



# Solar connectors

**LINE 4 CABUR SOLAR CONNECTORS**

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Cabur Solar "Line 4" connectors allow simple and effective connections with the most common inverter/ junction boxes.

The Line 4 connectors are composed by:

- Flying connectors, male and female
- Panel connectors, male and female
- Y connectors

### FAST, SIMPLE, AND EFFECTIVE: CONNECTION IN JUST THREE STEPS

- 1 Insert the stripped wire into the contact to be crimped -CRIMP IT-.
- 2 Insert the wire complete with contact into the connector and push hard until you hear the typical CLICK which indicates that the plastic and metal parts are hooked together. Do not make any joints without checking that the plastic and metal parts are hooked together.
- 3 Screw on the wire gland washer manually until it is firmly homed to guarantee IP67.

All Cabur Solar "Line 4" connectors are supplied with caps and relative accessories.

In order to assure a connection compliance with standard, Cabur recommend use of pliers UMCT with matrix IS3154 or the pliers IS3161.

The use of this tools is mandatory for guaranteed a excellent connection and the duration of the plant.

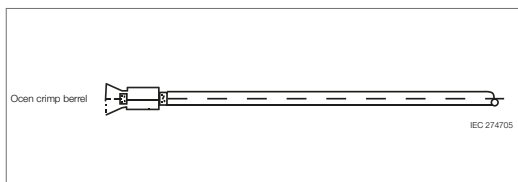


The line includes mobile and panel connectors certified TÜV.

## LINE 4 FLYING MALE - FEMALE CONNECTORS



**Fig. 1** - Exploded view of the panel connector body.  
The product is provided assembled.

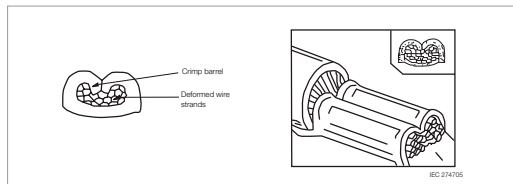


**Fig. 2** - Wire crimped onto PIN (top view)

The fly connectors, both male and female, are made by four main parts:

- 1 **Metallic PIN**
- 2 **Rubber washer**
- 3 **Rigid PPO plastic washer**
- 4 **Main body made of PPO plastic**

- 1 **Pin** is a metallic contact made of tinned copper composed by two metallic wings allowing cable tightening via crimping action. The pin wings should be bending around the cable core. This action should be done with the appropriate Cabur Solar accessories.
- 2 **Rubber washer** is used to protect internal part of the connector, thus preventing penetration of external agents such as humidity, dust, and oils. This is achieved by pinching the electric wire insulating sleeve.



**Fig. 3** - Wire crimped onto PIN (inner view)



**Fig. 4** - "Line 4" connector Pins

- 3 **PPO plastic washer** has a conical cavity that, after being screwed into the main body of the connector, forces the reeds together, compressing the rubber sheath into the wire insulation and hence acting to help ensure IP67 protection.
- 4 The **main body** holds the metallic PIN crimped onto the cable.

Connection from male and female connectors is made having the male metallic PIN paired with the female PIN, vice versa happens for the plastic shells.

Female connector has one red rubber ring which acts as insulating washer against the penetration of external atmospheric agents.

Male and female connectors are hooked together mechanically by means of two elastic wings on the female connector which must be inserted in the male connectors insulating body special slots.

## MALE-FEMALE PANEL CONNECTORS OF LINE 4



**Fig. 5** - Exploded view of the connector body. The product is provided assembled.

The connector are made by three parts:

- 1 **Metallic PIN**
- 2 **Rigid PPO hexagonal plastic washer**
- 3 **Main body made of PPO plastic**



**Fig. 6** - Exploded view of the rubber connector.

- 1 **Metallic PIN** is similar to the one of the flying version.
- 2 **Hexagonal nut** allows locking the connector on panel surface. Pay attention to the strength used to block the connector as, if excessive, could damage the connector.
- 3 **Main body** made of PPO plastic is similar to the one of the flying version.

- Maximum voltage 1000Vdc
- 4-6mm<sup>2</sup> section



VERSION	CODE TYPE	IS14110P KX04PM4060	IS24111P KX04PF4060
<b>TECHNICAL DATA</b>			
Application		Panel	Panel
Connector type		Male	Female
PIN diameter	(mm)	4	4
Cable section	(mm <sup>2</sup> )	4-6	4-6
Pliers to use	Movable matrix Fixed matrix	UMCT3149 IS3161	UMCT3149 IS3161
Matrix to use		IS3154	IS3154
PIN material		Tinned Copper	Tinned Copper
Contact resistance	Rc	(mΩ)	< 5
Case material		PPO	PPO
Max. applicable voltage		(Vdc)	1000
Max. applicable current		(A)	25
Operating temperature range		(°C)	-40...+85
Protection degree		IP67	IP67
Inflamability class		UL94-V0	UL94-V0
Pack quantity	pieces	100	100
Packaging		10 bag for every box, every single bag contains 10 plastic shell and 10 metallic PIN.	10 bag for every box, every single bag contains 10 plastic shell and 10 metallic PIN.

**APPROVALS**

<b>ACCESSORIES</b>			
Blocking ring		IS15BLOCK	IS15BLOCK
	Pack quantity	pieces	50
Unblocking key for release connectors		IS15SBLOCK	IS15SBLOCK
	Pack quantity	pieces	2
Caps	Male	IS52400	IS52400
	Female	IS51400	IS51400
	Working Temperature range		-40...+85
	Protection degree		IP67
	Inflamability class		UL94-V0
Pack quantity	pieces	50	50
<b>SPARE COMPONENTS</b>			
Plastic shell		ISPAN4MP	ISPAN4FP
	Pack quantity	pieces	100
Metallic PIN		ISPIN44060M	ISPIN44060F
	Pack quantity	pieces	100
Metallic PIN wound on reel		ISO601207	ISO601209
	Pack quantity	pieces	2000

- Maximum voltage 1000Vdc
- 4-6mm<sup>2</sup> section



VERSION	CODE TYPE	IS14240 KX04VM4060	IS24241 KX04VF4060	IS4FM KX04VFM4060
<b>TECHNICAL DATA</b>				
Application		Flying	Flying	Flying
Connector type		Male	Female	Female + Male
PIN diameter	(mm)	4	4	4
Cable section	(mm <sup>2</sup> )	4-6	4-6	4-6
Pliers to use	Movable matrix	UMCT3149	UMCT3149	UMCT3149
	Fixed matrix	IS3161	IS3161	IS3161
Matrix to use		IS3154	IS3154	IS3154
PIN material		Tinned Copper	Tinned Copper	Tinned Copper
Contact resistance	Rc (mΩ)	< 5	< 5	< 5
Case material		PPO	PPO	PPO
Max. applicable voltage	(Vdc)	1000	1000	1000
Max. applicable current	(A)	25	25	25
Operating temperature range	(°C)	-40...+85	-40...+85	-40...+85
Protection degree		IP67	IP67	IP67
Inflamability class		UL94-V0	UL94-V0	UL94-V0
Pack quantity	pieces	100	100	100
Packaging		10 bag for every box, every single bag contains 10 plastic shell and 10 metallic PIN.	10 bag for every box, every single bag contains 10 plastic shell and 10 metallic PIN.	50 bag for every box, every single bag contains 2 plastic shell and 2 metallic PIN.

APPROVALS



ACCESSORIES

Blocking ring		IS15BLOCK	IS15BLOCK	IS15BLOCK
	Pack quantity	pieces	50	50
Unblocking key for release connectors		IS15SBLOCK	IS15SBLOCK	IS15SBLOCK
	Pack quantity	pieces	2	2
Caps	Male	IS52400	IS52400	IS52400
	Female	IS51400	IS51400	IS51400
	Working Temperature range	-40...+85	-40...+85	-40...+85
	Protection degree	IP67	IP67	IP67
	Inflamability class	UL94-V0	UL94-V0	UL94-V0
Pack quantity	pieces	50	50	50

SPARE COMPONENTS

Plastic shell		ISVOL4M	ISVOL4F	ISVOL4F / ISVOL4M
	Pack quantity	pieces	100	100 / 100
Metallic PIN		ISPIN44060M	ISPIN44060F	ISPIN44060F / ISPIN44060M
	Pack quantity	pieces	100	100 / 100
Metallic PIN wound on reel		IS0601207	IS0601209	IS0601209 / IS0601207
	Pack quantity	pieces	2000	2000 / 2000

- Maximum voltage 1000Vdc
- 10mm<sup>2</sup> section

LINE 4 CABUR SOLAR CONNECTORS



VERSION	CODE TYPE	IS14242 KX04VM100	IS24243 KX04VF100
<b>TECHNICAL DATA</b>			
Application		Flying	Flying
Connector type		Male	Female
PIN diameter	(mm)	4	4
Cable section	(mm <sup>2</sup> )	10	10
Pliers to use	Movable matrix Fixed matrix	- IS3110	- IS3110
Matrix to use		-	-
PIN material		Tinned Copper	Tinned Copper
Contact resistance	Rc	(mΩ)	< 5
Case material		PPO	PPO
Max. applicable voltage		(Vdc)	1000
Max. applicable current		(A)	25
Operating temperature range		(°C)	-40...+85
Protection degree			IP67
Inflamability class			UL94-V0
Pack quantity	pieces		100
Packaging		10 bag for every box, every single bag contains 10 plastic shell and 10 metallic PIN.	10 bag for every box, every single bag contains 10 plastic shell and 10 metallic PIN.

**APPROVALS**

<b>ACCESSORIES</b>			
Blocking ring			IS15BLOCK
	Pack quantity	pieces	50
Unblocking key for release connectors			IS15SBLOCK
	Pack quantity	pieces	2
Caps	Male		IS52400
	Female		IS51400
	Working Temperature range		-40...+85
	Protection degree		IP67
	Inflamability class		UL94-V0
Pack quantity	pieces		50
<b>SPARE COMPONENTS</b>			
Plastic shell			-
	Pack quantity	pieces	-
Metallic PIN			-
	Pack quantity	pieces	-
Metallic PIN wound on reel			-
	Pack quantity	pieces	-

- Maximum voltage 1000Vdc
- For Y connections



VERSION	CODE TYPE	IS41410	IS42420
		KX04MFF	KX04FMM
<b>TECHNICAL DATA</b>			
Application		Flying	Flying
Connector type		Male/ Fem - Female	Female / Male - Male
PIN diameter	(mm)	4	4
Cable section	(mm <sup>2</sup> )	-	-
Pliers to use	Movable matrix Fixed matrix	-	-
Matrix to use		-	-
PIN material		Tinned Copper	Tinned Copper
Contact resistance	Rc	< 5	< 5
Case material		PPO	PPO
Max. applicable voltage	(Vdc)	1000	1000
Max. applicable current	(A)	35	35
Operating temperature range	(°C)	-40...+85	-40...+85
Protection degree		IP67	IP67
Inflamability class		UL94-V0	UL94-V0
Pack quantity	pieces	30	30
Packaging		6 bag for every box, every single bag contains 5 Y connectors.	6 bag for every box, every single bag contains 5 Y connectors.

**APPROVALS**

<b>ACCESSORIES</b>			
Blocking ring		IS15BLOCK	IS15BLOCK
	Pack quantity	pieces	50
Unblocking key for release connectors		IS15SBLOCK	IS15SBLOCK
	Pack quantity	pieces	2
Caps	Male	IS52400	IS52400
	Female	IS51400	IS51400
	Working Temperature range	-40...+85	-40...+85
	Protection degree	IP67	IP67
	Pack quantity	pieces	50
<b>SPARE COMPONENTS</b>			
Plastic shell		-	-
	Pack quantity	pieces	-
Metallic PIN		-	-
	Pack quantity	pieces	-
Metallic PIN wound on reel		-	-
	Pack quantity	pieces	-



- Maximum voltage 1000Vdc
- Fuse holder connector

(1) Max. fuse rate



VERSION		CODE TYPE	IS43430	KX04FMH
<b>TECHNICAL DATA</b>				
Application			Flying	
Connector type			Female	
PIN diameter		(mm)	4	
Cable section		(mm <sup>2</sup> )	4-6	
Pliers to use		Movable matrix	UMCT3149	
		Fixed matrix	IS3161	
Matrix to use			IS3154	
PIN material			Tinned Copper	
Contact resistance		Rc	(mΩ)	< 5
Case material			PPO	
Max. applicable voltage			(Vdc)	1000
Max. applicable current			(A)	20 (1)
Operating temperature range			(°C)	-40...+85
Protection degree				IP67
Inflamability class				UL94-V0
Pack quantity			pieces	50
Packaging				10 bag for every box, every single bag contains 5 plastic shell and 5 metallic PIN.

**APPROVALS**

ACCESSORIES				
Blocking ring				IS15BLOCK
		Pack quantity	pieces	50
Unblocking key for release connectors				IS15SBLOCK
		Pack quantity	pieces	2
		Male		IS52400
		Female		IS51400
Caps		Working Temperature range		-40...+85
		Protection degree		IP67
		Inflamability class		UL94-V0
		Pack quantity	pieces	50
SPARE COMPONENTS				
Plastic shell				-
		Pack quantity	pieces	-
Metallic PIN				-
		Pack quantity	pieces	-
Metallic PIN wound on reel				-
		Pack quantity	pieces	-



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