


44428277	Assembly instruction	
Valid from 29.09.2025	EPIC® SOLAR 4 Gen 2	

EPIC® SOLAR 4 GEN 2 ASSEMBLY INSTRUCTION

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Trademark on the Product: EPIC®

Scope of delivery

The Connector EPIC® SOLAR 4 Gen 2 is delivered pre- assembled, the necessary contacts are included separately.

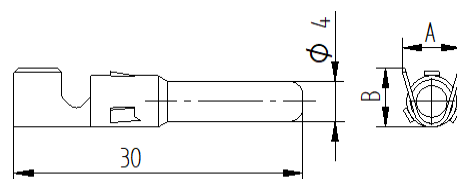
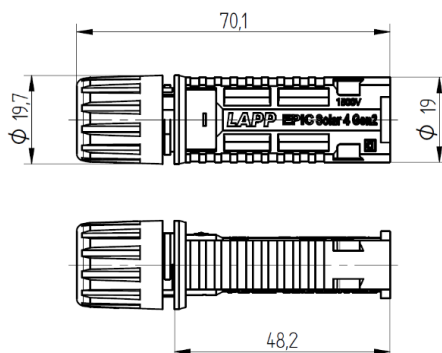
EPIC SOLAR 4 Gen 2 X Y

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Article Number	Article	Description	Cross section [mm²]	Cable clamping range [mm]	Rated current [A]
EPIC® SOLAR 4 GEN2, male field-mountable, inclusive contacts					
44428277	EPIC® SOLAR 4 GEN2 M 4-6 5.2-7.0mm	male connector incl. contacts 4-6mm² (100 pcs)	4 - 6	5,2 - 7,0	50
381166810	EPIC® SOLAR 4 GEN2 M 4-6 5.2-7.0mm	male connector incl. contacts 4-6mm² (10 pcs)	4 - 6	5,2 - 7,0	50
44428268	EPIC® SOLAR 4 GEN2 M 10mm²	male connector incl. contacts 10mm² (100 pcs)	10	7,0 - 7,4	70
EPIC® SOLAR 4 GEN2, male field-mountable, exclusive contacts					
44428270	EPIC SOLAR 4 GEN2 M 5.2-7.0mm	male connector without contacts (100 pcs)	-	5,2 - 7,0	50
381166461	EPIC SOLAR 4 GEN2 M 5.2-7.0mm	male connector without contacts (700 pcs)	-	5,2 - 7,0	50
EPIC® SOLAR 4 GEN2, male contacts					
44428272	EPIC SOLAR 4 GEN2 PIN M 4-6mm²	male contacts on reel (2500 pcs)	4 - 6	-	-
44428219	EPIC SOLAR 4PLUS PIN M 4-6mm²	male contacts (100 pcs)	4 - 6	-	-

Article Number	Cross section [mm²]	Max. rated current [A]
44428277	4	40
	6	50
381166810	4	40
	6	50

EPIC® SOLAR 4 Gen 2 M, male



Article	A [mm]	B [mm]
EPIC SOLAR 4 GEN2 PIN M 4-6mm²	5,3	6,4
EPIC SOLAR 4 GEN2 PIN F 10mm²	5,3	7,7
EPIC SOLAR 4PLUS PIN M 4-6mm²	4,8	5,9

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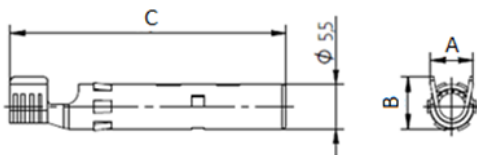
Article Number	Article	Description	Cross section [mm²]	Cable clamping range [mm]	Rated current [A]
EPIC® SOLAR 4 GEN2, female field-mountable, inclusive contacts					
44428278	EPIC® SOLAR 4 GEN2 F 4-6 5.2-7.0mm	female connector incl. contacts 4-6mm² (100 pcs)	4 - 6	5,2 - 7,0	50
381166811	EPIC® SOLAR 4 GEN2 F 4-6 5.2-7.0mm	female connector incl. contacts 4-6mm² (10 pcs)	4 - 6	5,2 - 7,0	50
44428269	EPIC® SOLAR 4 GEN2 F 10mm²	female connector incl. contacts 10mm² (100 pcs)	10	7,0 - 7,4	70
EPIC® SOLAR 4 GEN2, female field-mountable, exclusive contacts					
44428271	EPIC SOLAR 4 GEN2 F 5.2-7.0mm	female connector without contacts (100 pcs)	-	5,2 - 7,0	50
381166462	EPIC SOLAR 4 GEN2 F 5.2-7.0mm	female connector without contacts (700 pcs)	-	5,2 - 7,0	50
EPIC® SOLAR 4 GEN2, female contacts					
44428273	EPIC SOLAR 4 GEN2 PIN F 4-6mm²	female contacts on reel (2500 pcs)	4 - 6	-	-
44428220	EPIC SOLAR 4PLUS PIN F 4-6mm²	female contacts (100 pcs)	4 - 6	-	-

Article Number	Cross section [mm²]	Max. rated current [A]
44428278	4	40
	6	50
381166811	4	40
	6	50

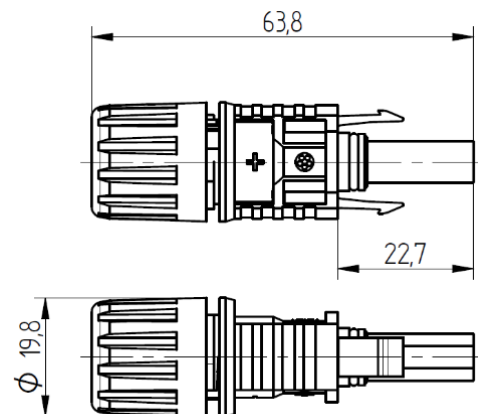
EPIC® SOLAR 4 Gen 2 F, female




Contacts



Article	A [mm]	B [mm]	C [mm]
EPIC SOLAR 4 GEN2 PIN F 4-6mm²	5,3	6,4	33,8
EPIC SOLAR 4 GEN2 PIN F 10mm²	5,3	7,7	33,8
EPIC SOLAR 4PLUS PIN F 4-6mm²	4,8	5,9	33,6



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Technical Specifications

According to IEC 62582: 2014+A1:2020

Rated Voltage:

1.500 V DC

2.000 V DC at 10 mm²

Rated Current:

40A (4.0 mm²)

50A (6.0 mm²)

70 A (10 mm²)

Rated impulse withstand voltage:

16 kV

Rated temperature:

-40°C ... +85°C

Upper limit of Temperature:

105°C

Protection degree:

IP68, 1 h/1 m; IP 65

Connecting Type:

Crimp

Contact resistance:

<5 mΩ

Protection Class:

II

Material of the Insulating Body:

Polycarbonate

Material of the Nut:


Polyamide

Contact Surface:

Tin plated

Pollution Degree

3 (in the Interior: 2)

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Safety Instructions

The EPIC® SOLAR 4 Gen 2 connector is not suitable for mating and unmating under load. De-energize the circuit by appropriate measures, e.g. at the inverter. Disconnecting and plugging in is possible without load, while voltage is present. EPIC® SOLAR 4 Gen 2 connectors are intended for connecting stationary photovoltaic systems. They are suitable for fixed installation in dry and damp rooms, as well as outdoors. EPIC® SOLAR 4 Gen 2 products are not suitable for underground installation.


Mated connectors are IP68 protected (1m/1h). Continuous operation under water, e.g. water on the roof skin of a flat roof is not possible.

EPIC® SOLAR Gen 2 connectors may only be assembled using tools and aids specified by Lapp. The cable may only be connected to the connector by trained electricians. To protect the installer from the danger of the electric current, the connector must be made floating on all sides during installation.

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. Protective caps: 381166463, 381166464 available.

Note: The PV Connectors EPIC SOLAR 4 Gen 2 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 cable is without voltage and not under load.

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Necessary Tools

Cable shears for cutting the PV-cables:



LAPP Cable shear KS20, Item number 62120523

Stripping Tool to strip the PV-Cable



LAPP Universal Strip Solar, Item number 21920120 or 21124030.

Crimping Tool

Note:

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



Crimp tool CSC Parts




Crimp tool CSC mounted

Crimp tool (11147000) with crimp inserts (e.g. 44428266) and locator (44428244) to crimp the EPIC® SOLAR contacts: 4; 6 and 10 mm²

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

Mounting of EPIC® SOLAR 4 Gen 2

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Analysing the cable

Determining the conductor cross section

Determining the outer diameter



Preparing the cable


Cut the cable cleanly - the strands must not have any oxidation or contamination.

Stripping the cable

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

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



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Crimping the contacts

Check that contact and cross-section match.

Insert the contact with the opening facing upwards into the EPIC® SOLAR Crimping tool.

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

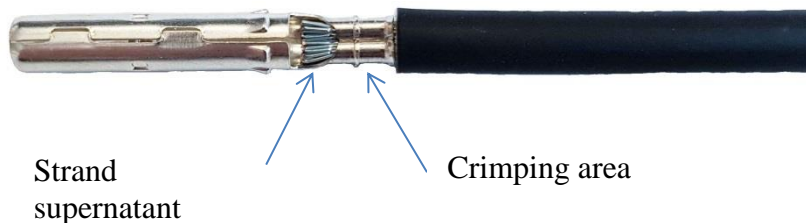


The cable is pushed forward until the insulation strikes the crimp receptacle of the contact. In this way a supernatant of at least 2 mm is ensured.

Completely squeeze the tool until the trigger lock releases the tool again.

Remove the crimp and visually check that all strands are completely enclosed.

The strand supernatant after crimping is at least 2 mm.




Explanation of the crimping process



Contact in the crimp insert

Contact in the crimp insert with cable

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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, or Solar 4 Gen 2 Assembly Tool 44428276



(EPIC® SOLAR 4 Gen 2 F)

Connecting and Disconnecting

Before plugging in, check the plugging area for possible soiling and clean it if necessary. Especially the O-ring on the female connector must be absolutely clean. Trapped moisture must be removed. Plug EPIC® SOLAR 4 Gen 2, male and female together until the snap-in hooks are fully engaged on both sides.




To disconnect, you can use the origin Lapp tool 44428276. Loosen the latching noses with the two tips.



You can also use a standard pliers, article number 3115160.



To disconnect press the latching hooks on both sides and pull them apart carefully but firmly.

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Laying the cable

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



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