DECLARATION

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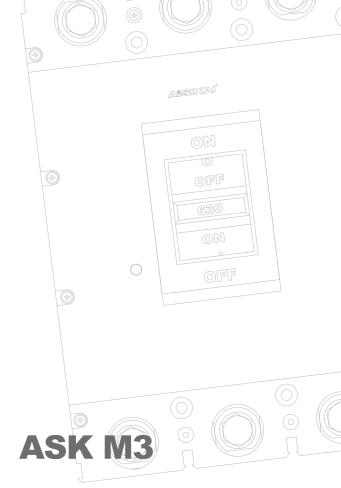




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MOLDED CASE CIRCUIT BREAKER SELECTION GUIDE



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Since established in 2007, AISIKAI has been committed to the manufacture, research, development and marketing of the high-quality high and low voltage electric switches. Our product lines cover level I, II, III power distribution fields. We are awarded as the National High Tech Enterprise, Double-Soft Certified Enterprise (i.e., software product certified and software enterprise certified), Little Giant Science and Technology Enterprise of Jiangsu Province, and Contract-keeping and Trustworthy Enterprise. We have invention patents, utility model patents and appearance patents. All of AISIKAI products have China Compulsory Certification (CCC) and China Quality Certification (CQC). From 2014, we have been recognized as Yangzhou City Engineering Technology Center and National Adopting International Standard Enterprise.

AISIKAI products have CE certification and IEC CB certification. We have passed the ISO9001 Quality Management System and ISO14001 Environment Management System, ISO45001 Occupational Health Management System, and SGS Global Qualified Supplier Authentication.

QUALITY, SERVICE, REPUTATION, INNOVATION is AISIKAI's unchanging company principle. We're always eager to make progress to offer reliable products and impeccable services. With your support and trust, AISIKAI will thrive and work towards a brighter future.





MOLDED CASE CIRCUIT BREAKER ASKM3 SERIES

MOLDED CASE CIRCUIT BREAKER

Time Tested, Safe and Reliable

ASKM1 series molded case circuit breaker (referred to as MCCB) is an important product of AISIKAI Electric in the field of low-voltage power distribution, and has been selling well in the field of power distribution for many years. MCCB covers a wide current range from 10A to 1600A. Derived from the basic type, we now have leakage protection type circuit breaker, electronic circuit breaker, LCD electronic circuit breaker, electronic leakage protection type circuit breaker and several other major categories of products.

Over the years, we have been specializing in the design, R&D and the professional manufacturing of the low voltage electric products. Oriented by the satisfaction and expectations of customers, we continuously improve product performance on the condition of safety and reliability. We use advanced automated assembly lines to ensure the timely delivery to customers. We observe strict quality standards to ensure that each product is qualified.



APPLICATIONS





STANDARDS

IEC60947-1 GB/T14048.1 IEC60947-2

GB/T14048.2

IEC60947-4-1

GB/T14048.4

GB/T2423.10 GB/T2423.4





ASKM3E

电子式断路器 12.5A-800A







ASKM3E-Y 夜晶电子式断路器 40A-800A



40A-800A

电子式漏电保护型断路器



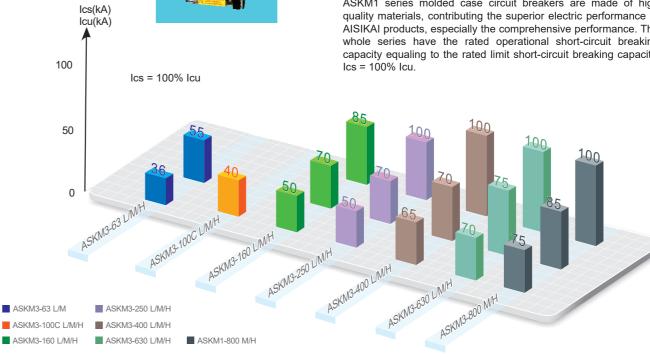












Wide Range of Applications

ASKM1 series molded case circuit breakers comply with the IEC/GB standards and passed the China Compulsory Certification. MCCB are suitable for the various power grid systems with rated operational voltage of AC 400V and rated insulation voltage of AC

Comprehensive Protection Functions

ASKM1 series molded case circuit breaker has protection functions against overload, short-circuit and under-voltage. Each protection time is fixed value. In addition to the above-mentioned functions, the leakage molded case circuit breaker also has the function of leakage protection. Electronic molded case circuit breaker can set overload fault long delay action current, overload fault long delay action time, short-circuit fault short delay action current, short-circuit fault short delay action time, short-circuit fault instantaneous current, pre-alarm action current value.

Microprocessor Control

ASKM1E electronic molded case circuit breaker adopts MCU microprocessor-controlled tripping mechanism. The protection parameters can be targeted according to the characteristics of the power distribution system and load equipment to achieve precise protection.

Extensive Optional Accessories

ASKM1 series molded case circuit breakers can be equipped with a wide range of optional accessories, thus meeting the functional requirements of various power distribution systems.

Internal mounting accessories:

Basic accessory modules can be installed individually or in any combination

Basic accessory modules: alarm contact, shunt tripper, auxiliary contact, under-voltage tripper

External mounting accessories

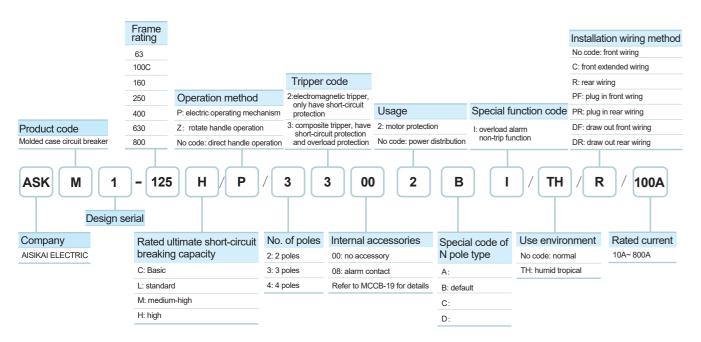
Electric operating mechanism, manual operating mechanism, mechanical operating mechanism

High-level Electric Parameters

ASKM1 series molded case circuit breakers are made of high quality materials, contributing the superior electric performance to AISIKAI products, especially the comprehensive performance. The whole series have the rated operational short-circuit breaking capacity equaling to the rated limit short-circuit breaking capacity,



ASKM3 THERMOMAGNETIC NORMAL PROTECTION MOLDED CASE CIRCUIT **BREAKER SELECTION TABLE**



- A: N poles does not have over-current tripper. N pole is always closed and does not break/close along with the other three poles.
- B: N poles does not have over-current tripper. N pole breaks/closes along with the other three poles. N pole is equipped with "first close, then split" function as standard.
- C: N poles has over-current tripper. N pole breaks/closes along with the other three poles. N pole is equipped with "first close, then split" function as standard.
- D: N poles has over-current tripper. N pole is always closed and does not break/close along with the other three poles.



Model definition 1:

ASKM3-100C/33002/TH/R/100A

- 1. normal molded case circuit breaker, 125A frame, electric operation;
- 2. 3 poles, composite tripper, no accessory, for motor protection;
- 3. humid tropical type, rear wiring;
- 4. rated current 100A.

Model definition 2:

ASKM3-250L/4300/160A

- 1. normal protection molded circuit breaker, 250A frame, standard breaking capacity, direct manual operation (implicit);
- 2. 4 poles, composite tripper, no accessory, for power distribution (implicit);
- normal environment(implicit), front wiring(implicit);
- 4 rated current 160A

STANDARDS

IEC60947-1

GB/T14048.1

GB/T14048.2

IEC60947-4-1

GB/T14048.4 GB/T2423.4

ASKM3 THERMOMAGNETIC NORMAL PROTECTION MOLDED CASE CIRCUIT BREAKER

OVERVIEW



FEATURES

APPLICATIONS

Commercial

Industrial

Civil

CLASSIFICATION

- ASKM3 thermomagnetic molded case circuit breaker(hereinafter referred to as MCCB) is a new type of circuit breaker designed and developed by our company using international advanced technology. The rated insulation voltage of MCCB is 1000V. MCCB is suitable for the distribution network of AC 50Hz/60Hz, rated voltage 690V and below and rated current 10A-1600A. MCCB can distribute power and protect circuits and power equipment against faults like overload, under-voltage, short-circuit and under-voltage. MCCB can also be used for infrequent switching of lines and infrequent starting of motors. The products have the characteristics of small volume, high breaking capacity, short flying arc, vibration resistant,
- Classified by the rated limit short-circuit breaking capacity (Icu) C-Basic, L-standard, M-medium high, H-high
- Classified by the over-current tripper rated current(A)

Frame 63: 10, 16, 20, 25, 32, 40, 50, 63A

etc. The whole series have isolation function.

Frame 125: 10, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125A

Frame 250: 100, 125, 140, 160, 180, 200, 250A

Frame 400: 225, 250, 315, 350, 400A Frame 630: 400, 500, 630A

Frame 800: 400, 500, 630, 700, 800A

Frame 1600: 800, 1000, 1250, 1600A

Classified by wiring method

Front wiring, extended front wiring, rear wiring, plug in front wring, plug in rear wiring, draw out front wiring and draw out rear wiring

Classified by over-current tripper type

Composite: thermal+electromagnetic tripper(overload protection and short-circuit protection); thermomagnetic: electromagnetic tripper(short-circuit protection)

Classified by accessories

Internal accessories: shunt tripper, under-voltage tripper, auxiliary tipper, alarm tripper External accessories: manual operating mechanism, electric operating mechanism

 Small volume, high breaking capacity, short flying arc, vibration resistant; Reasonable structure, reliable performance, easy installation; Extensive optional accessories, can installed on-line, meet the technical requirements of different power distribution systems.

NORMAL OPERATIONAL CONDITIONS AND INSTALLATION METHODS

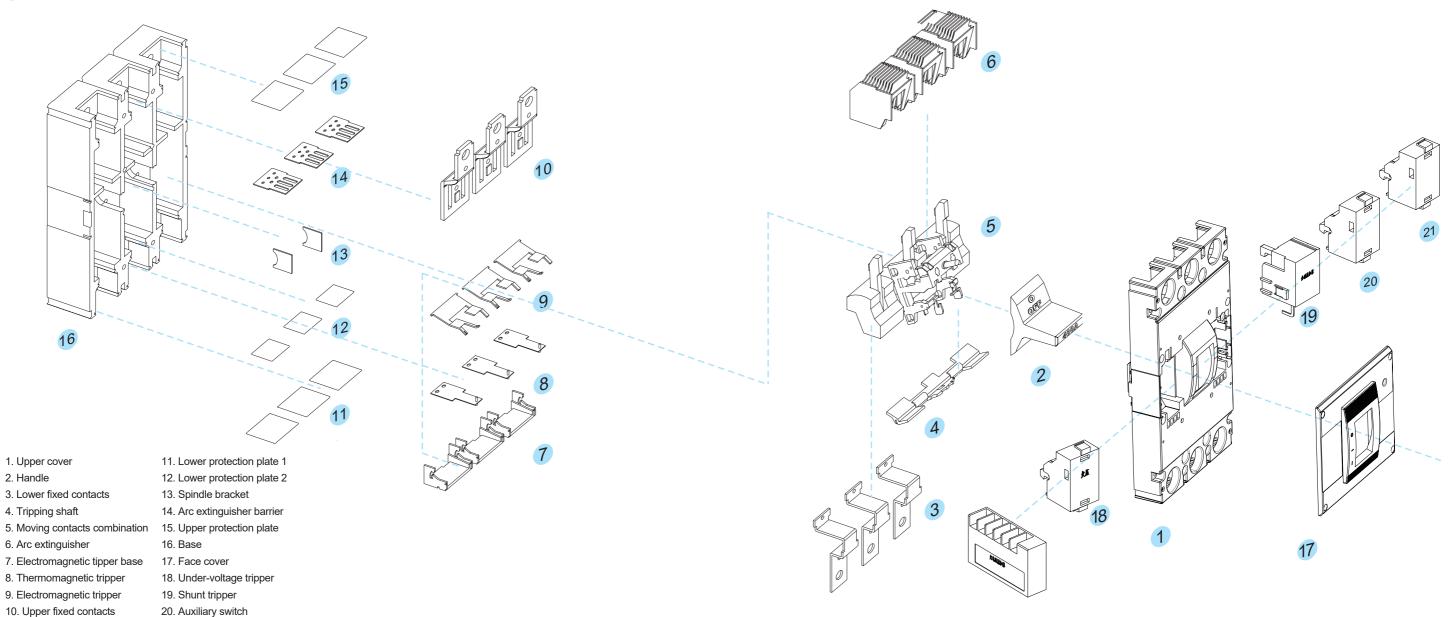
Category	Requirement
Altitude	Lower than 2000 meters.
Operational temperature	Between -5 $^{\circ}\!$
Pollution level	Level 3
Installation level	The installation level of circuit breaker main circuit is ${\mathbb H}$, it's ${\mathbb H}$ for the auxiliary circuit and control circuit which do not connect with the main circuit .
Operational humidity	The relative humidity at +40 $^{\circ}$ shall not exceed 50%. Higher relative humidity is allowed at lower temperature. The average maximum relative humidity is 90% in the most humid month and this month has the average minimum temperature of +25 $^{\circ}$. The condensation that occurs on the surface of the product due to temperature changes should also be taken into consideration.
Installation conditions	Use environment should be without strong vibration and shock. The magnetic field near the installation site should not exceed 5 times the geomagnetic field in any direction. The leakage protection circuit breaker normally should be installed vertically.
Installation method	Install vertically or horizontally.
Wiring method	Wiring reversely is acceptable.

IEC60947-2

GB/T2423.10



OVERVIEW



Structure overview

The molded case circuit breaker is a integral type structure, which is made of precision combination of internal parts. The base is designed with mounting positions for fixed contacts of each phase and arc extinguisher. The moving contact combination is driven by a manual handle to contact or separate from the fixed contacts to achieve manual control of the breaking/closing. When the thermal/electromagnetic protection exceeds the factory preset value, the tripper drives the moving contact combination into protection breaking. Three-phase detection transformer, monitoring circuit board and tripper are installed internally. Protection values can be adjusted on site according to usage.

21. Alarm switch

Contact mechanism

The moving contacts of each phase are fixed to a base of SMC material, forming the moving contact combination. The breaking process is rapid due to the high strength spring. The arc extinguishers which are independent between each phase can extinguish arc rapidly.

Working method

The molded case circuit breaker is driven by a manual handle exposed on the panel, compressing the spring to close the circuit. When a fault occurs during normal operation, the tripper will be triggered by the thermal/electromagnetic tripper. The strong force of the spring instantly breaks the circuit, achieving over-current protection and short-circuit protection.

Under-voltage tripper

When the supply voltage drops to the range of 70%-35% of the rated operational voltage, the under-voltage tripper can reliably break the circuit breaker. When the supply voltage is lower than 35% of the rated operational voltage, the under-voltage tripper can prevent the circuit breaker from closing. When the supply voltage is higher than 85% of the rated operational voltage, the under-voltage tripper can ensure the reliable closing of the circuit breaker. The rated value of the under-voltage is AC 50Hz, 230V, 400V. Customers can install under-voltage tripper as needed.

Shunt tripper

The rated control power voltage of the shunt tripper: 50Hz, AC230V, AC400V; DC110V, 220V, 24V. When the voltage is 70%~110% of the rated value, it can reliably break the circuit breaker. Customers can install shunt tripper as needed.





MAIN TECHNICAL PARAMETERS















Form 1																							
Model		ASKM3-	63	ASKM3-100C	ASKM	3-160			ASKN	13-250			ASKM3-	400			ASKM3-	-630			ASKM3-8	00	
Frame rating current	Frame rating current Inm(A) 63			100	160				250				400				630				800	800	
No. of poles	No. of poles 3			3P/4P	3P/4P	3P/4P :		3P/4F	3P/4P			3P/4P			3P/4P		3P/4P	3P/4P					
Rated current In(A)		10, 16, 2 50, 63	0, 25, 32, 40,	10, 16, 20, 25, 32, 40, 50, 63, 80, 100		10, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 140, 160			100, 125, 140, 160, 180, 200, 225, 250			200, 225, 250, 315, 350, 400			400, 500	400, 500, 630		400, 500,	400, 500, 630, 700, 800				
Rated insulation volta	age Ui(V)	1000V		1000V	1000V	1000V			1000\	/			1000V				1000V				1000V		
Rated impulse withst Uimp(V)	tand voltage	8000V		8000V	12000	12000V			12000V			12000V	12000V			12000V				12000V			
Rated operational vo	ltage Ue(V)			AC400\	//415V	AC660	V/690V																
Arc distance		>50(0) ²)	>50(0) ²⁾	≯50(0) ²⁾			≯50 (≯50(0) ²⁾			≯100(0)	>100(0) ²⁾			≯100(0)	2)			>100(0) ²⁾	>100(0) ²⁾	
Breaking capacity lev	vel	L	M	С	С	L	М	Н	С	L	M	Н	С	L	М	Н	С	L	М	Н	L	M	Н
Ultimate short-circuit breaking capacity	AC400V/415V	36	55	40	40	50	70	85	40	50	70	100	40	65	70	100	40	70	75	100	75	85	100
lcu(kA)	AC660V/690V	10	12	12	12	12	20	20	12	12	20	20	15	15	20	20	20	20	30	30	20	30	30
Service short-circuit breaking capacity	AC400V/415V	36	55	40	40	50	70	85	40	50	70	100	40	65	70	100	40	70	75	100	75	85	100
Ics(kA)	AC660V/690V	10	12	12	12	12	20	20	12	12	20	20	15	15	20	20	20	20	30	30	20	30	30
Use category		Α		A	Α				Α	Α		•	A		A		Α						
Electrical service	AC400V/415V	8000		8000	8000				8000		7500		7500		7500	7500							
life(times)1)	AC660V/690V	1500		1500	1500				1000	1000 1000			1000			500	500						
Mechanical service	without maintenance	20000		20000	20000				20000 10000				10000			10000							
life(times)1)	with maintainable	40000		40000	40000				40000)			20000				20000				20000		
Outline dimensions (mm)	W(3P/4P)	75/100		75/100	92/122			107/1	107/142			150/198		182/240		210/280	210/280						
+ + + v	L	130 130		130	150	150			165				257			270		280					
- H>	H (not including handle)	60.5		60.5	92				90				105.5				110				114.5		

According to GB/T14048.1, the term of "service life" indicates the probability that an appliance will complete a number of operating cycles before repairing or replacing a component.
 Choose the height of 4mm zero arc cover for (ASKM3-63L/M, ASKM3-100C), 6.2mm for (ASKM3-160C/L/M/H), 8mm for (ASKM3-250C), 7.5mm for (ASKM3-250L/M/H), 9.3mm for (ASKM3-400C/L/M/H), ASKM3-630C/L/M/H), 9.5mm for (ASKM3-800L/M/H), realizing zero arc.





PROTECTION CHARACTERISTIC PARAMETERS-POWER DISTRIBUTION TYPE - COMPOSITE TRIPPER

The circuit breaker for power distribution equipped with composite tripper has overload and short-circuit protection.

The protection characteristics are factory set according to the following parameters. Some parameters can be customized.

Model Example:



Protection Function	Frame Rating	Rated Current In(A)	Action Characteristics
Overload protection A/B/C pole	Whole series	10~800	Act by I²rt 1.05lr(cold state), no act within 1 h($\ln < 63A$) 1.3ln (hot state), < 1 h act($\ln < 63A$) 1.05lr(cold state), no act within 2 h($\ln > 63A$) 1.3ln (hot state), < 2 h act($\ln > 63A$)

Protection Function	Frame Rating	Rated Current In(A)	Short-circuit protect	ction current set value Ir(A)	Action time	
		10~25		300		
	63	32~63		10In		
	4000	10~25 300				
Short-circuit protection	100C	32 ~100		Act		
A/B/C pole	160	10~160	10~160 10ln			
	250	100~140		10In	instantaneously	
	200	160~250	10ln			
	400	225~400	10ln	5h can be		
	630	400~630	10In customized			
	800	400~800	10ln			
Action allowed error		±20%				

	Protection F	Function Frame Rating		Rated Current In(A)	Rated Current In(A) N pole overload protection N pole short-circuit protection			
			63	10~63		ln,lr		
			4000/400	10~63		ln,lr		
			100C/160	80/100	63,630			
			160	125/140/160	100,1000			
NI i	pole protection		250	100~120	100,1000			
	poles circuit	C/D		225/250	125,1250	Can customize: N pole overload protection current=In		
br	eaker)			225~315	225.2250	N pole short-circuit protection current=Ir		
				350/400	250,2500			
			630	400~630	400,4000			
				400/500	400,4000			
			800	630~800	500,5000			
		A/B	Whole series	10~800		without protection		

PROTECTION CHARACTERISTIC PARAMETERS-POWER DISTRIBUTION TYPE — ELECTROMAGNETIC TRIPPER

The circuit breaker for power distribution equipped with electromagnetic tripper only has short-circuit protection.

The protection characteristics are factory set according to the following parameters. Some parameters can be customized.

Model Example:

2: electromagnetic tripper

No code: for power distribution

ASK

M

3 - 250

H

/ 3 2 00

/ 200A

3: 3 poles 00: without accessory Rated current 200A

			0. 0 poics	oo. without acce	7330ry	TIL 2007		
e circuit breaker equ del is ASKM3-250H/	uipped with e	lectromagnetic tripper	can be added alarm without trip	pping function (code I).				
Protection F		Frame Rating	Rated Current In(A)	Acti	on Characteristics(al	arm only)		
Overload alarm without tripping (note: 63 frame does not have this function)		160~800	10~800	1.3In (hot sta 1.05lr(cold sta	Act by I^2 t 1.05lr(cold state), no act within 1 h 1.3ln (hot state), \leqslant 1 h act($In \leqslant 63$ h 1.05lr(cold state), no act within 2 h 1.3ln (hot state), \leqslant 2 h act($In > 63$ h			
Protection F	unction	Frame Rating	Rated Current In(A)	Short-circuit protection	on current set value Ir(A)	Action time		
	63		10~25		300			
			32~63					
			10~25		300			
		100C	32~100					
Short-circuit p	protection 160		10~160	10ln		Act		
A/B/C p		050	100~140		10In			
		250	160~250	10ln				
		400	225~400	10ln	5h can be			
		630	400~630	10ln	customized			
		800	400~800	10ln				
Action allowed	d error	±20%				<u> </u>		
Protection Fu	unction	Frame Rating	Rating Rated Current In(A) Short-circuit protection current set value Ir(A)			Action time		
			10~25	3	300			
		63	32~63	1	Oln			
			10~25	3	300			
		100C	32~63	1	Oln			
			80/100	630(10h can	be customized)			
			10~63					
pole protection poles circuit	C/D	160	80/160	630		Act		
reaker)	075	250	100~120	1000		instantaneou		
		250	225~250	1250	10lp in gradable			
		400	225~315	2250	10In is available. Specify when			
		400	350/400	2500	ordering.			
		630	400~630	4000				
		000	400/500	4000				

630~800

10~800

A / B Whole series

5000

without protection





PROTECTION CHARACTERISTIC PARAMETERS—POWER DISTRIBUTION TYPE — COMPOSITE TRIPPER

The circuit breaker for motor protection equipped with composite tripper has overload and short-circuit protection.

The protection characteristics are factory set according to the following parameters. Some parameters can be customized.

Model Example:

3: composite tripper
2: for motor protection

ASK M 3 - 250 H / 3 3 00 2 / 200A

3: 3 poles 00: without accessory Rated current 200A

Protection Function	Frame Rating	Rated Current In(A)	Action Characteristics
Overload protection A/B/C pole (note: the maximum rated current of circuit breaker for motor protection is 630A)	Whole series	10~630	Act by I² t 1.0In(cold state), no act within 2 h 1.2In (hot state), 2 h act 1.5In(hot state), ≤ 2 min(ASKM3-63L/M, ASKM3-100C) ≤ 4 min(ASKM3-160L/M) ≤ 8 min(ASKM3-250, 400, 630 and 800 In ≤630A) 7.2In(cold state),0.5S <tp≤5s(10(askm3-160l="" 20(askm3-250,="" 400,="" 4s<tp≤10s(="" 5(askm3-63l="" 630="" 6s<tp≤20s(="" 800="" and="" askm3-1000c)="" askm3-100c)="" askm3-160l="" askm3-250,400,630="" askm3-63l="" in="" in≤630a)="" level,="" m)="" m,="" td="" tripper="" ≤630a)<=""></tp≤5s(>

			20(ASKM3-250, 400, 630 and 800 in				
Protection Function	Frame Rating	Rated Current In(A)	Short-circuit protection current set value Ir(A)	Action time			
	63	10~25	300				
	03	32~63	12ln				
	100C	10~25	300				
	1000	32 ~100	12ln	Act instantaneously			
Short-circuit protection	160	10~160	12ln				
A/B/C pole	250	100~250	12ln				
	400	225~400	12ln				
	630	400~630	12ln				
	800	400~630	12ln				
Action allowed error		±20%					

	Protection	Function	Frame Rating	Rated Current In(A)	N pole overload protection current set N pole short-circuit protection current s			
			63	10~63	ln,lr			
			1000/160	10~63	ln,lr			
			100C/160	80/100	63,756			
			160	125/140/160	100,1000	The type with N pole		
	pole protection	CID	C / D 250	100~120	100,1200	overload protection current		
•	poles circuit reaker)	C/D		225/250	125,1500	set value of In, N pole short-circuit protection		
D	reaker)		400	225~315	225,2700	current set value of Ir is		
				350/400	250,3000	available. Specify when		
			630	400~630	400,4800	ordering.		
			000	400/500	400,4800			
			800	630	500,6000			
		A/B	Whole series	10~630	without	protection		

PROTECTION CHARACTERISTIC PARAMETERS-POWER DISTRIBUTION TYPE — ELECTROMAGNETIC TRIPPER

The circuit breaker for motor protection equipped with electromagnetic tripper only has short-circuit protection.

The protection characteristics are factory set according to the following parameters. Some parameters can be customized.



Protectio	n Function	Frame Rating	Rated Current In(A)	Action	Characteristics(alarn	n only)			
(note: the maximu	Act by I^2 t 1.0ln(cold state), no act within 2 h 1.2ln (hot state), 2 h act 1.5ln(hot state), 2 h act 1.5ln(hot state), 4 min(ASKM1-63L/M, ASKM 4 min(ASKM1-160L/M) 8 min(ASKM1-160L/M) 8 min(ASKM1-250, 400, 630 7.2ln(cold state), 0.5S<7p \leqslant 55(ASKM1-63L/M) 4S<7p \leqslant 10S(ASKM1-63L/M) 6S<7p \leqslant 20S(ASKM1-250, 400 Tripper level, 5(ASKM1-1000C), 10(ASKM1-160C) 10(ASKM1-250, 400, 630 and 800 Red and 800 Red at 1.0ln(cold state), no act within 2 h 1.2ln (hot state), 2 h act 1.5ln(hot state), 2 h act 1.5ln(hot state), 2 h min(ASKM1-63L/M) 8 min(ASKM1-63L/M) 6S<7p \leqslant 10S(ASKM1-63L/M) 6S<7p \leqslant 10S(ASKM1-63L/M) 6S<7p \leqslant 20S(ASKM1-250, 400, 630 and 800 Red at 1.5ln(hot state), 2 h act 1.5ln(hot state), 3 h min(ASKM1-63L/M) 6S<7p \leqslant 10S(ASKM1-100C), 10(ASKM1-63L/M) 6S<7p \leqslant 10S(ASKM1-250, 400, 630 and 800 Red at 1.5ln(hot state), 2 h min(ASKM1-63L/M) 6S<7p \leqslant 10S(ASKM1-250, 400, 630 and 800 Red at 1.5ln(hot state), 2 h min(ASKM1-63L/M) 6S<7p \leqslant 10S(ASKM1-250, 400, 630 and 800 Red at 1.5ln(hot state), 3 h min(ASKM1-63L/M) 6S<7p \leqslant 10S(ASKM1-250, 400, 630 and 800 Red at 1.5ln(hot state), 3 h min(ASKM1-63L/M) 6S<7p \leqslant 10S(ASKM1-250, 400, 630 and 800 Red at 1.5ln(hot state), 3 h min(ASKM1-63L/M) 6S<7p \leqslant 10S(ASKM1-250, 400, 630 and 800 Red at 1.5ln(hot state), 4 h min(ASKM1-63L/M) 6S<7p \leqslant 10S(ASKM1-250, 400, 630 and 800 Red at 1.5ln(hot state), 5 h min(ASKM1-63L/M) 6S<7p> \leqslant 10S(ASKM1-250, 400, 630 and 800 Red at 1.5ln(hot state), 6 h min(ASKM1-63L/M) 6S<7p \leqslant 10S(ASKM1-250, 400, 630 and 800 Red at 1.5ln(hot state), 6 h min(ASKM1-63L/M) 6S<7p \leqslant 10S(ASKM1-250, 400, 630 and 800 Red at 1.5ln(hot state), 7 h min(ASKM1-63L/M) 6S<7p \leqslant 10S(ASKM1-250, 400, 630 and 800 Red at 1.5ln(hot state), 8 h min(ASKM1-63L/M) 6S<7p \leqslant 10S(ASKM1-250, 400, 630 and 800 Red at 1.5ln(hot state), 8 h min(ASKM1-63L/M) 6S<7p> \leqslant 10S(ASKM1-63L/M) 6S<7				0 and 800 In ≤630A) ASKM1-100C) 0,630 and 800 In ≤630 0L/M				
Protectio	n Function	Frame Rating	Rated Current In(A)	Short-circuit protection cu	rrent set value Ir(A)	Action time			
		00	10~25	300					
		63	32~63	12ln					
	100C Short-circuit protection				10~25	300			
Short-circu			32~63	12ln	Act				
A/B/C pole		160	10~160	12ln		instantaneously			
		250	100~250	12In					
Note: there is no product of 12In		400	225~400	12ln					
for 100C frame N 100A.)	ICCB of 80A or	630	400~630	12ln					
,		800	400~630	12ln					
Action al	owed error								
Protectio	n Function	Frame Rating	Rated Current In(A)	Short-circuit protection cu	Action time				
		63	10~25	300					
		00	32~63	12ln					
		4000	10~25	300					
		100C	32~63	12ln					
		160	10~63	12ln		A =4			
pole protection poles circuit		100	80/100	756		Act instantaneously			
eaker)	C/D	250	100/120	1200		•			
		250	225/250	1500					
		400	225~315	2700	12In is available. Specify when				
		400	350/400	3000	ordering.				
		630	400~630	4800					
				800	400/500	4800			

A/B

Whole series

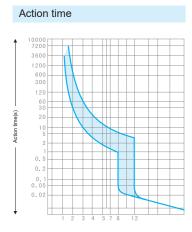
10~630

without protection

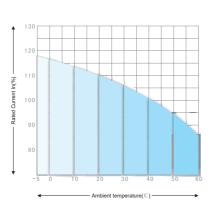


POWER DISTRIBUTION CIRCUIT BREAKER INVERSE TIME PROTECTION CHARACTERISTIC CURVE

63/100C/160 Frame 10A~32A

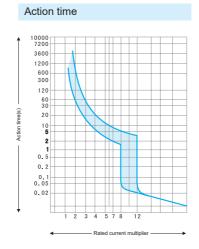


Temperature compensation curve

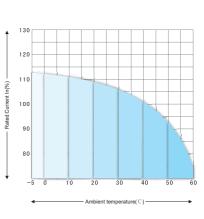


POWER DISTRIBUTION CIRCUIT BREAKER INVERSE TIME PROTECTION CHARACTERISTIC CURVE

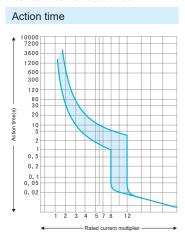




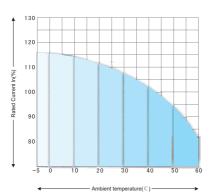
Temperature compensation curve



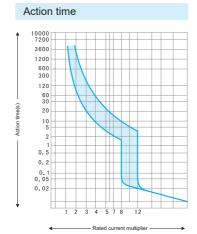
63/100C/160 Frame 40A~160A



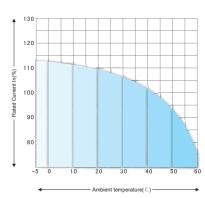
Temperature compensation curve



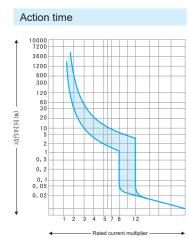
630 Frame



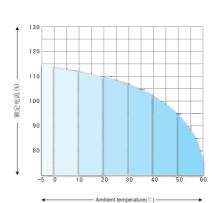
Temperature compensation curve



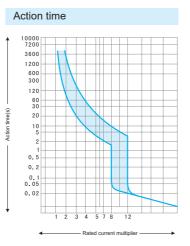
250 Frame



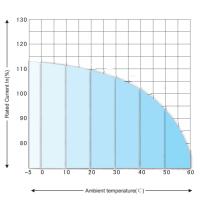
Temperature compensation curve



800 Frame



Temperature compensation curve





4-φ7

44 (3P)

4-φ7

94(4P)

4-φ7

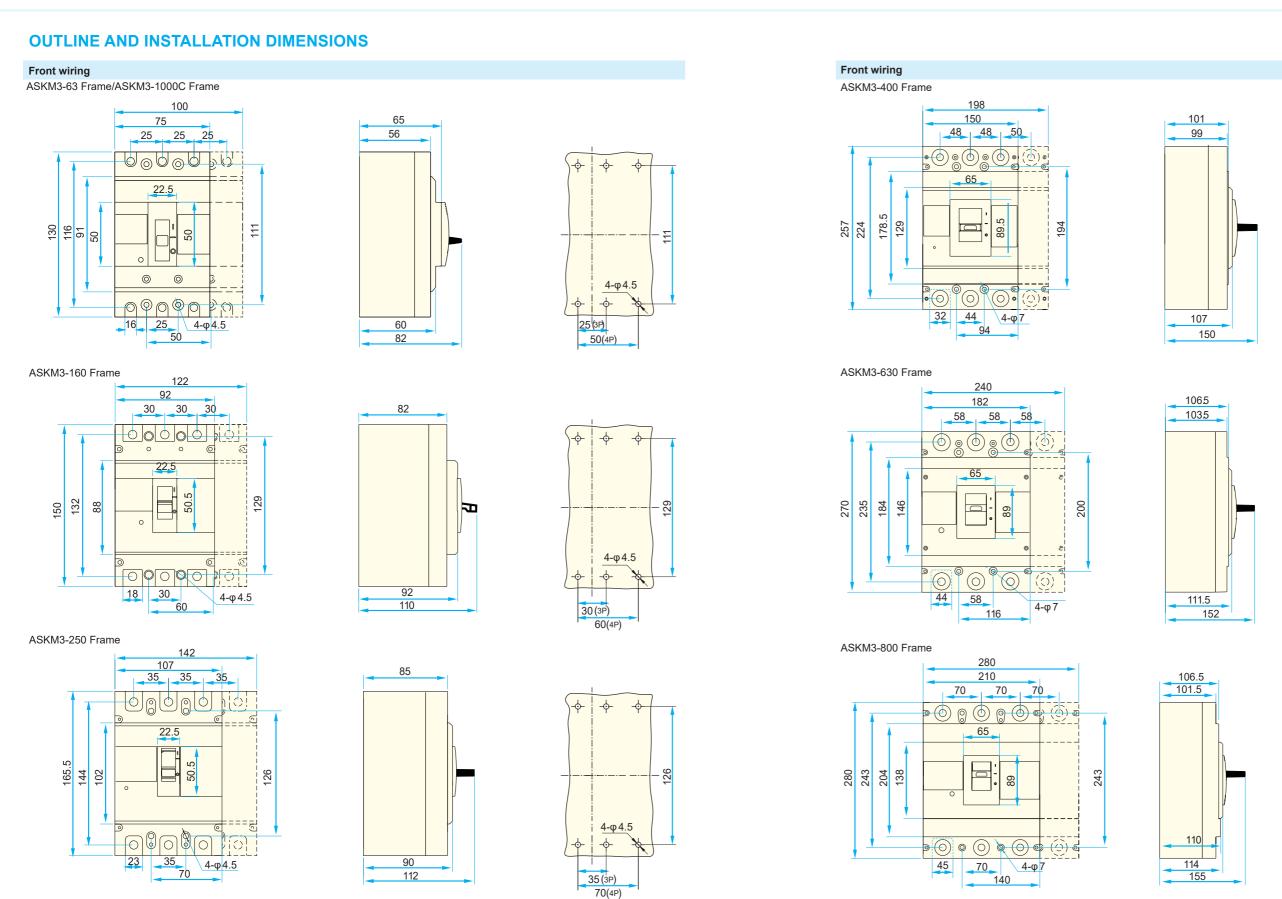
58 (3P)

116 (4P)

4-φ7

70 (3P)

140 (4P)







INTERNAL OPTIONAL ACCESSORIES

The ASKM3 thermomagnetic circuit breaker has five basic accessory modules available for optional installation inside the switch

Shunt Tripper MODEL: FJ-FT-ASKM3

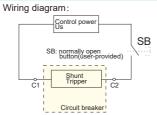
Usage: Shunt tripper is used to remotely control the breaking of the circuit breaker. It is instantaneous working system. Long time energizing is prohibited. Each power-on time is recommended to be no more than 1s. Standard outlet wire method: lead wire type Standard outlet wire length: 50cm Customizable outlet wire method: terminal type

Control power: Us=(70%-110%)Ue Frequency: 50/60 Hz

Default voltage: AC 220V

Optional voltage:AC 380V DC110V DC220V

Ue: rated operational voltage of shunt tripper



Outline:



Under-voltage tripper MODEL: FJ-QT-ASKM3

Under-voltage tripper is used for low voltage protection of power lines and power-using equipment. It ensures that load equipment is not damaged by a malfunction caused by a voltage below the rated value. Standard outlet wire method:

Module type (Control module is installed on the side of the circuit breaker, and the under-voltage tripper is

installed inside the breaker)

1.Control power voltage Us1: when Us1=(35%-70%)Ue, the under-voltage tripper can reliably break circuit breaker. 2.Control power voltage Us2: when Us2:Us2=(85%-110%)Ue,

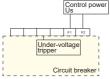
under-voltage tripper can prevent circuit breaker from closing.

the circuit breaker can close normally. 3.Control power voltage Us3: when Us3 \leq 35%Ue,the

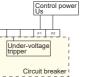
Frequency: 50/60Hz Ue: rated operational voltage

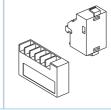
Standard voltage AC230V Optional voltage: AC380V AC110V

Wiring diagram:



Special reminder: The circuit breaker equipped with an under-voltage tripper can only be normally opened and closed if Us2 voltage is input between the P1 and P2 terminals.





Outline:

Outline:

Auxiliary switch MODEL: FJ-FC-ASKM3

Usage

It is used to provide the breaking and closing status signal of the circuit breaker, helping the secondary control circuit to realize the automatic control function

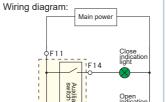
1 normally open 1 normally closed: 1NO1NC 2 normally open 2 normally closed: 2NO2NC 4 normally open 4 normally closed: 4NO4NC Standard outlet wire method: lead wire type Standard outlet wire length: 50cm

Customizable outlet wire method: terminal type

When circuit breaker is at position of open or free trip

When circuit breaker is at closing position

Conventional thermal current: Ith=3A



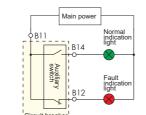
Alarm switch MODEL: FJ-BC-ASKM3

Usage:

It is used to provide the overload, short-circuit(free trip) and under-voltage fault(fault trip) status signal of the circuit breaker, helping the secondary control circuit to realize the automatic control function. Standard outlet wire method: lead wire type Standard outlet wire length: 50cm Customizable outlet wire method: terminal type When circuit breaker is at position of open/closed

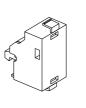
When circuit breaker is at position of free trip&fault trip B12 ⊶

Conventional thermal current: Ith=3A



Wiring diagram:

Outline:



Overload alarm without tripping module MODEL: FJ-GZBJ-ASKM3

Usage:

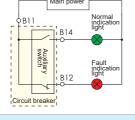
In the case of overload of circuit breaker, the module provides alarm signal and the circuit breaker does not trip, ensuring the continuity of power supply, suitable for places with special requirements.

When circuit breaker is overload

RB14 ← When circuit breaker is not overload

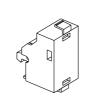
RB12 °

Conventional thermal current: Ith=3A



RB14





INTERNAL ACCESSORIES CODE TABLE

Depending on the application requirements, one or more base modules can be installed inside the switch. Each module has an individual code. Different modules can be combined and have a new accessory code.

Internal accessories icons

under-voltage tripper

Internal accessories installation position schematic diagram

☐ Alarm switch Right side Auxiliary switch Lead wire direction installation Shunt tripper

		ASKM3-63	ASKM3-100C	ASKM3-160	ASKM3-250	ASKM3-400/630/800
Code	Accessory	3P/4P	3P/4P	3P/4P	3P/4P	3P/4P
00	No accessory					
80	Alarm switch	4	•	4 -	4	4
10	Shunt tripper	•	•	•	4	•
	Auxiliary switch(1NO1NC)	4	4	◆ ■	4	
20	Auxiliary switch(2NO2NC)					4
02	Auxiliary switch(2NO2NC)	4	4	4	4	
30	Under-voltage tripper	• 0	40	+ 0	40	40
40	Shunt tripper+Auxiliary switch(1NO1NC)	◆ • ■ →	+ • II +	(0)	• • • •	
40	Shunt tripper+Auxiliary switch(2NO2NC)					◆ • ■ →
12	Shunt tripper+Auxiliary switch(2NO2NC)	• • • •	+ • • •	• • • •	+ • • •	
50	Shunt tripper+under-voltage tripper	◆ ○	+ 0 • +			◆ ○ ● →
00	2 sets of auxiliary switches(2NO2NC)	4 1 1 +	+ 1 1 +	+ 1 1 +	• • • •	
60	2 sets of auxiliary switches(4NO4NC)					• • •
22	2 sets of auxiliary switches(3NO3NC)	= = +	+ 1 1 +	4 1 1 +	• • • •	
23	2 sets of auxiliary switches(4NO4NC)	•	+ 1 1 +	4 1 1 +	4 1 1 +	
70	Under-voltage tripper+Auxiliary switch(1NO1NC)	← ○ ■ →	← ○ ■ →	◆ ○ ■ →	◆ ○ ■ →	
	Under-voltage tripper+Auxiliary switch(2NO2NC)					◆ ○ ■ →
32	Under-voltage tripper+Auxiliary switch(2NO2NC)	◆ ○ ■ →	← ○ ■ →	◆ ○ ■ →	← ○ ■ →	
18	Shunt tripper+Alarm switch	4 •	4 • □ >	4 • • •	• • •	+ • • •
	Auxiliary switch(1NO1NC)+Alarm switch	4 🗓	← □	◆ □	4	
28	Auxiliary switch(2NO2NC)+Alarm switch					4 🚦
38	Under-voltage tripper+Alarm switch	◆ ○ □ →	◆ ○ □ →	◆ ○ □ →	◆ ○ □ →	
	Shunt tripper+Auxiliary switch(1NO1NC) +Alarm switch	← • □ • •	• ••••	← • □ • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • •	
48	Shunt tripper+Auxiliary switch(2NO2NC) +Alarm switch					← □ • →
	2 sets of auxiliary switches(2NO2NC) +Alarm switch	← ■ ■ →	← □□•	← □ ■ →	← □ ■ →	
68	2 sets of auxiliary switches(4NO4NC) +Alarm switch					← □□•
05	2 sets of auxiliary switches(3NO3NC) +Alarm switch	← □□□→	← □□•	← □□■→	← □□□→	
78	Under-voltage tripper+Auxiliary switch(1NO1NC) +Alarm switch	← ○ □ →	◆ ○ □ →	◆ ○ □ →	◆ ○ □ →	



External Optional Accessory- Plug-in Front Wiring Base

Optional plug-in front wiring base is available for ASKM3 circuit breaker.

Plug-in front wiring base(PF)

Usage: The plug-in front wiring base is mounted on the back of the molded case circuit breaker, and is integrated with the breaker through conductive copper posts and fastening bolts. In the event of a serious circuit breaker failure, the circuit breaker can be quickly repaired and replaced without removing the primary cable.

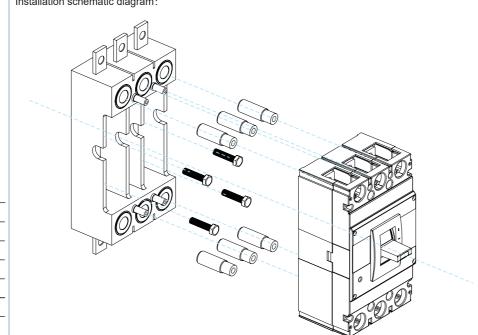
Copper bars dimensions(mm)



Frame d1 63, 100C 13 16 5.5 8.5 19 21 6.5 160 11 250 36 15 8.5 400 25 37 | 15.5 11 630 32 50 15.5 12

MODEL: FJ-BQDZ-ASKM3

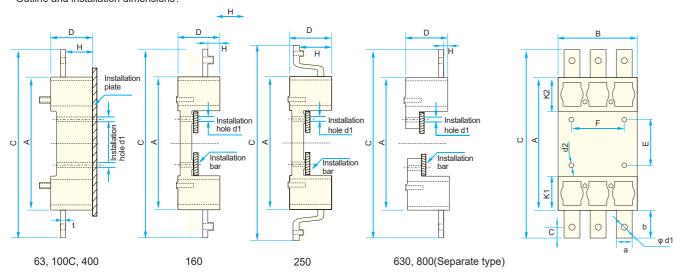
Installation schematic diagram:



35 Outline and installation dimensions:

800

50 | 15.5



Frame	Outline and installation opening dimensions												
Frame	Α	В	С	D	Е	F	Н	K1	K2	d2	t		
63A/100C	140	78	172	44	60	50	19	_	_	5	2		
160A	172	96	214	50	60	66	15	38	38	7	3		
250A	183	110	258	51.5	64	70	46	44	44	7	3		
400A	277	150	352	80	135	115	31	_	_	7	6		
630A	334	180	434	84	123	100	22	65	65	8.5	8		
800A	304	210	404	87	144	91	13	62	62	11	8		

External Optional Accessory- Plug-in Rear Wiring Base

Optional plug-in rear wiring base is available for ASKM3 circuit breaker.

Plug-in rear wiring base(PR)

Usage: The plug-in rear wiring base is mounted on the back of the molded case circuit breaker, and is integrated with the breaker through conductive copper posts and fastening bolts. In the event of a serious circuit breaker failure, the circuit breaker can be quickly repaired and replaced without removing the primary cable.

Copper bars dimensions(mm)

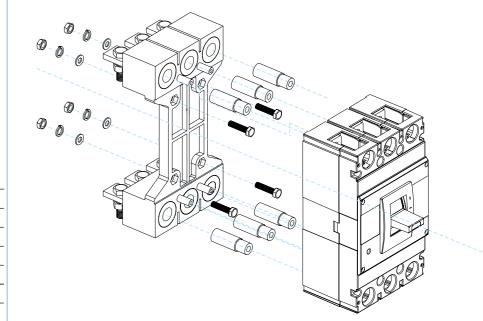




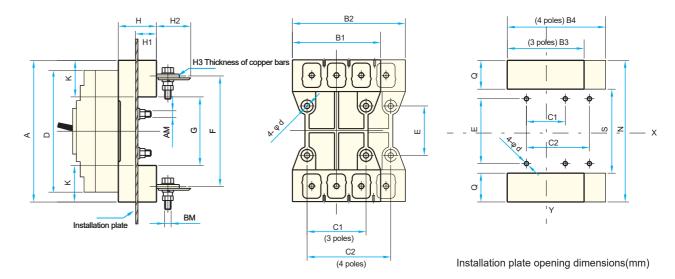
φι	<u>11</u>			
63-800 Fram	e	80	00 Fra	me
Frame	а	b	С	d1
63, 100C	10	18	8	6
160	18	34	18	8
250	21	36	20	8
400	30	43	22	12
630	32	46	17	12
800	BN	1=(Bolt	outlet	wire)

MODEL: FJ-BHDZ-ASKM3

Installation schematic diagram:



Outline and installation dimensions:



F				0	utline a	nd insta	llation	dimens	ions(mı	n)					Ор	ening d	imensio	ons(mm	1)
Frame	Α	B1	B2	C1	C2	D	Е	F	G	K	Н	H1	H2	НЗ	N	S	Q	В3	B4
63A100C	135	75	100	50	75	130	60	116	100	18	28	18	16	2	145	90	28	85	110
125A	168	91	125	60	90	150	56	132	92	38	50	33	35	3.5	178	82	48	101	135
250A	186	107	145	70	105	165.5	54	144	94	46	50	33	37	5.5	196	84	56	117	155
400A	280	149	200	60	108	257	129	224	170	55	60	38	46	8	290	160	65	159	210
630A	300	182	242	100	158	270	123	235	169	65	60	39	50	11	310	160	75	192	252
800A	305	210	280	90	162	280	146	243	181	62	87	60	16	/	315	171	72	220	290



External Optional Accessory- Front Extended Copper Bars

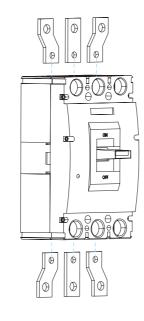
Optional front extended wiring is available for ASKM3 circuit breaker.

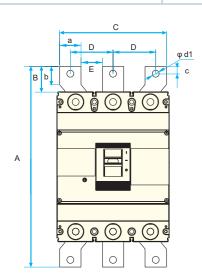
Front extended copper bards(C)

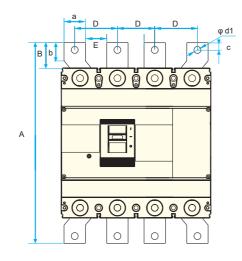
Usage: The front extended copper bars are installed at the inlet copper bars and outlet copper bars of the molded case circuit breaker, which expands the primary cable wiring space and facilitates the quick installation of cables on site.

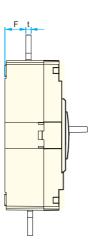
MODEL: FJ-BQJC-ASKM3

Installation schematic diagram:









F					Outline	e and installa	ation opening	g dimensions	S		
Fromm	Α	В	С	D	E	F	а	b	С	d1	t
63A/100C	181	25	76	32	20	24	12	15	6	6	4
160A	197	23	93	39	24	28.5	15	15	7.5	8.5	4
250A	245	40	104	42	22	22.5	20	23	9	9	5
400A	340	41	148	60	32	38	28	25	15	14	6
630A	368	49	176	68	28	41	40	34	14	13	7.8
800A	376	48	200	80	40	41	40	34	14	13	10

External Optional Accessory- Rear Copper Bars

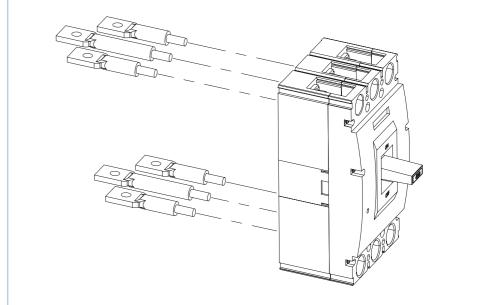
Optional real wiring is available for ASKM3 circuit breaker

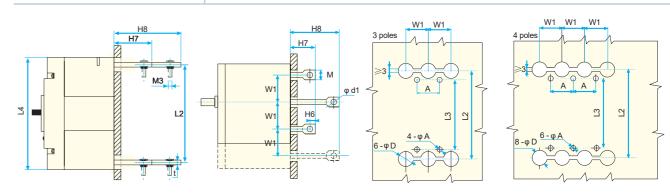
Rear wiring(R)

Usage: The rear copper bars are installed at the inlet copper bars and outlet copper bars of the molded case circuit breaker, which can change the circuit breaker vertical front wiring to horizontal rear wiring, isolating the primary cable behind the mounting board and improving the safety factor of the electrical cabinet.

MODEL: FJ-BQJC-ASKM3

Installation schematic diagram:





	63A/100C	160A	250A	400A	630A	800A
Α	25	30	35	44	58	70
φΑ	3.5	4.5	4.5	7	7	7
φD	8	10	12	33	37	37
L2	116	132	144	224	235	243
L3	111	129	126	194	200	243
L4	130	150	165.5	257	270	280
W1	25	30	35	48	58	70
φ d1	_	8	8	12	12	16
M	M6 (bolt output)	19	19	31	31	34
t	M6 (bolt output)	4.5	4.5	7.5	7.5	10.5
H6	_	14	14	21	21	22
H7	35	53.5	60	55	48.5	73
H8	52	85.5	92	90	83.5	112



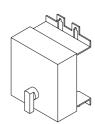
External Optional Accessory-Electric Operating Mechanism

Optional CD1 type or CD2 type electric operating mechanism is available for ASKM3 circuit breaker.

Electric Operating Mechanism- CD1

Usage: The electric operating mechanism is installed on the front side of the molded case circuit breaker. It realizes remote breaking and re-closing function through external control signal, and completes centralized monitoring and automatic control of transmission and distribution network. Internally driven by electromagnet, it has the advantage of low starting current.

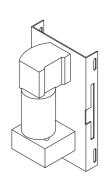
Applicable frame: 63, 100C, 160, 250 Standard wiring method: Lead wire type



Electric Operating Mechanism- CD1

Usage: The electric operating mechanism is installed on the front side of the molded case circuit breaker. It realizes remote breaking and re-closing function through external control signal, and completes centralized monitoring and automatic control of transmission and distribution network. Internally driven by motor, it has the advantage of low starting current.

Applicable frame: 400, 630, 800 Standard wiring method: Terminal type

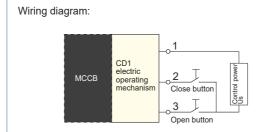


MODEL: FJ-DC/CD1- ASKM3- 250

Control power: Us=(85%-110%) Ue Frequency: 50Hz Ue:rated operational power supply

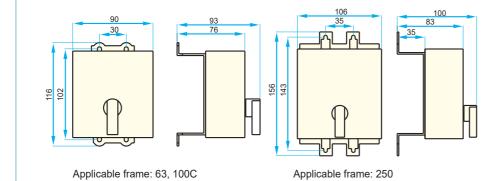
of electric operating mechanism

Default voltage:AC 230V Optional voltage: AC 220V AC 380V AC 400V



operating

Installation schematic diagram:

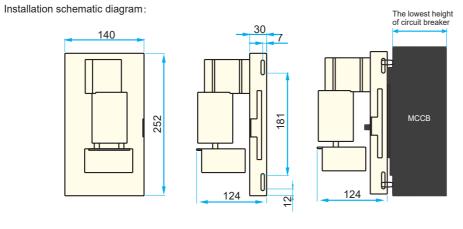


Wiring diagram:

MODEL: FJ-DC/CD1- ASKM3- 400

DC 220V

Control power: Us=(85%-110%) Ue Frequency: 50Hz Ue:rated operational power supply of electric operating mechanism Default voltage:AC 230V Optional voltage: AC 220V AC 380V AC 400V



Electric Operating Mechanism- CD2

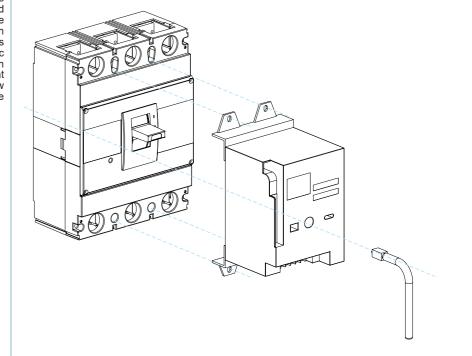
Usage:

The electric operating mechanism is installed on the front side of the molded case circuit breaker. It realizes remote breaking and re-closing function through external control signal, and completes centralized monitoring and automatic control of transmission and distribution network. Internally driven by permanent magnet motor, it has the advantage of low starting current and wide control voltage range.

Applicable frame: 63-800 whole series Standard wiring method: Terminal type

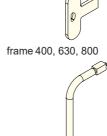
MODEL: FJ-DC/CD2- ASKM3

Wiring diagram:



Manual handle:

frame 63, 100C,160, 250

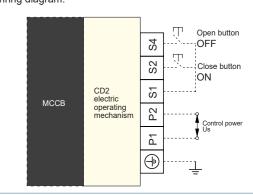


Control power: Us=(70%-110%) Ue Frequency: 50Hz Ue:rated operational voltage of shunt

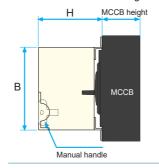
tripper Default voltage:AC 220V Optional voltage: AC 110V DC 220V

DC110V DC 24V

Wiring diagram:



Installation schematic diagram:



00000

Manual handle

	Outline an	nd installat	ion dimen	sions(mm)	Action current	Mechanical service life	Motor
Model	Α	В	Н	4-φd	(A)	Selvice ille	(w)
ASKM3-63	90	116	94	4.5	≤0.5	14000	14
ASKM3-100C	90	116	94	4.5	≤0.5	14000	14
ASKM3-125	90	116	94	4.5	≤0.5	14000	14
ASKM3-250	90	116	90	4.5	≤0.5	14000	14
ASKM3-400	130	176	143	6.5	≤2	5000	35
ASKM3-630	130	176	147	6.5	≤2	5000	35
ASKM3-800	130	176	147	6.5	≤2	5000	35



External Optional Accessory-Manual Operating Mechanism

Optional manual operating mechanism is available for ASKM3 circuit breaker.

Manual operating mechanism

Usage:
The manual operating mechanism is installed on the front of the circuit breaker. Through rotating handle, it realizes the requirement of operation on the panels of drawer cabinet, distribution cabinet, power box, etc. It also provides the function of interlocking between the circuit breaker and the cabinet door panel.

Features:

1.When the circuit breaker is in the closed state, the manual operating mechanism is interlocked with the door plate and the cabinet door cannot be opened.

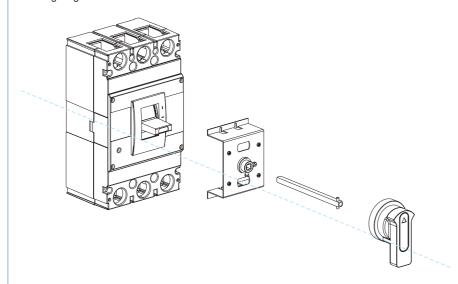
2.In case of failure when operating handle or manual operating mechanism in the closed state, the cabinet door can be opened by the emergency unlocking device on the operating handle.

3. For the manual handles matching with the manual operating mechanisms corresponding to different frames, they have the same openings on door plates.

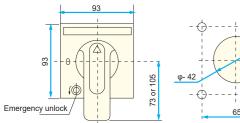
4. The length of standard square shaft is 150mm. We can also provide special specification.

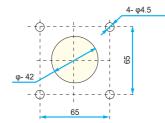
MODEL: FJ-SC- ASKM3

Wiring diagram:



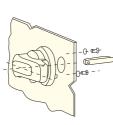
Square handle dimensions: type F

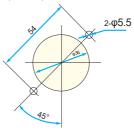




Square handle outline and door plate opening dimensions (the distance between the center of the opening and the hinge is not less than 100mm)

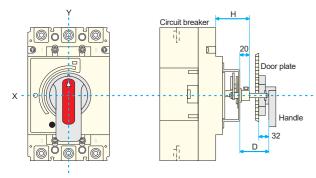
Round handle dimensions: type A(default)





Round handle outline and door plate opening dimensions (the distance between the center of the opening and the hinge is not less than 100mm)

Manual operating mechanism installation schematic diagram



Attention:

The manual operating mechanism used with our molded case circuit breaker must be ordered from our company to ensure the quality of the product. If the user purchases other brands, our company will not bear any adverse consequence occurring after the installation.

Manual operating mechanism installation dimensions

Model	ASKM3-63	ASKM3-125	ASKM3-250	ASKM3-400	ASKM1-630	ASKM3-800
Installation dimensions(H)	49	54	54	84	76	76
Operating handle to the center of circuit breaker Y value	0	0	0	0	0	-20

RATED CURRENT AND WIRE CROSS SECTION AREA

Connection Wire Reference Cross Section Area

Rated current(A)	10	16 20	25	32	40.50	63	80	100	125 140	160	180, 200, 225	250	315 350	400
Nated current(A)	10	10, 20	23	32	40, 50	03	00	100	123, 140	100	100, 200, 223	230	313, 330	400
Wire cross section area (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	185	240

5	Cable		Copper bars				
Rated current(A)	Cross section area(mm²)	Quantity	Size(mm×mm)	Quantity			
500	150	2	30x5	2			
630	185	2	40x5	2			
700/800	240	2	50x5	2			

MODEL OF WIRING TERMINALS

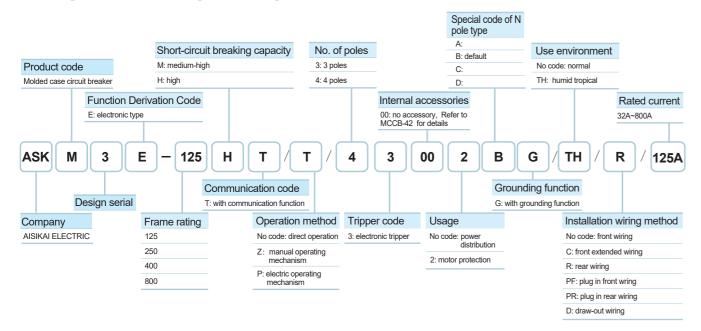
JGC\JBC wiring terminal reference dimension

Model Current(A) Wire cross section area (mirrin) Terminal model B										
100C 100C		Model	Current(A)	section area	Terminal model	В	L	L1	D	d
100C 100C			10, 16, 20	2.5	JBC2.5-5	10.4	18.2	9	φ2.6	φ5.2
100C 100 100 100 100 100 100 100			25	4	JBC4-5	11.7	20.2	9	φ2.8	φ5.2
100C 100 10		63	32	6	JBC6-5	12.8	22.6	10.3	φ3.5	φ5.2
10, 16, 20 2.5 JBC2.5-8 15 24.5 8.5 φ2.6 φ8.2 25 4 JBC4-8 13.4 20.4 9.2 φ2.8 φ8.2 32 6 JBC6-8 15 24.5 10 φ3.5 φ8.2 40, 50 10 JBC10-8 15 24.5 11 φ4.5 φ8.2 80 25 JGC25-8 14 46 38.5 φ7 φ8.2 80 25 JGC25-8 14 46 38.5 φ7 φ8.2 100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 100 35 JGC35-8 17 54 45 φ10 φ8.2 100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 100 35 JGC35-8 17 54 45 φ10 φ8.2 125, 140 50 JGC70-8 21.6 61 52 φ11 φ8.2 125, 140 50 JGC70-8 21.6 61 52 φ11 φ8.2 125, 140 50 JGC70-8 21.6 61 52 φ11 φ8.2 125, 140 50 JGC70-8 21.6 61 52 φ11 φ8.2 125, 140 50 JGC70-8 21.6 61 52 φ11 φ8.2			40, 50	10	JBC10-5	13.7	25.2	12.2	φ4.2	φ5.2
100C 25 4 JBC4-8 13.4 20.4 9.2 92.8 98.2 32 6 JBC6-8 15 24.5 10 93.5 98.2 40,50 10 JBC10-8 15 24.5 11 94.5 98.2 80 25 JGC25-8 14 46 38.5 97 98.2 100 35 JGC35-8 15.5 52 44.5 98 98.2 100 35 JGC35-8 17 54 45 910 98.2 125, 140 50 JGC50-8 17 54 45 910 98.2 125, 140 50 JGC50-8 17 54 45 910 98.2 125, 140 50 JGC50-8 17 54 45 910 98.2 125, 140 50 JGC50-8 17 54 45 910 98.2 125, 140 50 JGC50-8 17 54 45 910 98.2 125, 140 50 JGC50-8 17 54 45 910 98.2 125, 140 50 JGC50-8 17 54 45 910 98.2 125, 140 50 JGC50-8 17 54 45 910 98.2 125, 140 50 JGC50-8 17 54 45 910 98.2			63	16	JBC16-5	12.5	38	31.5	φ6	φ5.2
32 6 JBC6-8 15 24.5 10 φ3.5 φ8.2 40,50 10 JBC10-8 15 24.5 11 φ4.5 φ8.2 80 25 JGC25-8 14 46 38.5 φ7 φ8.2 100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 100 35 JGC35-8 17 54 45 φ10 φ8.2 160 160 70 JGC70-8 21.6 61 52 φ11 φ8.2 125, 140 50 JGC35-8 15.5 52 44.5 φ8 φ8.2 125, 140 50 JGC35-8 15.5 52 44.5 φ8 φ8.2 125, 140 50 JGC35-8 15.5 52 44.5 φ8 φ8.2 125, 140 50 JGC35-8 15.5 52 44.5 φ8 φ8.2 125, 140 50 JGC35-8 15.5 52 44.5 φ8 φ8.2 125, 140 50 JGC35-8 15.5 52 44.5 φ8 φ8.2 125, 140 50 JGC35-8 15.5 52 44.5 φ8 φ8.2 126, 140 50 JGC35-8 15.5 52 44.5 φ8 φ8.2 127, 140 50 JGC35-8 15.5 52 44.5 φ8 φ8.2 128, 140 50 JGC35-8 17 54 45 φ10 φ8.2 129, 140 50 JGC35-8 17 54 45 φ10 φ8.2 120 180, 200, 225 95 JGC95-8 22 66 57 φ13 φ8.2	JGC		10, 16, 20	2.5	JBC2.5-8	15	24.5	8.5	φ2.6	φ8.2
100C 40,50 10 JBC10-8 15 24.5 11 Q4.5 Q8.2 80 25 JGC25-8 14 46 38.5 Q7 Q8.2 100 35 JGC35-8 15.5 52 44.5 Q8 Q8.2 100 35 JGC35-8 17 54 45 Q10 Q8.2 100 35 JGC35-8 15.5 52 44.5 Q8 Q8.2 125, 140 50 JGC70-8 21.6 61 52 Q11 Q8.2 125, 140 50 JGC35-8 17 54 45 Q10 Q8.2 125, 140 50 JGC35-8 15.5 52 44.5 Q8 Q8.2 100 35 JGC35-8 15.5 52 44.5 Q8 Q8.2 100 35 JGC35-8 15.5 52 44.5 Q8 Q8.2 100 36 JGC35-8 15.5 52 44.5 Q8 Q8.2 100 36 JGC35-8 15.5 52 44.5 Q8 Q8.2 100 36 JGC35-8 15.5 52 44.5 Q8 Q8.2 100 Q8.2 100 35 JGC35-8 15.5 52 44.5 Q8 Q8.2 100 100 35 JGC35-8 15.5 52 44.5 Q8 Q8.2 100 100 100 100 100 100 100 1	+		25	4	JBC4-8	13.4	20.4	9.2	φ2.8	φ8.2
100C 63 16 JBC16-8 12.5 41 33.5 66 68.2 80 25 JGC25-8 14 46 38.5 67 68.2 100 35 JGC35-8 15.5 52 44.5 68 68.2 100 160 70 JGC70-8 21.6 61 52 61 61 62 61 62 63 61 62 63 61 62 63 61 63 61 63 61 63 61 63 61 61 63 63 63 64 65 65 66 66 67 68.2 68 68 68 68 68 68 68 68 68 68 68 68 68			32	6	JBC6-8	15	24.5	10	φ3.5	φ8.2
Section Sec		100C	40, 50	10	JBC10-8	15	24.5	11	φ4.5	φ8.2
100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 125, 140 50 JGC50-8 17 54 45 φ10 φ8.2 100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 1100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 125, 140 50 JGC50-8 17 54 45 φ10 φ8.2 125, 140 50 JGC50-8 17 54 45 φ10 φ8.2 125, 140 50 JGC70-8 21.6 61 52 φ11 φ8.2 180, 200, 225 95 JGC95-8 22 66 57 φ13 φ8.2		.000	63	16	JBC16-8	12.5	41	33.5	φ6	φ8.2
100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 125, 140 50 JGC70-8 21.6 61 52 φ11 φ8.2 100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 125, 140 50 JGC50-8 17 54 45 φ10 φ8.2 125, 140 50 JGC70-8 21.6 61 52 φ11 φ8.2 125, 140 50 JGC70-8 21.6 61 52 φ11 φ8.2 180, 200, 225 95 JGC95-8 22 66 57 φ13 φ8.2			80	25	JGC25-8	14	46	38.5	φ7	φ8.2
JBC 160 125, 140 50 JGC50-8 17 54 45 φ10 φ8.2 160 160 70 JGC70-8 21.6 61 52 φ11 φ8.2 100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 125, 140 50 JGC70-8 21.6 61 52 φ11 φ8.2 125, 140 50 JGC70-8 21.6 61 52 φ11 φ8.2 180, 200, 225 95 JGC95-8 22 66 57 φ13 φ8.2	90°		100	35	JGC35-8	15.5	52	44.5	φ8	φ8.2
160 160 70 JGC70-8 21.6 61 52 φ11 φ8.2 100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 125, 140 50 JGC50-8 17 54 45 φ10 φ8.2 180, 200, 225 95 JGC95-8 22 66 57 φ13 φ8.2			100	35	JGC35-8	15.5	52	44.5	φ8	φ8.2
160 70 JGC70-8 21.6 61 52 φ11 φ8.2 100 35 JGC35-8 15.5 52 44.5 φ8 φ8.2 125, 140 50 JGC50-8 17 54 45 φ10 φ8.2 250 160 70 JGC70-8 21.6 61 52 φ11 φ8.2 180, 200, 225 95 JGC95-8 22 66 57 φ13 φ8.2	JBC B	160	125, 140	50	JGC50-8	17	54	45	φ10	φ8.2
125, 140 50 JGC50-8 17 54 45 φ10 φ8.2 160 70 JGC70-8 21.6 61 52 φ11 φ8.2 180, 200, 225 95 JGC95-8 22 66 57 φ13 φ8.2		100	160	70	JGC70-8	21.6	61	52	φ11	φ8.2
250 160 70 JGC70-8 21.6 61 52 φ11 φ8.2 180, 200, 225 95 JGC95-8 22 66 57 φ13 φ8.2			100	35	JGC35-8	15.5	52	44.5	φ8	φ8.2
180, 200, 225 95 JGC95-8 22 66 57 φ13 φ8.2			125, 140	50	JGC50-8	17	54	45	φ10	φ8.2
		250	160	70	JGC70-8	21.6	61	52	φ11	φ8.2
250 95 JGC95-8 22 66 57 φ13 φ8.2	17		180, 200, 225	95	JGC95-8	22	66	57	φ13	φ8.2
	D		250	95	JGC95-8	22	66	57	φ13	φ8.2



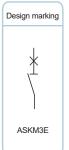
ASKM3E SERIES

ASKM3E INTELLIGENT NORMAL PROTECTION MOLDED CASE CIRCUIT BREAKER SELECTION TABLE



Note: the special code of N pole type(for 4 poles products only. The default type is B if there is no special instructions when ordering)

- A: N poles does not have over-current tripper. N pole is always closed and does not break/close along with the other three poles.
- B: N poles does not have over-current tripper.
- C: N poles has over-current tripper. N pole breaks/closes along with the other three poles.
- D: N poles has over-current tripper. N pole is always closed and does not break/close along with the other three poles.



Model definition 1:

ASKM3E-125H/P/43002/TH/R/ 63A

- 1. Electronic molded case circuit breaker. 125A frame, high breaking capacity, electric operating mechanism;
- 2. 4 poles, electronic tripper, no accessory, for motor protection;
- 3. humid tropical type, rear wiring:
- 4. rated current 63A; setting current(0.4-1)ln.

Model definition 2:

ASKM3E-250MT/3300/160A

- 1. normal protection molded circuit breaker, 250A frame, medium-high breaking capacity communicaton function, direct manual operation(implicit);
- 2. 3 poles, electronic tripper, no accessory, for power distribution, (implicit)
- normal environment(implicit), front wiring(implicit);
- 4. rated current 160A; setting current(0.4-1)ln.

STANDARDS

IEC60947-1 IEC60947-2 GB/T14048.1 GB/T14048.2 IEC60947-4-1 GB/T2423.10

GB/T14048.4 GB/T2423.4

ASKM3E Intelligent Electronic Molded Case Circuit Breaker

OVERVIEW



CLASSIFICATION

 ASKM1E intelligent electronic molded case circuit breaker(hereinafter referred to as MCCB) is a new type of circuit breaker designed and developed by our company using international advanced technology. MCCB is suitable for the distribution network of AC 50Hz, rated insulation voltage 1000V, rated voltage 400V and rated current up to 800A. MCCB can be used for infrequent switching of lines and infrequent starting of motors.

MCCB have 3-section protection function(LSI, i.e. overload long delay protection+short-circuit short delay protection+grounding protection), 4-section protection function(LSIG, i,e. overload long delay protection+short-circuit short delay protection+short-circuit instantaneous protection+grounding protection) and under-voltage protection function. MCCB can protect circuits and power equipment from damage. Low temperature to -40 C type circuit breaker is available.

MCCB can distribute power and protect circuits and power equipment against faults like overload, under-voltage, short-circuit and under-voltage. The products have the characteristics of small volume, high breaking capacity, short flying arc, vibration resistant, etc. The whole series have isolation function.

Classified by the over-current tripper rated current(A)

Frame 125: can be divided into 3 grades (rated 32A, rated 63A, rated 125A). For each grade, the setting range Ir1=(0.4-1)In;

Frame 250: can be divided into 2 grades (rated 160A, rated 250A). For each grade, the setting range Ir1=(0.4-1)In;

Frame 400: 1 grade (rated 400A). The setting range Ir1=(0.4-1)In;

Frame 800: can be divided into 2 grades (rated 630A, rated 800A). For each grade, the setting

range Ir1=(0.4-1)In;

Classified by wiring method

Front wiring, extended front wiring, rear wiring, plug in front wring, plug in rear wiring, draw out wiring

Classified by accessories

Internal accessories:

shunt tripper, under-voltage tripper, auxiliary tripper, alarm tripper, communication module External accessories:

manual operating mechanism, electric operating mechanism

Small volume, high breaking capacity, isolation function;

Electronic adjustable tripper based on MCU microprocessor technology, precise three-section / four-section protection:

Short-circuit protection with backup protection, there is a backup magnetic tripper to achieve rapid tripping, limiting the short-circuit current to ensure reliable breaking

APPLICATIONS

FEATURES



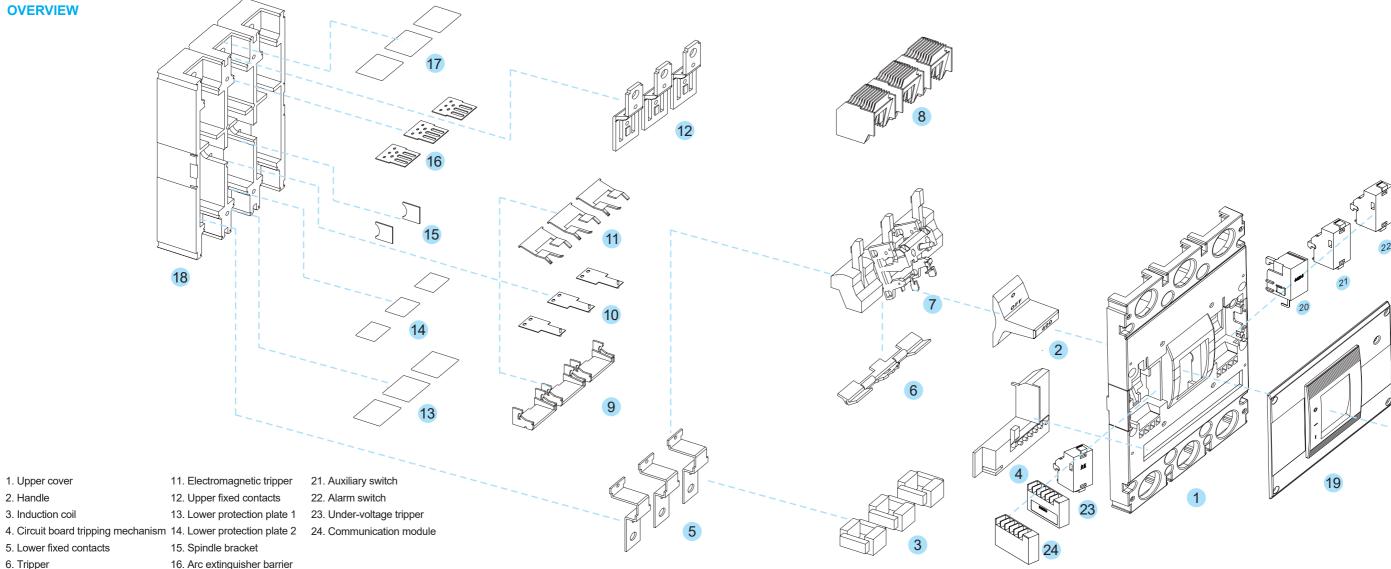




NORMAL OPERATIONAL CONDITIONS AND INSTALLATION METHODS

Category	Requirement
Altitude	Lower than 2000 meters.
Operational temperature	Between -5℃ and +40℃.
Pollution level	Level 3.
Installation level	The installation level of circuit breaker main circuit is $ \mathbb{II} ,$ it's \mathbb{I} for the auxiliary circuit and control circuit.
Installation environment	Suitable for electromagnetic environment.
Operational humidity	The relative humidity at +40 $^{\circ}$ shall not exceed 50%. Higher relative humidity is allowed at lower temperature, e.g. 90% at 20 $^{\circ}$. Special measures should be taken for the condensation that occasionally occurs due to temperature changes.
Installation conditions	Humid tropical type (TH type) circuit breakers are resistant to humid air, salt spray and mildew. The circuit breaker should be installed in a place where there is no danger of explosion and no conductive dust, without substances sufficient to corrode the metal and destroy the insulation. The circuit breaker should be installed in a place where there is no rain or snow
Installation method	Install vertically or horizontally.
Wiring method	Wiring reversely is prohibited. The only correct wiring is 1, 3, 5 connect power supply and 2, 4, 6 connect load.

AISIKAI Professional manufacture



Structure overview

8. Arc extinguisher

7. Moving contacts combination

9. Electromagnetic tripper base

10. Thermomagnetic tripper

The molded case circuit breaker is a integral type structure, which is made of precision combination of internal parts. The base is designed with mounting positions for fixed contacts of each phase and arc extinguisher. The moving contact combination is driven by a manual handle to contact or separate from the fixed contacts to achieve manual control of the breaking/closing. When the thermal/electromagnetic protection exceeds the factory preset value, the tripper drives the moving contact combination into protection breaking. Three-phase detection transformer, monitoring circuit board and tripper are installed internally. Protection values can be adjusted on site according to usage.

17. Upper protection plate

18. Base

19. Face cover

20. Shunt tripper

Contact mechanism

The moving contacts of each phase are fixed to a base of SMC material, forming the moving contact combination. The breaking process is rapid due to the high strength spring. The arc extinguishers which are independent between each phase can extinguish arc rapidly.

Working method

The molded case circuit breaker is driven by a manual handle exposed on the panel, compressing the spring to close the circuit. When a fault occurs during normal operation, the tripper will be triggered by the thermal/electromagnetic tripper. The strong force of the spring instantly breaks the circuit, achieving over-current protection and short-circuit protection.

Protection value can be adjusted

According to the on-site situations, use the knobs on the front of the molded case circuit breaker to adjust the following parameters:

- 1. overload long delay action current and time;
- 2. short-circuit short delay action current and time;
- 3. short-circuit instantaneous action
- 4. pre-alarm action current.

Under-voltage tripper

When the supply voltage drops to the range of 70%-35% of the rated operational voltage, the under-voltage tripper can reliably break the circuit breaker. When the supply voltage is lower than 35% of the rated operational voltage, the under-voltage tripper can prevent the circuit breaker from closing. When the supply voltage is higher than 85% of the rated operational voltage, the under-voltage tripper can ensure the reliable closing of the circuit breaker. The rated value of the under-voltage is AC 50Hz, 230V, 400V.

Shunt tripper

The rated control power voltage of the shunt tripper: 50Hz, AC230V, AC400V: DC110V, 220V, 24V. When the voltage is 70%~110% of the rated value, it can reliably break the circuit breaker.





MAIN TECHNICAL PARAMETERS











Model		ASKM3E	-125			ASKM3E-25	50	ASKM3E-	400	ASKM3E-6	30	ASKM3	E-800
Frame rating current	Inm(A)	125				250		400		630		800	
Rated current In(A)		32		63	125	160	250	400		630		800	
Overload long delay s Ir(A) Ir1=(0.4~1In)		12.5, 16, 25, 32	20,	32, 36, 40, 45, 50, 55, 60, 63	63, 65, 70, 80, 85, 90, 95, 100, 125		100 100, 125, 140, 160, 180, 200, 225, 250	200, 225,	250, 280, 315, 350, 400	400,420,44 500,530,56), 660, 680, 700,), 760, 780, 800
Rated operational vol	Itage Ue(V)				AC400V/415, AC6	60V/690V				AC400V/4	15, AC660V/690V		
Rated insulation volta	age Ui(V)				1000						1000		
Rated impulse withsta Jimp(V)	and voltage				12000						12000		
Breaking capacity lev	rel	M	Н			M	Н	М	Н	М	Н	М	Н
Ultimate short-circuit	AC400V/415V	50	85			50	85	65	100	65	100	65	100
reaking capacity cu(kA)	AC660V/690V	20	20			20	20	20	20	20	20	20	20
ervice short-circuit	AC400V/415V	35	50			35	50	50	65	50	75	50	75
reaking capacity cs(kA)	AC660V/690V	15	15			15	15	15	15	15	15	15	15
lated short-time withstand	current lcw(kA)/1s	5				5		8		10		10	
Jse category		В				В		В		В		В	
rc distance(mm)		⇒ 50(0)**	•			> 50(0)**		→ 100(0)**		> 100(0)**		100(0)**	
Electrical service life(8000				8000		7500		7500		7500	
lechanical service		20000				20000		10000		10000		10000	
	with maintenance	40000				40000		20000		20000		20000	
Outline dimensions(mm)	W(3P/4P)	92/122				107/142		150/198		210/280		210/280	
+ +	L	150		165		257		280		280			
	H (not including handle)	92				90		106.5		115.5		115.5	

^{*}Note: According to GB/T14048.1, the term of "service life" indicates the probability that an appliance will complete a number of operating

cycles before repairing or replacing a component.

**Note: Choose the height of 6.2mm zero arc cover for 125 frame, 7.5mm for 250 frame, 9.3mm for 400 frame, 9.5mm for 800frame, realizing zero arc.





PROTECTION CHARACTERISTIC PARAMETERS-POWER DISTRIBUTION TYPE - ELECTRONIC TRIPPER-LSI 3 SECTION PROTECTION

The circuit breaker for power distribution equipped with electronic tripper has 3 section protection

(LSI, i.e. overload long delay, short-circuit short delay, short-circuit instantaneous).

The protection characteristics are factory set according to the following parameters. Model Example:

	3: electr	onic tripper	No code:	for power distribution
ASK M 3 E - 125 H	3	3	00	63A
	\Box			
	3: 3 poles	00: withou	it accessory	Rated current 63A

For electronic circuit breaker, the 6 parameters (Ir1\t1\lr2\t2\lr3\lr0) can be adjusted on site according to on-site requirements.

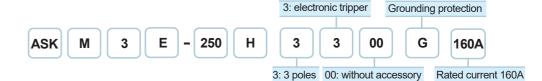
Protection Function	Frame Rating (Inm)	Rated Current In(A)	Setting Current Ir1=(0.4-1) In(A)	Action Characteristics/time
		32	Ir1=12.5-14-16-18-20-22-25-28-30-32	Act by I²rt
	125	63	Ir1=25-28-32-36-40-45-50-56-60-63	1.05Ir1: no act within 2 h
Overload		125	Ir1=40-45-50-56-63-70-75-80-90-100-125	1.3lr1: act within 1h 2lr1: t1=12s
long delay	250	160/250	Ir1=63-80-90/100-125-140-160/180-200-225-250	
L	400	400	Ir1=160-180-200-225-250-280-315-350-375-400	adjustable parameters: t1= off/60/80/100s(125/250)
	800	630	Ir1=250-280-315-350-375-400-450-500-560-630	t1= off/60/100/150s(400/800)
	800	800	Ir1=315-350-400-450-500-560-630-700-760-800	
Action allowed error				± 20%

Protection Function	Frame Rating (Inm)	Rated Current In(A)	Current Setting Value(A)	Action Characteristics/time				
Short-circuit short delay	125-800	32-630	Ir2=8Ir1, adjustable parameters: Ir2=2/ 2.5/ 3/ 4/ 5/ 6/ 7/ 10 Ir1	·	when 1.5 lr2≤1< lr3, definite-time action: t2=0.06s, ±0.02s,adjustable parameters:			
S	800	800	Ir2=8Ir1, adjustable parameters: Ir2=2/ 2.5/3 /3.5 /4 /5 /6 /7 /10 Ir1		t2=0.1s, ±0.03s t2=0.2s, ±0.04s			
Action allowed error			± 10%		t2=0.3s, ±0.06s			

Protection Function	Frame Rating (Inm)	Rated Current In(A)	Current Setting Value(A)	Action Characteristics / time		
Short-circuit	125	32-125	10.4014 15.414			
instantaneous	250/400/800	160-630	Ir3=10lr1, adjustable parameters: Ir3=(4-14)lr1			
I	800	800	lr3=10lr1, adjustable parameters: lr3=(4-12)lr1			
Action allowed error			± 15%	Act instantaneously		
Neutral pole protection 4 poles C type Whole series 32-		32-800	Ir1N=Ir1, Ir2N=Ir2, Ir3N=Ir3			
Overload pre-alarm	Whole series	32-800	Ir0=0.9Ir1,adjustable parameters: Ir0=0.7/0.75/0.8/0.85/0.9/0.95/1.0 Ir1			

PROTECTION CHARACTERISTIC PARAMETERS-POWER DISTRIBUTION TYPE - ELECTRONIC TRIPPER-LSIG 4 SECTION PROTECTION

The circuit breaker for power distribution equipped with electronic tripper has 4 section protection (LSI, i.e. overload long delay, short-circuit short delay, short-circuit instantaneous, grounding protection). The protection characteristics are factory set according to the following parameters. Model Example:



For electronic circuit breaker, the 6 parameters (Ir1\t1\lr2\t2\lr3\lg) can be adjusted on site according to on-site requirements.

Protection Function	Frame Rating (Inm)	Rated Current In(A)	Setting Current Ir1=(0.4-1) In(A)	Action Characteristics/time
		32	Ir1=12.5-14-16-18-20-22-25-28-30-32	Act by I²rt
	125	63	Ir1=25-28-32-36-40-45-50-56-60-63	1.05Ir1: no act within 2 h
Overload		125	Ir1=40-45-50-56-63-70-75-80-90-100-125	1.3lr1: act within 1h
long delay	250	160/250	Ir1=63-80-90/100-125-140-160/180-200-225-250	2lr1: t1=12s
L	400	400	Ir1=160-180-200-225-250-280-315-350-375-400	adjustable parameters: t1= off/60/80/100s(125/250)
	800	630	Ir1=250-280-315-350-375-400-450-500-560-630	t1= 0ff/60/100/100s(123/230) t1= off/60/100/150s(400/800)
800	800	800	Ir1=315-350-400-450-500-560-630-700-760-800	,
Action allowed error				± 20%

Protection Function	Frame Rating (Inm)	Rated Current In(A)	Current Setting Value(A)	Action Characteristics/time			
Short-circuit short delay	125-800	32-630	Ir2=8Ir1, adjustable parameters: Ir2=2/ 2.5/ 3/ 4/ 5/ 6/ 7/ 10 Ir1	when Ir2 ≤ 1<1.5 Ir2, inverse-time action 1.5 Ir2: t2=0.3s, adjustable parameters: t2=off/0.06/0.1/0.2s	when 1.5 lr2≤1< lr3, definite-time action; t2=0.06s, ±0.02s,adjustable parameters:		
S	800	800	Ir2=8Ir1, adjustable parameters: Ir2=2/ 2.5/3 /3.5 /4 /5 /6 /7 /10 Ir1		t2=0.1s, ±0.03s t2=0.2s, ±0.04s		
Action allowed error			± 10%	inverse-time: ± 20%	t2=0.3s, ±0.06s		

Protection Function	Frame Rating (Inm)	Rated Current In(A)	Current Setting Value(A)	Action Characteristics / time
Short-circuit	125	32-125		
instantaneous				
I 800	800	800	Ir3=10Ir1, adjustable parameters: Ir3=(4-12)Ir1	Act instantaneously
Action allowed error			± 15%	Act instantaneously
Neutral pole protection 4 poles C type	Whole series	32-800	Ir1N=Ir1, Ir2N=Ir2, Ir3N=Ir3	
Grounding 125		32-125	Ig=0.8 ln, adjustable parameters:	< 0.5lg not act, > 1.0lg delay act
protection G	250/400/800	160-800	lg=(0.3-0.8) ln+OFF	tg=0.4s ± 20%, action current accuracy ± 15%





PROTECTION CHARACTERISTIC PARAMETERS-MOTOR PROTECTION TYPE - ELECTRONIC TRIPPER-LSI 3 SECTION PROTECTION

The circuit breaker for motor protection equipped with electronic tripper has 3 section protection (LSI, i.e. overload long delay, short-circuit short delay, short-circuit instantaneous). The protection characteristics are factory set according to the following parameters.

Model Example:

3: electronic tripper 2: for motor protection

ASK M 3 E - 250 H 3 3 00 2 160A

3: 3 poles 00: without accessory Rated current 160A

For electronic circuit breaker, the 6 parameters (Ir1\t1\Ir2\t2\Ir3\Ir0) can be adjusted on site according to on-site requirements.

Protection Function	Frame Rating (Inm)	Rated Current In(A)	Setting Current Ir1=(0.4-1) In(A)	Action Characteristics/time			me						
		32	Ir1=12.5-14-16-18-20-22-25-28-30-32	1=12.5-14-16-18-20-22-25-28-30-32 Act by I²rt, t1=12s,					Ir1=12.5-14-16-18-20-22-25-28-30-32 Act by I²rt, t1=12s, can be adjusted to 60/80/100				
	40=			1.05lr1		no act v	vithin 2	h					
	125	63	Ir1=25-28-32-36-40-45-50-56-60-63	1.2lr1		act with	in 1h						
				1.5lr1	21.3s	107s	142s	178s					
		125	Ir1=40-45-50-56-63-70-75-80-90-100-125	2lr1, t1	12s	60s	80s	100s					
				7.2lr1	0.93s	4.63s	6.17s	7.72s					
Overload long delay	250	160/250	Ir1=63-80-90/100-125-140-160/180-200-225-250	tripping level	_	10	10	20					
L			Ir1=160-180-200-225-250-280-315-350-375-400	Act by I²rt, t1=12s, can be adjusted to 60/100/150				60/100/150					
	400	400		1.05lr1	no act within 2 h								
				1.2lr1		act with	in 1h						
				1.5lr1	21.3s	107s	178s	267s					
				2lr1, t1	12s	60s	100s	150s					
800	800	630	Ir1=250-280-315-350-375-400-450-500-560-630	7.2lr1	0.93s	4.63s	7.72s	11.6s					
				tripping level	-	10	20	30					
Action allowed error				± 20%									

Note: there is no rated current 800A product in motor protection circuit breaker.

Protection Function	Frame Rating (Inm)	Rated Current In(A)	Setting Current Ir1=(0.4-1) In(A)	Action Characteristics/time		
Short-circuit short delay S	125-800	32-630	lr2=8lr1, adjustable parameters: lr2=2/ 2.5/ 3/ 4/ 5/ 6/ 7/ 10/12 lr1	1.5 lr2: t2=0.3s,	when 1.5 lr2≤1< lr3, definite-time action; t2=0.06s, ±0.02s,adjustable parameters: t2=0.1s, ±0.03s	
Action allowed error			± 10%	t2=OFF/0.06/0.1/0.2s inverse-time: ±20%	12=0.2s, ±0.04s 12=0.3s, ±0.06s	

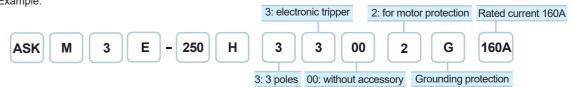
Protection Function	Frame Rating (Inm)	Rated Current In(A)	Current Setting Value(A)	Action Characteristics / time
Short-circuit	125	32-125		
instantaneous I	250/400/800	160-630	Ir3=12 Ir1, adjustable parameters: Ir3=(4-14)Ir1	
Action allowed error			± 15%	
Neutral pole protection 4 poles C type	Whole series	32-800	Ir1N=Ir1, Ir2N=Ir2, Ir3N=Ir3	Act instantaneously
Overload pre-alarm	Whole series	32-800	Ir0=0.9Ir1,adjustable parameters: Ir0=0.7/0.75/0.8/0.85/0.9/0.95/1.0 Ir1	

PROTECTION CHARACTERISTIC PARAMETERS-MOTOR PROTECTION TYPE - ELECTRONIC TRIPPER-LSIG 4 SECTION PROTECTION

The circuit breaker for motor protection equipped with electronic tripper has 4 section protection

(LSI, i.e. overload long delay, short-circuit short delay, short-circuit instantaneous, grounding protection).

The protection characteristics are factory set according to the following parameters. Model Example:



For electronic circuit breaker, the 6 parameters (Ir1\t1\Ir2\t2\Ir3\Ig) can be adjusted on site according to on-site requirements.

Protection Function	Frame Rating (Inm)	Rated Current In(A)	Setting Current Ir1=(0.4-1) In(A)	Action Characteristics/time				me	
		32	Ir1=12.5-14-16-18-20-22-25-28-30-32	Act by I2rt, t1=	Act by I²rt, t1=12s, can be adjusted to 60/80/100s				
				1.05lr1	no a	ct withir	12 h		
	125	63	Ir1=25-28-32-36-40-45-50-56-60-63	1.2lr1	act w	vithin 1h	1		
				1.5lr1	21.3s	107s	142s	178s	
		125	Ir1=40-45-50-56-63-70-75-80-90-100-125	2lr1, t1	12s	60s	80s	100s	
				7.2lr1	0.93s	4.63s	6.17s	7.72s	
Overload long delay	250	160/250	Ir1=63-80-90/100-125-140-160/180-200-225-250	tripping level	-	10	10	20	
L	400	400	Ir1=160-180-200-225-250-280-315-350-375-400	Act by I²rt, t1=			justed to	o 60/100/150s h	
				1.2lr1 act within 1h					
				1.5lr1	21.3s	107s	178s	267s	
				2lr1, t1	12s	60s	100s	150s	
80	800	630	Ir1=250-280-315-350-375-400-450-500-560-630	7.2lr1	0.93s	4.63s	7.72s	11.6s	
				tripping level	-	10	20	30	
Action allowed error						± 20%	1		

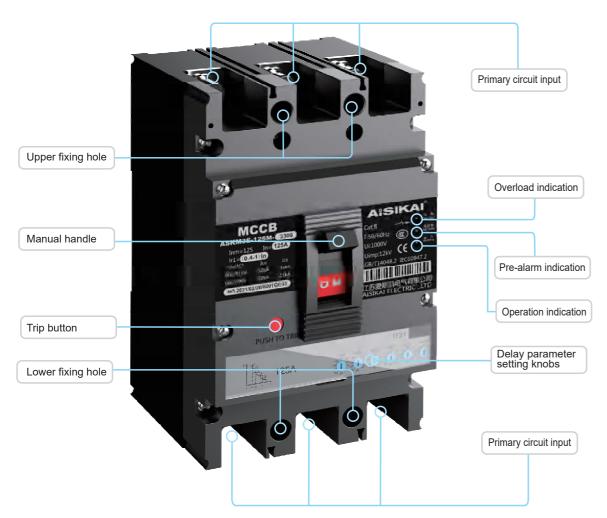
Note: there is no rated current 800A product in motor protection circuit breaker.

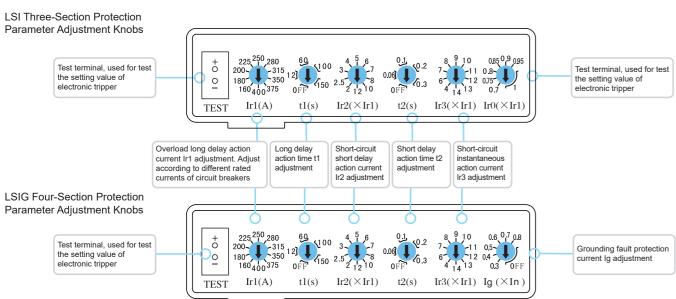
Protection Function	Frame Rating (Inm)	Rated Current In(A)	Setting Current Ir1=(0.4-1) In(A)	Action Characteristics/time			
Short-circuit short delay S	125-800	32-630	Ir2=8Ir1, adjustable parameters : Ir2=2/ 2.5/ 3/ 4/ 5/ 6/ 7/ 10/12 Ir1	1.5 lr2: t2=0.3s,	when 1.5 Ir2 \leq 1< Ir3, definite-time action t2=0.06s, \pm 0.02s,adjustable parameters t2=0.1s, \pm 0.03s		
Action allowed error			± 10%	adjustable parameters: t2=OFF/0.06/0.1/0.2s inverse-time: ±20%	t2=0.1s, ±0.04s t2=0.2s, ±0.06s		

Protection Function	Frame Rating (Inm)	Rated Current In(A)	Current Setting Value(A)	Action Characteristics / time
Short-circuit	125	32-125		
instantaneous I	250/400/800	160-630	lr3=10lr1, adjustable parameters: lr3=(4-14)lr1	Act instantaneously
Action allowed error			± 15%	Act instantaneously
Neutral pole protection 4 poles C type	Whole series	32-800	Ir1N=Ir1, Ir2N=Ir2, Ir3N=Ir3	
Grounding	125	32-125	Ig=0.8 ln, adjustable parameters:	< 0.5lg not act, > 1.0lg delay act
protection G	250/400/800	160-800	lg=(0.3-0.8) ln+OFF	tg=0.4s ± 20%, action current accuracy ± 15%

INDICATION STRUCTURE INTRODUCTION

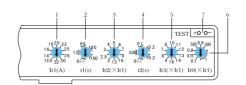
Circuit Breaker Front Indication



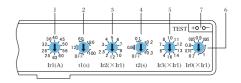


ELECTRONIC OVER-CURRENT TRIPPER SETTING VALUE

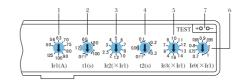
ASKM1E-125, In=32A electronic over-current tripper



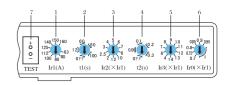




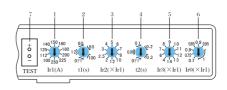
ASKM1E-125, In=125A electronic over-current tripper



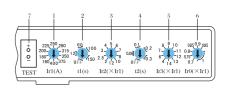
ASKM1E-250, In=160A electronic over-current tripper



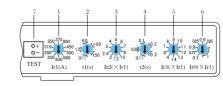
ASKM1E-250, In=250A electronic over-current tripper



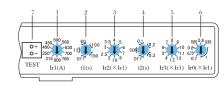
ASKM1E-400, In=400A electronic over-current tripper



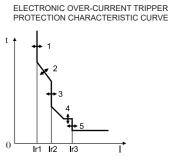
ASKM1E-630, In=630A electronic over-current tripper



ASKM1E-800, In=800A electronic over-current tripper



- 1.Overload long delay action current Ir1 adjustment. Adjust according to different rated currents of circuit breakers. Adjustable in 10 levels.
- 2.Long delay action time t1 adjustment. Adjustable in 4 levels.
- 3. Short-circuit short delay action current Ir2 adjustment. Adjustable in 10 levels.
- 4. Short delay action time t2 adjustment. Adjustable in 4 levels.
- 5. Short-circuit instantaneous action current Ir3 adjustment. Adjustable in 9 or 10 levels.
- 6. Overload pre-alarm action current. Adjustable in 7 levels.
- 7.Test terminal. Connect DC12V test power to check controller tripping function.

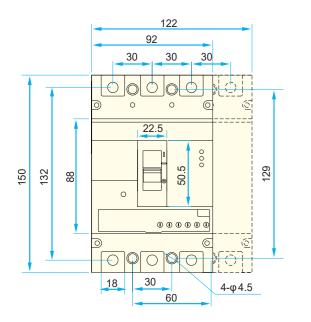


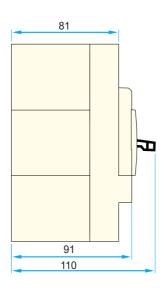


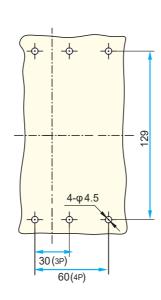
OUTLINE AND INSTALLATION DIMENSIONS

Front wiring

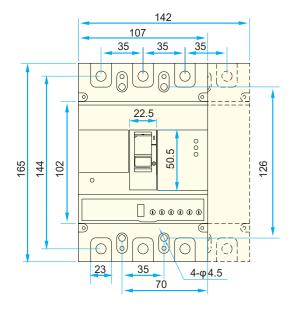
ASKM3E-125 Frame

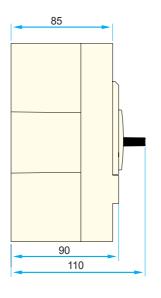


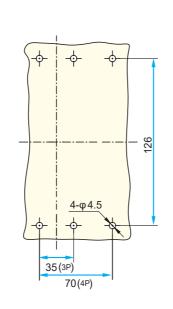




ASKM3E-250 Frame

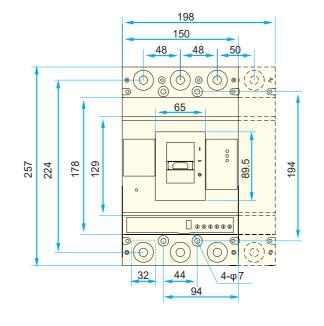


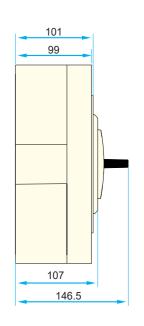


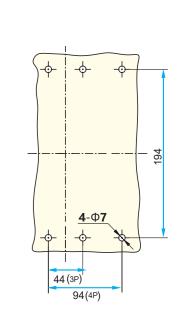


Front wiring

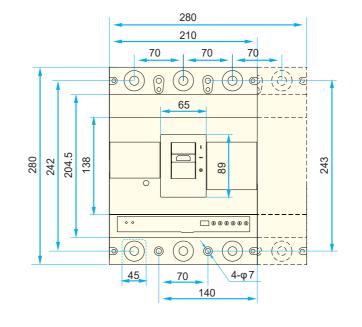
ASKM3E-400 Frame

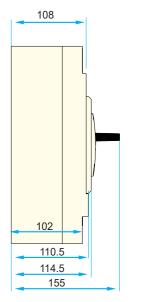


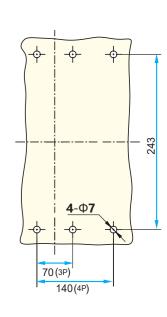




ASKM3E-630/800 Frame











INTERNAL OPTIONAL ACCESSORIES

The ASKM3E electronic circuit breaker has five basic accessory modules available for optional installation inside the switch.

Shunt Tripper MODEL: FJ-FT-ASKM3E Wiring diagram: Outline: Usage: Shunt tripper is used to remotely control the Control power: Us=(70%-110%)Ue Control power breaking of the circuit breaker. It is Frequency: 50/60 Hz instantaneous working system. Long time SB Ue: rated operational voltage of shunt tripper energizing is prohibited. Each power-on time is SB: normally open button(user-pro Default voltage: AC 220V recommended to be no more than 1s. Standard outlet wire method: lead wire type Optional voltage:AC 380V DC110V DC220V Standard outlet wire length: 50cm Customizable outlet wire method: terminal type Circuit breaker

Under-voltage tripper MODEL: FJ-QT-ASKM3E

Under-voltage tripper is used for low voltage protection of power lines and power-using equipment. It ensures that load equipment is not damaged by a malfunction caused by a voltage below the rated value. Standard outlet wire method:

Module type

(Control module is installed on the side of the circuit breaker, and the under-voltage tripper is installed inside the breaker)

1.Control power voltage Us1: when Us1=(35%-70%)Ue, the Wiring diagram: under-voltage tripper can reliably break circuit breaker. 2.Control power voltage Us2: when Us2:Us2=(85%-110%)Ue,

the circuit breaker can close normally. 3.Control power voltage Us3: when Us3≤35%Ue, the under-voltage tripper can prevent circuit breaker from closing.

Ue: rated operational voltage Standard voltage AC230V

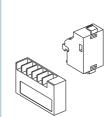
Frequency: 50/60Hz

F14 ---

Optional voltage AC380V AC110V

Circuit breaker

Special reminder: The circuit breaker equipped with an under-voltage tripper can only be normally opened and closed if Us2 voltage is input between the P1 and P2 terminals.



Outline:

Outline:

Outline:

Auxiliary switch MODEL: FJ-FC-ASKM3E

It is used to provide the breaking and closing status signal of the circuit breaker, helping the secondary control circuit to realize the automatic control function.

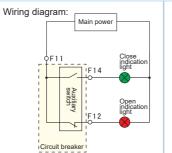
1 normally open 1 normally closed: 1NO1NC 2 normally open 2 normally closed: 2NO2NC 4 normally open 4 normally closed: 4NO4NC Standard outlet wire method: lead wire type Standard outlet wire length: 50cm

Customizable outlet wire method: terminal type

When circuit breaker is at position of open or free trip F12 ⊶

When circuit breaker is at closing position

Conventional thermal current: Ith=3A





MODEL: FJ-BC-ASKM3E Alarm switch

Usage:

It is used to provide the overload, short-circuit(free trip) and under-voltage fault(fault trip) status signal of the circuit breaker, helping the secondary control circuit to realize the automatic control function. Standard outlet wire method: lead wire type Standard outlet wire length: 50cm Customizable outlet wire method: terminal type When circuit breaker is at position of open/closed

When circuit breaker is at position of free trip&fault trip B12 ⊶ ---oR11

Conventional thermal current: Ith=3A

Wiring diagram: Circuit breaker



Communication module

Usage:

By installing communication module, the circuit breaker has communication function, remote communication, remote measurement, and data can be uploaded in real time. Standard outlet wire type: terminal

MODEL: FJ-TXMK-ASKM3E

Communication protocol: MODBUS-RTU Communication interface: RS485

Communication baud rate: 9600

RS485 Circuit breaker

Wiring diagram:

Outline:



INTERNAL ACCESSORIES CODE TABLE

Depending on the application requirements, one or more base modules can be installed inside the switch. Each module has an individual code. Different modules can be combined and have a new accessory code.

Internal accessories installation position schematic diagram Internal accessories icons

Alarm switch Shunt tripper Left side Right side Lead wire direction installation

,			J		
Accesson	ASKM3E	E-125/250	ASKN	13E-400	ASKM3E-630/800
Accessory	3P	4P	3P	4P	3P/4P
No accessory					
Alarm switch	•	4 -	4	4 -	4 🗆
Shunt tripper	•	•	4	4	•
Auxiliary switch(1NO1NC)	4	4			
Auxiliary switch(2NO2NC)			4	4	4
Auxiliary switch(2NO2NC)	◆ ■	4			
Under-voltage tripper	• 0	4 0	• 0	+ 0	• 0
Shunt tripper+Auxiliary switch(1NO1NC)	= • •	4 • 1 •			
Shunt tripper+Auxiliary switch(2NO2NC)			• • • •	• • • •	• • • •
Shunt tripper+Auxiliary switch(2NO2NC)	= • •	4 • 1 •			
Shunt tripper+under-voltage tripper	+ 0 • +	4 0 0	+ 0 • +	◆ ○ ● →	+ 0 • +
2 sets of auxiliary switches(2NO2NC)		+ II I +			
2 sets of auxiliary switches(4NO4NC)				+ 1 1 +	+ • • •
2 sets of auxiliary switches(3NO3NC)		+ 1 1 +			
2 sets of auxiliary switches(4NO4NC)		+ 1 1 +			
Under-voltage tripper+Auxiliary switch(1NO1NC)		◆ ○ ■ →			
Under-voltage tripper+Auxiliary switch(2NO2NC)				◆ ○ ■ →	← ○ ■ →
Under-voltage tripper+Auxiliary switch(2NO2NC)		◆ ○ ■ →			
Shunt tripper+Alarm switch	• • • •	• • •	← □ • →	+ • • •	+ • • •
Auxiliary switch(1NO1NC)+Alarm switch	◆ □	4 🗓	◆ 🗓	4 🗓	4 📱
Auxiliary switch(2NO2NC)+Alarm switch			can customize	can customize	can customize
Under-voltage tripper+Alarm switch		◆ ○ □ →			
Shunt tripper+Auxiliary switch(1NO1NC) +Alarm switch	← □ • →	← • □ • • • • • • • • • • • • • • • • •	← □ • →	← □ • →	← □ • →
Shunt tripper+Auxiliary switch(2NO2NC) +Alarm switch			can customize	can customize	can customize
2 sets of auxiliary switches(2NO2NC) +Alarm switch		← □□■ →			
2 sets of auxiliary switches(4NO4NC) +Alarm switch				can customize	can customize
2 sets of auxiliary switches(3NO3NC) +Alarm switch		← □□•		← □□□→	← □ • •
Under-voltage tripper+Auxiliary switch(1NO1NC) +Alarm switch		◆ ○ □ →			
Under-voltage tripper+Auxiliary switch(2NO2NC) +Alarm switch					
	Alarm switch Shunt tripper Auxiliary switch(1NO1NC) Auxiliary switch(2NO2NC) Auxiliary switch(2NO2NC) Under-voltage tripper Shunt tripper+Auxiliary switch(1NO1NC) Shunt tripper+Auxiliary switch(2NO2NC) Shunt tripper+Auxiliary switch(2NO2NC) Shunt tripper+Auxiliary switch(2NO2NC) Shunt tripper+under-voltage tripper 2 sets of auxiliary switches(2NO2NC) 2 sets of auxiliary switches(3NO3NC) 2 sets of auxiliary switches(3NO3NC) Under-voltage tripper+Auxiliary switch(1NO1NC) Under-voltage tripper+Auxiliary switch(2NO2NC) Shunt tripper+Alarm switch Auxiliary switch(2NO2NC)+Alarm switch Auxiliary switch(2NO2NC)+Alarm switch Under-voltage tripper+Alarm switch Shunt tripper+Auxiliary switch(1NO1NC) +Alarm switch Shunt tripper+Auxiliary switch(2NO2NC) +Alarm switch Shunt tripper+Auxiliary switch(2NO2NC) +Alarm switch 2 sets of auxiliary switches(2NO2NC) +Alarm switch 2 sets of auxiliary switches(4NO4NC) +Alarm switch Under-voltage tripper+Auxiliary switch(1NO1NC) +Alarm switch Under-voltage tripper+Auxiliary switch(2NO2NC) +Alarm switch Under-voltage tripper+Auxiliary switch(2NO2NC)	No accessory Alarm switch Shunt tripper Auxiliary switch(1NO1NC) Auxiliary switch(2NO2NC) Auxiliary switch(2NO2NC) Under-voltage tripper Shunt tripper+Auxiliary switch(1NO1NC) Shunt tripper+Auxiliary switch(2NO2NC) Shunt tripper+Auxiliary switch(2NO2NC) Shunt tripper+Auxiliary switch(2NO2NC) Shunt tripper+Auxiliary switch(2NO2NC) Shunt tripper+Auxiliary switches(2NO2NC) 2 sets of auxiliary switches(4NO4NC) 2 sets of auxiliary switches(4NO4NC) Under-voltage tripper+Auxiliary switch(1NO1NC) Under-voltage tripper+Auxiliary switch(2NO2NC) Under-voltage tripper+Auxiliary switch(2NO2NC) Under-voltage tripper+Auxiliary switch(2NO2NC) Shunt tripper+Alarm switch Auxiliary switch(1NO1NC)+Alarm switch Under-voltage tripper+Alarm switch Shunt tripper+Auxiliary switch(1NO1NC) +Alarm switch Shunt tripper+Auxiliary switch(1NO1NC) +Alarm switch 2 sets of auxiliary switches(2NO2NC) +Alarm switch 1 sets of auxiliary switches(2NO2NC) +Alarm switch Under-voltage tripper+Auxiliary switch(1NO1NC) +Alarm switch 1 sets of auxiliary switches(2NO2NC) +Alarm switch Under-voltage tripper+Auxiliary switch(1NO1NC) +Alarm switch Under-voltage tripper+Auxiliary switch(2NO2NC) +Alarm switch Under-voltage tripper+Auxiliary switches(3NO3NC) +Alarm switch Under-voltage tripper+Auxiliary switch(1NO1NC) +Alarm switch Under-voltage tripper+Auxiliary switch(2NO2NC)	No accessory Alarm switch Shunt tripper Auxiliary switch(1NO1NC) Auxiliary switch(2NO2NC) Auxiliary switch(2NO2NC) Auxiliary switch(2NO2NC) Under-voltage tripper Shunt tripper+Auxiliary switch(2NO2NC) 2 sets of auxiliary switches(2NO2NC) 2 sets of auxiliary switches(4NO4NC) 2 sets of auxiliary switches(4NO4NC) Under-voltage tripper+Auxiliary switch(1NO1NC) Under-voltage tripper+Auxiliary switch(2NO2NC) Shunt tripper+Alarm switch Auxiliary switch(1NO1NC)+Alarm switch Under-voltage tripper+Auxiliary switch(1NO1NC) Auxiliary switch(2NO2NC)+Alarm switch Shunt tripper+Auxiliary switch(1NO1NC) Auxiliary switch(2NO2NC)+Alarm switch Shunt tripper+Auxiliary switch(1NO1NC) Auxiliary switch(2NO2NC) Shunt tripper+Auxiliary switch(2NO2NC) Shunt tripper+Auxiliary switch(1NO1NC) Auxiliary switch(2NO2NC)+Alarm switch Chalarm switch Shunt tripper+Auxiliary switch(2NO2NC) Alarm switch Shunt tripper+Auxiliary switch(2NO2NC) Alarm switch Chalarm switch Chalarm switch Under-voltage tripper+Auxiliary switch(2NO2NC) Alarm switch Company the proper-Auxiliary switch (2NO2NC) Alarm switch Company the proper-Auxiliary switch (2NO2NC)	No accessory Alarm switch Shunt tripper Auxiliary switch(2NO2NC) Auxiliary switches(2NO2NC) Auxiliary switches(3NO3NC) Auxiliary switches(4NO4NC) Auxiliary switches(4NO4NC) Auxiliary switch(2NO2NC) Auxiliary switches(2NO2NC) Alarm switch Auxiliary switches(4NO4NC) Auxiliary switches(4NO4NC) Auxiliary switches(4NO4NC) Auxiliary switches(4NO4NC) Auxilia	No accessory Alarm switch Audiliary switch(1NO1NC) Audiliary switch(2NO2NC) Audiliary switch(2NO2NC) Audiliary switch(2NO2NC) Under-voltage tripper + O O O O O O O O O O O O O O O O O O



ASKM3E SERIES

External Optional Accessory- Plug-in Front Wiring Base

Optional plug-in front wiring base is available for ASKM3E electronic circuit breaker.

Plug-in front wiring base(PF)

Usage: The plug-in front wiring base is mounted on the back of the molded case circuit breaker, and is integrated with the breaker through conductive copper posts and fastening bolts. In the event of a serious circuit breaker failure, the circuit breaker can be quickly repaired and replaced without removing the

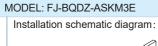
Copper bars dimensions(mm)

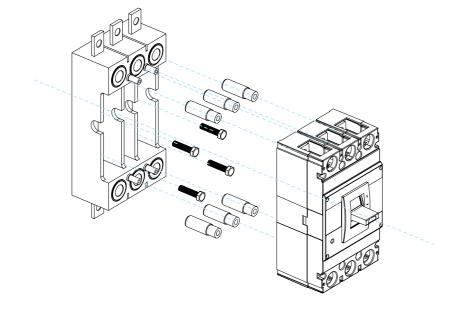


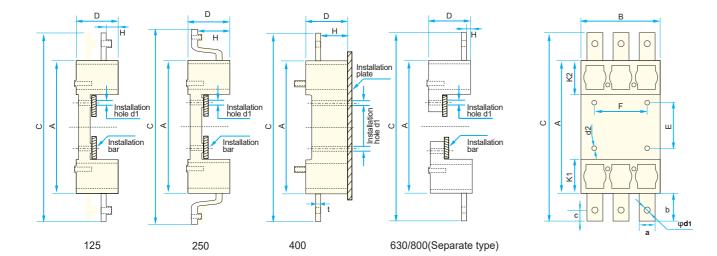
125-800 Frame

Frame	а	b	С	d1
125	19	21	11	6.5
250	22	36	15	8.5
400	25	37	15.5	11
630/800	35	50	15.5	13

Outline and installation dimensions:







F				Outlin	ne and install	lation openin	ng dimensior	ns			
Frame	Α	В	С	D	E	F	Н	K1	K2	d2	t
125A	172	96	214	50	60	66	15	38	38	7	3
250A	183	110	254	51.5	64	70	46	44	44	7	3
400A	276	150	352	80	135	115	31	_	_	7	6
630/800A	304	210	404	87	144	91	13	62	62	11	8

External Optional Accessory- Plug-in Rear Wiring Base

Optional plug-in rear wiring base is available for ASKM3E electronic circuit breaker.

Plug-in rear wiring base(PR)

Usage: The plug-in rear wiring base is mounted on the back of the molded case circuit breaker, and is integrated with the breaker through conductive copper posts and fastening bolts. In the event of a serious circuit breaker failure, the circuit breaker can be quickly repaired and replaced without removing the primary cable.

Copper bars dimensions(mm)

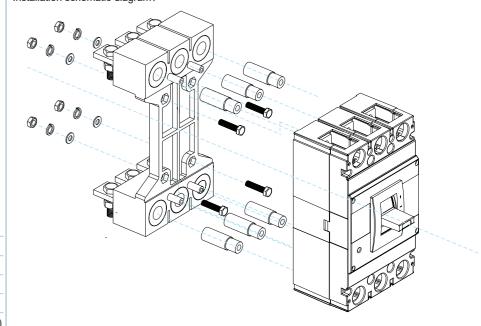




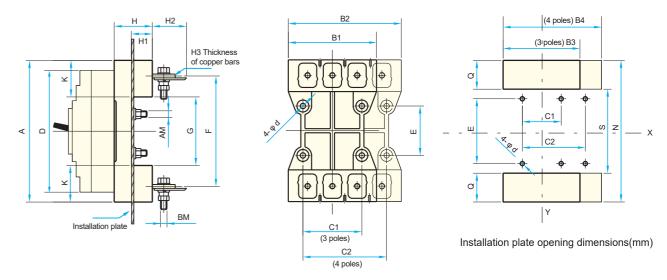
125-400 Fra	me	80	0 Frai	me
Frame	а	b	С	d1
125	18	34	18	8
250	21	36	20	8
400	30	43	22	12
630/800	BM=	И14(Во	lt outle	et wire)

MODEL: FJ-BHDZ-ASKM3E

Installation schematic diagram:



Outline and installation dimensions:



F				0	utline a	nd insta	allation	dimens	ions(m	m)					Ор	ening d	imensio	ons(mm	1)
Frame	Α	B1	B2	C1	C2	D	Е	F	G	K	Н	H1	H2	НЗ	N	S	Q	В3	B4
125A	168	91	125	60	90	150	56	132	92	38	50	33	35	3.5	178	82	48	101	135
250A	186	107	145	70	105	165	54	144	94	46	50	33	37	5.5	196	84	56	117	155
400A	280	149	200	60	108	257	129	224	170	55	60	38	46	8	290	160	65	159	210
630/800A	305	210	280	90	162	280	146	243	181	62	87	60	16	/	315	171	72	220	290





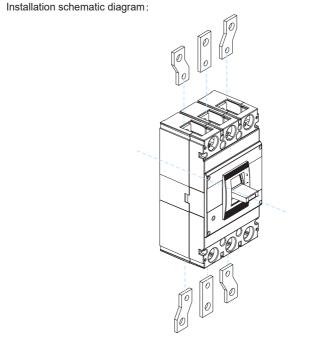
External Optional Accessory- Front Extended Copper Bars

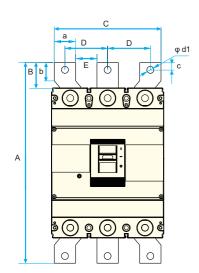
Optional front extended wiring is available for ASKM3E electronic circuit breaker.

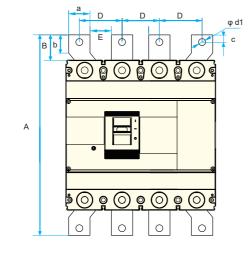
Front extended copper bards(C)

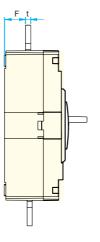
Usage: The front extended copper bars are installed at the inlet copper bars and outlet copper bars of the molded case circuit breaker, which expands the primary cable wiring space and facilitates the quick installation of cables on site.

MODEL: FJ-BQDZ-ASKM3E









Fromm		Outline and installation opening dimensions												
TIOHIH	Α	В	С	D	Е	F	а	b	С	d1	t			
125A	197	23	93	39	24	28.5	15	15	7.5	8.5	4			
250A	245	40	104	42	22	22.5	20	23	9	9	5			
400A	340	41	148	60	32	38	28	25	15	14	6			
630/800A	376	48	200	80	40	41	40	34	14	13	10			

External Optional Accessory- Rear Copper Bars

Optional rear wiring is available for ASKM3E electronic circuit breaker.

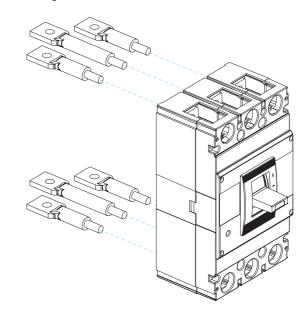
Rear wiring(R)

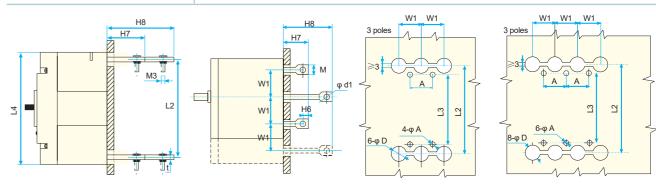
Usage:

The rear copper bars are installed at the inlet copper bars and outlet copper bars of the molded case circuit breaker, which can change the circuit breaker vertical front wiring to horizontal rear wiring, isolating the primary cable behind the mounting board and improving the safety factor of the electrical cabinet.

MODEL: FJ-BHJX-ASKM3E

Installation schematic diagram:





	125A	250A	400A	630/800A
Α	30	35	44	70
φΑ	4.5	4.5	7	7
φD	10	12	33	37
L2	132	144	224	243
L3	129	126	194	243
L4	150	165	257	280
W1	30	35	48	70
φ d1	8	8	12	16
М	19	19	31	34
t	4.5	4.5	7.5	10.5
H6	14	14	21	22
H7	53.5	60	55	73
H8	85.5	92	90	112



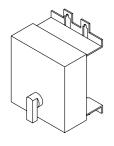
External Optional Accessory-Electric Operating Mechanism

Optional CD1 type or CD2 type electric operating mechanism is available for ASKM3E electronic circuit breaker.

Electric Operating Mechanism- CD1

Usage: The electric operating mechanism is installed on the front side of the molded case circuit breaker. It realizes remote breaking and re-closing function through external control signal, and completes centralized monitoring and automatic control of transmission and distribution network. Internally driven by electromagnet, it has the advantage of low starting

Applicable frame: 125, 250 Standard wiring method: Lead wire type

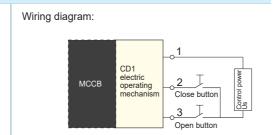


MODEL: FJ-DC/CD1-ASKM3E-250

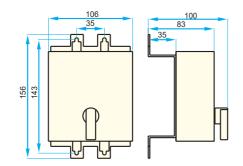
Control power: Us=(85%-110%) Ue Frequency: 50Hz Ue:rated operational power supply

of electric operating mechanism

Default voltage:AC 230V Optional voltage: AC 220V AC 380V AC 400V



Installation schematic diagram:

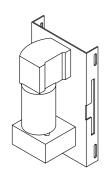


Applicable frame: 125, 250

Electric Operating Mechanism- CD1

The electric operating mechanism is installed on the front side of the molded case circuit breaker. It realizes remote breaking and re-closing function through external control signal, and completes centralized monitoring and automatic control of transmission and distribution network. Internally driven by motor, it has the advantage of low starting current.

Applicable frame: 400, 630, 800 Standard wiring method: Terminal type

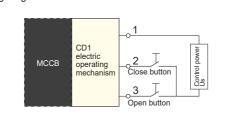


MODEL: FJ-DC/CD1-ASKM3E-400

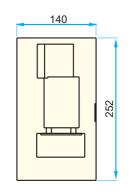
Control power: Us=(85%-110%) Ue Frequency: 50Hz Ue:rated operational power supply

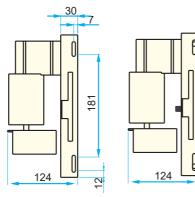
of electric operating mechanism Default voltage:AC 230V Optional voltage: AC 220V

AC 380V AC 400V DC 220V Wiring diagram:



Installation schematic diagram:





of circuit breaker MCCB

Electric Operating Mechanism- CD2

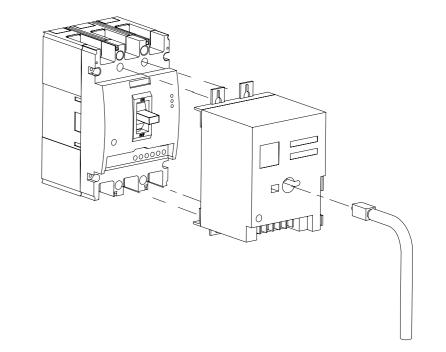
Usage:

The electric operating mechanism is installed on the front side of the molded case circuit breaker. It realizes remote breaking and re-closing function through external control signal, and completes centralized monitoring and automatic control of transmission and distribution network. Internally driven by permanent magnet motor, it has the advantage of low starting current and wide control voltage

Applicable frame: 125-800 whole series Standard wiring method: Terminal type

MODEL: FJ-DC/CD2-ASKM3E

Wiring diagram:



Manual handle:

frame 63, 125, 250



frame 400, 630, 800



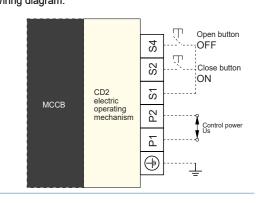
Control power: Us=(70%-110%) Ue Frequency: 50Hz

Ue:rated operational voltage of shunt tripper Default voltage:AC 220V

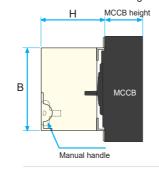
Optional voltage: AC 110V DC 220V

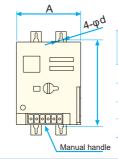
DC 110V DC 24V

Wiring diagram:



Installation schematic diagram:





Model	Outline ar	nd installati	on dimens	ions(mm)	Action	Mechanical	Motor
Model	Α	В	Н	4-φd	current (A)	service life	power (w)
ASKM3E-125	90	116	94	4.5	≪0.5	14000	14
ASKM3E-250	90	116	90	4.5	≤0.5	14000	14
ASKM3E-400	130	176	143	6.5	≪2	5000	35
ASKM3E-630,800	130	176	147	6.5	≪2	5000	35



External Optional Accessory-Manual Operating Mechanism

Optional manual operating mechanism is available for ASKM3E electronic circuit breaker.

Manual operating mechanism

Usage:

The manual operating mechanism is installed on the front of the circuit breaker. Through rotating handle, it realizes the requirement of operation on the panels of drawer cabinet, distribution cabinet, power box, etc. It also provides the function of interlocking between the circuit breaker and the cabinet door panel.

Features:

1.When the circuit breaker is in the closed state, the manual operating mechanism is interlocked with the door plate and the cabinet door cannot be opened.

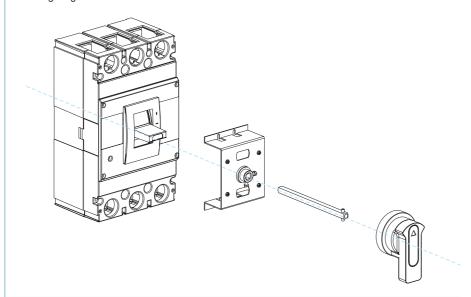
2.In case of failure when operating handle or manual operating mechanism in the closed state, the cabinet door can be opened by the emergency unlocking device on the operating handle.

3. For the manual handles matching with the manual operating mechanisms corresponding to different frames, they have the same openings on door plates.

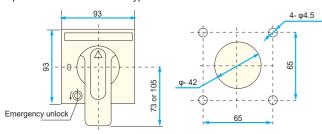
4. The length of standard square shaft is 150mm. We can also provide special specification.

MODEL: FJ-SC- ASKM3E

Wiring diagram:

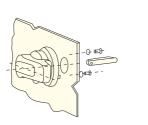


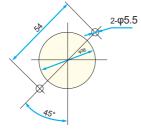
Square handle dimensions: type F



Square handle outline and door plate opening dimensions (the distance between the center of the opening and the hinge is not less than 100mm)

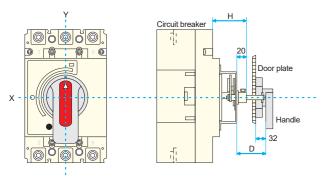
Round handle dimensions: type A(default)





Round handle outline and door plate opening dimensions (the distance between the center of the opening and the hinge is not less than 100mm)

Manual operating mechanism installation schematic diagram



Attention:

The manual operating mechanism used with our molded case circuit breaker must be ordered from our company to ensure the quality of the product. If the user purchases other brands, our company will not bear any adverse consequence occurring after the installation.

Manual operating mechanism installation dimensions

manaa oporaang moonamon moto				
Model	ASKM3E-125	ASKM3E-250	ASKM3E-400	ASKM3E-630/800
Installation dimensions(H)	54	54	84	76
Operating handle to the center of circuit breaker Y value	0	0	0	-20

RATED CURRENT AND WIRE CROSS SECTION AREA

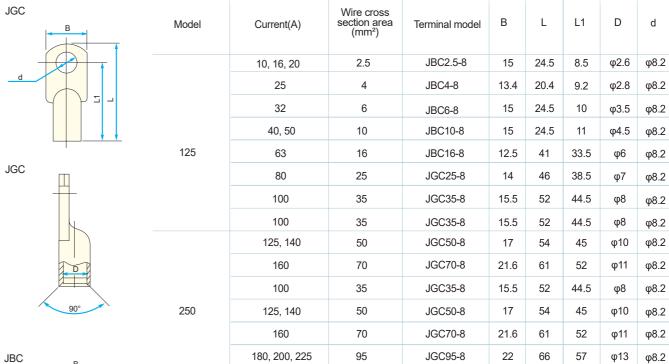
Connection Wire Reference Cross Section Area

Rated current(A)	10	16, 20	25	32	40, 50	63	80	100	125, 140	160	180, 200, 225	250	315, 350	400
Wire cross section area (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	185	240

5	Cable		Copper bars				
Rated current(A)	Cross section area(mm²)	Quantity	Size(mm×mm)	Quantity			
500	150	2	30x5	2			
630	185	2	40x5	2			
700/800	240	2	50x5	2			

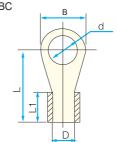
MODEL OF WIRING TERMINALS

JGC\JBC wiring terminal reference dimension



95

250



JGC95-8

22

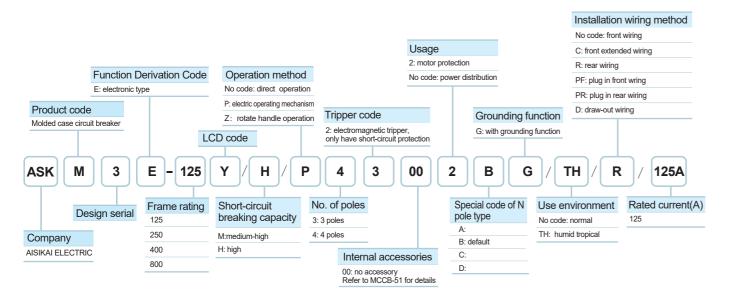
66

57

φ13

φ8.2

ASKM3E-Y LCD INTELLIGENT ELECTRONIC NORMAL PROTECTION MCCB SELECTION TABLE



Note: the special code of N pole type(for 4 poles products only. The default type is B if there is no special instructions when ordering)

- A: N poles does not have over-current tripper. N pole is always closed and does not break/close along with the other three poles.
- B: N poles does not have over-current tripper. N pole breaks/closes along with the other three poles. N pole is equipped with "first close, then split" function as standard.
- C: N poles has over-current tripper. N pole breaks/closes along with the other three poles. N pole is equipped with "first close, then split" function as standard.
- D: N poles has over-current tripper. N pole is always closed and does not break/close along with the other three poles.

Design marking ASKM3F-Y

Model definition 1:

ASKM3E-125YH/ P/ 43002/ TH/ R/ 63A

- 1. LCD electronic molded case circuit breaker. 125A frame. high breaking capacity, electric operating mechanism;
- 2. 4 poles, electronic tripper, no accessory, for motor protection;
- 3. humid tropical type, rear wiring;
- 4. rated current 63A, setting current (0.4-1)In.

Model definition 2:

ASKM3E-250YM/ 3300/ 160A

- 1. LCD electronic protection molded circuit breaker, 250A frame,
- medium-high breaking capacity, manual operation(implicit);
- 2. 3 poles, electronic tripper, no accessory;
- 3. for power distribution (implicit), normal environment(implicit), front wiring(implicit);
- 4. rated current 160A, setting current (0.4-1)In.

STANDARDS

IEC60947-1 IEC60947-2 GB/T14048.1 GB/T14048.2 IEC60947-4-1 GB/T2423.10

GB/T14048.4

GB/T2423.4

ASKM3E-Y LCD INTELLIGENT ELECTRONIC NORMAL PROTECTION MCCB

OVERVIEW



CLASSIFICATION

FEATURES

 ASKM3E-Y intelligent electronic molded case circuit breaker(hereinafter referred to as MCCB) is a new type of circuit breaker designed and developed by our company using international advanced technology. MCCB is suitable for the distribution network of AC 50Hz, rated insulation voltage 1000V, rated voltage 400V and rated current up to 800A. MCCB can be used for infrequent switching of lines and infrequent starting of motors.

MCCB have 3-section protection function(LSI, i.e. overload long delay protection+short-circuit short delay protection+grounding protection), 4-section protection function(LSIG, i.e. overload long delay protection+short-circuit short delay protection+short-circuit instantaneous protection+grounding protection) and under-voltage protection function. MCCB can protect circuits and power equipment from damage. Low temperature to -40 °C type circuit breaker is available.

MCCB can distribute power and protect circuits and power equipment against faults like overload, under-voltage, short-circuit and under-voltage. The products have the characteristics of small volume, high breaking capacity, short flying arc, vibration resistant, etc. The whole series have isolation function.

Classified by wiring method

Front wiring, extended front wiring, rear wiring, plug in front wring, plug in rear wiring, draw out wiring

Classified by accessories

Internal accessories: shunt tripper, under-voltage tripper, auxiliary tripper, alarm tripper, communication module

External accessories: manual operating mechanism, electric operating mechanism

Compatible and Small
 Have rich functions, small size and reliable operation

Excellent Performance

The ultimate short-circuit breaking capacity is up to 100KA. The operation life is up to 40000 times. Rated impulse withstand voltage is up to 12KV. With isolation function, High reliability, correct indication, excellent performance.

Meet Requirements of Intelligent Management

Integrated protection functions of overload, short-circuit, under-voltage, over-voltage, phase-loss, zero-loss. Can install all kinds of accessories, auxiliary, alarm, under-voltage, shunt, etc, meeting requirements of all kinds of controls.

Comply with The Requirements of "Low Voltage Circuit Breaker Communication Statute"

Built-in RS485 communication interface. With remote measurement, remote communication, remote control, remote adjustment and other functions to achieve intelligent management of the power grid.

User Friendly Man-Machine Interface

It adopts large LCD display, which automatically and cyclically displays real-time current, voltage, product breaking and closing status, fault tripping cause, fault tripping phase sequence and tripping parameters, with clear operation interface. Users can easily realize the control and parameter adjustment of circuit breaker on the circuit breaker panel.

NORMAL OPERATIONAL CONDITIONS AND INSTALLATION METHODS

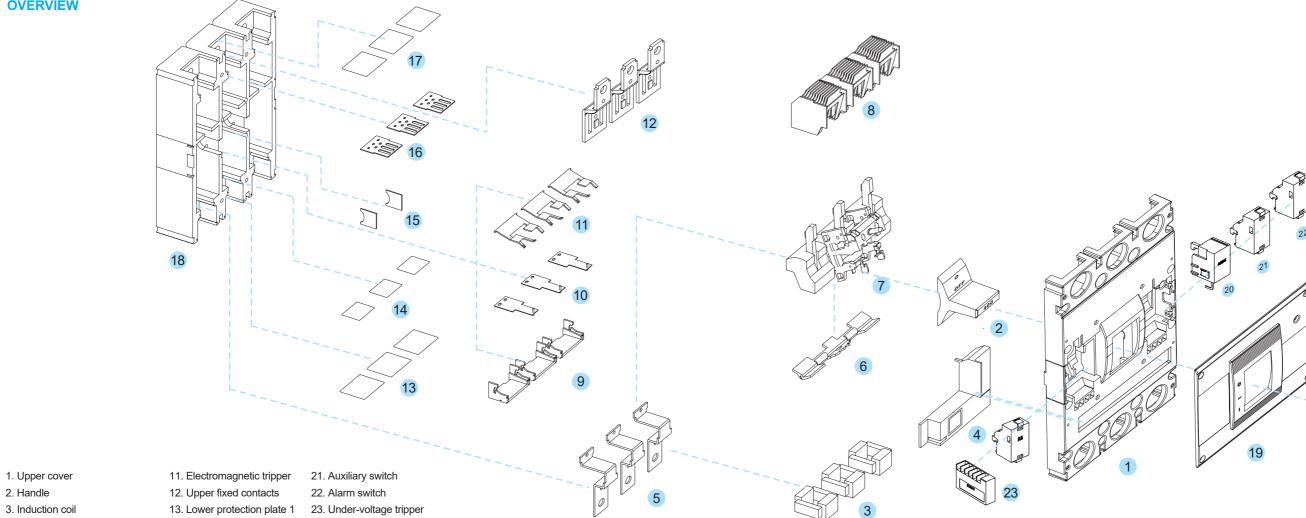
Category	Requirement
Altitude	Lower than 2000 meters.
Operational temperature	Between -5 C and +40 C.
Pollution level	Level 3.
Installation level	The installation level of circuit breaker main circuit is $ \mathbb{II} $, it's $ \mathbb{II} $ for the auxiliary circuit and control circuit which do not connect with the main circuit.
Installation environment	Suitable for electromagnetic environment.
Operational humidity	The relative humidity at +40 $^\circ$ shall not exceed 50%. Higher relative humidity is allowed at lower temperature, e.g. 90% at +20 $^\circ$. Special measures should be taken for the condensation that occasionally occurs due to temperature changes.
Installation conditions	Humid tropical type (TH type) circuit breakers are resistant to humid air, salt spray and mildew. The circuit breaker should be installed in a place where there is no danger of explosion and no conductive dust, without substances sufficient to corrode the metal and destroy the insulation. The circuit breaker should be installed in a place where there is no rain or snow
Installation method	Install vertically or horizontally.
Wiring method	Wiring reversely is prohibited. The only correct wiring is 1, 3, 5 connect power supply and 2, 4, 6 connect load.







OVERVIEW



Structure overview

7. Moving contacts combination

9. Electromagnetic tripper base

10. Thermomagnetic tripper

4. LCD circuit board 5. Lower fixed contacts

8. Arc extinguisher

6. Tripper

The molded case circuit breaker is a integral type structure, which is made of precision combination of internal parts. The base is designed with mounting positions for fixed contacts of each phase and arc extinguisher. The moving contact combination is driven by a manual handle to contact or separate from the fixed contacts to achieve manual control of the breaking/closing. When the thermal/electromagnetic protection exceeds the factory preset value, the tripper drives the moving contact combination into protection breaking. Three-phase detection transformer, monitoring circuit board and tripper are installed internally. Protection values can be adjusted on site according to usage.

14. Lower protection plate 2

16. Arc extinguisher barrier

17. Upper protection plate

15. Spindle bracket

18. Base

19. Face cover

20. Shunt tripper

Contact mechanism

The moving contacts of each phase are fixed to a base of SMC material, forming the moving contact combination. The breaking process is rapid due to the high strength spring. The arc extinguishers which are independent between each phase can extinguish arc rapidly.

Working method

The molded case circuit breaker is driven by a manual handle exposed on the panel, compressing the spring to close the circuit. When a fault occurs during normal operation, the tripper will be triggered by the thermal/electromagnetic tripper. The strong force of the spring instantly breaks the circuit, achieving over-current protection and short-circuit protection.

Protection value can be adjusted

According to the on-site situations, use the knobs on the front of the molded case circuit breaker to adjust the following parameters: 1. overload long delay action current and time; 2. short-circuit short delay action current and time; 3. short-circuit instantaneous action current; 4. pre-alarm action current.

Under-voltage tripper

When the supply voltage drops to the range of 70%-35% of the rated operational voltage, the under-voltage tripper can reliably break the circuit breaker. When the supply voltage is lower than 35% of the rated operational voltage, the under-voltage tripper can prevent the circuit breaker from closing. When the supply voltage is higher than 85% of the rated operational voltage, the under-voltage tripper can ensure the reliable closing of the circuit breaker. The rated value of the under-voltage is AC 50Hz, 230V, 400V.

Shunt tripper

The rated control power voltage of the shunt tripper: 50Hz, AC230V, AC400V; DC110V, 220V, 24V. When the voltage is 70%~110% of the rated value, it can reliably break the circuit breaker.



MAIN TECHNICAL PARAMETERS









Model		ASKM3E	-125Y			ASKM3E-2	50Y		ASKM3E-400Y		ASKM3E-6	30Y	ASKM3E	E-800Y	
rame rating current	Inm(A)	125				250			400		630		800		
Rated current In(A)		32		63	125	160	250		400		630	630		800	
Overload long delay s r(A) r1=(0.4~1ln)		12.5, 16, 25, 32	20,	32, 36, 40, 45, 50, 55, 60, 63	63, 65, 70, 75, 100, 125		100 100, 125, 140, 160, 60 180, 200, 225, 250		200, 225, 250, 280, 315, 350, 400		225, 250, 280, 315, 350, 400 400,420,440,460,480, 500,530,560,600,630		630, 640, 660, 680, 700, 720, 740, 760, 780, 800		
ated operational vol	Itage Ue(V)				AC400V/415, AC66	60V/690V					AC400V/4	15, AC660V/690V			
ated insulation volta	age Ui(V)				1000							1000	'		
ated impulse withstand	and voltage				12000							12000			
reaking capacity lev	rel	M	Н			M	Н		M	Н	M	Н	М	Н	
timate short-circuit	AC400V/415V	50	85			50	85		65	100	65	100	65	100	
reaking capacity u(kA)	AC660V/690V	20	20			20	20		20	20	20	20	20	20	
ervice short-circuit	AC400V/415V	35	50			35	50		50	65	50	75	50	75	
reaking capacity s(kA)	AC660V/690V	15	15			15	15		15	15	15	15	15	15	
ted short-time withstand	current lcw(kA)/1s	5			5		8		10		10				
se category		В				В		В		В			В		
c distance(mm)		> 50(0)**	•			> 50(0)**			> 100(0)*	*	> 100(0)**		100(0)**		
ectrical service life(,	8000				8000			7500		7500		7500		
echanical service	without maintenance	20000				20000		10000		10000		10000	10000		
	with maintenance	40000				40000			20000		20000		20000		
utline mensions(mm)	W(3P/4P)	107/142				107/142			150/198		210/280	210/280		210/280	
+ + + + + + + + + + + + + + + + + + +	L	165				165			257		280		280		
- H	H (not including handle)	105				105			110		115.5		115.5		

^{*}Note: According to GB/T14048.1, the term of "service life" indicates the probability that an appliance will complete a number of operating

cycles before repairing or replacing a component.

**Note: Choose the height of 6.2mm zero arc cover for 125 frame, 7.5mm for 250 frame, 9.3mm for 400 frame, 9.5mm for 800frame, realizing zero arc.



PROTECTION CHARACTERISTIC PARAMETERS-POWER DISTRIBUTION TYPE- ELECTRONIC TRIPPER-LSI 3 SECTION PROTECTION

The circuit breaker for power distribution equipped with electronic tripper has 3 section protection (LSI, i.e. overload long delay, short-circuit short delay, short-circuit instantaneous).

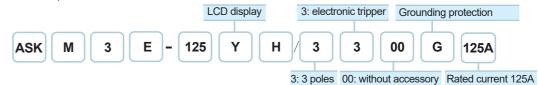
The protection characteristics are factory set according to the following parameters. Model Example:

	LCD display	3: electronic tripper	No code: for power distribution
ASK M 3 E - 129	5 Y H	3 3	00 63A
	3	: 3 poles 00: without	accessory Rated current 63A

Protection Function	Frame Rating (Inm)	Rated Current In(A)	Current / Voltage Setting Value	Action Characteristics/time				
	125	32/ 63/ 125	lr1=12.5-125	Act by I²rt				
	250	160/ 250	lr1=63-250	1.05lr1: no act within 2 h 1.3lr1: act within 1h				
Overload	400	400	Ir1=160-400	2lr1: t1=12s				
long delay	800	630	Ir1=250-630	adjustable parameters:				
L	800		lr1=315-800	t1= (12, 60, 80, 100, 150)s				
	Action allowed	d error		1.3lr1~3ln: ± 10%; ≥3ln: ± 20%				
	125 125							
	250	250		1.5Ir2: t2=(0.06-0.1-0.2-0.3-0.4) Definite-time: t2=0.06s, 0.1s, 0.2s: ±0.03s				
Short-circuit	400	400	adjustable parameters: lr2=(2~12)lr1	t2=0.03s, 0.4s: ± 15%				
short delay	800	630	adjustable parameters. III (2 12)II I	Note: when Ir2≤1<1.5Ir2,				
S	000	800		inverse-time action; when 1.5Ir2≤1 <ir3,< td=""></ir3,<>				
	Action allowed error		1lr1	definite-time action;				
	Progressive gradation		± 15%	Inverse-time or definite-time is optional.				
	125	125						
01	250	250						
Short-circuit nstantaneous	400	400	Ir3 = 10Ir1	Act instantaneously < 0.2				
I	630		adjustable parameters: lr2=(4~14)lr1					
	800	800						
	Action allowed	d error	1lr1					
	Progressive of	gradation	± 15%					
Neutral pole protection 4 poles C type	Whole series	32~800	Ir1N=Ir1, Ir2N=Ir2, Ir3N=Ir3					
Overload pre-alarm	Whole series	32~800	Ir0=0.9Ir1 adjustable parameters: Ir0=(0.7~1.0)×Ir1					
	Whole series	32~800	Phase voltage: 253V~286V; Line voltage: 437V~494V	1~30s				
Over-voltage protection	Action allowed	d error	1V	1s				
	Progressive g	radation	± 5%	± 5%				
	Whole series	32~800	Phase voltage: 154V~187V; Line voltage: 266V~323V	1~30s				
Under-voltage	Action allowed	d error	1V	1s				
protection	Progressive g	radation	± 5%	± 5%				
Phase-loss, zero-loss	Whole series	32~800		1~5s				
protection	Action allowed error			± 5%				

PROTECTION CHARACTERISTIC PARAMETERS-POWER DISTRIBUTION TYPE- ELECTRONIC TRIPPER-LSIG 4 SECTION PROTECTION

The circuit breaker for power distribution equipped with electronic tripper has 4 section protection (LSI, i.e. overload long delay, short-circuit short delay, short-circuit instantaneous, grounding protection). The protection characteristics are factory set according to the following parameters. Model Example:



Protection Function	Frame Rating (Inm)	Rated Current In(A)	Current / Voltage Setting Value	Action Characteristics/time				
	125	32/ 63/ 125	Ir1=12.5-125	Act by I2rt				
	250	160/ 250	Ir1=63-250	1.05lr1: no act within 2 h				
Overload	400	400	Ir1=160-400	-1.3lr1: act within 1h 2lr1: t1=12s				
long delay	800	630	Ir1=250-630	adjustable parameters:				
L	000	800	Ir1=315-800	t1= (12, 60, 80, 100, 150)s				
	Action allowe	d error		1.3lr1~3ln: ± 10%; ≥3ln: ± 20%				
	125 125			4 = 1 = 1 = 1 = 1 = 1 = 1 = 1				
	250	250	lr2 = 8 r1	1.5lr2: t2=(0.06-0.1-0.2-0.3-0.4) Definite-time: t2=0.06s, 0.1s, 0.2s: ±0.03				
Short-circuit	400	400	adjustable parameters: Ir2=(2~12)Ir1	t2=0.03s, 0.4s: ± 15%				
short delay	800	630	(2 · 2)	Note: when Ir2≤1<1.5Ir2, inverse-time action:				
S	000	800		when 1.5lr2≤1 <lr3,< td=""></lr3,<>				
	Action allowed error		1lr1	definite-time action;				
	Progressive gradation		± 15%	Inverse-time or definite-time is optional				
	125	125						
	250	250	r3 = 10 r1					
	400	400	adjustable parameters: lr2=(4~14)lr1	Act instantaneously < 0.2				
Short-circuit	800 630		(· · · · · · · · · · · · · · · · · · ·					
nstantaneous I		800						
'	Action allowe	d error	1lr1					
	Progressive g	radation	± 15%					
	125~800	32~800	Ir4=0.8In adjustable parameters: Ir4=(0.3~0.8)In+OFF	<0.5lr4 do not act act, > 1.0lr4 delay act				
Grounding protection	Action allowe	d error	0.1ln	t4=0.4 s+20% adjustable parameters:t4=0.1/0.2/0.3/0.4				
	Progressive g	radation	± 15%	0.1s±0.03s; 0.2s±0.03s; 0.3s,0.4s: ±15°				
Neutral pole protection 4 poles C type	Whole series	32~800	Ir1N=Ir1, Ir2N=Ir2, Ir3N=Ir3					
Overload pre-alarm	Whole series	32~800	lr0=0.9lr1 adjustable parameters: lr0=(0.7~1.0)×lr1					
	Whole series	32~800	Phase voltage: 253V~286V; Line voltage: 437V~494V	1~30s				
Over-voltage protection	Action allowed	d error	1V	1s				
	Progressive g	radation	± 5%	± 5%				
	Whole series	32~800	Phase voltage: 154V~187V; Line voltage: 266V~323V	1~30s				
Under-voltage protection	Action allowe	d error	1V	1s				
P. 310011011	Progressive g	radation	± 5%	± 5%				
Phase-loss, zero-loss	Whole series	32~800		1~5s				
protection	Action allowe	d error		± 5%				



PROTECTION CHARACTERISTIC PARAMETERS-MOTOR PROTECTION TYPE - ELECTRONIC TRIPPER-LSI 3 SECTION PROTECTION

The circuit breaker for motor protection equipped with electronic tripper has 3 section protection

(LSI, i.e. overload long delay, short-circuit short delay, short-circuit instantaneous).

The protection characteristics are factory set according to the following parameters. Model Example:

ASK M 3 E - 125 Y H / 3 3 00 2 32A

			0.0 10.0 00 111 1		D - 41		Α.		
			3: 3 poles 00: without ac	cessory	Rated cu	irrent 32	А		
Protection Function	Frame Rating (Inm)	Rated Current In(A)	Current / Voltage Setting Value	Action Characteristics/time					
	125	32/ 63/ 125	lr1=12.5-125	Act by I²rt can be ac	, t1=12s, ljusted to	60/80/1	50s		
	250	160/ 250	Ir1=63-250	1.05lr1		no ac	t withi	n 2 h	
Overload				1.2lr1 act within 1h					
long delay	400	400	Ir1=160-400	1.5lr1	21.3s	107s 1	142s	178s	267s
L	900	630	lr1=250-630	2lr1, t1 7.2lr1	12s	60s 4.63s 6			150s
	800	800	Ir1=315-800	tripping lev			10	20	30
	Action allowed error			1.3lr1~3	In: ± 10%	%; ≥3I	n: ± 2	0%	
	125	32/63/125		1.5lr2: ť	2=0.3s				
	250	160/250		Definite-time: t2=(0.06-0.1-0.2-0.3-0.4)s t2=0.06, 0.1, 0.2s: ± 0.03s t2=0.3, 0.4s: ± 15%					
Short-circuit	400	400	lr2 = 8lr1						
short delay	630		adjustable parameters: Ir2=(2~12)Ir1		Note: when Ir2≤1<1.5Ir2,				
S	800	800	inverse-time action; when 1.5lr2≤1 <lr3,< td=""></lr3,<>						
	Action allowed	d error	1lr1	(definite-t	ime act	ion;		
	Progressive gradation		± 15%	Inverse-time or definite-time is optiona					tional.
	125	32/63/125							
	250	160/250	10 4014						
Short-circuit	400	400	Ir3 = 12 r1						
nstantaneous ı	000	630	adjustable parameters: Ir3=(4~14) Ir1	Act instantaneously < 0.2					
'	800	800							
	Action allowed	d error	1lr1						
	Progressive g	radation	± 15%						
Neutral pole protection 4 poles C type	Whole series	125~800	Ir1N=Ir1, Ir2N=Ir2, Ir3N=Ir3						
Overload pre-alarm	Whole series	125~800	lr0=0.9lr1 adjustable parameters: lr0=(0.7~1.0)×lr1						
_	Whole series	125~800	Phase voltage: 253V~286V; Line voltage: 437V~494V	494V 1~30s					
Over-voltage protection	Action allowed	d error	1V	1s					
	Progressive g	radation	± 5%	± 5%					
Under veltage	Whole series	125~800	Phase voltage: 154V~187V; Line voltage: 266V~323V	3V 1~30s					
Under-voltage protection	Action allowed	d error	1V	1s					
	Progressive g	radation	± 5%	±5%					
Phase-loss,	Whole series	125~800		1~5s					
zero-loss protection	Action allowed	d error		± 5%					

PROTECTION CHARACTERISTIC PARAMETERS-MOTOR PROTECTION TYPE - ELECTRONIC TRIPPER-LSIG 4 SECTION PROTECTION

The circuit breaker for motor protection equipped with electronic tripper has 4 section protection (LSI, i.e. overload long delay, short-circuit short delay, short-circuit instantaneous, grounding protection). The protection characteristics are factory set according to the following parameters.

Model Example:

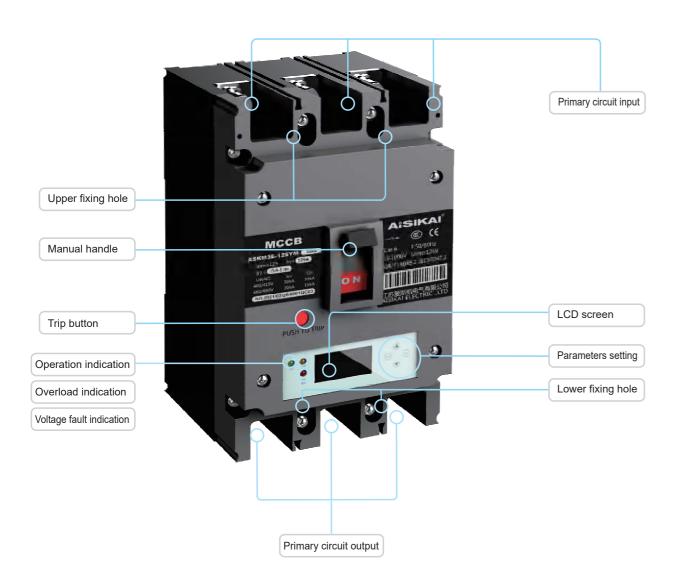
LCD display	3: electronic tri	ipper 2: for motor protection	Rated current 63A
ASK M 3 E - 125 Y H	3 3	00 2 G	63A
3	3: 3 poles 00: v	without accessory Grounding	g protection

Protection Function	Frame Rating (Inm)	Rated Current In(A)	Current / Voltage Setting Value	Actio	n Cha	racteri	stics/ti	me			
	125	32/ 63/ 125	lr1=12.5-125	Act by I²rt, t		60/80/	150s				
	250	160/ 250	lr1=63-250	1.05lr1 no act within 2 h							
Overload			1.2lr1 act within 1h								
long delay	400	400	lr1=160-400								
L	800	630	Ir1=250-630	2lr1, t1 7.2lr1	12s 0.93s	60s 4.63s	80s 6.17s		_		
	000	800	Ir1=315-800	tripping level	_	10	10	20	30		
	Action allowed error			1.3lr1~3ln: ± 10%; ≥3ln: ± 20%							
	125	32/63/125		1.5lr2: t2=							
	250	160/250		Definite-tir				2-0.3-	-0.4)s		
Short-circuit	400	400	lr2 = 8lr1	t2=0.06, 0 t2=0.3, 0.4			038				
short delay		630	adjustable parameters: Ir2=(2~12)Ir1	t2=0.3, 0.4s: ± 15% Note: when lr2≤1<1.5lr2,							
S	800	800			/erse-1 en 1.5						
	Action allowe	d error	1lr1		finite-1		,				
	Progressive gradation		± 15%	Inverse-ti	ne or	definite	e-time	is opt	tional.		
	125	32/63/125									
	250	160/250									
Short-circuit	400	400	Ir3 = 12Ir1	Act ins	stantar	eously	< 0.2				
nstantaneous		630	adjustable parameters: Ir3=(4~14) Ir1								
I	800	800									
	Action allowe	d error	1lr1								
	Progressive g	radation	± 15%								
_	125~800	32~800	Ir4=0.8In adjustable parameters: Ir4=(0.3~0.8)In+OFF	<0.5lr4 do not act act, > 1.0lr4 delay				ay act			
Grounding protection	Action allowe	d error	0.1ln	t4=0.4 s+20% adjustable parameters:t4=0.1/0.2/0.3			.3/0.4				
	Progressive g	radation	± 15%	0.1s±0.03s; 0.2s±0.03s; 0.3s,0.4s			,0.4s:	±15%			
Neutral pole protection 4 poles C type	Whole series	125~800	Ir1N=Ir1, Ir2N=Ir2, Ir3N=Ir3								
Overload pre-alarm	Whole series	125~800	Ir0=0.9Ir1 adjustable parameters: Ir0=(0.7~1.0)×Ir1								
	Whole series	125~800	Phase voltage: 253V~286V; Line voltage: 437V~494V	1~30s							
Over-voltage protection	Action allowed	d error	1V	1s							
,	Progressive g	radation	± 5%	± 5%							
	Whole series	125~800	Phase voltage: 154V~187V; Line voltage: 266V~323V	/ 1~30s							
Under-voltage protection	Action allowe	d error	1V	1s							
	Progressive g	radation	± 5%	± 5%							
Phase-loss,	Whole series	125~800		1~5s							
zero-loss protection	Action allowe	d error		± 5%							



INDICATION STRUCTURE INTRODUCTION

Circuit Breaker Front Indication



Use the buttons on the panel to manipulate the circuit breaker



Use "(Buck)" "(Buck)" "(D)" to modify the contents on the screen;

FUNCTIONS TABLE

Standard funct	ions table				
	Current measurement	I1, I2, I3, IN			
Measurement	Voltago magauroment	Line voltage: U12, U23, U31			
	Voltage measurement	Phase voltage: U1N, U2N, U3N			
	Setting	Menu setting			
		Overload, short-circuit delay, short-circuit instantaneous, grounding, fault phase sequence			
Maintenance	Fault memory	Over-voltage protection, under-voltage protection, fault phase sequence			
		Phase-loss protection, zero-loss protection, fault phase sequence			
	History records(the las	t 10 fault communication output)			
	Real-time current value				
Display	Real-time voltage value				
	System time				
	Last fault type, fault current or fault voltage, time of fault				

Optional functions table

	Optional functions table		Default setting	Optional	setting
	Long delay protection		Trip	Alarm	Off
	Short delay protection	Trip	Alarm	Off	
	Short-circuit instantaneous protection	Trip	Alarm	Off	
	Over-voltage protection	Off	Alarm	Trip	
Protection / alarm	Under-voltage protection	Off	Alarm	Trip	
	Phase-loss protection	Off	Alarm	Trip	
	Zero-loss protection	Off	Alarm	Trip	
	Overload pre-alarm	Off	Alarm		
Communication	General MODBUS communication	Choose one	Have		
function	Special "Low-voltage molded case circuit breaker communication protocol"		Optional		

[&]quot;Operation" indication: lit on when the circuit breaker is working normally;

[&]quot;Overload" indication: flashes when the circuit breaker is in pre-alarm condition, lit on when the circuit breaker is in overload tripping condition;

[&]quot;Voltage fault" indication: lit on when the circuit breaker in in under-voltage, under-voltage or phase-loss condition.



INTERNAL OPTIONAL ACCESSORIES

The ASKM3E-Y electronic circuit breaker has five basic accessory modules available for optional installation inside the switch. Shunt Tripper MODEL: FJ-FT-ASKM3E-Y Wiring diagram: Outline: Usage: Shunt tripper is used to remotely control the Control signal: passive close dry contact control breaking of the circuit breaker, realizing the intelligent operation of power distribution with external control circuits SB Under-voltage tripper MODEL: FJ-QT-ASKM3E-Y 1.Control power voltage Us1: when Us1=(35%-70%)Ue, the Wiring diagram: Outline: Under-voltage tripper is used for low voltage under-voltage tripper can reliably break circuit breaker. protection of power lines and power-using 2.Control power voltage Us2: when Us2:Us2=(85%-110%)Ue, equipment. It ensures that load equipment is the circuit breaker can close normally. not damaged by a malfunction caused by a 3.Control power voltage Us3: when Us3≤35%Ue, the voltage below the rated value. Standard outlet wire method: under-voltage tripper can prevent circuit breaker from closing. Module type Circuit breaker Frequency: 50/60Hz (Control module is installed on the side of the Special reminder: The circuit breaker equipped with an under-voltage tripper can only be normally opened and closed if Us2 voltage is input between Ue: rated operational voltage circuit breaker, and the under-voltage tripper is installed inside the breaker) Standard voltage AC230V Optional voltage AC380V AC110V the P1 and P2 terminals. Auxiliary switch MODEL:FJ-FC-ASKM3E-Y Wiring diagram: When circuit breaker is at position of open or free trip Usage Outline: It is used to provide the breaking and closing Main power status signal of the circuit breaker, helping the secondary control circuit to realize the F14 ---automatic control function 1 normally open 1 normally closed: 1NO1NC When circuit breaker is at closing position 2 normally open 2 normally closed: 2NO2NC 4 normally open 4 normally closed: 4NO4NC Standard outlet wire method: lead wire type Standard outlet wire length: 50cm Customizable outlet wire method: terminal type Conventional thermal current: Ith=3A MODEL: FJ-BC-ASKM3E-Y Alarm switch Wiring diagram: Outline: Usage: When circuit breaker is at position of open/closed It is used to provide the overload, short-circuit(free trip) and under-voltage fault(fault trip) status signal of the circuit breaker, helping the secondary control circuit When circuit breaker is at position of free trip&fault trip to realize the automatic control function. Standard outlet wire method: lead wire type B12 ⊶ Standard outlet wire length: 50cm --∘R11 Customizable outlet wire method: terminal type Conventional thermal current: Ith=3A Circuit breaker Communication module MODEL: FJ-TXMK-ASKM3E-Y Communication has 2 types: Wiring diagram: Usage: Outline: Breakers have built-in communication module, Type A: standard RS485

INTERNAL ACCESSORIES CODE TABLE

Depending on the application requirements, one or more base modules can be installed inside the switch. Each module has an individual code. Different modules can be combined and have a new accessory code.

Internal accessories installation position schematic diagram Internal accessories icons

Alarm switch	Shunt tripper	Left side	gle	Right side	Lead wire direction
Auxiliary switch	 under-voltage tripper 	installation	Han	installation	Lead Wife direction

Aux	dilary switch Under-voltage tripper		<u> </u>			
Code	Accessory		125Y/250Y		M3E-400Y	ASKM3E-630/800Y
	,	3P	4P	3P	4P	3P/4P
00	No accessory					
80	Alarm switch	← □	← □	4 • • • • • • • • • • • • • • • • • • •	4	← □
10	Shunt tripper	+ •	4	••	4 •	4 •
20	Auxiliary switch(1NO1NC)	4	4			
20	Auxiliary switch(2NO2NC)			+ •	4	4 •
02	Auxiliary switch(2NO2NC)	4	4			
30	Under-voltage tripper	• 0	• 0	+ 0	+ 0	◆ ○
40	Shunt tripper+Auxiliary switch(1NO1NC)	+ 1 0 +	+• •••			
40	Shunt tripper+Auxiliary switch(2NO2NC)			+ 1 0 +	+ • • 	• • • •
12	Shunt tripper+Auxiliary switch(2NO2NC)	+ 1 • +	+ • • •			
50	Shunt tripper+under-voltage tripper	◆ ○ ● →	+ 0 • +	+ 0 0 +	← ○ ● →	← ○ • →
60	2 sets of auxiliary switches(2NO2NC)		+ • • •			
00	2 sets of auxiliary switches(4NO4NC)				• • • •	+ +
22	2 sets of auxiliary switches(3NO3NC)		+ 1 1 +			
23	2 sets of auxiliary switches(4NO4NC)		4 1 1 +			
70	Under-voltage tripper+Auxiliary switch(1NO1NC)		◆ ○ ■ →			
70	Under-voltage tripper+Auxiliary switch(2NO2NC)				◆ ○ ■ →	◆ ○ ■ →
32	Under-voltage tripper+Auxiliary switch(2NO2NC)		◆ ○ ■ →			
18	Shunt tripper+Alarm switch	← □ • →	4 • • •	4 • • •	4 • • •	+ • • •
00	Auxiliary switch(1NO1NC)+Alarm switch	← □	4 🗓	4 🗓	4 □	4
28	Auxiliary switch(2NO2NC)+Alarm switch			can customize	can customize	can customize
38	Under-voltage tripper+Alarm switch		◆ ○ □ →			
40	Shunt tripper+Auxiliary switch(1NO1NC) +Alarm switch	← □ • •	← ● □ →	← □□•→	← □ • →	← □ • →
48	Shunt tripper+Auxiliary switch(2NO2NC) +Alarm switch			can customize	can customize	can customize
	2 sets of auxiliary switches(2NO2NC) +Alarm switch		← □□□→			
68	2 sets of auxiliary switches(4NO4NC) +Alarm switch				can customize	can customize
05	2 sets of auxiliary switches(3NO3NC) +Alarm switch		← □□•		← □□■ →	← • • • • • • • • • • • • • • • • • • •
78	Under-voltage tripper+Auxiliary switch(1NO1NC) +Alarm switch		← ○ : →			
	Under-voltage tripper+Auxiliary switch(2NO2NC) +Alarm switch					

functions.

below the product)

remote communication, remote measurement,

remote adjustment and remote control

Standard outlet wire type: terminal (Terminals are located on the front or directly

realizing communication function and providing General MODBUS communication protocol RS485 interface

Type B: optional

Meet the requirements of "Low-voltage molded case circuit

breaker communication protocol" and can provide metering

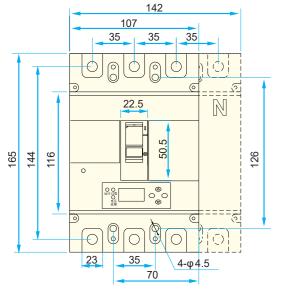
Circuit breaker

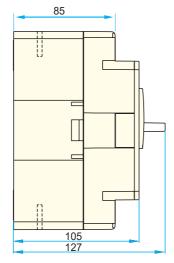


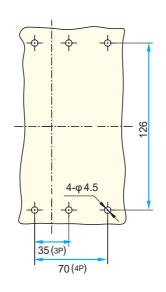
OUTLINE AND INSTALLATION DIMENSIONS

Front wiring

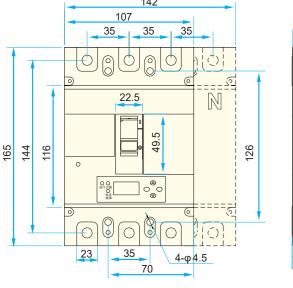
ASKM3E-125Y Frame

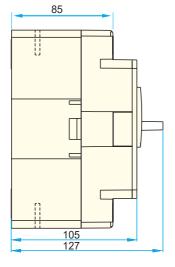


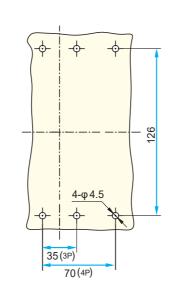




ASKM3E-250Y Frame

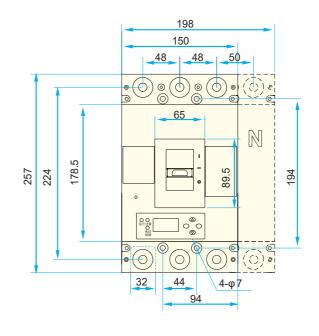


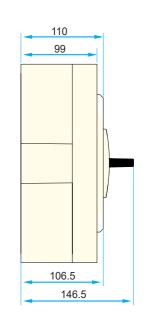


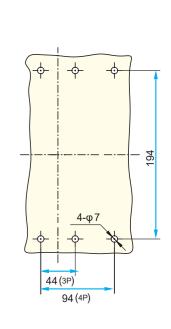


Front wiring

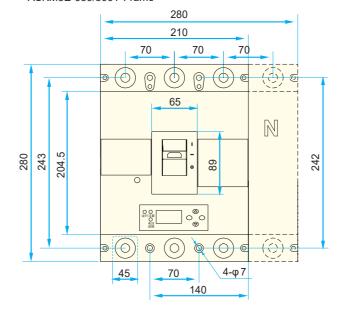
ASKM3E-400Y Frame

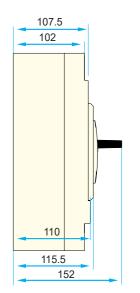


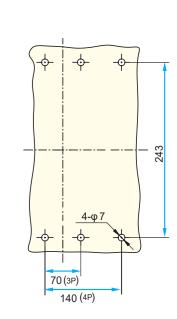




ASKM3E-630/800Y Frame







External Optional Accessory- Plug-in Front Wiring Base

Optional plug-in front wiring base is available for ASKM3E-Y LCD electronic circuit breaker.

Plug-in front wiring base(PF)

Usage: The plug-in front wiring base is mounted on the back of the molded case circuit breaker, and is integrated with the breaker through conductive copper posts and fastening bolts. In the event of a serious circuit breaker failure, the circuit breaker can be quickly repaired and replaced without removing the primary cable.

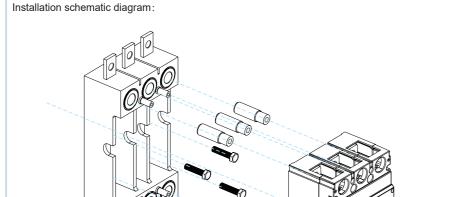
Copper bars dimensions(mm)



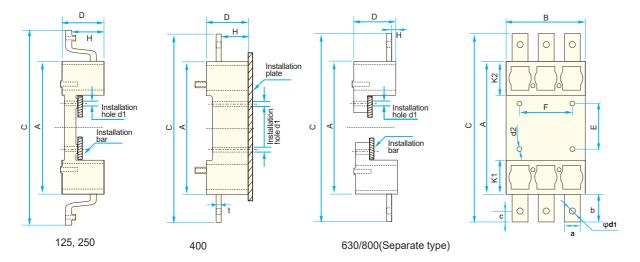
125-800 Frame

Frame	а	b	С	d1
125	22	36	15	8.5
250	22	36	15	8.5
400	25	37	15.5	11
630/800	35	50	15.5	13

MODEL: FJ-BQDZ-ASKM3E-Y



Outline and installation dimensions:



Frame		Outline and installation opening dimensions												
	Α	В	С	D	E	F	Н	K1	K2	d2	t			
125A	183	110	258	51.5	64	70	46	44	44	7	3			
250A	183	110	258	51.5	64	70	46	44	44	7	3			
400A	277	150	352	80	135	115	31	_	_	7	6			
630/800A	304	210	404	87	144	91	13	62	62	11	8			

External Optional Accessory- Plug-in Rear Wiring Base

Optional plug-in rear wiring base is available for ASKM3E-Y LCD electronic circuit breaker.

Plug-in rear wiring base(PR)

Usage: The plug-in rear wiring base is mounted on the back of the molded case circuit breaker, and is integrated with the breaker through conductive copper posts and fastening bolts. In the event of a serious circuit breaker failure, the circuit breaker can be quickly repaired and replaced without removing the primary cable.

Copper bars dimensions(mm)



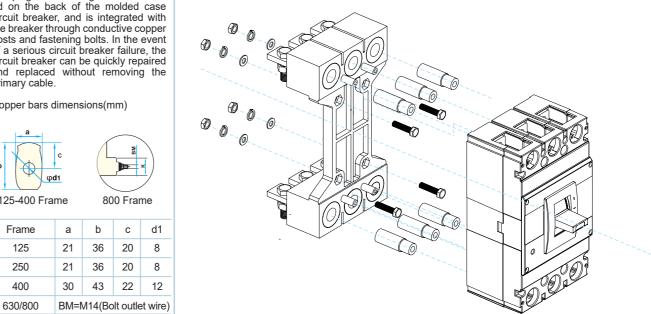


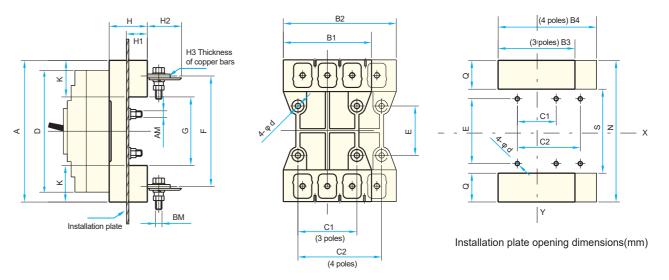
125-400 Frame 800 Frame Frame b С 36 125 21 20 250 21 36 20 8 400 30 43 22 12

Outline and installation dimensions:

MODEL: FJ-BHDZ-ASKM3E-Y

Installation schematic diagram:





Frame	Outline and installation dimensions(mm)											Opening dimensions(mm)							
	Α	B1	B2	C1	C2	D	Е	F	G	K	Н	H1	H2	НЗ	N	S	Q	В3	B4
125A	168	107	125	70	105	165	54	144	94	46	50	33	37	5.5	196	82	56	117	155
250A	186	107	145	70	105	165	54	144	94	46	50	33	37	5.5	196	84	56	117	155
400A	280	149	200	60	108	257	129	224	170	55	60	38	46	8	290	160	65	159	210
630/800A	305	210	280	90	162	280	146	243	181	62	87	60	16	/	315	171	72	220	290



External Optional Accessory-Electric Operating Mechanism

Optional CD1 type or CD2 type electric operating mechanism is available for ASKM3E-Y electronic circuit breaker.

Frequency: 50Hz

MODEL: FJ-DC/CD1-ASKM3E-Y-250

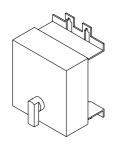
Control power: Us=(85%-110%) Ue

AC 380V

Electric Operating Mechanism- CD1

Usage: The electric operating mechanism is installed on the front side of the molded case circuit breaker. It realizes remote breaking and re-closing function through external control signal, and completes centralized monitoring and automatic control of transmission and distribution network. Internally driven by electromagnet, it has the advantage of low starting

Applicable frame: 125, 250 Standard wiring method: Lead wire type

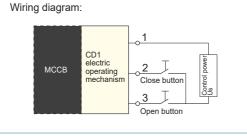


AC 400V

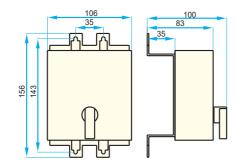
Default voltage:AC 230V

Optional voltage: AC 220V

Ue:rated operational power supply of electric operating mechanism



Installation schematic diagram:

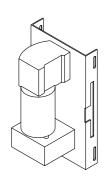


Applicable frame: 125, 250

Electric Operating Mechanism- CD1

The electric operating mechanism is installed on the front side of the molded case circuit breaker. It realizes remote breaking and re-closing function through external control signal, and completes centralized monitoring and automatic control of transmission and distribution network. Internally driven by motor, it has the advantage of low starting current.

Applicable frame: 400, 630, 800 Standard wiring method: Terminal type



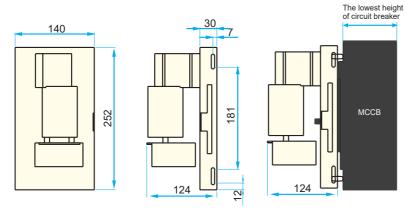
MODEL: FJ-DC/CD1-ASKM3-Y-400

Control power: Us=(85%-110%) Ue Frequency: 50Hz

Ue:rated operational power supply of electric operating mechanism Default voltage:AC 230V Optional voltage: AC 220V

AC 380V AC 400V DC 220V Wiring diagram: MCCB

Installation schematic diagram:



Electric Operating Mechanism- CD2

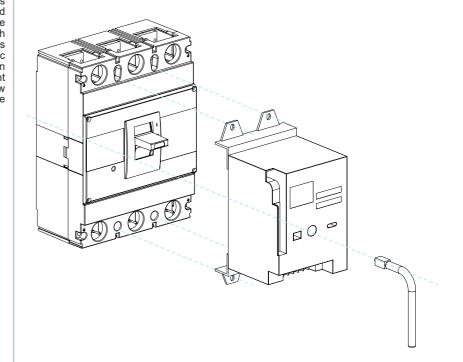
Usage:

The electric operating mechanism is installed on the front side of the molded case circuit breaker. It realizes remote breaking and re-closing function through external control signal, and completes centralized monitoring and automatic control of transmission and distribution network. Internally driven by permanent magnet motor, it has the advantage of low starting current and wide control voltage

Applicable frame: 125-800 whole series Standard wiring method: Terminal type

MODEL: FJ-DC/CD2-ASKM3E-Y

Wiring diagram:



Manual handle:

frame 63, 125, 250



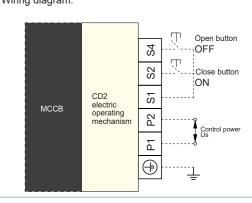


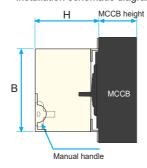
Control power: Us=(70%-110%) Ue Frequency: 50Hz

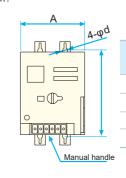
Ue:rated operational voltage of shunt tripper Default voltage:AC 220V

Optional voltage: AC 110V DC 220V DC 110V DC 24V

Wiring diagram:







Model	Outline ar	nd installati	on dimens	ions(mm)	Action	Mechanical	Motor power (w)	
Model	Α	В	Н	4-φd	current (A)	service life		
ASKM3E-Y-125	90	116	94	4.5	≪0.5	14000	14	
ASKM3E-Y-250	90	116	90	4.5	≪0.5	14000	14	
ASKM3E-Y-400	130	176	143	6.5	≤2	5000	35	
ASKM3E-Y-630,800	130	176	147	6.5	≪2	5000	35	

External Optional Accessory-Manual Operating Mechanism

Optional CD1 type or CD2 type electric operating mechanism is available for ASKM3E-Y electronic circuit breaker.

Manual operating mechanism

Usage:

The manual operating mechanism is installed on the front of the circuit breaker. Through rotating handle, it realizes the requirement of operation on the panels of drawer cabinet, distribution cabinet, power box, etc. It also provides the function of interlocking between the circuit breaker and the cabinet door panel.

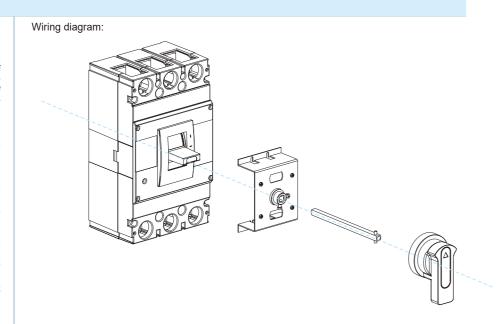
Features:

1.When the circuit breaker is in the closed state, the manual operating mechanism is interlocked with the door plate and the cabinet door cannot be opened.

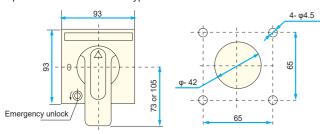
2.In case of failure when operating handle or manual operating mechanism in the closed state, the cabinet door can be opened by the emergency unlocking device on the operating handle.

3. For the manual handles matching with the manual operating mechanisms corresponding to different frames, they have the same openings on door plates.

4. The length of standard square shaft is 150mm. We can also provide special specification.

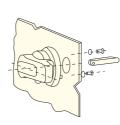


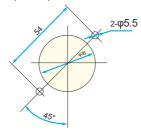
Square handle dimensions: type F



Square handle outline and door plate opening dimensions (the distance between the center of the opening and the hinge is not less than 100mm)

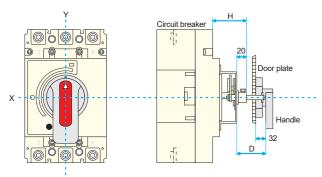
Round handle dimensions: type A(default)





Round handle outline and door plate opening dimensions (the distance between the center of the opening and the hinge is not less than 100mm)

Manual operating mechanism installation schematic diagram



Attention:

The manual operating mechanism used with our molded case circuit breaker must be ordered from our company to ensure the quality of the product. If the user purchases other brands, our company will not bear any adverse consequence occurring after the installation.

Manual operating mechanism installation dimensions

MCCB - 73

Mariadi oporating modification dimensions										
Model	ASKM3L-125	ASKM3L-250	ASKM3L-400	ASKM3L-630						
Installation dimensions(H)	54	54	84	76						
Operating handle to the center of circuit breaker Y value	0	0	0	-20						

RATED CURRENT AND WIRE CROSS SECTION AREA

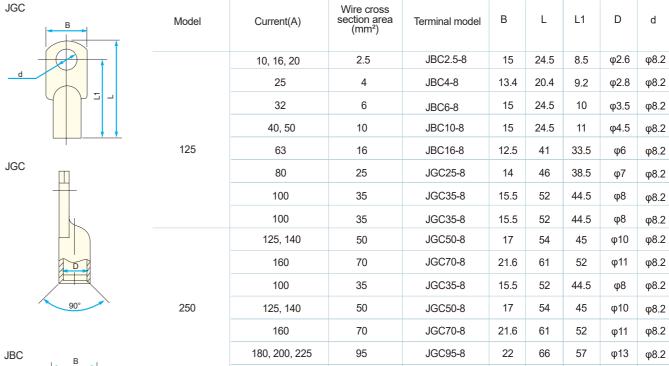
Connection Wire Reference Cross Section Area

Rated current(A)	10	16, 20	25	32	40, 50	63	80	100	125, 140	160	180, 200, 225	250	315, 350	400
Wire cross section area (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	185	240

5	Cable		Copper bars			
Rated current(A)	Cross section area(mm²)	Quantity	Size(mm×mm)	Quantity		
500	150	2	30x5	2		
630	185	2	40x5	2		
700/800	240	2	50x5	2		

MODEL OF WIRING TERMINALS

JGC\JBC wiring terminal reference dimension



95

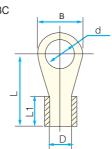
JGC95-8

22

66

57

250

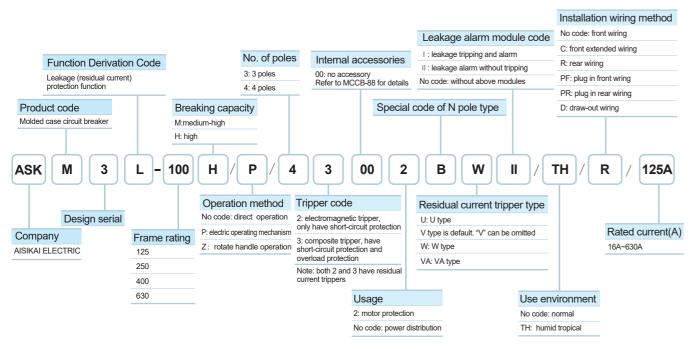


φ13

φ8.2



ASKM3L THERMOMAGNETIC LEAKAGE PROTECTION MOLDED CASE CIRCUIT BREAKER SELECTION TABLE



Note: the special code of N pole type(for 4 poles products only. The default type is B if there is no special instructions when ordering)

- A: N poles does not have over-current tripper. N pole is always closed and does not break/close along with the other three poles.
- B: N poles does not have over-current tripper. N pole breaks/closes along with the other three poles. N pole is equipped with "first close, then split" function as standard.
- C: N poles has over-current tripper. N pole breaks/closes along with the other three poles. N pole is equipped with "first close, then split" function as standard.
- D: N poles has over-current tripper. N pole is always closed and does not break/close along with the other three poles.

Design marking

ASKM3I

Model definition 1:

ASKM3L-125HP/4300/2BWIITH/R,In=125A

- 1. leakage protection molded case circuit breaker, 125A frame, standard breaking capacity, electric operation;
- 2. 4 poles, composite tripper, no accessory;
- 3. for motor protection. N poles does not have over-current tripper. W type residual current tripper, leakage alarm without tripping (leakage alarm and tripping is optional), humid tropical type;
- 4. rear wiring, rated current 125A

Model definition 2:

ASKM3L-250M/3300/A,In=250A

- 1. leakage protection molded circuit breaker, 250A frame, medium-high breaking capacity, direct manual operation (implicit);
- 2. 3 poles, composite tripper, no accessory
- 3. For power distribution. N poles does not have over-current tripper. N pole is always closed and does not break/close along with the other three poles;
- 4. V type residual current tripper, no leakage alarm module, normal
- 5. front wiring(implicit), rated current 250A

STANDARDS

IEC60947-1 IEC60947-2 GB/T14048.1 GB/T14048.2

IEC60947-4-1 GB/T2423.10

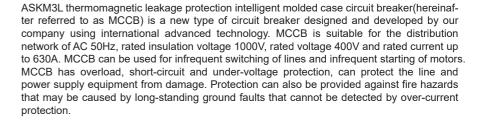
GB/T14048.4 GB/T2423.4



CLASSIFICATION

ASKM3L THERMOMAGNETIC LEAKAGE PROTECTION MOLDED CASE CIRCUIT BREAKER

OVERVIEW



Classified by the rated current(A)

Frame 125: 10, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125A

Frame 250: 100, 125, 140, 160, 180, 200, 250A

Frame 400: 225, 250, 315, 350, 400A

Frame 630: 400, 500, 630A

Classified by wiring method

Front wiring, extended front wiring, rear wiring, plug in front wring, plug in rear wiring, draw out wiring

Classified by over-current tripper type

Composite: thermal+electromagnetic tripper(overload protection and short-circuit protection); thermomagnetic: electromagnetic tripper(short-circuit protection)

Classified by accessories

Internal accessories: shunt tripper, under-voltage tripper, auxiliary tripper, alarm tripper External accessories: manual operating mechanism, electric operating mechanism

Residual Current 3 Phases Protection: The leakage protection modules of conventional circuit breakers with residual current protection use the operational power of two-phase sampling. Our circuit breakers use three-phase. If any phase is missing, the circuit breaker leakage protection module can still work normally.

Adjustable Parameters: Rated residual action current Inn and the maximum breaking time are adjustable according to the actual situation

Leakage Alarm Function Is Available

Comply with EMC requirements: IEC60947-2, GB14048.2[Appendix B]

High interchangeability: Same outline and volume as ASKM1 circuit breaker of the same frame

APPLICATIONS



FEATURES

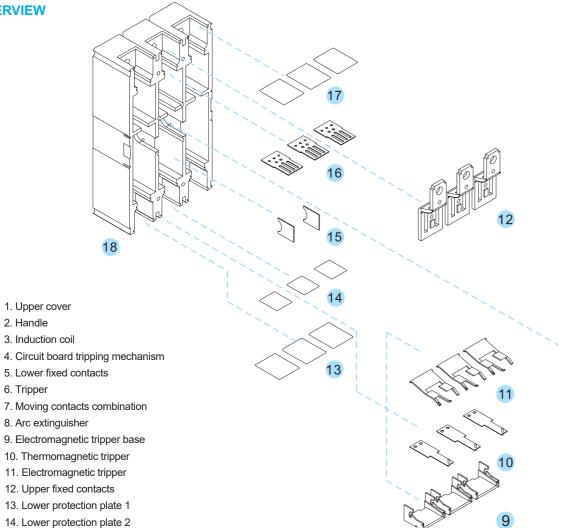




NORMAL OPERATIONAL CONDITIONS AND INSTALLATION METHODS

Category	Requirement
Altitude	Lower than 2000 meters.
Operational temperature	Between -5 C and +40 C. The average value in 24 hours does not exceed +35 C
Pollution level	Level 3.
Installation level	The installation level of circuit breaker main circuit is ${\rm I\hspace{1em}I\hspace{1em}I}$, it's ${\rm I\hspace{1em}I\hspace{1em}I}$ for the auxilian circuit and control circuit which do not connect with the main circuit.
Operational humidity	The relative humidity at +40 $^{\circ}$ C shall not exceed 50%. Higher relative humidity is allowed at lower temperature. The average maximum relative humidity is 90% in the most humid month and this month has the average minimum temperature of +25 $^{\circ}$ C. The condensation that occurs on the surface of the product due to temperature changes should also be taken into consideration.
nstallation conditions	Use environment should be without strong vibration and shock. The magnetic field near the installation site should not exceed 5 times the geomagnetic field in any direction. The leakage protection circuit breake normally should be installed vertically.
Installation method	Install vertically or horizontally.
Wiring method	Wiring reversely is prohibited. The only correct wiring is 1, 3, 5 connect power supply and 2, 4, 6 connect load.

OVERVIEW



Structure overview

15. Spindle bracket 16. Arc extinguisher barrier 17. Upper protection plate

18. Base

19. Face cover

20. Shunt tripper

The molded case circuit breaker is a integral type structure, which is made of precision combination of internal parts. The base is designed with mounting positions for fixed contacts of each phase and arc extinguisher. The moving contact combination is driven by a manual handle to contact or separate from the fixed contacts to achieve manual control of the breaking/closing. When the thermal/electromagnetic protection exceeds the factory preset value, the tripper drives the moving contact combination into protection breaking. Three-phase detection transformer, monitoring circuit board and tripper are installed internally. Protection values can be adjusted on site according to usage.

21. Auxiliary switch

23. Under-voltage tripper

24. Communication module

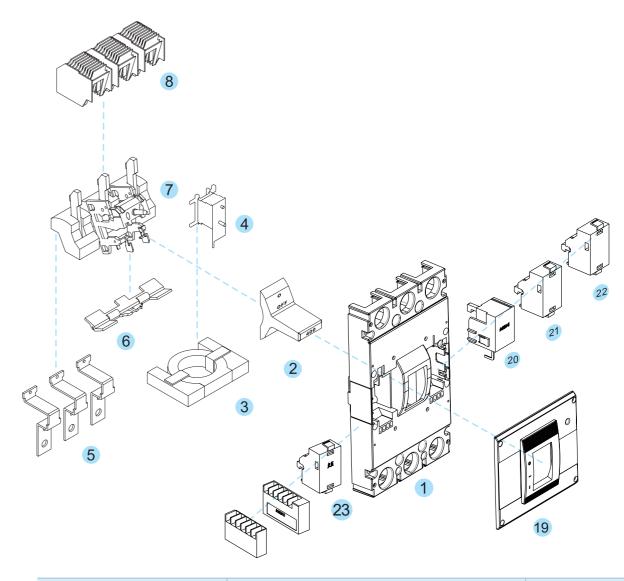
22. Alarm switch

Contact mechanism

The moving contacts of each phase are fixed to a base of SMC material, forming the moving contact combination. The breaking process is rapid due to the high strength spring. The arc extinguishers which are independent between each phase can extinguish arc rapidly.

Working method

The molded case circuit breaker is driven by a manual handle exposed on the panel, compressing the spring to close the circuit. When a fault occurs during normal operation, the tripper will be triggered by the thermal/electromagnetic tripper. The strong force of the spring instantly breaks the circuit, achieving over-current protection and short-circuit protection.



Protection value can be adjusted

According to the on-site situations, use the knobs on the front of the molded case circuit breaker to adjust the following parameters: 1. overload long delay action current and time; 2. short-circuit short delay action current and time; 3. short-circuit instantaneous action current; 4. pre-alarm action

Under-voltage tripper

When the supply voltage drops to the range of 70%-35% of the rated operational voltage, the under-voltage tripper can reliably break the circuit breaker. When the supply voltage is lower than 35% of the rated operational voltage, the under-voltage tripper can prevent the circuit breaker from closing. When the supply voltage is higher than 85% of the rated operational voltage, the under-voltage tripper can ensure the reliable closing of the circuit breaker. The rated value of the under-voltage is AC 50Hz, 230V, 400V.

Shunt tripper

The rated control power voltage of the shunt tripper: 50Hz, AC230V, AC400V; DC110V, 220V, 24V. When the voltage is 70%~110% of the rated value, it can reliably break the circuit breaker.



AfSIKAI Professional manufacture

MAIN TECHNICAL PARAMETERS









Technical	performance	specifications

ions										
			ASKM3L-125	ASKM3L-250	ASKM3L-400	ASKM3L-630				
			125	250	400	630				
			16, 20, 25, 32, 40, 50, 63, 80, 100, 125	100, 125, 140, 160,180, 200, 225, 250	225, 250, 315, 350, 400	400, 500, 630				
o. of poles			3/4	3/4	3/4	3/4				
V)			AC800							
e(V)			AC400	AC400	AC400	AC400				
tage Uimp(V))		8000	8000	8000	8000				
			⇒ 50(0)**	⇒ 50(0)**	→ 100(0)**	≯ 100(0)**				
Breaking capacity level			M	M	М	M				
ng capacity Ic	cu(kA)	AC400V	50	50	65	65				
ort-circuit breaking capacity Ics(kA) AC400V		AC400V	35	35	50	50				
U type tripper, non-delay AC type residual		pper, non-delay	0.03 / 0.1 / 0.3 / 0.5	0.03 / 0.1 / 0.3 / 0.5	_	_				
AC type residual current protection V type tripper, switchable between non-delay and delay		er, switchable between non-delay and delay	1.0 / 0.3 / 0.5	0.1 / 0.3 / 0.5	0.1 / 0.3 / 0.5	0.3 / 0.5 / 1				
	W type tripp	er, switchable between non-delay and delay	0.3 / 1 / 3 / 10	0.3 / 1 / 3 / 10	1/3/10/30	1/3/10/30				
nt protection	VA type tripp	per, switchable between non-delay and delay	0.1/0.3/0.5 0.1/0.3/0.5 0.1/0.3/0.5		0.1 / 0.3 / 0.5	0.3 / 0.5 / 1				
			A A							
rrent I∆no(n	nA)		½ I∆n(A) ½ I∆n(A)							
naking(breakir	ng) capac	city I∆m(kA)	1/4 lcu		1/4 Icu					
Electric	cal servic	e life(times)	8000	8000	7500	7500				
es)* Mechai	nical servi	ice life(times)-without maintenance	20000	20000	10000	10000				
Mechai	nical serv	ice life(times)-with maintenance	40000	40000	20000	20000				
W(3P/4	4P)		92/122	107/142	150/198	210/280				
L			150	165	257	280				
H			92	90	107	114.5				
יי יי יי יי	ng capacity long capacity lon	Ing capacity Icu(kA) Ing capacity Ics(kA) Ing capacity Icy(kA) Ing capa	Ing capacity Icu(kA) AC400V Ing capacity Ics(kA) AC400V Ing capacity Icy Icy Icy Icy Icy Icy Ing capacity Icy Icy Icy Icy Icy Ing capacity Icy Icy Icy Icy Icy Ing capacity Icy Icy Icy Icy Icy Icy Icy Ing capacity Icy Ic	125	125 250 16, 20, 25, 32, 40, 50, 63, 80, 100, 125 100, 125, 140, 160, 180, 200, 225, 250 3/4	125				

^{*}Note: According to GB/T14048.1, the term of "service life" indicates the probability that an appliance will complete a number of operating cycles before repairing or replacing a component.

Note:

^{**}Note: Choose the height of 6mm zero arc cover for 125 frame, 7.5mm for 250 frame, 9.3mm for 400 frame, 9.5mm for 800frame, realizing zero arc.

^{1.}when this series of three poles circuit breaker connected to a three-phase load, the load can not be connected the neutral pole, otherwise the circuit breaker will act falsely.

^{2.}when this series of three poles circuit breaker connected to a single-phase load, connect the phase line to the left pole, and connect the neutral line to the right pole. Do not connect the center pole.

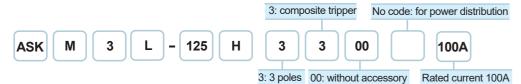




PROTECTION CHARACTERISTIC PARAMETERS-POWER DISTRIBUTION TYPE - COMPOSITE TRIPPER

The leakage circuit breaker for power distribution equipped with composite tripper has overload, short-circuit and leakage protection. The protection characteristics are factory set according to the following parameters. Some parameters can be customized.

Model Example:



Protection Fu	nction	Frame Rating	Rated Current In(A)	Action Charact	eristics		
Overload pro	tection	Whole series	16~630	e), no act within 1 h , act <1 h (In<63A) e), no act within 2 h , act <2 h (In>63A)	3A) 2 h (In>63A)		
Protection Fu	nction	Frame Rating	Rated Current In(A)		Short-circuit protection current set value Ir(A)		
		125	16~125	1	0In		
		250	100~140	1	0ln		
Short-circuit protection	230	160~250	10ln		Act instantaneously		
	400	250~400	10ln	5In can be customized	,		
		630	400~630	10ln			
Action allowe	d error			±	20%		
Protection Fu	nction	Frame Rating	Rated Current In(A)	Neutral Pole Ove Neutral Pole Sho	erload Protection Cur ort-circuit Protection (rent Setting Value(A), Current Setting Value(A	
		405	16~63		ln, Ir		
		125	80/125	63,630			
l		250	100 ~200	100,1000			
I pole protection 4 poles circuit	C/D	230	225/250	125,1250	can be customize		
oreaker)		400	250~315	225,2250	N pole overload protection current=I N pole short-circuit protection curren		
		400	350/400	250,2500	-	-	
		630	400~630	400,4000			
	A/B	Whole series	16~630		Without protection		

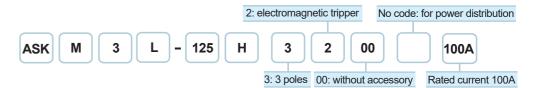
Residual current protection parameters default: AC type protection V type tripper,I \triangle n=0.5A, \triangle t=200ms, The parameters can be adjusted by the knobs on the panel.

Protection Function	Frame Rating	Residual curre tripper	ent	Current setting value I∆no(A)	Action time				
			U	0.03/0.1/0.3/0.5 adjustable, non-delay time					
	125/250	AC type protection	V	0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay					
	123/230	protoculon	W	0.3/ 1/ 3/ 10 adjustable, switchable between non-delay and delay	Maximum breaking time(ms) < 40				
	A type p	A type protection	VA	0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay	delay time ∆t(ms) (Ultimate non-drive	0	200	400	1000
Residual	Residual current	protection	V	0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay	time)				-
protection	400		W	1/ 3/ 10/ 30 adjustable, switchable between non-delay and delay	Maximum breaking time(ms)	<40	<300	<600	<2000
		A type protection VA		0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay	O O	Note: according to GB/T14048.2			
		AC type	V	0.3/ 0.5/ 1 adjustable, switchable between non-delay and delay	non-delay time, benchmark action current 5I∆ delay time, benchmark action current 2I∆n				
	630	switchable between non-delay and dela		1/ 3/ 10/ 30 adjustable, switchable between non-delay and delay					
				0.3/ 0.5/ 1 adjustable, switchable between non-delay and delay					

PROTECTION CHARACTERISTIC PARAMETERS-POWER DISTRIBUTION TYPE - ELECTROMAGNETIC TRIPPER

The circuit breaker for power distribution equipped with electromagnetic tripper only has short-circuit and leakage protection. The protection characteristics are factory set according to the following parameters.

Model Example:



Protection Function	Frame Rating	Rated Current In(A)	Short-circuit prot value	Action time		
	125	16~125	10ln			
	250	100~140	10In			
Short-circuit protection	230	160~250	10In		Act instantaneously	
	400	250~400	10In	5In can be customized	,	
	630	400~630	10In	343131111234		
Action allowed error			±2	20%		

Protection Func	tion	Frame Rating	Rated Current In(A)	Neutral Pole Short-circuit Protect	ion Current Setting Value(A)	
		125	16~63	10	Oln	
		125	80/125	630		
N pole protection		n		100~200	1000	
N pole protection (4 poles circuit	C/D	200	225/250	1250	can be customized: 10In	
breaker)		400	250~315	2250	our be oustornized. Tom	
		400	350/400	2500		
		630	400~630	4000		
	A/B	Whole series	16~630	Without pro	otection	

Residual current protection parameters default: AC type protection V type tripper, I \triangle n=0.5A, \triangle t=200ms, The parameters can be adjusted by the knobs on the panel

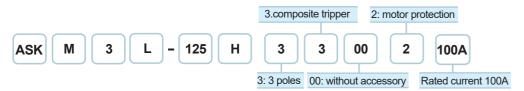
Protection Function	Frame Rating	Residual curre tripper	ent	Current setting value I∆no(A)	Action time				
			U	0.03/0.1/0.3/0.5 adjustable, non-delay time					
	125/250	AC type protection	V	0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay					
		F • • • • • • • • • • • • • • • • • • •	W	0.3/ 1/ 3/ 10 adjustable, switchable between non-delay and delay	Maximum breaking time(ms) < 40				
	A type protection	VA	0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay	delay time ∆t(ms) (Ultimate non-drive	0	200	400	1000	
Residual current		AC type protection	V	0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay	` time)	_			
protection	400		W	1/ 3/ 10/ 30 adjustable, switchable between non-delay and delay	Maximum breaking time(ms)	<40	<300	<600	<200
		A type protection VA		0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay	Note: according to GB/T14048.2			nt 51 🔿	
		AC type	V	0.3/ 0.5/ 1 adjustable, switchable between non-delay and delay	non-delay time, benchmark action current 5l∆r delay time, benchmark action current 2l∆n				
	630 A	protection		1/ 3/ 10/ 30 adjustable, switchable between non-delay and delay					
		A type protection	VA	0.3/ 0.5/ 1 adjustable, switchable between non-delay and delay					



PROTECTION CHARACTERISTIC PARAMETERS MOTOR PROTECTION COMPOSITE TYPE TRIPPER

The circuit breaker for motor protection equipped with composite tripper has overload, short-circuit and leakage protection. The protection characteristics are factory set according to the following parameters.

Model Example:



Protection Function	Frame Rating	Rated Current In(A)	Action Characteristics
Overload protection	Whole series	16~630	Act by I²rt 1.0In(cold state), no act within 2 h 1.2In(hot state), act within2 h 1.5In(hot state), ≤8 min 7.2In(cold state), 6s< Tp ≤20s Tripping level, 20

Protection Function	Frame Rating	Rated Current In(A)	Short-circuit protection current set value Ir(A)	Action time
Short-circuit protection	Whole series	16~630	12In	Act
Action allowed error			±20%	instantaneously

Protection Fu	Protection Function		rame Rating Rated Current In(A)		Neutral Pole Overload Protection Current Setting Value(A), Neutral Pole Short-circuit Protection Current Setting Value(A)			
		125	16~63		ln, Ir			
		125	80/125	63,756				
N note protection		250	100~200	100,1200				
N pole protection (4 poles circuit	C/D	230	225/250 125 1500 Call be co	can be customized: N pole overload protection current=In				
breaker)		400	250~315	225,2700	N pole short-circuit protection current=Ir			
		400	350/400	250,3000				
		630	400~630	400,4800				
	A/B	Whole series	16~630	Without protection				

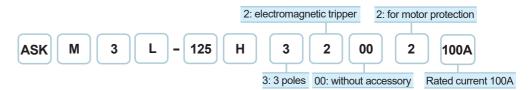
Residual current protection parameters default: AC type protection V type tripper, I \triangle n=0.5A, \triangle t=200ms, The parameters can be adjusted by the knobs on the panel.

Protection Function	Frame Rating	Residual curre tripper	Actio	on time	Э							
				U 0.03/0.1/0.3/0.5 adjustable, non-delay time								
	125/250	AC type protection	٧	0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay								
	123/230	protection.	W	0.3/ 1/ 3/ 10 adjustable, switchable between non-delay and delay	10 adjustable, Maximum breaki				ng time(ms) < 40			
	A type protection		0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay	delay time ∆t(ms) (Ultimate non-drive	0	0 200	400	1000				
Residual current		AC type protection	V	0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay	` time)							
protection	400		W	1/ 3/ 10/ 30 adjustable, switchable between non-delay and delay	Maximum breaking time(ms)	<40	<300	<600	<2000			
		A type protection VA		0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay	Note: according to G			CUTTO	nt 5l∧n			
		AC type	V	0.3/ 0.5/ 1 adjustable, switchable between non-delay and delay	non-delay time, benchmark action current 5l∠ delay time, benchmark action current 2l∆n							
630	630	Δ type protection V/Δ 0.3/ 0.		1/ 3/ 10/ 30 adjustable, switchable between non-delay and delay								
				0.3/ 0.5/ 1 adjustable, switchable between non-delay and delay								

PROTECTION CHARACTERISTIC PARAMETERS-MOTOR PROTECTION TYPE - ELECTROMAGNETIC TRIPPER

The circuit breaker for motor protection equipped with electromagnetic tripper only has short-circuit and leakage protection. The protection characteristics are factory set according to the following parameters.

Model Example:



Protection Function	Frame Rating	Rated Current In(A)	Short-circuit protection current set value Ir(A)	Action time
Short-circuit protection	Whole series	16~630 12ln		Act
Action allowed error			±20%	instantaneously

Protection Fu	Protection Function		Rated Current In(A)	Neutral Pole Overload Protection Current Setting Value(A), Neutral Pole Short-circuit Protection Current Setting Value(A)				
		125	16~63		12ln			
	C/D	125	80/125	756				
N I					250	100~200	1200	
N pole protection (4 poles circuit		250	225/250	1500	can be customized: 12In			
breaker)		400	250~315	2700	San be sustainized. 12m			
		400	350/400	3000				
		630	400~630	4800				
	A/B	Whole series	16~630	Without protection				

Residual current protection parameters default: AC type protection V type tripper, I \triangle n=0.5A, \triangle t=200ms, The parameters can be adjusted by the knobs on the panel.

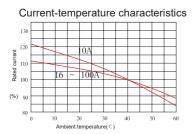
		, ,		•						
Protection Function	Frame Rating	Residual curre tripper	ent	Current setting value I∆no(A)	Actio	n time	Э			
				0.03/0.1/0.3/0.5 adjustable, non-delay time						
125/250	125/250	AC type protection	V	0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay						
	protocuen	W	0.3/ 1/ 3/ 10 adjustable, switchable between non-delay and delay	Maximum breaking time(ms) < 40						
	A type protection	VA	0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay	delay time ∆t(ms) (Ultimate non-drive	0	200	400	1000		
Residual current		AC type protection	V	0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay	` time)					
protection	400		W	1/ 3/ 10/ 30 adjustable, switchable between non-delay and delay	Maximum breaking time(ms)	<40	<300	<600	<200	
		A type protection VA		0.1/ 0.3/ 0.5 adjustable, switchable between non-delay and delay	O O	Note: according to GB/T14048.2				
		AC type	V	0.3/ 0.5/ 1 adjustable, switchable between non-delay and delay	non-delay time, benchmark action currer delay time, benchmark action current 21/2					
630	630	630 protection		1/ 3/ 10/ 30 adjustable, switchable between non-delay and delay						
		A type protection VA		0.3/ 0.5/ 1 adjustable, switchable between non-delay and delay						



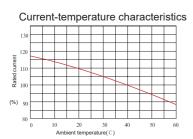
ASKM3L SERIES

POWER DISTRIBUTION TIME/CURRENT PROTECTION CHARACTERISTIC CURVE

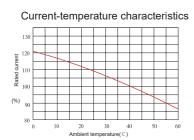
125A Frame Temperature compensation curve



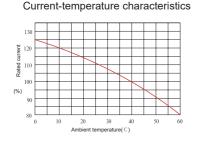
Temperature compensation curve 250A Frame



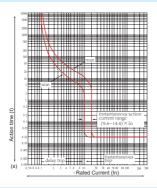
Temperature compensation curve 400A Frame



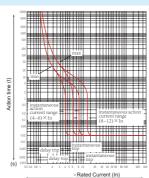
Temperature compensation curve 630A Frame



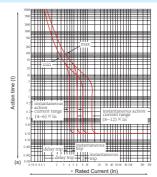
Action curve



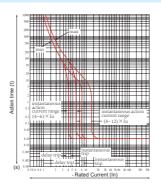
Action curve



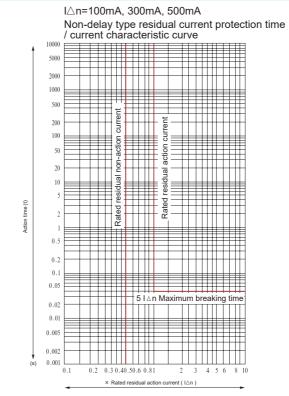
Action curve



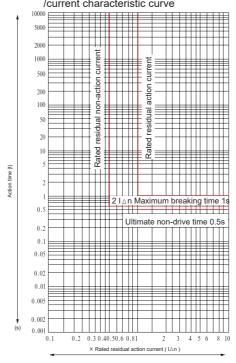
Action curve



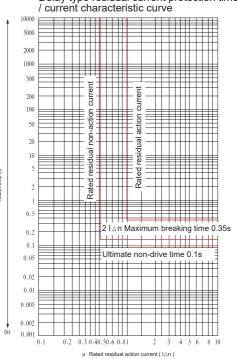
RESIDUAL CURRENT PROTECTION CHARACTERISTIC CURVE



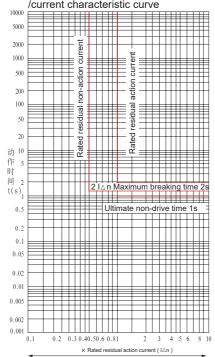
I∆n=100mA, 300mA, 500mA, 1000mA Delay type residual current protection time /current characteristic curve



I△n=100mA, 300mA, 500mA, 1000mA Delay type residual current protection time / current characteristic curve



I∆n=100mA, 300mA, 500mA, 1000mA Delay type residual current protection time /current characteristic curve







INTERNAL OPTIONAL ACCESSORIES

The ASKM3L thermomagnetic leakage circuit breaker has five basic accessory modules available for optional installation inside the switch.

Shunt Tripper MODEL: FJ-FT-ASKM3L

Usage: Shunt tripper is used to remotely control the breaking of the circuit breaker. It is instantaneous working system. Long time energizing is prohibited. Each power-on time is recommended to be no more than 1s. Standard outlet wire method: lead wire type Standard outlet wire length: 50cm Customizable outlet wire method: terminal type

Control power: Us=(70%-110%)Ue Frequency: 50/60 Hz

Default voltage: AC 220V Optional voltage:AC 380V DC110V DC220V

Ue: rated operational voltage of shunt tripper

Wiring diagram: SB Shunt Tripper Circuit breaker



Under-voltage tripper MODEL: FJ-QT-ASKM3L

Usage

Under-voltage tripper is used for low voltage protection of power lines and power-using equipment. It ensures that load equipment is not damaged by a malfunction caused by a voltage below the rated value. Standard outlet wire method: Module type

(Control module is installed on the side of the circuit breaker, and the under-voltage tripper is installed inside the breaker)

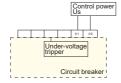
1.Control power voltage Us1: when Us1=(35%-70%)Ue, the under-voltage tripper can reliably break circuit breaker. 2.Control power voltage Us2: when Us2:Us2=(85%-110%)Ue, the circuit breaker can close normally.

3.Control power voltage Us3: when Us3≤35%Ue,the under-voltage tripper can prevent circuit breaker from closing. Frequency: 50/60Hz

Ue: rated operational voltage Standard voltage AC230V Optional voltage: AC380V AC110V

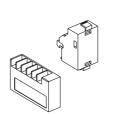
F14 ---

Wiring diagram:



The circuit breaker equipped with an underoltage tripper can only be normally opened and closed if Us2 voltage is input between the P1 and P2 terminals.

Outline:



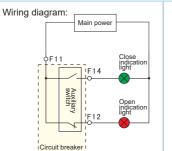
Auxiliary switch MODEL:FJ-FC-ASKM3L

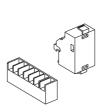
It is used to provide the breaking and closing status signal of the circuit breaker, helping the secondary control circuit to realize the automatic control function

1 normally open 1 normally closed: 1NO1NC 2 normally open 2 normally closed: 2NO2NC 4 normally open 4 normally closed: 4NO4NC Standard outlet wire method: lead wire type Standard outlet wire length: 50cm Customizable outlet wire method: terminal type When circuit breaker is at position of open or free trip

When circuit breaker is at closing position

Conventional thermal current: Ith=3A





Outline:

Outline:

MODEL: FJ-BC-ASKM3L Alarm switch

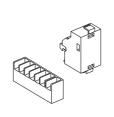
Usage:

It is used to provide the overload, short-circuit(free trip) and under-voltage fault(fault trip) status signal of the circuit breaker, helping the secondary control circuit to realize the automatic control function. Standard outlet wire method: lead wire type Standard outlet wire length: 50cm Customizable outlet wire method: terminal type When circuit breaker is at position of open/closed

--oR11

When circuit breaker is at position of free trip&fault trip

Conventional thermal current: Ith=3A



Leakage alarm unit module

It is used to provide alarm signal in the event of a leakage fault in the circuit breaker, helping the secondary control circuit to realize the automatic control function.

Note: II module is designed to meet the special function. Users should consider carefully when usin this function to protect the appliance.

MODEL: FJ-LDBJ-ASKM3L

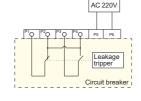
The leakage alarm unit has two modules: leakage alarm and tripping

The module issues alarm signal and the circuit breaker trips in case of leakage.

leakage alarm without tripping The module issues alarm signal but the circuit breaker does not trip in case of leakage.

Wiring diagram:

Wiring diagram:



Conventional thermal current: Ith=3A

Outline:



INTERNAL ACCESSORIES CODE TABLE

Depending on the application requirements, one or more base modules can be installed inside the switch. Each module has an individual code. Different modules can be combined and have a new accessory code.

Internal accessories installation position schematic diagram

☐ Alarm switch Shunt tripper ■ Auxiliary switch under-voltage tripper

	Left side installation		Right side installation	-	Lead wire direction
--	------------------------	--	-------------------------	---	---------------------

	,						
Code	Accessory	ASKN	/11L-125/250	ASKI	M1L-400	ASKM ²	1L-630
Coue	Accessory	3P/4P A/D	4P B/C	3P/4P A/D	4P B/C	3P/4P A/D	4P B/C
00	No accessory						
08	Alarm switch	4	4	4	4	4	4
10	Shunt tripper	4	•	4	4	+	4
	Auxiliary switch(1NO1NC)	4	◆ ■				
20	Auxiliary switch(2NO2NC)			4	4	4	4
02	Auxiliary switch(2NO2NC)	4	4				
30	Under-voltage tripper	40	• 0	4 0	+ 0	4 0	• 0
40	Shunt tripper+Auxiliary switch(1NO1NC)		• • • •				
40	Shunt tripper+Auxiliary switch(2NO2NC)				+ • 1 •		• • • •
12	Shunt tripper+Auxiliary switch(2NO2NC)		• • • •				
50	Shunt tripper+under-voltage tripper				4 0 • •		4 0 • •
00	2 sets of auxiliary switches(2NO2NC)		+ +				
60	2 sets of auxiliary switches(4NO4NC)				+ • • •		+ • • •
22	2 sets of auxiliary switches(3NO3NC)		4 1 1 +				
23	2 sets of auxiliary switches(4NO4NC)		+ 1 1 +				
70	Under-voltage tripper+Auxiliary switch(1NO1NC)		◆ ○ ■ →				
70	Under-voltage tripper+Auxiliary switch(2NO2NC)				4 0 8		◆ ○ ■ →
32	Under-voltage tripper+Auxiliary switch(2NO2NC)		◆ ○ ■ →				
18	Shunt tripper+Alarm switch		• • •		+ • □ +		+ • • •
00	Auxiliary switch(1NO1NC)+Alarm switch	4	◆ □				
28	Auxiliary switch(2NO2NC)+Alarm switch			4 🗓	← □	+	4
38	Under-voltage tripper+Alarm switch		◆ ○□ →				
40	Shunt tripper+Auxiliary switch(1NO1NC) +Alarm switch		• ••••				
48	Shunt tripper+Auxiliary switch(2NO2NC) +Alarm switch				← □ • →		• • • •
	2 sets of auxiliary switches(2NO2NC) +Alarm switch		← □□■ →				
68	2 sets of auxiliary switches(4NO4NC) +Alarm switch				← □□•		← □ ■→
05	2 sets of auxiliary switches(3NO3NC) +Alarm switch		← □□■ →				
78	Under-voltage tripper+Auxiliary switch(1NO1NC) +Alarm switch		← ○ :				

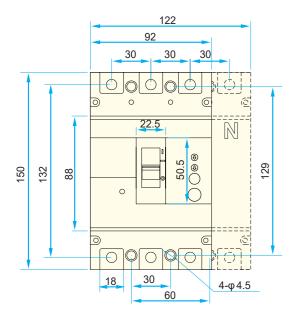


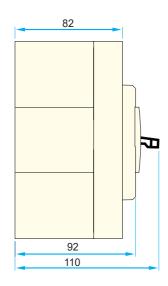
ASKM3L SERIES

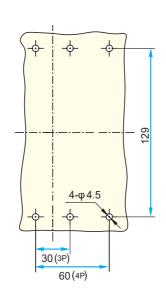
OUTLINE AND INSTALLATION DIMENSIONS

Front wiring

ASKM3L -125 Frame

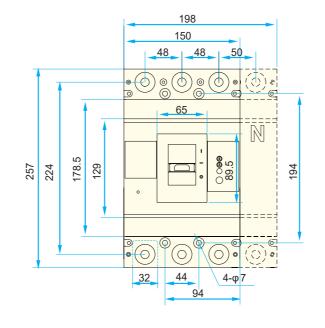


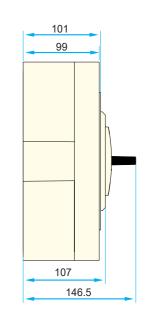


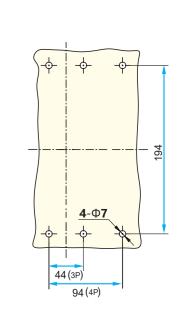


Front wiring

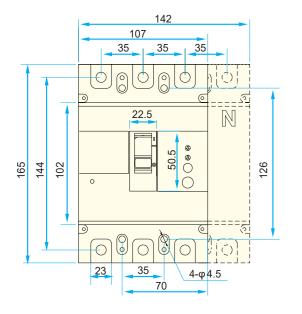
ASKM3L -400 Frame

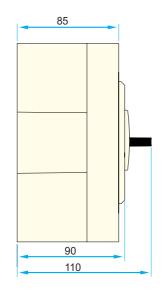


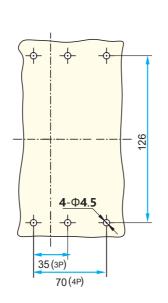


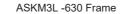


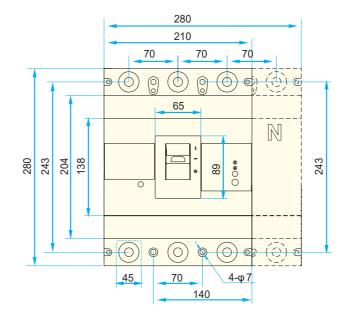
ASKM3L -250 Frame

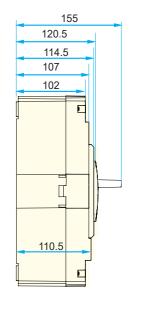


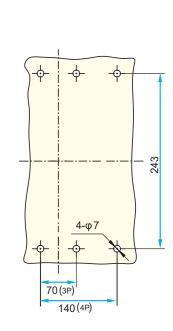
















External Optional Accessory- Plug-in Front Wiring Base

Optional plug-in front wiring base is available for ASKM3L circuit breaker.

Plug-in front wiring base(PF)

Usage:

The plug-in front wiring base is mounted on the back of the molded case circuit breaker, and is integrated with the breaker through conductive copper posts and fastening bolts. In the event of a serious circuit breaker failure, the circuit breaker can be quickly repaired and replaced without removing the primary cable.

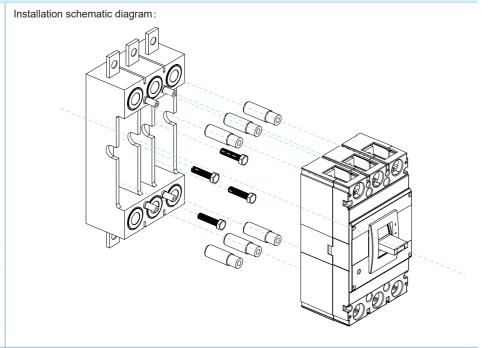
Copper bars dimensions(mm)



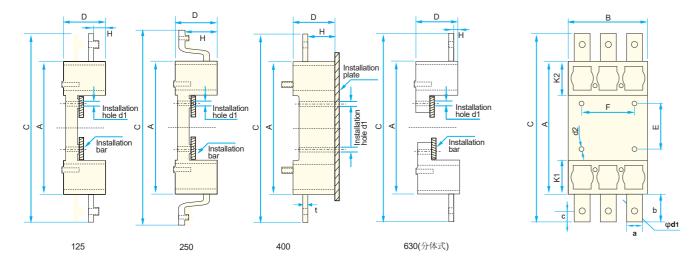
125-800 Frame

Frame	а	b	С	d1
125	19	21	11	6.5
250	22	36	15	8.5
400	25	37	15.5	11
630	35	50	15.5	13

MODEL: FJ-BQDZ-ASKM3EL



Outline and installation dimensions:



Frame		Outline and installation opening dimensions											
	Α	В	С	D	Е	F	Н	K1	K2	d2	t		
125A	172	96	214	50	60	66	15	38	38	7	3		
250A	183	110	258	51.5	64	70	46	44	44	7	3		
400A	277	150	352	80	135	115	31	_	_	7	6		
630A	344	210	444	87	188	91	13	62	62	11	8		

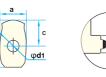
External Optional Accessory- Plug-in Rear Wiring Base

Optional plug-in rear wiring base is available for ASKM1L circuit breaker.

Plug-in rear wiring base(PR)

Usage: The plug-in rear wiring base is mounted on the back of the molded case circuit breaker, and is integrated with the breaker through conductive copper posts and fastening bolts. In the event of a serious circuit breaker failure, the circuit breaker can be quickly repaired and replaced without removing the primary cable.

Copper bars dimensions(mm)

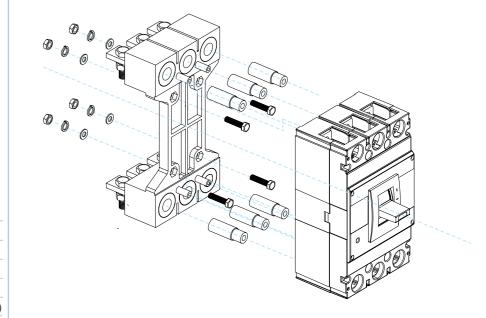




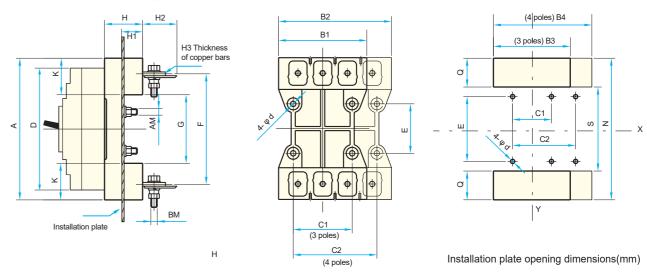
125-400 Fra	800 Frame						
Frame	а	b	С	d1			
125	18	34	18	8			
250	21	36	20	8			
400	30	43	22	12			
630	BM=M14(Bolt outlet w						

MODEL: FJ-BHDZ-ASKM3EL

Installation schematic diagram:



Outline and installation dimensions:



F		Outline and installation dimensions(mm)											Opening dimensions(mm)						
Frame	Α	B1	B2	C1	C2	D	Е	F	G	K	Н	H1	H2	НЗ	N	S	Q	В3	B4
125A	168	91	125	60	90	150	56	132	92	38	50	33	35	3.5	178	82	48	101	135
250A	186	107	145	70	105	165	54	145	94	46	50	33	37	5.5	196	84	56	117	155
400A	280	149	200	60	108	257	129	224	170	55	60	38	46	8	290	160	65	159	210
630A	305	210	280	90	162	280	146	243	181	62	87	60	16	1	315	171	72	220	290



ASKM3L SERIES

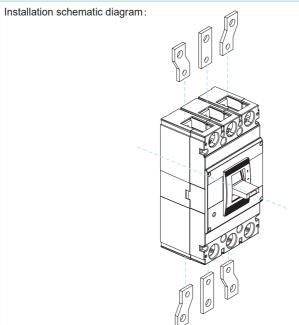
External Optional Accessory- Front Extended Copper Bars

Optional front extended wiring is available for ASKM3L circuit breaker.

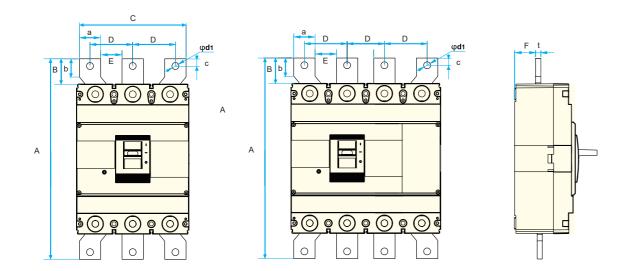
Front extended copper bars(C)

Usage: The front extended copper bars are installed at the inlet copper bars and outlet copper bars of the molded case circuit breaker, which expands the primary cable wiring space and facilitates the quick installation of cables on site.

MODEL: FJ-BQJC-ASKM3L



Outline and installation dimensions:



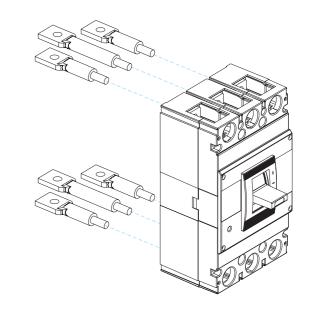
Fromm		Outline and installation opening dimensions										
1 10111111	Α	В	С	D	Е	F	а	b	С	d1	t	
125A	197	23	93	39	24	28	15	15	7.5	8.5	4	
250A	245	40	104	42	22	22.5	20	23	9	9	5	
400A	340	41	148	60	32	38	28	25	15	14	6	
630A	376	48	200	80	40	40	40	34	14	13	10	

External Optional Accessory- Rear Copper Bars

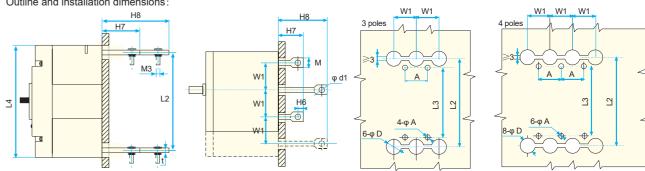
Optional rear wiring is available for ASKM3L circuit breaker.

Rear wiring(R) MODEL: FJ-BHJX-ASKM3L

Usage: The rear copper bars are installed at the inlet copper bars and outlet copper bars of the molded case circuit breaker, which can change the circuit breaker vertical front wiring to horizontal rear wiring, isolating the primary cable behind the mounting board and improving the safety factor of the electrical cabinet.







	125A	250A	400A	630A
Α	30	35	44	70
φΑ	4.5	4.5	7	7
φD	10	12	33	37
L2	132	144	224	243
L3	129	126	194	243
L4	150	165	257	280
W1	30	35	48	70
φ d1	8	8	12	16
M	19	19	31	34
t	4.5	4.5	7.5	10.5
H6	14	14	21	22
H7	53.5	60	55	73
H8	85.5	92	90	112



External Optional Accessory-Electric Operating Mechanism

Optional CD1 type or CD2 type electric operating mechanism is available for ASKM3L circuit breaker.

Electric operating mechanism-CD1

Usage:

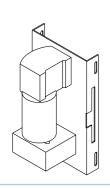
The electric operating mechanism is installed on the front side of the molded case circuit breaker. It realizes remote breaking and re-closing function through external control signal, and completes centralized monitoring and automatic control of transmission and distribution network. Internally driven by electromagnetic, it has the advantage of low starting current.

Applicable frame: 125, 250 Standard wiring method: Lead wire type

Electric Operating Mechanism- CD1

The electric operating mechanism is installed on the front side of the molded case circuit breaker. It realizes remote breaking and re-closing function through external control signal, and completes centralized monitoring and automatic control of transmission and distribution network. Internally driven by motor, it has the advantage of low starting current.

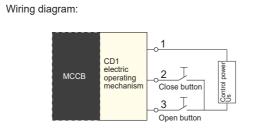
Applicable frame: 400, 630 Standard wiring method: Terminal type



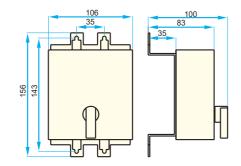
MODEL: FJ-DC/CD1-ASKM3L-250

Control power: Us=(85%-110%) Ue Frequency: 50Hz Ue:rated operational power supply of electric operating mechanism

Default voltage:AC 230V Optional voltage: AC 220V AC 380V AC 400V



Installation schematic diagram:



Applicable frame: 125, 250

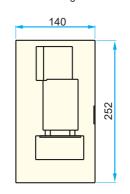
MODEL: FJ-DC/CD1-ASKM3L-400

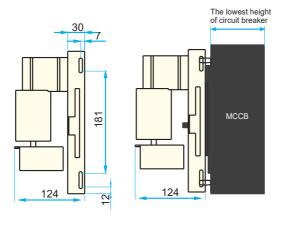
Control power: Us=(85%-110%) Ue Frequency: 50Hz Ue:rated operational power supply of electric operating mechanism Default voltage:AC 230V Optional voltage: AC 220V AC 380V AC 400V

Wiring diagram: operating

Installation schematic diagram:

DC 220V





Electric Operating Mechanism- CD2

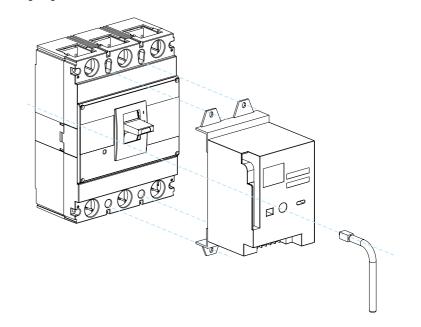
Usage:

The electric operating mechanism is installed on the front side of the molded case circuit breaker. It realizes remote breaking and re-closing function through external control signal, and completes centralized monitoring and automatic control of transmission and distribution network. Internally driven by permanent magnet motor, it has the advantage of low starting current and wide control voltage range.

Applicable frame: 125-630 whole series Standard wiring method: Terminal type

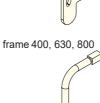
MODEL: FJ-DC/CD2-ASKM3L

Wiring diagram:



Manual handle:

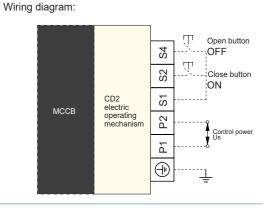
frame 125, 250

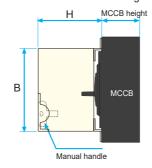


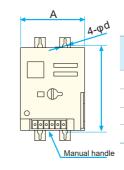
Control power: Us=(70%-110%) Ue Frequency: 50Hz Ue:rated operational voltage of shunt

tripper Default voltage:AC 220V Optional voltage: AC 110V

> DC 220V DC 110V DC 24V







Model	Outline ar	nd installati	on dimens	ions(mm)	Action	Mechanical	Motor
Model	Α	В	Н	4-φd	current (A)	service life	power (w)
ASKM3L-125	90	116	94	4.5	≪0.5	14000	14
ASKM3L-250	90	116	90	4.5	≤0.5	14000	14
ASKM3L-400	130	176	143	6.5	≪2	5000	35
ASKM3L-630	130	176	147	6.5	≤2	5000	35



External Optional Accessory-Manual Operating Mechanism

Optional manual operating mechanism is available for ASKM3L circuit breaker.

Manual operating mechanism

Usage:
The manual operating mechanism is installed on the front of the circuit breaker. Through rotating handle, it realizes the requirement of operation on the panels of drawer cabinet, distribution cabinet, power box, etc. It also provides the function of interlocking between the circuit breaker and the cabinet door panel.

Features:

1.When the circuit breaker is in the closed state, the manual operating mechanism is interlocked with the door plate and the cabinet door cannot be opened.

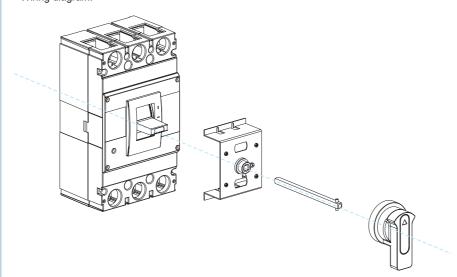
2.In case of failure when operating handle or manual operating mechanism in the closed state, the cabinet door can be opened by the emergency unlocking device on the operating handle.

3. For the manual handles matching with the manual operating mechanisms corresponding to different frames, they have the same openings on door plates.

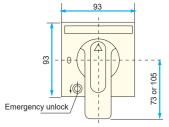
4. The length of standard square shaft is 150mm. We can also provide special specification.

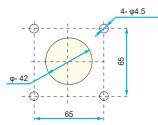
MODEL: FJ-SC-ASKM3L

Wiring diagram:



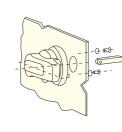
Square handle dimensions: type F

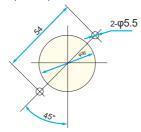




Square handle outline and door plate opening dimensions (the distance between the center of the opening and the hinge is not less than 100mm)

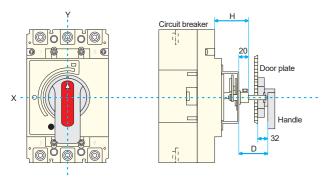
Round handle dimensions: type A(default)





Round handle outline and door plate opening dimensions (the distance between the center of the opening and the hinge is not less than 100mm)

Manual operating mechanism installation schematic diagram



Attention:

The manual operating mechanism used with our molded case circuit breaker must be ordered from our company to ensure the quality of the product. If the user purchases other brands, our company will not bear any adverse consequence occurring after the installation.

Manual operating mechanism installation dimensions

Mariaar operating meenament meta	illation aimendions			
Model	ASKM3L-125	ASKM3L-250	ASKM3L-400	ASKM3L-630
Installation dimensions(H)	54	54	84	76
Operating handle to the center of circuit breaker Y value	0	0	0	-20

RATED CURRENT AND WIRE CROSS SECTION AREA

Connection Wire Reference Cross Section Area

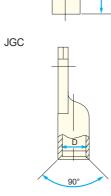
Rated current(A)	10	16, 20	25	32	40, 50	63	80	100	125, 140	160	180, 200, 225	250	315, 350	400
Wire cross section area (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	185	240

5	Cable		Сор	per bars
Rated current(A)	Cross section area(mm²)	Quantity	Size(mm×mm)	Quantity
500	150	2	30x5	2
630	185	2	40x5	2
700/800	240	2	50x5	2

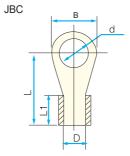
MODEL OF WIRING TERMINALS

JGC\JBC wiring terminal reference dimension

JGC	
<u>d</u>	B
	I

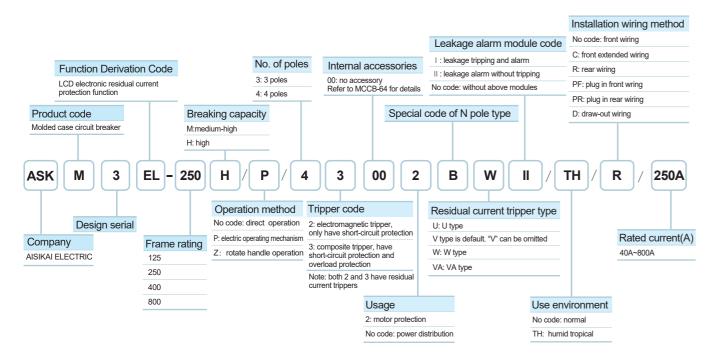


Model	Current(A)	Wire cross section area (mm²)	Terminal model	В	L	L1	D	d
	10, 16, 20	2.5	JBC2.5-8	15	24.5	8.5	φ2.6	φ8.2
	25	4	JBC4-8	13.4	20.4	9.2	φ2.8	φ8.2
	32	6	JBC6-8	15	24.5	10	φ3.5	φ8.2
	40, 50	10	JBC10-8	15	24.5	11	φ4.5	φ8.2
125	63	16	JBC16-8	12.5	41	33.5	φ6	φ8.2
	80	25	JGC25-8	14	46	38.5	φ7	φ8.2
	100	35	JGC35-8	15.5	52	44.5	φ8	φ8.2
	100	35	JGC35-8	15.5	52	44.5	φ8	φ8.2
	125, 140	50	JGC50-8	17	54	45	φ10	φ8.2
	160	70	JGC70-8	21.6	61	52	φ11	φ8.2
	100	35	JGC35-8	15.5	52	44.5	φ8	φ8.2
250	125, 140	50	JGC50-8	17	54	45	φ10	φ8.2
	160	70	JGC70-8	21.6	61	52	φ11	φ8.2
	180, 200, 225	95	JGC95-8	22	66	57	φ13	φ8.2
	250	95	JGC95-8	22	66	57	φ13	φ8.2
			1			!	-	+





ASKM3EL LCD INTELLIGENT ELECTRONIC LEAKAGE PROTECTION MOLDED CASE CIRCUIT BREAKER SELECTION TABLE



Note: the special code of N pole type(for 4 poles products only. The default type is B if there is no special instructions when ordering)

- A: N poles does not have over-current tripper. N pole is always closed and does not break/close along with the other three poles.
- B: N poles does not have over-current tripper. N pole breaks/closes along with the other three poles. N pole is equipped with "first close, then split" function as standard.
- C: N poles has over-current tripper. N pole breaks/closes along with the other three poles. N pole is equipped with "first close, then split" function as standard.
- D: N poles has over-current tripper. N pole is always closed and does not break/close along with the other three poles.

Design marking

ASKM3EL

Model definition 1:

ASKM3EL-125HP/43002AWII/TH/R, In=125A

- 1 LCD electronic leakage protection molded case circuit breaker. 125A frame, high breaking capacity, electric operating mechanism;
- 2. 4 poles, composite tripper, no accessory;
- 3. for motor protection. N poles does not have over-current tripper (A type). W type residual current tripper, leakage alarm without tripping(leakage alarm and tripping is optional),humid tropical
- 4. rear wiring, rated current 125A

Model definition 2:

ASKM3EL-250M/4300/250A

- 1. LCD electronic leakage protection molded circuit breaker, 250A frame,
- medium-high breaking capacity, manual operation(implicit);
- 2. 4 poles, electronic tripper, no accessory;
- 3. for power distribution (implicit), N poles does not have over-current tripper,N pole breaks/closes along with the other three poles(B type, implicit);
- 4. V type residual current tripper(implicit), without leakage alarm module, normal environment(implicit);
- 5. front wiring(implicit), rated current 250A

STANDARDS

IEC60947-1 IEC60947-2 GB/T14048.1 GB/T14048.2 IEC60947-4-1 GB/T2423.10

GB/T2423.4

GB/T14048.4

ASKM3EL LCD INTELLIGENT ELECTRONIC LEAKAGE PROTECTION MOLDED CASE CIRCUIT BREAKER

OVERVIEW



CLASSIFICATION

FEATURES

APPLICATIONS

Classified by wiring method

circuit breaker communication protocol".

Front wiring, extended front wiring, rear wiring, plug in front wring, plug in rear wiring, draw out front wiring, draw out rear wiring

Basing on the ASK3E-Y MCCB, we integrate the residual current protection function, we produce a new

LCD intelligent electronic leakage protection type circuit breaker ASKM3EL (MCCB for short). MCCB can

display real-time three phases currents, voltages and residual currents and upload data through communi-

cation network, realizing four remote functions and meeting the requirements of "Low-voltage molded case

MCCB have protections for overload, short-circuit, under-voltage, over-voltage, phase-loss, zero-loss, can

protect circuits and equipment from damage. MCCB also have residual current protection, providing

protection against dangerous voltage exposure to people due to insulation damage. The selective protec-

tions of ACB have high accuracy, which can improve the reliability of power supply and avoid unnecessary

MCCB is suitable for the distribution network of AC 50Hz, rated insulation voltage 1000V, rated voltage

400V and rated current up to 800A. MCCB can be used for infrequent switching of lines and infrequent

starting of motors. Special places can use leakage alarm non-tripping module to avoid major losses caused

by power outages. MCCB meet the requirements of Article 4.6 of GB13955-2005.

Classified by accessories

Internal accessories: shunt tripper, under-voltage tripper, auxiliary tripper, alarm tripper, communication module External accessories: manual operating mechanism, electric operating mechanism

Compatible and Small

power outages

Have rich functions and small size. Have the same dimensions as ASKM3E, convenient to use in combination.

Excellent Performance

The ultimate short-circuit breaking capacity is up to 75KA. The operation life is up to 10000 times. Rated impulse withstand voltage is up to 12KV. With isolation function, High reliability, correct indication, excellent

Meet Requirements of Intelligent Management

Integrated protection functions of overload, short-circuit, under-voltage, over-voltage, phase-loss, zero-loss. Can install all kinds of accessories, auxiliary, alarm, under-voltage, shunt, etc, meeting requirements of all kinds of controls

Intelligent Communication

Built-in RS485 communication interface. With remote measurement, remote communication, remote control, remote adjustment and other functions to achieve intelligent management of the power grid.

User Friendly Man-Machine Interface

It adopts large LCD display, which automatically and cyclically displays real-time current, voltage, product breaking and closing status, fault tripping cause, fault tripping phase sequence and tripping parameters, with clear operation interface. Users can easily realize the control and parameter adjustment of circuit breaker on the circuit breaker panel.

NORMAL OPERATIONAL CONDITIONS AND INSTALLATION METHODS

Category	Requirement
Altitude	Lower than 2000 meters.
Operational temperature	Between -5 $^\circ\!$
Pollution level	Level 3
Installation level	The installation level of circuit breaker main circuit is ${ \mathbb I \! I}$, it's ${ \mathbb I \! I}$ for the auxiliary circuit and control circuit which do not connect with the main circuit .
Installation environment	Suitable for electromagnetic environment.
Operational humidity	The relative humidity at $+40^\circ\text{C}$ shall not exceed 50%. Higher relative humidity is allowed at lower temperature. The average maximum relative humidity is 90% in the most humid month and this month has the average minimum temperature of $+25^\circ\text{C}$. The condensation that occurs on the surface of the product due to temperature changes should also be taken into consideration.
Installation conditions	Use environment should be without strong vibration and shock. The magnetic field near the installation site should not exceed 5 times the geomagnetic field in any direction. The leakage protection circuit breaker normally should be installed vertically.
Installation method	Install vertically or horizontally.
Wiring method	Wiring reversely is acceptable.



MAIN TECHNICAL PARAMETERS









Technical	performance	specifications

ecnnical performance specifications										
Model			ASKM3EL-12	25	ASKM3EL-250		ASKM3EL-400		ASKM3EL-	800
Frame rating current Inm(A)			125		250	250			800	
Rated current In(A)			40-125		100-250		160-400		630(250-630)/800(315-800)	
No. of poles			3/4				3/4		3/4	
Rated insulation voltage Ui(V)			AC1000 A				AC1000		AC1000	
Rated operational voltage Ue(V)			AC380/AC400/AC415 AC			415	AC380/AC400/AC	2415	AC380/AC	400/AC415
Rated impulse withstand voltage	Uimp(V)		12		12		12		12	
rc distance(mm)			≯ 50(0)**		≯ 50(0)**		≯ 100(0)**		→ 100(0)**	
Breaking capacity level			М	Н	M	Н	М	Н	М	Н
JItimate short-circuit breaking cap	pacity Icu(kA)	AC400V	50	85	50	85	70	85	70	100
ervice short-circuit breaking cap	acity Ics(kA)	AC400V	35	65	35	65	50	65	50	65
ted short-time withstand current lcw(kA)/1s			10		10		10		10	
Jse category			В				В		В	
Over-current tripper type/residual	current tripper t	уре	• •			nic AC type	Electronic/Electro	onic AC type	Electronic/l	Electronic AC type
Rated residual action current	I∆n(A)		50/100/150/2	200/300/500/1000	50/100/150/200/30	0/500/1000	50/100/150/200/3	00/500/1000	50/100/150)/200/300/500/1000
Rated residual non-action current	t I∆no(mA)		½ I∆n(A)		½ I∆n(A)					
ated residual short-circuit makin	g(breaking) capa	acity I∆m(kA)	½ lcu				1/4 Icu			
	Electrical servi	ice life(times)	8000		8000		7500		7500	
perational performance(times)*	Mechanical ser	rvice life(times)-without maintenance	20000		20000		10000		10000	
	Mechanical ser	rvice life(times)-with maintenance	40000		40000		20000		20000	
W(3P/4P)			107/142		107/142		150/198		210/280	
	L		165		165		257		400	
W A A H	Н		105		105		110		114.5	

^{*}Note: According to GB/T14048.1, the term of "service life" indicates the probability that an appliance will complete a number of operating cycles before repairing or replacing a component.

cycles before repairing or replacing a component.

**Note: Choose the height of 7.5mm zero arc cover for 125 frame, 7.5mm for 250 frame, 9.3mm for 400 frame, 9.5mm for 800frame, realizing zero arc.



ASKM3EL SERIES

INDICATION STRUCTURE INTRODUCTION

Circuit Breaker Front Indication



Use the buttons on the panel to manipulate the circuit breaker



Use "(Beck)" "(Beck)" "(O)" to modify the contents on the screen;

FUNCTIONS TABLE

Standard funct	ions table					
	Current measurement	I1, I2, I3, IN				
	Residual current measurement	I∆n				
Measurement	Voltage measurement	Line voltage: U12, U23, U31				
	voitage measurement	Phase voltage: U1N, U2N, U3N				
	Setting	Menu setting				
		Overload, short-circuit delay, short-circuit instantaneous, grounding, fault phase sequence				
Maintenance	Fault memory	Over-voltage protection, under-voltage protection, fault phase sequence				
		Phase-loss protection, zero-loss protection, fault phase sequence				
		Residual current tripping value, residual current tripping time				
	History records(the las	t 10 fault communication output)				
	Real-time current value	e				
Display	Real-time voltage value					
	Setting value display(ir	nclude rated residual action current, limit non-actuate time)				
	Last fault type, fault cu	rrent or fault voltage, time of fault				

Optional functions table

	Optional functions table		Default setting	Optional	setting
	Long delay protection	Trip	Alarm	Off	
	Short delay protection		Trip	Alarm	Off
	Short-circuit instantaneous protection		Trip	Alarm	Off
	Over-voltage protection		Off	Alarm	Trip
Protection / alarm	Under-voltage protection	Off	Alarm	Trip	
	Phase-loss protection	Off	Alarm	Trip	
	Zero-loss protection	Off	Alarm	Trip	
	Overload pre-alarm	Off	Alarm		
	Grounding fault protection	No	Optional		
	Residual current alarm and trip	Choose one	No	Optional	
	Residual current alarm without trip	of two	No	Optional	
Communication	General MODBUS communication	Choose one	Have		
function	Special "Low-voltage molded case circuit breaker communication protocol"	of two		Optional	

[&]quot;Operation" indication: lit on when the circuit breaker is working normally;

[&]quot;Overload" indication: flashes when the circuit breaker is in pre-alarm condition, lit on when the circuit breaker is in overload tripping condition;

[&]quot;Voltage fault" indication: lit on when the circuit breaker in in under-voltage, under-voltage or phase-loss condition;

[&]quot;Leakage fault" indication: when the leakage current reaches 50% of the action value, the red light flashes; when the leakage current reaches 70%-80% of the action value, the red light is lit on.





PROTECTION CHARACTERISTIC PARAMETERS-POWER DISTRIBUTION TYPE- ELECTRONIC TRIPPER-LSI 3 SECTION PROTECTION

The circuit breaker for power distribution equipped with electronic tripper has 3 section protection

(LSI, i.e. overload long delay, short-circuit short delay, short-circuit instantaneous). The protection characteristics are factory set according to the following parameters.

Model Example:

-xample.	3: electro	onic tripper	No code: 1	for power distribution
ASK M 3 E L - 125 H	4	3 00		125A
4	1: 4 poles	00: without a	ccessory	Rated current 125A

Protection Function	Frame Rating (Inm)	Rated Current In(A)	Current / Voltage Setting Value	;	Action Characteristics/time						
	125	125	Ir1=12.5-125		Act by I2rt						
	250	250	Ir1=63-250		1.05lr1: no act within 2 h 1.3lr1: act within 1h 2lr1: t1=12s						
Overload	400	400	Ir1=160-400								
long delay		630	Ir1=250-630	adjustable parameters:							
L	800	800	Ir1=315-800		t1= (12, 60, 80, 100, 150)s						
	Action allowe	d error			1.3Ir1~3In: ± 10%; ≥3In: ± 20%						
	125	125			1.5lr2: t2=(0.06-0.1-0.2-0.3-0.4)s						
	250	250			Definite-time:						
Short-circuit	400	400	Ir2 = 8Ir1		t2=0.06, 0.1, 0.2s: ± 0.03s t2=0.3, 0.4s: ± 15%						
short delay S	.00	630	adjustable parameters: Ir2=(2~12)	lr1	Note: when Ir2 ≤ 1<1.5Ir2,						
Ü	800	800									
	Action allowe		1lr1		when 1.5lr2≤1 <lr3, definite-time action:</lr3, 						
	Progressive g		± 15%		Inverse-time or definite-time is optional.						
	Ů Ů		± 1370								
	125	125		Act instantaneously < 0.2							
	250	250	lr3 = 10lr1								
Short-circuit	400	400	adjustable parameters: Ir2=(4~14)								
nstantaneous	800	630 800									
ļ	Action allowe		1lr1								
	Progressive q		± 15%								
Neutral pole	i logiessive g	ladation	1 1070								
protection 4 poles C type	Whole series	125~800	Ir1N=Ir1, Ir2N=Ir2, Ir3N=Ir3		1~30s						
Overload pre-alarm	Whole series	125~800	Ir0=0.9Ir1 adjustable parameters:	lr0=(0.7~1.0)×lr1	1~30s						
	Whole series	125~800	Phase voltage: 253V~286V; Line vo	ltage: 266V~323V	1s						
Over-voltage protection	Action allowe	d error	1V		± 5%						
·	Progressive g	radation	± 5%		1~30s						
	Whole series	125~800	Phase voltage: 154V~187V; Line vo	oltage: 266V~323V	1s						
Under-voltage	Action allowe	d error	1V		± 5%						
protection	Progressive g	radation	± 5%		1~5s						
Phase-loss,	Whole series	125~800			± 5%						
zero-loss protection	Progressive g	radation									
				No delay type	Maximum breaking time(ms) < 40						
Residual current	Whole series	50/100/150/200/300/ ries 125~800 500/1000/OFF		No delay time, delay adjustable	Delay time ∆t(ms) (limit non-actuate time) 0 100 200 300 500 1000						
protection			adjustable	type	Maximum breaking time (ms) <150 <250 <350 <550 <950 <1900						
			уро		Note: according to GB/T 14048.2 for no delay type, the base action current 5l∆n; for delay type, the base action current is 2l∆n.						

PROTECTION CHARACTERISTIC PARAMETERS-POWER DISTRIBUTION TYPE

- ELECTRONIC TRIPPER-LSIG 4 SECTION PROTECTION

The circuit breaker for power distribution equipped with electronic tripper has 4 section protection (LSI, i.e. overload long delay, short-circuit short delay, short-circuit instantaneous, grounding protection).

The protection characteristics are factory set according to the following parameters. Model Example:

ipie.	3: electronic tripper Grounding pro			g protection
ASK M 3 E L - 125 H	3	3 00	G	125A
3	3: 3 poles	00: without ac	cessory	Rated current 125A

Protection Function	Frame Rating (Inm)	Rated Current In(A)	Current / Voltage Setting Value	Action Characteristics/time			
	125	125	Ir1=12.5-125	Act by I²rt			
Overload	250	250	Ir1=63-250	1.05Ir1: no act within 2 h			
long delay	400	400	Ir1=160-400	1.3Ir1: act within 1h 2Ir1: t1=12s			
L	000	630	Ir1=250-630	adjustable parameters:			
	800	800	Ir1=315-800	t1= (12, 60, 80, 100, 150)s			
	Action allowe	d error		1.3lr1~3ln: ± 10%; ≥3ln: ± 20%			
	125	125		1.5lr2: t2=0.3s			
	250	250		Definite-time: t2=(0.06-0.1-0.2-0.3-0.4)			
Short-circuit short delay	400	400	lr2 = 8lr1	t2=0.06, 0.1, 0.2s: ± 0.03s t2=0.3, 0.4s: ± 15%			
Siloit delay	900	630	adjustable parameters: Ir2=(2~12)Ir1	Note: when Ir2 ≤ 1<1.5Ir2,			
	800	800		inverse-time action;			
	Action allowe	d error	1lr1	when 1.5lr2≤1 <lr3, definite-time action;</lr3, 			
	Progressive g	radation	± 15%	Inverse-time or definite-time is optional			
	125	125					
	250	250	lr3 = 10lr1				
Short-circuit	400	400		Act instantaneously < 0.2			
nstantaneous	800	630	adjustable parameters: Ir2=(4~14) Ir1				
I	800						
	Action allowe	d error	1lr1				
	Progressive gradation		± 15%				
	Whole series	125~800	Ir4=0.8In adjustable parameters: Ir4=(0.3~0.8)In+OFF	<0.5lr4 do not act act, > 1.0lr4 delay a			
Grounding protection	Action allowed error		0.1ln	t4=0.4 s+20% adjustable parameters:t4=0.1/0.2/0.3/0.4			
	Progressive gradation		± 15%	0.1s±0.03s; 0.2s±0.03s; 0.3s,0.4s: ±15			
Neutral pole protection 4 poles C type	Whole series	125~800	Ir1N=Ir1, Ir2N=Ir2, Ir3N=Ir3				
Overload pre-alarm	Whole series	125~800	Ir0=0.9Ir1 adjustable parameters: Ir0=(0.7~1.0)×Ir1				
	Whole series	125~800	Phase voltage: 253V~286V; Line voltage: 437V~494V	± 5%			
Over-voltage protection	Action allowed	derror	1V	1~30s			
protoction	Progressive gr	radation	± 5%	1s			
	Whole series	125~800	Phase voltage: 154V~187V; Line voltage: 266V~323V				
Under-voltage protection	Action allowe	d error	1V	± 5%			
	Progressive g	radation	± 5%	1~5s			
Phase-loss,	Whole series	125~800		± 5%			
zero-loss protection	Action allowe	d error					
Residual current protection	Whole series	125~800	50/100/150/200/300/ 500/1000/OFF adjustable	Note: same as 3 sections protection parameter			





PROTECTION CHARACTERISTIC PARAMETERS-MOTOR PROTECTION TYPE- ELECTRONIC TRIPPER-LSI 3 SECTION PROTECTION

The circuit breaker for motor protection equipped with electronic tripper has 3 section protection (LSI, i.e. overload long delay, short-circuit short delay, short-circuit instantaneous).

The protection characteristics are factory set according to the following parameters.

Model Example:

							3: electronic tripper			2: motor protection			
ASK M	3	E	L	-	125	Н	3	3	00		2	32A	
									/				
							3: 3 poles	s 00: wi	thout a	cesso	ry	Rated curre	ent 3

Protection Function	Frame Rating (Inm)	Rated Current In(A)	Current / Voltage Setting Va	alue	Action Characteristics/time			
	125	125	Ir1=40-125		Act by I²rt, t1=12s,can be adjusted to 60/80/150s			
	250	250	Ir1=100-250	1.05lr1 no act within 2 h 1.2lr1 act within 1h				
Overload long delay	400	400	Ir1=160-400	1.5lr1 21.3s 107s 142s 178s 267s 2lr1, t1 12s 60s 80s 100s 150s				
L	800	630	Ir1=250-630		7.2lr1 0.93s 4.63s 6.17s 7.72s 11.6s tripping level - 10 10 20 30			
	Action allowed	d error			1.3lr1~3ln: ± 10%; ≥3ln: ± 20%			
	125	125			1.5lr2: t2=0.3s			
Short-circuit	250	250	Ir2 = 8Ir1		Definite-time: t2=0.06, 0.1, 0.2s: ± 0.03s			
short delay S	400	400	adjustable parameters: Ir2=(2~	t2=0.3, 0.4s: ± 15% Note: when Ir2≤1<1.5Ir2,				
	800	630		inverse-time action; when 1.5lr2≤1 <lr3,< td=""></lr3,<>				
	Action allowed	d error	1lr1		definite-time action;			
	Progressive g	radation	± 15%		Inverse-time or definite-time is optional			
	125	125						
Short-circuit	250	250	lr3 = 12lr1					
	400	400	adjustable parameters: Ir3=(4~	·14) lr1	Act instantaneously < 0.2			
	800	630						
	Action allowed	d error	1lr1					
	Progressive g	radation	± 15%					
Neutral pole protection 4 poles C type	Whole series	125~630	Ir1N=Ir1, Ir2N=Ir2, Ir3N=Ir3					
Overload pre-alarm	Whole series	125~630	Ir0=0.9Ir1 adjustable paramete	rs: Ir0=(0.7~1.0)×Ir1				
	Whole series	125~630	Phase voltage: 253V~286V; Line	e voltage: 437V~494V	1~30s			
Over-voltage protection	Action allowed	d error	1V		1s			
	Progressive g	radation	± 5%		± 5%			
	Whole series	125~630	Phase voltage: 154V~187V; Line	e voltage: 266V~323V	1~30s			
Under-voltage protection	Action allowed	d error	1V		1s			
protection	Progressive g	radation	± 5%		± 5%			
Phase-loss, zero-loss	Whole series	125~630			1~5s			
protection	Progressive g	radation			± 5%			
Residual current protection	Whole series 125~630		50/100/150/200/300/ 500/1000/OFF adjustable	No delay type No delay time, delay adjustable type	Maximum breaking time(ms) < 40 Delay time \triangle t(ms) 0 100 200 300 500 1000 Maximum breaking time <150 <250 <350 <550 <950 <1900 Note: according to GB/T 14048.2 for no delay type, the base action current 5 \blacksquare \triangle n; for delay type, the base action current is $2 \blacksquare \triangle$ n.			

PROTECTION CHARACTERISTIC PARAMETERS-MOTOR PROTECTION TYPE - ELECTRONIC TRIPPER-LSIG 4 SECTION PROTECTION

The circuit breaker for motor protection equipped with electronic tripper has 4 section protection (LSI, i.e. overload long delay, short-circuit short delay, short-circuit instantaneous, grounding protection).

The protection characteristics are factory set according to the following parameters. Model Example:

'	3: electro	onic trippe	er 2: m	notor prote	ction	Rated current	32A
ASK M 3 E L - 125 H	3	3	00	2	G	32A	

3: 3 poles 00: without accessory Grounding protection

Protection Function	Frame Rating (Inm)	Rated Current In(A)	Current / Voltage Setting Value	Action Characteristics/time			
	125	125	Ir1=12.5-125	Act by I²rt, t1=12s,can be adjusted to 60/80/150s			
Overload	250	250	Ir1=63-250	1.05lr1 no act within 2 h 1.2lr1 act within 1h			
long delay	400	400	Ir1=160-400	1.5lr1 21.3s 107s 142s 178s 267s 2lr1, t1 12s 60s 80s 100s 150s			
L	800	630	Ir1=250-630	7.2lr1 0.93s 4.63s 6.17s 7.72s 11.6s tripping level – 10 10 20 30			
	Action allowe	d error		1.3lr1~3ln: ± 10%; ≥3ln: ± 20%			
	125	125		1.5lr2: t2=0.3s			
01	250	250		Definite-time: t2=(0.06-0.1-0.2-0.3-0.4) t2=0.06, 0.1, 0.2s: ± 0.03s			
Short-circuit short delay	400	400	adjustable parameters: Ir2=(2~12)Ir1	t2=0.3, 0.4s: ± 15%			
S	800	630	-	Note: when Ir2≤1<1.5Ir2, inverse-time action;			
	Action allowe	d error	1lr1	when 1.5lr2≤1 <lr3,< td=""></lr3,<>			
	Progressive g		± 15%	definite-time action; Inverse-time or definite-time is optional			
	125	125	-	and the space of t			
	250	250	lr3 = 10lr1				
Short-circuit nstantaneous	400	400	adjustable parameters: lr2=(4~14) lr1	Act instantaneously < 0.2			
1	800	630					
	Action allowed error		1lr1				
	Progressive gradation		± 15%				
	Whole series	125~800	Ir4=0.8In adjustable parameters: Ir4=(0.3~0.8)In+OFF	<0.5lr4 do not act act, > 1.0lr4 delay ac			
Grounding protection	Action allowed error		Action allowed error		0.1ln	t4=0.4 s+20% adjustable parameters:t4=0.1/0.2/0.3/0.	
	Progressive g	radation	± 15%	0.1s±0.03s; 0.2s±0.03s; 0.3s,0.4s: ±15			
Neutral pole protection 4 poles C type	Whole series	125~800	Ir1N=Ir1, Ir2N=Ir2, Ir3N=Ir3				
Overload pre-alarm	Whole series	125~800	Ir0=0.9Ir1 adjustable parameters: Ir0=(0.7~1.0)×Ir1				
	Whole series	125~800	Phase voltage: 253V~286V; Line voltage: 437V~494V	± 5%			
Over-voltage protection	Action allowed	d error	1V	1~30s			
protoction	Progressive gr	radation	± 5%	1s			
	Whole series	125~800	Phase voltage: 154V~187V; Line voltage: 266V~323V				
Under-voltage protection	Action allowe	d error	1V	± 5%			
	Progressive g	radation	± 5%	1~5s			
Phase-loss,	Whole series	125~800		± 5%			
zero-loss protection	Action allowe	d error					
Residual current protection	Whole series	125~800	50/100/150/200/300/ 500/1000/OFF adjustable	Note: same as 3 sections protection parameter			



AISIKAI

Professional manufacture

INTERNAL OPTIONAL ACCESSORIES The ASKM3EL electronic circuit breaker has five basic accessory modules available for optional installation inside the switch. Shunt Tripper MODEL: FJ-FT-ASKM3EL Wiring diagram: Outline: Usage: Shunt tripper is used to remotely control the Control signal: passive close dry contact control breaking of the circuit breaker, realizing the intelligent operation of power distribution with external control circuits SB Under-voltage tripper MODEL: FJ-QT-ASKM3EL 1.Control power voltage Us1: when Us1=(35%-70%)Ue, the Wiring diagram: Outline: Under-voltage tripper is used for low voltage under-voltage tripper can reliably break circuit breaker. protection of power lines and power-using 2.Control power voltage Us2: when Us2:Us2=(85%-110%)Ue, equipment. It ensures that load equipment is the circuit breaker can close normally. not damaged by a malfunction caused by a voltage below the rated value. 3.Control power voltage Us3: when Us3≤35%Ue, the Standard outlet wire method: under-voltage tripper can prevent circuit breaker from closing. Module type Circuit breaker Frequency: 50/60Hz (Control module is installed on the side of the Special reminder: The circuit breaker equipped with an under-voltage tripper can only be normally opened and closed if Us2 voltage is input between the P1 and P2 terminals. Ue: rated operational voltage circuit breaker, and the under-voltage tripper is installed inside the breaker) Standard voltage AC230V Optional voltage AC380V AC110V Auxiliary switch FJ-FC-ASKM3EL Wiring diagram: When circuit breaker is at position of open or free trip Usage Outline: It is used to provide the breaking and closing Main power status signal of the circuit breaker, helping the secondary control circuit to realize the automatic control function 1 normally open 1 normally closed: 1NO1NC When circuit breaker is at closing position 2 normally open 2 normally closed: 2NO2NC 4 normally open 4 normally closed: 4NO4NC Standard outlet wire method: lead wire type Standard outlet wire length: 50cm Customizable outlet wire method: terminal type Conventional thermal current: Ith=3A Alarm switch FJ-BC-ASKM3EL Wiring diagram: Outline: Usage: When circuit breaker is at position of open/closed It is used to provide the overload, short-circuit(free trip) and under-voltage fault(fault trip) status signal of the circuit breaker, helping the secondary control circuit When circuit breaker is at position of free trip&fault trip to realize the automatic control function. Standard outlet wire method: lead wire type B12 -Standard outlet wire length: 50cm Customizable outlet wire method: terminal type Conventional thermal current: Ith=3A Circuit breaker Leakage alarm module code MODEL: FJ-LDBJ-ASKM3EL The leakage alarm unit has two modules: Wiring diagram: Usage: Outline: leakage alarm and tripping It is used to provide alarm signal in the event of AC 220V

The module issues alarm signal and the circuit breaker trips

The module issues alarm signal but the circuit breaker does

Conventional thermal current: Ith=3A

in case of leakage.

not trip in case of leakage.

leakage alarm without tripping

INTERNAL ACCESSORIES CODE TABLE

Depending on the application requirements, one or more base modules can be installed inside the switch.

Each module has an individual code. Dillerent modules can be co	ombined and have a new accessory code.
Internal accessories icons	Internal accessories installation position schematic diagram
Alarm quitab Chunt trinnar	

	larm switch uxiliary switch		Left side installation	Handle	Right side installation	-	Lead wi	ire direction	
Code			ASKM	3EL-125/2	250				ASKM3
		Accessory	3P	4P)	3	3P		4P

	-	L					
		ASKM	3EL-125/250		ASKM3EL-	400 A	SKM3EL-800
Code	Accessory	3P	4P	3P	4P		3P/4P
00	No accessory						
08	Alarm switch	4	4	4	4 🗆	4 -	4 🗆
10	Shunt tripper	+ •	•	4	+	4	•
	Auxiliary switch(1NO1NC)	•	←				
20	Auxiliary switch(2NO2NC)			4	4	4	4
02	Auxiliary switch(2NO2NC)	4	4				
30	Under-voltage tripper	4 0	40	40	+ 0	• 0	40
40	Shunt tripper+Auxiliary switch(1NO1NC)		()				
40	Shunt tripper+Auxiliary switch(2NO2NC)				+ • • 		4 • •
12	Shunt tripper+Auxiliary switch(2NO2NC)		• • • •				
50	Shunt tripper+under-voltage tripper				+ 0 • +		400
00	2 sets of auxiliary switches(2NO2NC)		4 8 8				
60	2 sets of auxiliary switches(4NO4NC)				+ 1 1 +		4 8 8
22	2 sets of auxiliary switches(3NO3NC)		4 8 8				
23	2 sets of auxiliary switches(4NO4NC)		+ 1 1 +				
70	Under-voltage tripper+Auxiliary switch(1NO1NC)		◆ ○ ■ →				
70	Under-voltage tripper+Auxiliary switch(2NO2NC)				← ○ ■ →		◆ ○ ■
32	Under-voltage tripper+Auxiliary switch(2NO2NC)		◆ ○ ■ →				
18	Shunt tripper+Alarm switch		• • •		• • •		4
00	Auxiliary switch(1NO1NC)+Alarm switch	◆ 🗓	4 □				
28	Auxiliary switch(2NO2NC)+Alarm switch			+	← □	4 🗓	4
38	Under-voltage tripper+Alarm switch		+ 0				
	Shunt tripper+Auxiliary switch(1NO1NC) +Alarm switch		← • □ • • • • • • • • • • • • • • • • •				
48	Shunt tripper+Auxiliary switch(2NO2NC) +Alarm switch				← □ • •	← □ • →	← □ • •
	2 sets of auxiliary switches(2NO2NC) +Alarm switch		← □□■ →				
68	2 sets of auxiliary switches(4NO4NC) +Alarm switch				← □□•		← □ •
05	2 sets of auxiliary switches(3NO3NC) +Alarm switch		← □□•				
78	Under-voltage tripper+Auxiliary switch(1NO1NC) +Alarm switch		◆ ○ □ →				

a leakage fault in the circuit breaker, helping

the secondary control circuit to realize the

Note: $\, \mathrm{II} \,$ module is designed to meet the special function. Users should consider carefully when using this function to protect the appliance.

automatic control function.

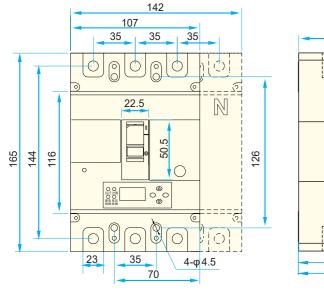


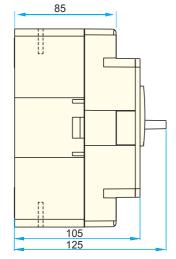
ASKM3EL SERIES

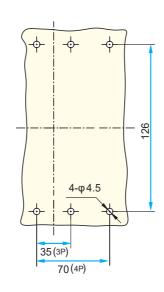
OUTLINE AND INSTALLATION DIMENSIONS

Front wiring

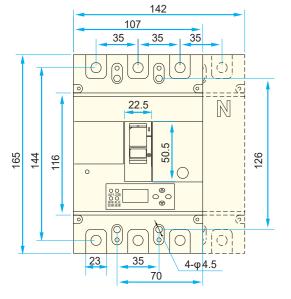
ASKM3EL -125 Frame

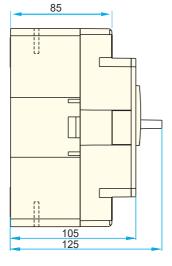


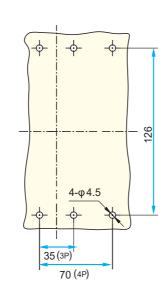




ASKM3EL -250 Frame

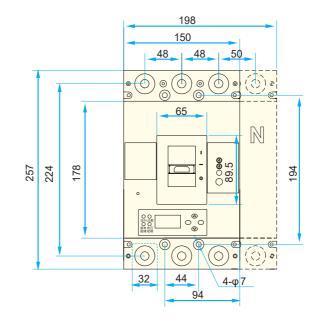


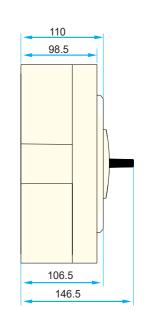


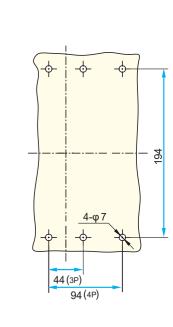


Front wiring

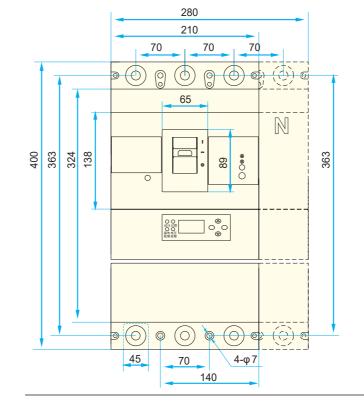
ASKM3EL -400 Frame

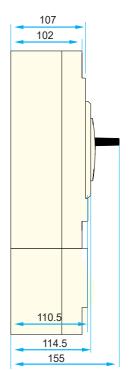


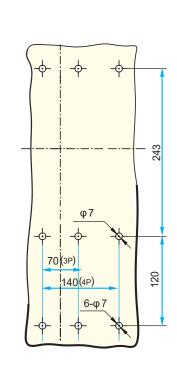




ASKM3EL -800 Frame









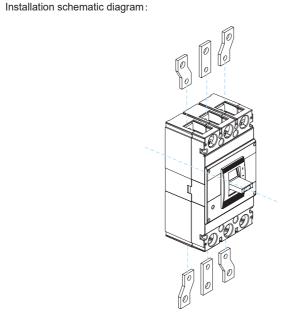
External Optional Accessory- Front Extended Copper Bars

Optional front extended bars are available for ASKM3EL circuit breaker.

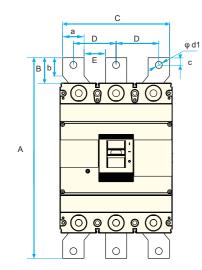
Front extended copper bars(C)

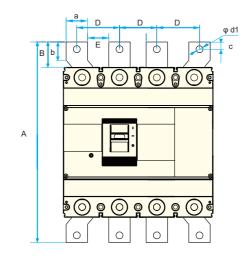
Usage: The front extended copper bars are installed at the inlet copper bars and outlet copper bars of the molded case circuit breaker, which expands the primary cable wiring space and facilitates the quick installation of cables on site.

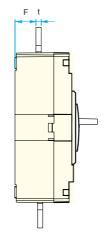
MODEL: FJ-BQJC-ASKM3EL



Outline and installation dimensions:







Fromm	Outline and installation opening dimensions												
TIOHIII	Α	В	С	D	Е	F	а	b	С	d1	t		
125A	197	23	93	39	24	22.5	15	15	7.5	8.5	4		
250A	245	40	104	42	22	22.5	20	23	9	9	5		
400A	340	41	148	60	32	38	28	25	15	14	6		
800A	496	48	200	80	40	40	40	34	14	13	10		

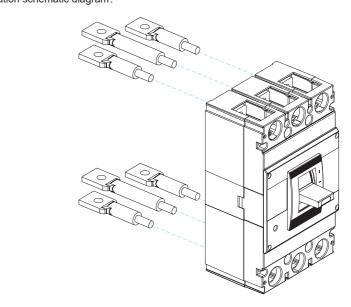
External Optional Accessory- Rear Copper Bars

Optional rear wiring is available for ASKM3EL circuit breaker.

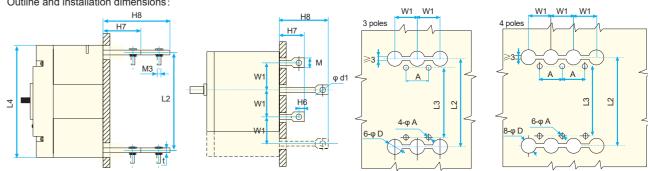
Rear wiring(R)

Usage: The rear copper bars are installed at the inlet copper bars and outlet copper bars of the molded case circuit breaker, which can change the circuit breaker vertical front wiring to horizontal rear wiring, isolating the primary cable behind the mounting board and improving the safety factor of the electrical cabinet.

MODEL: FJ-BHJX-ASKM3EL







	4054	0=04		
	125A	250A	400A	800A
Α	30	35	44	70
φΑ	4.5	4.5	7	7
φD	10	12	33	37
L2	132	144	224	363
L3	126	126	194	363
L4	150	165	257	400
W1	30	35	48	70
φ d1	8	8	12	16
M	19	19	31	34
t	4.5	4.5	7.5	10.5
H6	14	14	21	22
H7	53.5	60	55	73
H8	85.5	92	90	112



AISIKAI Professional manufacture

External Optional Accessory- Plug-in Rear Wiring Base

MODEL: FJ-BHDZ-ASKM3EL

Installation schematic diagram:

0

0

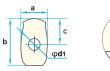
Optional plug-in rear wiring base is available for ASKM3EL circuit breaker.

Plug-in rear wiring base(PR)

Usage:

The plug-in rear wiring base is mounted on the back of the molded case circuit breaker, and is integrated with the breaker through conductive copper posts and fastening bolts. In the event of a serious circuit breaker failure, the circuit breaker can be quickly repaired and replaced without removing the primary cable.

Copper bars dimensions(mm)



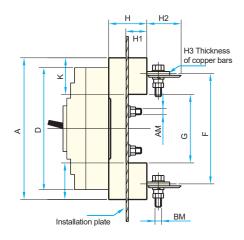


125-400 Frame 800 Frame

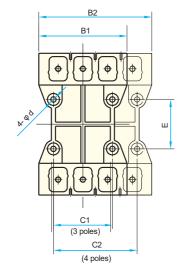
Frame	а	b	С	d1
125	21	36	20	8
250	21	36	20	8
400	30	43	22	12
250	21	36	20	8

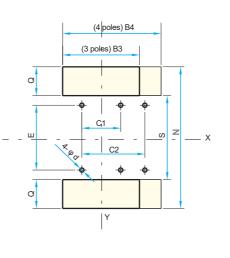
Outline and installation dimensions:

630/800



BM=M14(Bolt outlet wire)





Installation plate opening dimensions(mm)

Note: All 4P bases are split type.

Frame		Outline and installation dimensions(mm)												Opening dimensions(mm)					
	Α	B1	B2	C1	C2	D	Е	F	G	K	Н	H1	H2	НЗ	N	S	Q	В3	B4
125A	186	107	145	70	90	165	54	144	94	46	50	33	37	5.5	196	84	56	117	155
250A	186	107	145	70	105	165	54	144	94	46	50	33	37	5.5	196	84	56	117	155
400A	280	149	200	60	108	257	129	224	170	55	60	38	46	8	290	160	65	159	210
630A	425	210	280	90	162	400	266	363	301	62	87	60	16	/	435	291	72	220	290

External Optional Accessory-Electric Operating Mechanism

Optional CD2 type electric operating mechanism is available for ASKM3EL circuit breaker.

Electric Operating Mechanism- CD2

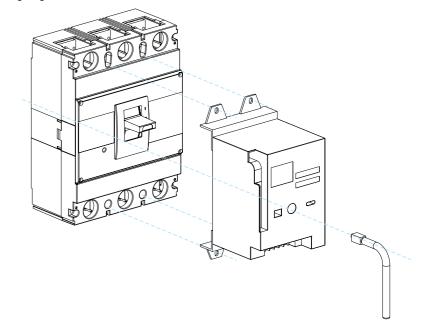
Usage:

The electric operating mechanism is installed on the front side of the molded case circuit breaker. It realizes remote breaking and re-closing function through external control signal, and completes centralized monitoring and automatic control of transmission and distribution network. Internally driven by permanent magnet motor, it has the advantage of low starting current and wide control voltage range.

Applicable frame: 125-800 whole series Standard wiring method: Terminal type

MODEL: FJ-DC/CD2-ASKM3EL

Wiring diagram:







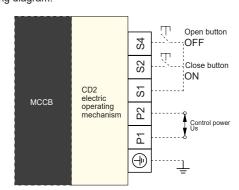


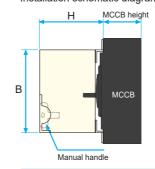
Control power: Us=(70%-110%) Ue Frequency: 50Hz

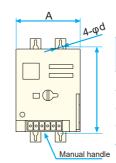
Ue:rated operational voltage of shunt tripper Default voltage:AC 220V

Optional voltage: AC 110V DC 220V DC 110V DC 24V

Wiring diagram:







Model	Outline ar	nd installati	on dimens	Action	Mechanical	Motor	
Model	Α	В	Н	4-φd current service life		(w)	
ASKM3EL-125	90	116	94	4.5	≪0.5	14000	14
ASKM3EL-250	90	176	90	4.5	≪0.5	14000	14
ASKM3EL-400	130	176	143	6.5	≪2	5000	35
ASKM3EL-630	130	176	147	6.5	≤2	5000	35



External Optional Accessory-Manual Operating Mechanism

Optional manual operating mechanism is available for ASKM3EL electronic circuit breaker.

Electric Operating Mechanism- CD2

Usage:
The manual operating mechanism is installed on the front of the circuit breaker. Through rotating handle, it realizes the requirement of operation on the panels of drawer cabinet, distribution cabinet, power box, etc. It also provides the function of interlocking between the circuit breaker and the cabinet door panel.

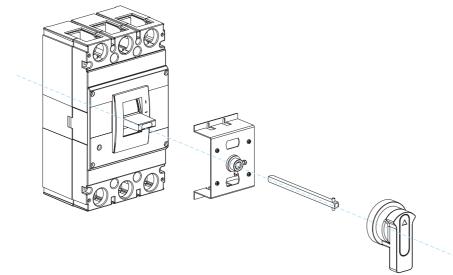
Features:

1.When the circuit breaker is in the closed state, the manual operating mechanism is interlocked with the door plate and the cabinet door cannot be opened.

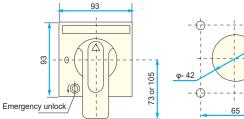
- 2.In case of failure when operating handle or manual operating mechanism in the closed state, the cabinet door can be opened by the emergency unlocking device on the operating handle.
- 3. For the manual handles matching with the manual operating mechanisms corresponding to different frames, they have the same openings on door plates.
- 4. The length of standard square shaft is 150mm. We can also provide special specification.

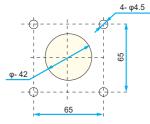
MODEL: FJ-SC-ASKM3EL

Wiring diagram:



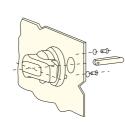
Square handle dimensions: type F

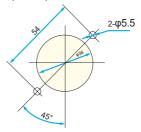




Square handle outline and door plate opening dimensions (the distance between the center of the opening and the hinge is not less than 100mm)

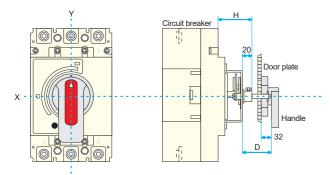
Round handle dimensions: type A(default)





Round handle outline and door plate opening dimensions (the distance between the center of the opening and the hinge is not less than 100mm)

Manual operating mechanism installation schematic diagram



The manual operating mechanism used with our molded case circuit breaker must be ordered from our company to ensure the quality of the product. If the user purchases other brands, our company will not bear any adverse consequence occurring after the installation.

Manual operating mechanism installation dimensions

Martual Operating medianism installation differsions											
Model	ASKM3E-125	ASKM3E-250	ASKM3E-400	ASKM3E-630							
Installation dimensions(H)	54	54	84	76							
Operating handle to the center of circuit breaker Y value	0	0	0	-20							

RATED CURRENT AND WIRE CROSS SECTION AREA

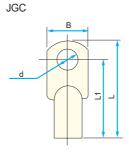
Connection Wire Reference Cross Section Area

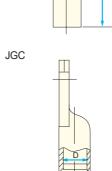
Rated current(A)	10	16, 20	25	32	40, 50	63	80	100	125, 140	160	180, 200, 225	250	315, 350	400
Wire cross section area (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	185	240

Rated current(A)	Cable		Copper bars			
	Cross section area(mm²)	Quantity	Size(mm×mm)	Quantity		
500	150	2	30x5	2		
630	185	2	40x5	2		
700/800	240	2	50x5	2		

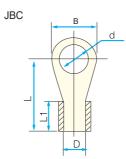
MODEL OF WIRING TERMINALS

JGC\JBC wiring terminal reference dimension





Model	Current(A)	Wire cross section area (mm²)	Terminal model	В	L	L1	D	d
	10, 16, 20	2.5	JBC2.5-8	15	24.5	8.5	φ2.6	φ8.2
	25	4	JBC4-8	13.4	20.4	9.2	φ2.8	φ8.2
	32	6	JBC6-8	15	24.5	10	φ3.5	φ8.2
	40, 50	10	JBC10-8	15	24.5	11	φ4.5	φ8.2
125	63	16	JBC16-8	12.5	41	33.5	φ6	φ8.2
	80	25	JGC25-8	14	46	38.5	φ7	φ8.2
	100	35	JGC35-8	15.5	52	44.5	φ8	φ8.2
	100	35	JGC35-8	15.5	52	44.5	φ8	φ8.2
	125, 140	50	JGC50-8	17	54	45	φ10	φ8.2
	160	70	JGC70-8	21.6	61	52	φ11	φ8.2
	100	35	JGC35-8	15.5	52	44.5	φ8	φ8.2
250	125, 140	50	JGC50-8	17	54	45	φ10	φ8.2
	160	70	JGC70-8	21.6	61	52	φ11	φ8.2
	180, 200, 225	95	JGC95-8	22	66	57	φ13	φ8.2
	250	95	JGC95-8	22	66	57	φ13	φ8.2
			1					



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