

Mingri Electric

Low Voltage

Selection Guide



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Claire

SJKM1E



*Product Description

The SJKM1E electronic case circuit breaker (hereinafter referred to as the circuit breaker) is suitable for circuits with AC 50Hz (or 60Hz), rated insulation voltage of 800V, rated working voltage of 400V and below, and rated working current up to 800A, and is used for infrequent conversion and infrequent starting of motors. The circuit breaker has functions such as overcurrent long-delay time limit, short-circuit short-delay time limit, short-circuit instantaneous time limit short-circuit breaking time and undervoltage protection (optional), and phase failure protection (optional), which can protect circuits and power supply equipment from damage. The circuit breaker has complete and accurate protection characteristics, which can improve the reliability of power supply and avoid unnecessary power outages. Among them, the "Z" and "B" type control units have communication interfaces and can perform "four remotes" to meet the requirements of the control center and automation system.

*Type Designation

SJKM1E- □□□/□□□
①②③ ④⑤⑥

SJK:Enterpriso code

M:Moldod casc circuit broakor code

1: Design code

E:Elcctronic rolcasc

①ShcII level rated current (A)

②Ratod limit short circuit breaking capacity lovcl (Noto 1)

③Opcration modo (Notc 2)

④Polc nunbor

⑤Releasc type and additional code

⑥Product typo (Notc 3)

Note:

(1) According to the high and low of the rated ultimate short-circuit breaking capacity, it is divided into M type (higher breaking type) and H type (high breaking type);

(2) The handle directly operates without code: Electric operation is represented by P, and rotating handle operation is represented by Z;

(3) Basic type code, intelligent communication type is represented by Z, programming communication type is represented by B, fire-fighting type is represented by X, liquid crystal display is represented by L.

*Usage Environment Conditions

Altitude: ≤ 2000 m;

Ambient temperature: -5°C ~ +40°C;

Resistant to the effects of humid air;

Resistant to the effects of salt mist and oil mist;

The installation category of the main circuit of the circuit - breaker is III, and the installation categories of the remaining auxiliary circuits and control circuits are II;

When the maximum temperature is +40°C, the relative air humidity shall not exceed 50%. A higher relative humidity is allowed at lower humidities. Special measures should be taken for the occasional occurrence of condensation due to temperature changes;

Maximum inclination: 22.5°;

In a non - explosive medium, and the medium does not contain gases and conductive dusts that can corrode metals and damage insulation;

In a place without rain and snow attacks.

*Main Functions and Features

The intelligent controller is the core component of the moulded - case circuit breaker. It is applied for motor protection or distribution protection, integrating measurement, protection, control and communication functions, so as to protect the circuit and power equipment from overload, short - circuit, grounding and other fault hazards.

It adopts MCU (Micro - Controller Unit) microprocessor control, with stable and reliable performance. This intelligent controller can self - power supply. As long as one phase is energized, when the current is not less than 20% of its rated value, the protection function can work normally.

It has selective coordination with three - stage protection. The circuit breakers of Class B and other short - circuit protection devices connected in the same circuit have selective coordination under short - circuit conditions; the setting of protection function parameters such as overload long - time delay inverse - time limit, short - time delay (inverse - time limit, definite - time limit), and short - circuit instantaneous delay.

It has three - stage protection parameter settings for operating current and operating time, which can be adjusted in 4 - 10 gears. Users can set and adjust the controller according to the load current requirements, and can also choose to turn off the corresponding functions (customized functions, which need to be specified when ordering) according to user requirements.

It has a large - current instantaneous tripping function. When the circuit breaker is closed or in operation, if a short - circuit large current ($\geq 20I_{nm}$) is encountered, the magnetic tripping mechanism of the circuit breaker can directly trip, providing more reliable and safe double protection.

It has a tripping test (test) function. Input DC 12V voltage to test the operating characteristics of the circuit breaker.

It has a self - diagnosis function for faults, protecting and detecting the working status and operation of the intelligent controller itself.

It has pre - alarm indication and overload indication. When the load current reaches or exceeds the set value, the corresponding light - guiding column will emit light.

It adopts magnetic flux transformer double - air - gap technology, which makes the operation more reliable and stable, eliminates misoperation, ensures reliable tripping and has low power consumption.

It has high protection accuracy. The action time accuracy of overload protection and short - circuit short - time delay protection is $\pm 10\%$; the action value accuracy of short - circuit instantaneous protection is $\pm 15\%$ depending on the operating current.

It has installation interchangeability. The external dimensions and installation dimensions are the same as those of the SJKM1 series moulded - case circuit breakers of the same specification.

*Main Technical Parameters

Model	SJKM1E-125				SJKM1E-250			
Shell -frame Rated Current Inm(A)	125				250			
Rated Current (Adjustable) In(A)	16A-125A				100A-250A			
Rated Operating Voltage Ue(V)	AC400V				AC400V			
Rated Insulation Voltage Ui(V)	AC800V				AC800V			
Rated Impulse Withstand Voltage Uimp(V)	AC800V				AC800V			
Number of Poles	3		4		3		4	
Rated Ultimate Short - circuit Breaking Capacity Level	M	H	M	H	M	H	M	H
Rated Ultimate Short - circuit Breaking Capacity Icu(kA)	50	85	50	85	50	85	50	85
Rated Service Short - circuit Breaking Capacity Ics(kA)	35	50	35	50	35	50	35	50
Rated Short - time Withstand Current Icw(kA)/1s								
Utilization Category	A				A			

*Main Technical Parameters

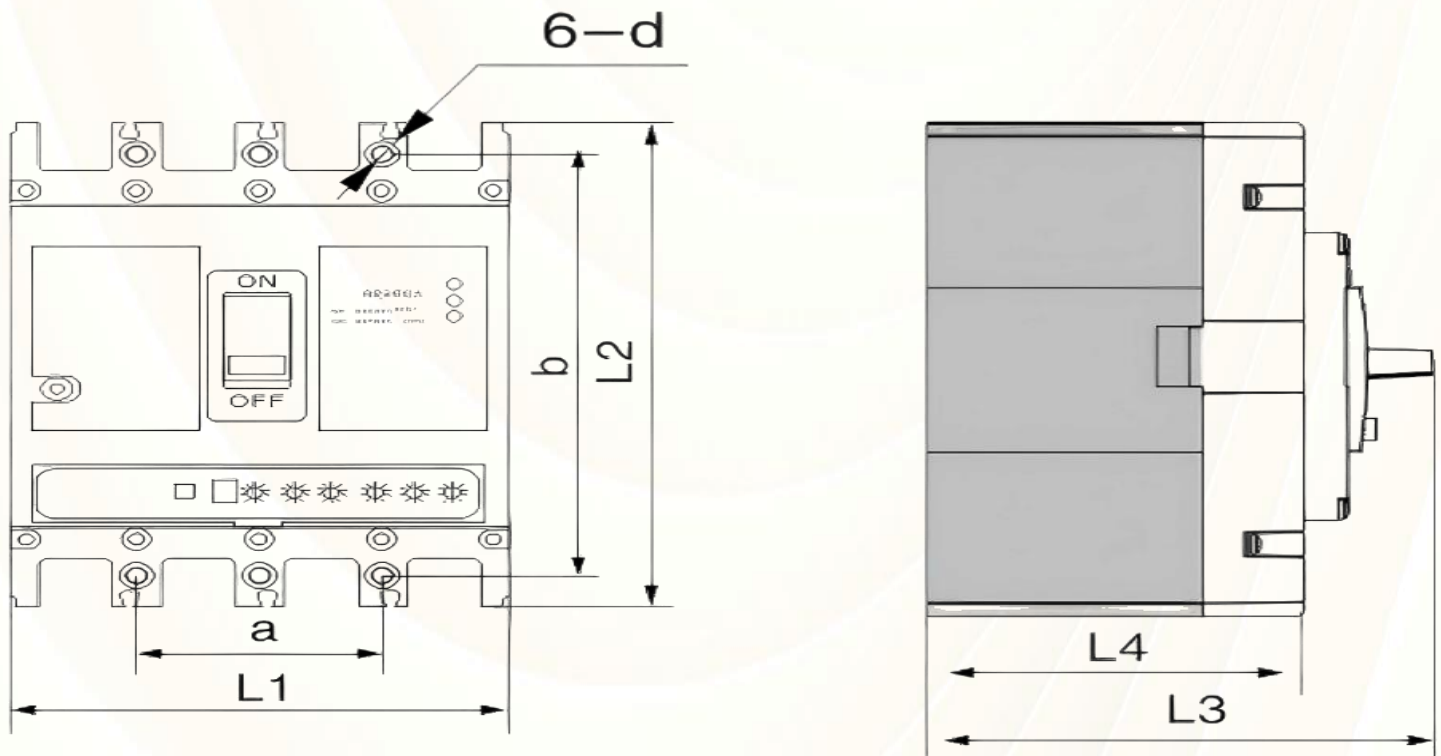
Model		SJKM1E-400				SJKM1E-630			
Shell -frame Rated Current Inm(A)		400				630			
Rated Current (Adjustable) In(A)		200A-400A				400A-630A			
Rated Operating Voltage Ue(V)		AC400V				AC400V			
Rated Insulation Voltage Ui(V)		AC800V				AC800V			
Rated Impulse Withstand Voltage Uimp(V)		AC800V				AC800V			
Number of Poles		3		4		3		4	
Rated Ultimate Short - circuit Breaking Capacity Level		M	H	M	H	M	H	M	H
Rated Ultimate Short - circuit Breaking Capacity Icu(kA)		75	85	75	85	80	100	80	100
Rated Service Short - circuit Breaking Capacity Ics(kA)		55	65	55	65	60	70	60	70
Rated Short - time Withstand Current Icw(kA)/1s		5				8			
Utilization Category		B				B			
Operating Performan	Energized	2000				1500			

*Main Technical Parameters

Model		SJKM1E-800			
Shell -frame Rated Current Inm(A)		800			
Rated Current (Adjustable) In(A)		630A-800A			
Rated Operating Voltage Ue(V)		AC400V			
Rated Insulation Voltage Ui(V)		AC800V			
Rated Impulse Withstand Voltage Uimp(V)		AC800V			
Number of Poles		3		4	
Rated Ultimate Short - circuit Breaking Capacity Level		M	H	M	H
Rated Ultimate Short - circuit Breaking Capacity Icu(kA)		80	100	80	100
Rated Service Short - circuit Breaking Capacity Ics(kA)		60	70	60	70
Rated Short - time Withstand Current Icw(kA)/1s		10			
Utilization Category		B			
Operating Performance (times)	Energized	1500			
	De - energized	3000			

*Installation and Overall dimensions

Product overall dimensions



Model	Pole	External Dimensions (mm)				Mounting Dimensions (mm)		
		L1	L2	L3	L4	a	b	d
SJKM1E-125	3	92	150	110	92	30	129	φ4.5
	4	122	150	110	92	60	129	φ4.5
SJKM1E-250	3	107	165	110	90	35	126	φ4.5
	4	142	165	110	90	70	126	φ4.5
SJKM1E-400	3	150	257	146	106	44	194	φ7
	4	198	257	146	106	94	194	φ7
SJKM1E-630	3	180	270	155	111	58	200	φ7
SJKM1E-800	3	210	280	155	116	70	243	φ7