

SRM3

AC/DC high voltage molded case circuit breaker

SRM3 Series
AC/DC High Voltage
Molded Case Circuit Breaker



AC/DC high voltage molded case circuit breaker

AC/DC Molded Case Circuit Breaker



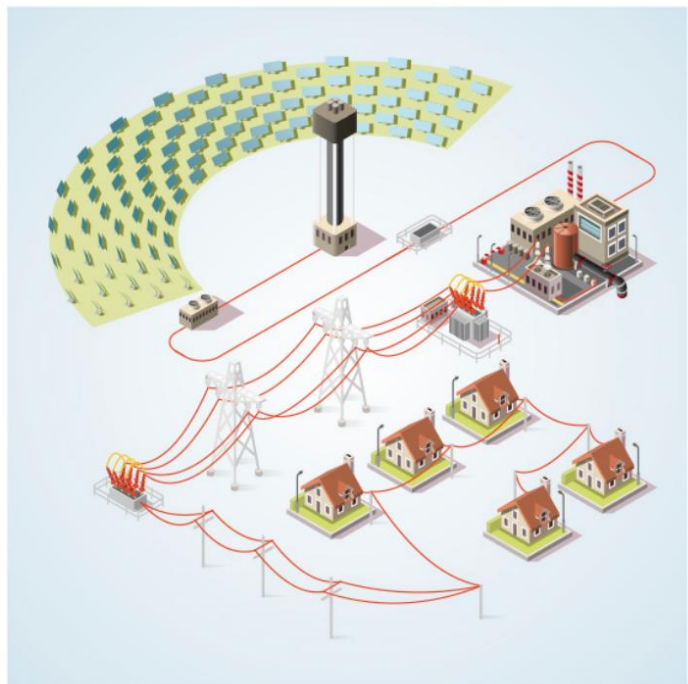
SRM3 Series
AC/DC High Voltage Molded Case Circuit Breaker



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SRM3 series AC/DC high voltage molded case circuit breaker



Performance introduction

Shilong Electric has developed SRM3HU/DC series of special AC/DC molded case circuit breakers for new energy by studying the actual system operation and customer demand of new energy at home and abroad for many years.

Product features:

- SRM3HU series AC molded case circuit breaker with rated working voltage as high as AC1140V and current as high as 800A.
- SRM3HU series AC molded case circuit breakers have a breaking capacity of up to 50kA at AC800V, which can reliably realize system short-circuit protection.
- SRM3DC series DC molded case circuit breakers with rated working voltage as high as DC1500V and current as high as 800A.
- SRM3DC series DC molded case circuit breakers have a breaking capacity of 20kA at DC1500V, which can reliably realize system short-circuit protection.

meet a criterion

SRM3 series AC/DC high voltage molded case circuit breakers meet the following standards.

IEC 60947-1 GB/T14048.1 总则

IEC60947-2 GB/T14048.2 Circuit Breaker

Applicable environment

1. The installation site can be up to 5500m; above sea level;
2. Can withstand the influence of humid air (three-proof type) ①;
3. Can withstand the influence of salt spray and oil mist (three-proof type);
4. Can tolerate the influence of mold (three-proof type);
5. In the medium without explosion danger, and the medium is free of gas and conductive dust that can corrode metals and destroy insulation.

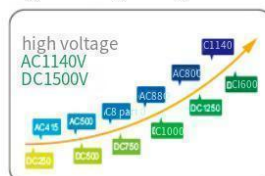
Note: ① Three-proof products need special customization, please indicate TH.

Use and maintenance

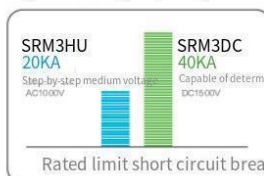
Various characteristics and accessories of the circuit breaker are set by the manufacturer and cannot be adjusted at will in use. After the user abides by the custody and

Under the conditions of use. Within 24 months from the delivery date of the manufacturer, the seal of the circuit breaker is intact. If the product is damaged or can not be used normally due to manufacturing quality problems, the manufacturer is responsible for free replacement and repair.

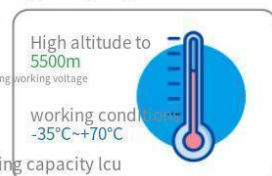
High working voltage



High breaking capacity



High range application



SRM3 series AC/DC high voltage molded case circuit breaker



Model compilation meaning

SR	M	three	DC	250	H-R	three	300	D	DC1500V	200A
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
one	②	three	four	five	⑥	⑦	eight	⑨	10	⑪

one	Shilong electricity
②	MCCB
three	Design serial number
four	HU AC, DC DC
⑤ number	Shell frame grade current 320, 400, 630, eight hundred
six	Rated short-circuit breaking capacity class H: high breaking, R: number
⑦	of current-limiting poles.
eight	Release mode and accessory code (see table). External accessory D is electrically operated and Z is manually operated.
nine	
⑩	rated voltage AC415V, AC550V, AC690V, AC800V, AC1000V, AC1140V DC250V, DC500V, DC750V, DC1000V, DC1250V, DC1500V 额定电压
⑪	63~800A 额定电流

classify

According to the operation mode:




1. Direct operation of ontology;
2. Operation of electric operating mechanism;
3. Rotate the handle to operate.

According to the protection form:

1. Line protection;
2. Line isolation.

SRM3HU series AC high voltage molded case circuit breaker

Main technical performance indicators

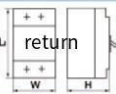
exterior									
Shell frame		SRM3HU-320				SRM3HU-400			
number of poles		three				three			
Rated working voltage Ue(V)		AC415	AC500/690	AC800	AC1000/1140	AC415	AC500/690	AC800	AC1000/1140
Rated isolation voltage Ui(V)		AC1150							
Rated impact withstand voltage Uimp(kV)		eight				12			
Rated current In(A)		63、80、100、125、140、160、180、200、 225、250、280、315、320				250、280、315、320、350、four hundred			
Rated limit short circuit breaking energy Icu(kA)	H type	eighty-five	50	36.5	10	eighty-five	50	36.5	10
	R type	one	!	one	one	100	60	50	15
Rated operating short-circuit breaking capacity Ics(kA)		Ics=100%Icu							
Usage category		A							
Does it have isolation function?		be							
Operating ambient temperature		-35°C~+70°C							
Mechanical life (times)		20000				ten thousand			
Electrical life (times)		3000	3000	3000	2000	1000	1000	1000	700
meet a criterion		IEC/EN 60947-2、GB/T 14048.2							
attachment		Separate excitation, auxiliary, alarm, manual operation and electric operation.							
authentication		CCC,CE,TUV							
measure (length × width × height)		180×107×126(3P)				250×182×165(3P)			
									

Remarks: 320 shell frame is divided into H: high breaking, R: current-limiting type.

SRM3HU series AC high voltage molded case circuit breaker





Shell frame		SRM3HU-630				SRM3HU-800			
number of poles		three				three			
Rated working voltage Ue(V)		AC415	AC500/690	AC800	AC1000/1140	AC415	AC500/690	AC800	AC1000/1140
Rated isolation voltage Ui(V)		AC1150							
Rated impact withstand voltage Uimp(kV)		12				12			
Rated current In(A)		500 630				700 eight hundred			
Rated limit short circuit breaking energy Icu(kA)	H type	eighty-five	50	36.5	10	eighty-five	50	36.5	10
	R type	100	60	50	15	100	60	50	15
Rated operating short-circuit breaking capacity Ics(kA)		Ics=100%Icu							
Usage category		A							
Does it have isolation function?		be							
Operating ambient temperature		-35°C~+70°C							
Mechanical life (times)		5000				5000			
Electrical life (times)		1000	1000	1000	700	1000	1000	1000	700
meet a criterion		IEC/EN 60947-2、GB/T 14048.2							
attachment		Separate excitation, auxiliary, alarm, manual operation and electric operation.							
authentication		CCC,CE,TUV							
measure (length × width × height)		250×182×165(3P)				250×182×165(3P)			



SRM3DC series DC high voltage molded case circuit breaker

Main technical performance indicators

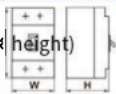
exterior							
Shell frame		Model SRM3DC-320			SRM3DC-400		
number of poles		2		three	2		three
Rated working voltage Ue(V)		DC500	DC1000	DC1500	DC250/500	DC750/1000	DC1250/1500
Rated isolation voltage Ui(V)		DC1250		DC1500	DC1500		
Rated impact withstand voltage Uimp(kV)		eight		12	12		
Rated current In(A)		63、80、100、125、140、160、180、200、225、250、280、315、320			225、250、315、350、four hundred		
Rated limit short circuit breaking energy 力Icu(kA)	H type	50	20	20	65	35	15
	R type	one	one	/	70	40	20
Lcs(kA) connection mode of rated operating short circuit breaking capacity		Ics=100%Icu					
		Up and down, down and up (2P, 320/3P)			Go in and out, go up and out (3P)		
Usage category		A					
Does it have isolation function?		be					
Operating ambient temperature		-35°C~+70°C					
Mechanical life (times)		20000			ten thousand		
Electrical life (times)		3000	2000	1500	1000	1000	700
meet a criterion		IEC/EN 60947-2、GB/T 14048.2					
attachment		Separate excitation, auxiliary, alarm, manual operation and electric operation.					
authentication		CCC,CE,TUV					
measure (length × width × height)		180×76×126(2P) 180×107×126(3P)			250×124×165(2P) 250×182×165(3P)		

Remarks: 320 shell frame is divided into H: high breaking, R: current-limiting type.

SRM3DC series DC high voltage molded case circuit breaker

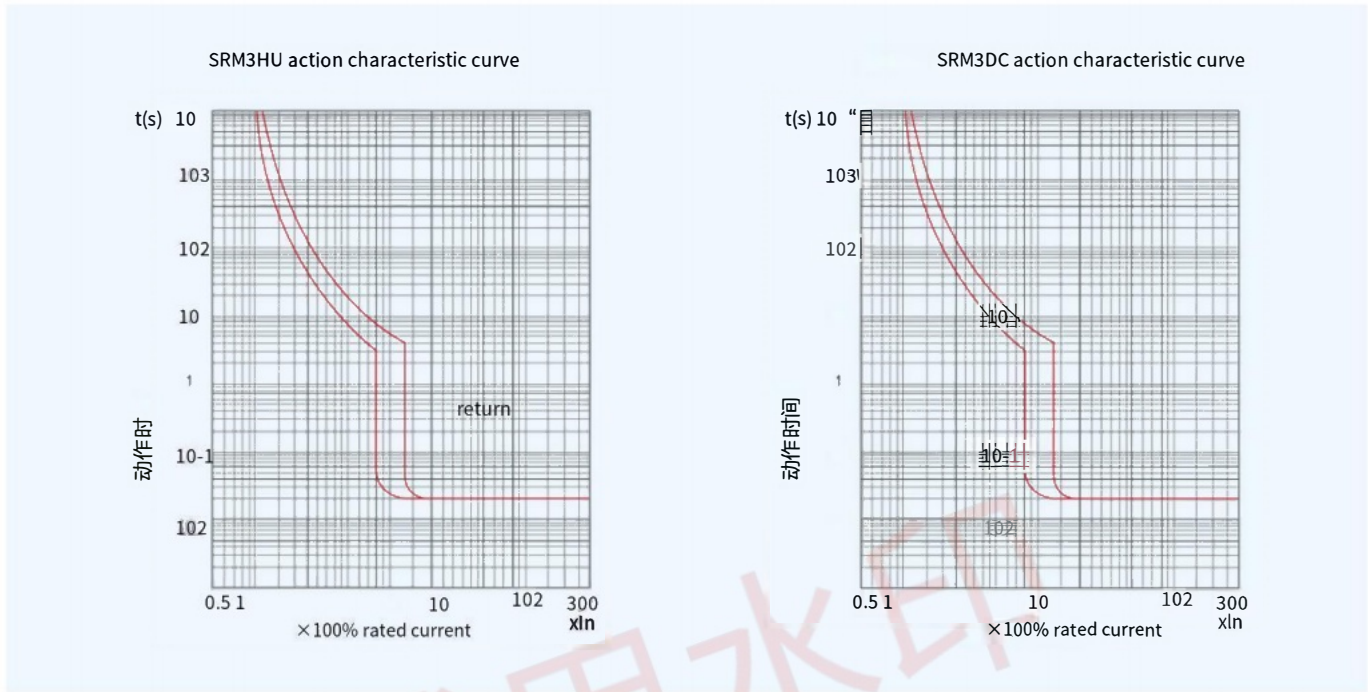


Shell frame		MTM3DC-630				MTM3DC-800					
number of poles		2			3		2			3	
Rated working voltage Ue(V)		DC250/500	DC750/1000	DC1250/1500	DC1250/1500	DC250/500	DC750/1000	DC1250/1500	DC1250/1500		
Rated isolation voltage Ui(V)		DC1500									
Rated impact withstand voltage Uimp(kV)		12				12					
Rated current In(A)		500 630				700 eight hundred					
Rated limit short circuit breaking energy Icu(kA)	H type	65	35	15	15(2-pole string) 20(3-pole string)	65	35	15	15(2-pole string) 20(3-pole string)		
	R type	70	40	20	20(2-pole string) 25(3-pole string)	70	40	20	20(2-pole string) 25(3-pole string)		
Lcs(kA) connection mode of rated operating short circuit breaking capacity		Ics=100%Icu									
Usage category		Up and down, down and up (2P, 320/3P)				Go in and out, go up and out (3P)					
Does it have isolation function?		A									
Operating ambient temperature		be									
Mechanical life (times)		5000				5000					
Electrical life (times)		1000	1000	700	500	1000	1000	700	500		
meet a criterion		IEC/EN 60947-2、GB/T 14048.2									
attachment		Separate excitation, auxiliary, alarm, manual operation and electric operation.									
authentication		CCC,CE,TUV									
measure (length × width × height)		250×124×165(2P) 250×182×165(3P)				250×124×165(2P) 250×182×165(3P)					

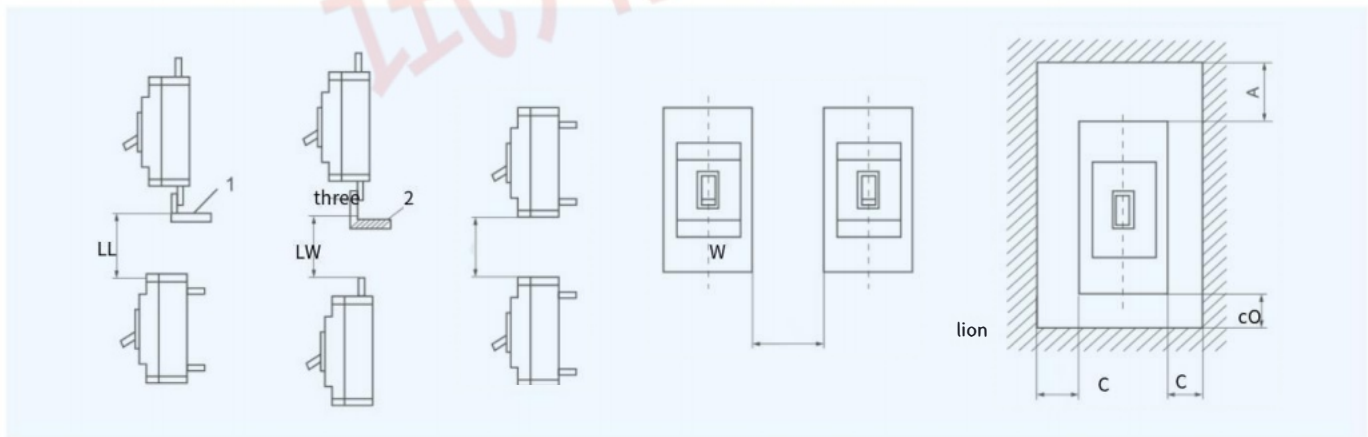


Circuit breaker action characteristic curve

SRM3 action characteristic curve



Safe distance of circuit breaker installation



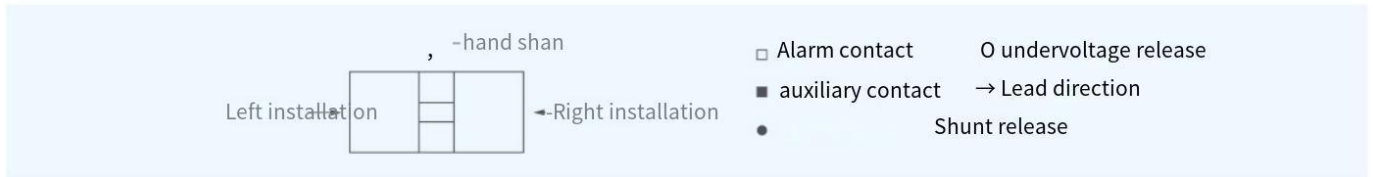
model	lion	A		B	C	E	
		Without zero flying arc cover	With zero flying arc cover			Without zero flying arc cover	With zero flying arc cover
SRM3-320	40	50	65	25	25	50	130
SRM3-400	70	100	65	25	25	100	130
SRM3-630		100	65	25	25	100	130
SRM3-800		100	65	25	25	100	130

In the figure: 1 No insulated link; 2 insulated wires; 3 Cable terminal

SRM3 series AC/DC high voltage molded case circuit breaker

Release mode and accessory code

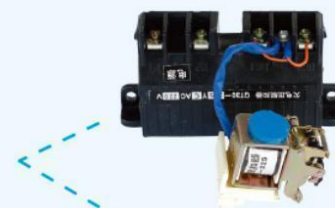
300 means: delay protection+instantaneous protection.



Attachment code	Attachment name	SRM3HU-250/320	SRM3HU-400/630/800	SRM3DC-250/320	SRM3DC-400/630/800
300	No internal accessories	—	—	—	—
308	Alarm contact	← □	← □	← □	← □
310	Shunt release	← ●	← ●	← ●	← ●
320	Auxiliary contact (1NO1NC)	← ■	← ■	← ■	← ■
302	Auxiliary contact (2NO2NC)	—	← ■ ■	—	← ■ ■
330	Undervoltage release	—	—	—	—
340	Shunt release+auxiliary contact (1NO1NC)	← ● ■ →	← ■ ■	← ● ■ →	← ■ ■
312	Shunt release+auxiliary contact (2NO2NC)	—	—	—	—
350	Shunt release+undervoltage release	—	—	—	—
360	Two groups of auxiliary contacts (2NO2NC)	← ■ ■ →	—	← ■ ■ →	—
322	Two groups of auxiliary contacts (3NO3NC)	—	—	—	—
323	Two groups of auxiliary contacts (4NO4NC)	—	—	—	—
370	Undervoltage release+auxiliary contact (1NO1NC)	—	—	—	—
332	Undervoltage release+auxiliary contact (2NO2NC)	—	—	—	—
318	Shunt release+alarm contact	—	← ● □	—	← ● □
328	Auxiliary contact (1NO1NC)+ alarm contact	← ■ □	← ■ □	← ■ □	← ■ □
338	Undervoltage release+alarm contact	—	—	—	—
348	Auxiliary contact of shunt release (1NO1NC)+ alarm contact	—	← ● ■ □	—	← ● ■ □
	Auxiliary contact of shunt release (2NO2NC)+ alarm contact	—	—	—	—
368	Two groups of auxiliary contacts (2NO2NC)+ alarm contacts	← ■ ■ □ →	← ■ ■ □ →	← ■ ■ □ →	← ■ ■ □ →
	Two groups of auxiliary contacts (4NO4NC)+ alarm contacts	—	—	—	—
305	Two groups of auxiliary contacts (3NO3NC)+ alarm contacts	—	—	—	—
378	Two sets of auxiliary contacts (1NO1NC)+ undervoltage release+alarm contact.	—	—	—	—
	Two groups of auxiliary contacts (2NO2NC)+ undervoltage release+alarm contact.	—	—	—	—

Product accessories

1. Ontology
2. Undervoltage release (customer's choice)
3. Shunt release (customer's choice)
4. Alarm contact (customer's choice)
5. Auxiliary contact (customer's choice)
6. Electric operating mechanism (customer's choice)
7. Hand-operated mechanism (customer's choice)
8. Terminal guard (customer's choice)
9. Front wiring board (customer's choice)
10. Arc baffle (standard with main body)



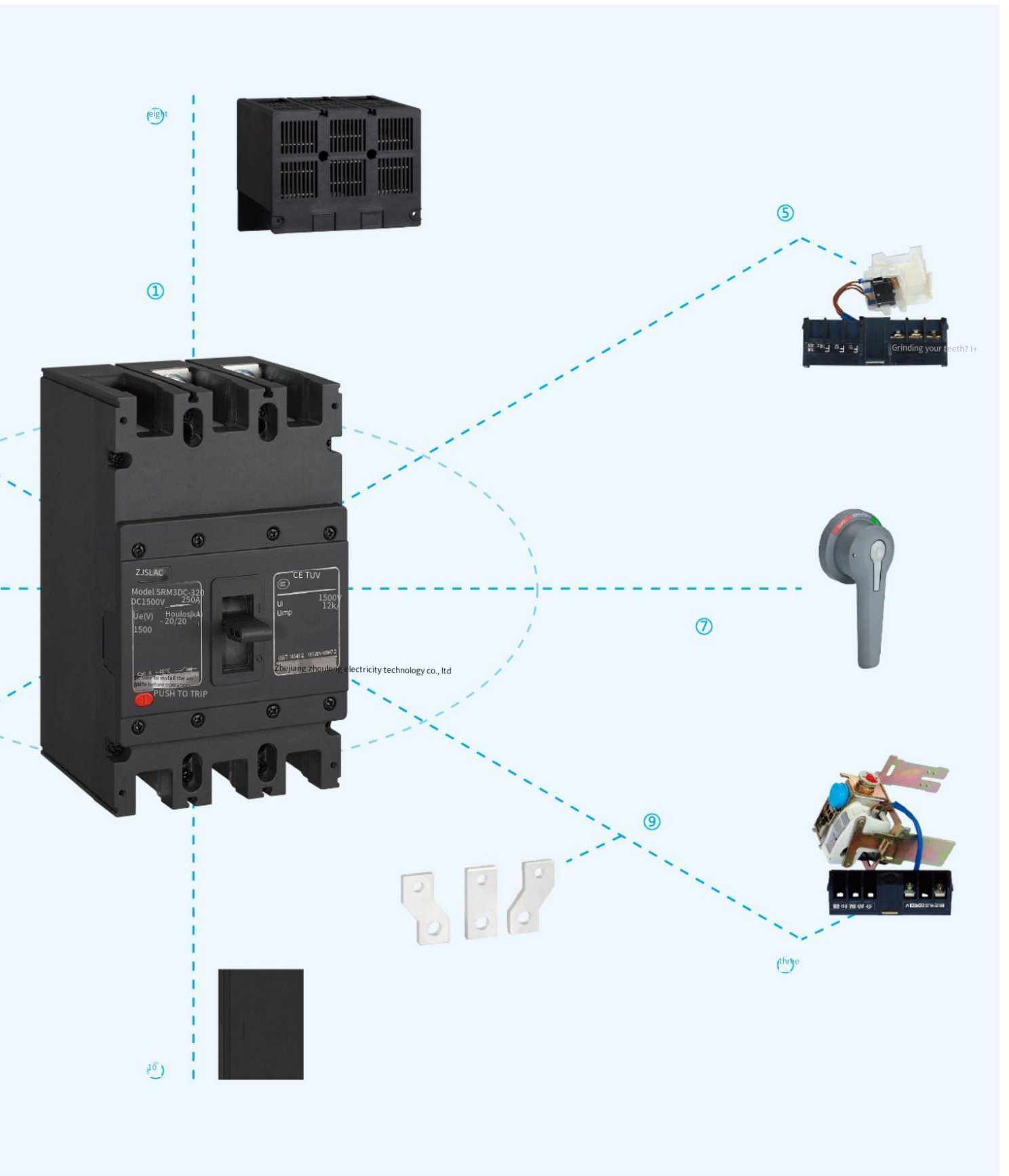
②



⑥

⑨





SRM3 series AC/DC high voltage molded case circuit breaker

auxiliary contact

Auxiliary contact current parameters

Rated current of shell frame class	Agreed heating current I_{th}	Rated working current at AC400V
$I_{nm} < 250$	3A	0.30A
$I_{nm} > 400$	6A	0.40A

Auxiliary contact and its combination

When the circuit breaker is in the "off" position	
When the circuit breaker is in the "on" position	

Alarm contact

Alarm contact and its combination

Alarm contact $U_e=220V, I_{th}=3A$.	
When the circuit breaker is in the "off" and "on" positions	
When the circuit breaker is in the "free trip" position	

SRM3 series AC/DC high voltage molded case circuit breaker

Shunt release

Generally installed in phase A of circuit breaker, when the rated control power supply voltage is between 70% and 110%, the shunt release should make the circuit breaker trip reliably under all operating conditions.

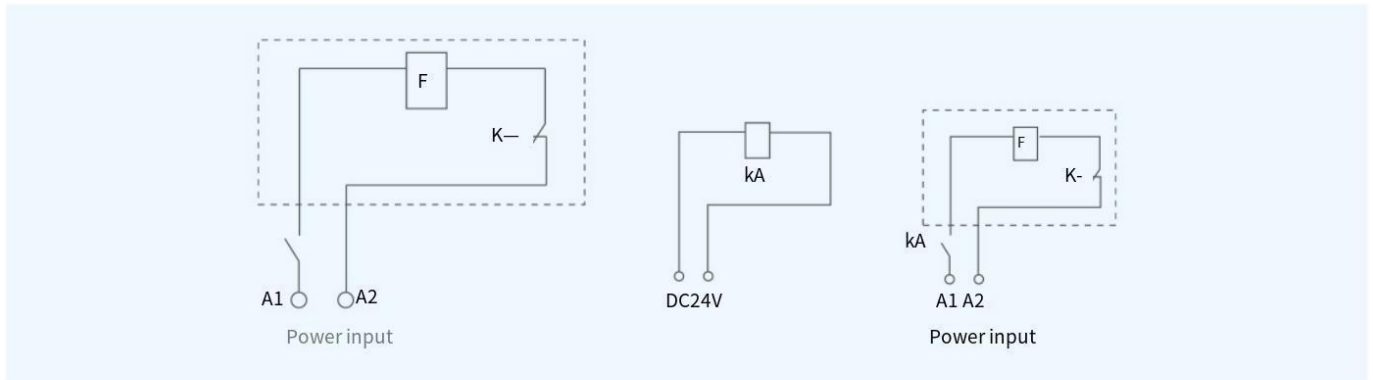
Control voltage: conventional: AC 50hz, 110v, 230v, 400v, DC24v, 110v, 220v.

Note: When the power supply of the control loop is DC24V, the following diagram is recommended to design the shunt control loop.

KA: DC24V intermediate relay with contact current capacity of 1A.

K: The microswitch connected in series with the coil inside the shunt release is a normally closed contact. When the circuit breaker opens, the contact automatically opens and closes when it closes.

Wiring diagram of shunt release

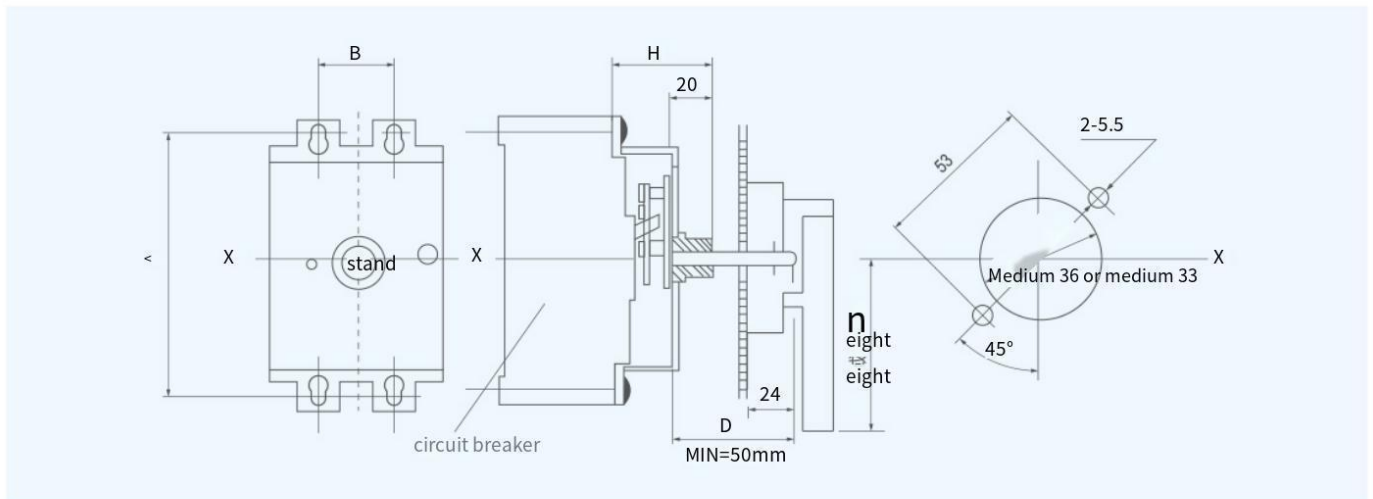


Installation method and external dimensions of external accessories

Model and specification of rotary operating handle mechanism

model	Installation dimension (mm)				Center value of operating handle relative to circuit breaker (mm)
	A	B	H	D	
CZ2-320/SRM3	157	35	55	50-150	0
CZ2-400/SRM3	224	48	seventy-eight	50-150	±5

Schematic diagram of mounting hole of CS1-A handle

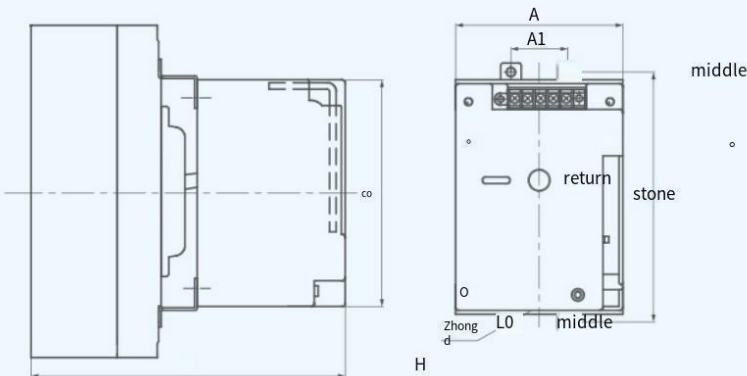


SRM3 series AC/DC high voltage molded case circuit breaker

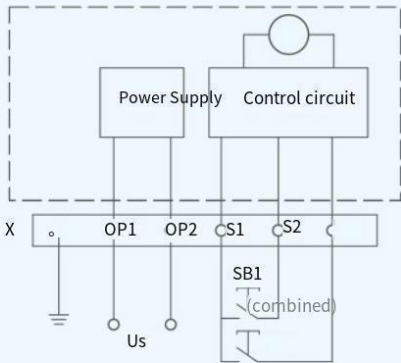
Model and specification of electric operating mechanism

model	H	B	B1	A	A1	D
SRM3-320	188.5	116	126	90	35	4.2
SRM3-400/630/800	244	176	194	130	48	6.5

Schematic diagram of CD2 shape and installation dimensions



Wiring diagram of electric operating mechanism



M

Symbol description:

SB1 and SB2 operation buttons (provided by users)

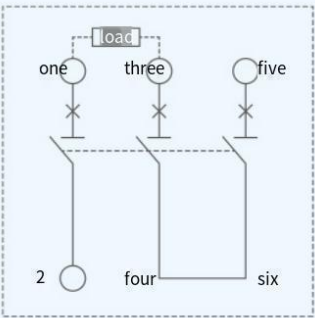
X terminal block

P1 and P2 are external power supplies.

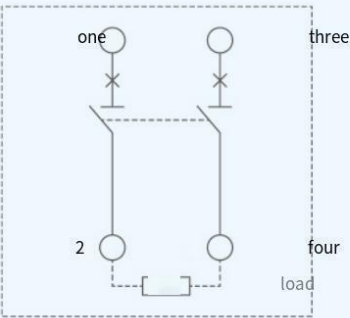
S4

SB2 (points)

Connection mode of DC circuit breaker



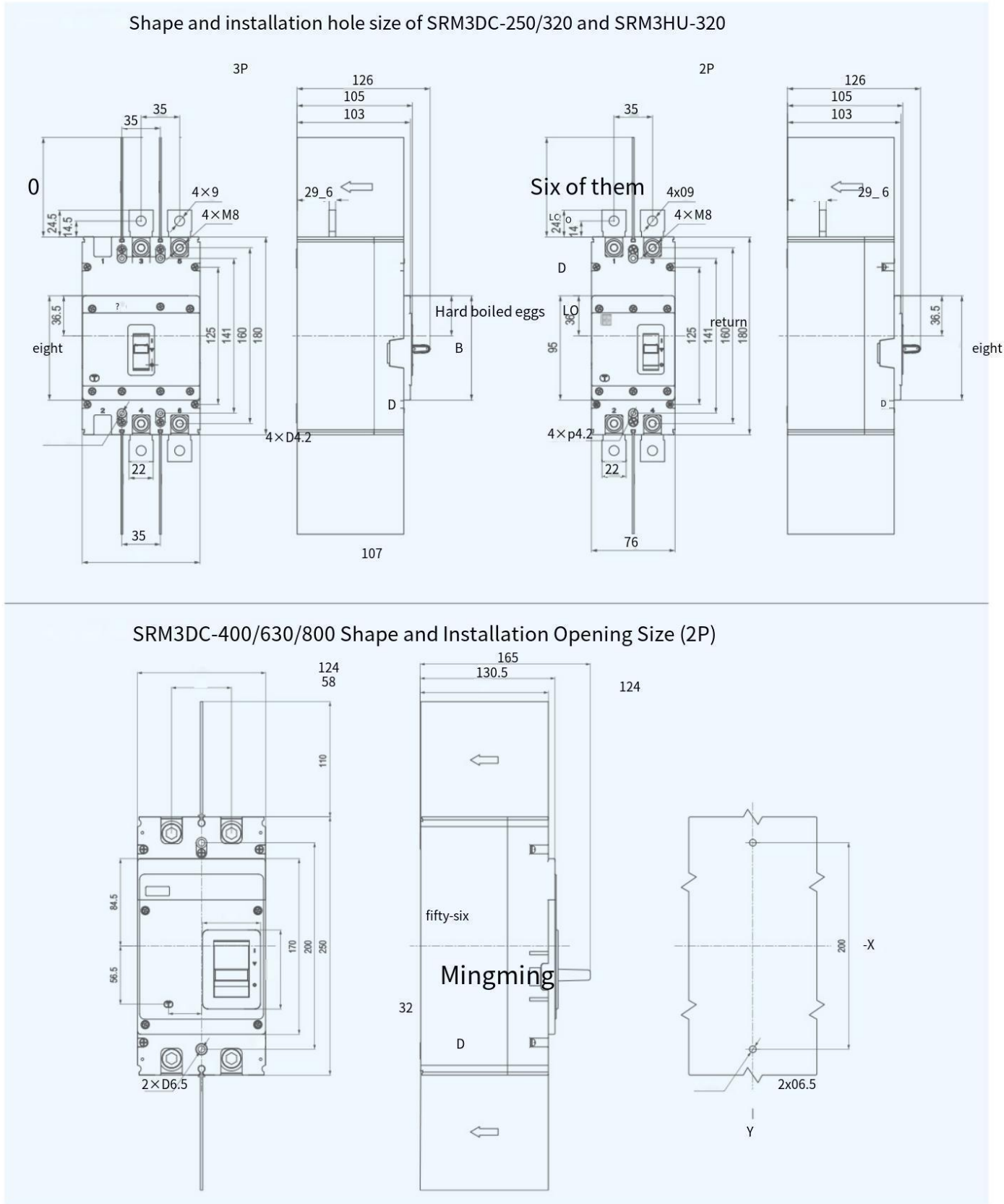
3P shape (3-pole string)



2P shape (2-pole string) and 3P shape (2-pole string)

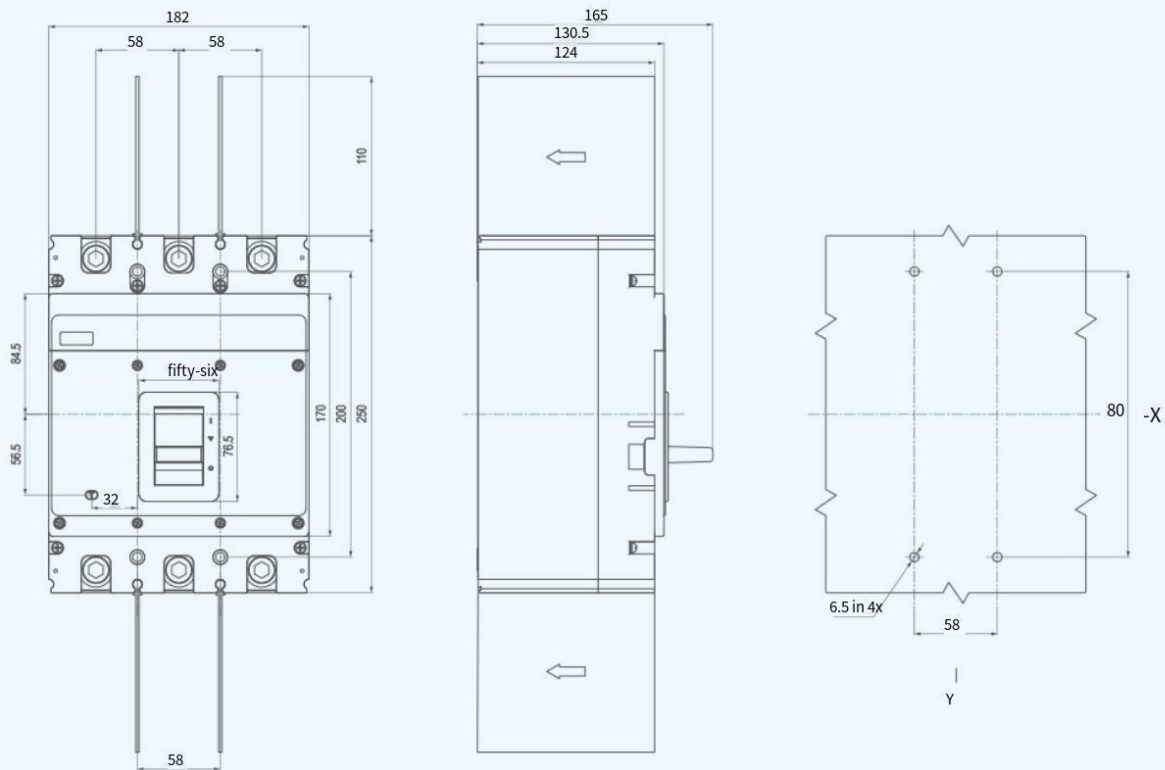
SRM3 series AC/DC high voltage molded case circuit breaker

Shape and installation dimensions

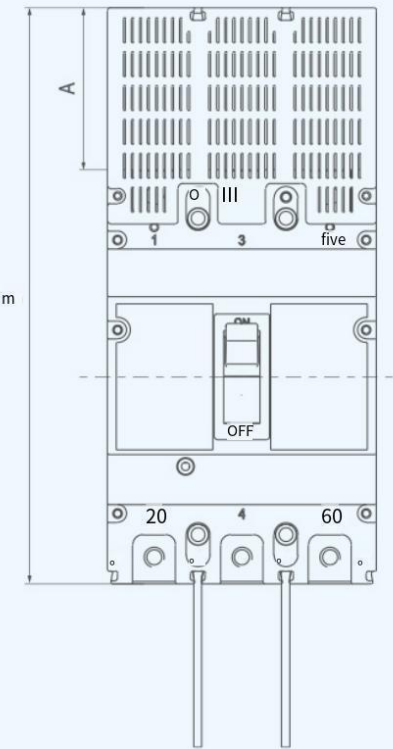


SRM3 series AC/DC high voltage molded case circuit breaker

SRM3DC-400/630/800,SRM3HU-400/630/800外形及安装开孔尺寸（3P）



Installation drawing of SRM3 with flying arc cover



circuit breaker	Flying arc cover length a	Total length b
SRM3-320	64	245
SRM3-400/630/800	64	314