Commercial Energy Storage System

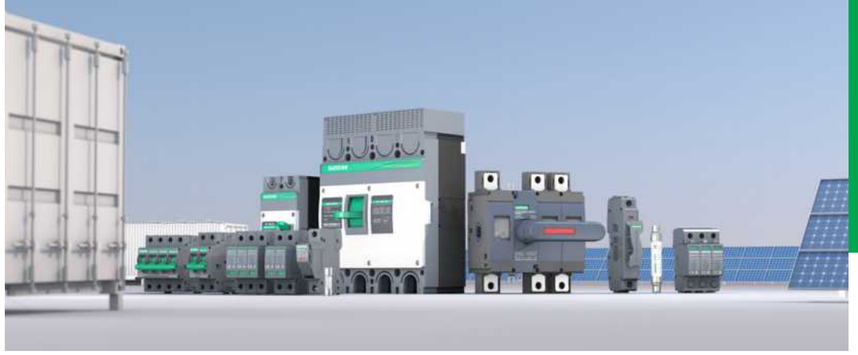
DC Components for Circuit Protection in Commercial Energy Storage Systems

Commercial Household Energy Storage Systems

AC/DC Components for Circuit Protection in Commercial Household Energy Storage Systems

Energy Storage System Protection

Suntree Energy Storage System
Application Solution Selection Manual



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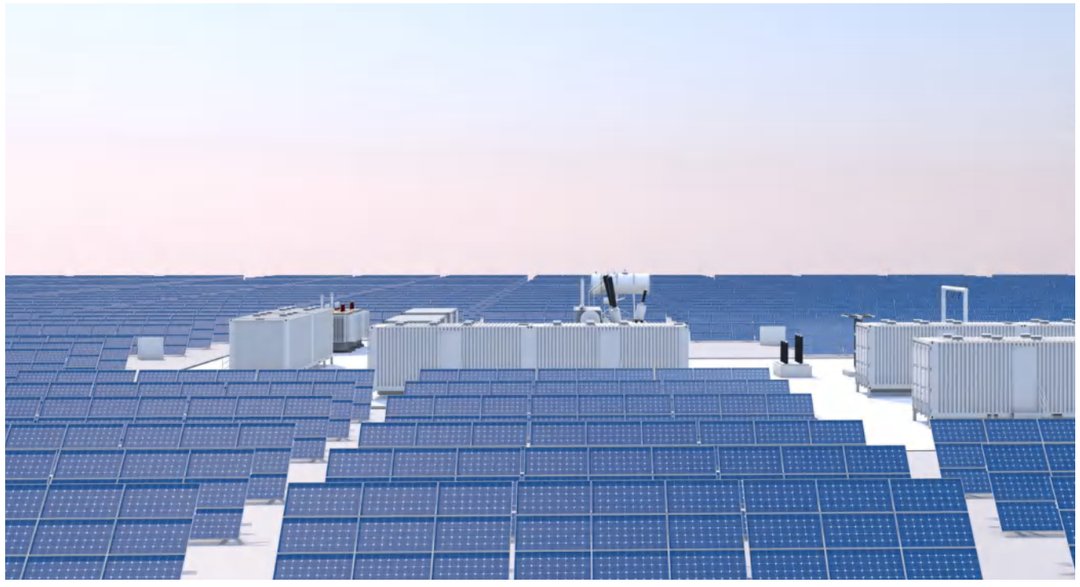
DC 1500V Series



DC MCCB

DC LOAD DISCONNECT SWITCH

DC SPD

DC FUSE

DC protection components and on-grid protection components for commercial household energy storage

DC 1000V Series / On-grid AC Series

DC MCCB

DC LOAD DISCONNECT SWITCH

DC SPD

DC FUSE

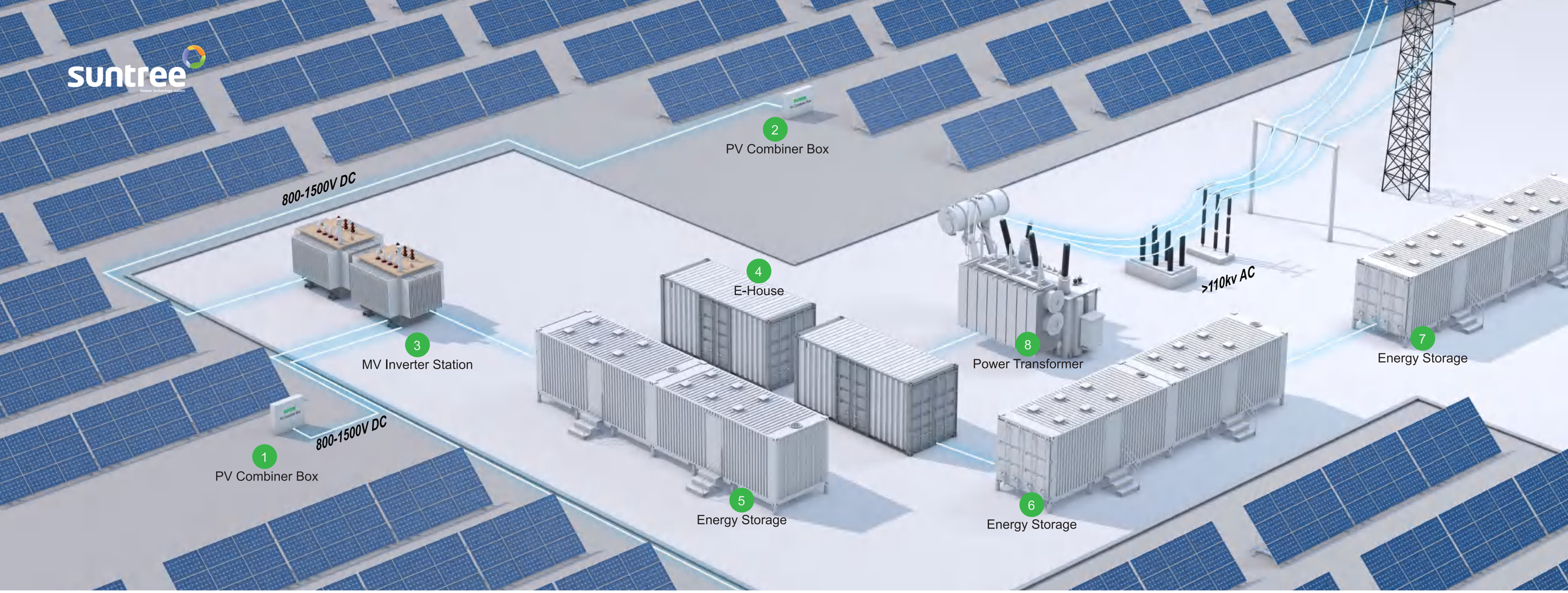
DC LSOLATING SIWTCH

AC CIRCUIT BREAKER

AC LEAKAGE CIRCUIT BREAKER

Automatic Transfer Switch

TYPE B AC LEAKAGE CIRCUITBREAKER



DC Protection Components for Circuit Protection in Industrial Energy Storage Systems

DC 1500V Series

05-06

For the protection of distribution lines in energy storage systems

07-08

For energy storage system circuit closures

09-10

For energy storage systems lightning protection and protection against operating overvoltages

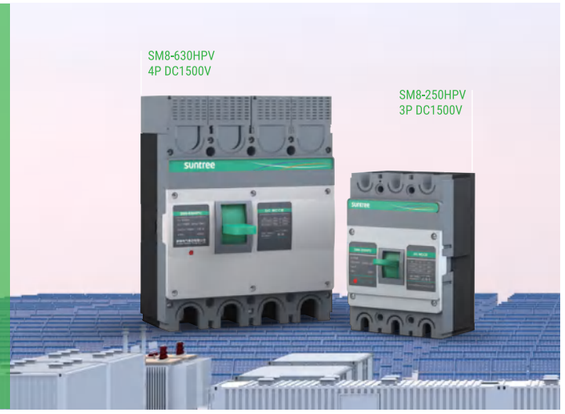
11-14

For energy storage system line overload, overcurrent protection

DC MCCB

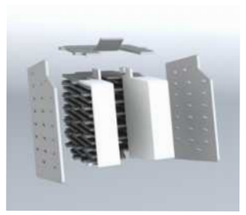
S M 8 - 6 3 0 H P V

For the protection of distribution
lines in energy storage systems

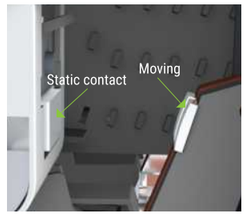


Product advantages

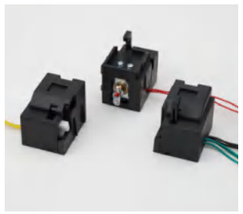
BASE MADE OF DMC
Class V0 flame retardant



LABYRINTH ARCING COVER
Prevent arc propagation in current impact



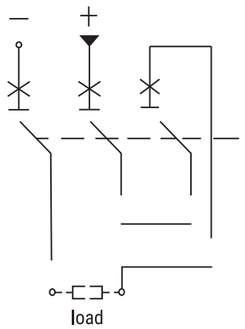
BUILT IN DOUBLE ROW MOVING CONTACT
Lengthen the arc and
increase the arc voltage



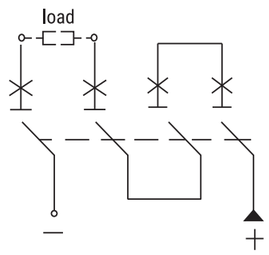
EASY TO INSTALL ACCESSORIES
Implementation of multiple protection
(shunt, auxiliary, alarm, etc.)

Wiring reference

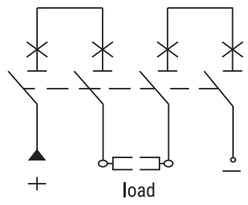
3P Connection mode



G-type connection mode

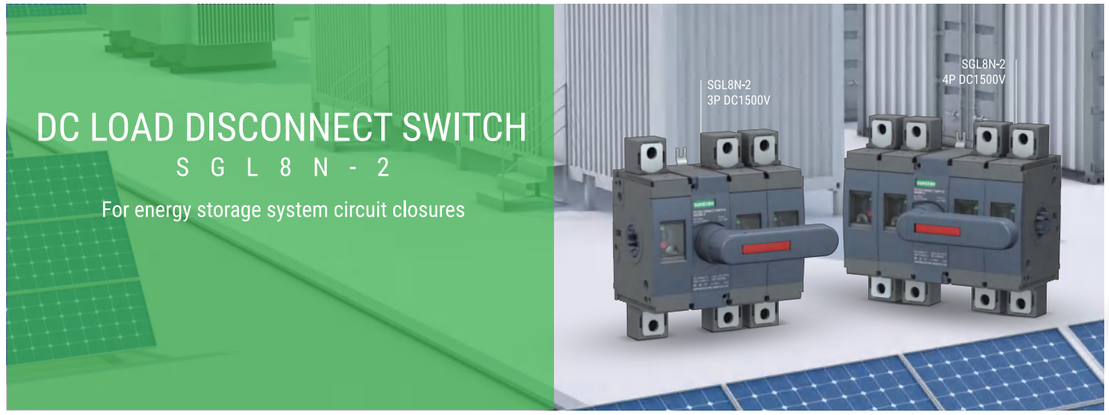


H-type connection mode



Electrical technical reference

Product Model	SM8-250HPV /3 1500V	SM8-630HPV /4 1500V
Product name	PV DC MCCB	PV DC MCCB
Rated service voltage Ue	DC1500V	DC1500V
Rated insulation voltage Ui	1500V	1500V
Rated impulse withstand voltage Uimp	12kV	12kV
Numbers of poles	3	4
Trip type	Thermal magnetic (thermal magnetic non adjustable) TMD fixed	
Manufacturing standards	GB14048.2，IEC/EN 60947-2	
Use category	A(PV-1)	
Current shell frame In	250A	630A
Rated service current Ie	100/125/160/200/225/250A	350/400/500/630A
Breaking type	H	
Ultimate short circuit breaking capacity Icu	Ue1500v 15kA	Ue1500v 15kA Ue1500v 15kA
Rated service short-circuit breaking capacity Ics	Ue1500v 15kA	Ue1500v 15kA Ue1500v 15kA
Current setting Ir	1In	
Instantaneous short circuit protection Li	6In (Min1000A)	
Mechanical life	10000Times	
Electrical life	2000Times	
Overall dimensions L x W x H	135×200 × 135mm	Type H: 310× 240× 155mm Type G: 350× 240× 155mm
Installation mode	Fixed	Fixed
Ingress protection	Wiring terminal: IP20/all sides: IP40	
Relative humidity	Not more than 95% at +50°C	
With wiring polarity requirements or not	NO	
Class of pollution	Level 3	
Service temperature	-40℃ -+75℃	
Operation indications	ON/OFF indication	
Whether the trip is adjustable	NO	
Electrical accessories	Option: shunt/auxiliary/alarm (note: only one set of auxiliary, alarm and shunt can be installed on the left and right side) 2P only on the left side	
Isolating function	Yes	

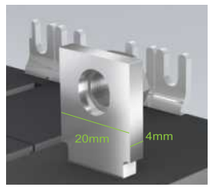


Product advantages

DOUBLE MAGNETIC +
DOUBLE ARC EXTINGUISHING CHAMBER
Can disconnect the power in a compact space

SAVE INSTALLATION SPACE AND COSTS
Connection nuts are available for all products

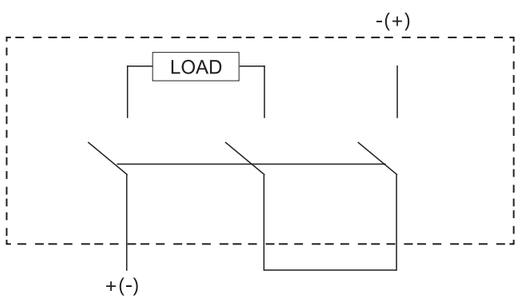
TRENCH STRUCTURE
Increase creepage distance and reduce the risk of current leakage



ULTRA-LARGE TERMINAL BLOCK
4 x 20mm silver plated purple copper terminal blocks as standard

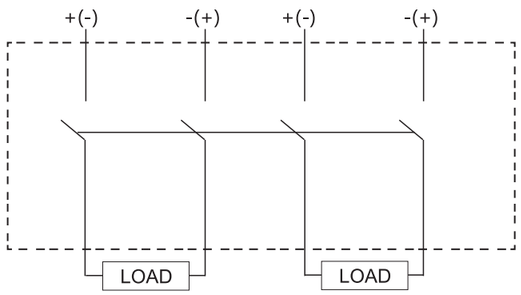
Wiring reference

Connevtion3a



3P 3-pole 1-circuit

Connevtion4b



4P 4-pole 2-circuit

Electrical technical reference

Product Model			SGL8N-2			
Phase (Pole)			3	4(1 set)	4(2 set)	6
Type			Manual	Manual	Manual	Manual
Operaion hander			Left/middle（default）	Middle（default）	Middle（default）	Middle（default）
Ue			1500VDC	1500VDC	1500VDC	1500VDC
Wiring method			3a、3b	4c、4d	4a、4b	6a、6b
Standard	IEC		IEC 60947-3	IEC 60947-3	IEC 60947-3	IEC 60947-3
In(A) Category	1P/2P 3P/4P 6P	32-100A	-	-	PV-1/PV-2	PV-1/PV-2
		125-250A	-	-	PV-1/PV-2	PV-1/PV-2
		320A	PV-2	-	-	-
	4P/6P	400A	-	PV-1	-	-
		500A	-	PV-1	-	-
Ui			1600VDC	1600VDC	1600VDC	1600VDC
Uimp			12KV	12KV	12KV	12KV
Icw 1s/1500Vdc,1s,RMS			8kA	8kA	8kA	8kA
Mechanical			8000	8000	8000	5000
Endurance（times）			1000	1000	1000	500
Acce	Aux Contact		○	○	○	○
	Tripping Coil (SHT)		X	X	X	X
	Power Supply		X	X	X	X
	Terminal Cover		√	√	√	√
	Phase Barriers		○	○	○	○
	Selector type handle		X	X	X	X
	Direct handle		√	√	√	√
	Extention Handle		○	○	○	○
	Key Lock		○	○	○	○

High temperature derating factor

Current specifications	Wiring method	40	50	60	65
< 250A	/	1	1	1	1
250A	2a、2b	1	1	1	1
250A	4a、4b	1	1	0.95	0.88
250A	6a、6b	1	0.95	0.9	0.85
320A	2a、2b	1	1	0.95	0.9
320A	3a、3b	1	0.95	0.9	0.85
400A	4c、4d	1	1	1	1
500A	4c、4d	1	0.95	0.9	0.85

The above data were measured in the laboratory under standard conditions according to GB/T 14048.3

DC SPD

S U P 2 - P V

Used for lightning protection of energy storage system and protection of operating overvoltage.

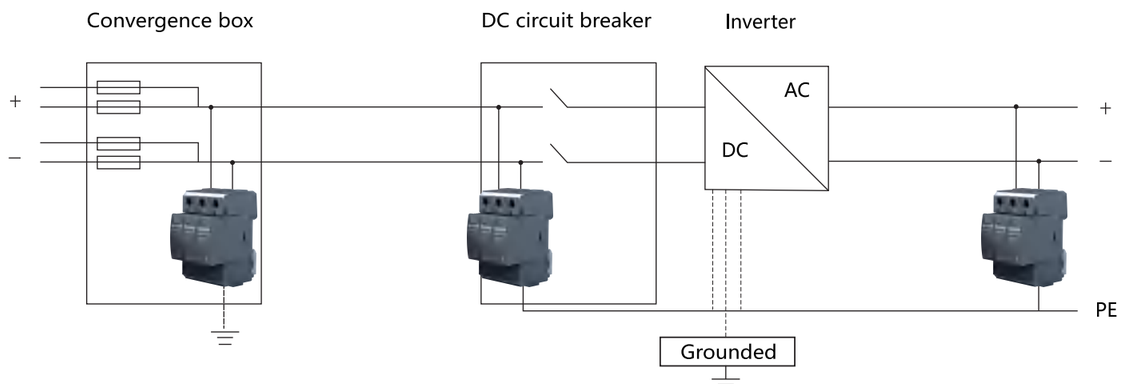
Product advantages

INTERNAL CHIP PROTECTION MECHANISM
Temperature control capability protection circuit with built-in thermal protection mechanism

METAL CLIPS
Easy to install and remove

PBT FLAME RETARDANT CASING
Flame retardant class V0

Wiring reference



Electrical technical reference

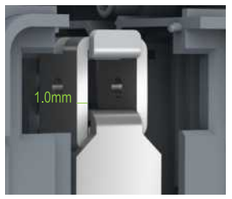
Product Model	SUP2-PV
Max. continuous operating voltage(Uc)	1500VDC
Max. discharge current (Imax)(8/20u s)	40KA
Protection level (In)Up	5.0kV
Service temperature	-40℃~+70℃
Relative humidity	≤95%(25℃)
Installation mode	35mm standard guide rail
Window indication	Normal: green; Failure: Red
Ingress protection	IP20
Numbers of poles	3P
Leakage 0.75u lmA(uA)	≤20

Installation precautions

- The normal range of ambient air temperature should be no higher than +40°C and no lower than -25°C, with a relative humidity of no more than 95%
- The altitude of the installation site shall not exceed 2000m
- Pollution class 3
- Where there is no risk of explosion and the medium is free of gases and conductive dusts sufficient to corrode metals and destroy insulation.
- Wiring resistance
- Grounded copper bus-bar

Product advantages

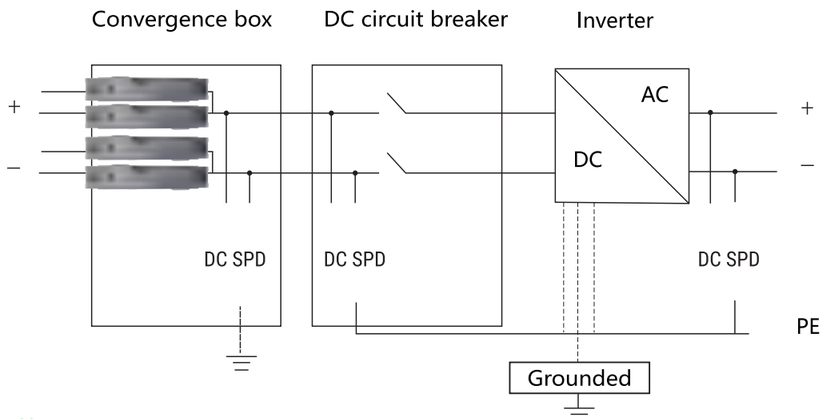
VENTILATION SLOT
The ventilation slot and cooling chamber have strong heat dissipation performance



RED COPPER TERMINAL BLOCK
Thickness up to 1.0mm

INDICATION WINDOW DESIGN
Signal whether the fused core is fused or not (light on fused, off on normal)

Wiring reference



Electrical technical reference

Product Model	CH-50H SRD-50H DC fuse isolating switch
Citation standards	IEC/EN60947-1 IEC/EN 60947-3
Rated insulation voltage Ui	1600V
Rated service voltage Ue	DC1500V
Rated service current Ie	2/3/4/5/6/8/10/12/15 16/20/25/30/32/35/40/45/50A
Rated impulse withstand voltage Uimp	8kV
Rated acceptable power dissipation	≤12W
Numbers of poles	1P
Rated limiting short circuit current	50kA
Fuse dimensions for use	10mm×85mm 14mm×85mm
Ingress protection	IP20
Use category	PV-0

Derating parameters

Poles (P)	Temperature in cabinet (° C reference) volume: 0.1m ³	Derating factor
1~4	20	1
1~4	30	0.96
1~4	40	0.93
1~4	50	0.9
1~4	60	0.85
1~4	65	0.8
1~4	70	0.75
1~4	75	0.7
5~24	20	0.96
5~24	30	0.9
5~24	40	0.85
5~24	50	0.75
5~24	60	0.6
5~24	65	0.5
5~24	70	0.45
5~24	75	0.4

>5P is the data measured when 24P is powered on at the same time

DC fuse link

SRF35H/SRF-50H

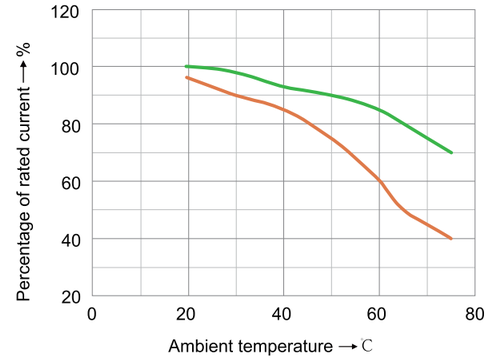
For energy storage system line overload, overcurrent protection

Installation position of fusible core

Electrical technical reference

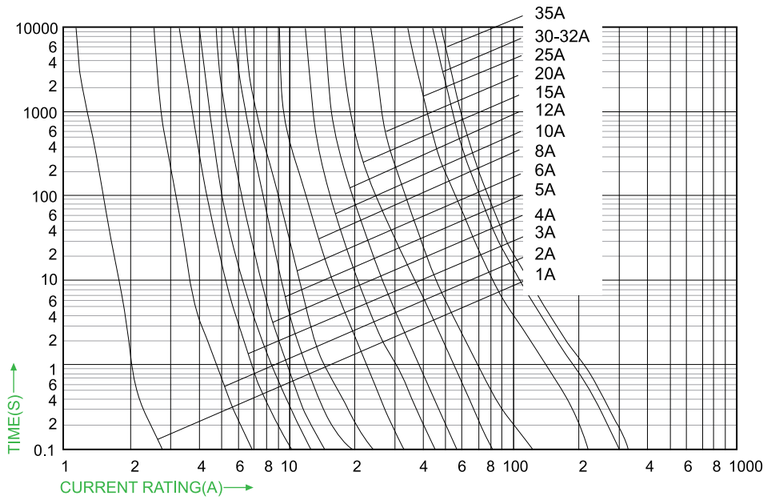
Product Model	SRF-35H	SRF-50H
Rated voltage	1500VDC	1500VDC
Rated service current	1/2/3/4/5/6/8/10/12 15/20/25/30/32/35A	15/20/25/30/32 35/40/45/50A
Rated acceptable power dissipation	6W	12W
Size	10mm×85mm	14mm×85mm
Rated limiting short circuit current	20kA	20kA
Citation standards	EN 60269-1 EN 60269-6	EN 60269-1 EN 60269-6
Ingress protection	IP20	IP20
Use category	PV-0	PV-0

Derating factor



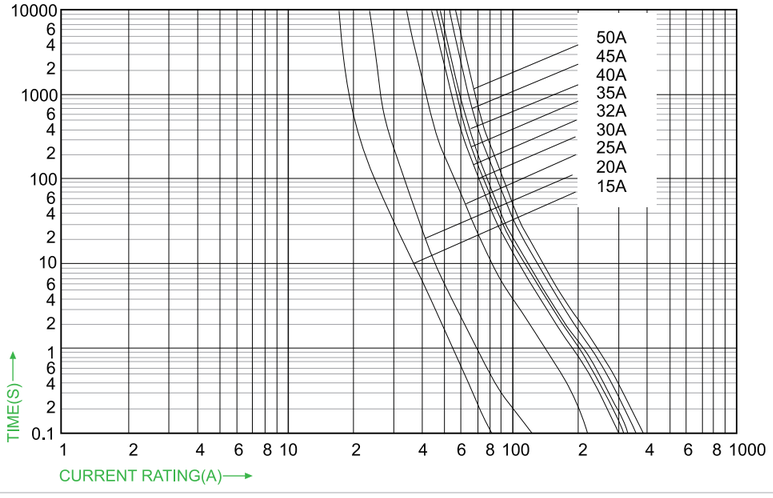
TIME CURRENT CURVE

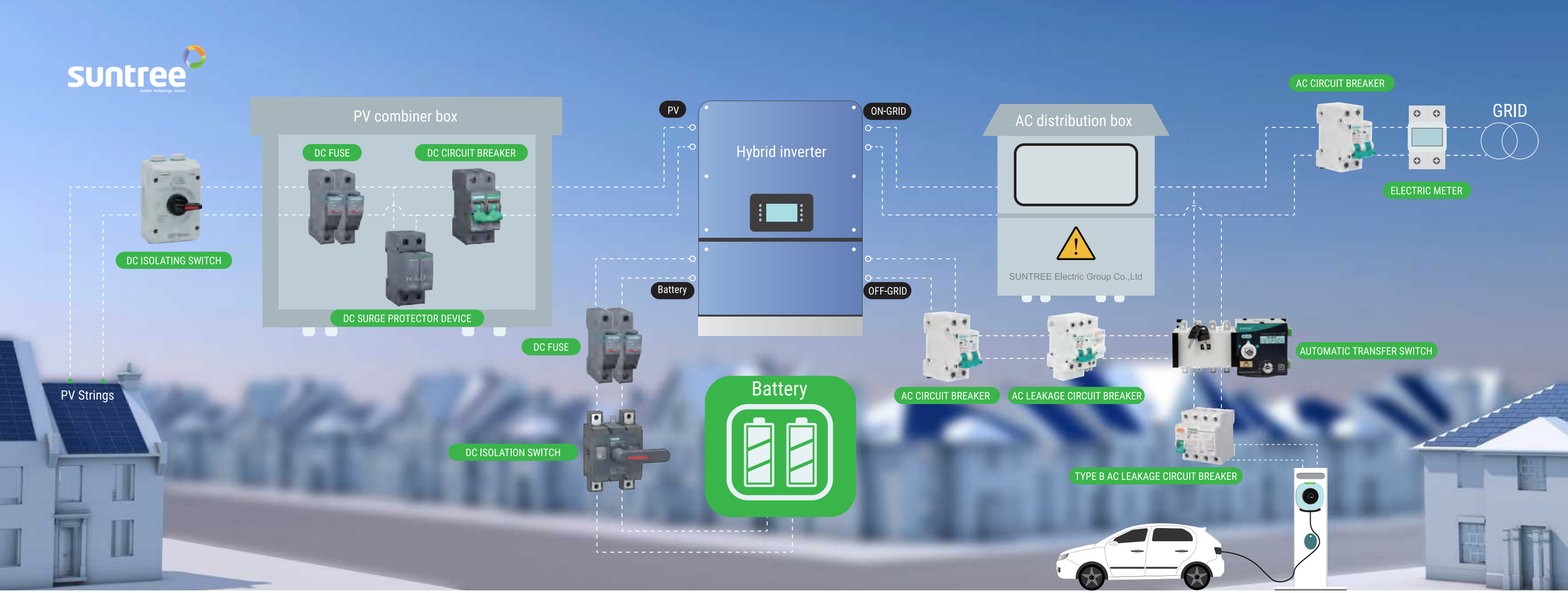
SRF-35H(10×85)



TIME CURRENT CURVE

SRF-50H(14×85)





DC 1000V series components

17-18

For the protection of distribution lines in household energy storage systems

19-20

For household energy storage system overload, overcurrent protection

21-22

For household energy storage system lightning protection and protection against operating overvoltages

23-24

For household energy storage system Circuit closed

25-26

For household energy storage system Installed outdoors to control circuit

AC series components

27

Used for overload and overcurrent protection of on-grid terminal.

28

Used for overload and overcurrent protection of on-grid terminal.

29-30

For automatic switching between normal and standby power supplies

31-34

For use at the lower end of dual supplies to protect the load with small short-circuit current (e.g. non-inductive or micro-inductive)

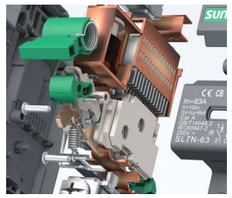
Protective components for commercial household energy storage system

DC MCB

SL7N-63

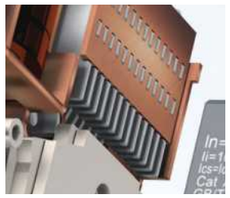
For the protection of distribution lines in household energy storage systems

Product advantages



6KA
High segmentation capability

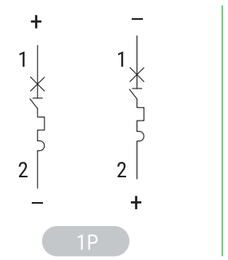
Unique shape design and high recognition.

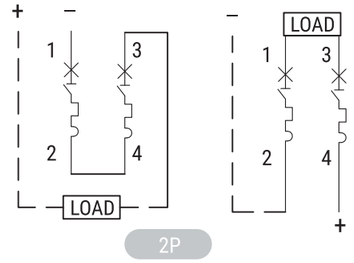


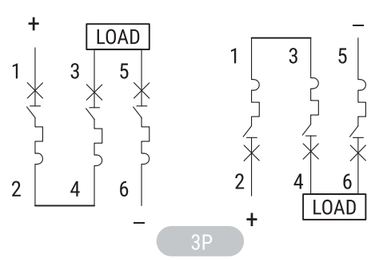
U-shaped magnetic blowing structure to improve arc extinguishing ability

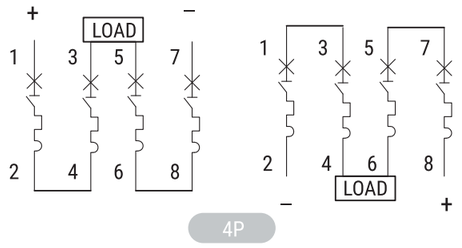
Accessories such as shunt and auxiliary can be assembled, which can protect the load-side products more comprehensively.

Wiring reference









Electrical technical reference

Rated insulation voltage (Ui)	1250V
Rated service voltage (Ue)	DC(1P):15V,60V,100V,180V,250V ; DC(2P):125V,375V , 550V,600V,800V DC(3P):750V,800V ; DC(4P):800V,1000V 1200v
Rated current of current shell frame	63A
Different currents In the same current shell frame	6A、10A、16A、20A、25A、32A、40A、50A、63A
Rated service short-circuit breaking capacity Ics=Icu	Ics=Icu=6kA(2P800V \4P1200V Ics=Icu= 2KA)
Mechanical life	8500 Times
Electrical life	1500 Times (< DC125V / 1P, < DC250V/ 2P), 1000 times (other voltage specifications)
Certificate	CB CE TÜVRheinland
Rated impulse withstand voltage Uimp	6kV
Trip characteristics / trip type	B/C
Overvoltage category	Ⅲ
Class of pollution	3
Ingress protection	IP40; terminal IP20
Resistance to heat and humidity	Class 2
Relative humidity	≤95%
Standards compliant	IEC 60947-2 GB/T 14048.2
Shock resistance	According to IEC60068-2-6
Mechanical shock resistance parameters	According to IEC60068-2-27
Service ambient temperature	-30℃~70℃
IEC60068-4Resistance to heat and humidity(IEC60068-4)	Class Db (temperature 55°C 6 cycles)
Storage ambient temperature	-40℃~85℃
Altitude	≤2000m
Weight accessories	0.12kg/P
Accessories	OFISD/MX/MN/MX+OF
MX control voltage Us	DC:12V,24V,220V ; AC:110V,220V,380V power supply recommended not less than 75W
MN rated voltage Un	AC220V AC380V

DC FUSE

SRD-30

For household energy storage system overload, short-circuit protection

Product advantages

PLUG IN DESIGN

Quick replacement of fusible core to improve efficiency

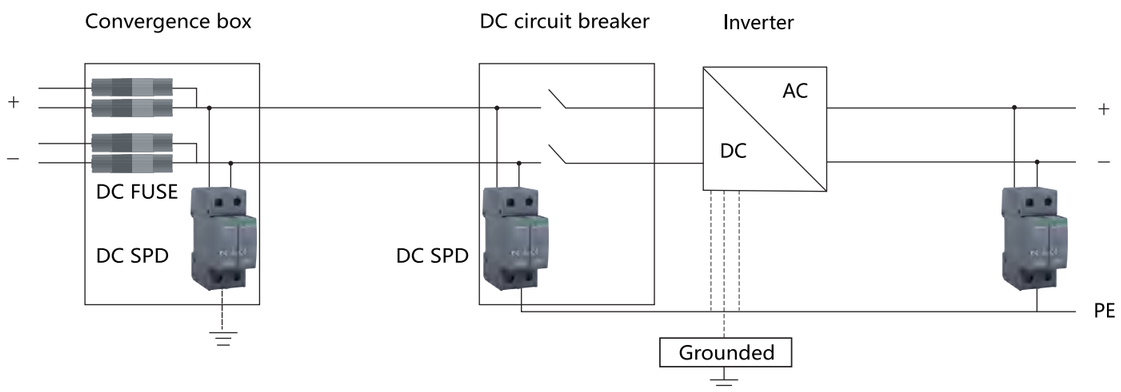
INDICATION WINDOW DESIGN

Signal whether the fused core is fused or not (light on fused, not on normal)

PA66 FLAME RETARDANT MATERIAL

Flame retardant class V2

Wiring reference



Electrical technical reference

Product Model	SRD-30
Citation standards	IEC/EN60947-1 IEC/EN 60947-3
Rated insulation voltage Ui	1200V
Rated service voltage Ue	DC1100V
Rated service current (Ie)	2/3/4/5/6/8/10/12/15/16/20/25/30A
Rated impulse withstand voltage Uimp	6kV
Rated acceptable power dissipation	4W
Numbers of poles	1P
Rated limiting short circuit current	30kA
Fuse dimensions for use	10mm×38mm
Ingress protection	IP20
Use category	PV-0

Aerating Parameters

Poles (P)	Ambient temperature	Temperature in cabinet (° C reference) volume: 0.1m ³	Derating factor
1~4	25	30	1
1~4	30	40	0.93
1~4	40	50	0.9
1~4	50	60	0.85
5~24	-11	30	0.9
5~24	3	40	0.85
5~24	18	50	0.75
5~24	40	60	0.6
5~24	55	65	0.5
5~24	60	70	0.45
5~24	65	75	0.6

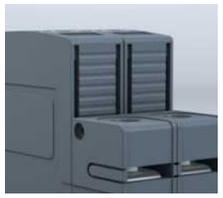
For “> 5p” items,the data are measured when 24P are powered on at the same time.

DC SPD

SUP2H1-PV

For household energy storage system
Lightning protection and protection against operating overvoltages

Product advantages



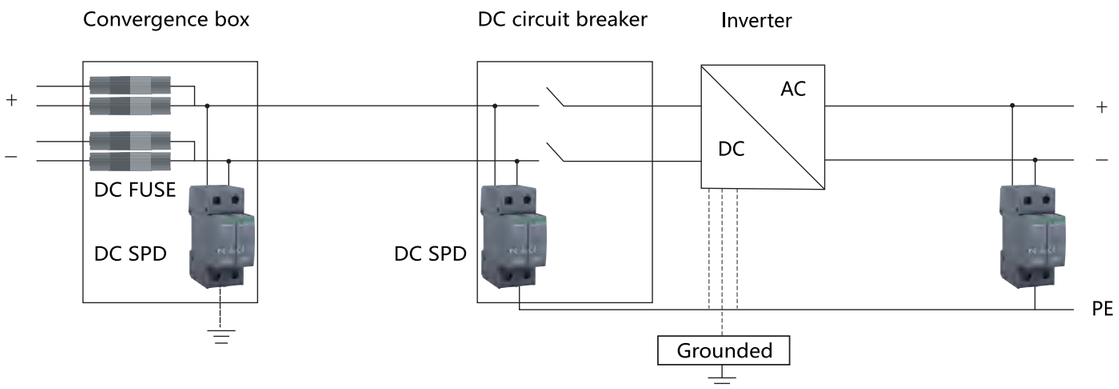
HEAT DISSIPATION HOLE
Quickly dissipate heat, reduce the service temperature.

PLUG-IN CLIPS
Easy module replacement

FLASH BARRIER
Prevent arc propagation in current impact

High reliability
Single chip voltage up to 750V

Wiring reference



Electrical technical reference

Product Model	SUP2H-PV			SUP2H1-PV	
Max. continuous operating voltage (Uc)	500VDC	600VDC	800VDC	1000VDC	1200VDC
Max. discharge current (Imax)(8/20u s)	20、40KA				
Protection level (In)Up	2.8kV	2.8kV	3.0kV	3.6kV	4.0kV
Service temperature	-40℃~+70℃				
Relative humidity	≤95%(25℃)				
Installation mode	35mm standard guide rail				
Window indication	Normal: green; Failure: Red				
Ingress protection	IP20				
Numbers of poles	1P、2P、3P				
Leakage 0.75u ImA(uA)	≤20				

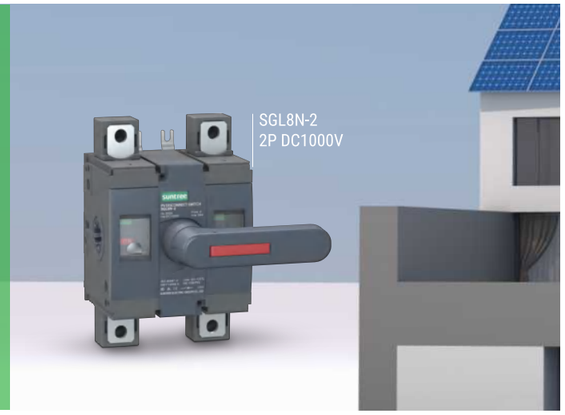
Installation precautions

- The normal range of ambient air temperature should be no higher than +40°C and no lower than -25°C, with a relative humidity of no more than 95%; The altitude of the installation site shall not exceed 2000m;
- Pollution class 3;
- Where there is no risk of explosion and the medium is free of gases and conductive dusts sufficient to corrode metals and destroy insulation.Wiring resistance
- Grounded copper bus-bar

DC LOAD DISCONNECT SWITCH

S G L 8 N - 2

For household energy storage system circuit closure

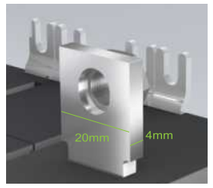


Product advantages

DOUBLE MAGNETIC +
DOUBLE ARC EXTINGUISHING CHAMBER
Can disconnect the power in a compact space

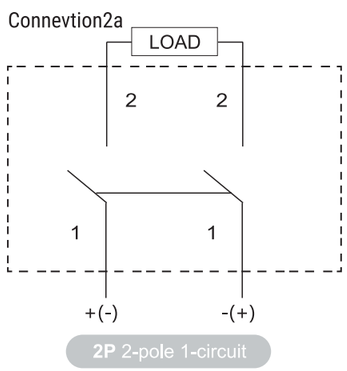
SAVE INSTALLATION SPACE AND COSTS
Connection nuts are available for all products

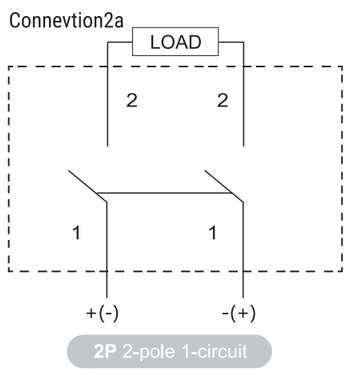
TRENCH STRUCTURE
Increase creepage distance and reduce the risk of current leakage

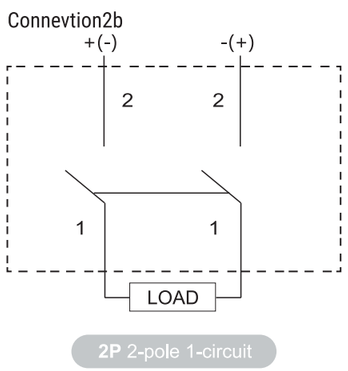


ULTRA-LARGE TERMINAL BLOCK
4 x 20mm silver plated purple copper terminal blocks as standard

Wiring reference







Electrical technical reference

Product Model			SGL8N-2
Phase (Pole)			2
Type			Manual
Operaion hander			Left/middle(default)
Ue			1500VDC
Wiring method			2a、2b
Standard	IEC		IEC 60947-3
In(A) Category	1P/2P/3P/4P/6P	32-100A	PV-1/PV-2
		125-250A	PV-1/PV-2
		320A	PV-1
	4P/6P	400A	-
		500A	-
Ui			1600VDC
Uimp			12KV
Icw 1s/1500Vdc,1s,RMS			8kA
Mechanical			8000
Endurance (times)			1000
Acce	Aux Contact		○
	Tripping Coil (SHT)		X
	Power Supply		X
	Terminal Cover		√(standard equipment)
	Phase Barriers		○
	Selector type handle		X
	Direct handle		√(standard equipment)
	Extention Handle		○
	Key Lock		○

High temperature derating factor

Current specifications	Wiring method	40	50	60	65
< 250A	/	1	1	1	1
250A	2a、2b	1	1	1	1
250A	4a、4b	1	1	0.95	0.88
250A	6a、6b	1	0.95	0.9	0.85
320A	2a、2b	1	1	0.95	0.9
320A	3a、3b	1	0.95	0.9	0.85
400A	4c、4d	1	1	1	1
500A	4c、4d	1	0.95	0.9	0.85

The above data were measured in the laboratory under standard conditions according to GB/T 14048.3

DC ISOLATING SWITCH

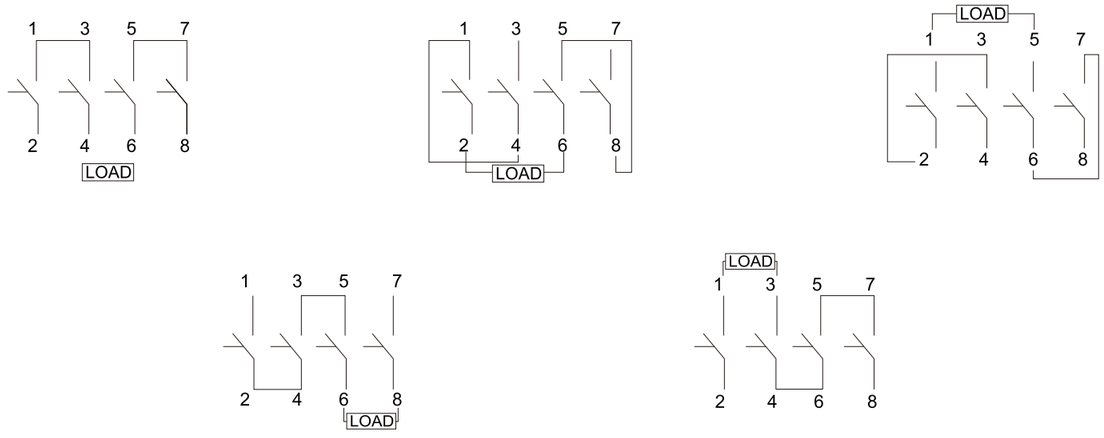
SISO-40

For circuit closure during maintenance of photovoltaic systems

Product advantages

- 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
- DC-PV1 DC-PV2 DC-21B
- 10A To 40A UP To DC1200V
- Easy To Install

Wiring reference



Electrical technical reference

Type	SISO-40MD、SISO-40
Function	Isolator,Control
Standard	IEC/EN 60947-3,AS 60947.3
Utili zation category	DC-PV2/DC-21B
Pole	4P
Rated frequency	DC
Rated voltage(Ue)	300V,≤600V,800V,1000V,1200V
Rated operational current(Ie)	10A,16A,25A,32A,40A,50A
Rated insulation voltage(Ui)	1500V
Conventional free air thermal current(Ith)	II
Conventional enclosed thermal current(Ithe)	32A
Rated short-time withstand current(Icw)	1kA,1s
Rated short-circuit making capacity(Icm)	1.7kA
Rated conditional short-circuit current(Icn)	3kA
Rated impulse withstand voltage(Uimp)	8.0kV
Overvoltage category	II
Suitability for isolation	Yes
Uv resistant	Yes
Polarity	No polarity, “+” and “-” polarities could be interchang ed.
Service Life/Cycle Operation	
Mechanical	20000
Electrical	2000
Installation Environment	
Ingress protection Enclosure	IP66NW
Ingress protection Switch body	IP20
Storage Temperature	-40℃~+85℃
Mounting Type	Vertically or horizontally
Pollution degree	3
Suitable environment	Outdoor/Indoor
Torque:Nm	1.8-2.0
Cable range:mm²	4mm²-16mm²

AC CIRCUIT BREAKER

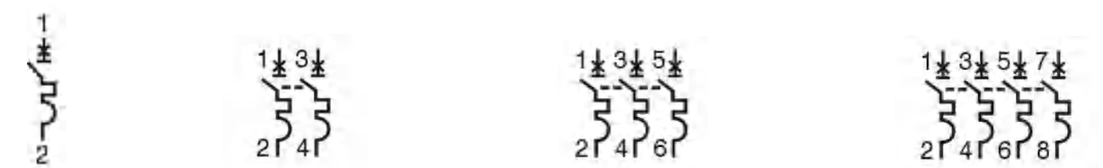
S C B 8 - 6 3

Used for overload and overcurrent protection of on-grid terminal.

Electrical technical reference

Product Model	Pole (P)	Rated current (A)	Rated voltage (V)	Segmental force(A)	Instantaneous trip type	Instantaneous protection current range
SCB8-63	1P、2P	6、10、16、20、25、32、40、50、63A	AC230/240	6000	B	3In<I≤5In
					C	5In<I≤10In
					D	10In<I≤20In
	3P、4P		AC400		B	3In<I≤5In
					C	5In<I≤10In
					D	10In<I≤20In

Wiring reference



AC LEAKAGE CIRCUIT BREAKER

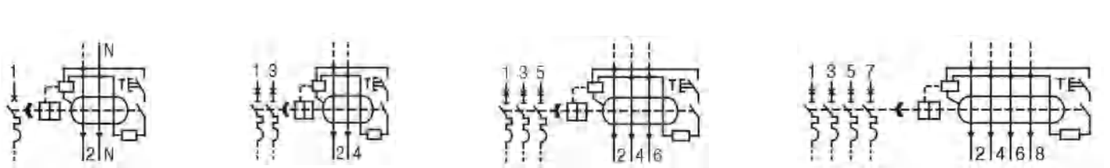
S C B 8 L E - 6 3

Used for overload, overcurrent and earth leakage protection of on-grid terminal.

Electrical technical reference

Product Model	SCB8LE-63	SCB8LE-63HS
Pole	1P+N、2P、3P、3P+N、4P	
Rated current (A)	6、10、16、20、25、32、40、50、63A	
Rated voltage (V)	1P+N 2P	AC230
	3P 3P+N 4P	AC400
Breaking capacity (A)	SCB8LE-63 6000 / SCB8LE-63HS 10000	
Rated residual nonworking current(mA)	15 25 50 150	
Rated residual operating current(mA)	30 50 100 300	
over current instantaneous release type	B、C、D	

Wiring reference



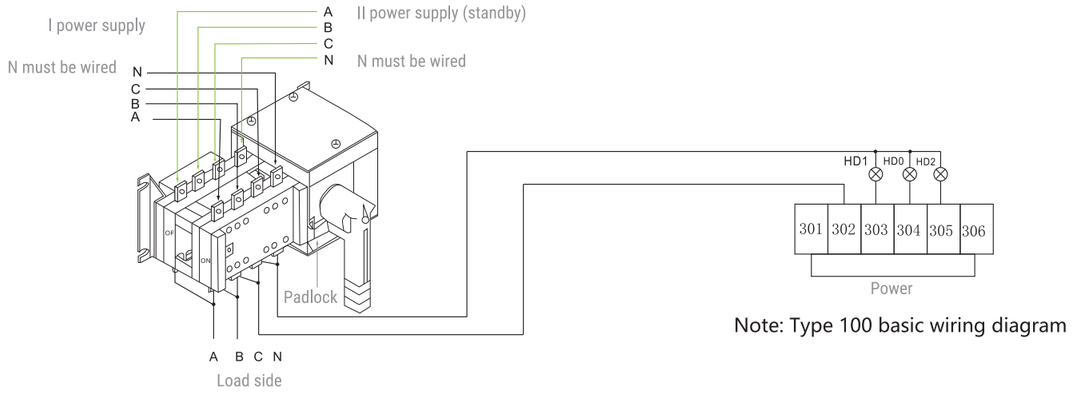
suntree

Automatic Transfer Switch

S Q 5 - 1 6 0

For automatic switching between normal and standby power supplies

接线参考



Note: Type 100 basic wiring diagram

Main technical and parameters

Electrical and mechanical properties of SQ5-16~100 series automatic transfer switch

Conventional heating current Ith			100A							
Rated current In(A)			16A	20A	25A	32A	40A	50A	63A	80A	100A
Rated insulation voltage Ui(V)			500	500	500	500	500	500	500	500	500
Medium strength (M)			3000	3000	3000	3000	3000	3000	3000	3000	3000
Rated impulse withstand voltage Uimp kV			6	6	6	6	6	6	6	6	6
Rated woeking current Ie(A)	400V	AC-31	16	20	25	32	40	50	63	80	100
		AC-33	16	20	20	25	32	40	50	63	80
		AC-35	16	20	25	32	40	50	63	80	100
	200V	AC-31	16	20	25	32	40	50	63	80	100
		AC-33	16	20	20	25	32	40	50	63	80
		AC-35	16	20	25	32	40	50	63	80	100
Motor power(400V)KW			8	10	15	15	20	25	30	30	32
Rated short-time withstand curent Icw(kA Rms)0.1S/1S			9/5	9/5	9/5	9/5	9/5	9/5	9/5	9/5	9/5
Rated breaking capacity (A Rms) AC33 380V			125	160	200	250	320	400	500	640	800
Rated turn-on capacity (A Rms) AC33 380V			160	200	250	320	400	500	640	800	1000
Rated short-cicuit capanility Icm (kA peak)			8	8	8	8	8	8	8	8	8
Mechanical life (numner of cycles)			6000	6000	6000	6000	6000	6000	6000	6000	6000
Electrical life	cosΦ=0.65 AC33		2000	2000	2000	2000	2000	2000	2000	2000	2000
Transfer time	I-OII or II-OI (S)		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	I-O or II-O (S)		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Electrical control energy consumption	24V(DC) (W)		25	25	25	25	25	25	25	25	25
	220V(AC) (W)		25	25	25	25	25	25	25	25	25
Operating force distance (Nm)			15	15	15	15	15	15	15	15	15

Main technical and parameters

SQ5-125-3200 serie automatic transfter switch Electrical and mechanical properties

Conventional heating current It (A)			160A		250A		630A		1600A			
Rated current In(A)			125A	160A	200A	250A	400A	630A	800A	1000A	1250A	1600A
Rated insulation voltage Ui(V)			500	500	500	500	500	500	500	500	500	500
Medium strength (M)			5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Rated impulse withstand voltage Uimp kV			8	8	8	8	12	12	12	12	12	12
Rated woeking current Ie(A)	400V	AC-31	125	160	200	250	400	630	800	1000	1250	1600
		AC-33	125	160	200	250	400	630	800	1000	1250	1600
		AC-35	125	160	200	250	340	536	630	800	1000	1250
	200V	AC-31	125	160	200	250	400	630	800	1000	1250	1600
		AC-33	125	160	200	250	400	500	800	1000	1250	1600
		AC-35	100	160	160	200	315	500	630	800	1000	1250
Motor power(400V)KW			8	10	15	15	20	25	30	30	32	560
Rated short-time withstand curent Icw(kA Rms)0.1S/1S			20/10	20/10	25/12	25/12	40/20	50/25	90/50	90/50	90/50	90/50
Rated breaking capacity (A Rms) AC33 380V			1000	1000	200	250	320	400	500	640	800	800
Rated turn-on capacity (A Rms) AC33 380V			1250	1250	250	320	400	500	640	800	1000	1000
Rated short-cicuit capanility Icm (kA peak)			12	12	17	17	30	30	50	50	50	50
Mechanical life (numner of cycles)			6000	6000	4000	4000	2000	2000	1000	1000	1000	3000
Electrical life	cosΦ=0.65 AC33		1000	1000	1000	1000	500	500	400	400	400	300
Transfer time	I-OII or II-OI (S)		1	1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2
	I-O or II-O (S)		0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8
Electrical control energy consumption	24V(DC) (W)		75	75	75	15	90	90	120	120	120	120
	220V(AC) (W)		75	75	75	75	90	90	120	120	120	120
Operating force distance (Nm)			19	19	26	26	39	39	39	39	39	60

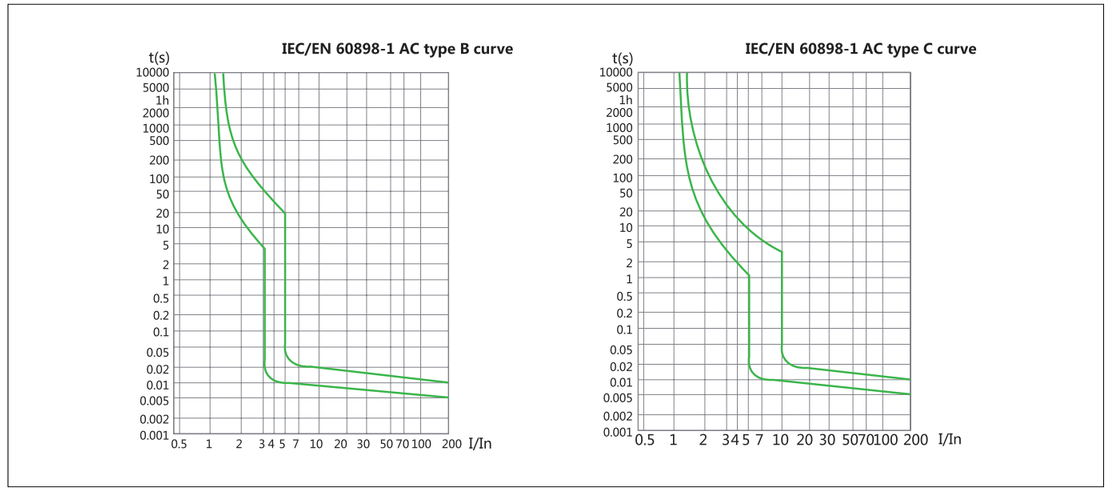
TYPE B
AC LEAKAGE CIRCUIT BREAKER
S C B 8 L D - 6 3

For use at the lower end of dual supplies
to protect the load with small short-circuit current
(e.g. non-inductive or micro-inductive circuits)

Main technical and parameters

Types	Values
Rated voltage Un	240V~1P+N,415V~3P+N
Rated current In	16A,25A,32A,40A,63A
Rated residual operated current I △ n	0.03A,0.1A,0.3A
Poles	1P+N,3P+N
Type of residual current	Type B (AC+A+ smoothing DC+F+ high frequency signal 1K Hz)
Rated limited short circuit current Inc	10000A
Rated limited residual short circuit current I △ c	10000A
Rated making and breaking capacity Im	1000A
Rated residual making and breaking capacity I △ m	1000A
Rated insulation voltage Ui	500V
Rated impulse withstand voltage Uimp	4000v
Electrical life	2000 Times
Mechanical life	10000 Times
Operated ambient temperature°c	-25~+40
Stored ambient temperature°c	-25~+70
Tightening torque	3N.m
Connection capacity	16mm2
Pollution level	2
Protection level	IP20
Mounting type	II

Time Current Curve



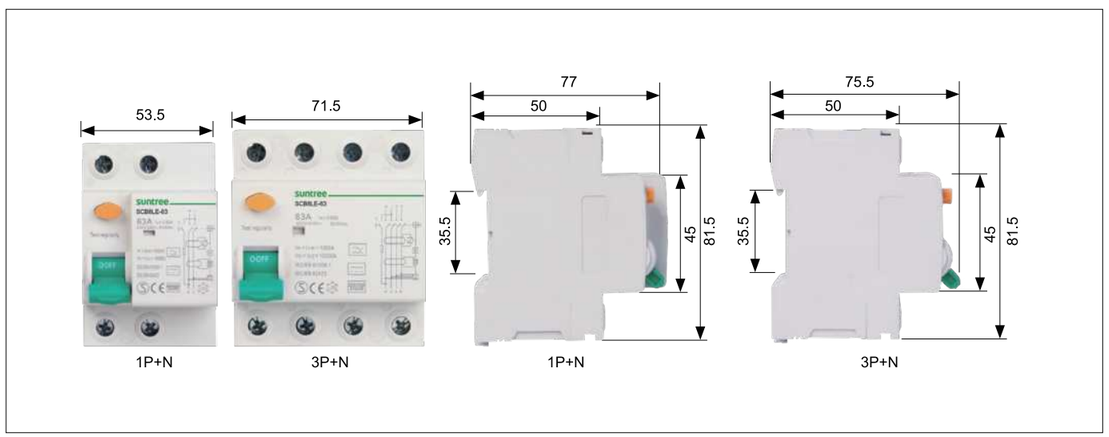
Mechanical and electrical life

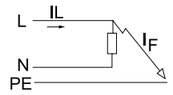
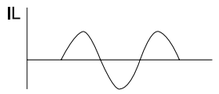
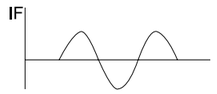
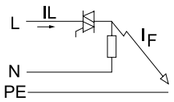
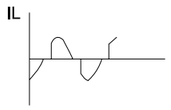
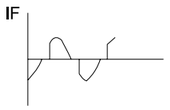
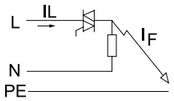
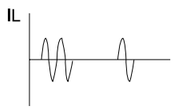
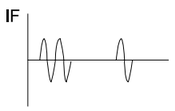
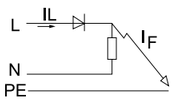
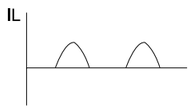
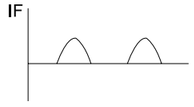
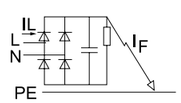
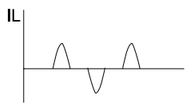
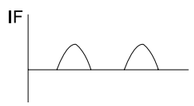
Category	Time	Operation Time(time/hour)
Mechanical life	10000	240
Electrical life	2000	In≤32A 240 In≥32A 120

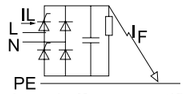
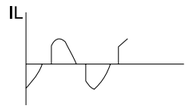
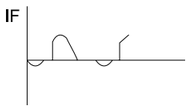
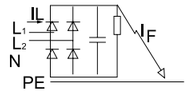
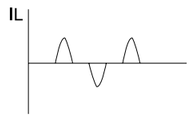
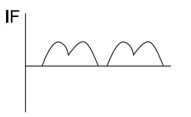
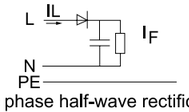
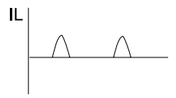
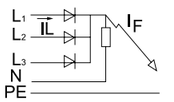
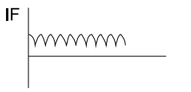
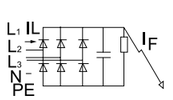
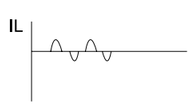
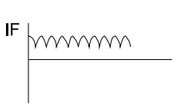
Connection wire

Rated current In(A)	Section area of copper wire S(mm²)
6	1.0
10	1.5
16,20	2.5
25	4
32	6
40	10

Overall and mounting sizes(mm)



Circuit diagram	Normal loop current	Loop current of earthing fault	Detection type of residual current		
			AC	A	B
 Single phase			✓	✓	✓
 Phase control			✓	✓	✓
 Impulse control			✓	✓	✓
 Single phase half-wave rectification			×	✓	✓
 Single phase full-wave rectification			×	✓	✓

Circuit diagram	Normal loop current	Loop current of earthing fault	Detection type of residual current		
			AC	A	B
 Single phase half-wave rectification, half phase control			×	✓	✓
 Single phase full-wave rectification			×	×	✓
 Single phase half-wave rectification, with filtering			×	×	✓
 Three phase half-wave rectification			×	×	✓
 Three phase half-wave rectification, with filtering			×	×	✓