



镇江默勒电器有限公司

Zhenjiang Klockner-Moeller Electrical Systems Co.,Ltd

ID2000 配电屏

ID2000

Distribution Boards



MOELLER

Think future. Switch to green.

ID 2000 配电柜

标准 Standards	IEC/EN60439-1,VDE0660 part 500/1994,GB7251.1-1997 并通过型式试验(TTA) IEC/EN60439-1,VDE0660 part 500/1994,GB7251.1-1997, and has passed the type-tested low voltage switchgear assemblies(TTA)	
安装条件 Installation Conditions	户内 Indoor installation	
环境温度 Ambient temperature	-5°C/40°C	
相对湿度 Relative humidity	93%(40°C)	
海拔高度 Altitude	< 2000m	
安装倾斜度 Installing leaning angle	< 5°	
尺寸 Dimensions	宽度 Width	400,600,800,1000,1200mm
	高度 Height	2150,2320mm
	深度 Depth	500,650,800,950,1000,1150,1300mm
防护等级 Degree of Protection	IP32~IP54	
额定电压 Rated voltage	400V/690VAC	
额定绝缘电压 Rated insulation voltage	1000VAC/1200VDC	
额定频率 Rated frequency	50HZ/60Hz	
绝缘类别 Insulation group	C	
主母排 Main Busbars	额定电流 Rated currents	1000/2000/2500/3200/4000/5000A
	额定预期短路电流 Rated prospective short-circuit currents	80/100KA($\text{Cos}\phi \geq 0.2$ t=0.1s)
	额定短时耐热电流 Rated short-time withstand current	65/100KA(1S)
	额定峰值耐受电流 Rated peak withstand current	176/220KA
	截面 Cross-section	12 × 50(1 × 2 × 4 × 4 × 4 × 6)mm ²
	内部电弧试验 Internal arc test	$I_{sc}=50\text{KA}_{rms}, \text{Cos}\phi \geq 0.2$ t=0.2s
柜体颜色 Colour	浅灰 RAL7032 (或按用户要求) Pebble grey to RAL7032(or as requested)	
耐腐蚀性 Chemical resistance against	汽油, 苯, 10% 酸, 10% 碱液, 高能辐射 Petrol, benzene, dilute acids (10%) dilute alkalis(10%) Resistant to high energy radiation	
框架厚度 Frame thickness	2.25mm	
门, 底板厚度 Door, Bottom plate thickness	2.0mm	
顶板, 侧板, 后板厚度 Top, Side, Back plate thickness	1.5mm	
安装板厚度 Mounting plate thickness	3.0mm	

ID 2000 Distribution Boards: Infinitely Variable



镇江默勒电器有限公司是大全集团有限公司(原江苏长江电气集团有限公司)与德国默勒公司的合资企业。主要设计制造低压成套开关装置: MODAN 6000 和 ID 2000 配电柜、MCC 3000 和 MCC 200 配电及马达控制中心以及 ID 全绝缘全封闭配电屏。

对于供、配电系统来说,开关的合闸、分闸、线路保护和控制功能的可靠性必须和配电功能本身的可靠性统一考虑。在低压领域, ID 2000 配电柜是能满足上述要求的一种理想手段。操作可靠、经济、简单、明了是其优势。

ID 2000 可用作主配电屏、分配电屏以及电动机控制中心,适用于工厂、电站、医院、学校、高层建筑等。

在配电领域,镇江默勒电器有限公司有能力、有信心竭诚为用户提供完整的服务、优良的技术、解决问题的现代化思路。

Zhenjiang Klockner-Moeller Electrical Systems Co., Ltd. is the joint venture between Daqo Group Co., Ltd. in Jiangsu Province, China and Klockner-Moeller GmbH in Bonn, Germany. The company mainly engineers and manufactures low voltage switchgear assemblies such as MODAN 6000 and ID 2000 distribution boards, MCC 3000 and MCC 200 power distribution boards and motor control center, and ID totally insulated totally enclosed distribution boards.

Switching, protection and control functions must be mastered with the same reliability as the power distribution function itself. ID 2000 distribution boards are an ideal means of meeting these objectives in the low-voltage sphere. Reliability, economy, simplicity and clarity of operation are the advantages of this distribution board concept. The ID 2000 is used as a main distribution board, sub-distribution board and motor control center in industrial plants, power stations, highrise buildings, clinics and schools, etc.

Zhenjiang Klockner-Moeller Electrical Systems Co., Ltd. can offer a complete range of modern solutions in the field of power distribution.

装配简单

配电柜的基础是框架结构

ID 2000 的柜体有下列几种：

- 元器件仅正面安装，带门及后板
- 元器件背靠背安装，前后均带门

柜体的防护等级可达 IP54，此时柜子可安装在户外封闭的工作场所。

下述结构特征确保柜子的功能区域清晰明了：

- 柜子分为：

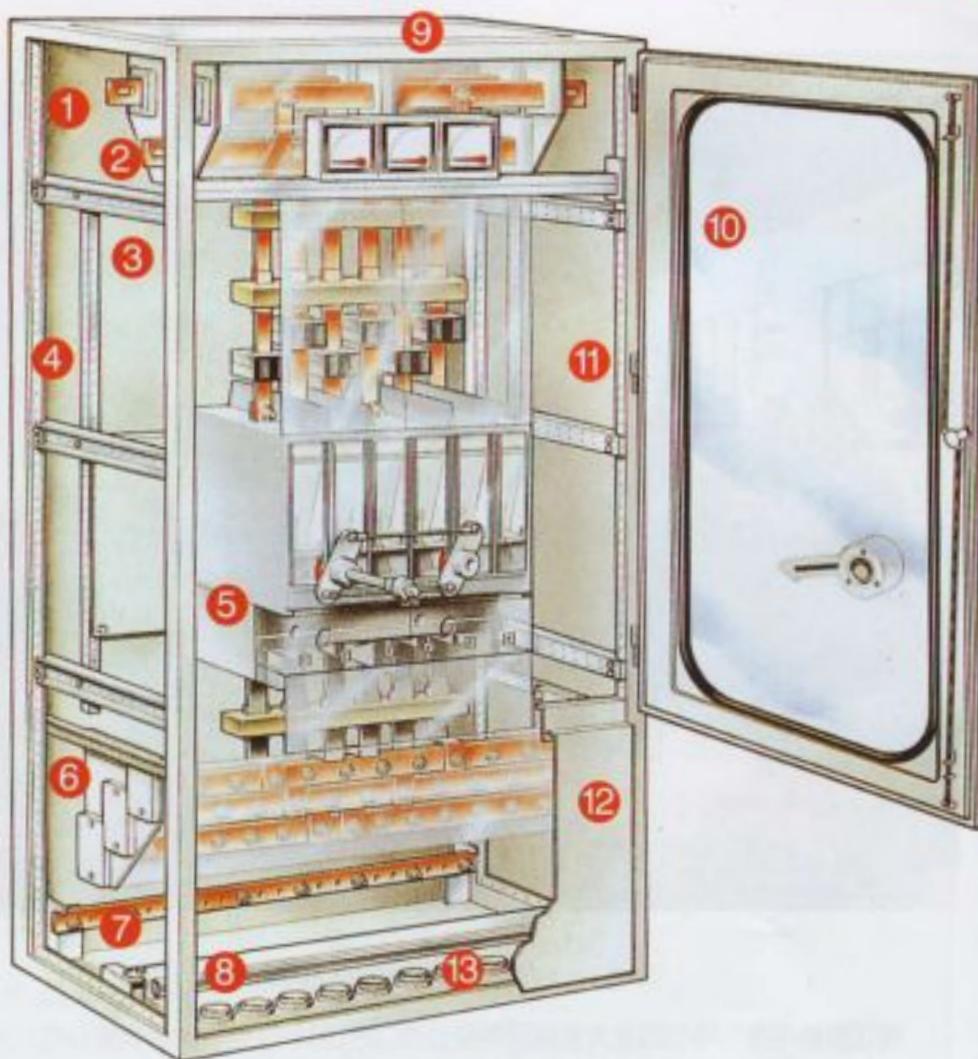
- 母线区
- 元器件安装区
- 电缆连接区
- 柜子装有透明门或非透明门
- 柜子可装成背靠背结构
- 用于拐角的拐角柜

后板焊接在框架上，顶板、底板及侧板用螺丝固定。门的开角为 180°。

母排至元器件、元器件至端子的接线一目了然。

因为门可以是透明的，所以即使系统在运行时也可通过透明门检查，从而确保了人员的安全——这是 ID 2000 配电柜的独特之处。

母线区可安装双母排系统。



The distribution sections are based on a frame construction. A range of cladding items can be added to the frame as required.

Sections are available in the following versions:

- Distribution sections for components installed on one side only, with front door and back plate.
- Distribution sections for components installed on both sides, with front and back doors.

The IP 54 degree of protection of the enclosure also enables the cabinets to be installed in the closed operating areas outside.

The following constructional features ensure a clear overview of the switchgear assembly:

- Division of the sections into:
 - Busbar area
 - Component mounting area
 - Cable connection area
- Sections fitted with glazed or non-glazed doors
- Distribution sections can be fitted back-to-back without back plates.
- Corner sections for installation into or around corners.

The frame is provided with pre-drilled holes at 25 mm centres. The back plate is spot-welded into position. The top, bottom and side plates are screwed into position. The door, which is glazed, has an opening angle of 180°. The door lock and base cover plate are locked with a 3 mm double ward key. The wiring from the busbar to the device and to the terminal in the cable connection area is clearly laid out. The glazed door enables checks to be performed with the door closed, thus it is safer for the operational personnel. Two busbar systems in parallel can be built into the busbar area.

- 1. 母线区
- 2. 母排 L1, L2, L3
- 3. 后板
- 4. 框架
- 5. 元器件安装
- 6. 电缆连接区
- 7. PE(N) 线
- 8. 电缆固定支架
- 9. 顶板
- 10. 透明门
- 11. 侧翼敞开或带侧板或隔板
- 12. 下盖板
- 13. 底部敞开或带底板

- Busbar area
- Busbars L1, L2, L3
- Back plate
- Frame
- Component mounting area
- Cable connection area
- PE(N) conductor
- Cable anchoring rail
- Top plate
- Glazed door
- Sides open or with side plates or partitions
- Base cover plates
- Base open or with bottom plate

Simple Assembly



- | | |
|----------|--|
| 1. 进线柜 | Incoming section |
| 2. 配电柜 | Distribution section |
| 3. 电容补偿柜 | Distribution section for power factor compensation |
| 4. 母联柜 | Coupling section |

安装安全

进线

ID 2000 配电柜的进线断路器为 NZM 或 IZM 断路器。

断路器可为固定式或抽出式，手动或电动。

最为经济的方案是进线柜位于配电系统的中部。

母联

有两种母联方式：

1. 纵向母联
左、右母排系统之间的连接
2. 横向母联
前、后母排系统之间的连接

母联额定电流：800A-5000A

出线

使用 NZM、IZM 断路器作为出线断路器可使操作可靠性、方便性达到最佳水平，从而可省去熔断器。当然低压高分断能力的熔断器也可用于出线，如：NH 型低压高分断能力熔断器、熔断器隔离开关或条形熔断器隔离开关。隔离开关可外部操作或柜内操作。

Incoming supply

The incoming supply to ID 2000 distribution boards is via NZM or IZM circuit-breakers. The breakers can be supplied in fixed or withdrawable modes and actuated either by handles mounted externally, or by motor operators. For the most economical solution, the incoming section is located in the center of the distribution board.

Busbar coupling

Two coupling arrangements are permitted by the busbar systems.

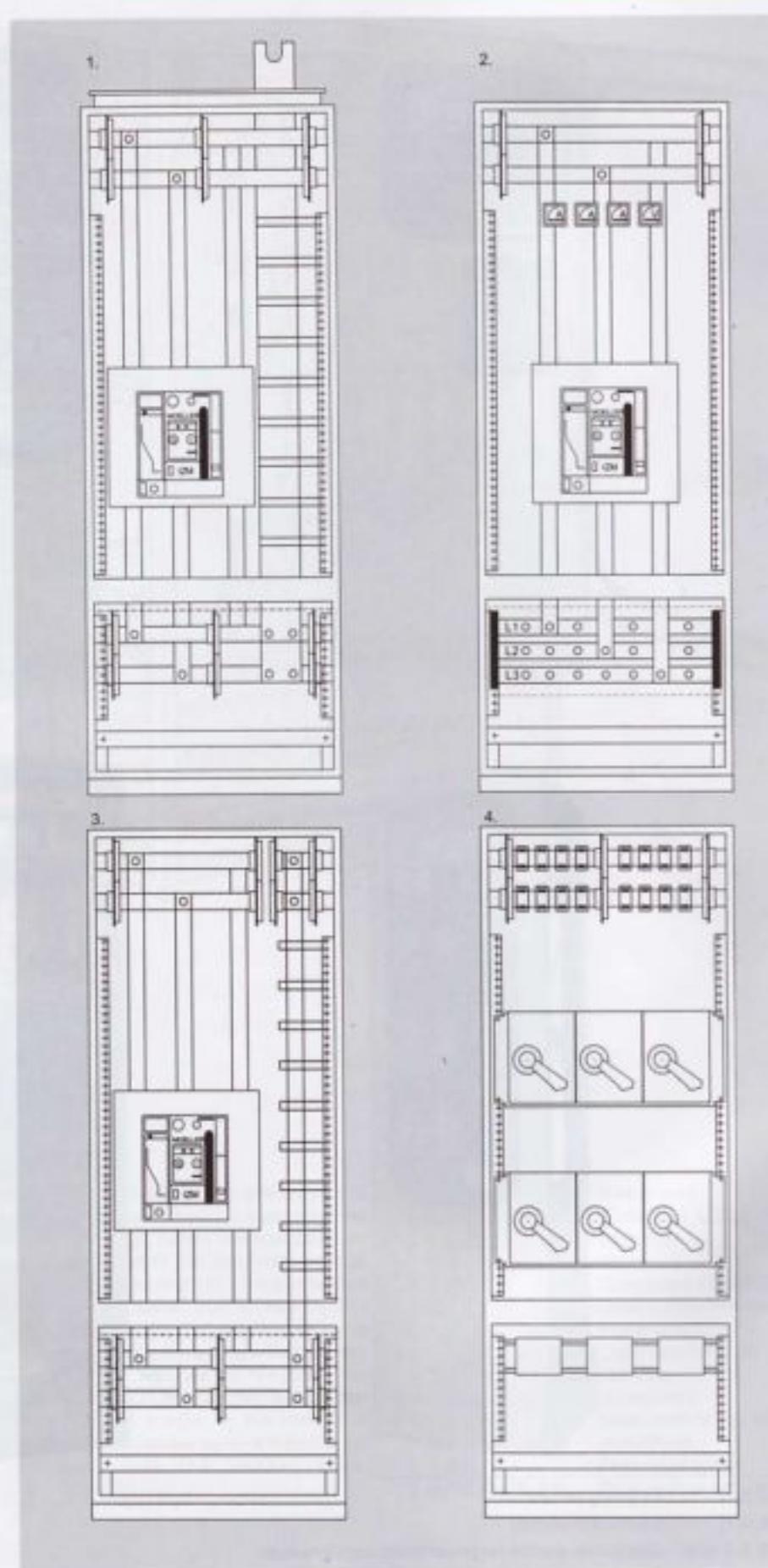
1. Longitudinal coupling
Longitudinal connection of the busbar system
2. Lateral coupling
connection between the front busbar system and the rear system.

Couplings with ratings between 800A and 5000A are possible.

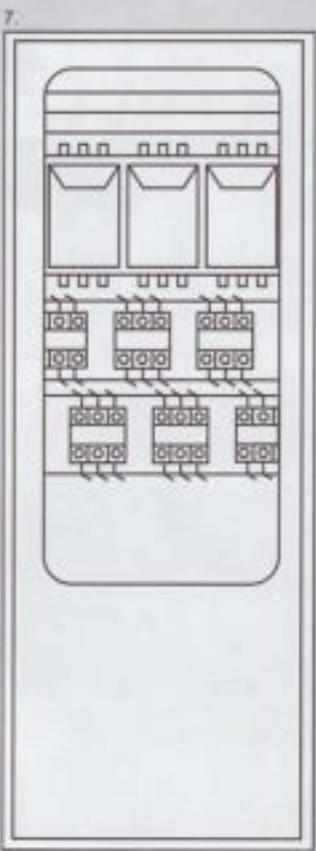
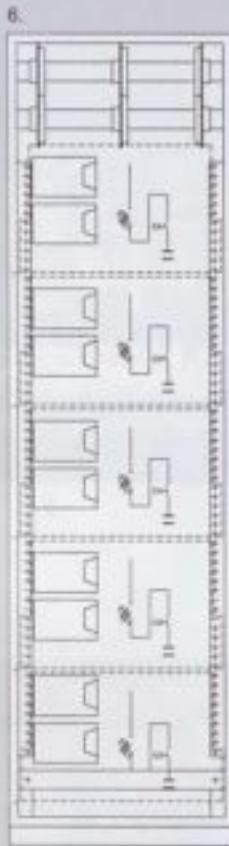
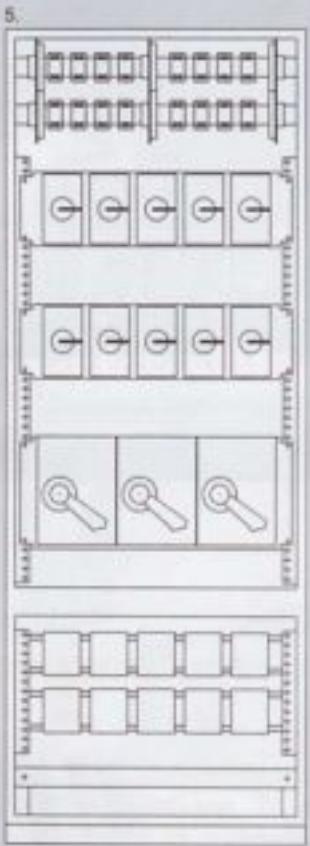
Outgoers

An optimum level of operational reliability and operator convenience can be achieved by using NZM and IZM circuit-breakers for the outgoers, thereby fuses are omitted.

Low-voltage h. b. c. fuses can also be used as the outgoers, such as
low-voltage h. b. c. fuses (type NH)
low-voltage h. b. c. fuses switch-disconnectors and strip-type fuse switch-disconnectors (type NH)
The switch-disconnectors are actuated either externally or internally.



Safe Installation



- 1 IZM 断路器母线进线
- 2 IZM 断路器电缆进线
- 3 IZM 断路器母联柜
- 4 六只出线断路器: NZM10-630N/ZM-630
- 5 三只出线断路器: NZM10-630N/ZM-630
十只出线断路器: NZM7-200N
- 6 400KVAR 电容柜
- 7 熔断器柜

- 1 Busbar incoming with IZM Circuit-breaker
- 2 Cable incoming with IZM Circuit-breaker
- 3 Coupling with IZM Circuit-breaker
- 4 Outgoers: 6x NZM10-630N/ZM-630
- 5 Outgoers: 3x NZM10-630N/ZM-630
10x NZM7-200N
- 6 400KVAR Power factor compensation section
- 7 Switch-fuse section

连接方便

电缆出入

ID 2000配电柜的电缆出入一般位于柜子底部。底部一般敞开用于电缆出入。也可根据需要加装底板，这时电缆通过电缆套出入。底板可卸掉。带法兰孔的底板最适用于小电缆。如使用单芯电缆，可用铝板作底板。如果电缆从柜顶出入，则有两种解决方案：

1. 电缆从元器件安装板的后面出入。
2. 母排系统安装在柜子底部，而电缆连接区移到柜子顶部。

端子

1000A 及以下的电缆连接可用端子。每组端子可加罩盖罩住。默勒公司开发的250A 至 1000A 的端子允许多至四根电缆并联连接。这些端子也适用于和铝电缆直接连接。



电缆连接系统

1250A 至 5000A 元器件可用带螺栓或端子的电缆连接系统连接。透明罩盖、阻燃绝缘材料能有效地防止拆卸下盖板时发生触电事故。

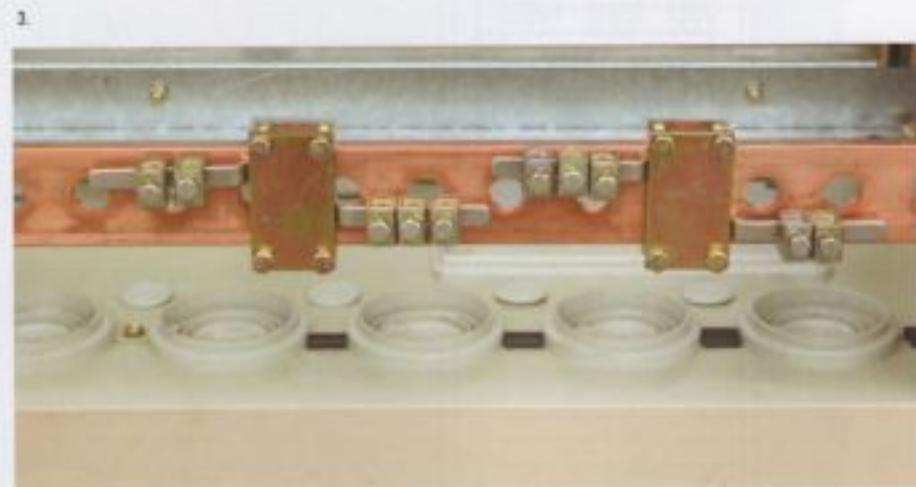


Cable entry

The ID 2000 distribution boards are designed for cable entry and connection in its lower part as standard. The base is normally open for cable entry. A bottom plate can be fitted if required. Cable entry is then through cable grommets. The bottom plate is used for cable entry, and can be removed. The bottom plate with flange apertures is the most suitable solution for smaller-cross-section cables. An aluminium bottom plate without apertures, which can be drilled according to the cable entries required, can be supplied for use with single core cable.

There are two possibilities for cable entry from above:

1. The cables go behind the devices.
2. The busbar system is installed at the lower part and the cable connection area lies in the upper area.



Terminals

Shrouded terminals are used for the connection to the cables with the rating less than 1000A. The terminals developed by Klockner-Moeller, with rated currents from 250A to 1000A, permit connection to four cables max. These terminals are also suitable for the direct connection to aluminium cables.

Cable connection system

Devices with rated currents from 1250A to 5000A are connected by means of the cable connection system with terminals or bolts. Transparent shrouds and flame-retardant insulating material ensure protection against electric shock when removing the base cover plate.

Convenient Connection



与母线槽系统的连接

母线系统可从上、下、后三个方向与 ID2000 配电柜连接。母线系统能确保从变压器至进线柜或从主配电柜至分配电柜之间最佳工作可靠性。
母线系统同样适用于与大型负载连接。

Connection of

Busbar trunking systems

The busbar trunking systems can make top, below or rear connection to ID2000 distribution board, and this systems also guarantee the optimum reliability of the power distribution either between transformers and incomers or between main boards and sub-boards.

The busbar systems are equally suitable for the connections to heavy loads .

1. 端子
2. 带螺栓的电缆连接系统
3. 带端子的电缆连接系统
4. 与变压器连接
5. 与配电柜连接
6. 与母线系统连接的成套开关装置

- 1 Terminals
- 2 Cable connection system with bolts
- 3 Cable connection system with terminals
- 4 Connection to transformers
- 5 Connection to distribution sections
- 6 Switchgear assembly with busbar trunking system

附件齐全

标准元器件使用越多，配电柜越经济。母排系统是其中之一。

ID 2000 的铜母排截面积为 $50 \times 12\text{mm}^2$ 的倍数，额定电流为 1000A 至 5000A。三根相线 L1、L2、L3 母排位于顶板下面，从而避免了因金属物体下落而引起短路的危险。母线系统可分为单母线系统和双母线系统。PE 或 PEN 线与柜子之间用金属导体连接。中性线与地线隔离。透明罩盖、阻燃绝缘材料能有效地防止触电。相邻运输单元之间的母排用连接片连接。

边柜总可以便于将来扩展。

表计可装于母排系统前。

More economical construction of distribution boards is possible only if standard components and parts are widely used. One of these parts is the busbar system.

ID2000 boards use copper busbars with the cross-section of $50 \times 12\text{mm}^2$ or times of it. The three main busbars with the rating between 1000A and 5000A are located directly beneath the top plate. The risk of a short-circuit caused by falling metal objects is therefore excluded. Single-group busbars or double-group busbars are used for the main busbars. PE or PEN conductor is connected to the frame and N conductor is isolated with the PE. Transparent shrouds and flame-retardant insulating material guarantee protection against electric shock.

The busbars are connected by means of lugs at the transport splits on the site.

The end sections can always be extended.

Meters can be fitted in front of the busbars at eye level.



2.



3.



4.



1. 带罩盖的母线系统
2. 母线运输单元分隔处
3. 隔板
4. 表计安装

1 Busbar system with shrouds

2 Busbar transport split

3 Partitions

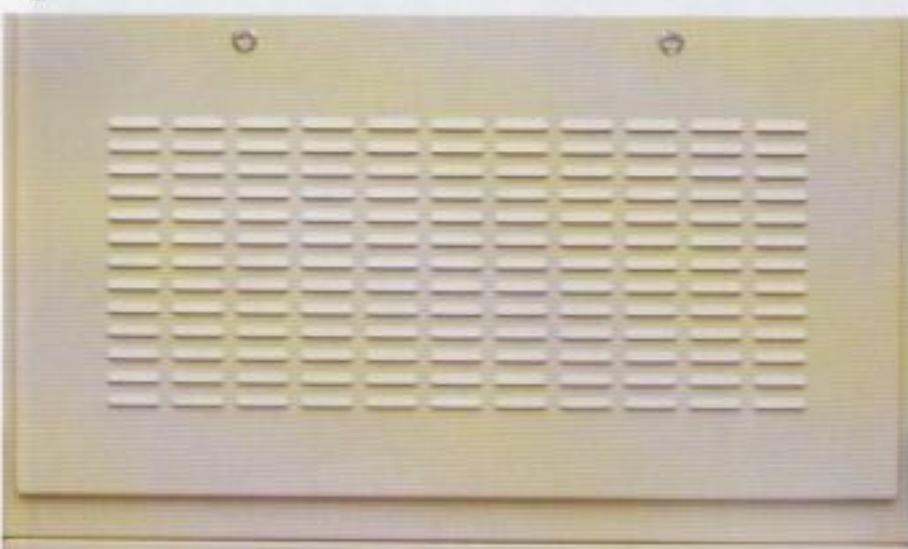
4 Meters

Accessories

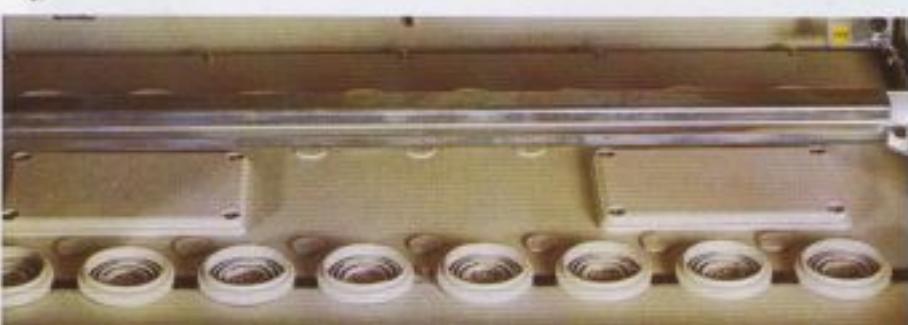
1.



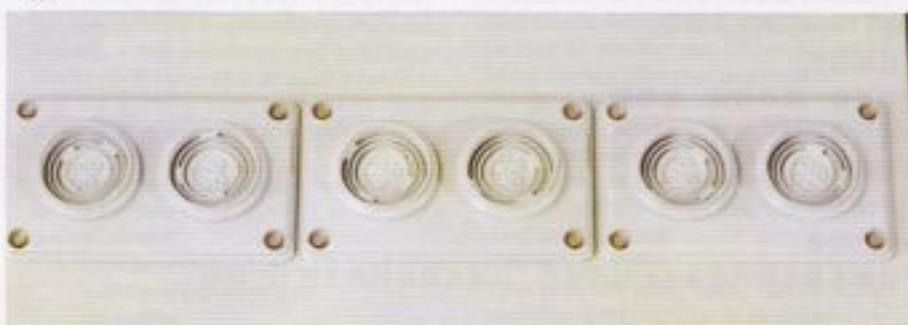
2.



3.



4.



如果要维持防护等级为 IP54，则电缆出入处需要密封。

根据需要，可加隔板使柜与柜之间隔离。

在装有热损耗大的元器件处，加装散热孔板、通风顶板可确保通风冷却。

Tight cable entry is required if the IP 54 degree of protection is to be maintained. Partitions can be used to compartmentalize the sections if required. Where devices with a high heat dissipation are fitted, louvres and ventilated top plates ensure adequate cooling.

1. 通风顶板
2. 带散热孔的下盖板
3. 带电缆套及电缆固定支架的底板
4. 带法兰及电缆套的顶板

- 1 Ventilated top plate
- 2 Base cover plate with louvres
- 3 Bottom plate with cable grommets and cable anchoring rail
- 4 Top plate with flanges and cable grommets

确保安全



不进则退

“不进则退”对于安全来讲千真万确，因此，镇江默勒公司坚持不懈地开发、完善成套开关装置。近年来，对人身安全的保护显得越来越重要。镇江默勒公司装置中的母线、布线、开关和端子，其高水平的防触电能力使得在进行维修工作时更为安全可靠。

IEC439-1 标准规定，低压成套开关装置分：

TTA—经过型式试验的低压成套开关装置，PTTA—经过部分型式试验的低压成套开关装置

镇江默勒公司的产品均为经过型式试验或部分型式试验的低压成套开关装置

所谓TTA就是与经过IEC439规定的全部型式试验项目验证的典型装置没有明显性能差异，并符合一种确认的形式或系统的装置。按IEC439-1标准进行型式试验和出厂试验是TTA特征的基本保证。

型式试验包括：

- 温升极限试验
- 介电性能试验
- 短路耐受强度试验
- 保护电路有效性试验
- 电气间隙和爬电距离试验
- 机械操作试验
- 防护等级试验

出厂试验包括：

- 外观检查、接线检查。如需要，
还进行通电操作试验
- 介电试验
- 防护措施检查、保护电路的电气
连续性检查
- 出厂试验在每台新的设备装配以后进行，以便发现材料和工艺上的缺陷

In Complete Safety



If you don't go forwards, you go backwards

This is particularly true of safety. For this reason, Zhenjiang Klockner-Moeller is working continuously on the development of switchgear assemblies. The protection of personnel has become increasingly more important in recent years. The level of protection against electric shock from busbars, wiring, switchgear and terminals in Zhenjiang Klockner-Moeller assemblies is so great that additional safety measures are not required for the purpose of maintenance and repair work.

The construction of low-voltage switchgear assemblies is covered by IEC439-1, which distinguishes between:

TTA -Type-tested low-voltage
switchgear and controlgear
assemblies

PTTA -Partially type-tested low voltage
switchgear and controlgear
assemblies

Zhenjiang Klockner-Moeller is a manufacturer of

"type-tested low-voltage switchgear and controlgear assemblies". A TTA is a low-voltage switchgear and controlgear assembly conforming to an established type or system without deviations likely to significantly influence the performance, from the typical assembly verified to be in accordance with IEC 439.

The type tests and routine tests laid down in IEC439-1 form the basis of certification of the characteristics of TTA. The type tests in this standard serve to demonstrate compliance with the construction requirements. Evidence of the following characteristics must be provided:

- Temperature rise limits
- Dielectric properties
- Short-circuit withstand strength
- Effectiveness of the protective circuit
- Clearances and creepage distances
- Mechanical operation
- Degree of protection

Type tests are basic tests, carried out on switchgear and controlgear assemblies.

Routine tests are required for each switchgear assembly produced. The routine test includes the

following points:

-Inspection of the assembly including inspection of wiring and, if necessary, electrical operation test

-Dielectric test

-Checking of protective measures and of the electrical continuity of the protective circuit

The routine tests are carried out on each new switchgear assembly after completion. Faults in material and workmanship can therefore be detected.

1. 在工厂进行 ID 2000 配电柜出厂试验
 2. ID 2000 配电柜使用在人民大会堂低压配电室
- 1 Routine test on an ID 2000 distribution board in the manufacturer.
2 ID 2000 distribution boards used in the people's great hall.

设计

主回路载流能力

根据 IEC439-1 第 4.8 条，额定分散系数如下：

主回路数	额定分散系数
1	1.0
2,3	0.9
4,5	0.8
6 至 9	0.7
10 及以上	0.6

进线断路器的选用

进线断路器可以为固定式或抽出式。标准变压器的额定电流及短路电流可查下表。断路器的分断能力 I_{cn} 必须大于等于变压器的短路电流 I_{sc} 。对于仅有一个进线的系统，进线柜应位于系统中间，因为这样使电气负荷分配得以平衡，从而可减少母排截面积，使整个系统的造价降低。

标准变压器的额定电流及短路电流

额定电压 U_n	400/231V			525V			690/400V		
	阻抗电压百分比 U_{sc}			4%		6%	4%		6%
额定容量 KVA	额定电流 A	短路电流 I_{sc} A		额定电流 A	短路电流 I_{sc} A		额定电流 A	短路电流 I_{sc} A	
400	578	14450	9630	440	11000	7333	336	8336	5568
500	722	18050	12030	550	13750	9166	420	10440	7120
630	910	22750	15166	693	17320	11550	526	13300	8760
800	1156	28900	19260	880	22000	14666	672	16672	11136
1000	1444	36100	24060	1100	27500	18333	840	20840	13820
1250	1805	45125	30080	1375	34375	22916	1050	26060	17480
1600	2312	57800	38530	1760	44000	29333	1330	33300	22300
2000	2888	72200	48120	2200	55000	36666	1680	41680	27840
2500	3612	90300	60200	2752	68800	45866	2094	52350	34900

粗略估算

变压器的额定电流：

$$I_n[A] = K \times S_{n\pi}[kVA]$$

380V:K=1.5 500V:K=1.1

415V:K=1.4 660V:K=0.9

变压器的短路电流：

$$I_{sc} = \frac{I_n}{U_{sc}} \times 100$$

Design

安装模块

ID2000配电柜的元器件安装区高1200mm=12HU，所以每面柜的总安装高度应小于等于12HU。每面柜可安装的元器件数可按下列方法计算：

宽度：

按柜宽选择安装模块，见第16页，由此确定此模块可装元器件数。

高度：

安装模块的高度见第16页($\Sigma HU \leq 12$)

深度：

安装深度见第15页($\Sigma C_1 \leq C_{max}$)

总安装深度 C_1 ，如元器件+接线空间或元器件+母线槽系统，必须小于等于柜子的最大安装深度 C_{max} 。

每面柜可安装的元器件数也取决于电缆种类及数量以及允许安装的端子数。

元器件总是从左至右安装，所以多余的空间总是在右面。大型元器件的安装模块总是装在柜子的底部。

例子：

柜子尺寸(W×H×D)：800mm×2150mm×500mm

元器件 8只NZM7-100

2只NZM10-400N/ZM-400

1. 根据选择表计算：

型号	柜宽	800mm	
NZM7	5只	HU=3	$C_1=175\text{mm}$
NZM10/ZM10	3只	HU=6	$C_1=300\text{mm}$

2. 按如下方式安装：

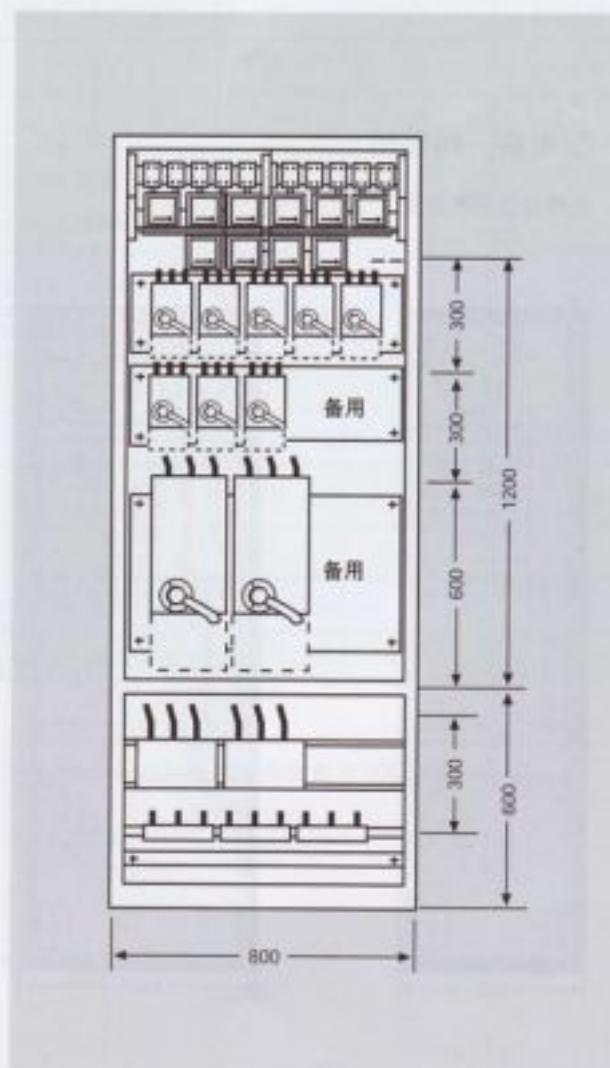
第一排	5 × NZM7-100	HU=3
第二排	3 × NZM7-100	HU=3
第三排	2 × NZM10-400N/ZM-400	HU=6
		$\Sigma HU=12$

满足条件 $\Sigma HU \leq 12$ 。

3. 检查安装深度：

柜深 500mm	$C_{max}=475\text{mm}$
NZM7	$C_1=175\text{mm}$
NZM10/ZM10	$C_1=300\text{mm}$
安装元器件所需深度：	$C_1=300\text{mm}$
布线空间：	$C_1=100\text{mm}$
	$\Sigma C_1=400\text{mm}$

满足条件 $\Sigma C_1 \leq C_{max}$ 。



设计

柜子最大安装深度 C_{max}

元器件仅正面安装

500mm 深的柜子 ZST...215	475mm
650mm 深的柜子 ZST...217	625mm

元器件前、后安装

安装深度相同:

500mm 深的柜子 ZSTII...215	225mm
650mm 深的柜子 ZSTII...217	300mm

安装深度不同:

500mm 深的柜子 ZSTII...215	150-300mm
650mm 深的柜子 ZSTII...217	150-450mm

在下列情况下, 元器件仅能正面安装:

- 断路器为抽出式时
- 使用母线系统
- 电缆从柜顶出入

元器件最大安装深度 C₁

装有元器件的安装模块见第 20-22 页的选择表

电缆从安装板后面出入 175mm

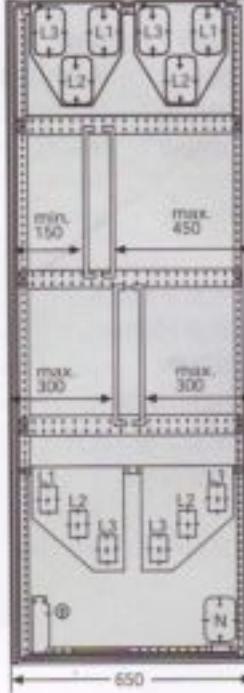
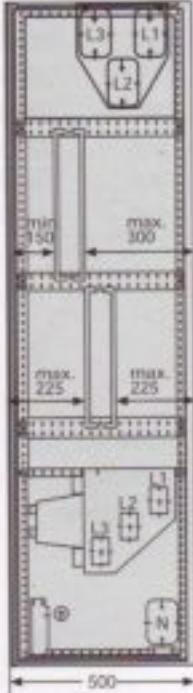
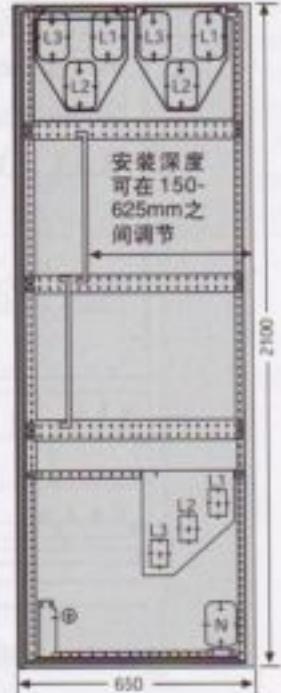
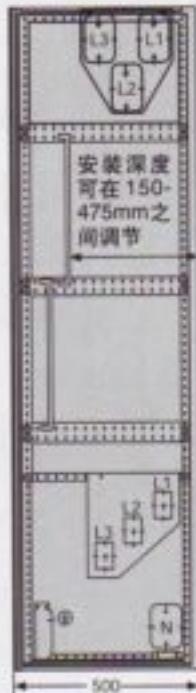
母线系统从安装板后面连接 125mm

LD1, LD2, LD3 125mm
LD4, LD5, LD5Cu 150mm

KSY 电缆连接系统 300mm
接线空间 100mm

配电柜, 侧视图

元器件仅正面安装



Design

ID2000 柜基本方案表

电流(A)	方案号	断路器型号	不同柜宽每块模板安装元件数量				模块高度 HU($\Sigma \leq 12$)	安装深度 mm
			600mm	800mm	1000mm	1200mm		
100 以下	1	NZM7	3	5	6	*	3	175
	3	NZM7+AS	3	5	6	*	4	250
125-200	1	NZM7	3	5	6	*	3	175
	3	NZM7+AS	3	5	6	*	4	250
250	1+2	NZM7	3	4	5	*	4	225(300)
250-630	1+2	NZM10/ZM(+R)	2	3	4	4	6	300(300)
	3+4	NZM10/ZM+AF(+R)	2	3	(4)	4	7.5	450(450)
800-1600	3+4	IZM#1(-4).../AV	-	1	1	*	12	425/625
2000	3+4	IZM#2(-4)-2000/AV	-	1	1	*	12	475/625
2500-3200	4	IZM#2(-4)-2500/AV	-	*	1	*	12	475/625
3500	4	IZMH3(-4)-4000/AV	-	-	-	1	12	625
4000	4	IZMH3(-4)-4000/AV	电缆进线柜宽为1200, 柜深650, 母线进线柜宽为400+1000(1200)+400, 柜深650				12	625
5000	4	IZMH3(-4)-5000/AV	电缆进线柜宽为1200, 柜深1300, 母线进线柜宽为400+1000(1200)+400, 柜深1300				12	625
母联柜								
800-1600	6	IZM#1(-4).../AV	-	1	1	*	12	425/625
2000-3200	6	IZM#2-2000/AV IZM#2-3200/AV	-	1	1	*	12	475/625
	6	IZM#2-4-2000/AV IZM#2-4-3200/AV	-	-	1	*	12	475/625
4000	6	IZMH3(-4)-4000/AV	柜宽为1000+400(1200+400), 柜深650				12	625
5000	6	IZMH3(-4)-5000/AV	柜宽为1000+400(1200+400), 柜深1300				12	625

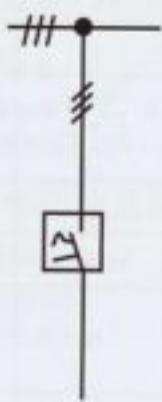
注：1. “*”为非标设计，一般不采用。

2. 一台ID2000柜可装400KVAR的电容补偿，柜宽为600mm。如果加装电抗器，则柜宽为1000mm。

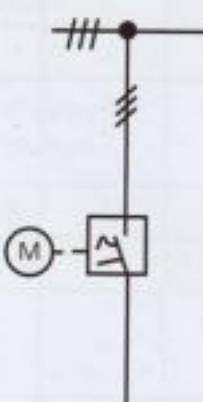
设计

线路方案

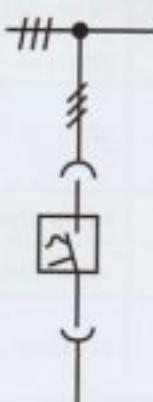
①



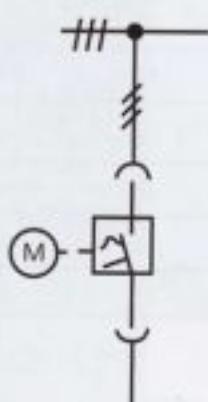
②



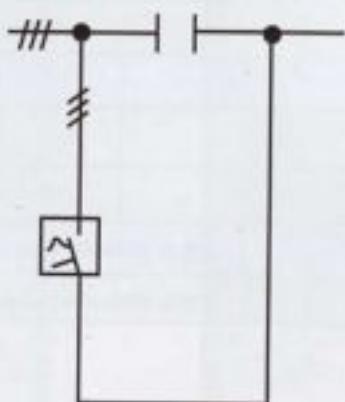
③



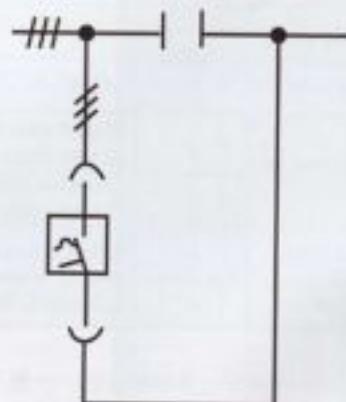
④



⑤



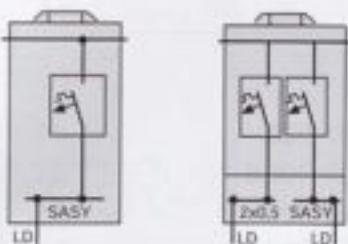
⑥



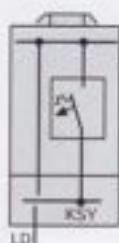
Design

与母线系统连接

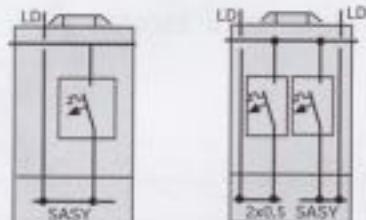
1. 从柜底出入，与 SASY 系统连接，带底板、通风顶板、通风下盖板，防护等级 IP32



2. 从柜底出入，与主母排连接，带底板、通风顶板、通风下盖板，防护等级 IP32



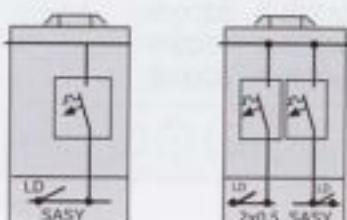
3. 从柜顶出入，与 SASY 系统连接，带底板、通风顶板、通风下盖板，防护等级 IP32



4. 从柜顶出入，与主母排连接，带底板、通风顶板、通风下盖板，防护等级 IP32



5. 从柜后出入，与 SASY 系统连接，带底板、通风顶板、通风下盖板，防护等级 IP32



辅件 / Accessories

1	2	3	4	5
电流互感器 额定一次 电流 A	形式	与下述断路器 配套使用	型号 准确级 3 /5A	额定容量 准确级 3 VA

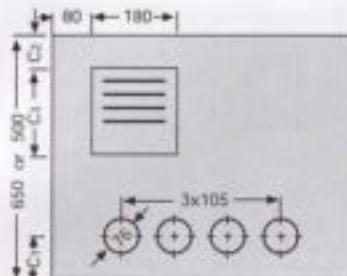
环形电流互感器 660V a.c.

50	单相	≤ 630A 的断路器	ALH-30 50/5	2.5
100			ALH-30 100/5	2.5
200			ALH-30 200/5	5
250			ALH-30 250/5	5
400			ALH-40 II 400/5	5
600			ALH-60 II 600/5	10
800	单相	NZM4(-4)	ALH-60 II × 50 800/5	15
1000			ALH-40 II × 50 1000/5	15
1250			ALH-40 II × 50 1250/5	20
1600			ALH-40 II × 50 1600/5	20
2000	单相	IZM2-2000	ALH-100 II 2000/5	40
2500		IZM2-2500	ALH-100 × 50 II 2500/5	40
3200		IZM2-3200	ALH-100 × 50 II 3200/5	40
4000		IZM3-4000	ALH-120 × 50 II 4000/5	40
5000	单相、并联	IZM3-5000	ALH-170 × 100 II 2500/2.5	40

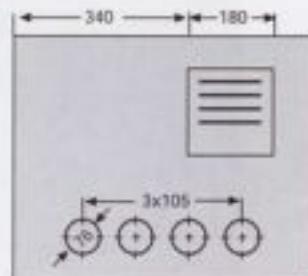
1	2	1	2
测量范围	型号	测量范围	型号
电压表	准确级 1.5; 直接连接	电流表	准确级 1.5, 用于.../5A 的电流互感器
0-250V	CM72B-V 250V	0-50A	CM72B-A 50/5
0-500V	CM72B-V 500V	0-100A	CM72B-A 100/5
0-600V	CM72B-V 600V	0-200A	CM72B-A 200/5
0-800V	CM72B-V 800V	0-250A	CM72B-A 250/5
		0-400A	CM72B-A 400/5
		0-600A	CM72B-A 600/5
		0-800A	CM72B-A 800/5
		0-1000A	CM72B-A 1000/5
		0-1250A	CM72B-A 1250/5
		0-1600A	CM72B-A 1600/5
		0-2000A	CM72B-A 2000/5
		0-2500A	CM72B-A 2500/5
		0-3000A	CM72B-A 3000/5
		0-3200A	CM72B-A 3200/5
		0-4000A	CM72B-A 4000/5
		0-5000A	CM72B-A 5000/5

尺寸 / Dimension

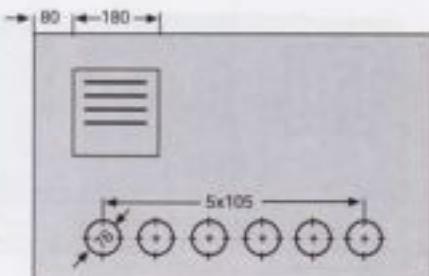
母线系统：柜顶或柜底出入



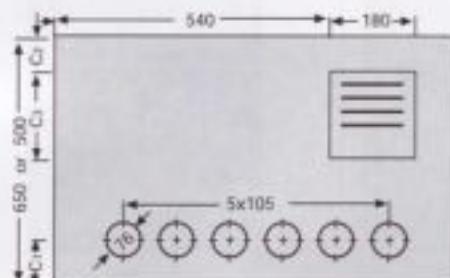
ZST 621...



ZST 621...

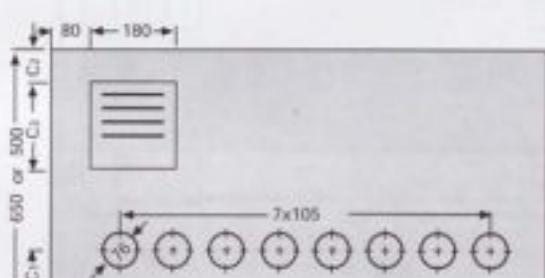


ZST 821...



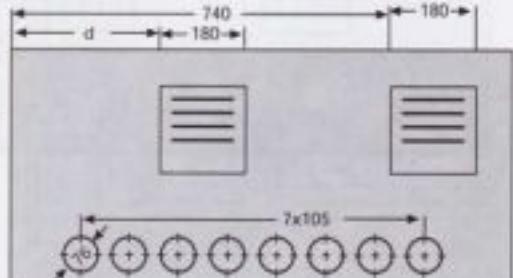
ZST 821...

	ZST—215	ZST—217				
	C ₁ mm	C ₂ mm	C ₃ mm	C ₁ mm	C ₂ mm	C ₃ mm
母线从柜顶出入 LD 14 to LD 35	0	30	180	0	30	180
LD 44 to LD 55	0	30	237	0	30	237
母线从柜底出入 LD 14 to LD 35	92	106	180	174	106	180
LD 44 to LD 55	92	106	237	174	106	237

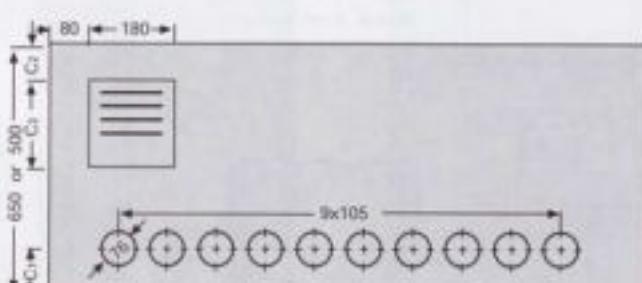


ZST 1021...

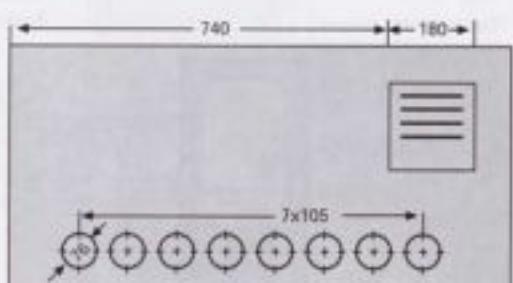
Arrangement	d mm
2 NZM(-4) + 2 母线 -	294



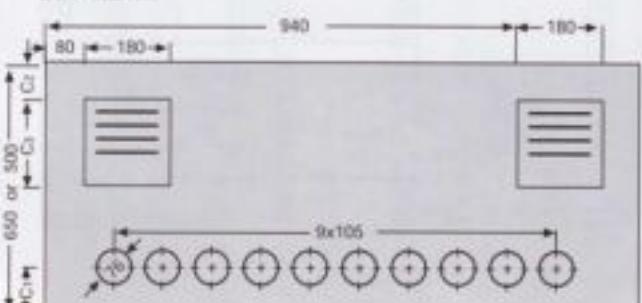
ZST 1021...



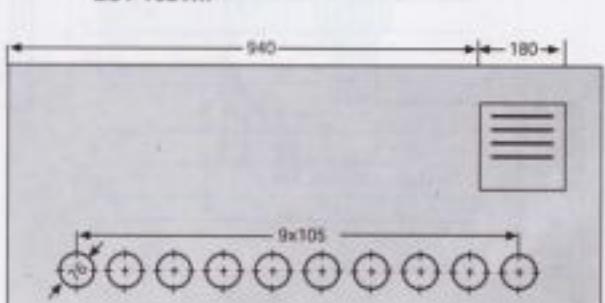
ZST 1221...



ZST 1021...



ZST 1221...

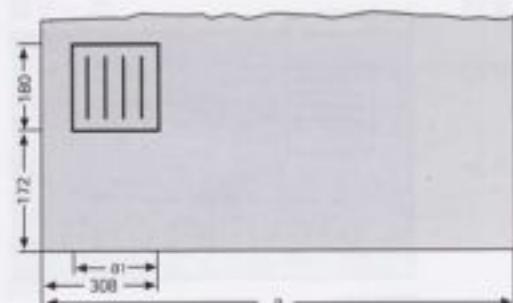


ZST 1221...

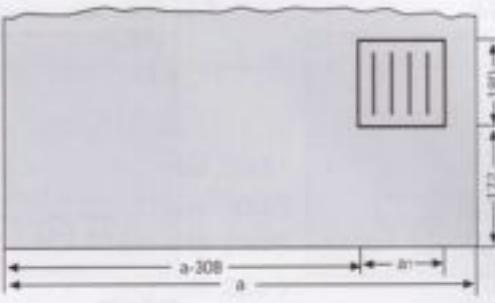
尺寸

母线系统：后出入

单母线出入



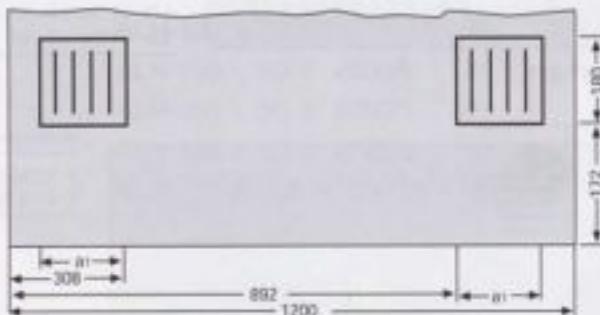
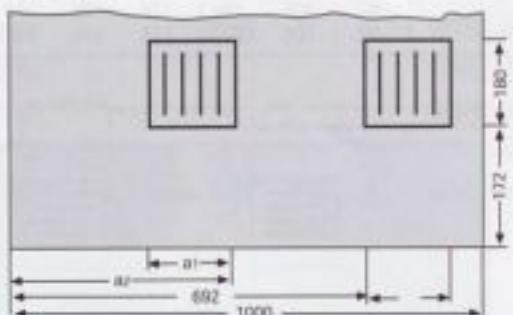
	a1 mm
LD 14 to LD 35	180
LD 44 to LD 55	237



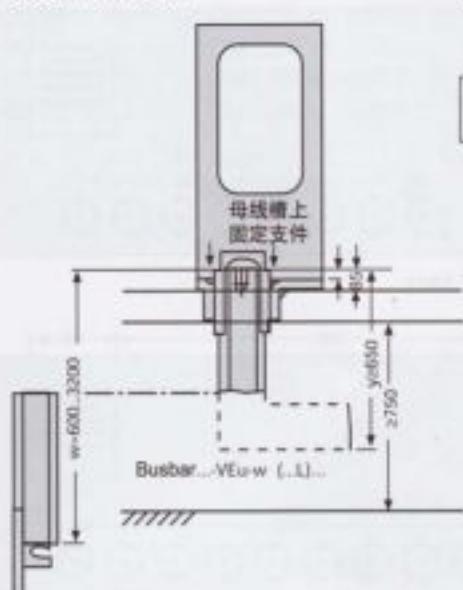
	a mm
ZST 621...	600
ZST 821...	800
ZST 1021...	1000
ZST 1221...	1200

Arrangement	a2 mm
2. NZM 12 +2. LD	503

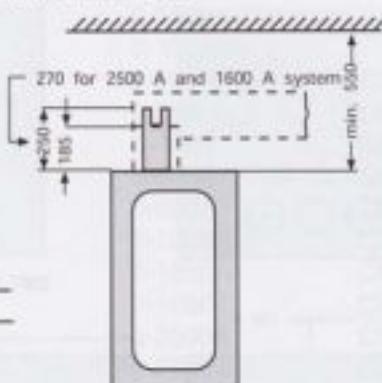
双母线出入



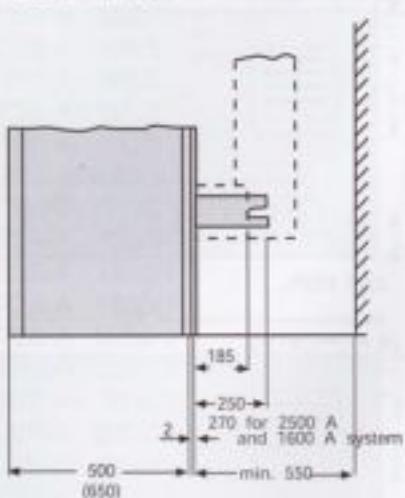
母线下出入
Busbar from below



母线上出入
Busbar from above

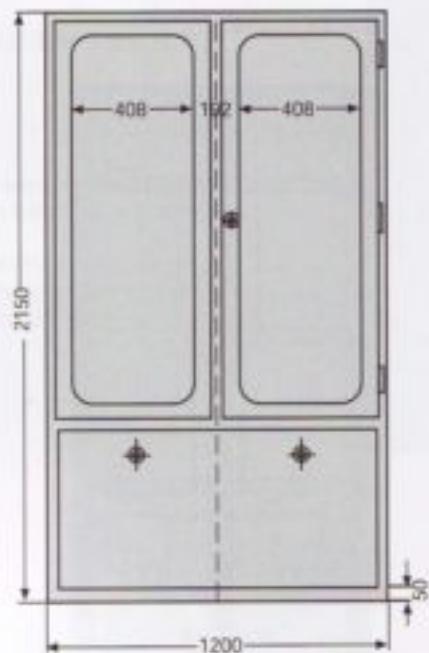
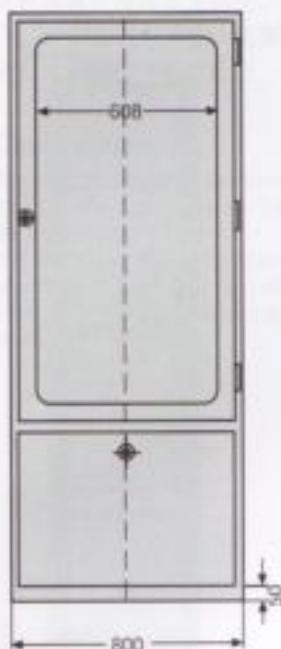


母线后出入
Busbar from rear

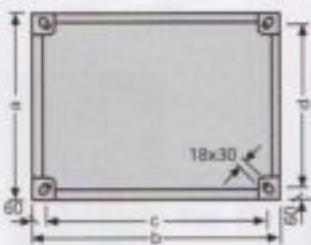


Dimension

正视图 Front view



安装底板图 Bottom plate view

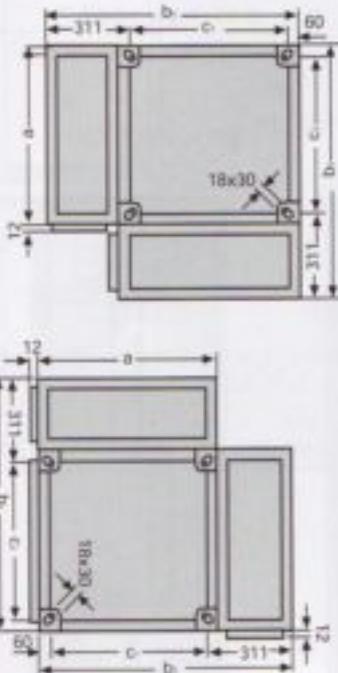


a	b	c	d
500	600	480	380
500	800	680	380
500	1000	880	380
500	1200	1080	380
650	600	480	530
650	800	680	530
650	1000	880	530
650	1200	1080	530

内拐角柜
ESTNA---



外拐角柜
ESTNU---

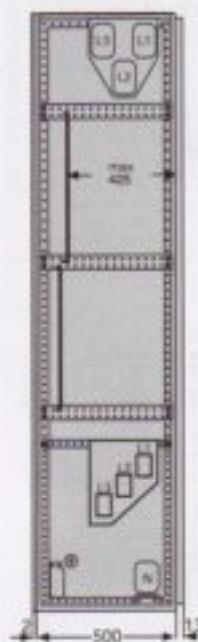


a	500	650
b	751	901
c	380	530

尺寸 / Dimension

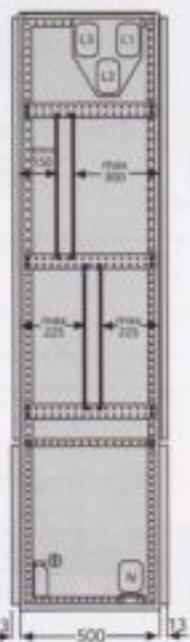
侧视图 Side view

ZST--215



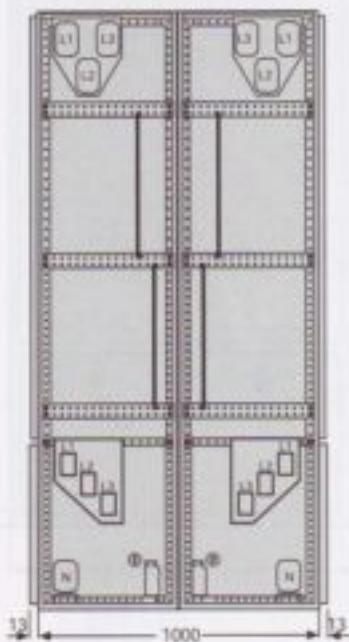
元器件仅正面安装
单母排系统≤2000A

ZST11--215



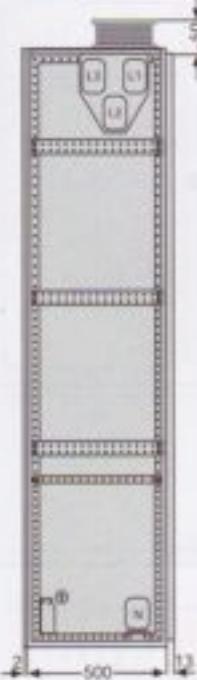
元器件前、后安装
单母排系统≤2000A

2 × ZST--215



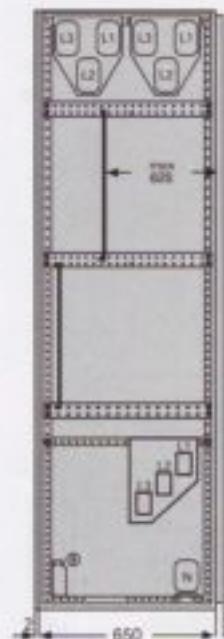
背靠背
双母排系统≤2×2000A

ZST--215/BL



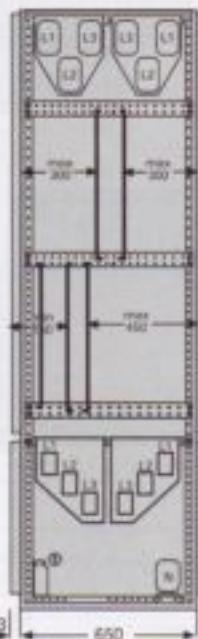
带通风顶板

ZST--217



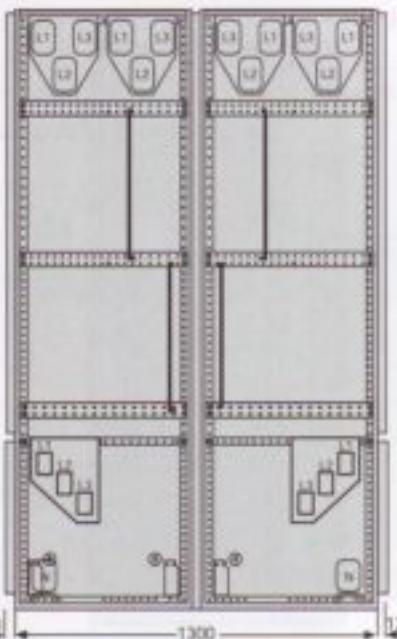
元器件仅正面安装
单母排系统≤4000A

ZST11--217



元器件前、后安装
单母排系统≤2×2000A

2 × ZST--217



背靠背
三母排系统≤5000A

ZST--217/BL



带通风顶板

安装 / Mount

电缆沟

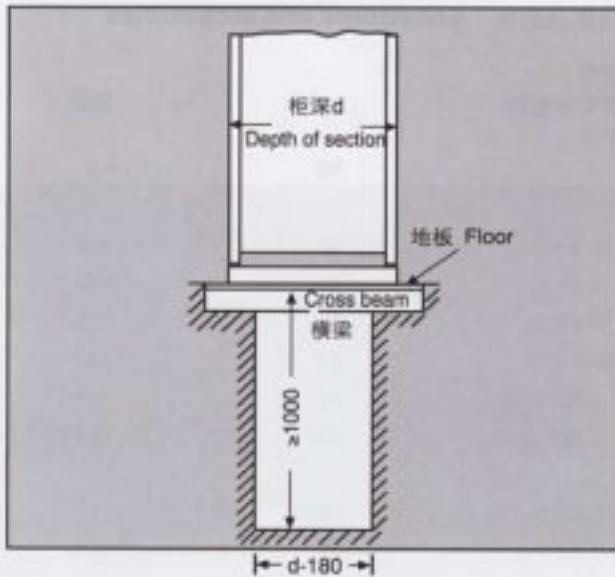
位于配电柜下面的电缆沟应大于柜子的深度，这样连接电缆就非常简便。

柜子由横梁支撑。电缆固定支架可固定在横梁上，这样电缆可固定此处。

Cable ducts

The cable duct under the distribution board should be such that it is accessible from the front to make marshalling and inserting the cable easier.

The distribution board is supported on cross beams. These beams permit cable anchoring rails to be fixed to them and the cables secured here before being brought into the distribution board.



架空平台

配电柜用一有适当承载能力的独立框架支撑。

此框架的高度与架空平台一致。

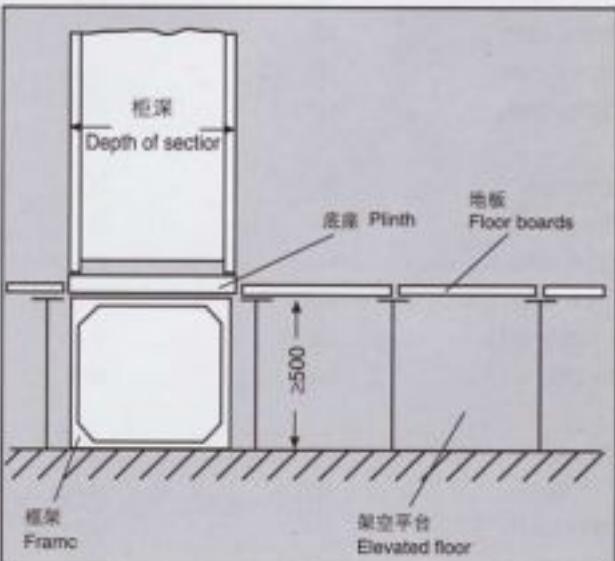
用 50mm 高的底座使柜子略高台面。

Elevated floor

A separate frame with the appropriate load-bearing capacity supports the distribution sections.

The height of this frame is made to fit the elevated floor.

The 50mm plinth provides the necessary clearance above the floor boards.



固定

用地脚螺栓将柜子与混凝土地面固定。按此方法仅需要在几处地方即可将柜子固定。

Securing to floor

The distribution boards are secured into concrete using lag bolts or onto sectional steel girders in the foundation using stay rods. It is only necessary to secure the distribution boards in this way at a few points.

重量 Weights

柜体及附件 Enclosures and accessories

型号 带安装板的 柜体	kg	侧板 kg	隔板 kg	通风 顶板 kg	底座 500mm 高 kg	底座 100mm 高 kg
ZST 6215-...	65	11.5	9.2	1.3	5	6.5
ZST 6217-...	70	15.3	12.2	1.3	5.6	7.2
ZST II 6215-...	68	11.5	9.2	1.3	5	6.5
ZST II 6217-...	73	15.3	12.2	1.3	5.6	7.2
2 × ZST 6215-...	98	11.5	9.2	1.3	5	6.5
2 × ZST 6217-...	105	15.3	12.2	1.3	5.6	7.2
ZST 8215-...	75	11.5	9.2	1.7	5.9	7.6
ZST 8217-...	80	15.3	12.2	1.7	6.5	8.4
ZST II 8215-...	79	11.5	9.2	1.7	5.9	7.6
ZST II 8217-...	84	15.3	12.2	1.7	6.5	8.4
2 × ZST II 8215-...	113	11.5	9.2	1.7	5.9	7.6
2 × ZST II 8217-...	120	15.3	12.2	1.7	6.5	8.4
ESTNA-8215-...	104	11.5	9.2	-	10.8	14
ESTNU-8215-...	109	11.5	9.2	-	10.8	14
ESTNA-8217-...	140	15.3	12.2	-	13	17
ESTNU-8217-...	147	15.3	12.2	-	13	17
ZST-10215-...	90	11.5	9.2	2.1	6.8	8.8
ZST-10217-...	95	15.3	12.2	2.1	7.4	9.6
ZST II 10215-...	94	11.5	9.2	2.1	6.8	8.8
ZST II 10217-...	99	15.3	12.2	2.1	7.4	9.6
2 × ZST 10215-...	135	11.5	9.2	2.1	6.8	8.8
2 × ZST 10217-...	143	15.3	12.2	2.1	7.4	9.6
ZST 12215-...	108	11.5	9.2	2.5	7.7	10
ZST 12217-...	118	15.3	12.2	2.5	8.3	10.8
ZST II 12215-...	113	11.5	9.2	2.5	7.7	10
ZST II 12217-...	123	15.3	12.2	2.5	8.3	10.8
2 × ZST II 12215-...	163	11.5	9.2	2.5	7.7	10
2 × ZST II 12217-...	178	15.3	12.2	2.5	8.3	10.8

母排系统 Busbar systems

母排系统 额定电流	相 线 截面积	材料	4 极 Kg/m	5 极 Kg/m
1000A	1 × 50 × 12	Cu	23	28
2000A	2 × 50 × 12	Cu	39	45
2500A	4 × 50 × 12	Cu	78	90
3200A	4 × 50 × 12	Cu	78	90
4000A	4 × 50 × 12	Cu	78	90
5000A	6 × 50 × 12	Cu	117	135

订货须知 Ordering Notice

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订货时用户应提供下列资料：

The following information should be supplied when ordering:

1. 一次系统图。
 2. 二次原理图（或按默勒公司标准原理提供）。
 3. 配电柜的排列图。
 4. 各柜内电器设备明细表（包括型号、规格、数量）。
 5. 配电室平面布置图。
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1. Main circuit single-line diagrams.
 2. Control and measuring circuit diagrams (or provided as standard by Zhenjiang Klockner-Moeller).
 3. The arrangement(s) for sections.
 4. The list of equipment in each section, including type, size and quantity.
 5. The location plans for sections in the power distribution centre.

application...and everything fits together perfectly; core products,PLCs,data and process display products,tools for network communication,open software standards, accessibility via the Internet,design and solution competence, and professional services. All backed up by Moeller's experience and expertise,spanning more than 100 years,with switchgear,controlgear and PLC technology in the fields of automation and power distribution.



Think future. Switch to green.