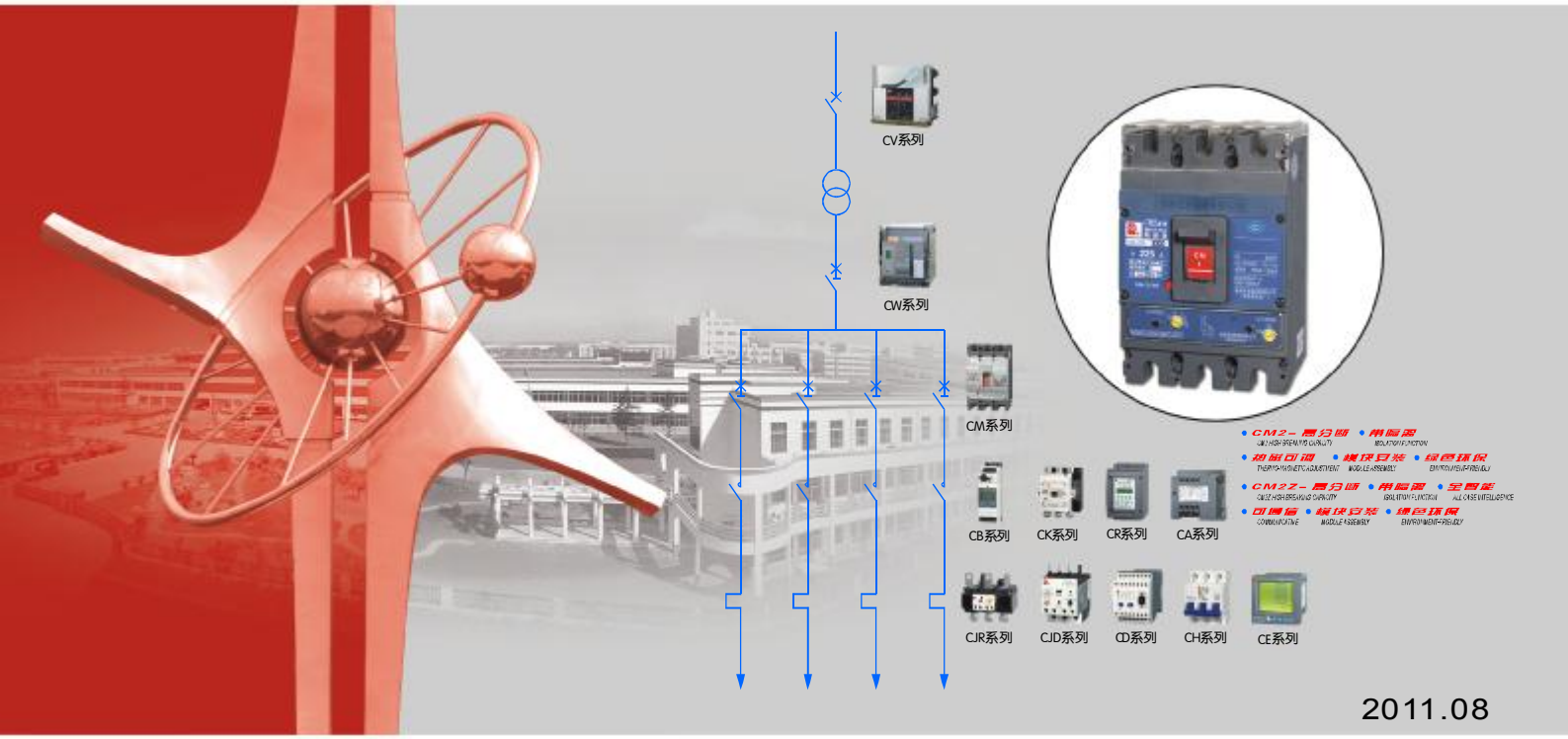
中国驰名商标

CM2 系列
CM2Z系列 塑料外壳式断路器

CM2 CM2Z SERIES MOULDED CASE CIRCUIT BREAKER



常熟开关制造有限公司
（原常熟开关厂）
CHANGSHU SWITCHGEAR MFG. CO.,LTD.
(FORMER CHANGSHU SWITCHGEAR PLANT)

中国驰名商标
China Well-known Trademark

国家创新型试点企业
National Innovative Pilot Enterprise

博士后科研工作站
Postdoctoral Programme

国家火炬计划重点高新技术企业证书
StateTorch Plan Key High-tech Enterprise

国家科学技术进步奖证书
National Awards for Science and Technology Cerificate

质量管理体系认证证书
Quality Management System Certificate

环境管理体系认证证书
Environmental Management System Certificate

职业健康安全管理体系认证证书
Occupational Health And Safety Management System Certificate

测量管理体系认证证书
Certificate Of Conformity For Measurement Management Systems

公司简介

Introduction

常熟开关制造有限公司是国有资产参股的电器制造企业、“国家重点高新技术企业”，占地约300亩，员工1500人。主要生产中低压电器元件、工控产品、太阳能光伏逆变器、成套装置等，可以为您提供“智能配电系统三位一体完整的解决方案”。

公司建有博士后科研工作站、省级企业技术中心和江苏省电器控制工程中心，具有一支以博士、硕士、本科生为主的多层次研发队伍，工程技术人员占企业员工总数的45%左右。公司拥有先进的模具制造、零部件自动化生产、断路器装配自动检测流水线等一大批先进的制造和试验检测设备；实施以ERP管理为重点的信息化、网络化管理；完善质量／环境／职业健康安全体系，确保为用户提供优质、安全、可靠的产品。公司“ ”商标被国家工商行政管理总局认定为中国驰名商标，CM系列塑料外壳式断路器、CW系列智能型万能式断路器曾双双被评为中国名牌产品。

Changshu Switchgear Mfg. Co., Ltd. (Former Changshu Switchgear Plant), an enterprise with state-owned equity, covered an area of 300,000 m^2, with 1500 staffs, is a "National Key New High-tech Enterprise" and mainly produces HV and LV electrical components, industry control products, solar photovoltaic inverters and complete sets of equipment etc, all of which could provide trinity and complete solutions for intelligent power distribution system.

Post - doctoral scientific research station, Province Enterprise Technique Center and Jiangsu Province Electrical Apparatus Control Engineering Research Center have been established and a multi-level professional technique team has been formed consisting of PHD candidates, postgraduates and university graduates. Engineers and technicians have covered 45% of all staffs.

Advanced mould manufacturing equipments, automation producing equipments for spare parts, assembling and inspecting lines for breakers and test equipments have been brought in. Meanwhile, information and network management, taking ERP management as the focal point, has been applied and quality environmental systems (ISO9001/ISO14001/OHSMS18001) have also been established and perfected to ensure reliability and safety for customers.

The registered trademark has been recognized as Famous Trademark of China by State Administration for Industry and Commerce of China. And CM Series Moulded Case Circuit Breaker and CW Series Intelligent Air Circuit Breaker are both China Top Brand products.

常熟开关制造有限公司
为您提供电气系统完整的解决方案

高压真空断路器


CV1-12系列
高压真空断路器


CV2-12系列
高压真空断路器


CV1-24系列
高压真空断路器


CV1-40.5系列
高压真空断路器

智能型万能式断路器


CW1系列
智能型万能式断路器


CW2系列
智能型万能式断路器


CW3系列
智能型万能式断路器


CW3V系列
智能型真空万能式断路器

塑料外壳式断路器


CM1系列
塑料外壳式断路器


CM1E系列
电子式塑壳断路器


CM1Z系列
智能型断路器


CM1L系列
带剩余电流保护塑壳断路器


CM1EL系列
带剩余电流保护
电子可调式断路器


CM2系列
塑料外壳式断路器


CM2Z系列
智能型塑壳断路器


CM2L系列
带剩余电流保护塑壳断路器


CM3系列
塑料外壳式断路器


CM5系列
塑料外壳式断路器


CM5Z系列
塑料外壳式断路器

自动转换开关


CA1系列自动
转换开关(CB级)


CAP1系列自动
转换开关(PC级)


CAP2系列自动
转换开关(PC级)

接触器和过载继电器


CK3系列接触器


CJR3系列
热过载继电器


CJD3系列
电子过载继电器

剩余电流动作继电器


CLJ3 剩余电流
动作继电器

常熟开关制造有限公司
为您提供电气系统完整的解决方案

电动机软起动器

CR1系列
电动机软起动器

CR2系列
电动机软起动器

电动机保护器

CD1系列
电动机保护器

CD4系列
智能马达保护器

控制和保护电器

CB1系列
控制和保护开关电器(CPS)

变频调速

CF1系列
通用变频器

光伏发电用产品

CS1G系列三相并网型
光伏发电逆变器

CW3G系列
隔离开关(AC，DC)

CM3DC系列
塑料外壳式断路器

小型断路器

CH系列小型断路器

电力质量和系统自动化器件

CE1系列
智能型电力仪表

CI1系列
远程智能I/O模块

CN1DP-MP
CN1DP-MD
CN1DP-MC
通信适配器
CN1EG以太网
适配器

FDM3
短消息通知模块

FWB1温度报警模块

电气火灾探测

CSJ1系列剩余电流式电气
火灾监控探测器(独立式)
CMSJ2系列剩余电流式电气
火灾监控探测器(非独立式)
CSX1电气火灾监控设备

智能化通信低压配电网络监控系列

●Riyear-PowerNet配电监控系统

●FCX3智能配电监控器

优秀特色

CM2系列断路器

- 具备TH型断路器，满足湿热带地区使用要求
- 获得国际认可的CB证书
- 高分断、带隔离、高可靠、零飞弧、体积小、绿色环保
  额定极限短路分断能力：Icu：400V：35kA～100kA
  额定运行短路分断能力：Ics：400V：35kA～75kA
- 采用新型灭弧技术和限流原理，全面提高断路器的性能，其中CM2-63采用双断点灭弧技术，Ics=100%Icu=70kA为目前同规格最高
- 热磁型脱扣器可实现热磁可调，现场可整定过载、瞬动的动作值
- 各类附件盒装化，不用打开断路器，可现场直接安装
- 可配FWB1温度报警模块，实现连接点在线超温报警

CM2Z系列断路器

- 具备TH型断路器，满足湿热带地区使用要求
- 获得国际认可的CB证书
- 高分断、带隔离、高可靠、零飞弧、体积小、绿色环保
  额定极限短路分断能力：Icu：400V：70kA～100kA
  额定运行短路分断能力：Ics：400V：50kA～75kA
  额定短时耐受电流Icw（1s）：400V：5kA～8kA
- CM2Z系列智能型脱扣器具有过载长延时、短路短延时、短路瞬时的三段保护功能，并具有接地故障（配电型）、热模拟保护功能、预报警功能，电动机型断路器还具有不平衡保护功能。保护参数可连续可调，面板液晶显示清晰、直观，并可实现多种调阅、检查、整定等功能
- LCD显示，菜单操作方式，并可故障记忆，使用方便
- 各类附件盒装化，不用打开断路器，可现场直接安装
- 短路保护具有后备保护，由后备磁脱扣实现快速脱扣，限制了短路电流，并确保断路器可靠分断
- 通信功能模块化实现，通过加装通信模块即可升级为通信型断路器
- 基于Modbus-RTU协议的通信断路器，通过本公司的CN1DP适配器、CN1EG以太网适配器可应用于Modbus、Profibus、Devicenet、CAN总线和以太网通信网络，方便用户进行多种协议的应用管理
- 通过配置FDM3短消息通知模块，可实现断路器故障脱扣或报警信息无线监视
- 可配FWB1温度报警模块，实现连接点在线超温报警

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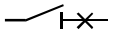
概　述 OUTLINE

● CM2系列、CM2Z系列塑料外壳式断路器（以下简称断路器），是本公司采用国际先进设计技术研制,根据IEC60947-2国际新标准的要求开发的新型断路器。其额定绝缘电压为800V，适用于交流50Hz/60Hz、额定工作电压400V及以下、额定电流至630A的电路中作不频繁转换之用。断路器具有过载、短路和欠电压保护功能，能保护线路和电源设备不受损坏。

● 断路器按照其短路分断能力的高低，分为L型（标准型）、M型（较高分断型）、H型（高分断型）三类。

● 断路器可垂直安装（即竖装），亦可水平安装（即横装）。

● 断路器不能倒进线，即只可1、3、5接电源线，2、4、6接负载线。

● 断路器具有隔离功能，其相应的符号为：  。

● 断路器执行下列标准：

IEC60947-1及GB 14048.1-2006 总则

IEC60947-2及GB 14048.2-2008 断路器

IEC60947-4-1及GB 14048.4 机电式接触器和电动机起动器

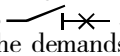
● 断路器获国家强制性产品认证“CCC”标志。

● CM2 and CM2Z Series Moulded Case Circuit Breakers (hereafter simply referred to as circuit breakers) are one of the new type breakers which have been developed by the company using international advanced design and manufaturing technology. The rated insulation voltage of the breakers is 800V. In the circuit of AC50Hz/60Hz, rated working voltage 400V (or below) and rated working current up to 630A, the breakers take the role of infrequent turn-on or turn-off . The breakers have overload, short-circuit and under-voltage protection performances so as to protect the circuit and the power equipment from damage.

● The circuit breakers, according to the level of short-circuit breaking capacity, can be classified into three categories: type L (typical type), type M (second high breaking type) and type H(high breaking type).

● The circuit breakers can be installed vertically (upright) or horizontally (transverse).

● The breakers can't be wired adversely 1,3 and 5 can only be connected with power line; 2,4 and 6 only be connected with load line.

● The circuit breaker has disconnecting function and its corresponding symbol is shown as  .

● The circuit breakers comply with the demands of the following standards:

IEC60947-1 and GB14048.1-2006 General

IEC60947-2 and GB14048.2-2008 Circuit-breakers

IEC60947-4-1 and GB14048.4 Electro-mechanical contactor and motor starter

● The circuit breakers have obtained the CCC mark of CQC.

适用工作环境 APPLICABLE ENVIRONMENT

● 周围介质温度不高于+40℃和不低于-5℃，且24h的平均值不超过+35℃。

● 海拔2000m以下。

● 安装地点的空气相对湿度在最高温度为+40℃时不超过50%，在较低温度下可以有较高的相对湿度，例如20℃时达90%（湿热带型断路器25℃时可达95%）。对于温度变化偶尔产生的凝露应采取特殊措施。

● 污染等级为3级。

● 断路器主电路及欠电压脱扣器安装类别为Ⅲ，其余辅助电路、控制电路安装类别为Ⅱ。

● 断路器适用于电磁环境A；

● 湿热带型（TH型）断路器能耐受湿热、盐雾、霉菌的影响。

● 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。

● Ambient temperature:-5℃ ~+40℃ and the average in 24 hours below +35.

● Elevation≤2000m.

● Relative humidity: not exceed 50% at the maximum ambient temperature of +40℃, but higher relative humidity at the lower temperature, for example, 90% at 20℃ (Relative humidity of the humid tropical area breakers isn't exceeding 95% at the temperature of +25℃). Special measures should be taken considering the dews on product surface due to temperature change.

● Pollution protection :3 grade.

● Installing categories: III for the main circuit and under-voltage release of the breakers, and II for other auxiliary and control circuits.

● The breakers are suitable in electromagnic environment A.

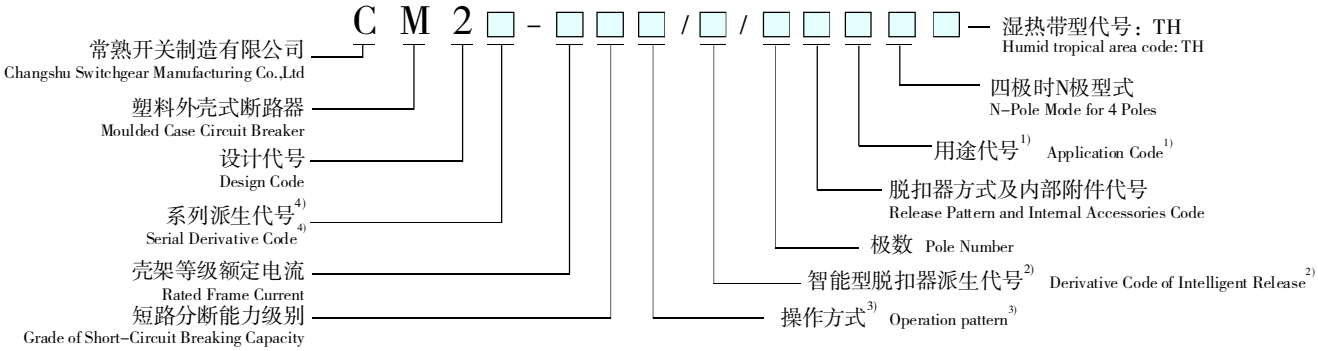
● The breakers used in humid tropical(TH) area can work normally without influence of humid air, salt fog and milder.

● There must be not any explosive medium, and there must be not any gas which would corrode metal or any conducting dust which would destroy the insulation.

● The place would not be invaded by rain and snow.

断路器的分类 CLASSIFICATION OF CIRCUIT BREAKERS

● 型号及其含义如下 Type and its meaning



注：1）配电用断路器无代号，保护电动机用断路器以 2 表示；

2）智能型脱扣器不带通信无代号，带通信用 T 表示；

3）直接操作无代号，电动操作用 P 表示，转动手柄操作用 Z 表示；

4）热磁型脱扣器无代号，智能型脱扣器用 Z 表示。

Note:

1）No code for Power Distribution; 2 for motor protection.

2）T for Intelligent Release with Communication interface.

3）No code for direct operation; P for Power-driven; Z for Manually-handled.

4）No code for Thermo-magnetic Release; Z for Intelligent Release.

● 按产品极数分为三极与四极。四极产品中中性极(N极)的型式分四种：

A型：N极不安装过电流脱扣器，且N极始终接通，不与其它三极一起合分；

B型：N极不安装过电流脱扣器，且N极与其它三极一起合分（N极先合后分）；

C型：N极安装过电流脱扣器，且N极与其它三极一起合分（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，不与其它三极一起合分。

注：建筑物内实施等电位联结的TN-C-S和TN-S系统，中性极型式推荐采用A型或D型。

● 按接线方式分为板前接线、板后接线、插入式接线、抽出式接线四种。

● 按过电流脱扣器型式分热磁型脱扣器及智能型脱扣器两大类；热磁型脱扣器又可分为瞬时脱扣器、复式脱扣器（瞬时脱扣器和热动脱扣器）两种。

● 按断路器是否带附件分带附件和不带附件两种，附件分内部附件和外部附件：内部附件有分励脱扣器、欠电压脱扣器、辅助触头、报警触头四种；外部附件有手动操作机构、电动操作机构、CM2Z专用测试器、FWB1温度报警模块等。

● According to the pole number of product, it classifies, three-and four-poles .

The neutral pole (N-pole) of the four-poles products has four types:

Type A: N-pole without over-current release unit, it has been connected all along, and does not act with other three poles to turn on or off.

Type B: N-pole without overcurrent release unit, it could act with other three poles. (N-pole turns-on prior to turns-off.)

Type C: N-pole fixed with over-current release unit, it could act with other three poles. (N-pole turns-on prior to turns-off.)

Type D: N-pole fixed with over-current release unit, it has been connected all along, and does not act with other three poles to turn on or off.

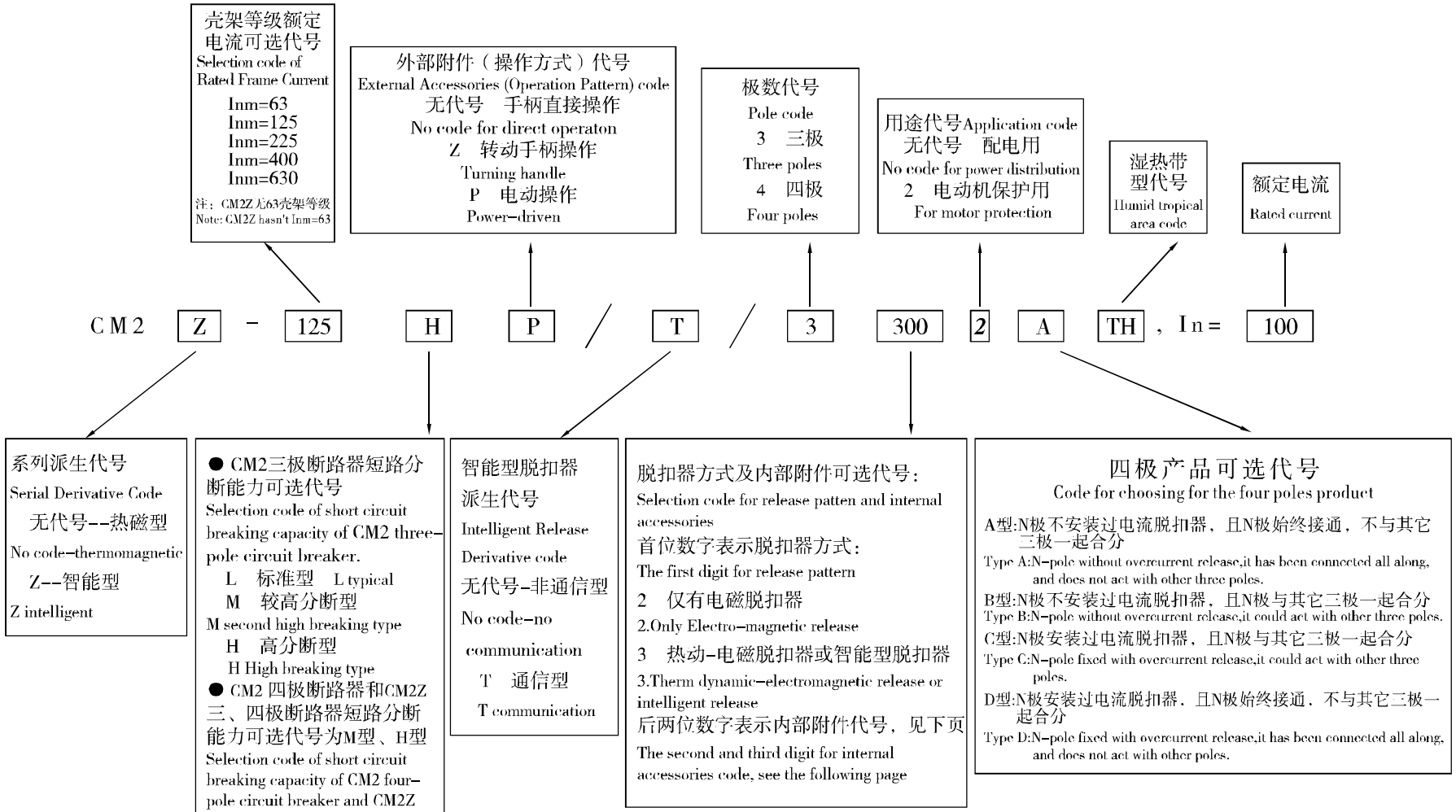
Note: Inside building, if the breakers used in TN-C-S and TN-S system which is equipotential bond, the pattern of neutral pole is recommended to adopt A type or D type.

● The wiring method has four ways: wiring in front of the board, wiring on back of the board ,wiring by insertion and wiring of draw-out.

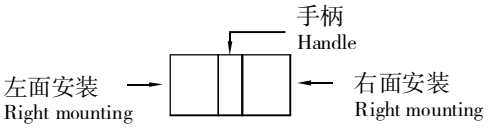
● According to the over-current release pattern, it can be classified into two types: Thermo-magnetic Release and Intelligent Release; furthermore, the Thermo-magnetic Release can be also classified into two types: Instantaneous Release and Double Release (Instantaneous Release and Thermodynamic Release).

● According to the outfit, it also has two types: with or without outfit. The outfit includes internal accessories and external accessories: The internal accessories have four kinds: shunt release, under-voltage release, auxiliary contactor and alarm contactor. The external accessories are turning handle operation mechanism, power-driven operation mechanism and CM2Z-exclusive Tester、FWB1 temperature alarm module etc.

CM2 全系列塑壳断路器快速选用表
Table for quick selection of CM2 series MCCB



脱扣器方式及内部附件代号 RELEASE PATTERN ACCESSORIES CODE



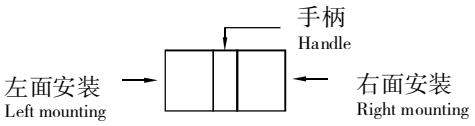
□ 报警触头 Alarm contactor
■ 辅助触头 Auxiliary contactor
● 分励脱扣器 Shunt release
○ 欠电压脱扣器 Under-voltage release
→ 引线方向 Lead direction

脱扣器方式及内部附件代号 Code release pattern and internal accessories	附件名称 Accessories name / 极数 Pole number / 型号 Type	CM2-63	CM2-125	CM2-225	CM2-400	CM2-630
		3、4	3、4	3、4	3、4	3、4
208、308	报警触头 Alarm contactor	←□	←□	←□	←□	←□
210、310	分励脱扣器 Shunt release	←●	←●	←●	←●	←●
220、320	辅助触头 Auxiliary contactor	←■	←■	←■	←■	←■
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 contactor	←■●	←■●	←■●	←■●	←■●
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 Two groups of auxiliary contactor	←■■	←■■	←■■	←■■	←■■
270、370	辅助触头 欠电压脱扣器 Auxiliary contactor under-voltage release	←○■	←○■	←○■	←○■	←○■
218、318	分励脱扣器 报警触头 Shunt release Alarm contactor	←□●	←□●	←□●	←□●	←□●
228、328	辅助触头 报警触头 Auxiliary contactor Alarm contactor	←■□	←■□	←■□	←□■	←□■
238、338	欠电压脱扣器 报警触头 Under-voltage release Alarm contactor	←○□	←○□	←○□	←○□	←○□
248、348	分励脱扣器 辅助触头 报警触头 Shunt release auxiliary contactor Alarm contactor	←■□●	←■□●	←■□●	←■□●	←■□●
268、368	二组辅助触头 报警触头 Two groups of Auxilitory contactor Alarm contactor	←■■□	←■■□	←■■□	←■■□	←■■□
278、378	辅助触头 欠电压脱扣器 报警触头 Auxiliary contactor under-voltage relaxe Alarm contactor	←○■□	←○■□	←○■□	←○■□	←○■□

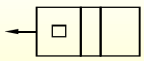
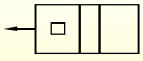
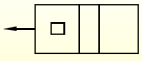
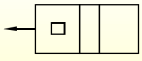
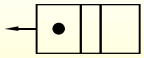
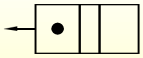
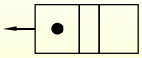
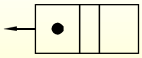
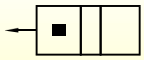
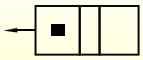
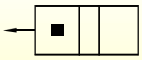
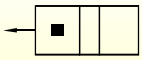
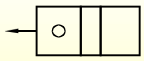
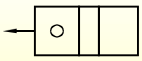
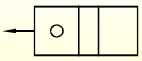
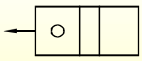
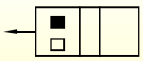
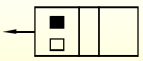
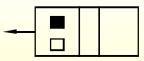
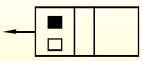
注：1. 000：表示无热动或电磁脱扣器，200：表示仅有电磁脱扣器的CM2断路器，300表示带有热动-电磁脱扣器的CM2断路器。
2. 对CM2-400及CM2-630其中248、348、278、378规格中辅助触头为一对触头（即一常开一常闭），268、368规格中的辅助触头为三对触头（即三常开三常闭）；其余规格辅助触头数量按P36表中配置。
3. 对CM2-63、CM2-125及CM2-225其中220、320、240、340、270、370规格中辅助触头可供二对触头（即二常开二常闭），260、360可供三对触头（即三常开三常闭），但订货时需注明。

Note：1.000:Breaker has not any thermo or electromagnic release;200：breaker only has electromagnetic release pattern; 300：breaker has thermo-electromagentic release pattern.
2. For CM2-400 and CM2-630；codes 248、348、278、.378 only have one pair of auxilliary contacts (a normal opened, a normal closed); but 268、368 have three pairs of auxilliary contacts (three normal opened, three normal closed). The amount of auxilliary contacts in terms of other specifications is disposed according to the diagrams on page 36.
3. For CM2-63、CM2-125 and CM2-225, code 220、320、240、340、270 and 370 can provide two pairs of auxilliary contacts (two normal opened, two normal closed), while code 260 and 360 can provide three pairs of auxilliary contacts (three normal opened, three normal closed), note when making order.

脱扣器方式及内部附件代号 RELEASE PATTERN ACCESSORIES CODE



□ 报警触头 Alarm contaetor
■ 辅助触头 Auxiliary contactor
● 分励脱扣器 Shunt release
○ 欠电压脱扣器 Under-voltage release
→ 引线方向 Lead direction

脱扣器方式及内部附件代号 Code release pattern and internal accessories / 附件名称 Accessories name / 极数 Pole number / 型号 Type		CM2Z-125	CM2Z-225	CM2Z-400	CM2Z-630
		3、4	3、4	3、4	3、4
308	报警触头 Alarm contactor				
310	分励脱扣器 Shunt release				
320	辅助触头 Auxiliary contactor				
330	欠电压脱扣器 Under-voltage release				
328	辅助触头 报警触头 Auxiliary contactor Alarm contactor				

注：300：表示不带附件的CM2Z断路器
Note: 300: for CM2Z circuit breaker without accessories listed in table.

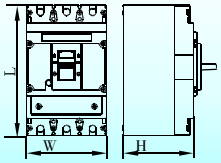
断路器主要技术性能指标 MAIN TECHNICAL PERFORMANCE PARAMETER

壳架等级额定电流Inm（A） Rated frame current		63				
型号 Type		CM2-63L	CM2-63M		CM2-63H	
额定电流In（A） Rated current	CM2	6**、10、16、20、25、32、40、50、63				
整定电流调节范围 I_{r1}(A) Band of regulated setting current		（0.8-0.9-1.0）In				
极数 Pole number		3	3	4	3	4
额定绝缘电压Ui（V） Rated insulation voltage		AC800				
额定冲击耐受电压Uimp（V） Rated impulse withstand voltage		8000				
额定工作电压Ue（V） Rate working voltage		AC400				
飞弧距离（mm） Arc distance		0				
额定极限短路分断能力 Icu（kA） Limiting short-circuit breaking ability	AC400V	35	50		70	
额定运行短路分断能力 Ics（kA） Operating short-circuit breaking ability	AC400V	35	50		70	
使用类别 Utilization category		A				
电气寿命*（次times） electrical durability		8000				
机械寿命*（次times） mechanical durability	免维护 free maintenance	20000				
	有维护 maintenance	40000				
外形尺寸（mm） Outline Dimersions	W	78	78	103	78	103
	L	135				
	H	81.5				

*注：根据GB14048.1-2006，术语“寿命”表示电器在修理或更换部件前能完成的操作循环次数的概率。
*Note:for GB14048.1-2006, the term"durability"expresses the expectancy of the number of operating cycles which can be performed by the equipment before repair or replacement of parts
**注：CM2-63中6A规格无过载保护。
**Note:without overload protection for 6A of CM2-63.

断路器主要技术性能指标 MAIN TECHNICAL PERFORMANCE PARAMETER

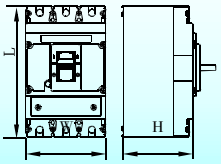
壳架等级额定电流Inm（A） Rated frame current		125				
型号 Type		CM2-125L	CM2-125M	CM2-125H		
			CM2Z-125M	CM2Z-125H		
额定电流In（A） Rated current	CM2	16、20、25、32、40、50、63、80、100、125				
	CM2Z	32、63、125				
整定电流调节范围 Ir1（A） Band of regulated setting current	CM2	（0.8-0.9-1.0）In				
	CM2Z**	32（16~32）、63（32~63）、125（63~125）				
极数 Pole number		3	3	4	3	4
额定绝缘电压Ui（V） Rated insulation voltage		AC800				
额定冲击耐受电压Uimp（V） Rated impulse withstand voltage		8000				
额定工作电压Ue（V） Rate working voltage		AC400				
飞弧距离（mm） Arc distance		≯50（0*）				
额定极限短路分断能力 Icu（kA） Limiting short-circuit breaking ability	AC400V	50	70	85		
额定运行短路分断能力 Ics（kA） Operating short-circuit breaking ability	AC400V	35	50	70		
使用类别 Utilization category		A				
电气寿命（次times） electrical durability		8000				
机械寿命（次times） mechanical durability	免维护 free maintenance	20000				
	有维护 maintenance	40000				
外形尺寸（mm） Outline Dimersions	W	92	92	122	92	122
	L	150				
	H	85				



*注：选装高为5mm的零飞弧罩，实现零飞弧。
**注：CM2Z整定电流连续可调。

Note: Zero arc distance by installing arc cover of 5mm in height
Note: The setting current of CM2Z is successively adjusted

断路器主要技术性能指标 MAIN TECHNICAL PERFORMANCE PARAMETER

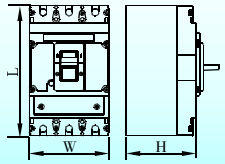
<table>
<tr><td colspan="2">壳架等级额定电流Inm（A）
Rated frame current</td><td colspan="5">225</td></tr>
<tr><td colspan="2" rowspan="2">型号 Type</td><td rowspan="2">CM2–225L</td><td>CM2–225M</td><td colspan="3">CM2–225H</td></tr>
<tr><td>CM2Z–225M</td><td colspan="3">CM2Z–225H</td></tr>
<tr><td rowspan="2">额定电流In（A）
Rated current</td><td>CM2</td><td colspan="5">125、140、160、180、200、225</td></tr>
<tr><td>CM2Z</td><td colspan="5">225</td></tr>
<tr><td rowspan="2">整定电流调节范围
Ir1（A）
Band of regulated setting current</td><td>CM2</td><td colspan="5">（0.8–0.9–1.0）In</td></tr>
<tr><td>CM2Z**</td><td colspan="5">225（125~225）</td></tr>
<tr><td colspan="2">极数 Pole number</td><td>3</td><td>3</td><td>4</td><td>3</td><td>4</td></tr>
<tr><td colspan="2">额定绝缘电压Ui（V）
Rated insulation voltage</td><td colspan="5">AC800</td></tr>
<tr><td colspan="2">额定冲击耐受电压Uimp（V）
Rated impulse withstand voltage</td><td colspan="5">8000</td></tr>
<tr><td colspan="2">额定工作电压Ue（V）
Rate working voltage</td><td colspan="5">AC400</td></tr>
<tr><td colspan="2">飞弧距离（mm）
Arc distance</td><td colspan="5">≯50（0*）</td></tr>
<tr><td>额定极限短路分断能力
Icu（kA）
Limiting short–circuit breaking ability</td><td>AC400V</td><td>50</td><td colspan="2">70</td><td colspan="2">85</td></tr>
<tr><td>额定运行短路分断能力
Ics（kA）
Operating short–circuit breaking ability</td><td>AC400V</td><td>35</td><td colspan="2">50</td><td colspan="2">70</td></tr>
<tr><td colspan="2">使用类别
Utilization category</td><td colspan="5">A</td></tr>
<tr><td colspan="2">电气寿命（次times）
electrical durability</td><td colspan="5">8000</td></tr>
<tr><td rowspan="2">机械寿命（次times）
mechanical durability</td><td>免维护
free maintenance</td><td colspan="5">20000</td></tr>
<tr><td>有维护
maintenance</td><td colspan="5">40000</td></tr>
<tr><td rowspan="3">外形尺寸（mm）
Outline Dimersions
  </td><td>W</td><td>107</td><td>107</td><td>142</td><td>107</td><td>142</td></tr>
<tr><td>L</td><td colspan="5">165</td></tr>
<tr><td>H</td><td colspan="5">85</td></tr>
</table>

*注：选装高为6mm的零飞弧罩，实现零飞弧。
**注：CM2Z整定电流连续可调。

Note: Zero arc distance by installing arc cover of 6mm in height
Note: The setting current of CM2Z is successively adjusted

断路器主要技术性能指标 MAIN TECHNICAL PERFORMANCE PARAMETER

壳架等级额定电流Inm（A） Rated frame current		400				
型号 Type		CM2–400L	CM2–400M		CM2–400H	
			CM2Z–400M***		CM2Z–400H***	
额定电流In（A） Rated current	CM2	225、250、315、350、400				
	CM2Z	400				
整定电流调节范围 I_{r1}（A） Band of regulated setting current	CM2	（0.8–0.9–1.0）In				
	CM2Z**	400（200~400）				
极数 Pole number		3	3	4	3	4
额定绝缘电压Ui（V） Rated insulation voltage		AC800				
额定冲击耐受电压Uimp（V） Rated impulse withstand voltage		8000				
额定工作电压Ue（V） Rate working voltage		AC400				
飞弧距离（mm） Arc distance		≯100（0*）				
额定极限短路分断能力 Icu（kA） Limiting short–circuit breaking ability	AC400V	50	70		100	
额定运行短路分断能力 Ics（kA） Operating short–circuit breaking ability	AC400V	50	70		75	
使用类别 Utilization category		A/CM2–400,B/CM2Z–400				
电气寿命（次times） electrical durability		7500				
机械寿命（次times） mechanical durability	免维护 free maintenance	10000				
	有维护 maintenance	20000				
外形尺寸（mm） Outline Dimersions	W	150	150	198	150	198
	L	257				
	H	110				

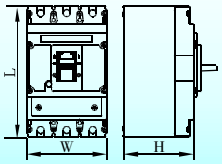


*注：选装高为10.5mm的零飞弧罩，实现零飞弧。
**注：CM2Z整定电流连续可调。
***注：CM2Z–400的额定短时耐受电流Icw（1s）=5kA。

Note: Zero arc distance by installing arc cover of 10.5mm in height
Note: The setting current of CM2Z is successively adjusted
Note: Rated withstand current for short time of CM2Z–400 Icw (1s)=5kA

断路器主要技术性能指标 MAIN TECHNICAL PERFORMANCE PARAMETER

壳架等级额定电流Inm（A） Rated frame current		630				
型号 Type		CM2-630L	CM2-630M		CM2-630H	
			CM2Z-630M***		CM2Z-630H***	
额定电流In（A） Rated current	CM2	400、500、630				
	CM2Z	630				
整定电流调节范围 I_{r1}（A） Band of regulated setting current	CM2	（0.8-0.9-1.0）In				
	CM2Z**	630（315~630）				
极数 Pole number		3	3	4	3	4
额定绝缘电压Ui（V） Rated insulation voltage		AC800				
额定冲击耐受电压Uimp（V） Rated impulse withstand voltage		8000				
额定工作电压Ue（V） Rate working voltage		AC400				
飞弧距离（mm） Arc distance		≥100（0*）				
额定极限短路分断能力 Icu（kA） Limiting short-circuit breaking ability	AC400V	50	70		100	
额定运行短路分断能力 Ics（kA） Operating short-circuit breaking ability	AC400V	50	70		75	
使用类别 Utilization category		A/CM2-630,B/CM2Z-630				
电气寿命（次times） electrical durability		7500				
机械寿命（次times） mechanical durability	免维护 free maintenance	10000				
	有维护 maintenance	20000				
外形尺寸（mm） Outline dimersions	W	182	182	240	182	240
	L	270				
	H	110				



*注：选装高为11.5mm的零飞弧罩，实现零飞弧。
**注：CM2Z整定电流连续可调。
***注：CM2Z-630的额定短时耐受电流Icw（1s）= 8kA。

Note: Zero arc distance by installing arc cover of 11.5mm in height
Note: The setting current of CM2Z is successively adjusted
Note: Rated withstand current for short time of CM2Z-630 Icw (1s)=8kA

断路器脱扣器电流值 CURRENT VALUE OF BREAKER RELEASE

● 常规出厂的断路器相极和中性极脱扣器电流值见表一及表二。四极断路器中性极（N）设在产品右侧。CM2、CM2Z四极断路器中性极型式为A型、B型时无过电流保护；CM2中性极型式为C型、D型N极脱扣器的额定电流、整定电流见表一；CM2Z中性极型式为C型、D型N极脱扣器的额定电流、整定电流见表二，但用户也可自行100%保护设定。

● Neutral pole (N) is on the right side of the four-pole breaker. For CM2 and CM2Z four-pole breakers. When the neutral pole type is A or B, the breakers haven't over-current protection; For CM2 four-pole breakers, when the neutral pole type is C or D, the rated current and setting current of N pole of the release see table one; For CM2Z four-pole breaker, when the neutral pole type is C or D, the rated current and setting current of N pole of the release see table two, but users can set 100% protection.

表一 Table 1

壳架等级额定电流 Inm（A） Frame rated current	断路器相极 Phase pole			断路器中性极（N） Neutral pole			
	额定电流In（A） Rated current	整定电流（A） Setting current		额定电流I_N（A） Rated current	整定电流（A） Setting current		
		热动型脱扣器 I_{r1}（A） Thermodynamic release	电磁脱扣器I_{r3}（A） Electromagnetic release		热动型脱扣器I_{r1N} Thermodynamic release	电磁脱扣器I_{r3N}（A） Electromagnetic release	
			配电型 For power distribution	电动机型 For motor protection		配电型 For power distribution	电动机型 For motor protection
63	6	–	10In ± 20%	12In ± 20%	6	–	$10I_N$ ± 20%	$12I_N$ ± 20%
	10	1.0In			10	$1.0I_N$		
	16 20 25 32 40 50 63	(0.8–0.9–1.0)In			16 20 25 32 40 50 63	(0.8–0.9–1.0)I_N		
125	16 20 25 32 40 50				16 20 25 32 40 50			
	63 80 100 125	(0.8–0.9–1.0)In	（5–6–7–8–9–10）In ± 20%	（10–12–14）In ± 20%	63 63 63 63	(0.8–0.9–1.0)I_N	（5–6–7–8–9–10）I_N ± 20%	（10–12–14）I_N ± 20%
225	125 140 160 180 200 225				125 125 125 125 125 125			
400	225 250 315 350 400				225 225 225 225 225			
630	400 500 630				400 400 400			

注：① 常规出厂的CM2四极断路器中性极电流值符合表一，本公司也可提供I_N = 100% In的四极断路器，用户需在订货时注明。
② CM2四极断路器中性极脱扣器整定电流I_{r1N}，I_{r3N}与相极整定电流I_{r1}，I_{r3}在设定时联动。
③ 6A为不推荐规格，且无过载保护。

Note: ① Normally, current values of neutral pole of CM2 four-pole breaker conform to table one, in addition, our company provides four-pole breakers which I_N=100% In, but it must be noted by users ordered.
② For CM2 four-pole breaker setting current of N-pole of the release (I_{r1N}) and setting current of phase-pole (I_{r1}) are linkage when they are set.
③ The breaker with 6A is not recommended, and this breaker has not overload protection.

断路器脱扣器电流值 CURRENT VALUE OF BREAKER RELEASE

表二 Table 2

壳架等级额定电流 Inm（A） Frame rated current	断路器相极 Phase pole				断路器中性极（N） Neutral pole		
	额定电流In（A） Rated current	整定电流（A） Setting current			整定电流（A） Setting current		
		过载长延时 I_{r1}（A） Inverse long-time delay overload	短路短延时 I_{r2}（A） Short-time delay short-circuit	短路瞬时 I_{r3}（A） Instantance short-circuit	过载长延时 I_{r1N}（A） Inverse long-time delay overload	短路短延时 I_{r2N}（A） Short-time delay short-circuit	短路瞬时 I_{r3N}（A） Instantance short-circuit
125	32 63 125	16 ~ 32 32 ~ 63 63 ~ 125	（2-12）I_{r1} ± 10%	（4-14）I_{r1} ± 15%	I_{r1} I_{r1} 63	（2-12）I_{r1N} ± 10%	（4-14）I_{r1N} ± 15%
225	225	125 ~ 225			125		
400	400	200 ~ 400			200		
630	630	315 ~ 630			315		

注：常规出厂的CM2Z四极断路器中性极电流值符合表二，用户也可自行100％保护设定。

Note: Normally, current values of neutral pole of CM2Z four-pole, conform to table two, and it can be setted by users with 100% protection.

CM2 断路器保护特性 PROTECTION CHARACTERISTIC OF CM2 CIRCUIT BREADERS

- CM2系列断路器热动型脱扣器具有反时限特性；电磁脱扣器为瞬时动作。
- 动作特性见表三、表四。

- The thermodynamic release of CM2 series MCCB is characteristic of inverse time delay
- Electromagnetic release acts instantaneously

表三（配电用） Table 3 (for power distribution)

壳架等级额定电流 Inm（A） Frame rated current	断路器额定电流 In（A） Rated current	热动型脱扣器 Thermodynamic release		电磁脱扣器动作电流 I_{r3}（A） Electromagnetic release acting current
		1.05I_{r1}（冷态）不动作时间（h） 1.05I_{r1} (cold state) not acting time	1.30I_{r1}（热态）动作时间（h） 1.30I_{r1} (hot state) acting time	
Inm=63	10≤In≤63	1小时内不动作 No acting	≤1	10In ± 20%
Inm=125	16≤In < 63	1小时内不动作 No acting	≤1	
	In = 63	1小时内不动作 No acting	≤1	(5-6-7-8-9-10)In ± 20%
	63 < In≤125	2小时内不动作 No acting	≤2	
Inm=225	125≤In≤225	2小时内不动作 No acting	≤2	
Inm=400	225≤In≤400	2小时内不动作 No acting	≤2	
Inm=630	400≤In≤630	2小时内不动作 No acting	≤2	

表四（电动机保护用）

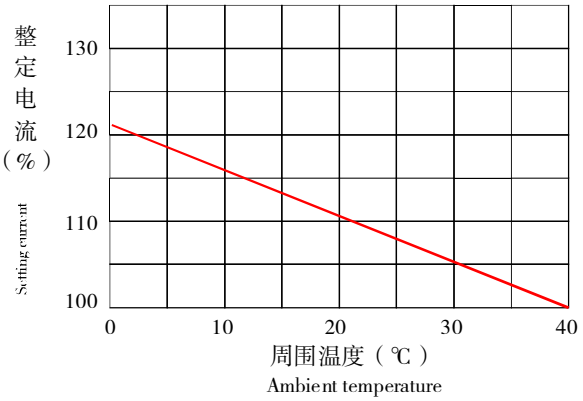
Table 4 (For motor protection)

壳架等级额定电流Inm（A） Frame rated current	额定电流In（A） Rated current	热动型脱扣器 Thermodynamic release					电磁脱扣器动作电流Ir3（A） Electromagretic release acting current
		1.0Ir1（冷态）不动作时间（h） 1.0Ir1 (cold state) not acting time	1.20I r1（热态）动作时间（h） 1.20Ir1 (hot state) acting time	1.50I r1（热态）动作时间（min） 1.50Ir1 (hot state) acting time	7.2I r1（冷态）动作时间 7.2Ir1 (cold state) acting time	脱扣级别 Release Rating	
Inm=63	10≤In≤63	2小时内不动作 No acting	≤2	≤4	4s＜T1≤10s	10	12In ± 20%
Inm=125	16≤In＜63	2小时内不动作 No acting	≤2	≤4	4s＜T1≤10s	10	12In ± 20%
	63≤In≤125	2小时内不动作 No acting					(10–12–14)In ± 20%
Inm=225	125≤In≤225	2小时内不动作 No acting	≤2	≤4	4s＜T1≤10s	10	
Inm=400	225≤In≤400	2小时内不动作 No acting	≤2	≤8	6s＜T1≤20s	20	
Inm=630	400≤In≤630	2小时内不动作 No acting	≤2	≤8	6s＜T1≤20s	20	

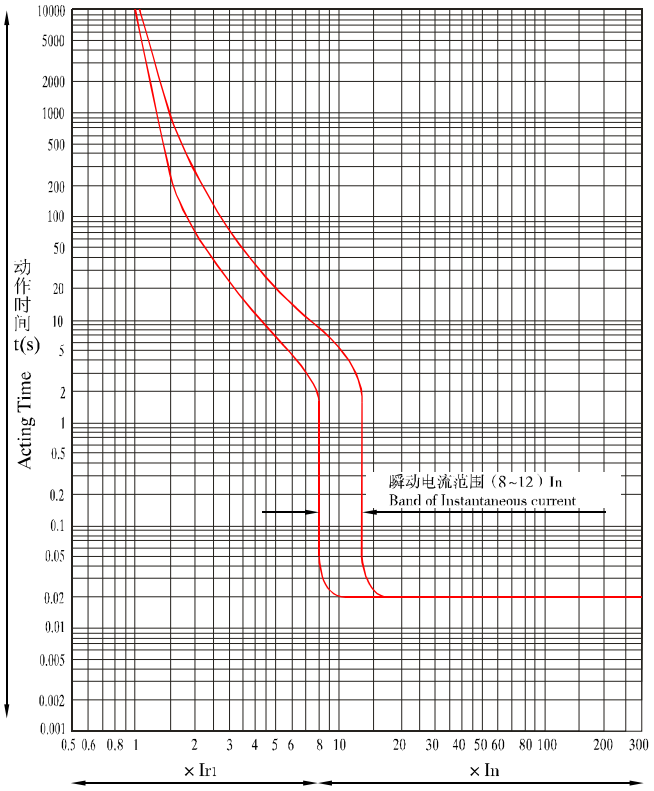
- 特性曲线
  Characteristic curve

特性曲线是在冷态，三相负载下测得。
The characteristic curves are obtained in the cold state and 3–pole loading.

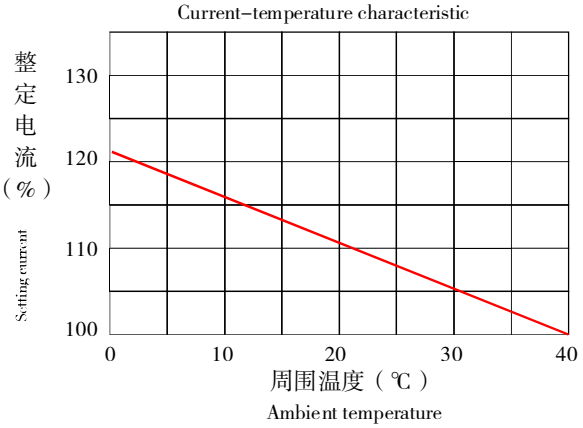
电流–温度特性
Current–temperature characteristic



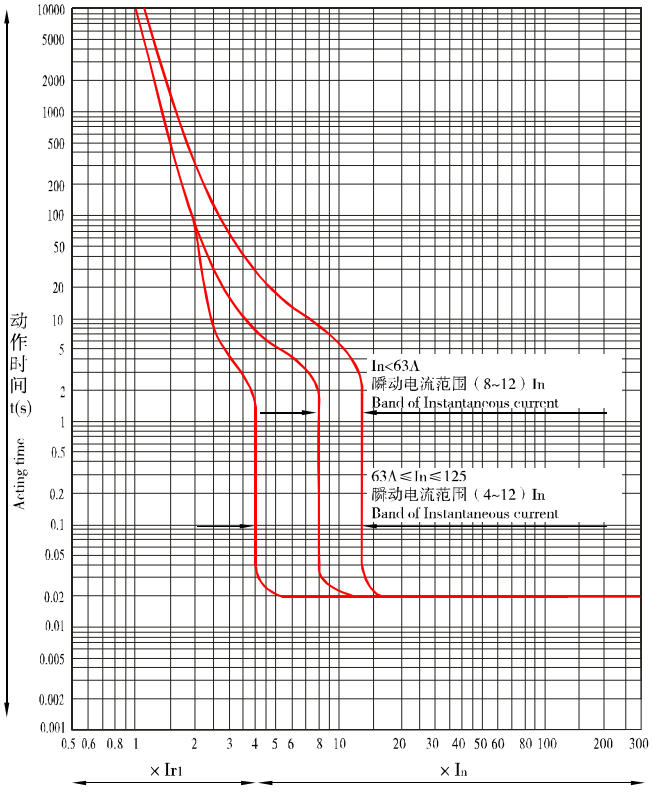
CM2–63L、M、H时间/电流特性曲线（配电）
CM2–63L、M、H time / current characteristic curve (power distribution)



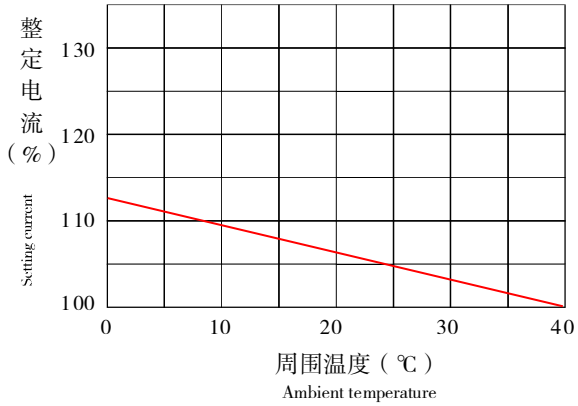
电流–温度特性
Current–temperature characteristic



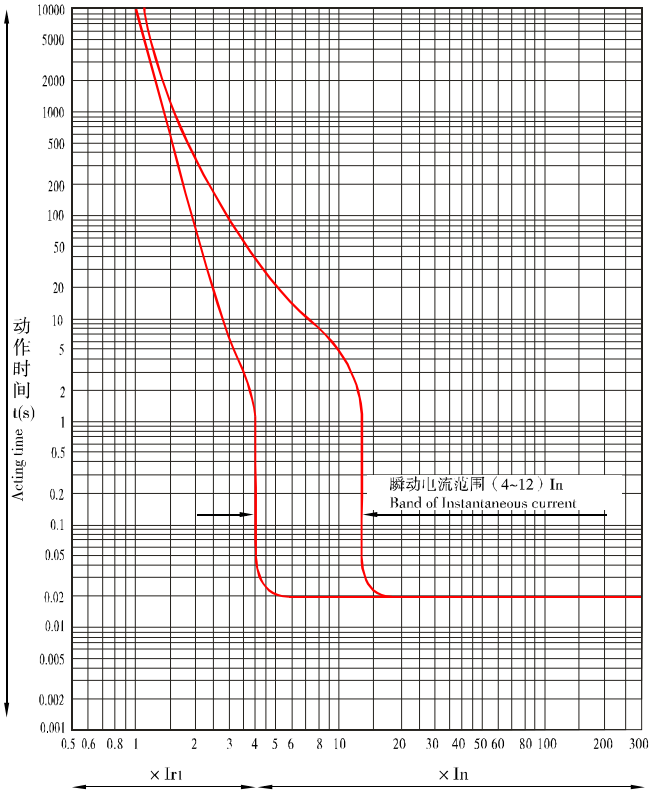
CM2–125L、M、H时间/电流特性曲线（配电）
CM2–125L、M、H time / current characteristic curve (power distribution)



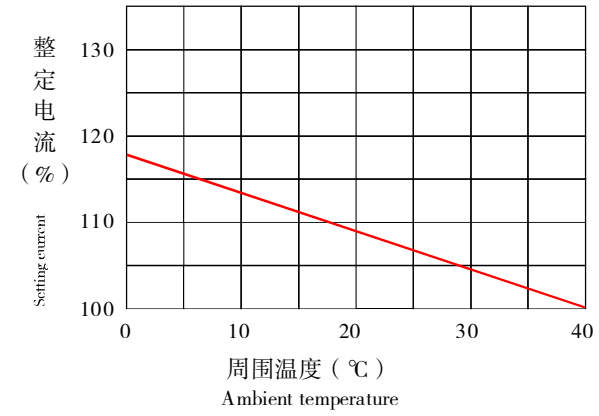
电流-温度特性
Current-temperature characteristic



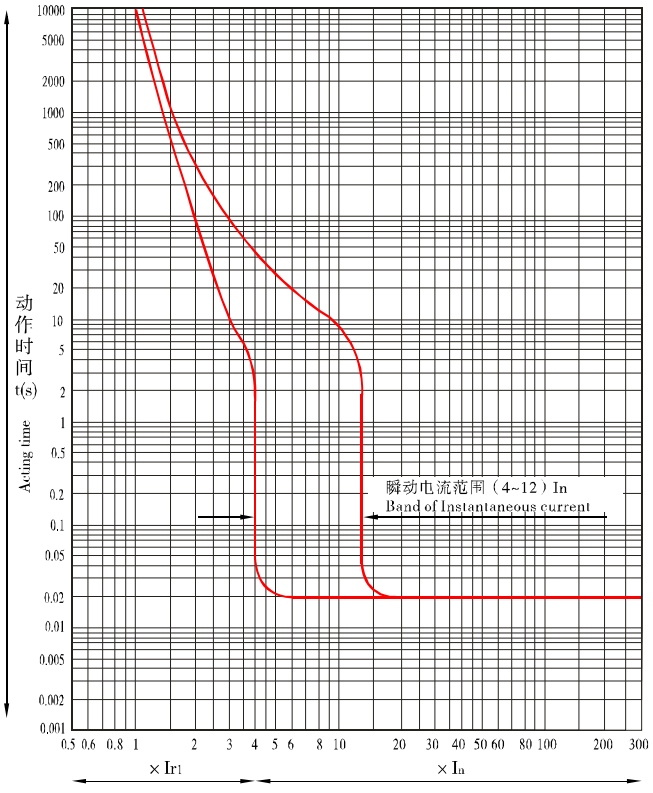
CM2-225L、M、H时间/电流特性曲线（配电）
CM2-225L、M、H time / current characteristic curve (power distribution)



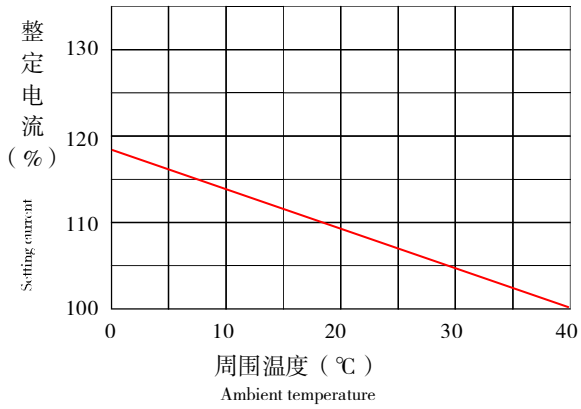
电流-温度特性
Current-temperature characteristic



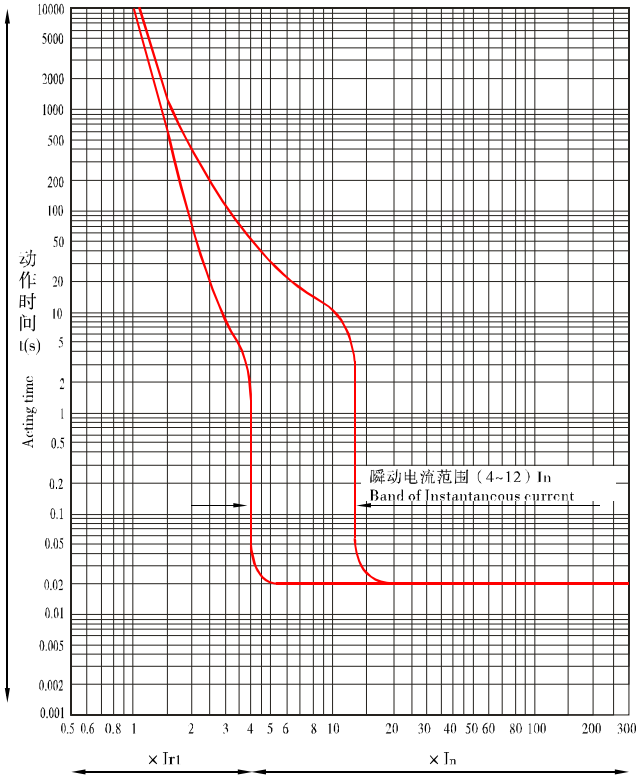
CM2-400L、M、H时间/电流特性曲线（配电）
CM2-400L、M、H time / current characteristic curve (power distribution)



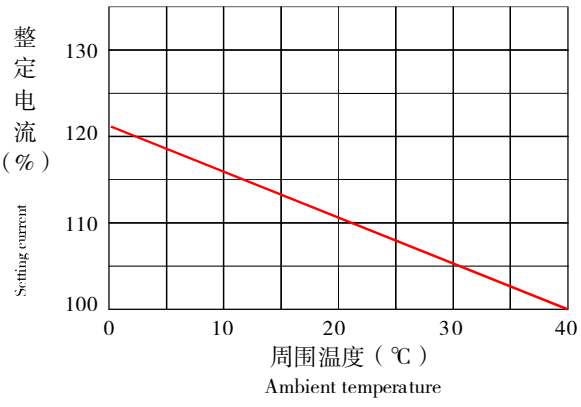
电流-温度特性
Current-temperature characteristic



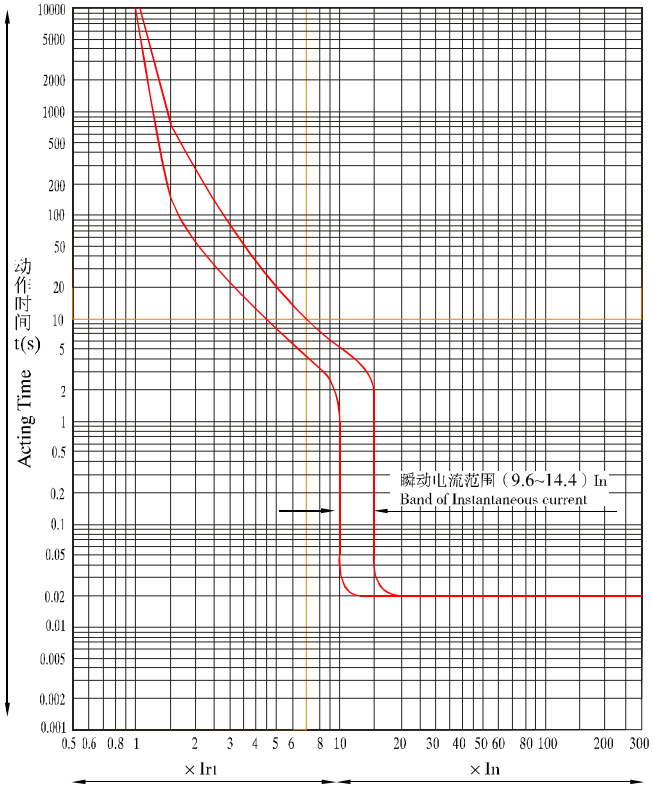
CM2-630L、M、H时间/电流特性曲线（配电）
CM2-630L、M、H time / current characteristic curve (power distribution)



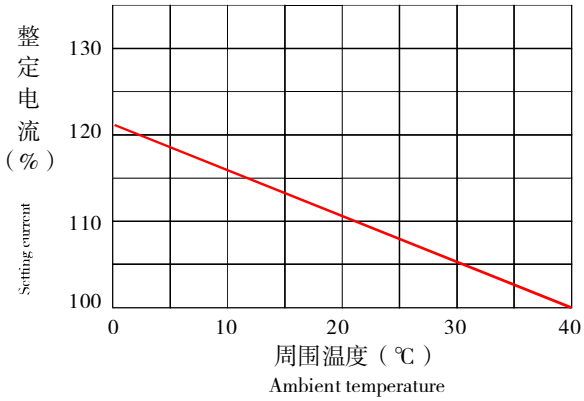
电流-温度特性
Current-temperature characteristic



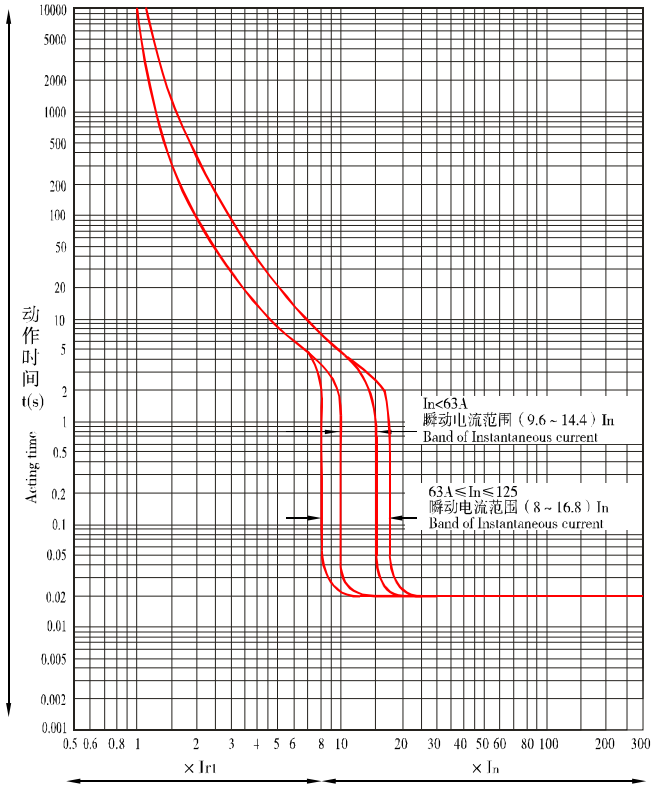
CM2-63L、M、H时间/电流特性曲线（电动机）
CM2-63L、M、H time / current characteristic curve (motor)



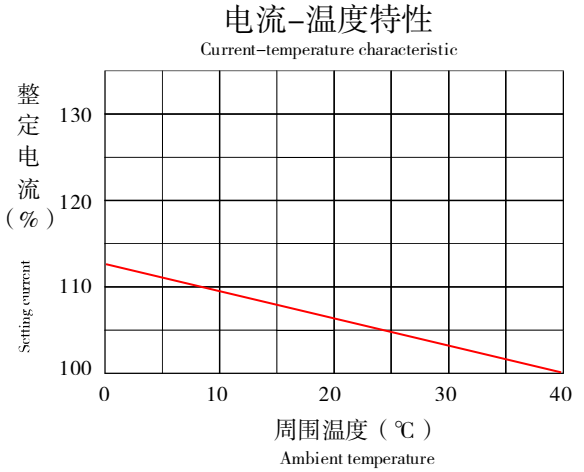
电流-温度特性
Current-temperature characteristic



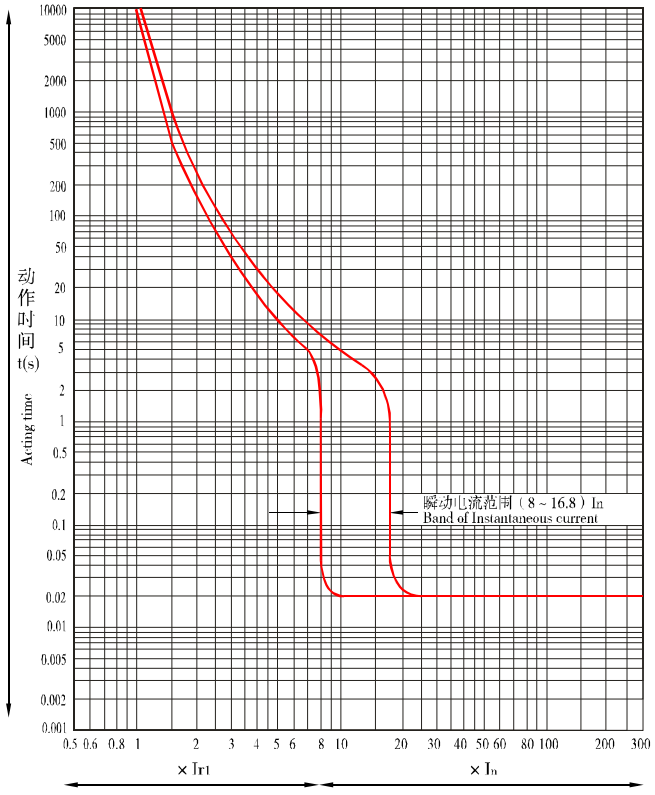
CM2-125L、M、H时间/电流特性曲线（电动机）
CM2-125L、M、H time / current characteristic curve (motor)



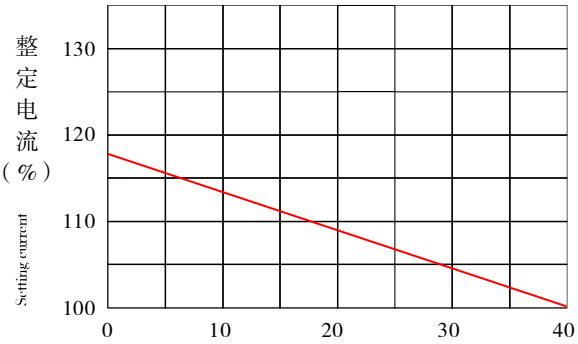
电流-温度特性
Current-temperature characteristic



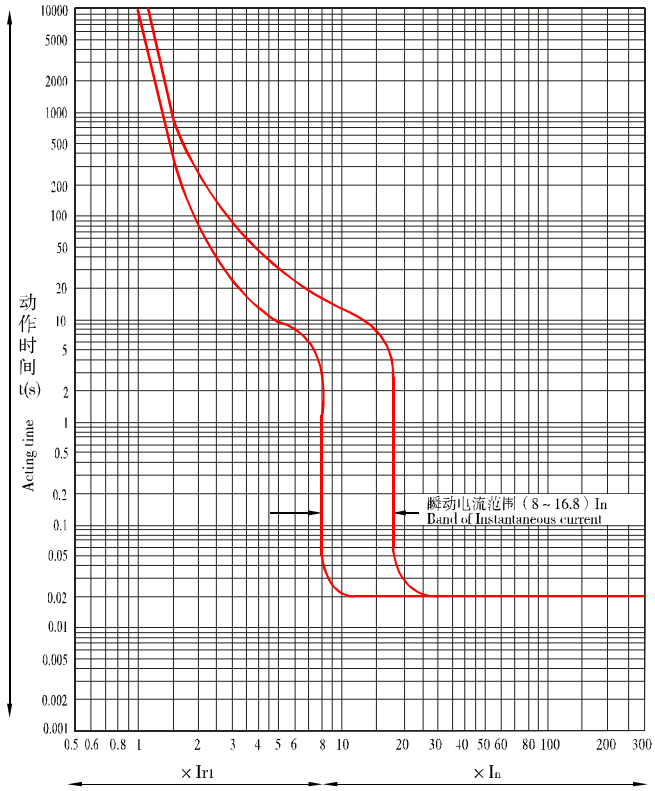
CM2-225L、M、H时间/电流特性曲线（电动机）
CM2-225L、M、H time / current characteristic curve (motor)



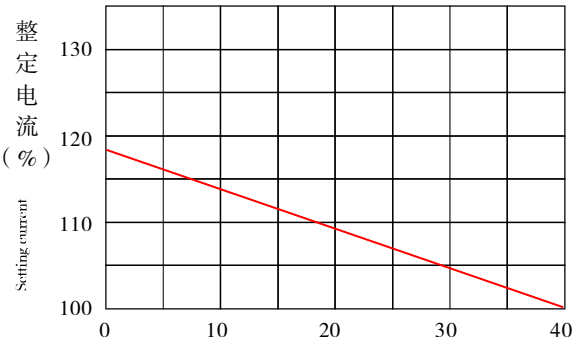
电流–温度特性
Current–temperature characteristic



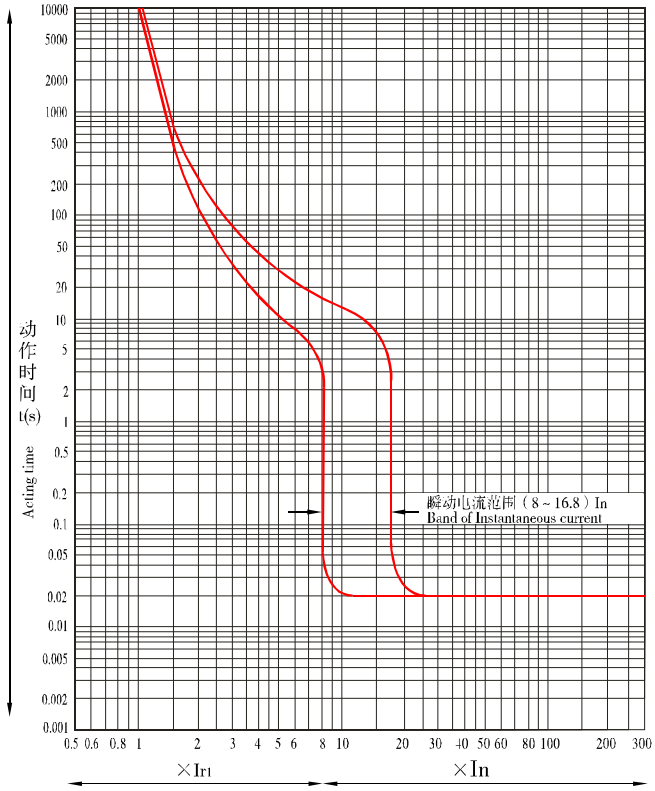
CM2–400L、M、H时间/电流特性曲线（电动机）
CM2–400L、M、H time / current characteristic curve (motor)



电流–温度特性
Current–temperature characteristic



CM2–630L、M、H时间/电流特性曲线（电动机）
CM2–630L、M、H time / current characteristic curve (motor)



CM2Z断路器保护特性 PROTECTION CHARACTERISTIC OF CM2Z CIRCUIT BREAKERS

● CM2Z系列断路器内装按有效值采样的电流传感器。断路器具有过载长延时反时限、短路短延时反时限、短路短延时定时限、短路瞬时、接地故障等保护功能，可由用户自行设定组成所需的保护特性。

● 长延时动作特性见表五

● The breaker for which the current sensing means are stated to be r.m.s. reponsive.The breaker are characteristic of the protection function such as inverse long-time delay overload protection、 invene short-time delay short-circuit protection、 definite short-time dealy short-circuit protection、 instantaneous short-circuit protection and ground-fault protection efc; which can be set by users them selves.

● Long-time delay acting characterisfic see table 5

表五（长延时动作特性）

Table 5 (long-time delay acting characteristic)

<table>
<tr><td colspan="2">电 流
Current</td><td colspan="9">动 作 时 间
Acting time</td></tr>
<tr><td rowspan="11">配电用
For power distribution</td><td>1.05Ir1</td><td colspan="9">2小时内不动作
Not acting</td></tr>
<tr><td>1.3Ir1</td><td colspan="9">≤1h动作
Acting</td></tr>
<tr><td rowspan="2">2Ir1</td><td rowspan="2">整定时间t1(s)
Setting time</td><td colspan="4">Inm=125A、225A</td><td colspan="4">Inm=400A、630A</td></tr>
<tr><td>12</td><td>60</td><td>80</td><td>100</td><td>12</td><td>60</td><td>100</td><td>150</td></tr>
<tr><td rowspan="11">电动机保护用
For power distrisition</td><td>1.05Ir1</td><td colspan="9">2小时内不动作
Not acting</td></tr>
<tr><td>1.2Ir1</td><td colspan="9">≤1h动作
Acting</td></tr>
<tr><td rowspan="2">1.5Ir1</td><td rowspan="2">动作时间T1(s)
Acting time</td><td colspan="4">Inm=125A、225A</td><td colspan="4">Inm=400A、630A</td></tr>
<tr><td>21.3</td><td>107</td><td>142</td><td>178</td><td>21.3</td><td>107</td><td>178</td><td>267</td></tr>
<tr><td>2Ir1</td><td>整定时间t1(s)
Setting time</td><td>12</td><td>60</td><td>80</td><td>100</td><td>12</td><td>60</td><td>100</td><td>150</td></tr>
<tr><td>7.2Ir1</td><td>动作时间T1(s)
Acting time</td><td>0.93</td><td>4.63</td><td>6.17</td><td>7.72</td><td>0.93</td><td>4.63</td><td>7.72</td><td>11.6</td></tr>
<tr><td colspan="2">脱扣级别
Release rating</td><td>——</td><td>10A</td><td>10</td><td>20</td><td>——</td><td>10</td><td>20</td><td>30</td></tr>
</table>

注：1.动作时间符合$I^2T_1=(2I_{r1})^2t_1$ $(1.2I_{r1}\leqslant I<I_{r2})$；

2.动作时间允差为 ± 20%；

3.可返回时间不小于动作时间的70%。

Note: 1.Acting time inline with$I^2T_1=(2I_{r1})^2t_1$ $(1.2I_{r1}\leqslant I<I_{r2})$；

2.Acting time tolerance: ± 20%；

3.Returnable time no less then 70% of acting time

- 短延时动作特性见表六，并可关闭（OFF）Short-time delay acting characteristic see table 6 (can be off)

表六（短延时动作特性）Table 6 (short-time delay acting characteristic)

电流 Current	动作时间 Acting time					
$Ir_2 \leqslant I < 1.5Ir_2$	反时限 Inverse time		$I^2T_2=(1.5Ir_2)^2t_2$			
$1.5Ir_2 \leqslant I < Ir_3$	定时限 Definite time	整定时间t_2(s) Setting time	0.1	0.2	0.3	0.4
		允差(s) Tolerance	± 0.03	± 0.04	± 0.06	± 0.08
		可返回时间(s) Returnable time		0.14	0.21	0.28
注：反时限动作时间允差 ± 20%。 Note: Inverse acting time tolerance: ± 20%.						

- 接地故障动作特性见表七，功能可关闭（OFF）（电动机保护用CM2Z断路器无接地故障保护）。
  Ground-fault acting charcteristic see fables （can be off）（Motor CM2Z MCCBs without ground-fault protection）

表七（接地故障动作特性） Table 7 (Ground-fault acting characteristic)

整定时间 t_4/s Setting time	0.1	0.2	0.3	0.4
允差 s Tolerance	± 0.03	± 0.04	± 0.06	± 0.08
可返回时间 s Returnable time	——	0.14	0.21	0.28

- 其它保护功能
- 不平衡保护功能（可开启/关闭）

电动机保护用CM2Z断路器具有不平衡保护功能，当流过断路器电流的三相不平衡度[（Imax-Imin）/Imax × 100%]达到或超过整定值（30% ~ 70%可调）且Imax > Ir_1（最小值）时，断路器延时10s断开。此功能用户可开启或关闭。

- 预报警功能（可开启/关闭）

CM2Z断路器的智能型脱扣器具有预报警功能，当电流达到或超过预报警电流整定值（0.7Ir_1 ~ 1.0Ir_1可调），断路器发出预报警信号，当电流大于1.1Ir_1时，发出过载信号。

- 热模拟功能

CM2Z断路器具有热模拟功能，并可关闭。长延时能量10min释放结束，短延时能量5min释放结束。

- Other protection functions
- Disequilibrium Protection (on/off)

CM2Z Series MCCBs would trip with 10s delay by the disequilibrium protection function, when the three phases disequilibrium level of the current flow [(Imax-Imin)/Imax100%] reached or passed the setting value (can be adjusted from 30%~70%) and Imax>Ir_1(minimum). This function can be on or off by users.

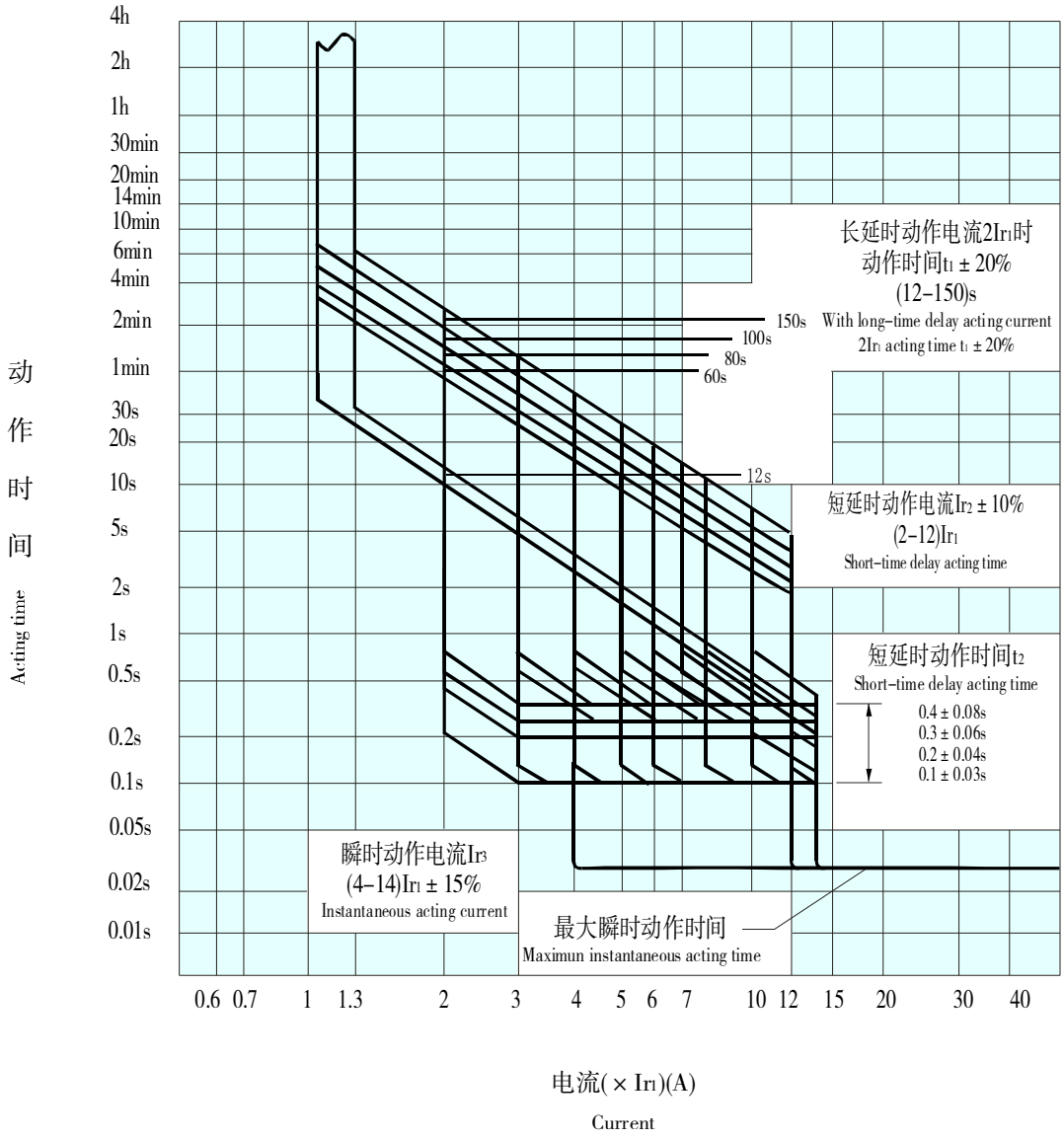
- Prior Alarm (on/off)

CM2Z Series MCCBs have the prior alarm function, when the current reached or passed the setting value of prior alarm (can be adjusted from 0.7Ir_1 to 1.0Ir_1), the circuit breakers would send out the prior alarm signal; when the current passed 1.1Ir_1, the circuit breakers would send out the overload signal.

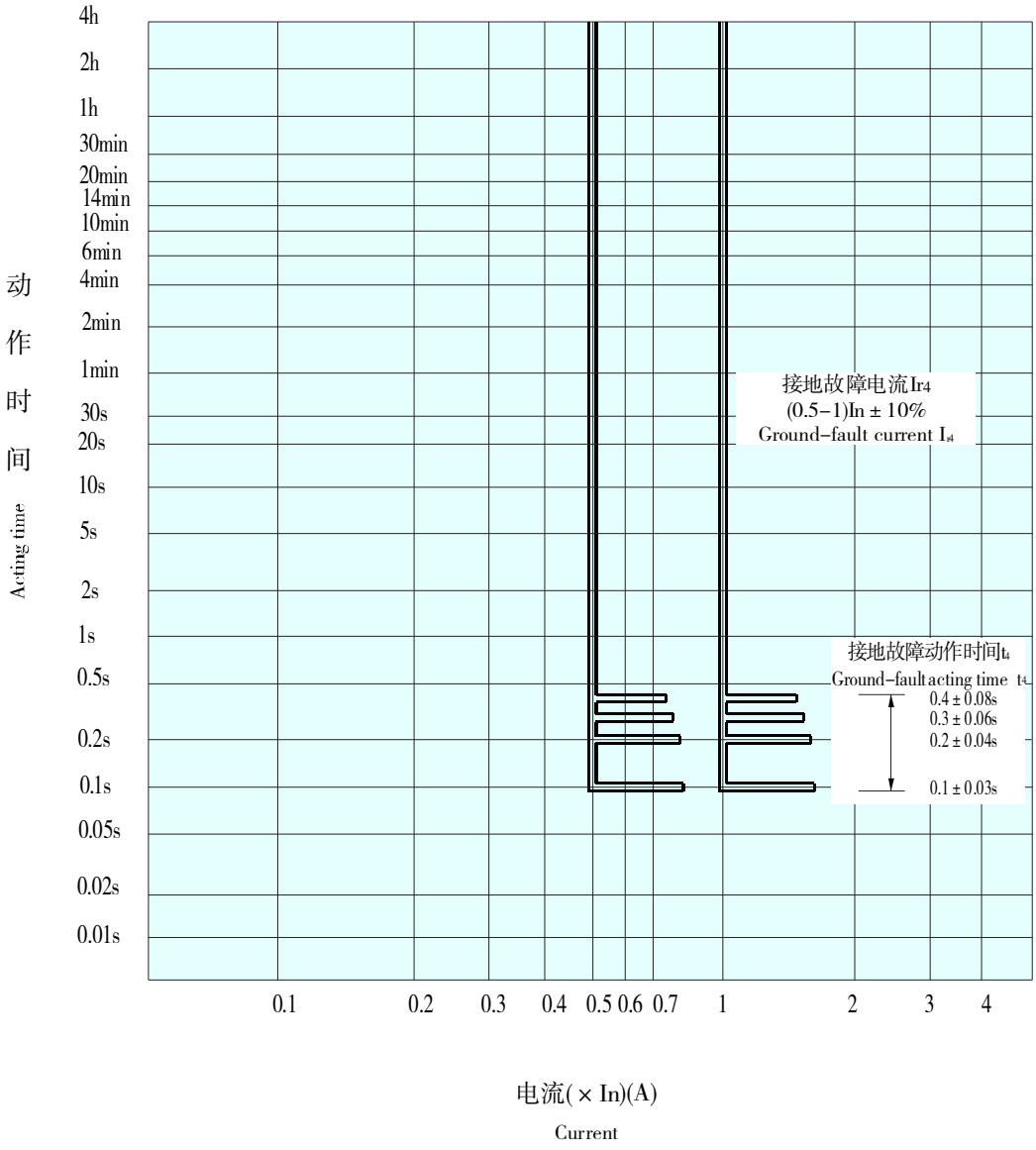
- Thermal simulation

CM2Z Series MCCBs have the thermal simulation function and can be off. The energy will be released in 10 minutes with long-time delay and in 5 minutes with short-time delay.

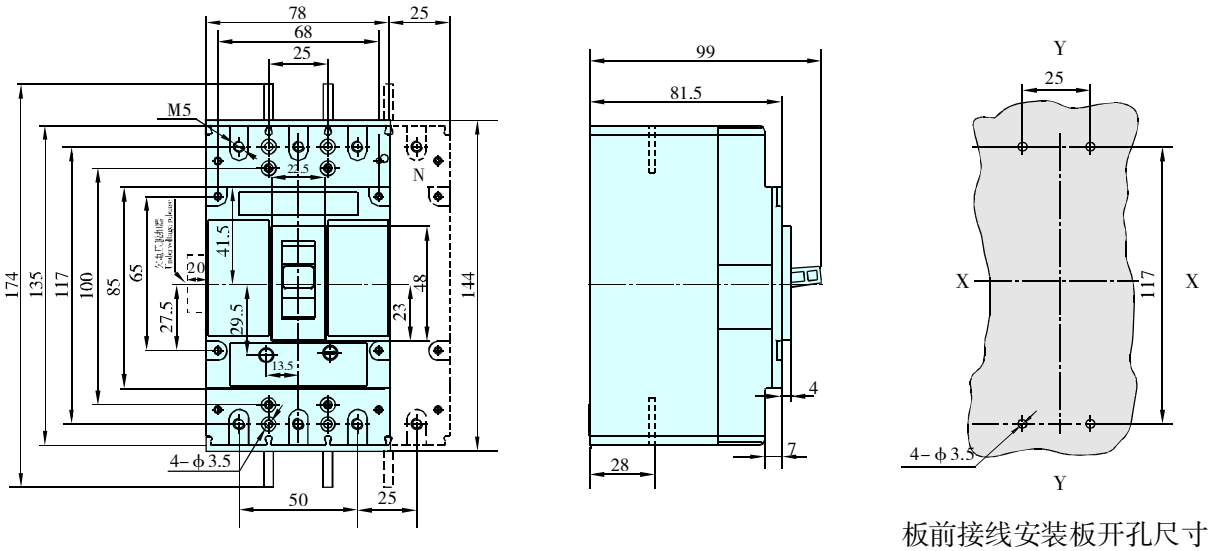
- 过载长延时反时限、短路短延时反时限、短路短延时定时限、短路瞬时特性曲线，整定电流I_{r1}、I_{r2}、I_{r3}调整步长为1A。
  Inverse long-time delay overload、inverse short-time delay short-circuit、definite short-time delay short-current、Instantaneous short-circuit Characteristic curve, 1A is the adjustment step of the setting current I_{r1}、I_{r2} and I_{r3}.



- 接地故障保护特性曲线，整定电流I_{r4}调整步长为1A。电动机保护用CM2Z无接地故障保护。
  Ground-fault protection characteristic curve, the adjustment step of the setting current I_{r4} is 1A.
  Motor CM2Z MCCBs without ground fault protection.

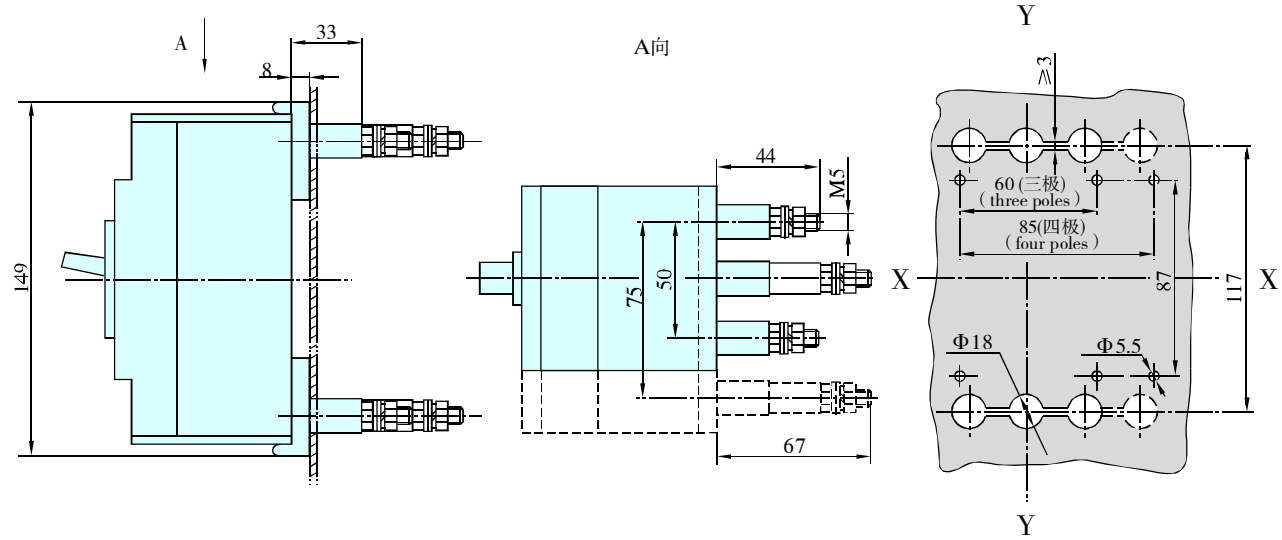


- CM2-63 板前接线（三极、四极） Wiring in front of the board（three and four poles）
  X-X、Y-Y为三极断路器中心 As the center of the circuit breaker with three poles



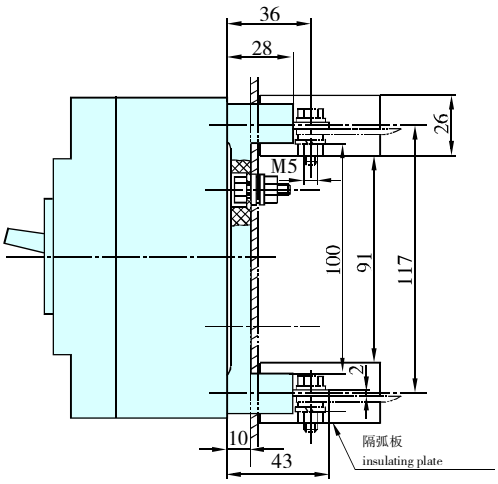
板前接线安装板开孔尺寸
Aperture Dimensions of the sub-panel, wiring in front of the board

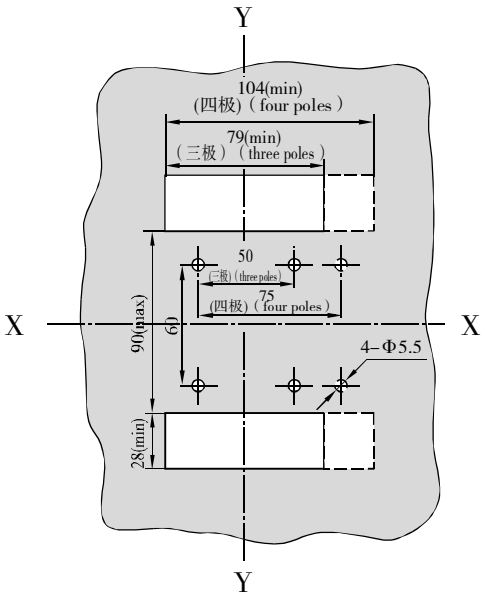
- CM2-63板后接线（三极、四极） Wiring on back of the board (three and four poles)
  X-X、Y-Y为三极断路器中心 As the center of the circuit breaker with three poles



板后接线安装板开孔尺寸
aperture dimensions of the sub-panel, wiring on back of the board.

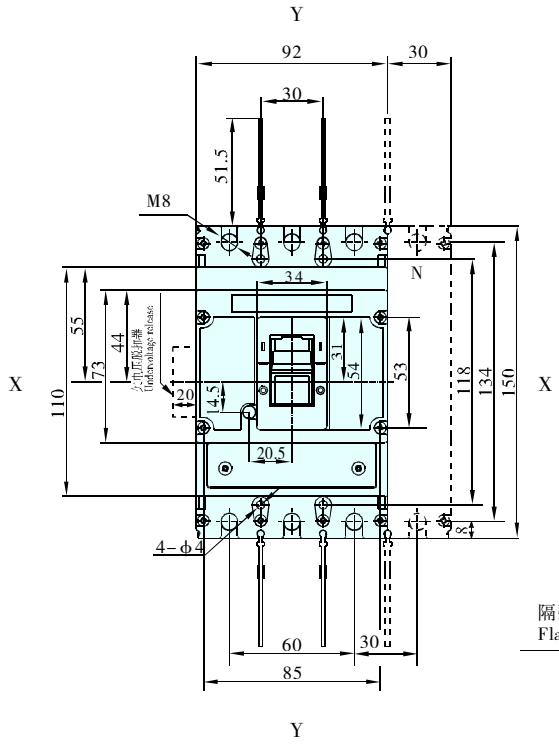
- CM2-63插入式接线（三极、四极） Wiring by insertion (three and four poles)
  X-X、Y-Y为三极断路器中心 As the center of the circuit breaker with three poles
  插入式接线安装方式一 The first mounting of insertion type

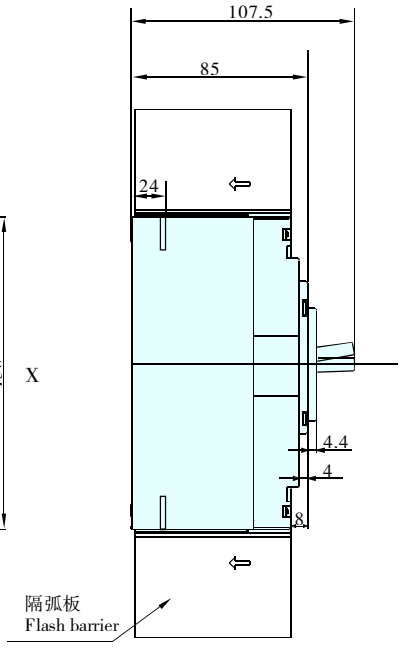


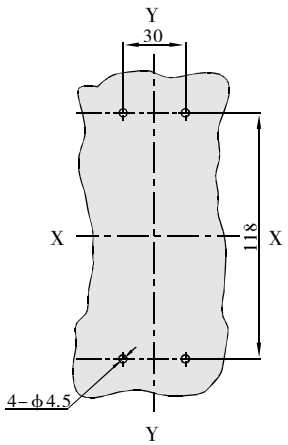


安装方式一开孔尺寸
Aperture Dimensions of the first mounting way

- CM2-125、CM2Z－125 板前接线（三极、四极） Wiring in front of the board（three and four poles）
  X-X、Y-Y为三极断路器中心 As the center of the circuit breaker with three poles



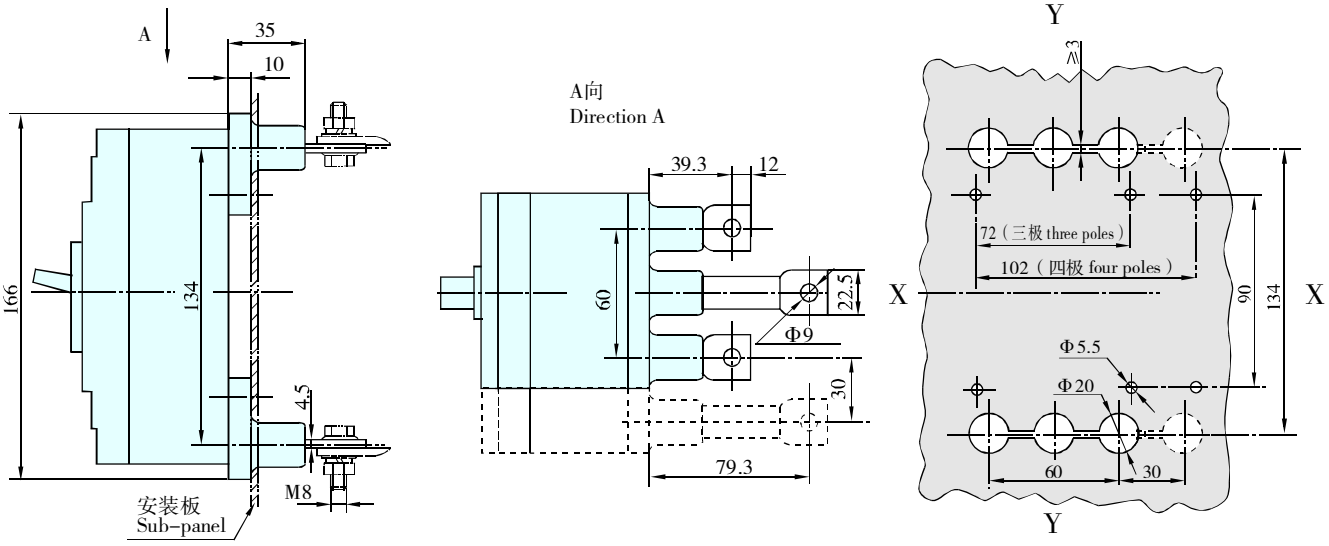




板前接线安装板开孔尺寸
Aperture Dimensions of the sub-panel, wiring in front of the board

- CM2–125、CM2Z – 125板后接线（三极、四极） Wiring in back of the board （three and four poles）

  X–X、Y–Y为三极断路器中心 As the center of the circuit breaker with three poles



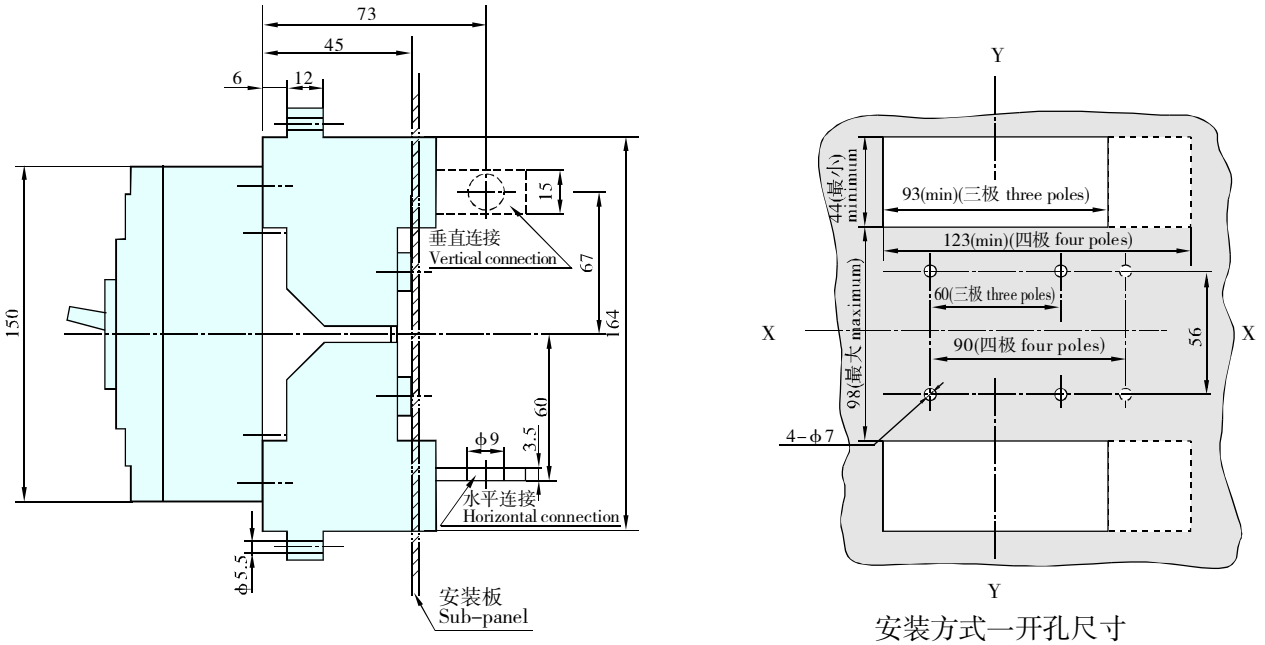
板后接线安装板开孔尺寸

Aperture Dimensions of the sub–panel, wiring in back of the board

- CM2–125、CM2Z – 125插入式接线（三极、四极） Wiring by Insertion （three and four poles）

  X–X、Y–Y为三极断路器中心 As the center of the circuit breaker with three poles

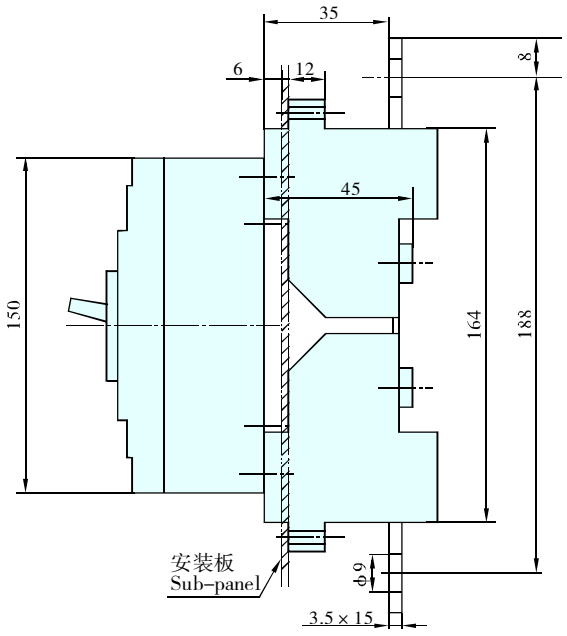
- 插入式接线安装方式一 The first mounting way of the insertion type

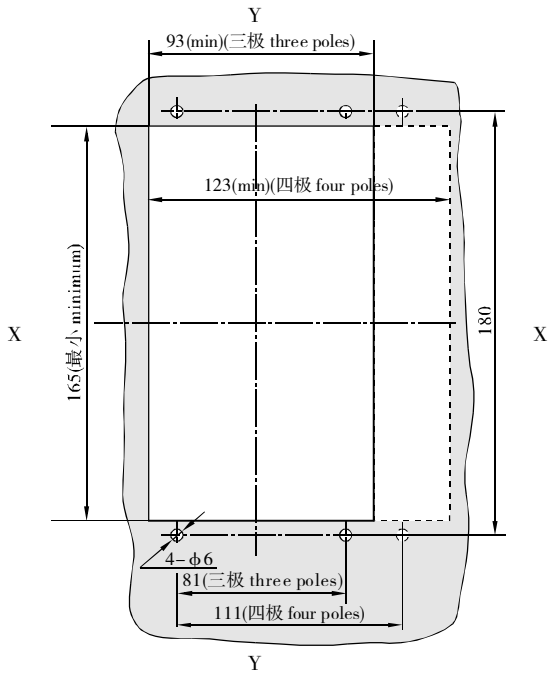


安装方式一开孔尺寸

Aperture Dimensions of the first mounting way

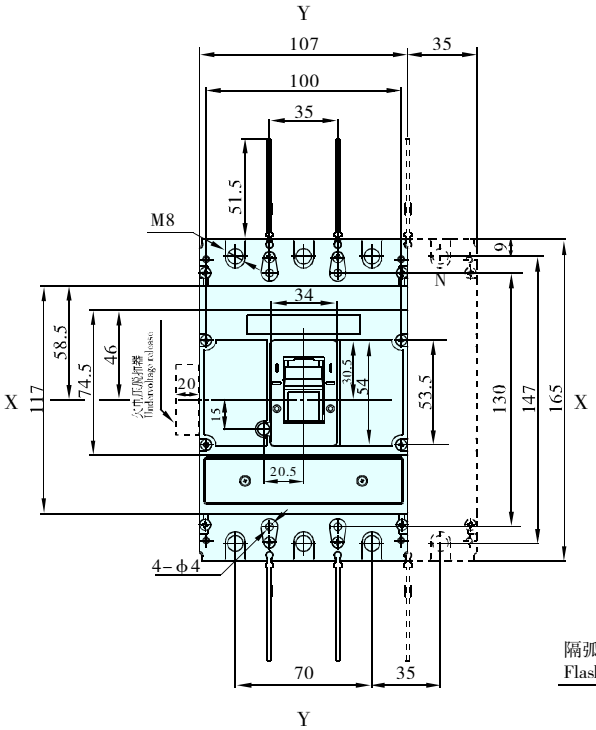
- 插入式接线安装方式二 The second mounting way of the Insertion type

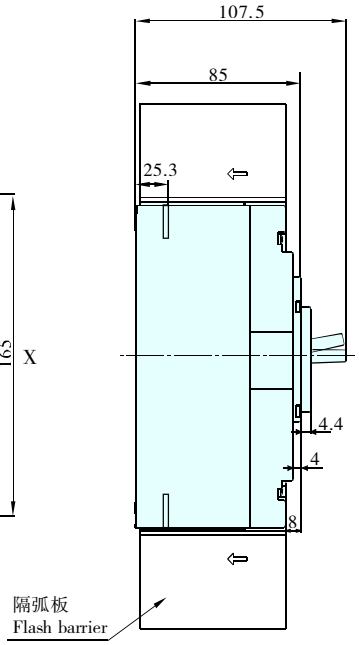


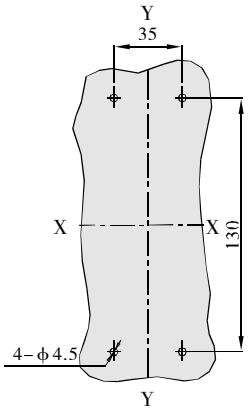


安装方式二开孔尺寸
Aperture Dimensions of the second mounting way

- CM2-225、CM2Z－225 板前接线（三极、四极） Wiring in front of the board （three and four poles）
  X-X、Y-Y为三极断路器中心 As the center of the circuit breaker with three poles

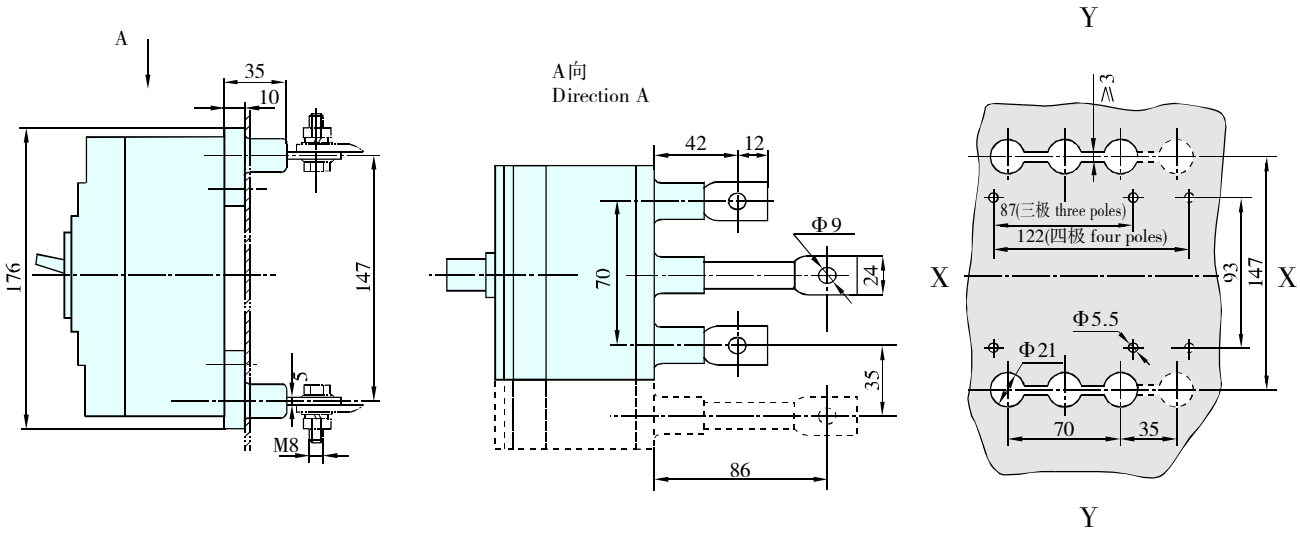






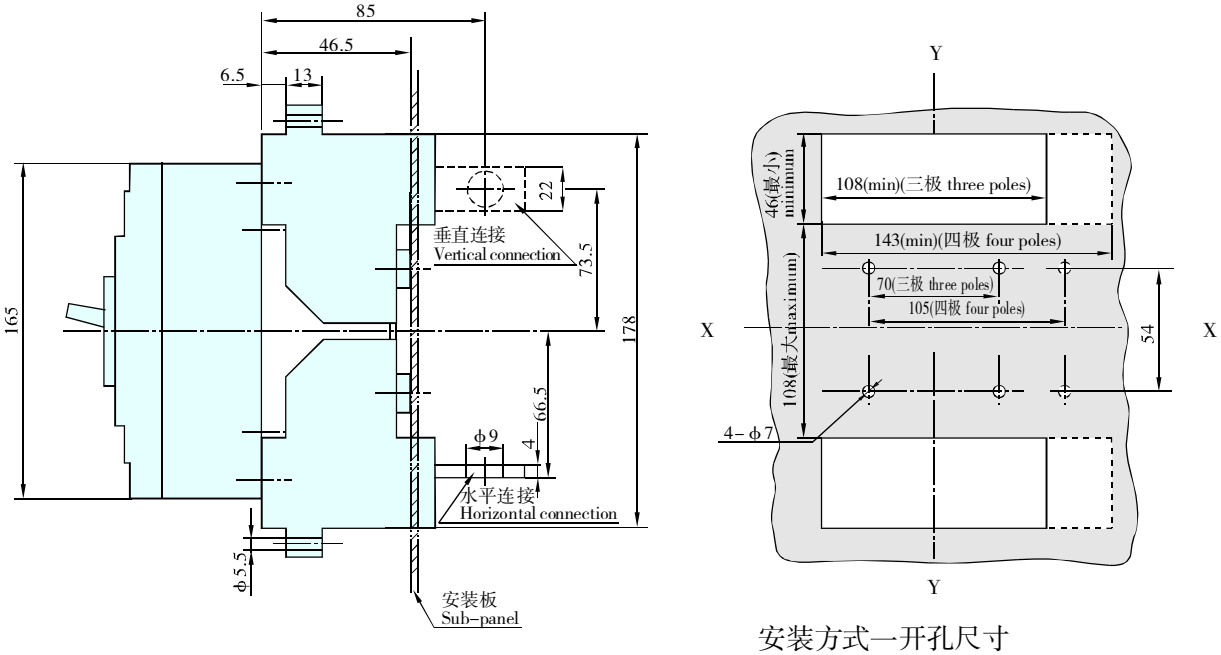
板前接线安装板开孔尺寸
Aperture Dimensions of the sub-panel, wiring on front of the board

- CM2–225、CM2Z – 225板后接线（三极、四极） Wiring in back of the board （three and four poles）
  X–X、Y–Y为三极断路器中心 As the conter of the circuit breaker with three poles



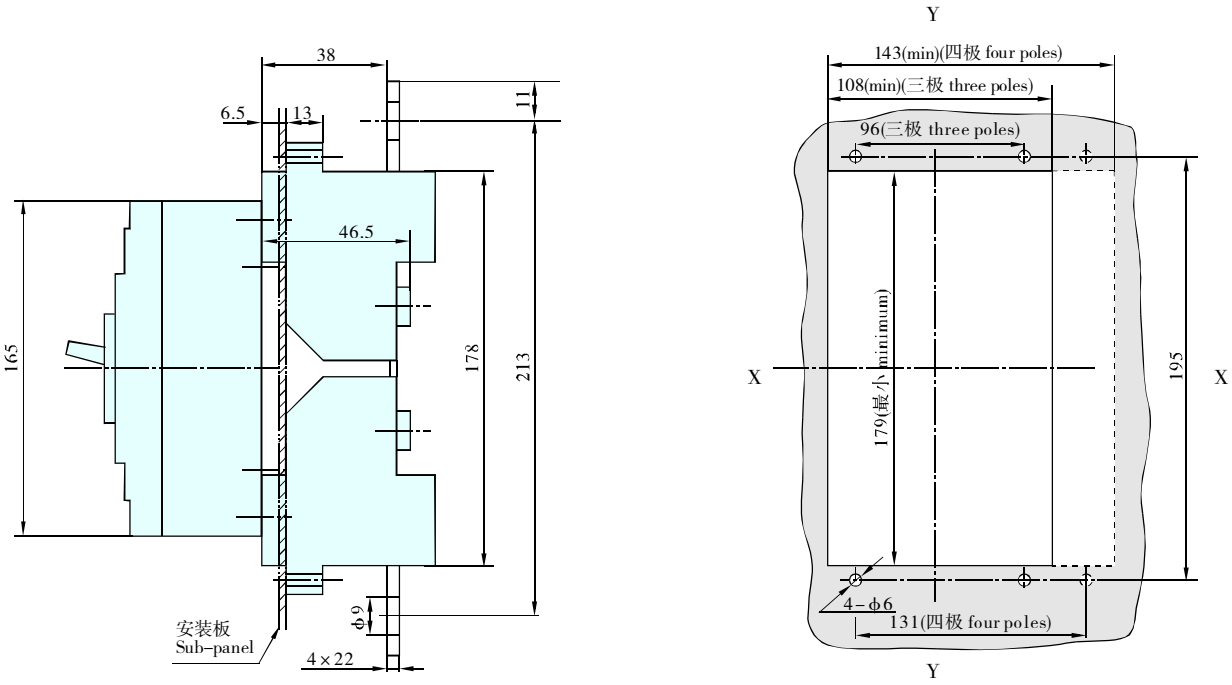
板后接线安装板开孔尺寸
Aperture Dimensions of the sub–panel, wiring on back of the board

- CM2–225、CM2Z – 225插入式接线（三极、四极） Wiring by insertion （three and four poles）
  X–X、Y–Y为三极断路器中心 As the center of the circuit breaker with three poles
- 插入式接线安装方式一 The first mounting way of the insertion type



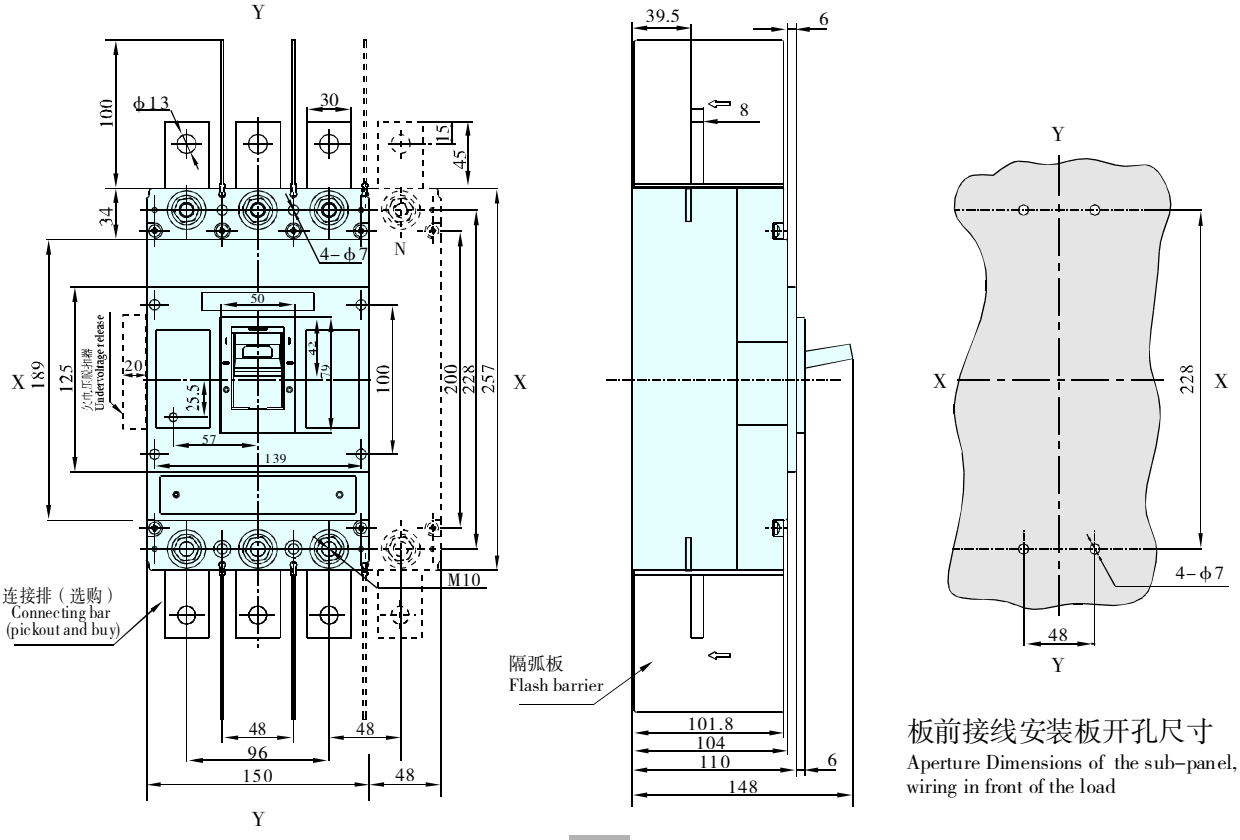
安装方式一开孔尺寸
Aperture Dimensions of the first mounting way

- 插入式接线安装方式二 The second mounting way of the insertion type



安装方式二开孔尺寸
Aperture Dimensions of the second mounting way

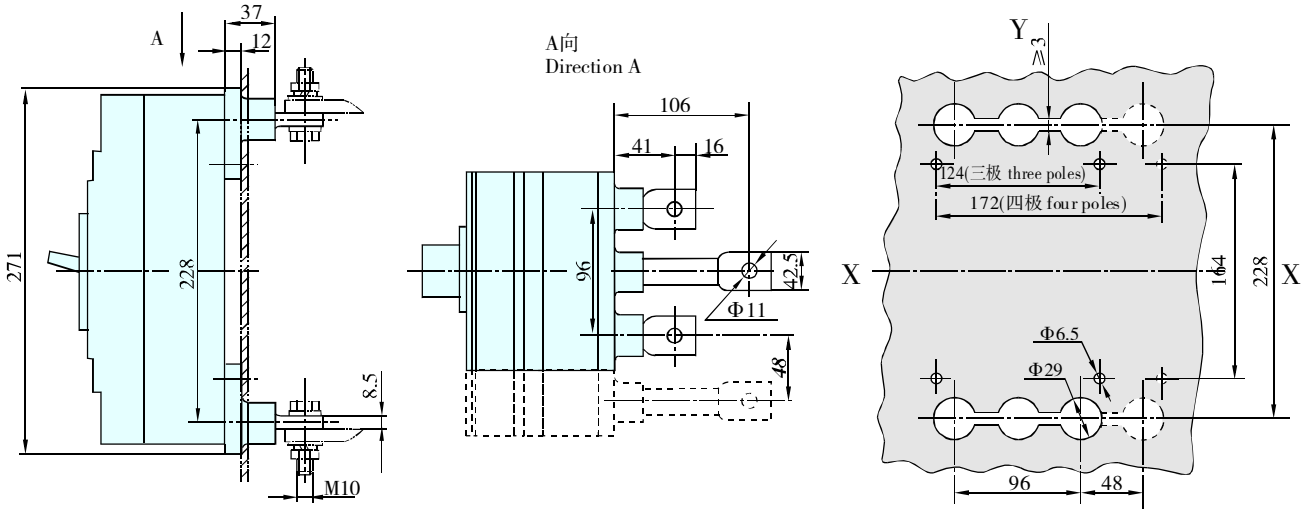
- CM2-400、CM2Z-400 板前接线（三极、四极） Wiring in front of the board （three and four poles）
  X-X、Y-Y为三极断路器中心 As the center of the circuit breaker with three poles



板前接线安装板开孔尺寸
Aperture Dimensions of the sub-panel, wiring in front of the load

- CM2–400、CM2Z – 400板后接线（三极、四极） Wiring in back of the board （three and four poles）

  X–X、Y–Y为三极断路器中心 As the center of the circuit breaker with three poles



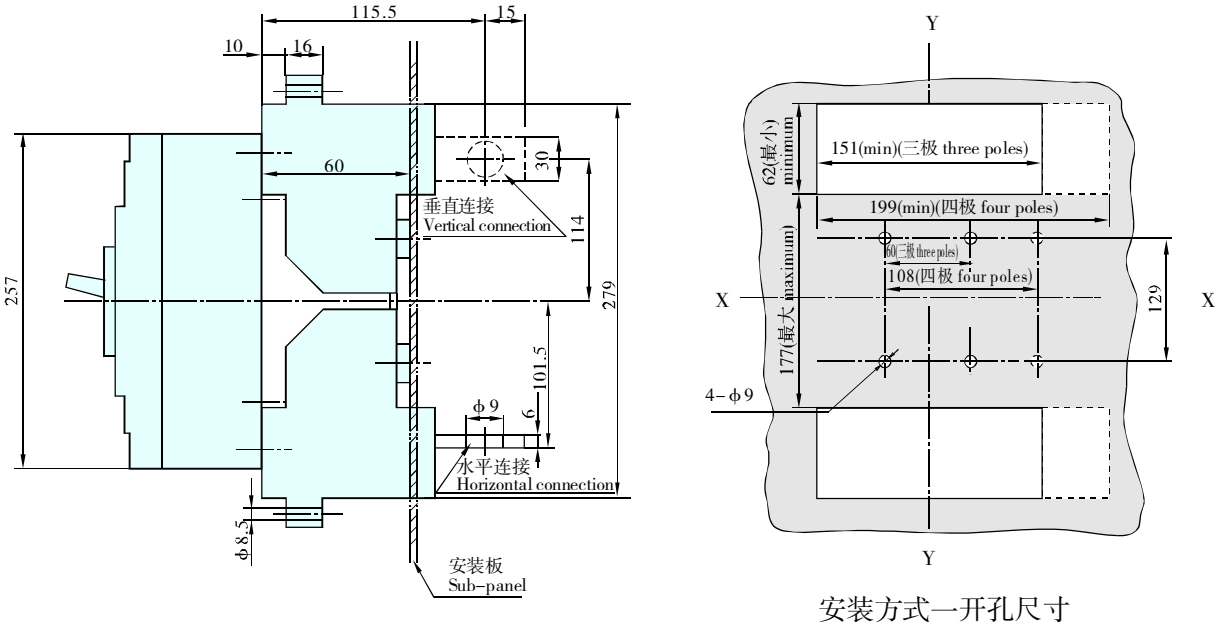
板后接线安装板开孔尺寸

Aperture dimensions of the sub–panel, wiring in back of the board.

- CM2–400、CM2Z – 400插入式接线（三极、四极） Wiring by insertion （three and four poles）

  X–X、Y–Y为三极断路器中心 As the center of the circuit breaker with three poles

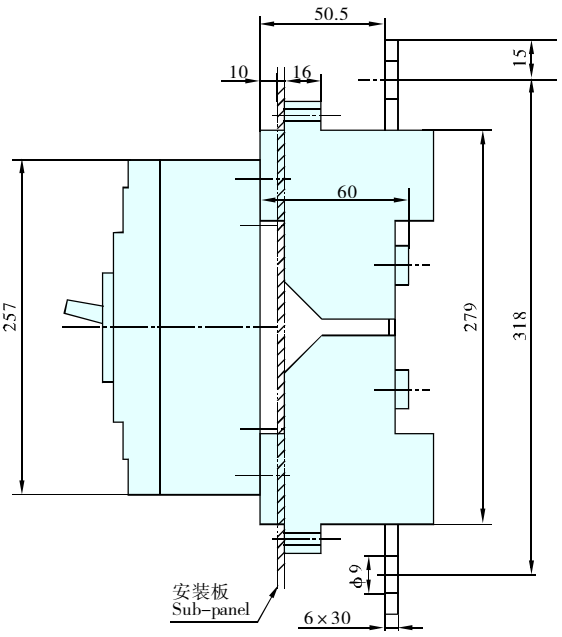
- 插入式接线安装方式一 The first mounting way of the insertion type

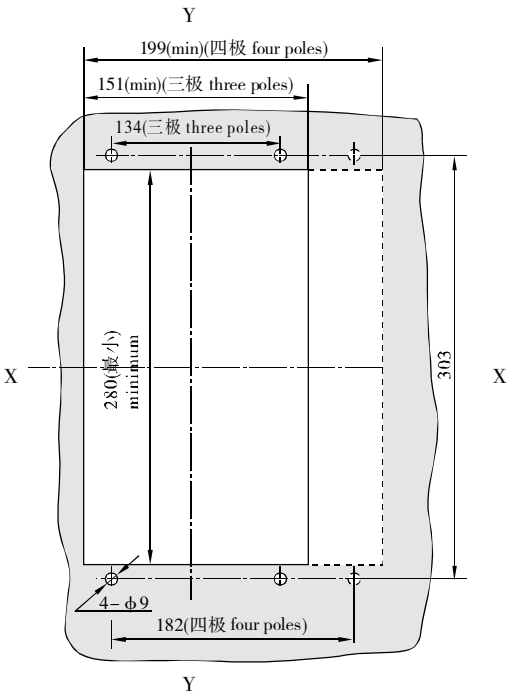


安装方式一开孔尺寸

Aperture Dimensions of the first mounting way

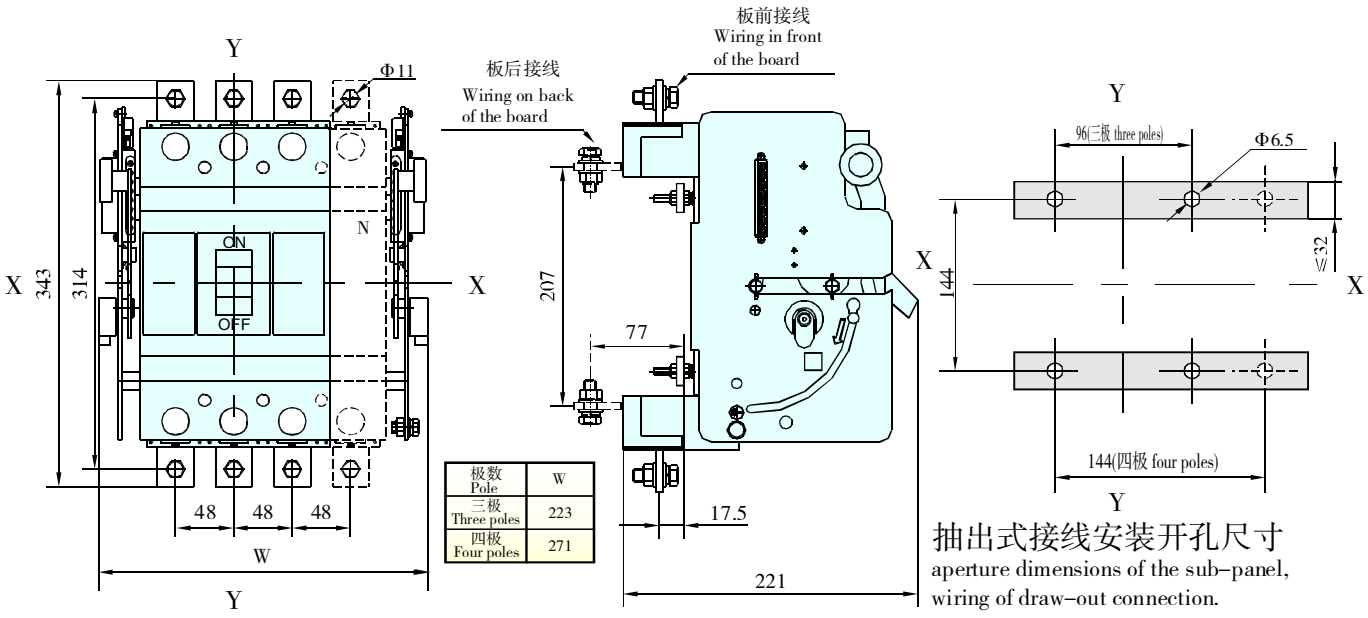
- 插入式接线安装方式二 The second mounting way of the insertion type





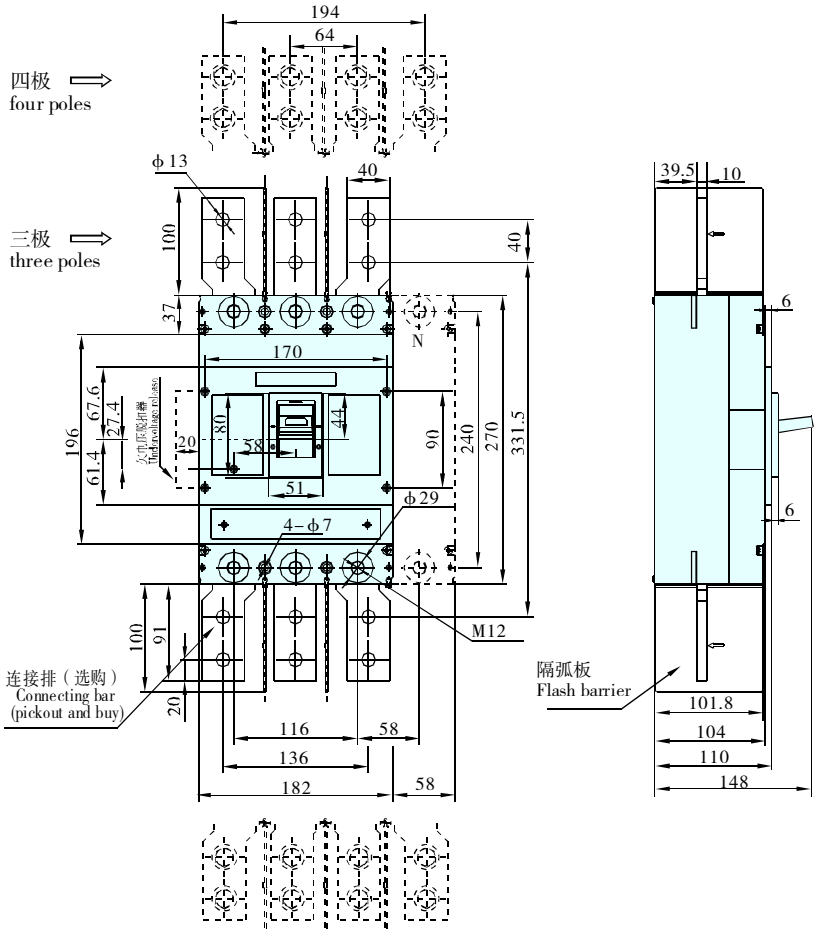
安装方式二开孔尺寸
Aperture Dimensions of the second mounting way

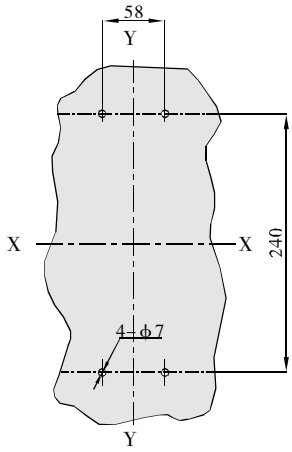
- CM2-400、CM2Z-400 抽出式接线（三极、四极） Wiring of draw-out connection （three and four poles）
  X-X、Y-Y为三极断路器中心 As the center of the breaker with three poles



抽出式接线安装开孔尺寸
aperture dimensions of the sub-panel, wiring of draw-out connection.

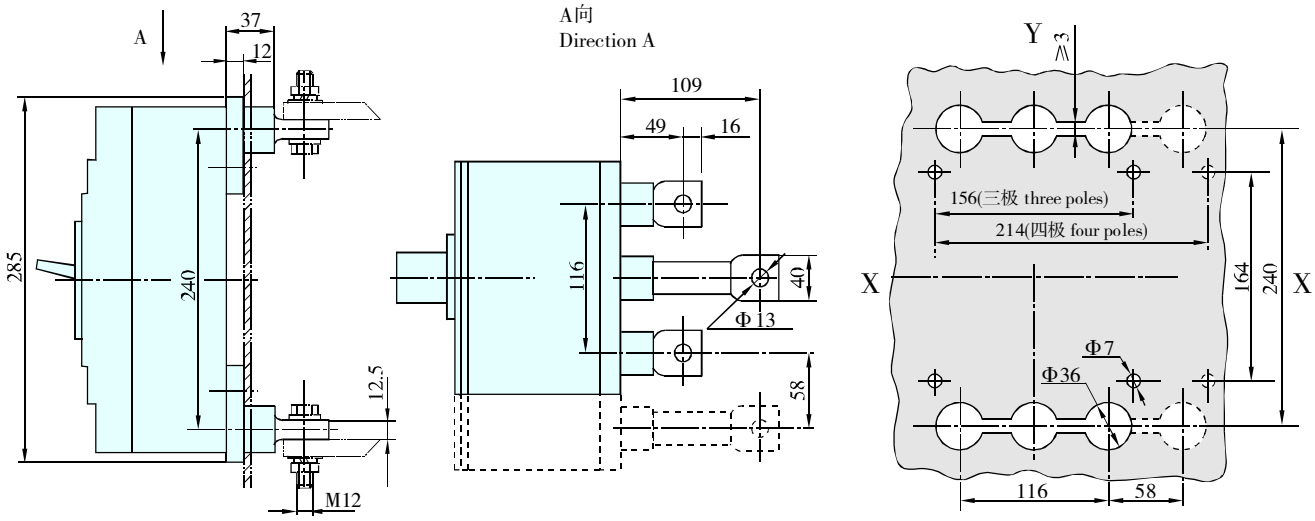
- CM2–630、CM2Z – 630 板前接线（三极、四极） Wiring in front of the board （three and four poles）
  X–X、Y–Y为三极断路器中心 As the center of the circuit breaker with three poles





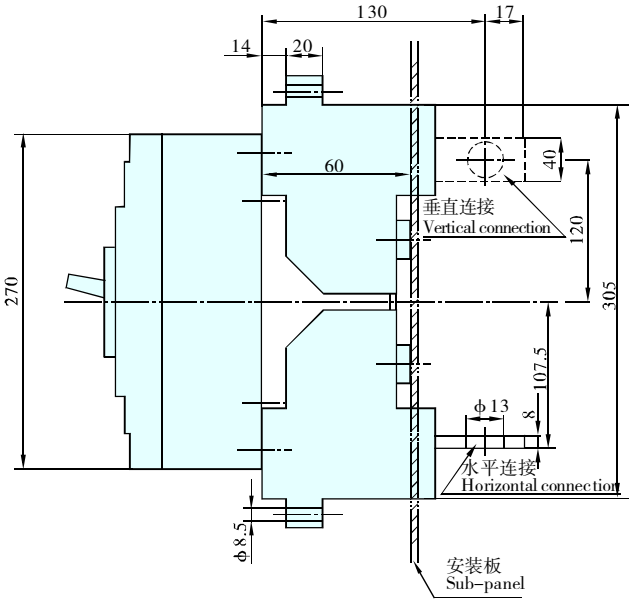
板前接线安装板开孔尺寸
Aperture Dimensions of the sub–panel, wiring in front of the board

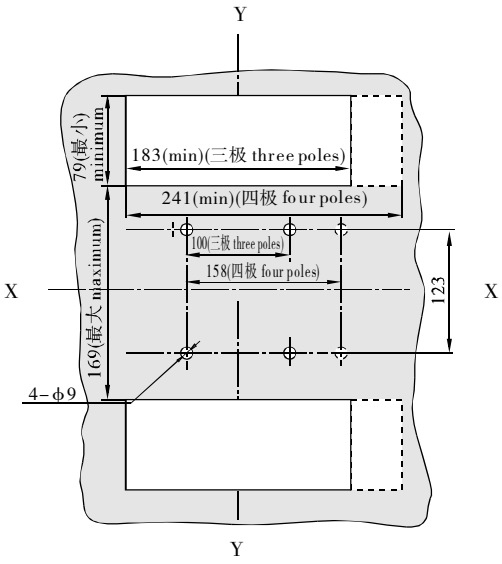
- CM2–630、CM2Z – 630板后接线（三极、四极） Wiring in back of the board （three and four poles）
  X–X、Y–Y为三极断路器中心 As the center of the circuit breaker with three poles



板后接线安装板开孔尺寸
Aperture Dimensions of the sub–panel, wiring on back of the board

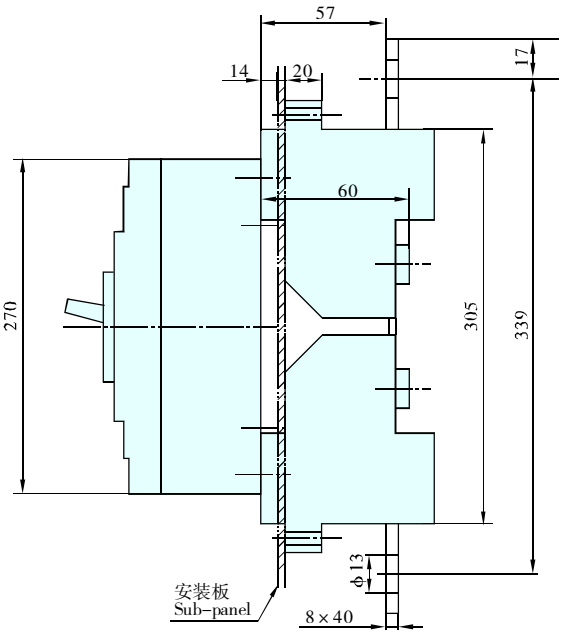
- CM2–630、CM2Z–630插入式接线（三极、四极） Wiring in by insertion（three and four poles）
  X–X、Y–Y为三极断路器中心 As the center of the circuit breaker with three poles
- 插入式接线安装方式一 The first mounting way of the insertion type

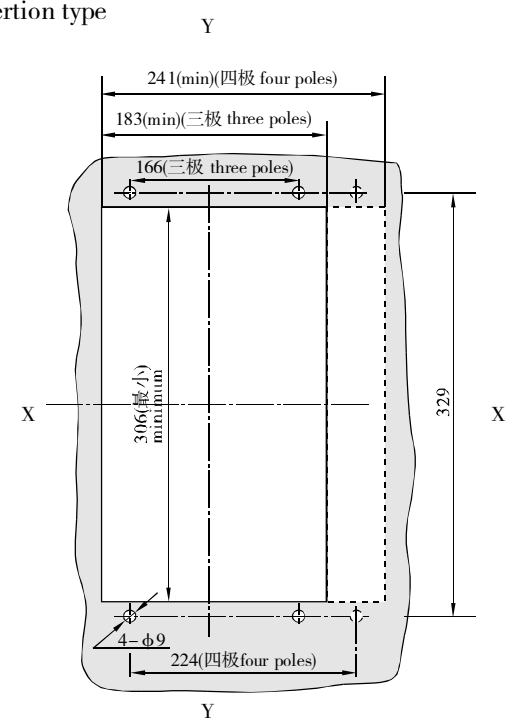




安装方式一开孔尺寸
Aperture Dimensions of the first mounting way

- 插入式接线安装方式二 The second mounting way of the insertion type

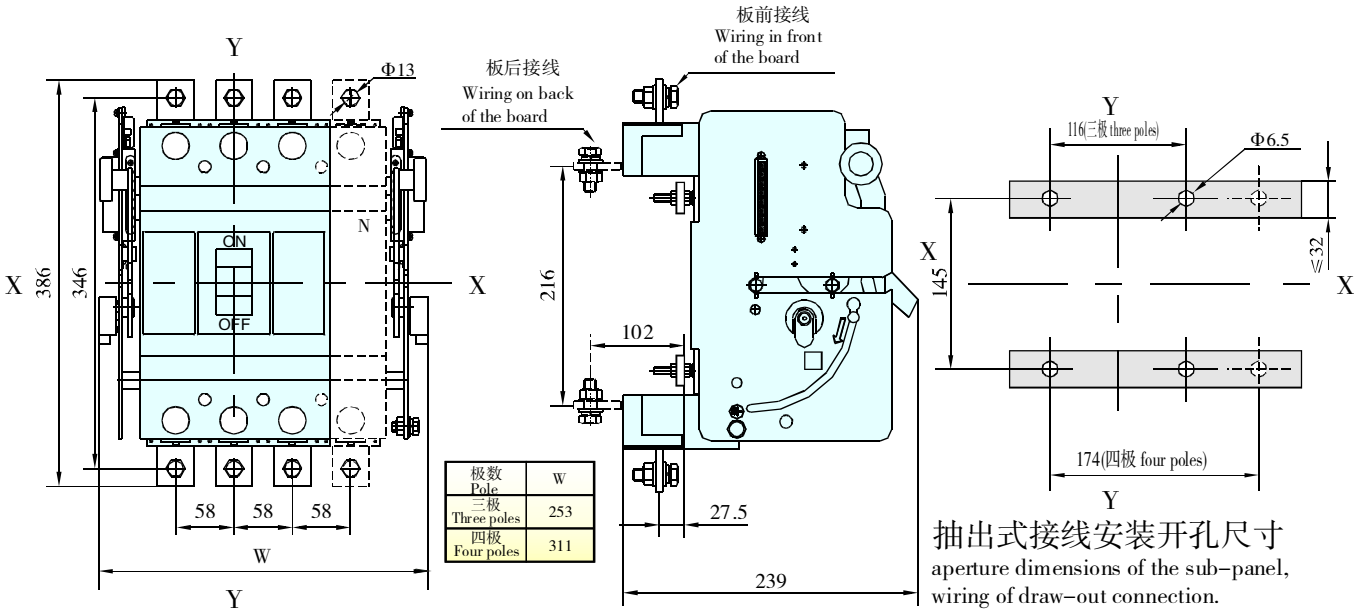




安装方式二开孔尺寸
Aperture Dimensions of the second mounting way

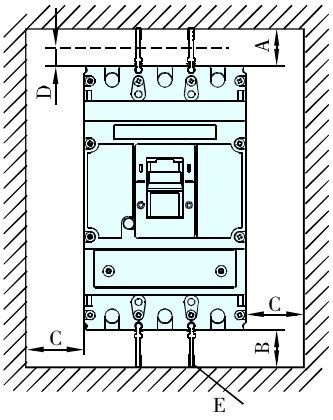
外形尺寸及安装尺寸 OUTLINE DIMENSIONS AND MOUNTING DIMENSIONS

- CM2-630、CM2Z-630 抽出式接线（三极、四极） Wiring of draw-out connection （three and four poles）
  X-X、Y-Y为三极断路器中心 As the center of the breaker with three poles



抽出式接线安装开孔尺寸
aperture dimensions of the sub-panel, wiring of draw-out connection.

断路器安装安全间隙 MOUNTING SAFETY CLEARANCE



A：到导电回路（包括无遮挡物或有接地金属）
B：断路器端子到底墙
C：断路器侧部到侧墙（包括无遮挡物或有接地金属）
D：到非导电部件
注：E为相间隔板。必须安装相间隔板或零飞弧罩

A: To conductive circuit (including without shetter or with earthed metals)
B: The terminals of the circuit breaker to the bottom wall
C: The side case of the circuit (breaker to the side wall (including without shelter or with earthed metals)
D: To non-conductive units

Note: E, the interphase barrier. the interphase barrier or zero arcventing cover should be installed

单位：mm
Measurement

型 号 Type	A		B	C	D
	不带零飞弧罩 Without zero arcventing cover	带零飞弧罩 With zero arcventing cover			
CM2-63	–	25	25	25	25
CM2-125、CM2Z-125	50	25	25	25	25
CM2-225、CM2Z-225	50	25	25	25	25
CM2-400、CM2Z-400	100	25	25	25	25
CM2-630、CM2Z-630	100	25	25	25	25

敬告用户:

内外部附件，须向本公司配套订货保证质量。如用户自行购买，装配后发生的一切不良后果本公司不能负责。

Warning:

The internal/external accessories should be ordered in a complete set for quality assurance. The company would not be responsible for the possible harmful effects after it was mounted if purchased by users themselves.

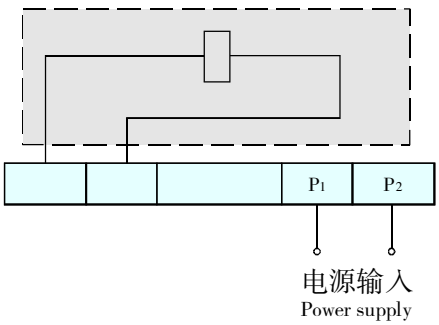
1、断路器的内部附件

根据用户需要断路器附件可直接导线引出（导线长度为50cm，有特殊要求订货时说明），或加装接线端子排（加装接线端子排，用户订货时注明）。

- QTCM2欠电压脱扣器，符号○

  AC50Hz/60Hz 230V、400V。

外挂欠电压模块接线图见下图(虚框内为断路器内部附件)



1、 Internal accessories

In terms of users' requirements, accessories could lead out by direct wire or by line wiring terminals additionally equipped (please mark out in case of making order).

- Under-voltage release

  AC50Hz/60Hz 230V、400V。

Wiring diagram of the under-voltage module connected externally see the following mechanism (internal accessories are indicated in the dotted square)

欠电压脱扣器型号 Under-voltage release type	配用断路器 Fitting Circuit Breaker	安装位置 Mounting position	欠电压脱扣器功率(VA) Power of the under-voltage release (VA)	
			AC230V	AC400V
QTCM2-63Z	CM2-63	左面 left	2.6	3.3
QTCM2-125Z	CM2-125		2.6	3.3
	CM2Z-125			
QTCM2-225Z	CM2-225		2.6	3.3
	CM2Z-225			
QTCM2-400Z	CM2-400		2.3	2.7
	CM2Z-400			
QTCM2-630Z	CM2-630		2.3	2.7
	CM2Z-630			

在额定电源电压的35%～70%时，欠电压脱扣器应可靠使断路器脱扣；

在额定电源电压的85%～110%时，欠电压脱扣器应保证断路器能合闸；

在额定电源电压低于35%时，欠电压脱扣器应防止断路器合闸。

With the working voltage of 35%~70% of the rated voltage, the under-voltage release should make the circuit breaker trip reliably.

With the working voltage of 85%~110% of the rated voltage, the under-voltage release should make the circuit breaker be switched on.

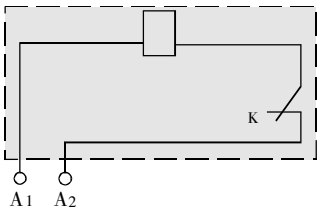
In case of the working voltage less than 35% of the rated voltage, the under-voltage release should prevent the circuit breaker from being switched on.

敬告：欠电压脱扣器必须先通电，断路器才能合闸。否则将损坏断路器!

Warning: only after the under-voltage release is electrified, the circuit breaker can be re-cramped and switched on. Otherwise, the circuit breaker would be damaged.

● FTCM2分励脱扣器，符号 ● Shunt release

接线图(虚框内为断路器内部附件) Wiring diagram (internal accessovies are indicated in the dotted square)



K：分励脱扣器内部与线圈串联的微动开关为常闭触头，当断路器分闸后，该触头自行断开，合闸时闭合
K: As a normally-closed contactor stands for the microswitch by the serial connection of the inside of shunt release and the coil as soon as the circuit breaker turns on or turns off , the contactor would be on or off in response.

电源输入 Power supply

电压规格：AC50Hz/60Hz 230V、400V; DC220V、24V

在额定控制电源电压的70～110%之间时，分励脱扣器应可靠使断路器脱扣。

Voltage specifications:: AC50Hz/60Hz 230V、400V; DC220V、24V

When the operation voltage is 70%~110% of the rated control voltage, the shunt release should make the circuit breaker trip reliably.

注：当额定控制电源电压为DC24V时，有两种解决方案。
方案1，采用DC24V分励脱扣器，但应满足如下条件。铜导线最大长度（两根导线中每根长度）须满足下表条件，脱扣器接线端处的电源功率须满足最小50W要求。

Note: While selecting DC24V voltage of the rated control power-supply, selecting two project.
Project1: Selecting DC24V release, but satisfy right table, and min-power capacity is 50W.

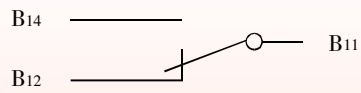
导线截面积 Wire area / 额定控制电源电压Us(DC24V) The rated control voltage	1.5mm²	2.5mm²
100%Us	150m	250m
85%Us	100m	160m

方案2，采用DC24V中间继电器控制AC230V或400V分励脱扣器，中间继电器触点容量不小于1A。

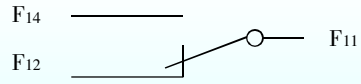
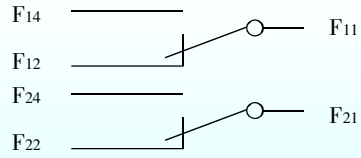
Project2: Selecting the inter mediate relay of DC24V with 1A current capacity of its contactor.

分励脱扣器型号 Shunt release type	配用断路器 Fitting breaker	安装位置 Mounting position
FTCM2-63Z	CM2-63 三极、四极 three/four poles	左面left
FTCM2-63Y		右面 right
FTCM2-125Z	CM2-125、CM2Z-125三极、四极 three/four poles	左面left
FTCM2-125Y	CM2-125三极、四极 three/four poles	右面 right
FTCM2-225Z	CM2-225、CM2Z-225三极、四极 three/four poles	左面left
FTCM2-225Y	CM2-225三极、四极 three/four poles	右面 right
FTCM2-400Z	CM2-400、CM2Z-400三极、四极 three/four poles	左面left
FTCM2-400Y	CM2-400三极、四极 three/four poles	右面 right
FTCM2-630Z	CM2-630、CM2Z-630三极、四极 three/four poles	左面left
FTCM2-630Y	CM2-630三极、四极 three/four poles	右面 right

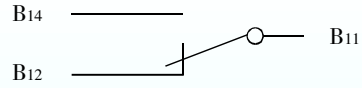
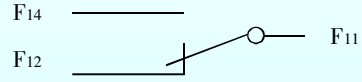
● BCCM2报警触头,符号 □Alarm contact

报警触头型号 Alarm contact type	配用断路器 Fitting breaker	安装位置 Mounting position	状态 status
BCCM2-63Z	CM2-63 三极、四极 three/four poles	左面left	 图示为断路器处于“分”或“合”时的状态，The status of the breaker in “off” or “on”, 当断路器处于“脱扣”时，图示状态转换。If breaker is “tripped”, the status is changovered.
BCCM2-63Y		右面 right	
BCCM2-125Z	CM2-125、CM2Z-125三极、四极 three/four poles	左面left	
BCCM2-125Y	CM2-125三极、四极 three/four poles	右面 right	
BCCM2-225Z	CM2-225、CM2Z-225三极、四极 three/four poles	左面left	
BCCM2-225Y	CM2-225三极、四极 three/four poles	右面 right	
BCCM2-400Z	CM2-400、CM2Z-400三极、四极 three/four poles	左面left	
BCCM2-400Y	CM2-400三极、四极 three/four poles	右面 right	
BCCM2-630Z	CM2-630、CM2Z-630三极、四极 three/four poles	左面left	
BCCM2-630Y	CM2-630三极、四极 three/four poles	右面 right	

● FCCM2辅助触头，符号 ■Auxiliary contact

辅助触头型号 auxiliary contact type	配用断路器 Fitting breaker	安装位置 Mounting position	状态 status
FCCM2-63Z	CM2-63 三极、四极 three/four poles	左面left	 图示为断路器处于“分”或“脱扣”时的状态，当断路器处于“合”时，图示状态转换。The status of breaker is “off” or “tripped”, if breaker is “on”, the status is changovered.
FCCM2-63Y		右面 right	
FCCM2-125Z	CM2-125、CM2Z-125三极、四极 three/four poles	左面left	
FCCM2-125Y	CM2-125三极、四极 three/four poles	右面 right	
FCCM2-225Z	CM2-225、CM2Z-225三极、四极 three/four poles	左面left	
FCCM2-225Y	CM2-225三极、四极 three/four poles	右面 right	
FCCM2-63YS	CM2-63 三极、四极 three/four poles	右面 right	 图示为断路器处于“分”或“脱扣”时的状态，当断路器处于“合”时，图示状态转换。The status of breaker is “off” or “tripped”, if breaker is “on”, the status is changovered.
FCCM2-125ZS	CM2-125、CM2Z-125三极、四极 three/four poles	左面left	
FCCM2-225ZS	CM2-225、CM2Z-225三极、四极 three/four poles	左面left	
FCCM2-400ZS	CM2-400、CM2Z-400三极、四极 three/four poles	左面left	
FCCM2-400YS	CM2-400三极、四极 three/four poles	右面 right	
FCCM2-630ZS	CM2-630、CM2Z-630三极、四极 three/four poles	左面left	
FCCM2-630YS	CM2-630三极、四极 three/four poles	右面 right	

- FBCM2辅助触头+报警触头，符号 ■□ Auxiliary and alarm contacts

辅助触头+报警触头型号 Auxiliary and alarm contact type	配用断路器 Fitting breaker	安装位置 Mounting position	状态 status
FBCM2–63Z	CM2–63 三极、四极 three/four poles	左面left	 图示为断路器处于“分”或“脱扣”时的状态，当断路器处于“合”时，图示状态转换。The status of breaker is “off” or “tripped”, if breaker is “on”, the status is changovered.  图示为断路器处于“分”或“合”时的状态，The status of the breaker in “off” or “on”，当断路器处于“脱扣”时，图示状态转换。If breaker is “tripped”, the status is changovered.
FBCM2–63Y		右面 right	
FBCM2–125Z	CM2–125、CM2Z–125三极、四极 three/four poles	左面left	
FBCM2–125Y	CM2–125三极、四极 three/four poles	右面 right	
FBCM2–225Z	CM2–225、CM2Z–225三极、四极 three/four poles	左面left	
FBCM2–225Y	CM2–225三极、四极 three/four poles	右面 right	
FBCM2–400Z	CM2–400、CM2Z–400三极、四极 three/four poles	左面left	
FBCM2–400Y	CM2–400三极、四极 three/four poles	右面 right	
FBCM2–630Z	CM2–630、CM2Z–630三极、四极 three/four poles	左面left	
FBCM2–630Y	CM2–630三极、四极 three/four poles	右面 right	

- 辅助触头、报警触头额定工作电流
  Operational performance of electrifred auxiliary contact and the corresponding test condition

分类 Classifications	壳架等级额定电流(A) Rated frame current	约定发热电流I_{th}(A) Conventional heating current	额定工作电流I_e(A) Rated working current	
			AC400V	DC220V
辅助触头 Auxiliary contact 报警触头 Alarm contact	Inm ≤225	3	0.3	0.15
	Inm ≥400	3	0.4	0.15

- 辅助触头的通电操作性能及相应的试验条件
  Operational performance of electifed auxiliary contact and the corresponding test condition

使用类别 Usage category	接通 On			分断 Off			通电操作循环次数 Electrified operational times	每分钟操作循环次数*) Operational time per minute	通电时间*) Duration under current
	I/Ie	U/Ue	cosϕ或$T_{0.95}$	I/Ie	U/Ue	cosϕ或$T_{0.95}$			
AC-15	10	1	0.3	1	1	0.3	6050	6	≥0.05s
DC-13	1	1	6Pe	1	1	6Pe			≥$T_{0.95}$

- 辅助触头的非正常条件下接通与分断能力
  The on-off ability of the auxiliary contact under improper conditions

使用类别 Usage category	接通 On			分断 Off			通电操作循环次数 Electrified operational times	每分钟操作循环次数*) Operational time per minute	通电时间*) Duration under current
	I/Ie	U/Ue	cosϕ或$T_{0.95}$	I/Ie	U/Ue	cosϕ或$T_{0.95}$			
AC-15	10	1.1	0.3	10	1.1	0.3	10	2	≥0.05s
DC-13	1.1	1.1	6Pe	1.1	1.1	6Pe			≥$T_{0.95}$

注：上述二表1.$T_{0.95}$=6Pe是经验公式，其中Pe以“瓦”单位，$T_{0.95}$毫秒为单位。
2.*)操作频率和通电时间允许与断路器主电路的一致。

Note: For two tables above
1. “$T_{0.95}$=6Pe” is a traditional formula in which the unit of “Pe” is watl and the unit of “$T_{0.95}$” is mini-second
2.Frequency and duration under current of the auxiliary contact are allowed to be the same sa that of the main circuit

2、断路器的外部附件

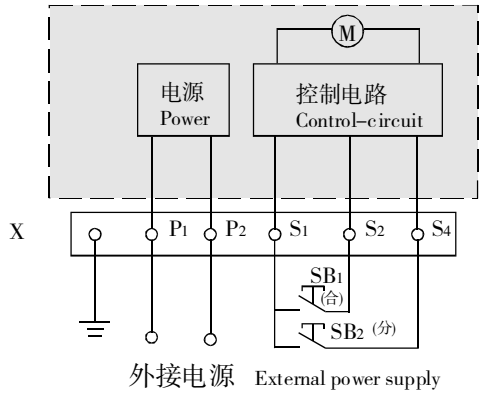
- DCCM2电动操作机构

电动机操作机构接线图见下图（虚框内为断路器外部附件接线图）

2、External accessories

- Motor-driven operation mechanism

Wiring diagram of motor-driven operation mechanism see the following mechanism (internal accessories are indicated in the dotted square)



符号说明：
Code description:
SB_1、SB_2操作按钮（用户自备）
SB_1 and SB_2 stand for push button (provided by users themselves)
X接线端子排
X stands for line wiring terminals
P_1、P_2为外接电源
P_1 and P_2 stand for external power supply

电压规格：AC50Hz/60Hz 110V、230V
DC24V、110V、220V

Voltage specifications：AC50Hz/60Hz 110V、230V
DC24V、110V、220V

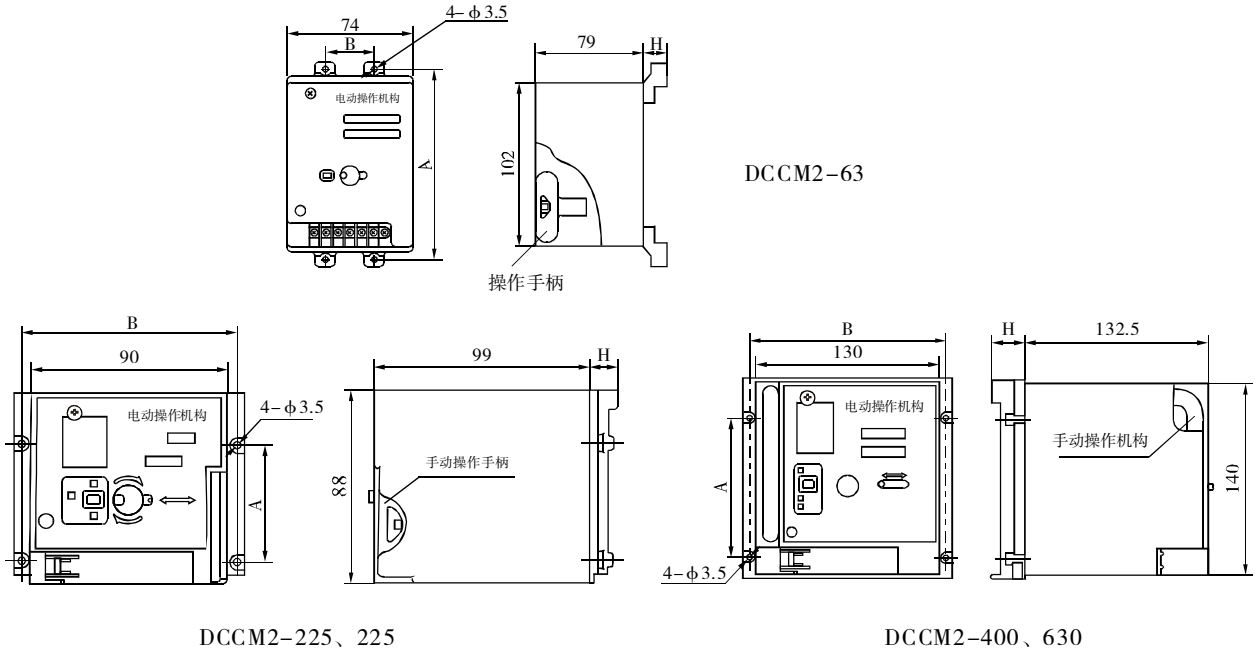
- 电动操作机构的动作电流、电机功率及寿命
  Acting Current、Motor Power and Longevity of Power-driven Operating Mechanism

电动操作机构型号 Motor operator type	配用断路器 For circuit breaker	动作电流(A) Acting Current		电机功率(W) Motor Power	寿命(次数) Durability (times)
		AC110V、230V DC110V、220V	DC24V		
DCCM2-63	CM2-63	≤0.5	≤3	14	20000
DCCM2-125	CM2-125 CM2Z-125	≤0.5	≤3	14	20000
DCCM2-225	CM2-225 CM2Z-225	≤0.5	≤3	14	20000
DCCM2-400	CM2-400 CM2Z-400	≤2	≤5	35	10000
DCCM2-630	CM2-630 CM2Z-630	≤2	≤5	35	10000

注：断路器脱扣跳闸后，电动操作机构必须先使断路器再扣，然后才能合闸，若由智能型脱扣器控制，已考虑此种情况。

Note:After the circuit breaker trips,power-driven operating mechanism has to make the circuit breaker recramped,then it can be turned on.If the circuit breaker is controued by the intelligent release,this situation has alreach been taken into account.

电动操作机构外形安装尺寸
Outline dimensions and mounting dimensions of Power driven Operating Mechanism



电动操作机构型号 Motor operator type		DCCM2-63	DCCM2-125	DCCM2-225	DCCM2-400	DCCM2-630
安装尺寸 Mounting dimensions	A	117	53	53.5	100	90
	B	25	85	100	139	170
	H	11.5	12.5	12.5	23	23

ZCCM2手动操作机构

特点：

该操作机构采用独特的设计和传动结构，通过旋转手柄实现塑壳断路器的合闸、分闸和再扣。操作灵活、平稳、操作力小，安装方便，机构的整体性能和质量均优于其它同类产品。操作机构对三、四极都通用。

用途：

本机构专用于CM2、CM2Z系列塑壳断路器，通过转动手柄实现抽屉柜、配电柜、动力箱等在面板上操作的要求，并保证断路器处于合闸时柜体门板不能开启（即与门联锁）。

Turning handle operation mechanism

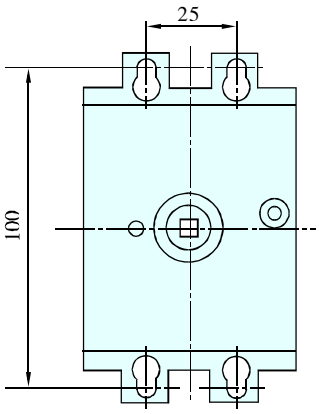
Characteristics:

Adopting the unique design and transmitting structure, the operation mechanism can make the circuit breaker be switched on, switched off and re-cramped by turning the handle. The overall performance and quality of this operation mechanism are superior to other similar products for its flexibility, stability, little operating force and convenient installation. For MCCBs of three or four poles, their operation mechanism are same.

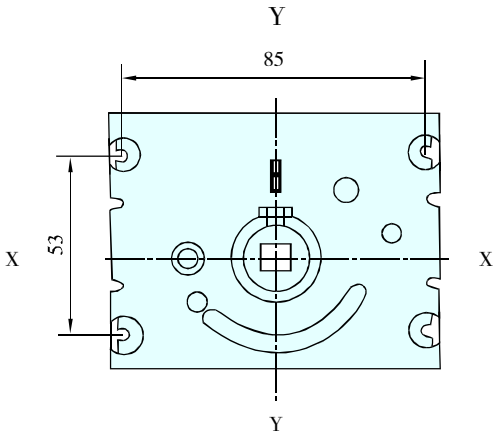
Usage:

Specially used in CM2 and CM2Z Series MCCBs, the mechanism can operate the draw-out cabinet, power distribution cabinet and power supply box etc on the panel by turning the handle, and ensure that the panel sheet of the cabinet can not be opened when the circuit breaker is on (i.e interlock with the door).

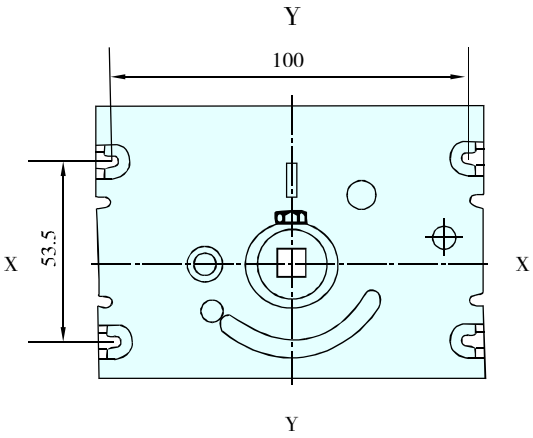
- 门板中心开孔
  Aperture in the center of the panel sheet
  X–X、Y–Y为三极断路器中心
  X–X、Y–Y as the center of three poles circuit breaker



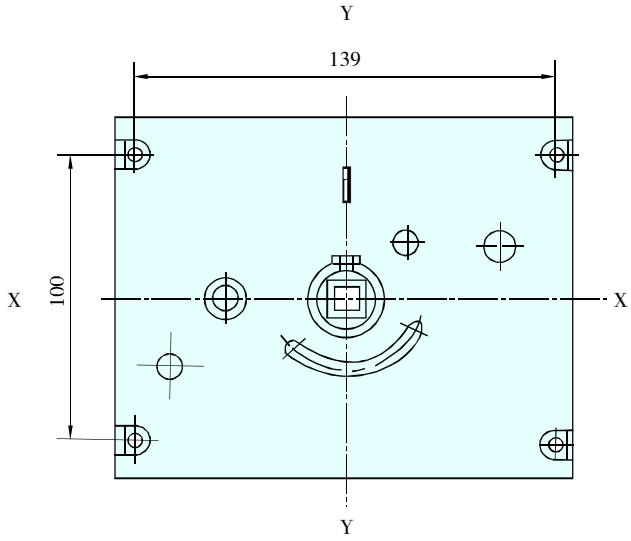
ZCCM2–63C
配于CM2–63
For CM2–63



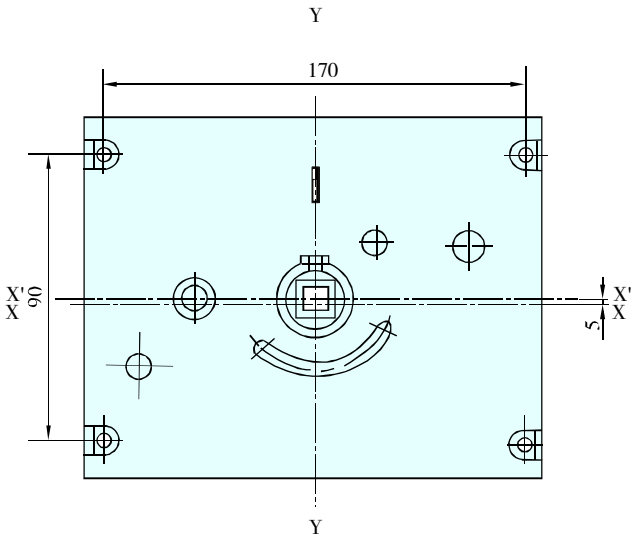
ZCCM2–125C
配于CM2–125、CM2Z–125
For CM2–125、CM2Z–125



ZCCM2–225C
配于CM2–225、CM2Z–225
For CM2–225、CM2Z–225

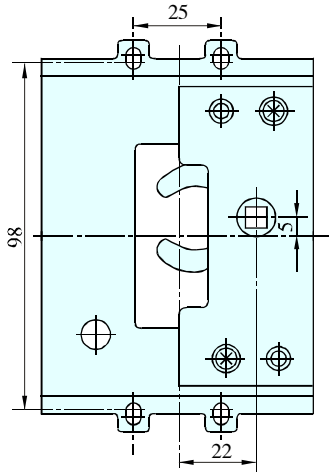


ZCCM2-400C
配于CM2-400、CM2Z-400
For CM2-400、CM2Z-400

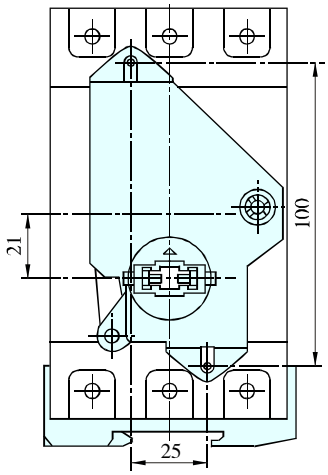


ZCCM2-630C
配于CM2-630、CM2Z-630
For CM2-630、CM2Z-630
注：X'-X'为手操机构中心
X'-X' as the center of handle mechanism

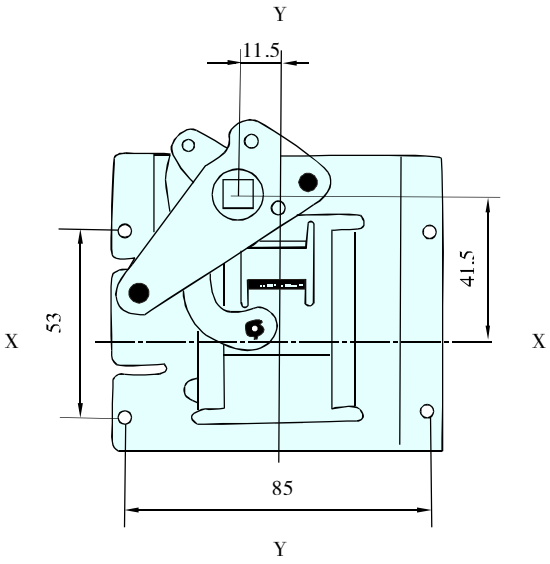
- 门板偏心开孔
  Aperture out of center
  X-X、Y-Y为三极断路器中心
  X-X、Y-Y as the center of three poles circuit breaker



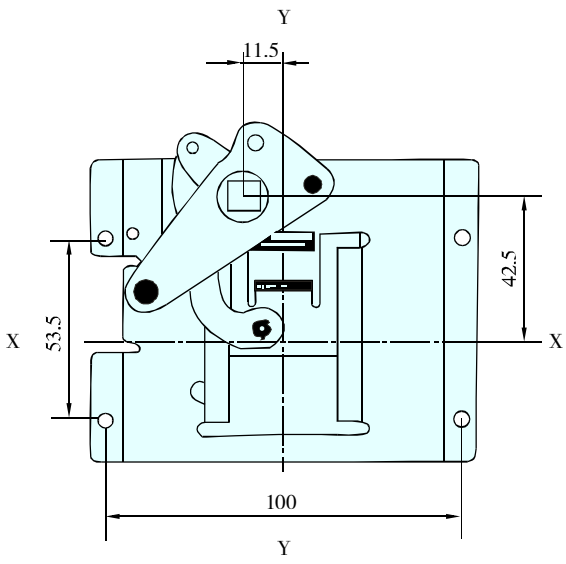
ZCCM2-63A
配于CM2-63
For CM2-63
（可用于GCS柜横装，无转动手柄配用）
（could be used for GCS panel installed horizontally）



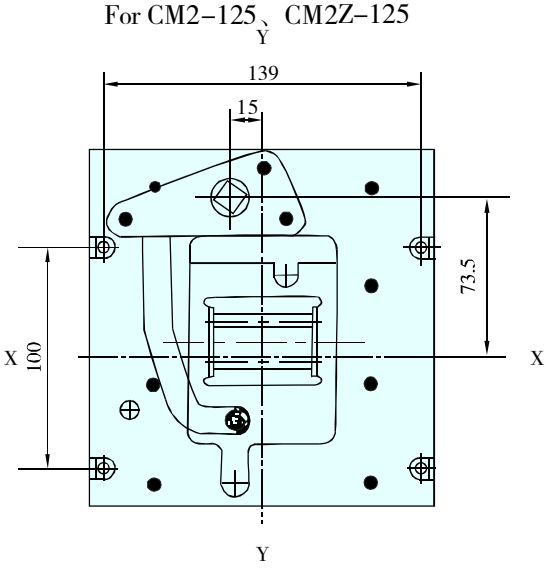
ZCCM2-63B
配于CM2-63
For CM2-63
（可用于MNS柜8E/2或8E/4板后接线）
（could be used in MNS panel 8E/2 or 8E/4 wiring on back of the board）



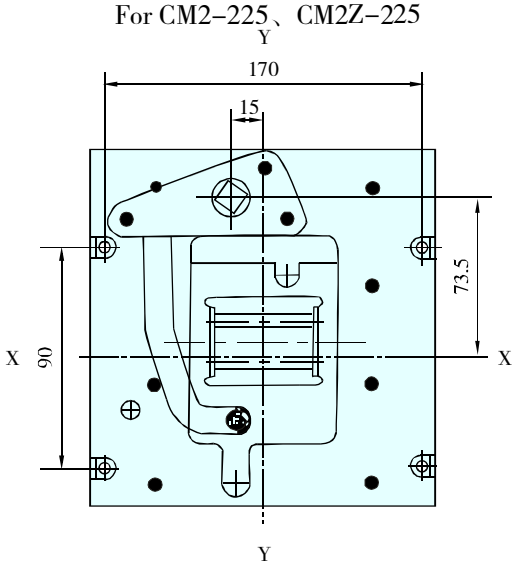
ZCCM2-125A
配于CM2-125、CM2Z-125
For CM2-125、CM2Z-125



ZCCM2-225A
配于CM2-225、CM2Z-225
For CM2-225、CM2Z-225

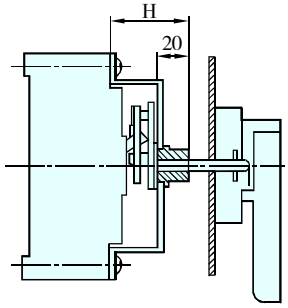


ZCCM2-400A
配于CM2-400、CM2Z-400
For CM2-400、CM2Z-400

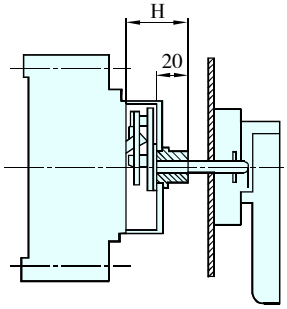


ZCCM2-630A
配于CM2-630、CM2Z-630
For CM2-630、CM2Z-630

操作机构高度
Height of the handle mechanism



CM2-63



CM2
CM2Z -125、225、400、630

安装形式 Mounting type	安装操作机构的断路器型号 Type of circuit breakers with the handle mechanism mounted	H（mm）
中心式 Central	CM2-63	49
	CM2-125、CM2Z-125	56
	CM2-225、CM2Z-225	57
	CM2-400、CM2Z-400	66
	CM2-630、CM2Z-630	66
偏心式 Eccentic	CM2-63	24（用于GCS柜）/45（用于MNS柜）
	CM2-125、CM2Z-125	52
	CM2-225、CM2Z-225	52
	CM2-400、CM2Z-400	48
	CM2-630、CM2Z-630	50

- 操作机构可配用二种操作手柄：一种为“F”型方形手柄；另一种为“A”型圆形手柄，其门板开孔尺寸见下图。

操作手柄特点：

1.当断路器在合闸状态时，不能开启柜门；

2.若操作手柄或操作机构在合闸状态时有故障，可通过操作手柄上的紧急解锁装置开启柜门；

3.对应不同规格的操作机构，相配套的手操手柄，其门板开孔一致。

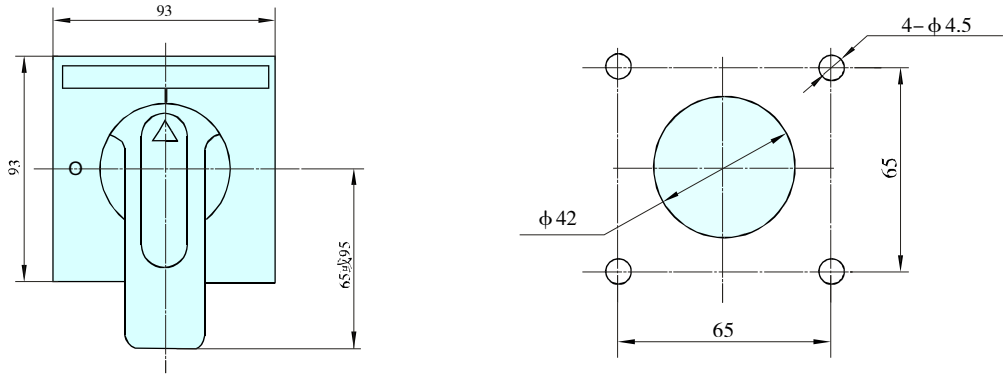
- The handle mechanism can be equipped with two types of operation handle: one is square handle "F", the other is round handle "A", Aperture dimensions on the panel sheet see the following:

Characteristics of the operation handle:

1.The panel sheet can't be opened when the circuit breaker is closed.

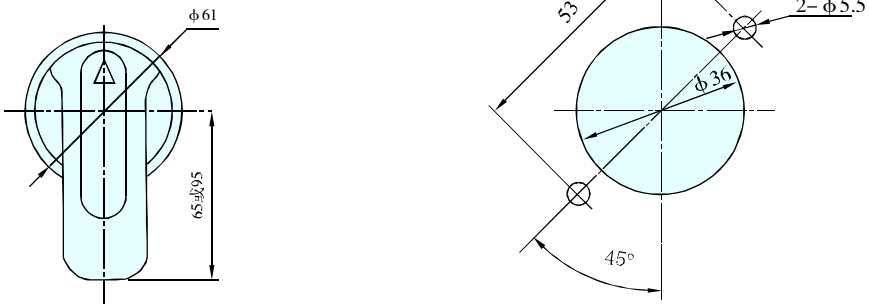
2.If fault happens when the operation handle or hand driven mechanism is closed, the panel sheet can be opened by operating the hard-driven mechanism is closed, the panel sheet can be opened by operating the energency reliever on the operation handle.

3.The aperture of the consspondent operation handle on the panel sheet should be the same regardless of the hard-driven mechanism of different specification.



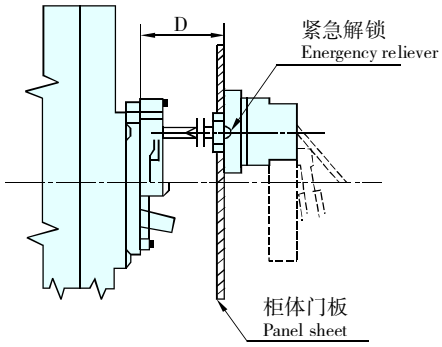
“F”型方形手柄外形及门板开孔尺寸（开孔中心离铰链距离不小于200mm）

Contour of square handle “F” and the aperture dimensions on the panel sheet (Distance from the aperture center to the hinge of panel sheet isn't less than 200mm)



“A”型圆形手柄外形及门板开孔尺寸（开孔中心离铰链距离不小于200mm）

Contour of round handle "A" and the aperture dimensions on the panel sheet (Distance from the aperture center to the hinge of panel sheet isn't less than 200mm)



注：方轴长度D=150，长度大于150mm时，在订货时注明；

Note: Length of the square axis (D) is 150mm. If the length is move than 150mm, please note while making order.

- CM2Z专用测试器（用户订货时需注明）

为方便用户对CM2Z断路器各整定参数进行确认，本公司可提供CM2Z专用测试器（内装一节9V碱性电池，用户自备），测试器通过测试口与断路器本体相连。

- CM2Z–exclusive Tester (Note while making order)

To facilitate users' confirmation of rarions setting parameters of CM2Z Circuit Breakers, the company can provide CM2Z–exclusive Tester (a piece of 9V alkaline battery inside and provided by users themselves). which is linked with the circuit breakers by the interface of the tester

不同额定电流的连接导线参考截面 REFERENCE CROSS-SECTIONAL AREA OF CONNECTING WIRE WITH DIFFERENT RATED CURRENT

不同额定电流的连接导线的参考截面
Reference cross-sectional area of connecting wire with different rated current

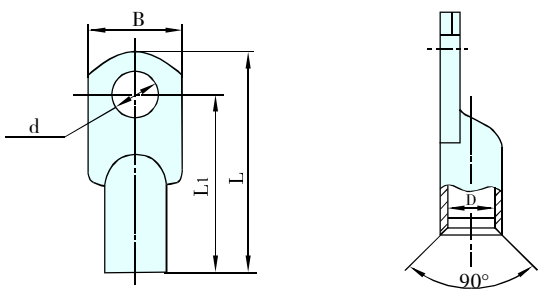
额定电流In(A) Rated current	6 10	16 20	25	32	40 50	63	80	100	125 140	160	180 200 225	250	315 350	400
导线截面积（mm^2） Cross-sectional area of wire	2.5	2.5	4	6	10	16	25	35	50	70	95	120	185	240

额定电流In(A) Rated current	电缆 Cable		铜排 Copper bar	
	截面积（mm^2） Cross-sectional area of wire	数量 Number	尺寸（mm × mm） Dimensions	数量 Number
500	150	2	30 × 5	2
630	185	2	40 × 5	2

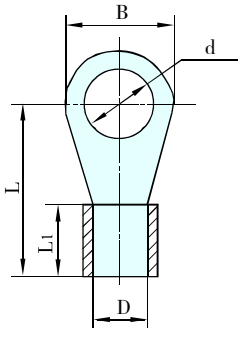
注：按GB14048标准，CM2-63中额定电流6A采用1mm^2导线和10A采用1.5mm^2导线连接满足温升要求。
Note: Rated current 6A by 1mm^2 cable connecting and 10A by 1.5mm^2 cable connecting of CM2-63 are complied temperature-rises of GB14048 standrad.

接线端子型号 TYPE OF WIRING TERMIRALS

接线端子有JGC及JBC两种
Two types of wiring terminals are supplied JGC and JBC



JGC型 JGC type



JBC型 JBC type

接线端子型号 TYPE OF WIRING TERMIRALS

断路器型号 Type	额定电流In(A) Rated current	导线截面积(mm²) Cross-sectional area of wire	端子型号 Type of Terminals	B	L	L1	D	d
CM2-63	6、10、16、20	2.5	JBC2.5-5	10.4	18.2	9	φ2.6	φ5.2
	25	4	JBC4-5	11.7	20.2	9	φ2.8	φ5.2
	32	6	JBC6-5	12.8	22.6	10.3	φ3.5	φ5.2
	40、50	10	JBC10-5	13.7	25.2	12.2	φ4.2	φ5.2
	63	16	JGC16-5	12.5	38	31.5	φ6	φ5.2
CM2-125 CM2Z-125	16、20	2.5	JBC2.5-8	15	24.5	8.5	φ2.6	φ8.2
	25	4	JBC4-8	13.4	20.4	9.2	φ2.8	φ8.2
	32	6	JBC6-8	15	24.5	10	φ3.5	φ8.2
	40、50	10	JBC10-8	15	24.5	11	φ4.5	φ8.2
	63	16	JGC16-8	12.5	41	33.5	φ6	φ8.2
	80	25	JGC25-8	14	46	38.5	φ7	φ8.2
	100	35	JGC35-8	15.5	52	44.5	φ8	φ8.2
	125	50	JGC50-8	17	54	45	φ10	φ8.2
CM2-225 CM2Z-225	125、140	50	JGC50-8	17	54	45	φ10	φ8.2
	160	70	JGC70-8	21.6	61	52	φ11	φ8.2
	180、200、225	95	JGC95-8	22	66	57	φ13	φ8.2

FWB1温度报警模块 TEMPERATURE ALARM MODULE

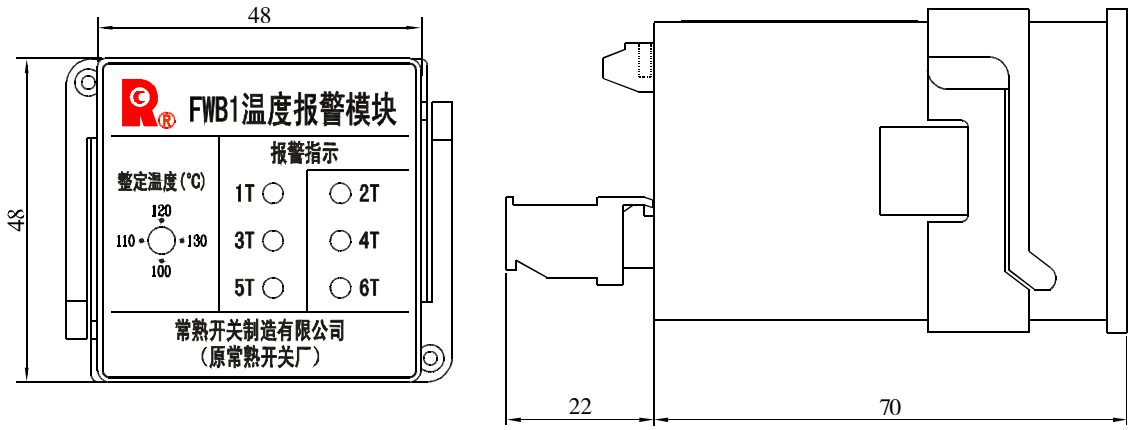
FWB1温度报警模块采用FRG热传感器直接安装在连接点位置在线检测温度，最多监测6路连接位置温度(热传感器连接至温度报警模块背面的输入端子分别为1T、2T、3T、4T、5T、6T)。当监测到连接点温度超过动作温度时，温度报警模块指示灯点亮发出相应报警指示，并且内置的继电器二路输出触头闭合（二路输出端子分别为13、14，23、24），可发出远方报警信号或使断路器跳闸；当监测到连接点温度降至复位温度时，温度报警模块指示灯熄灭并且二路输出触头断开。温度报警模块连接至热传感器的线长为1.5米。

FWB1 temperature alarm module adopts online temperature detection that the FRG heat sensor directly mounted on the connection position.It can detect at most six points connection position(the input terminals on the back of the temperature alarm module, which the heat sensot is connected to,are 1T、2T、3T、4T、5T、6T respectively).When detecting the temperature of the connection points is higher than action temperature, the temperature alarm module' s directive lights are on and alarming,at that time,the inbuilt relay' s 2nd output contact will make(the 2nd output terminals are 13、14, 23、24 respectively);when detecting the connection temperature dropping to resetting temperature, the temperature alarm module' s directive lights are off and the 2nd output contact will break.The connection wire between the temperature alarm module and the heat sensor is of 1.5m length.

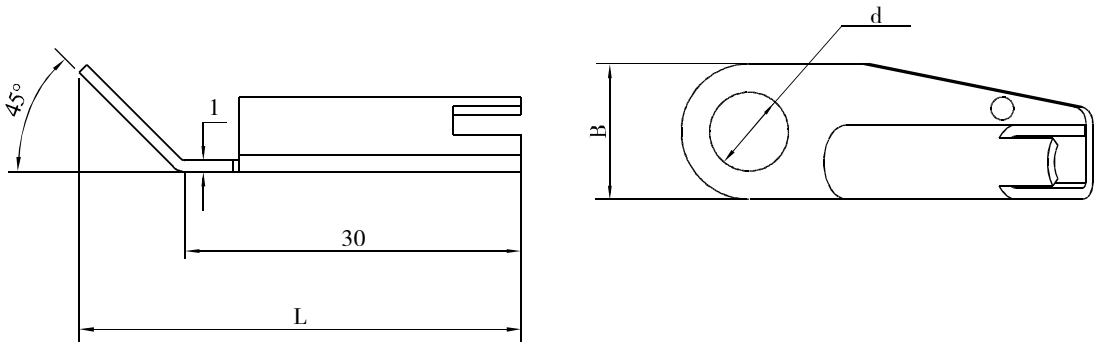
FWB1温度报警模块 TEMPERATURE ALARM MODULE

测温范围 temperature detection range	0~150℃
动作温度To action temperature	100/110/120/130℃
复位温度Tr resetting temperature	To-5℃
精度 precision	±5℃
传感器绝缘耐压 sensor insulation withstand voltage	AC3500V/1min
测温点数 temperature detection points	最多6路 6 points at most
工作电源 operatiing current	AC230V，范围range195~253V
输出触头容量 output contace capacity	3A/AC250V，3A/DC24V
工作温度 operating temperature	-20℃~+70℃

- FWB1温度报警模块+FRG热传感器 FWB1 temperature alarm module+FRG heat sensor



FWB1温度报警模块
Temperature alarm module



FRG热传感器
Hest sensor

FWB1温度报警模块 TEMPERATURE ALARM MODULE

热传感器型号 heat sensor type	B（mm）	L（mm）	d（mm）
FRG-7	12	40	φ7
FRG-9	14	41	φ9
FRG-11	16	42	φ11
FRG-13	18	44	φ13
FRG-17	22	47	φ17

功耗及降容系数 POWER WASTAGE AND CAPACITY REDUCING FACTOR

- 功率损耗（环境温度+40℃） Power loss (ambient temperature +40℃)

功率损耗是在断路器通以壳架电流Inm情况下测量的总的损耗。

Power loss is the total loss when the circuit breaker is operated with the frame current Inm.

型号 Type	通电电流（A） Electromotion current	三极/四极 功耗（W） Power loss		
		板前、板后接线 Wiring in front or on back of the board	插入式接线 Insertion type	抽出式接线 draw-out
CM2-63	63	14.3	14.5	—
CM2-125	125	24.4	24.6	—
CM2Z-125		21.6	21.8	—
CM2-225	225	41	41.2	—
CM2Z-225		33.4	33.6	—
CM2-400	400	67.2	67.5	87.2
CM2Z-400		38.4	38.7	48.4
CM2-630	630	107.2	107.5	127.2
CM2Z-630		95.3	95.6	115.3

功耗及降容系数 POWER WASTAGE AND CAPACITY REDUCING FACTOR

- 降容系数 Capacity-lowering coefficient

  环境温度变化的降容系数 Capacity-lowering coefficient due to the change of ambient temperature

型号 Type / 所处环境温度 Ambient temperature	+40℃	+45℃	+50℃	+55℃	+60℃
CM2-63	1In	0.981In	0.962In	0.922In	0.908In
CM2-125	1In	0.972In	0.942In	0.912In	0.881In
CM2-225	1In	0.982In	0.963In	0.944In	0.925In
CM2-400	1In	0.977In	0.954In	0.930In	0.905In
CM2-630	1In	0.977In	0.953In	0.929In	0.904In

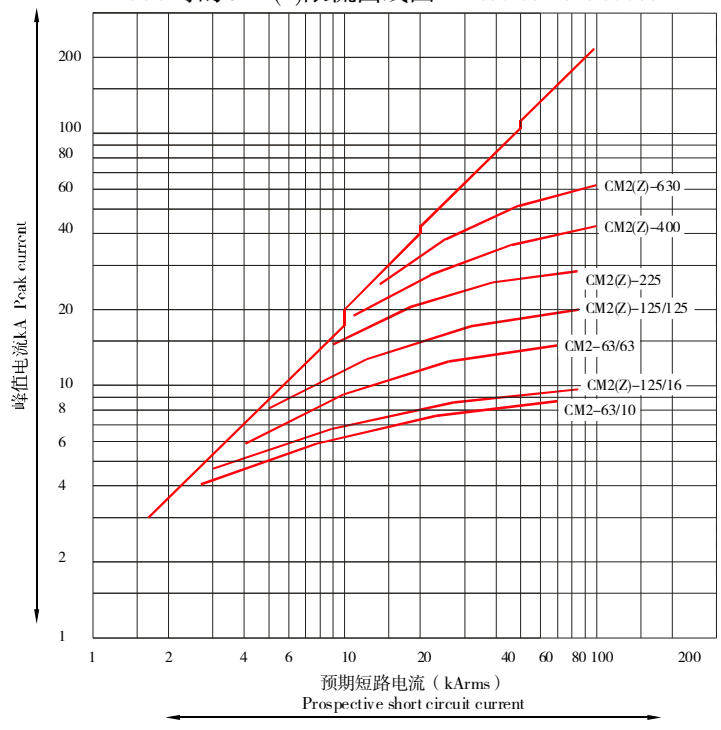
高海拔降容 CAPACITY-REDUCING FOR HIGH-ELEVATION

海拔超过适用工作环境的2000m，断路器电气性能可参照下表修正：
If elevation exceeds work environment 2000m, electric property of circuit breaker can correct according to following table:

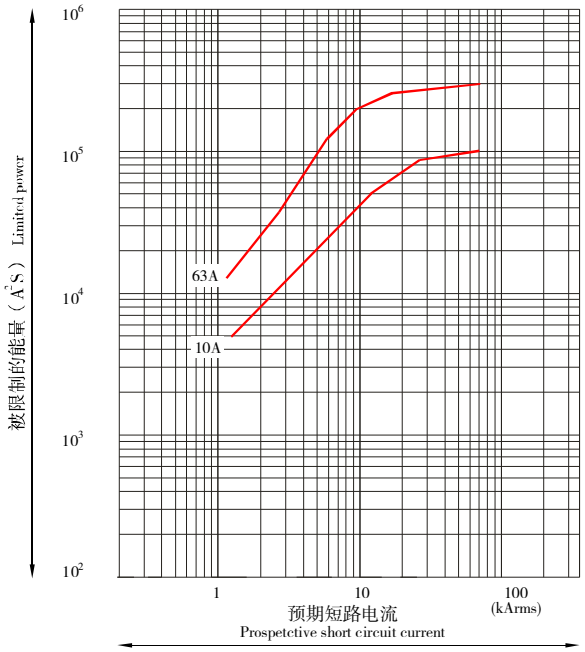
海拔（m） elevation	2000	3000	4000	5000
工频耐压(V) Power-frequency withstand voltage	3000	2500	2000	1800
工作电流修正系数 Correction factor of operational current	1	0.94	0.88	0.83

CM2(Z)限流特性 LIMITED CHARACTERISTIC

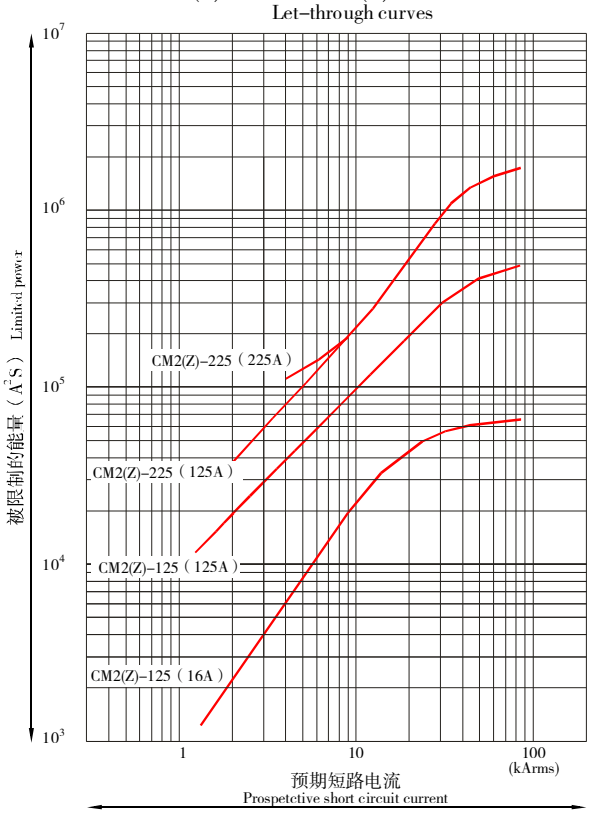
400V时的CM2(Z)限流曲线图Limited current cuves



CM2-63 允通曲线
Let-through curves



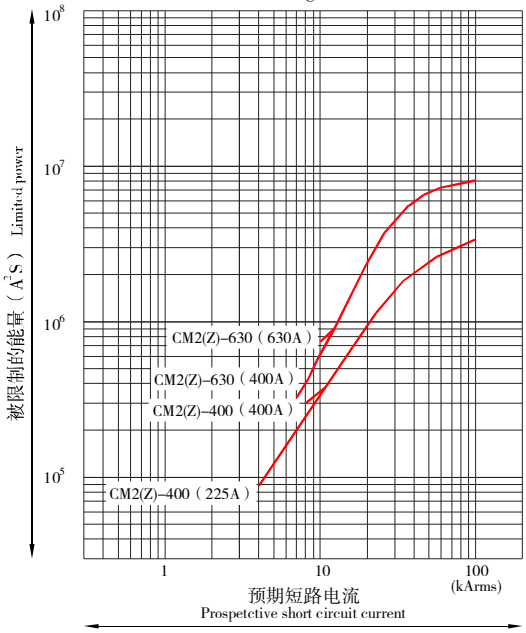
CM2(Z)-125、CM2(Z)-225 允通曲线
Let-through curves



CM2(Z)限流特性 LIMITED CHARACTERISTIC

CM2(Z)–400、CM2(Z)–630 允通曲线

Let–through curves



CM2Z/T 断路器通信功能 COMMUNICATIVE FUNCTION OF CM2Z/T

带电动操作机构的CM2Z/T断路器（带通信模块）与上位机连接，可实现远距离“四遥”功能。另外，加装CM2Z断路器控制器（选购配件）还可在现场直接读取断路器的各项参数并进行修改。

接口协议：采用标准RS485接口，ModBus–RTU协议，通信波特率19200bps（支持1200，2400，4800，9600，38400bps）。

数据帧格式：1位起始位，8位数据位，2位停止位，偶校验（支持奇校验及无校验）。

网络特性：采用双绞屏蔽线，每一通信线最多连接32台设备，最长距离1200米，可以通过中继器延长通信距离。

同一条总线的所有设备需采用相同的波特率、奇偶校验，并且设备地址不重复，CM2Z/T才能正常通信。

CM2Z/T breaker (with communication module) with motor operator can connect with up–level device to realize remote “four telecontrol” function. Moreover, it can still directly read it's various parameters and proceed modification on the spot with the adding–up of CM2Z controller(make choice of purchase the accessories).

Interface protocol: adopt standard RS485 interface, ModBus–RTU protocol, communication baud rate 19200bps (give support to 1200, 2400, 4800, 9600, 38400bps).

Data frames format: one start bit, eight data bits, two stop bits, even parity (give support to parity odd and no parity).

Network behavior: adopt twin–intwist screened wires, each communication wire links 32 sets equipment at most, the maximum distance is 1200m, but it can prolong by adding repeater.

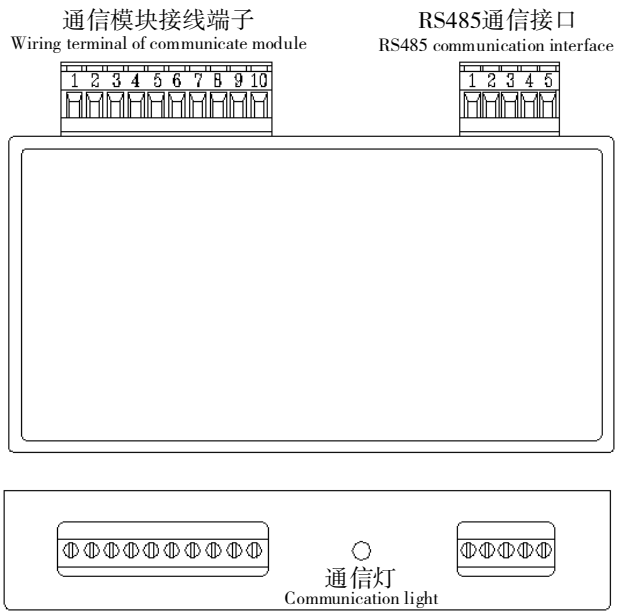
CM2Z/T breaker can communicate normally must accord with following conditions: all equipment which on identity bus wire must adopt identical baud rate、odd–even check, and the equipment's address doesn't repeat.

断路器组网状态 Status of group networks		CM2Z/T断路器+上位机 CM2Z/T+up-level device	CM2Z/T断路器+断路器控制器 CM2Z/T+ controller
断路器识别 Identification	断路器型号 Type	●	●
	通信地址 Communication address	●	●
状态指示 Status indication	合闸/分闸 Switching-on/ switching-off	●	●
	报警、故障指示 Alarm、malfunction indication	●	●
	允许/禁止网络控制 Permit/forbid network control	●	
	本地参数修改 Modify local-parameters	●	
断路器控制 Control	合闸/分闸 Switching-on/ switching-off	● （需安装电操） (must install motor operator)	● （需安装电操） (must install motor operator)
整定保护值 读取/修改 Read/modify setting safeguard value	过载长延时动作整定电流I_{r1}、整定时间t_1 Current setting for over-load long-time delay I_{r1}, setting time t_1	●	●
	短路短延时动作整定电流I_{r2}、整定时间t_2 Current setting for short-circuit short-time delay I_{r2}, setting time t_2	●	●
	短路瞬时动作整定电流I_{r3} Current setting for short-circuit instantaneous I_{r3}	●	●
	中性极电流整定值I_{r1N} Current setting value for neutral phase I_{r1N}	● （四极断路器） (four-phase)	● （四极断路器） (four-phase)
	电流不平衡保护设定值 Setting value for protection against phase imbalance of current	●	●
	接地故障动作整定电流I_{r4}、整定时间t_4 Current setting for earth fault I_{r4}, setting time t_4	●	●
工作参数 Operational parameter	三相电流值I_A、I_B、I_C Three-phase current value I_A、I_B、I_C	●	●
	接地故障电流值Ig Earth fault current value Ig	●	●
	N相电流值I_N N phase current value I_N	● （四极断路器） (four-phase)	● （四极断路器） (four-phase)
	报警类型 Alarm type	●	
	故障类型 Malfunction type	●	●
	分断电流 Breaking current	●	●
	分断时间 Break time	●	●
	最近一次故障记录 A latest malfunction record	●	●

注：断路器在连接电流正常工作时，保护的设定值可以通过上位机软件、断路器控制器以及断路器本体按键三种方式来进行修改。

Note: when breaker operates normally, the setting value can be modified through three methods. i.e. up-level device software、controller and keystoke which on the main body of the breaker.

通信模块 Communication module



通信模块接线端子的接线：
Connection for wiring terminal of communicate module

端子 Terminal	连接 Connect
P1	电操机构控制COM The terminal which used to control COM by motor operator
P2	电操机构控制ON The terminal which used to control ON by motor operator
P3	电操机构控制OFF The terminal which used to control OFF by motor operator
P4、P5	网络控制选择（参见注） The terminal which used to selection of network control (reference note)
P8	电源输入DC24V（+） The terminal which used to power input DC24V (+)
P10	电源输入DC24V（-） The terminal which used to power input DC24V (-)

RS485通信接口端子的接线：
Connection for wiring terminal of RS485 communication interface

端子 Terminal	连接 Connect
1	电源输出VCC（控制器） Power output VCC (controller)
2	电源地GND Power ground GND
3	通信屏蔽层 The shielded layer of communication line
4	接收/发送数据（A+） Receive/send data (A +)
5	接收/发送数据（B-） Receive/send data (B -)

注： 1、如果P4和P5短接，则为本地控制状态。上位机此时无法对断路器进行操作和修改参数，只能读取数据，在此状态时可使用断路器控制器对断路器进行控制和参数调节。

2、如果P4和P5开路，则为远程控制状态。此时控制器无法对断路器进行操作，只能查询数据，而上位机能够对断路器完成全部操作。

3、通信型断路器应外接DC24V电源，并注意P8，P10极性，否则通信功能无法实现。如断路器正在通信，则通信灯闪烁。

Note: 1、If P4 and P5 closed, the state of communication module is on native. At this time the up-level device can't operate the breaker and modify parameters, only can read datas, but it can use controller to operate breaker and adjust parameters.

2、If P4 and P5 opened, the state of communication module is on remote. At this time the controller can't operate the breaker, only can read datas, but it can use up-level device to operate breaker.

3、The communications breaker should be energized by DC24V, and be paid attention to the polarity of P8 and P10, or else, it will be unable to communicate.

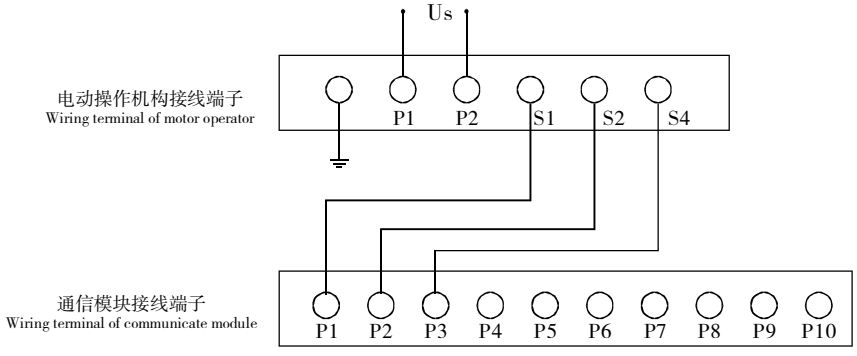
通信模块与电动操作机构的连接

Connection between communication module and motor operator

根据电动操作机构的额定控制电源电压Us接线

Connection according to rated control supply voltage of motor operator

Us=AC110V、230V，DC24V、110V、220V



- CM2Z断路器控制器

△ 参数显示、设定功能（中文菜单）

△ 电动分合闸及指示功能

△ 报警（过载、故障）功能

△ 通信及指示功能

可通过专用连接线（控制器附带）连接CM2Z/T 断路器。无需外接电源，在本地状态可直接操作断路器合分闸，并能修改各种整定参数。外壳设计有卡口，方便安装在各种动力箱、配电柜面板上。与断路器搭配可取代各种繁琐的控制按钮及电流表，极大的简化柜内布线。

CM2Z断路器控制器为选购配件，可对应全系列CM2Z/T断路器。

- CM2Z controller

△ Parameter display, set-up function (chinese menu)

△ Electric switching on、 switching off and indication function

△ Alarming (over-load、malfunction) function

△ Communication and indication function

The controller can link with CM2Z/T breaker by exclusive connecting wire (controller in passing). It needn't connect external supply. When the controller is on native state, it can operate breaker's switching on and switching off directly, and modify all sorts of setting parameters. The bayonet designed for enclosure is convenient for installing the controller on the panel of power case or power distributing cabinet. The controller matched with breaker can replace by every kind of fussy control button and current meter, so that it can simplify wiring inside cabinet.

CM2Z/T controllers are choose and purchase accessories, they can be one to one correspondence with full series CM2Z/T breakers.

正面 Front view

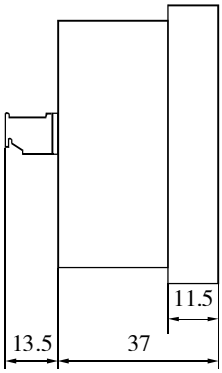
背面 Back view

专用连接线

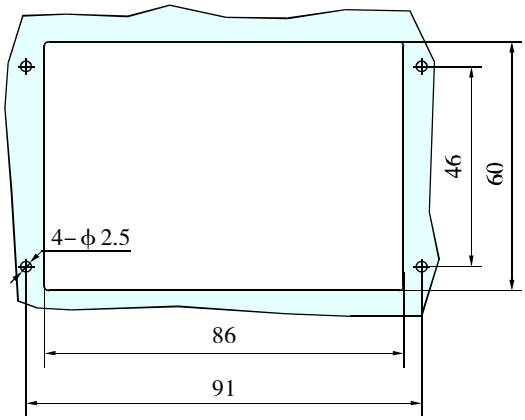
Exclusive connecting wire

- 安装尺寸：
Mounting dimension

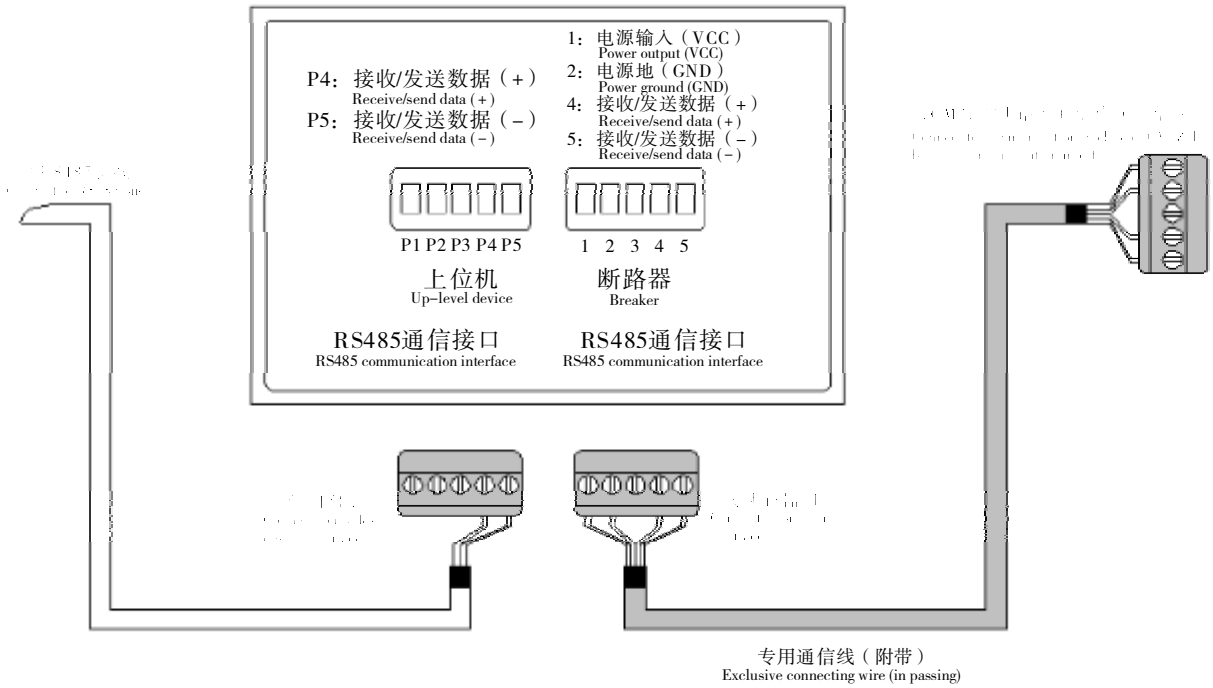
左视
Left View



面板开孔尺寸
Aperture Dimension of the panel



CM2Z断路器控制器的连接 Connection of CM2Z controller



上图为控制器与断路器一对一连接，其中断路器和控制器之间的专用连接线为控制器附带配件，标准长度为2m，用户只需将该专用连接线两端分别按上图分别连接即可。需上位机通信时，只需将连接上位机的通信线按上图接到控制器背面的上位机口，上位机就可以和CM2Z/T断路器进行通信，同直接连接到断路器不安装控制器相比，用户在上位机的处理上无需作任何改变。

CM2Z断路器控制器还能与断路器实现一对多连接，此时一台控制器最多可以连接16台CM2Z/T断路器，通过面板的选择访问连接到控制器的多台断路器的数据，并且这种情况下远程通信功能将继续执行，上位机仍可与这些断路器进行通信。

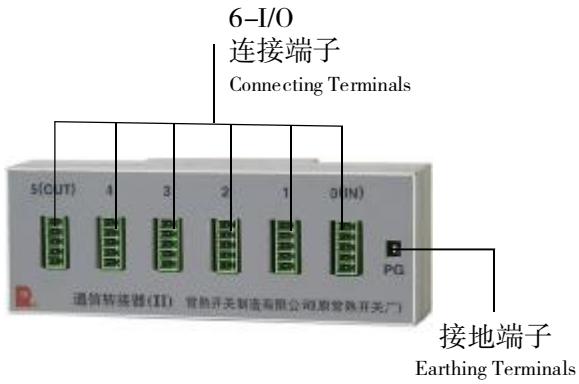
注：连接控制器和断路器时请使用附带的专用连接线，如因使用非正规的连接线而造成断路器损坏的，不在本公司保修范围。

The controller connects with breaker by one to one, the exclusive connecting wire between them is accessory in passing, which the length is 2m. The user only need to connect them by using the exclusive connecting wire according to the fig mentioned above. If using communication wire to connect between up-level device and up-level device interface on the back of the controller, it can realize communication between up-level device and CM2Z/T breaker.

CM2Z controller can be one to many connection with breakers, each controller may link 16 sets CM2Z/T breakers at most. The controller can access datas of breakers which connected with the controller by selection menu on the panel. And at this condition remote communication continues executing, so the up-level device can still communicate with breakers.

Note: the wire connected between controller and breaker must use exclusive connecting wire (in passing). The company wouldn't maintain the breaker damaged by using unregular connecting wire.

- 通信转接器(Ⅱ) Communication Adapter



通信转接器可以大幅提高用户现场接线的效率和可靠性，它具有以下特点：

①6个RS485通信接口，最大连接5个可通信设备

②多个通信转接器可互联进行扩展(参见注)

③配有通信线接地端子

④可直接安装在标准35mm导轨上

注：可多次扩展，但一条线路不应连接超过32台设备。

The Communication Adapter can largely improve the efficiency and reliability of wiring on site by customers, which embraces the characteristics of :

1.six pieces of RS485 Communication Interfaces, can join together with 5 sets of Communicative Devices at most

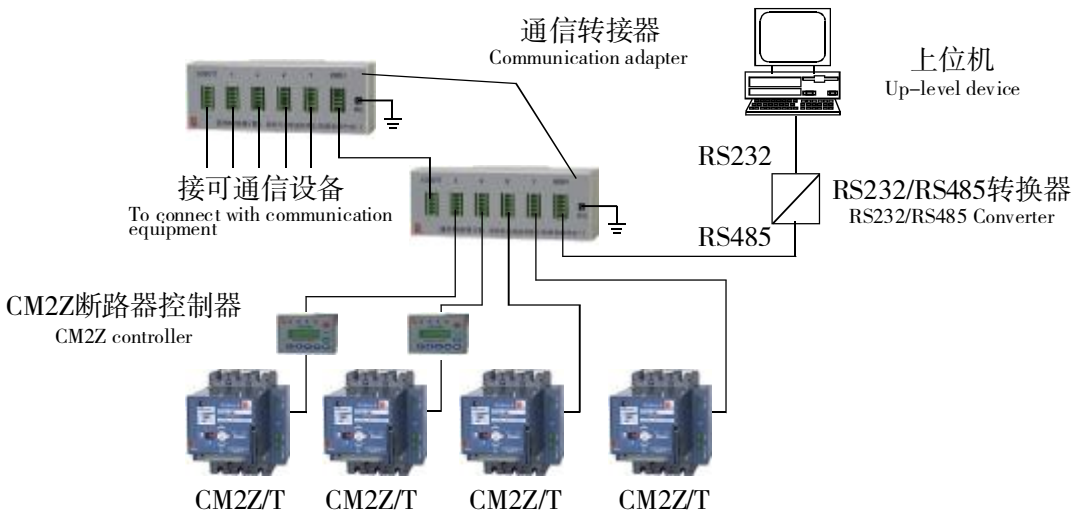
2.Several Communication Adapters can realize the expansions by their networking (Refer to Note)

3.Equipped with earthing terminals of communication line

4.can be installed directly on the standard slideway in 35mm width

Note: can be expanded by several times, but one piece of circuit can not connect with 32 sets of devices at most.

- 断路器通信系统连接示意图
  Connection figured diagram of communication systerm



使用与维护 USE AND MAINTERANCE

- 断路器手柄可以处在三个位置，分别标示闭合、断开、脱扣三种状态，当手柄处于脱扣位置时，应向后扳动手柄，使断路器再扣，然后合闸。

- 在用户遵守正确保管和使用条件下，从制造公司发货之日起，不超过18个月，断路器封印完好，产品如因制造质量问题而发生损坏或不能正常使用时，制造公司负责无偿更换和修理。

- The handle of the circuit breaker has three positions: on, off and release respectively. When the handle is at the position of release, it should be pulled backward to make the circuit breaker be re-cramped and then switched on.

- The company would replace or repair the circuit breakers free of charge for the products damaged or working unregularly as a result of quality problems in the process of manufacturing if can be satisfied the following conditions: users comply with the requirements of application and storage, the duration of this commitment is within 18 months since the delivery date, and the seal on the circuit breakers are still intact.

订货须知 ORDERING NOTICE

- 订货须知

用户在订货时，必须将断路器的型号、规格、所配附件写清楚，采用欠电压脱扣器和分励脱扣器时，应注明工作电压（或控制电源电压）的电压值。

例 如订CM2-125M配电用、额定电流为50A，“0”飞弧并带转动手柄操作机构、分励脱扣器（AC400V）、辅助触头、报警触头12台。

即写为订CM2-125MZ/3348 In=50A“0”飞弧，分励脱扣器AC400V，12台。

Ordering notice

When users making order, the type, specification and accessories of the circuit breakers should be written clearly. If using under-voltage release and shunt release, the value of working voltage (or control power supply voltage) should be marked.

For example: If ordering 12 sets of CM2-125M for power distribution with rated current 50A, zero arc distance with turning handle operation mechanism, shunt release (AC400V), auxiliary contacts and alarm contacts, it should be written sa follows; ordering CM2-125MZ/3348 In=50A "0" arc distance, shunt release AC400V, 12 sets

订 货 规 范 ORDERING NOTICE

（一）用户务必确认对本产品技术资料已有详细了解，并应根据断路器将来使用的场合，按“订货规范”表订货。

（二）如用户订货时对CM2、CM2Z断路器保护参数不作要求，本公司将按“CM2断路器热磁脱扣器出厂整定值”、“CM2Z断路器智能型脱扣器出厂整定值”表配置。

（三）建筑物内实施等电位联结的TN-C-S和TN-S系统，中性极型式推荐采用A型或D型。

1.Users should make sure of their detailed acquaintance of the products' technological materials and make ordering by the ordering notice in terms of future applicable situations of the circuit breakers.

2.The company would configure by "Factory's setting value of thermomagnetic release" and "Factory's setting values of the intelligent release" if users had no requirements of protection parameters of CM2、CM2Z circuit breakers when making order.

3.Inside building, if the breakers used in TN-C-S and TN-S system which is equipotential bond, the pattern of neutral pole is recommended to adopt A type or D type.

订 货 规 范
Ordering Notice

(请在___内填上数字, □打√)
(Please fill number in___or mark √ in □)

用户单位 Name		订货总数 Order Amount		订货日期 Order Date	
型号 Type	CM2 __-____ __ __ / __ / __ ____ __ __ __				
额定电流 Rated current	In=_____ A				
接线方式 Wiring way	板前接线 Wirin in front of the load □	插入式接线安装方式一 Pattern one of the mounting way of the insertion type □		抽出式板前接线 Wiring of draw-out in front of the board □	
	板后接线 Wiring on back of the board □	插入式接线安装方式二 Pattern two of the mounting way of the insertion type □		抽出式板后接线 Wiring of draw-out on back of the board □	
CM2Z智能型脱扣器整定值 The setting value of CM2Z intelligent release	过载长延时动作电流I_{r1}=_____ A Long-time delay overload acting current	长延时动作时间t_1=_____ s long-time delay acting time			
	短路短延时动作电流I_{r2}=_____ ×I_{r1} Short-time delay overload acting current	短延时动作时间t_2=_____ s short-time delay acting time			
	短路瞬时动作电流I_{r3}=_____ ×I_{r1} Instantaneous short-time delay overload acting current				
	接地故障动作电流I_{r4}=_____ ×In Gound-fault acting current	接地故障动作时间t_4=_____ s ground-fault acting time		电动机保护用无此功能 Motor MCCB without Ground-fault protection	
	预报警电流I_{r0}=_____ ×I_{r1} Prior alarm current				
	电动机保护型断路器不平衡功能 Disequilibrium performance of the circuit breakers for motor protection	不平衡度_____% Disequilibrium level			
附件 Accessories	欠电压脱扣器 Under-voltage release	AC400V□ AC230V□			
	分励脱扣器 Shunt relesae	AC400V□ AC230V□ DC220V□ DC24V□			
	电动操作机构 Power-driven operation mechanism	AC230V□ AC110V□ DC220V□ DC110V□ DC24V□			
	手动操作机构 Turning handle operation mechanism	中心式 Central □ / 偏心式 Eccentric □	操作手柄 Operation handle F型 Type F □	A型 Type A □	
	接线端子 Wiring terminals	JBC□ JGC□	零飞弧罩 Zero arcventing cover □		
	连接排 Connecting bar □				
	CM2Z专用测试器 CM2Z-exclusive tester □ 只				
	CM2Z断路器控制器 CM2Z controller □ 只				
	通信转接器(Ⅱ) Communication Adapter □ 只				
	FWB1温度报警模块 Temperature alarm module □ 和	热传感器型号Type	FRG-7	FRG-9	FRG-11	FRG-13	FRG-17
		数量（只）Number					

注：1. 常规出厂的CM2四极断路器中性极型式为C型、D型N极脱扣器电流值见表一，本公司也可提供I_N=100%In的四极断路器，用户需在订货时注明。
2. 常规出厂的CM2Z四极断路器中性极型式为C型、D型N极脱扣器电流值见表二，但用户也可自行100%保护设定。

Note: 1. Normally, current values of neutral pole of CM2 four-pole breaker conform to table one, in addition, our company provides four-pole breakers which I_N=100% In, but it must be noted by users ordered.
2. Normally,current of neutral pole of CM2Z four-pole breaker conform to table two, but it can be setted by users with 100% protection.

CM2断路器热磁脱扣器出厂整定值
Factory's setting values of CM2 thermomagnetic release

配电型断路器 Circuit breakers for power distribution

<table>
<tr><td>热动型脱扣器整定电流I_{r1}
Setting current of thermodynamic release</td><td colspan="3">In</td></tr>
<tr><td>电磁脱扣器整定电流I_{r3}
Setting current of release</td><td colspan="3">10In</td></tr>
<tr><td rowspan="5">中性极额定电流I_N
（四极C型和D型）
Rated current for neutral phase
（type C and D for four pole）</td><td>CM2-63</td><td colspan="2">I_N=In</td></tr>
<tr><td rowspan="2">CM2-125</td><td>In≤63</td><td>I_N=In</td></tr>
<tr><td>63 < In≤125</td><td>I_N=63</td></tr>
<tr><td>CM2-225</td><td colspan="2">I_N=125</td></tr>
<tr><td>CM2-400</td><td colspan="2">I_N=225</td></tr>
<tr><td>CM2-630</td><td colspan="2">I_N=400</td></tr>
<tr><td>中性极电磁脱扣器I_{r3N}
（四极C型和D型）
Setting current of release
（type C and D for four pole）</td><td>CM2-63 ~ 630</td><td colspan="2">$10I_N$</td></tr>
</table>

电动机型断路器 Circuit breakers for motor protection

<table>
<tr><td>热动型脱扣器整定电流I_{r1}
Setting current of thermodynamic release</td><td colspan="3">In</td></tr>
<tr><td>电磁脱扣器整定电流I_{r3}
Setting current of release</td><td colspan="3">12In</td></tr>
<tr><td rowspan="5">中性极额定电流I_N
（四极C型和D型）
Rated current for neutral phase
（type C and D for four pole）</td><td>CM2-63</td><td colspan="2">I_N=In</td></tr>
<tr><td rowspan="2">CM2-125</td><td>In≤63</td><td>I_N=In</td></tr>
<tr><td>63 < In≤125</td><td>I_N=63</td></tr>
<tr><td>CM2-225</td><td colspan="2">I_N=125</td></tr>
<tr><td>CM2-400</td><td colspan="2">I_N=225</td></tr>
<tr><td>CM2-630</td><td colspan="2">I_N=400</td></tr>
<tr><td>中性极电磁脱扣器I_{r3N}
（四极C型和D型）
Setting current of release
（type C and D for four pole）</td><td>CM2-63 ~ 630</td><td colspan="2">$12I_N$</td></tr>
</table>

CM2Z断路器智能型脱扣器出厂整定值
Factory's setting values of CM2Z intelligent release

配电型断路器 Circuit breakers for power distribution

过载长延时 Overload long-time delay	整定电流I_{r1} Setting current	In			
	延时t_1 Delay	60s			
短路短延时 Short circuit short-time delay	整定电流 I_{r2} Setting current	$8I_{r1}$			
	延时t_2 Delay	0.3s			
短路瞬时 Short circuit instantaneous	整定电流 I_{r3} Setting current	$12I_{r1}$			
接地故障 Ground-fault	关闭（OFF）				
预报警 Pre-alarm	整定电流 I_{ro} Setting current	$0.9I_{r1}$			
中性极电流整定值（四极C型和D型） Current setting value for neutral phase (type C and D for four pole)	CM2Z-125	In=32	$I_{r1N}=I_{r1}$	$I_{r2N}=8I_{r1N}$	$I_{r3N}=12I_{r1N}$
		In=63	$I_{r1N}=I_{r1}$		
		In=125	$I_{r1N}=63$		
	CM2Z-225	$I_{r1N}=125$			
	CM2Z-400	$I_{r1N}=200$			
	CM2Z-630	$I_{r1N}=315$			
热模拟功能 Thermal simulation	关闭（OFF）				
CM2Z/T断路器通信参数 Communication parameters of CM2Z/T breaker	通信波特率 Communication baud	19200bps			
	通信校验位 Communication check	偶校验 Even check			

电动机型断路器 Circuit breakers for motor protection

过载长延时 Overload long-time delay	整定电流I_{r1} Setting current	In			
	延时t_1 Delay	100s			
短路短延时 Short circuit short-time delay	整定电流 I_{r2} Setting current	$10I_{r1}$			
	延时t_2 Delay	0.3s			
短路瞬时 Short circuit instantaneous	整定电流 I_{r3} Setting current	$14I_{r1}$			
预报警 Pre-alarm	整定电流 I_{ro} Setting current	$0.9I_{r1}$			
中性极电流整定值（四极C型和D型） Current setting value for neutral phase (type C and D for four pole)	CM2Z-125	In=32	$I_{r1N}=I_{r1}$	$I_{r2N}=8I_{r1N}$	$I_{r3N}=14I_{r1N}$
		In=63	$I_{r1N}=I_{r1}$		
		In=125	$I_{r1N}=63$		
	CM2Z-225	$I_{r1N}=125$			
	CM2Z-400	$I_{r1N}=200$			
	CM2Z-630	$I_{r1N}=315$			
不平衡功能 Disequilibrium	关闭（OFF）				
热模拟功能 Thermal simulation	关闭（OFF）				
CM2Z/T断路器通信参数 Communication parameters of CM2Z/T breaker	通信波特率 Communication baud	19200bps			
	通信校验位 Communication check	偶校验 Even check			

注：短路短延时保护功能、接地故障保护功能、不平衡保护功能、预报警功能、热模拟功能都可进行开启或关闭。一、如由“CM2Z断路器智能型脱扣器出厂整定值”表出厂设置为“关闭（OFF）”的功能用户再开启，则默认值如下：① 短延时保护：配电型$I_{r2}=10I_{r1}$，电动机型$I_{r2}=12I_{r1}$，$t_4=0.4s$；② 接地故障，$I_{r4}=In$，$t_4=0.4s$；③ 电动机保护不平衡功能，不平衡度70%，动作时间10s；④ 预报警功能：$I_{ro}=I_{r1}$。二、如上述可开启/关闭功能关闭后再开，则需重设整定值，否则按默认最大值设置。

Note:The following functions can be opened or closed, i.e. short circuit short-time delay ,earth-fault,disequilibrium,pre-alarm and thermal simulation.一、According the "Factory's setting values of CM2Z intelligent release" table, if the breakers were setted the "OFF" function, the user can re-open these functions, the defaultings as follow: ① Short-time delay: for power distribution, $I_{r2}=10I_{r1}$, for motor protection: $I_{r2}=12I_{r1}$, $t_4=0.4s$; ② earth fault: $I_{r4}=In$, $t_4=0.4s$; ③ disequilibrium: degree of unblance is 70%. acting time is 10s; ④ pre-alarm:$I_{ro}=I_{r1}$.二、If re-open the open/close function mentioned above, the setting values must be resetted, otherwise default maximum values.

全国一级经销商明细表

北京

北京欣凯通机电有限公司 010-66162644
北方森源电气有限公司 010-87581701

天津

天津市强强电器科技有限公司 022-83715527

上海

上海常开电器设备有限公司 021-56319090
上海企开电器设备有限公司 021-56319090
上海森昊电器有限公司 021-54791857
上海泰耀机电设备有限公司 021-57428230
上海三樱电气有限公司 021-56032616

重庆

重庆宏腾物资有限公司 023-68615538

福建

泉州市恒源电力设备有限公司 0595-22587087

浙江

杭州华森电器有限公司 0571-86947817
杭州天源机电设备有限公司 0571-87244850
乐清市新格电气有限公司 0577-61722717
宁波市江东腾辉电器有限公司 0574-87890910

安徽

合肥恒祥电气设备安装有限公司 0551-4668867

江苏

南京扬力电器有限公司 025-84605256
南京苏能动力工程设计有限公司 025-85283021
常州市中环电器有限公司 0519-88867161
镇江兆丰电器有限公司 0511-88320888
苏州市机电设备有限责任公司 0512-67202006
苏州苏新机电设备有限公司 0512-67571866
苏州市中信机电设备有限公司 0512-65225732
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