



## 综合样本 COMPOSITE SAMPLES



天仑电气 - 为您提供一流的电力系统解决方案  
Tianlun Electric, provide you with first-class power system solution

宁波天仑电气有限公司  
NINGBO TIANLUN ELECTRIC CO., LTD

宁波市北仑区江南中路 10 号  
No. 10, jiangnan Road , Beilun, Ningbo, China  
传真 (Fax): +86-0574-8619 3383 网址 (Web): www.cn-tianlun.com

联系电话 (TEL)  
**86-574-8619 3396 (中国)**  
**86-574-8619 3389 (International)**



企业官网  
Website qr code



微信公众号  
Wechat qr code

本型录文字、参数规格及资讯仅供参考。产品以实物为准，内容亦会随时更新。本公司样本及商标版权所有，翻录必究。型录所有机型为我司专利产品，仿冒必究。  
The text, specifications and information of catalogue are for only reference. Products depend on the actual model, the content will be updated without notice. The company sample and trademark copyright reserved, and counterfeiting is not allowed. all the models for our patented products, copying is not permitted.

宁波天仑电气有限公司  
NINGBO TIANLUN ELECTRIC CO., LTD



## 公司简介 Introduction

宁波天仑电气有限公司(以下简称公司)成立于2001年1月。

公司坐落于浙江宁波,毗邻“东方大港”北仑港。拥有10000平方米的研发生产基地,年产值超亿元,目前有80多名年轻朝气的员工,其中60%为本科学历。公司是集研发、生产、销售、服务于一体的高新技术企业,致力于打造高品质的智能化、节能型、定制模式的输变电设备产品。

公司目前有符合国际及国内标准3大类18种产品,包括24kV中置式开关柜及环网柜,12kV中置式开关柜及环网柜,440V固定式分隔柜,抽屉式开关柜,预装式变电站,低压母线槽(合作生产),10kV变压器(合作生产)等等,同时部分为ABB、Schneider的授权产品。公司立足于浙江,为很多大型的制造企业、房产开发、学校、港口等用户提供了许多高质量的产品和服务,同时也出口到东非、北非及东南亚国家,获得了客户的一致满意。

公司严格执行ISO9001质量保证体系,标准化体系,安全生产标准体系,国家CCC认证体系。坚持持续提升产品质量,追求零缺陷产品,全心全意服务用户的质量方针,坚持以人为本,鼓励创新,精细化的管理理念,坚持以感恩在心为核心价值观,为我们的用户提供最好的产品和服务。

Ningbo TIANLUN Electric Co., Ltd was established in year 2001, January. It is located in Ningbo, near Beilun port, which is called "oriental grand port". TIANLUN has 10000-square-meter researching and developing workshop and annual output value exceeds 100 million. TIANLUN has a professional team composed of 80 innovative staff, most of them have bachelor's degrees. TIANLUN is a company that integrates researching, developing, selling and service. Our purpose is to create high quality electric equipment product which is intelligentized, energy-saving and customized.

TIANLUN mainly have 18 types of products which belong to 3 majors as follow: 24 kV Intermediate switchgear and Ring Main Unit Switchgear, 12kV Intermediate Switchgear and Ring Main Unit Switchgear, 440V Fixed Isolated Switchgear, Preparatory Transformer Substation, Low Voltage Bus Duct (coproduction) and 10kV transformer (coproduction). Some products are Licensed by ABB and Schneider. TIANLUN have been providing high quality products to large manufacture enterprise, real estate, school and port constructions. At the mean time, our product are exported to Africa and southeastern countries and win satisfaction from the overseas customers.

TIANLUN strictly stick to ISO9001 standard system, standardization system, safety standard system and CCC authentication system. Our quality policy is producing good and zero defect product, having customers well served. Our management policy is people orientation, creation encouragement and high-effective system. TIANLUN always hold a thankful heart and provide top-level product with best service.

<b>XGN15-24F</b>	03-04	<b>GCS</b>	25-26
<b>XGN15-12F</b>	05-06	<b>GGD</b>	27-28
<b>ASGN</b>	07-08	<b>SIVACON 8PT</b>	29-30
<b>GTXGN □-12</b>	09-10	<b>LGDL</b>	31-32
<b>KYN28A-24</b>	11-12	<b>MD190</b>	33-34
<b>KYN28A-12</b>	13-14	<b>GGJ</b>	35-36
<b>DFW □-12</b>	15-16	<b>FLW</b>	37-38
<b>YB-12</b>	17-18	<b>SVS (JP)</b>	39-40
<b>GSM-I</b>	19-20	<b>DJK</b>	41
<b>GZDW</b>	21-22	<b>PZ30</b>	42
<b>GCK</b>	23-24		



ISO9001-2000



CCC 认证



WSC 北京世标认证中心



# XGN15-24F

箱型交流金属封闭环网开关设备  
AC Metal-enclosed Ring Main Unit Switchgear

## 产品概述

### Overview

XGN15-24 箱型交流金属封闭环网开关设备（以下简称环网柜），是我厂吸收国内外先进技术，自行设计、研制的新产品，该产品技术性能指标达到 IEC62271《1~52kV 交流金属封闭开关设备和控制设备》和 GB3906《3.6kV~40.5kV 交流金属封闭开关设备和控制设备》。由于产品具有体积小、重量轻、操作灵活、维护方便、质量稳定可靠、并具备完善的“五防”联锁功能，防护等级达到 IP3X 等优点，是城市电网改造的理想配套产品，主要适用于 50Hz 的三相交流网络中，作为电能的接受和分配之用。

The XGN15-24 AC Metal-enclosed Ring Main Unit Switchgear (hereinafter referred to as "ring main unit") is a new product designed and developed by Tianlun Electric by introducing overseas advanced techniques. The technical indicators of the product reaches IEC62271 and Controlgear and GB3906. The product is characterized by small volume, light weight, operation flexibility, maintenance convenience, and quality stability & reliability, and it comes out with perfect interlock protection functions and IP3X protection grade, so it is an ideal product for mains grid reconstruction. The product is mainly applicable to 50Hz three-phase AC network for receiving and distributing energy.

## 使用环境

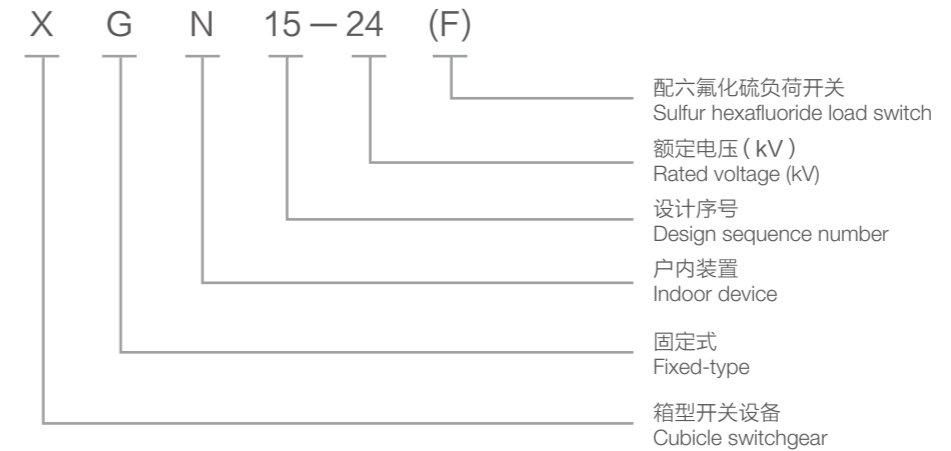
### Environmental Requirements

- 环境温度：不高于 +40℃，不低于 -25℃；
- 海拔高度：不超过 1000m；
- 相对湿度：日平均值不大于 95%，月平均值不大于 90%；
- 适用场所：没有火灾、爆炸危险、严重污秽、化学腐蚀及剧烈振动的场所。
- Ambient temperature: -25°C ~ +40°C
- Altitude ≤ 1000m
- Relative humidity: daily relative humidity ≤ 95% on average; monthly relative humidity ≤ 90% on average
- Applicable scenario: places that are free of risk of fire and explosion, severe dirt, and chemical corrosives and places that will not cause violent vibration.



## 型号含义

### Model Description



## 技术参数

### Technical Data

环网柜的主要技术参数见表 1。

Table 1 lists the main technical indicators of the ring main unit.

序号 Sn	名称 Name	单位 Unit	技术参数 Technical Data
1	额定电压 /Rated voltage	kV	24
2	额定频率 /Rated frequency	Hz	50
3	主母线额定电流 /Rated current of main bus	A	630
4	主回路、接地回路额定短时耐受电流 Rated short-time withstand current of main circuit and grounding circuit	kA/s	20/2
5	主回路、接地回路额定峰值耐受电流 Rated peak withstand current of main circuit and grounding circuit	kA	50
6	主回路、接地回路额定短路关合电流 Rated short-circuit making current of main circuit and grounding circuit	kA	50
7	负荷开关满容量开断次数 /Load switch full-capacity breaking times	次 /Times	100
8	熔断器开断电流 /Fuse breaking current	kA	31.5
9	1min 工频耐受电压（有效值）相间、对地 / 隔离断口 1min power frequency withstand voltage (valid value) between phases, to ground, to isolating fracture	kV	65/79
10	雷电冲击耐受电压（峰值）相间、对地 / 隔离断口 Impulse withstand voltage (peak value) between phases, to ground, to isolating fracture	kV	125/145
11	二次回路 1min 工频耐压 /1min power frequency withstand voltage of secondary circuit	kA	2
12	防护等级 /Degrees of Protection		IP3X



# XGN15-12F

箱型交流金属封闭环网开关设备  
AC Metal-enclosed Ring Main Unit Switchgear

## 产品概述 Overview

XGN15-12 箱型交流金属封闭环网开关设备（以下简称环网柜），是我厂吸收国内外先进技术，自行设计、研制的新产品，该产品技术性能指标达到 IEC62271 1~52kV 交流金属封闭开关设备和控制设备和 GB3906《3.6~40.5kV 交流金属封闭开关设备和控制设备》。由于产品具有体积小、重量轻、操作灵活、维护方便、质量稳定可靠、并具备完善的“五防”联锁功能，达到 IP2X 等优点，是城市电网改造的理想配套产品，主要适用于 50Hz 的三相交流网络中，作为电能的接受和分配之用。

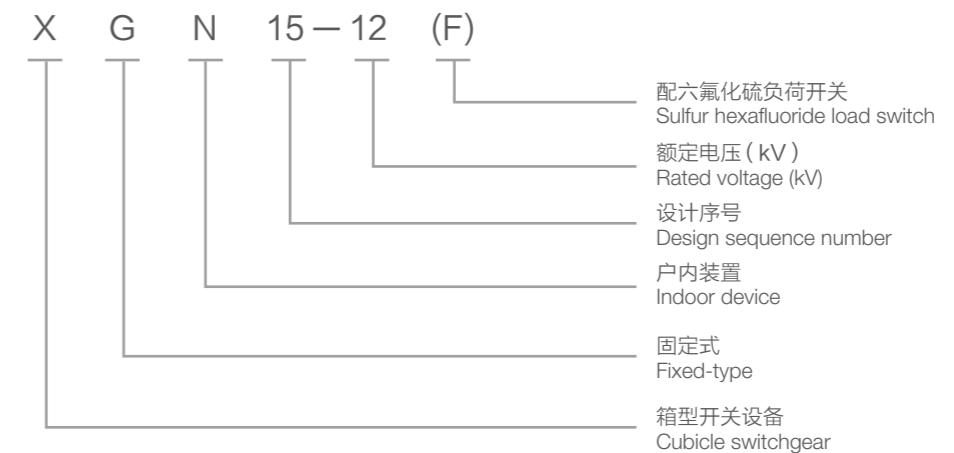
The XGN15-12 AC Metal-enclosed Ring Main Unit Switchgear (hereinafter referred to as "ring main unit") is a new product designed and developed by Tianlun Electric by introducing oversea advanced techniques. The technical indicators of the product reaches IEC62271 and GB3906. The product is characterized by small volume, light weight, operation flexibility, maintenance convenience, and quality stability & reliability, and it comes out with perfect interlock protection functions and IP2X protection grade, so it is an ideal product for mains grid reconstruction. The product is mainly applicable to 50Hz three-phase AC network for receiving and distributing energy.

## 使用环境 Environmental Requirements

- 环境温度：不高于 +40℃，不低于 -25℃；
- 海拔高度：不超过 1000m；
- 相对湿度：日平均值不大于 95%，月平均值不大于 90%；
- 适用场所：没有火灾、爆炸危险、严重污秽、化学腐蚀及剧烈振动的场所。
- Ambient temperature: -25℃ ~ +40℃
- Altitude ≤ 1000m
- Relative humidity: daily relative humidity ≤ 95% on average; monthly relative humidity ≤ 90% on average
- Applicable scenario: places that are free of risk of fire and explosion, severe dirt, and chemical corrosives and places that will not cause violent vibration.



## 型号含义 Model Description



## 技术参数 Technical Data

环网柜的主要技术参数见表 1。  
Table 1 lists the main technical indicators of the ring main unit.

序号 Sn	名称 Name	单位 Unit	技术参数 Technical Data
1	额定电压 / Rated voltage	kV	12
2	额定频率 / Rated frequency	Hz	50
3	主母线额定电流 / Rated current of main bus	A	630
4	主回路、接地回路额定短时耐受电流 Rated short-time withstand current of main circuit and grounding circuit	kA/s	20/2
5	主回路、接地回路额定峰值耐受电流 Rated peak withstand current of main circuit and grounding circuit	kA	50
6	主回路、接地回路额定短路关合电流 Rated short-circuit making current of main circuit and grounding circuit	kA	50
7	负荷开关满容量开断次数 / Load switch full-capacity breaking times	次 / Times	100
8	熔断器开断电流 / Fuse breaking current	kA	31.5
9	1min 工频耐受电压 (有效值) 相间、对地 / 隔离断口 1min power frequency withstand voltage (valid value) between phases, to ground, to isolating fracture	kV	42/48
10	雷电冲击耐受电压 (峰值) 相间、对地 / 隔离断口 Impulse withstand voltage (peak value) between phases, to ground, to isolating fracture	kV	75/85
11	二次回路 1min 工频耐压 / 1min power frequency withstand voltage of secondary circuit	kV	2
12	防护等级 / Degrees of Protection		IP2X

# ASGN

单元式金属封闭开关柜  
Unit Metal-enclosed Switchgear



## 产品介绍 Product Introduction

ASGN 开关柜，为模块化设计的 12kV 空气绝缘开关柜。该柜采用 SchneiderAS12 三工位 SF6 开关，并由成套厂组装完成，具有结构简单，方案灵活，操作便捷，安全可靠等特点。针对不同的应用场合，不同的用户需求，均能提供令人满意的解决方案。

ASGN switchgear is 12kV air-insulated switchgear featuring modular design. The switchgear uses Schneider AS12 three-position SF6 switches which are assembled in complete set factory, characterized by simple structure, flexible scheme, easy-to-use, high safety and reliability. Based on different applications and various user demands, satisfactory solutions will be provided.



## 应用领域 中压 / 低压变电站

### APPLICATIONS

#### Medium-voltage/low-voltage Substation

##### 定义

- 以下列出的是用于中压 / 低压变电站和工矿配电站的 ASGN 系列产品
- ISC: 负荷开关进线、出线或连接柜
- QSC: 熔断器 + 负荷开关组合柜
- ESC: 隔离开关 + 真空断路器柜
- PSC: 电压互感器柜
- GC: 电流 / 电压计量柜
- DSC: 双电源进线柜
- GB: 母线升高柜
- GA: 进线电缆连接柜
- CSC: 站用变柜
- 其它柜: 请向制造厂商咨询

##### Definitions

- The followings are ASGN Series products used for medium-voltage/low-voltage substations and industrial and mining power distribution stations
- ISC: load switch incoming line, outgoing line or connecting cabinet
- QSC: fuse + load switch combination cabinet
- ESC: Disconnector + vacuum circuit breaker cabinet
- PSC: voltage transformer cabinet
- GC: current/voltage metering cabinet
- DSC: dual power supply incoming line cabinet
- GB: bus lifting cabinet
- GA: incoming cable connection cabinet
- CSC: Transformer Cabinet for Substation
- Other cabinets: please consult with the manufacturer

## 应用领域 供电网系统

### Normal Applications

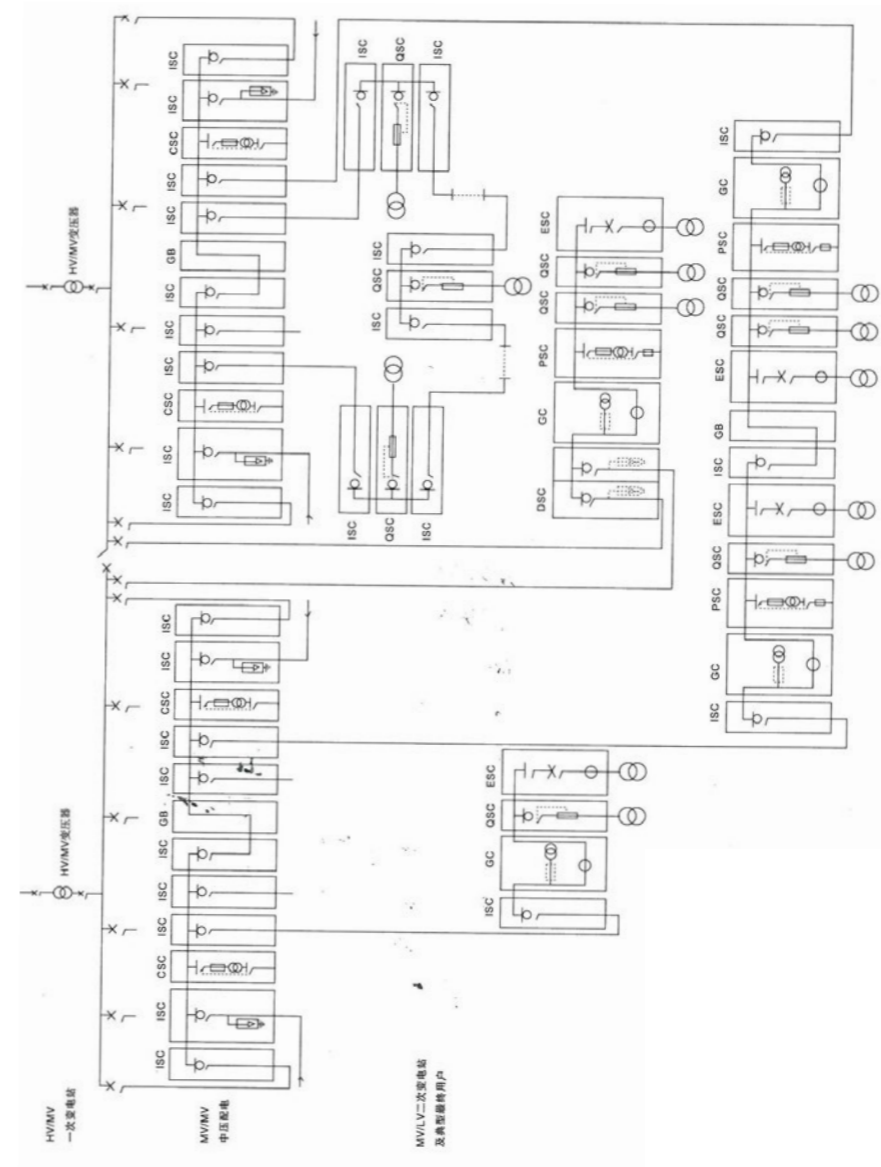
#### Power Supply Network System

发电厂发出的中压电能经过 MV/HV 主变传送到高压电网。一般来说，电力通过架空线传送到一次变电站。

- 在 HV/MV 一次变电站中，电力从高压转变为中压。
- 在 MV/MV 一次变电站中，电力被输送到若干个下级二次变电站。断路器在输配电中起着重要的作用。
- 在 MV/LV 二次变电站中，其电压等级从 MV 转变为 LV，并送至最终用户。在二次变电站中，负荷开关起主要的作用。

The medium-voltage electric energy generated by power plant is transmitted to high-voltage power grid through MV/HV main transformer.

- In general, the electric power is transmitted to primary substation through overhead line.
- In HV/MV primary substation, the electric power is converted into medium voltage from high voltage.
- in MV/MV primary substation, the electric power is transmitted to several secondary substations at lower level. The circuit breaker plays an important role in power transmission and distribution.





# GTXGN □-12

固体绝缘全封闭开关设备  
Solid-insulated Switchgear

## 概述

### General

GTXGN-12 固体绝缘开关设备是一种全绝缘、全封闭的新一代环保开关设备，所有带电部件全部密封在一个 APG 注塑成型的环氧树脂壳体内，相邻柜间通过接插式固体绝缘母线连接，整个开关设备不受外部环境影响。

GTXGN-12 固体绝缘开关设备具有真空负荷开关柜、真空负荷开关 - 熔断器组合电器柜和真空断路器柜三种基本功能单元柜，适用于 10kV 三相交流 50Hz 单母线系统，作为接受和分配电能设备；它自身具备对线路进行控制、保护、监视和通讯功能，可适用于机场、地铁、大型建筑、二次变电站及工矿企业等，特别适合于场地狭小、环境恶劣、海拔高、要求免维护等场合使用。

GTXGN-12 Solid-insulated Switchgear is a new generation of fully-insulated and fully-enclosed environment-friendly switchgear. All live parts are enclosed in epoxy resin housing with APG injection moulding, and the adjacent cabinets are connected by plug-in solid-insulated bus, so the switchgear will not be affected by external environment.

GTXGN-12 Solid-insulated Switchgear includes three cabinets of basic functional units: vacuum load switch cabinet, vacuum load switch & fuse cabinet combination, and vacuum circuit breaker cabinet, which applies to 10kV three-phase AC 50Hz single-busbar system. As an equipment to receive and distribute electric energy, it is provided with line control, protection, monitoring and communication, and can be used in airport, subway, large building, secondary substation and mining or industrial enterprises, especially suitable for those occasions with narrow place, poor environment, high altitude and maintenance-free requirement.

### 质量保证：

#### Quality Assurance

产品质量保证建立在符合质量体系各方面要求的研究、开发、设计和生产过程的不断改进之上，生产工厂取得了 ISO9001 的认证。

产品在国家高压试验检测中心进行了规定项目的型式试验验证，产品的基本参数和技术指标均符合以下标准：

GB1984-2014	高压交流断路器
GB3804-2004	3.6kV~40.5kV 高压交流负荷开关
GB3906-2006	3.6kV~40.5kV 交流金属封闭开关设备和控制设备
GB16926-2009	高压交流负荷开关 - 熔断器组合电器
Q/GDW730-2012	12kV 固体绝缘环网柜技术条件（国网企标）

Quality assurance is established based on continuous improvement in the process of research, development, design and production in compliance with quality system. The manufacturing factory has passed ISO9001 certification.

The product has been provided with type test as required by National High-voltage Test and Inspection Center, whose basic parameters and technical index conform the following standards:

GB 1984-2014	High-voltage alternating-current circuit-breakers
GB3804-2004	High-voltage alternating-current switches for rated voltage above 3.6 kV and less than 40.5 kV
GB3906-2006	Alternating-current metal-enclosed switchgear and controlgear for rated voltages above 3.6 kV and up to and including 40.5 kV
GB16926-2009	High-voltage alternating current switch-fuse combinations
Q/GDW730-2012	Specifications for 12kV solid-insulated ring main units



## 产品特点

### Product Features

- 安全可靠——带电部件全部密封在外表面进行了接地屏蔽处理的环氧树脂绝缘筒和硅橡胶封闭母线内，实现全绝缘、全封闭、免维护。使用时不受环境和高海拔影响。分箱设计避免了相间放电可能性。
- 结构紧凑——同类环网柜体积最小的产品之一：负荷开关柜、断路器柜尺寸 400×750×1500，负荷开关 + 熔断器组合电器柜尺寸 440×750×1500。
- 绿色环保——无 SF6 等温室气体。
- 智能化——断路器机构具有重合闸功能，负荷开关机构具有脱扣功能，可选配智能控制单元组件，适应电力企业实现配网自动化要求。
- 断口可视——三工位隔离开关的导通、隔离、接地三个位置可视。
- 灵活扩展——通过插接式绝缘母线可进行各种方案组合方案扩展，且扩展母线设在柜的顶部，符合用户使用习惯，便于安装。
- 负荷开关 + 熔断器组合电器功能柜的熔断器下端出线侧设有下接地装置，确保更换熔断器时的人身安全。
- 进行了内部故障泄压通道和结构设计，是一款达到 IAC 内燃弧级别的固体绝缘柜。
- 具有完善的机械、电气联锁功能，满足“五防”要求。

- Safe and reliable – all live parts are enclosed in the epoxy resin-insulated cylinder and silicon rubber-sealed busbar with external surface grounded and shielded so as to achieve full-insulation, full-enclosure and maintenance-free. The operation will not be affected by environment and altitude. Branch boxes prevent phase-to-phase discharge.
- Compact structure – the smallest in the similar looped-network cabinets: load switchgear and circuit breaker 400 x 750 x 1500; load switch-fuse combination 440 x 750 x 1500.
- Environmental protection – without greenhouse gases such as SF6.
- Intelligent – the circuit breaker mechanism is functioned with reclosing and the load switch mechanism is functioned with tripping. The intelligent control unit components can be optional to meet the distribution and automation requirement in electric power enterprises.
- Visual port – the conducting, isolating and grounding position of three-position isolated switch are visual.
- Flexible expansion – with plug-in isolated bus, it can realize different combinations and expansions. The expanded bus is set on the top of cabinet, which caters for users and convenient for installation.
- In order to ensure human safety in fuse replacement, the grounding device is provided on the lower outgoing side of load switch-fuse combination.
- The solid-insulated cabinet is provided with internal fault relief passage and structure, and reaches to IAC internal arc class. It is complete with mechanical and electrical interlocking and meets five-prevention requirement.

## 使用环境条件

### Service Environmental Conditions

- 海拔高度：不超过 1000m；
  - 周围空气温度：上限 +45℃，下限 -40℃；
  - 相对湿度：日平均不大于 95%，月平均不大于 90%；
  - 周围无腐蚀或可燃性气体等明显污染；
  - 无经常性的剧烈振动，地震强度不超过 8 级。
- 注：顾客若偏离正常使用条件可与制造厂家协商。**

- Altitude: not higher than 1000m;
- Ambient temperature: upper limit +45℃, lower limit -40℃;
- Relative humidity: daily mean RH not more than 95%, monthly mean RH not more than 90%;
- No obvious pollutions such as erosion or combustible gas;
- No frequent violent vibrations, earthquake intensity not above 8-magnitude.

**Note: the customers shall consult any deviations from normal service conditions with the manufacturer.**

# KYN28A-24

交流金属铠装中置移开式开关设备  
AC Metal-clad withdrawable Switchgear

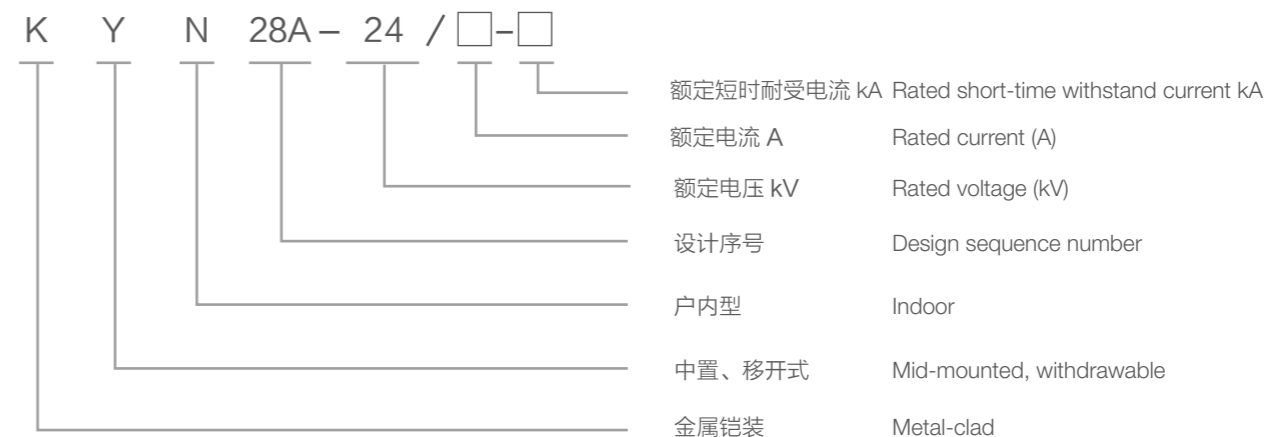
## 概述 Overview

KYN28A-24 型户内交流金属铠装中置移开式开关设备（以下简称开关设备），系 24kV 三相交流 50Hz 单母线及单母线分段系统的成套装置。主要用于发电厂、中小型发电机送电、工矿企业配电以及电业系统的二次变电所的受电、送电、极大型高压电动机启动等。实行控制保护、检测之用。本开关柜满足 IEC62271、GB3906 等标准要求、具有防止带负荷推拉断路器手车，防止误分断路器、防止接地开关处在闭合位置时关合断路器、防止误入带电隔室、防止在带电时误合接地开关的联锁功能，既可配用 ABB 公司的 VD4 真空断路器，也可配置 VS1 真空断路器、隔离手车、电压互感器手车等，实为一种性能优越的配电装置。

The KYN28A-24 indoor AC metal-clad withdrawable switchgear (hereinafter referred to as switchgear) is a complete set of power distribution devices of 24kV three-phase AC 50Hz single bus or single bus sectional system. The switchgear is mainly used in power plants, small- and medium-sized power generators, industrial and mining enterprises, and secondary substations of power system for power receiving, power transmission, and startup of large-sized high-voltage motor in order to implement control, protection, and monitor. The switchgear complies with IEC62271 and GB3906 standards and comes out with a variety of protection functions, including preventing pulling or pushing circuit breaker handcart in load mode, preventing turning on/off the circuit breaker by mistake, preventing turning on the circuit breaker when the grounding switch is in ON position, preventing entering the energized cubicle by mistake, and preventing turning on the interlock function of the grounding switch by mistake in energized state. The switchgear can be used in conjunction with the VD4 circuit breaker of the ABB company, VSI circuit breaker, isolation handcart, and voltage transformer. It is really a high-performance power distribution device.



## 型号含义 Model Description



## 使用环境条件 Environmental Requirements

### 正常使用条件

- 海拔不超过 1000m;
- 周围空气湿度: 上限 +40°C, 下限 -10°C (允许 -25°C 储运);
- 环境湿度: 日平均相对湿度不大于 95%  
月平均相对湿度不大于 90%
- 地震: 地震烈度不超过 8 度;
- 适用于 II 类污秽环境。

### Normal Operation Conditions

- Altitude  $\leq$  1000m
- Ambient temperature: -10°C ~ +40°C (temperature can be as low as -25°C during transportation and storage)
- Relative humidity: daily relative humidity  $\leq$  95% on average;  
monthly relative humidity  $\leq$  90% on average
- Seismic scale of earthquake  $\leq$  8
- The switchgear is applicable to category II contaminated environment.

### 特殊工作条件

在超过正常环境条件下使用时，由用户和制造厂协商。

### Special Operation Conditions

If the switchgear will be used in conditions that exceed the normal environmental conditions, users shall negotiate with the manufacturer.



# KYN28A-12

户内交流金属铠装中置移开式开关设备  
Indoor AC Metal-Clad Withdrawable Switchgear

## 概述 Overview

KYN28A-12 型户内交流金属铠装中置移开式开关设备（以下简称开关设备），3.6~12kV 三相交流 50Hz 单母线及单母线分段系统的成套配电装置。主要用于发电厂、中小型发电机送电、工矿企业事业配电以及电业系统的二次变电所的受电，送电及大型高压电动机起动等。实行控制保护、检测之用。本开关柜满足 IEC62271、GB3906 等标准要求，具有防止带负荷推拉断路器手车、防止误分合断路器、防止接地开关处在闭合位置时关合断路器、防止误入带电隔室、防止在带电时误合接地开关的联锁功能，既可配用 ABB 公司的 VD4 型真空断路器，也可配置 VS1 型真空断路器、隔离手车、电压互感器手车等，实为一种性能优越的配电装置。

The KYN28A-12 indoor AC metal-clad withdrawable switchgear (hereinafter referred to as switchgear) is a complete set of power distribution devices of 3.6kV ~ 12kV three-phase AC 50Hz single bus or single bus sectional system. The switchgear is mainly used in power plants, small- and medium-sized power generators, industrial and mining enterprises, and secondary substations of power system for power receiving, power transmission, and startup of large-sized high-voltage motor in order to implement control, protection, and monitor. The switchgear complies with IEC62271 and GB3906 standards and comes out with a variety of protection functions, including preventing pulling or pushing circuit breaker handcart in load mode, preventing turning on/off the circuit breaker by mistake, preventing turning on the circuit breaker when the grounding switch is in ON position, preventing entering the energized cubicle by mistake, and preventing turning on the interlock function of the grounding switch by mistake in energized state. The switchgear can be used in conjunction with the VD4 circuit breaker of the ABB company, VS1 circuit breaker, isolation handcart, and voltage transformer. It is really a high-performance power distribution device.



## 型号含义 Model Description



## 使用环境条件 Environmental Requirements

### 正常使用条件

- 海拔不超过 1000m；
- 周围空气湿度：上限 +40℃，下限 -10℃（允许 -25℃ 储运）；
- 环境湿度：日平均相对湿度不大于 95%  
月平均相对湿度不大于 90%
- 地震：地震烈度不超过 8 度；
- 适用于 II 类污秽环境。

### Normal Operation Conditions

- Altitude ≤ 1000m
- Ambient temperature: -10℃ ~ +40℃ (temperature can be as low as -25℃ during transportation and storage)
- Relative humidity: daily relative humidity ≤ 95% on average;  
monthly relative humidity ≤ 90% on average
- Seismic scale of earthquake ≤ 8
- The switchgear is applicable to category II contaminated environment.

### 特殊工作条件

在超过正常环境条件下使用时，由用户和制造厂协商。

### Special Operation Conditions

If the switchgear will be used in conditions that exceed the normal environmental conditions, users shall negotiate with the manufacturer.



# DFW □ - 12

高压电缆分接箱  
High-voltage Cable Branching Switchgear

## 概述 Overview

电缆分接箱是电缆传送电能的中转站，用于户外对电缆线路进行联络、分接、分支、接续或转换。具有联结方式简单、方便、灵活、全绝缘结构、耐腐蚀、抗污染、安全可靠等特点。

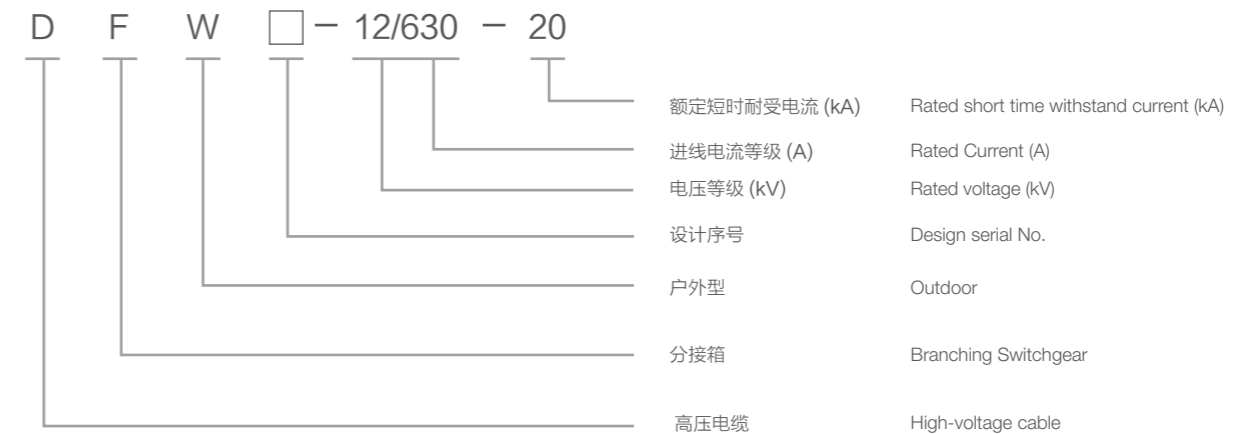
DFW □ - 12 系列电缆分接箱是我厂为配合 10kV 电力网电缆系统而设计的新型供电设备，广泛适用于 10kV 系统中的电缆节点处，作为电能接受和分配之用。该系列电缆分接箱结构独特、外形美观，特别适用于城市街道、住宅小区、高层建筑、机场、码头等建筑面积小且对环境要求又相对较高的场所。

The Cable Branching Switchgear is the transfer station for cable to transmit electric energy, used for connecting, shunting, branching, continuing or transferring cables outdoors. It features simple, convenient, and flexible connecting ways, full insulation structure, corrosion resistance, anti-pollution, high safety and reliability.

DFW □ - 12 Cable Branching Switchgear is a new power supply equipment designed by us for being used with 10kV power grid cable system, which is widely used at cable joints in 10kV system for receiving and distributing the electric energy. The cable distribution box of this series has unique structure and aesthetical appearance, especially suitable for city streets, residential quarter, high-rise building, airport, and wharf and other sites with small building area and serious requirements for the environment.



## 型号含义 Model Description



## 正常使用条件 Normal Operating Conditions

- |                     |  |
|---------------------|--|
| A、海拔不超过 1000m；      | A. Altitude not greater than 1000m;    |
| B、环境温度 -25℃ ~ +40℃； | B. Ambient temperature - 25℃ to +40℃ ; |
| C、风速 ≤ 34 m/s；      | C. Wind speed ≤ 34m/s                  |
| D、无经常性的剧烈振动的场所。     | D. No frequent severe vibrations       |

## FN26-12 六氟化硫负荷开关主要参数 Main Parameters of FN26-12 Sulfur Hxfluoride Load Switch

项目 Item	单位 Unit	数据 Parameters
额定电压 Rated voltage	kV	12
额定电流 Rated current	A	630
额定短时耐受电流 Rated short-time withstand current	kA/s	25/2
额定峰值耐受电流 Rated peak withstand current	kA	63
额定短路关合电流 Rated short circuit making current	kA	63
1min 工频耐受电压 1 min power frequency withstand voltage	kV	42/48
雷电冲击耐受电压 Impulse withstand voltage	kV	75/85
机械寿命 Mechanical lifetime	次 /time	10000
SF6 气体压力 (20℃时表压) SF6 gas pressure (gage pressure at 20℃ )	MPa	0.04
年漏气率 Annual air leak rate		≤1%

# YB-12

预装式变电站 - 欧式、美式箱变  
Prefabricated Substation

## 产品概述

### Product Overview

YB-12 预装式变电站是适用于交流 50Hz, 额定电压为 6、10kV 的网络中, 容量为 1600kVA 及以下的独立成套变配电装置。具有投资少、占地面积小、安装简单、运行可靠、维修方便等优点。能直接深入负荷中心, 一次安装即能实现送电目的。广泛应用于城市高层建筑、居民小区、商场、宾馆、医院、机场、码头、工矿企业、旅游景点、高速公路及临时性设施等户内、外场所。YB-12 预装变电站既可用于环网配电系统, 也可作为放射式电网终端供电。

YB-12 Prefabricated Substation applies to the network of AC 50Hz and rated voltage 6/10kV, and the independent complete transformation and distribution device of capacitance 1600kVA or less. This station is small in investment, small in ground area, simple in installation, reliable in operation and easy in maintenance. The station can be directly put into load center, and the goal of power supply can be realized only by one-time installation. It is widely used in urban high buildings, residential quarters, shopping malls, hotels, hospitals, airports, industrial and mining enterprises, tourism spots, expressways and temporary facilities both indoor and outdoor.

YB-12 Prefabricated Substation can be used in the ringed network distribution system and be for the purpose of terminal power supply of radial grid as well.



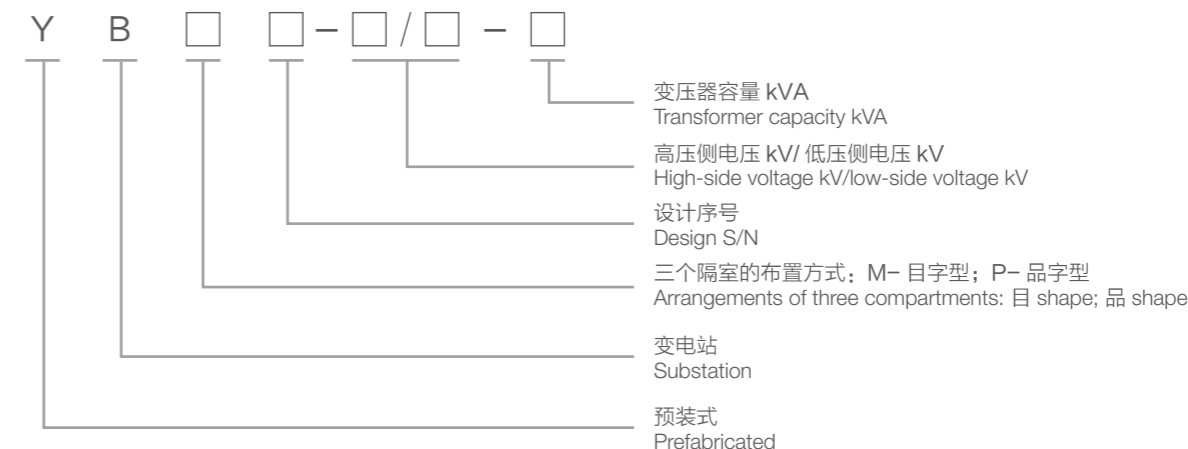
## 正常使用条件

### Normal Service Conditions

- 周围环境温度  $-25^{\circ}\text{C} \sim +40^{\circ}\text{C}$   
最热日平均温度  $+30^{\circ}\text{C}$   
最高年平均温度  $+20^{\circ}\text{C}$
  - 空气相对湿度 在  $25^{\circ}\text{C}$  时, 相对湿度日平均不超过 95%, 月平均值不超过 90%。
  - 海拔高度不超过 1000m
  - 户外风速不超过 34m/s
  - 安装地点 应安装于无火灾、无剧烈震动、无化学腐蚀及无爆炸危险的场所
- Ambient temperature  $-25^{\circ}\text{C} \sim +40^{\circ}\text{C}$   
Max daily average temperature  $+30^{\circ}\text{C}$   
Max yearly average temperature  $+20^{\circ}\text{C}$
  - Relative humidity: at  $25^{\circ}\text{C}$ , the daily average is not higher than 95%; The monthly average is not higher than 90%.
  - Altitude not more than 1000m
  - Outdoor wind speed not more than 34m/s
  - Installation location: it shall be installed where there is free of fire, violent vibrations, chemical corrosion or explosion risks.

## 型号含义

### Model Description



本公司生产的预装式变电站共有三类: YBM29-12/0.4 (欧式) 变电站、YBM(J)-12/0.4 (紧凑型) 变电站、YB-12/0.4 (美式) 变电站。

There are three types of prefabricated Substations manufactured by the company: YBM29-12/0.4 (European) Substation, YBM(J)-12/0.4 (Compact) Substation, YB-12/0.4 (American) Substation.

## 主要技术参数表 (表 1)

### Main Technical Data (Table 1)

	项目 Item	单位 Unit	参数 Data
高压 high voltage	额定频率 rated frequency	Hz	50
	额定电压 rated voltage	kV	12
	1min 工频耐受电压 1min power frequency withstand voltage	kV	42
	雷电冲击耐受电压 impulse withstand voltage	kV	75
	额定电流 rated current	A	200 400 630
	额定短时耐受电流 rated short-time withstand current	kA	25/1s 20/3s
低压 low voltage	额定电压 rated voltage	V	400
	主回路额定电流 rated current of main circuit	A	100 ~ 2500
	支路电流 current of branch	A	10 ~ 800
	分支回路数 circuit number in branch	路 Circuit	1 ~ 12
变压器 transformer	补偿容量为变压器容量的 percentage of compensating capacity in transformer capacity		15 ~ 30%
	额定容量 rated capacity	kVA	50 ~ 1600
	分接范围 tapping range		$\pm 2 \times 2.5\%$ 或 (or) $\pm 5\%$
箱体 cabinet	联接范围 connection group		Yyn0 或 (or) Dyn11
	外壳防护等级 degree of protections		IP23D
	声级水平 sound level	dB	$\leq 55$

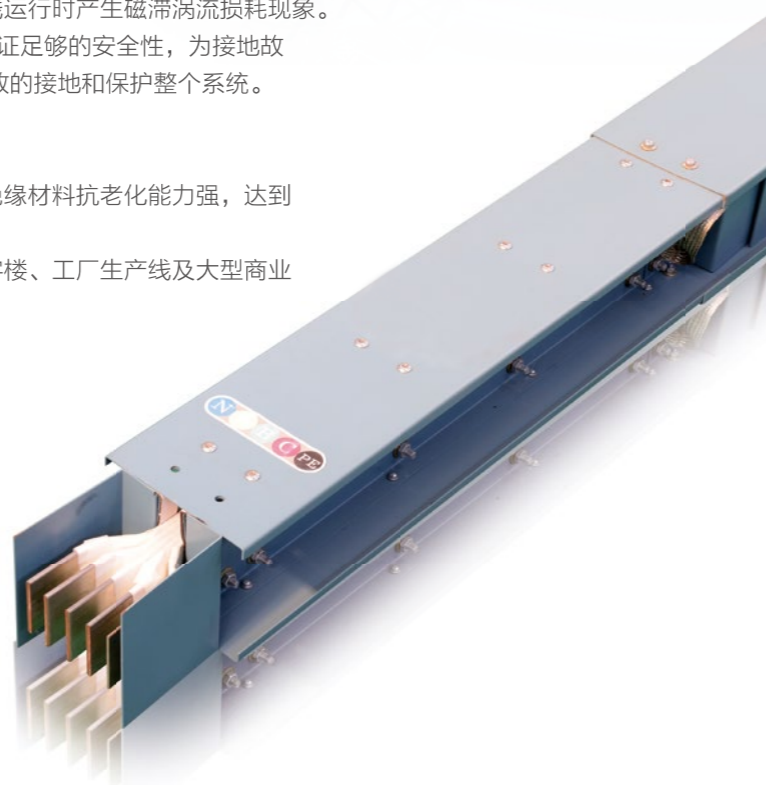


# GSM-I

母线槽系统  
Busways System

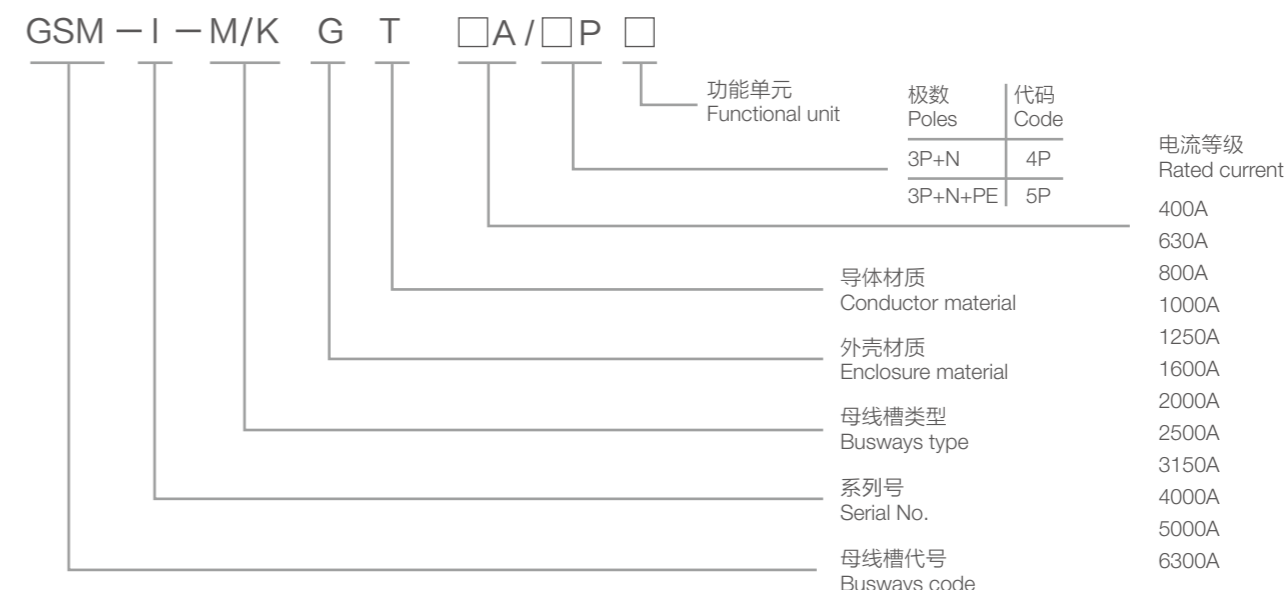
## 产品特点 Product Features

- 电流：400~6300A
- 排之间保持紧凑的“三明治”结构，可有效避免“烟囱效应”。
- 外壳采用优质高强度冷轧钢一次冷轧成波纹结构，不仅外形美观大方，更大大增强母线槽的机械强度和系统的动热稳定性，可彻底解决施工现场大跨距安装的难题。
- 选用铝镁合金外壳为非磁材料，散热块，可避免钢制外壳母线运行时产生磁滞涡流损耗现象。
- 系统选择具有大于相线 50% 容量的整个外壳作接地系统，保证足够的安全性，为接地故障提供可靠的接地路径，当发生高容量的接地故障时，可有效的接地和保护整个系统。
- 母线槽防护等级最高可达 IP65。
- 导体采用 2# 电解铜，原材料从国外进口，纯度高。
- 导体表面整体镀锡，全长包裹美国杜邦公司的聚酯薄膜，该绝缘材料抗老化能力强，达到 B 级绝缘，耐温 130℃。
- 本系列母线槽广泛适用于变配电中心、高层商住楼、综合写字楼、工厂生产线及大型商业中心等高效、安全的输配电场所。



- Rated current: 400-6,300A
- Maintaining compact “sandwich” structure between copper bars may effectively avoid “chimney effect”.
- The shell adopts high-quality and high-strength cold-rolled steel which is cold rolled into a corrugated structure at a single time. with a nice outlook, the structure also greatly enhances the mechanical strength of busway and good dynamic thermal stability of the system. Therefore, it may thoroughly solve the problem of large-span installation at construction site.
- The shell of busway adopts aluminum magnesium alloy, which enjoys non-magnetism and fast heat dissipation capability, and may avoid magnetic lag and eddy current loss generated during the running of busbar with steel shell.
- The whole enclosure with more than 50% of the capacity of phase line is chosen as grounding system, which guarantees system safety and provide reliable grounding path for ground fault, and can be effectively grounded and protect the entire system when a high-capacity ground fault occurs.
- The protection level of busways is IP65.
- The conductor adopts superior electrolytic copper (2#), the raw material of which is imported abroad and is highly pure.
- The surface of conductor is coated with tin and totally covered with polyester film produced by USA Dupont. Such insulating material has strong anti-oxidant corrosion ability, with insulation grade B and resistance to the temperature of 130℃ .
- This series of busways is applicable to high-efficient and safe PTD occasions, such as power transformation and distribution centers, high-rise commercial and residential buildings, integrated office buildings, factory production lines and large commercial centers, etc.

## 型号含义 Model Description



## 技术参数 Technical Data

符合标准 /Standard	GB7251.1/GB7251.2
标准颜色 /Standard colors	RAL7046
额定工作电压 /Rated operating voltage Ue	AC380V/AC690V
额定绝缘电压 /Rated insulation voltage Ui	AC690V/AC1000V
额定频率 /Rated frequency	50/60Hz
防护等级 /Degrees of protection	IP54/65

## 铜母线 Copper busbar

额定电流 Ie(A) Rated current Ie (A)	400	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300
额定短时耐受电流 Icw(kA) Rated short-time withstand current Icw (kA)	30	30	30	50	50	50	80	80	80	80	100	100
额定峰值耐受电流 Ipk(kA) Rated peak withstand current Ipk (kA)	63	63	63	105	105	105	176	176	176	176	220	220
电阻 R(mΩ/m) Resistance R (mΩ/m)	0.109	0.094	0.073	0.060	0.050	0.036	0.026	0.016	0.013	0.010	0.007	0.004
电抗 X(mΩ/m) Reactance X (mΩ/m)	0.044	0.039	0.034	0.032	0.028	0.023	0.019	0.012	0.009	0.005	0.001	0.001
阻抗 Z(mΩ/m) Impedance Z (mΩ/m)	0.117	0.101	0.081	0.073	0.058	0.043	0.032	0.020	0.016	0.011	0.007	0.004
电压降 (v/m) Voltage drop (v/m)	0.076	0.102	0.100	0.091	0.087	0.079	0.073	0.071	0.072	0.071	0.063	0.071

# GZDW

电力工程直流电源设备  
DC Power Supply Equipment Of Power Projects

## 产品概述 Overview

该系统适用于 500kV 及以下的发电厂、变电站、工矿企业、高层建筑、通讯、铁路等系统直流操作、继电保护、控制信号和事故照明等方面的不间断直流供电控制。该系统控制下、整个直流成套系统严格按照蓄电池充电曲线进行强充电、均充电、避免过充和欠充现象，延长电池的使用寿命。设定在控制系统出现故障时，直流屏自动转换为手动并报警，以确保整个系统的安全和可靠。这是一套理想的直流屏智能控制系统，它可按部颁标准实现所有的需求。

The system supplies 500kV or lower-voltage power plants, substations, industrial and mining enterprises, tall buildings, communication systems, and railway systems with uninterrupted DC power for DC operation, relay protection, signal control, and lighting. Controlled by this system, the entire DC complete system performs forced charging and equalized charging in strict accordance with the charging curve of the battery to avoid overcharging and undercharging and extend the service life of the battery. In case of fault on the control system, the DC cabinet switches to manual operation mode and gives an alarm to ensure safety and reliability of the entire system. This ideal DC cabinet smart control system can implement all requirements of the power industry.

## 技术数据 Technical Data

### 系统配置 System Configuration:

**充电机:** 高频开关整流模块或进口电力模块

**备份方式:** 1、电池容量在 200Ah 以上的系统: 按 (N1+1)+(N2+1) 备份  
2、电池容量在 200Ah 以下的系统: 按 N1+(N2+1);N+1 备份

**中央控制系统:** 液晶屏界面控制、触摸屏 + 各检测分模块、触摸屏 + PLC 组件

**数据采集:** 综合参数控制器

**降压装置:** 电压调整器、DC/DC

**人机界面:** 液晶屏、触摸屏

**电池检测:** 触摸屏画面、专用电池检测装置、PLC 监控

**温度补偿:** 温度补偿装置

**断路器:** 西门子等

**Charging module:** High-frequency switch rectifier module or imported power module

**Standby method:** 1. For system with battery capacity larger than 200 Ah, (N1+1) + (N2+1)  
2. For system with battery capacity smaller than 200 Ah, N1 + (N2+1); N+1

**Central control system:** LCD interface control, touchscreen + detection submodules, touchscreen + PLC components

**Data collection:** general parameter controller

**Step-down device:** voltage adjustor; DC/DC

**MMI:** LCD, touchscreen

**Battery monitor:** touchscreen interface, special -purpose battery detection device, PLC monitor

**Temperature compensation:** temperature compensation device

**Circuit breaker:** Siemens, etc



### 配置原则

#### Configuration Rules:

充电/浮充电装置采用多个智能高频开关电源模块并联, N+1 热备份工作。智能高频开关电源模块数量可按如下公式选择(即确定 N 的数值):

$N \times \text{模块额定电流} \geq \text{最大经常性负荷} + \text{满足蓄电池要求的均充电流}$

例如: 直流系统电压等级为 220VDC, 蓄电池容量为 300Ah, 经常性负载为 5A, 则充电电流 (0.1 × 300Ah) + 经常性负载 (5A) = 35A。若选用整流模块 4 台即可满足符合要求 (N=4), 再加一个备用模块共 5 个电源模块并联可构成所需系统。

可选功能: (1) 输出支路绝缘监测 (2) 输出支路开关状态监测 (3) 输出支路跳闸监测 (4) 单体蓄电池端电压监测 (5) 电池容量监测

The charging / float charging device adopts multiple smart high-frequency switch mode power modules which are paralleled and work in N+1 hot standby mode. The number of smart high-frequency switch mode power modules can be determined in accordance with the following formula (that is to determine the value N):

$N \times \text{rated current of module} \geq \text{maximum general load} + \text{equalized charging current (meeting battery requirement)}$

For example, a DC system with voltage 220 VDC, battery capacity 300 Ah, and general load 5 A, the charging current is (0.1 × 300 Ah) + General load (5A) = 35A. If four rectifier modules (N = 4) can meet requirements, add a standby module. A total of five power modules are connected in parallel mode to form a required system.

Optional functions: 1. Monitoring insulation of output branch 2. Monitoring ON/OFF state of output branch

3. Monitoring trip state of output branch 4. Monitoring end voltage of single battery 5. Monitoring battery capacity

名称 Name	单位 Unit
输入电压 /Input voltage	380V±15% (三相 three-phase)
电网频率 /Rated frequency	50Hz±10%
输入过压 /Input overvoltage	437V±5V
输入欠压 /Input undervoltage	320V±5V
额定输出直流电压范围 /Rated output DC voltage range	48V、110V、220V 等 (180V-320 连续可调, 90V-160V) 48V, 110V, 220V, etc (180V ~ 320V consecutive and adjustable, 90V ~ 160V)
输出欠压 /Output undervoltage	196V±2V, 98V±2V
过压保护 /Overvoltage protection	325V±5V, 162V±2V
蓄电池额定容量 /Battery rated capacity	5-3000Ah
事故后供电时间 /Post-accident power supply time	1h
常规负荷母线额定电流 (A) /Rated current of conventional load bus (A)	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 100, 160, 180, 200, 250, 315, 400, 630, 800, 1000, 1250, 1600, 2000
直流设备中各电路的额定绝缘电压 Rated insulating voltage of various circuits in DC device	直流 63V 及以上 (48V 系统) DC 63V and above (48V system) 直流 200V 及以上 (110V 系统) DC 200V and above (110V system) 直流 300V 及以上 (220V 系统) DC 300V and above (220V system)
绝缘电阻 /Insulating resistance	≥10MΩ
稳压精度 /Voltage stabilization precision	≤±0.5%
稳流精度 /Current stabilization precision	≤±1%
纹波系数 /Ripple factor	≤0.5%
合闸时动力母线电压 /Ripple coefficient	≥200V
外壳防护等级 /Housing protection grade	不低于 IP30 Not lower than IP30
效率 /Efficiency	η ≥90%
效率因数 /Power factor	cosΦ ≥0.95
均流不平衡度 /Equalized current unbalance	充电模块间电流不平衡度不大于 ±5% Current unbalance between charging modules ±5%
相对湿度 /Relative humidity	≤ 90% (20 ± 5℃)
环境温度 /Ambient temperature	-5℃ ~ +45℃
可闻噪音 /Noise	≤ 45dB
绝缘强度: 输出对地、输入对低、输入对输出施加 2kV AC, 1Min 无飞弧无闪络 Insulation strength: apply 2 kV AC to output-to-ground, input-to-ground, and input-to-output; 1Min is free of arcing and flashover	
尺寸 /Dimensions:	2260mm×800mm×600mm 2360mm×800mm×600mm



# GCK

低压抽出式开关柜  
Low-voltage Draw-out Switchgear

## 用途 Usage

GCK 低压抽出式开关柜适用于三相交流 50、60Hz，额定电压 380V 额定电流 4000A 及以下的三相四线制及三相五线制电力系统，作为接受电能和分配电能之用。广泛应用于发电厂、变电所、厂矿企业和高层建筑的动力配电中心和电动机控制中心 MCC。

GCK low-voltage draw-out switchgear is applicable to three-phase four-wire and three-phase five-wire power systems with three-phase AC 50, 60Hz, rated voltage 380V and rated current 4,000A and below and is used to accept and distribute electric energy. It has been widely applied to power distribution center PC and motor control center MCC of power plants, substations, industrial and mining enterprises and high-rise buildings.

## 符合标准 Standards

本产品符合：

**This product shall conform to:**

- GB7251.1 低压成套开关设备和控制设备 第一部分：总则
- GB7251.12 低压成套开关设备和控制设备 第二部分：成套电力开关和控制设备
- IEC61439 低压成套开关设备和控制设备
- GB7251.1 Low-voltage Switchgear and Controlgear Assemblies Part 1: General Rules
- GB7251.12 Low-voltage Switchgear and Controlgear Assemblies Part 2: Power Switchgear and Controlgear Assemblies
- IEC61439 Low-voltage Switchgear and Controlgear Assemblies



## 结构特点 Structure

开关柜的基本框架采用拼装组合式结构，采用型钢由螺栓互相紧固联接成基本框架，再按方案变化需要，加上相应的门、封板、隔板、安装支架以及母线、功能单元等零件组成一面完整的开关柜，柜内结构件都经过镀锌处理，并实行模数化安装（模数 E=20mm），开关柜板面采用优质冷轧钢板经数控机床加工成型，表面经过酸洗、磷化处理并静电喷涂，抗磨耐腐，既有牢固的机械强度，又有可靠的接地保护连续性。

开关柜隔室可分为功能单元室、母线室、电缆室，各单元的功能作用相对独立且区域之间由连续接地的金属板严格分隔，保证使用安全防止事故蔓延。

MCC 柜抽屉有 200mm、300mm、400mm、600mm 和 200/2mm 五种规格。抽屉具有连接位置、试验位置和分离位置。各抽屉与开关设有机械联锁装置；当开关处于分断时，抽屉才能抽出或插入；当开关处于合闸时，抽屉不能抽出或插入。为防止未经允许的操作，操作机构能使用挂锁将开关锁定在分断位置上。同规格的功能单元抽屉可以方便地实现互换，每一个功能单元抽屉对应 20 对辅助接点，能满足异地操作控制、电度计量和与计算机接口的自动化检测系统的需要。

The basic frame of switchgear adopts assembled combined structure and it is manufactured by fastening and connecting the profile steels with bolts, and then it is installed with corresponding door, closing plate, partition plate, installation bracket and bus and function units, etc. into a complete switchgear according to the change of scheme. The structural parts in switchgear are galvanized and adopt modular installation (modulus E=20mm). The switchgear panel is made of high-quality cold-rolled steel plates which are machined and shaped by numerically controlled machine tool, and after pickling and phosphating, the surface undergoes electrostatic plastic spraying and is resistant to wear and corrosion, so it has solid mechanical strength and reliable ground protection continuity.

The switchgear compartment is divided into function unit chamber, bus chamber and cable chamber, and the function of each unit is independent of each other and the areas are strictly isolated by continuously grounded metal plate, thus ensuring the safety of use and preventing spreading of accidents.

MCC cabinet drawer has five specifications of 200mm, 300mm, 400mm, 600mm and 200/2mm. The drawer has connected position, test position and separated position. Mechanical interlocking device is equipped between each drawer and switch. Only when the switch is disconnected, can the drawer be drawn out or inserted. When the switch is closed, the drawer may not be drawn out or inserted. To prevent unauthorized operation, the operating mechanism can lock the switch in OFF position with a padlock. The function unit drawers of same specification are interchangeable, and the drawer of each function unit has 20 pairs of auxiliary contacts, to meet the needs of automatic monitoring systems of operation control, electricity metering and computer interface in different place.

## 使用条件 Service Condition

- 周围空气温度不高于 +40℃；不低于 -5℃；并且 24 小时内其平均温度不高 +35℃。
- 周围空气相对湿度在最高温度为 +40℃ 时不超过 50%，在较低温度时允许有较大的相对湿度，如 +20℃ 时为 90%，但应考虑到由于温度的变化有可能会偶尔产生适度的凝露。
- 户内使用，使用地点的海拔高度不得超过 2000m。
- 应安装在无剧烈震动和冲击以及不足以使用电器元件受到腐蚀的场所。

- The ambient air temperature shall not be higher than +40℃ and not be lower than -5℃, and the average temperature within 24h shall not be higher than +35℃.
- The relative humidity of ambient air shall not exceed 50% at the maximum temperature of +40℃ and maybe higher at lower temperature, for example, 90% at +20℃. Moderate condensation may be generated occasionally due to temperature variation.
- The product shall be used indoors and The altitude may not exceed 2,000m.
- The product shall be installed in the place where there is no vibration and shock and the electrical apparatus elements will not be corroded.

# GCS

低压抽出式开关柜  
Low-voltage Draw-out Switchgear

## 概述

### Overview

GCS 型低压抽出式开关柜（以下简称装置），是电力工业部、机械工业部两部联合设计组根据行业主管部门广大电力用户及设计单位的要求，设计研制出的符合国情，具有较高技术性能指标，能够适应电力市场发展的需要，并可与现有引进产品竞争的低压抽出式开关柜。该装置于一九九六年七月在上海通过了两部联合主持的鉴定，受到电力使用部门的重视和肯定。

电力工业部、机械工业部联合以安生用[1997]01号、机重[1997]01号文下发了《关于 GCS 型低压抽出式开关柜推广应用有关问题的通知》。目前，GCS 型低压抽出式开关柜已被电力用户广泛使用。

装置符合 IEC61439-1、GB7251.1、GB7251.12 等标准。

GCS low-voltage draw-out switchgear (hereinafter referred to as the device) is a low-voltage draw-out switchgear which is designed and developed jointly by the Ministry of Power Industry and the Ministry of Machine Building together with Design Team in accordance with the requirements of competent industry department, power consumers and design unit, accords with national situation of China, has high technical index and can adapt to the development needs of power market and compete with current imported product. Such device passed the appraisal of two ministries in Shanghai in July, 1996, and was valued and recognized by power user department.

The Ministry of Power Industry and the Ministry of Machine Building issued the ASY [1997] No. 01 and JZ [1997] No. 01 document of the Notice Concerning Problems with Promotion and Application of GCS Low-voltage Draw-out Switchgear. Currently, GCS low-voltage draw-out switchgear has been widely chosen by power consumers.

The device conforms to standard IEC61439-1, GB7251.1, GB7251.12.



## 使用条件

### Service Condition

- 周围空气温度上限 +40℃，下限为 -5℃，并且 24 小时内平均温度不高于 +35℃，超过时需根据实际情况降容运行。
- 空气清洁，相对湿度在最高 +40℃时，不超过 50%，在较低温度时，允许有较高的相对湿度，如 +20℃时 90%，但应考虑到由于温度的变化可能产生的凝露的影响。
- 设备安装时倾斜度不超过 5 度，使用地点的海拔不超过 2000m。
- 在无爆炸危险的介质中且介质中无足以腐蚀金属和损坏绝缘的气体和导电尘埃。
- 用户如有特殊要求，可与我公司协商解决。

- The ambient air temperature shall not be higher than +40℃ and not be lower than -5℃, and the average temperature within 24h shall not be higher than +35℃. If the temperature exceeds the above value, the device shall run with reduced capacity.
- When the air is clean, the relative humidity shall not exceed 50% at +40℃, and it may be higher at lower temperature, for example, 90% at +20℃. The impact of condensation resulting from temperature variation should be considered.
- The inclination of equipment shall not exceed 5° at installation. The height above sea level in the place of use may not exceed 2,000m.
- The medium shall be free from explosive hazard and not contain the gas and conducting dust which may corrode metals and destroy the insulation.
- The user's special requirements may be solved through consultation with the Company.

## 用途

### Usage

本装置适用于发电厂、石油、化工、冶金、纺织、高层建筑等行业的配电系统。在大型发电厂、石化系统等自动化程度高，要求与计算机接口的场所，作为三相交流频率为 50（60）Hz、额定工作电压为 380V（400）（660），额定电流为 4000A 及以下的发、供电系统中的配电、电动机集中控制、无功功率补偿使用的低压成套配电装置。

This device is widely applied to the power distribution systems of power plants, petroleum, chemical, metallurgical, textile and high-rise building industries. In the large power plants, petrochemical systems, etc. with high automation degree and with interface with computer, the device may serve as a low-voltage power distribution device used in power distribution, motor centralized control and reactive power compensation of power generation and supply systems with AC three-phase frequency of 50 (60) Hz, rated operating voltage of 380V (400) (660), and rated current of 4,000A and below.

## 型号含义

### Model Description





# GGD

交流低压配电柜  
AC Low-voltage Power Distribution Cabinet

## 用途 Usage

GGD 型交流低压配电柜适用于发电厂、变电站、厂矿企业等电力用户作为交流 50Hz，额定工作电压 380V，额定工作电流至 3150A 的配电系统中，作为动力、照明及配电设备的电能转换、分配与控制之用。

GGD 交流低压配电柜符合 IEC61439《低压成套开关设备和控制设备》，GB7251《低压成套开关设备和控制设备》等标准。产品具有分断能力高、动热稳定性好，结构新颖、合理，电气方案完善，系列性、适用性强、防护等级高等特点。可作为更新换代的产品使用。

GGD AC low-voltage power distribution cabinet is applicable to power consumers of power plants, substations, industrial and mining enterprises and is used for electric energy conversion, distribution and control of power, lighting and power distribution equipment in power distribution system with AC 50Hz, rated operating voltage of 380V and rated operating current of up to 3,150A. GGD low-voltage power distribution cabinet conforms to IEC61439 Low-voltage Switchgear and Controlgear Assemblies and GB7251 Low-voltage Switchgear and Controlgear Assemblies. Featuring high breaking capacity, good dynamic thermal stability, novel and reasonable structure, Perfect electric scheme, strong series and applicability and high degree of protection, the product may be used as an upgraded product.

## 符合标准 Standards

本产品符合：

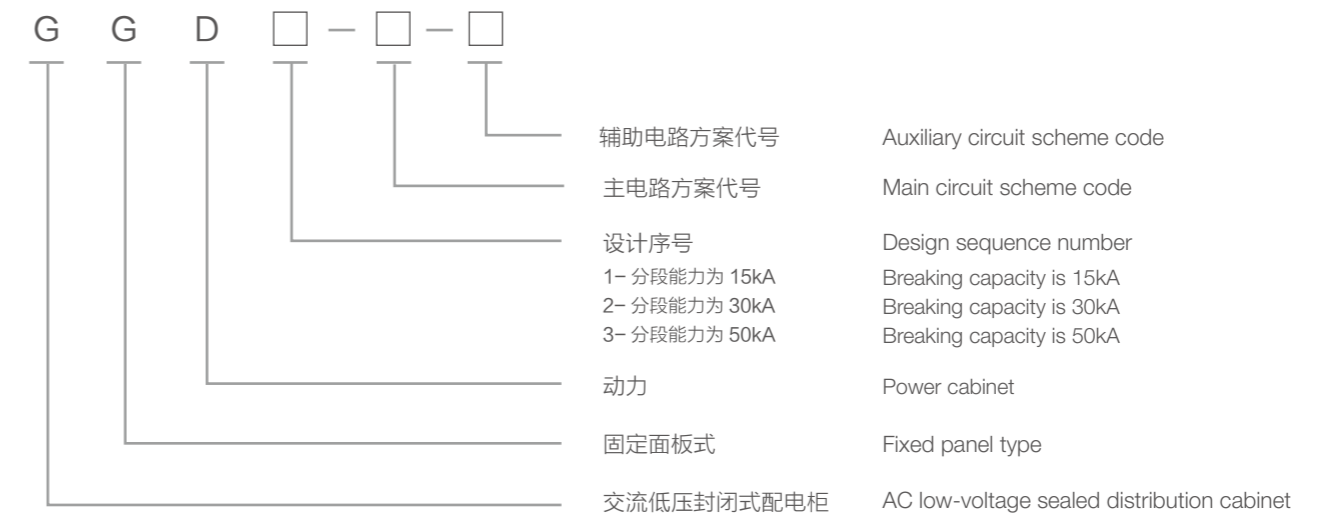
**This product shall conform to:**

- GB71251.1 低压成套开关设备和控制设备 第 1 部分：总则
- GB7251.12 低压成套开关设备和控制设备 第 2 部分：成套电力开关和控制设备
- IEC61439 低压成套开关设备和控制设备

- GB7251.1 Low-voltage Switchgear and Controlgear Assemblies Part 1: General Rules
- GB7251.12 Low-voltage Switchgear and Controlgear Assemblies Part 2: Power Switchgear and Controlgear Assemblies
- IEC61439 Low-voltage Switchgear and Controlgear Assemblies



## 型号含义 Model Description



## 使用条件

### Service Condition

- 周围空气温度不高于 +40℃，不低于 -5℃，24h 内的平均温度不得大于 +35℃。
- 户内安装使用，使用地点的海拔不超过 2000m。
- 周围空气相对湿度在最高为 +40℃时不超过 50%，在较低温度时允许有较大的相对湿度（例如 +20℃时为 90%）应考虑到由于温度的变化可能会偶然产生凝露的影响。
- 设备安装时与垂直面的倾斜度不超过 5 度。
- 设备应安装在无剧烈振动和冲击的地方，周围介质不含有腐蚀金属和破坏绝缘的有害气体及导电介质。
- The ambient air temperature shall not be higher than +40℃ and not be lower than -5℃, and the average temperature within 24h shall not be higher than +35℃.
- The product shall be used indoors and The altitude may not exceed 2,000m.
- The relative humidity of ambient air shall not exceed 50% at the maximum temperature of +40℃ and may be higher at lower temperature, for example, 90%at +20℃. The impact of condensation resulting from temperature variation should be considered.
- The inclination of equipment with vertical plane shall not exceed 5° at installation.
- The product shall be installed in the place without vibration and shock. The ambient medium shall not contain the harmful gas and conducting medium which may corrode metals and destroy the insulation.

## 电气参数

### Electrical parameters

型号 Model	额定电压 V Rated voltage V	额定电流 A Rated current A	1s 额定耐受电流 kA 1s rated withstand current kA	额定峰值耐受电流 kA Rated peak withstand current kA
GGD1	380	400-1000	15	31.5
GGD2	380	1000-1500 ( 1600 )	30	63
GGD3	380	2000-3150	50	105

# SIVACON 8PT

低压成套开关设备  
Low-voltage Switchgear

SIEMENS  
西门子

授权 Authorized

## 产品简介

### Product Introduction

SIVACON 8PT 低压成套开关设备具有用于建筑行业 and 工业技术领域的标准型结构。SIVACON 是根据世界市场需要而开发的低压开关柜，也就是，它一方面要考虑到标准型解决方案的各项要求，另一方面，它又兼顾到当地生产以及由此给财务和生产运行带来的利益。

SIVACON 是向世界各地推广的开关柜，它可应用在最大额定电流至 7400A 的各种容量等级的层面上，它既可采用固定安装式设计，插入式设计，也可采用抽出式设计。

The SIVACON low-voltage switchgear has standard structure applicable to construction and power distribution sectors. SIVACON low-voltage switchgear has been developed based on the world's market demands. It should consider the so-called single handedly standard solution requirements, on the other hand, it also takes into account the local production and brings financial and operation interests. SIVACON is a switch cabinet, which can be applied to all parts of the world. It can be applied to the maximum rated current to 7400A. On various levels of capacity, it can be used in fixed installation design, insert type design, also can be used to draw out type design.

## 模块化的设计

### Modular design

每台 SIVACON 都是完全用标准化和典型化的模块制成。所有模块在质量上都符合西门子评定指标和设计指标。

Each SIVACON is made by completely using standardized and typical modules. All the modules conform to Siemens' evaluation and design standards in terms of quality.

## SIVACON 特点

### Structure

通过型式实验的低压开关柜 (TTA) 水平母线统一布置在开关柜的上方，3 极和 4 极水平母线系统其额定电流可至 7400A，额定峰值耐受电流  $I_{pk}$  可至 375kA，器件隔室的深度尺寸大，适用于各种安装器件，隔室按模数结构分隔成不同的单元，开关柜可单面安装，也可以背靠背安装进线可采用上进线或下进线，出线电缆可在柜体前部连接或后部连接。

The type experiment (TTA) low voltage switch cabinets arranged above the horizontal bus unified switch cabinet 3 poles and 4 poles horizontal bus system its rated current to 7400A,  $I_{pk}$  rated peak withstand current to 375kA, The device compartment is deep enough for various mounting dimensions, The device compartment can be divided into multiple units according to modular structure, The switchgear can be installed on one side or back to back. The incoming cable can be arranged from the top or bottom, The outgoing cable can be connected in the front or on the back.



## 机动灵活

### Mobile and Flexible

SIVACON 永远满足您的要求

SIVACON 的模块化技术能使开关柜最佳地适应各种要求。

- 水平母线统一布置在开关柜的上方
- 器件可任意装入器件隔室，它与水平母线系统和开关柜的深度尺寸无关
- 可根据要求来分隔各功能隔室 (符合 IEC61439-1 规定的形式 1 至形式 4)
- 器件隔室的深度尺寸大

能最佳地适应开关设备安装现场的条件

- 可靠墙安装或自由落地安装
- 电缆可选用上进线或下进线
- 水平母线连接连接方便
- 电缆可柜前连接或柜后连接

SIVACON satisfies your requirements all the time

The modular technology of SIVACON 8PT-4000 allow it to best adapt to various requirements.

- The horizontal bus is arranged above the switchgear in a centralized manner
- The device can be mounted into the compartment freely independent of the horizontal bus system and depth of the switchgear.
- The functional compartments could be divided as demanded (conforming to the types 1 to 4 specified in IEC 61439-1)
- The device compartment is deep enough

Well adaptable to the conditions of the switchgear installation site

- Can be mounted against the wall or on the floor
- The cable can be arranged to come in from the top or bottom
- The horizontal bus is easy for connection
- The cable can be connected in the front or on the back



# LGDL

低压插入式开关柜  
Low-Voltage Switchgear



## 专业解决方案 Professional Solutions

LGDL 系列低压成套开关设备是本公司针对低压配电系统开发的新一代专用柜型，由 LS 产电授权生产。

The LGDL series of low-voltage switchgear assemblies is a new generation of special assemblies developed for low-voltage power distribution system. The switchgear is produced under the authorization of the LS Group.

## 规范引用 Normative References

GB 7251.1-2013 低压成套开关设备和控制设备 第 1 部分：总则

GB 7251.12-2013 低压成套开关设备和控制设备 第 2 部分：成套电力开关和控制设备

IEC 61439-1-2011 低压开关设备和控制设备第 1 部分：总则

GB7251.1-2013 Low-voltage switchgear and controlgear assemblies – part 1: General rules

GB7251.1-2013 Low-voltage switchgear and controlgear assemblies – part 2: Power switchgear and controlgear assemblies

IEC61439-1-2011 Low-voltage switchgear and controlgear assemblies – part 1 General rules

## 正常使用条件 Normal service conditions

- 使用地点的海拔不超过 2000m。
- 周围空气温度不超过 +40℃，下限为 -5℃，且在 24h 一个周期的平均温度不超过 +35℃。
- 最高温度为 +40℃时的相对湿度不超过 50%；温度较低时，允许有较高的相对湿度，但应考虑到由于温度变化可能产生的凝露的影响。
- 周围空气没有明显受到尘埃、烟、腐蚀性和 / 或可燃性气体、蒸汽或盐雾的污染。

- Altitude ≤ 2000m
- Ambient temperature: -5℃ ~ +40℃, daily average temperature: ≤ +35℃, 24 hours per cycle.
- Permissible relative humidity under the highest temperature +40℃ shall not exceed 50%; in low temperature environment, the relative humidity can be higher than that. Note that impact of condensing that may be caused due to variation in temperature shall be taken into consideration.
- Ambient air is not significantly contaminated by dust, smoke, corrosive and/or flammable gases, vapors, or salt.



## 特殊使用条件 Special Service Conditions

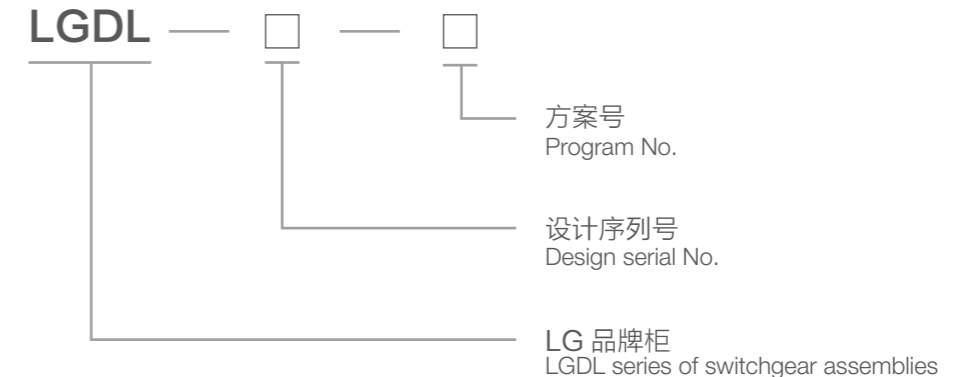
- 如有特殊使用条件，可协商解决。
- Where there are requirements for any special service conditions, negotiate with the switchgear manufacturer.

## 应用场所 Application

- **工业：**油 / 气、矿山、钢铁、化工等大中小型企业；
- **交通：**机场、码头、铁路、高速公路等公共交通设施；
- **能源：**火电站、水电站、垃圾发电站、生物质电站等；
- **环保：**垃圾填埋场、污水处理厂等；
- **商业：**住宅小区、商业中心、仓储中心、数据中心、商住楼等；
- **公共：**政府办公场所、学校、医院等。

- **Industry:** enterprises of petroleum/gas, mining, iron steel, chemical, etc of different scales;
- **Traffic:** public transport facilities such as airport, port, railway, expressway, etc;
- **Energy:** thermal power station, hydroelectric power station, waste incineration power plant, biomass generated power station, etc;
- **Environmental protection:** refuse landfill, sewage treatment plant, etc;
- **Commercial buildings:** residential community, commercial center, storage center, data center, business & residential building, etc;
- **Public building:** governmental office, school, hospital, etc.

## 型号含义 Model Description



## 技术参数 Technical Data

名称 Name	单位 Unit	参数 Value
额定工作电压 / Rated operating voltage Ue	V	380/400
额定绝缘电压 / Rated insulation voltage Ui	V	660
额定频率 / Rated frequency f	Hz	50/60
介电耐受电压 / Dielectric withstand voltage	V	2500
额定短时耐受电流 / Rated short-time withstand current Icw	kA	50
额定峰值耐受电流 / Rated peak withstand current Ipk	kA	105
内部分隔式 / Internal partition mode		2/3/4
防护等级 / Degrees of protection		IP 30/IP 40

# MD190

低压成套开关设备  
Low-voltage Switchgear



授权 Authorized

## 产品应用范围

### Overview

MD190 (Honor) ”安压” 低压开关柜 (以下简称 MD190) 是 ABB 采用模块组合型低压开关柜的概念设计。技术符合 BS5486-1、AS3439-1、EN60439-1、IEC61439 等国际标准 and GB7251 中国国家标准。MD190 适用于各种配电和电动机控制项目, 如:

- 工业配电设施
- 电厂和炼油厂
- 石化工业
- 海上石油站钻井平台
- 工商业及住宅高层大楼
- 中央空调系统
- 船用配电屏

MD 190 (Honor) Low-voltage Switchgear (hereinafter referred to as "MD190") is designed on the modular concept. It adopts the technology in compliance with Chinese national standard GB7251 and some international standards including BS5486-1, AS3439-1, EN60439-1 and IEC61439. MD190 is applied to power distribution and motor control projects, including:

- Industrial power distribution facilities
- Power plant and oil refinery
- Petrochemical industry
- Drilling platform at offshore oil production site
- Industrial, commercial and residential building
- Central air-conditioning system
- Distribution panel for ships



## 产品特点

### Features

采用 ABB 全系列低压电器组件, 包括: Megamax 及 Emax 空气断路器、Isomax 及 Tmax 塑壳断路器和 A 系列接触器等, 组成完善及最可信赖的低压系统。

- 高强度的型材使开关柜结构更坚固。
- 方案齐全、具备固定分隔式及抽屉式供任意选用组装, 可保持外观一致。
- 采用模数化框架的柜体深度、宽度、高度, 适应性强和设计方案灵活。
- 排列紧凑, 省空间, 省成本。
- 单元组件组合自由, 通用性强、灵活变化、满足项目需要。
- 具不同外壳的防护等级和内部隔离形式, 用户可按要求进行多种选择。
- 装配方便、快捷、毋需特殊复杂的工序。

Adopt ABB series low-voltage components such as Megamax and Emax air circuit breaker, Isomax and Tmax moulded case circuit breaker, and A series contactor to form a complete and reliable low-voltage system.

- Use the materials with high strength to ensure high security of switchgear.
- Fixed isolated type and draw-out type are optional for assembly, assuring consistent appearance.
- The cabinet with depth, width and height adopts modular framework to achieve strong adaptability and good flexibility in design.
- Compact layout saves space and costs.
- The components can be combined freely with strong generality and flexible changes, satisfying different demands.
- It is provided with different degree of protection and internal isolation forms, which enable users to make choice as required.
- The assembly is easy, quick and without complex procedure.

## 型号含义

### Model Description

MD190

ABB 品牌授权柜  
ABB brand Authorized Cabinet



## 概述

### Overview

输电及配电系统是运行在固定频率的正弦波电压和电流波形下，当非线性负荷如晶闸管整流器、变频器接入电网会产生大量的谐波电流，引起电压及电流畸变。电容器的电容和电网的电感可以形成并联谐振回路，而使谐波电流放大到正常的20倍左右。并联谐振回路的谐振频率与电网中存在的谐波频率相接近时，谐振的电流会畸变引起进一步的电压畸变。这就是为什么受谐波影响的电网不能采用常规的电容器来做功率因数补偿的原因。

当电网存在谐波时，应该采用调谐滤波器做功率因数补偿。由电容器和电抗器串联组成的调谐滤波器可以在基波频率时补偿无功功率而不会放大谐波。

Transmission and distribution system is the sine wave voltage and current waveform of the fixed frequency. When the nonlinear load is like the thyristor rectifier, the frequency converter will generate a large amount of harmonic current, causing the voltage and current distortion.

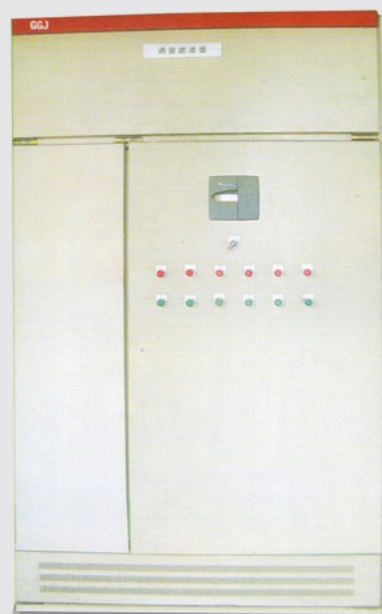
Capacitor and power grid can form a parallel resonant circuit, and the harmonic current amplification to 20 times as the normal. The resonant frequency of the parallel resonant circuit is close to the harmonic frequency in the power network. The harmonic current will cause the further voltage distortion, which is why power grid affected by harmonics can not be used for power factor compensation by the conventional capacitor.

When the power grid is in the presence of harmonics, the tuning filter should be used to compensate the power factor, A tuned filter, which is composed of capacitors and reactors in series. can compensate for inactivity without amplification.

## 产品标准和技术要求

### Product standards and technical requirements

GB/T 15576-2008



## 存在谐波时的功率因数补偿

### Power factor compensation in the presence of harmonics

调谐滤波器设计用于产生谐波的电网的功率因数补偿。

调谐滤波器的每一段由一台电容器和一台电抗器串联而成，电容器和电抗器形成串联谐振电路，其谐振频率低于电网中存在的最低次谐波通常是5次（250Hz）。

低于谐振电路的调谐频率例如基波频率（50Hz），此时调谐滤波器是电容性，对电网发出无功功率。高于调谐频率调谐滤波器是电感性，这意味着不会放大其它包括5次、7次和11次的普通谐波。调谐滤波器还可以吸收电网中低次谐波的一部分。与常规的电容器组不同，每一段调谐滤波器由自动功率因数调整器根据无功功率的需要进行投切控制。

The tuned filter design used to the grid which generate harmonics for power factor compensation

Each section of the tuned filter is composed of a reactor and capacitor in series, and a series of resonant circuit is formed by the capacitor and reactor, and the resonance frequency is 5 times of the lowest harmonic in the power network.(250Hz)

The tuning frequency of the resonant circuit, such as the fundamental frequency, is capacitive, for the power grid, the reactive power is higher than the tuning frequency of the filter is an electric sensibility, This means that no other including 5 times, 7 times and 11 times of the ordinary harmonic will be amplified, and the filter can also absorb a part of Low order harmonic in the power grid.

Different from the conventional capacitor group, each tuned filter is controlled by an automatic power factor regulator according to the need of no power

## 技术参数

### Technical parameter

额定电压：In=569A~82A

系统电压：AC380V/AC400V

额定容量：87.5~450kvar/ 柜

谐振频率：141Hz 和 189Hz；其它频率根据需要提供（如 204Hz）

安装场合：屋内

温度范围：最低 -5℃，最高 +40℃

24 小时平均最高 +35℃

年平均最高 +25℃

防护等级：IP30

rated voltage: In=569A~82A

system voltage: AC380/AC400V

rated capacity: 87.5~450kvar/cabinet

resonant frequency: 141Hz and 189Hz, other frequency which to provided based on the need s(such as 204Hz)

Installation site: In the house

Temperature range: the lowest -5℃ , the highest +40℃ ,

24 hours average maximum +35℃ , annual average +25℃

Degree of protection: IP30

- |           |                           |
|-----------|---------------------------|
| 1、功率因数调振器 | 1. Power-factor regulator |
| 2、熔断器     | 2. Fuse protector         |
| 3、接触器     | 3. Contactor              |
| 4、电抗器     | 4. Reactor;               |
| 5、电容器     | 5. Capacitor              |
| 6、空气过滤器   | 6. Air filter             |



## 产品简介

### Product Introduction

我公司专业生产的低压电缆分线箱，应用于交流 380V、400V 低压电缆的电能分配。主要适用于城市住宅小区、城市道路路灯控制、工业园区、商业中心及一些大型企业的低压配电网。针对目前此同类产品的耐腐蚀性差、表面处理粗糙、铰链门锁生锈脱落、防护等级低、连接困难等一些缺陷，我公司都进行了有效的改进与设计。其整体选用优质不锈钢板材，利用了目前国内先进的不锈钢加工工艺及设备制作而成；同时对母排进行了绝缘处理，结构上进行了精心合理的设计与制作。使之具有外形美观、耐腐蚀、防雨防尘、绝缘性能好、连接方便、使用寿命长等显著特点。

Assemblies for Power Distribution produced by our company applies to the electric energy distribution of AC 380V, 400V low-voltage cable. This product is mainly used for the low-voltage distribution network in urban residential quarters, urban street lamp control, industrial park, commercial center and some large enterprises. Considering such defects as poor anti-corrosion, rough surface, rusting and fall-off of hinged door lock, low protection class and difficult connection in the similar products, our company has made effective improvements and design with high-quality stainless steel sheet and advanced processing technology and equipment. In addition, we make bus-bar insulation treatment and employ reasonable structure in design and manufacturing so as to achieve such remarkable characteristics as artistic appearance, anti-wear, waterproof, anti-dust, good insulation, easy connection and long service life.

## 型号含义

### Model Description

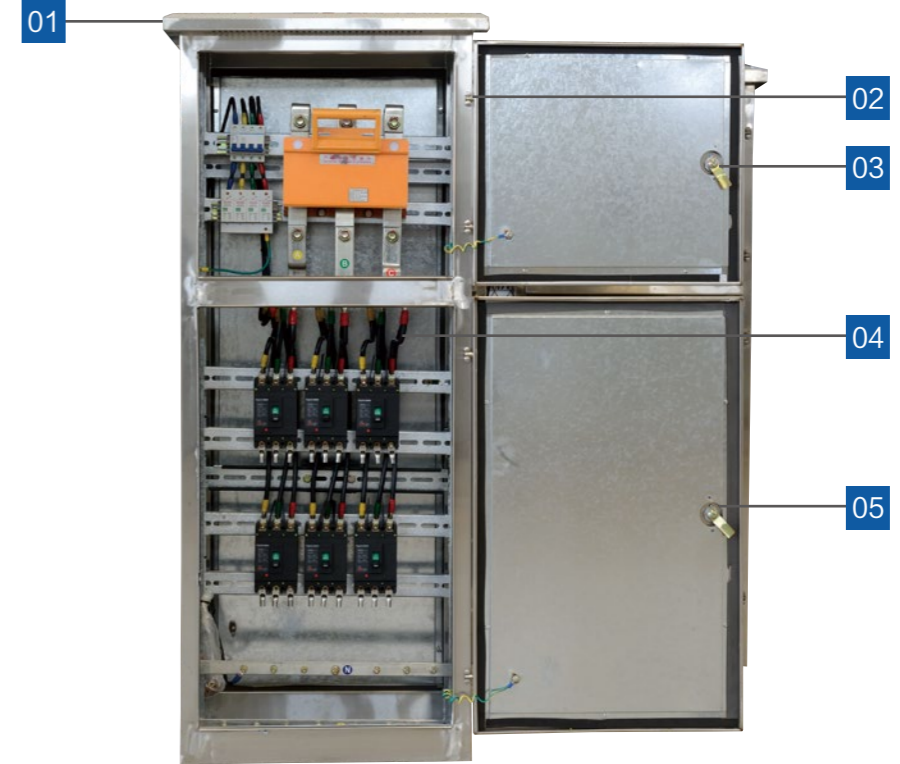


## 产品主要技术参数

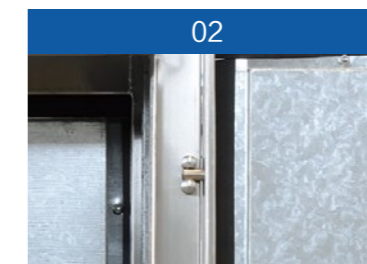
### Main Technical Data

额定电压 /Rated voltage (V)	AC380、400
额定频率 /Rated frequency (Hz)	50、60
额定绝缘电压 /Rated insulation voltage (V)	660、1000
额定电流 /Rated current (A)	1250~1000
母线额定短时耐受电流 /Rated short-time withstand current of bus (kA)	35
母线额定峰值耐受电流 /Rated peak withstand current of bus (kA)	73.5
工频耐压 /Power frequency withstand voltage (V)	2500
环境温度 /Ambient operation temperature (°C)	-40~50
海拔高度 /Altitude (m)	≤2000
防护等级 (A)/Degree of protection	IP34D

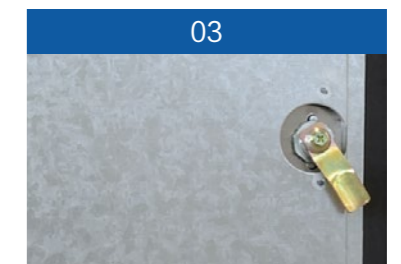
## 产品结构 Structure



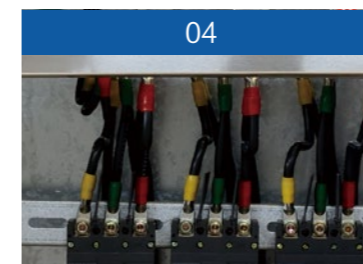
完美的表面工艺处理与最佳的散热及防雨系统设计。  
Perfect surface processing and optimized heat radiation & waterproof system design



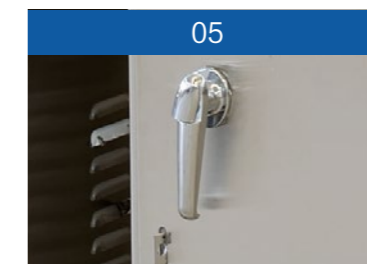
灵活、可靠的不锈钢铰链联结。  
Flexible and reliable stainless steel-hinged connection



独特的双层门结构与紧密的防水防尘保护。  
Unique double door structure and good waterproof & anti-rust protection



精心制作的母线绝缘分支连接。  
Meticulously-made bus-insulated branch connection



精致、美观的户外门锁。  
Fine and artistic door lock for outdoor purpose



# SVS (JP)

户外低压无功综合自动补偿箱  
Outdoor low voltage reactive power automatic compensation box

## 概述

### Overview

户外低压无功综合自动补偿箱适用于城镇及农村配电变压器低压侧配电装置，具有分配、控制电能、保护设备等功能；同时能实时监测、显示、记录配变电运行数据并实现数据的远方传输；实现低压无功自动补偿，能有效改善供电质量，提高供电的可靠性，降低电网无功电能损耗，降低电网线损率。

户外低压无功综合自动补偿箱运行数据实现 GPRS 实时通信并能与原有的后台系统连接应用。

SVS outdoor low voltage reactive power automatic compensation box suitable for urban and rural power distribution transformer low voltage side, Function of distribution, control power, protection equipment and so on . At the same time can be monitored in real-time, display, record with operating data and realize remote data transmission, realize low voltage reactive power automatic compensation, can effectively improve the quality of power supply, to provide the power supply reliability, reduce reactive power loss, reduce power loss rate

SVS outdoor low voltage reactive power automatic compensation box running data to achieve with GPRS real-time communication and can be linked to the original background system application

## 型号含义

### Model Description

#### SVS (JP)

户外低压无功综合自动补偿箱  
Outdoor low voltage reactive power automatic compensation box



## 产品标准和技术要求

### Product standards and technical requirements

GB/T 15576-2008

## 使用条件

### Working Conditions

- 周围空气温度不高于 +45℃，不低于 -10℃，日平均温度不高于 +35℃；
- 户外安装使用，具备全天候在户外环境下正常工作的能力；
- 空气相对湿度在 +25℃时不超过 95%，应考虑到由于温度的变化可能会偶然地产生凝露。
- 周围介质无爆炸及易燃危险、无足以损坏绝缘及腐蚀金属的气体，无导电尘埃。
- 安装地点无剧烈震动及颠簸，安装倾斜度不大于 5°。
- 使用电压波动范围不超过额定工作电压的 ±10%，极限电压不超过额定工作电压的 ±20%。当使用条件不同或有其它要求时，由用户与制造厂协商确定。

- The ambient air humidity is not higher than +45℃, and no less than -10℃, and the daily average temperature is not higher than +35℃.
- Outdoor installation, with the ability to work in All day outdoor environment
- The air relative humidity when it is +25℃ less than 95%, should be taken into account due to changes in the environment may occasionally produce moderate condensation.
- The surrounding medium is not explosive and flammable, and is not enough to damage the insulation and corrosion of metal gas, no electric dust
- Installation site without severe vibration and bumps, according to the inclination of not more than 5°
- The use of voltage fluctuation range is not more than the rated working voltage of ±10%, the limit voltage is not more than ±20% of the rated working voltage, when the use of conditions or other requirements, by negotiated with manufacturer and user.



- 1) 额定工作电压：AC380V,50Hz
- 2) 额定绝缘电压：AC690V
- 3) 电气间隙：不小于 10mm
- 4) 爬电距离：不小于 14mm
- 5) 补偿容量：146~6kvar
- 6) 主开关额定电流：630~100A
- 7) 外壳防护等级：IP44
- 8) 回路数：根据客户要求配置，单相，三相结合补偿

- 1) Rated operational voltage: AC380V 50Hz
- 2) Rated insulation voltage: AC690V
- 3) Clearance: ≥10mm
- 4) Creepage distance: ≥14mm
- 5) Compensation capacity: 146~6kvar
- 6) Main switch rated current: 630~100A
- 7) Degree of Protection: IP44
- 8) Loop number, according to customer requirements configuration, single-phase, three-phase combined compensation

# DJK

计量箱（配电板）  
Distribution Boards

## 产品简介

### Product Introduction

DJK 系列三相集中计量表箱用于多层住宅和办公用房等场所。箱体分为进线室、计量室、出线室三部分。箱内相互分隔，进线室内装断路器及三相四线导电排，计量室为电业表计或用户表计，出线室内装多个出线小型断路器供用户通断和维修之用，除出线室外其余两室都装有铅封锁。

DJK series three phase Distribution Boards is used for multi - storey residential and office space. The box body is divided into three parts, the inlet chamber, the Metering chamber, the outlet chamber. The Box has it's own partition, the inlet chamber installed circuit breaker and three-phase four wire busbar, the Metering chamber for electric meter or user meter, the outlet chamber installed multiple circuit breakers for the user on-off and maintenance purposes, in addition to the outlet chamber, the remaining two outdoor rooms are equipped with lead locks.



## 产品结构

### Structure

集中计量箱根据住宅每单元户数分 1、2、4、6、(8+1)、(10+1)、(12+1) 表位的计量箱；计量箱最大设计方案单相为 (12+1) 表位；三相 6 表位，单相 (10+1)、(12+1) 表位的计量箱宜用两扇门开启；计量箱设计适用于感应式机械表、全电子式电子表和分时电能表，其中 6、(8+1)、(10+1)、(12+1) 表位的计量箱预留装设集抄终端的位置。计量箱体采用 2mm 厚镀锌冷轧钢板制作，户外单表箱采用不锈钢材料，箱盖与箱体应方便分卸；电缆进线仓、电能表仓、用户出线仓隔离、独自封闭。

Centralized metering box is divided by the number of residential unit 1,2, 4, 6 (8+1), (10+1), (12+1); the maximum design scheme for single-phase metering box (12+1), three phase 6 epitope; single phase (10+1) and (12 +1) should open a metering box with two doors; for metering box design is suitable for induction type mechanical meter, electronic spreadsheet and timeshare Watt-hour meter, of which 6 (8+1), (10+1), (12+1)a meter box for installation of collecting terminal position. The box body is made of 2mm thick galvanized cold rolled steel sheet, the outdoor single box is made of stainless steel, the box cover and the box body should be conveniently divided; the cable inlet chamber , the meter chamber , the user outlet chamber independently.

# PZ30

终端配电箱  
Distribution Boards

## 产品简介

### Product Introduction

PZ30 配电箱，是一种模数化终端组合电器，广泛运用在配电站、工厂、工矿企业、民用建筑中的交流 50Hz，额定工作电压交流 380/220V，额定工作电流至 100A 的低压配电系统照明中。符合 GB7251.3《低压成套开关设备和控制设备》标准要求。

PZ30 power distribution boards, is a modular terminal combination of electrical appliances, widely used in power distribution stations, factories, industrial and mining enterprises, civil construction, AC 50HZ ,rated working voltage 380/220V, rated working current to100A low voltage power distribution lighting system. according with GB7251.3 "low voltage switchgear and controlgear assemblies "standard requirements.

## 适用场合

### Application Scope

主要应用领域：广泛运用在工厂、工矿企业、大型电厂、高层建筑、宾馆、住宅照明配电等场合。

Major applications: widely used in factories, industrial and mining enterprises, large power plants, high-rise buildings, hotels, residential Lighting distribution, etc.

## 技术参数

### Technical Data

额定电压：220/380VAC；额定绝缘电压：400VAC 3~；  
额定频率：50Hz；  
额定电流：100A；  
额定峰值耐受电流：6kA；额定短时耐受电流 Icw：4.5kA；  
安装最大回路数：6、9、12、15、18；  
防护等级：IP30。

Rated voltage: 220/380VAC; rated insulation voltage: 400VAC 3~;  
Rated frequency: 50Hz;  
Rated current: 100A;  
Bus: 10~250A, rated peak withstand current: 6KA; rated short-time withstand current Icw:4.5KA;  
Install the maximum return number: 6, 9, 12, 18.  
Protection level: IP30.

