts are included separately.

EPIC® SOLAR 4 Plus X Y

Item number	Designation
44428235	EPIC® SOLAR 4 PLUS M 4, 0 mm ² or 6,0 mm ²
44428236	EPIC® SOLAR 4 PLUS F 4, 0 mm ² or 6,0 mm ²
44428237	EPIC® SOLAR 4 PLUS M 10,0 mm ²
44428238	EPIC® SOLAR 4 PLUS F 10,0 mm ²
Symbol	Signification
X:	M (male) or F (female)
Y:	Cross sections 4, 0 mm ² or 6,0 mm ² or 10,0 mm ²

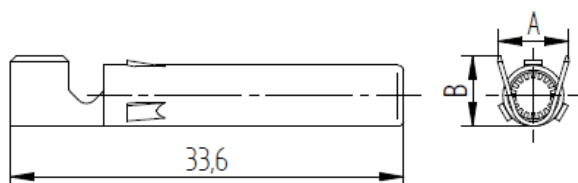


EPIC® SOLAR 4 PLUS F
female

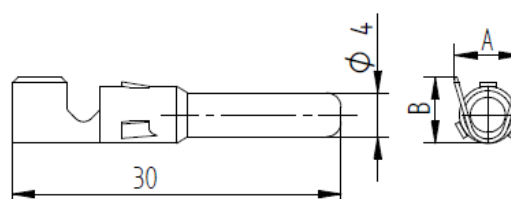


EPIC® SOLAR 4 PLUS M
male


Contacts :



44428240	Female Contact 10 mm ²	5,6	7,9
44428220	Female Contact, 4-6 mm ²	4,8	5,9
Mat. No.	Designation	A [mm]	B [mm]



44428239	Male Contact 10 mm ²	5,6	7,9
44428219	Male Contact, 4-6 mm ²	4,8	5,9
Mat. No.	Designation	A [mm]	B [mm]

44428235	ASSEMBLY INSTRUCTION	
Valid from: 17.07.2019	EPIC® SOLAR 4 PLUS	

Technical Specifications

According to IEC 62582 : 2014

Rated Voltage:

1.500 V DC

Rated Current:

30 A (4.0mm²)

30 A (6.0mm²)

30 A (10 mm²)

Rated impulse withstand voltage:

16 kV

Rated temperature:

-40°C ... +85°C

Upper Limit of Temperature :

105°C

Protection degree:

IP68, 10 h, 1m; IP 65

Connecting Type:

Crimp

Contact resistance:

<5mΩ

Protection Class:

II

Material of the Insulating Bodys:

Polyamide

Material of the Nut


Polyamide

Contact Surface:

Tin plated

Pollution Degree

3 (in the Interior: 2)

44428235	ASSEMBLY INSTRUCTION	
Valid from: 17.07.2019	EPIC® SOLAR 4 PLUS	

Safety Instructions

The Connector EPIC® SOLAR 4 PLUS is not able to be connected or disconnected under load. De-energize the circuit by appropriate measures, e.g. at the inverter. To disconnect and to connect without load, under voltage, is possible.

EPIC® SOLAR 4PLUS Connectors are intended to connect stationary photovoltaic systems. They are suitable for fixed installation in dry or damp rooms, as well as outdoors. EPIC® SOLAR products are not suitable for laying into earth.

PV Cables

Designation	LAPP KABEL H1Z2Z2-K
Cable Code	H1Z2Z2-K
Rated cross-section :	4,0 mm ² ; 6,0 mm ² ; 10,0 mm ²
Rated Voltage :	AC U0/U 1,0/1,0 kV DC 1,5 kV
max. Voltage :	DC 1,8 kV (Conductor / Earth) System without Earth Connection


Mated connectors are IP68 protected, 1m 10 h. A permanent use under water, e. g. water on the roof of a flat roof is not possible.

EPIC® SOLAR connectors shall be mounted only with tools and accessories specified by Lapp. The connection of the cable at the connector must be performed by qualified electricians. To protect the installer from the danger of the electric current, the connector must be made floating on all sides during assembly.

Unplugged connectors must be protected against ingress of dirt and moisture. Before plugging together, make sure that the mating area is free of any dirt.

Note :The PV Connectors EPIC® SOLAR 4 Plus are not rewirable.

Defective connectors can be replaced by new connectors of the same type and connection cross-section, complying with all requirements of this installation instruction and having ensured that the connector is without voltage and not under load.

44428235	ASSEMBLY INSTRUCTION	
Valid from: 17.07.2019	EPIC® SOLAR 4 PLUS	

Necessary Tools

Cable shears for cutting the PV-cables:



LAPP Cable shear KS20, Item number 62120045

Stripping Tool to strip the PV-Cable



LAPP Universal Strip Solar, Item number 21920120

EPIC® SOLAR Mounting Tool is not necessary:

Two 19 mm open-end wrenches are enough.

Crimping Tool

Note :

To comply the tested quality, it`s necessary to use only the indicated tools.




Crimptool CSC Parts

Crimptool (11147000) with crimp inserts (e.g. 44428995) and locator (44428996) to crimp the EPIC® SOLAR contacts:



Crimptool CSC mounted

Alternating the CSC insert can be used with the Crimping Tool. This insert has the function: cut, stripping and crimping.

44428235	ASSEMBLY INSTRUCTION	
Valid from: 17.07.2019	EPIC® SOLAR 4 PLUS	

Mounting of EPIC® SOLAR 4 PLUS

Analysing the cable

Find the cross section

Find the outer diameter



Item Number	Designation	Cross section in mm ²	Cable clamping range d in mm	Stripping Length L [mm]	Rated Current [A]
EPIC® SOLAR 4PLUS Female Connector, field mountable, including Contacts					
44428236	EPIC® SOLAR 4PLUS F 4 mm ² ... 6 mm ²	4 – 6	5,2 – 7,1	8	30
44428238	EPIC® SOLAR 4PLUS F 10 mm ²	10	5,2 – 7,1	12	30
EPIC® SOLAR 4PLUS Male Connector, field mountable, including Contacts					
44428235	EPIC® SOLAR 4PLUS M 4mm ² ... 6mm ²	4 – 6	5,2 – 7,1	8	30
44428237	EPIC® SOLAR 4PLUS M 10 mm ²	10	5,2 – 7,1	12	30

Preparing the cable


Carefully cut the cable. The strands shall be without any oxidation or contamination.

Stripping the cable

Stripping length: depending on the table (see table above!).

The insulation must be removed clean and competet. No stranded wires may be cut off



44428235	ASSEMBLY INSTRUCTION	
Valid from: 17.07.2019	EPIC® SOLAR 4 PLUS	

Crimping the contacts

Check that contact and cross-section fit together.

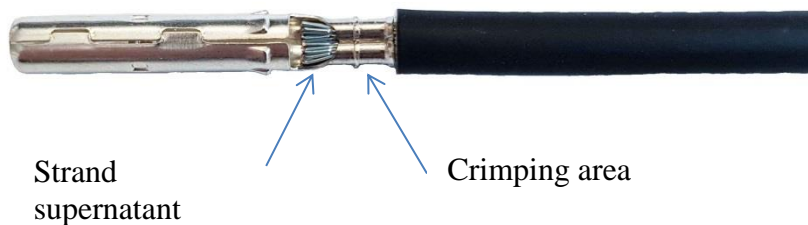
Insert the contact with the opening facing upwards into EPIC® SOLAR Crimp-Tool.

Insert the wire completely into the crimp area of the contact.



The cable is pushed forward until the insulation strikes the crimp receptacle of the contact. In this way, the supernatant is insured at least 2 mm.

Completely squeeze the tool until the trigger lock releases the tool again. Remove the crimp and check visually if all strands are completely enclosed. The strand supernatant after crimping is at least 2 mm.




Explanation of the crimping process



Contact into the crimp insert

Contact into the crimp insert with cable

44428235	ASSEMBLY INSTRUCTION	
Valid from: 17.07.2019	EPIC® SOLAR 4 PLUS	

Mounting

Insert the crimped contact into the opened cable gland until the contact clicks into place. Lightly pull the cable to make sure that the contact is properly engaged. Turn cap nut “hand-tight” (4,5 Nm) – finished. Spanner size 19.



(EPIC® SOLAR 4PLUS F)


Connecting and Disconnecting

Before plugging in, check the plug-in area for any dirt and, if necessary, clean it. Especially the O-ring on the female connector must be absolutely clean. Remove moisture. Connect EPIC® SOLAR 4 PLUS, male and female until the snap-in hooks are completely engaged on both sides.



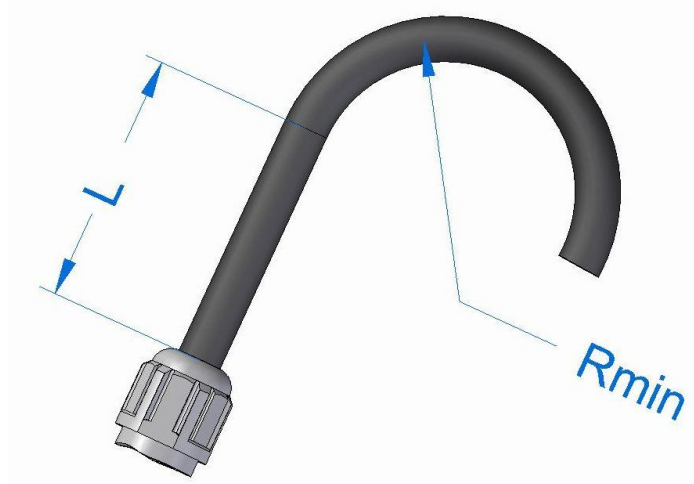
To disconnect, press the latching hooks on both sides with the standard pliers (article 3115160) and pull them apart carefully but firmly.



44428235	ASSEMBLY INSTRUCTION	
Valid from: 17.07.2019	EPIC® SOLAR 4 PLUS	

Laying the cable

The cables must be laid firmly in the photovoltaic system, securely fastened and the minimum bending radius shall not be undercut. The cable shall be led out straight at least $L=50\text{ mm}$. The bending radius R_{min} must be at least $10\times$ cable diameter.



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