Head office: SUNTREE(China)Electric Group Co., Ltd.

Add: Xinguang Industrical Zone, Liushi, Yueqing Zhejiang China
Tel: +86 577 6289 0205
Web: www.chinasuntree.com
Main products: Solar Accessories, such as Combiner box, DC breaker, DC isolator switch, DC spd,etc,

Shanghai SUNTREE Electric Co., Ltd. (Production base 1)
Add: No. 65 Haifeng Road, Baoshan Districl, shanghai, china
Tel: +86 21 5161 9313
Main items: ATS, Load isolator swtich, circuit breaker,etc

Zhejiang Nudy Electric Equipment Co.,Ltd. (production base 2)
Add: Fangdouyan Industrical Zone, Liushi, Yueqing Zhejiang China
Tel: +86 577 6178 8115
Main products: Power distribution cabinet, etc

Shenzhen Litto New Energy Co.,Ltd. (production base 3)
Add: Bldg. B, bafangyuan Science Park, Sanmin Rd. No.3 Rd., Shuitian, Shiyan, Baoan, Shenzhen.
Tel: 86-755-8170 7800
Main products: on grid inverter, hybrid inverter, etc,

Wenzhou Xinchi International Trade Co.,Ltd.
Yueqing Xinchi Imp&Exp Co.,Ltd.
Add:Xinguang Industrical Zone,Liushi,Yueqing,ZhejiangYueqing Xinc hi Imp&Exp Co.,Ltd,China
Tel: +86 577 6289 0205
Web: www.chinasuntree.com
E-mail: tony@chinasuntree.com
sell all products which are produced by suntree group in international market

www.chinasuntree.com

SOLAR ENERGY ACCESSORIES

Newly Launched
1500V DC Series Products

suntree
human. technology. nature

TECHNOLOGY, FOR BETTER LIFE.

SUNTREE ELECTRIC CONCENTRATES ON

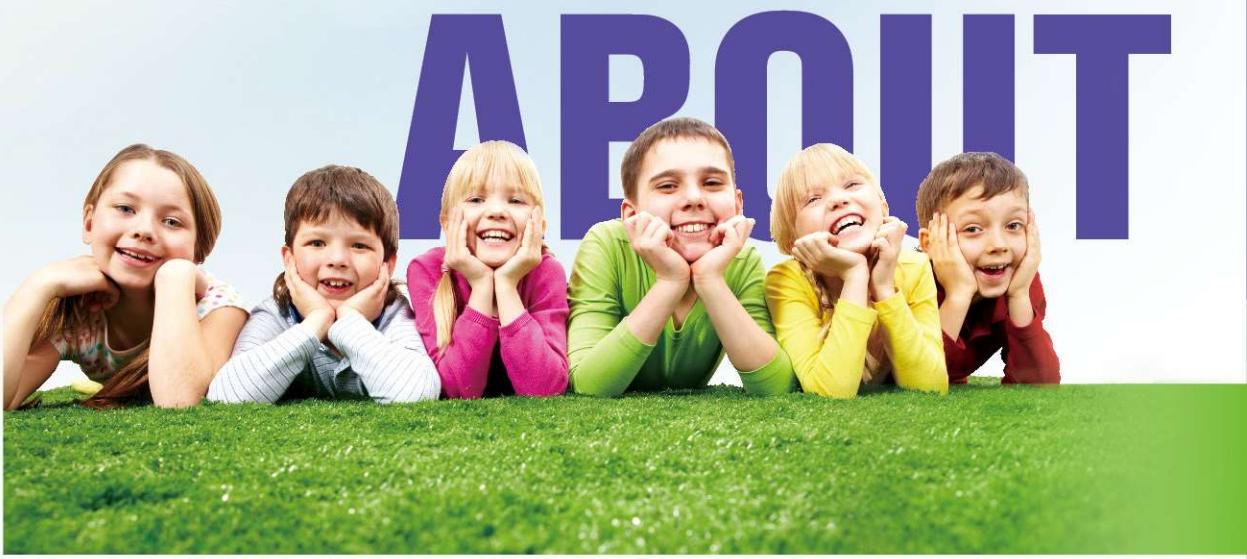
INTELLIGENT TECHNOLOGY

FOCUS ON GREEN TECHNOLOGY

TO WORK OUT HARMONIOUS

LIFE WITH NATURE

ABOUT



Suntree Electric Co.,Ltd, an outstanding company in China intelligent electrical industry, a legendary growing company.

Suntree, have leading R&D and manufacture capacity. With power grid, new energy, intelligent electric, and middle & high voltage four sales business units. With production plants in Shanghai, Zhejiang, Shenzhen.

Suntree New eneery business unit concentrate on new energy (Solar power generation , wind power, new energy application etc.), distribution system research and development, manufacture, sales and service. Suntree has great independent innovation ability, with many core technology, gain many patents, with ISO9001:2008, 14000, OHSAS18000 etc.

Suntree brand DC products used in Photovoltaic systems with leading technology in this area, passed CE,CB, IEC, Nemko, SAA, TUV, CCC, Gold-sun etc. Litto breand PV inverter authorized with TUV, CE, CQC, ETLCQC, AS4777, VDE-AR-4105, VDE0126-1-1, G59/2, G83/2, MEA, PEA, EN50438, EN60116, EN61727 etc. certificates.

suntree
human. technology. nature

SUNTREE

www.chinasuntree.com

Suntree new energy products including: Solar Photovoltaic distribution system (DC MCCB, DC MCB, Intelligent DC ACB, DC SPD, DC Fuse, Intelligent PV Combiner box. And Litto Brand on-grid and off-grid inverter, high frequency isolated inverter and energy storage inverter etc.

Wind power distribution system: Intelligent wind power frame circuit breaker (plateau type, salt-fog resistance type, low temperature resistance type), Moulded case circuit breaker.

New energy application: Litto brand Charging pile module.

First class products, it from advanced design concept, precise production equipment, strict testing, perfect quality assurance system, quick feedback and excellent after sales service

To provide customer with our first class products and service is our persistent goal.

Suntree company spirit "Innoviation, Communication, Service, Dream", insist on "Human, technology, nature" harmonious development, according to "Win-win, win future" cooperation concept. Sincerely hope to cooperate with you to win future.

www.chinasuntree.com

CB CE SAA APPROVALS TÜV IEC ROHS Nemko

HONOR

suntree
human. technology. nature

NEWLY LAUNCHED

www.chinasuntree.com

1500VDC

- SISO PV ISOLATOR
- DC-PV1 DC-PV2 DC-21B
- 10A TO 32A UP TO DC1200V
- EASY TO INSTALL IP66 WATERPROOF

- DC FUSE
- SENSING EACH CURRENT,PROTECTION

OTHERS ELECTRIC PARTS FOR THE FIRST TIME

suntree
human. technology. nature

SERIES PRODUCTS

● 1500VDC PV MOUDLE CASE CIRCUIT BREAKER

● SURGE PROTECTOR DEVICE
● IMPORTED CHIP,DURABLE PROTECTION
● EASY TO CHANGE PROTECTION MODEL

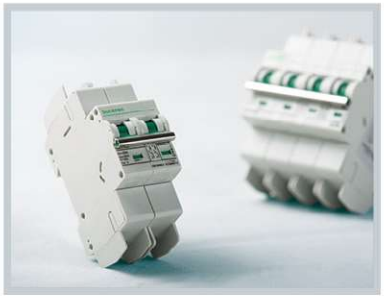
PRODUCT

01-14
DC Isolating Switch

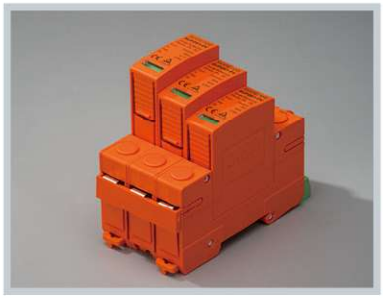
33-40
Solar Connector And Cable Assemblies

suntree
human. technology. nature

CATALOGUE



15-23
PV Solar Dedicated DC Circuit Breaker



24-30
PV Surge Protector

31-32
IP66 Distribution Enclosures

41-50
PV DC Fuse

51-54
PV Lightning Protection Cabinet

55-58
Automatic Reclosing Mini Circuit Breaker

TECHNICAL TERMS
EXPLANATION OF PV TECHNICAL TERMS

- Solar modules: Solar modules use light energy (photons) from the sun to generate electricity through the photovoltaic effect. The majority of modules use wafer–based crystalline silicon cells or thin–film cells based on cadmium telluride or silicon. The structural (load carrying) member of a module can either be the top layer or the back layer. Cells must also be protected from mechanical damage and moisture.
- Solar Cell: solar cell, or photovoltaic cell, is an electrical device that converts the energy of light directly into electricity by the photovoltaic effect. It is a form of photoelectric cell, defined as a device whose electrical characteristics, such as current, voltage, or resistance, vary when exposed to light. Solar cells are the building blocks of photovoltaic modules, otherwise known as solar panels.
- PV strings:circuit string formed by PV modules in series, used to generate specific output voltage.
- Solar panel: the unit that is composed of PV strings and other components and generates direct current.
- PV combiner box: electrical connection of PV strings of solar panels is finished in the box, where you also can find the protective equipment.
- PV power generating set: assembly of PV power generation, also called PV field.
- PV power conversion equipment: convert direct current into alternating current, also called inverter.
- Standard test condition (STC): test conditions in accordance with NF EN60904–3 (C 57–323) for PV cells and modules.
- Open–circuit voltage UocSTC: under the condition of standard test, the terminal voltage of PV modules, PV strings, and solar panels with no loads, or terminal voltage of DC side of PV power conversion equipment.
- Short–circuit current IocSTC: under the condition of standard test, the short–circuit current of PV modules, PV strings, and solar panels, or short–circuit current of generating set.

Max reverse current IRM: max reverse current that the module can withstand under the condition of no any damage. This value will be provided by the manufacturer.

Note 1: this value has nothing to do with the withstand current of diversion diode, but it is the normal current flows through the PV cells in reverse direction.

Note 2: IocSTC of modules whose typical value of crystalline silicon is 2~2.6 times.

Maximum power point (MPP or MPPT)

As shown in its name (track the maximum power point), in principle it can track nonlinear power generating system, such as the maximum power point of PV power generating set.

MPPT or MPPTS also embodies an inverter assembly making use of solar energy to the largest extent by optimized matching the load characteristics with that of PV devices.

Normative reference

SL7-PV series miniature DC breaker for PV power generation meets the following standards:

IEC60947-2 Low-voltage switchgear and controlgear-Part 2: Circuit-breakers, IEC60898-2 (GB 10963.2-2008) Circuit-breakers for overcurrent protection for household and similar installation - Part 2: Circuit-breakers for a.c. and d.c. operation.

Normative reference

SM1-PV series high-performance circuit breaker meets the following standards:

IEC 60947-1 (GB 14048.1) General rules

IEC 60947-2 (GB 14048.2) Circuit breakers

Normative reference

SM1G-PV series disconnector meets the following standards:

IEC 60947-1 (GB 14048.1) General rules

IEC 60947-2 (GB 14048.2) Circuit breakers

Normative reference

SRD-PV series fuse meets the following standards:

GB13539.1-2008 Low-voltage fuses - Part 1: General requirements

GB13539.2-2008 Low-voltage fuses - Part 2: Supplementary requirements for fuses for use by authorized persons

IEC 60269-1-2006 Low-voltage fuses - Part 1: General requirements

IEC 60269-2-2010 Low-voltage fuses - Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application)

Normative reference

SUP2-PV surge protective device meets the following standards:

IEC 61643-31 Surge protective device

Normative reference

SGL-PV series load conversion isolating switch meets the following standards:

International standards:

\IEC 60947-1(1998) Low-voltage switchgear and controlgear-Part 1: General rules

IEC 60947-3(1999) Low-voltage switchgear and controlgear, switches, disconnectors, switch-disconnectors and fuse-combination units

International standards:

GB/T14048.1-2000 Low-voltage switchgear and controlgear-General rules

GB/T14048.3-2002 Low-voltage switchgear and controlgear-Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units

SHLX PV combiner box meets the following standards:

CGC/GF002:2010(CNCA/CTS0001-2011) Technical specifications of PV combiner box

Executive standards

This scheme is mainly prepared according to the following national or industrial standards:

DL/T5044-2004 Technical code for designing DC system of power projects

DL/T5103-1999 Design code for unattended substation of 35kV~110kV

DL/T5120-2000 DC System design code for small electric power project

GB14285-1993 Technical code for relaying protection and security automatic equipment

DL/T5136-2001 Technical code for designing of electrical secondary wiring in fossil fuel power plants and substations

JB/T5777.4 The general specification and safety requirements for D.C power supply equipment of the power system

DL/T724-2000 Specification of operation and maintenance of battery DC power supply equipment for electric power system

DL/T459-2000 Specifications of D.C supply cabinet in power system

JB/T8456-1996 Low-voltage D.C switchgear assemblies

Guodian [2000] 589 Notice about printing and issuing The twenty-five key requirements to prevent serious accident and failure in electric power operation

YDB 037-2009 Technical requirements of 240V direct current power supply system for telecommunications

Applications

SL7 series high-performance miniature DC breakers and SM1 molded case circuit breakers are mainly developed for the solar PV field. In the following applications, they are the best protective devices:

- DC reverse current protection:Protect PV modules from the danger of DC reverse current;
- AC feedback current protection:Protect PV modules from harm of feedback current caused by defective inverter AC;
- DC load isolation switch:Under load condition, it can be safely switching-off. Due to the need of malfunction or maintenance work, single PV string can be safely and selectively put into and out of use under load condition;
- Remotely trip off and send alarm.
  Remote tripping function of Suntree series products can be realized by shunt release. Optional auxiliaries (switch on or off) can send out the status signals of breakers in each PV string.

Scope of application

Full range products are suitable for isolation

Suntree high-performance electrical circuit breakers can disconnect any PV string under load condition. Its rated current is up to 1250A, and its maximum working voltage is up to DC1500V.

Reliable remote control

Shunt release can be installed to remotely control electrical tripping of Suntree high-performance electrical circuit breakers.
Auxiliary and alarm contacts and other optional accessories can upload clear status signals of Suntree high-performance electrical circuit breakers on each PV string.

Technical features

Protect PV modules from the danger of DC reverse current

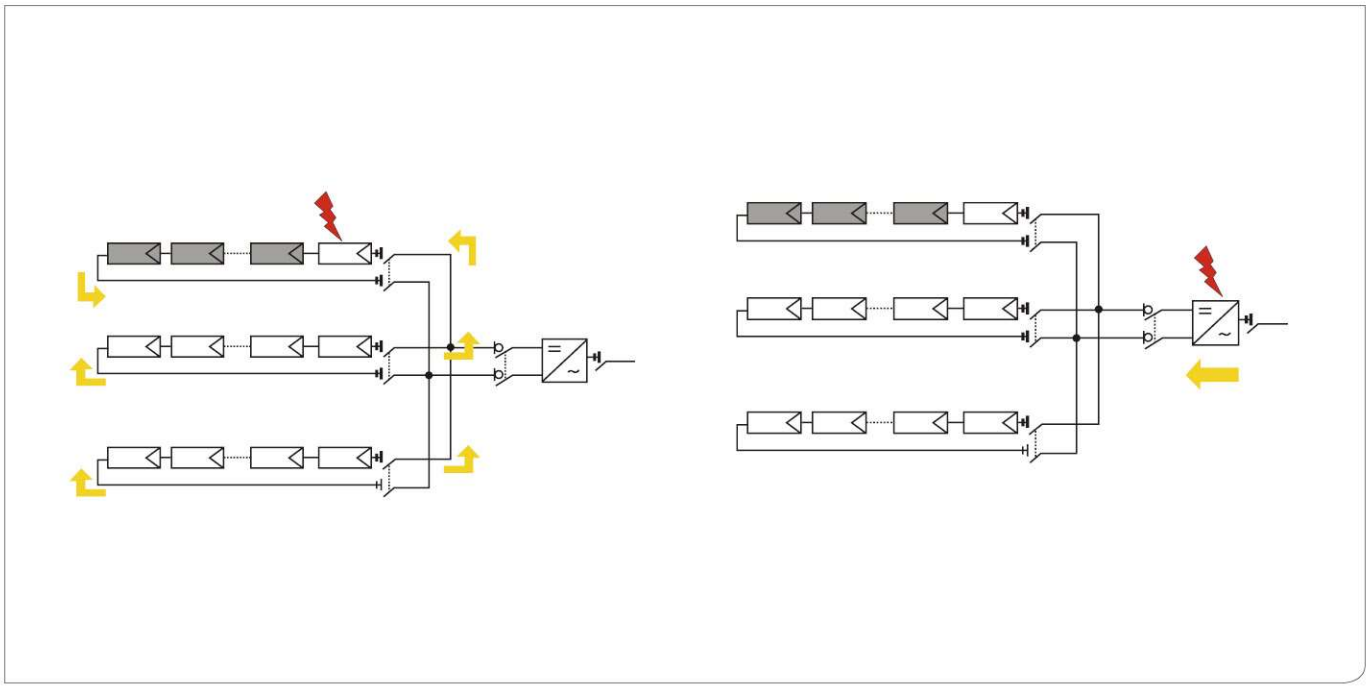
In a PV system without fault, the current going through each PV string are equal, there is no excessive reverse current. When the system is paralleled with more than three PV strings, generally there will be a critical reverse current. In a PV string, if one or more of the PV module are damaged, the current of entire string will decrease.

This means that the normal PV string feeds higher reverse current into a failed PV string, the heat generated by the reverse current may damage PV modules and wires in each PV string.

Such damage can be avoided through installing Suntree high-performance electrical circuit breakers, when dangerous reverse current is appeared, the breaker will be tripped which can protect PV modules from damage.

If the inverter is failed, the feedback current at AC side will be fed into the DC side and damage PV modules.

Suntree high-performance electrical circuit breakers can protect each PV string from the danger of feedback current brought by fault at AC side, it can cut off the circuit before PV module is damaged.



Advantages and benefits

- Rated current is up to 1250A, working voltage is up to DC1500V;
- Protect PV modules from the danger of DC reverse current;
- Protect PV modules from harm of feedback current caused by defective inverter AC;
- Each PV string can be safely and selectively put into and out of use under load condition.
- It can remotely control the disconnection of any PV string in the system, even in negative state;
- It can upload clear status signals of DC breakers in each PV string.
- Users can save the cost of series copper bars and installation, which significantly reduces the cost of manufacture.
- Internal preset series wiring can be avoided, high temperature caused by that the external series wiring does not meet the standard of GB14048.1–2006 main circuit terminal wiring standard, the circuit breaker needs to derate over 30% of its capacity, which makes it safer and more reliable.
- In accordance with the provisions in GB14048.1–2006, rated current 115A ~ 150A should choose two meters of 50mm wire, we can calculate that the wire cooling area is 50340.48mm which can use external series wiring if we can ensure sufficient cooling area.
- Use of copper bars can not guarantee its economical efficiency and safety.

Arc extinguishing principle of DC breaker

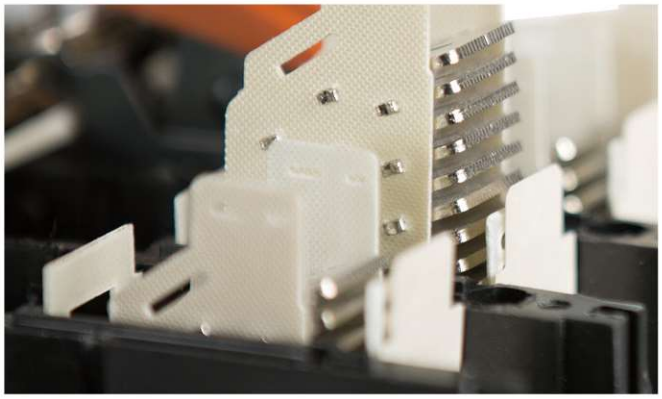
Arcing and arc extinguishing process of DC breaker is different from that of AC breaker. The AC arc generated by disconnection of AC breaker will go through the zero point 2f (f is the grid frequency) every second. It extinguishes the arc by polar effect. Only when AC breaker solved the re–strike of arc problem, it restores the recovery process of dielectric strength from conducting state back to the insulating state, It will not be elaborated.
The AC arc generated by breaking of DC breaker is constant, the greater the current is, the larger the time constant is, the more difficult to extinguish the arc.
There is no requirements for the contact of DC breaker because its performance of long–term carrying current is similar with general AC breaker. But the breaking current of DC breaker largely differs from AC breaker. The DC arc should be extinguished when contact of DC breaker is breaking. The followings are features of DC arc and measures to extinguishing DC arc:
When the contact of breaker is breaking, arc is immediately generated between static and moving contacts, which not only hinders timely breaking of the circuit, but also make contacts wear, the main problem at this time is electrical burning of contacts, on which AC and DC circuits are the same. In order to understand the arc cutting performance of DC circuit breaker, we must firstly analyze the arc generating process and the ability to extinguish the arc. When contact are breaking, at the beginning of separating of the contacts, the gap is very small, the electric field strength is great, which is easy to produce heat and strong electric field, free electrons in metal escapes from surface of the cathode to the anode. While free electrons hit the neutral gas molecules in the electric field, so it is excited and dissociated to produce positive ions and electrons, the electrons continue to move toward the anode in the strong electric field, it will also impact other neutral molecules, therefore, a large amount of ions and charged particles in the gap between contacts. These make gas conductive and forms hot electron flow, namely the arc.
After the arc is generated, there are ionization and de–ionization factors, ionization effect is due to the large amount of heat generated in the arc gap, it mainly hot ionization of gas, ely when the metal vapor on the contact surfaces gets into the arc gap, the gaseous heat ionization effect is more significant. The higher the voltage, the greater the current, which means that the larger arc power, the higher the arc zone temperature, and the stronger the arc of ionization factor. De–ionization is because the ionized positive ions and electrons will combine when they meet in space, and reform neutral gas molecules, and high temperature and intensive ions and electrons also spread towards other medium with less intensive and low temperature. As a result, the concentration of ions and free electrons decreases in the arc gap, the arc resistance increases, and the arc current is reduced, thereby hot ionization is weaken.
To extinguish the arc, it is necessary to restrain the ionization factor and strengthen the de–ionization factor, such as to pull the arc into the narrow space, to increase the distance between the moving contact and the gate films and so on, to narrow the diameter of the arc, so that the interior concentration of the ion is increased, it can enhance the proliferation and cooling effect, to stretch the arc, or to set up obstacles inside the arc to combine ions and electrons, which makes the de–ionization effect is greater than ionization effect, it will be able to extinguish the arc.

Arc distinguishing process of DC breaker

There are four processes while DC breaker completes limit test of breaking capacity:
1. Short–circuit current rises from 0 to instantaneous tripping current setting along an prospective exponential curve, the time is less than 0.5 ~ 4ms.
2. After tripping action, the contact is breaking after fixed operating time of switching mechanism, the current continues to rise, the time lasts about 1 ~ 4ms.
3. Arc are generated under cold and hot emitting effect, the arc is stretched and hot ionized and hot impacted in the arc column. The speed of gas ionization is accelerated and generated a large mount of heat and pressure, the time lasts about 0.3 ~ 6ms.
4. There is a permanent magnet or an electromagnetic coil between the static contact and moving contact of DC breaker, and it generates a magnetic field, the magnetic flux is relatively concentrated, it goes into arc extinguish space through the core plywood, and it forms layers of closed magnetic circuit with arc extinguishing plate, which quickly leads the arc through arcing ring from the contact to arc extinguishing space under a strong magnetic field.

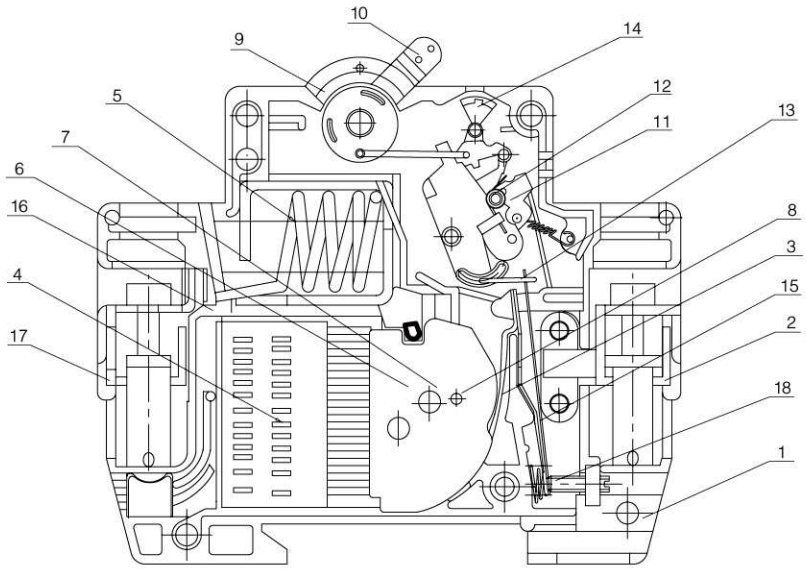
Magnetic arcing chamber is equipped with arc deflecting cover, which is made of plastic, it is used for:

First, leading the arc be blown out vertically;
Second, making the arc to contact with the insulated wall in arcing chamber, thereby rapidly cool down the arc, enhance the de–ionization effect, improve the voltage of arc column, and force the arc to be extinguished;
Third, producing inert gas to help extinguishing arc.
Arc slit can compress the diameter of arc column and make the arc to contact closely with the wall of the slit, and to enhance the cooling and de–ionization effect.The gate file is insulated, it can derive the heat of the arc, and increase the pressures–drop of the arc column, while the films divide the arc into sections , each film is the electrode of the short arc, thus there are a plurality of anode and cathode drops, when the voltage drop at the electrode near the arc column is large enough, the voltage can not maintain the arc, and thus the arc is extinguished. It will take about 2 ~ 30ms.



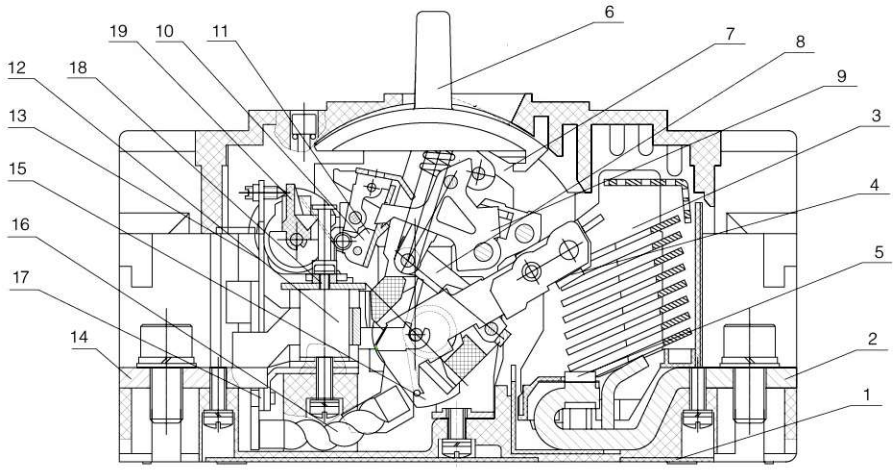
DC breaker is consisted of conductive loop, separable contacts, arc extinguishing devices, insulating parts, chassis, transmission mechanism, operation mechanism and other components.

Structure of SL7–63PV DC breaker



1.Shell
2.Wiring board
3.Arcing ring
4.Arcing chamber
5.Electromagnetic release
6.Permanent magnet
7.Moving contact
8.Static contact
9.Spring
10.Handle
11.Lock
12.Chain components of the release
13.Trip
14.Indicator
15.Bimetallic strip
16.Soft connection
17.Wiring board
18.Adjusting screw

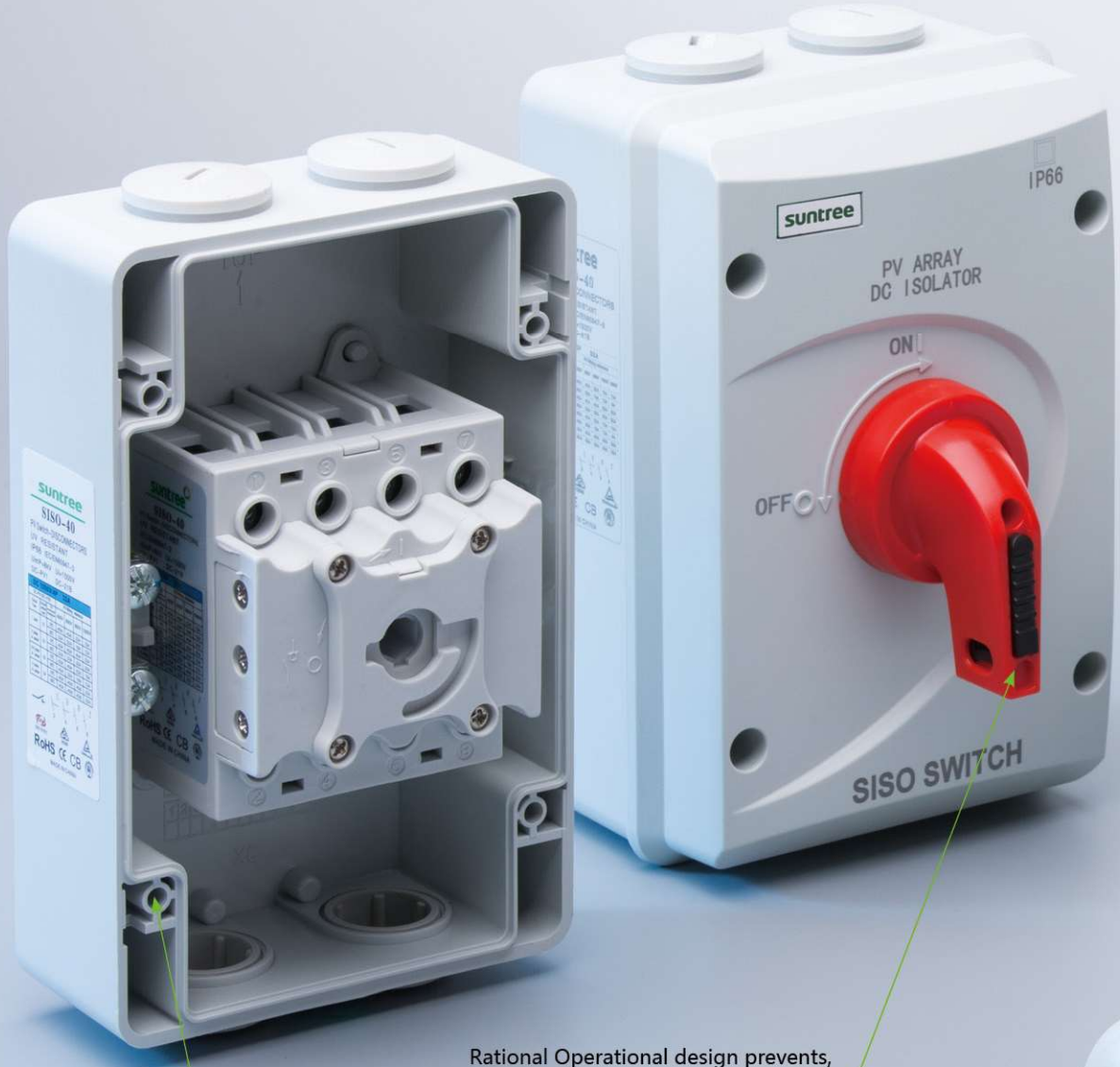
Structure of SM1–125PV and SM1–225PV molded–case DC breaker



1.Shell
2.Upper wiring board
3.Arcing chamber
4.Moving contact
5.Static contact
6.Handle
7.Lever
8.Connecting rod
9.Trip
10.Chain pieces
11.Chain pieces
12.Magnetic release
13.Bimetallic strip
14.Lower wiring board
15.Shaft
16.Soft connection
17.Thermal elements
18.Lower push rod
19.Short time delay mechanism

Each pole contact equiped with arc extinguish system , can eliminate arc immediately when switch off

DC ISOLATOR

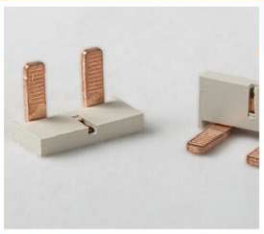


Rational Operational design prevents, reverse/ incorrect rotation

Wall-mounted design, No need to open the cover mounting,Flexible installation

suntree
human technology nature

SWITCH



with bus-bar

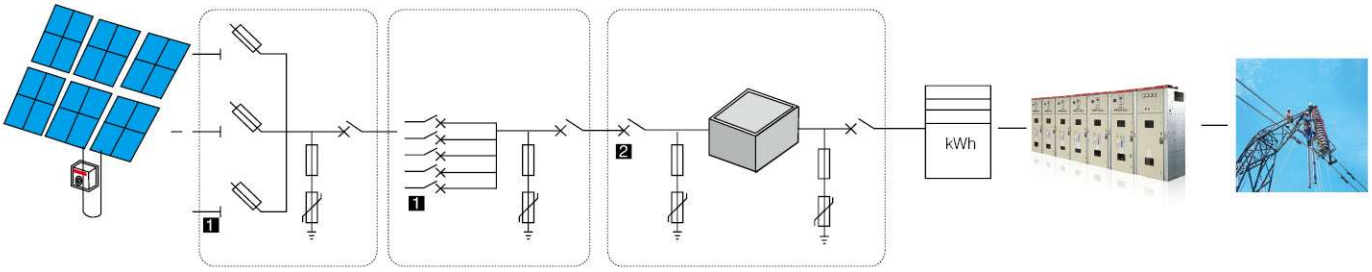
Waterproof cover

Can connect to the MC4 connectors

DC distribution PV system used disconnector

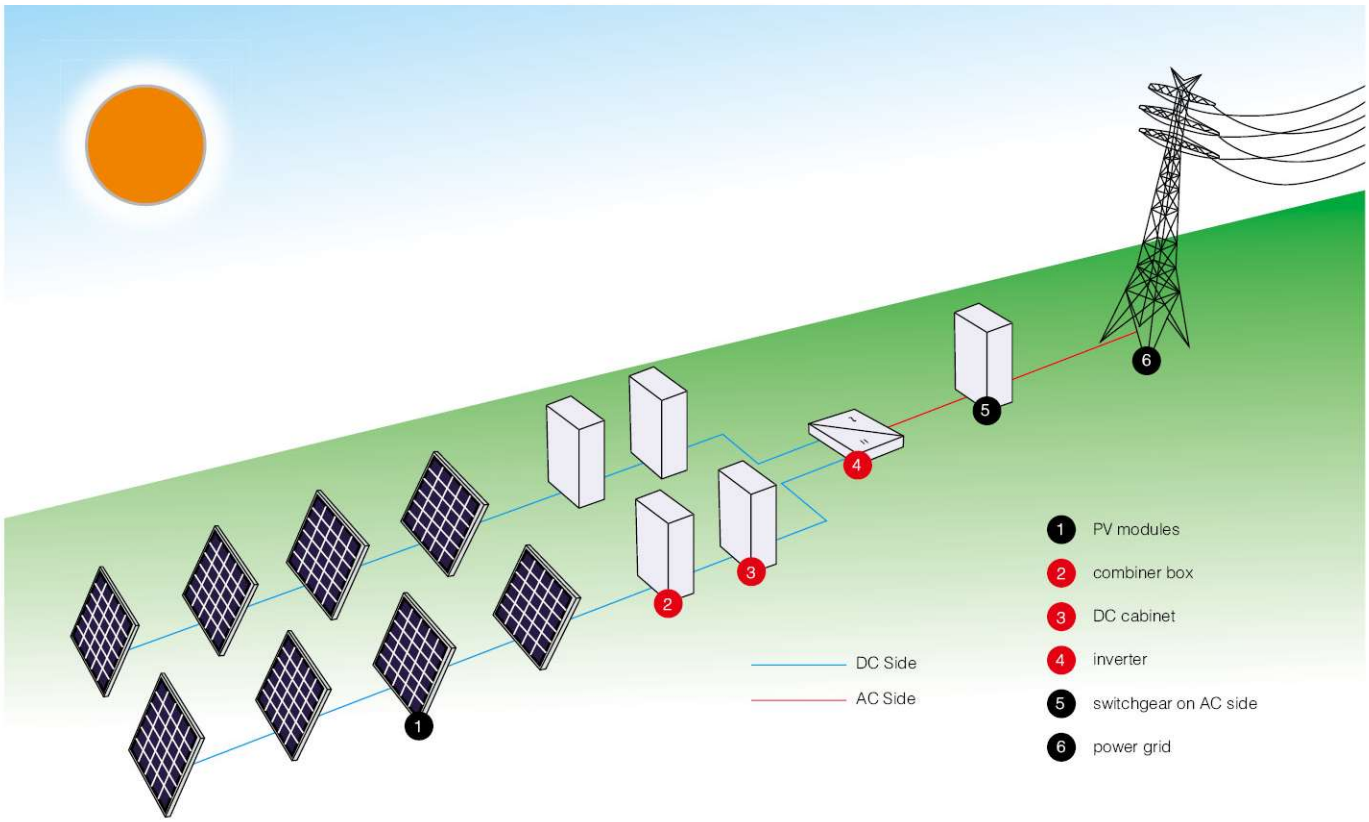
System requirements

Generally speaking, the voltage on DC side of PV system usually is higher, could be as high as 1000VDC. So we need switchgear of Ue=1000VDC. The branch circuit in combiner box needs protection, while the main circuit equipments in combiner box and DC cabinet need isolating function 1. Switching with load of 1000VDC or remote operation function. In addition, it needs to install switchgear 2 on DC side of inverter cabinet to switch with loads, plays a role of isolation for overhauling.



Solar tracking system | DC combiner box | DC cabinet | Inverter system | Metering and Monitoring system | AC distribution and On-grid system | Utility power grid

Flow chart



SISO-40

SISO-40

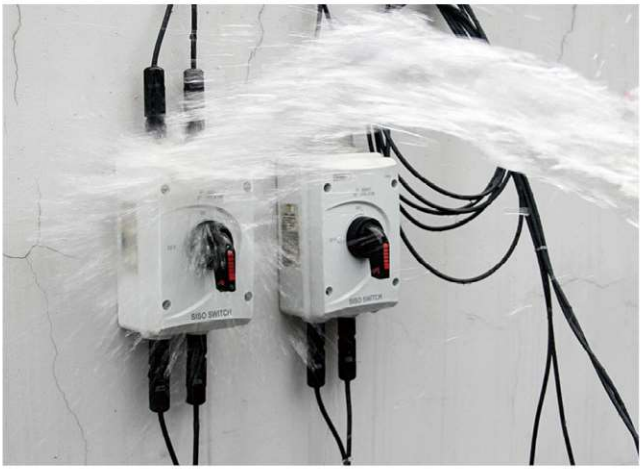
DC ISOLATING SWITCH

- UV Resistant IP66 Enclosure
- Extremely Short Power Shut Off Time Of Approx.2ms
- Lid Only Removable In “off” Position
- Earth Terminal
- IEC60947-3,AS/NZS60947.3: 2015
- DC-PV1 DC-PV2 DC-21B
- 10A To 32A UP To DC1200v
- Easy To Install

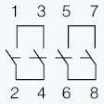
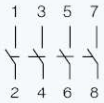
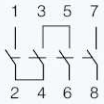
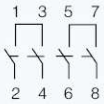
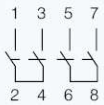
Specifications

Rated Voltage	1000VDC TO 1200VDC
IP Rating	IP66
Connection Type	M20 M25 MC4
Rated Current	10A,16A,20A,25A, 32A
Working Temperature	-25°C~+85°C
Standard	IEC60947-3, AS/NZS60947.3:2015

This product passed IEC authorized Lab IP66 waterproof testing. Also our company will take simulation tests irregularly, similar to customer's using environment, to make sure this product completely conforms to IP66 protection grade

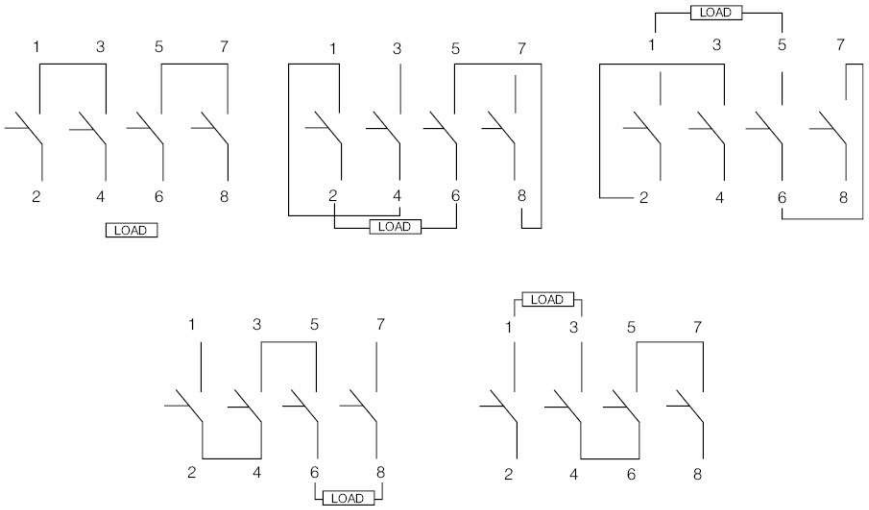


Specifications

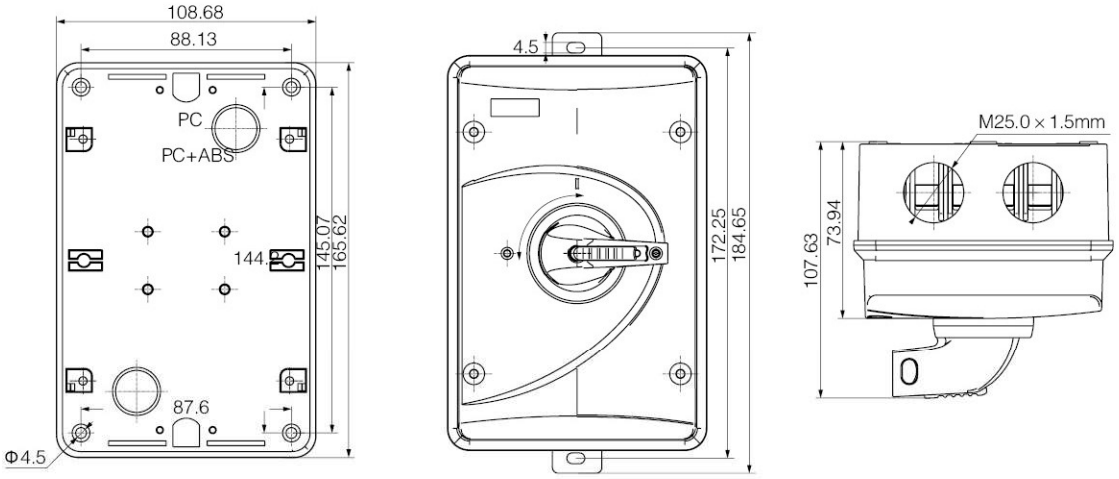
Contact configuration	600V	800V	1000V	1200V	Poles in series	Number of strings	Type Number
	16A	16A	9A	9A	2	1	SISO-16P2
	25A	20A	11A	11A	2	1	SISO-25P2
	32A	23A	13A	13A	2	1	SISO-32P2
	29A	16A	9A	9A	2	1	SISO-16P2H
	45A	20A	11A	11A	2	1	SISO-25P2H
	50A	23A	13A	13A	2	1	SISO-32P2H
	16A	16A	9A	9A	2	2	SISO-16P4
	25A	20A	11A	11A	2	2	SISO-125P4
	32A	23A	13A	13A	2	2	SISO-32P4
	16A	16A	16A	16A	4	1	SISO-16P4S
	25A	25A	25A	25A	4	1	SISO-25P4S
	32A	32A	32A	32A	4	1	SISO-32P4S
	16A	16A	16A	16A	4	1	SISO-16P4B
	25A	25A	25A	25A	4	1	SISO-25P4B
	32A	32A	32A	32A	4	1	SISO-32P4B
	16A	16A	16A	16A	4	1	SISO-16P4T
	25A	25A	25A	25A	4	1	SISO-25P4T
	32A	32A	32A	32A	4	1	SISO-32P4T

1500V DC voltage require customized

Contact Configuration



Dimensions(mm)

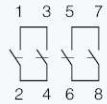
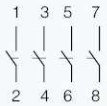
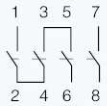
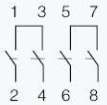
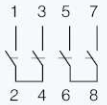


Main Switch for DIN Rail Mounting

- DIN rail mounting
- Extremely short power shut off time of approx. 3ms
- 2 poles and 4 poles available
- IEC60947–3 standard
- DC21B: 16A, 25A and 32A up to 1500V DC

CE TÜV SAA IEC ROHS

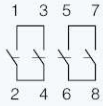
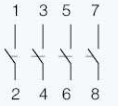
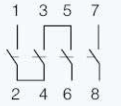
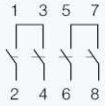
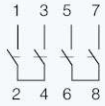
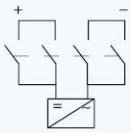
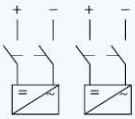
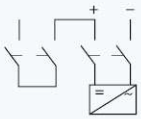
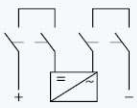
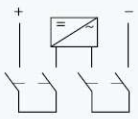
Specifications

Contact configuration	600V	800V	1000V	1200V	Poles In serles	Number of strings	Type Number
	16A	16A	16A	9A	2	1	SISO.2-16 D2
	25A	25A	20A	11A	2	1	SISO.2-25 D2
	32A	32A	23A	13A	2	1	SISO.2-32 D2
	29A	29A	16A	9A	2	1	SISO.2-16 D2H
	45A	45A	20A	11A	2	1	SISO.2-25 D2H
	58A	58A	23A	13A	2	1	SISO.2-32 D2H
	16A	16A	16A	9A	2	2	SISO.2-16 D4
	25A	25A	20A	11A	2	2	SISO.2-25 D4
	32A	32A	23A	13A	2	2	SISO.2-32 D4
	16A	16A	16A	16A	4	1	SISO.2-16 D4S
	25A	25A	25A	25A	4	1	SISO.2-25 D4S
	32A	32A	32A	32A	4	1	SISO.2-32 D4S
	16A	16A	16A	16A	4	1	SISO.2-16 D4B
	25A	25A	25A	25A	4	1	SISO.2-25 D4B
	32A	32A	32A	32A	4	1	SISO.2-32 D4B
	16A	16A	16A	16A	4	1	SISO.2-16 D4T
	25A	25A	25A	25A	4	1	SISO.2-25 D4T
	32A	32A	32A	32A	4	1	SISO.2-32 D4T

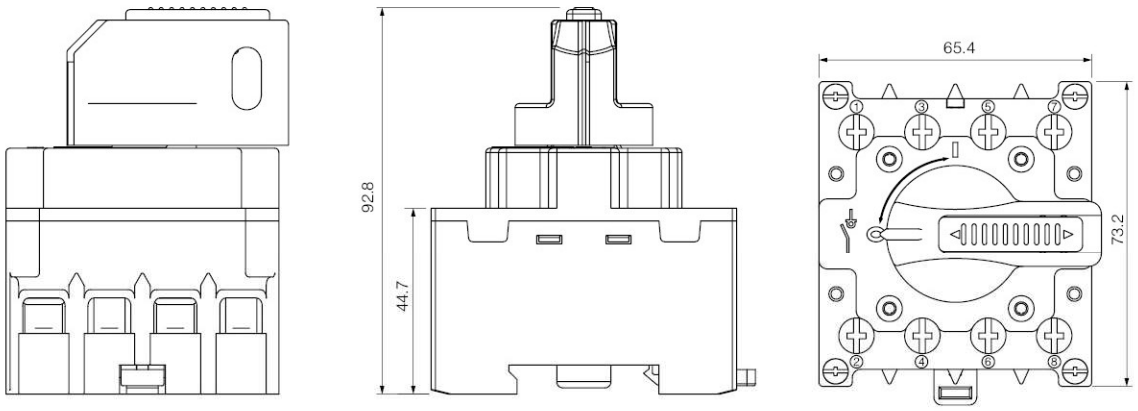
1500V DC voltage require customized

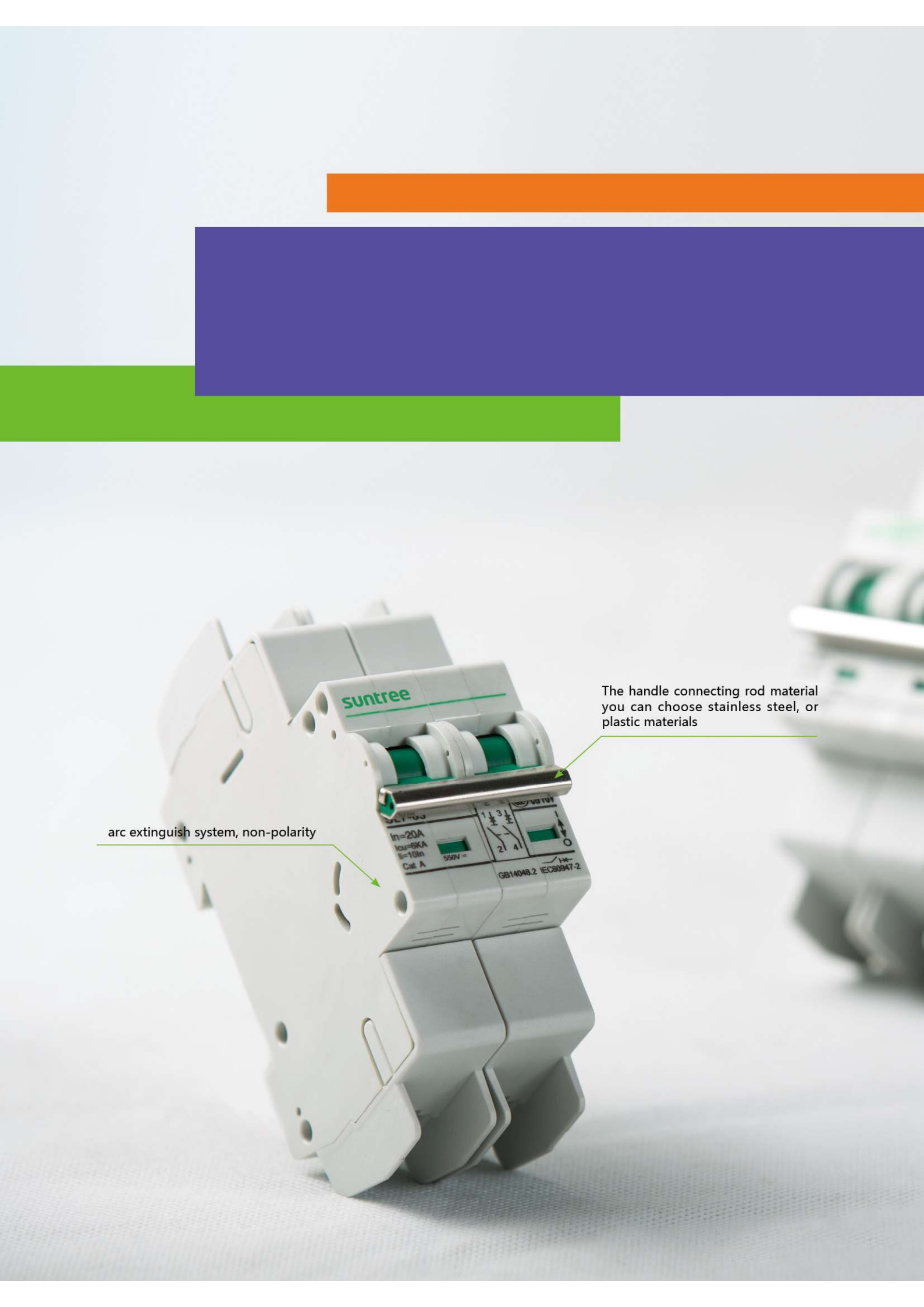
Main Switch for DIN Rail Mounting

Switching Configurations

Type	2-pole	2-pole 4 paralleled poles	4-pole	4-pole with Input on top output bottom	4-pole with Input and output bottom	4-pole with Input and output on top
SISO.2-16	2	2H	4	4S	4B	4T
SISO.2-25	2	2H	4	4S	4B	4T
SISO.2-32	2	2H	4	4S	4B	4T
Contacts Wiring graph						
Switching example						

Dimensions(mm)




suntree
In=20A
Icu=6KA
Ii=10In
Cat A
550V =
GB14048.2 IEC60947-2
The handle connecting rod material you can choose stainless steel, or plastic materials
arc extinguish system, non-polarity

suntree
human technology nature

Busbar can be set up in advanced, nice looking and practical

3 YEAR WARRANTY

SL7 Non-Polarity DC circuit breaker

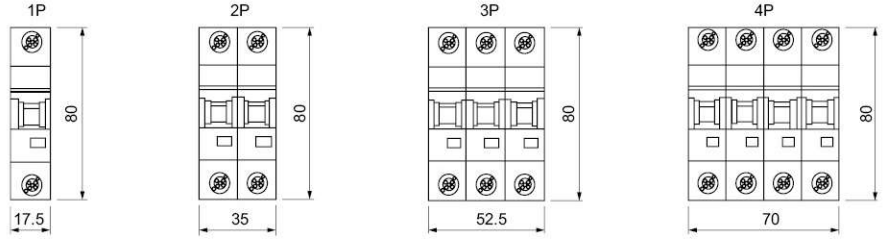
SL7 PV DC breaker supplementary protectors are designed to provide overcurrent protection within appliances or electrical equipment, where a branch circuit protection is already provided or not required. Devices are designed for direct current (DC) control circuit applications.

CE TÜV SAA IEC ROHS

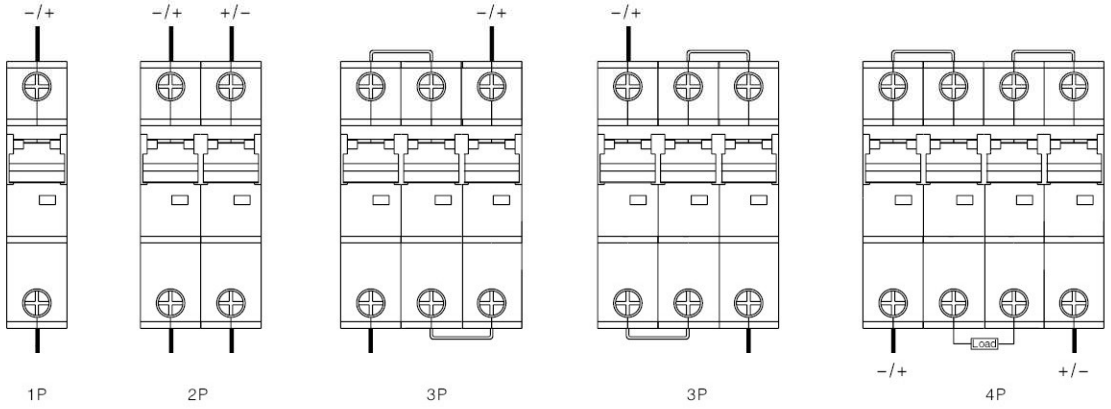
Specifications

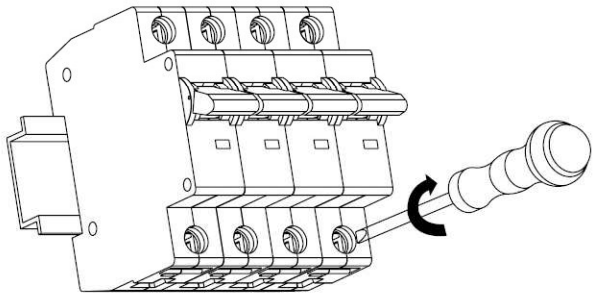
SL7 PV Series Circuit Breaker		SL7-63			
Frame degree rated current (A)		63			
Electrical performance					
Ue Rated operating voltage (V DC)		2P: DC440V DC550V DC800V 4P:DC800V DC1000V DC1200V			
Rated Current In (A)		6-10-16-20-25-32-40-50-63			
Rated insulation voltage Ui (V DC)		2P: 800V 4P: 1200V			
ated Impact voltage Uimp (kV)		4			
Ultimate breaking capacity Icu (kA)		6	6	6	6
Run breaking capacity Ics (%Icu)		75%	75%	75%	75%
Curve type		C			
Trip type		Thermal-magnetic			
MECHANICAL	Actual average value	20000			
	Standard value	8500			
ELECTRIC	Actual average value	2500			
	Standard value	1500			
Control and indication					
Shunt release (SHT)		Option			
Undervoltage release (UNT)					
Auxiliary contact (AX)					
Alarm contact (AL)					
Connection and installation					
Wiring capacity (mm²)		In≤32A,1~25 mm², I≥40A,10~35mm²			
Ambient temperature (℃)		-20~70			
Altitude		≤2000			
Relative humidity		≤95%			
Pollution Level		3			
Installation Environment		No obvious shock and vibration			
Installation category		Class Ⅲ			
Installation		DIN Standard rail			
Dimensions(W)x(H)x(Deep)	W	17.5	35	52.5	70
	H	80	80	80	80
	Deep	71	71	71	71
Weight (kg)		0.12	0.24	0.36	0.48

Dimensions(mm)



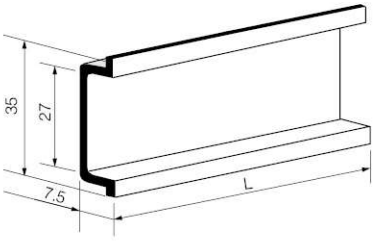
Wiring diagram



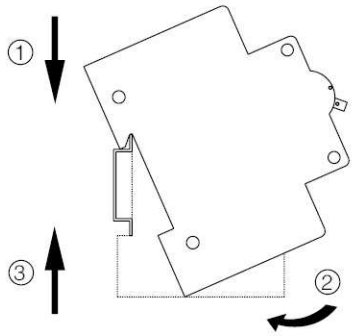


Rated current (A)	Sectional area of wire(mm^2)	Tightening torque of connecting wire(N.m)
1、2、3、4、5、6	1	Both the power side and load side are 2.0
10	1.5	
16、20	2.5	
25	4	
32	6	
40、50	10	
63	16	

Installation diagram



TH35−7.5 Mounting Din−Rail



SL7 Polarity DC circuit breaker

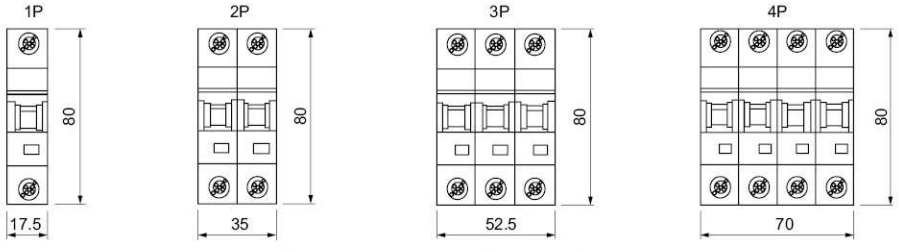
SL7 PV DC breaker supplementary protectors are designed to provide overcurrent protection within appliances or electrical equipment, where a branch circuit protection is already provided or not required. Devices are designed for direct current (DC) control circuit applications.

CE TÜV SAA IEC ROHS

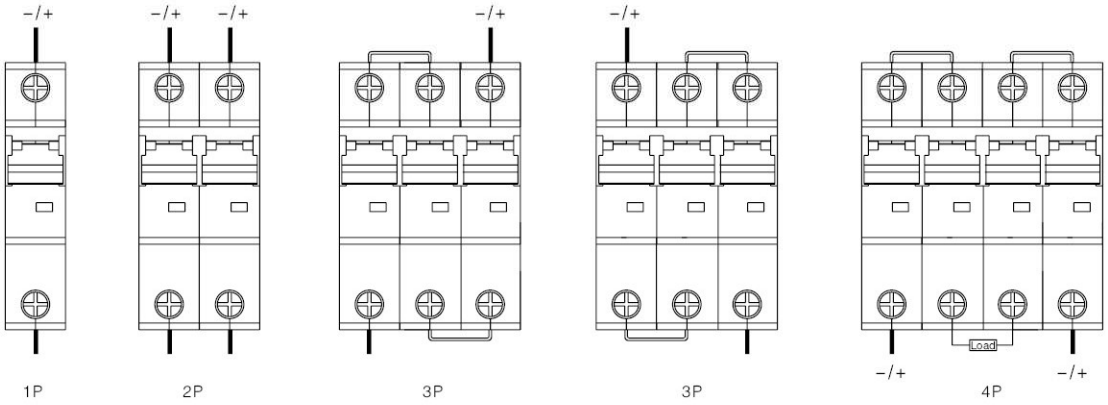
Specifications

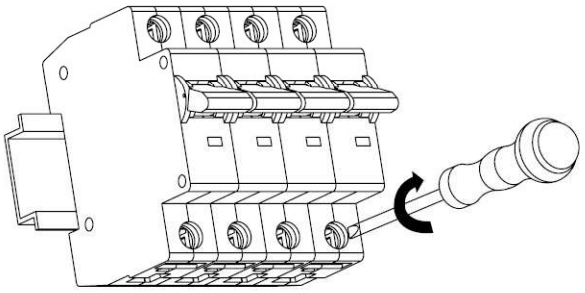
SL7 PV Series Circuit Breaker		SL7-63			
Frame degree rated current (A)		63			
EI					
Ue Rated operating voltage (V DC)		2P: DC440V DC550V DC800V 4P:DC800V DC1000V DC1200V			
Rated Current In (A)		6-10-16-20-25-32-40-50-63			
Rated insulation voltage Ui (V DC)		2P: 800V 4P: 1200V			
ated Impact voltage Uimp (kV)		4			
Ultimate breaking capacity Icu (kA)		6	6	6	6
Run breaking capacity Ics (%Icu)		75%	75%	75%	75%
Curve type		C			
Trip type		Thermal-magnetic			
MECHANICAL	Actual average value	20000			
	Standard value	8500			
ELECTRIC	Actual average value	2500			
	Standard value	1500			
Control and indication					
Shunt release (SHT)		Option			
Undervoltage release (UNT)					
Auxiliary contact (AX)					
Alarm contact (AL)					
Connection and installation					
Wiring capacity (mm²)		In≤32A,1~25 mm²,I≥40A,10~35mm²			
Ambient temperature (℃)		-20~70			
Altitude		≤2000			
Relative humidity		≤95%			
Pollution Level		3			
Installation Environment		No obvious shock and vibration			
Installation category		Class Ⅲ			
Installation		DIN Standard rail			
Dimensions(W)x(H)x(Deep)	W	17.5	35	52.5	70
	H	80	80	80	80
	Deep	71	71	71	71
Weight (kg)		0.12	0.24	0.36	0.48

Dimensions(mm)



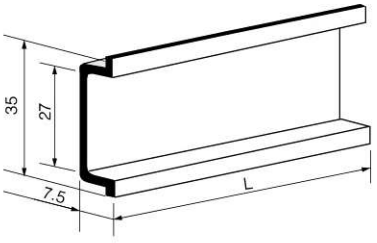
Wiring diagram



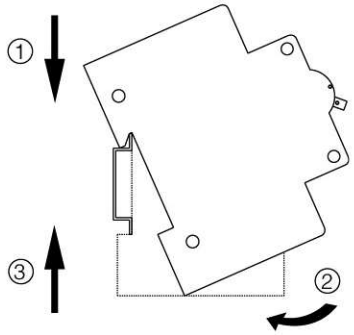


Rated current (A)	Sectional area of wire(mm^2)	Tightening torque of connecting wire(N.m)
1、2、3、4、5、6	1	Both the power side and load side are 2.0
10	1.5	
16、20	2.5	
25	4	
32	6	
40、50	10	
63	16	

Installation diagram



TH35-7.5 Mounting Din-Rail



SM8-250HPV
PV Specially Used DC molded case circuit breaker

SM8–250HPV series photovoltaic special DC molded case circuit breaker is suitable for DC grid circuit with rated voltage up to DC1500V and rated current of 250A. DC circuit breaker has overload long delay protection, short circuit instantaneous protection function, used to distribute electric energy and protect circuit and the power supply equipment is protected from the danger of overload, short circuit, etc.

The operating mechanism of the DC circuit breaker has the functions of quick closing and fast reading segmentation, compact structure, small size and convenient use.

CE TÜV SAA IEC ROHS

Specifications

name	model	Attachment code	Attachment installation location	Control voltage
Auxiliary contact	AX	250PV	-	-
Alarm contact	AL	250PV	-	-
Shunt release	SHT	250HPV	right side installatio n	DC24V/AC230V/AC400V

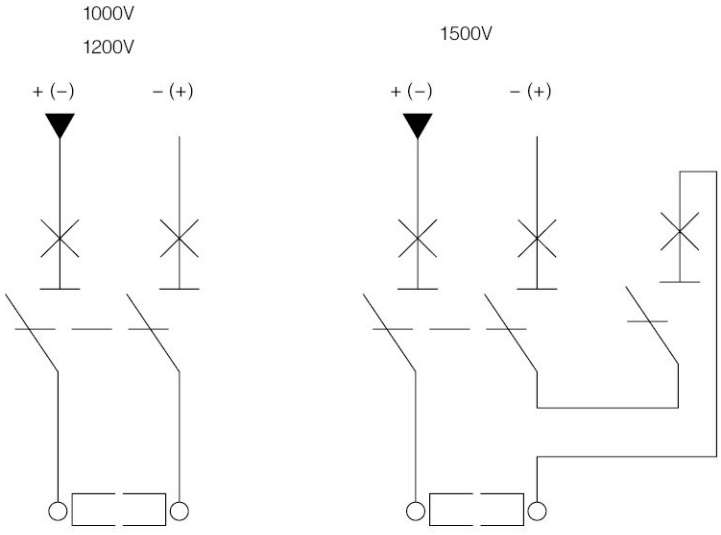
The main technical parameters

Product number		SM8-250HPV /2 1000V SM8-250HPV /2 1200V	SM8-250HPV /3 1500V
product name		PV DC MCCB PV DC MCCB	
Rated operating voltage Ue		DC1000V DC1200V	DC1500V
Rated insulation voltage Ui		1500V	1500V
Rated impulse voltage Uimp		12kV	12kV
Number of poles		2	3
Trip unit type		Thermomagnetic(Not adjustable), TMD Fixed	
Rated ultimate short-circuit segmentation capability Icu		Ue1200v 10kA Ue1000v 16kA	Ue1500v 20kA
Running segmentation capability Ics		Ue1200v 7.5kA Ue1000v 12kA	Ue1500v 15kA
Protective function	Long delay protection Ir	1In	
	Instantaneous protection Ii	5In	
Dimensions W×H×D		90×200×86mm	135×200×86mm

Thermal protection

Serial number	Experimental current	I/Ir	Appointed time	Initial state
1	Conventional non-tripping current	1.05	>1h(In≤63A) >2h(In>63A)	Cold state
2	Conventional discharge current	1.3	≤1h(In≤63A) ≤2h(In> 63A)	After the test according to the serial number 1

Wiring diagram



Distributor : www.7-mars.com, www.siamenergysaving.com