

UKM5

系列塑料外壳式断路器

Series Moulded Case Circuit Breaker



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Outline

概述

UKM5系列塑料外壳断路器（以下简称断路器）是面向21世纪的高新技术产品。该产品设计先进，性能指标高；外形美观；体积小；

符合GB/T 14048.2《低压开关设备和控制设备低压断路器》和IEC60947-2《低压开关设备和控制设备第二部分：低压断路器》等标准。

UKM5 series moulded case circuit breaker(circuit breaker for short) is high-tech products in 21st century with advanced design, high performance, pleasant appearance and delicate dimension. Meanwhile.

It is complied with GB/T 1408.2<low-voltage switch device and controlling device low-voltage circuit breaker> and IEC60947-2 section 2<low voltage switch device and control device part II: low-voltage circuit breaker> and etc.

Product model & definition

产品型号及含义



Usage & Appliance

用途及使用范围

该断路器适用于交流50Hz，额定电压至690V，额定电流至1600A的电力系统免受过载、短路、欠电压等故障的危害，也可用来控制电动机不频繁的操作。

The circuit breaker is used in the electrical system of AC 50Hz, related voltage of up to 690V, rated current of up to 1600A to prevent the system from overload, short-circuit and under-voltage and to control the infrequent operation of motor.

Normal operation condition

正常工作条件

断路器适用于下列工作环境；

- 1、周围空气温度不高于+40℃和低于-5℃
- 2、海拔高度不超过2000m
- 3、空气相对湿度在最高温度为+40℃时不超过50%，在较低温度下可允许有较高相对湿度、最湿月的月平均最低温度不超过+25℃该月平均最大相对湿度不超过90%。
- 4、污染等级：3级周围空气中无爆炸危险、且无腐蚀金属和破坏绝缘的气体及导电尘埃。
- 5、安装类别为Ⅲ
- 6、断路器的“1，3，5，7”端子接电源，“2，4，6，7”端子接负载，不可反接。

The circuit breaker could be used in the following working conditions:

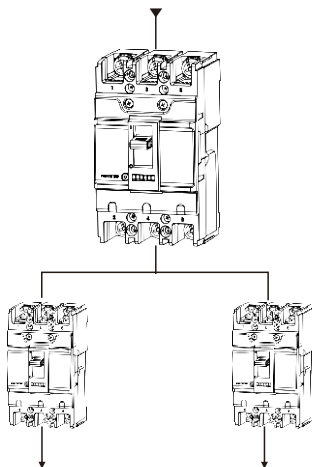
1. Ambient air temperature not higher than +40℃ and not lower than -5℃.
2. Altitude no more than 2000m
3. The relative air humidity is not more than 50% in the max. at the temperature. The lowest monthly average temperature not higher than 25℃ in the most moist month and the max. relative humidity should be no more than 90%.
4. Pollution degree: Grade 3. There is no explosion factor, corrosive metal and the gas destroying the insulation and the electric dust.
5. Installation type: III
6. The terminals of 1,3,5,7,N1 should be connected with the power supply and the terminals of 2,4,6,8,N2 should be connected with the load. Reverse wiring is forbidden.

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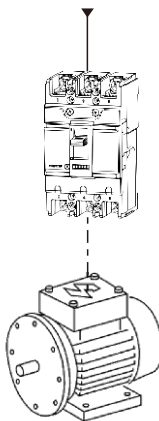
低压配电网络保护

Low-voltage power distribution network



电动机的控制和保护

Control and protection of motor



双电源转换系统

Dual power changeover system

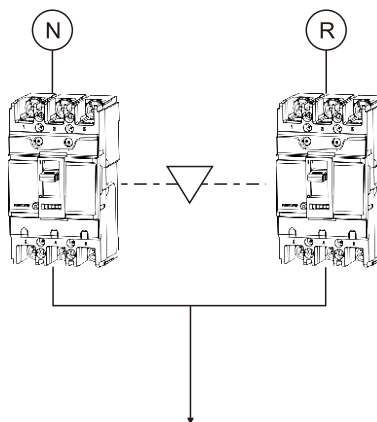


表 (table)1

代号 Code	型号 Type	说明 Specification
A	A型	N极不装过电流脱扣器, 且N极始终接通, 不与其他三极一起合分 N phase without overcurrent trip unit is normal open and do not make and break along with other 3 poles
B	B型	N极不装过电流脱扣器, 与其他三极一起合分 N phase without overcurrent trip unit make and break along with other 3 poles

表 (table)2

代号 Code	名称 Title	说明 Description
1	延时脱扣器 Delay trip	具有过电流反时限保护特性 The protection of overcurrent reverse time.
2	瞬时脱扣器 Instantaneous trip	即电磁脱扣器, 具有过电流瞬时动作保护特性 Electromagnetic release of overcurrent instantaneous protection
3	复式脱扣器 Multiple trip	同时具有上述两种功能 With the above two performances

表 (table)3

Inm (A)	I			II	III		备注 Note
	代号 Code	说明 Description	代号 Code	说明 Description	代号 Code	说明 Description	
63 100 250	0	无 Null	0~2	辅助触头组数 Pairs of auxiliary contacts	0~2	报警触头组数 Pairs of alarm contacts	
	1	分励脱扣器 Shunt trip	0~1		0~1		
	2	欠电压脱扣器 Under-voltage trip	0~1		0~1		
400	0	无 Null	0~5		0~2		II + III ≤5
	1	分励脱扣器 Shunt trip	0~3		0~2		II + III ≤3
	2	欠电压脱扣器 Under-voltage trip	0~3		0~2		II + III ≤3
	3	分励、欠电压脱扣器 Shunt trip & Under-voltage trip	0~1		0~1		II + III ≤1
630 800	0	无 Null	0~8		0~3		II + III ≤8
	1	分励脱扣器 Shunt trip	0~5		0~3		II + III ≤5
	2	欠电压脱扣器 Under-voltage trip	0~5		0~3		II + III ≤5
	3	分励、欠电压脱扣器 Shunt trip & Under-voltage trip	0~3		0~2		II + III ≤3

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Main technical parameter

主要技术性能指标

表 (table)4

壳架等级额定电流 Inm(A)		63		100						250					
产品型号 Model		UKM5-63C		UKM5-100C	UKM5-100S	UKM5-100H	UKM5-100U	UKM5-250C	UKM5-250S	UKM5-250H	UKM5-250U				
外形 Photo															
额定电流 Rated current(A)		10,16,20,32,40,50 63,75,100,125		16,25,32,40,50,63 75,100, (125,160)				100,125,150,175,200,225,250							
极数 Poles		3	4	3		4		3		4					
额定绝缘电压 Rated Insulation Voltage Ui(V)		AC600		AC690				AC690							
飞弧距离(mm) Arcing distance		≤50(0*)		≤50(0*)				≤50(0*)							
额定极限/运行 短路分断能力 Rated ultimate/ service short-circuit breaking capacity(Ka)	AC690V	-		-	5/3	10/5	10/5	-	10/5	10/5	10/5				
	AC400V	10/5		30/15	50/35	85/85	125/125	30/15	50/35	85/85	125/125				
	AC230V	25/13		50/25	100/50	125/125	200/200	50/25	100/50	125/125	200/200				
操作性能(次) Operational performance (times)	通电 ON	6000		6000				2000							
	不通电 OFF	8500		8500				7000							
外形尺寸 Dimension(mm)	a	75	100	90	120	90	120	90	90	105	140	105	140	105	
	b	130	130	155			216		165			240			
	c	56		68				68							
重量 Weight (Kg)		0.75		1.0	1.3	1.1	1.4	1.8	1.8	1.5	1.9	1.5	1.9	2.6	2.6
额定操作频率(次/h) Rated Operation Frequency(per hour)		120		120				120							

*0飞弧需在订货时注明。*0" arcing distance: please specify when ordering if you require.

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主要技术性能指标

续表(table)4

壳架等级额定电流 Inm(A)		400 / 630							
产品型号 Model		UKM5-400C UKM5-630C		UKM5-400S UKM5-630S		UKM5-400H UKM5-630H		UKM5-400U UKM5-630U	
外形 Photo									
额定电流 Rated current(A)		250,300,350,400,500,630							
极数 Poles		3				4			
额定绝缘电压 Rated insulation voltage Ui(V)		AC690							
飞弧距离(mm) Arcing distance		≤50(0°)							
额定极限/运行 短路分断能力 Rated ultimate/ service short-circuit breaking capacity (Ka)	AC690V	10/10		10/10		15/10		35/35	
	AC400V	45/45		70/70		100/100		125/125	
	AC230V	85/85		100/100		150/100		200/200	
操作性能(次) Operational performance (times)	通电 ON	1000							
	不通电 OFF	4000							
外形尺寸 Dimension(mm)	a	150	198	150	198	150	150		
	b	257					297		
	c	103					200		
重量 Weight (Kg)		5.5	7.3	5.7	7.5	16.7	16.7		
额定操作频率(次/h) Rated Operation Frequency(per hour)		60							

*0飞弧需在订货时注明。 *0" arcing distance: please specify when ordering. if you require.

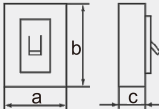
UKM5 Series Moulded Case Circuit Breaker

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Main technical parameter

主要技术性能指标

续表(table)4

壳架等级额定电流 Inm(A)		800								
产品型号 Model		UKM5-800C		UKM5-800S		UKM5-800H		UKM5-800U		
外形 Photo										
额定电流 Rated current(A)		630,700,800								
极数 Poles		3				4				
额定绝缘电压 Rated insulation voltage Ui(V)		AC690								
飞弧距离(mm) Arcing distance		≤50 (0*)								
额定极限/运行 短路分断能力 Rated ultimate/ service short-circuit breaking capacity(Ka)	AC690V	10/10		15/15		20/15		35/35		
	AC400V	45/45		70/70		100/100		125/125		
	AC230V	85/85		100/100		150/100		200/200		
操作性能(次) Operational performance (times)	通电 ON	500								
	不通电 OFF	2500								
外形尺寸 Dimension(mm) 	a	210	280	210	280	210		210		
	b	275					322			
	c	103					200			
重量 Weight (Kg)		9.9	13	11.4	15.7	27.3		27.3		
额定操作频率(次/h) Rated operation frequency(per hour)		20								

热电磁式过电流脱扣器

1.长延时脱扣器整定电流Ir1

Ir1即为断路器的额定电流In,In的规格见表4

四极断路器的中性极（N极）均不装设过电流脱扣器，其约定发热电流值与其它三极相同。

Thermal electromagnetic over-current release

Long time delay tripping current Ir1

In: rated current of circuit breaker(as table 4)

There is no over-current release for neutral phase of 4P MCCB and the thermal current is the same with other three phases.

*0飞弧需在订货时注明。*0* arcing distance: please specify when ordering if you require.

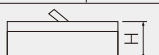
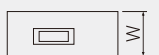
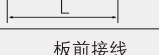
UKM5 Series Moulded Case Circuit Breaker

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Main technical parameter

主要技术性能指标

续表(table)4

壳架等级额定电流 Inm(A)		1250		1600		
产品型号 Model		UKM5-1250		UKM5-1600		
外形 Photo						
额定电流 Rated current		630, 700, 800, 1000, 1250		800, 1000, 1250, 1400, 1600		
极数 Poles		3	4	3	4	
额定工作电压 Rated working voltage		400、690		400、690		
额定绝缘电压 Rated insulation voltage		800		800		
额定极限分断能力 Rated ultimate/ breaking capacity Icu/kA	AC690V	25		30		
	AC400V	80		80		
额定运行分断能力 Rated service/ breaking capacity Ics/kA	AC690V	20		20		
	AC400V	40		40		
外形尺寸 Dimension		W	210	280	210	280
		L	275		275	
		H	103		103	
接线方式 Connection method	板前接线 Front connection		☆		☆	
	板后接线 Rear connection		☆		☆	
	抽出式 Withdrawal connection		☆		☆	
附件 Accessories	内部 附件 Internal	欠电压脱扣器 Undervoltage trip	☆		☆	
		分励脱扣器 Shunt trip	☆		☆	
		辅助触头 Auxiliary contact	☆		☆	
		报警触头 Alarm contact	☆		☆	
	外部 附件 External	电动操作机构 Electrical operating mechanism	☆		☆	
		转动手柄操作机械 Rotary handle	☆		☆	
飞弧距离 (mm) Arcing distance mm		≤ 120		≤ 120		
重量(Kg) Weight(Kg)		14	19	17	23	

UKM5 Series Moulded Case Circuit Breaker

系列塑料外壳式断路器

配电用断路器过电流保护特性见表1

电动机保护用断路器过电流保护特性见表2

UKM5 过电流保护特性曲线见下图

a-冷态热过载保护特性;

b-热态热过载保护特性;

c-电磁脱扣器保护特性;

The overcurrent protection characteristics of circuit breakers for power distribution are shown in Table1

The overcurrent protection characteristics of circuit breakers for motor protection are shown in Table1

UKM5 overcurrent protection characteristic curves shown in figure below

a- Thermal overload protection characteristic in cold state

b- Thermal overload protection characteristic in thermal state

c- Electromagnetic release protection characteristics

Overcurrent protection characteristics of circuit breakers for power distribution

配电用断路器过电流保护特性

表(table)1

额定电流In(A) Rated current In(A)	热脱扣器(环境温度+40℃) Thermal tripper (ambient temperature +40℃)		电磁脱扣器动作电流 (A) The operating current of electromagnetic tripper(A)
	1.05 In 不动作时间 (h) (超始状态: 冷态) 1.05 In non-operating time(h)(starting state: cold)	1.30 In 不动作时间 (h) (超始状态: 热态) 1.30 In non-operating time(h)(starting state: hot)	
≤63	> 1	≤ 1	(10 ± 2)In (注)
> 63	> 2	≤ 2	

Motor Circuit Breaker Overcurrent Protection Characteristic

电动机用断路器过电流保护特性

表(table)2

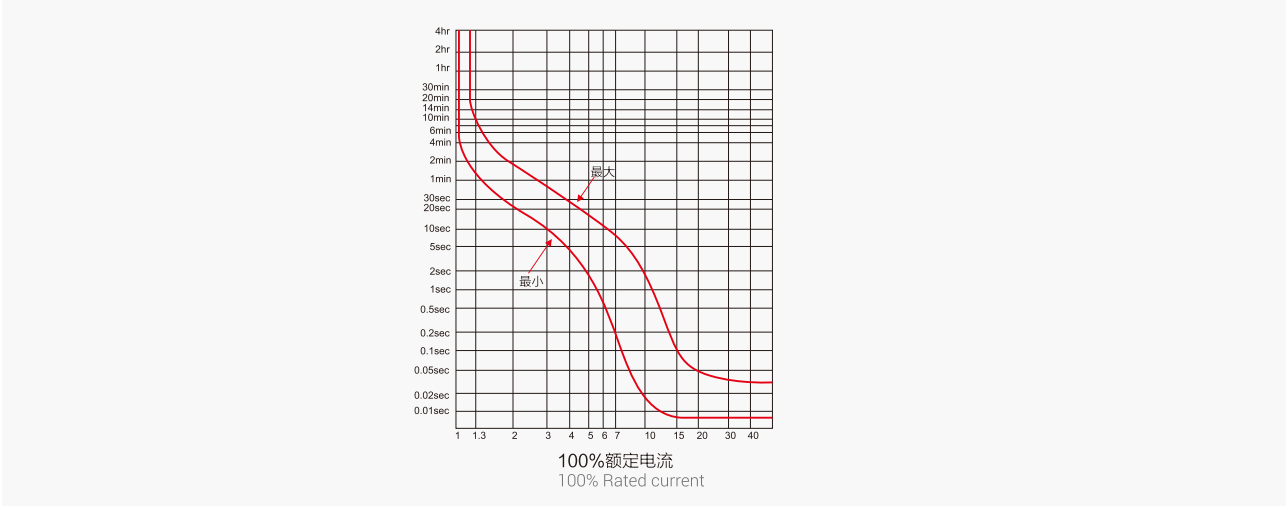
额定电流In(A) Rated current In(A)	热脱扣器(环境温度+40℃) Thermal tripper (ambient temperature +40℃)				电磁脱扣器 动作电流 (A) The operating current of electromagnetic tripper(A)
	1.0 In 不动作时间 (h) (超始状态: 冷态) 1.0 In non-operating time(h) (starting state: cold)	1.2 In 动作时间 (h) (超始状态: 热态) 1.2 In operating time(h) (starting state: hot)	1.5 In 动作时间 (min) (超始状态: 热态) 1.5 In operating time(h) (starting state: hot)	7.2 In 动作时间TP (s) (超始状态: 冷态) 7.2 In operating time(h) (starting state: cold)	
≤63	> 2	≤2	≤2	2<Tp≤10	(12 ± 2.4)In (注)
63<In≤250			≤4	4<Tp≤10	
250<In≤800			≤8	6<Tp≤20	

注: UKM5-63、800的电磁脱扣器动作电流为(5~14)In可调。

Note: The operation current of electromagnetic tripper for UKM30-630/UKM30-800 is adjustable(5In-14In)

UKM5-63 Overcurrent Protection Characteristic Curve

UKM5-63过电流保护特性曲线

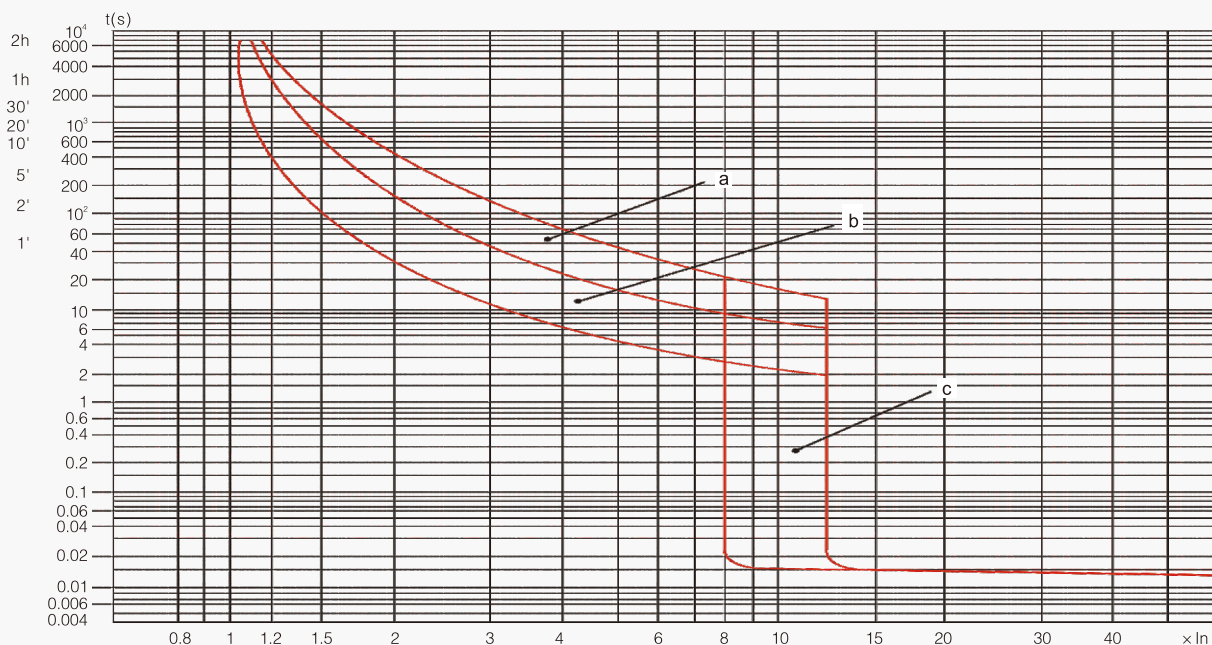


UKM5 Series Moulded Case Circuit Breaker

系列塑料外壳式断路器

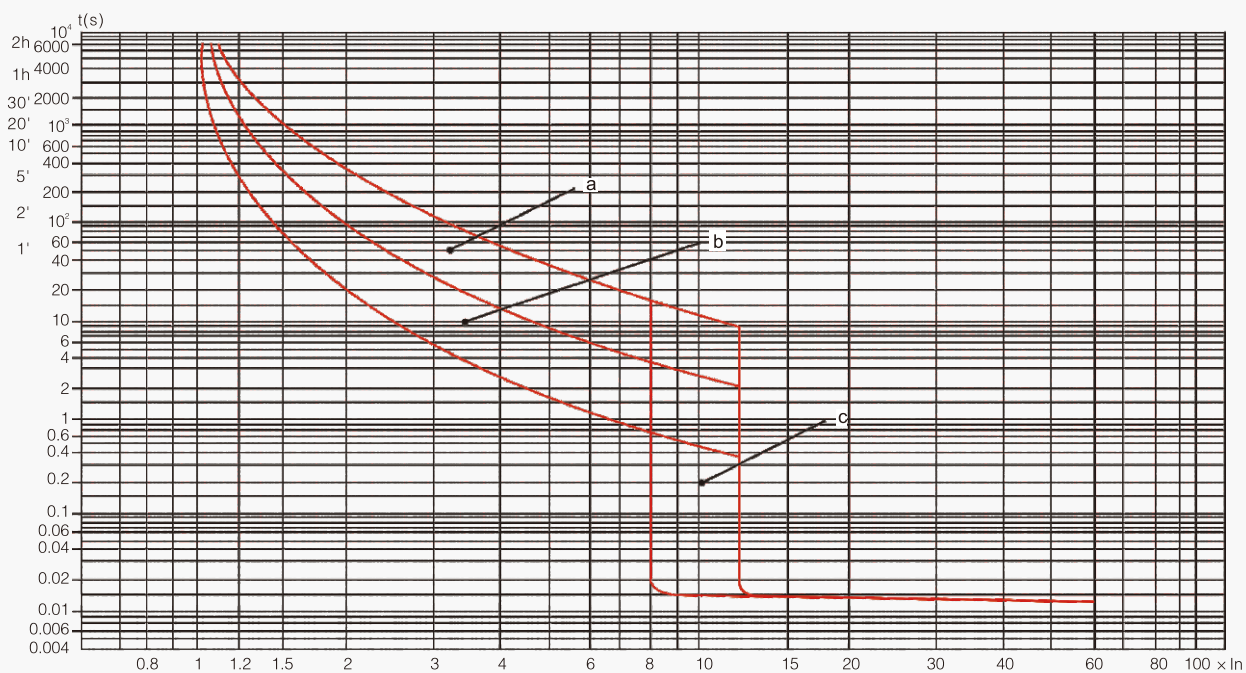
UKM5-100 Overcurrent Protection Characteristic Curve

UKM5-100过电流保护特性曲线



UKM5-250 Overcurrent Protection Characteristic Curve

UKM5-250过电流保护特性曲线

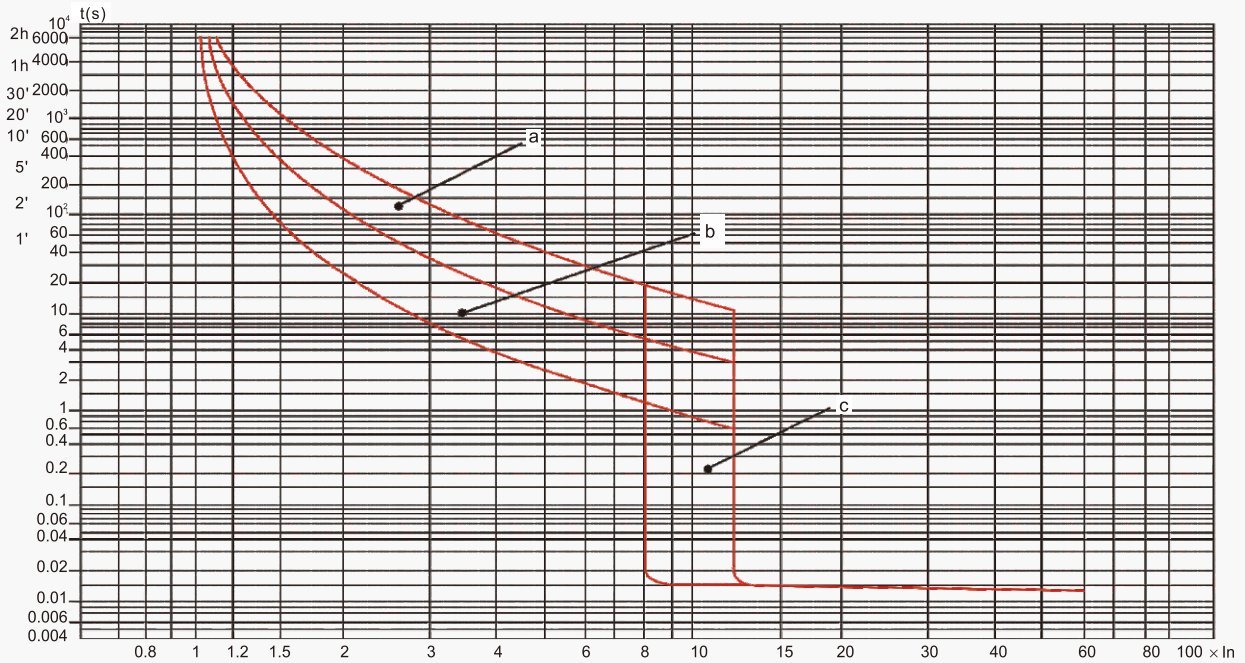


UKM5 Series Moulded Case Circuit Breaker

系列塑料外壳式断路器

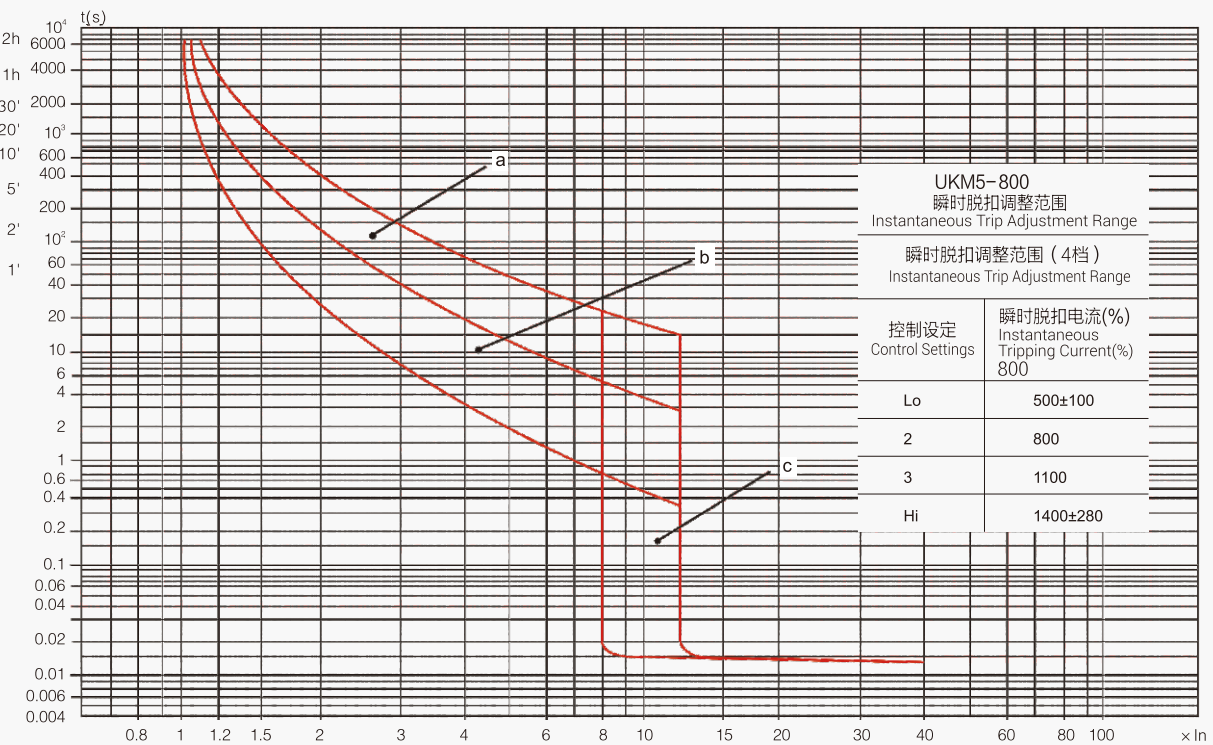
UKM5-400,630 Overcurrent Protection Characteristic Curve

UKM5-400/630 过电流保护特性曲线



UKM5-800 Overcurrent Protection Characteristic Curve

UKM5-800 过电流保护特性曲线

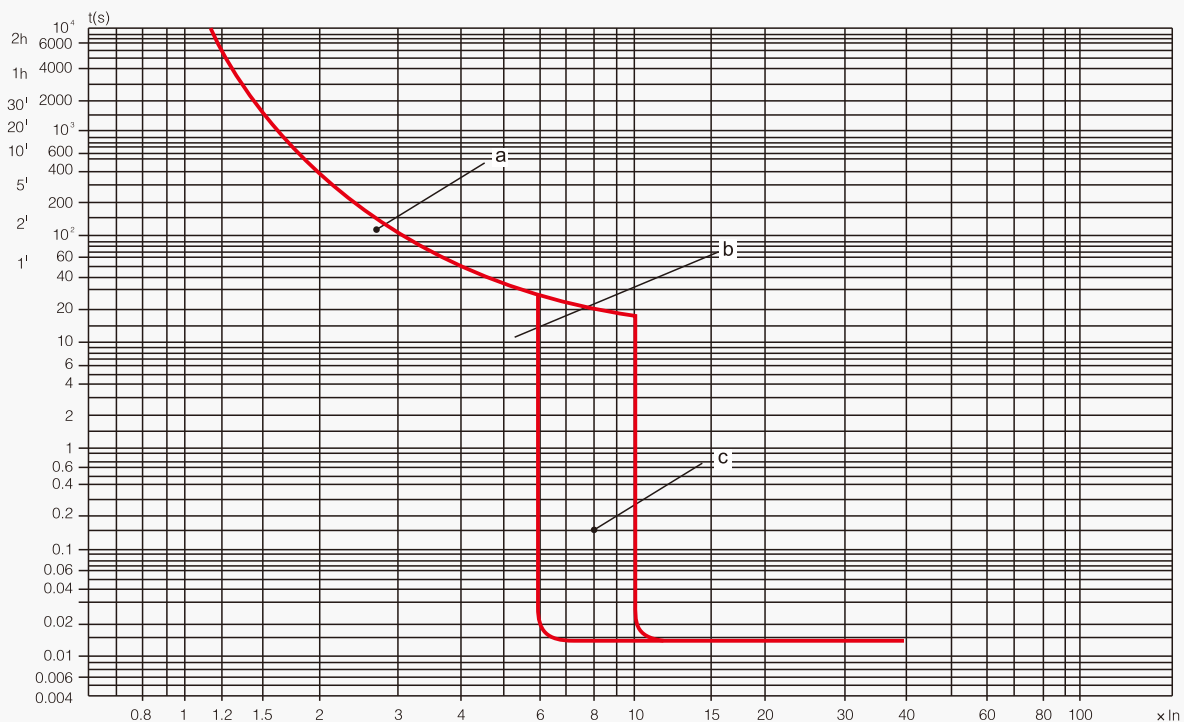


UKM5 Series Moulded Case Circuit Breaker

系列塑料外壳式断路器

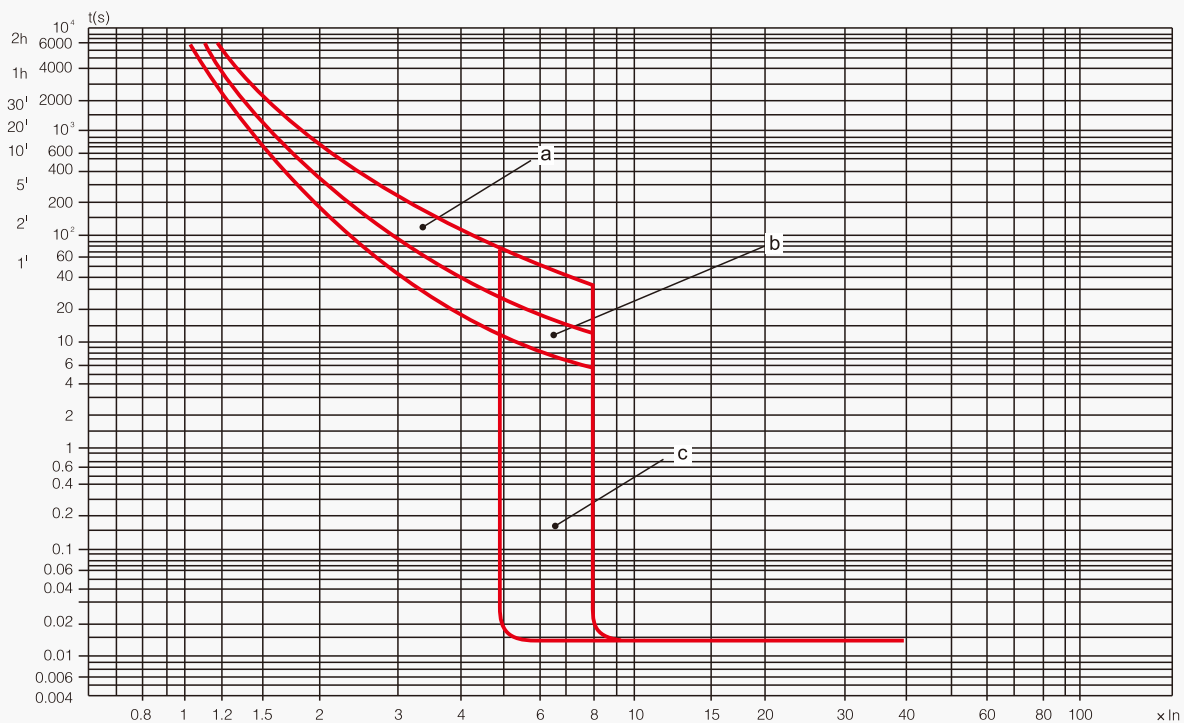
UKM5-1250 Overcurrent Protection Characteristic Curve

UKM5-1250过电流保护特性曲线



UKM5-1600 Overcurrent Protection Characteristic Curve

UKM5-1600过电流保护特性曲线

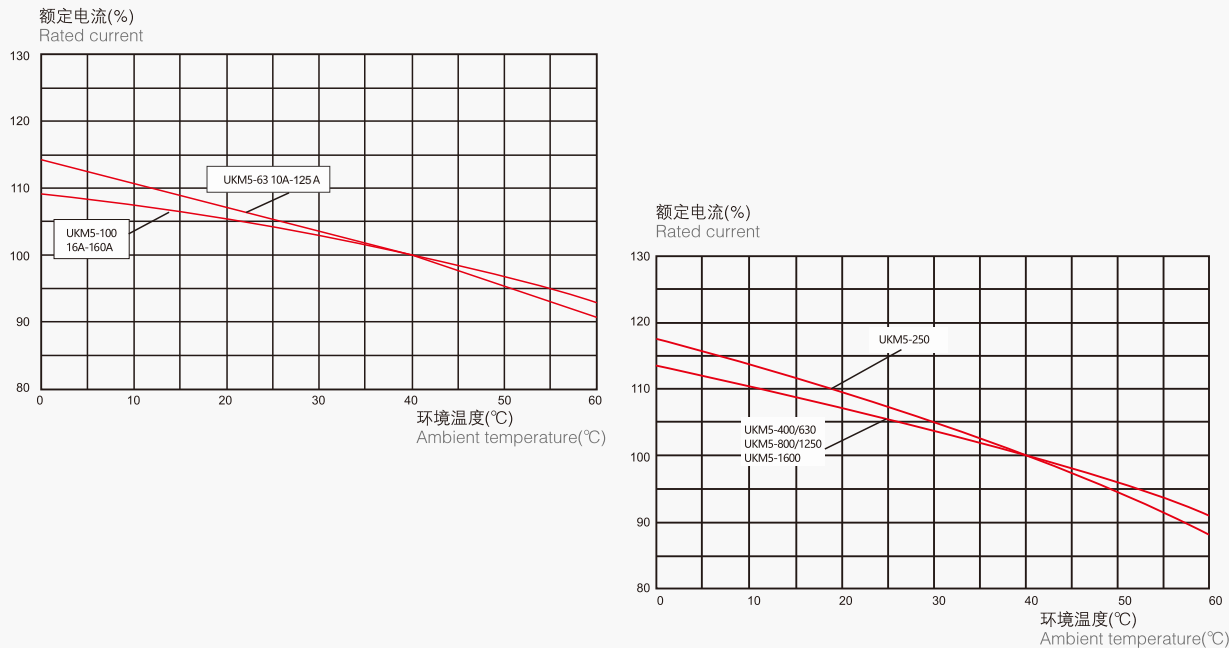


UKM5 Series Moulded Case Circuit Breaker

系列塑料外壳式断路器

UKM5 Series Thermal-Trip Curve

UKM5系列热脱扣器温度校正曲线



Power Losses of MCCB

断路器的功率损耗

壳架等级额定电流 Inm(A)	额定电流In(A) Rated current In(A)	每极电阻(mΩ) Resistance of each pole	三极总功率损耗(W) Gross power consumption of three-pole	
			固定式 Fixed	插入式或抽出式 Plug-in / Withdrawal
100	100	2.1	25	
250	250	1.2	36	36
400	400	0.32	60	47
630	630	0.2	96	115
800	800	0.11	210	270
1250	1250	0.05	234	
1600	1600	0.035	270	

注: UKM5-800、1250、1600AF的电磁脱扣器动作电流为(5~14)In可调。

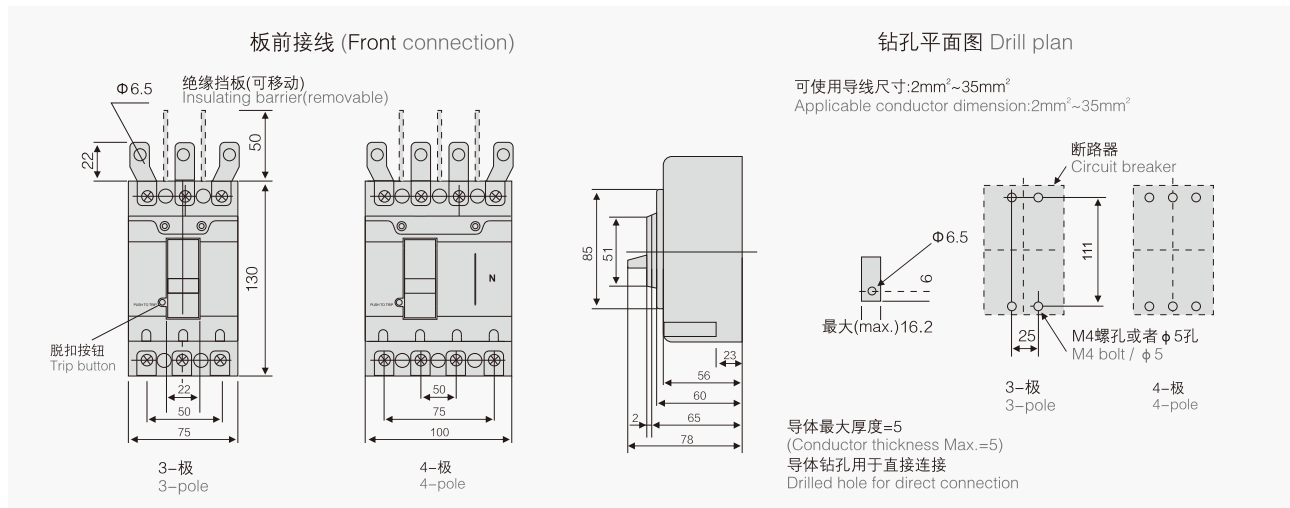
Note: The operation current of electromagnetic tripper for UKM5-800、1250、1600AF is adjustable(5In~14In)

UKM5 Series Moulded Case Circuit Breaker

系列塑料外壳式断路器

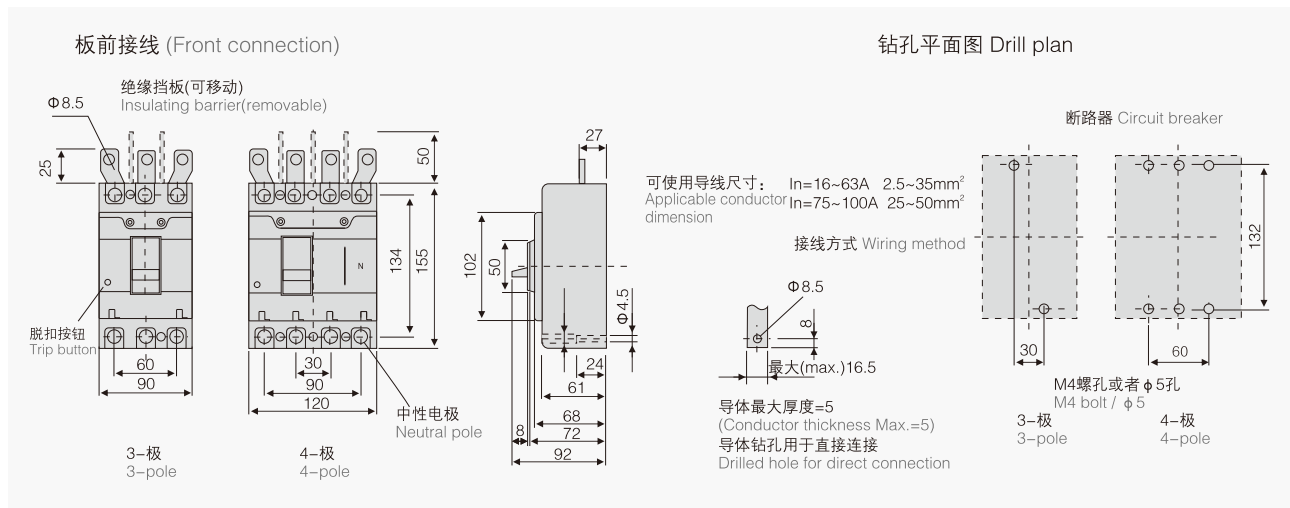
UKM5-63 Outline & Mounting Dimension

UKM5-63 外形及安装尺寸

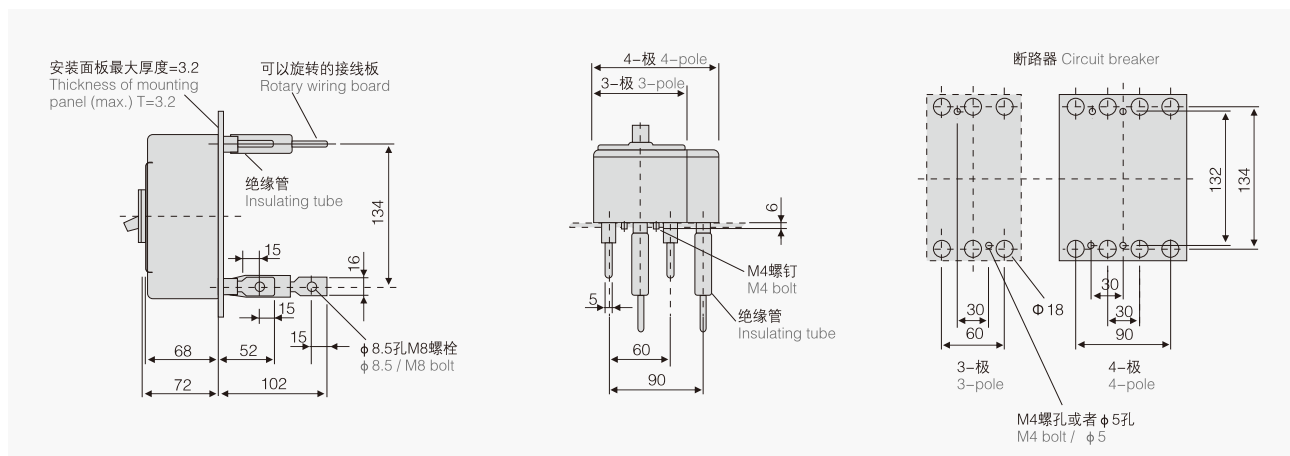


UKM5-100 Outline & Mounting Dimension

UKM5-100 外形及安装尺寸

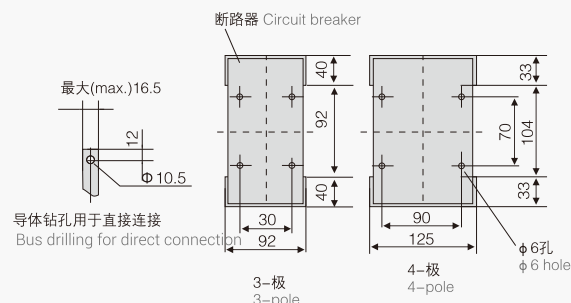
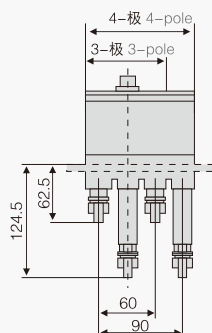


板后接线 (Rear connection)



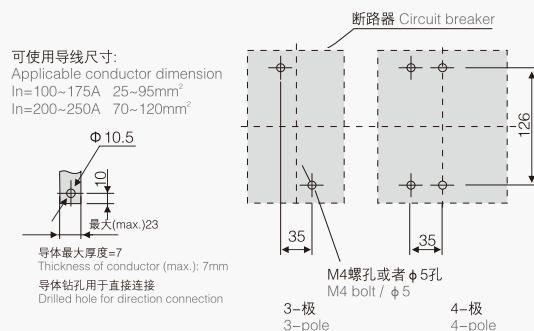
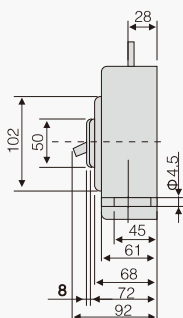
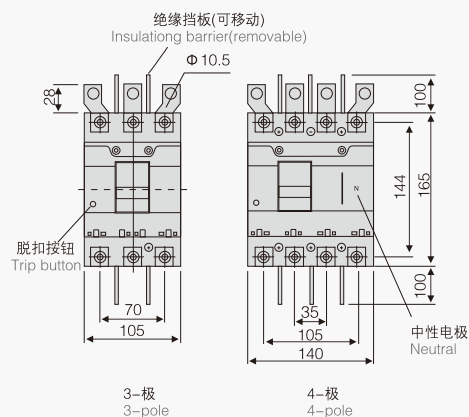
Series Moulded

钻孔平面图 Drill plan

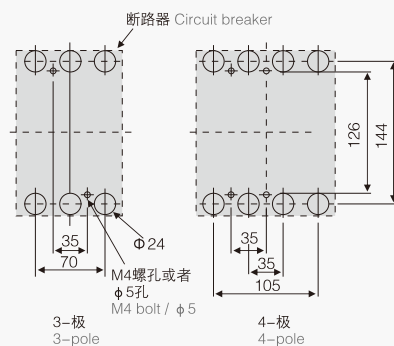
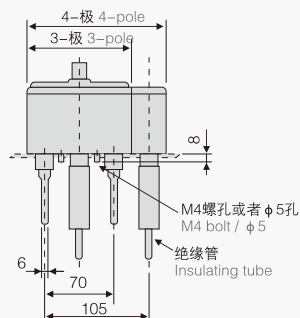
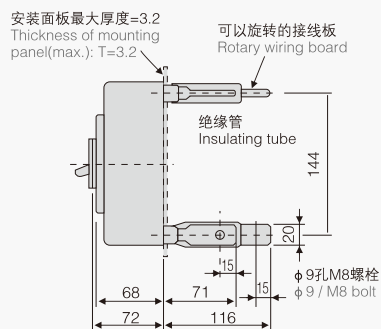


UKM5-250外形及安裝尺寸

钻孔平面图 Drill plan

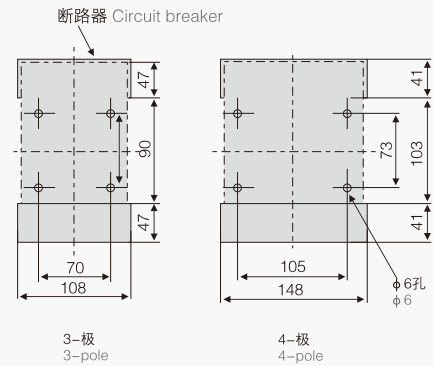


钻孔平面图 Drill plan



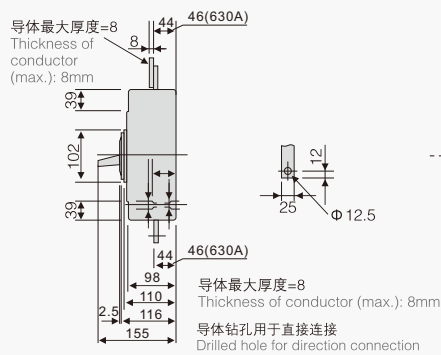
系列塑料外壳式断路器

钻孔平面图 Drill plan



UKM5-400/630 外形及安装尺寸

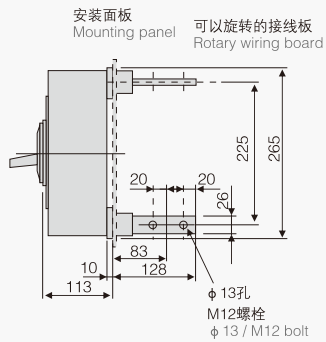
钻孔平面图 Drill plan



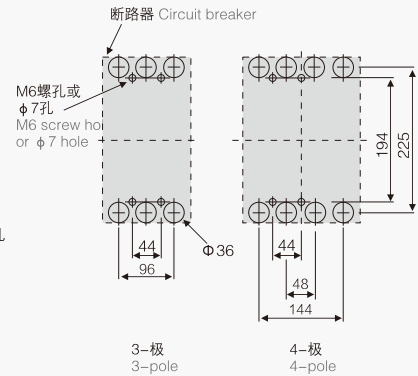
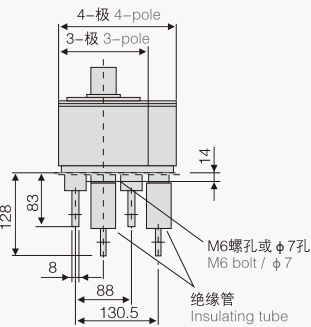
UKM5 Series Moulded Case Circuit Breaker

系列塑料外壳式断路器

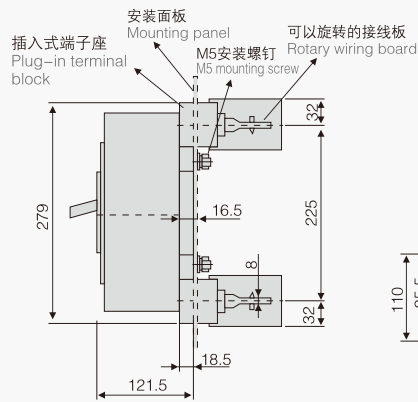
板后接线 (Rear connection)



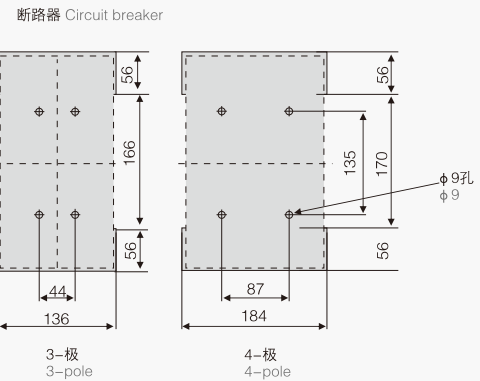
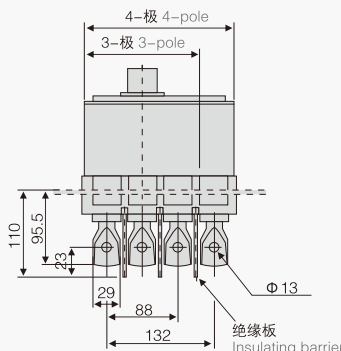
钻孔平面图 Drill plan



插入式接线 (Plug-in connection)



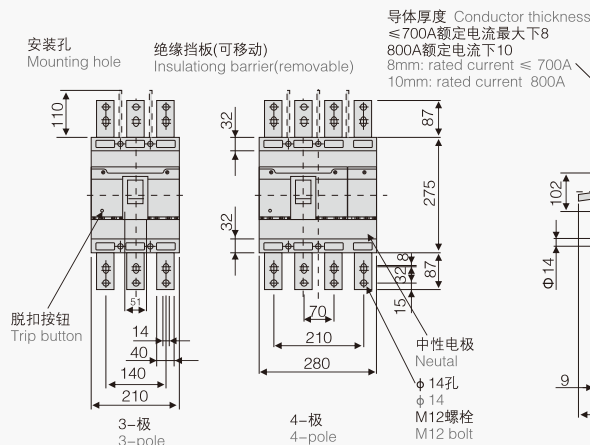
钻孔平面图 Drill plan



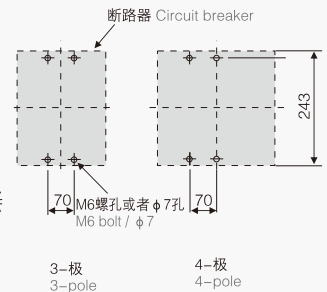
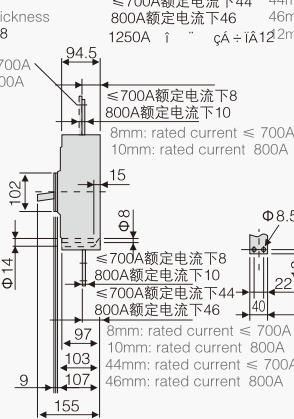
UKM5-800/1250 Outline & Mounting Dimension

UKM5-800/1250外形及安装尺寸

板前接线 (Front connection)



钻孔平面图 Drill plan



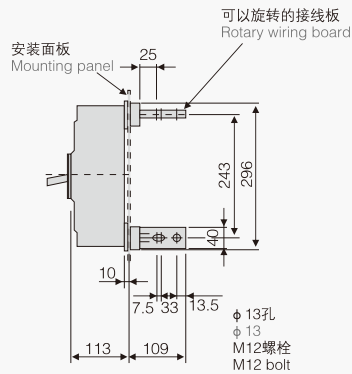
导体厚度
≤ 700A额定电流下8 8mm: rated current ≤ 700A
800A额定电流下10 10mm: rated current 800A
1250A 12mm: rated current 1250A

导体钻孔用于直接连接
Drilled hole for direct connection

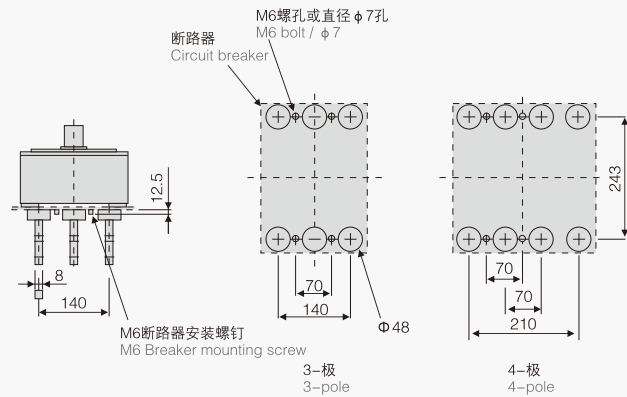
UKM5 Series Moulded Case Circuit Breaker

系列塑料外壳式断路器

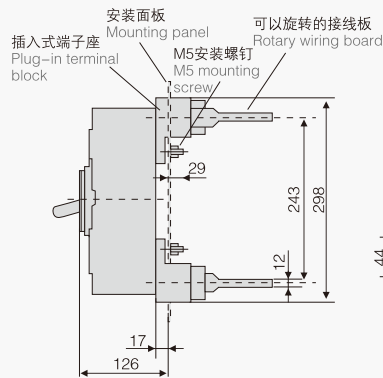
板后接线 (Rear connection)



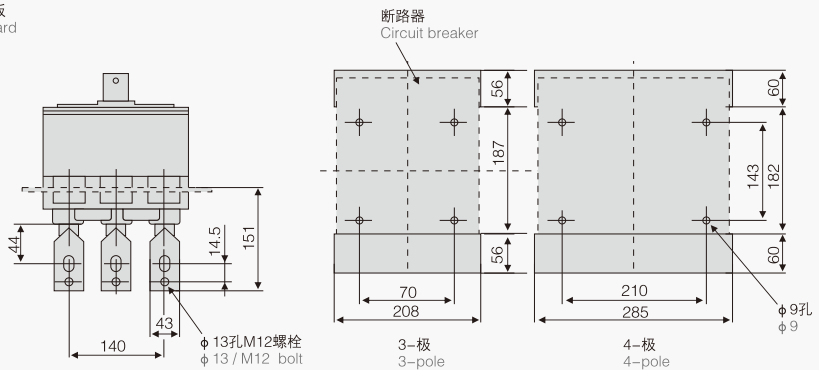
钻孔平面图 Drill plan



插入式接线 (Plug-in connection)

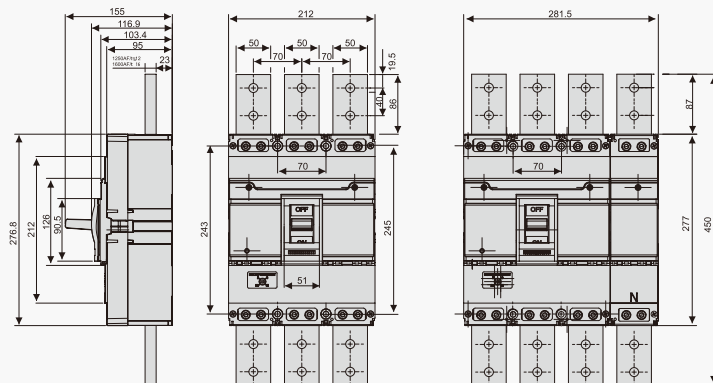


钻孔平面图 Drill plan

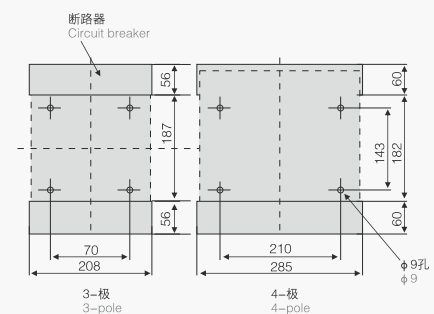


UKM5-1600 Outline & Mounting Dimension

UKM5-1600外形及安装尺寸



钻孔平面图 Drill plan



UKM5 Series Moulded Case Circuit Breaker

系列塑料外壳式断路器

Accessories of Circuit breaker

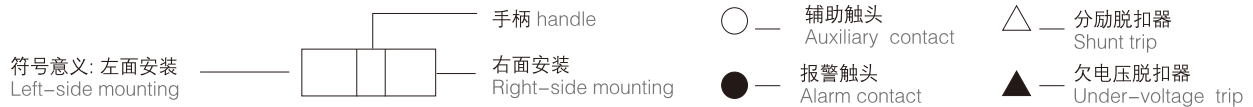
断路器的附件

附件型号一览表 General table

壳架等级额定电流 Inm(A)		63	100	250	400	630,800	1250,1600
内部附件 Internal accessories	报警触头 Alarm contact	B1	B2	B3	B4		B4
	辅助触头 Auxiliary contact	F1	F2	F3	F4		F4
	分励脱扣器 Shunt trip	FL1	FL2	FL3	FL4		FL4
	欠电压脱扣器 Under-voltage trip	QY1	QY2	QY3	QY4		QY4
内部附件接线端子座 Connection terminal block as internal accessories							
外部附件 External accessories	旋转操作手柄 Rotary operating handle	CS1-63	CS1-100	CS1-250	CS1-400	CS1-630,800	CS1-1250,1600
	电动操作机构 (电磁铁操作) Electrical operating mechanism	-	MD1	MD2	-	-	-
	电动操作机构 (减速电机操作) Electrical operating mechanism	-	MDX1	MDX2	MDX3	MDX4	MDX4

内部附件代号及安装位置图

Code & Installation

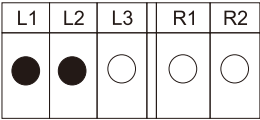
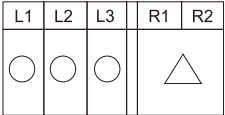
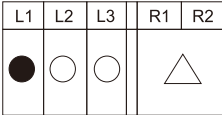
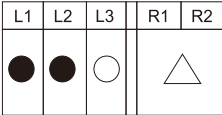
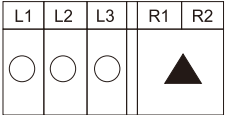
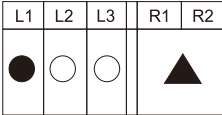
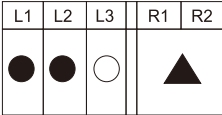
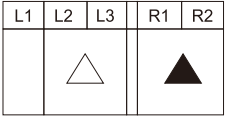
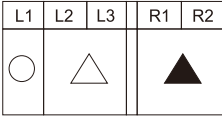
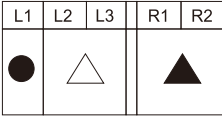


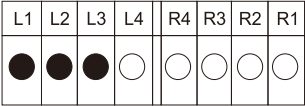
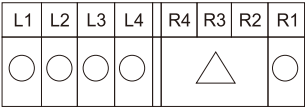
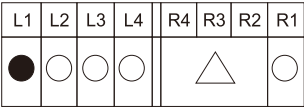
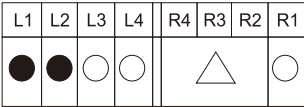
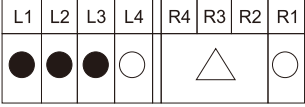
壳架等级额定电流 Inm(A)	63A,100A,250A		
附件代号 Code	0 (0~2) 0	0 (0~2) 1	0 (0~2) 2
位置图 Position			
附件代号 Code	1 (0~1) 0	1 (0~1) 1	
位置图 Position			
附件代号 Code	2 (0~1) 0	2 (0~1) 1	
位置图 Position			

注* 通用M1-400

UKM5 Series Moulded Case Circuit Breaker

系列塑料外壳式断路器

壳架等级额定电流 Inm(A)	400A(í 用M1-400)		
附件代号 Code	0 (0~5) (0~2)		
位置图 Position	 注:后两位数字相加≤5 Note: the sum of last two digits : ≤5		
附件代号 Code	1 (0~3) 0	1 (0~2) 1	1 (0~2) 1
位置图 Position			
附件代号 Code	2 (0~3) 0	2 (0~2) 1	2 (0~1) 2
位置图 Position			
附件代号 Code	300	310	301
位置图 Position			

壳架等级额定电流 Inm(A)	630A,800A,1250A,1600A		
附件代号 Code	0 (0~8) (0~3)		
位置图 Position	 注:后两位数字相加≤5 Note: the sum of last two figures : ≤5		
附件代号 Code	1 (0~5) 0	1 (0~4) 1	1 (0~3) 2
位置图 Position			
附件代号 Code	1 (0~2) 3		
位置图 Position			

UKM5 Series Moulded Case Circuit Breaker

系列塑料外壳式断路器

附件代号 Code	2 (0~5) 0	2 (0~4) 1	2 (0~3) 2
位置图 Position			
附件代号 Code	2 (0~2) 3		
位置图 Position			
附件代号 Code	3 (0~3) 0	3 (0~2) 1	3 (0~1) 2
位置图 Position			

Parameter of auxiliary & alarm contact

辅助触头报警触头参数

断路器不同工作状态下的辅助、报警触头线路图 The circuit drawings of auxiliary contact & alarm contact in different working status

断路器工作状态 Working status of circuit breaker	辅助触头 Auxiliary contact	报警触头 Alarm contact
合 Close		
分 Open		
脱扣 Tripping		

Main technical parameter

主要技术参数

额定绝缘电压 $U_i=400V, AC$

额定发热电流 $I_{th}=6A$;

额定工作电压 U_e 及对应的额定工作电流 I_e
AC400V, 1A; AC230V, 3A。

DC220V, 0.15A

Rated insulation voltage $U_i=400V, AC$

Rated thermal current $I_{th}=6A$

Rated operation voltage(U_e) & rated operation current (I_e)
current I_e AC400V, 1A; AC230V, 3A

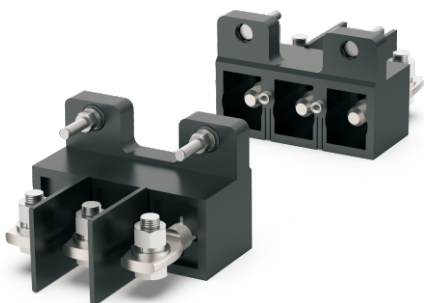
DC220V, 0.15A

电寿命和接通、分断能力 Electrical life & making and breaking capacity

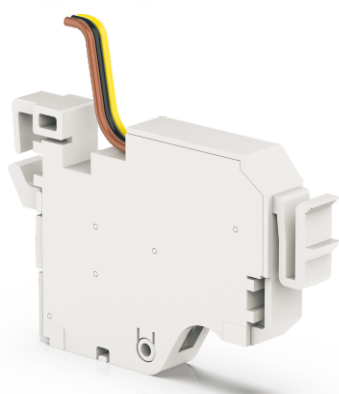
使用类别 Using categories		接通 Making			分断 Breaking			循环次数 Cycle time	操作频率 (次/min) Operating frequency (time/min)	通电时间(s) Time of making
AC		I/I _e	U/U _e	cos ϕ	I/I _e	U/U _e	cos ϕ			
AC-15	电寿命 Electrical life	10	1	0.3	1	1	0.3	6050	6	≥ 0.05
	接通、分断能力 Making & breaking capacity	10	1.1	0.3	10	1.1	0.3	10	6	≥ 0.05
DC		I/I _e	U/U _e	T0.95	I/I _e	U/U _e	T0.95			
DC-13	电寿命 Electrical life	1	1	300ms	1	1	300ms	6050	6	≥ 0.3
	接通、分断能力 Making & breaking capacity	1.1	1.1	300ms	1.1	1.1	300ms	10	6	≥ 0.3

UKM5 Series Moulded Case Circuit Breaker

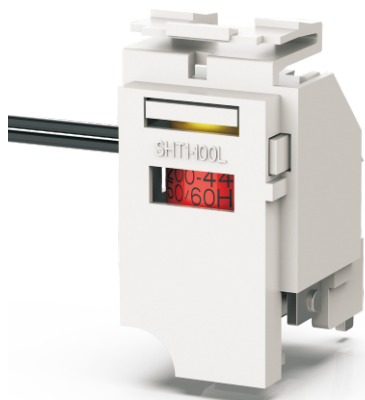
系列塑料外壳式断路器



插入式板后接线



报警辅助



分励脱扣器

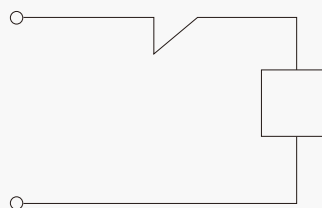


欠压脱扣器单元

The parameter of shunt trip

分励脱扣器参数

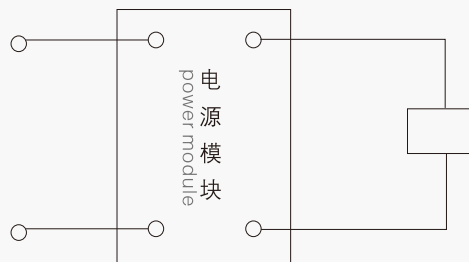
分励脱扣器线路图 Circuit figure of shunt trip



额定电压(Rated voltage)
Us: 110V, 230V, 400V
DC: 24V, 48V, 110V,
输入容量(Input capability)
AC: 180VA DC: 60W

The parameter of Under-voltage trip

欠电压脱扣器参数



电源模块

1. 电源模块可插挂在断路器的侧面,也可独立安装
 2. 额定电压: Ue: AC: 110V、230V、400V; DC: 24V、48V、110V;
 3. 输入容量: AC: 5VA; DC: 2W;
 4. 动作电压: $U = (70\% \sim 35\%) U_e$; 断路器脱扣分断;
 5. 动作时间: (10~30)ms;
- $U \geq 85\% U_e$, 断路器能够闭合;
- $U \leq 35\% U_e$, 断路器不能闭合。

Power module

1. power module can be fitted at the side of the circuit breaker, and the independant installation available
 2. rated voltage Ue: AC: 110V、230V、400V; DC: 24V、48V、110V;
 3. input capability AC: 5VA; DC: 2W;
 4. operating voltage: $U = (70\% \sim 35\%) U_e$; circuit breaker tripping & breaking
 5. operating time: (10~30)ms ;
- $U \geq 85\% U_e$, circuit breaker could be closed
- $U \leq 35\% U_e$, circuit breaker can not be closed

UKM5 Series Moulded Case Circuit Breaker

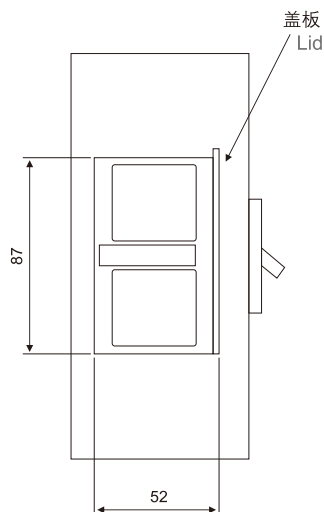
系列塑料外壳式断路器

JX series wiring terminal block-internal accessories

Jx型内部附件接线端子座

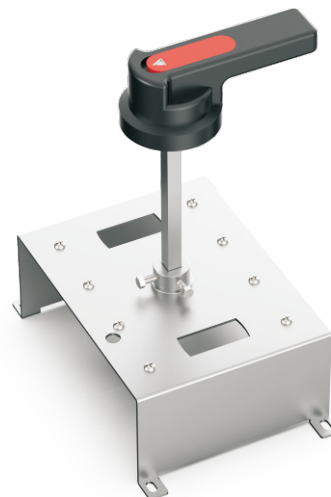
该接线端子座插挂在断路器侧面

The wiring terminal block is hanged at the side of circuit breaker



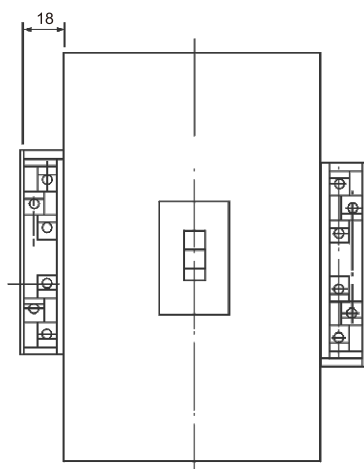
Cs1型旋转操作手柄

Model CS1 rotary handle



安装于断路器产品上可用挂锁防止断路器闭合或分断

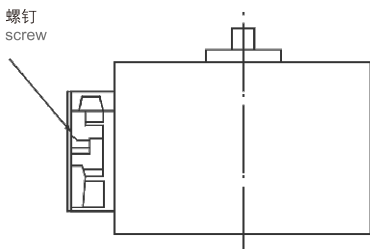
It is mounted on the circuit breaker and can be locked by padlock to prevent the making / breaking of circuit breaker



MDX型电动操作机构

MDX series electrical operating mechanism

M3.5 螺钉
M3.5 screw



MDX型用于Inm=100A V800A的断路器

For circuit breaker: Model(AF) 100A-800A

UKM5 Series Moulded Case Circuit Breaker

系列塑料外壳式断路器

CS1 series rotary operating mechanism

CS1 型旋转操作机构

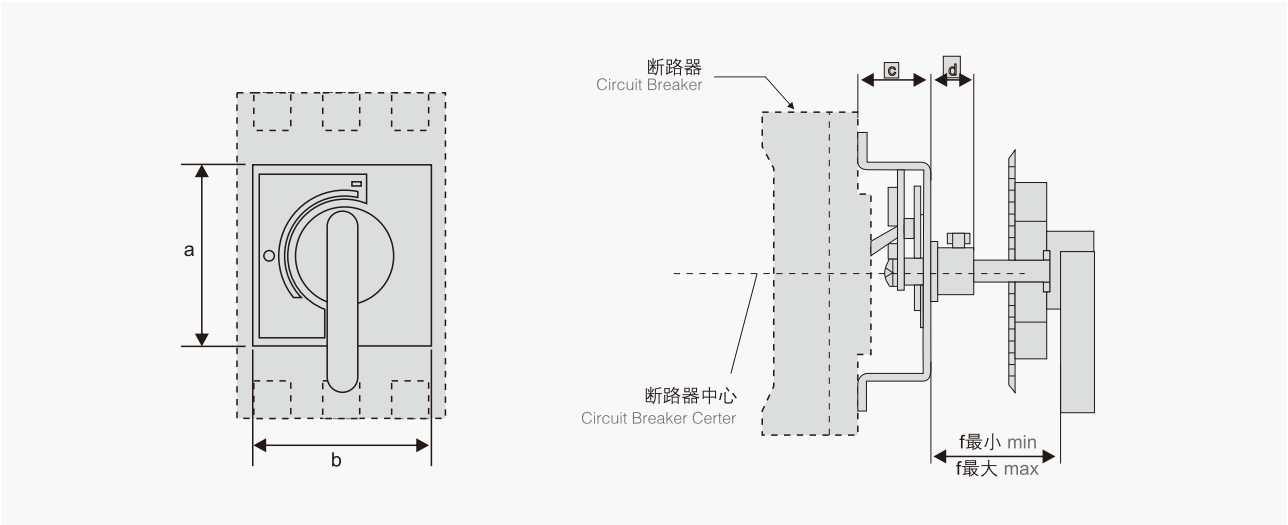
该操作机构采用齿轮一齿条机构推动断路器手柄，摩擦力小，操作轻松，使用寿命长。可选择A型（方形）操作手柄或B型（圆形）操作手柄。可用挂锁锁定手柄，防止断路器闭合或分断

The operating mechanism adopts gear-rack mechanism to drive the circuit breaker handle, with features of small friction, easy operation and long life. It can be locked by padlock to prevent making & breaking of circuit breaker.

型号 Model	壳架等级额定电流 Inm(A)	a	b	c	d	F最小 F min	F最大 F max
CS1-63	63	90	70	42	13.5	50	400
CS1-100	100	110	80	44	13.5	50	400
CS1-250	250	110	90	46	13.5	50	400
CS1-400(M1-400)	400/630	185	140	80	20	50	350
CS1-630,800	800/1250/1600	226	210	80	20	50	350

一般出厂方轴长f=150mm,如需其它长度，订货时注明

The general length of square shaft: f=150mm Other requirements, please specify when ordering.



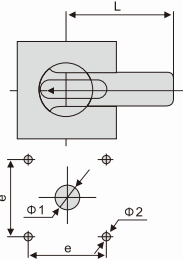
手柄的中心与铰链的距离不应小于200mm

The distance between the handle center and hinge should not be less than 200mm

A型手柄安装尺寸

Mounting size of A type handle

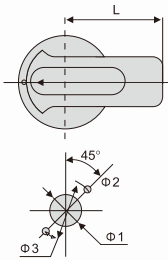
框架等级 Model (AF)	63~250	400~630	800~1600
φ 1	φ 42	φ 42	φ 63
φ 2	φ 4.5	φ 4.5	φ 5.5
e	65	65	88
L	60	125	140



B型手柄安装尺寸

Mounting size of B type handle

框架等级 Model (AF)	63~250	400~630	800~1600
φ 1	φ 33	φ 33	φ 33
φ 2	φ 4.5	φ 4.5	φ 4.5
φ 3	φ 53	φ 53	φ 53
L	65	200	125



UKM5 Series Moulded Case Circuit Breaker

系列塑料外壳式断路器

Electric operating mechanism

电动操作机构

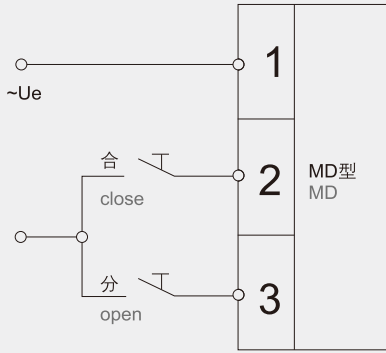
MD型电动操作机构由电磁铁拉动断路器的操作手柄，用来闭合和分断断路器。MDX型电动操作机构由电动机、齿轮和凸轮将电动机的旋转运动变为直线运动，用来闭合和分断断路器。

The MD series electrical operating mechanism is to make the electromagnet to drive the operating handle of the circuit breaker which is to close and open the circuit breaker. The MDX series electrical operating mechanism by motor, gear and cam can turns the revolving morement of the motor into the beeline morement to close and open the circuit breaker.

Main technology parameter of MD series electrical operating mechanism

MD型电动操作机构主要技术参数

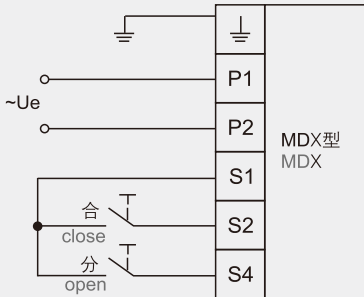
壳架等级额定电流 Inm(A)	100		250		MD型电动操作机构接线图 Wiring figureing of MD electrical operating mechanism
电动操作机构型号 Model	MD1		MD2		
交流额定工作电压Ue(V) AC rated working voltage Ue(V)	AC400V	AC230V	AC400V	AC230V	
起动电流(A) Starting current (A)	4.4	7.5	5.5	9.5	
动作时间(S) Operating time (S)	≤0.2				
额定操作频率(次/h) Rated operating frequency (time/n)	120				
机械寿命(次) Mechanical life	15000		9000		



Main technology parameter of MDX series electrical operating mechanism

MDX型电动操作机构主要技术参数

壳架等级额定电流 Inm(A)	100	250	400	630 800	1250,1600	MDX 型电动操作机构接线图 Wiring figureing of MDX electrical operating mechanism
电动操作机构型号 Model	MDX1	MDX2	MDX3 (M1~400)	MDX4		
交流额定工作电压Ue(V) AC rated working voltage Ue(V)	AC110~230V 50Hz DC110~220V		AC110, 230V 50Hz DC110, 220V			
起动电流(A) Starting current (A)	≤0.5		≤2			
动作时间(S) Operating time (S)	≤0.8					
额定操作频率(次/h) Rated operating frequency (time/h)	180		120			
机械寿命(次) Mechanical life	15000	9000	5000	3000		



UKM5 Series Moulded Case Circuit Breaker

系列塑料外壳式断路器

Definition of model

UKM5系列塑料外壳式断路器订货选型注解



Ordering notes

订货须知

1、型号

UKM5 □ - □□□ / □ - □□□□□□□□ 若接线方式为CH抽出式，则注明板前接线或板后接线。

2、分励、欠压脱扣器的额定电压

3、外部附件

旋转操作手柄型号（A型或B型）、方轴的长度及旋转操作手柄量；电动操作机构型号及额定电压、数量。

1. Model

UKM5□-□□□/□-□□□□□□□□

With drawal connection or circuit breaker; when ordering, please specify it is front connection or rear connection;

2. Please indicate the rated voltage of shunt trip & Under-voltage trip.

3. External accessories

Please let us know the type of rotary handle A or B; the length of square shaft;

Model of electrical operating mechanism and its voltage & quantity;