EvM6 Series
Moulded Case Circuit Breaker

Product overview

EvM6, EvM6DC, EvM6E series of circuit breakers are new upgraded circuit breakers researched and developed by the company combined with the advantages of similar international products and demand of domestic and international markets.

With insulation voltage up to 1000V, the circuit breaker is applicable for distribution systems of AC50Hz, rated working voltage 690V and rated working current from 10A to 1250A, used to distribute electric power energy, protect circuits and power equipment against overload, short circuit, undervoltage and so on, also can be used for infrequent startup of motor and protect it from overload, short circuit or undervoltage.

It is featured with small size, high breaking, short flashover, etc., is the ideal product for users. It can be vertically installed or horizontally installed.

EvM6DC series DC moulded-case circuit breaker (hereinafter referred to as circuit breaker) is suitable for DC systems of rated voltage up to and including DC 1000V and rated current 10~800A, used to distribute electric power energy, protect circuits and power equipment against overload, short circuit and so on.

The products can be fed with wires from top and bottom, and it is polarity-free.

It complies with the standards IEC60947-2, GB14048.2, etc.

Product features

Feature 1: current limiting capacity

Current-limiting refers to limit of the increase of short-circuit current in the loop, and in the loop protected by EvM6, peak value of the short-circuit current and the I2t energy in the circuit will be much smaller than the prospective value.

U-shaped static contact

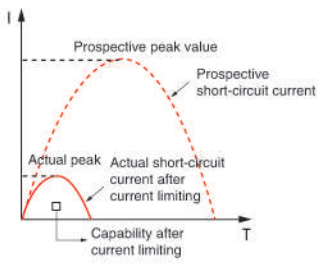
Unique U-shaped static contact can achieve pre-breaking technology:

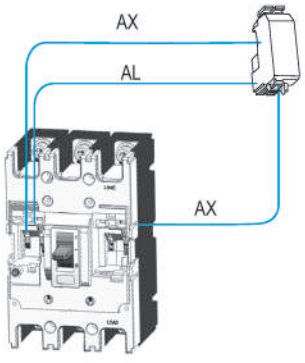
The so-called pre-breaking technology refers to when short-circuit current flows through the contact system, electric power generated by U-shaped static contact and moving contact is mutual exclusive. The greater the short-circuit current is, the greater the repulsion of the electromotive force, and it is generated together with the short-circuit current at the same time. Before the trip action occurs, the electrodynamic repulsion force can make the static and moving contact separation, by increasing the arc to increase the equivalent resistance between them to achieve the purpose of suppressing increase of short-circuit current.

Feature 2: modularized accessories

Accessory: For the circuit breakers of the same frame, they has uniform sizes regardless of the breaking capacity and rated current;Accessory: Users can freely choose and expand functions of circuit breakers according to their needs.

Modularized accessories have insulation function, which is easy for hot-line operation and installation.

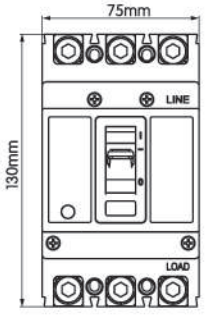




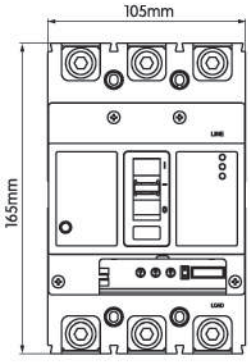
Product features

Feature 3: miniaturized frame

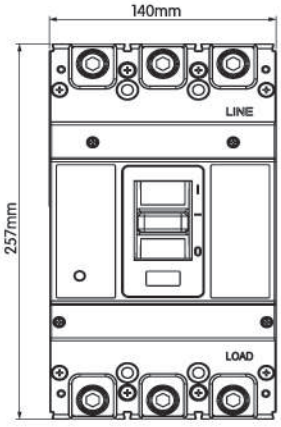
5 frame sizes: 125 type, 160 type, 250 type, 630 type, 800 type, 1000 type, 1250 type
Rated current of EvM6 series 10A~800A



125 frame reduces to the same size as the original 63 frame (the width is only 75mm)



160 frame reduces to the same size as the original 100 frame (the width is only 90mm)



630 frame reduces to the same size of the original 400 frame (the width is only 140mm)

Feature 4: contact repulsion device (patented technology)

The technical scheme adopted by the invention is:
As shown in Figure 1, the new contact device is mainly consisted of static contact, moving contact, shaft 1, shaft 2, shaft 3 and springs;
When the circuit breaker is in the closed state, shaft 2 acts on the right side of the spring angle; When the circuit breaker has a large fault current, the moving contact will be subjected to the electric repulsion generated by the current itself, and rotate with the center of shaft 1, when shaft 2 rotates to the top of the spring angle with the moving contact, it makes moving contact to rapidly rotate upwards and quickly break the circuit upon the reaction of spring, it has enhanced the breaking capacity of the product through optimization of the contact structure.

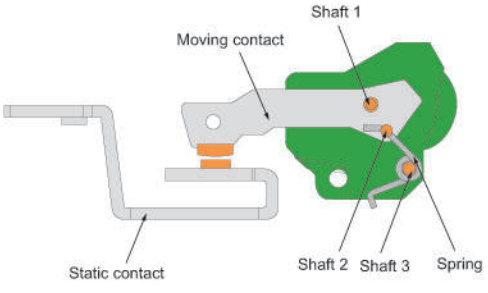


Fig.1

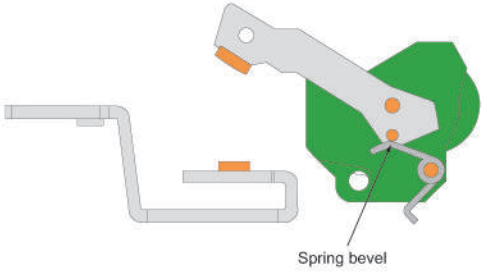


Fig.2 (status when breaking)

Product selection guide

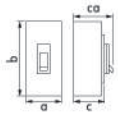
EvM6 - 125 S P / 4 300 - 125A 2 A Q1 D1 Q 2

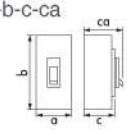
EvM6	125	S			P	4
Product code	Frame size	Current class			Code of control circuit source voltage	Pole number
		S	M	H		
Moulded-case circuit breaker	125 160 250 400 630 800 Note: 125 is upgraded type of 63 frame 160 is upgraded type of 100 frame 250 is upgraded type of 225 frame 630 is upgraded type of 400 frame	25/15		35/25	P: electric operation Z: rotary handle W: direct operation	3: 3-pole 4: 4-pole
		35/25	50/35	70/50		
		35/25	50/35	85/50		
		50/35	65/42	85/50		
		50/35	65/42	85/50		
		50/35	65/42	85/50		

300	125A	2	A
Release type and internal accessory	Rated current (A)	Application	Code of four-pole product
The first digit represents release type 2: has instantaneous release only; 3: complex release Note: Later two digits are the code of accessories (see accessory table)	125(10, 16, 20, 32, 40, 5063, 80, 100, 125) 160(10, 16, 20, 32, 40, 50, 63, 80, 100, 125, 140, 160) 250(100, 125, 140, 160, 180, 200, 225, 250 400(250, 300, 315, 350,400) 630(400, 500, 630) 800(500, 630, 700, 800)	1: power distribution 2: motor protection	A: N-pole without protection,cannot close or open B: N-pole without protection, can close and open C: N-pole with protection, can close and open D: N-pole with protection, cannot close or open

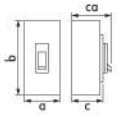
Q1			D1		Q	2
Accessory voltage			Electric operation voltage		Installation methods	Install wiring board or not
Undervoltage release	Shunt release	Auxiliary alarm	DC 1electric operation	DC3 electric operation		
Q1: AC220V Q2: AC240V Q3: AC380V Q4: AC415V	F1: AC220V F2: AC380V F3: DC110V F4: DC24V	J1: AC125V J2: AC250V J3: DC125V J4: DC24V	D1: AC220V D2: AC230V D3: AC380V D4: AC400V	D5: AC230V D6: AC110V D7: DC220 D8: DC110 D9: AC110-240V D10: DC100-220V	Q: Front-board H: Back-board C: Plug-in type	1: No 2: Yes
			Note: Adaptable voltages for two electric operations. Please refer to the introduction of external accessory.			

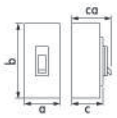
Main performance indexes

Frame current (A)		125		160		
Model		EvM6-125S	EvM6-125H	EvM6-160S	EvM6-160M	EvM6-160H
Pole number		2, 3, 4				
Rated current (A)		10, 16, 20, 32, 40, 50, 63, 80, 100, 125		10, 16, 20, 32, 40, 50, 63, 80, 100, 125, 140, 160		
Rated voltage (V)		AC400V				
Rated insulation voltage (V)		AC1000V				
Short-circuit breaking capacity (KA)Icu/Ics	AC400V	25/15	35/25	35/25	50/35	70/50
Operating cycle number	ON	6000		3000		
	OFF	9000		7000		
Outline dim. (mm) a-b-c-ca 	2P	50-130-68-90		60-155-68-90	60-155-68-90	60-155-88-115
	3P	75-130-68-90		90-155-68-90	90-155-68-90	90-155-88-115
	4P	100-130-68-90		120-155-68-90	120-155-68-90	120-155-88-115
Wight (kg)	2P	0.5	0.55	1.0		1.1
	3P	0.55	0.65	1.1		1.2
	4P	0.65	0.8	1.4		1.5
Electric operating device (MD)		■				
External driving operating handle		■				
Automatic release		Thermal electromagnetic type				

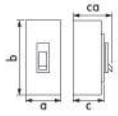
Frame current (A)		250			400			630		
Model		EvM6-250S	EvM6-250M	EvM6-250H	EvM6-400S	EvM6-400M	EvM6-400H	EvM6-630S	EvM6-630M	EvM6-630H
Pole number		3, 4								
Rated current (A)		100, 125, 140, 160, 180, 200, 225, 250			250, 315, 350, 400, 500, 630			250, 315, 350, 400, 500, 630		
Rated voltage (V)		AC400V								
Rated insulation voltage (V)		AC1000V								
Short-circuit breaking capacity (KA)Icu/Ics	AC400V	35/25	65/42	85/50	50/35	65/42	85/50	50/35	65/42	85/50
Operating cycle number	ON	3000			2000					
	OFF	7000			4000					
Outline dim. (mm) a-b-c-ca 	3P	105-165-68-92		105-165-88-115	140-257-103-155			140-257-103-155		
	4P	140-165-68-92		140-165-88-115	184-257-103-155			184-257-103-155		
Wight (kg)	3P	1.5		1.7	5.5			5.7		
	4P	1.9		2.1	7.0			7.5		
Electric operating device (MD)		■								
External driving operating handle		■								
Automatic release		Thermal electromagnetic type								

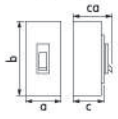
Main performance indexes

Frame current (A)		800			1000		1250	
Model		EvM6-800S	EvM6-800M	EvM6-800H	EvM6-1000M	EvM6-1000H	EvM6-1250M	EvM6-1250H
Pole number		3, 4						
Rated current (A)		500, 630, 700, 800			800, 1000		1000, 1250	
Rated voltage (V)		AC400V						
Rated insulation voltage (V)		AC1000V						
Short-circuit breaking capacity (KA)Icu/Ics	AC400V	50/35	65/42	85/50	65/42	85/50	65/42	85/50
Operating cycle number	ON	1500						
	OFF	4000						
Outline dim. (mm) a-b-c-ca 	3P	210-275-103-155			210-275-103-155		210-275-103-155	
	4P	280-275-103-155			280-275-103-155		280-275-103-155	
Wight (kg)	3P	9.5						
	4P	12.5						
Electric operating device (MD)		■						
External driving operating handle		■						
Automatic release		Thermal electromagnetic type						

Frame current (A)		125	160	250
Model		EvM6DC-125H	EvM6DC-160H	EvM6DC-250H
Pole number		2, 3, 4		
Rated current (A)		10, 16, 20, 32, 40, 50, 63, 80, 100, 125	10, 16, 20, 32, 40, 50,63, 80, 100, 125, 140, 160	100, 125, 140, 160, 180, 200, 225, 250
Rated voltage (V)		DC250V, DC500V, DC750V, DC1000V		
Rated insulation voltage (V)		DC1000V		
Short-circuit breaking capacity (KA) Icu(Ics=70%Icu)		DC250V(35kA), DC500V(25kA), DC750V(15kA), DC1000V(10kA)		
Operating cycle number	ON	6000	3000	
	OFF	9000	7000	
Outline dim. (mm) a-b-c-ca 	2P	50-130-68-90	60-155-88-115	-
	3P	75-130-68-90	90-155-88-115	105-165-88-115
	4P	100-130-68-90	120-155-88-115	140-165-88-115
Wight (kg)	2P	0.55	1.0	-
	3P	0.65	1.1	1.5
	4P	0.8	1.4	1.9
Electric operating device (MD)		■		
External driving operating handle		■		
Automatic release		Thermal electromagnetic type		

Main performance indexes

Frame current (A)		400	800
Model		EvM6DC-400M	EvM6DC-800M
Pole number		2, 3, 4	
Rated current (A)		250, 315, 350, 400	500, 630, 700, 800
Rated voltage (V)		DC250V, DC500V, DC750V, DC1000V	DC250V, DC500V, DC750V, DC1000V
Rated insulation voltage (V)		DC1000V	
Short-circuit breaking capacity (KA) Icu(Ics=70%Icu)		DC250V(65kA), DC500V(35kA), DC750V(25kA), DC1000V(15kA)	DC250V(65kA), DC500V(35kA), DC750V(25kA), DC1000V(15kA)
Operating cycle number	ON	2000	1500
	OFF	4000	7000
Outline dim. (mm) a-b-c-ca 	2P	140-257-103-155	210-275-103-155
	3P	140-257-103-155	210-275-103-155
	4P	184-257-103-155	280-275-103-155
Wight (kg)	2P	5.0	9.5
	3P	5.7	12.5
	4P	7.5	1.4
Electric operating device (MD)		■	■
External driving operating handle		■	■
Automatic release		Thermal electromagnetic type	Thermal electromagnetic type

Frame current (A)		160	250	400	630	800
Model		EvM6E-160	EvM6E-250	EvM6E-400	EvM6E-630	EvM6E-800
Pole number		3, 4				
Rated current (A)		16-32, 40-125, 80-160	100-250	200-400	200-400, 300-630	300-630, 400-800
Rated voltage (V)		AC400V				
Rated insulation voltage (V)		AC1000V				
Short-circuit breaking capacity (KA)Icu/Ics	AC400V	70/50	85/50			
Operating cycle number	ON	1500	1000			
	OFF	7000		4000		
Outline dim. (mm) a-b-c-ca 	3P	90-155-88-115	105-165-88-115	140-257-103-155	140-257-103-155	210-257-103-155
	4P	90-155-88-115	140-165-88-115	185-257-103-155	185-257-103-155	280-257-103-155
Wight (kg)	3P	1.8	2.1	5.5	5.7	5.7
	4P	2.3	2.6	7.0	7.5	7.5
Electric operating device (MD)		■				
External driving operating handle		■				
Automatic release		Electronic type				