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ADMIN@STWSA.CO.ZA

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Solar Energy Accessories

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Application

STW-D40 Series Surge Protection Device was designed andmanufactured , complying the standard EN61643-31 , it widely uesdin PV DC combiner box , inverter controller and PV DC cabinet .Rated voltage DC1000V , Maximum discharge current 40KAHigh Energy Varistor , high effective for lightning protection

Feature

Suitable for use in all PV systems
Prewired modular complete unit , consisting of A base part plug-in protection modules
Plug-in protection module , easily installation and maintainance
High energy varistor , response time less than 25 nanosecond
Optional remote signalling contact (FM) for monitoring device (Floating changeover contact)
Din rail mounting TH35-7 . 5 / DIN35
Green window will change when fault occurs , also provide remote alarm terminal
Standard : EN61643-31

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Parameter

Electrical Characteristics			
Type			
Pole		2P	3P
Standard		EN61643-31	
Rated Voltage (max continuous a.c. voltage [Ue]		DC800V/DC1000V/DC1200V	
Nominal discharge current (8 / 20) [In]		20KA	
Maximum discharge current (8 / 20) [In]		40KA	
Voltage protection level [Up]		3.2KV/4.0KV/4.4KV	
Response time [TA]		<25ns	
Control and Indication			
Operating State / Fault Indication		Green / Red	
Remote Signalling	Max working voltage(V)	30V DC	
Contact (Optional)	Max working current(A)	1A	
Connection and Installation			
Wire	Hard cabie mm^2	$4mm^2$~$25mm^2$	
	Fiexible cabie mm^2	$4mm^2$~$25mm^2$	
Terminal Screws		M5	
Torque (NM)	Main Circuit	2.5	
	Remote Contact	0.25	
Ingress Protection		IP20	
Installation Environment			
Operating Temperature Range TU		-40℃~85℃	
For Mounting on		TH35-7.5/DIN35	
Relative Humidity		30%~90%	
Weight		0.24kg	0.36kg

Solar Energy Accessories

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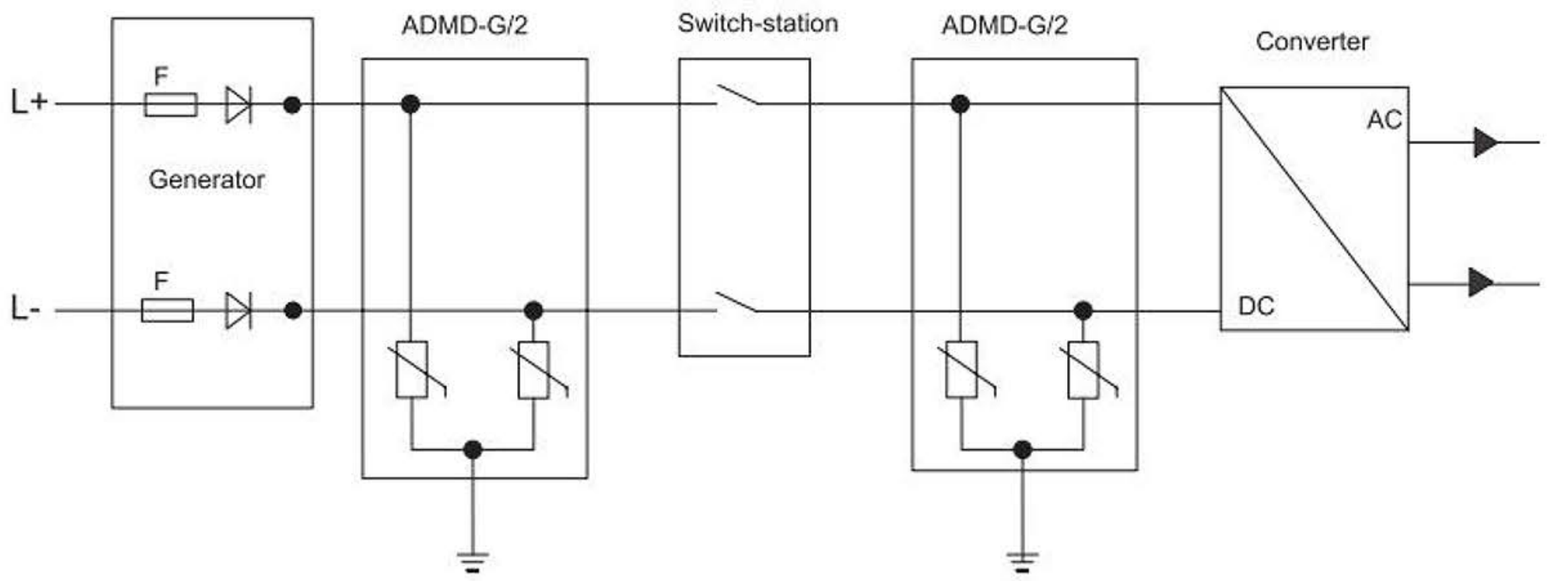
Application

STW-C40 series SPD secondary power surge protectors are designed according to IEC and GB standards. The products with powerful surge release capability, each of the maximum discharge current 10~80kA(8/20μs), applicable to low-voltage distribution system protection at all levels, according to different distribution systems (TT/TN/IT) can choose a variety of combinations.

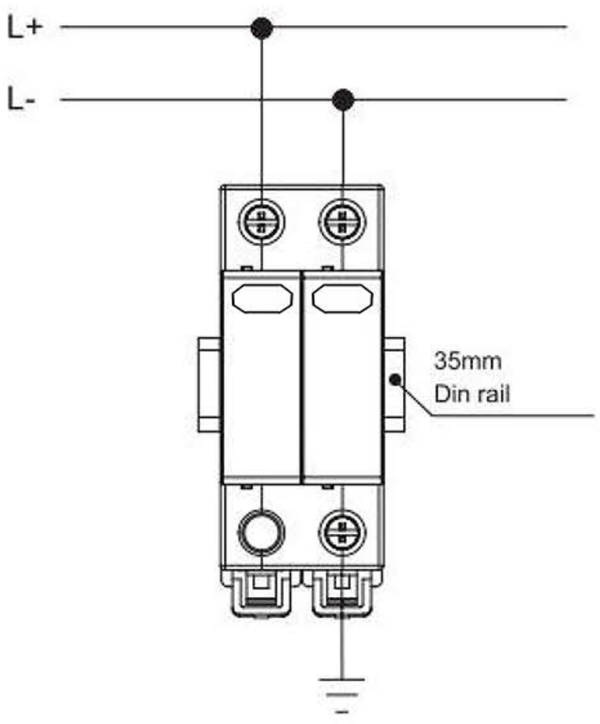
Parameter

Type	STW-C40			
Protection level B,C,D Grade	D,C,B			
Rated Operating Voltage Un(V)	380V/220V			
Max continuous operating voltage Uc/V	275V	320V	385V	385V
Voltage protection level up(KV)	≤1.0	≤1.2	≤1.8	≤2.0
Maximum discharge current Imax(8/20μs)KA	5	10	20	30
Nominal discharge current In(8/20μs)KA	10	20	40	60
Response times	≤25			
Test Standard	IEC61643.1, GB18802.1			
Operating Environment	-40 degree to + 85 degree			
Max Connection Line	35mm2 hard wire/35mm2 strand wire copper line			
Recommended Connection Line	16mm2 hard wire/25mm2 strand wire copper line			
keyword	ac surge protection device			

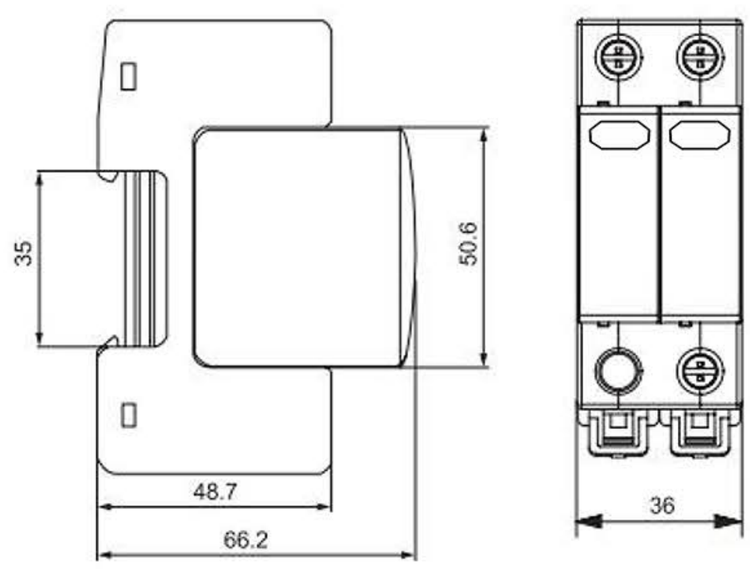
Principal Drawing



Wiring Method



Dimensions(mm)



Scope of application

STW2-63DC series dc circuit breaker is mainly suitable for rated voltage up toand DC1000V , rated current DC 63A and under new energy dc power generation ,storage , custom power system , digital and computer center , communication system , intelligent city (construction , municipal and public facilities) , smart home ,transportation and micro power grid in the areas of low voltage power distribution system .
Conformity to GB / T 14048.2 IEC 60947-2

STW2-63DC series DC miniature circuit breaker are high-performance DC miniature circuit breaker with a single-pole width of 18mm , rated current up to 100A , rated short-circuit breaking capacity up to 10KA , and various technical parameters leading in China.

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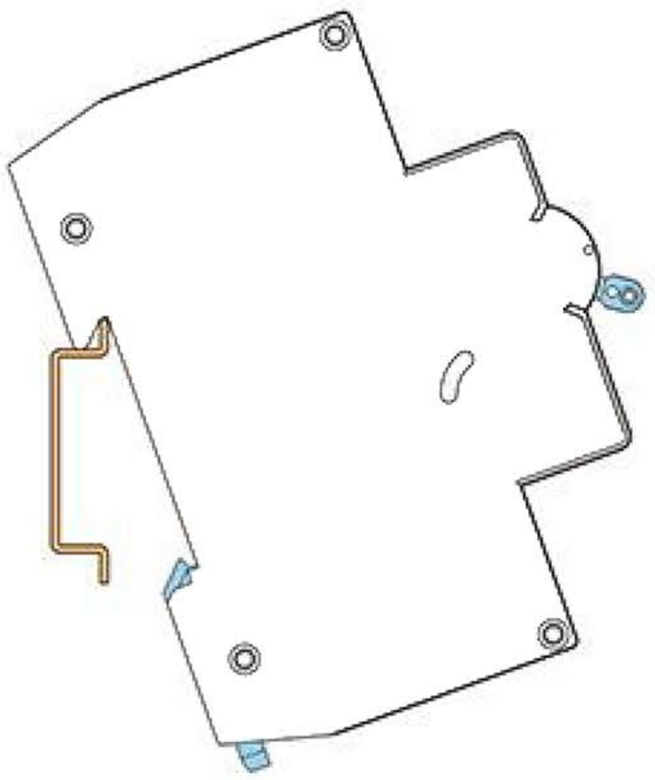
Specifications

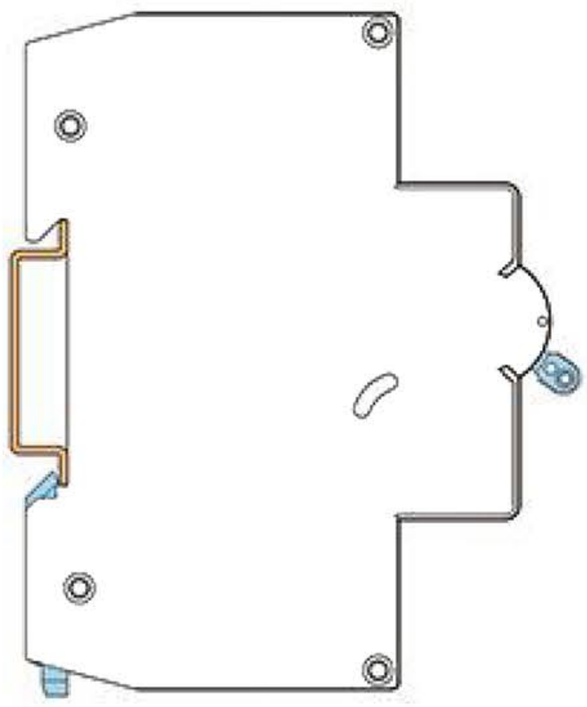
STW2 Series circuit breaker	STW2-63DC
Shell frame grade Current(A)	100
Standardards	IEC 60947-2
Rated Insulantion voltage Ui(V)	1000
Rated Impulse Withstand Voltage Uimp（kv)	6
Rated current（A)	16、20、25、32、40、50、63、80、100
Rated voltage	DC250V(1P)、500V(2P)、800V(3P)、1000V(4P)
Electromagnetic trip characteristics	10In+20%
Tripping curves	C : 8in + 20 % D 12in + 20%
Number of poles	1P , 2P , 3P , 4P
Icu	18mm
Ics	10KA
Reference temperature	7.5KA
Unipolar width	30℃
Utilization Category	A
Mechanical life	20000Cycles
Electrical life	2000Cycles
Protection Degree	IP20

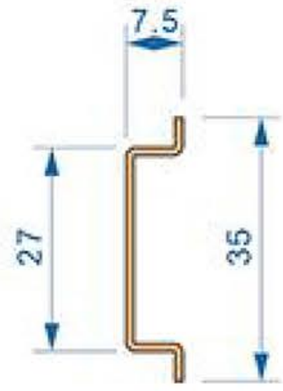
Current trip characteristics

Rated current In(A)	Overload trip feature		Electomagnetic trip action current(A)
	1.05In agreed non-trip time H(cold state)	1.30In agreed trip time H(hot state)	
In≤63	1	1	B(6In±20%) C(6In±20%)
In≥63	2	2	

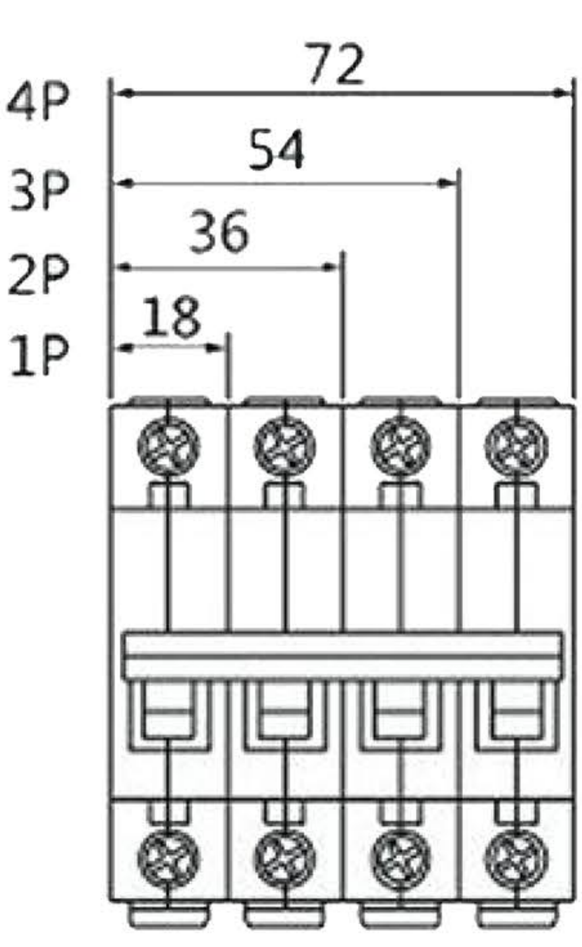
Mounting

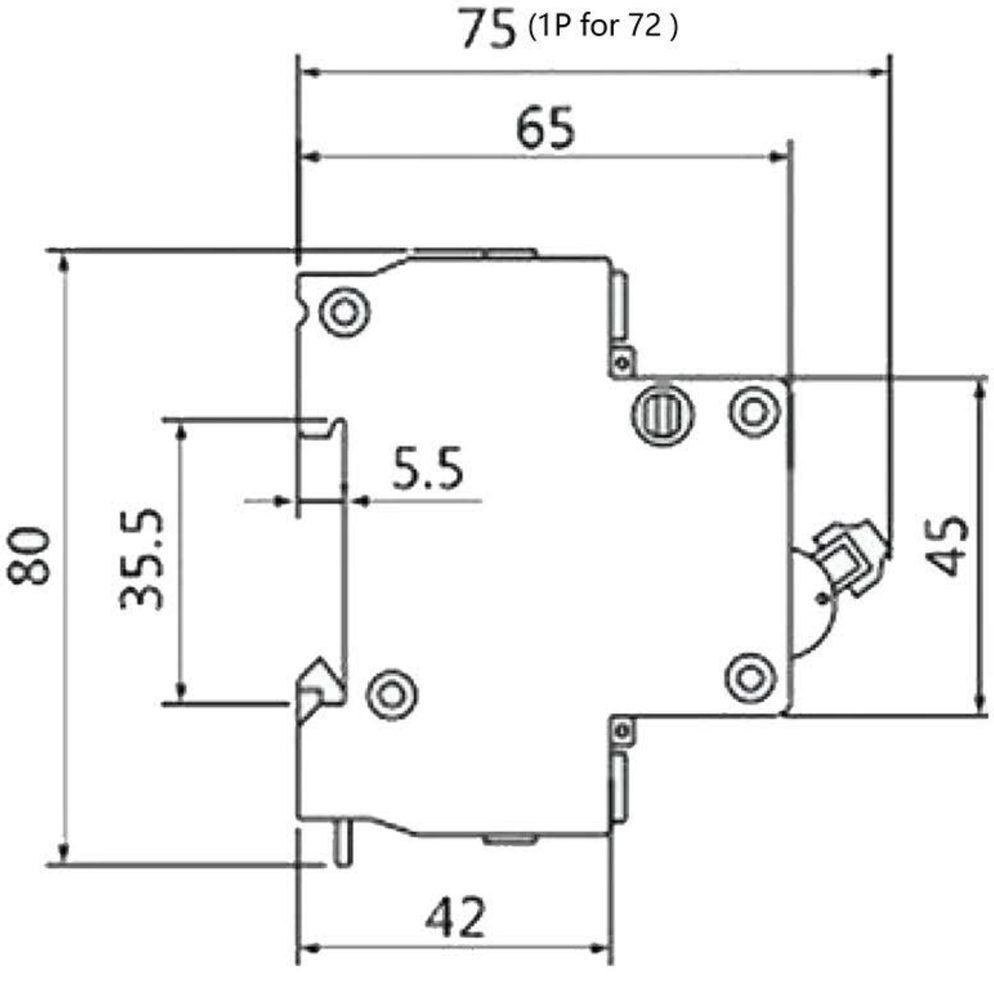






Overall dimensions





Scope of application

STW2-125 series DC miniature circuit breaker have rated working voltageup to 1000V , mainly suitable for overload and short circuit protection of DC power distribution system equipment and electrical equipment with rated current 125A and below , widely used in power , postal , transportation , mining enterprises and various fields , also can be used for infrequent on-off operation . InChina , the shell current and rated short-circuit breaking capacity of our products are the highest in the same category.

STW2-125DC series DC miniature circuit breaker are high-performance DC miniature circuit breaker with a single-pole width of 27mm , rated current up to 125A , rated short-circuit breaking capacity up to 15KA , and various technical parameters leading in China.

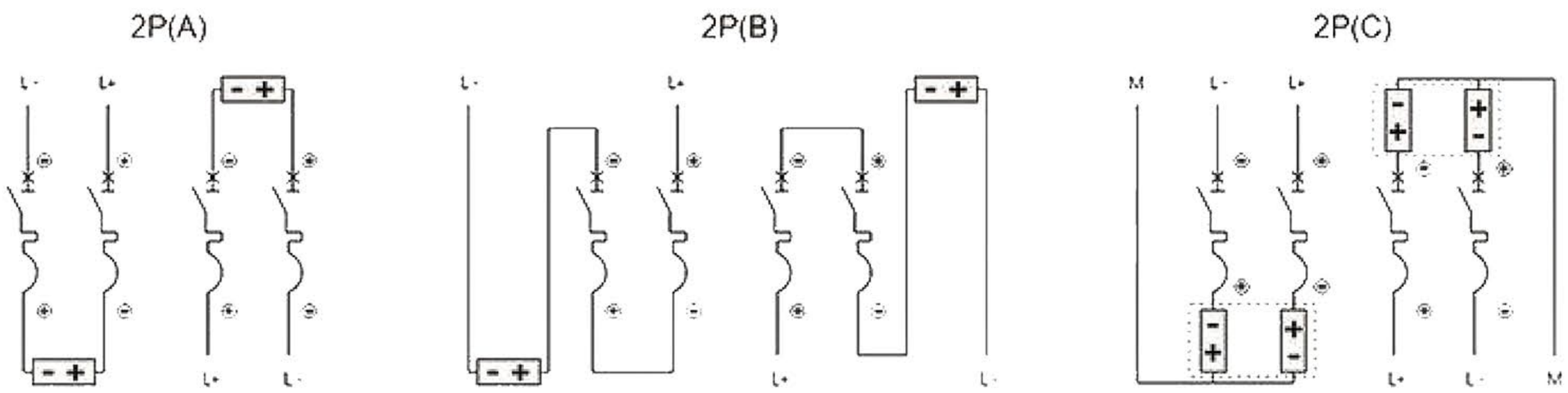
Specifications

STW2 Series circuit breaker	STW2-125DC
Shell frame grade Current (A)	125
Standards	IEC 60947-2
Rated Insulation voltage Ui	1000V
Rated Impulse Withstand Voltage Uimp	6kv
Rated current（A)	32A,40A,50A,63A,80A,100A,125A
Rated voltage	DC250V(1P) , 500V(2P) , 800V(3P),1000V(4P)
Electromagnetic trip characteristics	10In + 20%
Number of poles	1P ,2P,3P,4P
Unipolar width	27mm
Icu	10KA(In≤100A)，15KA(In=125A)
Ics	7.5KA(In≤100A)，10KA（In=125A)
Reference temperature	30℃
Utilization Categpry	A
Mechanical life	20,000 Cycles
Electrical life	2000 Cycles
Protection Degree	IP20

Current trip characteristics

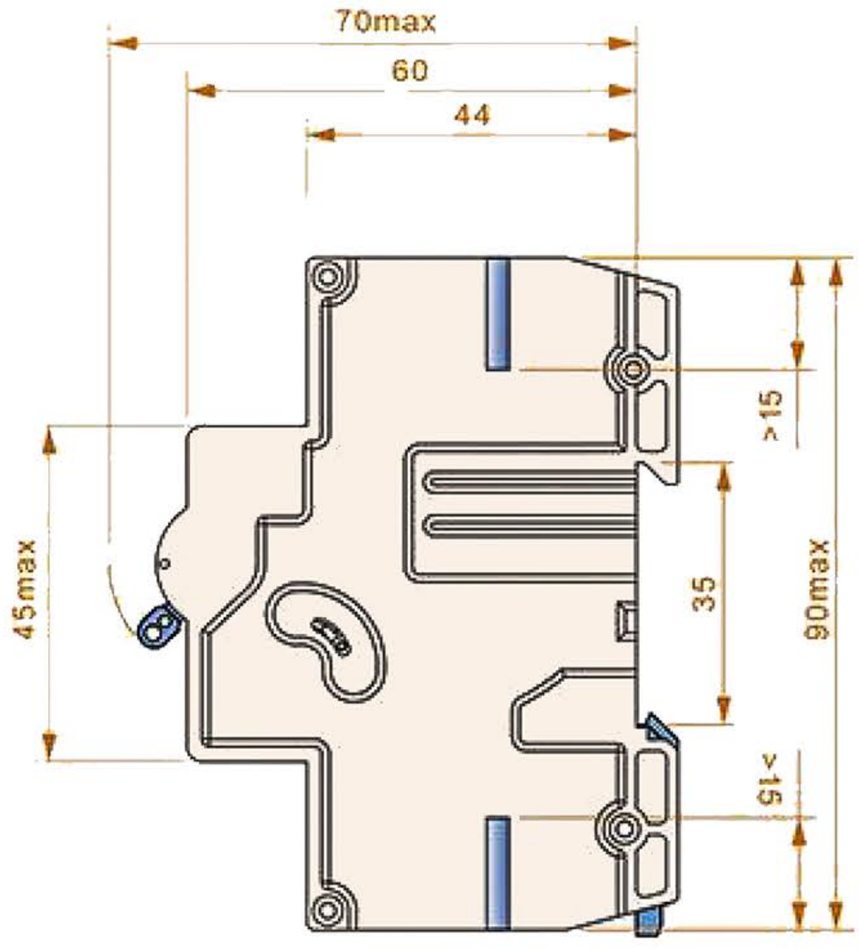
Rated current In(A)	Overload trip feature		Electomagnetic trip action current(A)
	1.05In agreed non-trip time H(cold state)	1.30In agreed trip time H(hot state)	
In≤63	1	1	10In±20%
In≥63	2	2	

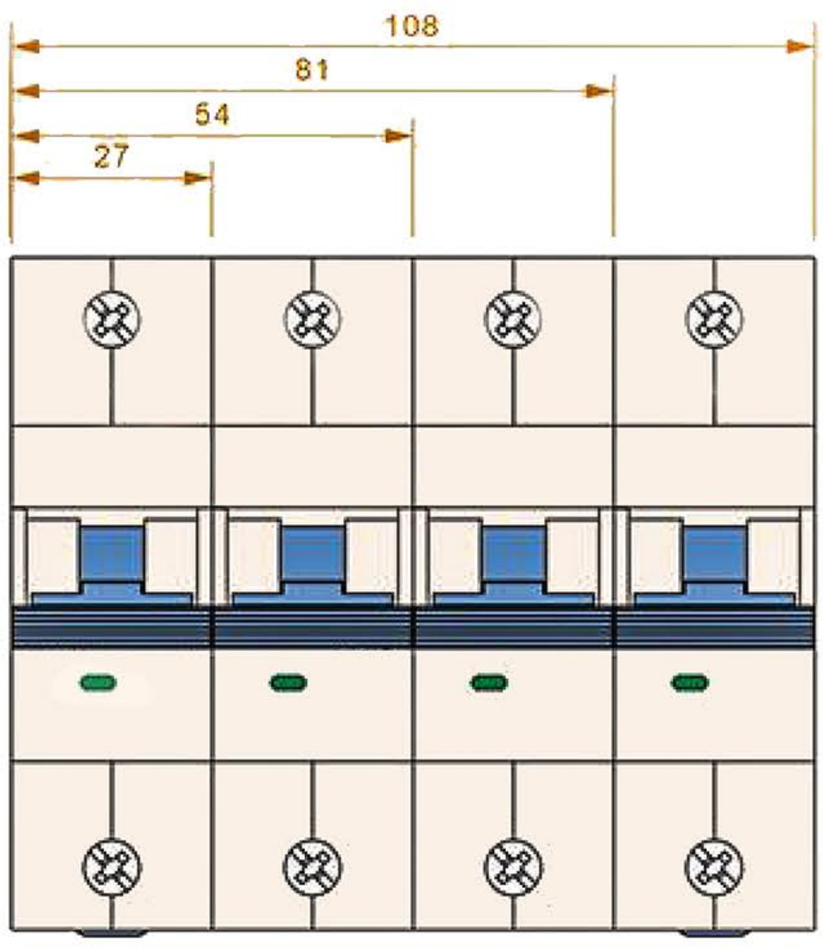
Circuit diagram



Remark:
1.⊟load;
2.L+Positive pole of power, L-Negative pole of power;
3.⊕circuit breaker positive pole,⊖ciecuit breaker negayive pole;
4.DC power supply is usually “L” grounded,while neutral pole of posiyive and negative power supply system is ‘M’ grounded.

Overall dimensions





Scope of application

STW2-63 series miniature circuit breakers have short circuit protection , overload protection , control , isolation and other functions , suitable for ac 50HZ / 60HZ , rated voltage AC240 / 400V , rated current to 63A in industrial , civil construction , energy communication and infrastructure and other fields of low-voltage terminal distribution.

IEC 60898-1 ,GB / T 10963.1

STW2-63 series circuit breakers are characterized by small size , simple structure and high reliability , and can be equipped with auxiliary contact , alarm contact .shunt trip , undervoltage trip , overvoltage trip , over-voltage trip and other accessories , among which the auxiliary and alarm width is 9mm , while the width of other accessories is 18mm.

STW2-63AC series min iature circuit breakers are high-performance smallcircuit breakers with a single-pole width of 18mm , rated current up to100A , rated short-circuit breaking capacity up to 10KA , and various indusry-leading technical parameters

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Specifications

STW2 Series circuit breaker	STW2-63AC
Shell frame grade Current(A)	63
Standardards	IEC 60898-1
Rated Insulantion voltage Ui(V)	500
Rated Impulse Withstand Voltage Uimp（kv)	4
Rated current（A)	1、2、3、4、6、10、16、20、25、32、40、50、63
Rated voltage	240/400V（1P、1P+N) ，400V（2P、3P、4P)
Rated frequency(Hz)	50/60
Themo-magnetic release characteristic	B (3-5in) , C (5-10in) , D (10-20ln)
Number of poles	1P , 1P + N , 2P , 3P , 3P + N , 4P
Unipolar width	18mm
Rated breaking capacity	6KA
Dielectrictest voltage at ind . Freq for 1 min	2kv
Reference temperature	30℃
Mechanical life	20,000 Cycles
Electrical life	4000 Cycles
Protection degree	IP20
erminal size top / bottom for cable (mm2)	25
Connection	From top and bottom

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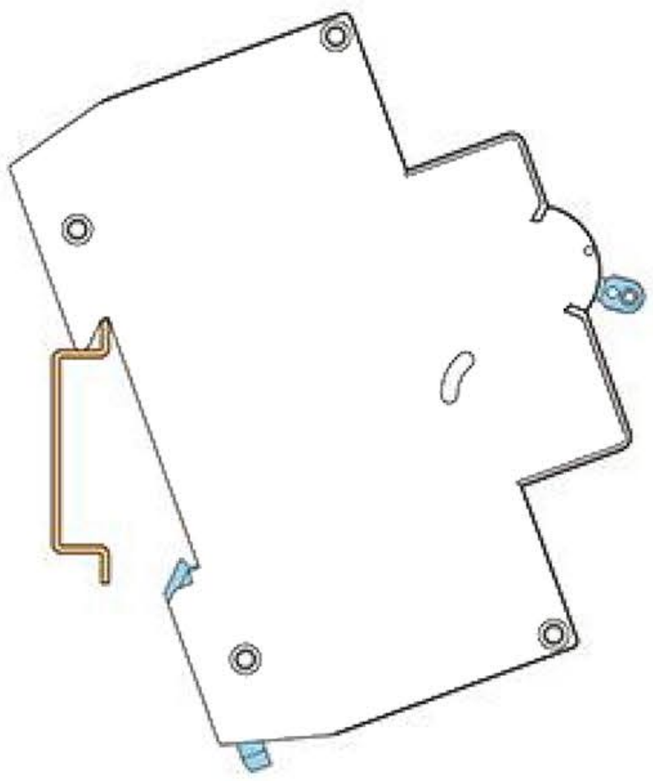
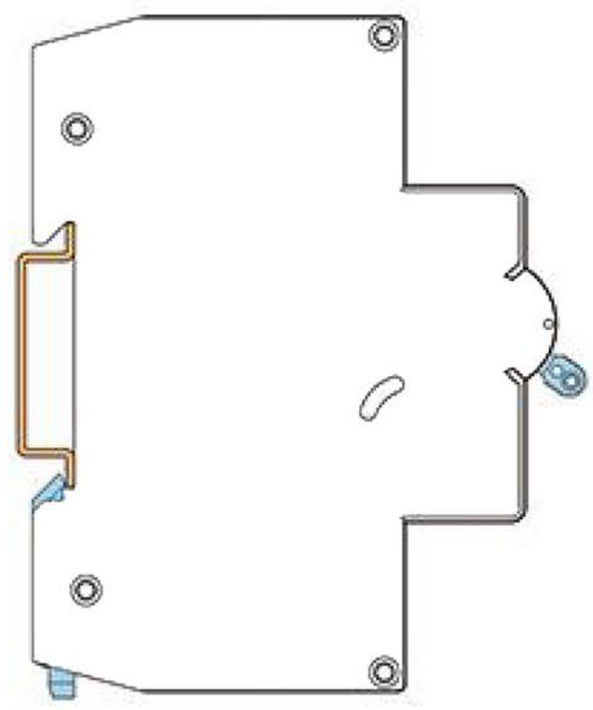
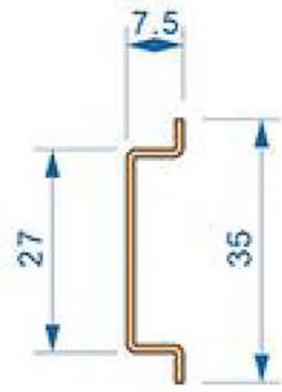
Current trip characteristics

Rated current In(A)	Overload trip feature		Electomagnetic trip action current(A)
	1.13In agreed non-trip time H(cold state)	1.45In agreed trip time H(hot state)	
In≤63	1	1	B(3-5In) C(5-10In) D(10-20In)
In≥63	2	2	

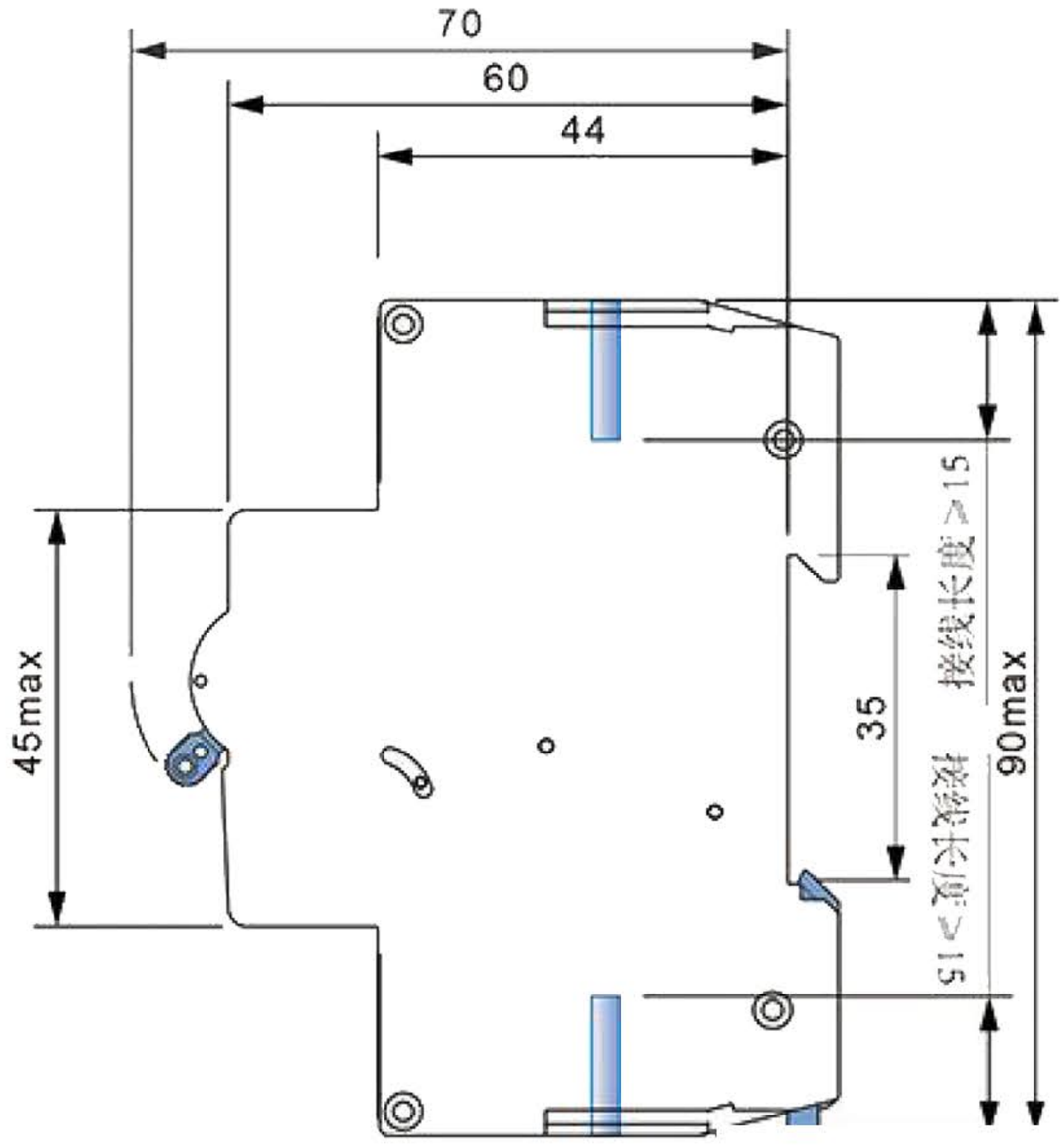
Mounting

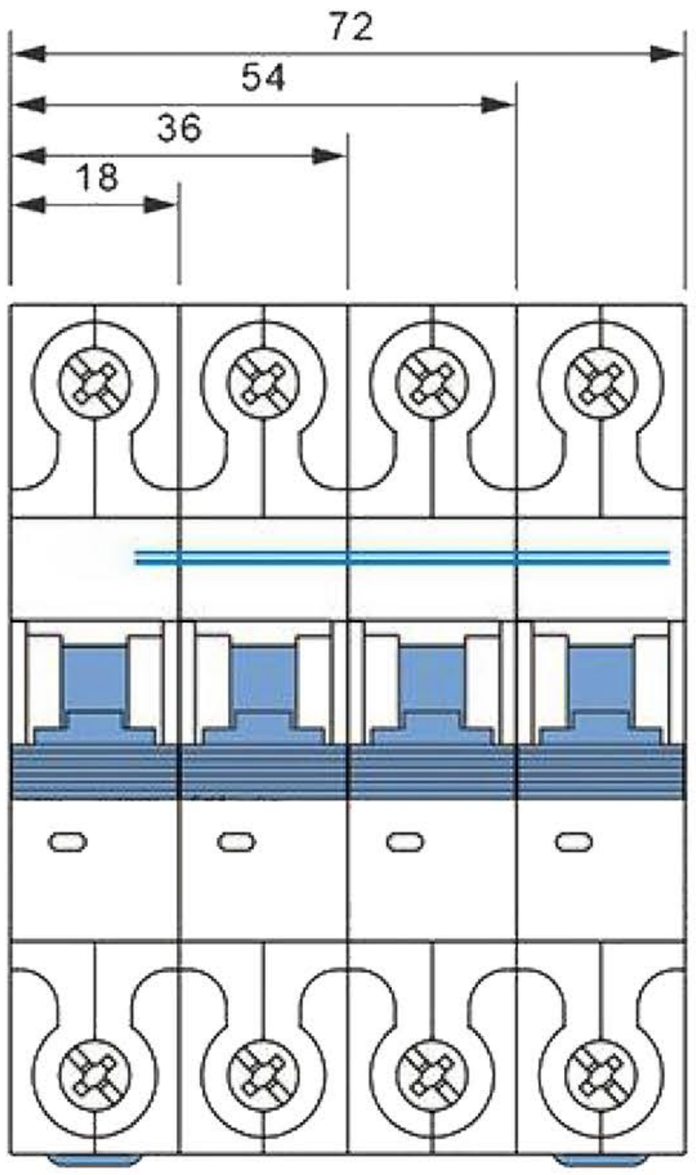






Overall dimensions





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Application

Residual current circuit breaker is suitable to the circuit of AC50/60Hz.rated voltage 230V for 2 poles and 400V for 4 poles, and rated current up to 63A. When people get the electric shock, or the leakage current of the electrical network exceeds the fixed value, this RCCB can cut off the fault current in short period to protect people safty and the equipments. It is applicable to industrial area, commercial area, tall building and civil house. It complies with standard IEC/EN 61008.1 and GB1696.1

Feature

1).Provides protection against electric shock, earth fault, leakage current;
2).Fire resistant plastic casing endures abnormal heating and strong impact;
3). Improved mechanical and bimetallic system provides more precise tripping
4).Equipped with finger protected in connection terminals;
5). Both terminal wiring and busbar wiring are available
6). Small size and weight, easy installation and wiring, high and durable performance

Detection Waveform Type and Classification

Waveform definition	Waveform	AC Type	A Type	A-SI Type	Tripping current
Sinusoidal exchange	~	✓	✓	✓	0.5~1 I△n
Pulsating half wave	⎍	X	✓	✓	0.5~1.4 I△n
Pulsating Half wave + diret current (6mA)	⎍ ⎓	X	✓	✓	max1.4I△n+6mA
Pulsating Half wave + diret current (10mA)	⎍ ⎓	X	X	✓	max1.4I△n+10mA
High frequency (up to 1KHz)	≀	X	X	X	150Hz,0.5~2.4 I△n
		X	X	X	400Hz,0.5~6 I△n
		X	X	X	1000Hz,1~14 I△n
Two phase rectified full wave	⎍	X	X	X	0.5~2 I△n
Three phase rectified full wave	⎍				
Direct current	⎓				

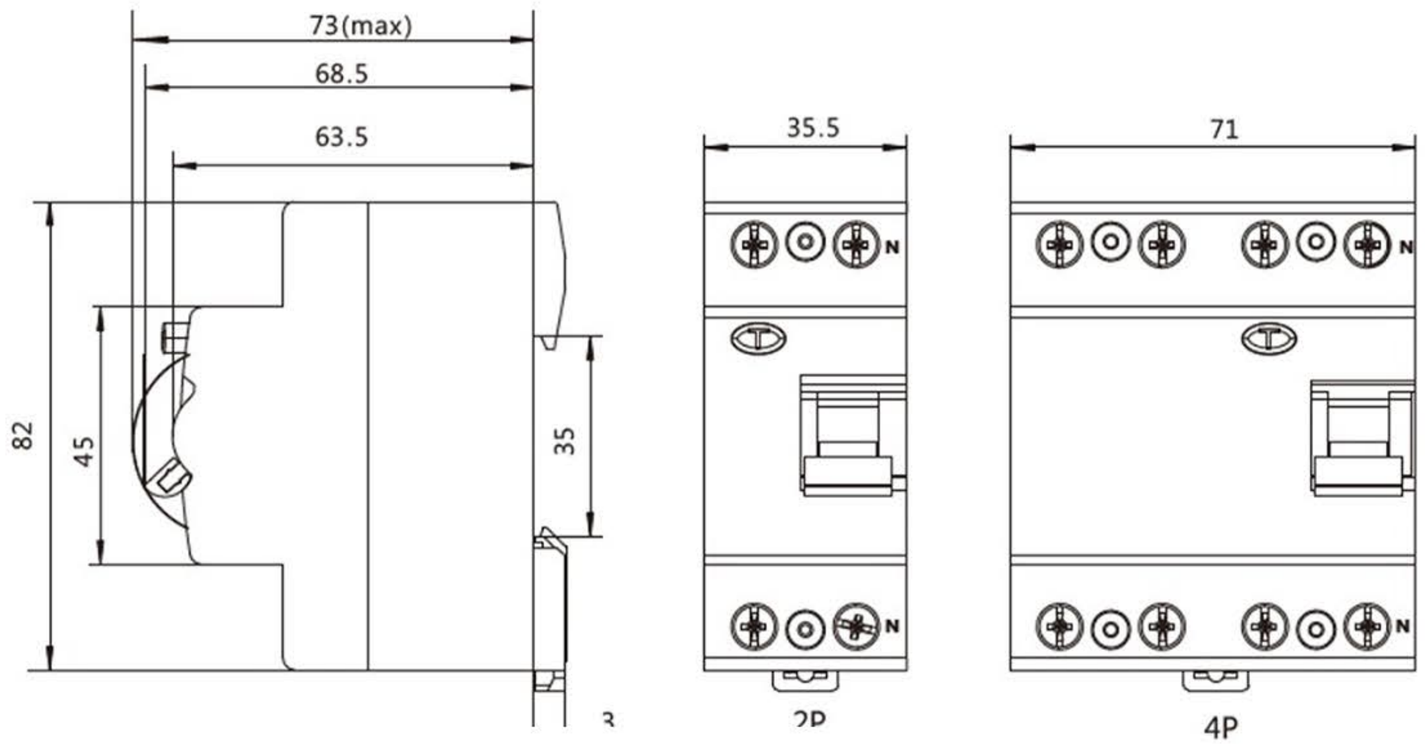
Connection

Rated current	Nominal Section Area of Copper Wire(mm^2)
1~6A	1
10A	1.5
16、20A	2.5
25A	4
32A	6
40、50A	10
63A	16

Technical Data

Electrical features	
Rated current	16A、25、40、63A
Poles	2P 4P
Rated voltage Ue	2P:230V~ 4P:400V~
Insulation voltage Ui	500V
Rated frequency	50/60Hz
Rated sensitivity I△n	0.03A 0.1A 0.3A
Rated residual making and breaking capacity I m	500(In=25-40A) 630(In=63A)
Short-circuit current Inc=I△c	6000A
SCPD fuse	6000
Break time under I△n	≤0. 1S
Rated impulse withstand voltage(1.2/50)Uimp	6000V
Dielectric test voltage at and ind.Freq.for 1min	2.5kV
Electrical life and Mechanical life	4000
Pollution degree	2
Installation	
Fault current indicator	NO
Protection Class	IP20
Ambient temperature(with daily average≤35℃)	-5~+40℃
Storage temperature	-25+70℃
Terminal connection type	Cable/U-type busbar/Pin -type busbar
Terminal size top/bottom for cable	25mm² 18-3
Tightening torque	3.0N*m 22
Mounting	On DIN rail FN 60715 (35mm) by means of fast clip device
Connection	From top and bottom

Mounting & dimension



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Product Description

The HR18 series fuse type isolation switch has a beautiful appearance, novel and simple structure, and is easy to operate. Its rated insulation voltage is 1000V, rated working voltage is 690V, rated working current is 800A, and rated frequency is 50Hz. It is used as a power switch, isolation switch, emergency switch, and circuit protection in distribution and motor circuits with high short-circuit current, but is generally not used for directly opening and closing a single motor.
The switch complies with IEC60947-3 and GB/T14048.3 standards.

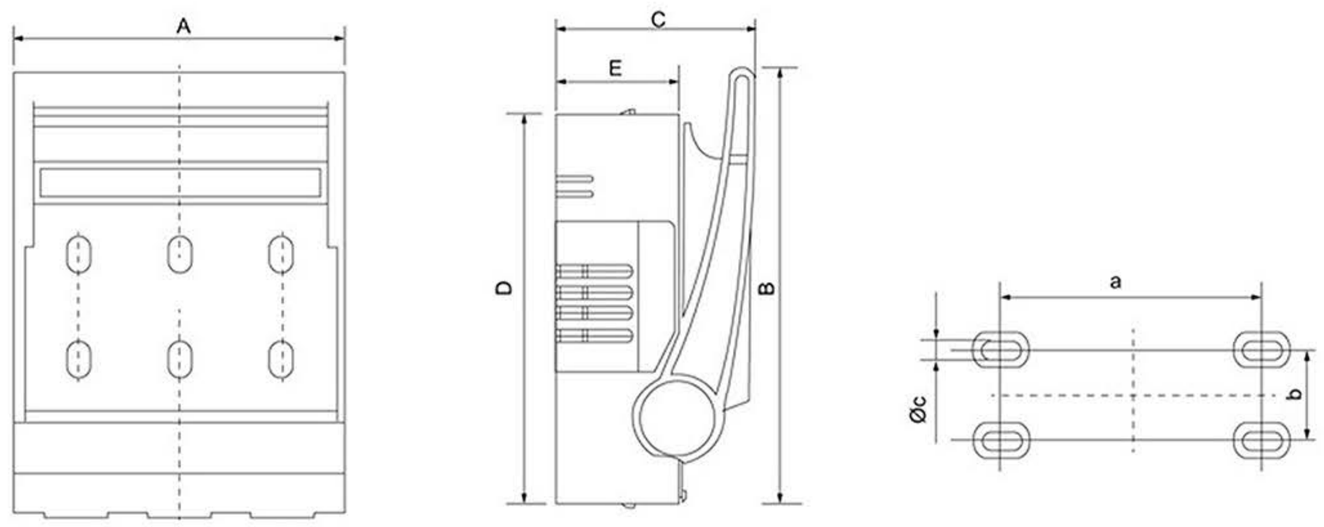
operational condition

The ambient air temperature shall not be higher than+40 ° C or lower than -5 ° C, and the average temperature within 24 hours shall not exceed+35 ° C. The altitude of the working site shall not exceed 2000m. When the ambient air temperature is+40 °C, the relative humidity is not higher than 50%, and the monthly average maximum relative humidity in the wettest month is not higher than 90%. At the same time, the average minimum temperature of the month shall not exceed+25 °C. The pollution level of the surrounding environment is Level 3. The installation category is Class III. The switch is installed in a place free from vibration and impact. Switch protection level | P30

Fuse link

Conventional thermal current	Equipped with fuse link code	Rated current of fuse link (A)
160A	NT00	10、16、25、32、40、50、63、80、100、125、160
250A	NT1	80、100、125、160、200、225、250
400A	NT2	125、160、200、225、250、300、315、355、400
630A	NT3	315、355、400、425、500、630

Appearance and installation dimensions



Switch model	External dimensions (mm)					Installation dimensions		
	A	B	C	D	E	a	b	Øc
HR18-160	105	184	88	160	43	73	25	Ø7
HR18-250	184	268	116	230	66	115	50	Ø11
HR18-400	210	285	129	256	81	140	50	Ø11
HR18-630	250	328	138	315	86	150	50	9

Technical Parameter

				HR18-160		HR18-250		HR18-400		HR18-630		HR18-800
Electrical parameters	Arated operational voltage	Ue	V	AC400	AC690	AC400	AC690	AC400	AC690	AC400	AC690	AC400
	rated working current	Ie	A	160	100	250	200	400	315	630	425	800
	Conventional thermal current	Ith	A	160	100	250	200	400	315	630	425	80
	Rated conditional short-circuit current		KA	100	50	100	50	100	50	100	50	50
	rated insulation voltage	Ui	V	1000		1000		1000		1000		1000
	rated impulse withstand voltage	Uimp	KV	12		12		12		12		12
	Usage level			AC-23B	AC-21B	AC-23B	AC-21B	AC-23B	AC-21B	AC-23B	AC-21B	AC-23B
	Rated frequency		Hz	50/60		50/60		50/60		50/60		50/60
	number of poles			3		3		3		3		3
	Number of electrical lifespans		order	200		200		200		200		100
fuse	Size (RT16/TNH) IEC60629-2 GB 13539.2			00		1		2		3		3
	Working current	In	A	160	125	250	200	400	315	630	425	800
	consumption	P	W	12	12	18	32	28	45	40	50	-
institution	mechanical life		order	1400		1400		800	1400	800		800
	Bus spacing		mm	60		60		60		60		60
protection	front	open		IP20		IP20		IP20		IP20		IP20
		close		IP30		IP30		IP30		IP30		IP30
other	Switch fault, closing signal feedback (micro switch)			Can be added		Can be added		Can be added		Can be added		Can be added
working conditions	ambient temperature		℃	-5~+55								
	way of working			Continuous operation								
	operate			handle								
	Installation form			vertical								
	height		rice	≤ 2000								
	pollution degree			3								
	Overvoltage level			III								

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Application

160A 1P 690V NH00 Panel Mount Din Fuse Disconnect

1.GB 14048.3; IEC60947-3
2.Rated voltage: 400Vac 690Vac ;250-1000Vdc
This fuse disconnecting switch is the first combination of current transformer and fuse switch. It is suitable for rated current 160A-630A and rated frequency 50/60HZ. This series of product modularity, small volume, safe and reliable use, high application in low voltage power distribution cabinet installed capacity density, showing very high economy, safety and contingency, not only has the switch and protection function, but also can be extended to other functions, not only is a kind of closed form is more important it is an intelligent system that is widely used in low voltage cable branch box, box type substation, factories, and other areas, is a trend in the future in the field of distribution.

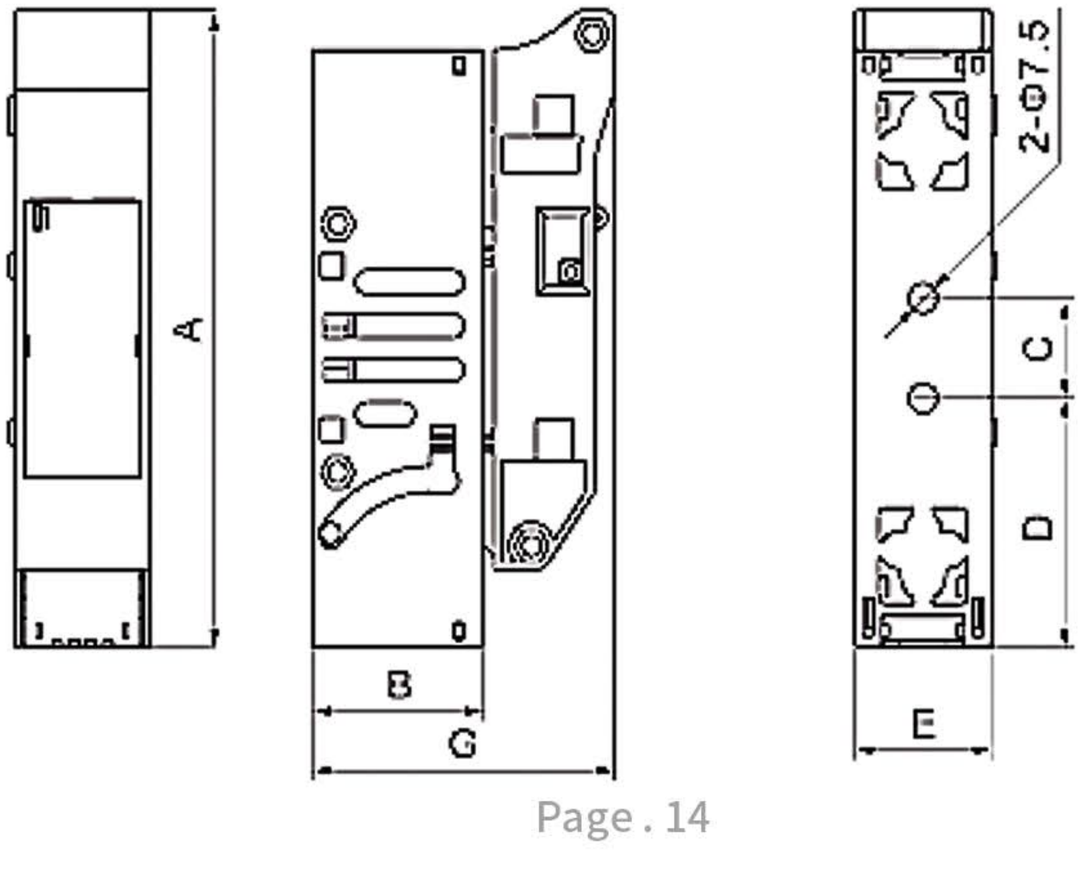
The products meet the standards: GB14048.3, IEC60947-3

Feature

1. union can be closed and broken at the same time;The split can be made by single phase;
2. the operation is safer, the core is installed in the handle, and can be directly used as contact blade;
3. beautiful and practical, seat and body disassembly convenient, and box installation fast, convenient construction;
4. reduce wiring, easy to increase the loop, increase the use rate of the box;
5. resin glass fiber base, V0 class flame retardant, shell protection level up to IP30;
6. the latest products, the highest market utilization, customized bidding style;
7. the instantaneous breaking operation is up to 100kA, with a load capacity of up to 1.3 times of rated current;
8. It can add fuse monitor, signal switch and remote control module.

Parameter

Type	Rated Voltage (V)	Rated Current (A)	Dimension(mm)						
			A	B	C	D	E	F	G
NT00-DC-160A/1P	**AC400/690**	**160**	**159**	**45**	**25**	**62**	**36**	**-**	**80**
NT00-DC-160A/2P	AC400/690	160	159	45	25	62	72	36	80
NT00-DC-160A/3P	AC400/690	160	159	45	25	62	108	72	80



Solar Energy Accessories

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Application

STWPV-32H Fuse Holder was designed and manufactured , complyingwith the standard LEC60947-3 , IEC60269-6 The rated current up to32A , rated voltage up to DC1000V It applied for PV DC combiner boxinverter etc , with the main function of over-current protection andeffective disconnection

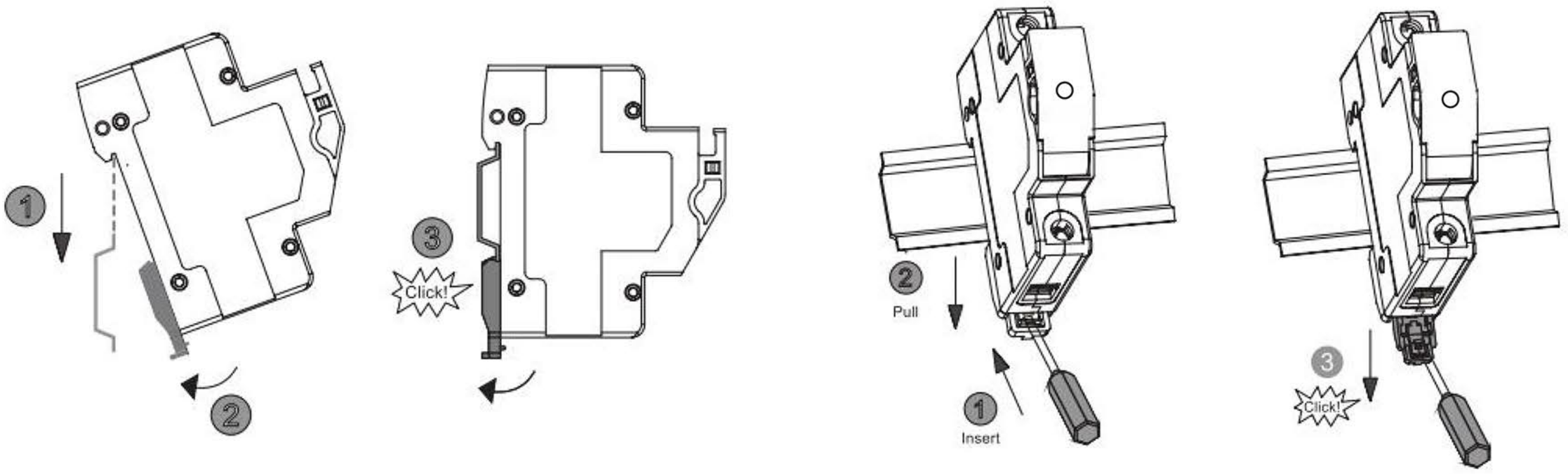
Feature

Special DC fuse for Photovoltaic
Max breaking capacity up to 20 KA , Effective protection
The Innovation replacing fuse Link
With light / without light
Led Indicator , reminding fuse link replacement
Rated Voltage : DC1000V
Rated Current : 32A
Class of Operation : gpv
Be suit for 10x38mm Fuse size
Standard : EC60947-3 . EC60269-6

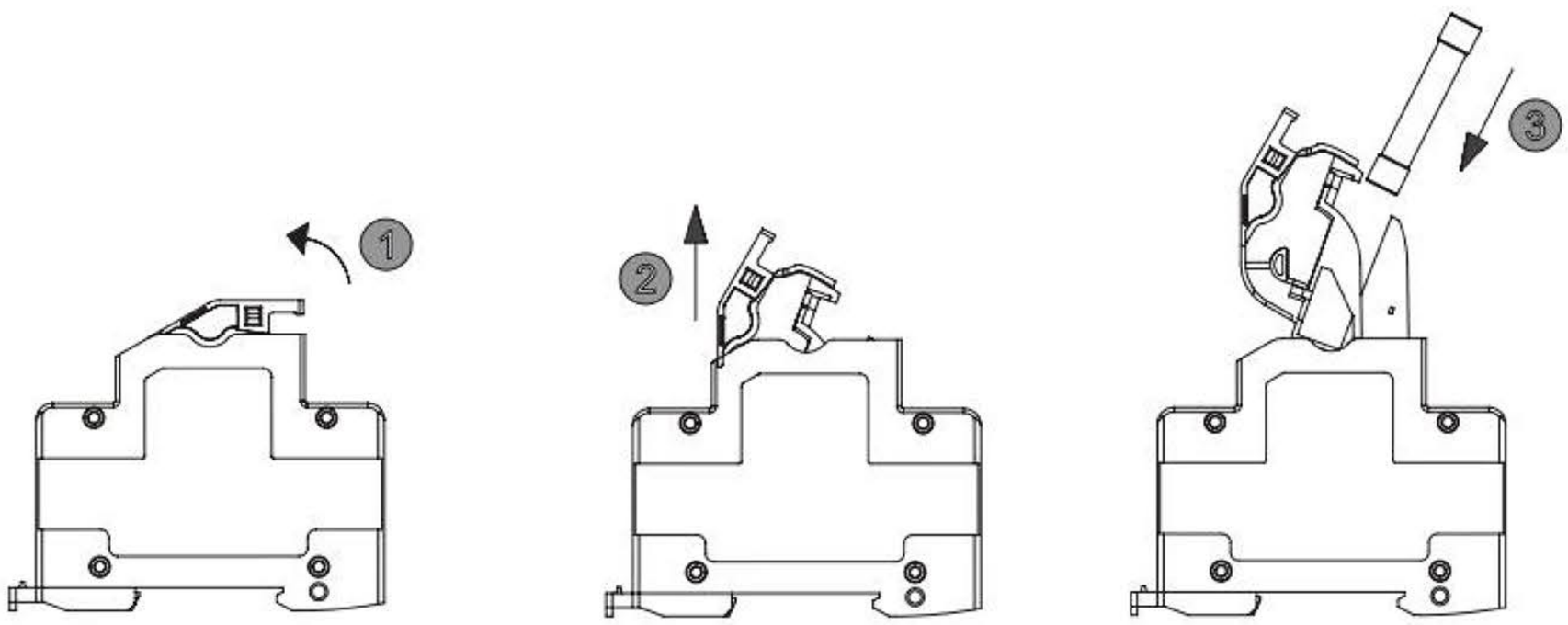
Parameter

Electrical Characteristics		
Type		STWPV-32H
Standard		IEC60947-3 / IEC60269-6
Pole		1P
Rated Working Voltage	Ue	DC 1000V
Rated Current	In	32A
Breaking Capacity		20KA
Max Power Dissipation		3.2W
Rated Impulsed Voltage	Uimp	6KA
Control and Indication		
Operating State / Fault Indication		Indicator Light OFF / Indicator Light ON
Connection and Installation		
Wire		2.5mm²~25mm²
Terminal Screws		M5
Torque	NM	2. 5
Ingress Protection		IP20
Installation Environment		
Fuse Size		10x38mm
Operating Temperature Range	TU	-40℃ ~+85℃
Installation Mode		TH35-7.5/DIN35
Pollution Grade		3
Relative Humidity		+20℃ ≤ 95%,+40℃ ≤ 50%
Weight		0.07kg Per pole
Installation Level		III

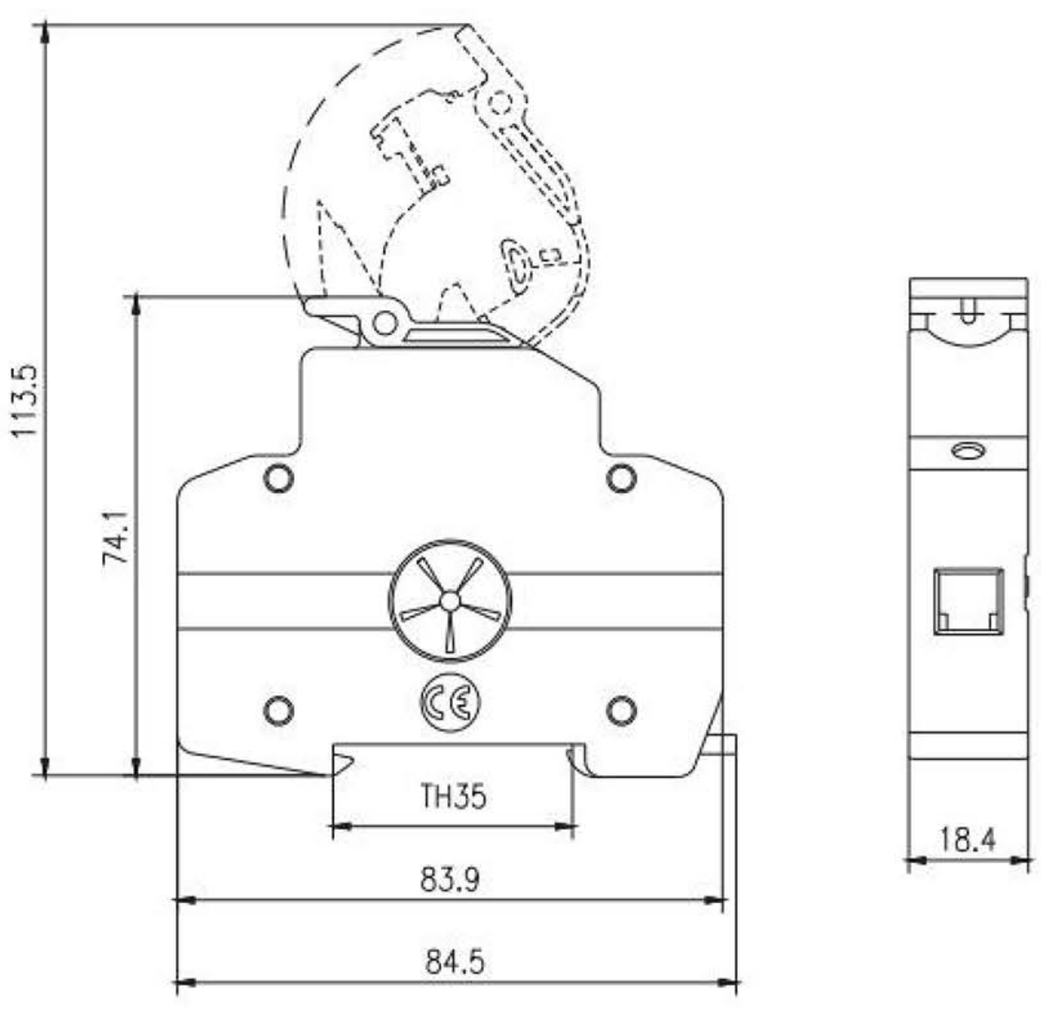
Installation



Replacemet Fuse



Dimensions (mm)



Solar Energy Accessories

VOLTA

STW-32g PV 1A-20A Photovoltaic Fuse

Standard:IEC 60269-6,GB/T 13539.6

Interrupting Capacity

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

Specifications

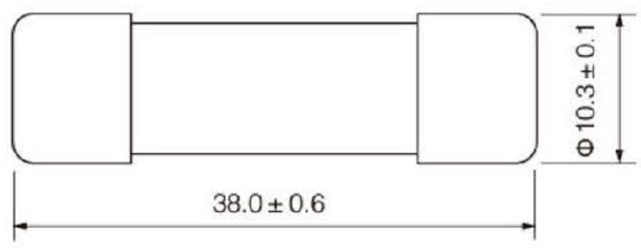
Catalog No.	Current Rating	Safety Approvals
		TUV
32gPV1U0	1A	●
32gPV2U0	2A	●
32gPV3U0	3A	●
32gPV3.5U0	3.5A	●
32gPV4U0	4A	●
32gPV5U0	5A	●
32gPV6U0	6A	●
32gPV8U0	8A	●
32gPV10U0	10A	●
32gPV12U0	12A	●
32gPV15U0	15A	●
32gPV16U0	16A	●
32gPV20U0	20A	●

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.

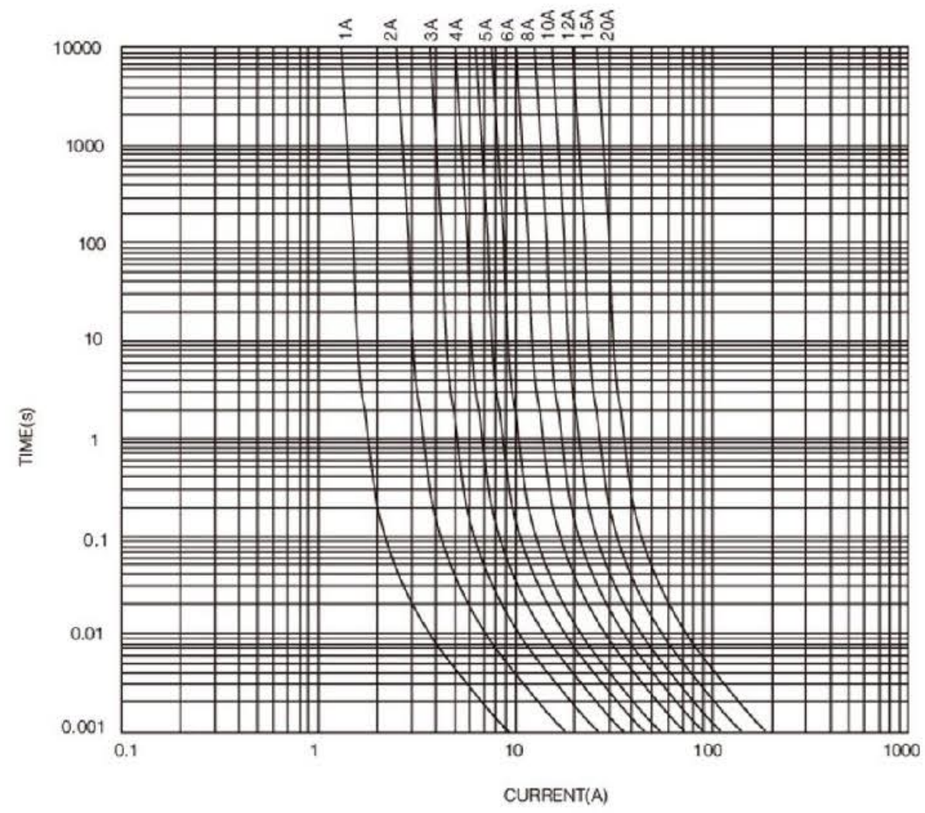
Dimensions



STW-32g PV

Average I-T Characteristics Curve

(For Reference Only)



VOLTA

Application

This series of fuse links is mainly used in AC 50Hz, rated voltage up to 1140V, rated current up to 1250A and for pro- tecting electric equipment from overload and short-circuit. It can reliably break the min fusion current to any current wit- hin 120KA.

It is also available for the protection of semiconductor parts and equipments against short-circuit(type aR)and prote- ction of motors(type aM).

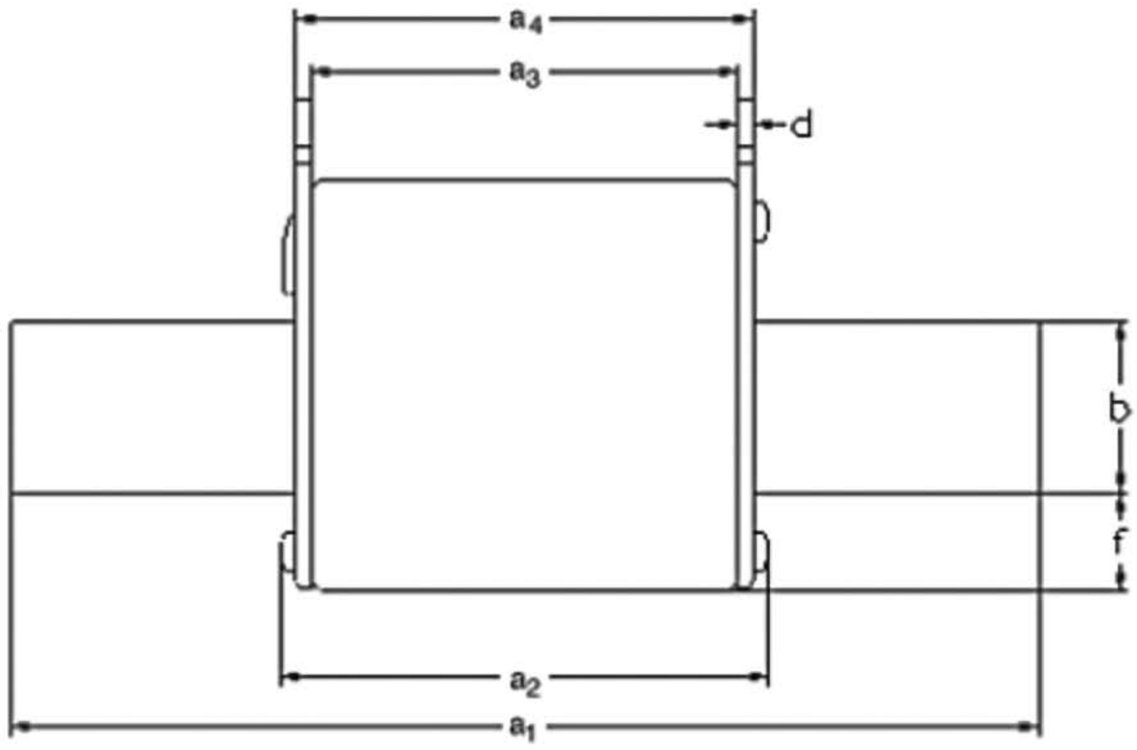
This series of fuse links conforms to GB13539 and IEC 60269 standards.

Feature

It adopts the material with high quality. The arc-extinguishi- ng medium is quartz sand and fuse tube is high strength ceramic. The advanced manufacturing craft work ensures the performance of small power waste stable characteristic for the product. The outline structure and insta lation dime- nsion joints the advanced similar products from domestic and abroad.

Parameter

Size - mm



Size	a1	a2	a3	a4	b	c1	c2	d	e1(max)	e2(max)	e3(max)	e4	f(max)
000	78.5	54-6	45.4	49.1	15	35	9.5	1.9	43	21	17	6	7.5
00	76.5	54-6	45.7	49.7	15	34.7	10	1.5	44.5	28.5	18	6	13
0	125	68-8	61	64.7	15	34	9.8	2.7	44	28.5	18	6	12.5
1C	134	68-8	61	64.7	15	34	9.8	2	44	28.5	14	6	12.5
1	134	75-10	62	66	20	40	10.2	2	49	48	18.5	6	11.8
2C	150	75-10	62	66	20	47	10	2.5	47	47	18	6	11.5
2	149	75-10	62.5	67	25	46.3	10	2.3	58.5	58.5	18	6	14
3C	149	75-10	61	66	25	56	10	2.8	59.5	59.5	24	6	16.5
3	150	75-10	62	68	32	60.5	10	3	68	68	18	6	15.5
4	202	Max90	66	71	50	81.5	11	3	95	87	23.5	8	21

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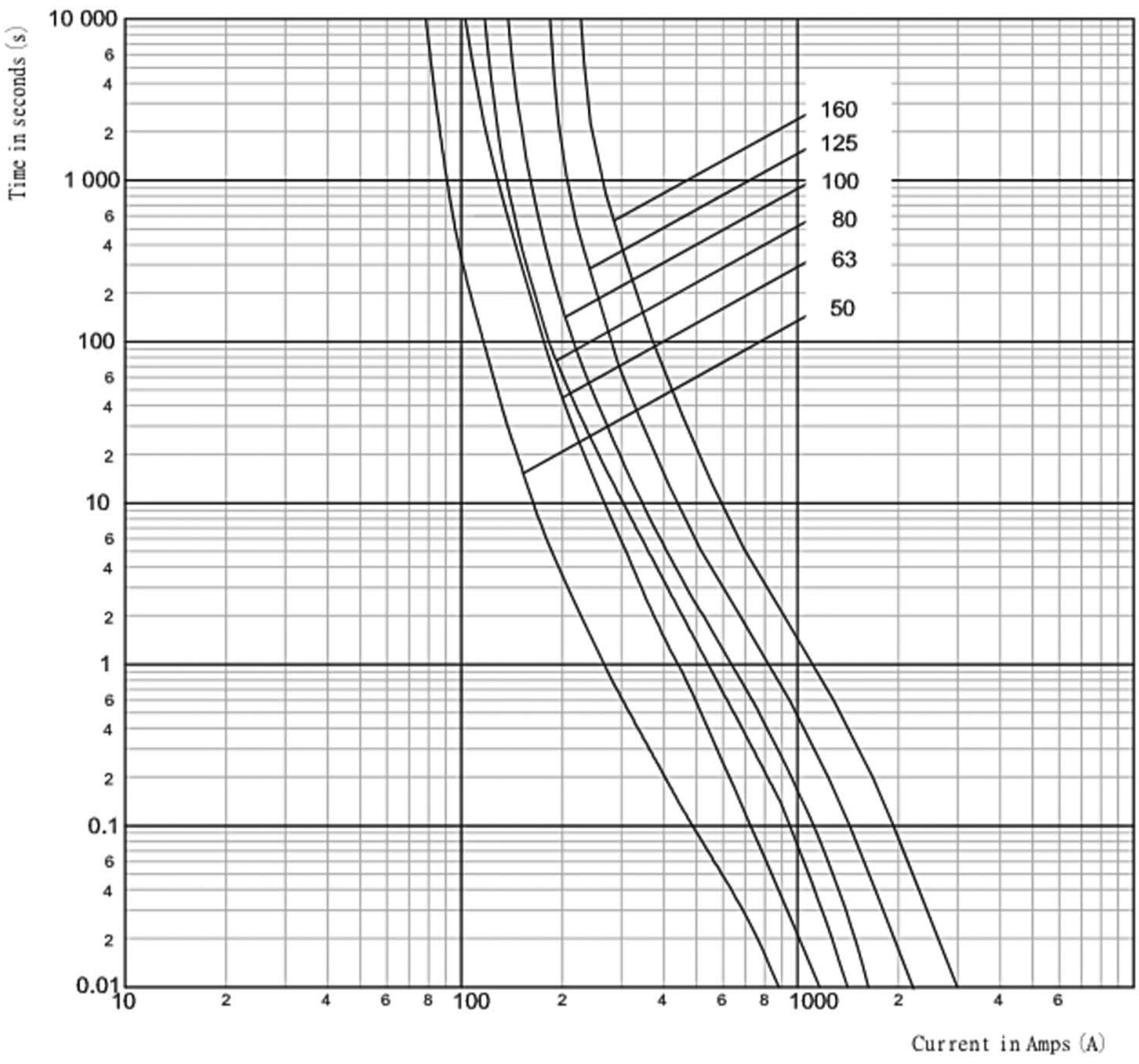
NH00/NT00 size Fuse Link Time-Current Curves:



NH00/NT00 size Fuse Link Technical Parameter:

Part numbers with metal gripping lugs	Fuse link size	Rated current (Amps)	Rated voltage (V a.c.)	I^2t(Amps^2 Seconds) Minimum pre-arcing	I^2t(Amps^2 Seconds) *I 120kA at 500 V a.c.	Watts loss(kg)	Net weight per fuse (kg)
50NH00	00	50	500	5970	22200	≤12	0.16
63NH00		63		5970	25800		
80NH00		80		11300	36100		
100NH00		100		19500	61900		
125NH00		125		25800	129000		
160NH00		160		66000	320000		

Fuse-base with Blade Contacts

NH00B

NH1/2/3B

NH1/2XLB,NH3LB

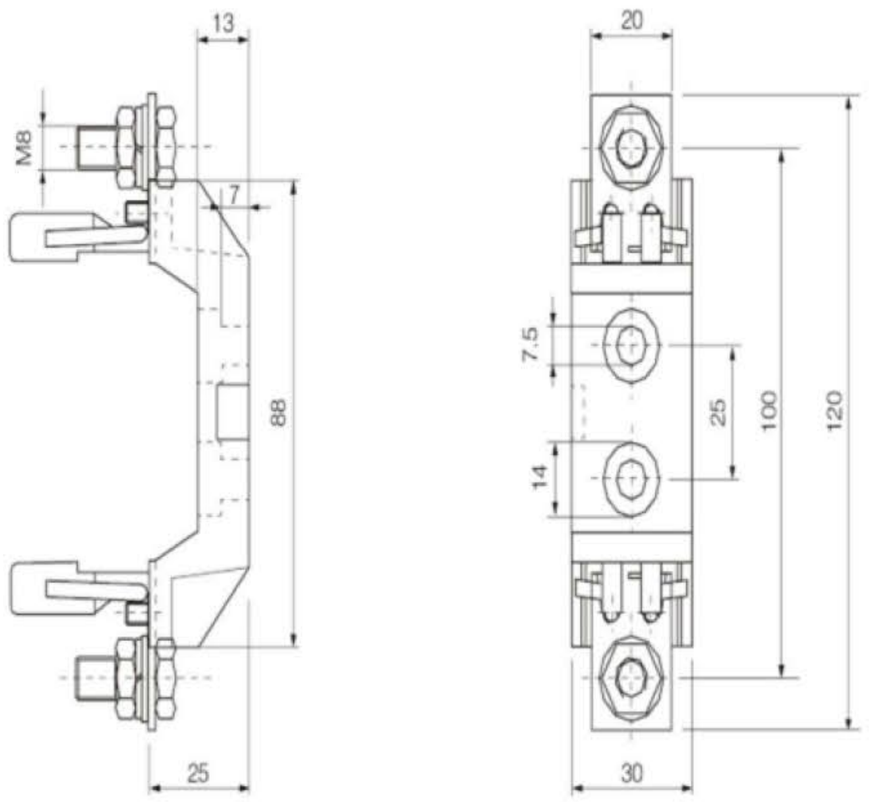
Specifications

Model of product	Applicable fuse link size	Rated voltage	Rated current	Safety Approvals
NH00B	NH000/NH00	690	160	CCC
		1000	160	

Model of product	Applicable fuse link size	Rated voltage	Rated current	Safety Approvals
NH1B	NH01	690	250	CCC
		1000	250	
NH2B	NH02	690	400	
NH3B	NH03	690	630	

Model of product	Applicable fuse link size	Rated voltage	Rated current	Safety Approvals
NH1XLB	NH1XL	1000	250	
NH2XLB	NH2XL	1000	400	
NH3LB	NH2XL/NH3L	1000	400	TUV
NH3LB	NH2XL/NH3L	1000	630	

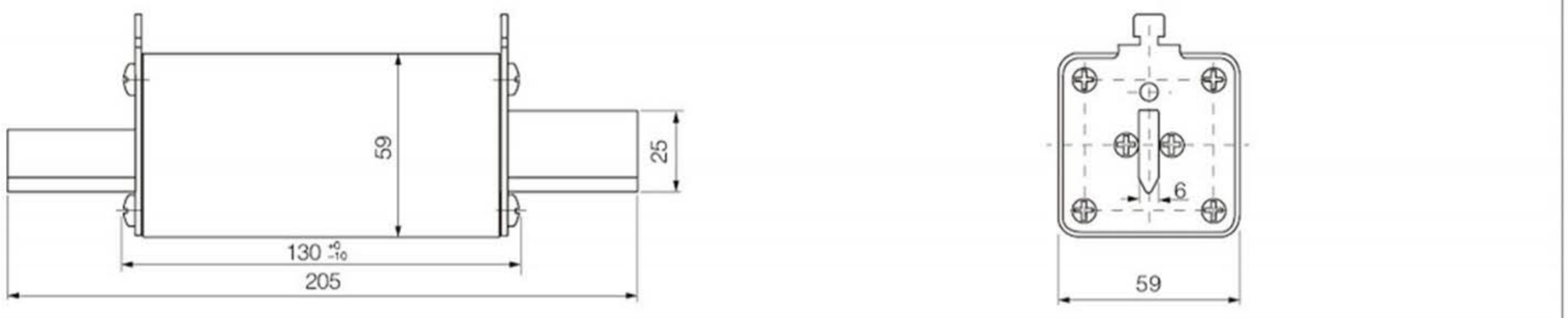
Dimensions(mm)



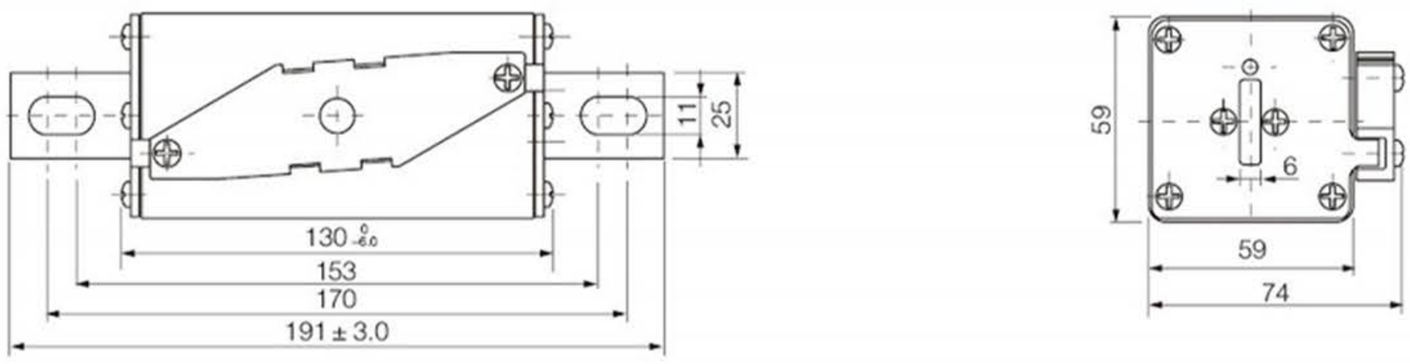
NH00B

Dimensions(mm)

Part No.: NH2XLgPV (amp rating) U11A

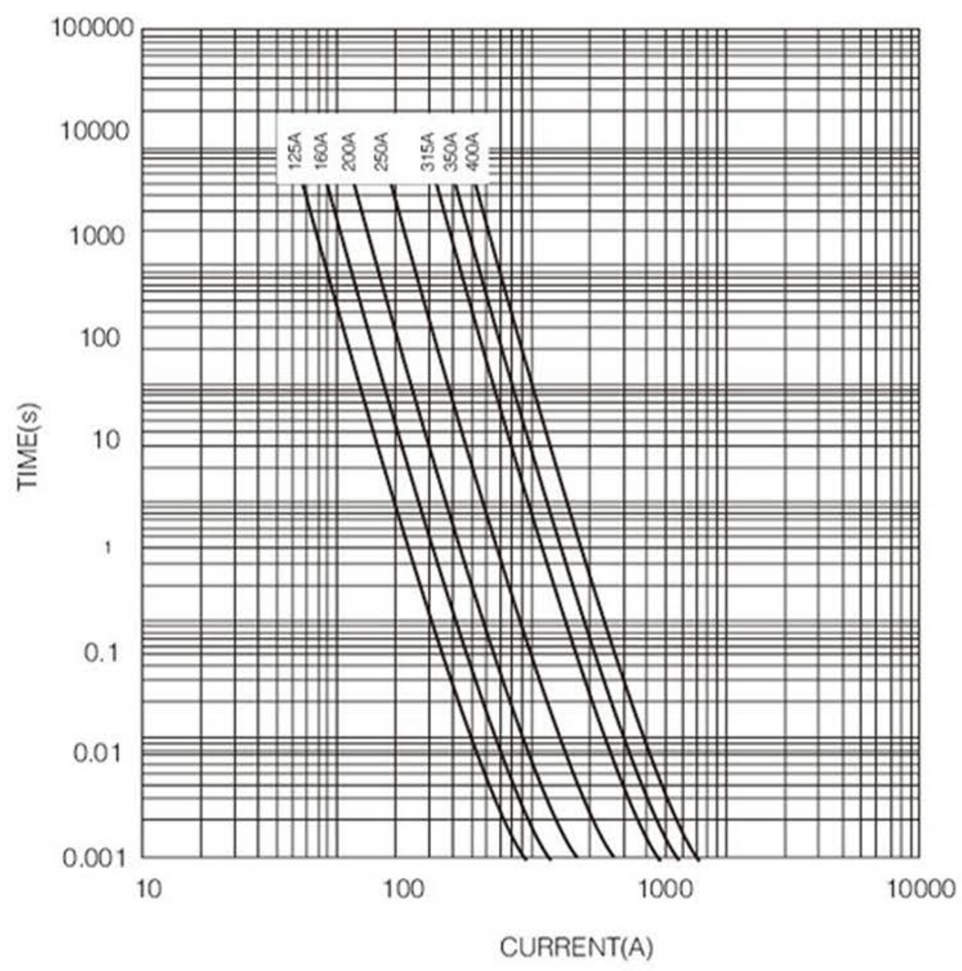


Part No.: NH2XLgPV (amp rating) U11B



NH2XLg PV 1100V

Average I-T Characteristics Curve(For Reference Only)



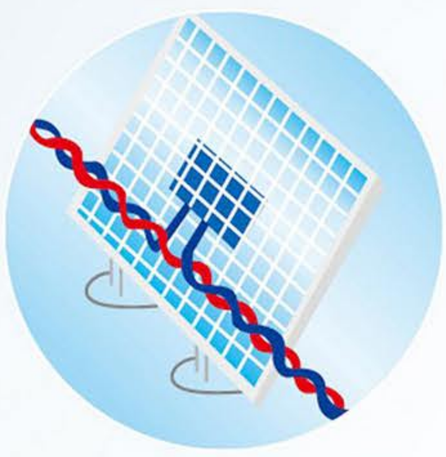
Lightning and surge protection for PV systems installed on buildings

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.

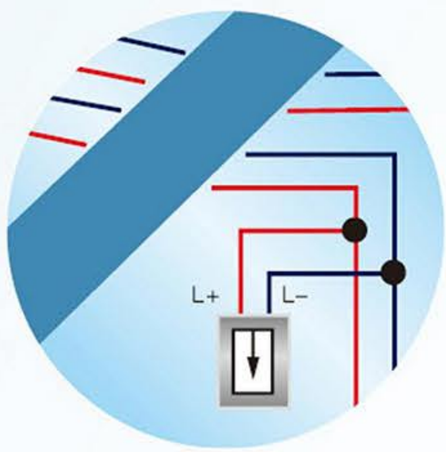
Reasonable wiring:

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.

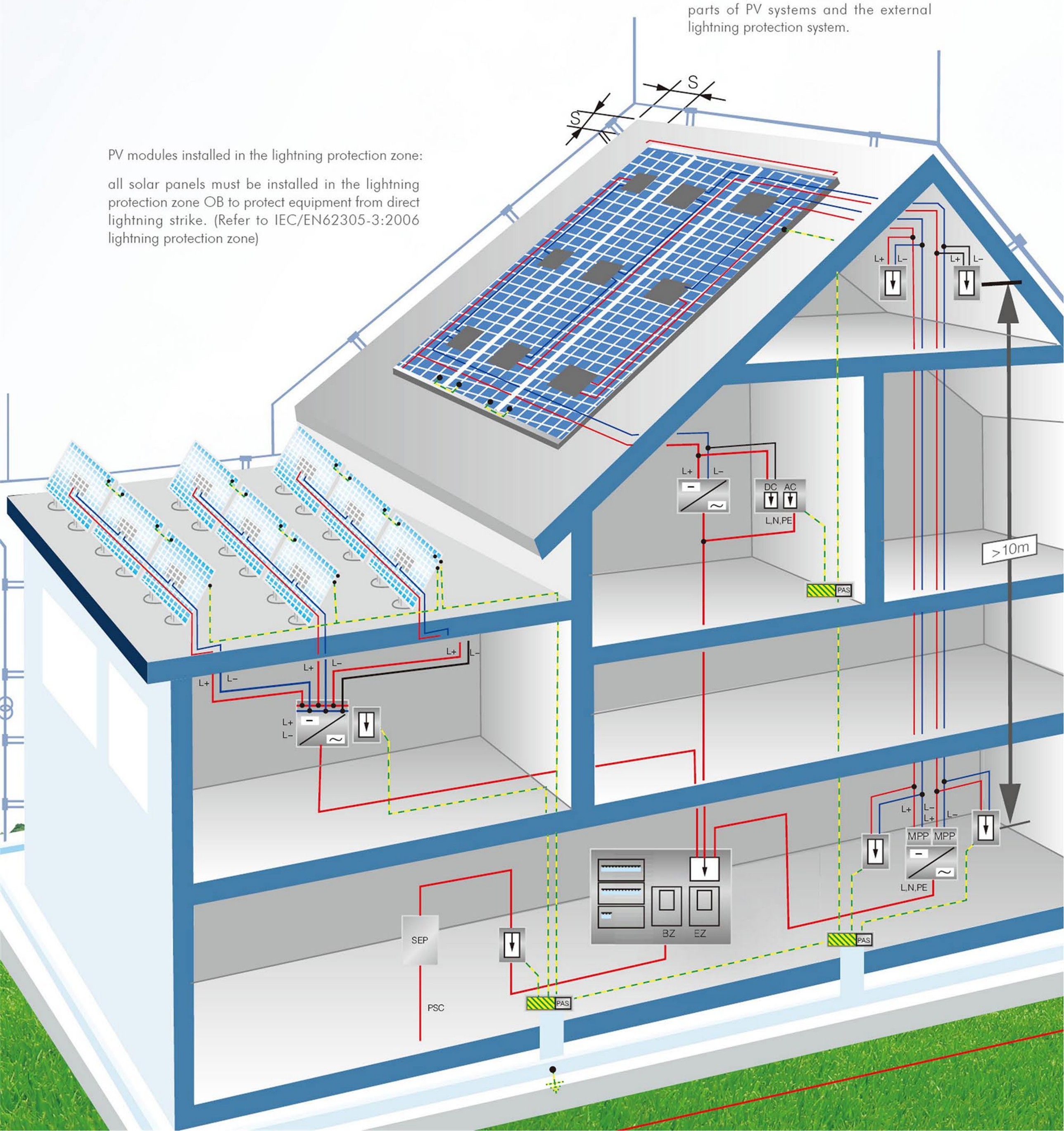


safe distance (S):

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/EN62305-3:2006 lightning protection zone)



Solar Energy Accessories

VOLTA

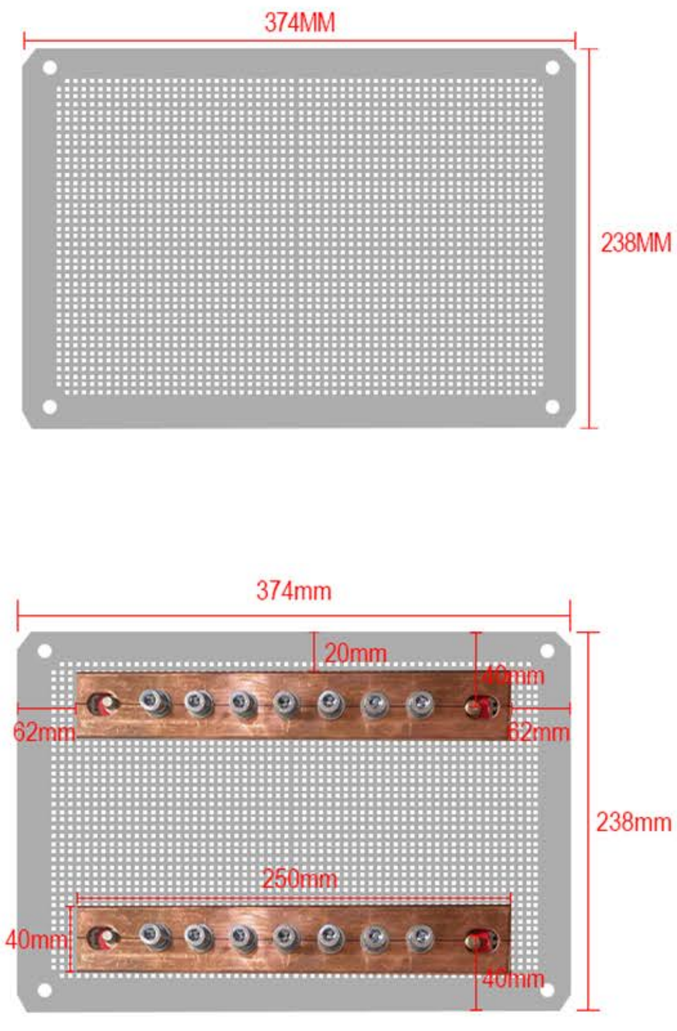
PV Combiner Box

STW-9-PV 1/1

STW-18-PV 2/2

Model	STW-9-PV 1/1	STW-18-PV 2/2
Array string mumber	1	2
Max PV voltage Uocstc	600VDC	600VDC
Max PV current Imppstc	30A	30A
Circuit connection (input / output)	Terminal 6,5/10mm²	Terminal 6,5/10mm²
DC Mini Circuit Breaker	Yes	Yes
Fuse wire protection of branch circuit	Optional	Optional
Type 2 Surge protection device	STW-D40	
Max PV voltage Ucpv	600VDC	
Nominal discharge current In	20KA	
Max discharge current Imax	40KA	
Voltage protection level Up	2.0KV	
Structural parameters		
Shell material	ABS PC	
Ingress protection	IP65	

Battery Busbar Box



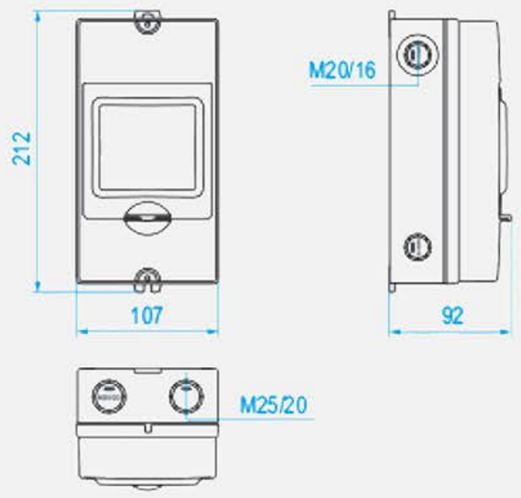
Solar Energy Accessories

VOLTA

Waterproof box

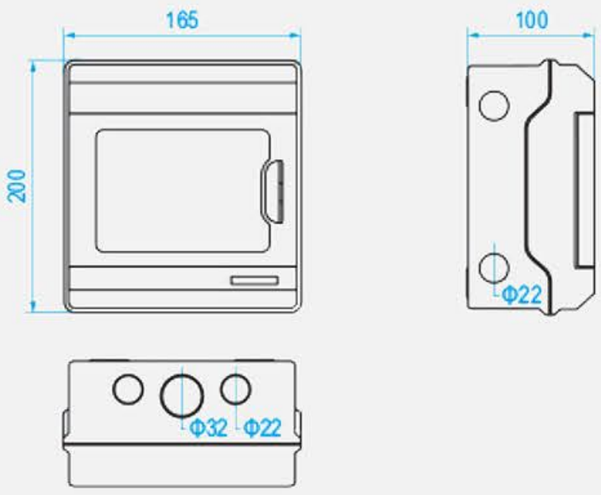
107*212*92MM

STW-4-WAY



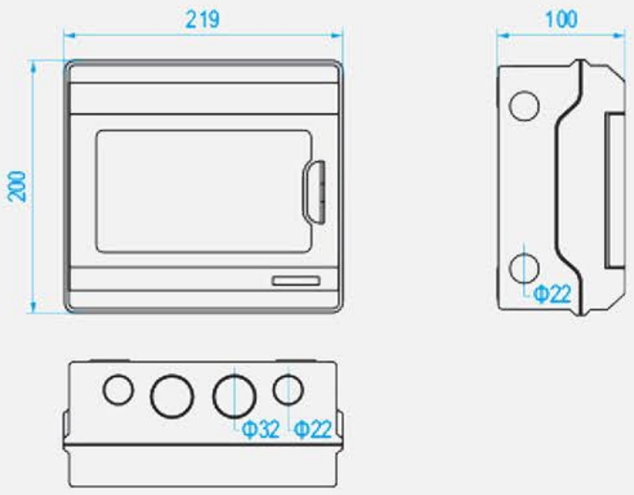
165*200*100MM

STW-6-WAY



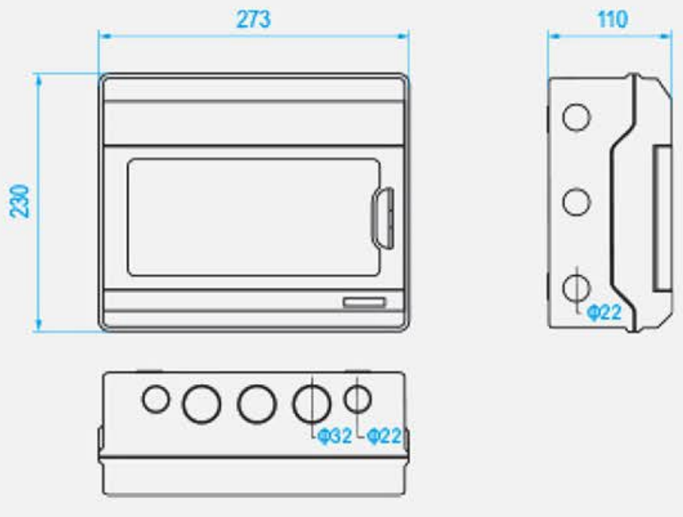
219*200*100MM

STW-9-WAY



273*230*110MM

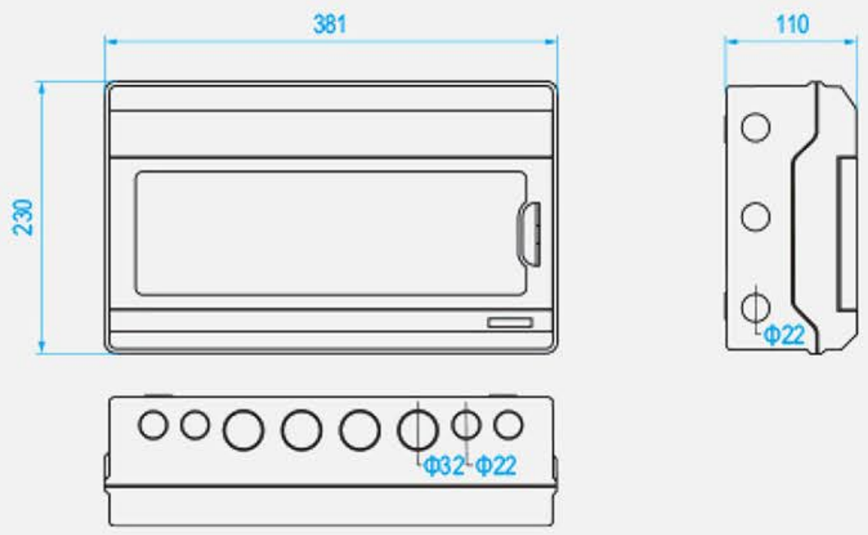
STW-12-WAY



Waterproof box

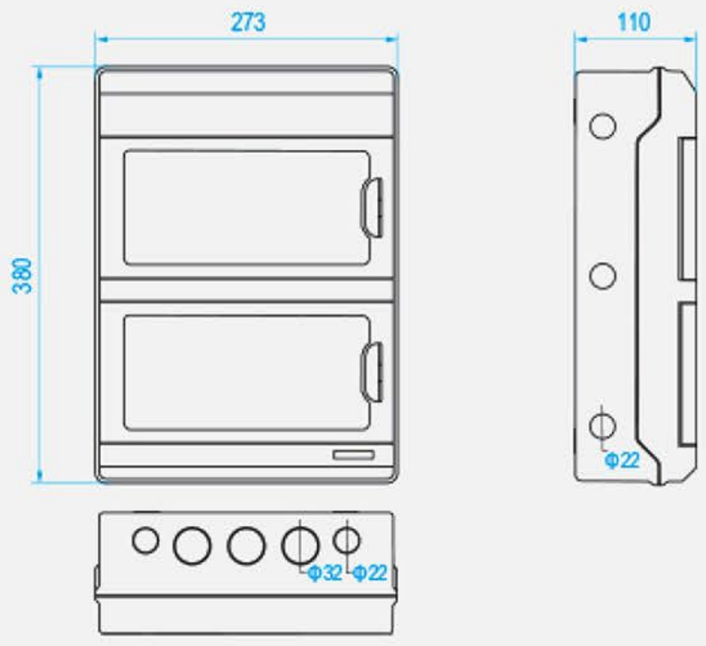
381*230*110MM

STW-18-WAY



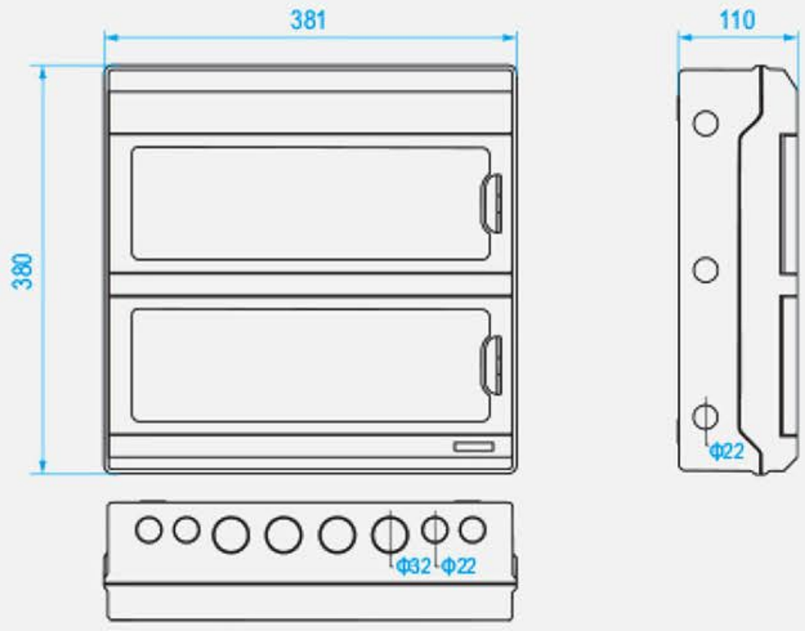
273*380*110MM

STW-24-WAY



381*380*110MM

STW-36-WAY



VOLTA

Function

1. Under voltage protection 210V-140V (adjustable) (default: 160V)
2. Over voltage proteciton 230V-300V (adjustable) (default: 280V)
3. Over current protection 1A-40A/63A (adjustable) (default: 20A)
4. Reconnect time (delay on time): 1s-300s (default: 5s)
5. Voltage meter
6. Ammeter

Rated voltage: 220V; Frequency: 50Hz/60HZ
Over current protection: 1A-40A/63A (adjustable) (default: 20A)
Under-voltage action switch-off value: 210V-145V (adjustable) (default: 160V)
Over-voltage action switch-off value: 230V-300V (adjustable) (default: 280V)
Reconnect time (delay on time): 1s-300s (default: 5s)
Error in real-time current, voltage : ⩽5%

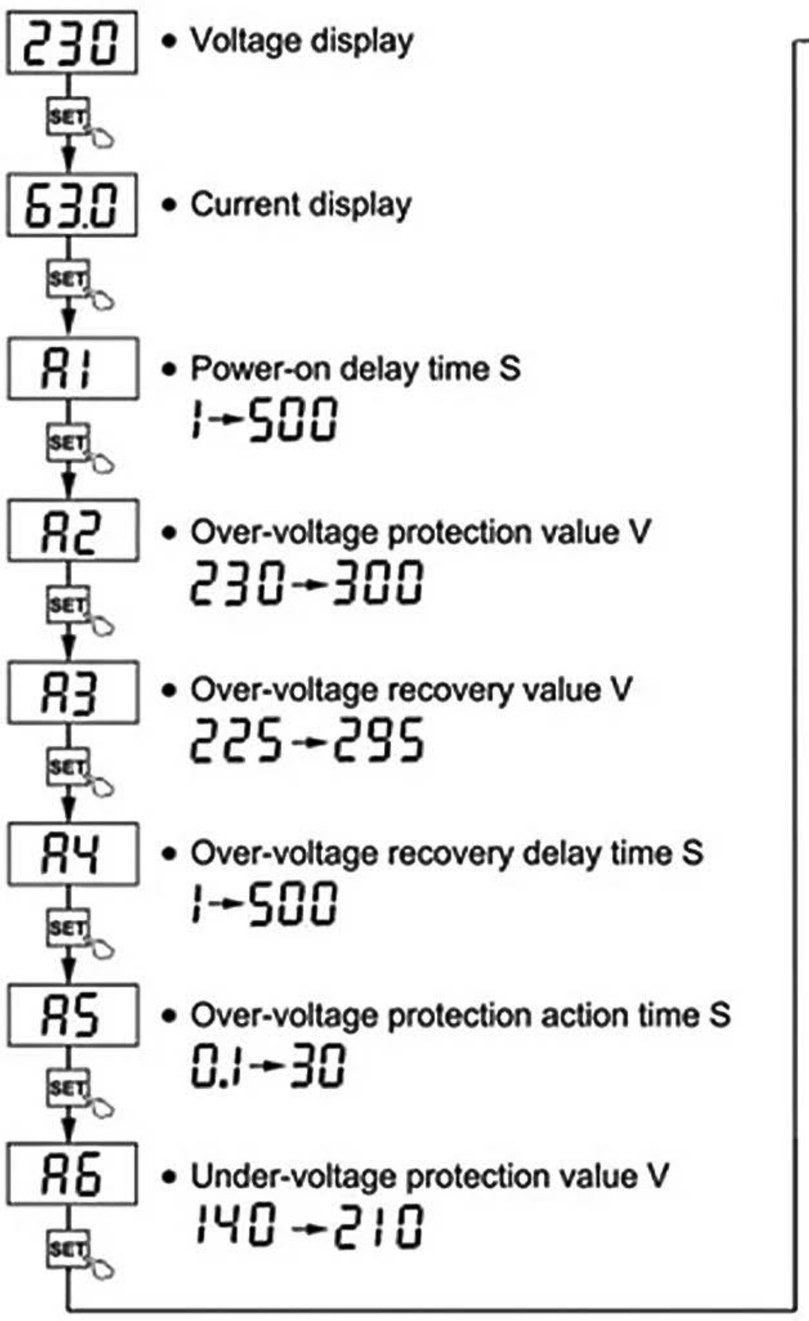
Electrical Features

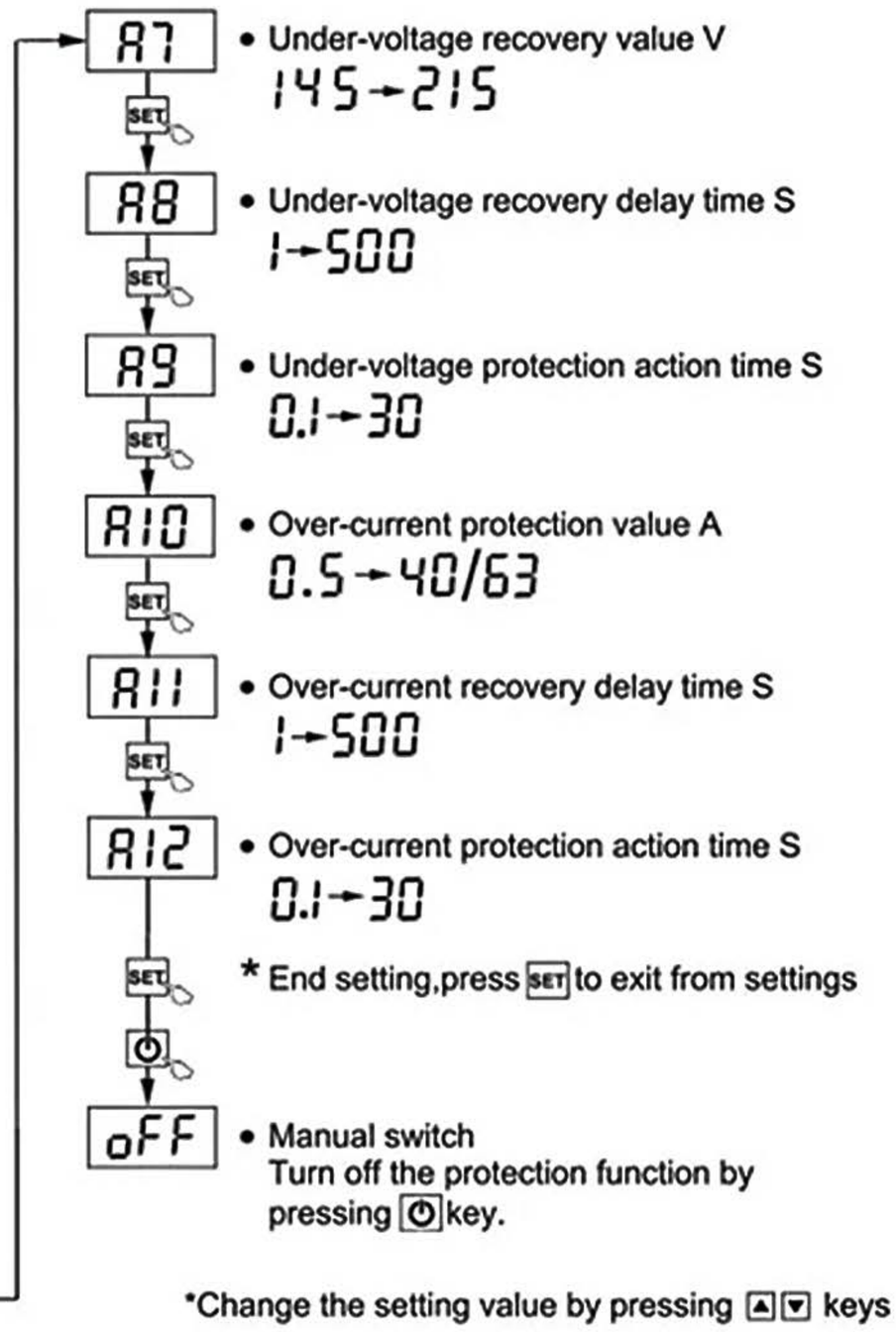
Rated supply voltage	AC220V
Operation voltage range	AC80V ~ 440V(Single phase)
Rated frequency	50 / 60HZ
Overvoltage(> V)setting range	240V ~ 300V(Factory setting 270V)
Undervoltage(< V)setting range	140V ~ 210V(Factory setting 170V)
Overcurrent(> A)setting range	1-40A / 1-63A
Max.power ofload(kW)	40A(< 8.8KW) / 63A(< 13.9KW)
Rated insulation voltage	400V
Voltage measurerment accuracy	1%(Not exceeding 1% of the overall range)
Reset delay time	1s ~ 300s(Factory setting 30s)
Starting delay time	1s~300s(Factory setting 2s)
Output contact	1NO
> V and < V trip delay	0.5S
Error	2%

Installation

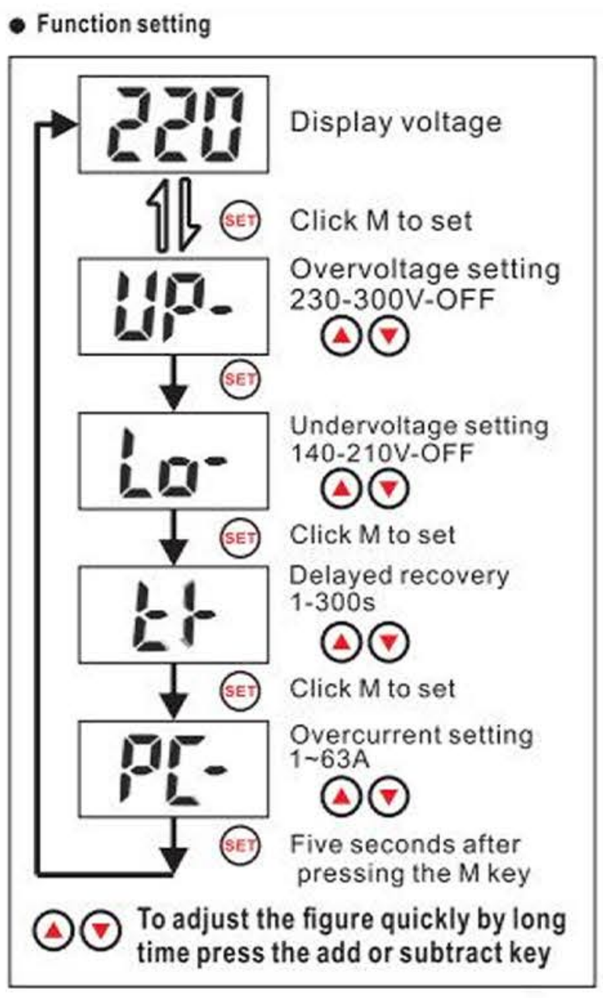
Mechanical life	10^5
Protection degree	10^6
Oporatintg temperature	-5℃ ~ 55℃
Storage temperature	-30℃ ~ 70℃
Terminal connection type	Cable/pin-tpye busbar/U-type busbar
Humidity	≤50%at40C(without condensnton)
Pollution degree	IP20
Tightening torque	2.5Nm 22In-Ibs
Electrical life	3
Terminal size top/bottom for cable/busbar	25mm² 18-3AWG
Mounting	On DIN rail EN60715(35mm) by means of fast clip device
Altitude	≤2000M
Overall and Installation Dimension	81*36*66mm

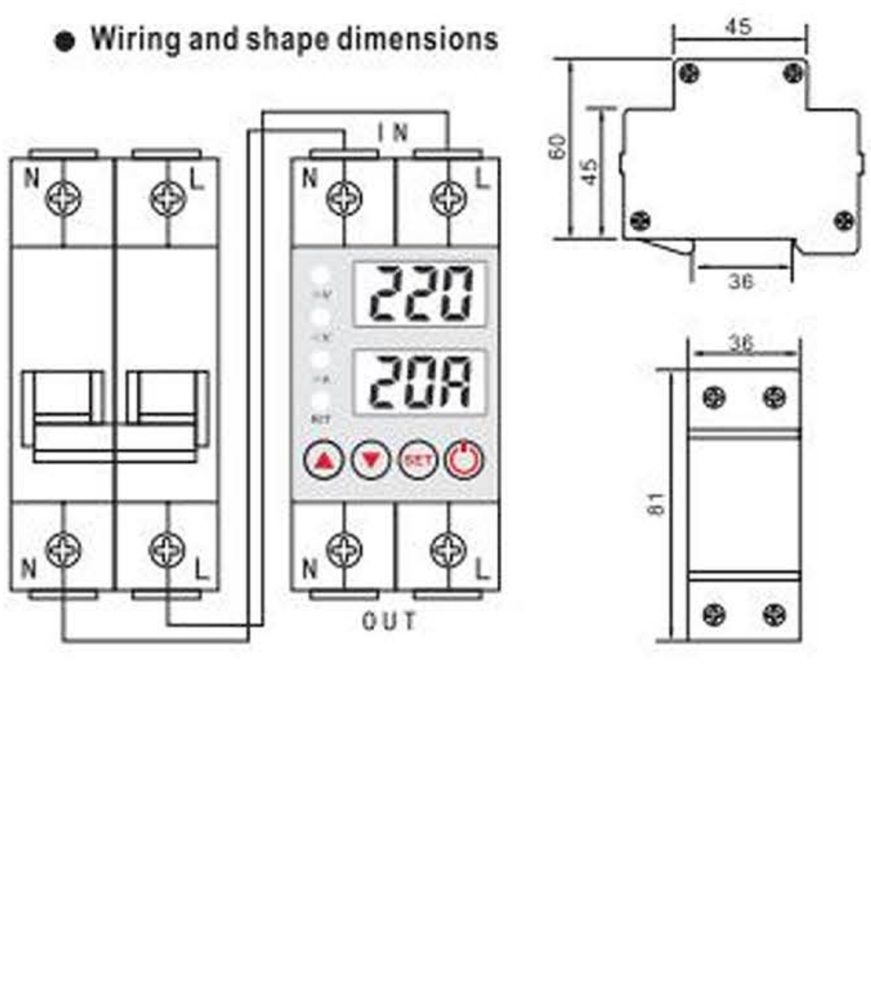
PRODUCT SETTING





*Change the setting value by pressing ▲▼ keys





VOLTA

Productcharacteristics

- microcontroller-based
- Digital display of operating voltage and current values
- Prevent the electrical set voltage is too high/too low current, three-phase asymmetry and phase sequence error
- Voltage measurement accuracy 2%
- Key setting parameter
- LED indicates overvoltage/undervoltage and overcurrent faults
- 6 modules, DIN rail mounting

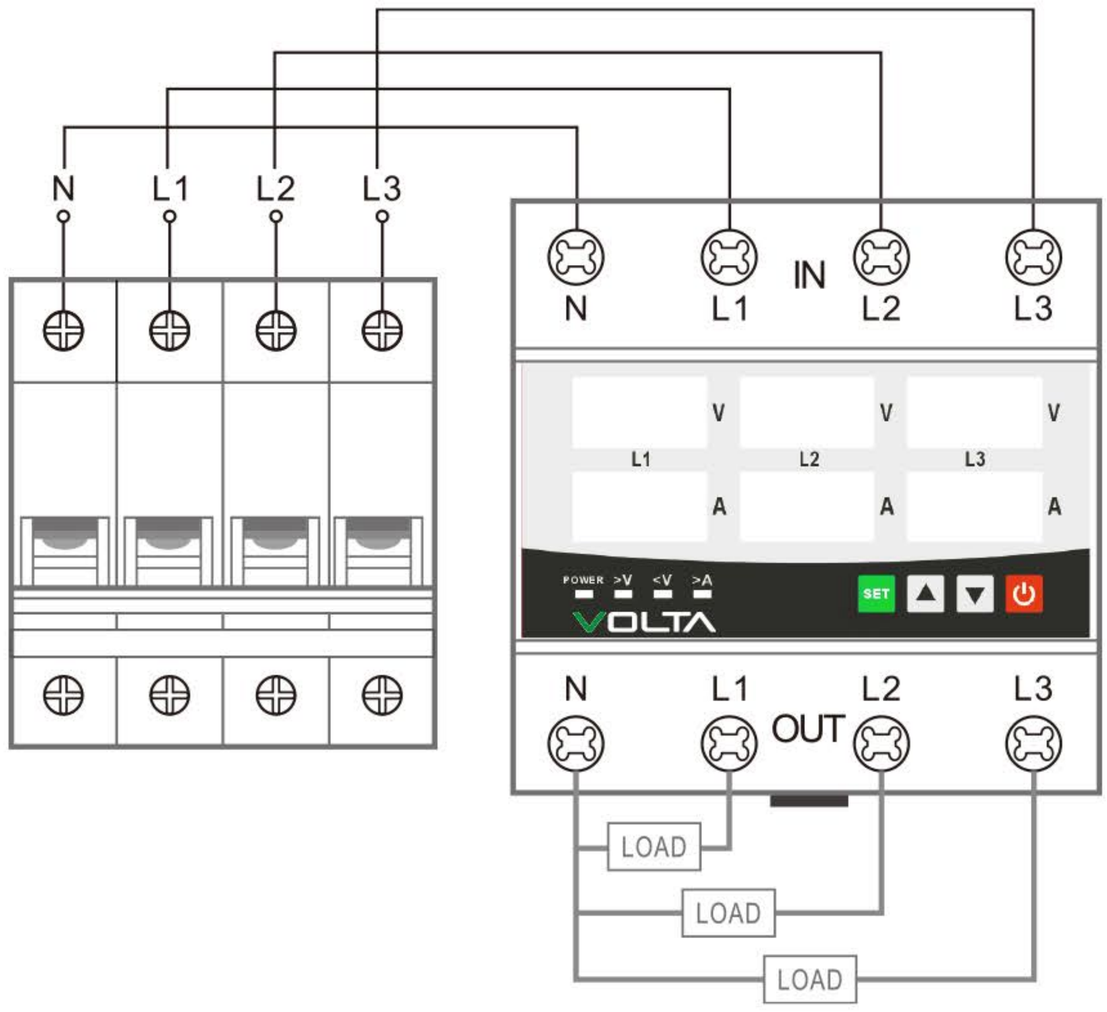
Mattersneeding attention

1. The equipment must be installed by qualified professionals.
2. Before operating the device, disconnect all power supplies and do not touch any terminal when the power supply is connected.
3. Verify that terminals are properly connected.
4. No matter whether the equipment is in normal operation, do not disassemble or repair otherwise, producers and sellersNo responsibility is accepted.
5. Do not use the equipment in places that may be corroded by gas, strong sunlight and rain.
6. Clean equipment with a dry cloth.
7. Failure to comply with these instructions will result in serious injury or serious accident.

Technicaldata

Rated supply voltage	AC230V
Operating voltage range	AC120V-300v
Rated frequency	50/60Hz
lag	Overvoltage and asymmetry:5V Undervoltage:5V
Asymmetric delay	10s
Voltage measurement accuracy	≤2%（On the whole spectrum）
Rated insulation voltage	450V
Output contact	3NO
Electrical life	10^5
Mechanical life	10^5
Protection class	Ip20
Pollution degree	3
altitude	<2000m
Operating temperature	-5℃-40℃
humidity	≤50%or40℃(Condensation free)
Storage temperature	-25℃-55℃

Wiring Diagram



VOLTA

Application

This din rail type LED indicator is applicable to circuit with rated voltage 230/240V and frequency 50/60Hz for visual indication and warning with red, yellow, bule and green color for option.

Feature

1) Flame retardant material high temperature resistance
2) One color indicator (customizable colors) : indicate theworking state clearly
3) Logo highlight : VOLTA quality assurance
4) Upper and lower terminals

Parameter

Breaking Capacity	6ka
Rated Voltage	230V
BCD Curve	C
Rated Frequency (Hz)	50-60Hz
Light source	LED
Color	red/yellow/blue/white/green
Width	9mm
IP degree	IP20

Three combinations of AC current, voltage, and frequency surface

size	model	power supply	measuring range	Display method	Colors
Outline ruler 72 * 72 * 32mm Opening size 68 * 68mm	ENCORE CH72UAF	Two wire No power supply	voltage AC50500 V current AC1-120A 10-99.9Hz	Red LED Nixie tube display character height 0.561INCH (14.30mm)	Red Blue White

Function

The STWDIM5D partial series DC special circuit breaker (hereinafter referred to as the circuit breaker) is used in DC power gridcircuits with a rated voltage of Dc250v, Dc1500v, and a rated working curent of 63A ^ 800A. This circuit breaker has overloadlong delay and short-circuit instantaneous protection functions, which are used to disribute electricily and protect the circuit andpower equipment from overload, short circuit and other fault hazards.

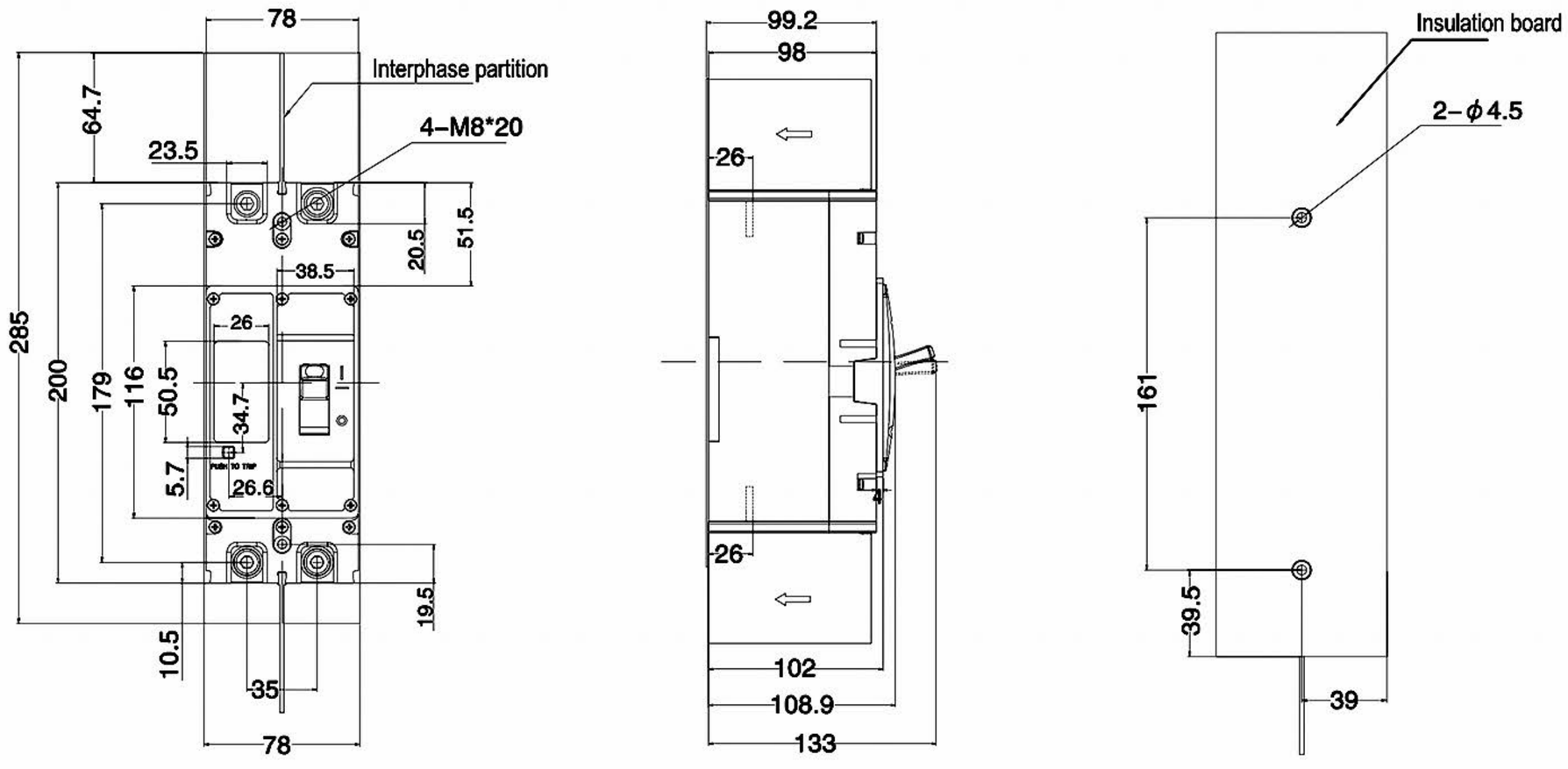
Compliant with standards:

GB/T14048.1 "Low voltage switchgear and control equipment - Part 1: General principles"
GB/T14048.2 "Low voltage switchgear and control equipment - Part 2: Circuit breakers"

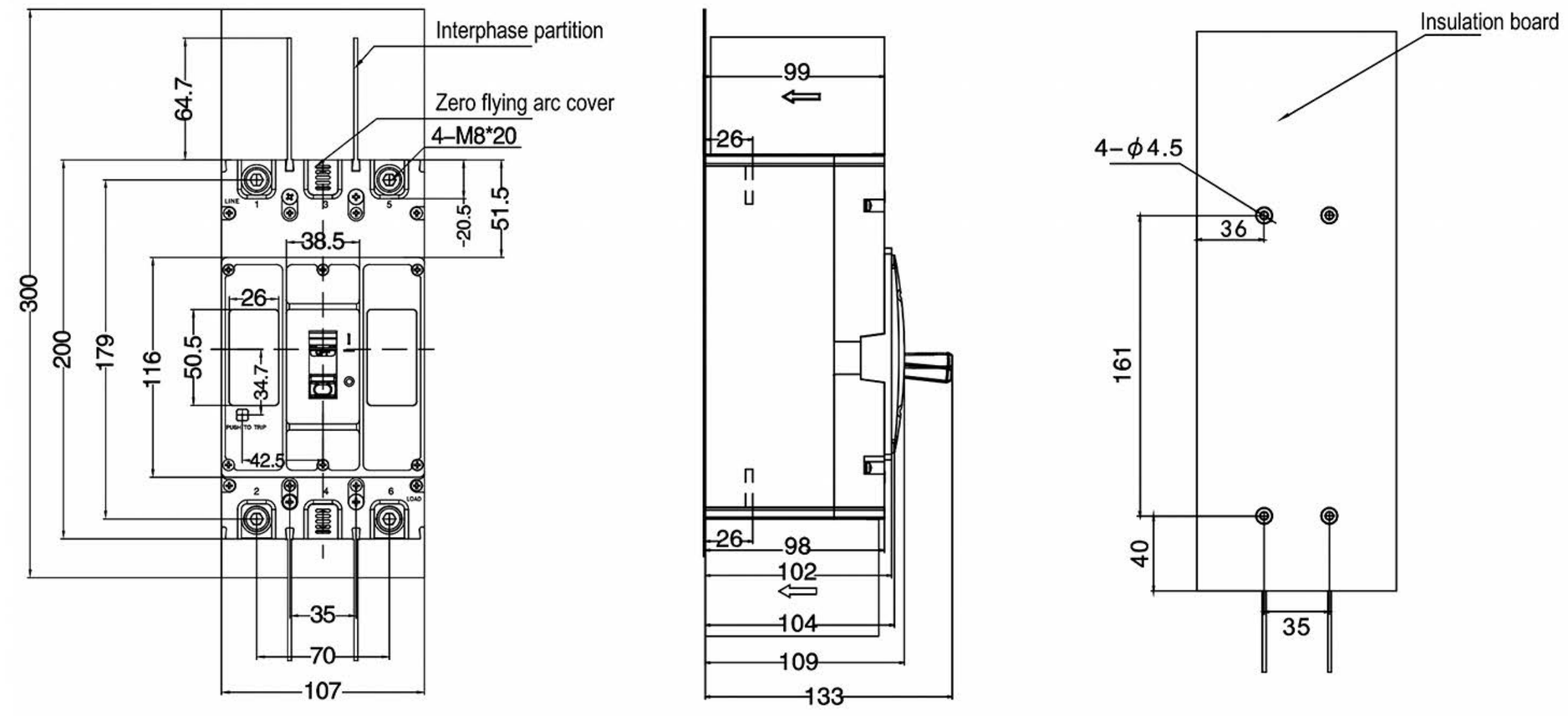
Normal working and installation conditions

- The altitude of the installation site shall not exceed 2000m
- Allow the ambient temperature to be no higher than+70 C and no lower than -45 C; (For use with reduced capacity exceeding+40 C, specific details must be negotiated with the manufacturer)
- Atmospheric conditions: such as 90% at 20 *C C, and considering the condensation that occurs on the suface of the product due to temperature changes, when the surrounding temperature is 40 °C
- The relative humidity of the atmosphere shall not exceed 50%, and higher relative humidity is allowed atower temperatures;
- Pollution level is level 3
- The installation category is lll
- Installation magnetic field: The magnetic field at the installation position shal not exceed 5 times the geomagnetic field in any direction
- In a medium without explosion risk, and there are no gases or conductive dust in the medium that are suficient to corrode metals and damace insulation.
- In areas without wind and snow erosion;
- Installtion conditions:Horizontal and vertical installtion can be carried out, and there should be no significant impact or cibration at the installation site. It should not be insralled in flammable and explosive places.
- The circuti breaker has isolation function, with the symbol

STW5DC-250 and 315 front wiring installation dimension diagram (2P)



STW5DC-250 and 315 front wiring installation dimension diagram (3P)



Release method and accessory code

Tripping method	Attachment Category						
	shunt release	auxiliary contact	Alarm contact	Shunt release Auxiliary contact	Shunt release Auxiliary erosion head	Two groups Auxiliary contact	Auxiliary contact Alarm contact
electromagnetic trip	210	220	208	240	218	260	228
Dble reelease	310	320	308	340	318	360	328

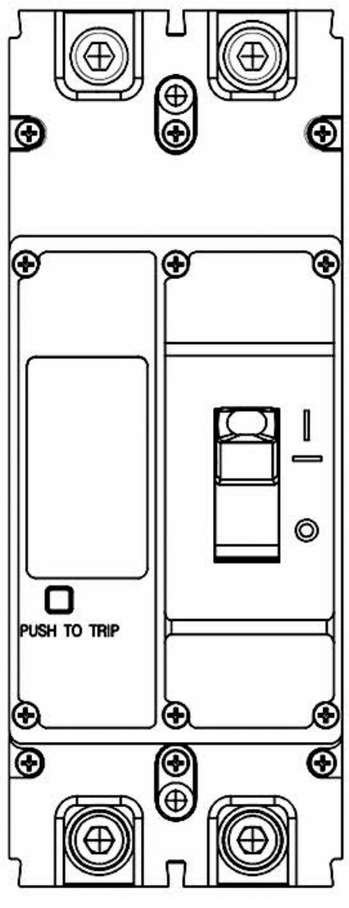
Tripping method	Attachment Category		
	Two groups Auxiliary contact Alarm contact	Shunt release Auxiliary contact Alarm contact	
electromagnetic trip	268	248	
Double release	368	348	

Note: 1.The first digit of the release method and internal accessory code 2 represents the electromagneric (instantaneous) release, and 3 represents the thermal electromagnetic (compound) release: The last two digits represent the internal attachment code.If there are no attachments, use 00 to indicate.

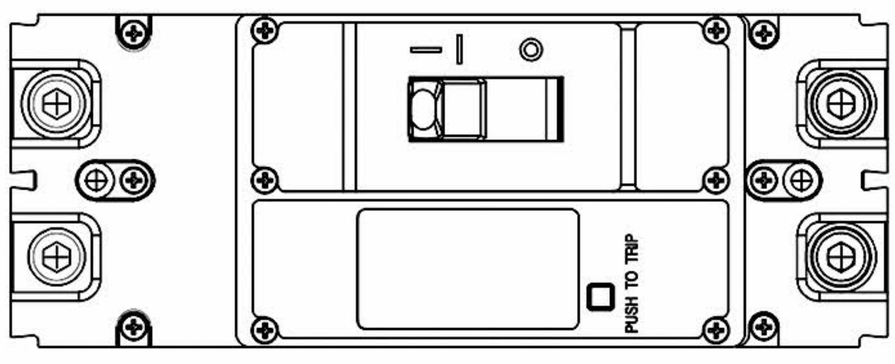
2.For In the specifications of ℃ -630,248 and 348 have one pair of auxiliary contacts (one normally open and one normally closed), while in the specifiactions of 268 and 368,there are three pairs of auxiliary contacts (i.e. three normally open and three normally closed)

Installation method

This series of circuit breakers is generally installed vertically, but can also be installed horizontally (see the picture below)



verical installation



Horizontal installation

Cross-sectional area of the connecting conductor and corresponding rated current

Rated current value(A)	63	80	100	125	160	80、200 225	250	280、300	315、350	400
Wire cross-sectional area (mm^2)	16	25	35	50	70	95	120	185	185	240

Rated current value(A)	Copper row		Copper row	
	The number of	Cross-sectional area of each wire(mm^2)	The number of	Cross-sectional area of each wire(mm^2)
500	2	150	2	30 X 5
630	2	185	2	30 X 5
700	2	240	2	50 X 5
800	2	240	2	50 X 5

Main technical data and performance indicators

Model							
Frame grade		250	315	400		400V	
Rated current(A)	In	63A、80A、100A、125A、140A、160A、180A、200A、225A、250A	280A、300A、315A	250A、315A、350A 400A		250A、315A、350A 400A	
Rated insulation voltage(A)	Ui	1500V					
Rated impulse withstand voltage (kV)	Uimp	12kA					
type		DC	PV	DC	PV	DC	
Rated working voltage (v)	Ue 2P Appearance	DC250V、DC500V、DC750V、DC1000V、DC1500V		DC250V、DC500V、DC750V、DC1000V、DC1500V		DC250V、DC500V、DC750V、DC1000V、DC1500V	
	3P Appearance	DC1000V、DC1250V、DC1500V		DC1000V、DC1500V		DC1000V、DC1500V	
Rated limit short circuit Breaking capacity (kA)	Icu 2P Appearance	DC1000V:15 DC1500V:5	DC250V、DC500V: 50 DC750V、DC1000V: 25 DC1500V: 25	DC250V、DC500V: 25 DC750V、DC1000V: 15 DC1500V: 10	DC250V、DC500V: 50 DC750V、DC1000V: 25 DC1500V: 10	DC250V、DC500V: 70 DC750V、DC1000V: 50 DC1250V、DC1500V: 20	
	3P Appearance	DC1500V:20	DC1000V、DC1250V、DC1000V: 25	DC1000V: 30 DC1500V: 25	DC1000V: 40 DC1500V: 30	——	
Rated ultimate short-circuit breaking capacity(kA)	Ics	100% Icu					
Connection		2P appearance(Figure 1),3 appearance(Figure 2)		2P appearance(Figure 1),3 appearance(Figure 3)		2P appearance(Figure 1)	
Isolation fun ction		correct					
Utilization category	Cat.	A					
Mechanical life	order	20000		15000			
Electical life	order	1500		1000		800	500
Flashover distance	mm	≯50		≯ 100			
External dimensions	mm 2P Appearance	200 x 73 x 135		270 x 130 x 156		275 x 106 x 149	
	mm 3P Appearance	200 x 107 x 135		270 x 182 x 156			
Reference ambient temperature	℃	40		40			

Model						
Frame grade			630	630V	800	
Rated current(A)			400A、500A、630A	400A、500A 630A	630A、700A 800A	
Rated insulation voltage(V)	ui		1500V			
Rated impulse withstand voltage(V)	uimp		12kV			
type			DC	PV	DC	DC	PV
Rated working voltage(V)	ue	2P shape	DC250V、DC500V、DC750V、DC100V、DC1500V		DC250V、DC500V、DC750V、DC100V、DC1500V	
		3P shape	DC1000V、DC1250V、DC1500V		DC100V、DC1500V	
Rsted Extreme short ciruit Breaking capacity (kA)	Icu	2P shape	DC 1000V: 35 DC 1500V: 25	DC250V、DC500V:50 DC750V、DC1000V:35 DC1500V:25	DC250V、DC500V:70 DC750V、DC1000V:50 DC1250V、DC1500V:20	DC250V、DC500V:25 DC750V、DC1000V:15 DC1500V:10	DC250V、DC500V:50 DC750V、DC1000V:25 DC1500V:10
		3P shape	DC 1000V: 30 DC 1500V: 25	DC 1000V: 30 DC 1500V: 25	——	DC 1000V: 30 DC 1500V: 25	DC 1000V: 40 DC 1500V: 30
Rated operating short-circuit breaking capacity(kA)	Ics		100% Icu			
Wuring			2P shape(Fig.1),3P shape(Fig.2)		2P shape(Figure.1)	2P shape(Fig.1),3P shape(Fig.3)	
Isolation function			yes			
Usage categories	Cat.		A			
Mechanical life	次		20000		15000	
Electrical life	次		1500		800	500
Arcing distance	mm		≥100		≥100	
Dimensons	mm	2P shape	270 x 130 x 156	275 x 106 x 149	270 x 130 x 156	
		3P shape	270 x 182 x 156		270 x 182 x 156	
Base ambient temperature	℃		40		40	

Wiring

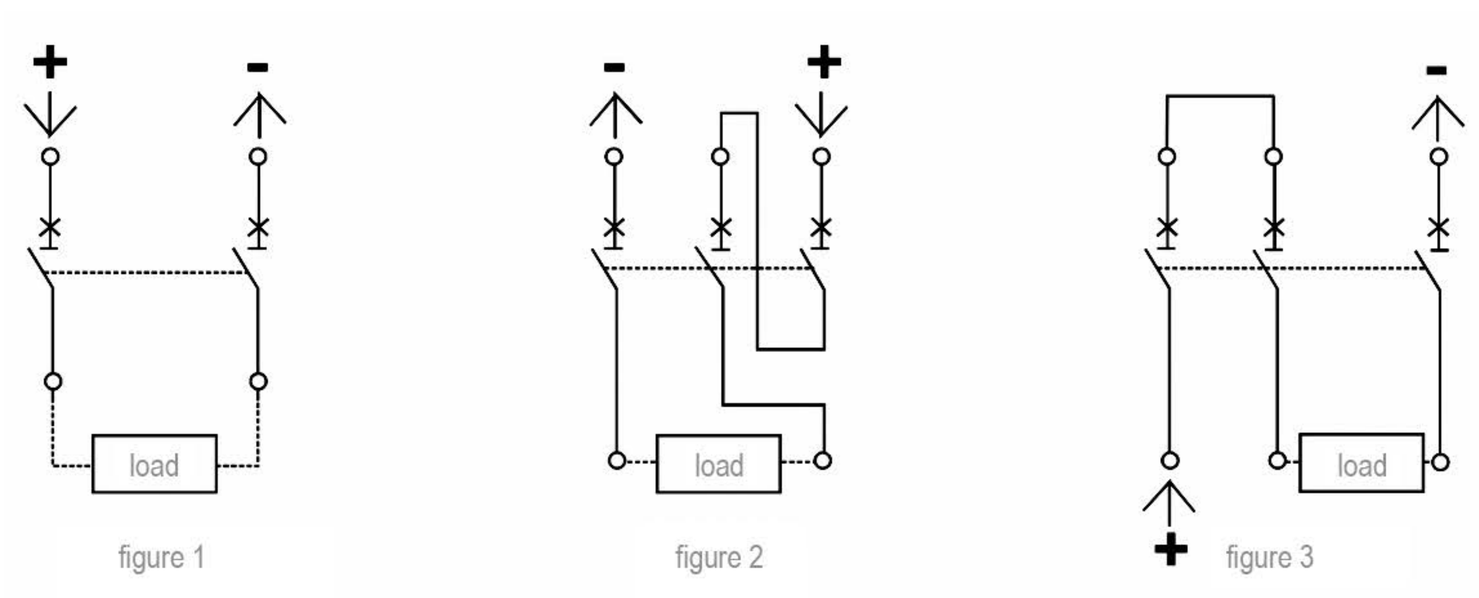


figure 1　figure 2　figure 3

Maintain characteristics

The thermal tripper of the circuit breaker has the special characteristics of inverse time limit;the electromagnetic tripper is instantaneous action,the characteristics are shown in the table below

For power distribution

Rated current of circuit bresker(A)	Thermal release(ambient temperature+40℃)		Electromagnetic release action current(A)
	1.05In(cold state) No action time(In)	1.3In(hot state) Action time(h)	
63	≥1	≤1	10In ±20%
63<In≤ 800	≥2	≤2	

◆ Power loss table

Model	Power current(A)	Three-pole/four-poel total power loss(W)
STW5DC-250	250A	40
STW5DC-315	315A	43
STW5DC-400	400A	115
STW5DC-400V	630A	105
STW5DC-630	800A	187
STW5DC-630V	630A	127
STW5DC-800	800A	252

◆ The derating coefficient of the rated operating current of the thermal release as the ambient temperature changes

Circuit breaker model	ambient temperature						
	+40℃	+45℃	+50℃	+55℃	+60℃	+65℃	+70℃
STW5DC-250	1.0In	1.0In	1.0In	0.95In	0.93In	0.91In	0.88In
STW5DC-315	1.0In	1.0In	1.0In	0.95In	0.93In	0.91In	0.88In
STW5DC-400	1.0In	1.0In	1.0In	0.93In	0.91In	0.89In	0.85In
STW5DC-630	1.0In	1.0In	1.0In	0.92In	0.90In	0.89In	0.83In
STW5DC-800	1.0In	1.0In	1.0In	0.92In	0.89In	0.85In	0.80In

Note: When the ambient temperature is lower than 50℃, the product can be used normally without derating.

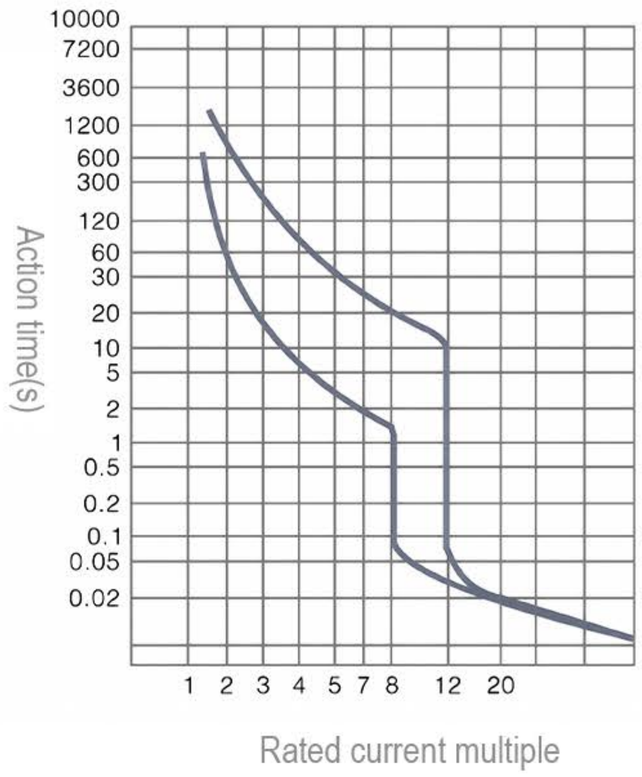
◆ Power loss table

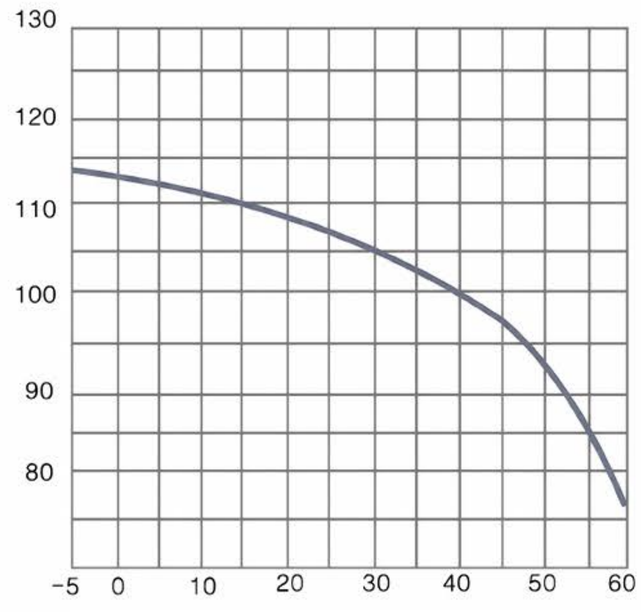
If the altitude exceeds 2000m for the applicable working environment,please refer to the table below for the electrucak performance of the circuit breaker.

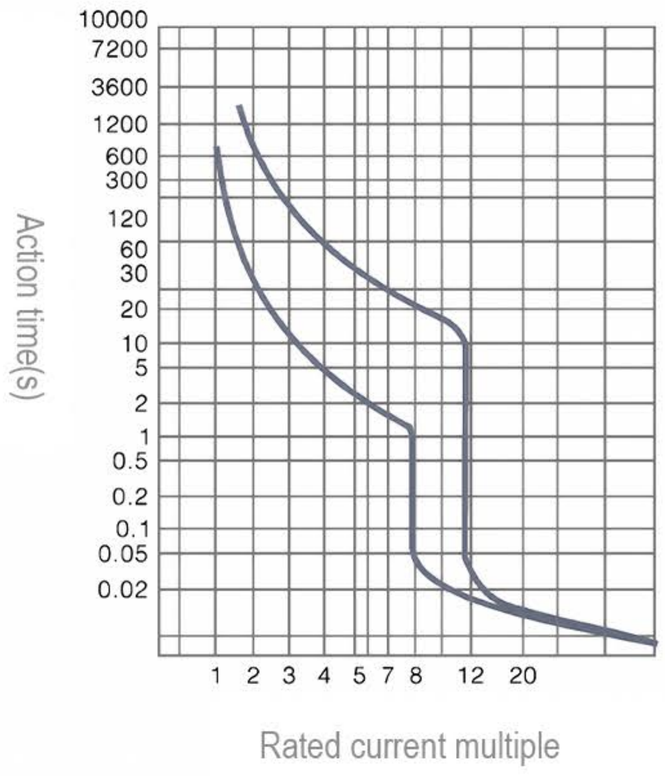
Altitude(M)	2000	2500	3000	3500	4000	4500	5000
Maximum operating current coefficient	1	1	0.98	0.95	0.93	0.91	0.89
Maximum operating voltage(V)	1	1	1	1	1	1	1
Power frequency withstand voltage	1	1	1	1	1	1	1
Insulation voltage	1	1	1	1	1	1	1

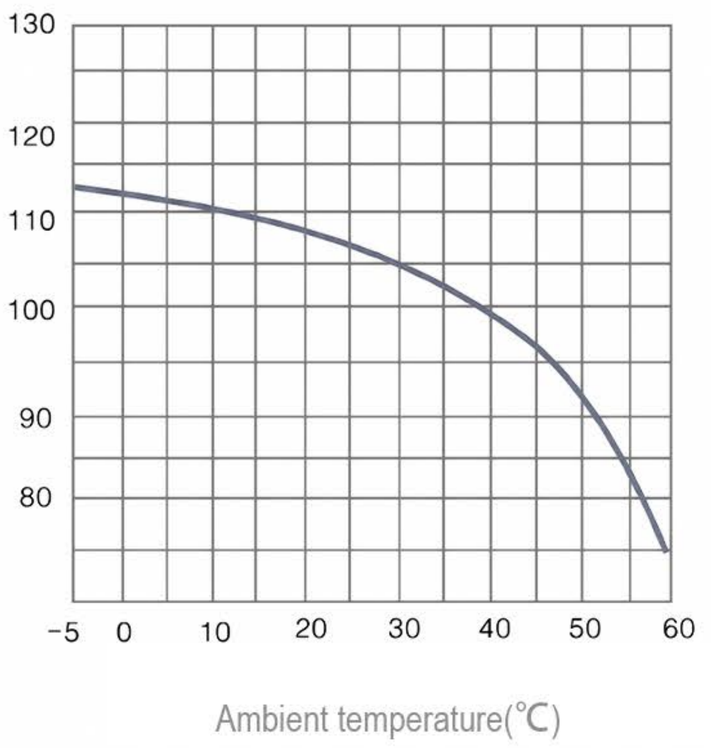
Characteristic curve

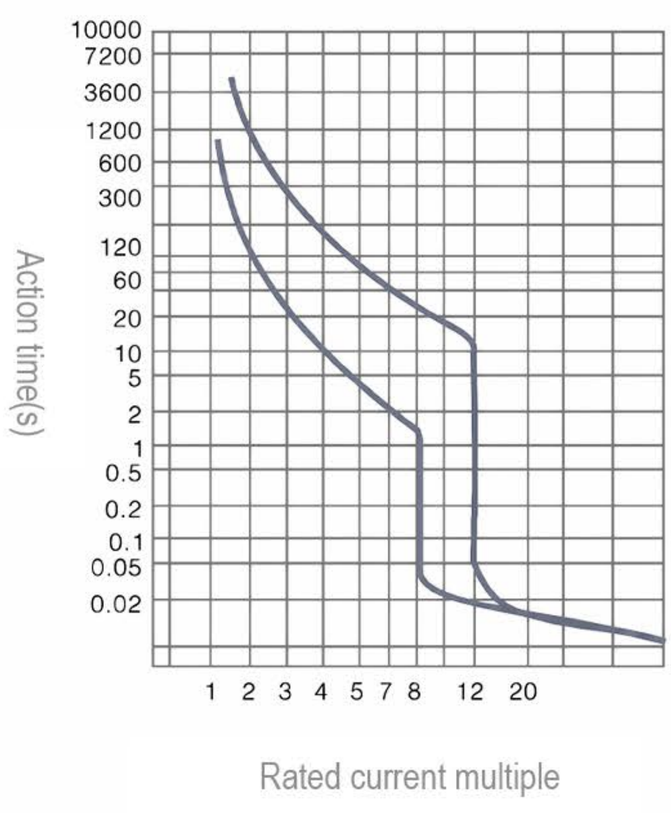
Note: The characteristic curve is measured under cold state and three-phase load.

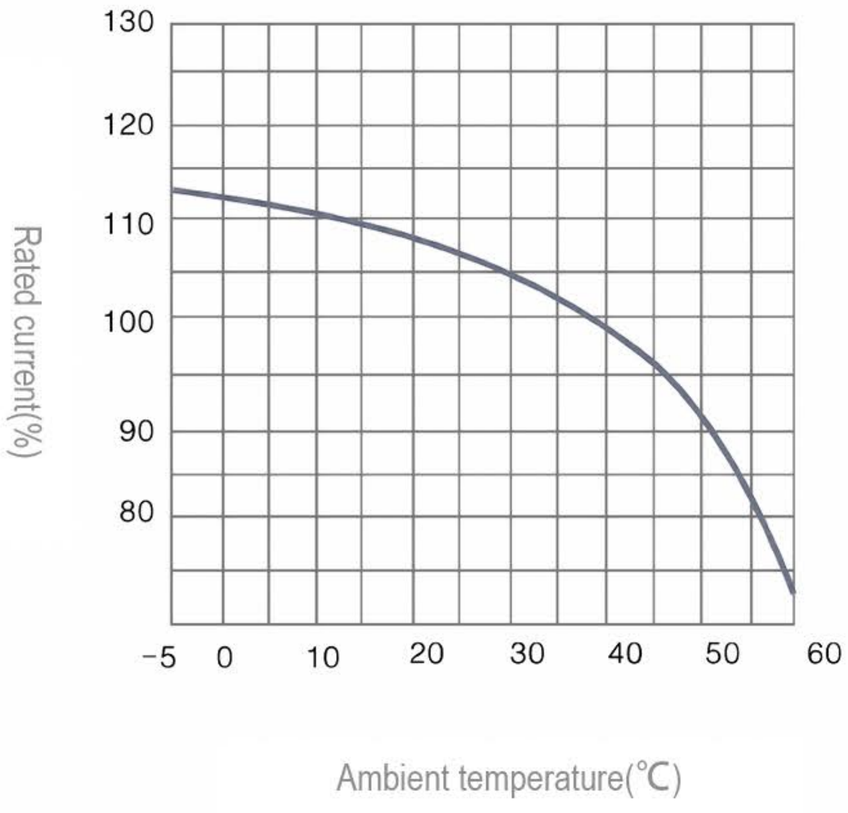










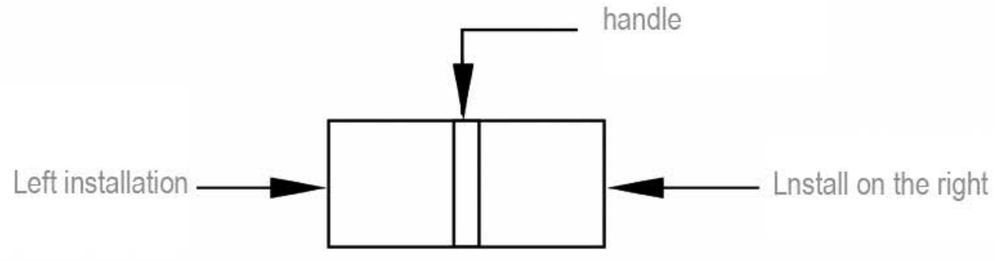


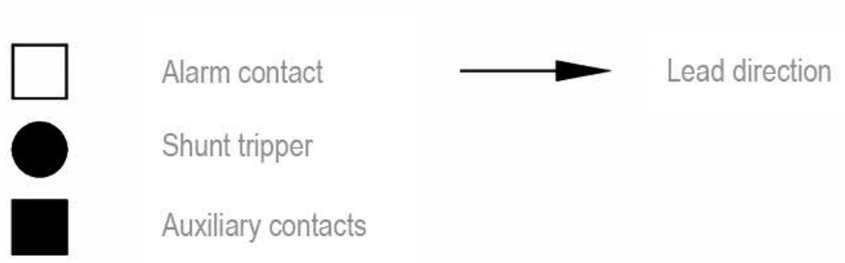
Appendix

Electrical accessories for circuit breaker intenal accesspries

According to user needs, circuit breaker accseeories can be directly led out with wires

(The length of the wire is 50cm,special requirements need to be specified)， and a terminal block can also be installed.

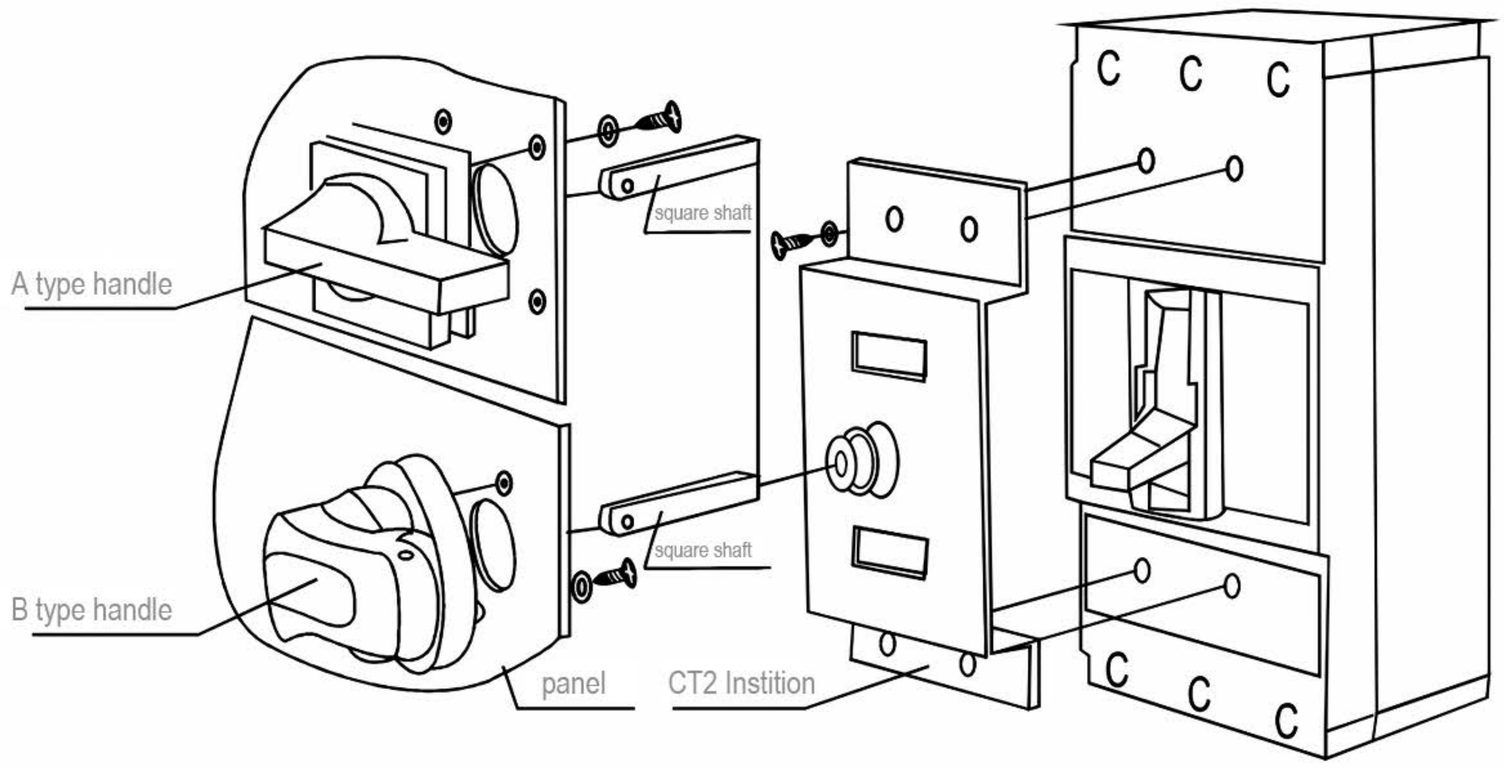




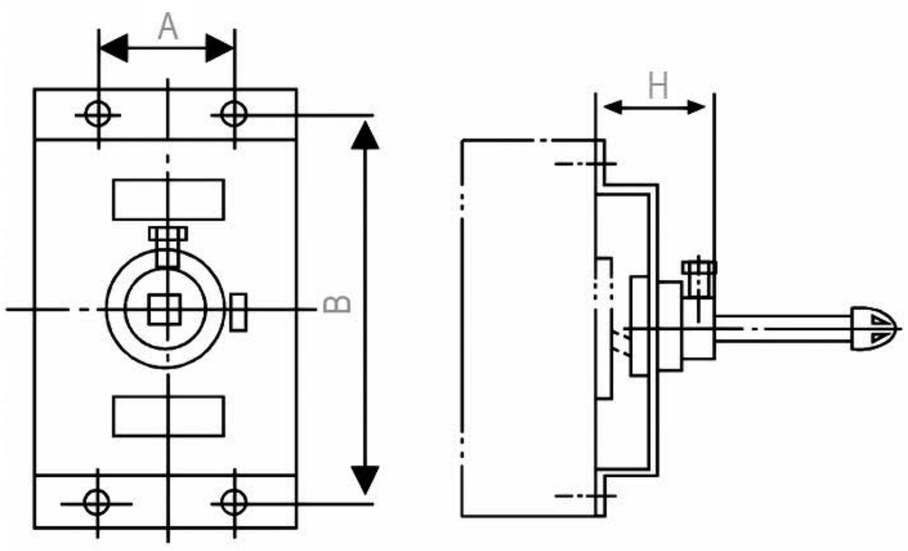
Tripping Method and Accessories code	Attachment Name / Model / Number of poles	STW5DC-250、315 2	STW5DC-250、315 3	STW5DC-400V、630V 2	2	3
208、 308	Alarm contact □	← □	← □	← □	← □	← □
210、 310	Shunt tripper ●	← ●	← ●	← ●	← ●	← ●
220、 320	Auxiliary contacts ■	← ■	→ ■	← ■	← ■	→ ■
240、 340	Shunt release ausiliary contact	← ● ■	← ● ■ →	← ● ■	← ● ■	← ● ■ →
260、 360	Two sets of auxiliary contacts	← ■ ■	← ■ ■ →	← ■ ■	← ■ ■	← ■ ■ →
218、 318	Shunt tripper alarm contact	– –	← □ ● →	– –	– –	← □ ● →
228、 328	Auxiliary contact Alarm contact	← □ ■	← □ ■ →	← □ ■	← □ ■	← □ ■ →
248、 348	Shunt trip alarm contact Auxiliary contacts	– –	← ■ ● □ →	– –	– –	← ■ ● □ →
268、 368	Two sets of auxiliary contacts Alarm contacts	– –	← ■ ■ □ →	– –	– –	← ■ ■ □ →

Note:1.The first digit of the release mode and inthrnal accessory code number 2 represents the electromagnrtic(insrantaneous) release,and 3 represents the thermal- electromagnetic(duplicate) release;
The last two digits represent the internal accessory code, such as No attachment is represented by 00.

Installation digram of CT2 type manual operating mechanism

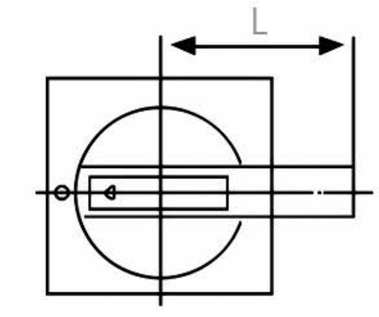


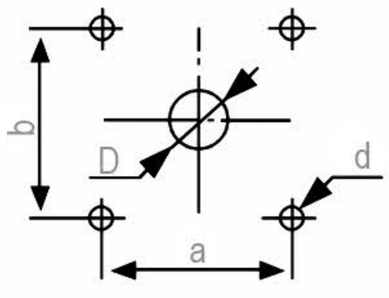
Installation dimension drawing of CT2 type manual operating mechanism



Product model specifications	Ocerall installation dimensions(mm)		
	A	B	H
STW5DC-250、315/2300	—	161	62
STW5DC-250、315/3300	35	161	70
STW5DC-400、630/2300	116	200	76.3
STW5DC-400、630V/2300	89	217	48
STW5DC-800/2300	116	200	76.3
STW5DC-400、630 、800/3300	167	214	76.3

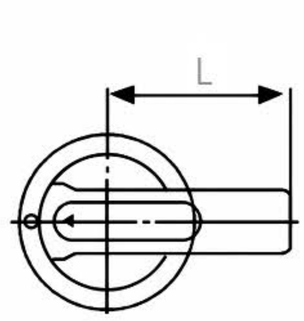
CT2 type operating mechanism handle appearance and installtion dimensions drawing

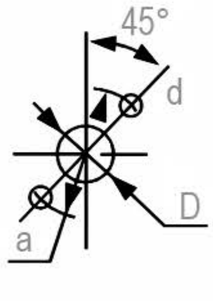




Handle specifications	A1 250-315	A2 400-800
D	Φ 35	Φ 35
d	Φ 4.5	Φ 4.5
a	65	65
b	65	65
L	95	125

1.A-type handle size

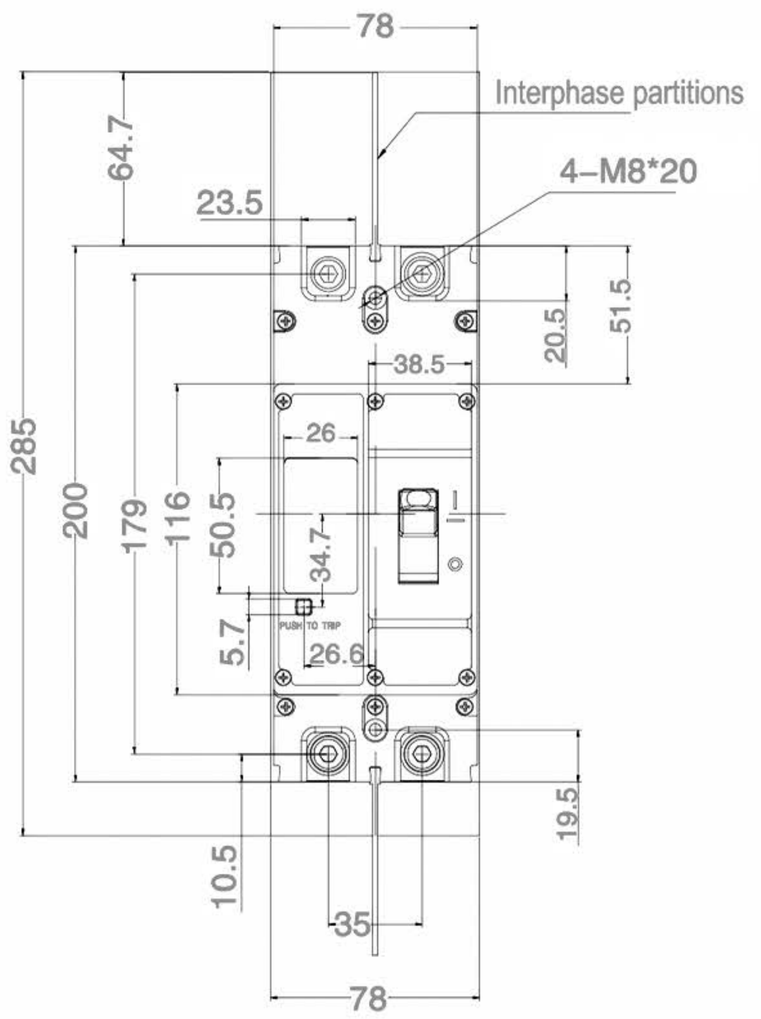


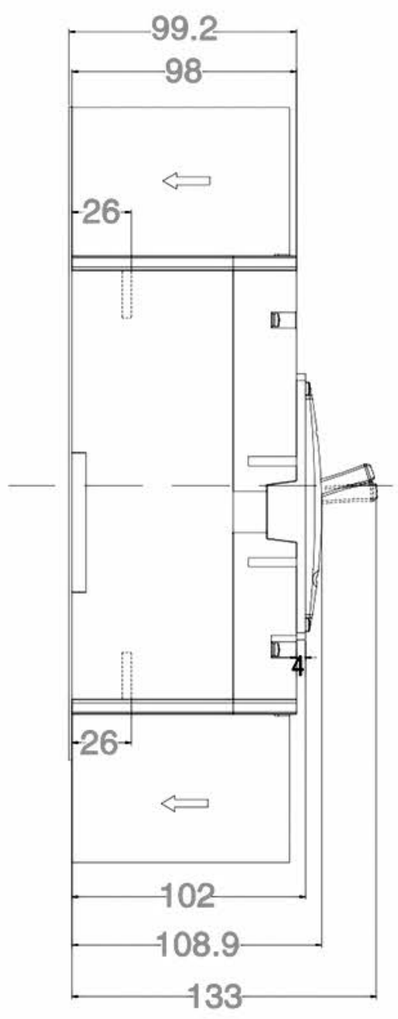


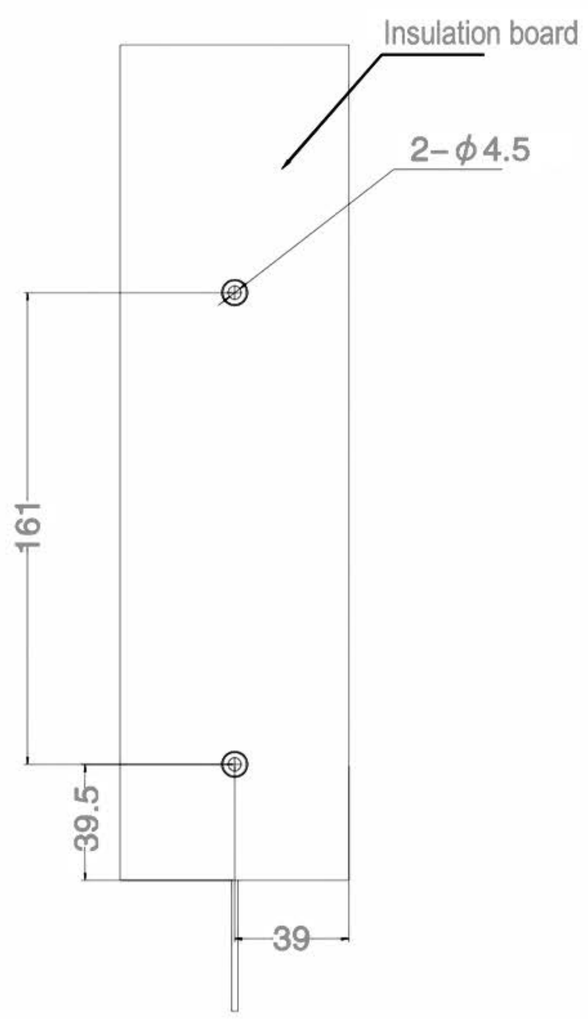
Handle specifications	A1 250-315	A2 400-800
D	Φ 35	Φ 35
d	Φ 4.5	Φ 4.5
a	65	65
b	65	65
L	95	125

1.B-type handle size

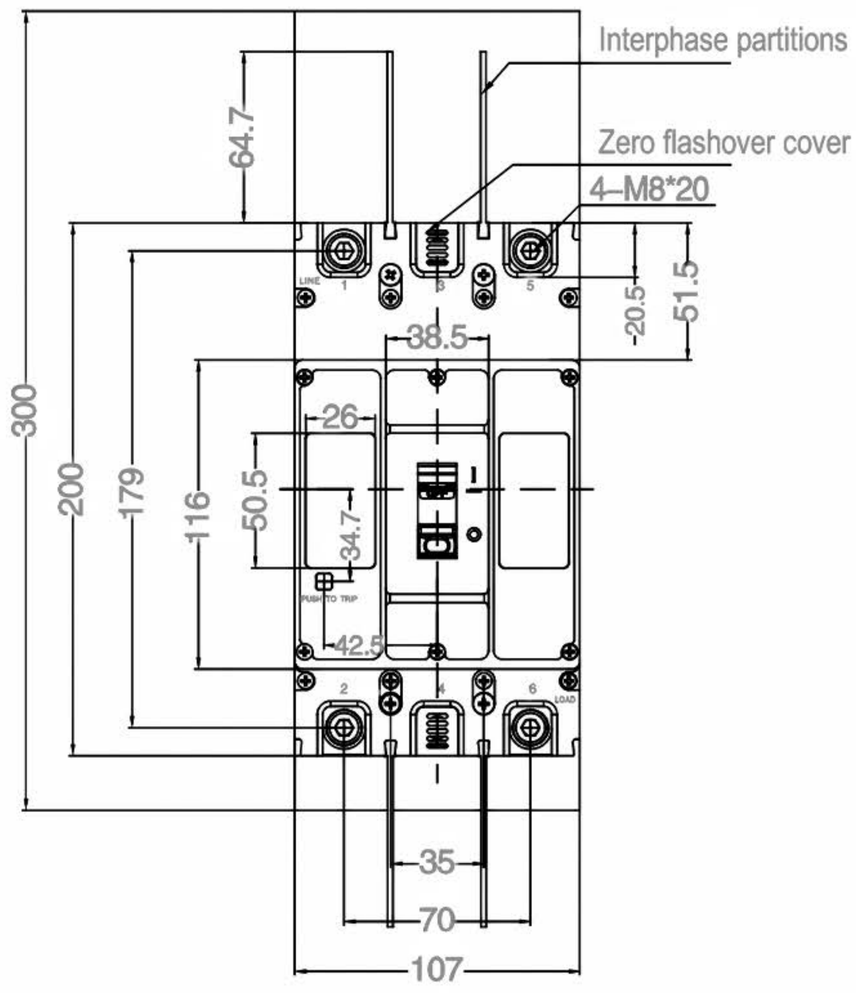
STW5DC -250,315 front panel wiring installation dimenion drawing(2P)

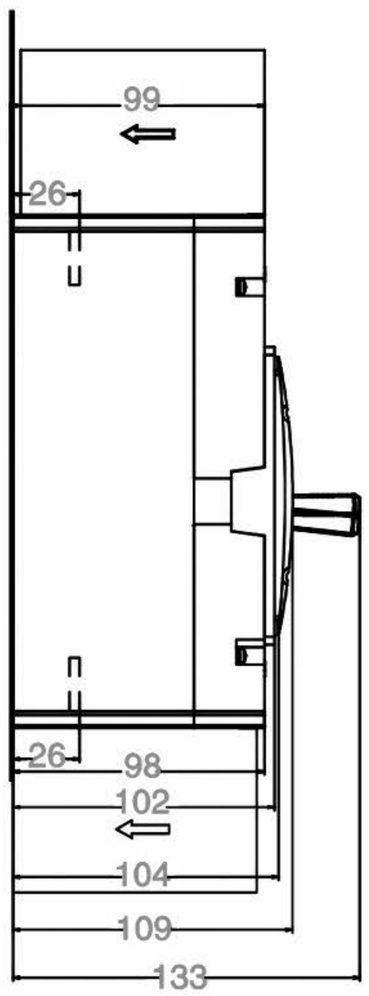


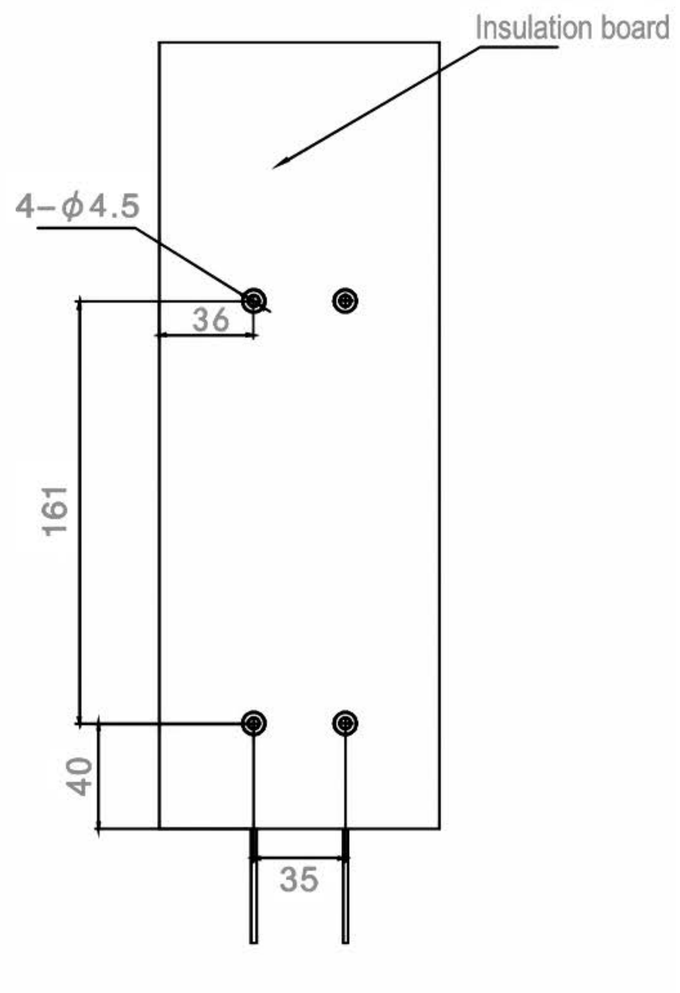




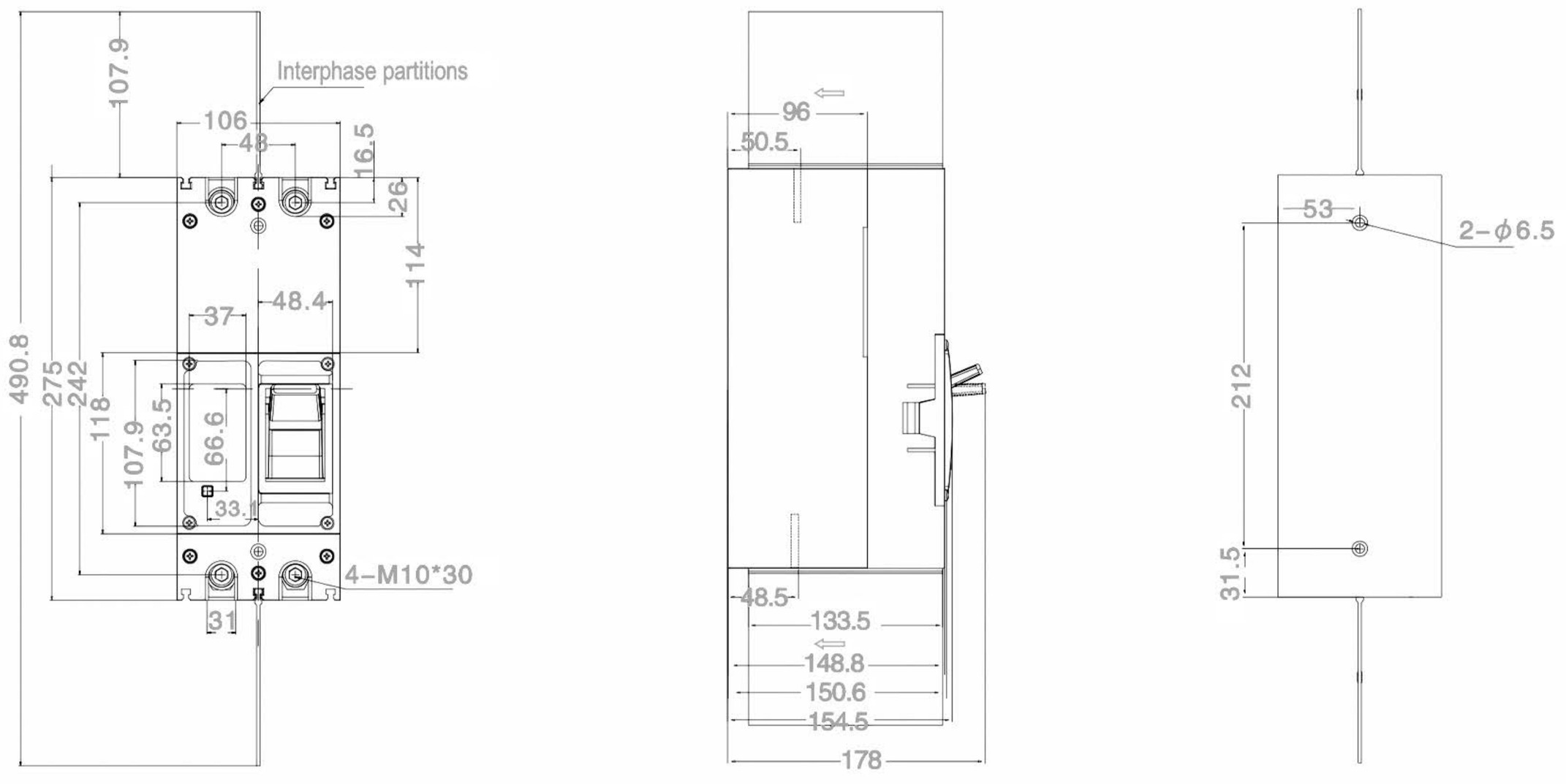
STW5DC -250,315 front panel wiring installation dimenion drawing(3P)



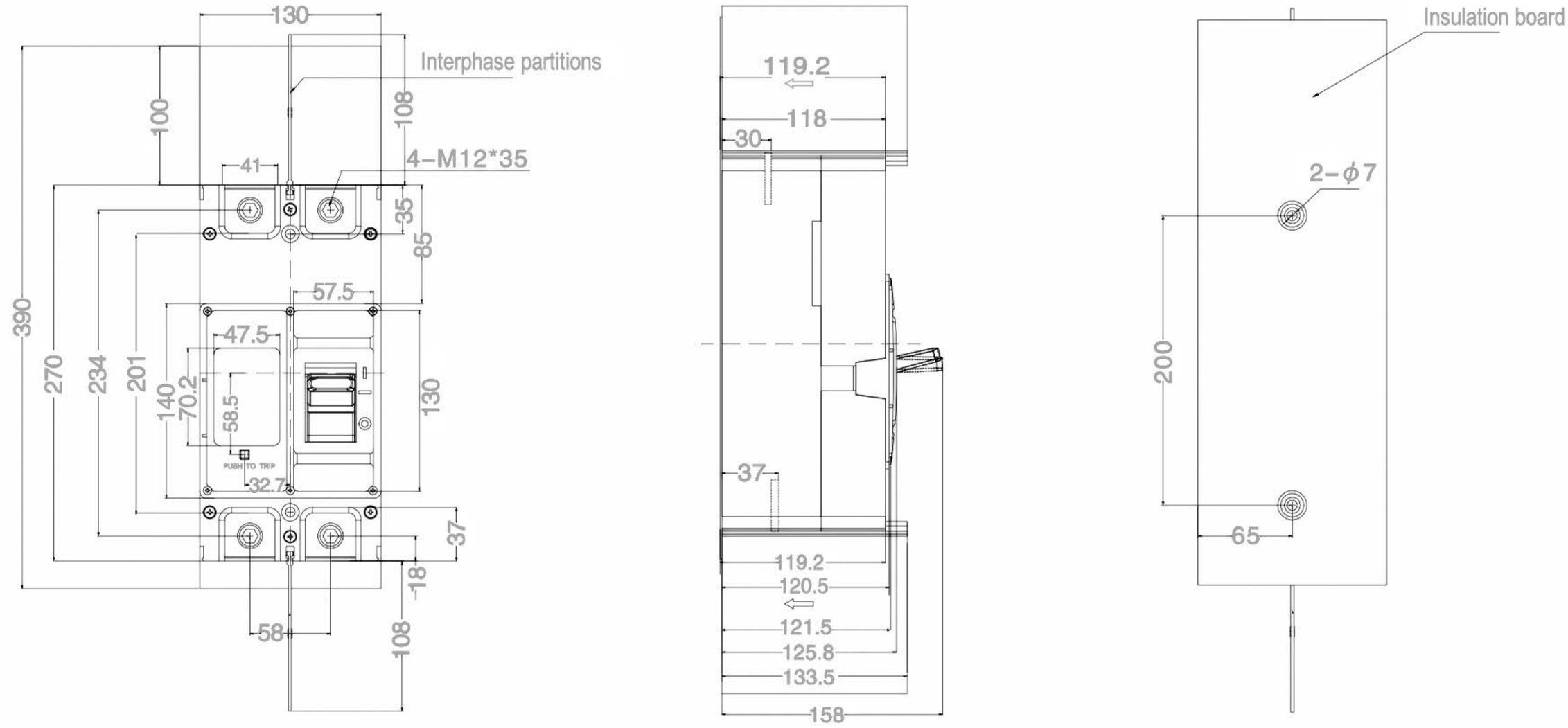




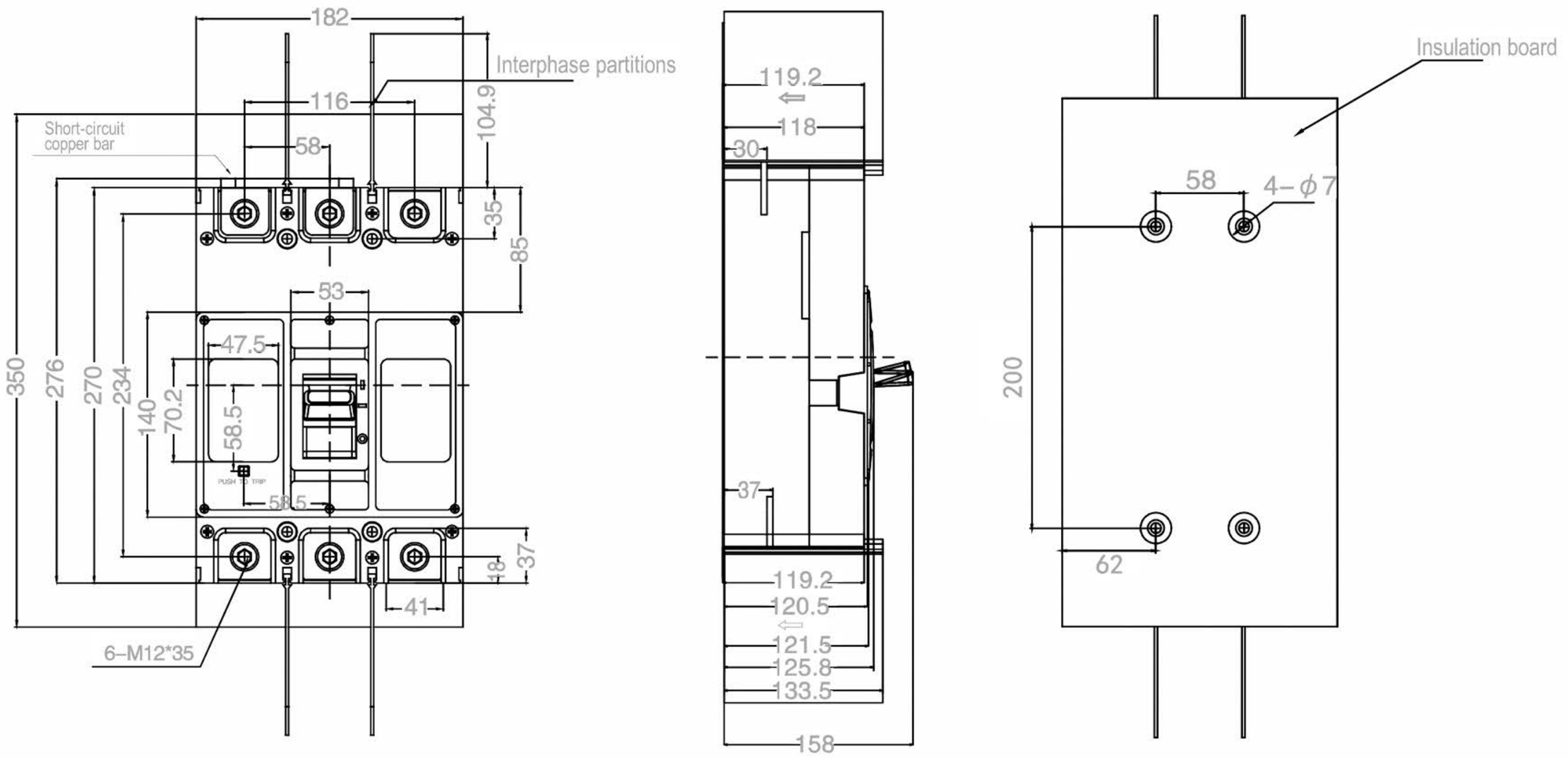
STW5DC-400V,630V front panel wiring installaltion dimension diagram(2P)



STW5DC-400V,630V front panel wiring installaltion dimension diagram(3P)



STW5DC-400,630.800 front panel wiring installation dimenion diagram(3P)



Modeland Explanatiln

AD16 22 □ / □ □

- Without words is long body,normal is short body “D”
- The voltage code(expressed as a two digit number)V.A.H.M.....express the corresponding function
- Auxiliary specification code(D,E,F,H.....)Represents different model for the same head size
- Second any code (Represnts neck size or product head size)
- Pilot lighes type

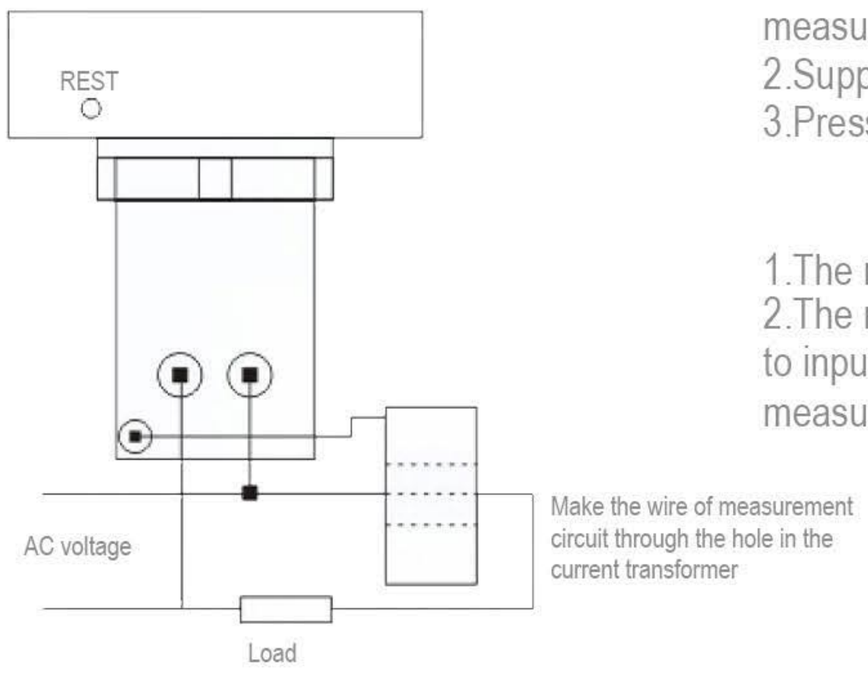
Working Condition

1.ambient temperature:-25℃~+55℃
2.relative humidity:≤98%
3.nomally workable when vibration frequency is 2-80Hz with acceleration of.0.7g
4.pollution degree is 3, installation g roup is III
5.“TH” marked can work at damp-heat environment.

Technical Data

1.Power frequency withstand voltage:2.5kv/1min(effective AC value)
2.insulation resistance:≥2MΩ,
3.Allowable voltage fluctuation:±20%
4. Continuous operating life:≥30000H,
5.Brigtnss:≥100cd/m2,
6.CTI ≥600,
7.Protection degree of the head IP67 in available on request,
8.Applying frequency: AC50~60Hz

Connect way

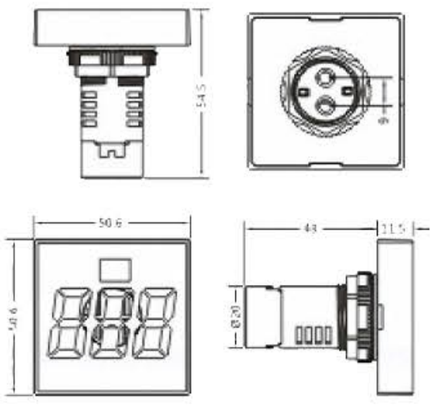
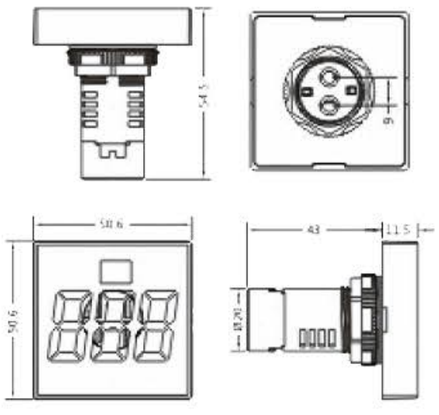
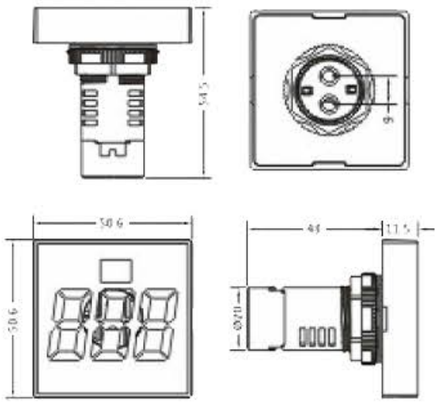
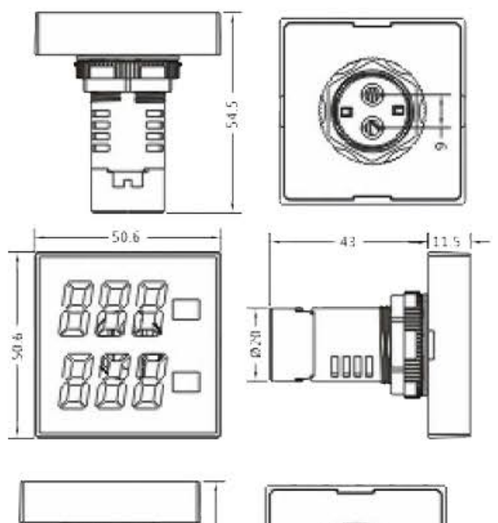
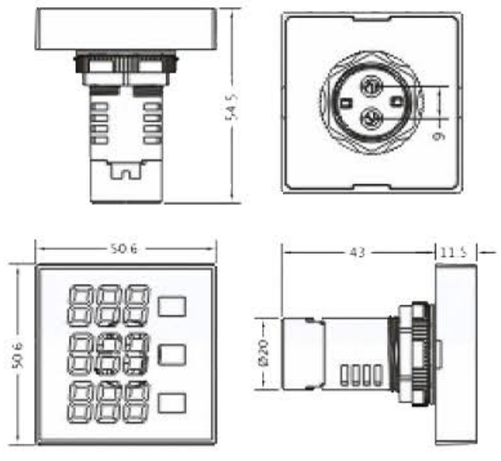


Application Method

1.According th connection graph,connect the green wire of secondary current transfirmer to the blue terminal of meter and make the wire of measurement circuit through the hole in the current transformer.
2.Supply power and start to measure and display the result.
3.Press down the button last of 5 second,the electric enerfgy will be zero

Attention

1.The metre will bw destroyed when you make wrong connection methdo with volrage
2.The meter can only use th measure 50Hz AC city electricity,it will be destroyed when use to input(green terminal)and secondary current trandformere(blue terminal).
measure square wave,output of inverter and correction sine wave.

Style	Type	Color	Parameter	Outine Dimensions
	AD112-50FSA Amper	White Green Red Yellow Blue	0-50A 0-100A 0-200A 0-500A	
	AD112-50FSV voltage meter	White Green Red Yellow Blue	60-500V	
	AD112-50FSH frequency meter	White Green Red Yellow Blue	20-75Hz	
	AD112-50FVA Amper+Voltage meter	White Green Red Yellow Blue	60-500V 0-100A	
	AD112-50FVAH Amper+Voltage +Frequency meter	White Green Red Yellow Blue	60-500V 0-100A 20-75Hz	

Weather protected

The WP Series of Weatherprot-ected Isolatingswitches is a robust range of switches suitablefor virtually any external application. Includedin the range are single, double and triple poleswitches from 20 to 80 Am-ps.The base mountedmechanism provides for easier terminationand more wiring room.Switch dimensions are165mm x 82mm with an overall height of 85mm

Isolating switches

Fixed Earth and Neutral connector bars with dualclamping screws pertunnel provide equal strippinglengths and secure clamping for all cablesTerminal bore size 5 x 6.6mm

A safety feature for mounting switches to metalstructures is the insulating caps that cover basemounting screws to totally protect them from anylive cables.

Products Available	Phase & Voltage	IP Rating
STW1-20	20A 250V Single pole surface switch. Terminals accommodate 16mm^{2}cable.M Rating220.	66
STW1-35 STW1-63	36A/63A 250V Single pole Terminals accommodate 16mm^{2}cable.M Rating220.	66
STW1-20A-16 STW1-35A-16 STW1-63A-25	Single phase 250V conduit:Φ25mm	66
STW1-20A-16 STW1-35A-16 STW1-63A-25	Single phase 440V conduit:Φ25mm	66
STW1-20A-16 STW1-35A-16 STW1-63A-25	Single phase 440V conduit:Φ25mm	66
STW1-55A-25 STW1-63A-25 STW1-80A-25	Single phase 440V conduit:Φ25mm	66
STW2-20	20A 440V Double pole Terminals accommodate 16mm^{2}cable.M Rating180.	66
STW2-35	35A 400V Double pole Terminals accommodate 16mm^{2}cable.M Rating180.	66
STW2-63	63A 440V Double pole Terminals accommodate 25mm^{2}cable.M Rating160.	66
STW3-20	20A 440V Double pole Terminals accommodate 16mm^{2}cable.M Rating180.	66
STW3-35	35A 440V Double pole Terminals accommodate 16mm^{2}cable.M Rating160.	66
STW3-55	55A 440V Double pole Terminals accommodate 16mm^{2}cable.M Rating160.	66
STW3-55-32CE	55A 440VTriple pole.with 32mm conduit entry at each end. Terminals accommodate 25mm^{2}cable.M Rating160.	66
STW3-63-32EC	63A 440VTriple pole.with 32mm conduit entry at each end. Terminals accommodate 25mm^{2}cable.M Rating160.	66
STW3-80-32EC	80A 440VTriple pole.with 32mm conduit entry at each end. Terminals accommodate 25mm^{2}cable.M Rating150.	66

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