

SMC4 Solar Connector



- Simple on-site processing.
- Accommodates PV cable with different insulation diameters.
- Mating safety provided by keyed housings.
- Multiple plugging and unplugging cycles.
- High current carrying capacity.
- TUV and UL approved.

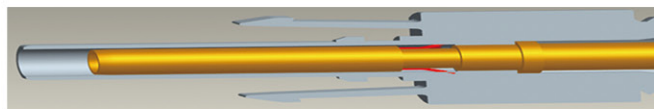
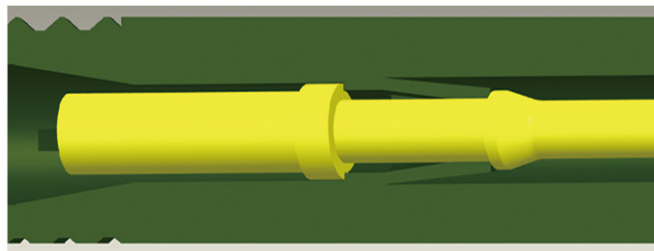
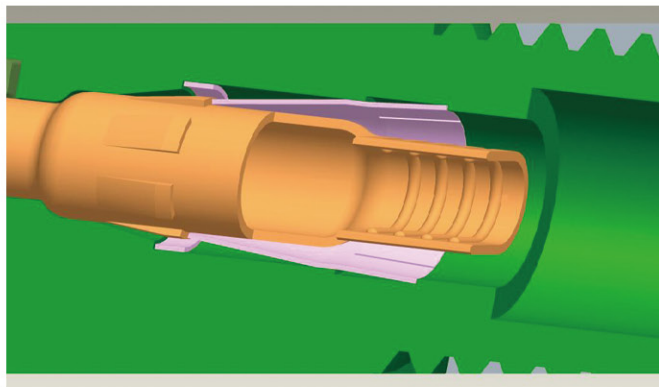


Specifications

Order NO.	Part P/N		Cable	
	Connector	Terminal	Conductor size (mm ²)	Cable OD (Φ Dmm)
SMC4-CMMM-14	SMC4-CMMM-H	SMC4-CM-T14	AWG 14(2.5 mm ²)	Φ 4.5- Φ 8.5
SMC4-CMMM-12		SMC4-CM-T12	AWG 12(4.0 mm ²)	
SMC4-CMMM-10		SMC4-CM-T10	AWG 10(6.0 mm ²)	
Order NO.	Part P/N		Cable	
	Connector	Terminal	Conductor size (mm ²)	Cable OD (mm)
SMC4-CFPM-14	SMC4-CFPM-H	SMC4-CF-T14	AWG 14(2.5 mm ²)	Φ 4.5- Φ 8.5
SMC4-CFPM-12		SMC4-CF-T12	AWG 12(4.0 mm ²)	
SMC4-CFPM-10		SMC4-CF-T10	AWG 10(6.0 mm ²)	
Rated current		30A(2.5-6mm ²)		
Rated voltage		1000v DC		
Test voltage		6000V(50Hz, 1min)		
Overvoltage type/pollution degree		CAT III /2		
Contact resistance of plug connector		1mΩ		
Contact material		Copper, Tin-plated		
Insulation material		PPO		
Degree of protection		IP2X/IP67		
Flame class		UL94-VO		
Safety class		II		
Suitable cable		OD 4.5-8.5(2.5-6.0 mm ²)		
Insertion force/withdrawal force		≤50N/≥50N		
Connecting system		Crimp connection		
Temperature range		-40℃~+125℃		

comparison for internal structure

Connectors of other companies

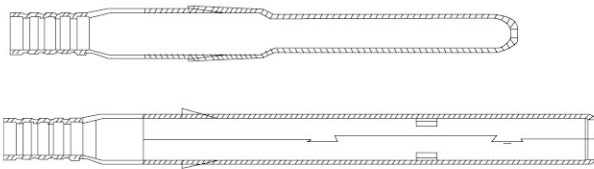


Structure:

Insulator design by forced demoulding Create a slot (red circle marked) to fix spring by forced demoulding. Using spring to position terminal.

Shortcoming:

- Forced demoulding is not very steady It can't ensure any products with same performance.
- Maintain force will change between 7~20kgf.
- Must assemble spring . It is to be a risk that sometimes operator will miss the spring.



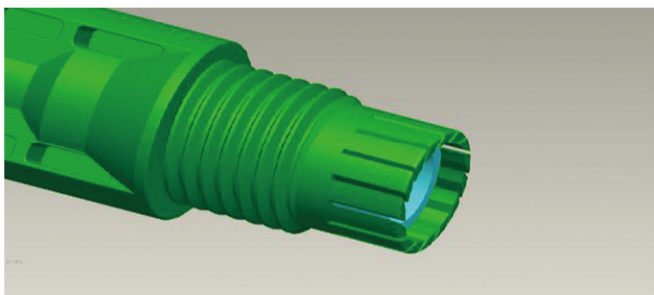
Process: Stamping , Tin plating

Strongpoint:

- Low cost ,high productive capacity.
- It can be continually rivet because of terminal have strip feeder .

Shortcoming

- Material is thin .
- It's easy to deform.
- It will be heat serious in a long time when using
- It need to solder after riveting to reach pull force 31kgf.



Strongpoint:Simple structure

Shortcoming:

The thread can't return back when screw open

Because of first reason , it can't be reuse.

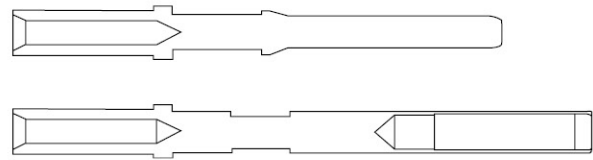
The screw is easy to get open.

Structure:

Moulding a fixed structure to replace spring (red circle marked) .The fixed structure will be expand when terminal insert into insulator . It will be back to original position when terminal is to correct position and hold to terminal.

Shortcoming:

- All product is with same performance.
- Maintain force is 35kgf Min.
- Cut down the accessories.



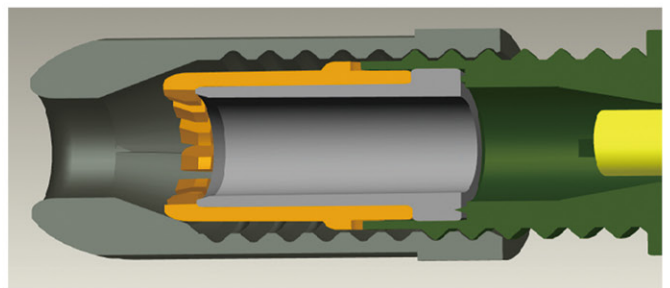
Process: Lathe Machining , Ag plating

Strongpoint:

- High cost ,low productive capacity
- It can't be continually rivet because it 's without terminal rail.

Shortcoming

- Material is thin .
- It's easy to deform.
- It will be heat slight in a long time when using.
- Pull force can reach 31kgf after riveting.



Strongpoint:Add a part

Shortcoming:

The thread can return back when screw open.

It can be reuse.

It's with an anti-loosen part ,screw is not easy to get open.



SMC3 Solar Connector

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- Multiple plugging and unplugging cycles .
- High current carrying capacity.
- TUV and UL approved.



Specifications

Order No.	Part P/N		Cable	
	Connector	Terminal	Conductor size (mm ²)	Cable OD (Φ Dmm)
SMC3-CMMM-14	SMC3-CMMM-H	SMC3-CM-T14	AWG 14(2.5 mm ²)	Φ 4.5- Φ 6.5
SMC3-CMMM-12		SMC3-CM-T12	AWG 12(4.0 mm ²)	
SMC3-CMMM-10		SMC3-CM-T10	AWG 10(6.0 mm ²)	
Order NO.	Part P/N		Cable	
	Connector	Terminal	Conductor size (mm ²)	Cable OD (mm)
SMC3-CFPM-14	SMC3-CFPM-H	SMC3-CF-T14	AWG 14(2.5 mm ²)	Φ 4.5- Φ 6.5
SMC3-CFPM-12		SMC3-CF-T12	AWG 12(4.0 mm ²)	
SMC3-CFPM-10		SMC3-CF-T10	AWG 10(6.0 mm ²)	
Rated current		30A(2-6mm ²)		
Rated voltage		1000V DC		
Test voltage		6000V(50Hz,1min)		
Overvoltage type/pollution degree		CAT Ⅲ /2		
Contact resistant of plug connector		1mΩ		
Contact material		Copper,Tin-plated		
Insulation material		PPO		
Degree of protection		IP2X/IP67		
Flame class		UL94-VO		
Safety class		Ⅱ		
Suitable cable		OD 4.5-6.5(2.5-6.0 mm ²)		
Insertion force/withdrawal force		≤50N/≥50N		
Connecting system		Crimp connection		
Temperature range		-40℃~+90℃		

Twins core PV Cable



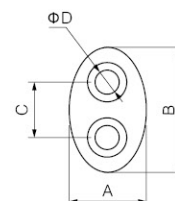
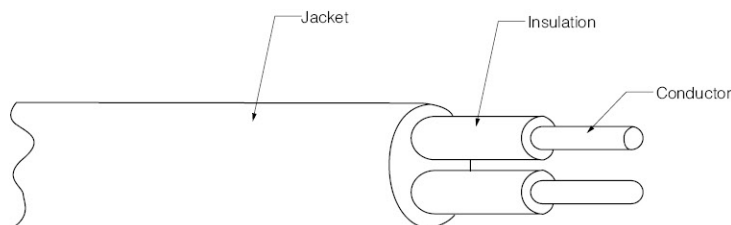
- Dual wall Insulation, electron beam cross-linked
- Excellent resistance to UV, water, ozone, fluids, salt, general weathering
- Excellent resistance to abrasion
- Halogen free, flame retardant, low toxicity
- Excellent flexibility and stripping performance
- High current carrying capacity
- TUV and UL approved

CE  ROHS

Specifications

Type	Cross section	Strand design	Conductor diameter	Conductor resistance	Outer diameter A×B	Rated voltage	Rated current
	mm ²	No.×Φ (mm)	mm	Ω/km	mm	V AC/DC	A
PV-2x1.5 mm ²	1.5	30×Φ 0.25	1.6	13.9	5.80×9.30	1000/1800	20
PV-2x2.5 mm ²	2.5	50×Φ 0.25	2.0	8.06	6.20×9.90	1000/1800	30
PV-2x4.0 mm ²	4.0	56×Φ 0.3	2.6	4.97	6.9×11.30	1000/1800	50
Wire				Class 5, tinned			
Insulation material				XLPE			
Double insulated							
Halogen-free							
High resistance against oils, greases, oxygen and ozone							
Microbe-resistant							
UV resistant							
High wear and abrasion resistance							
Flam test according to				DIN EN 50265-2-1 UL1571(VW-1)			
Smallest permissible bending radius				5XD			
Temperature range				-40℃ ~ +90℃			
Colours				Black/red			

Dimensions(mm)





Single core PV Cable

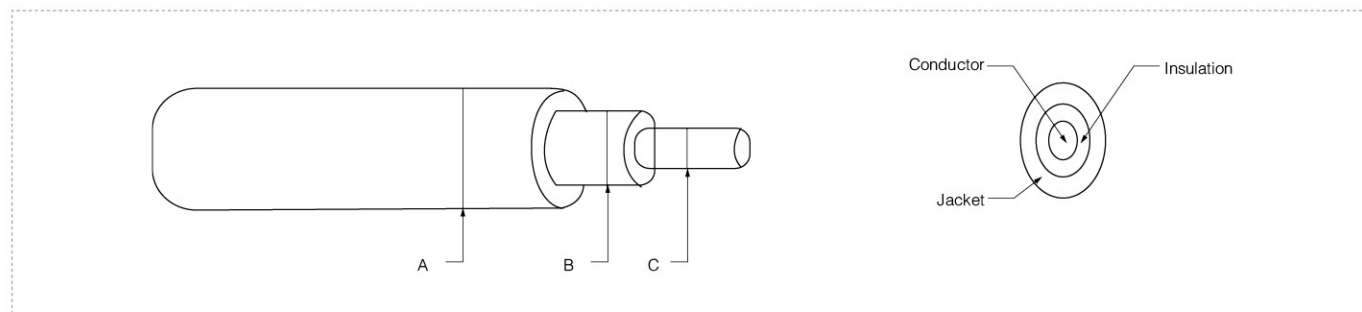
- Dual wall Insulation, electron beam cross-linked
- Excellent resistance to UV, water, ozone, fluids, salt, general weathering
- Excellent resistance to abrasion
- Halogen free, flame retardant, low toxicity
- Excellent flexibility and stripping performance
- High current carrying capacity
- TUV and UL approved

CE  ROHS

Specifications

Type	Cross section	Strand design	Conductor diameter	Conductor resistance	Outer diameter AxB	Rated voltage	Rated current
	mm ²	No. × Φ (mm)	mm	Ω/km	mm	V AC/DC	A
PV-1x1.5 mm ²	1.5	30×Φ0.25	1.6	13.9	4.5	1000/1800	20
PV-1x2.5 mm ²	2.5	50×Φ0.25	2.0	8.06	5.3	1000/1800	30
PV-1x4.0 mm ²	4.0	56×Φ0.3	2.6	4.97	6.4	1000/1800	50
PV-1x6.0 mm ²	6.0	84×Φ0.3	3.3	3.52	7.2	1000/1800	70
PV-1x10.0 mm ²	10.0	200×Φ0.25	4.4	2.12	8.3	1000/1800	95
PV-1x16.0 mm ²	16.0	224×Φ0.3	5.2	1.95	9.5	1000/1800	140
Wire				Class 5, tinned			
Insulation material				XLPE			
Double insulated							
Halogen-free							
High resistance against oils, greases, oxygen and ozone							
Microbe-resistant							
UV resistant							
High wear and abrasion resistance							
Flam test according to				DIN EN 50265-2-1 UL1571 (VW-1)			
Smallest permissible bending radius				5XD			
Temperature range				-40°C ~ +90°C			
Colours				Black/red			

Dimensions(mm)



SMC3Y/SMC4Y Solar Connector

- PV Branch
- Plug SMC3Y/SMC4Y-2M1F
- Socket SMC3Y/SMC4Y-2F1M

Specifications

Type And meaning	
Rated current	30A
Rated voltage	1000V DC
Test voltage	6000V(50Hz,1min)
Overvoltage Category/pollution degree	CAT III /2
Contact resistance of plug connector	1mΩ
Contact material	Copper,Tin-plated
Insulation material	PA/PRO
Degree of protection	IP2*/IP65
Flame class	UL94-VO
Safety class	II
Insertion force	≤50N
withdrawal force	≥50N
Temperature range	-40℃~+110℃



CE ROHS

PV Cable Assembly

Examples of cable assemblies

- Can be customized according to customer requirements

SMC3 TO SMC4



Panel Connector Series

