

Twins core PV Cable



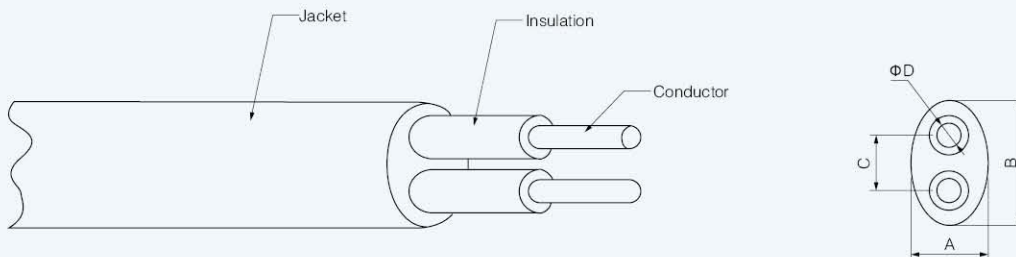
Dual wall Insulation, electron beam cross-linked
 Excellent resistance to UV, water, ozone, fluids, salt, general weathering
 Excellent resistance to abrasion
 Halogen free, flame retardant, low toxicity
 Excellent flexibility and stripping performance
 High current carrying capacity
 TUV and UL approved

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 × Φ0.25 | 1.6 | 13.9 | 5.80 × 9.30 | 1000/1800 | 20 |
| PV-2x2.5 mm ² | 2.5 | 50 × Φ0.25 | 2.0 | 8.06 | 6.20 × 9.90 | 1000/1800 | 30 |
| PV-2x4.0 mm ² | 4.0 | 56 × Φ0.3 | 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



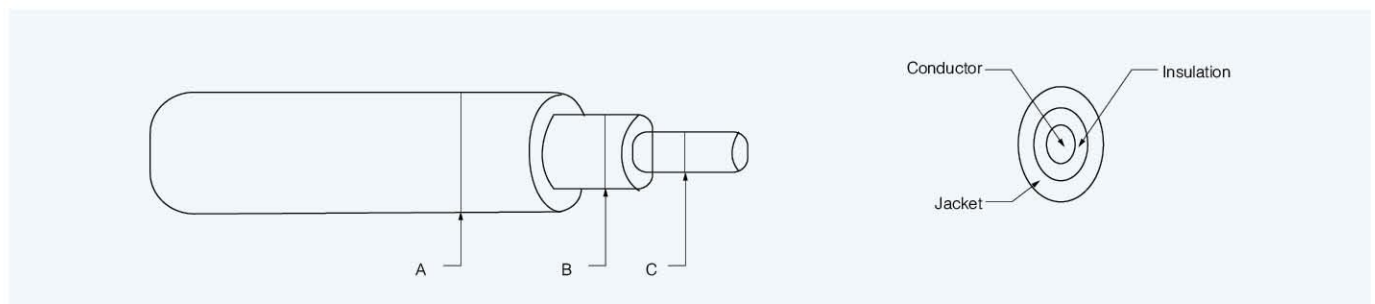
- Dual wall Insulation, electron beam cross-linked
- Excellent resistance to UV, water, ozone, fluids, salt, general weathering
- Excellent resistance to abrasion
- Halogen free, flame retardant, low toxicity
- Excellent flexibility and stripping performance
- High current carrying capacity
- TUV and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



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)



PV DC Products

Suntree

SMC4 Solar Connector



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



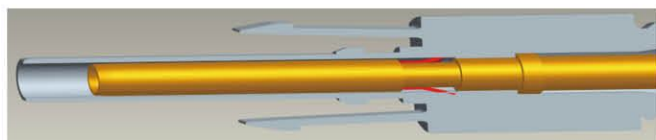
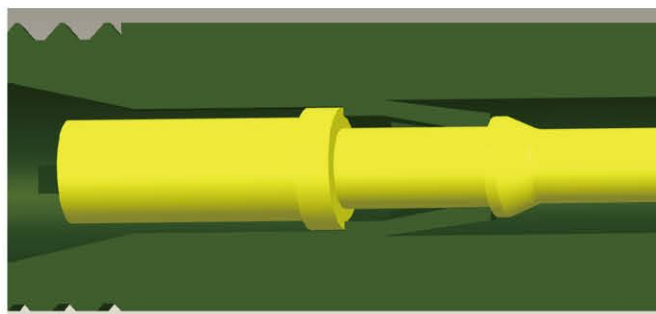
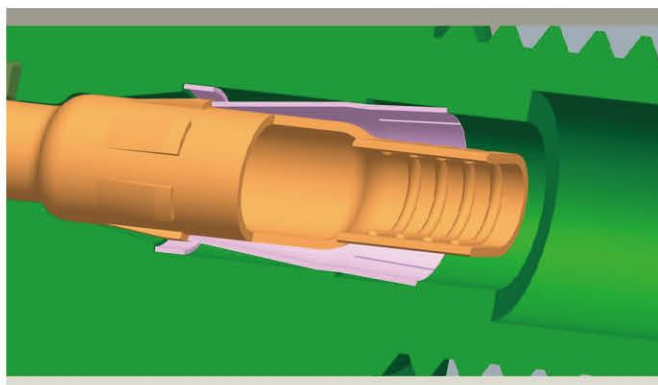
Specifications



| Order NO. | Part P/N | | Cable | |
|--------------------------------------|-------------|--------------------------------------|-----------------------------------|-----------------|
| | Connector | Terminal | Conductor size (mm ²) | Cable OD (ΦDmm) |
| SMC4-CMMM-14 | SMC4-CMMM-H | SMC4-CM-T14 | AWG 14(2.5 mm ²) | Φ4.5-Φ8.5 |
| 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) | Φ4.5-Φ8.5 |
| 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°C ~ +125°C | | |

comparison for internal structure

Connectors of other companies



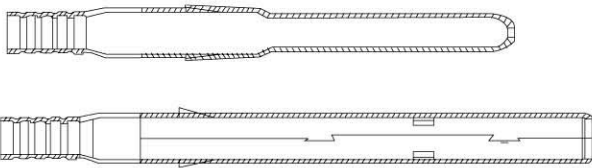
SMC4 Solar Connector

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.



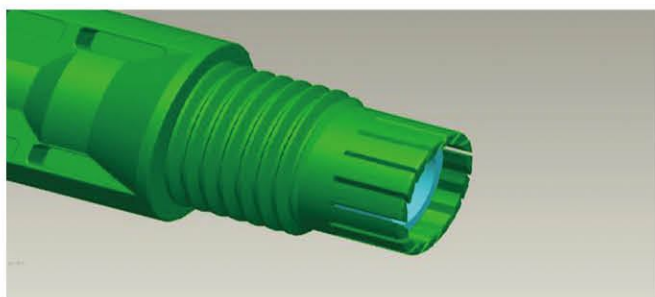
Process: Stamping , Tin plating

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:

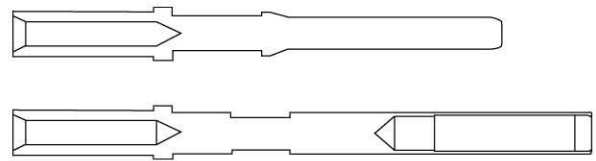
- The thread can't return back when screw open
- Because of first reason , it can't be reuse.
- The screw is easy to get open.

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.



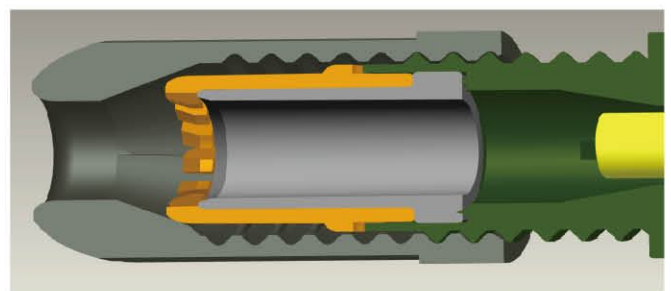
Process: Lathe Machining , Ag plating

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.

PV DC Products

Suntree

SMC3 Solar Connector



Simple on-site processing.

Accomodate 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.

CE  ROHS

Specifications

| Order No. | Part P/N | | Cable | |
|-------------------------------------|-------------|--------------------------------------|-----------------------------------|-----------------|
| | Connector | Terminal | Conductor size (mm ²) | Cable OD (ΦDmm) |
| SMC3-CMMM-14 | SMC3-CMMM-H | SMC3-CM-T14 | AWG 14(2.5 mm ²) | Φ4.5-Φ6.5 |
| 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) | Φ4.5-Φ6.5 |
| 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°C ~ +90°C | | |

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



Cable Clips

