

## Three Phase 5G Inverter cable size

(25-50 KW)



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### Ground Cable.

Solis recommends two Ground protections.

- External heat sink connection.
- Grid connection.

a) External heat sink Ground connection.

Cable Size : 6-16 mm<sup>2</sup>.  
Cable Type : Copper-core cable.  
Lug Type : OT.  
Lug Size : M6.  
Torque : 3 N

### ➤ Ground Cable Stripping.

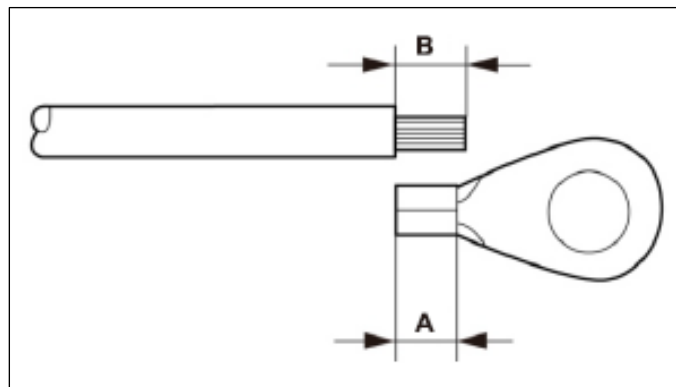


Figure 1 Suitable Length



#### Important:

B (insulation stripping length) is 2mm~3mm longer than A (OT cable terminal crimping area) 2mm~3mm.

### ➤ Ground Lug and cable arrangement.

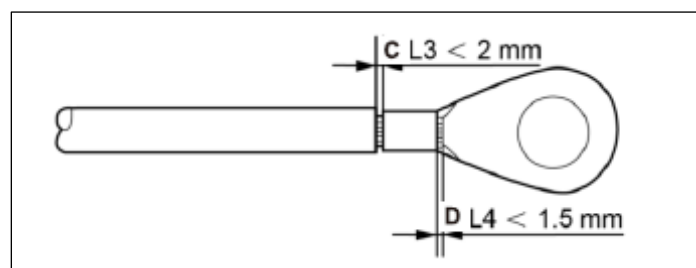


Figure 2 Strip Wire



#### Important:

After crimping the terminal to the wire, inspect the connection to ensure the terminal is solidly crimped to the wire.

## Inverter Grounding Picture.

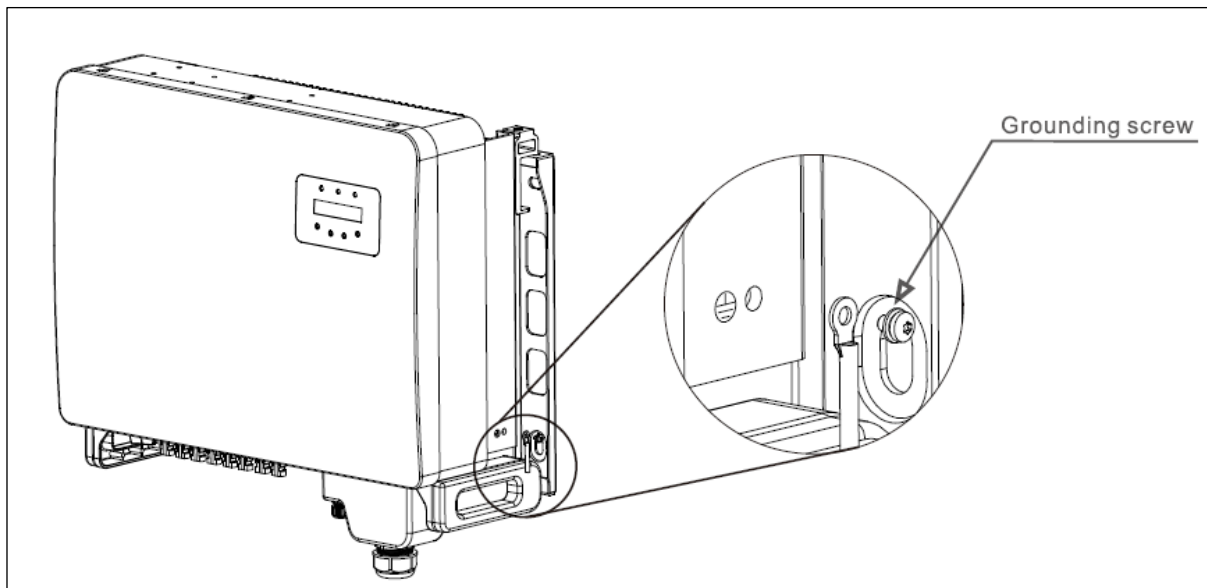


Figure 3 Fixed Cable



### Important:

For improving anti-corrosion performance, after ground cable installed, apply silicone or paint is preferred to protect.

## AC Termination cable.

- For all AC connections, **10- 35 mm<sup>2</sup> 105°C** cable is required to be used.
- Please make sure the resistance of cable is lower than **1.5 ohm**.
- If the wire is longer than **100 m**, it's recommended to use **35 mm<sup>2</sup> cable**.
- Since the inverter is compatible with IT grid (only 3-line wire) connection. so N Neutral connection can be ruled out
- But if there is tender obligation where neutral cable needs to be connected then customer can connect N line in the N port of AC connection side

Cable specification		Copper-cored cable
Traverse cross sectional area (mm <sup>2</sup> )	Range	10~35
	Recommended	25
Cable outer diameter (mm)	Range	22~32
	Recommended	27

Table 1 AC Cable Recommendation

Strip the end of cable outer insulating jacket about 90 mm then strip the end of each wire about 15mm as shown in the figure.

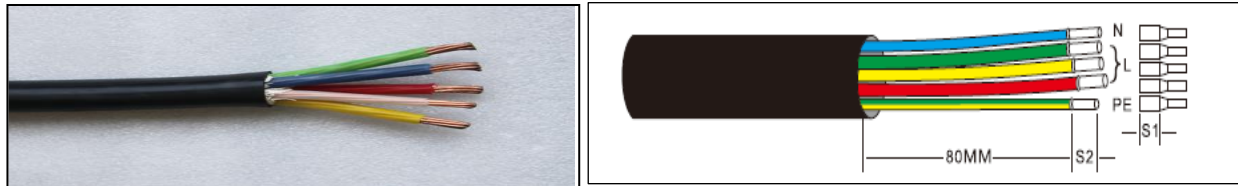


Figure 4 Example of Stripped cables



**NOTE:**

S2 (insulation stripping length) should be as long as S1 (AC terminal cable compression area).



Figure 5 Crimp the cables using End sleeve lugs.

## Disassemble the cover.

Disassemble the 4 screws on the AC terminal cover and take out the cover. Disassemble the screw under terminal rack and Pull out the terminal.



Figure 4 Bottom View of Solis 5G 25-50K Model

Open the screws  
for AC Cable  
terminations



Figure 5 Inner side view of AC Cable Bus bar Box

Insert the cable through cup nut, water-proof sleeve and AC terminal cover into the AC terminal and use a M6 hexagon screwdriver to tight the screws. The torque is **10Nm**.

## Use Adhesive tapes on AC cables for Insulation.

Wind AC Cables with adhesive tape provided in a spiral pattern.

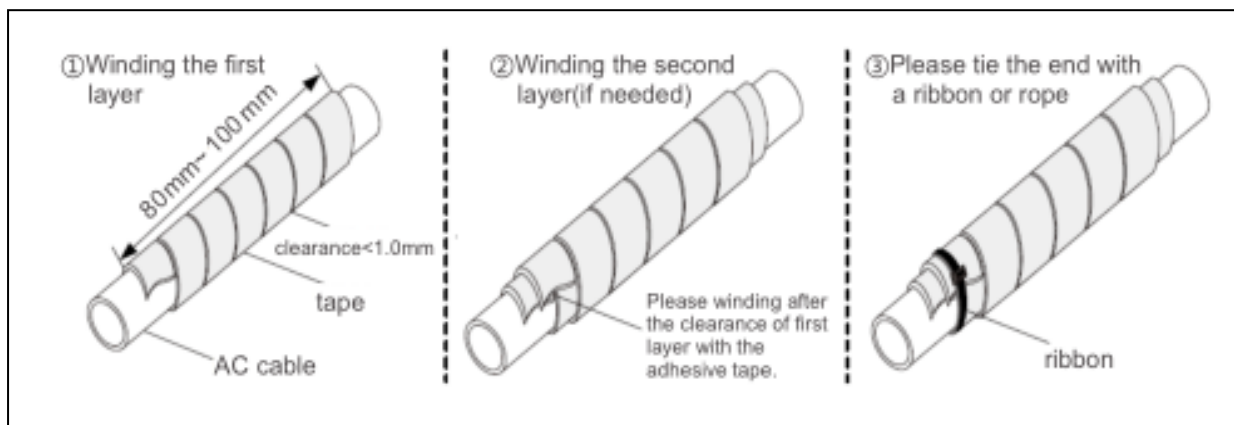


Figure 6 Insulation of AC Cables

## Three Phase 5G Inverter OCPD details (25-50 KW)

To reduce the risk of fire, over-current protective devices (OCPD) are required for circuits connected to the Inverter. The recommended rated trip current of OCPD are mentioned as below:

Inverter	Rated voltage(V)	Rated output current (Amps)	Current for protection device (A)
Solis-25K-5G	380	36.0	50
Solis-30K-5G	380	43.3	63
Solis-33K-5G	380	47.6	63
Solis-36K-5G	380	51.9	80
Solis-40K-5G	380	57.7	80
Solis-40K-HV-5G	480	48.1	63
Solis-50K-HV-5G	480	60.1	80

Table 2 Recommended OCPDs for 25-50K Models



## Three Phase 5G Inverter cable size details (25-50 KW)

Serial	Item	Description
A.	Cable Size	10-35 mm <sup>2</sup>
B.	Operation phase	3/N/PE
C.	AC Termination Pins	5 output (L1, L2, L3, N, PE)
D.	Cable Core	4 Core (Body Earthing)/5 core (AC cable earthing)
E.	If more than 100 m	16-35 mm <sup>2</sup>
F.	Tools	M6 hexagon screwdriver (Gland plate)
G.	Termination	End sleeve type
H.	Ground cable cross section	6-16 mm <sup>2</sup>
I.	Ground cable Termination	OT Lug
J.	Ground cable Termination Torque	3 Nm
K.	Cable type Recommended	Copper

### Note:

- Bimetallic Lugs can be used if Cable used is Aluminum.
- Never use Pin type of lugs for AC connections which is not recommended.

