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XKM5(L)

塑料外壳式（漏电）断路器



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外部附件(电动操作机构)	External Accessories(Electric operating mechanism)
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产品介绍

PRODUCT INTRODUCTION


适用范围及标准

- XKM5系列塑料外壳式断路器适用于AC50/60Hz、额定绝缘电压800V、额定工作电压AC400V/500V/690V，额定电流从16A至800A的电路中，作配电保护用，也可作为电动机保护用。
- 本断路器可作为线路不频繁转换及电动机不频繁启动之用，具有过载、短路、欠电压保护。
- 本断路器具有隔离功能，其相应的符号为“”。
- 本断路器不能倒进线、只可“LINE”接电源端，“LOAD”接负载端。
- 本断路器符合 IEC60947-1及GB/T14048.1《低压开关设备和控制设备总则》、IEC60947-2及GB/T14048.2《低压开关设备和控制设备第二部分低压断路器》、IEC60947-4-1及GB/T14048.4《低压开关设备和控制设备机电式接触器和电动机起动器（含电动机保护器）》。
- 本断路器均获国家强制性产品认证“CCC”标志。

适用工作环境

- 安装地点周围空气温度不高于+40°C和不低于-5°C，且24h的平均值不超过+35°C；
注1：周围空气温度为-10°C或-25°C的工作条件，在订货时用户须向制造厂申明；
注2：周围空气温度上限超过+40°C或下限低于-25°C的工作条件，用户应与制造厂商协商。
- 安装地点的海拔不超过2000m。
- 大气的相对湿度在周围最高温度+40°C时不超过50%；在较低的温度下可以有较高的湿度；在最湿月的月平均最低温度为+25°C时，该月的月平均最大相对湿度为90%，并考虑到因温度变化发生在产品表面上的凝露。
注：提供特殊产品：湿热带型（通过GB/T 2423.4 和GB/T 2423.18 的试验要求）
- 污染等级：断路器本体为3级，装于断路器内部的附件为2级。
- 断路器主电路及欠压脱扣器，过电压类别III，辅助电路和控制电路，过电压类别II。
- 断路器适用于电磁环境A；
- 断路器可以垂直安装（竖装），也可水平安装（横装）。
- 运输和存储温度：-25°C至+55°C之间，短时间内（24小时内）可达+70°C；
- 断路器应安装在无爆炸危险和无导电尘埃、无足以腐蚀金属和破坏绝缘的地方；
- 断路器应安装在没有雨雪侵袭的地方。

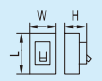
Applicable Scope and Standard

XKM5 series circuit breaker with plastic shell is suitable for the circuit with AC50/60Hz, rated insulation voltage 800V, rated working voltage AC400V/500V/690V, rated current 16A-800A. It can be used for the protection of the power distribution, also can be used for the protection of the motor. This circuit breaker can be used for the infrequent conversion of the circuit and the infrequent start of the motor. It has functions of overload, short circuit, and undervoltage protection. This circuit breaker has the isolation function, the symbol for it is "". The wiring of this circuit breaker can not be backward, with only "LINE" to the power supply side and "LOAD" to the load side. This circuit breaker conforms to IEC60947-1 and GB/T14048.1 (General requirements for low voltage switchgear and controlgear), IEC60947-2 and GB/T14048.2 (Low voltage switchgear and controlgear second section-Low Voltage circuit breakers), IEC60947-4-1 and GB/T14048.4 (Low voltage switchgear and controlgear-Electromechanical contactors and motor-starters (including motor protector)). This circuit breaker has "CCC" certification.

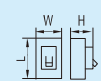
Applicable working environment

The ambient air temperature of the installation location should be no higher than +40°C and no lower than -5°C, meanwhile the average of 24 hours does not exceed +35°C.
Note 1: When the ambient air temperature is -10°C or -25°C, the user needs to notify the manufacturer when ordering.
Note 2: When the ambient temperature is higher than +40°C or lower than -25°C, the user needs to consult with the manufacturer.
Altitude of the installation location should be no more than 2000m.
The relative humidity of the atmosphere is no more than 50% at the maximum temperature of +40°C, allowing a higher relative humidity at a lower temperature. The average maximum relative humidity is 90%, in the wettest month with lowest temperature of +25°C, taking into account the condensation on the product surface due to the temperature variation.
Note: Can provide special product, Hot and humid zone type (Pass the GB/T2423.4 and GB/2423.18 test requirement).
Pollution level: this circuit breaker is third-class, and the internal accessories installed in the circuit breaker is second-class.
Overvoltage category of the circuit breaker main circuit and undervoltage stripper is III, overvoltage category of auxiliary circuit and control circuit is II.
This circuit breaker can be used in electromagnetic environment A.
The circuit breaker can be installed vertically and horizontally.
Transportation and storage humidity: between -25°C and 55°C and within short period (24 hours) can be +70°C.
Circuit breaker should be installed in locations without explosion hazard, conductance dust, metal corrosion or insulation destruction.
Circuit breakers shall be installed in locations without rain or snow invasion.

断路器技术参数

型号 Model		XKMS-63N XKMS-63S		XKMS-100N XKMS-100S XKMS-100H XKMS-100R				XKMS-160N XKMS-160S XKMS-160H XKMS-160R			
额定电流 Rated current In(A)		16,20,25,32,40,50,63		16,20,25,32,40,50,63,80,100				100,125,140,160			
极数 Pole number		3P/4P		3P	3P/4P			3P	3P/4P		
额定绝缘电压 Ui(V) Rated insulation voltage		800		800				800			
额定工作电压 Ue(V) Rated operating voltage		AC400		AC400	AC400/AC500/AC690			AC400	AC400/AC500/AC690		
额定冲击耐受电压 Uimp(V) Rated impact tolerance voltage		8000		8000				8000			
机械寿命 mechanical life	免维护 maintenance-free	20000		20000				20000			
电气寿命 electrical life	AC400V	8000		8000				8000			
	AC690V	-		1500				1500			
额定极限短路分断能力 Icu(KA) Rated ultimate short-circuit breaking capacity	AC400V	35	50	35	50	70	100	35	50	70	100
	AC500V	-	-	-	40	40	40	-	40	40	40
	AC690V	-	-	-	10	10	10	-	10	10	10
额定运行短路分断能力 Ics(KA) Rated service short-circuit breaking capacity	AC400V	35	35	35	50	70	70	35	50	70	70
	AC500V	-	-	-	40	40	40	-	40	40	40
	AC690V	-	-	-	10	10	10	-	10	10	10
飞弧距离 Flashover distance(mm)		0或(or)≤50		0或(or)≤50				0或(or)≤50			
外形尺寸 outline dimensions		W	78(3p) 103(4p)		92(3p) 122(4p)			92(3p) 122(4p)			
		L	135		150			150			
		H	82	73	91		73	91			
分励脱扣器 shunt release		○		○				○			
欠电压脱扣器 Under-voltage release		○		○				○			
辅助触头 Auxiliary contact		○		○				○			
报警触头 Alarm contact		○		○				○			
电动操作机构 Electric operating mechanism		○		○				○			
转动操作手柄机构 Rotation handle mechanism		○		○				○			
板前接线 Board connection		○		○				○			
板后接线 Back panel connection		○		○				○			
插入式接线 Plug in connection		○		○				○			
抽出式接线 Extraction type wiring											

断路器技术参数

型号 Model		XKMS-250N		XKMS-250S		XKMS-250H		XKMS-250R		XKMS-400N		XKMS-400S		XKMS-400H		XKMS-400R		
额定电流 Rated current In(A)		100,125,140,160,180,200,225,250								225,250,315,350,400								
极数 Pole number		3P		3P/4P						3P		3P/4P						
额定绝缘电压 Ui(V) Rated insulation voltage		800								800								
额定工作电压 Ue(V) Rated operating voltage		AC400		AC400 / AC500 / AC690						AC400		AC400 / AC500 /AC690						
额定冲击耐受电压 Uimp(V) Rated impact tolerance voltage		8000								8000								
机械寿命 mechanical life		免维护 maintenance-free		20000						10000								
电气寿命 electrical life		AC400V		8000						8000								
		AC690V		1500						1000								
额定极限短路分断能力 Icu(KA) Rated ultimate short-circuit breaking capacity		AC400V		35	50	70	100	50	50	70	100							
		AC500V		-	40	40	40	-	40	40	40							
		AC690V		-	10	10	10	-	15	15	15							
额定运行短路分断能力 Ics(KA) Rated service short-circuit breaking capacity		AC400V		35	50	70	70	35	50	70	70							
		AC500V		-	40	40	40	-	40	40	40							
		AC690V		-	10	10	10	-	15	15	15							
飞弧距离 Flashover distance(mm)		0或(or)≤50								0或(or)≤100								
外形尺寸 outline dimensions		W	107(3P) 142(4P)								140(3P) 184(4P)							
		L	165								257							
		H	73	91						103								
分励脱扣器 shunt release		○								○								
欠电压脱扣器 Under-voltage release		○								○								
辅助触头 Auxiliary contact		○								○								
报警触头 Alarm contact		○								○								
电动操作机构 Electric operating mechanism		○								○								
转动操作手柄机构 Rotation handle mechanism		○								○								
板前接线 Board connection		○								○								
板后接线 Back panel connection		○								○								
插入式接线 Plug in connection		○								○								
抽出式接线 Extraction type wiring										○								

断路器技术参数

Technical parameters of circuit breaker

断路器技术参数

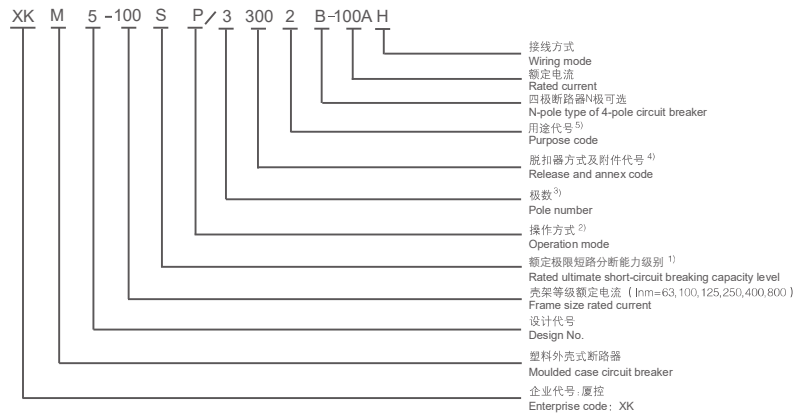
型号 Model			XKM5-630N	XKM5-630S	XKM5-630H		XKM5-630R	XKM5-800S	XKM5-800H	XKM5-800R
额定电流 Rated current In(A)			500,630		400,500,630			630,700,800		
极数 Pole number			3P		3P/4P			3P/4P		
额定绝缘电压 Ui(V) Rated insulation voltage					800			800		
额定工作电压 Ue(V) Rated operating voltage			AC400		AC400 / AC500 / AC690			AC400 / AC500 / AC690		
额定冲击耐受电压 Uimp(V) Rated impact tolerance voltage					8000			8000		
机械寿命 mechanical life		免维护 maintenance-free			10000			10000		
电气寿命 electrical life		AC400V			8000			8000		
		AC690V			1000			1000		
额定极限短路分断能力 Icu(KA) Rated ultimate short-circuit breaking capacity		AC400V	50	50	70	100	50	70	100	
		AC500V	-	40	40	40	40	40	40	40
		AC690V	-	15	15	15	15	15	15	15
额定运行短路分断能力 Ics(KA) Rated service short-circuit breaking capacity		AC400V	35	50	70	70	50	70	70	
		AC500V	-	40	40	40	40	40	40	40
		AC690V	-	15	15	15	15	15	15	15
飞弧距离 Flashover distance(mm)			0或(or)≤100				0或(or)≤100			
外形尺寸 outline dimensions		W	140	210(3P) 280(4P)			210(3P) 280(4P)			
		L	257	275			275			
		H		103			103			
分励脱扣器 shunt release			○				○			
欠电压脱扣器 Under-voltage release			○				○			
辅助触头 Auxiliary contact			○				○			
报警触头 Alarm contact			○				○			
电动操作机构 Electric operating mechanism			○				○			
转动操作手柄机构 Rotation handle mechanism			○				○			
板前接线 Board connection			○				○			
板后接线 Back panel connection			○ (注：XKM5-630N无板后接线)				○			
插入式接线 Plug in connection			○ (注：XKM5-630N无插入式接线)				○			
抽出式接线 Extraction type wiring			○ (注：XKM5-630N无抽出式接线)				○			

注：○ 为可选项

断路器含义

Meaning of circuit breaker

断路器含义



- 1) 按极限短路分断能力分：
N 基本型；
S 标准型；
H 高分断型；
R 限流型。

2) 按操作方式分：
手柄直接操作无代号；
电动操作用P表示；
转动操作用Z表示。

3) 按极数分：
三级；
四级。(注)

4) 按过电流脱扣型式分：
瞬时脱扣(短路保护)；
复式脱扣(过载长延时和短路瞬时)。
- 5) 用途代号：
配电用断路器无代号；
保护电动机用断路器以2表示。

6) 按接线方式分：
板前接线—无代号；
板后接线—H；
插入式接线—R；
抽出式接线—C。

注：四级断路器中性极(N极)型式分四种：
A型：N极不安装过电流脱扣器，且N极始终接通，不与其他三极一起合分；
B型：N极不安装过电流脱扣器，且N极与其他三极一起合分(N极先合后分)；
C型：N极安装过电流脱扣器，且N极与其他三极一起合分(N极先合后分)；
D型：N极安装过电流脱扣器，且N极始终接通，不与其他三极一起合分。
- 1) Breaking capacity according to limit short circuit:
N Normal type;
S Standard type;
H High segment type;
R Limiting current type.

2) According to operation mode:
Handle directly without code;
P for electric operation;
Z for rotation operation.

3) According to the number of poles:
2 pole;
3 pole;
4 pole.(Note)

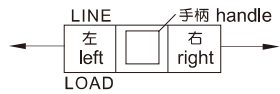
4) According to current tripping type
Instantaneous release(Short circuit protection);
Duplex release.(Overload long delay and short circuit transient)
- 5) Purpose code:
No circuit code for distribution circuit breakers;
Motor protection circuit breaker to 2 ;

6) According to wiring mode:
Board connection-Board connection without code;
After-plate wiring-H;
Plug in connection-R;
Extraction type wiring-C.

Note: there are four types of quadrupole circuit breakers neutral pole (N).
Type A: N does not install an over current release, and N is always connected.
Type B: N is not installed over current release, and N together with other three points (N first and then)
Type C: N pole is installed with over current release, and N pole is combined with other three poles (N first and then)
Type D: N pole is installed with over current release, and N is always connected, not with other three poles.

脱扣器及附件代号、符号

Release and annex code and symbol



- 报警触头 alarm contact
- 辅助触头 auxiliary contact
- ▲ 欠电压脱扣器 under-voltage release
- △ 分励脱扣器 shunt release
- 辅助报警触头 auxiliary alarm contact
- 双辅助触头 double auxiliary contact
- 右边引线即右装式 right downlead, namely, right installation
- ← 左边引线即左装式 left downlead, namely, left installation

脱扣器及附件代号 Release and accessory code	断路器型号 circuit breaker model		XKM5-63	XKM5-160 (100) /250	XKM5-400/800 (630)
	附件名称 Accessory name	极数Pole Number	3P、4P	3P、4P	3P、4P
200,300	无附件 without accessory	200-电磁式脱扣器 (仅有短路瞬时保护) 200-electromagnetic type release (of only short-circuit transient protection) 300-复式脱扣器 (兼有过载和短路瞬时保护) 300-complex release (of both over-load and short-circuit transient protection)			
208,308	报警触头 alarm contact				
210,310	分励脱扣器 shunt release				
220,320	辅助触头 (1NO1NC) auxiliary contact (1NO1NC)				
202,302	辅助触头 (2NO2NC) auxiliary contact (2NO2NC)				
230,330	欠电压脱扣器 under-voltage release				
240,340	分励脱扣器,辅助触头 (1NO1NC) shunt release,auxiliary contact (1NO1NC)				
212,312	分励脱扣器,辅助触头 (2NO2NC) shunt release,auxiliary contact (2NO2NC)				
250,350	分励脱扣器,欠电压脱扣器 shunt release,under-voltage release				
260,360	二组辅助触头 (2NO2NC) 2 groups of auxiliary contacts (2NO2NC)				
222, 322	二组辅助触头 (3NO3NC) 2 groups of auxiliary contacts (3NO3NC)				
223, 323	二组辅助触头 (4NO4NC) 2 groups of auxiliary contacts (4NO4NC)				
270,370	欠压脱扣器,辅助触头 (1NO1NC) under-voltage release, auxiliary contact (1NO1NC)				
232,332	欠压脱扣器,辅助触头 (2NO2NC) under-voltage release, auxiliary contact (2NO2NC)				
218,318	分励脱扣器,报警触头 shunt release,alarm contact				
228,328	辅助触头 (1NO1NC),报警触头 auxiliary contact (1NO1NC), alarm contact				
238,338	欠压脱扣器,报警触头 under-voltage release, alarm contact				
248,348	分励脱扣器,辅助触头 (1NO1NC),报警触头 shunt release, auxiliary contact (1NO1NC), alarm contact				
268,368	二组辅助触头 (2NO2NC),报警触头 2 groups of auxiliary contact (2NO2NC), alarm contact				
205,305	二组辅助触头 (3NO3NC),报警触头 2 groups of auxiliary contact (3NO3NC), alarm contact				
278,378	欠压脱扣器,辅助触头 (1NO1NC),报警触头 under-voltage release,auxiliary alarm contact (1NO1NC), alarm contact				

保护特性Protection Characteristics

过载(反时限动作)断开特性

Overload(inverse time limit)disconnecting characteristics.

	试验电流名称 Test current name	整定电流倍数 Multiple of set current	约定时间 Conventional period		起始状态 Start status
			In≤63	In≥63	
过载保护 (配电) Overload protection (power distribution)	约定不脱扣电流 Conventional non-release current	1.05	≥1h	≥2h	冷态 Cold status
	约定脱扣电流 Conventional release current	1.3	<1h	<2h	热态 Hot status
过载保护 (电动机) Overload protection (electromotor)	约定不脱扣电流 Conventional non-release current	1.0		≥2h	冷态 Cold status
	约定脱扣电流 Conventional release current	1.2		<2h	热态 Hot status
		1.5	≤2min(XKM5-63)脱扣级别5 ≤4min(XKM5-100,160,250)脱扣级别10 ≤8min(XKM5-400,630)脱扣级别20		热态 Hot status
		7.2	0.5s<Tp≤5s(XKM5-63)脱扣级别5 4s<Tp≤10s(XKM5-100,160,250)脱扣级别10 6s<Tp≤20s(XKM5-400,630)脱扣级别20		冷态 Cold status

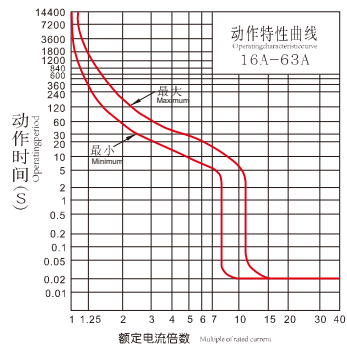
短路断开特性

Short-circuit disconnecting characteristics.

	额定电流In Rated current	动作特性 performance characteristic
短路保护 (配电) Short-circuit protection (power distribution)	≤32A	400A±20%
	40~800A	10In±20%
短路保护 (电动机) Short-circuit protection (electromotor)	≤32A	400A±20%
	40~630A	12In±20%

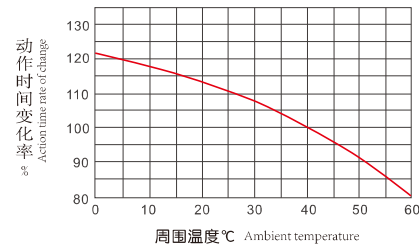
XKM5-63N,S 动作特性曲线

XKM5-63N,S Operating characteristic curve



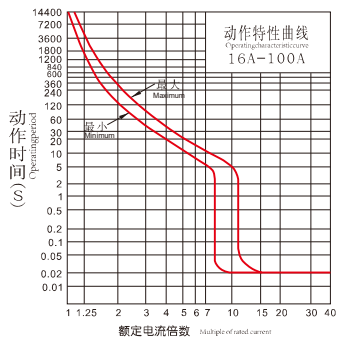
XKM5-63N,S 温度校正曲线

XKM5-63N,S temperature correction curve



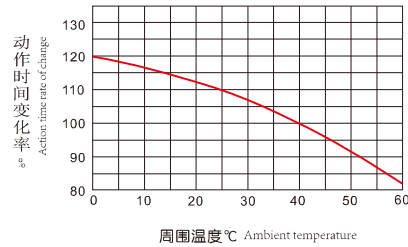
XKM5-100N,S,H,R 动作特性曲线

XKM5-100N,S,H,R Operating characteristic curve



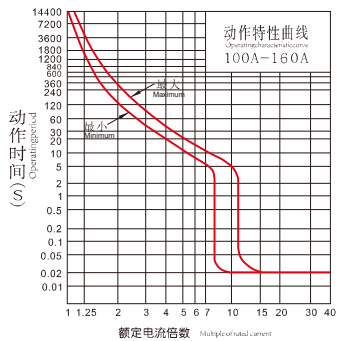
XKM5-100N,S,H,R 温度校正曲线

XKM5-100N,S,H,R temperature correction curve



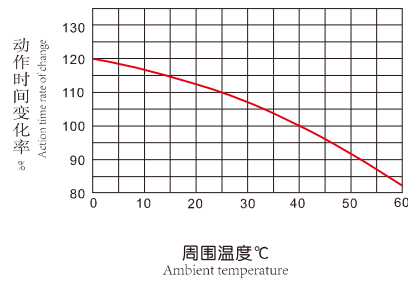
XKM5-160N,S,H,R 动作特性曲线

XKM5-160N,S,H,R Operating characteristic curve



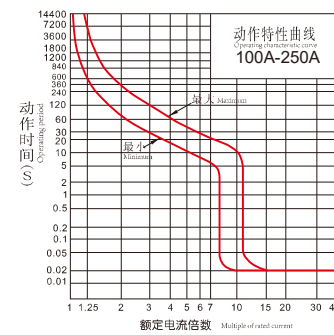
XKM5-160N,S,H,R 温度校正曲线

XKM5-160N,S,H,R temperature correction curve



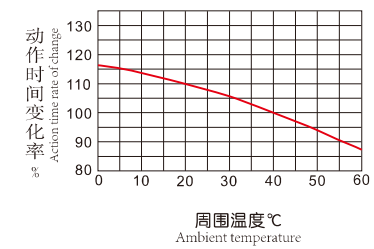
XKM5-250N,S,H,R 动作特性曲线

XKM5-250N,S,H,R Operating characteristic curve



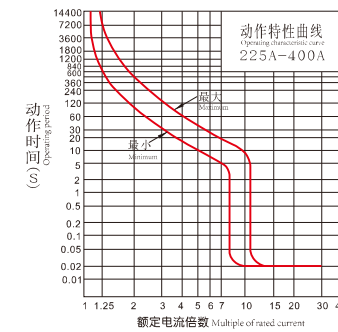
XKM5-250N,S,H,R 温度校正曲线

XKM5-250N,S,H,R temperature correction curve



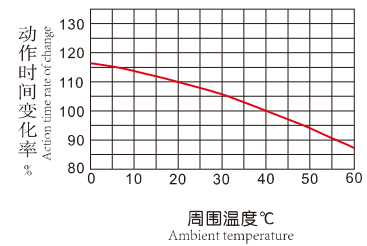
XKM5-400N,S,H,R 动作特性曲线

XKM5-400N,S,H,R Operating characteristic curve



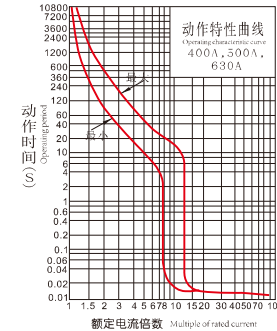
XKM5-400N,S,H,R 温度校正曲线

XKM5-400N,S,H,R temperature correction curve



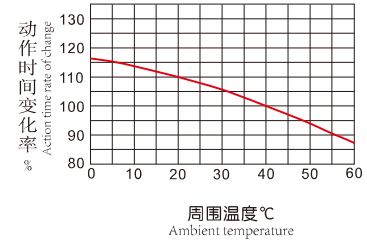
XKM5-630N,S,H,R 动作特性曲线

XKM5-630N,S,H,R Operating characteristic curve



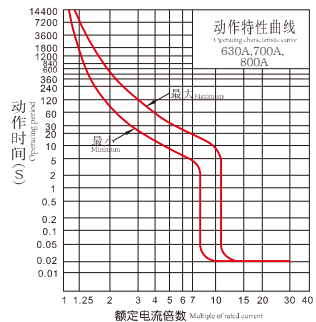
XKM5-630N,S,H,R 温度校正曲线

XKM5-630N,S,H,R temperature correction curve



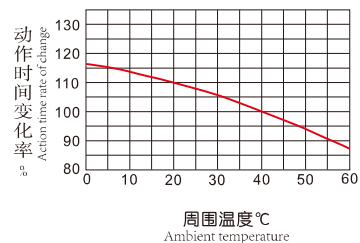
XKM5-800S,H,R 动作特性曲线

XKM5-800S,H,R Operating characteristic curve



XKM5-800S,H,R 温度校正曲线

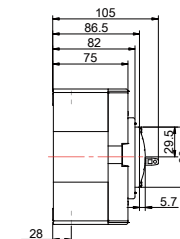
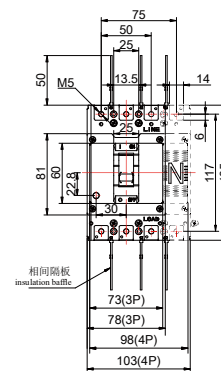
XKM5-800S,H,R temperature correction curve



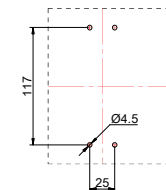
XKM5-63N,S

板前接线

Board connection

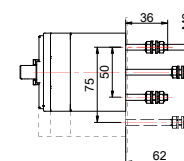
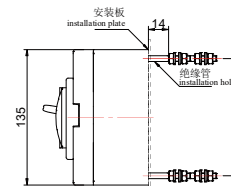


板前接线安装板开孔尺寸
installation hole dimensions for the Board connection

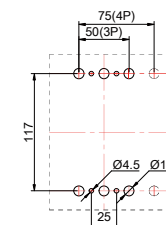


板后接线

Back panel connection



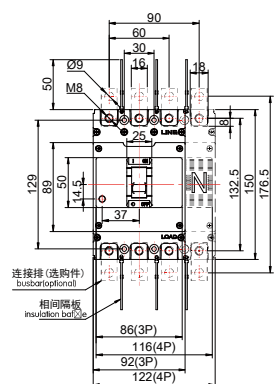
板后接线安装板开孔尺寸
installation hole dimensions for the Back panel connection



XKM5-100S,H,R; XKM5-160S,H,R

板前接线

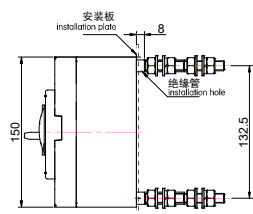
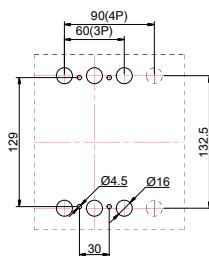
Board connection

板前接线安装板开孔尺寸
Installation hole dimensions for the Board connection

型号	a	b	c	d	e
XKM5-160(100)N	63.5	73	74	95	23
XKM5-160(100)S,H,R	81.5	91	92	113	28

板后接线

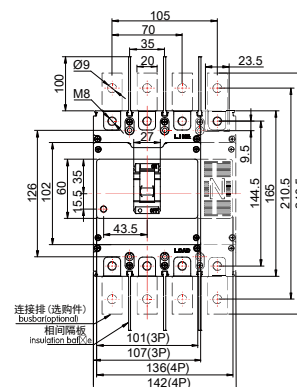
Back panel connection

板后接线安装板开孔尺寸
Installation hole dimensions for the Back panel connection

XKM5-250N,S,H,R

板前接线

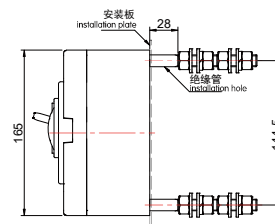
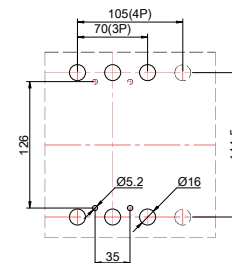
Board connection

板前接线安装板开孔尺寸
Installation hole dimensions for the Board connection

型号	a	b	c	d
XKM5-250N	68	73	77.5	102
XKM5-250S,H,R/3P	86	91	95.5	120

板后接线

Back panel connection

板后接线安装板开孔尺寸
Installation hole dimensions for the Back panel connection

外形及安装尺寸

Overall & Installation

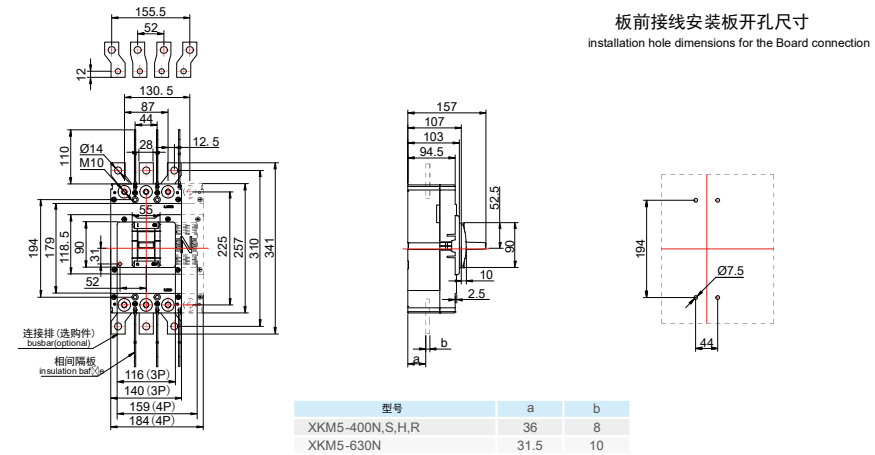
XKM5-400S,H,R,XKM5-600N

板前接线 Board connection

Board connection

板前接线安装板开孔尺寸
installation hole dimensions for the Board connection

installation hole dimensions for the Board connection



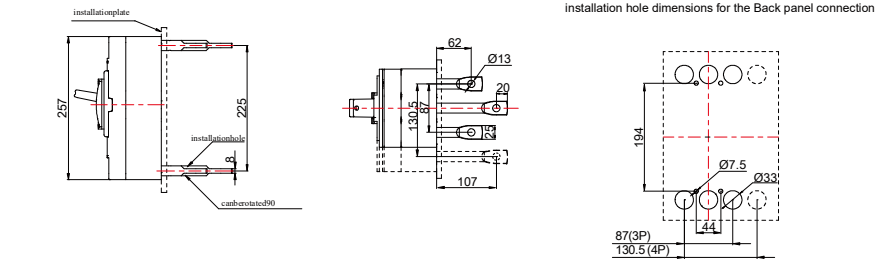
型号	a	b
XKM5-400N,S,H,R	36	8
XKM5-630N	31.5	10

板后接线 Back panel connection

Back panel connection

板后接线安装板开孔尺寸
installation hole dimensions for the Back panel connection

installation hole dimensions for the Back panel connection



注：XKM5-630N无板后接线
Note：XKM5-630N without back panel type wiring

Note : XKM5-630N without back panel type wiring

外形及安裝尺寸

Overall & Installation

Overall & Installation

XKM5-630S,H,R;XKM5-800S,H,R

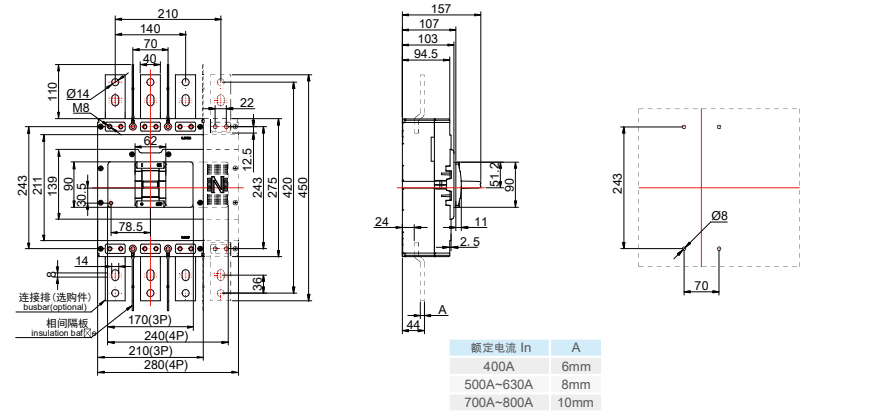
板前接线

Board connection

Board connection

板前接线安装板开孔尺寸
installation hole dimensions for the Board connection

installation hole dimensions for the Board connection



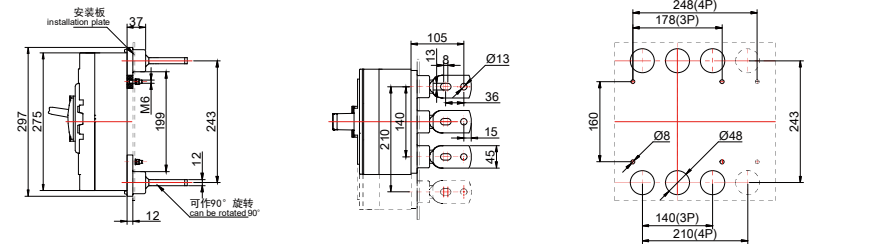
额定电流 In	A
400A	6mm
500A~630A	8mm
700A~800A	10mm

板后接线 Back panel connection

Back panel connection

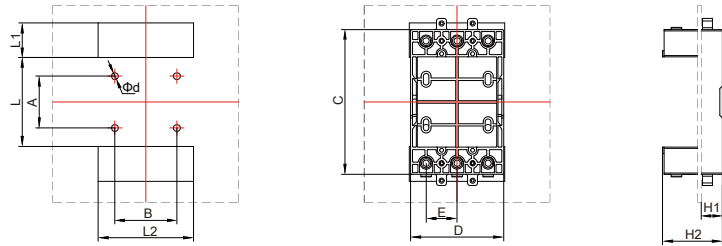
板后接线安装板开孔尺寸
installation hole dimensions for the Back panel connection

installation hole dimensions for the Back panel connection



板后安装

Back panel connection



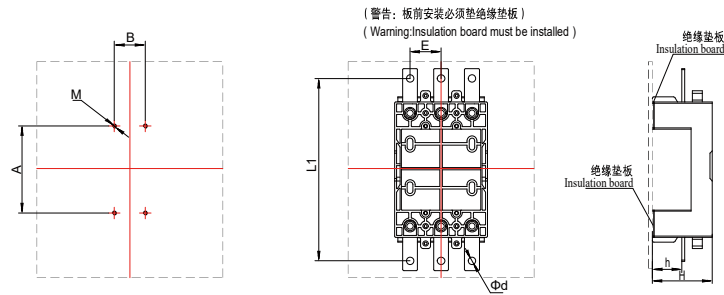
型号规格 Model and dimensions	选用插入式型号 Optional Plug in type	外形&安装尺寸 Outline & Installation dimensions											
		A	B	L	L1	L2	Φd	C	D	E	H1	H2	
XKM5-63	MZ3-63/XKM5	60	50	90	38	79	5.5	135	75	25	17	48.2	
XKKM5-(160)100	MZ3-100/XKM5	65	60	90	51	94	6.5	160	90	30	20	56.2	
XKKM5-(160)100N	MZ3-100/XKM5(N型)	65	60	90	51	94	6.5	160	90	30	20	56.2	
XKM5-250	MZ3-250/XKM5	74	70	100	55	110	6.5	179	105	35	27	73.2	
XKM5-250(N)	MZ3-250/XKM5(N型)	74	70	100	55	110	6.5	179	105	35	27	73.2	
XKM5-400	MZ3-400/XKM5	141	88	178	70	135	7	275	132	44	45	85	
XKM5-800(630)	MZ3-800/XKM5	143	140	181	87	213	7	311	210	70	50	125	

注：当四极开关时，尺寸B，L2，D均增加相距E

Note: for four pole breakers, Dimension B, L2, D should be added with Phase distance E

板前安装

Board connection



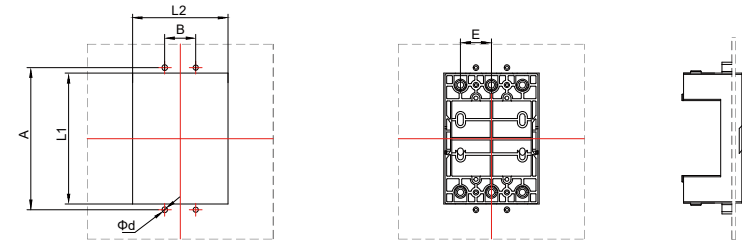
型号规格 Model and dimensions	选用插入式型号 Optional Plug in type	外形&安装尺寸 Outline & Installation dimensions								
		A	B	L1	E	d	M	H	h	
XKM5-63	MZ3-63/XKM5	96	25	173	25	6	M3	49	23	
XKM5-160(100)	MZ3-100/XKM5	110	30	198	30	6.5	M4	57	28	
XKM5-160(100)N	MZ3-100/XKM5(N型)	110	30	198	30	6.5	M4	57	28	
XKM5-250	MZ3-250/XKM5	150	35	223	35	8.5	M4	74	32	
XKM5-250(N)	MZ3-250/XKM5(N型)	150	35	223	35	8.5	M4	74	32	
XKM5-400	MZ3-400/XKM5	245	44	326	44	10.5	M5	85	36	
XKM5-800(630)	MZ3-800/XKM5	283	70	363	70	12.5	M6	125	67	

注：当四极开关时，250A及以下尺寸B增加相距E；开关是400A及以上尺寸B不变；XKM5-630N无插入式接线（整体式）

Note: for four pole breakers, when 250A and below, dimension B should be added with Phase distance E; Dimension B remains unchanged when the switch is 400A and above. XKM5-630N without plug-in wiring (integrated type)

大开孔式板后安装

Back panel installation for the type with big holes



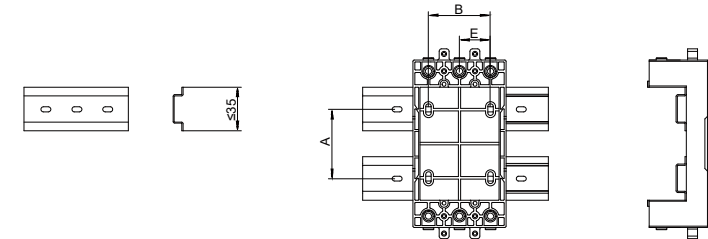
型号规格 Model and dimensions	选用插入式型号 Optional Plug in type	外形&安装尺寸 Outline & Installation dimensions					
		A	B	L1	L2	Φd	E
XKM5-63	MZ3-63/XKM5	157	25	137	77	4	25
XKM5-160(100)	MZ3-100/XKM5	170	30	161	92	5	30
XKM5-160(100)N	MZ3-100/XKM5(N型)	170	30	161	92	5	30
XKM5-250	MZ3-250/XKM5	191	35	180	107	5	35
XKM5-250N	MZ3-250/XKM5(N型)	191	35	180	107	5	35
XKM5-400	MZ3-400/XKM5	291	44	277	134	6	44
XKM5-800(630)	MZ3-800/XKM5	327	70	313	212	6	70

注：当四极开关时，250A及以下尺寸B，L2均增加相距E；开关是400A及以上尺寸B不变，L2向增加的N相方向增加相距E

Note: for four pole breakers, when it's 250A, Dimension B and L2 should be added with Phase distance E; When it's 400A or above, Dimension B remains the same, L2 should be added with Phase distance E

条架式板后安装

Back panel installation for the Bar-type



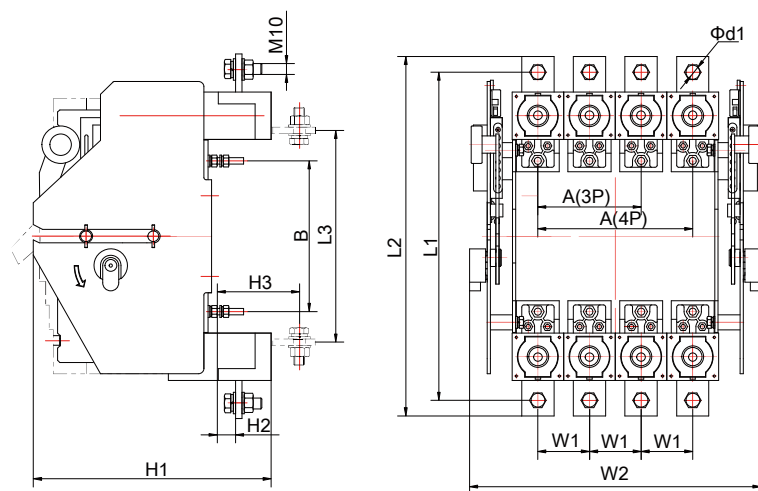
型号规格 Model and dimensions	选用插入式型号 Optional Plug in type	外形&安装尺寸 Outline & Installation dimensions		
		A	B	E
XKM5-63	MZ3-63/XKM5	56	50	25
XKM5-160(100)	MZ3-100/XKM5	65	60	30
XKM5-160(100)N	MZ3-100/XKM5(N型)	65	60	30
XKM5-250	MZ3-250/XKM5	74	70	35
XKM5-250N	MZ3-250/XKM5(N型)	74	70	35
XKM5-400	MZ3-400/XKM5	141	88	44
XKM5-800(630)	MZ3-800/XKM5	143	140	70

注：当四极开关时，尺寸B均增加相距E

Note: for four pole breakers, Dimension B should be added with Phase distance E

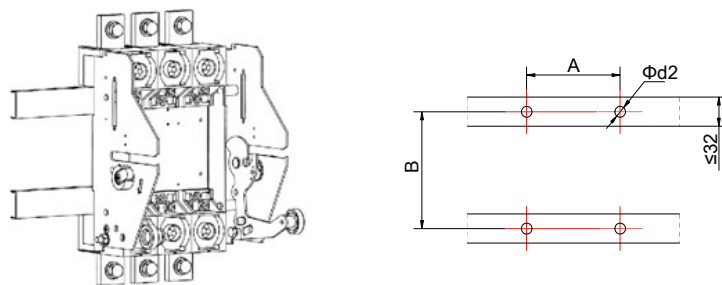
外形尺寸

Outline dimensions



安装尺寸

Installation dimensions



型号规格 Model and dimensions	选用抽出式型号 Selected extraction type model	极数 Pole number	外形尺寸 Outline dimensions									安装尺寸 Installation dimensions		
			L1	L2	L3	H1	H2	H3	W1	W2	Φd1	A	B	Φd2
XKM5-400	CH2-400/XKM5	3P	311	340	197	227	17.5	77	44	219	11	88	141	6.5
		4P	311	340	197	227	17.5	77	44	263	11	132	141	6.5
XKM5-800(630)	CH2-630/XKM5	3P	368	411	231	213	24	74	70	297	13	140	131	6.5
		4P	368	411	231	213	24	74	70	367	13	210	131	6.5

注：XKM5-630N无抽出式接线

Note: XKM5-630N without extraction type wiring

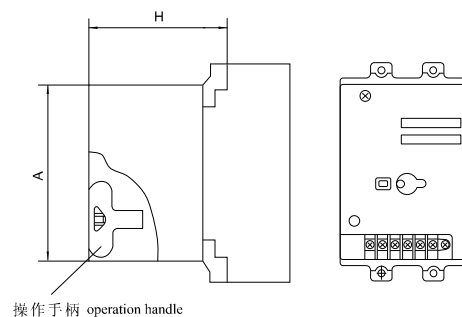
DC3 系列电动操作机构技术参数

DC3 Technical parameters of electric mechanism

电动操作机构型号 Model of electric operating mechanism	配用断路器 Sorted circuit breaker	功率 (W) Operating current	操作时间 Operating time	电压可选 Operating voltage	动作电流 Operating current
DC3-63/XKM5	XKM5-63N,S	≤14	≤0.7s	AC400V AC230V DC220V AC110V DC110V	≤2A
DC3-100/XKM5	XKM5-160(100)S,H,R	≤14			
DC3-100/XKM5(N型)	XKM5-160(100)N	≤14			
DC3-250/XKM5	XKM5-250N,S,H,R	≤14			
DC3-400/XKM5	XKM5-400N,S,H,R XKM5-630N	≤35			
DC3-630/XKM5	XKM5-800(630)S,H,R	≤35		DC24V	≤3A

DC3 系列电动操作机构外形尺寸

DC3 Outline dimensions of electric mechanism



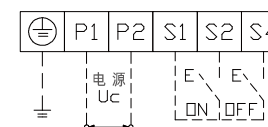
操作手柄 operation handle

型号规格 Type specification	A	H
DC3-63/XKM5	102	95
DC3-100/XKM5	117	97
DC3-250/XKM5	117	97
DC3-400/XKM5	176	151
DC3-630/XKM5	176	153

DC3系列电动操作机构电气接线图

DC3 Electrical wiring diagram of electric mechanism

电动操作机构的额定控制电源电压为：AC400V、AC230V、AC110V、DC220V、DC110V、DC24V。
The rated control power supply voltage of the electric operating mechanism is: AC400V、AC230V、AC110V、DC220V、DC110V、DC24V.



转动手柄操作机构

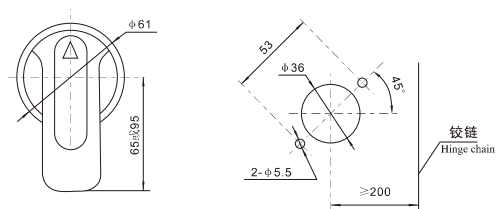
Rotation handle operating mechanism

手柄: XKM5 系列塑料外壳式断路器转动手柄有三种可选,分别为“A”型、“F1”型、“F2”型

Handle: A, F1 and F2 kinds of rotation handles of HTS3series of moulded case type circuit breakers can be selected.

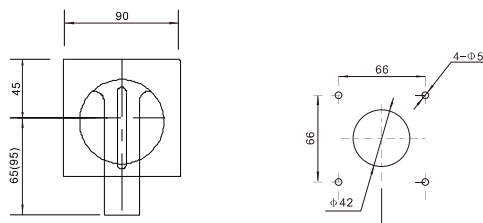
开孔尺寸: A型

Perforation dimensions: A type



开孔尺寸: F1型

Perforation dimensions: F1 type

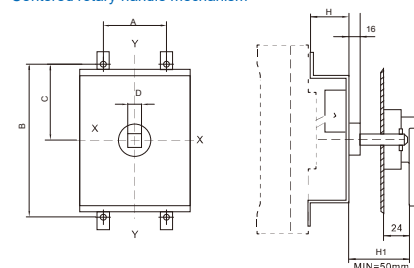


操作机构: 有“中心式转动手柄操作机构”, “偏心式转动手柄操作机构”

Operation handle: "Centered rotary-handle mechanism", "Acentric rotary-handle mechanism"

中心式转动手柄操作机构

Centered rotary-handle mechanism



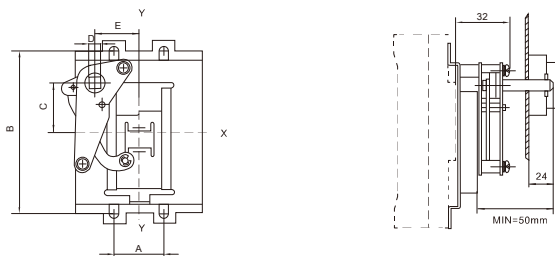
型号规格 Model and dimensions	配用断路器 Sorted circuit breaker	A	B	C	D	H	操作手柄相对于断路器中心Y值 Deviation (Y value) of operation handles from circuit breaker center
SC1-63/XKM5	XKM5-63	25	117	58.5	8	41	0
SC1-100/XKM5	XKM5-160(100)	30	132	66	8	46	0
SC1-250/XKM5	XKM5-250	35	126	63	8	46	0
SC1-400/XKM5	XKM5-400	128	195	97.5	10	76	0
SC1-630/XKM5	XKM5-800(630)	198	243	121.5	10	76	0

注: X,Y轴为对应断路器的中心,

Note: X and Y axes are centers of corresponding circuit breakers.

偏心式转动手柄操作机构

Acentric rotary-handle mechanism



型号规格 Model and dimensions	配用断路器 Sorted circuit breaker	A	B	C	D	E	操作手柄相对于断路器中心Y值 Deviation (Y value) of operation handles from circuit breaker center
SC2-63/XKM5	XKM5-63	25	117	32	8	0	0
SC2-100/XKM5	XKM5-160(100)	30	132	32	8	11	0
SC2-250/XKM5	XKM5-250	35	126	40	8	11	0
SC2-400/XKM5	XKM5-400	128	195	60	10	15	0
SC2-630/XKM5	XKM5-800(630)	198	243	60	10	15	0

注: X,Y轴为对应断路器的中心,

Note: X and Y axes are centers of corresponding circuit breakers.

附件类型Accessory type

附件名称 Accessory name	功能 Function	电压可选 Voltage optional	接线图 Wiring diagram
报警触头 alarm contact	指示断路器已脱扣 It indicates release circuit breaker.		
辅助触头 auxiliary contact	指示断路器处于断开或闭合 It indicates that circuit breaker is disconnected or connected.		
分励脱扣器 shunt release	在额定控制电源电压70%~110%之间时, 应可靠使断路器脱扣 Circuit breaker shall release within scope of 70% to 110% of rated control power voltage.	AC400V AC230V	
欠电压脱扣器 under-voltage release	在额定工作电压的85%~110%时, 欠压脱扣器应保证断路器能可靠闭合。在额定工作电压的35%~75%时, 欠压脱扣器应可靠使断路器脱扣。在额定工作电压低于35%时欠压脱扣器应能防止断路器合闸。 Under-voltage release shall guarantee reliable connection of circuit breaker within scope of 85% to 110% of rated operating voltage. It shall release circuit breaker reliably within scope of 35% to 75% of rated operating voltage. It shall avoid connection of circuit breaker when voltage is less than 35% of rated operating voltage.	AC230V AC400V	

注意: 欠电压脱扣器必须先通电后才能进行断路器的操作, 否则将损坏断路器。

Note: Circuit breaker cannot be operated until power supply of under-voltage release or it may be damaged.

辅助触头和报警触头的技术参数
Technical parameters of auxiliary contact and alarm

额定发热电流(I _{th}) Rated heating current	额定工作电流(I _e) Rated operating current	
	AC-14	DC-13
	AC400V	DC220V
3	0.3	0.15

使用和维护Use and maintenance

- 断路器特性和附件的动作值已经由制造厂调整好, 用户在使用中不应随意开盖及调节。
- 使用中应注意周围清洁, 有机会停电维修时, 应把进线端积尘清除, 检查铜排螺钉是否松动等。
- 断路器手柄可以处于三种状态, 分别表示闭合、断开、自由脱扣三个位置。当手柄处于自由脱扣位置时合闸, 应将手柄用力推向断开位置使断路器再扣才能进行闭合操作。
- 在用户遵守保管和使用条件下, 自制造厂发货之日起18个月内断路器 封签完好, 产品因制造质量问题而产生的损坏或不能正常使用时, 本公司承诺无偿更换或修理。

- Characteristics of circuit breaker and operating values of accessories have been adjusted by manufacturer. User cannot uncover or adjust randomly during use.
- Pay attention to surrounding cleanness during use. Collect dust in incoming wire end and check if copper bar screws are loose or not once power failure repair.
- Circuit breaker handles can be under 3 states, namely, closing, disconnection and free release positions respectively. Push handle to disconnection position for closing and circuit breaker re-release when handle is in free release position.
- Our company does not commit free replacement or repair for damage or abnormal use of products because of manufacturing quality problem unless users abide by storage and use conditions and circuit breaker seal is perfect within 18 months since delivery date of manufacturer.


(请根据需要在内打“√”,或填上数字)

用户单位 User unit		联系人及 联系方式 Contact and contact information	
订货台数 Ordering quantity		订货日期 The date of order	
壳架等级 额定电流 Frame size	XKM5-	63 □ 100 □ 250 □ 400 □ 630 □ 800 □	分断能力 Breaking ability N正常型 □ S标准型 □ Normal type H高分段型 □ R限流型 □ High segment type Limiting current type
额定电流 Rated current	63	16A □ 20A □ 25A □ 32A □ 40A □ 50A □ 63A □	
	100	16A □ 20A □ 25A □ 32A □ 40A □ 50A □ 63A □ 80A □ 100A □	
	160	100A □ 125A □ 140A □ 160A □	
	250	100A □ 125A □ 140A □ 160A □ 180A □ 200A □ 225A □ 250A □	
	400	225A □ 250A □ 315A □ 350A □ 400A □	
	630	400A □ 500A □ 630A □	
	800	630A □ 700A □ 800A □	
极数 Pole	3 □ 4 □	N极型式 N-type	A型type □ B型type □ C型type □ D型type □
用途代号 The code of usage	配电保护 Power protection □ 电动机保护保护 Electric protection □		
脱扣器 代号 Release code	200 □ 208 □ 210 □ 220 □ 202 □ 230 □ 240 □ 212 □ 250 □ 260 □ 222 □	备注 remark	
	223 □ 270 □ 232 □ 218 □ 228 □ 238 □ 248 □ 268 □ 205 □ 278 □	备注 remark	
接线方式 Wiring	板前接线(带连接排) □ 插入式接线 板前接线 □ 抽出式接线 □ Board connection(with connecting line) Plug in connection board install Extraction Type connection 板后接线 □ 板后接线 □ Back panel connection Back panel install		
附件 Accessories	操作方式 Operation method	转动手柄操作 rotary-handle operation	操作机构 Operation mechanism 中心式转动手柄操作机构 □ 偏心式转动手柄操作机构 □ Centered rotary-handle mechanism Acentric rotary-handle mechanism
		手柄 handle	A型type □ F1型type □
	电动操作 Electric operation	AC400V □ DC220V □	AC230V □ AC110V □ DC24V □
	欠电压脱扣器 under-voltage release	AC400V □ AC230V □	
	分励脱扣器 shunt release	AC400V □ DC220V □	AC230V □ DC110V □ DC24V □

产品介绍

PRODUCT INTRODUCTION

适用范围及标准

- XKM5L系列塑料外壳式断路器适用于AC50/60Hz、额定绝缘电压800V、额定工作电压AC400V/690V，额定电流从16A至630A的电路中，作配电保护用，也可作为电动机保护用。
- 本断路器可作为线路不频繁转换及电动机不频繁启动之用，具有过载、短路、欠电压保护。
- 本断路器可以作为人身间接接触保护和设备漏电保护，也可以用来防止设备绝缘损坏产生接地故障电流而引起火灾危险。
- 本额定剩余动作电流为30mA的XKM5L断路器可对人提供直接接触附加保护。
- 本断路器具有交流叠加脉动直流场合的A型剩余电流保护功能。
- 本断路器具有隔离功能，其相应的符号为“”。
- 本断路器不能倒进线、只可“LINE”接电源端，“LOAD”接负载端。
- 本断路器符合 IEC60947-1及GB/T14048.1《低压开关设备和控制设备总则》、IEC60947-2及GB/T14048.2《低压开关设备和控制设备第二部分低压断路器》、IEC60947-4-1及GB/T14048.4《低压开关设备和控制设备机电式接触器和电动机起动器（含电动机保护器）》。
- 本断路器均获国家强制性产品认证“CCC”标志。

适用工作环境

- 安装地点周围空气温度不高于+40°C和不低于-5°C，且24h的平均值不超过+35°C；
注1：周围空气温度为-10°C或-25°C的工作条件，在订货时用户须向制造厂申明；
注2：周围空气温度上限超过+40°C或下限低于-25°C的工作条件，用户应与制造厂商协商。
- 安装地点的海拔不超过2000m。
- 大气的相对湿度在周围最高温度+40°C时不超过50%；在较低的温度下可以有较高的湿度；在最湿月的月平均最低温度为+25°C时，该月的月平均最大相对湿度为90%，并考虑到因温度变化发生在产品表面上的凝露。
注：提供特殊产品：湿热带型（通过GB/T 2423.4 和GB/T 2423.18 的试验要求）
- 污染等级：断路器本体为3级，装于断路器内部的附件为2级。
- 断路器主电路及欠压脱扣器，过电压类别III，辅助电路和控制电路，过电压类别II。
- 断路器适用于电磁环境A；
- 断路器可以垂直安装（竖装），也可水平安装（横装）。
- 运输和存储温度：-25°C至+55°C之间，短时间内（24小时内）可达+70°C；
- 断路器应安装在无爆炸危险和无导电尘埃、无足以腐蚀金属和破坏绝缘的地方；
- 断路器应安装在没有雨雪侵袭的地方。

Applicable Scope and Standard

XKM5L series circuit breaker with plastic shell is suitable for the circuit with AC50/60Hz, rated insulation voltage 800V, rated working voltage AC400V/690V, rated current 32A-800A, it can be used for the protection of the power distribution, also can be used for the protection of the motor.

This circuit breaker can be used for the infrequent conversion of the circuit and the infrequent start of the motor. It has functions of overload, short circuit, and undervoltage protection.

The circuit breaker can be used as personal indirect contact protection and equipment leakage protection, and can also be used to prevent insulation damage of equipment from grounding fault current and fire hazard.

XKM5L circuit breakers with rated residual operating current of 30mA provide additional direct contact protection to humans.

The circuit breaker has A type A residual current protection function on ac superposition pulsating dc occasions.

This circuit breaker has the isolation function, the symbol for it is “”.

The wiring of this circuit breaker can not be backward, with only “LINE” to the power supply side and “LOAD” to the load side.

This circuit breaker conforms to IEC60947-1 and GB/T14048.1 (General requirements for low voltage switchgear and controlgear), IEC60947-2 and GB/T14048.2 (Low voltage switchgear and controlgear second section-Low Voltage circuit breakers), IEC60947-4-1 and GB/T14048.4 (Low voltage switchgear and controlgear-Electromechanical contactors and motor-starters (including motor protector)).

This circuit breaker has “CCC” certification.

Applicable working environment

The ambient air temperature of the installation location should be no higher than +40°C and no lower than -5°C, meanwhile the average of 24 hours does not exceed +35°C.

Note 1: When the ambient air temperature is -10°C or -25°C, the user needs to notify the manufacturer when ordering.

Note 2: When the ambient temperature is higher than +40°C or lower than -25°C, the user needs to consult with the manufacturer.

Altitude of the installation location should be no more than 2000m.

The relative humidity of the atmosphere is no more than 50% at the maximum temperature of +40°C, allowing a higher relative humidity at a lower temperature. The average maximum relative humidity is 90%, in the wettest month with lowest temperature of +25°C, taking into account the condensation on the product surface due to the temperature variation.

Note: Can provide special product, Hot and humid zone type (Pass the GB/T2423.4 and GB/2423.18 test requirement).

Pollution level: this circuit breaker is third-class, and the internal accessories installed in the circuit breaker is second-class.

Overvoltage category of the circuit breaker main circuit and undervoltage stripper is III, overvoltage category of auxiliary circuit and control circuit is II.

This circuit breaker can be used in electromagnetic environment A.

The circuit breaker can be installed vertically and horizontally.

Transportation and storage humidity: between -25°C and 55°C and within short period (24 hours) can be +70°C.

Circuit breaker should be installed in locations without explosion hazard, conductance dust, metal corrosion or insulation destruction.

Circuit breakers shall be installed in locations without rain or snow invasion.

断路器技术参数

Technical parameters of circuit breaker

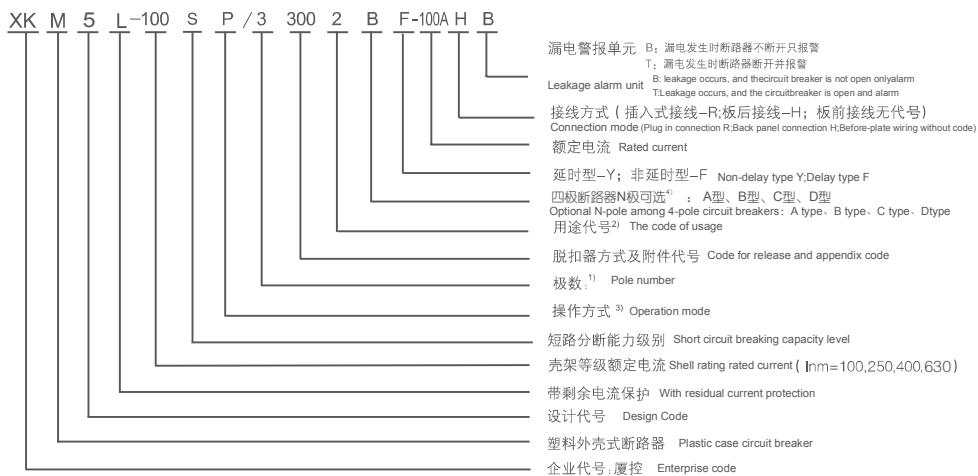
剩余电流断路器主电路的额定值和极限值
Residual current circuit breaker main circuit rating and limit value

型号 Model		XKM5L-100			XKM5L-250			XKM5L-400			XKM5L-630		
壳架电流 (In)m A Frame current		100			250			400			630		
额定电流 (In) A Rated current		16,20,25,32,40 50,63,80,100			100,125,140,160 180,200,225,250			225,250,315 350,400			400,500,630		
额定绝缘电压 Ui(V) Rated insulation voltage		800											
额定工作电压 Ui(V) Rated operating voltage		AC400											
额定频率(Hz) Rated frequency		50/60											
极数 Pole number		3P/4P											
额定冲击耐受电压 (Uimp) V Rated impulse withstand voltage		8000											
飞弧距离 Flashover distance(mm)		0或(or)≤50			0或(or)≤60			0或(or)≤100			0或(or)≤100		
分断能力级别 Breaking ability level		S	H	R	S	H	R	S	H	R	S	H	R
额定极限短路分断能力(Icu)KA Rated ultimate short-circuit breaking capacity	AC400V	50	70	100	50	70	100	50	70	100	50	70	100
额定运行短路分断能力(Ics)KA Rated operating short-circuit breaking capacity		50	70	70	50	70	70	50	70	70	50	70	70
额定剩余动作电流(IΔn)mA(可OFF) Rated residual operating current (can OFF)	非延时型 Non-delay type	30,100,500可调						100,300,500可调					
	延时型 Delay type	100,300,500可调											
额定剩余不动作电流(IΔno)mA Rated residual non-operating current		1/2 IΔn											
额定剩余短路接通（分断）能力 (IΔm) KA Rated residual short-circuit making (breaking) capacity		1/4 Icu											
机械寿命 mechanical life	免维护 maintenance-free	20000			20000			10000			10000		
电气寿命 electrical life	AC400V	8000			8000			8000			8000		
分励脱扣器 Shunt release		○			○			○			○		
欠电压脱扣器 Under-voltage release		○			○			○			○		
辅助触头 Auxiliary contact		○			○			○			○		
报警触头 Alarm contact		○			○			○			○		
板前接线 Board connection		○			○			○			○		
板后接线 Back panel connection		○			○			○			○		
插入式接线 Plug in connection		○			○			○			○		
电动操作机构 Electric operating mechanism		○			○			○			○		
转动操作手柄机构 Rotation handle mechanism		○			○			○			○		

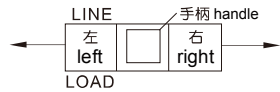
断路器含义

Meaning of circuit breaker

断路器含义



- 注：1) 三极以3表示，四极以4表示，四极时N极与其他三级一起分合不装过电流保护
The three pole is expressed in 3. The quadropole is 4. When the quadropole is used, the N pole is separated from the other three poles without overcurrent protection.
- 2) 配电用断路器无代号，保护电动机用断路器以“2”表示；
Optional frame size level current;Electric protection for 2;
3) 手柄直接操作无代号，电动操作作用“P”表示；转动操作作用“Z”表示。
Manual operation without code;Optional frame size level current for P;Rotation handle operation for Z.
- 4) **A型**: N极不装过电流脱扣器，且N极始终接通，不与其他三极一起分合
A type: N pole is not fitted with current release.Beside,It is always connected without connection/disconnection to other 3 poles.
B型: N极不装过电流脱扣器，且N极与其他三极一起分合
B type: N pole is not fitted with current release.Beside,It is always connection/disconnection to other 3 poles.
C型: N极装过电流脱扣器，且N极与其他三极一起分合
C type: N pole is not fitted with current release.Beside,It is always connection/disconnection to other 3 poles.
D型: N极装过电流脱扣器，且N极始终接通，不与其他三极一起分合
D type: N pole is not fitted with current release.Beside,It is always connected without connection/disconnection to other 3 poles.

脱扣器及附件代号、符号
Release and annex code and symbol

- 报警触头 alarm contact
- 辅助触头 auxiliary contact
- ▲ 欠电压脱扣器 under-voltage release
- △ 分励脱扣器 shunt release
- 辅助报警触头 auxiliary alarm contact
- 双辅助触头 double auxiliary contact
- 右边引线即右装式 right downlead, namely, right installation
- ← 左边引线即左装式 left downlead, namely, left installation

脱扣器及附件代号 Release and accessory code	附件名称 Accessory name	断路器型号 circuit breaker model		极数 Pole Number	
		XKM5L-100/250		XKM5L-400/630	
		3P、4P A/D型	4P B/C型	3P、4P A/D型	4P B/C型
200,300	无附件 without accessory	200-电磁式脱扣器 (仅有短路瞬时保护) 200-electromagnetic type release (of only short-circuit transient protection) 300-复式脱扣器 (兼有过载和短路瞬时保护) 300-complex release (of both over-load and short-circuit transient protection)			
208,308	报警触头 alarm contact	←●	←●	←●	←●
210,310	分励脱扣器 shunt release	←△	←△	←△	←△
220,320	辅助触头 (1NO1NC) auxiliary contact (1NO1NC)	←○	←○	←○	←○
202, 302	辅助触头 (2NO2NC) auxiliary contact (2NO2NC)	←○○	←○○		
230,330	欠电压脱扣器 under-voltage release	←▲	←▲	←▲	←▲
240,340	分励脱扣器,辅助触头 (1NO1NC) shunt release,auxiliary contact (1NO1NC)		←△○	←△○	←△○
212,312	分励脱扣器,辅助触头 (2NO2NC) shunt release,auxiliary contact (2NO2NC)		←△○○		←△○○
250,350	分励脱扣器,欠电压脱扣器 shunt release,under-voltage release		←▲△		←▲△
260,360	二组辅助触头 (2NO2NC) 2 groups of auxiliary contacts (2NO2NC)		←○○○	←○○○	←○○○
222, 322	二组辅助触头 (3NO3NC) 2 groups of auxiliary contacts (3NO3NC)		←○○○	←○○○	←○○○
223, 323	二组辅助触头 (4NO4NC) 2 groups of auxiliary contacts (4NO4NC)		←○○○○		←○○○○
270,370	欠压脱扣器,辅助触头 (1NO1NC) under-voltage release, auxiliary contact (1NO1NC)		←▲○	←▲○	←▲○
232, 332	欠压脱扣器,辅助触头 (2NO2NC) under-voltage release, auxiliary contact (2NO2NC)		←▲○○		←▲○○
218,318	分励脱扣器,报警触头 shunt release,alarm contact		←△●	←△●	←△●
228,328	辅助触头 (1NO1NC),报警触头 auxiliary contact (1NO1NC), alarm contact	←○●	←○●	←○●	←○●
238,338	欠压脱扣器,报警触头 under-voltage release, alarm contact		←▲●	←▲●	←▲●
248,348	分励脱扣器,辅助触头 (1NO1NC),报警触头 shunt release, auxiliary contact (1NO1NC), alarm contact		←△●○	←△●○	←△●○
268,368	二组辅助触头 (2NO2NC),报警触头 2 groups of auxiliary contact (2NO2NC), alarm contact		←○○○●	←○○○●	←○○○●
205, 305	二组辅助触头 (3NO3NC),报警触头 2 groups of auxiliary contact (3NO3NC), alarm contact		←○○○○●	←○○○○●	←○○○○●
278,378	欠压脱扣器,辅助触头 (1NO1NC),报警触头 under-voltage release,auxiliary contact (1NO1NC), alarm contact		←▲○○●	←▲○○●	←▲○○●

- 具有同XKM5-100、XKM5-250、XKM5-400、XKM5-630型断路器相同的外形尺寸和安装尺寸。
 - 使用可靠性高: 剩余电流脱扣器用三相电源, 任何一相失电时产生漏电故障能脱扣。
 - 保护范围大: 当电源电压降低到50V对中性线电压时, 剩余电流脱扣器能脱扣。
 - 具有漏电报警输出功能: 有漏电发生时断路器不断开 只报警(B型)和漏电发生时断路器断开 并报警(T型)二种可选。
 - 按剩余电流是否含有直流分量分为: A型和AC型保护。
- 注:
- 本系列三极断路器三相负载时, 负载不能带中性线, 否则该断路器会产生误动作
 - 本系列三极断路器接单相负载时, 相线接A相, 中性线接C相。

- * With same dimensions and mounting dimensions as XKM5-100,XKM5-250, XKM5-400, XKM5-630 type circuit breakers.
- * The use is very reliable: residual current trip with three-phase power supply. When any one phase loss current, the leakage fault can trip.
- * Wide range of protection: When the power supply voltage drops to 50V on the neutral line voltage, the residual current release can trip.
- * With function of leakage alarm output: there are two choices that leakage occurs when the circuit breaker is not open only alarm (B type) and leakage occurs when the circuit breaker is broken and alarm (T type).

Note:

- 1.When the series of three-pole circuit breaker is in the state of three-phase load, the load cannot be with the neutral line, otherwise the circuit breaker will produce malfunction.
- 2.When the series of three-pole circuit breaker is in the state of the single-phase load, the phase line connects A phase and the neutral line connects C phase.

保护特性和漏电报警单元 Protection Characteristics and Leakage alarm unit

保护特性 Protection Characteristics

过载 (反时限动作) 断开特性

Overload(inverse time limit)disconnecting characteristics.

	试验电流名称 Test current name	整定电流倍数 Multiple of set current	约定时间 Conventional period		起始状态 Start status
			In≤63	In≥63	
过载保护 (配电) Overload protection (power distribution)	约定不脱扣电流 Conventional non-release current	1.05	≥1h	≥2h	冷态 Cold status
	约定脱扣电流 Conventional release current	1.3	<1h	<2h	热态 Hot status
过载保护 (电动机) Overload protection (electromotor)	约定不脱扣电流 Conventional non-release current	1.0	≥2h		冷态 Cold status
	约定脱扣电流 Conventional release current	1.2	<2h		热态 Hot status
		1.5	≤4min(XKM5L-100,250)脱扣级别10 ≤8min(XKM5L-400,630)脱扣级别20		热态 Hot status
		7.2	4s<Tps10s(XKM5L-100,250)脱扣级别10 6s<Tps20s(XKM5L-400,630)脱扣级别20		冷态 Cold status

短路断开特性

Short-circuit disconnecting characteristics.

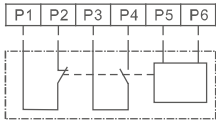
	额定电流In Rated current	动作特性 performance characteristic
短路保护 (配电) Short-circuit protection (power distribution)	≤32A	400A±20%
	≥40A	10In±20%
短路保护 (电动机) Short-circuit protection (electromotor)	≤32A	400A±20%
	≥40A	12In±20%

漏电报警单元

Leakage alarm unit

B型:
漏电发生时断路器不断开只报警
注: B型为满足特殊场合需要, 用户在采用此功能保护电器时请谨慎考虑。
T型:
漏电发生时断路器断开并报警
漏电报警单元模块上带有漏电报警指示灯及报警解除按钮

B type:
leakage occurs, and the circuit breaker is not open only alarm
note:B type is to meet the special needs of the occasion. When users use this function to protect the electrical appliances, please consider carefully.
T type:
Leakage occurs, and the circuit breaker is open and alarm
Leakage alarm unit module with a leakage alarm indicator and alarm release button



- 1.PAP2为常闭触头, P3P4为常开触头, 触点容量: 0.5A 250VAC
1.PAP2 is normally closed contact,P3P4 is normal open contact,contact capacity:0.5A 250VAC
2.P5P6接电源AC230V
2.P5P6 connected to AC230V
3.产品合闸之前务必接通模块工作电源
3.Be sure to switch on the module power before closing the product

剩余电流动作的分断时间 Breaking time of residual current acting

延时型剩余电流断路器的剩余电流动作的分断时间

Breaking time of residual current acting on delay type residual current circuit breaker

剩余电流 Residual current	$I_{\Delta n}$	$2I_{\Delta n}$	$5I_{\Delta n}$	$10I_{\Delta n}$
最大分断时间 Maximum break time	0.5	0.5	0.3	0.3
极限不驱动时间 Limit non drive time	—	0.1	—	—
最大分断时间 Maximum break time	1.15	1.0	0.9	0.9
极限不驱动时间 Limit non drive time	—	0.5	—	—
最大分断时间 Maximum break time	2.15	2.0	1.9	1.9
极限不驱动时间 Limit non drive time	—	1.0	—	—

注: 剩余电流动作时间可OFF。
Note: Residual current operating time can be OFF.

非延时型剩余电流断路器剩余电流动作的分断时间

Breaking time of residual current for non- delay residual current circuit breakers

剩余电流 Residual current	$I_{\Delta n}$	$2I_{\Delta n}$	$5I_{\Delta n}$	$10I_{\Delta n}$
最大分断时间 Maximum Breaking time	0.2	0.1	0.04	0.04

注: 对 $I_{\Delta n} \leq 30\text{mA}$ 剩余电流断路器用 0.25A代替 $5I_{\Delta n}$
对 $I_{\Delta n} \leq 30\text{mA}$ 剩余电流断路器用 0.5A代替 $10I_{\Delta n}$
Note: Replace the 5 $I_{\Delta n}$ residual current circuit breaker with 0.25A for $I_{\Delta n} \leq 30\text{mA}$
Replace the 10 $I_{\Delta n}$ residual current circuit breaker with 0.5A for $I_{\Delta n} \leq 30\text{mA}$

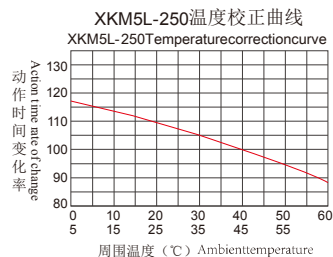
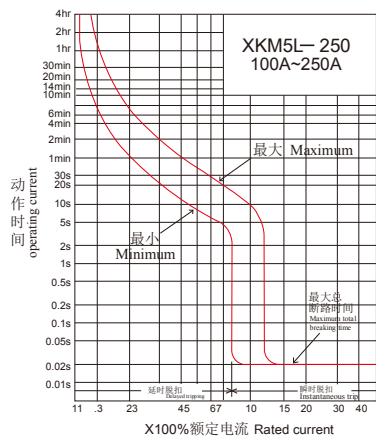
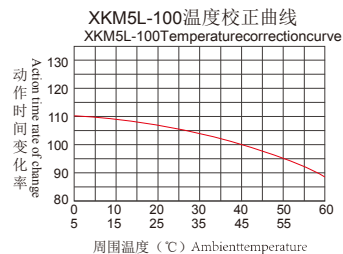
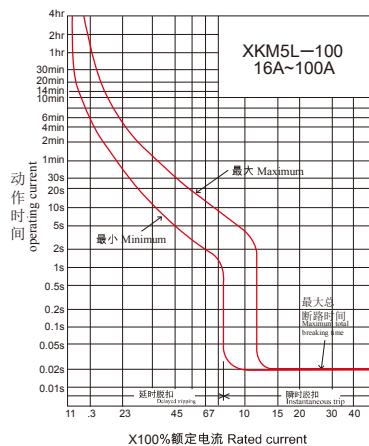
在剩余电流含直流分量情况下剩余电流断路器脱扣电流范围

Release current scope of the residual current circuit breaker when residual current has AC in it.

角度α Angle	脱扣电流/A Release current/A	
	下限 MIN.	上限 MAX.
0°	0.35 $I_{\Delta n}$	1.4 $I_{\Delta n}$
90°	0.25 $I_{\Delta n}$	
135°	0.11 $I_{\Delta n}$	

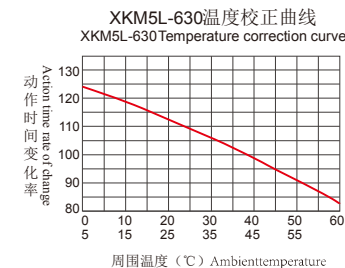
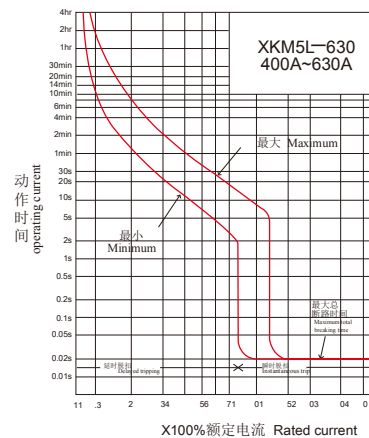
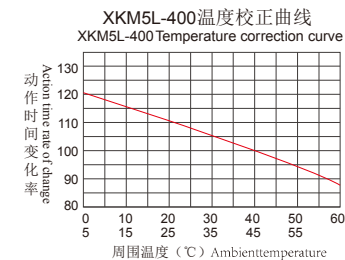
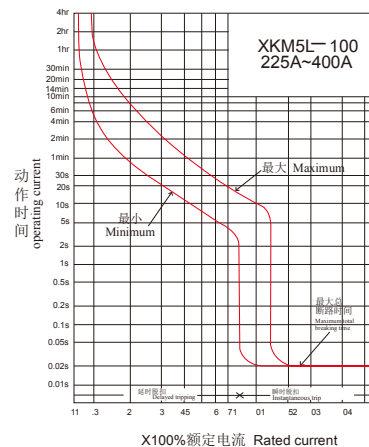
XKM5L系列剩余电流断路器动作特性曲线

Operating characteristic curve for HTS3L series residual current circuit breaker



XKM5L系列剩余电流断路器动作特性曲线

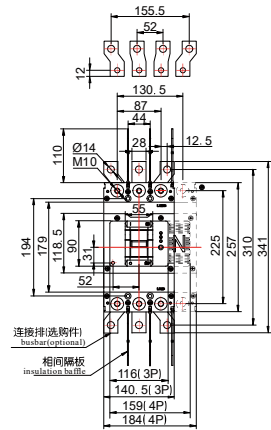
Operating characteristic curve for HTS3L series residual current circuit breaker



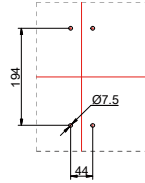
XKM5L-400S,H,R

板前接线

Board connection

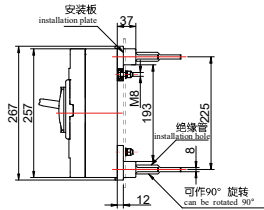


板前接线安装板开孔尺寸
installation hole dimensions for the Board connection

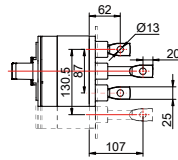


板后接线

Back panel connection



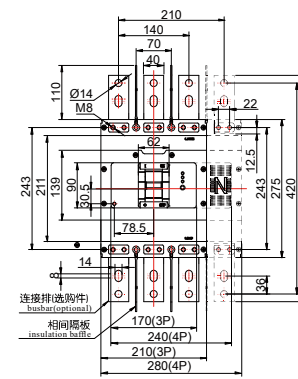
板后接线安装板开孔尺寸
installation hole dimensions for the Back panel connection



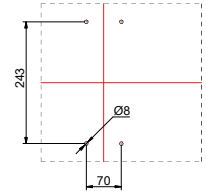
XKM5L-630S,H,R

板前接线

Board connection

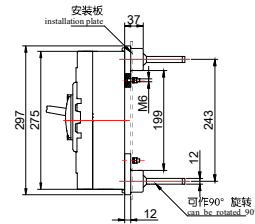


板前接线安装板开孔尺寸
installation hole dimensions for the Board connection

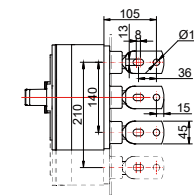


板后接线

Back panel connection

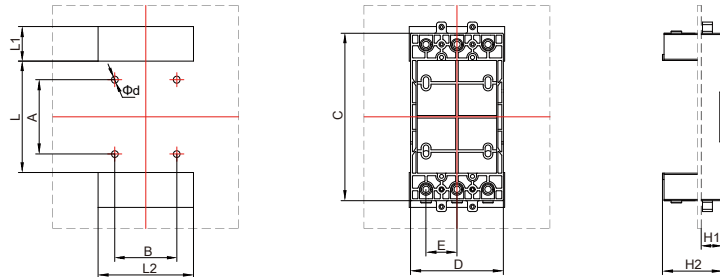


板后接线安装板开孔尺寸
installation hole dimensions for the Back panel connection



板后安装

Back panel connection



型号规格 Model and dimensions	选用插入式型号 Optional Plug in type	外形&安装尺寸 Outline & Installation dimensions										
		A	B	L	L1	L2	Φd	C	D	E	H1	H2
XKM5L-100	MZ3-100/XKM5	65	60	90	51	94	6.5	160	90	30	20	56.2
XKM5L-250	MZ3-250/XKM5	74	70	100	55	110	6.5	179	105	35	27	73.2
XKM5L-400	MZ3-400/XKM5	141	88	178	70	135	7	275	132	44	45	85
XKM5L-630	MZ3-800/XKM5	143	140	181	87	213	7	311	210	70	50	125

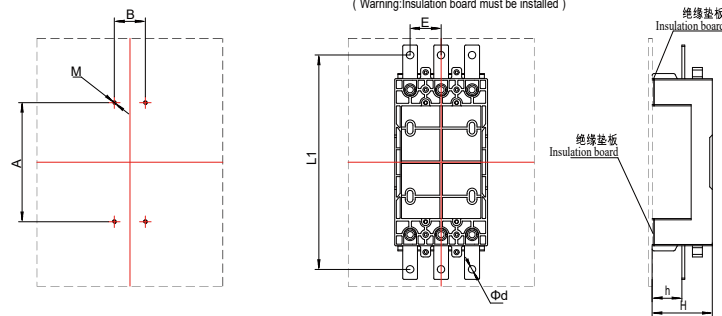
注：当四极开关时，尺寸B，L2，D均增加相距E

Note: for four pole breakers ,Dimension B,L2,D should be added with Phase distance E

板前安装

Board connection

(警告：板前安装必须垫绝缘垫板)
(Warning: Insulation board must be installed)



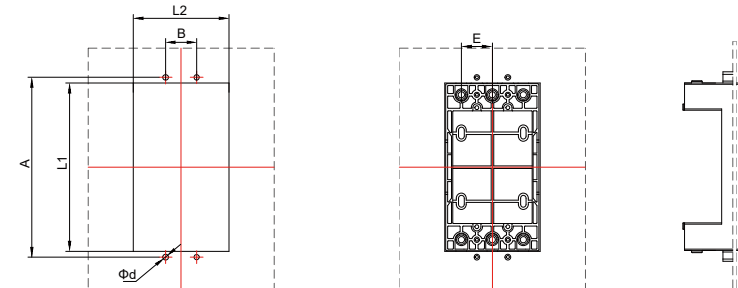
型号规格 Model and dimensions	选用插入式型号 Optional Plug in type	外形&安装尺寸 Outline & Installation dimensions								
		A	B	L1	E	d	M	H	h	
XKM5L-100	MZ3-100/XKM5	110	30	198	30	6.5	M4	57	28	
XKM5L-250	MZ3-250/XKM5	150	35	223	35	8.5	M4	74	32	
XKM5L-400	MZ3-400/XKM5	245	44	326	44	10.5	M5	85	36	
XKM5L-630	MZ3-800/XKM5	283	70	363	70	12.5	M6	125	67	

注：当四极开关时，250A及以下尺寸B增加相距E；开关是400A及以上尺寸B不变

Note: for four pole breakers, when 250A and below, dimension B should be added with Phase distance E; Dimension B remains unchanged when the switch is 400A and above.

大开孔式板后安装

Back panel installation for the type with big holes



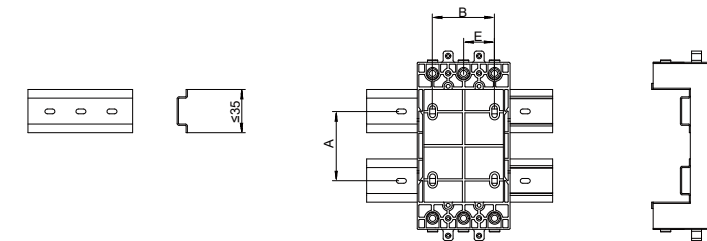
型号规格 Model and dimensions	选用插入式型号 Optional Plug in type	外形&安装尺寸 Outline & Installation dimensions					
		A	B	L1	L2	Φd	E
XKM5L-100	MZ3-100/XKM5	170	30	161	92	5	30
XKM5L-250	MZ3-250/XKM5	191	35	180	107	5	35
XKM5L-400	MZ3-400/XKM5	291	44	277	134	6	44
XKM5L-630	MZ3-800/XKM5	327	70	313	212	6	70

注：当四极开关时，250A及以下尺寸B，L2均增加相距E；开关是400A及以上尺寸B不变，L2向增加的N相方向增加相距E

Note: for four pole breakers ,when it's 250A, Dimension B and L2 should be added with Phase distance E; When it's 400A or above, Dimension B remains the same, L2 should be added with Phase distance E

条架式板后安装

Back panel installation for the Bar-type



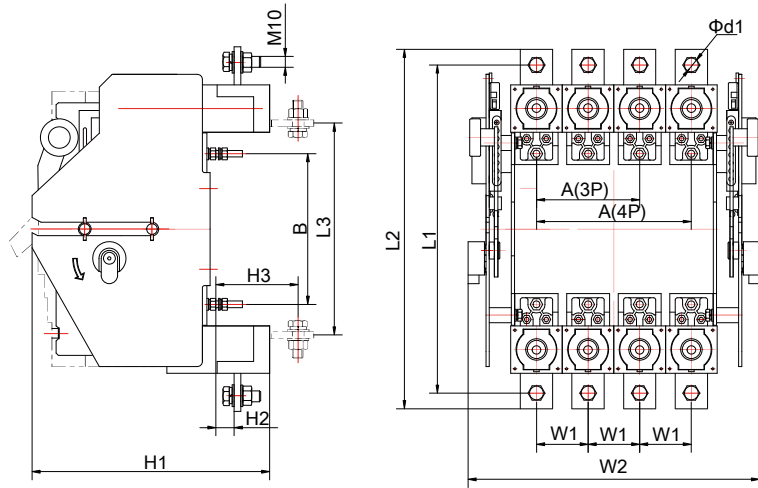
型号规格 Model and dimensions	选用插入式型号 Optional Plug in type	外形&安装尺寸 Outline & Installation dimensions		
		A	B	E
XKM5L-100	MZ3-100/XKM5	65	60	30
XKM5L-250	MZ3-250/XKM5	74	70	35
XKM5L-400	MZ3-400/XKM5	141	88	44
XKM5L-630	MZ3-800/XKM5	143	140	70

注：当四极开关时，尺寸B均增加相距E

Note: for four pole breakers , Dimension B should be added with Phase distance E

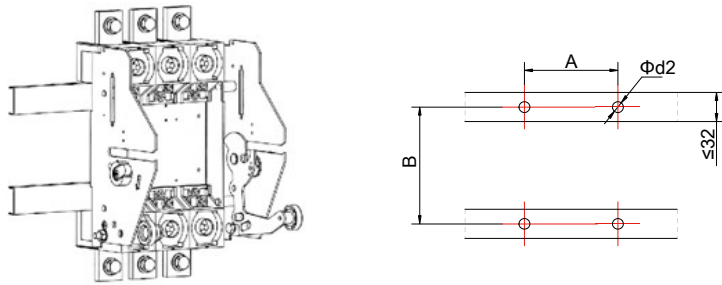
外形尺寸

Outline dimensions



安装尺寸

Installation dimensions



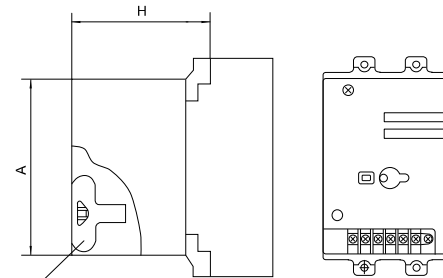
型号规格 Model and dimensions	选用抽出式型号 Selected extraction type model	极数 Pole number	外形尺寸 Outline dimensions									安装尺寸 Installation dimensions		
			L1	L2	L3	H1	H2	H3	W1	W2	Φd1	A	B	Φd2
XKM5L-400	CH2-400/XKM5	3P	311	340	197	227	17.5	77	44	219	11	88	141	6.5
		4P	311	340	197	227	17.5	77	44	263	11	132	141	6.5
XKM5L-630	CH2-630/XKM5	3P	368	411	231	213	24	74	70	297	13	140	131	6.5
		4P	368	411	231	213	24	74	70	367	13	210	131	6.5

DC3 系列电动操作机构技术参数

电动操作机构型号 Model of electric operating mechanism	配用断路器 Sorted circuit breaker	功率 (W) Operating current	操作时间 Operating time	电压可选 Operating voltage	动作电流 Operating current
DC3-100/XKM5	XKM5L-100	≤14	≤0.7s	AC400V AC230V DC220V AC110V DC110V	≤2A
DC3-250/XKM5	XKM5L-250	≤14			
DC3-400/XKM5	XKM5L-400	≤35			
DC3-630/XKM5	XKM5L-630	≤35		DC24V	≤3A

DC3 系列电动操作机构外形尺寸

DC3 Outline dimensions of electric mechanism



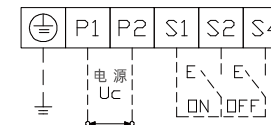
操作手柄 operation handle

型号规格 Type specification	A	H
DC3-100/XKM5	117	97
DC3-250/XKM5	117	97
DC3-400/XKM5	176	151
DC3-630/XKM5	176	153

DC3系列电动操作机构电气接线图

DC3 Electrical wiring diagram of electric mechanism

电动操作机构的额定控制电源电压为：AC400V、AC230V、AC110V、DC220V、DC110V、DC24V。
The rated control power supply voltage of the electric operating mechanism is：AC400V、AC230V、AC110V、DC220V、DC110V、DC24V.



转动手柄操作机构

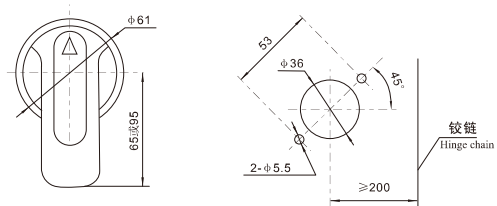
Rotation handle operating mechanism

手柄: XKM5L系列塑料外壳式断路器转动手柄有三种可选,分别为“A”型、“F1”型、“F2”型

Handle: A, F1 and F2 kinds of rotation handles of XKM5L series of moulded case type circuit breakers can be selected.

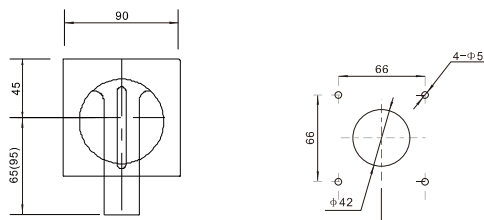
开孔尺寸: A型

Perforation dimensions: A type



开孔尺寸: F1型

Perforation dimensions: F1 type

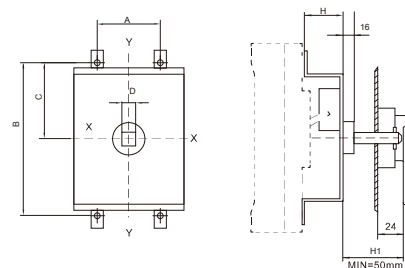


操作机构: 有“中心式转动手柄操作机构”, “偏心式转动手柄操作机构”

Operation handle: “Centered rotary-handle mechanism”, “Acentric rotary-handle mechanism”

中心式转动手柄操作机构

Centered rotary-handle mechanism



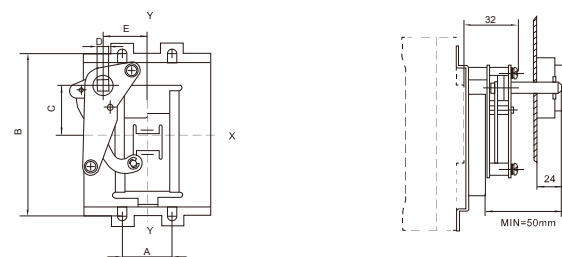
型号规格 Model and dimensions	配用断路器 Sorted circuit breaker	A	B	C	D	H	操作手柄相对于断路器中心Y值 Deviation (Y value) of operation handles from circuit breaker center
SC1-100/XKM5	XKM5L-100	30	132	66	8	46	0
SC1-250/XKM5	XKM5L-250	35	126	63	8	46	0
SC1-400/XKM5	XKM5L-400	128	195	97.5	10	76	0
SC1-630/XKM5	XKM5L-630	128	243	121.5	10	76	0

注: X,Y轴为对应断路器的中心,

Note: X and Y axes are centers of corresponding circuit breakers.

偏心式转动手柄操作机构

Acentric rotary-handle mechanism



型号规格 Model and dimensions	配用断路器 Sorted circuit breaker	A	B	C	D	E	操作手柄相对于断路器中心Y值 Deviation (Y value) of operation handles from circuit breaker center
SC2-100/XKM5	XKM5L-100	30	132	32	8	11	0
SC2-250/XKM5	XKM5L-250	35	126	40	8	11	0
SC2-400/XKM5	XKM5L-400	128	195	60	10	15	0
SC2-630/XKM5	XKM5L-630	198	243	60	10	15	0

注: X,Y轴为对应断路器的中心,

Note: X and Y axes are centers of corresponding circuit breakers.

附件类型 Accessory type

附件名称 Accessory name	功能 Function	电压可选 Voltage optional	接线图 Wiring diagram
报警触头 alarm contact	指示断路器已脱扣 It indicates release circuit breaker.		
辅助触头 auxiliary contact	指示断路器处于断开或闭合 It indicates that circuit breaker is disconnected or connected.		
分励脱扣器 shunt release	在额定控制电源电压70%~110%之间时, 应可靠使断路器脱扣 Circuit breaker shall release within scope of 70% to 110% of rated control power voltage.	AC400V AC230V	
欠电压脱扣器 under-voltage release	在额定工作电压的85%~110%时, 欠压脱扣器应保证断路器能可靠闭合。在额定工作电压的35%~75%时, 欠压脱扣器应可靠使断路器脱扣。在额定工作电压低于35%时欠压脱扣器应能防止断路器合闸。 Under-voltage release shall guarantee reliable connection of circuit breaker within scope of 85% to 110% of rated operating voltage. It shall release circuit breaker reliably within scope of 35% to 75% of rated operating voltage. It shall avoid connection of circuit breaker when voltage is less than 35% of rated operating voltage.	AC230V AC400V	

注意: 欠电压脱扣器必须先通电后才能进行断路器的操作, 否则将损坏断路器。

Note: Circuit breaker cannot be operated until power supply of under-voltage release or it may be damaged.

辅助触头和报警触头的技术参数

Technical parameters of auxiliary contact and alarm

额定发热电流(I _{th}) Rated heating current	额定工作电流(I _e) Rated operating current	
	AC-14	DC-13
	AC400V	DC220V
3	0.3	0.15

使用和维护

Use and maintenance

- 断路器的特性和附件的动作值已经由制造厂调整好, 用户在使用中不应随意开盖及调节。
- 使用中应注意周围清洁, 有机会停电维修时, 应把进线端积尘清除, 检查铜排螺钉是否松动等。
- 断路器手柄可以处于三种状态, 分别表示闭合、断开、自由脱扣三个位置。当手柄处于自由脱扣位置时合闸, 应将手柄用力推向断开位置使断路器再扣才能进行闭合操作。
- 在用户遵守保管和使用条件下, 自制造厂发货之日起18个月内断路器封签完好, 产品因制造质量问题而产生的损坏或不能正常使用时, 本公司承诺无偿更换或修理。
- 断路器的额定剩余动作电流和最大断开时间, 用户可根据实际需要进行调整(专业人员进行)。
- 在主电路通电情况下, 对额定剩余动作时间型式为非延时型的断路器, 手按模拟剩余电流动作试验按钮断路器应立即脱扣, 对延时型, 手按试验按钮应保持所谓的延时时间值后, 断路器才能脱扣。
- 断路器漏电脱扣后, 面板上漏电指示按钮向外突出。
- 带漏电报警单元模块的断路器, 当发生漏电报警后, 必须对模块上的复位按钮进行复位, 断路器漏电保护模块才能正常工作。

- Characteristics of circuit breaker and operating values of accessories have been adjusted by manufacturer. User cannot uncover or adjust randomly during use.
- Pay attention to surrounding cleanness during use. Collect dust in incoming wire end and check if copper bar screws are loose or not once power failure repair.
- Circuit breaker handles can be under 3 states, namely, closing, disconnection and free release positions respectively. Push handle to disconnection position for closing and circuit breaker re-release when handle is in free release position.
- Our company does not commit free replacement or repair for damage or abnormal use of products because of manufacturing quality problem unless users abide by storage and use conditions and circuit breaker seal is perfect within 18 months since delivery date of manufacturer.
- The rated residual operating current and the maximum disconnection time of the circuit breaker can be adjusted according to the actual needs (professional personnel).
- In the case of the main circuit power, the rated residual operating time type is non-delay type circuit breaker, pressing test button of analog residual current action, and circuit breaker should be immediately tripped. For the delay type, pressing the test button should be maintained after the delay time, and the circuit breaker can trip.
- After the circuit breaker leakage tripping, the touchout button on the panel protrudes outward.
- When the circuit breaker with the leakage alarm unit module occur leakage alarm, it must be on the mold: block reset button on the reset, and protection module of circuit breaker leakage can work properly.

(请根据需要在_内打“√”,或填上数字)

用户单位 User unit			联系人及联系方式 Contact and contact information	
订货台数 Ordering quantity			订货日期 The date of order	
壳架等级 Frame size	XKM5L-	100 □ 250 □ 400 □ 630 □	分断能力 Breaking ability	S标准型 □ Standard type H高分段型 □ High segment type R限流型 □ Limiting current type
过载长延时	100	16A □ 20A □ 25A □ 32A □ 40A □ 50A □ 63A □ 80A □ 100A □		
	250	100A □ 125A □ 140A □ 160A □ 180A □ 200A □ 225A □ 250A □		
	400	225A □ 250A □ 315A □ 350A □ 400A □		
	630	400A □ 500A □ 630A □		
极数 Pole	3 □ 4 □	N极型式 N-type	A型 □ A-type □ C型 □ C-type □	B型 □ B-type □ D型 □ D-type □
用途代号 The code of usage	配电保护 □ Power protection □ 电动机保护保护 □ Electric protection □			
脱扣器代 号 Release code	200 □ 208 □ 210 □ 220 □ 202 □ 230 □ 240 □ 212 □ 250 □ 260 □ 222 □ 223 □ 270 □ 232 □ 218 □ 228 □ 238 □ 248 □ 268 □ 205 □ 278 □			备注 mark
	300 □ 308 □ 310 □ 320 □ 302 □ 330 □ 340 □ 312 □ 350 □ 360 □ 322 □ 323 □ 370 □ 332 □ 318 □ 328 □ 338 □ 348 □ 368 □ 305 □ 378 □			备注 mark
接线方式 Wiring	板前接线(带连接排) □ Board connection(with connecting line) 插入式接线 板前接线 □ 抽出式接线 □ 板后接线 □ 板后接线 □ Back panel install Back panel connection			
剩余电流型号 Rated operating type	延时AC型 □ Non-delay type AC □ 非延时AC型 □ delay type AC □ 延时A型 □ Non-delay type A □ 非延时A型 □ delay type A □			
额定剩余动作电流 Rated residual operating current	非延时型 Non-delay type	30mA □ 100mA □ 300mA □ 500mA □		
	延时型 Plug in connection	100mA □ 300mA □ 500mA □		
额定剩余动作时间 Rated residual operating time	0.5S □ 1.0S □ 2.0S □			
附件 Accessories	操作方式 Operation method	转动手柄操作 rotary-handle operation	操作机构 Operation mechanism	中心式转动手柄操作机构 □ 偏心式转动手柄操作机构 □ Centered rotary-handle mechanism □ Acentric rotary-handle mechanism □
		手柄 handle		A型 □ A type □ F1型 □ F1 type □
	电动操作 Electric operation		AC400V □ DC220V □	AC230V □ DC110V □ AC110V □ DC24V □
	欠电压脱扣器 Under-voltage release		AC230V □	AC400V □
	分励脱扣器 Shunt release	AC400V □	AC230V □	DC220V □ DC110V □ DC24V □
	漏电报警单元 Leakage alarm unit (只针对AC型产品)		B □	T □