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XKM1(L)

塑料外壳式(漏电)断路器



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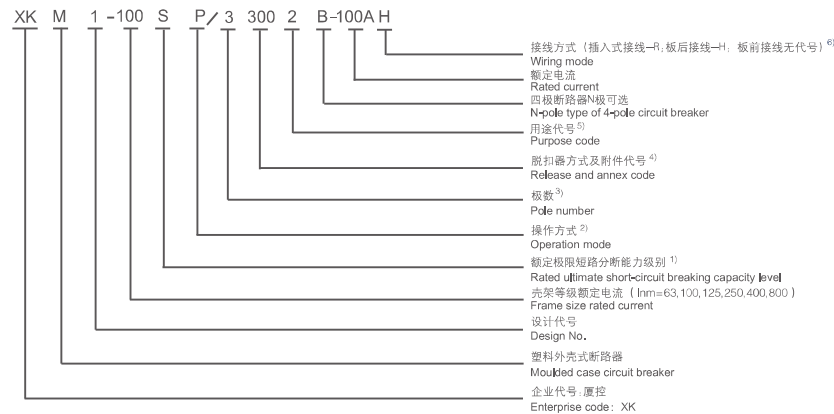
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Record

断路器的型号和含义

Circuit Breaker Model and Meaning



适用范围及标准

- XKM1系列塑料外壳式断路器适用于交流50Hz或60Hz、额定绝缘电压690V (壳架等级63、125为500V)、额定工作电压400V/690V、额定电流从10A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。
- 大气的相对温度在周围最高温度+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。

- 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；
板后接线；
插入式接线。

注：四极断路器中性极(N极)的型式分两种：
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 Basic type;
S Standard type;
H High split type;
R Limit flow pattern.
- 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;
After-plate wiring;
Plug in connection.
- Note: there are four types of quadrapole 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.

Applicable Scope and Standard

XKM1 series of moulded case circuit breakers are suitable to AC50Hz or 60Hz, rated insulation voltage of 690V (500V for frame size 63、125), rated operating voltage of 400V/690V, rated current 10A-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 verload ,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 24hours 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.

Note2: 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(24hours) 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.

主要性能

Main Performance

- 按产品极数分为三极和四极。四极产品中N极的型式分四种：
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
B型：N极不装过电流脱扣器，且N极与其他三极一起分合
C型：N极装过电流脱扣器，且N极与其他三极一起分合
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
按额定电流（A）分：
XKM1-63为10,16,20,25,32,40,50,63
XKM1-100为16,20,25,32,40,50,63,80,100
XKM1-125为10,12, 5, 16, 20, 25, 32, 40, 50,63, 80, 100, 125
XKM1-250为100,125,140,160,180, 200,225,250
XKM1-400为250,315,350,400
XKM1-800为400,500,630,700,800

• Products can be classified into 3-pole and 4-pole according to Pole number. 4 N-pole kinds among 4-pole products are as follows:
A type: N pole is not fitted with current release. Besides, It is always connected without connection/disconnection to other 3 poles.
B type: N pole is not fitted with current release. Besides, It is always connected/disconnected to other 3 poles.
C type: N pole is fitted with current release. Besides, It is always connected/disconnected to other 3 poles.
D type: N pole is fitted with current release. Besides, It is always connected without connection/disconnection to other 3 poles.
• Divide as follows according to rated current (A):
10, 16, 20,25, 32, 40, 50 and 63 for XKM1-63;
16, 20,25, 32, 40, 50, 63, 80 and 100 for XKM1-100;
10,12.5, 16,20, 25, 32, 40,50,63,80,100 and 125 for XKM1-125;
100,125, 140,160, 180, 200, 225 and 250 for XKM1-250;
250,315,350 and 400 for XKM1-400;
400, 500, 630, 700 and 800 for XKM1-800;

主要性能

Main Performance

分断能力：本断路器 Icu 有 25KA，35KA, 50KA，65KA, 85KA, 100KA
接线方式：板前接线、板后接线、插入式接线、抽出式接线

Breaking ability: This circuit breaker Icu has 25KA, 35KA, 50KA, 65KA, 85KA, 100KA. Wiring mode: Board connection , Back panel connection , Plug in connection and extraction type wiring

保护特性

Protection Characteristics

配电保护用反时限断开特性：

Power distribution protection uses 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
		Ins63	63<Ins200	In>200	
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

电动机保护用反时限断开特性：

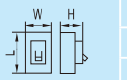
Electromotor protection uses inverse time limit disconnecting characteristics.

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
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(63)脱扣级别5 ≤4min(100 , 125)脱扣级别10 ≤8min(250,400,630)脱扣级别20	热态 Cold status
	7.2	0.5S<Tp≤5S(63)脱扣级别5 4S<Tp≤10S(100,125)脱扣级别10 6S<Tp≤20S(250,400,630)脱扣级别20	冷态 Cold status

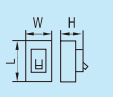
断路器技术参数

Technical parameters of circuit breaker

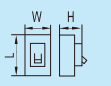
断路器技术参数

型号 Mode		XKM1-63S	XKM1-63H	XKM1-100N	XKM1-100S	XKM1-100H	XKM1-100R
额定电流 Rated current In(A)		10, 16, 20, 25, 32, 40, 50, 63		16, 20, 25, 32, 40, 50, 63, 80, 100			
极数 Pole number		3	3、4	3	3、4		
额定绝缘电压 Ui(V) Rated insulation voltage		500		690			
额定工作电压 Ue(V) Rated operating voltage		AC400		AC400			
额定冲击耐受电压 Rated impact tolerance voltage		8000		8000			
寿命次数 service life	通电 power supply	7000		7000			
	不通电 Without power supply	10000		10000			
额定极限短路分断能力 Icu(KA) Rated ultimate short-circuit breaking capacity	AC400V	25	50	35	50	65	85
	AC690V					20	
额定运行短路分断能力 Ics(KA) Rated service short-circuit breaking capacity	AC400V	18	35	18	35	50	50
	AC690V					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) 104(4p)		90(3p) 120(4p)		
		L	135		155		
		H	72	82	68	86	
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			XKM1-125N	XKM1-125S	XKM1-250N	XKM1-250S	XKM1-250H	XKM1-250R
额定电流 Rated current In(A)			10, 12, 5, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125		100, 125, 140, 160, 180, 200, 225, 250			
极数 Pole number			3、4		3	3、4		
额定绝缘电压 Ui(V) Rated insulation voltage			500		690			
额定工作电压 Ue(V) Rated operating voltage			AC400		AC400			
额定冲击耐受电压 Rated impact tolerance voltage			8000		8000			
寿命次数 service life		通电 power supply	3000		7000			
		不通电 Without power supply	7000		10000			
额定极限短路分断能力 Icu(KA) Rated ultimate short-circuit breaking capacity		AC400V	25	50	35	50	65	85
		AC690V					20	
额定运行短路分断能力 Ics(KA) Rated service short-circuit breaking capacity		AC400V	16	25	18	35	50	50
		AC690V					10	
飞弧距离 Flashover distance(mm)			0或(or)≤50		0或(or)≤50	0或(or)≤60		
外形尺寸 outline dimensions			W	76(3P) 103(4P)	105(3P) 140(4P)			
			L	120	165			
			H	70 80	86	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

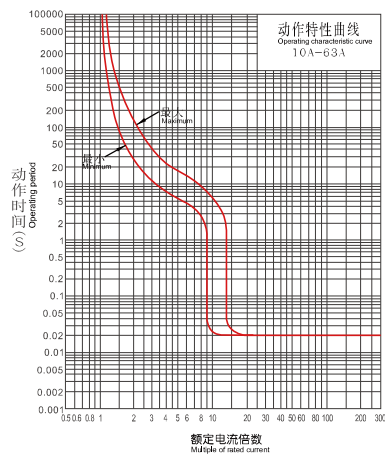
型号 Model		XKM1-400S	XKM1-400H	XKM1-800S	XKM1-800H
额定电流 Rated current In(A)		250, 315, 350, 400		400, 500, 630, 700, 800	
极数 Pole number		3、4	3	3、4	3
额定绝缘电压 Ui(V) Rated insulation voltage		690		690	
额定工作电压 Ue(V) Rated operating voltage		AC400		AC400	
额定冲击耐受电压 Rated impact tolerance voltage		8000		8000	
寿命次数 service life	通电 power supply	7000		7000	
	不通电 Without power supply	10000		10000	
额定极限短路分断能力 Icu(KA) Rated ultimate short-circuit breaking capacity	AC400V	50	65	50	65
	AC690V				
额定运行短路分断能力 Ics(KA) Rated service short-circuit breaking capacity	AC400V	35	35	35	
	AC690V				
飞弧距离 Flashover distance(mm)		0或(or)≤100		0或(or)≤100	
外形尺寸 outline dimensions		W	140(3P) 185(4P)	210(3P) 280(4P)	
		L	257	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		○		○	
插入式接线 Plug in connection		○		○	
抽出式接线 Extraction type wiring		○		○	

动作特性曲线及温度校正曲线

Operating characteristic curve and temperature correction curve

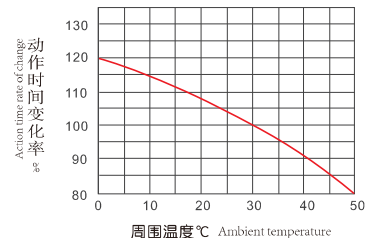
XKM1-63S,H 动作特性曲线

XKM1-63S,H Operating characteristic curve



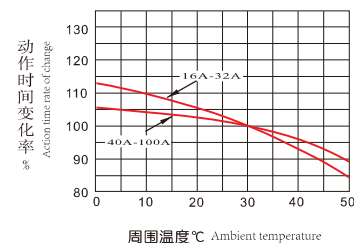
XKM1-63S,H 温度校正曲线

XKM1-63S,H temperature correction curve



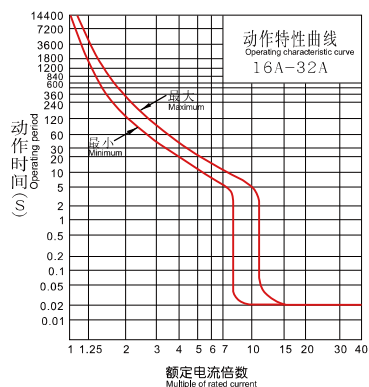
XKM1-100N,S,H,R 温度校正曲线

XKM1-100N,S,H,R temperature correction curve



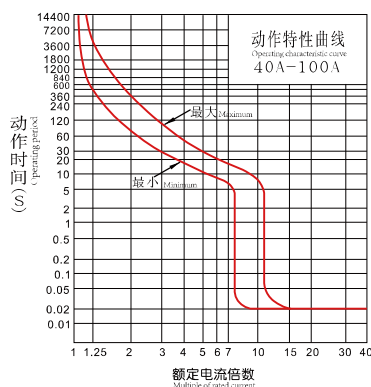
XKM1-100N,S,H,R 动作特性曲线

XKM1-100N,S,H,R Operating characteristic curve



XKM1-100N,S,H,R 动作特性曲线

XKM1-100N,S,H,R Operating characteristic curve

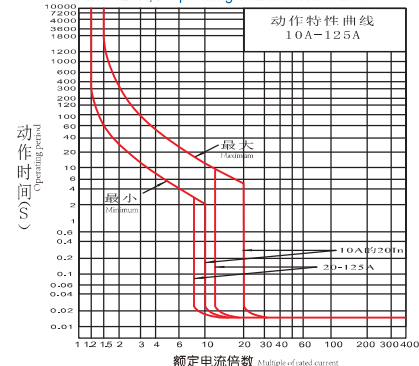


动作特性曲线及温度校正曲线

Operating characteristic curve and temperature correction curve

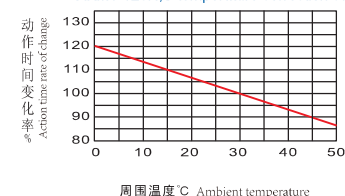
XKM1-125N,S 动作特性曲线

XKM1-125N,S Operating characteristic curve



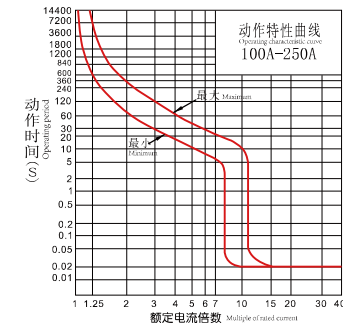
XKM1-125N,S 温度校正曲线

XKM1-125N,S temperature correction curve



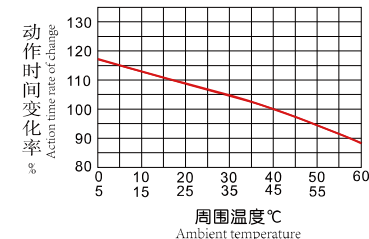
XKM1-250N,S,H,R 动作特性曲线

XKM1-250N,S,H,R Operating characteristic curve



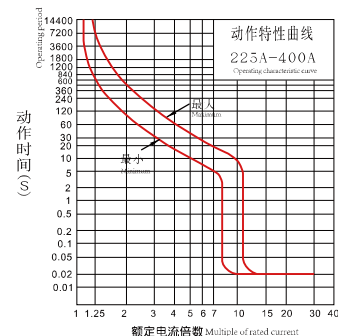
XKM1-250N,S,H,R 温度校正曲线

XKM1-250N,S,H,R temperature correction curve



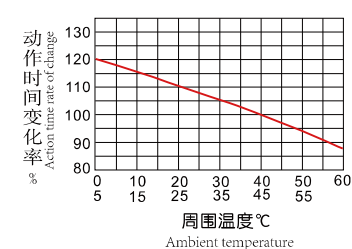
XKM1-400S,H 动作特性曲线

XKM1-400S,H Operating characteristic curve



XKM1-400S,H 温度校正曲线

XKM1-400S,H temperature correction curve

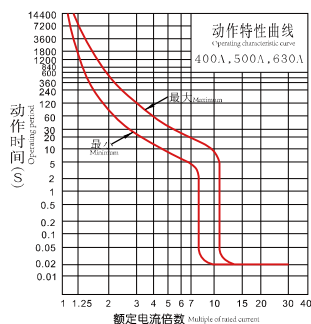


动作特性曲线及温度校正曲线

Operating characteristic curve and temperature correction curve

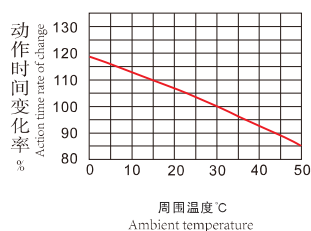
XKM1-800S,H 动作特性曲线

XKM1-800S,H Operating characteristic curve



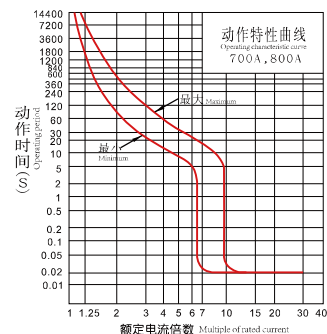
XKM1-800S,H 温度校正曲线

XKM1-800S,H temperature correction curve



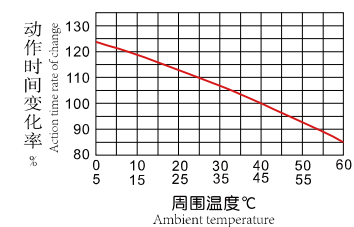
XKM1-800S,H 动作特性曲线

XKM1-800S,H Operating characteristic curve



XKM1-800S,H 温度校正曲线

XKM1-800S,H temperature correction curve



XKM1接线片宽度尺寸及接线方式

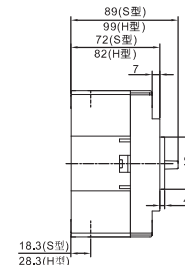
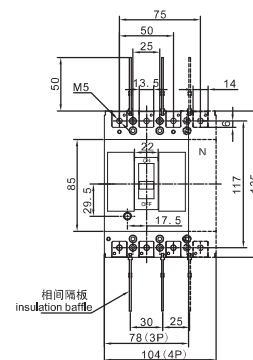
型号	宽度 (mm)	接线方式
XKM1-63	13	正常直接接外部电缆 (无提供外接接线片)
XKM1-100	16	可接电缆或铜排
XKM1-125	10	正常直接接外部电缆 (无提供外接接线片)
XKM1-250	20	可接电缆或铜排 (选配外接接线片)
XKM1-400	28	可接电缆或铜排 (选配外接接线片)
XKM1-800	40	推荐搭接铜排 (选配外接接线片)

外形及安装尺寸

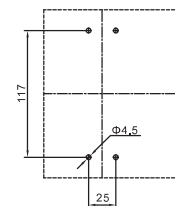
XKM1-63 S,H

板前接线

Board connection

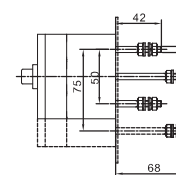
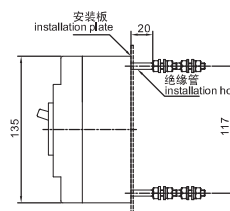


板前接线安装板开孔尺寸 Installation hole dimensions for the Board connection

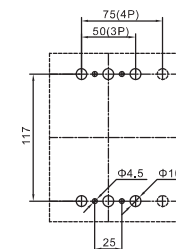


板后接线

Back panel connection

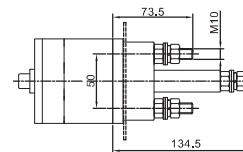
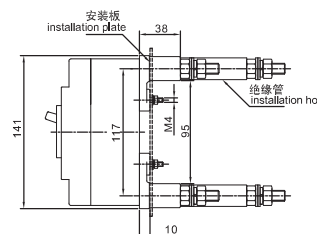


板后接线安装板开孔尺寸 Installation hole dimensions for the Back panel connection

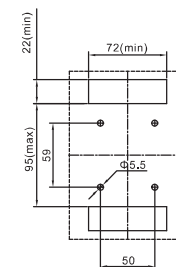


插入式接线

Plug in connection



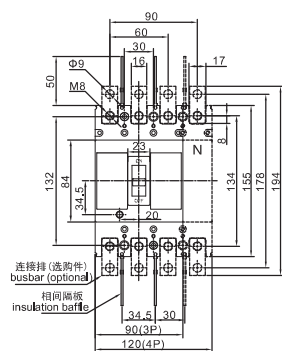
插入式板后接线安装板开孔尺寸 Installation hole dimensions for the Plug in connection



XKM1-100N,S,H,R

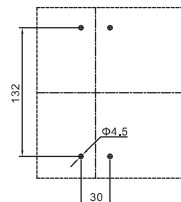
板前接线

Board connection



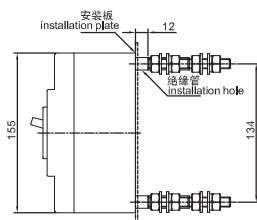
板前接线安装板开孔尺寸

installation hole dimensions for the Board connection



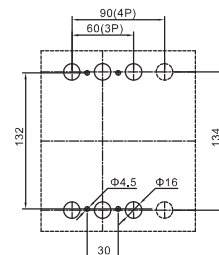
板后接线

Back panel connection



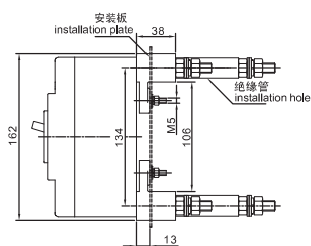
板后接线安装板开孔尺寸

installation hole dimensions for the Back panel connection



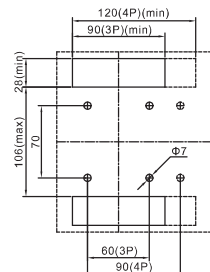
插入式接线

Plug in connection



插入式板后接线安装板开孔尺寸

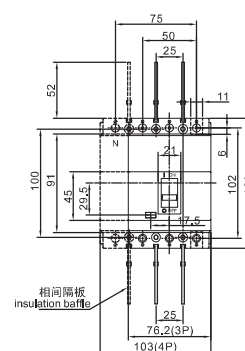
installation hole dimensions for the Plug in connection



XKM1-125N,S

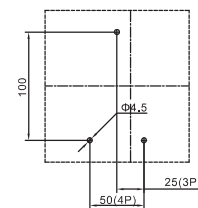
板前接线

Board connection



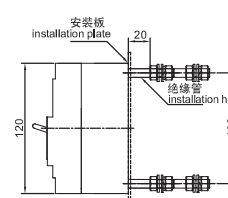
板前接线安装板开孔尺寸

installation hole dimensions for the Board connection



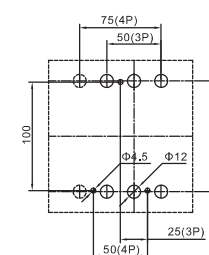
板后接线

Back panel connection



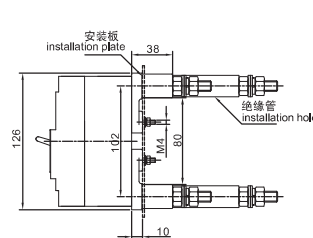
板后接线安装板开孔尺寸

installation hole dimensions for the Back panel connection



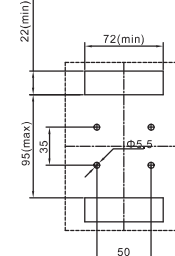
插入式接线

Plug in connection



插入式板后接线安装板开孔尺寸

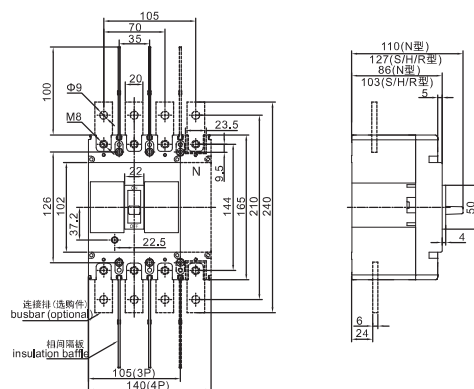
installation hole dimensions for the Plug in connection



XKM1-250N,S,H,R

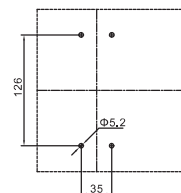
板前接线

Board connection



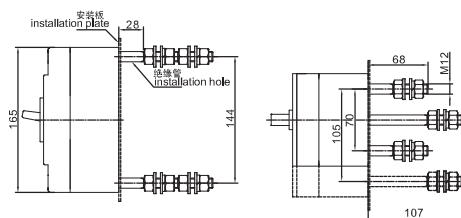
板前接线安装板开孔尺寸

installation hole dimensions for the Board connection



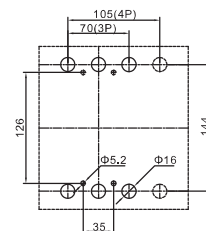
板后接线

Back panel connection



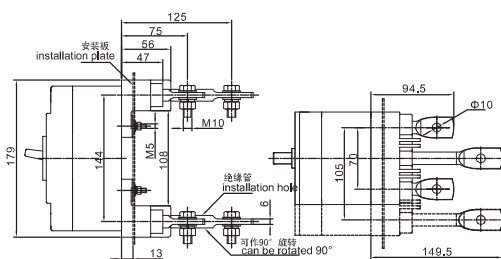
板后接线安装板开孔尺寸

installation hole dimensions for the Back panel connection



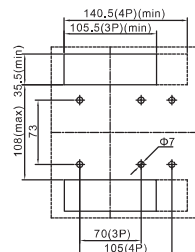
插入式接线

Plug in connection



插入式板后接线安装板开孔尺寸

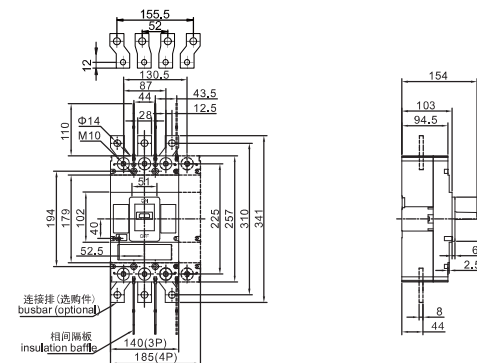
installation hole dimensions for the Plugin connection



XKM1-400S,H

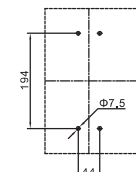
板前接线

Board connection



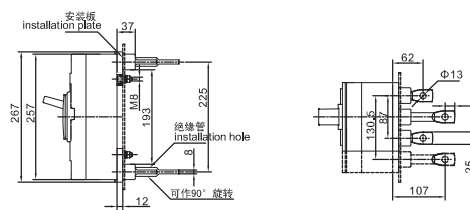
板前接线安装板开孔尺寸

installation hole dimensions for the Board connection



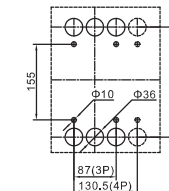
板后接线

Back panel connection



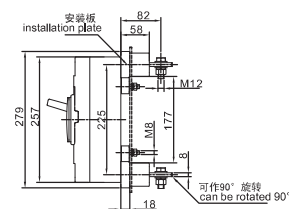
板后接线安装板开孔尺寸

installation hole dimensions for the Back panel connection



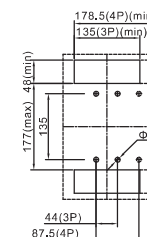
插入式接线

Plug in connection



插入式板后接线安装板开孔尺寸

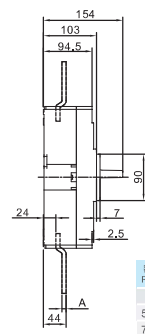
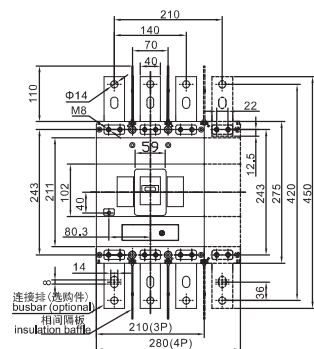
installation hole dimensions for the Plug-in connection



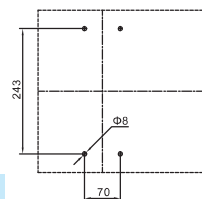
XKM1-800S,H

板前接线

Board connection



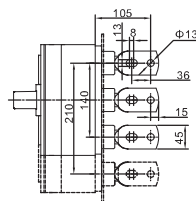
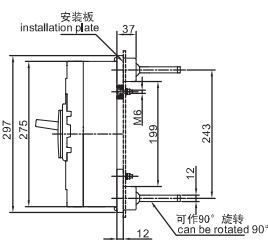
板前接线安装板开孔尺寸
installation hole dimensions for the Board connection



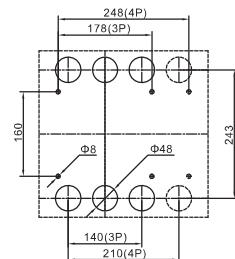
额定电流 In Rated current	A
400A	6mm
500A-630A	8mm
700A-800A	10mm

板后接线

Back panel connection

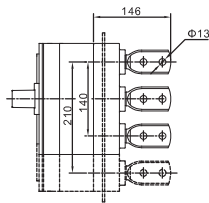
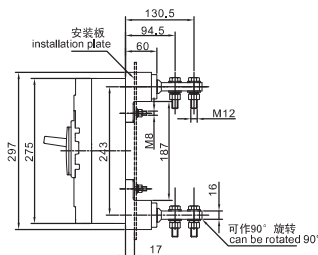


板后接线安装板开孔尺寸

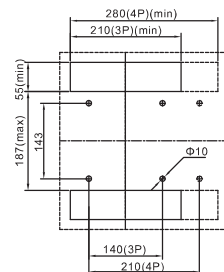


插入式接线

Plug in connection

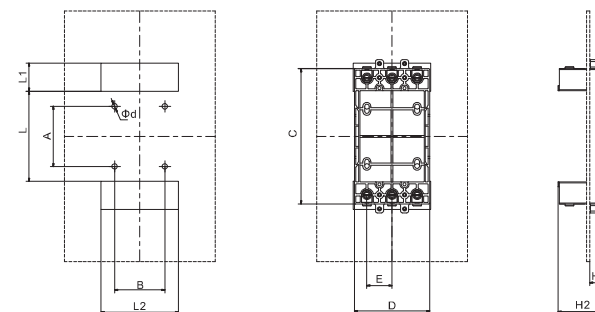


插入式板后接线安装板开孔尺寸
installation hole dimensions for the Plug-in connection



板后接线

Back panel installation

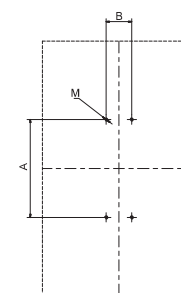


规格型号 Typical specification	选用插入式型号 Plug in type	外型及安装尺寸 (mm) Outline and installation dimensions(mm)											备注 Remarks
		A	B	L	L1	L2	C	C	D	E	H1	H2	
XKM1-100	M23-100XKM1	67	60	90	51	94	6.5	162	90	30	20	56.2	
XKM1-125	M23-125XKM1	45	50	72	38	79	6.5	120	75	25	17	48.2	
XKM1-250	M23-250XKM1	74	70	100	55	110	6.5	179	105	35	27	73.2	
XKM1-400	M23-400XKM1	141	88	178	70	135	7	275	132	44	45	85	
XKM1-800	M23-800XKM1	143	140	181	87	213	7	311	210	70	50	125	

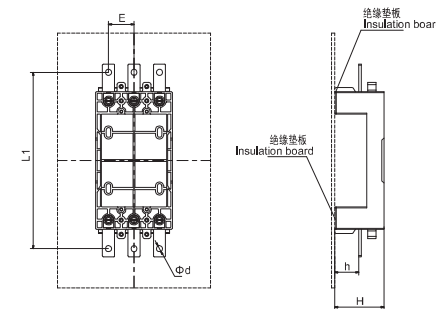
注: 当四极开关时, 尺寸B, L2,D均增加相距E
Note: for four pole breakers, Dimension B,L2,D should be added with Phase distance E

板前接线

Board connection



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

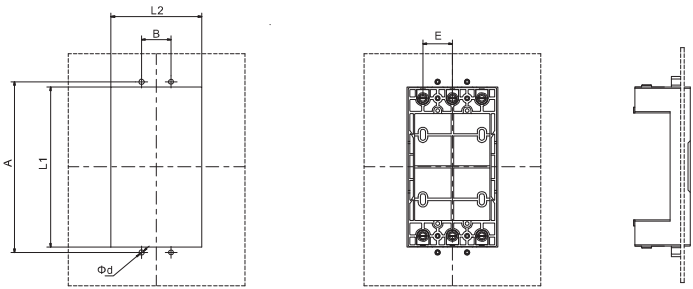


规格型号 Type specification	选型代号型式图 Optional Plug in type	外型及安装尺寸 (mm) Outline and installation dimensions(mm)								备注 Remark
		A	B	L1	E	d	M	H	h	
XKM1-100	MZ3-100/XKM1	112	30	200	30	6.5	M4	57	28	
XKM1-125	MZ3-125/XKM1	81	25	158	25	6	M3	49	23	
XKM1-250	MZ3-250/XKM1	150	35	223	35	8.5	M4	74	32	
XKM1-400	MZ3-400/XKM1	245	44	326	44	10.5	M5	85	36	
XKM1-800	MZ3-800/XKM1	283	70	363	70	12.5	M6	125	67	

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

大开孔式板后安装

Back panel installation for the type with big holes

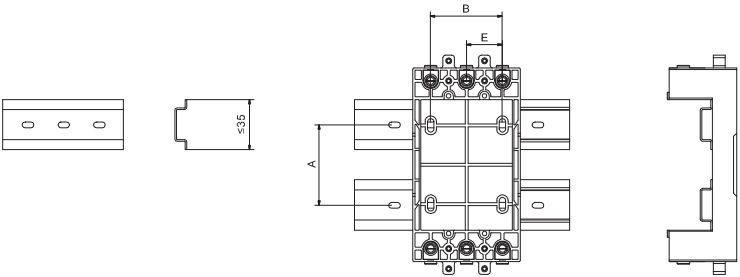


规格型号 Type specification	选用插入式型号 Optional Plug in type	外型及安装尺寸 (mm) Outline and installation dimensions (mm)						备注 Remark
		A	B	L1	L2	d	E	
XKM1-100	MZ3-100/XKM1	172	30	163	92	5	30	
XKM1-125	MZ3-125/XKM1	130	25	122	77	4	25	
XKM1-250	MZ3-250/XKM1	191	35	180	107	5	35	
XKM1-400	MZ3-400/XKM1	291	44	277	134	6	44	
XKM1-800	MZ3-800/XKM1	327	70	313	212	6	70	

注：当四级开关时，开关是250A及以下时尺寸B、L2均增加相距E；开关是400A以上时尺寸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



规格型号 Type specification	选用插入式型号 Optional Plug in type	外型及安装尺寸 (mm) Outline and installation dimensions (mm)			备注 Remark
		A	B	E	
XKM1-100	MZ3-100/XKM1	65	60	30	
XKM1-125	MZ3-125/XKM1	41	50	25	
XKM1-250	MZ3-250/XKM1	74	70	35	
XKM1-400	MZ3-400/XKM1	141	88	44	
XKM1-800	MZ3-800/XKM1	143	140	70	

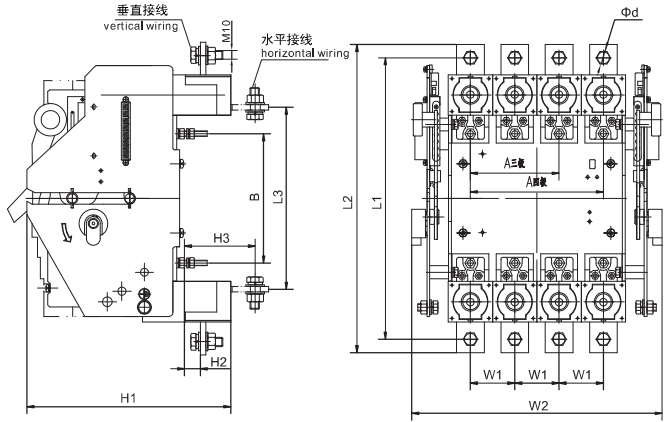
注：当四级开关时，尺寸B增加相距E
Note: for four pole breakers, Dimension B should be added with Phase distance E

XKM1 系列抽出式接线

XKM1 series of Extraction Type Wiring

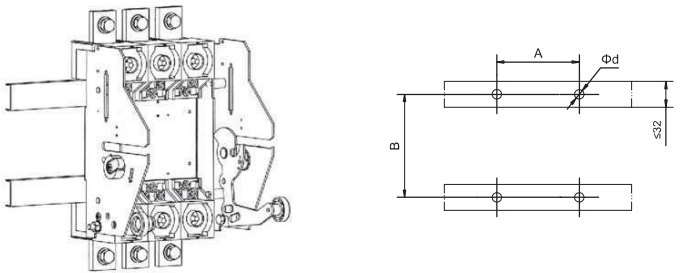
外形尺寸

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	A	B	Φd
XKM1-400	CH2-400/30	3P	311	340	197	227	17.5	77	44	219	88	141	Φ6.5
		4P	311	340	197	227	17.5	77	44	263	132	141	Φ6.5
XKM1-800	CH2-630/30	3P	368	411	231	213	24	74	70	297	140	131	Φ7
		4P	368	411	231	213	24	74	70	367	210	131	Φ7

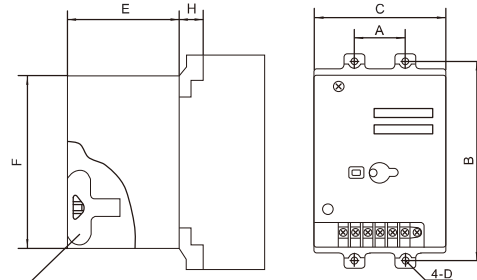
电动操作机构技术参数

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	电压可选 Operating voltage	动作电流(A) Operating current	操作时间 Operating time
CD2-63/XKM1	XKM1-63	AC380V	≤0.3	≤0.7S
		AC380V, DC220V AC110V, DC110V	≤0.5	
		DC24V	≤3	
CD2-100/XKM1	XKM1-100	AC380V	≤0.3	
		AC220V, DC220V AC110V, DC110V	≤0.5	
		DC24V	≤3	
CD2-125/XKM1	XKM1-125	AC380V	≤0.3	
		AC220V, DC220V AC110V, DC110V	≤0.5	
		DC24V	≤3	
CD2-225/XKM1	XKM1-250	AC380V	≤0.3	
		AC220V, DC220V AC110V, DC110V	≤0.5	
		DC24V	≤3	
CD2-400/XKM1	XKM1-400	AC380V	≤1	
		AC220V, DC220V AC110V, DC110V	≤2	
		DC24V	≤6	
CD2-630/XKM1	XKM1-800	AC380V	≤1	
		AC220V, DC220V AC110V, DC110V	≤2	
		DC24V	≤6	

电动操作机构外形尺寸

Outline dimensions of electric mechanism



操作手柄 operation handle

型号规格 Type specification	A	B	C	D	E	F	H
CD2-63/XKM1	25	117	74	Φ3.5	79	102	11.5
CD2-100/XKM1	30	132	90	Φ4.5	77	116	12.5
CD2-125/XKM1	58	111	74	Φ3.5	79	102	2
CD2-225/XKM1	35	126	90	Φ4.5	77	116	15
CD2-400/XKM1	44	194	130	Φ6.5	115	176	37
CD2-800/XKM1	70	243	130	Φ6.5	115	176	38

转动手柄操作机构

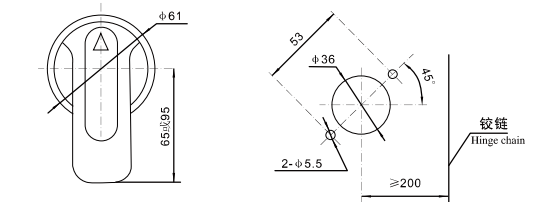
Rotation handle operating mechanism

手柄: XKM1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 XKM1 series of moulded case type circuit breakers can be selected.

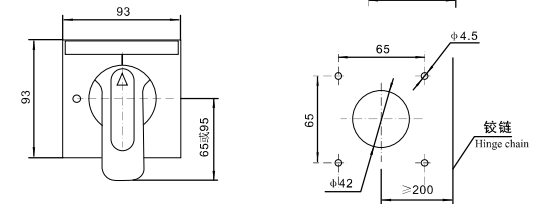
开孔尺寸: A型

Perforation dimensions: A type



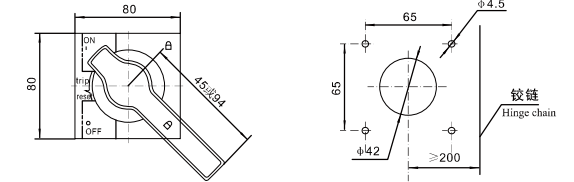
开孔尺寸: F1型

Perforation dimensions: F1 type



开孔尺寸: F2型

Perforation dimensions: F2 type

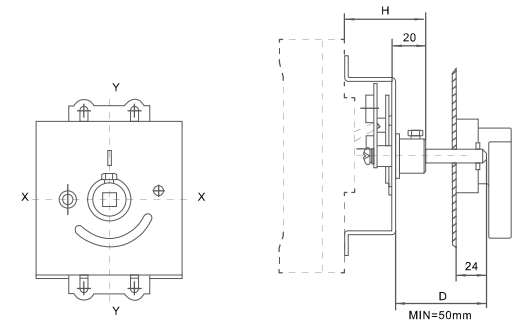


操作机构: 有“中心式拐臂结构”, “中心式齿轮结构”, “偏心式连杆结构”

Operation handle: Central crank arm structure, central gear structure, eccentricity connecting rod mechanism

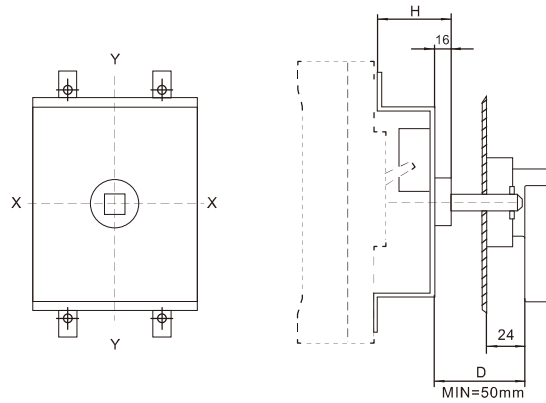
中心式齿轮结

Central gear structure



型号规格 Model and dimensions	配用断路器 Sorted circuit breaker	安装尺寸H Installation dimensions	操作手柄相对于断路器中心Y值 Deviation (Y value) of operation handles from circuit breaker center
CS1-63/XKM1	XKM1-63	50	0
CS1-100/XKM1	XKM1-100	50	0
CS1-125/XKM1	XKM1-125	48	0
CS1-225/XKM1	XKM1-250	54	0
CS1-400/XKM1	XKM1-400	83	0
CS1-630/XKM1	XKM1-800	83	0

中心式齿轮结构
Central gear structure



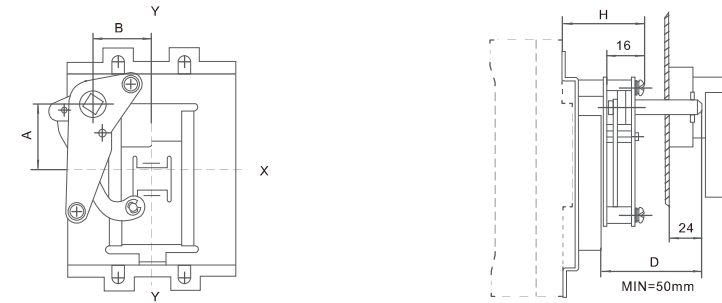
型号规格 Model and dimensions	配用断路器 Sorted circuit breaker	安装尺寸H Installation dimensions	操作手柄相对于断路器中心Y值 Deviation (Y value) of operation handles from circuit breaker center
SC1-63/XKM1	XKM1-63	57	0
SC1-100/XKM1	XKM1-100	62	0
SC1-125/XKM1	XKM1-125	54	0
SC1-225/XKM1	XKM1-250	62	0
SC1-400/XKM1	XKM1-400	92	0
SC1-630/XKM1	XKM1-800	92	0

注：X,Y轴为对应断路器的中心,A,B为机构操纵杠对应柜体面板及手柄的开孔中心。

Note: X and Y axes are centers of corresponding circuit breakers. A and B are perforation centers of mechanism manipulation rods which correspond to cabinet body panel and handle.

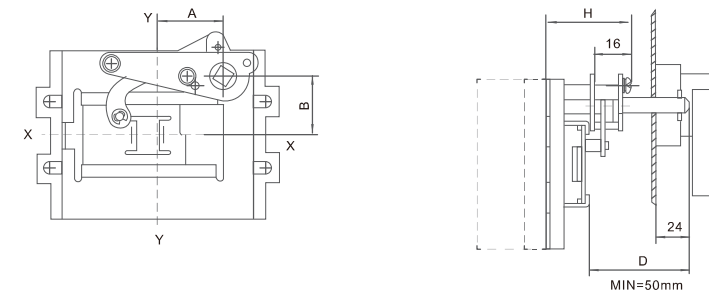
偏心式连杆结构：横装

Eccentricity type connecting rod structure: Transverse



偏心式连杆结构：竖装

Eccentricity type connecting rod structure: Vertical



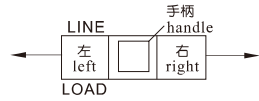
附件名称 Accessory name	配用断路器 Sorted circuit breaker	A	B	H
CS2-63/XKM1	XKM1-63	-24	0	44
CS2-100/XKM1	XKM1-100	35	11.5	44
CS2-125/XKM1	XKM1-125	35	11.5	45
CS2-225/XKM1	XKM1-250	35	31	46
CS2-400/XKM1	XKM1-400	68	15	61
CS2-630/XKM1	XKM1-800	65	15	64

注：X,Y轴为对应断路器的中心,A,B为机构操纵杠对应柜体面板及手柄的开孔中心。

Note: X and Y axes are centers of corresponding circuit breakers. A and B are perforation centers of mechanism manipulation rods which correspond to cabinet body panel and handle.

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
- 右边引线即右装式 right download, namely, right installation
- ← 左边引线即左装式 left download, 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	XKM1-63/100/250	XKM1-125	XKM1-400	XKM1-800
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 auxiliary contact		←○□□	□□○→	←○□□	←○□□
230,330	欠电压脱扣器 under-voltage release		□□▲→	←▲□□	□□▲→	□□▲→
240,340	分励脱扣器,辅助触头 shunt release, auxiliary contact		←○□□△→	←△□□○→	←○□□△→	←○□□△→
250,350	欠压脱扣器,分励脱扣器 under-voltage release, shunt release		←□□△▲→	←▲□□△→	←□□△▲→	←□□△▲→
260,360	二组辅助触头 2 groups of auxiliary contacts		←○□□○→	□□○→	←○□□○→	←○□□○→
270,370	欠压脱扣器,辅助触头 under-voltage release, auxiliary contact		←○□□▲→	←▲□□○→	←○□□▲→	←○□□▲→
218,318	分励脱扣器,报警触头 shunt release, alarm contact		←●□□△→	←△□□●→	←●□□△→	←●□□△→
228,328	辅助触头,报警触头 auxiliary contact, 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,报警触头 shunt release, auxiliary contact, alarm contact		←○□□△●→	←△□□○●→	←○□□△●→	←○□□△●→
268,368	二组辅助触头,报警触头 2 groups of auxiliary contact, alarm contact		←○□□○●→	□□○●→	←○□□○●→	←○□□○●→
278,378	欠压脱扣器,报警触头,辅助触头 under-voltage release, alarm contact, auxiliary contact		←○□□▲●→	←▲□□○●→	←○□□▲●→	←○□□▲●→

附件类型

Accessory type

附件名称 Accessory name	外形 Profile	功能 Function	接线图 Wiring diagram
报警触头 alarm contact		指示断路器已脱扣 It indicates release circuit breaker.	B14 ——— B11 B12 ——— B11
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.	F14 ——— F11 F12 ——— F11
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.	
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.	

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.

产品介绍

PRODUCT INTRODUCTION

- XKM1L系列塑料外壳式断路器适用于AC50Hz、额定绝缘电压690V、额定工作电压AC400V、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XKM1L断路器可对人员提供直接接触附加保护。
- 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。

XKM1L series circuit breaker with plastic shell is suitable for the circuit with AC50Hz, rated insulation voltage 690V, rated working voltage AC400V, rated current 16A-630A, 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.

XKM1L circuit breakers with rated residual operating current of 30mA provide additional direct contact protection to humans.

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.

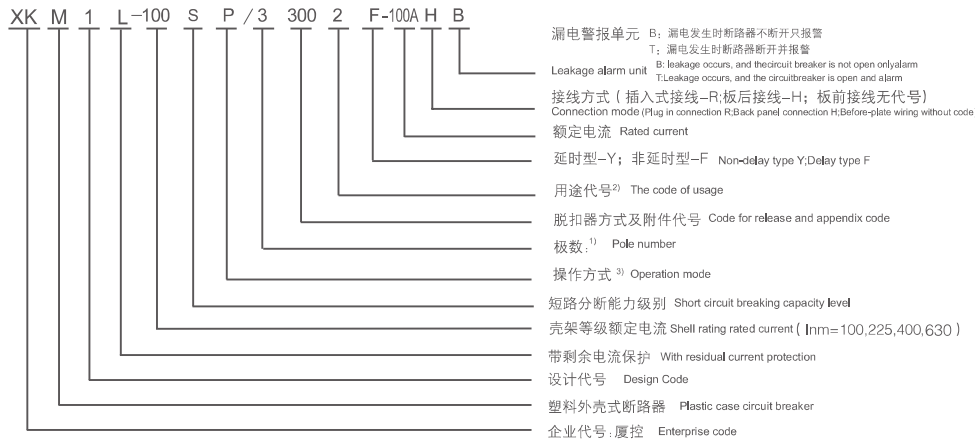
产品特点

- 本断路器具有隔离功能,其相应的符号为“—/—X—”
- 具有同XKM1-100、XKM1-250、XKM1-400、XKM1-800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。
- 具有在发生剩余电流断开时的指示装置,该装置只有在进行操作时才能复位。
- 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。
- XKM1L-225剩余电流断路器的零序互感器内的导体是由四块独立而且相互绝缘的扇形柱组成,扇形柱两端有预制螺数,成形的导体能很方便地进行连接,它充分地利用了零序互感器的有效空间,最大限度的增加了导电截面,本结构已获国家专利。
- 本断路器不能后进线、只可“LINE”接电源端,“LOAD”接负载端。

Product Characteristics

- The circuit breaker has an isolation function, the corresponding symbol is “—/—X—”
- With same dimensions and mounting dimensions as XKM1-100, XKM1-250, XKM1-400, XKM1-800 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.
- An indicating device turns up when the residual current is disengaged, which can only be reset when the operation is performed.
- With function of leakage alarm output: there are two choices that leakage when the circuit breaker is not open only alarm (B type) and leakage occurs when the circuit breaker is broken and alarm (T type).
- The conductor in the zero sequence transformer of XKM1L-225 residual current circuit breaker is composed of four independent and mutually exclusive fan-shaped columns with the prefabricated screw at both ends. The formed conductor can be easily carried out Connection, which makes full use of the effective space of the zero sequence transformer and has the maximum increase in the conductive cross-section. The structure has been the national patent.
- The circuit breaker cannot be backward with only "LINE" to the power supply side and "LOAD" to the load side.

断路器型号及含义 Product Model and Meaning



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, 电动操作用“P”表示; 转动操作用“Z”表示。
 Manual operation without code;Optional frame size level current for P;Rotation handle operation for Z.

基本规格和参数

Basic specifications and parameters

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	XKM1L-100	XKM1L-225	XKM1L-400	XKM1L-630
壳架电流 (Inm) A Frame current	100	225	400	630
额定电流 (In) A Rated current	16, 20, 32, 40 50, 63, 80, 100	100, 125, 160 180, 200, 225	225, 250, 315 350, 400	400, 500, 630
额定绝缘电压 Ui(V) Rated insulation voltage	690			
额定工作电压 Ue(V) Rated operating voltage	400			
额定频率(Hz) Rated frequency	50			
极数 Pole number	3、4			
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			
额定极限短路分断能力(Icu)KA Rated ultimate short-circuit breaking capacity	50	50	50 65 100	50 70 100
额定运行短路分断能力(Ics)KA Rated operating short-circuit breaking capacity	35	35	35 65 65	50 70 70
额定剩余动作电流(IΔn)mA Rated residual operating current	非延时型 Non-delay type	30, 100, 500	30, 100, 500	100, 300, 500
	延时型 Delay type	100, 300, 500	100, 300, 500	100, 300, 500
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			
操作性能 Operational performance	通电 power supply	7000	7000	7000
	不通电 Without power supply	10000	10000	10000
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	○	○	○	○

注:1.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
 2.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, 不要接B相

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 and do not connect B phase.

形式

Form

剩余电流动作时间

- 非延时型
- 延时型

剩余动作电流三点可调

- 非延时型分为 $I_{\Delta n}$ 分为
壳架电流 $\leq 225A$ 为30mA、100mA、500mA \leq
壳架电流 $> 225A$ 为100mA、300mA、500mA
延时型分为 $I_{\Delta n}$ 分为100mA、300mA、500mA
- 延时动作时间 $2I_{\Delta n}$ 最大分断时间
0.5S、1S、2S（极限不动作时间对应为0.1S、0.5S、1.0S）三点可调
- 极数
- 三极
- 四极
- 飞弧距离
- 短飞弧
- 长飞弧
- 保护特性
- 配电保护
- 电动机保护
- 安装方式
- 板前接线
- 板后接线
- 插入式接线
- 过电流脱扣方式
- 复式保护（兼有过载长延时短路瞬时保护）
- 电磁式保护（仅有短路瞬时保护）

Operating time of residual current

- Non-delay type
- Delay type

Three points of the residual operating current is adjustable

- Non-delay type $I_{\Delta n}$ Frame currents $\leq 225A$ 为30mA,100mA,500mA.
Non-delay type $I_{\Delta n}$ Frame current $> 225A$ 为30mA,100mA,500mA.
Delay type $I_{\Delta n}$ 100mA,300mA,500mA.
- Delay operating time $I_{\Delta n}$ Maximum segment time 0.5S、1S、2S (Limited and no-action time corresponding to 0.1S, 0.5S, 1.0S) three points are adjustable.

Pole number

- Three-type
- Four-type

Flashover distance

- Short arcs
- Long arcs

Protection features

- Power distribution protection
- Motor protection

Installation method

- Board connection
- Back panel connection
- Plug in connection

Overcurrent tripping

- Double protection (protection of both overload long delay and short circuit)
- Electromagnetic protection (protection of only short-circuit transient)

附件类型

Accessory type

附件名称 Accessory name	外形 Profile	功能 Function	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.	
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.	

注: 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 for auxiliary and alarm contacts

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

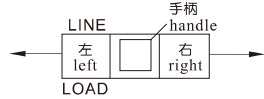
Use and maintenance

- 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。
- 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调的延时时间值后, 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 one 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.

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
- 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	XKM1L-100		XKM1L-225		XKM1L-400/630	
		3P	4P	3P	4P	3P	4P
208,308	报警触头 alarm contact	←●□□	←●□□	←●□□	←●□□	←●□□	←●□□
210,310	分励脱扣器 shunt release	←△□□	←△□□	←△□□	←△□□	←△□□	←△□□
220,320	辅助触头 auxiliary contact	←○□□	←○□□	←○□□	←○□□	←○□□	←○□□
230,330	欠电压脱扣器 under-voltage release	←▲□□	←▲□□	←▲□□	←▲□□	←▲□□	←▲□□
240, 340	分励脱扣器,辅助触头 shunt release, auxiliary contact	←△□○	←△□○	←△□○	←△□○	←△□○	←△□○
250,350	欠压脱扣器,分励脱扣器 under-voltage release, shunt release					←△□○	←△□○
260,360	二组辅助触头 2 groups of auxiliary contacts	←○□□	←○□□	←○□□	←○□□	←○□□	←○□□
270,370	欠压脱扣器,辅助触头 under-voltage release, auxiliary contact	←▲□○	←▲□○	←▲□○	←▲□○	←▲□○	←▲□○
218, 318	分励脱扣器,报警触头 shunt release, alarm contact					←△□●	←△□●
228,328	辅助触头,报警触头 auxiliary contact, 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,报警触头 shunt release, auxiliary contact, alarm contact					←△□●	←△□●
268,368	二组辅助触头,报警触头 2 groups of auxiliary contact, alarm contact	←○□●	←○□●	←○□●	←○□●	←○□●	←○□●
278,378	欠压脱扣器,报警触头,辅助触头 under-voltage release, alarm contact, auxiliary contact					←▲□●	←▲□●

注:因断路器三、四级不同,及壳架不同,还可选装不同的附件,具体情况订货时可向公司查询。
警告:欠电压脱扣器必须先通电,断路器才能再扣及合闸,否则将损坏断路器。

Note: Because the circuit breaker has difference between three and four poles, and shell frame, you can also choose different accessories. You can query the specific circumstances from the company when you order.
Warning: Undervoltage release must be energized, and the circuit breaker can be re-engaged and closed, otherwise it will damage the circuit breaker.

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



I₁, I₂ 为电源输入端, 电压为AC220V, B型不需要接入电源

I₁, I₂ is the power input, the voltage is AC220V, B type does not need to access the power supply

01为公共触点 01 for public contacts

03为常开触点 03 is a normally open contact

02为常闭触点 02 is normally closed contact

01、02、03触头容量为 AC220V/5A、DC220V/0.25A

01,02,03 contact capacity for AC220V/5A,DC220V/0.25A

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
			I _n ≤63	I _n ≥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

短路断开特性

Short-circuit disconnecting characteristics

	动作特性 performance characteristic
短路保护 (配电) Short-circuit protection (power distribution)	10I _n ±20%
短路保护 (电动机) Short-circuit protection (electromotor)	12I _n ±20%

剩余电流动作分断时间

Residual current action breaking time

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

极限不驱动时间 Limit non drive time	剩余电流 Residual current	$I_{\Delta n}$	$2I_{\Delta n}$	$5I_{\Delta n}$	$10I_{\Delta n}$	备注 Remark
0.1S	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	—	—	
0.5S	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	—	—	
1.0S	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	—	—	

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 $10I_{\Delta n}$

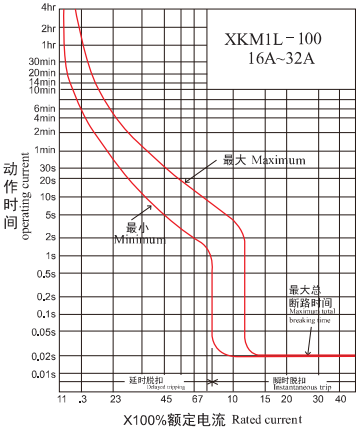
Note: Replace the $5I_{\Delta n}$ residual current circuit breaker with 0.25A for
 $I_{\Delta n} \leq 30\text{mA}$
Replace the $10I_{\Delta n}$ residual current circuit breaker with 0.5A for
 $I_{\Delta n} \leq 30\text{mA}$

动作特性曲线

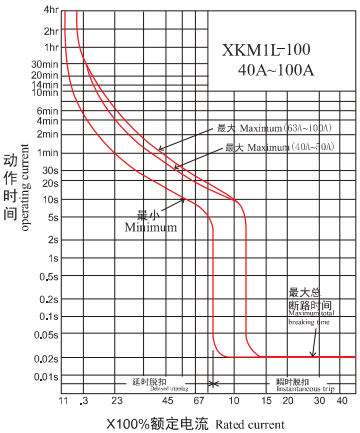
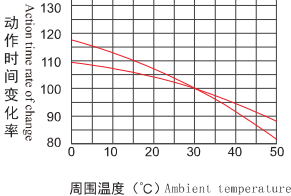
Action characteristic curve

XKM1L 系列剩余电流断路器动作特性曲线

Operating characteristic curve for XKM1L series residual current circuit breaker

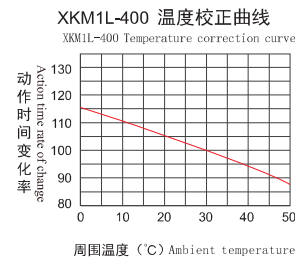
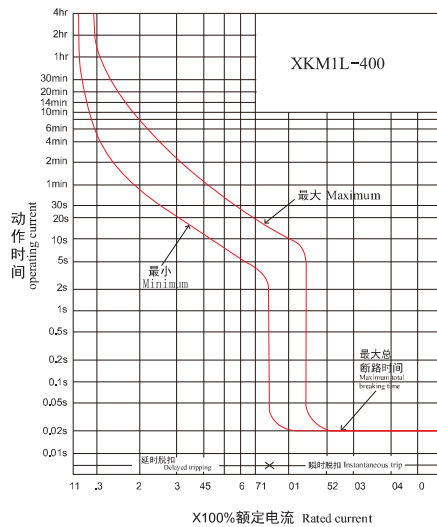
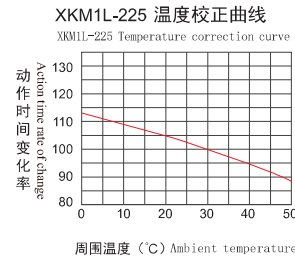
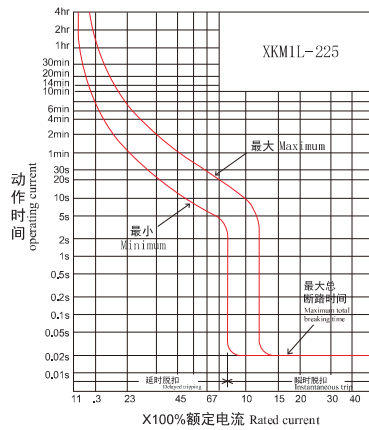


XKM1L-100 温度校正曲线
XKM1L-100 Temperature correction curve



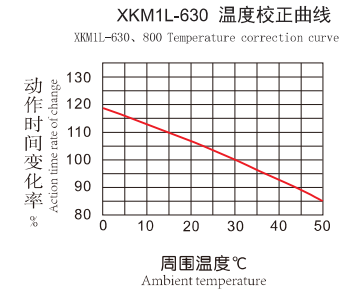
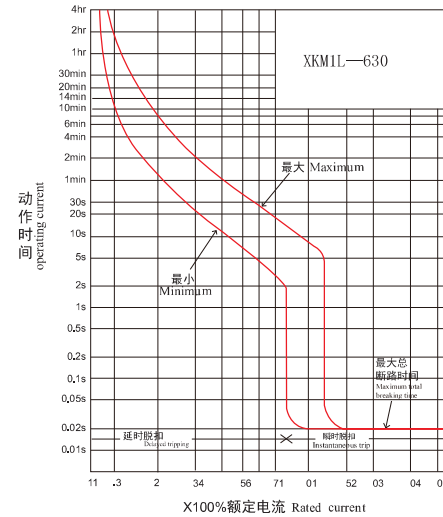
XKM1L 系列剩余电流断路器动作特性曲线

Operating characteristic curve for XKM1L series residual current circuit breaker



XKM1L 系列剩余电流断路器动作特性曲线

Operating characteristic curve for XKM1L series residual current circuit breaker



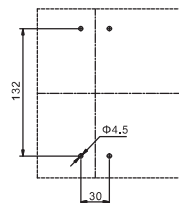
XKM1L 接线片宽度尺寸及接线方式

型号	宽度 (mm)	接线方式
XKM1L-100	16	可接电缆或铜排
XKM1L-225	20	可接电缆或铜排 (选配外接接线片)
XKM1L-400	28	可接电缆或铜排 (选配外接接线片)
XKM1L-630	40	推荐搭接铜排 选配外接接线片)

Residual current circuit breakers and mounting dimensions

XKM1L-100 The shape and installation dimensions for residual current circuit breaker

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



板后接线安装板开孔尺寸

installation hole dimensions for the Back panel connection

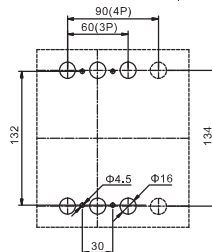
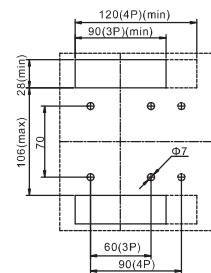


图 1 展示了安装板的详细尺寸和结构。左侧为侧视图，标注了总高度 162，安装板厚度 38，绝缘管安装孔直径 134，以及绝缘管安装孔间距 108。底部标注了安装板宽度 13。右侧为前视图，标注了总宽度 134.5，绝缘管安装孔间距 73.5，以及绝缘管安装孔直径 90。图中还标注了 M10 的螺纹规格。

插入式板后接线安装板开孔尺寸

installation hole dimensions for the Plugin connection



Residual current circuit breakers and mounting dimensions

XKM1L-225 The shape and installation dimensions for residual current circuit breaker

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

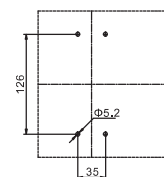
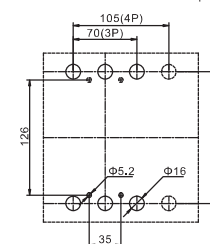


Figure 107 shows the mounting plate (安装板) with dimensions and labels. The front view (left) shows a plate with a width of 165 and a height of 144. The side view (right) shows a plate with a thickness of 28 and a height of 105. The mounting holes are labeled "安装孔" and the mounting plate is labeled "安装板". The dimensions are: 165, 144, 28, 105, 68, and M12.

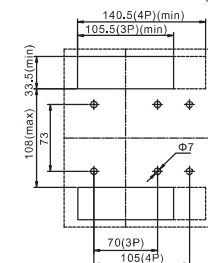
板后接线安装板开孔尺寸

installation hole dimensions for the Back panel connection



插入式板后接线安装板开孔尺寸

installation hole dimensions for the Plugin connection

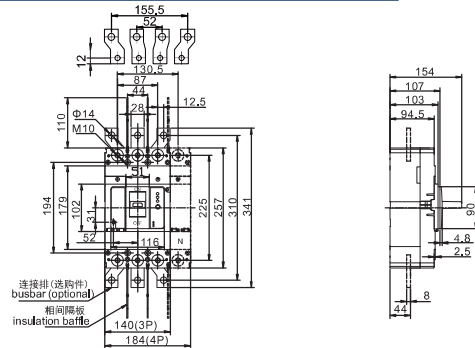


Residual current circuit breakers and mounting dimensions

XKM1L-400 系列剩余电流断路器外形及安装尺寸

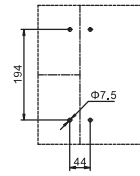
XKM1L-400 The shape and installation dimensions for residual current circuit breaker

板前接线 Board connection

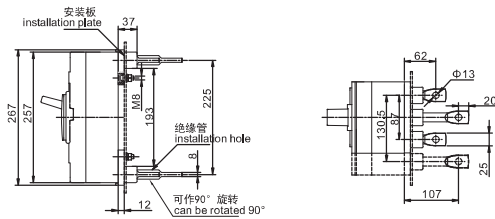


板前接线安装板开孔尺寸

installation hole dimensions for the Board connection

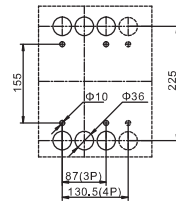


板后接线 Back panel connection

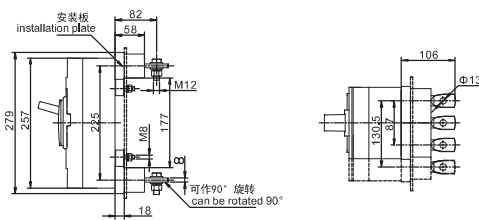


板后接线安装板开孔尺寸

installation hole dimensions for the Back panel connection

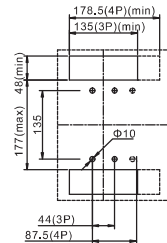


插入式接线 Plug in connection



插入式板后接线安装板开孔尺寸

installation hole dimensions for the P|ugin connection



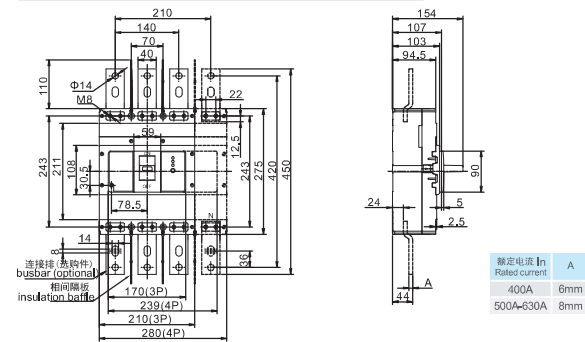
剩余电流断路器外形及安装尺寸

Residual current circuit breakers and mounting dimensions

XKM1L -630 系列剩余电流断路器外形及安装尺寸

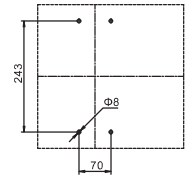
XKM1L-630 The shape and installation dimensions for residual current circuit breaker

板前接线 Board connection

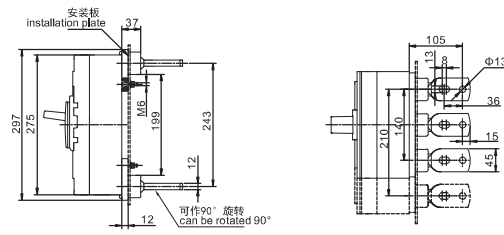


板前接线安装板开孔尺寸

installation hole dimensions for the Board connection

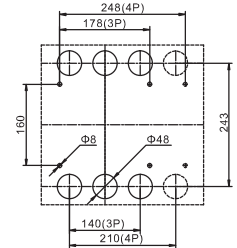


板后接线 Back panel connection

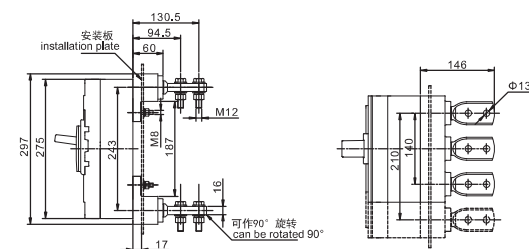


板后接线安装板开孔尺寸

installation hole dimensions for the Back panel connection

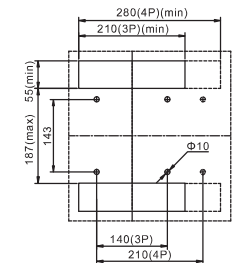


插入式接线 Plug in connection



插入式板后接线安装板开孔尺寸

installation hole dimensions for the PlugIn connection



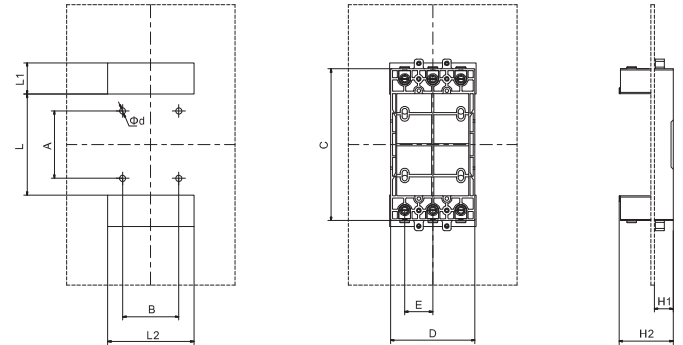
剩余电流断路器外形及安装尺寸

Residual current circuit breakers and mounting dimensions

插入式接线 (整体式)

Plug in connection (integrated type)

板后接线 Back panel connection

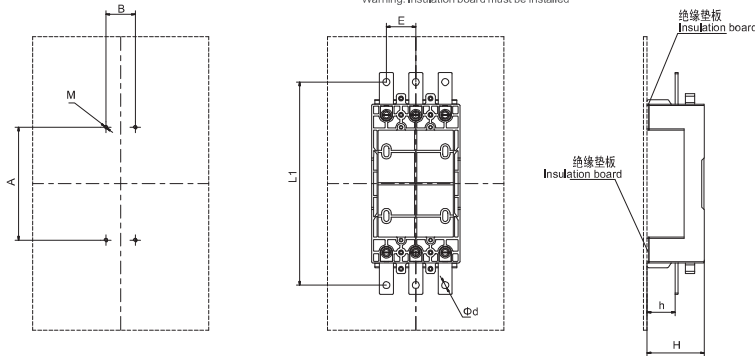


规格型号 Type specification	选用插入式型号 Optional Plug in type	外型及安装尺寸 (mm) Outline and installation dimensions (mm)											备注 Remark
		A	B	L	L1	L2	d	C	D	E	H1	H2	
XKM1L-100	MZ3-100/XKM1	65	60	90	51	94	6.5	162	90	30	20	56.2	
XKM1L-225	MZ3-250/XKM1	74	70	100	55	110	6.5	179	105	35	27	73.2	
XKM1L-400	MZ3-400/XKM2Z	141	88	178	70	135	7	275	132	44	45	85	
XKM1L-630	MZ3-800/XKM2Z	143	140	181	87	213	7	311	210	70	50	125	

注：当四级开关时，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

板前接线 Board connection

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



规格型号 Type specification	选用插入式型号 Optional Plug in type	外型及安装尺寸 (mm) Outline and installation dimensions (mm)										备注 Remark
		A	B	L1	E	d	M	H	h			
XKM1L-100	MZ3-100/XKM1	112	30	200	30	6.5	M4	57	28			
XKM1L-225	MZ3-250/XKM1	150	35	223	35	8.5	M4	74	32			
XKM1L-400	MZ3-400/XKM2Z	245	44	326	44	10.5	M5	85	36			
XKM1L-630	MZ3-800/XKM2Z	283	70	363	70	12.5	M6	125	67			

注：当四级开关时，尺寸B均增加相距E
Note: for four pole breakers, Dimension B should be added with Phase distance E

剩余电流断路器外形及安装尺寸

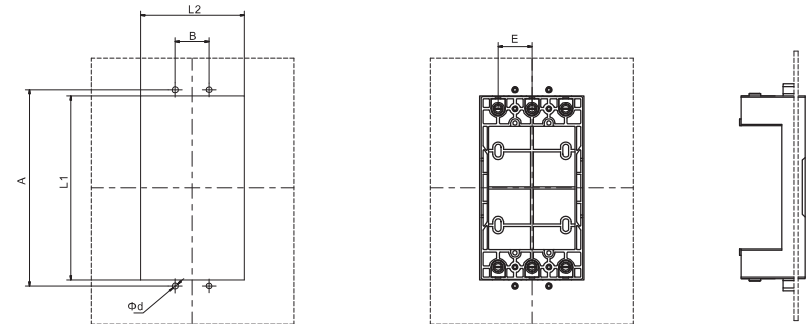
Residual current circuit breakers and mounting dimensions

插入式接线 (整体式)

Plug in connection (integrated type)

大开孔式板后安装

Back panel installation for the type with big holes

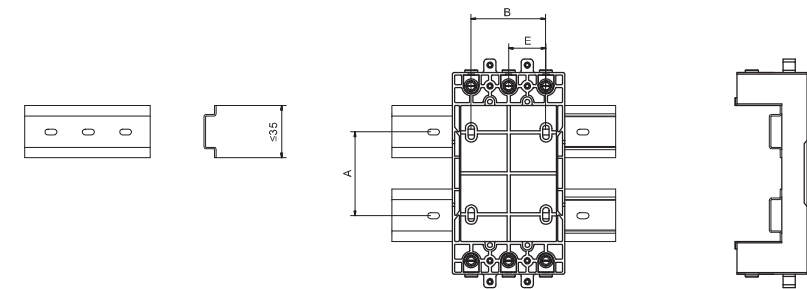


规格型号 Type specification	选用插入式型号 Optional Plug in type	外型及安装尺寸 (mm) Outline and installation dimensions (mm)							备注 Remark
		A	B	L1	L2	d	E		
XKM1L-100	MZ3-100/XKM1	172	30	163	92	5	30		
XKM1L-225	MZ3-250/XKM1	191	35	180	107	5	35		
XKM1L-400	MZ3-400/XKM2Z	291	44	277	134	6	44		
XKM1L-630	MZ3-800/XKM2Z	327	70	313	212	6	70		

注：当四级开关时，开关是250A及以下尺寸B、L2均增加相距E；开关是400A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

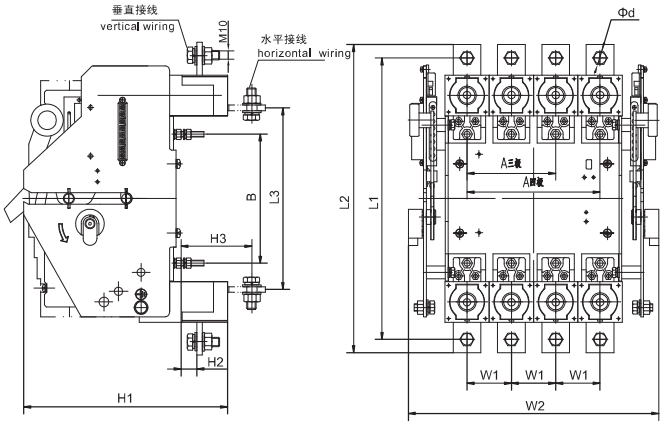


规格型号 Type specification	选用插入式型号 Optional Plug in type	外型及安装尺寸 (mm) Outline and installation dimensions (mm)			备注 Remark
		A	B	E	
XKM1L-100	MZ3-100/XKM1	65	60	30	
XKM1L-225	MZ3-250/XKM1	74	70	35	
XKM1L-400	MZ3-400/XKM2Z	141	88	44	
XKM1L-630	MZ3-800/XKM2Z	143	140	70	

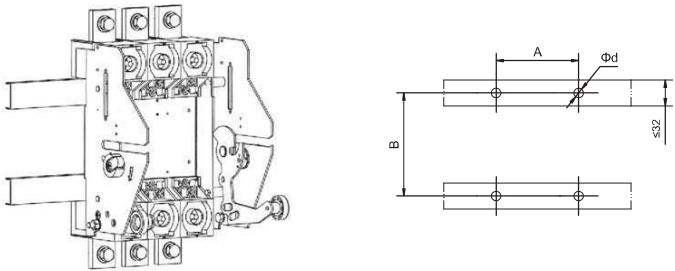
注：当四级开关时，尺寸B增加相距E
Note: for four pole breakers, Dimension B should be added with Phase distance E

XKM1L 系列抽出式接线
XKM1L series of Extraction Type Wiring

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	A	B	Φd
XKM1L-400	CH2-400/XKM2Z	3P	311	340	197	227	17.5	77	44	219	88	141	Φ6.5
		4P	311	340	197	227	17.5	77	44	263	132	141	Φ6.5
XKM1L-630	CH2-630/XKM2Z	3P	368	411	231	213	24	74	70	297	140	131	Φ7
		4P	368	411	231	213	24	74	70	367	210	131	Φ7