

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.

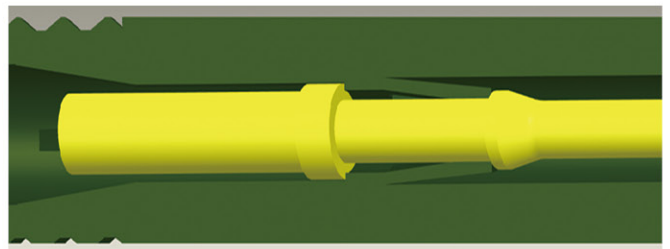
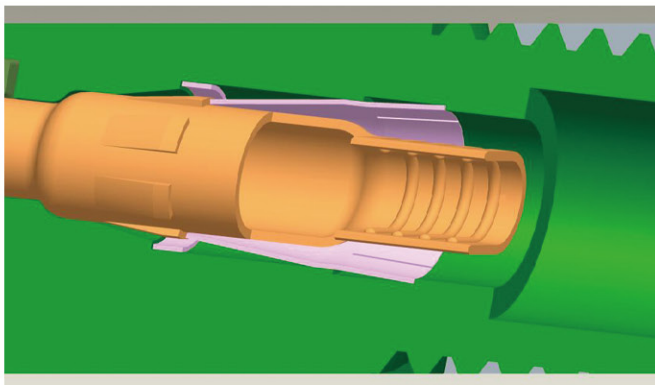


Specifications

| 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 | Terminal | 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

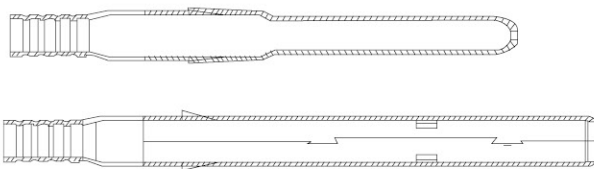


Structure:

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.



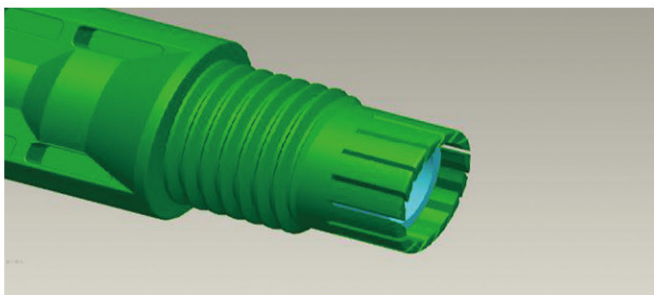
Process: Stamping , Tin plating

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
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.



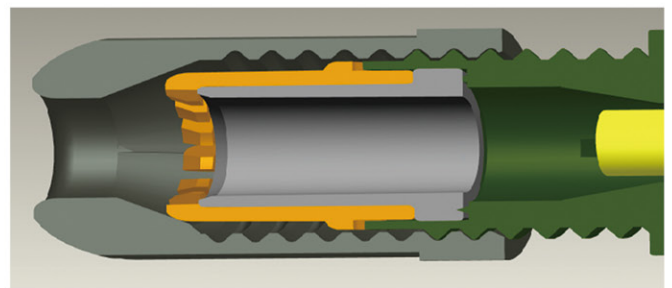
Process: Lathe Machining , Ag plating

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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- Accomodate PV cable with different insulation diameters.
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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



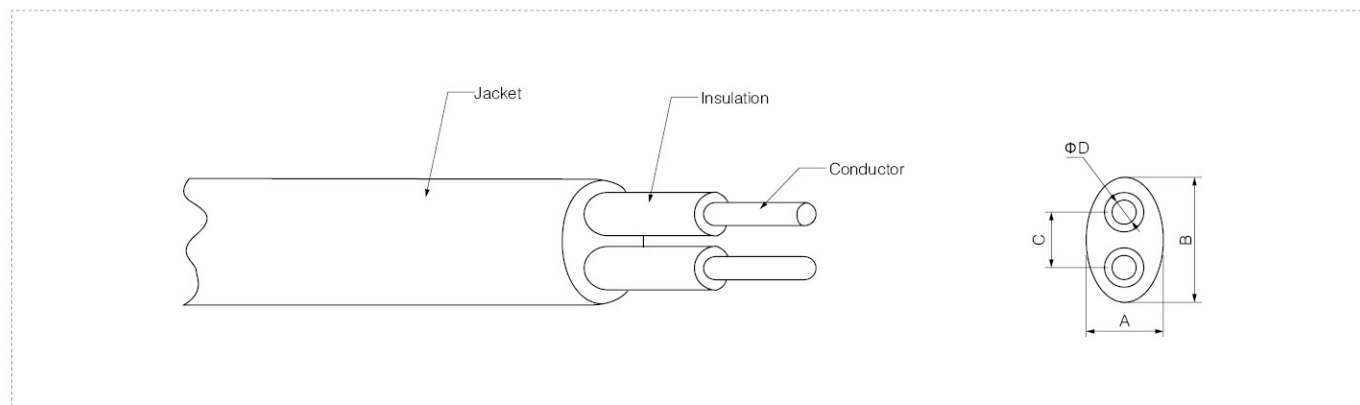
- Dual wall Insulation, electron beam cross-linked
- Excellent resistance to UV, water, ozone, fluids, salt, general weathering
- Excellent resistance to abrasion
- Halogen free, flame retardant, low toxicity
- Excellent flexibility and stripping performance
- High current carrying capacity
- TUV and 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°C ~ +90°C | | | |
| Colours | | | | Black/red | | | |

Dimensions(mm)





Single core PV Cable

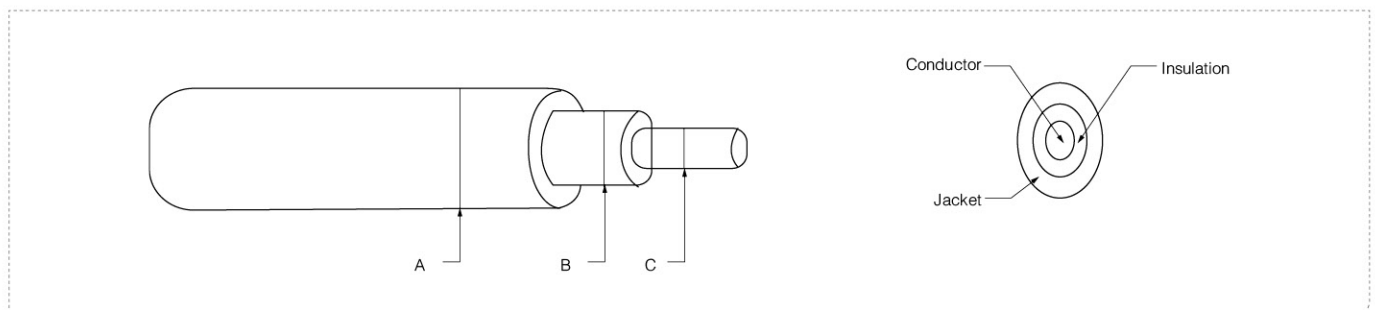
- Dual wall Insulation, electron beam cross-linked
- Excellent resistance to UV, water, ozone, fluids, salt, general weathering
- Excellent resistance to abrasion
- Halogen free, flame retardant, low toxicity
- Excellent flexibility and stripping performance
- High current carrying capacity
- TUV and 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°C~+110°C |



CE ROHS

PV Cable Assembly

Examples of cable assemblies

- Can be customized according to customer requirements

SMC3 TO SMC4



Panel Connector Series

