

2018年版



2018年版

高低压配电柜产品手册

Product manual of high and low voltage
distribution cabinet



地址：安徽省天长市仁和南路20号
ADD:No.20south Renhe road,Tianchang,Anhui
邮编(ZIP)：239300
电话(TEL)：0550-7777777 7038698 7308802
传真(FAX)：0550-7028077 7038699
网址(Http)：[//www.tiankang.com](http://www.tiankang.com)
E-mail:xsc@tiankang.com

安徽天康(集团)股份有限公司
ANHUI TIANKANG(GROUP) SHARES CO.,LTD

INNOVATION MAKES EXCELLENT

有 | 跨 | 越 | 才 | 有 | 卓 | 越

企业介绍 Companies to introduce

安徽天康（集团）股份有限公司创建于1974年，总部位于“长三角”经济圈核心区域—天长市，是中国民营企业制造业500强企业、中国电子信息百强企业、国家级守合同重信用企业、国家高新技术企业、安徽省依法纳税先进企业、银行资信AAA级企业、中国仪表行业十强企业、中国电线电缆十强企业、安徽省重点骨干企业、“全国五一劳动奖状”获得者等荣誉。

天康集团历经四十年的蓬勃发展，已形成集仪器仪表、光电缆、医疗卫生、锂电池等跨行业、多元化的集团公司，下属子公司达二十余家。旗下产品凭借良好的质量与服务，被广泛应用于石油、电力、化工、通讯、卫生、新能源汽车及储能等行业和领域。其自主研发、生产的纳米钛酸锂动力/储能电池产品属国家重点新产品。经业内专家评定，达到国内领先、国际先进水平。

作为皖东经济最具活力与贡献的骨干企业之一，天康集团以“追求卓越，缔造满意”为目标，依托一流的产品、一流的管理、一流的服务，不仅在国内市场中赢得了广泛赞誉；在国际市场中，天康产品远销欧洲、非洲、亚洲等46个国家和地区。

天康集团在发展中逐步形成了独特的品牌文化及着眼全球的经营布局，全力塑造“高科技、高品质、国际化”的品牌形象。始终秉承“有跨越才有卓越”的天康精神，在创建和谐企业的基础上，引进国际先进的构架与模式，组织企业的生产经营管理体系。在积极参与国际化竞争的基础上，不断把握市场发展脉搏，寻求经济战略联盟，与全球伙伴共同发展与进步。如今天康人将全新的投入化为无私的奉献，与世界共同发展，与人类一起进步。

Anhui Tiankang (Group) Co., Ltd. created in 1974, the headquarters is located in the "Yangtze River Delta" economic circle core area - Tianchang City, is China's private enterprises in the manufacturing industry 500 strong enterprises, China's electronic information hundred enterprises, state-level keep contract recredit enterprise, national new and high technology enterprise, Anhui Province tax law advanced enterprises, bank credit AAA level enterprise, China instrument industry ten strong enterprises, top ten enterprises in the Chinese wire and cable, Anhui province key enterprises, "national labor certificate" get "and other honorary.

After forty years of vigorous development, the group has formed a set of instruments, optical cable, medical and health, lithium batteries, such as cross industry, diversified group companies, subsidiaries of more than twenty. Products with good quality and service, is widely used in oil, electricity, chemicals, communications, health, new energy vehicles and energy storage and other industries and areas. Its independent research and development, production of nano lithium titanate power / energy storage battery products are national key new products. By industry experts, to achieve the domestic leading and international advanced level.

As one of the backbone enterprises in Anhui east economy the most vitality and contribution, tecon group to "the pursuit of excellence, creating satisfaction" as the goal, relying on the first-class products, first-class management, first-class service, not only in the domestic market won wide acclaim; in the international market, the day Kang products are exported to 46 countries and regions, including Europe, Africa, and Asia.

TianKang group in the developing gradually formed a unique brand culture and focus on global business department bureau, spare no effort to shape the brand image of "high-tech, high-quality, internationalization". Always adhering to the "excellence," the spirit of Tiankang across only, to create the basis for a harmonious enterprise, the introduction of international advanced framework and patterns, organization of production management system. Actively participate in the international competition, and continue to grasp the pulse of the market development, to seek economic and strategic alliances, and global partners to develop and progress. Such as today, the people will be a new investment into the selfless dedication, and the common development of the world, together with the progress of mankind.



MA 150008250951 IEC QAS CNAS LQ441 NETS No.DB17011F02M

检验报告

试品型号: HXGN□-12/630-20
试品名称: 交流金属铠装移开式开关设备
委托单位: 安徽天康(集团)股份有限公司
检验类别: 型式试验

电力工业带电作业工具质量检验检测中心
东北电力电器产品质量检测站

MA 150008250951 IEC QAS CNAS LQ441 NETS No.DB16009E08GN1

检验报告

试品型号: KYN28-12/4000-40
试品名称: 户内交流金属铠装移开式开关设备
委托单位: 安徽天康(集团)股份有限公司
检验类别: 型式试验

电力工业带电作业工具质量检验检测中心
东北电力电器产品质量检测站

CNEX 国家防爆
防爆电气设备
防爆合格证
编号: CNEX15.1431

制造单位: 安徽天康股份有限公司
(安徽省天长市仁和南路20号)
产品名称: 隔爆型电气控制箱
型号规格: BXK51-400/380 380V 400A
防爆标志: Ex d IIC T4 Gb
产品标准: Q/TK 1001-2015
总装图号: OSBE.206.001.1

本证有效期: 2015年5月19日至2020年5月18日
颁发日期: 2015年5月19日
中心主任: 王华

国家防爆电气产品质量监督检验中心
地址: 中国河南省南阳市仲恺北路29号 邮编: 473068
电话: 0377-63228564 传真: 0377-63228175 Http://www.china-ex.com

CNEX 国家防爆
防爆电气设备
防爆合格证
编号: CNEX16.2761

制造单位: 安徽天康(集团)股份有限公司
(安徽省天长市仁和南路20号)
产品名称: 防爆控制装置
型号规格: BXK21-400/380 380V 400A
防爆标志: Ex d IIC T4 Gb
产品标准: Q/TK 1001-2016
总装图号: OTK.216.001(1-6)

本证有效期: 2016年9月2日至2021年9月1日
颁发日期: 2016年9月2日
中心主任: 王华

国家防爆电气产品质量监督检验中心
地址: 中国河南省南阳市仲恺北路29号 邮编: 473068
电话: 0377-63228564 传真: 0377-63228175 Http://www.china-ex.com

MA 2012002878Z IEC QAS AL JDC

实验室名称: 国家电器产品质量监督检验中心
Lab Name: China National Center for Quality Supervision and Test of Electrical Apparatus Products

No. 13Q0864-S

检验(试验)报告

Test Report

委托单位: 安徽天康股份有限公司
Client: 安徽天康股份有限公司
产品名称: 交流金属铠装移开式开关设备
Name of Product: 交流金属铠装移开式开关设备
产品型号: KYN28-12/1250-31.5
Product Type: 型式试验
检验类别: 型式试验
Test Category: 型式试验

本实验室对出具的检验(试验)结果负责, 未经实验室书面同意, 不得部分地复制本报告。

The laboratory is responsible for the inspection (Test) results. The report shall not be reproduced except in full, written approval of the laboratory.

MA 2012002878Z IEC QAS AL JDC

实验室名称: 国家电器产品质量监督检验中心
Lab Name: China National Center for Quality Supervision and Test of Electrical Apparatus Products

No. 13Q0865-S

检验(试验)报告

Test Report

委托单位: 安徽天康股份有限公司
Client: 安徽天康股份有限公司
产品名称: 交流金属铠装移开式开关设备
Name of Product: 交流金属铠装移开式开关设备
产品型号: KYN61-40.5/1600-31.5
Product Type: 型式试验
检验类别: 型式试验
Test Category: 型式试验

本实验室对出具的检验(试验)结果负责, 未经实验室书面同意, 不得部分地复制本报告。

The laboratory is responsible for the inspection (Test) results. The report shall not be reproduced except in full, written approval of the laboratory.

CCC 中国国家强制性产品认证证书

证书编号: 2015010301759091

委托人名称、地址: 安徽天康股份有限公司
天长市仁和南路20号

生产者(制造商)名称、地址: 安徽天康股份有限公司
天长市仁和南路20号

生产企业名称、地址: 安徽天康股份有限公司
安徽省天长市仁和南路20号

产品名称和系列、规格、型号: 低压抽出式开关柜(低压成套开关设备)

WMS 主母线: 10kV-4000A-4000A, 10kV-1000A; 配电母线: 10kV-1000A-400A, 10kV-300A, 10kV-380V, 10kV-690V, 50Hz, 1P40

产品标准和技术要求: GB 7251.12-2013

上述产品符合强制性产品认证实施规则 CNCA-C03-01:2014的要求, 特此认证。

发证日期: 2015年03月11日 有效期至: 2020年03月11日

证书有效期内本证书的有效性依据发证机构的定期监督获得保持。

本证书的相关信息可通过国家认证委员会网站 www.cncac.gov.cn 查询

主任: 王华

中国质量认证中心
中国·北京·南四环西路188号9区100070
http://www.cqc.com.cn

CCC CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

No.: 2015010301759091

NAME AND ADDRESS OF THE APPLICANT: Anhui Tiankang Shares Co., Ltd.
No. 20 south renhe road Tian Chang City

NAME AND ADDRESS OF THE MANUFACTURER: Anhui Tiankang Shares Co., Ltd.
No. 20 south renhe road Tian Chang City

NAME AND ADDRESS OF THE FACTORY: Anhui Tiankang Shares Co., Ltd.
South Tian Cha Road, West Jing Qi Road, Tian Chang City

NAME, MODEL AND SPECIFICATION: Low-voltage Switchgear Assemblies

WMS 主母线: 10kV-4000A-4000A, 10kV-1000A; 配电母线: 10kV-1000A-400A, 10kV-300A, 10kV-380V, 10kV-690V, 50Hz, 1P40

THE STANDARDS AND TECHNICAL REQUIREMENTS FOR THE PRODUCTS: GB 7251.12-2013

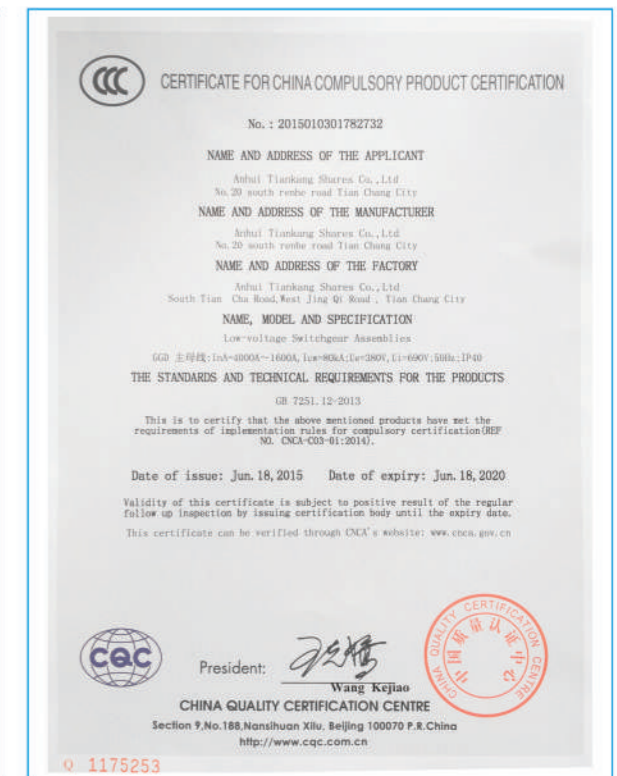
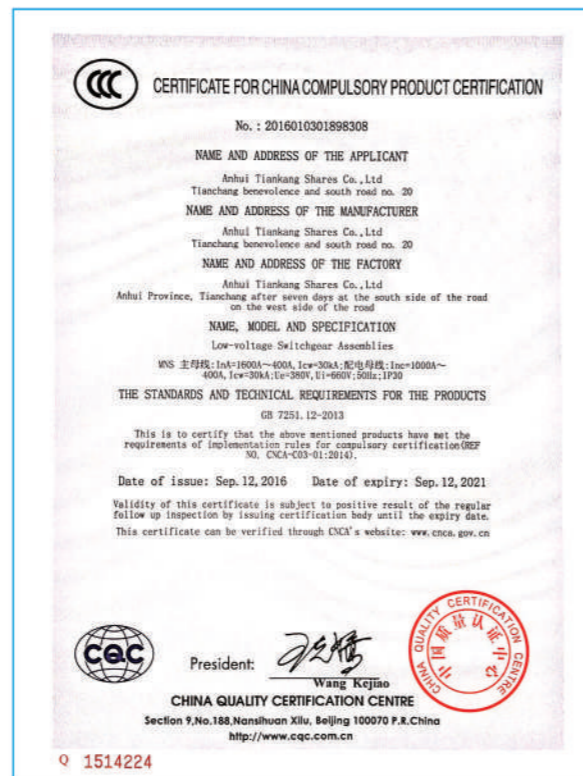
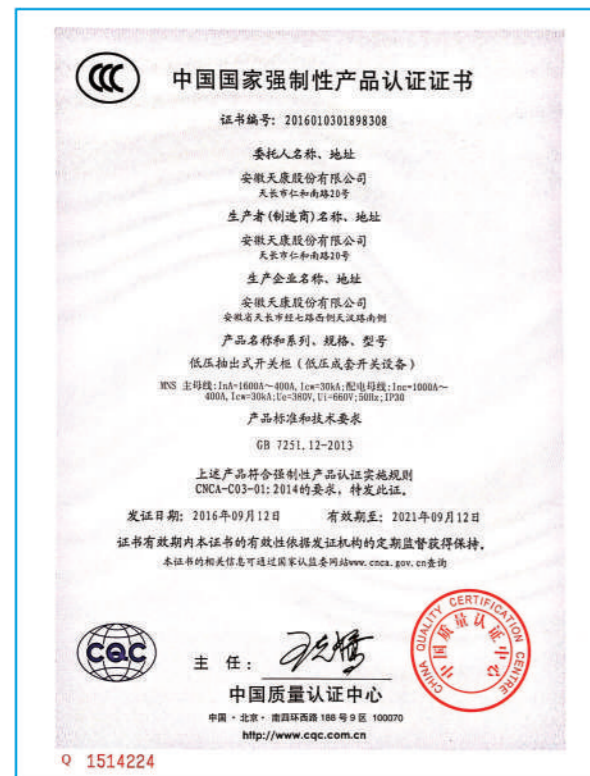
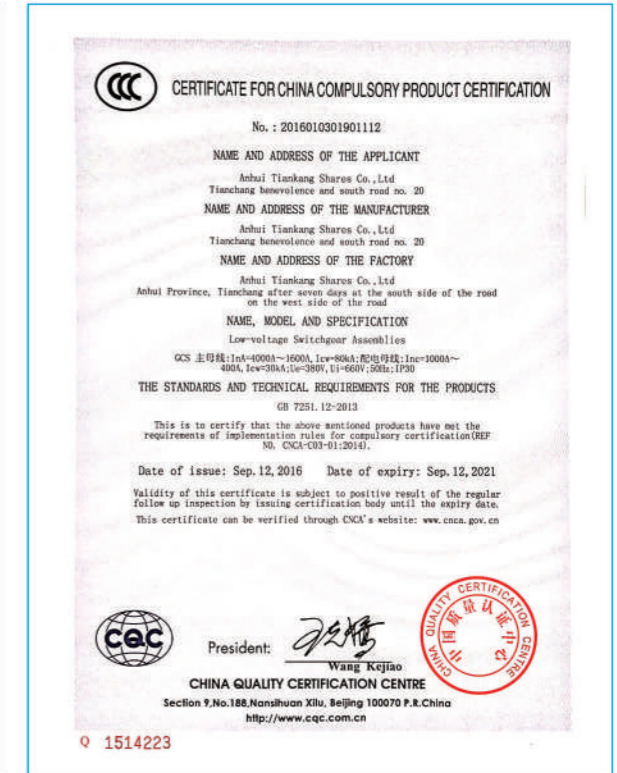
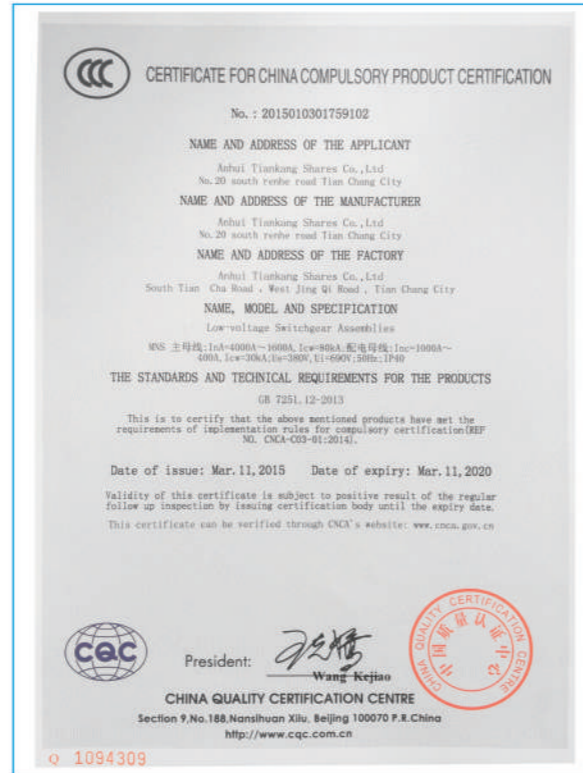
This is to certify that the above mentioned products have met the requirements of implementation rules for compulsory certification (CNCA-C03-01:2014).

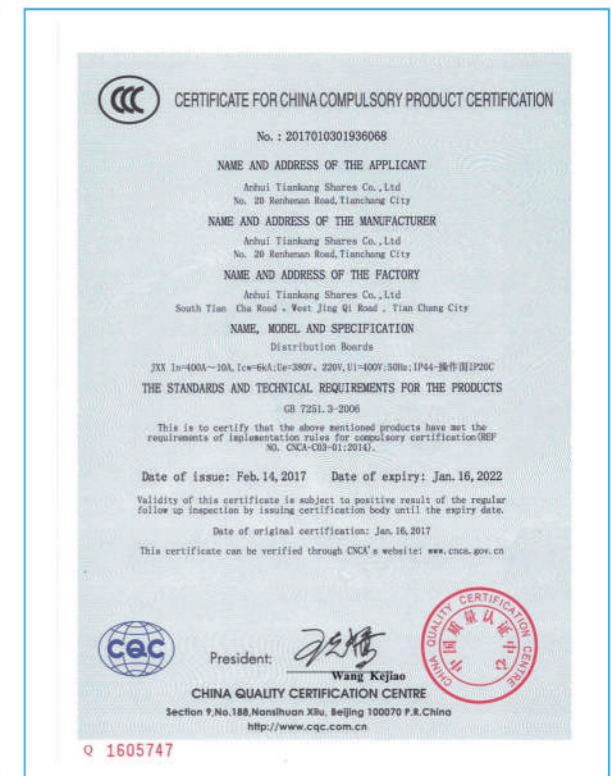
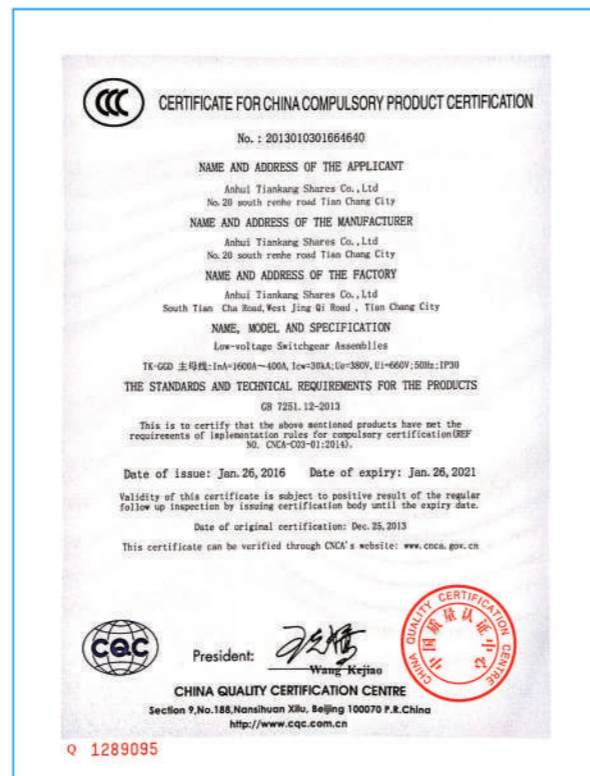
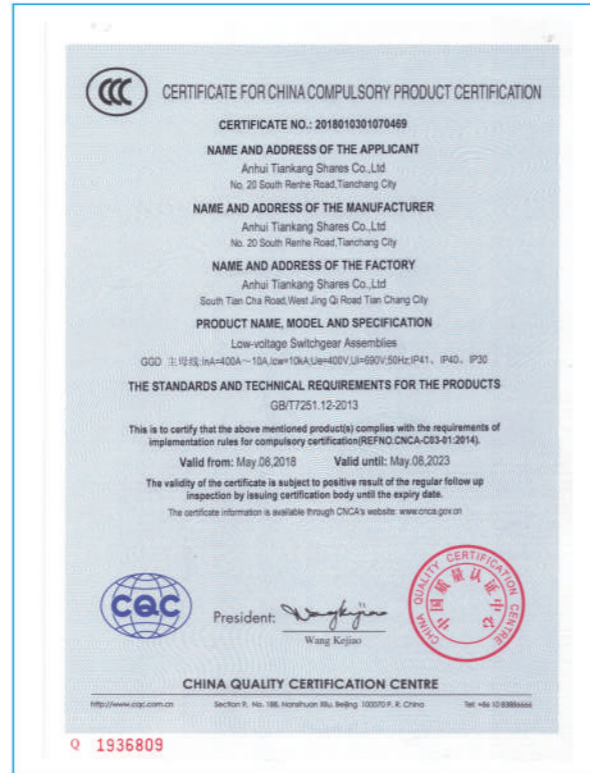
Date of issue: Mar. 11, 2015 Date of expiry: Mar. 11, 2020

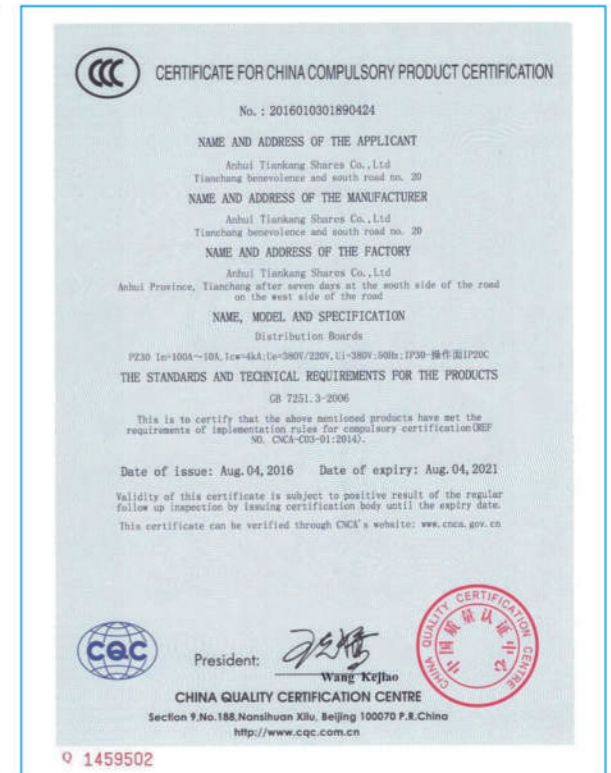
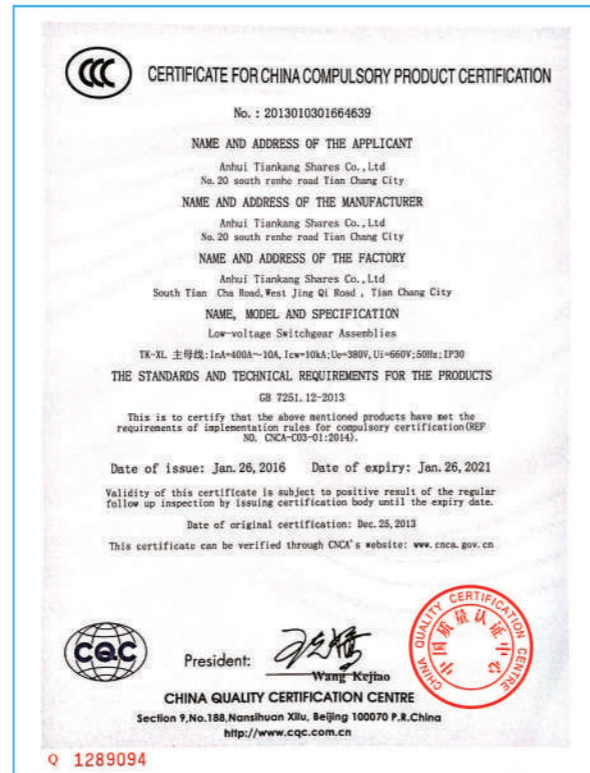
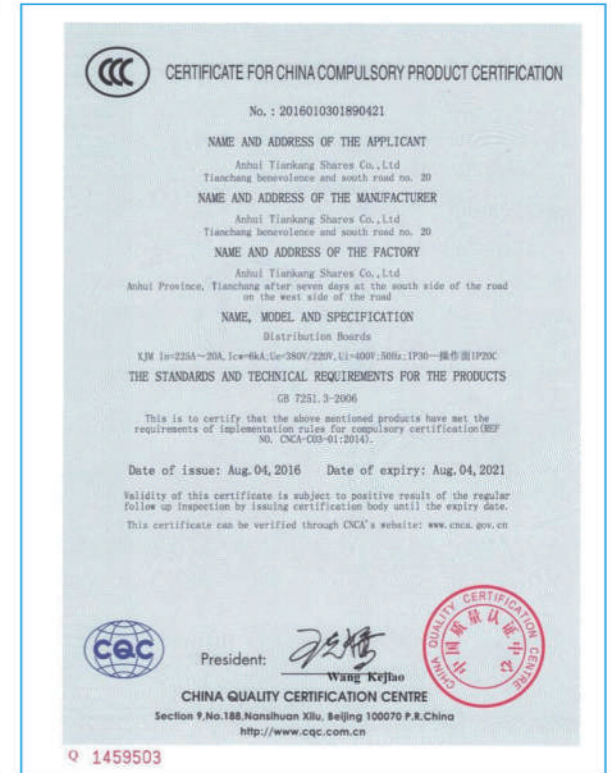
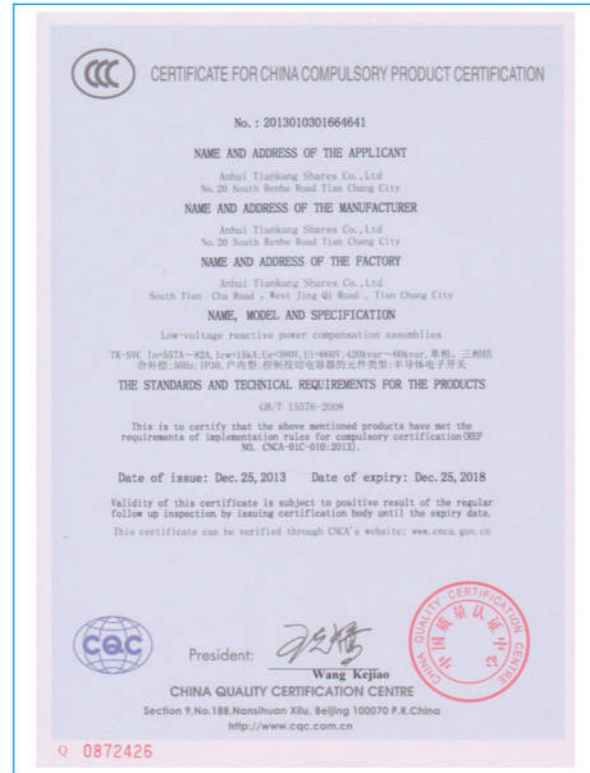
Validity of this certificate is subject to positive result of the regular follow up inspection by issuing certification body until the expiry date. This certificate can be verified through CNCA's website: www.cncac.gov.cn

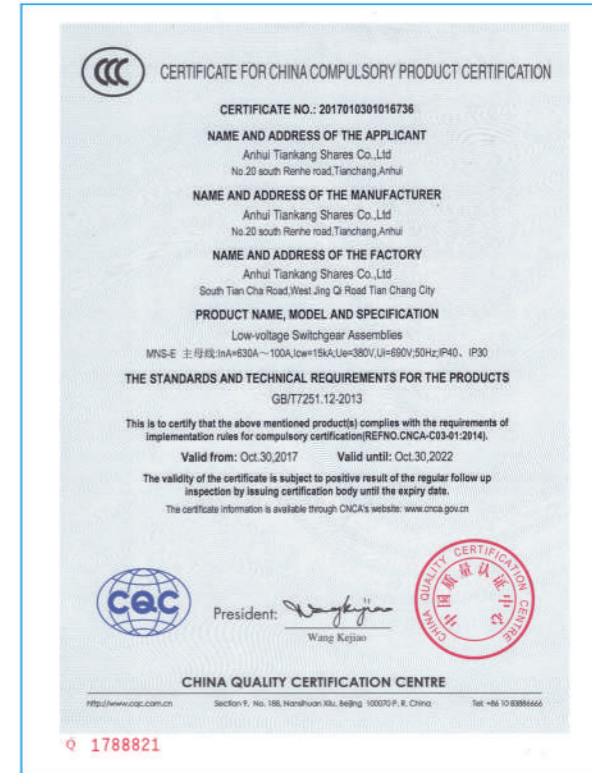
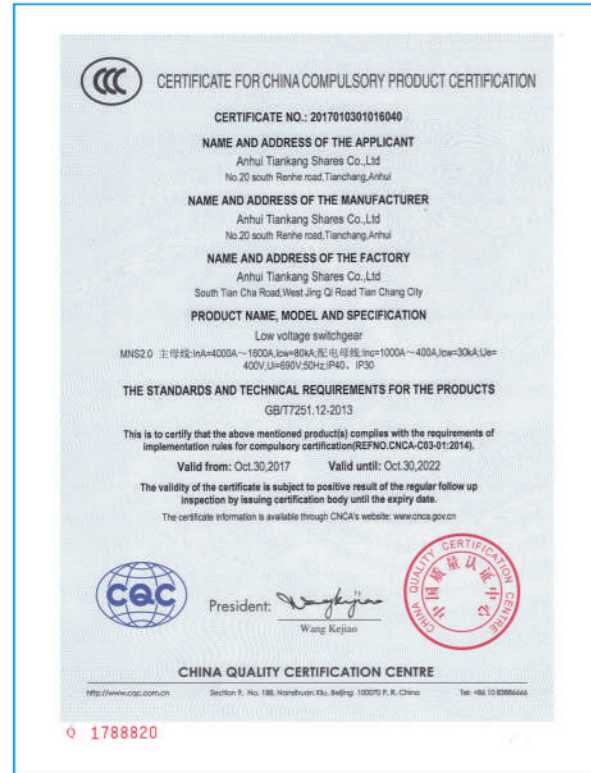
主任: 王华

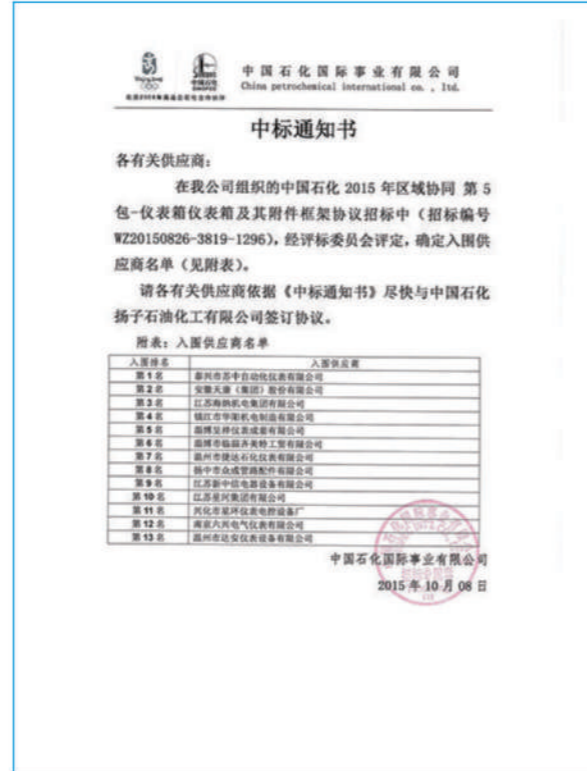
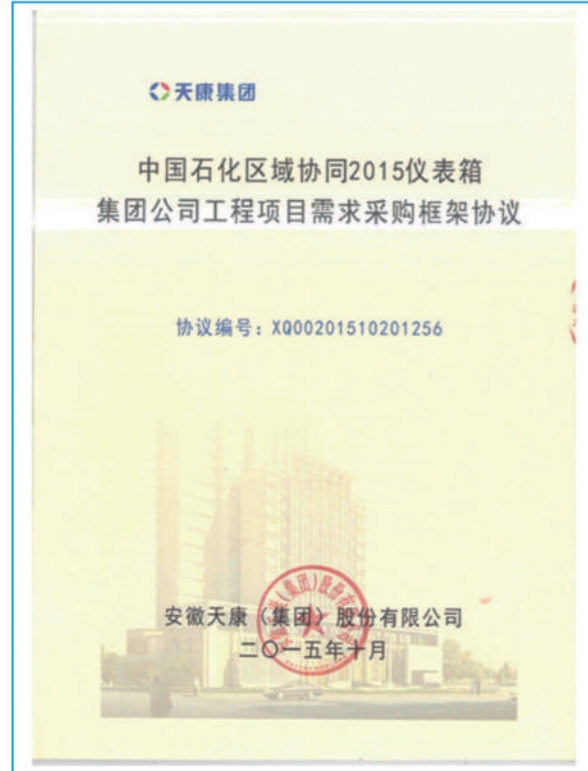
CHINA QUALITY CERTIFICATION CENTRE
Section 9, No. 188, Nanshuoan Xilu, Beijing 100070 P.R. China
http://www.cqc.com.cn













目录
Contents

KYN61-40.5Z铠装移开式户内交流金属封闭开关设备 INDOOR MOVABLE METAL-CLAD SWITCHGEAR	01
KYN28A-12Z金属铠装抽出式开关设备 INDOOR METAL-CLAD DRAW-OUT SWITCHGEAR	03
HXGN-12环网真空开关柜 VACUUM RING MAIN UNIT	05
XLW-12户外电缆分支箱 OUTDOOR CABLE BRANCH BOX	07
ZBW户外成套变电站(箱式变电站) OUTDOOR PACKAGED SUBSTATION	09
MNS2.0组装式低压开关柜 LOW VOLTAGE WITHDRAWABLE SWITCHGEAR	11
MNSX低压抽出式开关柜 MNSX L.VOLTAGE WITHDRAWABLE SWITCHGEAR	13
GCS低压抽出式开关柜 LOW VOLTAGE WITHDRAWABLE SWITCHGEAR	15
GCK低压抽出式开关柜 LOW VOLTAGE WITHDRAWABLE SWITCHGEAR	17
GDX(MNSX)组合式开关柜 GDX COMBINED SWITCHGEAR	19
GGD交流低压配电柜 AC L.VOLTAGE DISTRIBUTION CUBICLE	21
XL□-□□动力配电箱 POWER DISTRIBUTION BOX	23
PZ30照明配电箱 LIGHTING DISTRIBUTION BOX	24
就地仪表保温保护箱 LOCAL INSTRUMENT THERNAL INSULATION PROTECTIVE BOX	25
APSD三段式操作台 APSD THREE-SECTION OPERATION CONSOLE SERIES	27

KYN61-40.5Z 铠装移开式户内交流金属封闭开关设备 INDOOR MOVABLE METAL-CLAD SWITCHGEAR

产品概述

◆KYN61-40.5Z铠装移开式户内交流金属封闭开关设备是我公司自主研发的额定电压为40.5kV, 额定频率50Hz的单母线或单母线分段的三相交流户内配电装置, 用于接收和分配电能, 并对电路实行控制、保护及检测。开关柜满足IEC298、GB3906等标准要求。开关柜具有完善的“五防”功能, 主要用于发电厂、变电所及工矿企业、高层建筑等的变配电中作为接收和分配电能只用。



GENERALS

◆KYN61-40.5Z indoor movable metal-clad switchgear is suitable for use in AC.3-phase, 50Hz, 40.5KV power elec. System of single-phase and single-phase section, as receiving and distributing equipment in power plant, substation and various industries and enterprises. The switchgear also has control, protection, monitoring and "5-protection" function, according to relevant IEC298, GB3906 standards.

正常使用条件

- ◆海拔高度: ≤1000m。
- ◆环境温度: 上限为+40℃, 下限为-15℃。
- ◆环境湿度: 日平均相对湿度≤95%; 月平均相对湿度≤90%; 日平均饱和蒸汽压≤ 2.2×10^{-3} Mpa; 月平均饱和蒸汽压≤ 1.8×10^{-3} Mpa。
- ◆地震强度: 不超过8度。
- ◆没有火灾、爆炸危险、化学腐蚀等严重污秽的场所。
- ◆若有特殊使用条件, 请在订货时和制造厂申明、协商。

OPERATION CONDITIONS

- ◆Above sea level: ≤1000m
- ◆Highest air temperature: +40℃, Lowest air temperature: -15℃
- ◆Environment humidity: daily average humidity≤95% monthly average humidity≤90% daily average saturated vapor pressure≤ 2.2×10^{-3} Mpa monthly average saturated vapor pressure≤ 1.8×10^{-3} Mpa
- ◆Seismic intensity: ≤8 degree.
- ◆The operating place shall be no serious pollution, such as fire, exploder and chemical corrosion.
- ◆If any special requirement, please give the details as operation condition

产品型号及含义 TYPE EXPLANATION

KYN61-□40.5Z/□

一次方案	K	The primary scheme No.
真空断路器	Y	Vacuum circuit breaker
额定电压	N	Rated voltage
设计版本号	61	Design version No.
设计序号	□	Design sequence No.
手车式	40.5	Draw-out type
高压	Z	High voltage
安徽天康集团股份有限公司	□	Anhui Tiangkang Group Co., Ltd.

产品特点

- ◆采用热缩绝缘材料及环氧涂覆绝缘工艺, 优化电极形状, 柜体结构紧凑, 占地面积小。
- ◆开关柜柜体采用敷铝锌板或优质冷轧钢板经数控钣金加工后, 通过高强度螺栓和铆螺母连接而成, 构件表面采用喷塑或镀锌工艺。
- ◆配有安徽森源生产的真空断路器VAN31 (ZN85) -40.5或施耐德公司HVX、ABB公司VD4等。
- ◆各室分割独立, 有专用卸压通道, 可关门操作, 有完善的机械闭锁, “五防”功能齐全。
- ◆方案丰富, 达198种以上。

PRODUCTS MANUAL

- ◆Having adopted pyrocondensation insulating materials and epoxide resin coat insulating technique, optimizing design of electrical poles, the switchgear has compact construction and needs smaller occupied area.
- ◆The enclosure is made of alum-zinc or advanced cold rolling steel plate with digital steel metal process technique and assembled up by high mechanical-strength bolts and nuts, Surfaces of all component are coated by plastic painting & zin-plated.
- ◆It can be fitted with vacuum circuit breaker VAN31 (Zn85)-40.5 made by Anhui Senyuan Electrical Co., Ltd. Or ZN85-40.5 (3AV3) made in China.
- ◆Individual compartments, special pressure releasing channel, perfect mechanical hold-off and complete "5-protection" functions.
- ◆Complete wiring schemes, we can provide more than 198 schemes for your selection.

技术参数 TECHNICAL PARAMETERS

序号 NO.	项目	ITEM	单位 UNIT	参数 PARAMETERS	
1	额定电压	Rated voltage	kV	40.5	
2	额定频率	Rated frequency	Hz	50	
3	主母线额定电流	Main Busbar rated current	A	1250、1600、2000、2500、3150、4000	
4	分支线额定电流	Branch line rated current	A	630、1250、1600、2000、2500、3150	
5	额定绝缘水平 Rated Insulation Level	1 min 工频耐受电压(有效值)	kV	相间、相对地 Interphaes、oppositely 95	一次隔离断口 Primary seclusion break-point 118
		雷电冲击耐受电压(峰值)		185	215
		控制回路1min工频耐受电压	V	2000	
6	额定短路断开电流	Rated short circuit breaking current	KA	25、31.5	
7	额定短路关合电流	Rated short circuit making current	KA	63、80	
8	额定短时耐受电流	(4S)Rated short time withstand current(4s)	KA	25、31.5、	
9	额定峰值耐受电流	Rated short circuit breaking current	KA	63、80	
10	辅助控制回路额定电压	Assistant(Comtrol)loop rated current	V	-110、-220、-220	
11	防护等级	Protective level		外壳/Shell:IP4X隔室间、开门时 Compartment room, when open the door:IP2X	
12	外形尺寸(宽×深×高)	Outine simensions(W×D×H)	mm	1200(1400)×2800×2600	

注: 配VD4柜宽为1200mm, 其他为1400mm宽。

所用变

- ◆50KVA及以下变压器按标准柜型;
- ◆63-100KVA变压器按熔断器手车柜加变压器, 变压器柜宽度一般为1400mm。

TRANSFORMER TO BE USED:

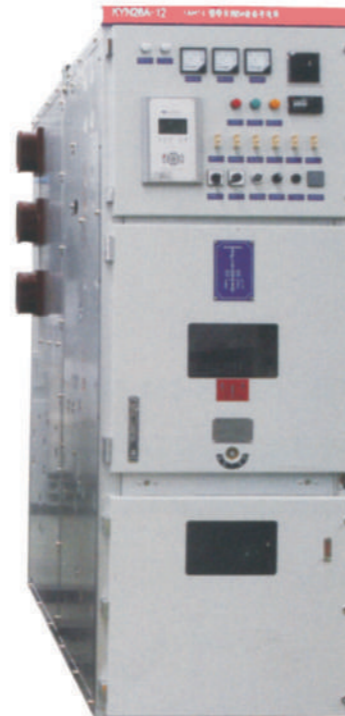
- ◆Transformer under 50KVA as per standard cabinet;
- ◆63-100KVA transformer as per fuse handcart cabinet and transformer cabinet. and the transformer cabinet has a general width of 1400mm.

KYN28A-12Z 金属铠装抽出式开关设备

INDOOR METAL-CLAD DRAW-OUT SWITCHGEAR

产品概述

◆KYN 28A-12Z型户内金属铠装抽出式开关设备(以下简称开关设备),系6~12千伏三相交流电流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启动等,实行控制保护、监测之用。本开关柜满足IEC298、GB3906等标准要求,具有防止带负荷推拉开关手车、防止误分合断路器、防止接地开关处在闭合位置时合分断路器、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,既可配有ABB公司的VD4真空断路器,施耐德公司HVX真空断路器,又可配有VS1、VA真空断路器,实为一种性能优越的配电装置。



GENERALS

◆ The KYN28A-12Z indoor metal-clad draw-out switchgear, made in Anhui Xinlong Electrical company is a assembled electrical power distributing equipment for AC.6~12Kv,3 phases,50Hz,signal or double busbar system, mainly used in power distributing system of electrical power plants,power transmitting work-net,industries and secondary substations as receiving and distributing equipment or as a controlling,protecting or supervising equipment of starting H. voltage motors,and so on.The switchgear meets with IEC298, GB3906 standards, having many features that preventing circuit breaker truck from being pulled out with load.preventing the circuit breaker from being Mal-operated by close or open,preventing persons from entering into live chambers and preventing earthing switch from being closed when main breaker is closed.The switchgear is equipped with VA1 vacuum breaker or VS1、VA vacuum circuit breaker of Schneider CO.,Ltd. or VD4 vacuum breaker of ABB company as main breaker.The switchgear is a electrical distributing equipment with reliable and higher electrical performance.

使用条件

正常使用条件

- ◆海拔高度: ≤1000m。
- ◆环境温度: 上限+40℃; 下限-15℃。
- ◆环境湿度: 日平均相对湿度≤95%
月平均相对湿度≤90%;
- ◆地震强度: 不超过8度。
- ◆周围空气应不受到腐蚀性或可燃气体、水蒸气等明显污染。
- ◆无严重污秽及经常性剧烈振动, 严酷条件下严酷度设计满足1类要求。

特殊工作条件

- ◆在超过GB3906规定的正常的环境条件下使用时, 由用户和制造厂协商。

OPERATION CONDITIONS

Normal operational conditions

- ◆Above sea level: ≤1000m
- ◆Highest air temperature:+40℃; Lowest air temperature:-15℃
- ◆Environmental humidity:Daily average humidity≤95%
Monthly average humidity≤90%
- ◆Seismic intensity:≤8 degree

- ◆The operating place shall be no serious pollution,such as fire, vapor and chemical corrosion

- ◆Rigorous degree is able o meet requirement for species 1

Special operational ondition

- ◆If conditions of applied environment are beyond requirement for GB3906 standard,please discuss the details with manufacturer

产品型号及含义 TYPE EXPLANATION

KYN28-12 Z/□□

金属铠装	K	Metal-clad
移开式	Y	Removable
户内	N	Indoor type
设计系列序号	28	Design sequence No.
设计版本号	A	Design version No.
额定电压	12	Rated voltage
真空	Z	Vacuum circuit breaker
一次电路方案编号	□	The scheme No.of the primary circuit
环境特征代号	□	Environmental code

环境特征代号:(用于温热带为TH;用于干热带为TA;用于高海拔为G)
Environmental code:(Humid tropics TH;Tropic TA;High-altitude G)

方案应用实例 TECHNICAL PARAMETERS

序号 NO.	项目	ITEM	单位 UNIT	参数 PARAMETERS	
1	额定电压	Rated voltage	kV	3.6,7.2,12	
2	最高工作电压	Rated frequency	kV	3.6,7.2,12	
3	额定绝缘水平 Rated Insulation Level	1 min 工频 耐受电压	1 min power frequency withstand voltage	kV	42
		雷电冲击耐受 电压	Lightning impulse withstand voltage(peak value)	kV	75
4	额定频率	Rated short circuit breaking current	Hz	50	
5	主母线额定电流	Rated short circuit making current	A	630,1250,1600,2000,2500,3150,4000,5000	
6	分支母线额定电流	(4S)Rated short time withstand current(4S)	A	630,1250,1600,2000,2500,3150,4000,5000	
7	4S热稳定电流(有效值)	Rated short circuit beak current	KA	16,20,25,31.5,40,50	
8	额定动稳定电流(峰值)	Assistant(Control)loop rated current	KA	40,50,63,80,100,125	
9	防护等级	Protective level		外壳为IP4X, 隔室间、断路器室门打开时为IP2X If the shell is IP4X,when the compartment room and the fuse room are open,it is IP2X	

注: 电流互感器的短路容量应单独考虑。
Note:The short circuit capacity of the current mutual inductor should be considered separately.

HXGN-12 环网真空开关柜 VACUUM RING MAIN UNIT

产品概述

◆HXGN-12环网真空开关柜(简称环网柜),适用于工矿企业、住宅小区、高层建筑和学校等配电系统,作为户内交流三相12KV,50Hz的环网供电单元和终端配电设备。可开断或关合额定负荷电流计变压器空载电流,并能开断或关合一定距离的架空线路、电缆线路或电容器组的电容电流。负荷开关-熔断器组合电器柜可一次性开断额定短路电流。在电力系统中作为配电设备的保护、电能的分配和控制之用。

GENERALS

◆HXGN-12 vacuum ring main unit is an indoor ring-net power supply unit and end distributing equipment of AC.3-phase,12KV,50Hz distributing system, mainly used in enterprises,industries,high-buildings,schools and residence areas.The cubicle has capability of breaking or making rated load current and idle current of power transformer, as well as a certain distance overhead circuits, cable circuits or current of capacitor banks.Load switch-fuse combined switchgear can break rated short circuit current disposable,as protecting, distributing and controlling equipment in power supply system.



使用环境条件

- ◆海拔高度: ≤1000m。
- ◆环境温度: 上限+40℃; 下限-25℃。
- ◆环境湿度: 日平均相对湿度≤95%; 月平均相对湿度≤90%;
- ◆无火灾、爆炸危险及剧烈振动的场所。
- ◆周围空气无腐蚀性或可燃气体、水蒸气和导电性尘埃等明显污染。

OPERATION CONDITIONS

- ◆Above sea level: ≤1000m
- ◆Highest air temperature: +40℃, Lowest air temperature: -25℃
- ◆Environmental humidity: Daily average humidity≤95% Monthly average humidity≤90%
- ◆No fire or frequent intense libration
- ◆The operating place shall be no serious pollution,such as vapor, conducting dust and chemical corrosion

工作原理

- ◆XHGN-12型环网柜型组合一般有三个基本单元组成。如图一所示: A柜和C柜为02方案, 环网柜分别为电缆进出线单元, B柜为15方案环网柜接变压器回路, 作为负载或分配电能单元。
- ◆环网柜A或C作为环网单元, 在任一线路出现故障时, 能及时隔离, 并用另一单元保证的连续供电。环网柜对变压器其保护和隔离作用, 便于维护检修。
- ◆根据需要环网单元可以任意延展。

OPERATING PRINCIPLE

- ◆XHGN-12 ring main unit is composed of three basic units. Referred to table 1:Being No.2 scheme,A and C boars is designed to be as cable incoming and outgoing line unit; Being No.15 scheme,B board is designed to be as load and distributing unit with transformer circuit.
- ◆As ring main unit,A or C can isolate circuits when happens fault in either circuit in time,and the other unit can be operated continuously as spare equipment,so it's easy for inspection and maintenance.
- ◆Ring main unit can be extended at will by your requirement.

额定参数 RATED PARAMETERS

环网柜中其它电器元件的性能参数 PERFORMANCE PARAMETERS FOR OTHER ELECTRICAL COMPONENTS

LZJ(或LFS)-10型电流互感器LZJ (OR LFS) -10TYPE OF CURRENT TRANSFORMER

额定电压 (KV)	Rated voltage(kv)	10	额定二次电流(A)	Rated secondary current(A)	5
最高工作电(KV)	Highest operating voltage(KV)	12	准确级次	Accuracy rating	0.2 0.5
额定一次电流(A)	Rated primary current(A)	5 10 15 30 40 50 75 100 150 200 300 400	额定二次VA COS φ=0.8	Rated secondary VA COS φ=0.8	10
			IS热稳定电流 (有效期) (KA)	Thermal stability current for is (rms)(KA)	80/In
			动稳定电流 (峰值) (KA)	Dynamic stability current (peak)(KA)	200/In

JDZ-10型电压互感器 JDZ-10 TYPE OF VOLTAGE TRANSFORMER

1	额定电压 (KV)	Rated voltage(kv)	一次线圈Primary Coil	10000
			二次线圈Secondary Coil	100
2	额定电压 (KV)	Rated voltage(kv)	0.5级degree	50
			1级degree	80
			3级degree	200
3	极限负荷VA	Limit load VA		400

技术参数 TECHNICAL PARAMETERS

序号 NO.	项目	ITEM	单位 UNIT	参数 PARAMETERS	
1	额定电压	Rated voltage	KV	12	
2	主母线额定电流	Main busbar rated current	A	630	
3	额定电流	进线柜	Rated current	A	630
		出线柜(组合电器柜)	Line out cubicle(combined electric appliance cabinet)	A	125(Max)
4	额定短时耐受电流(4S)	Rated short time withstand current(4S)	KA	20	
5	额定峰值耐受电流	Rated peak withstand current	KA	50	
6	额定短路关合电流峰值	Rated short circuit close current peak value	KA	50	
7	额定有功负载开断电流	Rated reallead dropout current	A	603	
8	额定闭环开断电流	Rated closed-loop dropout current	A	630	
9	额定电缆充电电流	Rated cable charging current	A	10	
10	接地开关额定短时耐受电流2S	Earthing switch rated short time withstand current2S	KA	20	
11	接地开关额定峰值耐受电流	Earthing switch rated peak withstand current	KA	50	
12	接地开关额定短路关合电流峰值	Earthing switch rated shot circuit close current peak value	KA	50	
13	组合电器额定开断交流电流	Combined electric appliance rated dropout alternating current	A	3150	
14	1min工频耐受电压	相间相对的真空断口	1min power frequency withstand voltage	Phase-to-phase and phase-to-earth vacuum break-point	42
		隔离断口		Insulation break point	48
15	雷电冲击耐受电压	相间相对的真空断口	Lightning impulse withstand voltage	Phase-to-phase and phase-to-earth vacuum break-point	75
		隔离断口		Insulation break point	85
16	机械寿命	真空负荷开关	Mechanicallife	Vacuum lead switch	10000
		隔离刀接地刀		Isolation knife, grounding knife	2000
17	负荷开关	平均合闸速度		Average disconnection speed	m/S 0.6 ± 0.2
		平均分闸速度	Load switch	Average connection speed	m/S 1.1 ± 0.2
		三相不同期性		Three phase asynchronicity	m/S ≤2
18	组合电器 配用熔断器	最大额定电流	Max rated current	A	125
		额定短路开断电流	Rated short circuit dropout current	KA	31.5
19	防护等级	Protective level			IP2X

XLW-12 户外电缆分支箱

OUTDOOR CABLE BRANCH BOX

产品概述

◆该电缆分支箱用于等级12KV以下的单相或三相电缆系统，尤其适用于地下电缆系统分支的场合。该产品联接组合方式简单、方便。灵活；具有全绝缘、全密封、耐腐蚀、免维护、安全可靠等，性能，适用于各种恶劣环境，可大大节省设备的电缆的投资，提高供电的可靠性，必要时它还可以代替环网柜，另外在电缆主网或分支网的电缆接头上安装短路故障指示器，可以迅速判断短路故障区段，缩短查找故障时间，因此，广泛用于商业中心，工业园区及城市密集区。

GENERALS

◆This product is suitable for used in single-phase or 3-phase cable system under 12KV.specially in branch underground cable system.It has many advantages, such as simple and flexible combination mode,full insulation and seal,corrosion resistance,no maintenance and reliable operation. Moreover,it can displays the position of short circuit fault and shortens time to find fault,if mounts a short-circuit fault indicator on the cable iunction,which belongs to main cable network or its branch.Therefore,the product widely applies to commercial centers,industrial zones and midtown.



主要特点

- ◆全绝缘、全密封结构，无需绝缘距离，可靠保证人身安全。
- ◆户外型、防尘、防潮、抗洪水、耐腐蚀、免维护，适合多种恶劣环境。
- ◆组合极为灵活，进出线可达八路，满足多种接线要求。
- ◆体积小，结构紧凑。安装简单、操作方便。
- ◆分支电缆接头可作为负荷开关，带负荷拔插，并具有隔离开关的特点。
- ◆电缆分支箱外型美观，与外界环境协调一致。
- ◆所有电缆头都使用于交联聚乙烯绝缘电缆，其中200A肘型电缆插头使用电缆标称截面35-120mm²，600A的T型电缆的T型电缆接头使用电缆标称截面为50-500mm²。

PRODUCTS FEATURES

- ◆ Full insulation and sealed structure,no required insulating distance, reliable for operators.
- ◆ Outdoor type,dust and moisture proof,floodwater and corrosion resistance no maintenance,and suitable to various foul environment.
- ◆ Flexible combination,8 ways incoming & outgoing line,meet various wiring scheme.
- ◆ Small volume,compact structure,easy installation and convenient operation.
- ◆ As load switch,branch cable junction is provided with load plugin and plug-out functions and has disconnecting switch feature.
- ◆ Cable branch box has beautiful appearance,and harmonize with outside ambient.
- ◆ All cable plugs can be fitted with XLPE insulating cable,thereinto,200A bend cable plug is matched with cable of 35-120mm² nominal section,600A tee cable plug is matched with cable of 50-500mm² nominal section.

产品型号及含义 TYPE EXPLANATION

XLW-12

电缆分支箱	XL	Cable branch box
户外	W	Outdoor
电压等级	12	Voltage degree

技术参数 TECHNICAL PARAMETERS

序号 NO.	项目	ITEM	200A (分支网Branch net)	600 (分支网Main net)
1	额定电压 (KV)	Rated voltage	12KV	12KV
2	额定电流 (KV)	Rated current	200A	600A
3	额定短时耐受电流	Rated short-time withstand current	16KA	40KA
4	1分钟工频电压	One-minute power frequency voltage lightning	42KV	42KV
5	雷电冲击耐击	Impulse withstand voltage	75KV	75KV

方案应用实例 TECHNICAL PARAMETERS

序号 NO.	方案 SCHEME	箱体外形尺寸 OUTLINE DIMENSION	母线方式	BUS MODE
1		800 × 600 × 1260		
2		800 × 600 × 1260		
3		1000 × 660 × 1260	二通接头	Bend junction
4		1000 × 660 × 1260	二通接头	Bend junction
5		1220 × 660 × 1260	二通接头	Bend junction
6		1220 × 700 × 1260	三通接头	Tee junction
7		1200 × 700 × 1260	三通接头	Tee junction
8		1500 × 700 × 1260	三通接头	Tee junction
9		1500 × 700 × 1260	四通接头	Cross junction
10		1500 × 700 × 1260	四通接头	Cross junction

ZBW 户外成套变电站(箱式变电站) OUTDOOR PACKAGED SUBSTATION

产品概述

◆ZBW系列箱式变电站(箱式变电站)是一种适用于户外,用箱体将12KV高压系统、变压器和0.4KV低压系统组合在一起的成套变配电装置。广泛用于城市电网改造、工厂、企业、城乡生活小区、基本建设、矿山、油田、建筑工地、公路交通和铁路、港口。

◆ZBW系列箱式变电站符合GB/T17467《高压/低压预装式变电站》国家标准。

GENERALS

◆ZBW series of view type of packaged substation is an complete outdoor transmitting and distributing device, included a 12KV high voltage system, transformer and 0.4KV low voltage system, widely used in electric network building and improvement of town and country, factories, enterprises, highway, railways and ports, etc.

◆ZBW series of view type of packaged substation meet GB/T 17467 " high/low voltage prefabricated substation " standard.



正常使用条件

- ◆海拔高度: 200米。
- ◆环境温度: 上限为+40℃; 下限为-25℃; 24H周期内平均温度不超过+35℃;
- ◆风速: 不大于35M/S。
- ◆无剧烈震动和冲击地方以及不足以腐蚀金属和电器元件的场所。
- ◆无导电尘埃及爆炸危险的场所。
- ◆垂直倾斜度不超过5度的场所。
- ◆注: 使用场所超过以上规定条件, 用户提出, 制造厂可作特殊使用条件, 对产品进行改进或另行设计。

OPERATION CONDITIONS

- ◆Above sea level: 200m
- ◆Highest air temperature: +40℃; Lowest air temperature: -25℃ Daily average temperature: ≤35℃
- ◆The wind velocity: ≤35M/S
- ◆No intense vibration or serious chemical corrosion
- ◆No conducting dust or exploder
- ◆Vertical leaning value is not more than 5 degree
- ◆Addition: If any special requirement, please give the details as operation condition

产品型号及含义 TYPE EXPLANATION

ZBW□-□ / □-□□

成套变电站(箱式变电站)	ZB	Packaged substation
户外	W	Outdoor type
方案编号设计序号(1-夹芯外壳; 2-钢板外壳; 3-水泥景观外壳)	□	Design sequence No.(1-sandwich enclosure; 2-cement view type enclosure)
变压器容量(KVA)	□	Transformer capacity(KVA)
高压侧电压等级(KV)	□	Voltage degree for H.V. side(KV)
方案编号	□□	Scheme code

基本参数 BASIC PARAMETERS

序号 NO.	项目	ITEM	单位 UNIT	高压单元 HIGH VOLTAGE UNIT	低压单元 LOW VOLTAGE UNIT	变压器 TRANSFORMER
1	额定电压	Rated voltage	KV	10(6、20)	0.4(0.69)	10(6、20)/0.4(0.69)
2	额定容量	Rated current	KVA			10~2000
3	额定电流	Rated short circuit making current	A	400、630	20~400	
4	额定短路开断电流	Rated short circuit making current	KA	31.5~50	15、30、50、65、80、100	
5	额定短路关合电流	Rated thermal stability current	KA	50		
6	额定热稳定电流	Rated thermal stability current	KA/S	20/2		
7	额定动稳定电流	Rated stability current	KA	50		
8	工频耐压	Power frequency withstand voltage	KV/1min	对地42; 断口48 Over the ground 42 Break point 48		油35/干28 oily35/dry28
9	冲击耐压	Impulse withstand voltage	KV	对地75; 断口85 Over the ground 75 Break point 85	2.5	75
10	箱壳防护等级	Shell protective level		IP44	IP44	IP44
11	噪声水平	Noise leve	dB	油55/干65 oily55/dry65		

主电路方案 MAIN CIRCUIT SCHEME

主电路方案编号 SCHEME NO. FOR MAIN CIRCUIT		
主电路方案 Main circuit scheme	单结线图 Single wiring diagram	
用途Application		配电照明Distributing & lighting
主电路电器 Electrical Equipment for main circuit	型号规格Specification	数量Quantity
	FN5-10(DR)	1
	GSN-6	1
	LZJC-10	2
	HY5WS-17/50	3
	S9	1
	HD13	3
ME、CW1、2、3、AXW1	1	
DZ20、CM1、AXM1	6	
BH-0.66	6	

MNS2.0 组装式低压开关柜

LOW VOLTAGE WITHDRAWABLE SWITCHGEAR

产品概述

◆MNS2.0组装式低压开关柜是我公司全套引进ABB公司的产品，产品标准化程度高，主要用于交流50~60HZ，额定电压690V及以下供电系统。作为电站、工矿企业、高层楼宇、机场等配电及动力控制用。

◆本装置负荷IEC60439-1、VDE660第五部分和GB7251.1《低压开关成套设备》国家标准。

GENERALS

◆The switchgear is a compact low voltage switchgear factory-assembler with standard modulated parts,suitable for use in AC 50~60Hz, rated voltage up to 660V power distributing system of power generating plants, substa-tions and other industries as energy-switching and load control equipment.

◆The switchgear meets with IEC439, the 5 th part of VDE660 and "Low voltage switchgear and control equip-ment" of GB7251.1-1997 the national standard and "Low voltage drawble switchgear" of ZBK36001-89 special standard.



正常使用条件

◆周围空气温度不高于+40℃，不低于-5℃,24小时内平均温度不得高于+35℃，超过时，需根据实际情况降容运行。

◆户内适应，使用地点的海拔高度不得超过2000m。

◆周围空气相对湿度在最高温度为+40℃时不得超过50%，在较低温度时允许有较大的相对湿度，如+20℃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。

◆安装时与垂直面的倾斜度不超过5度，且整组柜列相对平整(符合GBJ232-B2标准)

◆应安装在无剧烈震动和冲击以及使电器元件受到不应有腐蚀的场所。

◆用户有特殊要求时，可以与本公司协调解决。

柜体结构

◆开关柜柜体基本结构是由C型型材装组，C型型材是E=25mm为模数安装孔的钢板弯制而成，全部柜架及内层隔板都作镀锌钝化处理，四周门板，侧板则作静电喷涂。

◆柜体可以正面操作靠墙安装，也可双面操作。

OPERATION CONDITIONS

◆The ambient air temperature must be between+40℃ and-15℃,and the average temperature of 24 hours must be lower than+35℃.The capacity of the machine should be cut down according to actual conditions when the temperature is higher than the average.

◆Indoor adapted and the altitude of the location where the machine is used must be lower than 2000m.

◆The relative humidity of the ambient air must be lower than 50% when the highest temperature is+40℃.Higher relative humidity is allowed in lower temperature condition, such as 90% humidity in +20℃.The effects of condensation caused by temperature variation should be considered.

◆The gradient between machine and vertical plan must be less than 5 degree when installed, and the switchgear group should be stay flattening.(Be up to the GBJ232-B2 stand)

◆The working situation must be stay away from violent vibration, impingement,and corrosion.

◆Special needs from client can be solved by negotiating with our company.

PRODUCT STRUCTURE

◆The switchgear construction is made of "C" fabricated grouped parts. "C" fabricated grouped parts are mode of steel plate after being bended with assembling holes in modular E=25mm.All doors and side paltes are coated with paint.

◆The enclosure can not only be installed against wall with front operation,also double sides operation.

产品特点

◆本抽出式开关柜为近期开发新产品，其技术水平达到九十年代国际先进水平。

◆设计紧凑：以较小的空间能容纳较多的功能单元。

◆结构通用性强，组装灵活：以25mm为模数的C型型材能满足各种结构形式、防护等级及使用环境的要求。

◆采用标准模块设计：分别可成保护、操作、转换、控制、调节、测定、指示等标准单元，用户可根据需要任意选用组装。

◆安全性：大量采用高强度阻燃性工程塑料组件,有效加强防护安全性能。

◆压缩场地：三化程度高，可大大压缩储存和运输预制件的场地。

◆装配方便：不需要特殊复杂工具。

定货需知

◆产品的全部型号包括主电路方案号和辅助电路方案号。

◆主电路系统组合顺序图。

◆辅助电路电气原理图。

◆柜内元器件清单。

◆电路中电压，电流，时间等整定参数。

◆与产品正常使用不符的其他特殊要求。

技术参数 TECHNICAL PARAMETERS

电气性能Electrical performance

序号 NO.	项 目	DESCRIPTION	单位 UNIT	参 数 PARAMETERS
1	额定绝缘电压	Rated insulation voltage	V	660V 1000V
2	额定工作电压	Rated operational voltage	V	400V 690V
3	主母线最大工作电流	Main busbar max working current	A	6300A
4	主母线短时(1S)耐受电流	Main busbar short-time(1s)withstand current	KA	100KA(有效值)(effective value)
5	主母线短时峰值电流	Main busbar peak withstand current	KA	220KA(最大值)(effective value)
6	配电母线(垂直母线)	最大工作电流	A	1600A
7		短时耐受电流	A	85KA
8	防护等级	Protective level		IP30对大于Φ2.5mm固体防护 The protection of IP30 to over Φ2.5mm solid IP40对大于Φ1.0mm固定防护 The protection of IP40 to overt Φ1.0 mm solid IP54对尘埃和任意方向飞溅作防护(订购IP54防护等级时应与制造厂协商) The protection of IP54 against dust and random-direction spill (Negotiate with the manufacturer when order the IP54 protective level)

PRODUCT CHARACTERISTICS

◆This drawble switchgear is a newly developed product, having technical technology of international advanced level of 1990'S.

◆Compact designed construction:The construction is of small space contenting several functional units.

◆Strong universal-use capability and flexible assembly: "C" shaped fabricated materials made in modular in E=25mm can meet various kind of requirements for constructions, protective degree and operational environment.

◆Adopt astandard modular block design:The construction can be grouped into protecting,operating,changeover,controlling, adjusting, measuring,indicating units and other satandard units.

◆Security:use a lot of high mechanical strength fire resistance engineering plastic grouped parts,have been effectively enhanced protection and safe of the switchgear.

◆Decrease occupied area:Having 3-high advances that greatly decrease area:Having 3-high advances that greatly decrease storing and transporting areas.

◆Convenient assembly:Do not use any special tools for installing the equipment.

PRODUCT STRUCTURE

◆All of types of the product, including main circuit scheme No. and auxililary circuit scheme NO.

◆Combined sequential diagram of main circuit system.

◆Electrical schematic diagram of auxiliary circuit.

◆The list of components in the switchgear.

◆Rated parameters for voltage, current and time in the circuit.

◆Other special requirements by clients.

MNSX 低压抽出式开关柜

MNSX L.VOLTAGE WITHDRAWABLE SWITCHGEAR

产品概述

◆本装置是一种用标准模块组装的组合式低压开关柜，本装置适用于交流50~60Hz，额定工作电压690V及以下的供电系统，用于发电、配电、电能转换盒和电能消耗设备的控制。

◆本装置符合IEC60439-1和GB7251.1《低压开关成套设备》国家标准。

GENERALS

◆ The switchgear is a compact low voltage switchgear factory-assembler with standard modulated parts, suitable for use in AC 50-60Hz, rated voltage up to 660V power distributing system of power generating plants, substations and other industries as energy-switching and load control equipment.

◆ The switchgear meets with IEC60439-1, and "Low voltage switchgear and control equipment" of GB7251.1 the national standard.



正常使用条件

◆周围空气温度不高于+40℃，不低于-5℃，24小时内平均温度不得高于+35℃，超过时，需根据实际情况降容运行。

◆户内适应，使用地点的海拔高度不得超过2000m。

◆周围空气相对湿度在最高温度为+40℃时不得超过50%，在较低温度时允许有较大的相对湿度，如+20℃为90%，应考虑由于温度的变化可能会偶然产生凝露的影响。

◆MNSX安装时与垂直面的倾斜度不超过5度，且整组柜列相对平整(符合GBJ232-B2标准)

◆MNSX应安装在无剧烈震动和冲击以及使电器元件受到不应有腐蚀的场所。

◆用户有特殊要求时，可以与本公司协调解决。

柜体结构

◆开关柜柜体基本结构是由C型型材装组，C型型材是E=25mm为模数安装孔的钢板弯制而成，全部柜架及内层隔板都作镀锌钝化处理，四周门板，侧板则作静电喷涂。

◆柜体可以正面操作靠墙安装，也可双面操作。

OPERATION CONDITIONS

◆Ambient temperature:Max.+40℃;Min.-15℃; average temperature shall not be higher than+35℃ during 24h.

◆Altitude shall be not higher than 2000m.

◆Climate conditions shall be clear and relative humidity shall be not higher than 50% at Max.40℃,but at lower temperature,it is possible to have higher humidity,i.e. 90%at 20℃.

◆Installation gradient of MNSX switchgear shall be not over 5 degree during installation.All switchgear shall be leveled up in a line(according to GBJ232-B2 standard)

◆MNSX switchgear applies to the place where is no heavy vibration,risk of explosion,fire,conductive dust and corrosive gas.

◆For special requirement,please connect with us for discussion.

PRODUCT STRUCTURE

◆The switchgear construction is made of "C" fabricated grouped parts. "C" fabricated grouped parts are made of steel plate after being bended with assembling holes in modular E=25mm. All doors and side paltes are coated with paint.

◆The enclosure can not only be installed against wall with front operation, also double sides operation.

产品特点

◆本抽出式开关柜为近期开发新产品，其技术水平达到九十年代国际先进水平。

◆设计紧凑：以较小的空间能容纳较多的功能单元。

◆结构通用性强，组装灵活：以25mm为模数的C型型材能满足各种结构形式、防护等级及使用环境的要求。

◆采用标准模块设计：分别可成保护、操作、转换、控制、调节、测定、指示等标准单元，用户可根据需要任意选用组装。

◆安全性：主母线、功能单元、电缆室严格分割，有效加强防护安全性能。

◆压缩场地：三化程度高，可大大压缩储存和运输预制件的场地。

◆装配方便：不需要特殊复杂工具。

PRODUCT CHARACTERISTICS

◆This drawble switchgear is a newly developed product, having technical technology of international advanced level of 1990'S.

◆Compact designed construction:The construction is of small space contenting several functional units.

◆Strong universal-use capability and flexible assembly: "C" shaped fabricated materials made in modular in E=25mm can meet various kind of requirements for constructions, protective degree and operational environment.

◆Adopt a standard modular block design:The construction can be grouped into protecting,operating,changeover,controlling, adjusting, measuring,indicating units and other satandard units.

◆Security:use a lot of high mechanical strength fire resistance engineering plastic grouped parts,have been effectively enhanced protection and safe of the switchgear.

◆Decrease occupied area:Having 3-high advances that greatly decrease area:Having 3-high advances that greatly decrease storing and transporting areas.

◆Convenient assembly:Do not use any special tools for installing the equipment.

定货需知

◆产品的全部型号包括主电路方案号和辅助电路方案号。

◆主电路系统组合顺序图。

◆辅助电路电气原理图。

◆柜内元器件清单。

◆电路中电压，电流，时间等整定参数。

◆与产品正常使用不符的其他特殊要求。

PRODUCT STRUCTURE

◆All of types of the product, including main circuit scheme No. and auxiliary circuit scheme No.

◆Combined sequential diagram of main circuit system.

◆Electrical schematic diagram of auxiliary circuit.

◆The list of components in the switchgear.

◆Rated parameters for voltage, current and time in the circuit.

◆Other special requirements by clients.

技术参数 TECHNICAL PARAMETERS

电气性能 Electrical performance

序号 NO.	项目	DESCRIPTION	单位 UNIT	参数 PARAMETERS
1	额定绝缘电压	Rated insulation voltage	V	660V 1000V
2	额定工作电压	Rated operational voltage	V	400V 690V
3	主母线最大工作电流	Main busbar max working current	A	6300A
4	主母线短时(1S)耐受电流	Main busbar short-time(1s)withstand current	KA	100KA(有效值)(effective value)
5	主母线短时峰值电流	Main busbar peak withstand current	KA	220KA(最大值)(effective value)
6	配电母线(垂直母线)	最大工作电流	A	1600A
7		短时耐受电流	A	85KA
8	防护等级	Protective level		IP30对大于Φ2.5mm固体防护 The protection of IP30 to over Φ2.5mm solid IP40对大于Φ1.0mm固定防护 The protection of IP40 to overt Φ1.0 mm solid IP54对尘埃和任意方向喷溅作防护(订购IP54防护等级时应与制造厂协商) The protection of IP54 against dust and random-direction spill (Negotiate with the manufacturer when order the IP54 protective level)

GCS 低压抽出式开关柜

LOW VOLTAGE WITHDRAWABLE SWITCHGEAR

产品概述

◆GCS系列开关柜适用于工矿企业，三相交流频率50HZ，额定电压380V至660V，电力系统的一次配电和以异步电动机为主要控制对象的二次配电或控制设备，也适用于车站、码头，高层建筑尤其适用于发电厂，变电站，石油，化工，冶金，机械的群控系统和现场控制装置。厂矿企业，高层建筑等低压配电系统的动力，配电和电动机控制中心，电容补偿等的电能转换，分配与控制用。在打单机容量的发电厂，大规模石化等行业的低压动力控制中心和电动机控制中心等电力使用场合时能满足与计算机接口的特殊需要。

◆产品具有分断力强，接通能力高，动热稳定性好，电器方案灵活，组合方便，系列性实用性强，结构新颖，防护等级高等特点，可以作为低压抽出式开关柜的换代产品使用。

◆GCS符合IEC 60439-1《低压成套开关设备和控制设备》，GB7251.1《低压成套开关设备》等标准。



GENERALS

◆GCS low voltage switchgear is an advanced cubicle with high technical performances,widely applies to 3-phase,50Hz,380 ~ 660V power control system as power atribution or control equipment.The cubicle also can be applied to railway stations,ports and high buildings,especially to power generating plants,substations,petrol-industried and chemical industries as group control and local control equipment.Due to high automatization function,the cubicle can connect with computer for some specific operation as motor control center,distributing equipment.

◆GCS product,as an advanced version for L.voltage withdrawable switchgear,has several obvious advantages of high breaking capacity,high making ability,good dynamical and thermal stability,various electric schemes,convenient combination and high-level protective degree.

◆GCS cubicle is in compliance with requirements of following standards: IEC60439-1 "Low voltage complete switchgear & control equipment",GB7251.1 "Low voltage switchgear equipment".

正常使用条件

◆周围空气温度不高于+40℃，不低于-5℃，24小时内平均温度不得高于+35℃，超过时，需根据实际情况降容运行。

◆户内使用，使用地点的海拔高度不得超过2000m。

◆周围空气相对湿度在最高温度为+40℃时不得超过50%，在较低温度时允许有较大的相对湿度，如+20℃为90%，应考虑由于温度的变化可能会偶然产生凝露的影响。

◆GCS安装时与垂直面的倾斜度不超过5度，且整组柜列相对平整(符合GBJ232-B2标准)。

◆GCS应安装在无剧烈震动和冲击以及使用电器元件受到不应有腐蚀的场所。

◆用户有特殊要求时，可以与本公司协调解决。

OPERATION CONDITIONS

◆Ambient temperature is not higher than+40℃, and less than -5℃.Average temperature is not higher than+35℃ during 24 hour.

◆Altitude is not higher than 2000m.

◆Relative humidity is not higher than 50% at

◆Max.Temperature+40℃,but at lower temperature,it is possible to have higher humidity,i.e.90%at 20℃.

◆Installation gradient of GCS switchgear shall be not over 5 degree during installation. All switchgear shall be leveled up in a line (according to GBJ232-B2 standard).

◆GCS switchgear applies to the place where is no heavy vibration, risk of explosion,fire, conductive dust and corrosive gas.

◆For special requirement,please connect with us for discussion.

产品型号及含义 TYPE EXPLANATION

GCS-□□

辅助电路方案代号	G	Code of auxiliary circuit scheme
主电路方案代号	C	Code of main circuit scheme
封闭式开关柜	S	Enclosed switchgear
抽出式	□	Withdrawable
森源电器系统	□	Senyuan Elec. System

定货须知 PRODUCT STRUCTURE

◆产品的全部型号包括主电路方案号和辅助电路方案号。

◆主电路系统组合顺序图。

◆辅助电路电器原理图。

◆柜内元器件清单。

◆电路中电压，电流，时间等整定参数。

◆与产品正常使用不符的其他特殊要求。

◆All product types shall be offered,including scheme codes of main circuit and auxiliary cilrcuit.

◆Combined sequence diagram of main circuit system.

◆Schematic diagram of auxiliary circuit.

◆The list of electrical components in the switchgear.

◆Rated parameters of voltage,current and time in circuits.

◆Other special requirements by clients.

技术参数 TECHNICAL PARAMETERS

序号 NO.	项 目	ITEM	单位 UNIT	参 数 PARAMETERS
1	额主电路额定电压	Main circuit rated voltage	V	交流Alternating Current 380(660)
2	辅助回路额定电压	Assistant loop rated current	V	交流Alternating Current 220、380 直流Direct Current 110、220
3	额定频率	Rated frequency	Hz	50
4	额定绝缘电压	Rated frequency	V	660(1000)
5	额定电流 Rated current	水平母线	A	≤6300
		垂直母线	KA/IS	1600
6	母线额定短时耐受电流	Busbar rated short time withstand current	V/1min	50、80
7	工频电压	Power frequency voltage		主回路Main-loop 2500 辅助回路Auxiliary loop 2000
8	母线 Busbar	水平母线		A、B、C、N、PE
		垂直母线		A、B、C、N、PE
9	防护等级	Protective level		IP40、IP41、IP42、
10	柜体尺寸(高×宽×深)	Outline dimension(W×D×H)		2200 × (600 × 800 × 1000)X(600 × 800 × 1000)

GCK 低压抽出式开关柜

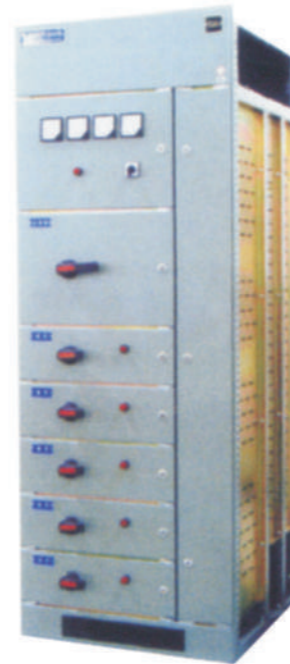
LOW VOLTAGE WITHDRAWABLE SWITCHGEAR

产品概述

◆GCK 低压抽出式开关柜是我公司引进国内产品先进技术而开发的产品，适用于三相交流50Hz、60Hz额定工作电压380V，额定电流6300A及以下的三相四线制或三相五线制电力系统，广泛用于电厂、工矿企业、宾馆、建筑、港口等电力用户作为接受和分配电能之用。

GENERALS

◆GCK type of low voltage withdrawable switchgear is a new product developed by our company according to modern technology of advanced product in China.suitable for use in 3-phases and 4 wires or 3-phases and 5 wires Elec.power system of 3-phase,AC.50Hz/60Hz, rated operating voltage 380V and rated current up to 6300A power distributing network of Elec.power generating plants,mining industries or enterprises,hotels,constructions or sea/air ports as Elec.Power receiving and distributing equipment.



正常使用条件

- ◆海拔高度：≤2000米。
- ◆没有粉末、腐蚀和雨水侵袭的户内。
- ◆环境温度：上限为+40℃，下限为-5℃，24h周期内测得的平均温度不超过+35℃。
- ◆空气相对湿度不超过85%。
- ◆没有震动及颠簸，且安装倾斜度不超过5度。

OPERATION CONDITIONS

- ◆Altitude shall be not higher than 2000m
- ◆There is no dust,corrosion or water in the switchgear
- ◆Highest air temperature:+40℃,Lowest air temperature:-5℃, Daily average temperature: ≤35℃
- ◆Relative humidity:≤85%
- ◆Installation angle of GCK switchgear shall be not over 5 degree

产品特点

- ◆技术参数（见附表）。
- ◆主开关与母联开关可根据用户需要装设自投、切换装置。
- ◆馈电电路主开关具有瞬时和过载保护、用户需要可加装漏电保护。
- ◆电动机控制电路具有短路瞬时、过载、欠压释放及断相保护功能。
- ◆受电电路装有电流表、有功和无功电度表。250A及以上馈电电路可装或不装电流及电度表、其他大约37KW或60A的电路装有电流表。
- ◆事故时备有灯光和报警装置。

PRODUCTS FEATURES

- ◆Technical parameters(see details in appendix).
- ◆Bus automatic transfer system can be installed at main switch and bus coupler by requirement of customers.
- ◆Main switch of feed circuit is provided with instantaneous and overkoad protectivr functions,and leakage protection can be offered as clients required.
- ◆Motor control circuit has functions of short-circuit instantaneous, overload,undervoltage release and open-phase protection.
- ◆Receiving circuit is fitted with current meters,active and reactive wathour meters.
- ◆The switchgear is provided with lamp ad alarm device for emergency indication.

技术参数 TECHNICAL PARAMETERS

序号 NO.	项目	ITEM	单位 UNIT	参数 PARAMETERS	
1	符合标准	Accord with the standard		IEC60439-1:GB7251.1	
2	防护等级	Protective level		符合IECI44和GB4942.2-85规定的IP40 Accord with IEC144 and GB4942.2-85 prescriptive IP40	
3	额定工作电压	Rated operational voltage	V	交流Alternating current 380	
4	额定绝缘电压	Rated insulation voltage	V	交流Alternating current 660	
5	控制电动机最大作量	Control motor max capacity	KW	300	
6	额定电流 Rated current	水平母线	Horizontal busbar	A	1600、2000(2500)、(3150)、(4000)、(6300)
		垂直母线	Vertical busbar	A	400、630、800、1000、1250、1600
		受电电路	Receiving circuit	A	1000、1600、2000、(2500)、(3150)、(4000)、(6300)
		馈电电路最大电流	Supply circuit max current	A	630~4000
		一次按插件	Primary connector assembly	A	100、160、250、400、630
	二次安插件	Secondary connector assembly	A	15	
7	额定短时耐受电流 Rated short time with stand current	有效值KA/S	Effective value	KA/S	30、50、80
		峰值KA	Peak value	KA	63、105、176
8	耐压(V/min)	Withstand voltage	V/min	2500	
9	分断能力(KA)	Disjunction ability	KA	30、50、80	

GDX(MNSX) 组合式开关柜

GDX COMBINED SWITCHGEAR

产品概述

◆GDX(MNSX)交流低压组合式开关柜，主要用于50-60HZ，额定电压660V及以下的供电系统，作为电站、工矿企业、高层楼宇、机场等的配电及动力控制。

GENERALS

◆ GDX Type of AC,Low voltage compact switch-board is mainly used in 50-60HZ, rated voltage up to 660V power supplying systems of power generating plants, industries and enterprises, high building and airports as power distributing and control equipment.



正常使用条件

- ◆环境温度不高于40℃，不低于-5℃。
- ◆相对湿度在最高温度为40℃，不超过50%；在较低温度时允许有较高的相对湿度。
- ◆应在-25℃+50℃温度内运输和储存，在短时间（不超过24小时）温度可达+70℃。
- ◆海拔高度不超过2000米。
- ◆如有特殊使用条件，用户定货时提出。

OPERATION CONDITIONS

- ◆Ambient temperature: Max. +40℃; Min. -5℃
- ◆Climate conditions shall be clear and relative humidity shall be not higher than 50%at Max. 40℃, but at lower temperature, It is possible to have higher humidity
- ◆The switchgear shall be stored and transported within following temperature: -25℃to+50℃,for short time(in 24 hours),it is possible to be up to 70℃
- ◆Altitude shall be not higher than 2000m
- ◆Any special operational conditions. Shall be put forward when offering

技术参数 TECHNICAL PARAMETERS

序号 NO.	项目	ITEM	单位 UNIT	参数 PARAMETERS
1	额定工作电压	Rated operational voltage	V	≤660V
2	母线额定工作电流 Busbar rated bworking current	水平母线	A	1000 1600 2500 400 6300
		垂直母线	A	400 630 1000 2000
3	母线短时耐受电流1秒有效值	Busbar short-time withstand current(effective value in one second)	KA	50 80
4	母线峰值耐受电流	Busbar withstand current(peak value)	KA	105、176
5	外壳防护等级	Shell protective level		IP30、IP40
6	符合标准:	Accord with the standard		IEC-60439.1 GB7251.1

产品特点

- ◆GDX(MNSX)柜为金属外壳防护，基本骨架是E=25mm为模数安装孔的C型材，全部采用组合装配而成。
- ◆金属结构采用镀锌和粉末喷塑工艺，防腐能力强。
- ◆功能单元采用插入式、抽屉式、半抽屉式和固定分隔式四种安装方式，检修安全，方便。
- ◆采用高强度阻燃型工程塑料组件，有效地加强防护安全性能。
- ◆柜内部母线可外套耐热、耐弧的绝缘套。
- ◆GDX(MNSX)可配有安装底座，安装时将底座直接焊接在槽钢上。
- ◆GDX(MNSX)柜可离墙安装，亦可靠墙安装。
- ◆可适应各种进出线方式。

PRODUCTS FEATURES

- ◆GDX (MNSX) switchgear is metal-clad structure for protection. Basic frame is assembled by materials with sealed modular installation hole, which has dimension of E=25mm.
- ◆The enclosure is provided with plastic-spraying & zinc-plated treatment with intense antiseptic performance.
- ◆Functional units are provided with four installation means of plug-in,withdrawable,semi-withdrawable and fixed styles.
- ◆In order to enhance protective performance,it is provided with high intense fire-retardant plastic parts.
- ◆Inner busbars can be covered with insulating sleeve,which is heat-resisting and arc-tight.
- ◆GDX(MNSX) is equipped with installation base,which shall be welded on U-steel directly.
- ◆GDX(MNSX)switchgear can be installed against or out of wall.
- ◆It applies to different modes of incoming and outgoing lines.

结构特点

- ◆柜体由冷扎钢板加工成构件，用型材和三通连接器组装，每个柜体有五部分组成：母线室、电缆室、功能室、PE室和基础底座。柜体组合形式分为以下几种：

PRODUCT STRUCTURE

- ◆The enclosure is made of cold rolling steel plates.,assembled by profile and T-joint.Each switchgear is composed of 5 distinct zones for busbars,cable connections,components,PE,and base. This series of switch-gears have following styles:

型号TYPE	分类	SYSTEM
抽屉式结构 Withdrawable structure	开关采用抽出式。	The switch is withdrawable
半抽屉式结构 Semi- Withdrawable structure	基本结构与抽屉式相同，所不同的是： (A)抽屉单元为插件，出线及二次部分为固定式联接。这种方式适用于柜靠墙安装单元维护。 (B)MCCB为插入式，其它元件为固定式安装。	It's mostly similar with the above one,but it has two additional parts: (A) Drawer unit is a plug-in, and outgoing line and subpart are fixed connection. (B)MCCB is plug-in type, and other components are fixed type.
插入式结构 Insert type structure	开关采用插入式。	The switch is in insert type.
固定分隔式结构 Fixed dividing structure	固定分隔式功能单元中的元件均采用固定式安装。分隔单元小室可与抽屉结构混合安装。	Components those used in the fixed partitioned functional units are adopted of fixed type installation,partition type functional unit and 、drawer type structure can be installed at the same switchgear simultaneity.

GGD 交流低压配电柜

AC L.VOLTAGE DISTRIBUTION CUBICLE

产品概述

◆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,额定电流4000A的配电系统中,做为动力、照明及配电设备的电能转换、分配及控制之用。

◆GGD型交流低压配电柜符合IEC60439.1《低压成套开关设备和控制设备》。GB7251-1《低压成套开关设备》等标准。

GENERALS

◆ GGD AC L.voltage distributing switchgear is suitable for use in power distribution system of AC.50Hz, rated voltage of 380V, rated current up to 4000A of electrical power plants, substations and enterprises as power and energy distributing or controlling switchgear.

◆ GGD AC L.A.switchgear meets standards of IEC60439.1: " L.V.switch-gear and control cubicle" and GB7251-1: " complete switchgear equipment"



产品特点

- ◆周围空气温度不高于+40℃, 不低于-5℃, 24小时平均。
- ◆温度不得大于+35℃。
- ◆户内安装使用, 使用地点的海拔高度不超过2000米。
- ◆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。
- ◆设备安装时与垂直面的倾斜度不超过5度。
- ◆设备安装在无剧烈震动和冲击的地方, 以及不足使电器元件受到腐蚀的场所。

PRODUCTS FEATURES

- ◆Ambient temperature is not higher than 40℃, and less than -5℃. Average temperature is not higher than +35℃ during 24 hour
- ◆Altitude is not higher than 2000m
- ◆Relative humidity is not higher than 50% at Max, temperature +40℃. but at lower temperature, it is possible to have higher humidity.
- ◆Installation gradient shall be not over 5 degree during installation GGD switchgear applies to the place where is no heavy vibration, risk .
- ◆of explosion, fire, conductive dust and corrosive gas.

产品型号及含义 TYPE EXPLANATION

GGD-□-□-□

辅助电路方案代号	—	G	Code of auxiliary circuit
主电路方案代号	—	G	Code of main circuit
设计序号: 1-分断能力为15KA; 2-分断能力为30KA; 3-分断能力为50KA	—	D	Design sequence 1-Breaking capacity up to 15KA; 2-Breaking capacity up to 30KA; 3-Breaking capacity up to 50KA
电力用柜	—	□	Electrical power cubicle
固定安装、固定接线	—	□	Fixed installation of electrical components and fixed wiring
交流低压配电柜	—	□	AC.L.V. power distribution cubicle.

技术参数 TECHNICAL PARAMETERS

序号 NO.	项目	ITEM	单位 UNIT	参数 PARAMETERS		
1	额定绝缘电压	Rated insulation voltage	V	AC660		
2	额定工作电压	Rated operational voltage	V	AC380		
3	额定最大工作电流	Rated max operational current	A	4000		
4	额定短路强度 Rated short -circuit intensity	分断能力	KA	GGD1 15KA	GGD2 30KA	GGD3 50KA
		峰值耐受电流	KA	30KA	63KA	105KA

柜体结构

◆柜体骨架采用8MF冷弯型钢局部焊接、拼接而成。其刚性及承载能力均达到电器元件的安装要求, 并采用模数化安装孔E=20mm, 柜宽分为600mm、800mm、1000mm。

PRODUCT STRUCTURE

◆Basic frame of the cubicle is assembled by 8MF fabric-coated steel. There are fixing holes E=20mm in the frame in module. The width of switchgear is 600mm, 800mm or 1000mm.

防护安装

◆GGD柜体的设计防护等级为IP30-IP40, 可根据安装场所的要求进行选择。

THE DEGREE OF THE PROTECTION

◆Protective degree ranges from IP30 to IP40, according to the selection from customers.

安装使用

- ◆本产品为不靠墙安装, 正面操作。
- ◆产品到达收货地点, 首先应当检查包装是否完整无损, 发现问题应及时通知有关部门, 对于不能立即安装产品, 应根据正常使用条件的规定, 置于适当的场所。

INSTALLATION AND APPLICATION

- ◆The switchgear is front operation, and does not install depending on the wall.
- ◆After the switchgear arriving at destination, packing boxes shall be checked if it is damaged. If yes, a recorder shall be sent to relevant department and analysis will be taken to find the relevant cause for future handling with.

XL□-□□ 动力配电箱

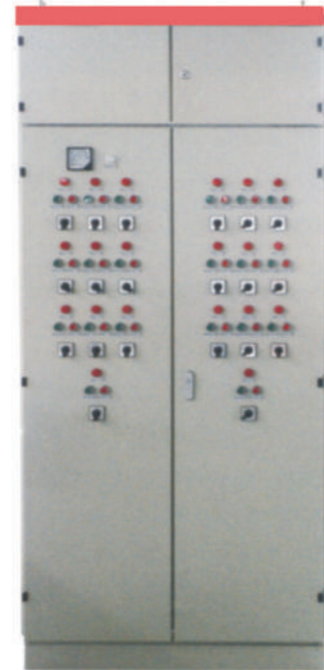
POWER DISTRIBUTION BOX

产品概述

◆XL□-□□动力配电箱适用于交流50Hz，额定电压交流400V以下三相五线系统作动力照明配电用。本配电箱壳体分为户外和户内。

GENERALS

◆XL power distribution box applies to AC 50Hz, rated voltage up to AC 400V, 3-phase,5-line electrical system as lighting and distributing equipment. This series of distribution box has indoor and outdoor types.



正常使用条件

- ◆海拔高度：≤2000m。
- ◆环境温度：上限为+40℃，下限为-5℃，在较低温度下，允许有较高的相对湿度。
- ◆设备安装在无剧烈震动和冲击的地方，以及不足使用电器元件受到腐蚀的场所。
- ◆设备安装时与垂直面的倾斜度不超过5度。
- ◆正面操作，可靠墙安装。

OPERATION CONDITIONS

- ◆Altitude shall be not higher than 2000m
- ◆Ambient temperature: Max. +40℃;Min.-5℃;and it is possible to have higher humidity at lower temperature
- ◆The product applies to the place where is no heavy vibration, risk of explosion,fire,conductive dust and corrosive gas
- ◆Installation angle of XL distribution box shall be not over 5 degree
- ◆Front operation. and it can be installed against wall

产品型号及含义 TYPE EXPLANATION

XL□-□□

- | | | |
|---------------|----|----------------------------------|
| 设计序号 | XL | Design No |
| (F)为防尘 (W)为户外 | □ | (F)for dustproof, (W)for outdoor |
| 动力箱 | □□ | Power case |

PZ30 照明配电箱

LIGHTING DISTRIBUTION BOX

产品概述

◆PZ30系列终端组合照明配电箱适用于交流50Hz，额定电压AC380V，负载交流不大于100A的电路中，作为对用电设备进行控制；配电对线路的过载、短路、漏电、过电压等起保护作用。

GENERALS

◆PZ30 series of combined lighting distribution box applies to AC 50Hz,380V,load alternating current up to 100A electrical equipment as controlling system,and has such functions as overload, short-circuit, leakage and overvoltage protection.



产品特点

◆PZ30 系列终端组合配电箱由电器元件、外壳底箱、盖和透明门组成，盖为阻燃材料，并有足够的机械强度，透明门上、下开启角度不小于90度，且能自行卡住。

PRODUCTS FEATURES

◆PZ30 series of combined electrical box is composed of electrical components, enclosure, cover and transparent door. Cover is made of fire-re-tardant material, and possesses enough mechanical intensity. Transparent door can be self-stucked.

正常使用条件

- ◆海拔高度：≤2000m。
- ◆环境温度：上限为+40℃，下限为-5℃。
- ◆空气的相对湿度在最高温度为+40℃时，不超过50%，在较低温度下，允许有较高的相对湿度。

OPERATION CONDITIONS

- ◆Altitude shall be not higher than 2000m
- ◆Ambient temperature: Max.+40℃;Min.-5℃
- ◆Climate conditions shall be clear and relative humidity shall be not higher than 50% at 40℃of Max.temperature,but it is possible to have higher humidity at lower temperature

产品型号及含义 TYPE EXPLANATION

PZ30□□

- | | | |
|-------------|----|--|
| 表示箱体为明装 | PZ | M stands for that the case is surface mounted. |
| 外壳形式A、B、C、D | 30 | Shell type A、B、C、D |
| A、铁面铁底，向上开门 | | A、Iron surface and bottom, Open to upside. |
| B、铁面铁底，侧面开门 | | B、Iron surface and bottom, Open to side face. |
| C、不锈钢面，向上开门 | | C、Stainless steel surface, Open to upside. |
| D、不锈钢底，侧面开门 | | D、Stainless steel surface, Open to side face. |
| 设计序号 | □ | Design NO |
| 终端组合箱 | □ | Terminal combined cabinet |

BWX BHX 就地仪表保温保护箱

LOCAL INSTRUMENT THERMAL INSULATION PROTECTIVE BOX

产品概述

◆仪表保温保护箱（变送器柜）是吸收国内外同类产品的优点改进设备而成的。可广泛用于电力、化工、冶金、石油、建材等行业，收到用户和安装单位的一致欢迎和好评。

GENERALS

◆ Instrument insulation protection box (transmitter cabinet) is to absorb the advantages of similar products at home and abroad to improve the equipment. Can be widely used in electric power, chemical industry, metallurgy, petroleum, building materials and other industries, received the user and installation units of the same welcome and praise.



正常使用条件

◆仪表保温箱内采用电加热方式，内设加热、保温和控温系统，以控制和保证箱内温度保持在设定（可调）的 $10^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 范围之内。加热元件配有防护罩。

◆仪表保温保护箱（变送器柜）内设有内照明、检修插座和接地装置。

◆仪表保温保护箱（变送器柜）内、外表面均经酸洗、热磷化然后静电喷塑、高温固化处理，且采用室外粉，涂层有良好的附着力。同一批仪表保温保护箱的涂层没有明显的色差。外表面涂层要均匀、牢固、没有气泡、皱纹、擦伤、剥落、锤痕及修补刷痕等缺陷，所用的金属零件和紧固件均采用镀锌处理。镀层应牢固、无锈蚀、无脱皮及剥落等现象。各紧固处装有防松装置。

◆ An electric heating method is adopted in the instrument thermal insulation box, which is provided with a heating, thermal insulation and a temperature control system to control and ensure the temperature inside the box is kept in a setting (adjustable) of $10\text{C} + 2\text{C}$. Heating element equipped with protective cover.

◆ An inner illumination, an inspection socket and a grounding device are arranged inside the instrument thermal insulation protection box (transmitter cabinet).

◆ Thermal insulation protection box (transmitter cabinet) inside and outside surface by pickling, phosphating, electrostatic spray heat and high temperature treatment, and the use of outdoor powder coating has good adhesion. The coating of the same batch of instrument thermal insulation protective box has no obvious color difference. Outer surface coating should be uniform, firm, without bubbles, wrinkles, scratches, peeling, hammer marks and repair brush marks and other defects, the metal parts and fasteners should be galvanized treatment. The coating should be firm, no rust, no peeling, peeling off and so on. Each fastener is provided with an anti loosening device.

OPERATION CONDITIONS

产品特点

◆仪表保温保护箱（电加热仪表保温箱、蒸汽加热仪表保温箱）是与变送器、仪表阀门及管路、电器配件与一体的仪表现场成套装置。它是仪表现场安装的重要保护、保温、防尘、防水设备，具有标准化程度高、造型美观、结构合理、形式多样、结实耐用、安装操作方便等特点。

◆仪表保温箱由箱体、仪表安装支架等部件组成。仪表保温箱与仪表保护箱的结构基本相同，区别在于仪表保温箱内还装有电器加热器、电伴热带或者蒸汽加热装置，壳体夹装泡沫保温层、耐热海绵保温层或者耐高温石棉保温层。

◆仪表保温保护箱的箱体材料有玻璃钢、不锈钢板等，箱门上可加嵌入式玻璃观察窗。

PRODUCTS FEATURES

◆ Instrument thermal insulation protection box (electric heating instrument incubator, steam heating instrument incubator) is a complete set of equipment and instruments for the transmitter, instrument valves and pipelines, electrical accessories and integration. It is an important protection, thermal insulation, dust and waterproof equipment, which has the characteristics of high degree of standardization, beautiful appearance, reasonable structure, various forms, strong durability, convenient installation and operation, etc..

◆ The instrument thermal insulation box is composed of a box body, an instrument mounting bracket, and other components. The structure of thermal insulation box and instrument protection box is basically the same, the difference is also equipped with electric heater thermal insulation box, cable or steam heating device, a clamping foam insulation layer, heat insulation layer of high temperature resistant sponge or asbestos insulation layer.

◆ The material of the box body of the instrument thermal insulation protection box is a glass steel, stainless steel plate, etc., and the embedded glass observation window can be added on the box door.

结构特点

◆仪表保温保护箱（变送器柜）为采用垂直地面安装的自撑式结构。有足够的强度能承受一定机械的、电的和热的应力。仪表保温保护箱（变送器柜）采用倾斜式防雨顶盖结构，门与箱体之间装镶密封条，密封条选用优良，装镶工艺良好，适用于户外安装使用。外表面无焊结、铆钉或外侧出现的螺栓头，整个外表面应端正光滑。

◆仪表保温保护箱（变送器柜）内配备 $\Phi 60$ 无缝钢管作为变送器的安装支架，安装支架上变送器在安装时可上下、左右任意移动，以满足现场变送器及导压管施工安装调节需要。变送器安装管水平设置。

◆ Instrument thermal insulation protection box (transmitter cabinet) is a self supporting structure with vertical ground installation. Having sufficient strength to withstand the mechanical, electrical, and thermal stresses. Thermal insulation protection box (transmitter cabinet) by tilting rainproof cover structure, between the door and the cabinet installed with seal, seal with excellent inserting process is good, suitable for outdoor installation. The outer surface of the weld, rivet or the outside of the bolt head, the entire outer surface should be smooth.

◆ Thermal insulation protection box (transmitter cabinet) equipped with $\Phi 60$ seamless steel pipe is used as the transmitter mounting bracket, mounting bracket can be installed in transmitter and so on any mobile, in order to meet the transmitter and tubing installation adjustment needs. Transmitter mounting tube level setting.

PRODUCT STRUCTURE

APSD 三段式操作台

THREE-SECTION OPERATION CONSOLE SERIES

产品概述

- ◆ 监控操作台的大特点是单元模块化设计，所以操作台具有许多标准设备的安装单元。从一个细小的螺丝到操作台面板都是该系列操作台模块化设计的完美体现。可根据用户的不同需求，组成单层，双层和三层操作台，TP三段式操作台定制，也可形成斜面或平面操作台，操作台可容纳显示器的类型从纯平到液晶，可容纳的尺寸从17寸到21寸。可根据调度室环境量身定制。



GENERALS

- ◆ The monitoring console / feature is the modular design of the unit, so the operator has a lot of standard equipment. From a small screw to the operating table panel is the perfect embodiment of the modular design of the series. According to the different needs of users, the composition of single layer, double layer and three layer operation platform, TP three stage operation platform customization, also can form an oblique plane or a plane type console, console can accommodate the display from flat to LCD, can accommodate the size from 17 inches to 21 inches. Can be tailored according to the dispatch room environment.

产品特点

- ◆ 操作台表面覆盖层应采用具有耐热、耐潮湿、耐烟灼、耐撞击、防水、耐腐蚀的高强度高压耐磨板，三段式操作台定制，后部面板具有足够的支撑力以保证横向的稳定。
- ◆ 现代的流线型设计造型，外观简洁，大方，三段式操作台定制，两侧有装饰灯带，让控制台显得更加生动，具有科技感，为云计算而进行特别设计的。

PRODUCTS FEATURES

- ◆ The operating table surface cover should be used with high heat resistance and high strength wear-resistant plate moisture resistant, smoke burning, impact resistant, waterproof, corrosion resistance, three segment operating platform customization, the rear panel has enough supporting force to ensure the lateral stability of.
- ◆ Modern streamlined design, the appearance of simple, generous, three – stage operation of the table, with decorative lights on both sides, so that the console is more vivid, with a sense of science and technology for the cloud computing and special design.

结构特点

- ◆ 控制台的设计结合招标人的实际情况，布局合理、美观、可用性高，符合安全规范以及人体工学方面的要求，配置应依照调控中心的实际面积、尺寸以及空间布局的合理性进行设计，并且应考虑到与整个环境的协调性。
- ◆ 控制台安装与维护的灵活性，整体采用组合式设计，方便拆卸与将来的扩展。
- ◆ 内部结构具有较大的可调整性，辅有专业的各式设备承托架及内配件，使安装与调整更加方便。
- ◆ 控制台内部框架有线缆通孔，或者同等的线缆管理系统，可在不同的位置以使布线方便有序。
- ◆ 台面及主体所采用的非金属材料应当具有防火阻燃的性能，各种材料均采用环保料，保证操作人员的人身健康和安。

PRODUCT STRUCTURE

- ◆ Console design combined with the actual situation of the tenderer, the layout is reasonable, beautiful appearance, high availability, conform to the safety regulations and ergonomic requirements shall be in accordance with the actual configuration of the reasonableness of the design area, size and spatial distribution of control center, and should be taken into account and the coordination of the entire environment.
- ◆ Console installation and maintenance of flexibility, the overall use of modular design, easy disassembly and future expansion.
- ◆ The internal structure can be adjusted greatly, there are all kinds of professional auxiliary equipment support and accessories, make more convenient installation and adjustment.
- ◆ Console internal frame with cable through holes, or the same cable management system, can be in different locations in order to facilitate the orderly wiring.
- ◆ Non metallic materials used in the table and the main body shall have the properties of fire retardant and flame retardant, and all kinds of materials can be used to ensure the safety and health of the operating personnel.

前景分析

- ◆ 随着工业设计的发展，不仅仅局限对操作台的功能的满足，同时也会考虑产品的美观性，并且操作台的美感直接影响产品销量，也是我们满足客户需求的重要标准之一。无论是从产品功能需求来说，还是从产品的美观性来说，都对我们这个钣金行业带来了极大的挑战。
- ◆ 操作台所有的面板都可以非常灵活的拆卸，以便于用户安装设备和进线。操作台内部可拆卸的进线底板由四块可随意组合的钢板组成。所以，电缆可以从控制室地板直接进入操作台内，从而大大减少了您进线的复杂性。四个可升降的橡胶底脚为多个操作台并列的摆放为了调整高度提供了方便快捷的解决方案。

PROSPECT ANALYSIS

- ◆ With the development of industrial design, not only on the operating table function to meet, will also consider the beauty of the product, and the operation of Taiwan Beauty directly affect the product sales, but also one of the important standards we meet customer needs. Whether it is from the functional requirements of the product, or from the product of the aesthetic, we have this sheet metal industry has brought great challenges.
- ◆ All panels of the operating table can be very flexible to remove, so that the user can install the equipment and the line. The detachable inlet bottom plate of the operating table is composed of four steel plates which can be arbitrarily combined. Therefore, the cable can be directly from the control room floor into the operating table, thereby greatly reducing the complexity of your line. Four lifting rubber feet for multiple operating parallel arrangement in order to adjust the height provides a fast solution.