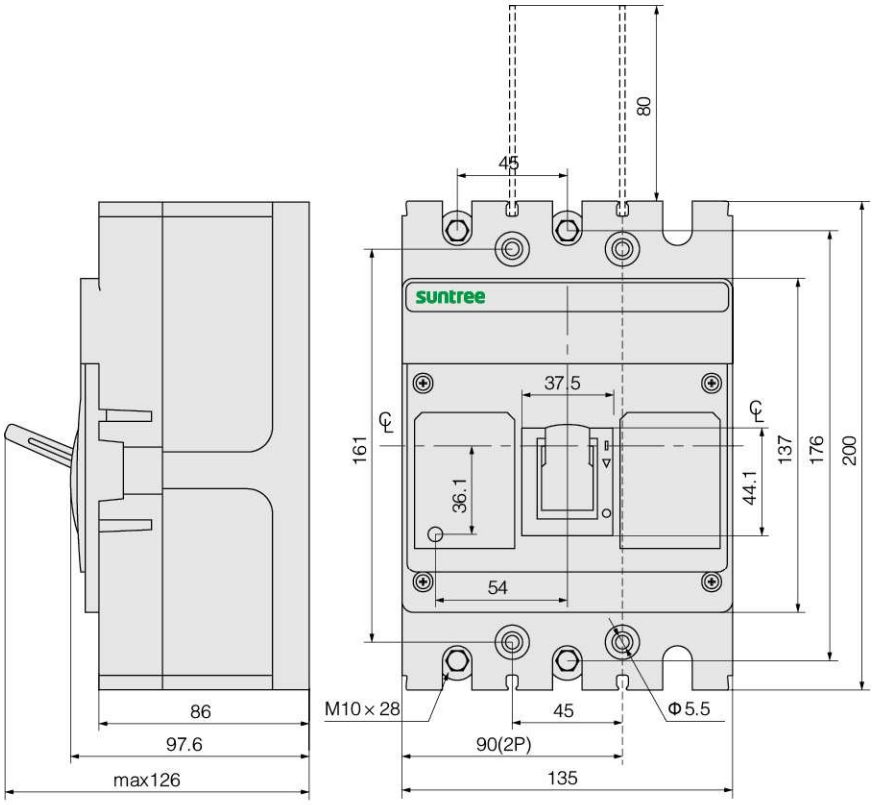
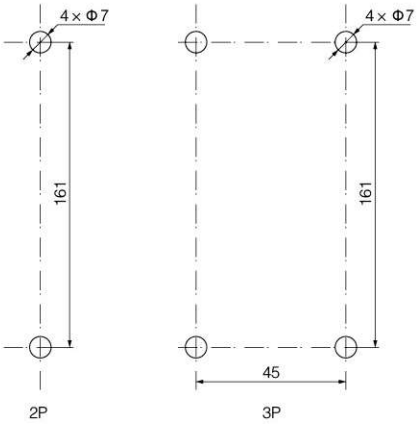
Shape and Installation Dimensions(mm)



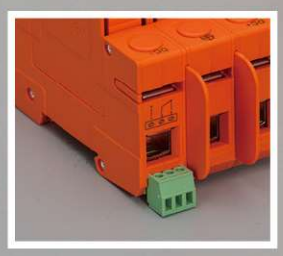


Tolerance Table

Base size		Tolerance
>	<	range
0	30	±0.2
30	50	±0.3
50	80	±0.5
80	120	±0.6
120	180	±0.7
180	250	±0.8
250	315	±1.0

PV SURGE PROTECTOR

The handle connecting rod material you can choose stainless steel, or plastic materials



5 YEAR WARRANTY

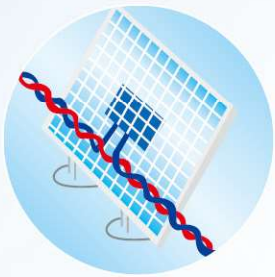
Lightning and surge protection for PV systems installed on buildings

Please take the following measures to protect the PV system from damage of lightning impulse or surge voltage:

- All metal parts (such as framework, support, etc) of PV system must be connected to the main equipotential bus to ensure reliable equipotential connection of the whole system.
- Must keep a safe distance (S) between all parts of PV systems and the external lightning protection system. The external lightning protection system can be connected to the main equipotential bus, fundamental earth screen or ground ring only.
- Adoption of twisted–pair wiring to reduce system jamming.
- For cables from outdoors, the surge protection device should be installed at the entrance of buildings. An all–round and systematic lightning protection should also protect other facilities on buildings from being damaged.

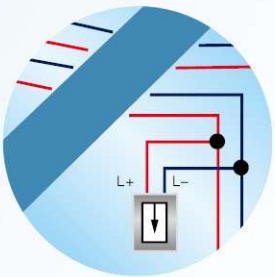
Reasonable wiring:

adoption of twisted–pair wiring with lines as short as possible, to avoid big loop and reduce induced voltage on circuits.



Surge protection device installed on the DC side:

for cables from outdoors, the surge protection device should be installed at the entrance of buildings.

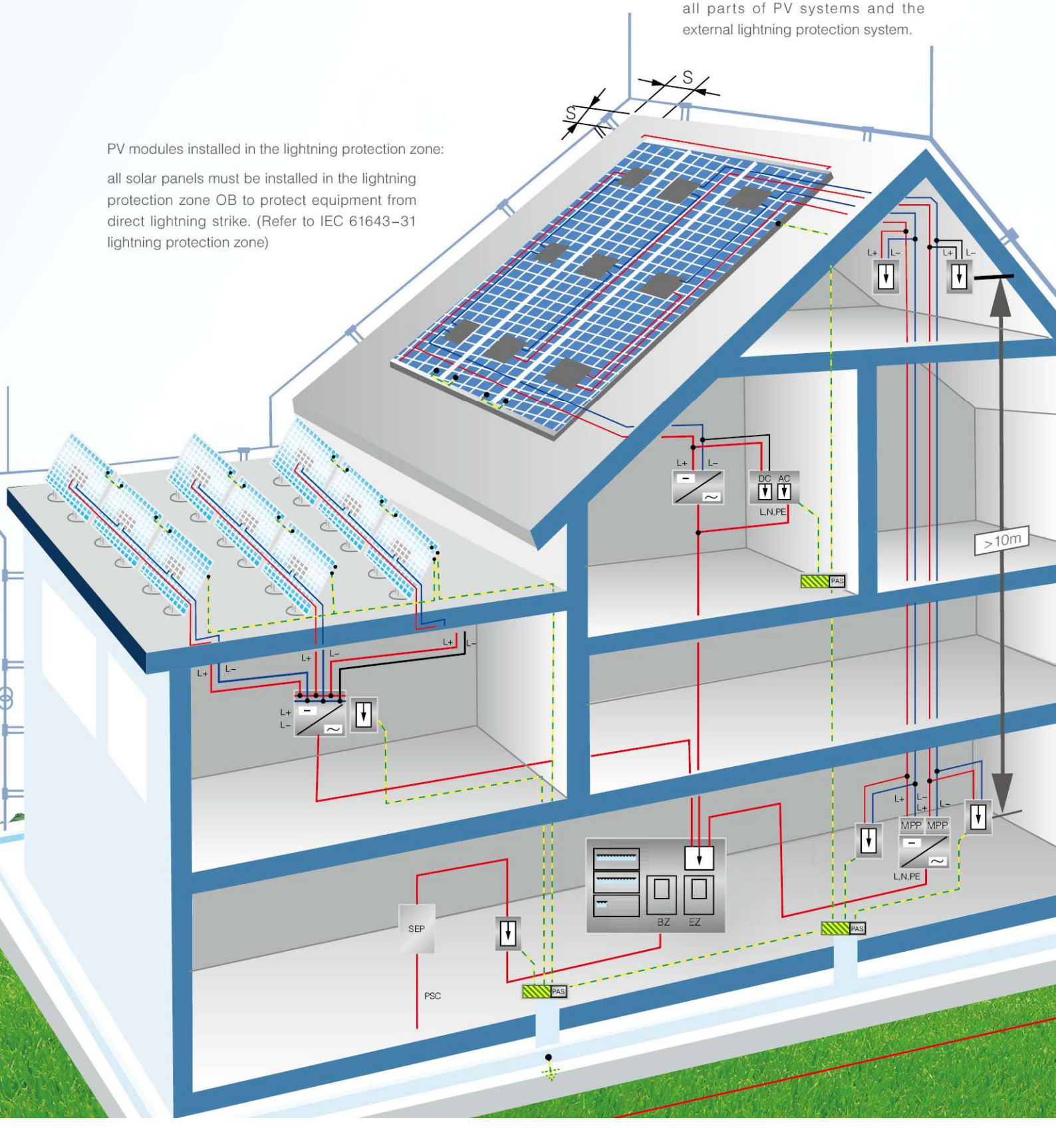


safe distance (S):

must keep a safe distance between all parts of PV systems and the external lightning protection system.

PV modules installed in the lightning protection zone:

all solar panels must be installed in the lightning protection zone OB to protect equipment from direct lightning strike. (Refer to IEC 61643–31 lightning protection zone)



SUP2H-PV Series Surge Protector

SUP2H–PV surge protective device, protect against lightning surge voltages in solar system (photovoltaic power supply system).
These units must be installed in parallel on the DC networks to be protected and provide common and different modes protection. Its installed location are recommended at both ends of the DC power supply line (solar panel side and inverter/converter side), ely if the line routing is external and long.
High energy MOVs equipped with specific thermal disconnectors and related failure indicators.

CE TÜV ROHS

Specifications

SUP2H-PV series surge protector		SUP2H-PV	
PV DC-specific (LEC 66143-1/EN 61643-31)			
Pole		2P	2P
Electrical Parameter			
Classified test		II	II
UCPV(V DC)		500	800
In(8/20)us (kA)		20	20
Imax(8/20)us (kA)		40	40
Up (kV)		2.8	3.0
Remote control and indication			
Indication window			
Plug-in Module			
Remote signal contact			
Remote signal contact	maximum working voltage(V)	250 AC/30V DC	250AC/30V DC
	maximum working current (A) 1A(250V/ AC)	1A(250V/ AC)	1A(250V/ AC)
	1A (30V DC)	1A(30V/ AC)	1A(30V/ AC)
Wiring & installation			
Wiring capacity(mm²)	Hard wire	4~25	4~25
	Flexible wire	4~16	4~16
Stripping length(mm)		10	10
Terminal screwa		M5	M5
Torque(Nm)	Main ciruit	3.5	3.5
	Remote signal contact	0.25	0.25
Protection class	All profile	IP40	IP40
	Connection port	IP20	IP20
Installation environment		No obvious shock and vibration	
Altitude (m)		≤2000	≤2000
Working Temperature		-3.0~+70	-3.0~+70
Relative humidity		30%~90%	30%~90%
How to Install		Installed with H35-7.5/DIN35 steel mounting rail	
Size(mm)(WxHxL)	W	36	54
	H	90	90
	L	67.6	67.6
Weight (kg)		0.24	0.36

SUP2H1-PV Photovoltaic Surge Protective Device

The Cooper suntree three–module photovoltaic Surge Protective Device (SPD) (with three–step DC switching device) features visual indication and optional remote contact signaling (floating changeover contact) for use in PV systems.
These complete surge protective devices are suitable for all PV systems in accordance with IEC 61643–31. Includes a five year limited warranty.
These prewired solutions consist of a base and locking modules that feature a combined disconnection and short–circuiting (shunting) device with safe electrical isolation to prevent fire damage due to DC arcs. An integrated DC fuse allows safe module replacement without arc formation.
In case of insulation faults in the generator circuit, a reliable and tested fault–resistant Y circuit prevents damage to the surge protective devices.
The green and red visual indicator flags show the module protective status (green = good, red = replace). Apart from this visual indication,the remote signaling option features a three terminal floating changeover contact that can be used as a make or break contact depending on the particular monitoring system design employed.

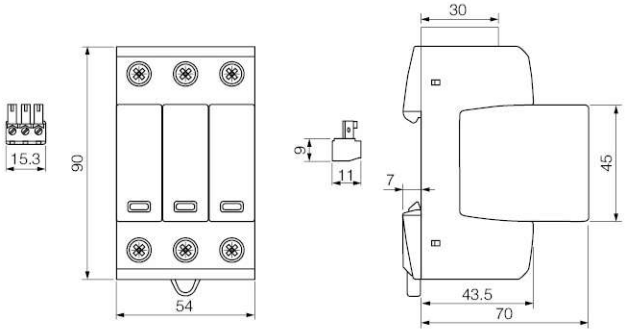
Visual Status Indication

Remote Signal Contact Available

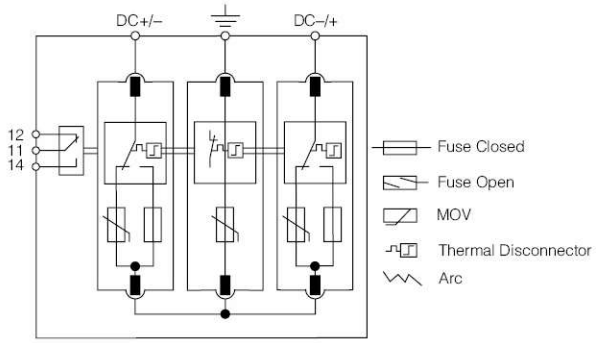
5 YEAR WARRANTY

CE TÜV ROHS

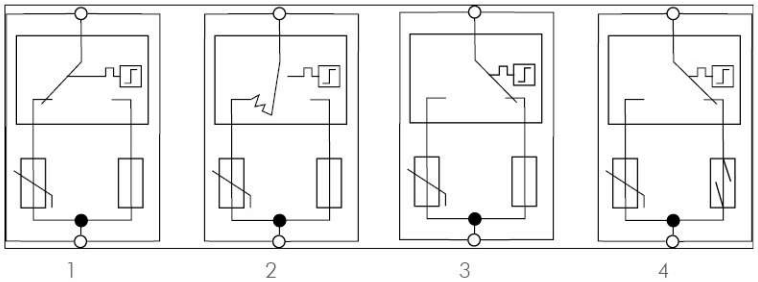
Dimensions(mm)



Module Circuit Diagrams



Short-Circuit Interrupting (SCI) Technology



1. Original State
2. Disconnection Device Response
3. Arc Extinguishes
4. Safe Electrical Isolation

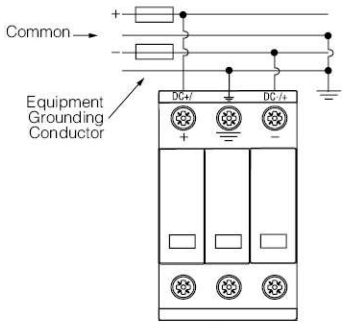
Specifications

SUP2H-PV series surge protector		SUP2H1-PV	SUP2H1-PV	SUP2-PV
UCPV(V DC)		1000V	1200V	1500V
Max System Discharge Current (8/20 μs) [Imax]		40kA	40kA	40kA
Voltage Protection Level [UP]		≤4.0kV	≤4.5kV	≤4.5kV
Voltage Protection Level at 5kA [UP]		≤3.6kV	≤4.0kV	≤5.0kV
Integrated Fuse Breaking Capacity/Interrupting Rating		40kA/1000Vdc	40kA/1200Vdc	40kA/1500Vdc
Technology		Short-Circuit Interruption (SCI) Overcurrent Protection		
Operating Temperature Range [TU]		-40°C to +80°C		
Nominal Discharge Current (8/20 μs) [(DC+/DC-) --> PE] [In]		20kA		
Response Time [tA]		<25ns		
Operating State/Fault Indication		Green (good)/Red (replace)		
Conductor Ratings and Cross-Sectional Area:	Minimum	60/75°C 1.5mm^2/14AWG Solid/Flexible		
	Maximum	60/75°C 35mm^2/2AWG Stranded/25mm^2/4AWG Flexible		
Mounting		35mm DIN Rail per EN 60715		
Enclosure Material		UL 94V0 Thermoplastic		
Degree of Protection		IP20		
Capacity		3 Modules, DIN 43880		
Standards Information:		IEC 61643-31 Type 2, IEC 61643-1 Class II		
Product Warranty		Five Years**		

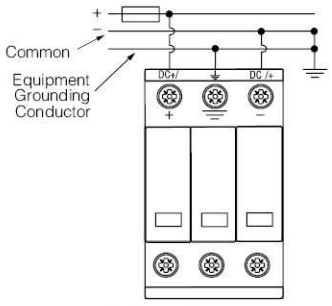
Remote Contact Signaling

Remote Contact Signaling Type	Changeover Contact
AC Switching Capacity (Volts/Amps)	250V/0.1A
DC Switching Capacity (Volts/Amps)	250V/0.1A; 125V/0.2A; 75V/0.5A
Conductor Ratings and Cross-Sectional Area for Remote Contact Signal Terminals	60/75°C Max. 1.5mm^2/14AWG Solid/Flexible
Ordering Information	Order from Catalog Numbers Above

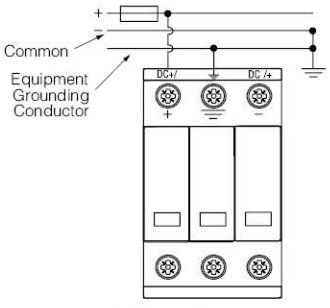
Typical Application Schematics



Application A
Two energized poles/modes
600, 1000 & 1200Vdc systems



Application B
One energized pole/mode
600Vdc & 1000Vdc*** systems only



Application C
One energized pole/mode
600Vdc & 1000Vdc*** systems only
(Max. system discharge current
(8/20 μ s) [Imax] 25kA)

* Does not apply to 1200Vdc.

1. Use a suitable electrical insulator to keep a 10mm min. safety distance from the PV-SPD and other grounded parts in the housing.
2. No metal covers are in the area of the module release buttons as shown.

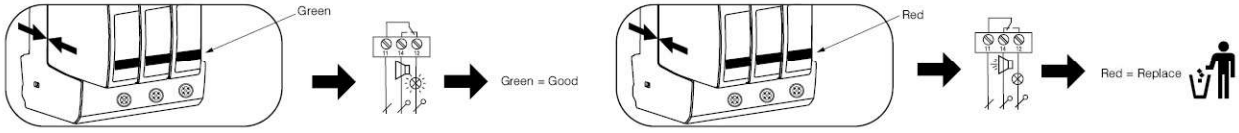
Conductors and Busbars for Use in Photovoltaic Systems

IEC 60364–7–712 (DIN VDE 0100 Part 712)

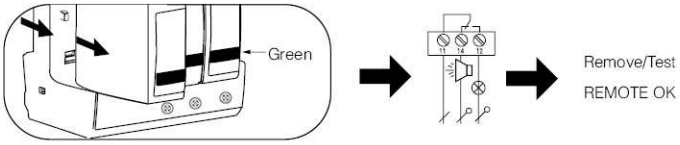
60/75°C Cu Conductors		
Min.□DC±,DC±, ⏚	1.5mm²/14AWG	
Max.□DC±,DC±, ⏚	25mm²/4AWG	35mm²/2AWG
Busbar	16mm² Cu  ⩾15.5mm	

Visual Indication Status

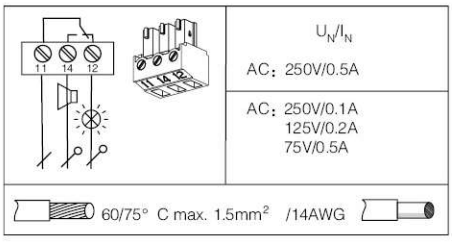
Fault Indication & Remote Contact Signaling (with modules installed)



Testing Remote Contact Signaling (with modules removed)



Remote Contact Signaling



U_N = Nominal Voltage
I_N = Nominal Current
= Audio Alarm/Alert
= PLC / Monitoring System Connection

SCB56 SERIES IP66 WATERPROOF BOX

5 YEAR WARRANTY

IP66 Distribution Enclosures

IP66 UV stabilised 4 way and 8 way weatherproof enclosures are avitally important party of any solar installation, if you are using DC circuit breaker as isolation.For this reason we have worked hard to produce a very high quality IP66 4 way and 8 way enclosures. This enclosure meets all the required standards and has thus been classed as IP66.

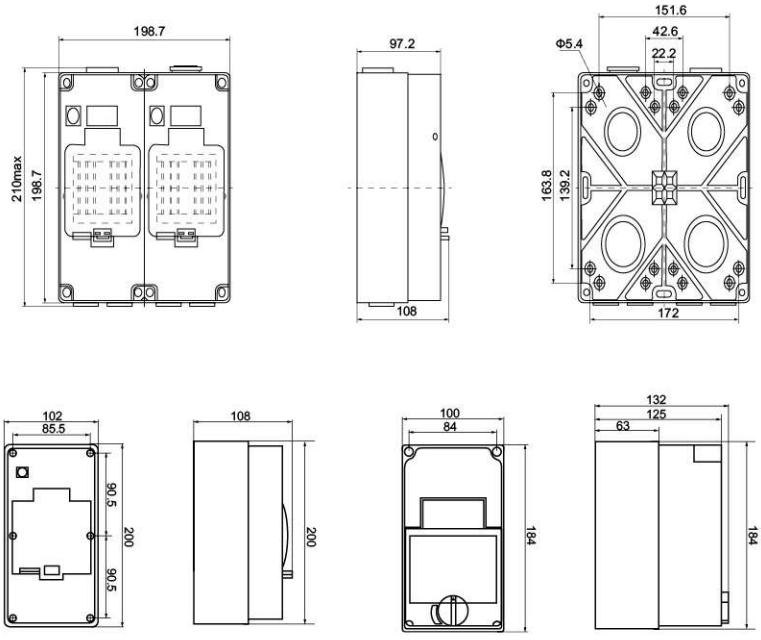
This IP66 4 way and 8 way enclosures are designed to house a range of DIN rail circuit breakers are complete with a storing loaded lockable lid.It also has top ,bottom and rear cable entry.

CE ROHS

Specifications

Catalogue Number	Module Type	No.of Poles	No.of Poles
56CB1N	MCB	1	4
56CB2N	MCB	2	4
56CB3N	MCB	3	4
56CB4N	MCB	4	4
56CB5N	MCB	5	8
56CB6N	MCB	6	8
56CB7N	MCB	7	8
56CB8N	MCB	8	8

Dimensions(mm)



* 8 ways distribution box can be selected from a separate and integral

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.

CE TÜV ROHS

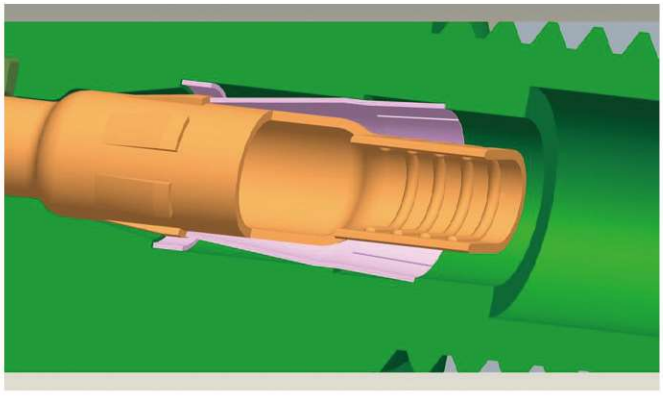
Specifications

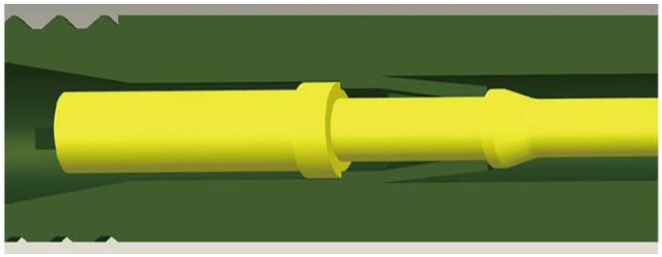
Order NO.	Part P/N		Cable	
	Connector	Terminal	Conductor size (mm²)	Cable OD (ΦDmm)
SMC4-CMMM-14	SMC4-CMMM-H	SMC4-CM-T14	AWG 14(2.5 mm²)	Φ4.5-Φ8.5
SMC4-CMMM-12		SMC4-CM-T12	AWG 12(4.0 mm²)	
SMC4-CMMM-10		SMC4-CM-T10	AWG 10(6.0 mm²)	
Order NO.	Part P/N		Cable	
	Connector	Terminal	Conductor size (mm²)	Cable OD (mm)
SMC4-CFPM-14	SMC4-CFPM-H	SMC4-CF-T14	AWG 14(2.5 mm²)	Φ4.5-Φ8.5
SMC4-CFPM-12		SMC4-CF-T12	AWG 12(4.0 mm²)	
SMC4-CFPM-10		SMC4-CF-T10	AWG 10(6.0 mm²)	

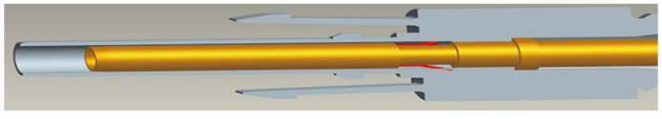
Rated current	30A(2.5-6mm²)
Rated voltage	1000v DC
Test voltage	6000V(50Hz,1min)
Overvoltage type/pollution degree	CAT Ⅲ /2
Contact resistance of plug connector	1mΩ
Contact material	Copper,Tin-plated
Insulation material	PPO
Degree of protection	IP2X/IP67
Flame class	UL94-VO
Safety class	Ⅱ
Suitable cable	OD 4.5-8.5(2.5-6.0 mm²)
Insertion force/withdrawal force	≤50N/≥50N
Connecting system	Crimp connection
Temperature range	-40℃~+125℃

comparation for internal structure

Connectors of other companies



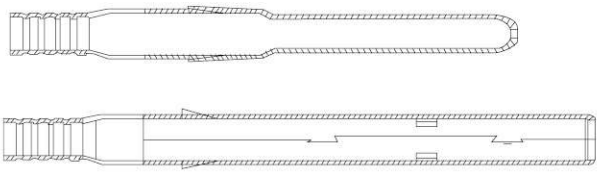




Structure:
Insulator design by forced demoulding Create a slot (red circle marked) to fix spring by forced demoulding. Using spring to position terminal.

Shortcoming:

- Forced demoulding is not very steady It can't ensure any products with same performance.
- Maintain force will change betwween7~20kgf.
- Must assemble spring . It is to be a risk that sometimes operator will miss the spring.



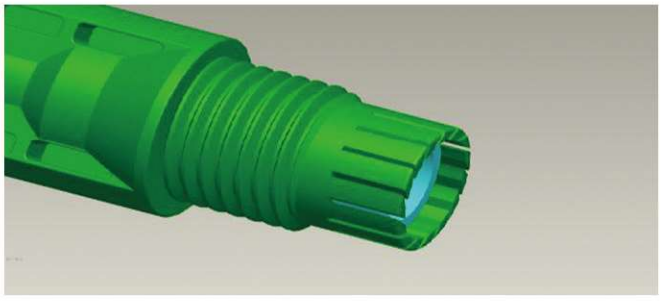
Process: Stamping , Tin plating

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.

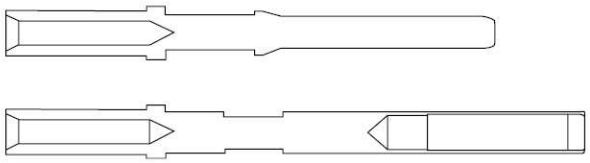


Strongpoint:Simple structure
Shortcoming:
The thread can't return back when screw open
Because of first reason , it can't be reuse.
The screw is easy to get open.

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.



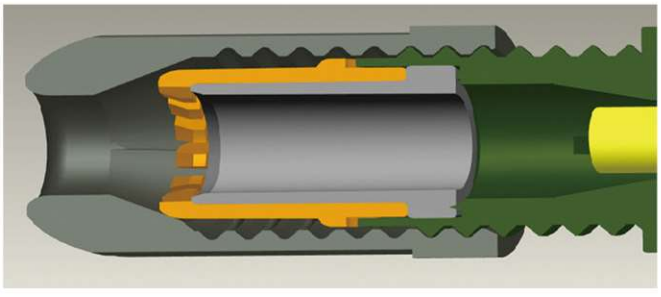
Process: Lathe Machining , Ag plating

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

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

CE TÜV ROHS

Specifications

Order No.	Part P/N		Cable	
	Connector	Terminal	Conductor size (mm²)	Cable OD (ΦDmm)
SMC3-CMMM-14	SMC3-CMMM-H	SMC3-CM-T14	AWG 14(2.5 mm²)	Φ4.5-Φ6.5
SMC3-CMMM-12		SMC3-CM-T12	AWG 12(4.0 mm²)	
SMC3-CMMM-10		SMC3-CM-T10	AWG 10(6.0 mm²)	
Order NO.	Part P/N		Cable	
	Connector	Terminal	Conductor size (mm²)	Cable OD (mm)
SMC3-CFPM-14	SMC3-CFPM-H	SMC3-CF-T14	AWG 14(2.5 mm²)	Φ4.5-Φ6.5
SMC3-CFPM-12		SMC3-CF-T12	AWG 12(4.0 mm²)	
SMC3-CFPM-10		SMC3-CF-T10	AWG 10(6.0 mm²)	

Rated current	30A(2-6mm²)
Rated vollage	1000V DC
Test vollage	6000V(50Hz,1min)
Overvollage 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 mm²)
Insertion force/withdrawal force	≤50N/≥50N
Connecting system	Crimp connection
Temperature range	-40℃~+90℃

Twins core PV Cable

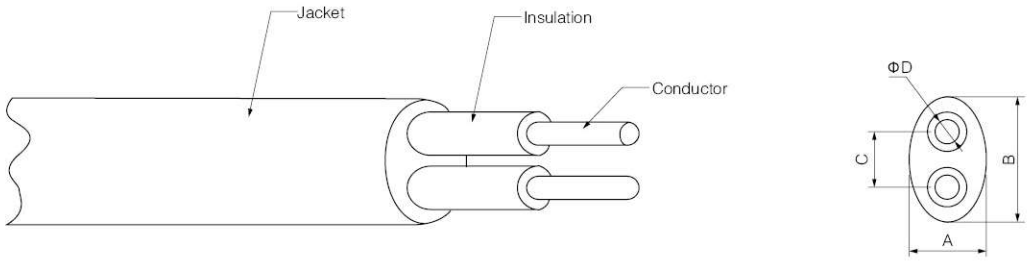
- Dual wall Insulation,electron beam cross-linked
- Excellent resistance to UV,water,ozone,fluids,salt,general weathering
- Excellent resistance to abrasion
- Halogen free,flame retardant,low toxicity
- Excellent flexibility and stripping performance
- High current carrying capacity
- TUV and UL approved

CE TÜV ROHS

Specifications

Type	Cross section	Strand design	Conductor diameter	Conductor resistance	Outer diameter A×B	Rated voltage	Rated current
	mm²	No.× Φ(mm)	mm	Ω/km	mm	V AC/DC	A
PV-2x1.5 mm²	1.5	30× Φ0.25	1.6	13.9	5.80×9.30	1000/1800	20
PV-2x2.5 mm²	2.5	50× Φ0.25	2.0	8.06	6.20×9.90	1000/1800	30
PV-2x4.0 mm²	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℃ ~ +90℃			
Colours				Black/red			

Dimensions(mm)



Single core PV Cable

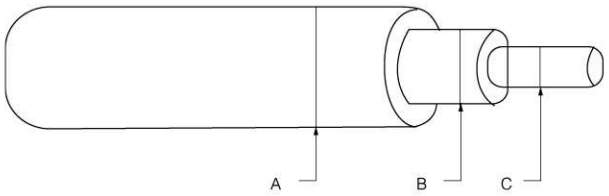
- Dual wall Insulation,electron beam cross-linked
- Excellent resistance to UV,water,ozone,fluids,salt,general weathering
- Excellent resistance to abrasion
- Halogen free,flame retardant,low toxicity
- Excellent flexibility and stripping performance
- High current carrying capacity
- TUV and UL approved

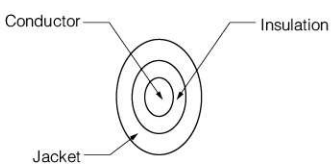
CE TÜV ROHS

Specifications

Type	Cross section	Strand design	Conductor diameter	Conductor resistance	Outer diameter AxB	Rated voltage	Rated current
	mm²	No.×Φ(mm)	mm	Ω/km	mm	V AC/DC	A
PV-1x1.5 mm²	1.5	30×Φ0.25	1.6	13.9	4.5	1000/1800	20
PV-1x2.5 mm²	2.5	50×Φ0.25	2.0	8.06	5.3	1000/1800	30
PV-1x4.0 mm²	4.0	56×Φ0.3	2.6	4.97	6.4	1000/1800	50
PV-1x6.0 mm²	6.0	84×Φ0.3	3.3	3.52	7.2	1000/1800	70
PV-1x10.0 mm²	10.0	200×Φ0.25	4.4	2.12	8.3	1000/1800	95
PV-1x16.0 mm²	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℃ ~ +90℃			
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

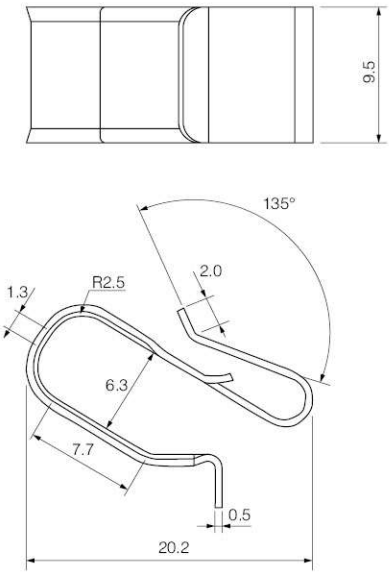
Examples of cable assemblies

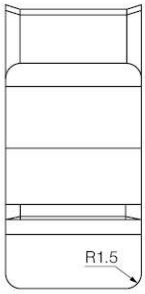
- Can be customized according to customer requirements

SMC3 TO SMC4

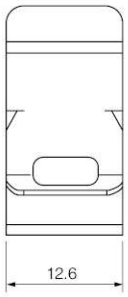
Panel Connector Series

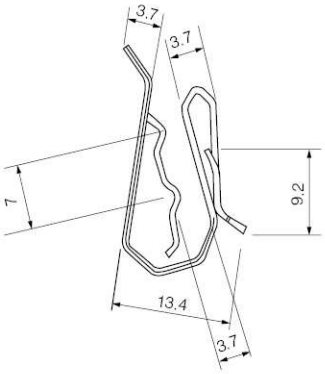
Cable Clips

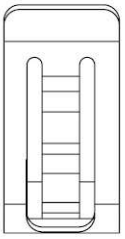


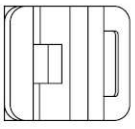


$2 \times 4mm^2$









PV DC FUSE

DC Fuse mainly used in DC combiner box in solar PV systems. When PV panel or inverter causes overload or short circuit, it trip off immediately, to protect PV panels. DC fuse also used t o protect other electrical parts in DC circuit, when overload or short circuit.

Nylon shell, resistant to high temperatures

Maximum current 400A maximum voltage DC1200V

SRD-32gPV 1A-32A Photovoltaic Fuse

Standard:IEC 60269-6,GB/T 13539.6

Interrupting Capacity

30,000 amperes at 1000V DC (Time Constant: 1-3ms)

CE TÜV ROHS

Specifications

Catalog No.	Current Rating	Safety Approvals
		TUV
32gPV1U0	1A	●
32gPV2U0	2A	●
32gPV3U0	3A	●
32gPV3.5U0	3.5A	●
32gPV4U0	4A	●
32gPV5U0	5A	●
32gPV6U0	6A	●
32gPV8U0	8A	●
32gPV10U0	10A	●
32gPV12U0	12A	●
32gPV15U0	15A	●
32gPV16U0	16A	●
32gPV20U0	20A	●
32gPV25U0	25A	●
32gPV30U0	30A	●
32gPV32U0	32A	●

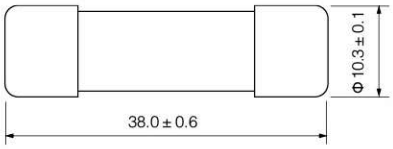
U0 Denotes For 1000V DC:

● Denotes For Approval ○ Denotes For Pending

Electrical Characteristics

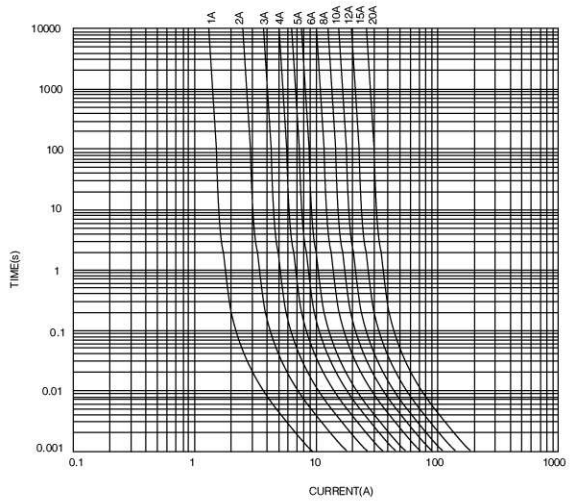
% of Current Rating	Blowing Time
113%	1 hour Min.
145%	1 hour Max.

Dimensions



SRD-32gPV

Average I-T Characteristics Curve
(For Reference Only)



SNH1gPV 1000V DC 32A-160A Photovoltaic Fuse

Standard:IEC 60269-6,GB/T 13539.6

Interrupting Capacity

50,000 amperes at 1000V DC (Time Constant: 1-3 ms)

SNH1B

Recommended fuse-base for NH1 fuse
See Model of product: NH1B

CE TÜV ROHS

Specifications

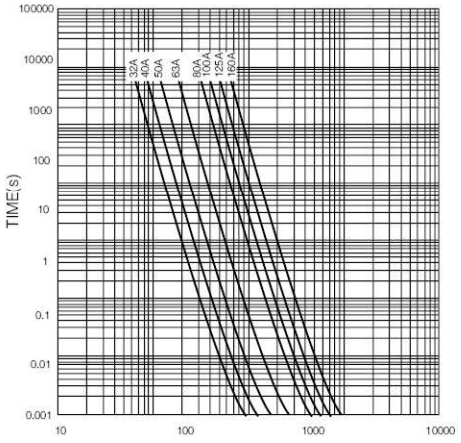
Catalog No.	Current Rating	Safety APprovals
		TUV
SNH1gPV32U0	32A	○
SNH1gPV40U0	40A	○
SNH1gPV50U0	50A	○
SNH1gPV63U0	63A	○
SNH1gPV80U0	80A	○
SNH1gPV100U0	100A	○
SNH1gPV125U0	125A	○
SNH1gPV160U0	160A	○

U0 Denotes For 1000V DC

● Denotes For Approval ○ Denotes For Pending

SNH1gPV

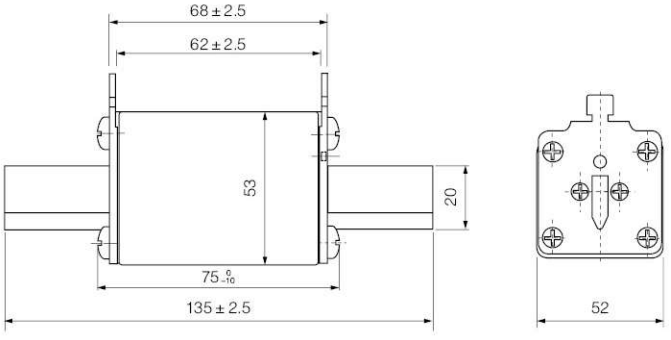
Average I-T Characteristics Curve(For Reference Only)



Electrical Characteristics

Rating	Blowing Time	
	1.13In	1.45In
In≤60	1 hour Min.	1 hour Max.
63 < In≤160	2 hour Min.	2 hour Max.

Dimensions(mm)



SNH2XLg PV 1100V DC 125A-400A Photovoltaic Fuse

Standard:IEC 60269-6,GB/T 13539.6

Interrupting Capacity

30,000 Amperes At 1100V DC(Time Constant: 1-3ms)

CE TÜV ROHS

Specifications

Catalog No.	Current Rating	Safety Approvals	
		CGC	TUV
2XLgPV125U11A/B	125A	●	●
2XLgPV160U11A/B	160A	●	●
2XLgPV200U11A/B	200A	●	●
2XLgPV250U11A/B	250A	●	●
2XLgPV315U11A/B	315A	●	●
2XLgPV350U11A/B	350A	●	●
2XLgPV400U11A/B	400A	●	●

U11 Denotes For 1100V

●Denotes For Approval ○ Denotes For Pending

Electrical Characteristics

Rating	Conventional TIME(H)	Conventional Current	
		Conventional Non-Fusing Current(A)	Conventional Fusing Current(A)
In≤60	2	1.13In	1.45In
160<In≤400	3		

SNH2XLB

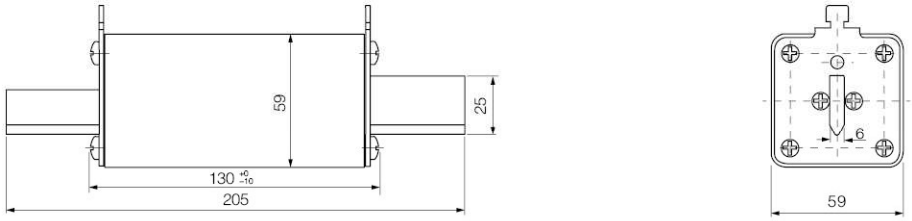
Recommended fuse-base for NH2XL fuse

See Model of product: NH2XLB NH3LB

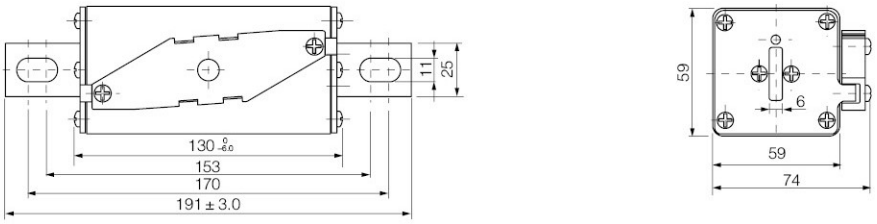
CE TÜV ROHS

Dimensions(mm)

Part No.:SNH2XLgPV (amp rating) U11A

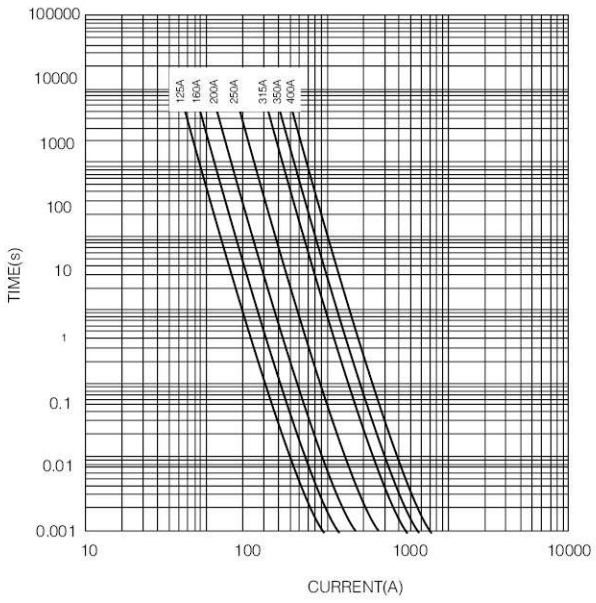


Part No.:SNH2XLgPV (amp rating) U11B



SNH2XLg PV 1100V

Average I–T Characteristics Curve(For Reference Only)



Fuse-base with Blade Contacts

SNH00B

SNH1/2/3B

SNH1/2XLB,NH3LB

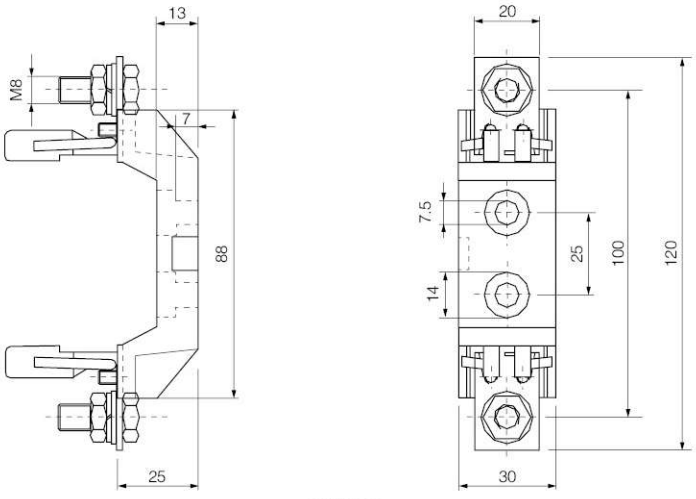
Specifications

Model of product	Applicable fuse link size	Rated voltage	Rated current	Safety Approvals
SNH00B	SNH000/NH00	690	160	CCC
		1000	160	

Model of product	Applicable fuse link size	Rated voltage	Rated current	Safety Approvals
SNH1B	SNH01	690	250	CCC
		1000	250	
SNH2B	SNH02	690	400	
SNH3B	SNH03	690	630	

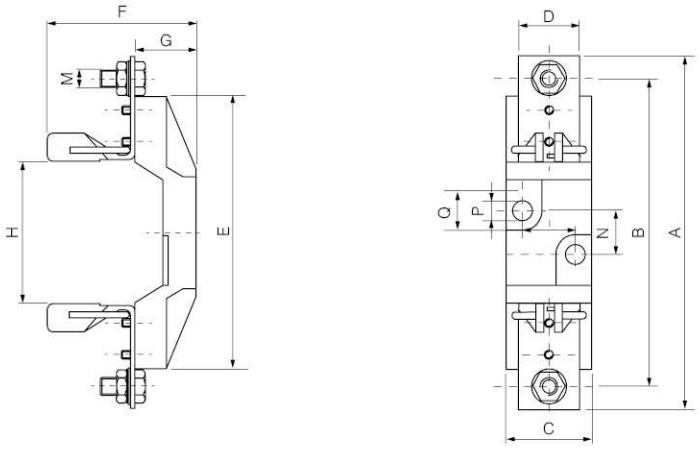
Model of product	Applicable fuse link size	Rated voltage	Rated current	Safety Approvals
SNH1XLB	SNH1XL	1000	250	
SNH2XLB	SNH2XL	1000	400	
SNH3LB	SNH2XL/NH3L	1000	400	TUV
SNH3LB	SNH2XL/NH3L	1000	630	

Dimensions(mm)



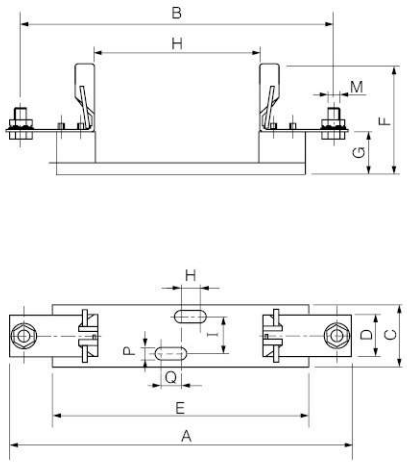
SNH00B

Dimensions(mm)



SNH1/2/3B

Size	A	B	C	D	E	F	G	H	I	M	N	P	Q
SNH1	200	175	60	35	155	85	35	80	30	M10	25	10.5	20.5
SNH2	225	200	60	35	155	90	35	80	30	M10	25	10.5	20.5
SNH3	240	210	60	35	155	100	35	80	30	M10	25	10.5	20.5



SNH1/2XLB,SNH3LB

Size	A	B	C	D	E	F	G	H	I	M	N	P	Q
SNH1XL	200	175	60	35	155	85	35	80	30	M10	25	10.5	20.5
SNH2XL	225	200	60	35	155	90	35	80	30	M10	25	10.5	20.5
SNH3XL	240	210	60	35	155	100	35	80	30	M10	25	10.5	20.5

Application

This series of fuse is suitable for solar photovoltaic power generation system,rated voltage to 1500V,rated current to 50A,connected with photovoltaic panels and batteries ,to charge variable flow system for short circuit breaking protection in photovoltaic station and photovoltaic power generation system.the rated breaking capacity is 20KA,products confirms to IEC60269.6

Normal Working Conditions

Ambient Temperature:–40℃ – + 90℃
Equipment installation height:less than 2000m
(if you want use exceedng this height,pls tell us in advance,we can design according to your requirements)

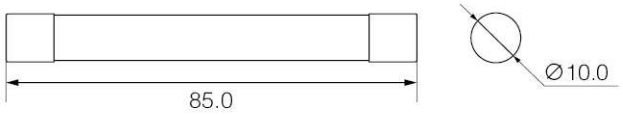
Use Category

gPV means all range DC Fuse used for breaking protection in solar photovoltaic power generation system

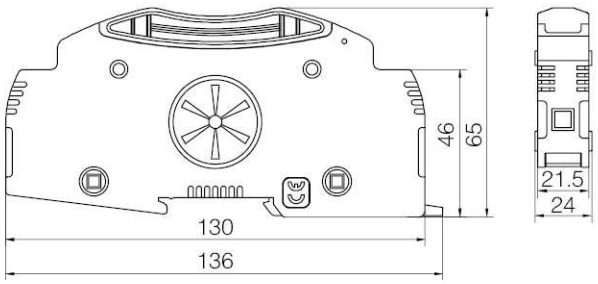
Structure

Fuse Link is made of pure silver,welding low tin and encapsulated in the high–strength porcelain,the fuse tube filled with high pure quartz sand with chemically processed as a arc medium,fuse body is connected with contacting terminals by spot welding.

Main Technical Specification



Model	Rated Voltage (V)	Rated Current (A)	SIZE(mm)
SRF-30	DC1500V	2-30	See Above Drawing



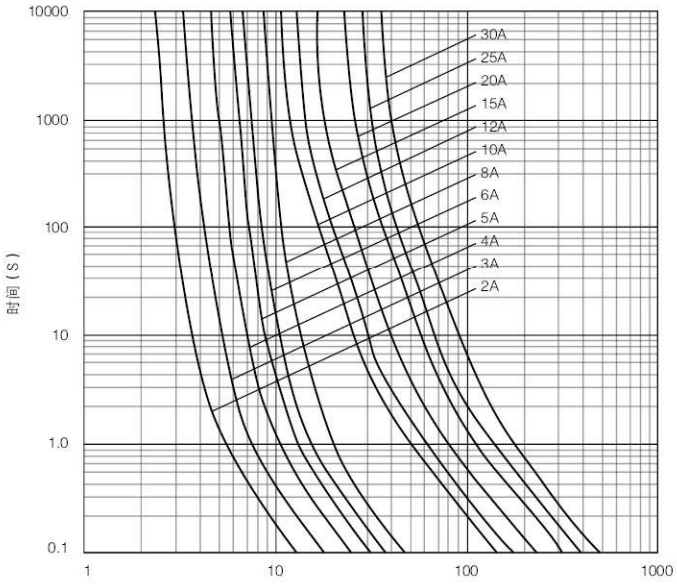
Model	Fuse Size	Rated Voltage (V)	Rated Current (A)	SIZE(mm)
SRD-30	10/14×85	DC1500V	2-50A	See Above Drawing

Testing Method

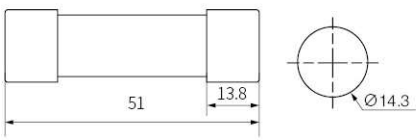
Appointed time and current

gPV Fuse current rated (A)	Appointed Timeh	Appointed Current	
		Inf	If
In≤63	1	1.13In	1.45In
63<In≤160	2		
160<In≤400	3		
In>400	4		

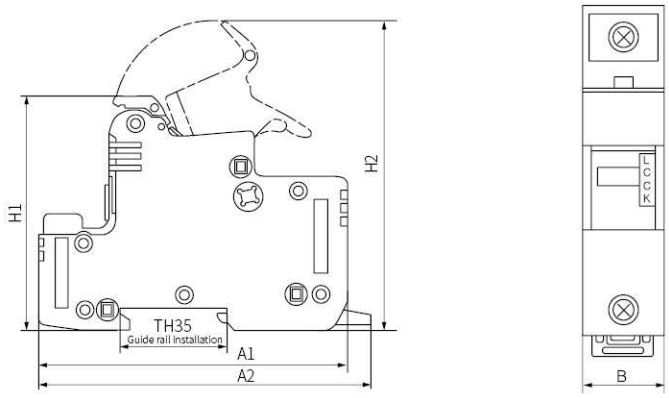
Characteristic Curve



Main Technical Specification



Model	Rated Voltage (V)	Rated Current (A)	SIZE(mm)
SRF-30	DC1500V	10A-32A	See Above Drawing



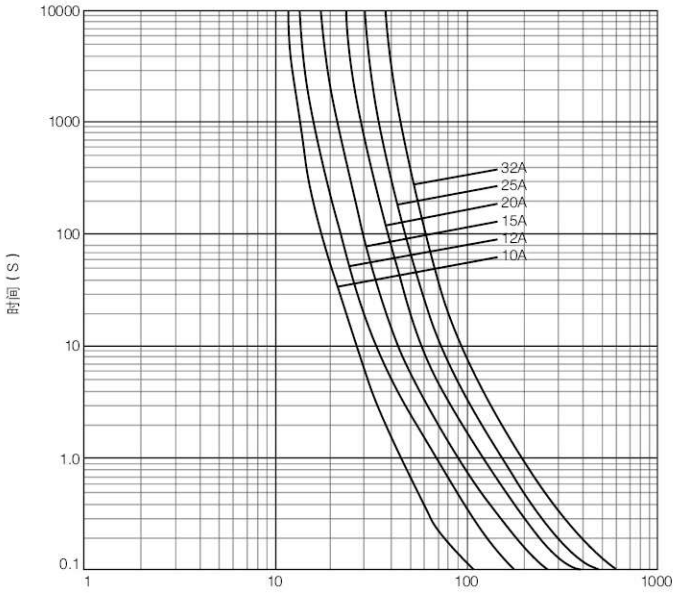
Model	Fuse Size	Rated Voltage (V)	Rated Current (A)	SIZE(mm)				
				A1	A2	B	H1	H2
SRD-32	14x51	DC1500V	10-32A	107	111	27	72	100

Testing Method

Appointed time and current

gPV Fuse current rated (A)	Appointed Timeh	Appointed Current	
		Inf	If
In≤63	1	1.13In	1.45In
63<In≤160	2		
160<In≤400	3		
In>400	4		

Characteristic Curve



Accept the different needs of customization

PV LIGHTNING PROTECTION CABINET

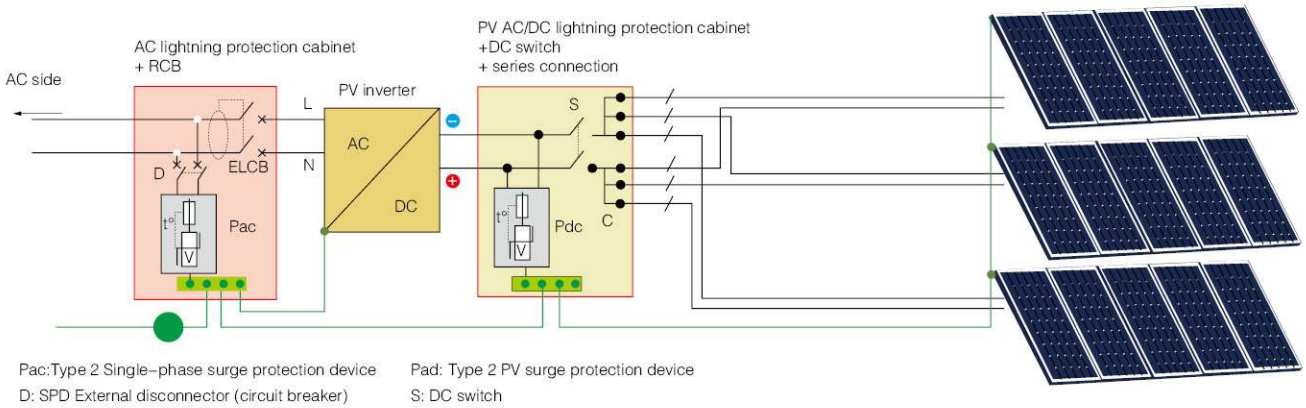
Various lightning protection cabinets with all kinds of functions launched only by Suntree involve surge protection, over-current protection, connection, switching and many other devices. Design of these lightning protection cabinets are fully in accordance with the standard CLC/TS 50539-12. The products are widely used on AC and DC sides of PV inverters. Custom made according to your requirements is available.

suntree
human. technology. nature

PV lightning protection cabinet

Distributed substation used lightning protection cabinet

Various lightning protection cabinets with all kinds of functions launched only by Suntree involve surge protection, over-current protection, connection, switching and many other devices. Design of these lightning protection cabinets are fully in accordance with the standard CLC/TS 50539-12. The products are widely used on AC and DC sides of PV inverters. Custom made according to your requirements is available.



Pac:Type 2 Single-phase surge protection device
D: SPD External disconnector (circuit breaker)
ELCB: earth leakage circuit breaker 25A, 30mA

Pad: Type 2 PV surge protection device
S: DC switch
C: terminal block

SPV240 Series
AC lightning protection cabinet

Model	SPV240-230-XXX-DDR
Power grid voltage Un	230V single-phase
Max current	16A-25A-32A
Circuit connection (input/output)	6mm^2 max

Safety	
Thermal disconnector	Built-in
Visible disconnecting index	Lightning protection indicator
Surge protection	Surge protection device
Over-current protection	Circuit breaker (16 or 32A)
Protect against indirect contact	Differential circuit breaker 30mA
Type2 Surge protection device	SUP2-230/G
Max continuous working voltage Uc	255VAC
Nominal discharge current In	20kA
Max discharge current Imax	40kA
Voltage protection level (common mode/differential mode) Up	1,5/1,25kV

Structural parameters	
Shell material	UL90-Vo
Waterproof grade	IP55

Distributed substation used lightning protection cabinet

SPV50-XXX-XXA-XST Series
DC lightning protection cabinet

Model	SPV50-500-40A-3ST	SPV50-600-40A-3ST	SPV50-800-40A-3ST
Array string number	3	3	3
Max PV voltage Uocstc	500VDC	600VDC	800VDC
Max PV current Imppstc	25A	25A	25A
Circuit connection (input/output)	Terminal 6,5/10mm^2	Terminal 6,5/10mm^2	Terminal 6,5/10mm^2
DC switch	Yes	Yes	Yes
Fuse wire protection of branch circuit	Optional	Optional	Optional

Type2 Surge protection device		SUP2-PV500/51	SUP4-PV800/51	SUP4-PV1000/51
Max PV voltage	Ucpv	600VDC	720VDC	960VDC
Nominal discharge current	In	15kA	15kA	15kA
Max discharge current	Imax	40kA	40kA	40kA
Voltage protection level	Up	2,2kV	2,8kV	2/3,6kV

Structural parameters	
Shell material	ABS PC
Ingress protection	IP65

SPV240-50 Series
AC/DC lightning protection cabinet

Model	SPV240-50-230-XX-DDR	
Power grid type	AC single-phase grid	2-string-DC grid
Working voltage Un/Uocstc	230V single-phase	600VDC
Max current	16A-25A-32A	25A
Connection mode	Max 6mm^2 screw terminal connection	Max 6mm^{2}MC interface connection

Type2 Surge protection device		SUP2-230/G	SUP4-600/51
Max continuous working voltage	Uc	255Vac	720Vdc
Nominal discharge current	In	20kA	15kA
Max discharge current	Imax	40kA	40kA
Protection level	Up	1,5/1,25kV	2,8kV

Structural parameters	
Shell material	UL90-Vo
Ingress protection	IP55

Automatic Reclosing MCB

SCB8ZY–80 : It combiner mini circuit breaker and mini intelligent electric motor, circuit breaker will be turned on or off when it test the meter's control signal, used with prepaid meter, then will be turn on after paid, and turn off when Arrears.

SCB8ZY–80: It combiner mini circuit breaker and mini intelligent electric motor, with function of over voltage, under voltage, lose voltage, delay, automatic turn on when return to normal voltage.

CE TÜV ROHS

Over Load Protection Data

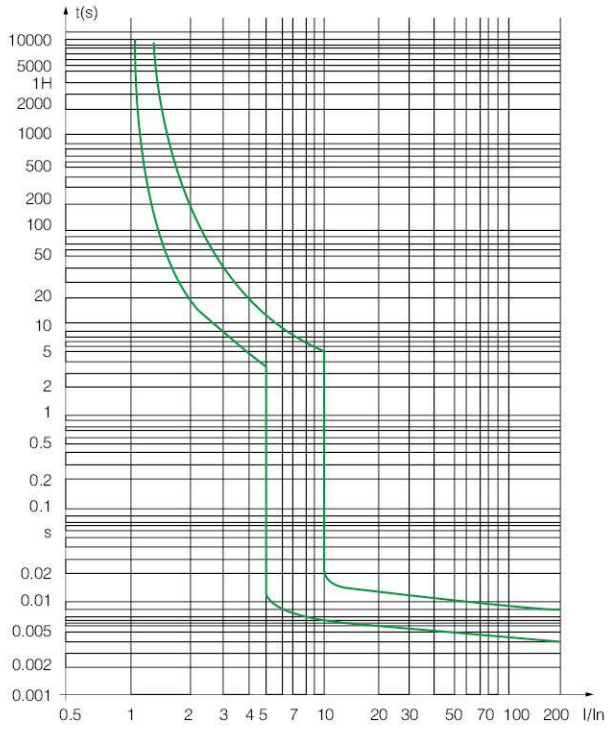
Rated Current	Start State	Test Current	Standard time	Result	Mark
10~80A	Cold state	1.13 In	t≤1h(≤63A) t≤2h(80A)	NO Trip	Current will up to standard current within 5s
10~80A	After finishe the 1.13 In test	1.45In	t < 1h(≤63A) t < 2h(≤80A)	Trip	
In≤32A	Cold state	2.55In	1s < t < 60s	Trip	
In > 32A	In≤32A	Cold state	1s < t < 120s	Trip	
10~80A	-	5In	t≤0.1s	NO Trip	Type C
-	-	10In	t < 0.1s	Trip	
-	-	10In	t≤0.1s	NO Trip	Type D
-	-	14In	t < 0.1s	Trip	

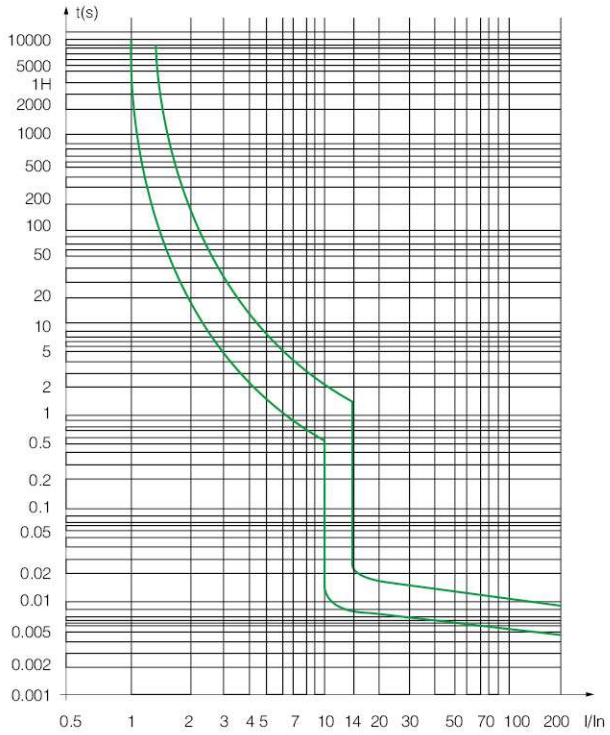
Frame Current	80
Rated insulation voltage	500V
Rated Frequency	50HZ/60HZ
Rated impulse withstand voltage	4KV
Poles	1P+N, 3P+N
Trip type	C, D
Rated short circuit Capacity Icn	6KA(80A), 10KA(10-63A)

Technology Data

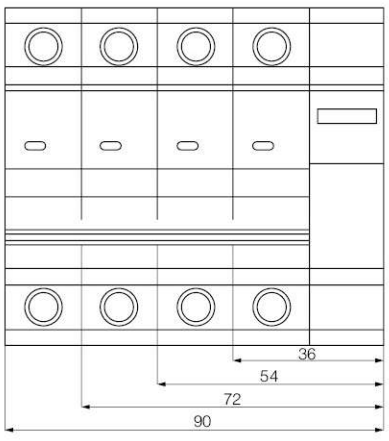
Working short circuit Capacity Ics	6KA(80A), 7.5KA(10-63A)
Mechanical life	20000
Electric lifi	8000
Working range	(65%-120%)Un
Control signal voltage	AC220V 50HA
Turn on delay time	t≥4s
Reclosing delay time	t≤3s
Working Temperature	-25℃~+60℃
Relative humidity	Less than 95% (+20℃); Less than 50% (+40℃)
Cross sectional area of Signal cable	0.3mm²
Signal cable length	50mm (accept customize)
Installation method	DIN Rail Mounted

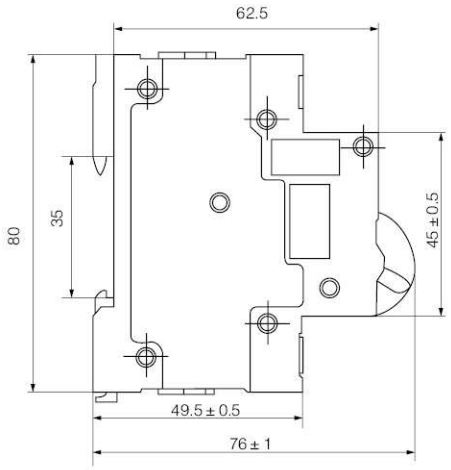
Trip Curve



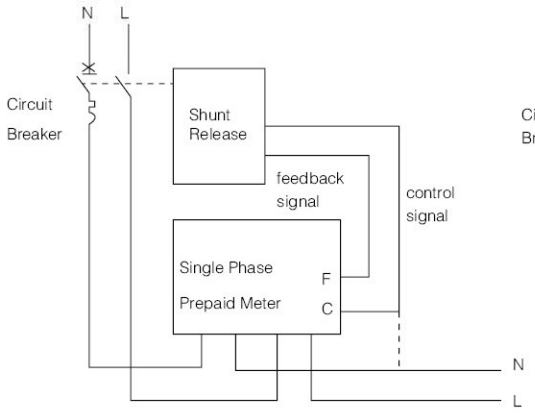


Product Dimetion

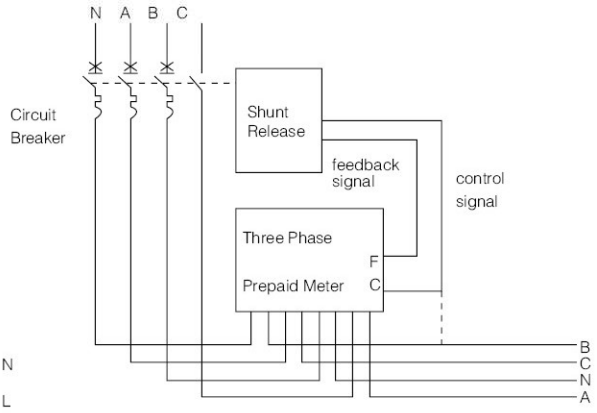




Application

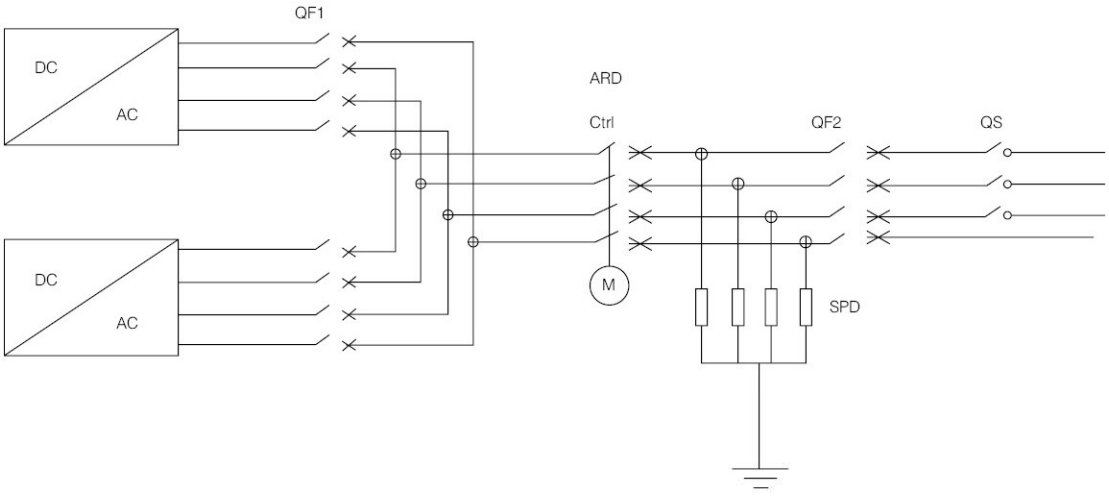


Single phase Wiring Diagram



Single phase Wiring Diagram

SCB8ZY-80



SCB8ZV-80

Solar System Components Layout Reference

Solar System Type	Inverter Type	Inverter QTY	PV Panel Type	PV Panle QTY	DC Isolating Switch Type	DC Switch QTY	DC MCB Type	DC MCB QTY	DC Combiner Box Type	DC Combiner Box QTY	DC SPD Type	DC SPD QTY	MC4 Type	MC4 QTY
2KW-SP-1 MPPT	LS2000H	1	260	8	SISO-25 600VDC 25A	1	SL7-63/2P 25A 800VDC	1	1/1	1	SUP2-PV 20/40 600VDC	1	SMC4-4	4
3KW-SP-1 MPPT	LS3000H	1	260	12	SISO-25 600VDC 25A	1	SL7-63/2P 25A 800VDC	1	1/1	1	SUP2-PV 20/40 600VDC	1	SMC4-4	4
4KW-SP-1 MPPT	LS4000H	1	260	16	SISO-25 600VDC 25A	2	SL7-63/2P 25A 800VDC	2	2/2	1	SUP2-PV 20/40 600VDC	2	SMC4-4	8
5KW-SP-1 MPPT	LS5000H	1	260	20	SISO-25 600VDC 25A	2	SL7-63/2P 25A 800VDC	2	2/2	1	SUP2-PV 20/40 600VDC	2	SMC4-4	8
3KW-SP-2 MPPT	LS3000HD	1	260	12	SISO-25 600VDC 25A	2	SL7-63/2P 25A 800VDC	2	2/2(fitting)	1	SUP2-PV 20/40 600VDC	2	SMC4-4	8
4KW-SP-2 MPPT	LS4000HD	1	260	16	SISO-25 600VDC 25A	2	SL7-63/2P 25A 800VDC	2	2/2(fitting)	1	SUP2-PV 20/40 600VDC	2	SMC4-4	8
5KW-SP-2 MPPT	LS5000HD	1	260	20	SISO-25 600VDC 25A	2	SL7-63/2P 25A 800VDC	2	2/2(fitting)	1	SUP2-PV 20/40 600VDC	2	SMC4-4	8
5KW-TP	LT5000HD	1	260	20	SISO-25 1000VDC 25A	2	SL7-63/4P 25A 1000VDC	2	2/2(fitting)	1	SUP2-PV 20/40 1000VDC	2	SMC4-4	8
6KW-TP	LT6000HD	1	260	24	SISO-32 1000VDC 32A	2	SL7-63/4P 32A 1000VDC	2	2/2(fitting)	1	SUP2-PV 20/40 1000VDC	2	SMC4-4	8
8KW-TP	LT8000HD	1	275	30	SISO-32 1000VDC 32A	2	SL7-63/4P 32A 1000VDC	2	2/2(fitting)	1	SUP2-PV 20/40 1000VDC	2	SMC4-4	8
10KW-TP	LT10000HD	1	260	40	SISO-32 1000VDC 32A	2	SL7-63/4P 32A 1000VDC	2	2/2(fitting)	1	SUP2-PV 20/40 1000VDC	2	SMC4-4	8
15KW-TP	LT15000HD	1	260	58	SISO-32 1000VDC 32A	4	SL7-63/4P 32A 1000VDC	4	4/4(fitting)	1	SUP2-PV 20/40 1000VDC	2	SMC4-4	16
18KW-TP	LT18000HD	1	260	70	SISO-32 1000VDC 32A	4	SL7-63/4P 32A 1000VDC	4	4/4(fitting)	1	SUP2-PV 20/40 1000VDC	2	SMC4-4	16
20KW-TP	LT20000HD	1	260	80	SISO-32 1000VDC 32A	4	SL7-63/4P 32A 1000VDC	4	4/4(fitting)	1	SUP2-PV 20/40 1000VDC	2	SMC4-4	16
30KW-TP	LT30000HD	1	265	114	SISO-32 1000VDC 32A	6	SL7-63/4P 32A 1000VDC	6	6/6(fitting)	1	SUP2-PV 20/40 1000VDC	3	SMC4-4	24
33KW-TP	LT33000HD	1	275	120	SISO-32 1000VDC 32A	6	SL7-63/4P 32A 1000VDC	6	6/6(fitting)	1	SUP2-PV 20/40 1000VDC	3	SMC4-4	24
40KW-TP	LT40000HD	1	275	144	SISO-32 1000VDC 32A	6	SL7-63/4P 32A 1000VDC	6	6/6(fitting)	1	SUP2-PV 20/40 1000VDC	3	SMC4-4	24

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