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TIANHONG 天宏电力

OMEGA TRANSFORMER

**OMEGA TRANSFORMER**

天宏电力科技

**TIANHONG POWER TECHNOLOGY**



COMPLETE SET SCHEME SOLUTION
PROVIDER FOR THE GLOBAL POWER SYSTEM

全球电力系统成套方案解决商



天宏电力科技有限公司

TIANHONG POWER TECHNOLOGY CO., LTD.

Jiangsu Omega Electric Co., Ltd.

# CONTENTS

## 目录



www.omegatransformer.com


### 企业篇 ENTERPRISE CHAPTER 01

企业简介 Company Profile — 03

企业文化 Corporate culture — 05

企业团队 Our team — 06

资质荣誉 Enterprise Qualification & honor — 07

车间设备 Workshops & Equipments — 15

### 产品篇 PRODUCT CHAPTER 02

单相架空配电变压器（CON 型） Single phase overhead distribution transformer（con type） — 22

单相架空配电变压器（CSP 型） Single phase overhead distribution transformer（csp type） — 24

单相垫装式配电变压器 Single phase pad mounted distribution transformer — 26

110kV~220kV 电力变压器 110kV~220kV power transformer — 27

35kV 油浸式电力变压器 35kV oil immersed power transformer — 30

油浸式非晶合金配电变压器 Oil immersed amorphous alloy distribution transformer — 32

S13 型油浸式电力变压器 S13 oil immersed power transformer — 34

SCBH15 型干式非晶合金铁芯配电变压器 SCBH15 dry-type amorphous alloy iron core distribution transformer — 36

SC(B)13 型干式电力变压器 SC(B)13 type dry power transformer — 38

SC(B)18 型干式电力变压器 SC(B)18 type dry power transformer — 40

特种变压器光伏电站用绕组双分裂干式变压器 Special transformer double split dry-type transformer with winding for photovoltaic power station — 41

预装式变电站（美式） Prefabricated substation（American type） — 42

片式散热器 Chip radiator — 43

伺服电液数控折弯机 Servo electro-hydraulic CNC press brake — 45

交换台大包围光纤激光切割机 Laser exchangeable table — 46

DFWK-12 系列户外环网柜 DFWK-12 series outdoor ring main unit — 47

KYN28A-12 型金属铠装中置移开式开关设备 KYN28A-12 metal armored middle mounted removable switch equipment — 49

GCS 型低压抽出式成套开关设备 GCS type low voltage draw out switchgear — 51

GGD 型成套开关设备 GGD type complete switchgear — 53

### 服务篇 SERVICE CHAPTER 03

合作案例 Collaboration Cases — 55

客户与合作伙伴 Customer & Partner — 59

全球营销网络 Global Marketing Network — 61

TIANHONG 天宏电力 ΩMEGA TRANSFORMER

# COMPANY PROFILE
# 企业简介

生产 PRODUCTION

研发 R&D

销售 SALES



天宏电力集团是一家从事变压器及配套产品生产、研发、销售的高新技术企业。公司坐落于江苏三大都市圈之一、国家综合交通枢纽，华东地区重要的科教、文化、金融、旅游、会展，江苏省重要的经济、商业和对外贸易——徐州市，京沪铁路和陇海铁路在此交汇，交通运输便利。

公司总投资 2.5 亿元，注册资本 1.08 亿元。公司现有员工 1000 余人，其中：工程师 7 人；博士、硕士等中级技术人员 110 余人。

Jiangsu Omega Transformer is a high - tech enterprise engaged in the production, research and development and sales of transformers and supporting products. The company is located in one of the three metropolitan areas of Jiangsu Province，the national comprehensive transportation hub，East China's important science and education, culture，finance，tourism，exhibition，Jiangsu Province's important economy, commerce and foreign trade – Xuzhou city, Beijing – Shanghai railway and Longhai Railway in this intersection, transportation is convenient. The total investment of the company is 250 million yuan，and the registered capital is 108 million yuan. The company has 1000+ employees，including：engineers 7 people；There are more than 110 intermediate technical personnel such as doctors and masters.

**2.5**
总投资 2.5 亿元
Total investment of 250 million yuan

**1.08**
注册资本 1.08 亿元
Registered capital of 108 million yuan

**1000+**
现有员工 1000 余人
More than 1000 employees

## 主要产品 MAIN PRODUCTS

500kV 及以上 ,220kV,110kV,35kV,20kV,10kV,6kV 等油浸式变压器（S11,S13，S20,S22）系列； 35kV,20kV,10kV,6kV 等环氧树脂浇筑干式变压器 SC（B）1,0，SC（B）11，SC（B）12，SC（B）13，SC（B）14，SC（B）18 系列；非晶合金油浸式配电变压器 (SC(B)H15、SC(B)H17、SC(B)H19 系列)：YB 预装式变电站，ZGS 型组合式变电站：光伏发电升压变压器、高过载变压器、有载调压变压器。产品分别通过国家电器质量监督检验中心、并获得注册型号备案证书。产品还通过中国质量认证中心能效产品，国家电能认证中心的 PCCC产品认证,并通过了 GB/T 27922-2021[ 商品售后服务评价体系 ] 标准。

500kV and above, 220kV,110kV,35kV,20kV,10kV,6kV and other oil-immersed transformers (S11，S13，S20，S22)Series: 35kV,20kV,10kV,6kV epoxy resin cast dry-type transformer (SC（B）1,0，SC（B）11，SC（B）12，SC（B）13，SC（B）14，SC（B）18)series; amorphous alloy oil-immersed distribu-tion transformer (SC(B)H15, SC(B)H17, SC(B)H19 series); YB prefabricated substation，ZGS type combined substation; photovoltaic power generation step-up transformer,high overload transformer,on-load voltage regulating transformer.The products have passed the National Electrical Appliance Quality Supervision and Inspection Center and obtained registered model filing certificates. The product has also passed the China Quality Certification Center Energy Efficiency Product and National Electric Energy Certification.The center's PCCC product certification has passed the GB/T 27922-2021【 Commodity After-sales Service Evaluation System 】standard.



## 执行标准 STANDARDS

- GB 1094 电力变压器
- GB/T 15164 油浸式电力变压器负载导则
- GB/T 6451 三柜油浸式电力变压器技术参数和要求
- GB 2536 变压器油
- GB 311.1 高压输变电设备的绝缘配合
- JB/T 501 电力变压器试验导则
- GB 10237 电力变压器绝缘水平和绝缘试验外绝缘的空气间隙
- DL/T 572 变压器运行规程
- IEC 60076 国际电工委员会变压器标准

- GB 1094 Power transformer
- GB/T 15164 Loading Guidelines for Oil-immersed Power Transformers
- GB/T 6451 Technical parameters and requirements for three-phase oil-immersed power transformers
- GB 2536 transformer oil
- GB 311.1 Insulation coordination of high-voltage power transmission and transformation equipment
- JB/T 501 Power Transformer Test Guidelines
- GB 10237 Insulation level of power transformer and air gap of external insulation for insulation test
- DL/T 572 Transformer operating procedures
- IEC 60076 International Electrotechnical Commission Transformer Standard

公司自成立以来，始终遵循“科技向导，服务先行，诚信为本”的经营理念，坚持以客户的利益为己任，注重产品的研发投入。严格按照 IS09000 质量管理体系的标准运行，求精务实创新奋进，为各界客户提供符合各区域特点的优异产品及变压器的解决方案。 公司以先进的技术、精湛的设备、上乘的质量、满意的服务及良好的信誉，与广大用户真诚合作，谋求共同发展，真诚地欢迎各界人士前来我公司洽谈合作，共创辉煌！

Since its establishment,Tianhong has always followed the business philosophy of "science and technology guide, service first, integrity-based", insisting on taking the interests of customers as its own responsibility, and focusing on product research and development investment We operate in strict accordance with the standards of the ISO9000 quality management system, strive for refinement, pragmatism, innovation and progress, and provide customers from all walks of life with excellent products and transformer solutions that meet the characteristics of each region. With advanced technology, superb equipment, superior quality, satisfactory service and good reputation, the company sincerely cooperates with users and seeks common development.We sincerely welcome people from all walks of life to come to our company to discuss cooperation and create brilliance together！

# CORPORATE CULTURE
# 企业文化



## 企业使命 Corporate Mission

为员工创造幸福 为企业创造效益 为社会创造财富

Creating happiness for employees, benefits for enterprises, and wealth for society.

## 核心价值观 Core Values

一切相信群众 一切依靠群众 一切为了群众

Believe in the masses, rely on the masses, and do everything for the masses.

## 企业愿景 Corporate Vision

做时代企业 创百年品牌

Creating a Centennial Brand as a Time Enterprise

## 企业精神 Enterprise Spirit

给自己征服一切困难的力量

Give oneself the power to conquer all difficulties.

## 战略目标 Strategic Objective

先求好 后求大 再求强

First seek good, then seek greatness, and then seek strength.

## 经营理念 Business Concept

厚德笃行 和谐鼎新

Benevolent in Virtue，Adhering to Harmony, and Promoting Innovation.

## 人才理念 Talent Concept

德才兼备 因人施用

Having both moral integrily and talent, and using it according to people's needs.



# OUR TEAM
# 企业团队

公司自成立以来，始终遵循厚德笃行，和谐鼎新的经营理念，注重产品的科技研发，严格按照IS09001质量管理体系的标准运行，团结务实，创新奋进。

正确树立人才理念，坚持以人为本，不断加大对员工的全面培养，铸造出一支能打善战、业绩一流的队伍，为客户提供安全、优质、节能的产品和满意的服务。

Since its establishment,the company has always adhered to the business philosophy of"honesty and integrity, harmony and innovation", focused on product technology research and development, strictly operated in accordance with the ISO9001 quality management system standards, united and pragmatic, innovative and progressive.

Correctly establish a talent concept, adhere to people-oriented principles，continuously increase the comprehensive training of employes, and create a team capable of fighting well and achieving first-class performance,providing customers with safe,high-quality, energy-saving products and satisfactory services.






# QUALIFICATION & HONOR
# 资质荣誉


统一社会信用代码 91320300MA209YDF8F (1/1)

营业执照

（副本）

名 称 天宏电力科技有限公司

类 型 有限责任公司(自然人独资)

法定代表人 张晓峰

经营范围 ……

注册资本 10000.00万元整

成立日期 2019年10月24日

住 所 徐州经济技术开发区徐海路路北318-1号

登记机关

2021年09月08日

国家企业信用信息公示系统网址：http://www.gsxt.gov.cn


大宏电力科技有限公司（组织机构代码/统一社会信用代码：91320300MA209YDF8F）于2021年06月10日 11时11分33秒，在国网电子商务平台生成此资质业绩凭证，并将其用于投标，提供招标方评审使用。

• 资质业绩凭证单说明如下：

资质业绩凭证单是指在供应商资质库中生成，并用于投标的一种电子凭证。

供应商在资质库中填报资质业绩后，可随时选择资质业绩，并生成凭证单，在参与国家电网公司相应集中招标采购活动时，请根据招标文件规定，将资质业绩凭证单输入相应投标文件中，评标阶段，专家可通过资质业绩凭证单编码，自动调取该供应商资质库中经过自主选择、签名过的有效数据，进行后续评标。

供应商可实时查询业绩凭证的详细信息，通过查看按照方式查看供应商的具体资质业绩信息。

免责说明：本凭证单记录的是截止2021年06月10日 11时11分33秒的数据，资质业绩凭证单具体的使用要求和时间要求以招标文件要求为准；数据的具体使用规则，评审规则按招标文件要求。


质量管理体系认证证书

证书号：46023005891R

兹证明

天宏电力科技有限公司

统一社会信用代码：91320300MA209YDF8F

注册地址：徐州经济技术开发区徐海路路北318-1号
办公地址：徐州经济技术开发区徐海路路北318-1号
生产地址：徐州经济技术开发区徐海路路北318-1号

建立的质量管理体系符合标准

GB/T 19001-2016/ISO 9001:2015

认证范围：CCC 范围内低压配电柜的加工组装；高压配电柜、变压器加工组装及其场所部分及职业健康安全管理相关活动

IAF 代码：19

发证日期：2023 年 05 月 05 日　有效期至：2026 年 05 月 04 日
初次获证：2020 年 06 月 08 日　换证日期：2024 年 04 月 01 日

本证书的有效性须经华智认证通过定期的监督审核确认保持

IAF　IAS ACCREDITED　签发

深圳华智认证服务有限公司


职业健康安全管理体系认证证书

证书号：46023050901R

兹证明

天宏电力科技有限公司

统一社会信用代码：91320300MA209YDF8F

注册地址：徐州经济技术开发区徐海路路北318-1号
办公地址：徐州经济技术开发区徐海路路北318-1号
生产地址：徐州经济技术开发区徐海路路北318-1号

建立的职业健康安全管理体系符合标准

GB/T 45001-2020/ISO 45001:2018

认证范围：CCC 范围内低压配电柜的加工组装；高压配电柜、变压器加工组装及其场所部分及职业健康安全管理相关活动

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IAF　IAS ACCREDITED　签发

深圳华智认证服务有限公司


环境管理体系认证证书

证书号：46023050891R

兹证明

天宏电力科技有限公司

统一社会信用代码：91320300MA209YDF8F

注册地址：徐州经济技术开发区徐海路路北318-1号
办公地址：徐州经济技术开发区徐海路路北318-1号
生产地址：徐州经济技术开发区徐海路路北318-1号

建立的环境管理体系符合标准

GB/T 24001-2016/ISO 14001:2015

认证范围：CCC 范围内低压配电柜的加工组装；高压配电柜、变压器加工组装及其场所部分及的环境管理相关活动

IAF 代码：19

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IAF　IAS ACCREDITED　签发

深圳华智认证服务有限公司

01
营业执照
Business license

02
国网入围证明
State grid finalization certificate

03
三体系认证证书
Three system certification certificate





## 欧盟 CE 证书、报告 / EU CE CERTIFICATE AND REPORT


MACHINERY DIRECTIVE
ATTESTATION OF CONFORMITY


TEST REPORT
EN ISO 12100: 2010
Safety of machinery - General principles for design - Risk assessment and risk reduction
EN 60204-1
Safety of machinery-Electrical equipment of machines- part 1: General requirements






MACHINERY DIRECTIVE
ATTESTATION OF CONFORMITY


TEST REPORT
EN ISO 12100: 2010
Safety of machinery - General principles for design - Risk assessment and risk reduction
EN 60204-1
Safety of machinery-Electrical equipment of machines- part 1: General requirements





## 检验报告 / TEST REPORT


检验检测报告
Test Report
No: ZXBIS20220175-NX
国家中低压配电设备质量检验检测中心
China National Center for Quality Testing of Mid-low Voltage Distribution Equipment

## 型式试验报告 / TYPE TEST REPORT


型式试验报告
Type Test Report
№：ZXBXS20210177G
产品名称 油浸式电力变压器
规格型号 S20-M-100/10-NX2
委托单位 天宏电力科技有限公司
检验检测类别 型式试验
镇江市产品质量监督检验中心
国家中低压配电设备质量检验检测中


型式试验报告
Type Test Report
№：ZXBXS20210178G
产品名称 油浸式电力变压器
规格型号 S20-M-400/10-NX2
委托单位 天宏电力科技有限公司
检验检测类别 型式试验
镇江市产品质量监督检验中心
国家中低压配电设备质量检验检测中


型式试验报告
Type Test Report
№：ZXBXS20210205
产品名称 油浸式电力变压器
规格型号 S22-M-630/10-NX1
委托单位 天宏电力科技有限公司
检验检测类别 型式试验
国家中低压配电设备质量检验检测中
（镇江市产品质量监督检验中心）


型式试验报告
Type Test Report
№：ZXBXS20220175
产品名称 油浸式电力变压器
规格型号 S22-M-1250/10-NX1
委托单位 天宏电力科技有限公司
检验检测类别 型式试验
镇江市产品质量监督检验中心
国家中低压配电设备质量检验检测中心


型式试验报告
Type Test Report
№：ZXBXS20230033
产品名称 非晶合金油浸式电力变压器
规格型号 SBH21-M-630/10-NX2
委托单位 天宏电力科技有限公司
检验检测类别 型式试验
镇江市产品质量监督检验中心
国家中低压配电设备质量检验检测中


型式试验报告
Type Test Report
№：ZXBXS20210175G
产品名称 干式变压器
规格型号 SCB14-1000/10-NX2
委托单位 天宏电力科技有限公司
检验检测类别 型式试验
镇江市产品质量监督检验中心
国家中低压配电设备质量检验检测中


型式试验报告
Type Test Report
№：ZXBXS20210357G
产品名称 干式变压器
规格型号 SCB14-2000/10-NX2
委托单位 天宏电力科技有限公司
检验检测类别 型式试验
镇江市产品质量监督检验中心
国家中低压配电设备质量检验检测中心


型式试验报告
Type Test Report
№：ZXBXS20210176G
产品名称 干式变压器
规格型号 SCB14-500/10-NX2
委托单位 天宏电力科技有限公司
检验检测类别 型式试验
镇江市产品质量监督检验中心
国家中低压配电设备质量检验检测中心


型式试验报告
TypeTest Report
№：ZXBXS20240314
产品名称 干式变压器
规格型号 SCB14-630/10-NX2
委托单位 天宏电力科技有限公司
检验检测类别 型式试验
镇江市产品质量监督检验中心
国家中低压配电设备质量检验检测中


型式试验报告
Type Test Report
№：ZXBXS20240174
产品名称 干式电力变压器
规格型号 SCB14-800/10-NX2
委托单位 天宏电力科技有限公司
检验检测类别 型式试验
镇江市产品质量监督检验中心
国家中低压配电设备质量检验检测中


型式试验报告
Type Test Report
№：ZXBXS20240340
产品名称 干式变压器
规格型号 SCB18-1250/10-NX1
委托单位 天宏电力科技有限公司
检验检测类别 型式试验
镇江市产品质量监督检验中心
国家中低压配电设备质量检验检测中心


型式试验报告
Type Test Report
№：ZXBXS20210174
产品名称 油浸式电力变压器
规格型号 S20-M-1600/10-NX2
委托单位 天宏电力科技有限公司
检验检测类别 型式试验
家中低压配电设备质量检验检测中心
（镇江市产品质量监督检验中心）





## 试验合格证书 / TEST CERTIFICATE


型式试验合格证书
试验报告编号：ZXBXS20210177G
合格证书编号：202101776
生产单位：天宏电力科技有限公司
样品名称：油浸式电力变压器
样品型号：S20-M-100/10-NX2
样品序号：TH20210723001
试验项目：例行试验+型式试验+绝缘液闪点（闭口）测定+压力变
三相变压器零序阻抗测量+空载电流谐波测量+短路承受能力试验
试验依据：GB/T 1094.1-2013、GB/T 1094.2-2013、GB/T 1094.3-
GB/T 1094.5-2008、GB/T 1094.10-2003、GB/T 6451-2015、JB/T 1
GB 20052-2020、GB/T 7595-2017 及试验委托协议书
试验结论：油浸式电力变压器（型号：S20-M-100/10-NX2）例行试
式试验，绝缘液闪点（闭口）测定、压力变形试验、三相变压器零
测量、空载电流谐波测量、短路承受能力试验的试验结果符合检
产品主要技术要求，样品上述试验合格。
2022 年 08 月 26 日
国家中低压配电设备质量检验检测中心


型式试验合格证书
试验报告编号：ZXBXS20210176G
合格证书编号：202101766
生产单位：天宏电力科技有限公司
样品名称：油浸式电力变压器
样品型号：S20-M-1600/10-NX2
样品序号：TH20210723003
试验项目：例行试验+型式试验+绝缘液闪点（闭口）测定+压力变
三相变压器零序阻抗测量+空载电流谐波测量+短路承受能力试验
试验依据：GB/T 1094.1-2013、GB/T 1094.2-2013、GB/T 1094.3-
GB/T 1094.5-2008、GB/T 1094.10-2003、GB/T 6451-2015、JB/T 1008
GB 20052-2020、GB/T 7595-2017 及试验委托协议书
试验结论：电力变压器（型号：S20-M-1600/10-NX2）例行试验、型
绝缘液闪点（闭口）测定、压力变形试验、三相变压器零序阻抗测
空载电流谐波测量、短路承受能力试验的试验结果符合检验依据标
型要求，样品上述试验合格。
2022 年 08 月 26 日
国家中低压配电设备质量检验检测中心


型式试验合格证书
试验报告编号：ZXBXS20210178G
合格证书编号：202101786
生产单位：天宏电力科技有限公司
样品名称：油浸式电力变压器
样品型号：S20-M-400/10-NX2
样品序号：TH20210723002
试验项目：例行试验+型式试验+绝缘液闪点（闭口）测定+压力变
三相变压器零序阻抗测量+空载电流谐波测量+短路承受能力试验
试验依据：GB/T 1094.1-2013、GB/T 1094.2-2013、GB/T 1094.3-
GB/T 1094.5-2008、GB/T 1094.10-2003、GB/T 6451-2015、JB/T 1008
GB 20052-2020、GB/T 7595-2017 及试验委托协议书
试验结论：电力变压器（型号：S20-M-400/10-NX2）例行试验、型
绝缘液闪点（闭口）测定、压力变形试验、三相变压器零序阻抗测
空载电流谐波测量、短路承受能力试验的试验结果符合检验依据标
型要求，样品上述试验合格。
2022 年 08 月 26 日
国家中低压配电设备质量检验检测中心


型式试验合格证书
试验报告编号：ZXBXS20220175
合格证书编号：202201775
生产单位：天宏电力科技有限公司
样品名称：油浸式电力变压器
样品型号：S22-M-1250/10-NX1
样品序号：TH20220525001
试验项目：例行试验、型式试验+绝缘液闪点（闭口）测定+压力变
三相变压器零序阻抗测量+空载电流谐波测量+短路承受能力试验
试验依据：GB/T 1094.1-2013、GB/T 1094.2-2013、GB/T 1094.3-
GB/T 1094.5-2008、GB/T 1094.10-2003、GB/T 6451-2015、JB/T 1008
GB 20052-2020、GB/T 7595-2017 及试验委托协议书
试验结论：油浸式电力变压器（型号：S22-M-1250/10-NX1）例行试验、型式
试验（含绝缘热点温升计算）、绝缘液闪点（闭口）测定、绝缘液中溶解气体
测量、压力变形试验、空载噪声测试、三相空载电流谐波测量、短路承受能力
试验、油箱开展试验、油箱开展试验、油箱开展试验、油箱开展试验、油箱开展试验
2022 年 08 月 26 日
国家中低压配电设备质量检验检测中心


型式试验合格证书
试验报告编号：ZXBXS20210205G
合格证书编号：202102056
生产单位：天宏电力科技有限公司
样品名称：油浸式电力变压器
样品型号：S22-M-630/10-NX1
样品序号：TH20210723007
试验项目：例行试验+型式试验+绝缘液闪点（闭口）测定+压力变
三相变压器零序阻抗测量+空载电流谐波测量+短路承受能力试验
试验依据：GB/T 1094.1-2013、GB/T 1094.2-2013、GB/T 1094.3-
GB/T 1094.5-2008、GB/T 1094.10-2003、GB/T 6451-2015、JB/T 1008
GB 20052-2020、GB/T 7595-2017 及试验委托协议书
试验结论：电力变压器（型号：S22-M-630/10-NX1）例行试验、型式试
绝缘液闪点（闭口）测定、压力变形试验、三相变压器零序阻抗测量、
空载电流谐波测量、短路承受能力试验的试验结果符合检验依据标准
产品主要技术要求，样品上述试验合格。
2022 年 08 月 26 日
国家中低压配电设备质量检验检测中心


型式试验合格证书
试验报告编号：ZXBXS20230033
合格证书编号：20230033
生产单位：天宏电力科技有限公司
样品名称：非晶合金油浸式电力变压器
样品型号：SBH21-M-630/10-NX2
样品序号：20221220007
试验项目：例行试验、型式试验、绝缘液含水量测定、绝缘液闪点
测定、绝缘液中溶解气体测量、压力变形试验、变压器容量评估测
变压器零序阻抗测量、空载电流谐波测量、短路承受能力试验、油
承受能力试验。
试验依据：GB/T 1094.1-2013、GB/T 1094.2-2013、GB/T 1094.3-2
2)+10%-2019、GB/T 1094.5-2008、GB/T 1094.10-2003、GB/T 6451-2
2595-2017、GB 20052-2020、JB/T 10088-2016 及试验委托协议书
试验结论：非晶合金油浸式电力变压器（型号：SBH21-M-630/10-N
试验、型式试验、绝缘液含水量测定、绝缘液闪点（闭口）测定、
测定、三相变压器零序阻抗测量、空载电流谐波测量、短路承受能力
测量、空载电流谐波测量、短路承受能力试验、油箱开展试验的试
产品主要技术要求，样品上述试验合格。
2022 年 08 月 26 日
国家中低压配电设备质量检验检测中心


型式试验合格证书
试验报告编号：ZXBXS20210175G
合格证书编号：202101756
生产单位：天宏电力科技有限公司
样品名称：干式变压器
样品型号：SCB14-1000/10-NX2
样品序号：TH20210723006
试验项目：例行试验、型式试验、在90%和110%额定电压下的空载损耗和
试验+压力变形试验+空载电流测量+声级测定+三相变压器零序阻抗测量+空载电流谐波测量
承受能力试验。
试验依据：GB/T 1094.1-2013、GB/T 1094.3-2017、GB/T 1094.5-2008、
GB/T 1094.10-2003、GB/T 1094.11-2007、GB/T 10228-2015、JB/T
10088-2016、GB 20052-2020 及试验委托协议书。
试验结论：干式电力变压器（型号：SCB14-1000/10-NX2）例行试验、型式
式试验，在90%和110%额定电压下的空载损耗和空载电流测量、声
空载电流谐波测量、短路承受能力试验的试验结果符合检验依据标准和委托书要求。样品上述试验合格。


型式试验合格证书
试验报告编号：ZXBXS20210357G
合格证书编号：202103576
生产单位：天宏电力科技有限公司
样品名称：干式变压器
样品型号：SCB14-2000/10-NX2
样品序号：TH20210723005
试验项目：例行试验、型式试验、在90%和110%额定电压下的空载损耗和
空载电流测量、声级测定、三相变压器零序阻抗测量、空载电流谐波测量、
短路承受能力试验、变压器容量评估测试。
试验依据：GB/T 1094.1-2013、GB/T 1094.3-2017、GB/T 1094.5-2008、
GB/T 1094.10-2003、GB/T 1094.11-2007、GB/T 10228-2015、JB/T
10088-2016、GB 20052-2020 及试验委托协议书。
试验结论：干式变压器（型号：SCB14-2000/10-NX2）例行试验、型式
式试验，在90%和110%额定电压下的空载损耗和空载电流测量、声
三相变压器零序阻抗测量、空载电流谐波测量、短路承受能力试验、变
压器容量评估测试。试验结果符合检验依据标准和委托书要求。样品上
述试验合格。


型式试验合格证书
试验报告编号：ZXBXS20210176G
合格证书编号：202101766
生产单位：天宏电力科技有限公司
样品名称：干式变压器
样品型号：SCB14-630/10-NX2
样品序号：TH20210723004
试验项目：例行试验、型式试验、变压器容量评估测试、三相变压
抗测量、空载电流谐波测量、短路承受能力试验。
试验依据：GB/T 1094.1-2013、GB/T 1094.3-2017、GB/T 1094.5-2
1094.10-2022、GB/T 1094.11-2022、GB/T 10228-2023、JB/T 10
GB 20052-2024 及试验委托协议书。
试验结论：干式变压器（型号：SCB14-630/10-NX2）例行试验、型
变压器容量评估测试、短路承受能力试验的试验结果符合检验依据
试验，在90%和110%额定电压下的空载损耗和空载电流测量、声
空载电流谐波测量、短路承受能力试验的试验结果符合检验依据标准和委托书要求。样品上述试验合格。
2022 年 08 月 26 日
国家中低压配电设备质量检验检测中心


型式试验合格证书
试验报告编号：ZXBXS20240314
合格证书编号：20240314
生产单位：天宏电力科技有限公司
样品名称：干式变压器
样品型号：SCB14-630/10-NX2
样品序号：TH20210031
试验项目：例行试验、型式试验、变压器容量评估测试、三相变压
抗测量、空载电流谐波测量、短路承受能力试验。
试验依据：GB/T 1094.1-2013、GB/T 1094.3-2017、GB/T 1094.5-2
1094.10-2022、GB/T 1094.11-2022、GB/T 10228-2023、JB/T 10
GB 20052-2024 及试验委托协议书。
试验结论：干式变压器（型号：SCB14-630/10-NX2）例行试验、型
变压器容量评估测试、短路承受能力试验的试验结果符合检验依据
试验，在90%和110%额定电压下的空载损耗和空载电流测量、声
空载电流谐波测量、短路承受能力试验的试验结果符合检验依据标准和委托书要求。样品上述试验合格。
2022 年 08 月 26 日
国家中低压配电设备质量检验检测中心


型式试验合格证书
试验报告编号：ZXBXS20240174
合格证书编号：20240171
生产单位：天宏电力科技有限公司
样品名称：干式电力变压器
样品型号：SCB14-800/10-NX2
样品序号：TH20210031
试验项目：例行试验、型式试验、变压器容量评估测试、三相变压
抗测量、空载电流谐波测量、短路承受能力试验。
试验依据：GB/T 1094.1-2013、GB/T 1094.3-2017、GB/T 1094.5-2
1094.10-2022、GB/T 1094.11-2022、GB/T 10228-2023、JB/T 10
GB 20052-2024 及试验委托协议书。
试验结论：干式电力变压器（型号：SCB14-800/10-NX2）例行试验、型
变压器容量评估测试、短路承受能力试验的试验结果符合检验依据标准和委托书要求。样品上述试验合格。
2022 年 08 月 26 日
国家中低压配电设备质量检验检测中心


型式试验合格证书
试验报告编号：ZXBXS20240310
合格证书编号：20240340
生产单位：天宏电力科技有限公司
样品名称：干式变压器
样品型号：SCB18-1250/10-NX1
样品序号：20211100033
试验项目：例行试验、型式试验、变压器容量评估测试、空载电流谐波测量、
三相变压器零序阻抗测量、短路承受能力试验。
试验依据：GB/T 1094.1-2013、GB/T 1094.3-2017、GB/T 1094.5-2008、GB/T
1094.10-2022、GB/T 1094.11-2022、JB/T 10088-2016、GB 20052-2024、GB/T
10228-2023 及委托书要求。
试验结论：干式变压器（型号：SCB18-1250/10-NX1）例行试验、型式试验、
变压器容量评估测试、短路承受能力试验的试验结果符合检验依据标准和委托书要求。样品上述试验合格。
2022 年 08 月 26 日
国家中低压配电设备质量检验检测中心

## 产品认证证书 / PRODUCT CERTIFICATION CERTIFICATE





## 高低压配电柜 / HIGH AND LOW VOLTAGE DISTRIBUTION CABINET









## 矿用一般型变压器认证证书 CERTIFICATION CERTIFICATE FOR MINING GENERAL TRANSFORMER


矿用合格证
CONFORMITY CERTIFICATE FOR MINING
编号：CQExK24.1763X
制造商：天宏电力科技有限公司
产品名称：矿用一般型干式变压器
产品型号：KSGG-1600/10
产品规格：额定电压：10kV 额定容量：1600kVA
标志：KY
执行文件：GB/T 12173-2008《矿用一般型电气设备》
备注：1. 本产品可代表：KSGG-1600/6，KSGG-1250/10，KSGG-1000/6，KSGG-1000/10，KSGG-800/6，KSGG-800/10矿用一般型干式变压器；
2. 该产品仅供井下金属及非金属矿山无煤水和粉尘侵入的硐室中；
3. 设备使用环境温度：-5℃≤T≤+40℃。
有效期：2024年7月29日 至 2029年7月28日
发证日期：2024年7月29日
发证单位：重庆安标检测研究院有限公司
国家安全生产重庆矿用设备检测检验中心
批准：
注：本证仅对符合安检群机的产品有效，持证者有责任保证产品符合标准规定。
Note: This certificate is only valid for the products which are in conformity with the tested sample. The holder of this certificate have the responsibility to ensure the products complying with relative standard(s).
地址：重庆市沙坪坝区西永大学城西路9号 邮编：401331 电话：023-65329504 网址：http://www.cqabjc.com
Address: No.9,Xilin Avenue, Daxuecheng District, Chongqing, China P.C.: 401331 Tel: 023-65329504 URL: http://www.cqabjc.com


矿用合格证
CONFORMITY CERTIFICATE FOR MINING
编号：CQExK24.1762X
制造商：天宏电力科技有限公司
产品名称：矿用一般型干式变压器
产品型号：KSGG-630/10
产品规格：额定电压：10kV 额定容量：630kVA
标志：KY
执行文件：GB/T 12173-2008《矿用一般型电气设备》
备注：1. 本产品可代表：KSGG-500/6，KSGG-250/6，KSGG-200/6，KSGG-125/6，KSGG-630/6，KSGG-160/6，KSGG-400/6，KSGG-315/6，KSGG-100/6，KSGG-125/10，KSGG-315/10，KSGG-500/10，KSGG-400/10，KSGG-200/10，KSGG-160/10，KSGG-250/10，KSGG-100/10矿用一般型干式变压器；
2. 该产品仅供井下金属及非金属矿山无煤水和粉尘侵入的硐室中；
3. 设备使用环境温度：-5℃≤T≤+40℃。
有效期：2024年7月29日 至 2029年7月28日
发证日期：2024年7月29日
发证单位：重庆安标检测研究院有限公司
国家安全生产重庆矿用设备检测检验中心
批准：
注：本证仅对符合安检群机的产品有效，持证者有责任保证产品符合标准规定。
Note: This certificate is only valid for the products which are in conformity with the tested sample. The holder of this certificate have the responsibility to ensure the products complying with relative standard(s).
地址：重庆市沙坪坝区西永大学城西路9号 邮编：401331 电话：023-65329504 网址：http://www.cqabjc.com
Address: No.9,Xilin Avenue, Daxuecheng District, Chongqing, China P.C.: 401331 Tel: 023-65329504 URL: http://www.cqabjc.com


检验检测报告
INSPECTION AND TESTING REPORT
报告编号：DD02403204-YMG
样品名称：矿用一般型干式变压器
型号规格：KSSG-630/10
委托人：天宏电力科技有限公司
检验检测类别：安标定型检验
重庆安标检测研究院有限公司
国家安全生产重庆矿用设备检测检验中心
发布日期：


检验检测报告
INSPECTION AND TESTING REPORT
报告编号：DD02403207-YMG
样品名称：矿用一般型干式变压器
型号规格：KSSG-630/6
委托人：天宏电力科技有限公司
检验检测类别：安标定型检验
重庆安标检测研究院有限公司
国家安全生产重庆矿用设备检测检验中心
发布日期：


检验检测报告
INSPECTION AND TESTING REPORT
报告编号：DD02403205-YMG
样品名称：矿用一般型干式变压器
型号规格：KSSG-1600/10
委托人：天宏电力科技有限公司
检验检测类别：安标定型检验
重庆安标检测研究院有限公司
国家安全生产重庆矿用设备检测检验中心
发布日期：


检验检测报告
INSPECTION AND TESTING REPORT
报告编号：DD02403206-YMG
样品名称：矿用一般型干式变压器
型号规格：KSSG-1600/6
委托人：天宏电力科技有限公司
检验检测类别：安标定型检验
重庆安标检测研究院有限公司
国家安全生产重庆矿用设备检测检验中心
发布日期：


矿用产品安全标志证书


矿用产品安全标志证书

## 绿色工厂认证证书 / GREEN FACTORY CERTIFICATION CERTIFICATE




## 信用 3A 证书 / CREDIT 3A CERTIFICATE




## 中国国家强制性产品认证证书 / CHINA NATIONAL COMPULSORY PRODUCT CERTIFICATION CERTIFICATE

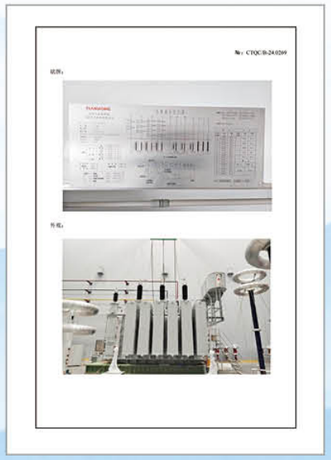



## 35kV 型式试验报告 / 35kV TYPE TEST REPORT




## 110kV 型式试验报告 / 110kV TYPE TEST REPORT



# WORKSHOPS & EQUIPMENTS
## 车间设备

### 铁芯车间 Iron core workshop




滚剪机 Rolling shear machine



硅钢车间 Silicon steel workshop




硅钢片叠片 Silicon steel sheet lamination



铁芯车间剪铁 Iron core shear





### 220kV 变压器车间 220kV transformer workshop




220kV 试验中心
Transformer 220kV Test Center



220kV 试验中心控制室
220kV test center control room



220kV 试验中心内部
Internal 220kV test center




220kV 绕线车间
220kV winding workshop

## 干变车间 Dry transformation workshop



高压绕线
High voltage winding



低压箔绕机
Low voltage foil winding machine



烘箱
Drying oven



浇注罐
Pouring tank



干变装配
Dry transformer assembly



干变装配
Dry transformer assembly





## 油变车间 Oil transformation workshop



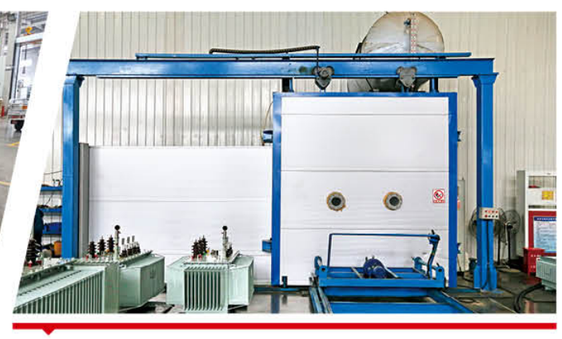
片式散热器
Chip Radiator



绕线
Wire winding



插铁芯
Insert iron core



真空注油机
Vacuum oiling machine




智能试验中心
Intellgent Testing Center



油箱生产车间
Oil tank workshop

## 成套高低压开关柜生产线 Complete set of high and low voltage switchgear production line




数控冲床
CNC Punching machine



UV 打印机
UV printer



成套柜体生产车间
Complete cabinet production workshop



高低压配电柜
High and low voltage distribution cabinet



数控雕刻机
CNC engraving machine



成套组装车间
Complete assembly workshop



## 试验室 Test room




机器人折变单元
Robot bending unit




220kV 智能试验中心
220kV Intelligent Testing Cente




上下料库
Loading and unloading warehouse




国家标准试验室
National standard laboratory




数控冲床
CNC punch press



检测
Testing

## 拉丝生产车间 Wire drawing production workshop



拉丝车间
Wire drawing workshop



挤压机
Extruder machine



挤压机
Extruder machine



包纸机
Paper wrapping machine

## 喷塑车间 Spray painting workshop











# 单相架空配电变压器（CON 型）

SINGLE PHASE OVERHEAD DISTRIBUTION TRANSFORMER ( CON TYPE )













## 产品概述 Product Overview

单相架空配电变压器是专门为服务城镇和农村居民架空配电负荷的分散配电网而设计的。它们也适用于轻型和多样化的电力应用。这些变压器是为公用事业配电系统中通常遇到的应用条件而设计的。

The single phase overhead distribution transformers are specifically designed for the decentralization distribution network of servicing residential overhead distribution loads of town and countryside. They are also suitable for light and diversified power applications. These transformers are designed for the application conditions normally encountered on electric utility power distribution systems.

## 主要特点 Main Features

| | |
|---|---|
| 适用标准 Applicable Standard | ANSI C57.12.20 |
| 类型 Type | CON 型和 CSP 型 CON Type & CSP Type |
| 频率 Frequency | 60Hz、50Hz |
| 效率标准 Efficiency Standard | DOE 2016、CSA 802.1、TP1 等 DOE 2016, CSA 802. 1, TP1 etc. |
| 铁芯 Core | C.R.G.O 磁芯和非晶磁芯 C.R.G.O Core & Amorphous Core |
| 绕组 Winding | Cu-Cu、Cu-Al、Al-Al |
| 分接范围 Taps | 无抽头 , ± 2*2. 5%、+1、-3*2.5%、0、-4*2.5%等 No taps, ± 2*2.5% ,+1,-3*2.5% ,0,-4*2.5% etc |
| 产品范围 Product Scope | kVA：5-167 |
| 初级电压 Primary Voltage | 2400-1992V |
| 二级电压 Secondary Voltage | 120-600V |

**变压器铁芯：可供选择的两种铁芯**

Transformer Core: Two Types of Core for Option

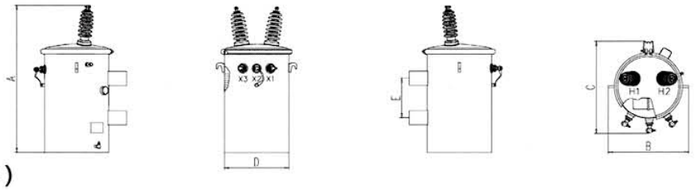


非晶铁芯 Amorphous Core



C.R.G.O. 铁芯 C.R.G.O.Core

## 技术参数 Technical Parameter



### 典型尺寸和重量 I（C.R.G.O 铁芯）
Typical Dimensions and Weights I (C.R.G.O Core)

| 额定值 Rating (kVA) | 高压 HV (kV) | 分接范围 Taps (%) | 低压 LV (V) | 损耗 Loss (W) | | 尺寸 Dimension (mm) | | | | | 重量 Weight (kg) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 空载 No Load | 满载 Full Load | A | B | C | D | E | 油重 Oil Weight | 总重量 Total Weight |
| 15 | 7.97 | +1/-3×2.5% | 120-240 | 55 | 140 | 1055 | 530 | 600 | 410 | 286 | 51 | 176 |
| 25 | | | | 73 | 240 | 1085 | 580 | 660 | 460 | 286 | 68 | 231 |
| 37.5 | | | | 101 | 331 | 1150 | 616 | 695 | 496 | 286 | 86 | 288 |
| 50 | | | | 115 | 430 | 1155 | 645 | 725 | 524 | 286 | 96 | 337 |
| 75 | | | | 152 | 600 | 1235 | 680 | 780 | 560 | 591 | 114 | 425 |
| 100 | | | | 181 | 900 | 1240 | 730 | 860 | 610 | 591 | 144 | 504 |
| 167 | | | | 266 | 1400 | 1450 | 900 | 950 | 660 | 591 | 197 | 753 |
| 15 | 19.92 | +0/-4×2.5% | 120-240 | 55 | 140 | 1125 | 580 | 650 | 460 | 286 | 72 | 210 |
| 25 | | | | 73 | 240 | 1160 | 616 | 695 | 496 | 286 | 86 | 255 |
| 37.5 | | | | 101 | 331 | 1235 | 645 | 720 | 524 | 286 | 104 | 311 |
| 50 | | | | 115 | 430 | 1240 | 680 | 760 | 560 | 286 | 119 | 368 |
| 75 | | | | 152 | 600 | 1305 | 730 | 830 | 610 | 591 | 148 | 485 |
| 100 | | | | 181 | 900 | 1340 | 730 | 855 | 610 | 591 | 153 | 537 |
| 167 | | | | 266 | 1400 | 1530 | 900 | 950 | 660 | 591 | 205 | 784 |

### 典型尺寸和重量 II（非晶铁芯）
Typical Dimensions and Weights II (Amorphous Core)

| 额定值 Rating (kVA) | 高压 HV (kV) | 分接范围 Taps (%) | 低压 LV (V) | 损耗 Loss (W) | | 尺寸 Dimension (mm) | | | | | 重量 Weight (kg) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 空载 No Load | 满载 Full Load | A | B | C | D | E | 油重 Oil Weight | 总重量 Total Weight |
| 5 | 7.62 | ±2×2.5% | 120-240 | 8 | 75 | 835 | 450 | 520 | 330 | 286 | 23 | 92 |
| 10 | | | | 12 | 120 | 895 | 480 | 550 | 360 | 286 | 28 | 133 |
| 15 | | | | 15 | 195 | 915 | 500 | 570 | 380 | 286 | 34 | 149 |
| 25 | | | | 18 | 290 | 985 | 530 | 605 | 410 | 286 | 41 | 215 |
| 37.5 | | | | 30 | 360 | 1015 | 580 | 655 | 460 | 286 | 52 | 270 |
| 50 | | | | 32 | 500 | 995 | 645 | 720 | 524 | 286 | 66 | 318 |
| 75 | | | | 45 | 650 | 1115 | 680 | 780 | 560 | 591 | 86 | 440 |
| 100 | | | | 50 | 850 | 1110 | 730 | 860 | 610 | 591 | 83 | 560 |
| 167 | | | | 65 | 1410 | 1215 | 925 | 950 | 660 | 591 | 114 | 846 |
| 10 | 14.4 | ±2×2.5% | 120-240 | 12.5 | 260 | 1000 | 480 | 550 | 360 | 286 | 35 | 116 |
| 15 | | | | 15.5 | 395 | 1020 | 480 | 550 | 360 | 286 | 35 | 129 |
| 25 | | | | 24 | 500 | 1030 | 530 | 605 | 410 | 286 | 44 | 174 |
| 37.5 | | | | 32 | 625 | 1080 | 580 | 650 | 460 | 286 | 59 | 231 |
| 50 | | | | 38 | 800 | 1150 | 616 | 690 | 496 | 286 | 80 | 282 |
| 75 | | | | 60 | 1000 | 1250 | 980 | 775 | 560 | 591 | 110 | 404 |

⚠ 注：以上数据仅以我们的标准设计为准，特殊要求可定制。
Note：The above data is only subject to our standard design, special requirement can be customized.





# 单相架空配电变压器（CSP型）
SINGLE PHASE OVERHEAD DISTRI BUTION TRANSFORMER（CSP TYPE）













## CSP配件 Csp Accessories



A



B



C



D

| | |
|---|---|
| 图 A Figure A | 带过载信号灯的次级断路器 Secondary circuit breaker with overload signal light |
| 图 B Figure B | 初级保险丝 Primary fuse |
| 图 C Figure C | 初级重型避雷器 Primary heavy duty surge arrester |
| 图 D Figure D | 二级避雷器 Secondary surge arrester |

## 定制配件 Customized Accessory

**变压器铁芯： 可供选择的两种铁芯**
Transformer Core: Two Types of Core for Option.

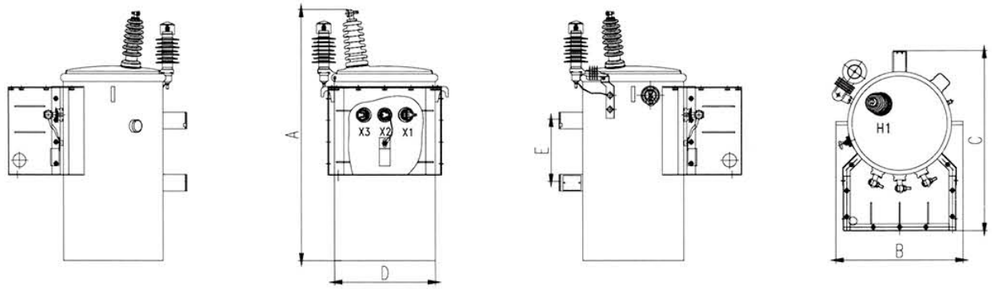


非晶铁芯 Amorphous Core



C.R.G.O. 铁芯 C.R.G.O.Core

## 技术参数 Technical Parameter




### 典型尺寸和重量 I（C.R.G.O 铁芯）
Typical Dimensions and Weights I (C.R.G.O Core)

| 额定值 Rating (kVA) | 高压 HV (kV) | 分接范围 Taps (%) | 低压 LV (V) | 损耗 Loss (W) | | 尺寸 Dimension (mm) | | | | | 重量 Weight (kg) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 空载 No Load | 满载 Full Load | A | B | C | D | E | 油重 Oil Weight | 总重量 Total Weight |
| 15 | 7.2 | +1/−3×2.5% | 120−240 | 60 | 180 | 1040 | 530 | 770 | 410 | 286 | 45 | 175 |
| 25 | | | | 100 | 300 | 1040 | 530 | 775 | 410 | 286 | 46 | 178 |
| 37. 5 | | | | 113 | 413 | 1100 | 580 | 830 | 460 | 286 | 59 | 247 |
| 50 | | | | 150 | 500 | 1180 | 580 | 830 | 460 | 286 | 62 | 294 |
| 75 | | | | 225 | 750 | 1290 | 616 | 880 | 496 | 591 | 84 | 372 |
| 15 | 19.92 | ±2×2.5% | 120−240 | 58 | 185 | 1180 | 580 | 650 | 460 | 286 | 76 | 194 |
| 25 | | | | 78 | 325 | 1155 | 580 | 660 | 460 | 286 | 75 | 217 |
| 37. 5 | | | | 100 | 480 | 1250 | 620 | 691 | 496 | 286 | 90 | 270 |
| 50 | | | | 125 | 660 | 1235 | 645 | 725 | 524 | 286 | 109 | 308 |
| 75 | | | | 165 | 900 | 1300 | 680 | 780 | 660 | 591 | 122 | 394 |

### 典型尺寸和重量 II（非晶铁芯）
Typical Dimensions and Weights II (Amorphous Core)

| 额定值 Rating (kVA) | 高压 HV (kV) | 分接范围 Taps (%) | 低压 LV (V) | 损耗 Loss (W) | | 尺寸 Dimension (mm) | | | | | 重量 Weight (kg) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 空载 No Load | 满载 Full Load | A | B | C | D | E | 油重 Oil Weight | 总重量 Total Weight |
| 10 | 7.62 | ±2×2.5% | 120−240 | 17 | 110 | 940 | 580 | 650 | 460 | 286 | 62 | 186 |
| 15 | | | | 22 | 142 | 1020 | 580 | 650 | 460 | 286 | 64 | 220 |
| 25 | | | | 33 | 210 | 1025 | 680 | 755 | 560 | 286 | 99 | 318 |
| 37. 5 | | | | 43 | 305 | 1060 | 730 | 805 | 610 | 286 | 120 | 393 |
| 50 | | | | 50 | 410 | 1130 | 730 | 805 | 610 | 286 | 130 | 451 |
| 75 | | | | 65 | 580 | 1280 | 780 | 875 | 610 | 591 | 154 | 560 |
| 10 | 14.4 | ±2×2.5% | 120−240 | 12. 5 | 260 | 1075 | 480 | 550 | 360 | 286 | 44 | 134 |
| 15 | | | | 15. 5 | 395 | 1085 | 500 | 580 | 380 | 286 | 44 | 150 |
| 25 | | | | 24 | 500 | 1085 | 580 | 655 | 460 | 286 | 47 | 215 |
| 37. 5 | | | | 32 | 680 | 1245 | 580 | 655 | 460 | 286 | 69 | 282 |
| 50 | | | | 38 | 800 | 1260 | 616 | 691 | 496 | 286 | 96 | 340 |
| 75 | | | | 60 | 1000 | 1330 | 680 | 775 | 560 | 591 | 115 | 428 |

⚠ 注：以上数据仅以我们的标准设计为准，特殊要求可定制。
Note：The above data is only subject to our standard design, special requirement can be customized.





# 单相垫装式配电变压器

SINGLE PHASE PAD MOUNTED DISTRIBUTION TRANSFORMER

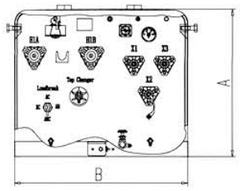


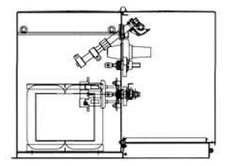
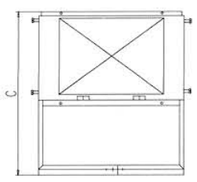



单相衬垫式配电变压器将专注于传统的衬垫式外壳设计，具有体积小、重量轻、低噪声、低损耗、高可靠性、密封的特点。全绝缘紧凑结构，美观大方。体积仅为箱式变电站（欧洲箱式变压器）的 1/3。所有配电室可直接放置在室内或室外。它还可以放置在街道和区域皮带上，可靠地保证人身安全，既有供电设施，又能装饰环境。广泛应用于住宅区、商业中心、车站、机场、工厂、企业、医院、学校等场所。

Single Phase pad mounted distribution transformers will focus on traditional Pad mounted housing design,with features of small size, light weight, low noise level low loss high reliability, hermetically sealed. Fully insulated compact structure. beautiful appearance. volume is only 1/3 of the box−type substation (European box−type transformer). All distribution rooms can be directly placed in the indoor or outdoor. It can also be placed in the streets and the area belt and reliably ensure personal safety, both power supply facilities, but also decorate the environment. Widely used in residential areas, commercial centers, stations, airports, factories, businesses, hospitals, schools and other places.

## 技术参数 Technical Parameter




### 典型尺寸和重量（C.R.G.O 铁芯）
Typical Dimensions and Weights (C.R.G.O Core)

| 额定值 Rating (kVA) | 高压 HV (kV) | 分接范围 Taps (%) | 低压 LV (V) | 损耗 Loss (W) | | 尺寸 Dimension (mm) | | | 重量 Weight (kg) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 空载 No Load | 满载 Full Load | A | B | C | 油重 Oil Weight | 总重量 Total Weight |
| 25 | 7.62 | ±2×2.5% | 120−240 | 115 | 420 | 680 | 830 | 950 | 175 | 405 |
| 37. 5 | | | | 130 | 520 | 700 | 850 | 980 | 190 | 423 |
| 50 | | | | 150 | 660 | 730 | 875 | 1000 | 205 | 459 |
| 75 | | | | 190 | 980 | 800 | 895 | 1030 | 245 | 557 |
| 100 | | | | 245 | 1230 | 840 | 950 | 1105 | 317 | 697 |
| 167 | | | | 380 | 1560 | 910 | 990 | 1185 | 389 | 925 |
| 250 | | | | 550 | 2000 | 975 | 1090 | 1215 | 462 | 1215 |
| 25 | 19. 92 | ±2×2.5% | 120−240 | 115 | 420 | 680 | 830 | 950 | 175 | 405 |
| 37. 5 | | | | 130 | 520 | 700 | 850 | 980 | 190 | 423 |
| 50 | | | | 150 | 660 | 730 | 875 | 1000 | 204 | 464 |
| 75 | | | | 190 | 980 | 800 | 895 | 1030 | 243 | 562 |
| 100 | | | | 245 | 1230 | 840 | 950 | 1105 | 311 | 694 |
| 167 | | | | 380 | 1560 | 910 | 990 | 1185 | 386 | 930 |
| 250 | | | | 550 | 2000 | 1300 | 1090 | 1215 | 462 | 1215 |

# 110kV~220kV 电力变压器

110KV~220KV POWER TRANSFORMER

电站、工厂、医院、机场、隧道、化工厂、核电站最理想选择



## 产品概述 Product Overview

1. 高压变压器，采用日本东芝分析软件和我公司独特的计算和验证程序。为了保证产品的性能，我们对变压器铁芯、线圈、机体、引线、油箱等机件进行了设计和测试。
2. 我公司 SSZ11-40000/110 产品已通过国家变压器质量监督检验中心的短路承受能力及全部例行型式试验。
3. 本产品具有稳定、经济、可靠、环保等特点，适用于发电厂、变电站及大型工矿、石化企业。

1. High pressure transformer, use Japanese Toshiba analysis software and our company unique calculation and validation procedures. In order to ensure the performance of product, we design and test to the transformer core, coil, the body of machine, lead wire, oil tank and other parts of machine.
2. Our product SSZ11-40000/110 has passed the short-circuit bearing capacity and all routine type tests of the National Transformer Quality Supervision and Inspection Center.
3 .This product has the characteristics of stability, economy, reliability and environmental protection, and is suitable for power plants, substations and large industrial, mining and petrochemical enterprises.

## 产品特点 Product Features

- 全密封绝缘结构，保证人身安全。
- 经济高效，降低网络损耗和运营成本。
- 它不仅用于环网，也可用于终端。
- 低损耗、低噪音、性能优越。
- 低温、过载能力强。
- 变压器采用特殊结构，其突出优点是品质优良。



- Fully sealed and insulated structure can guarantee the security of person.
- Economic and efficient to reduce network loss and operation cost.
- It is not only used for ring network but also terminal.
- Low loss, low noise, superior performance.
- Low temperature, overload ability.
- Transformer adopts special structure and its outstanding advantages is high quality.





## 技术参数 Technical Parameter

### 6300kVA~120000kVA 带 NVTC 的双绕组变压器

6300kVA~120000kVA two-winding transformer with NVTC

| 额定容量 Rated capacity (kVA) | 额定电压和分接范围 Rated Voltage and tapping range | | | 矢量组 Vector group | 空载电流 No-load current (%) | 短路阻抗 Impedance voltage (%) | 空载损耗 No-load losses (kW) | 有载损耗 On load losses (kW) |
|---|---|---|---|---|---|---|---|---|
| | 高压 High voltage | 分接范围 Tapping range | 低压 Low voltage | | | | | |
| 6300 | 110, 121 | ±2×2.5% | 6. 3, 6. 6, 10. 5, 11 | YNd11 | 0. 77 | 10. 5 | 9. 3 | 36 |
| 8000 | | | | | 0. 77 | | 11. 2 | 45 |
| 10000 | | | | | 0. 72 | | 13. 2 | 53 |
| 12500 | | | | | 0. 72 | | 15. 6 | 63 |
| 16000 | | | | | 0. 67 | | 18. 8 | 77 |
| 20000 | | | | | 0. 67 | | 22 | 93 |
| 25000 | | | | | 0. 62 | | 26 | 110 |
| 31500 | | | | | 0. 6 | | 30. 8 | 133 |
| 40000 | | | | | 0. 56 | | 36. 8 | 156 |
| 50000 | | | | | 0. 52 | | 44 | 194 |
| 63000 | | | | | 0. 48 | | 52 | 234 |
| 75000 | | | | | 0. 42 | 12-14 | 59 | 278 |
| 90000 | | | | | 0. 38 | | 68 | 320 |
| 120000 | | | | | 0. 34 | | 84. 8 | 397 |

### 6300kVA~100000kVA 带 NVTC 的三绕组变压器

6300kVA~100000kVA thtree-winding transformer with NVTC

| 额定容量 Rated capacity (kVA) | 额定电压和分接范围 Rated Voltage and tapping range | | | 矢量组 Vector group | 空载电流 No-load current (%) | 短路阻抗 Impedance voltage(%) | | 空载损耗 No-load losses (kW) | 有载损耗 On load losses (kW) |
|---|---|---|---|---|---|---|---|---|---|
| | 高压 High voltage | 中压 Medium voltage | 低压 Low voltage | | | 上升 Step up | 下降 Step down | | |
| 6300 | 110±2×2.5%,121 ±2×2.5% | 35, 38. 5 | 6. 3, 6. 6, 10. 5, 11 | YNyn0d11 | 0. 82 | HV~MV: 17. 5~18. 5 HV~LV:10. 5 MV~LV:6. 5 | HV~MV:10. 5 HV~MV: 17. 5~18. 5 HV~LV:6. 5 | 11. 2 | 47. 0 |
| 8000 | | | | | 0. 78 | | | 13. 2 | 56. 0 |
| 10000 | | | | | 0. 74 | | | 15. 8 | 66. 0 |
| 12500 | | | | | 0. 70 | | | 18. 4 | 78. 0 |
| 16000 | | | | | 0. 66 | | | 22. 4 | 95. 0 |
| 20000 | | | | | 0. 65 | | | 26. 4 | 112. 0 |
| 25000 | | | | | 0. 6 | | | 30. 8 | 133. 0 |
| 31500 | | | | | 0. 6 | | | 36. 8 | 157. 0 |
| 40000 | | | | | 0. 55 | | | 43. 6 | 189. 0 |
| 50000 | | | | | 0. 55 | | | 52. 0 | 225. 0 |
| 63000 | | | | | 0. 50 | | | 61. 6 | 270. 0 |
| 75000 | | | | | 0. 50 | | | 70. 2 | 307. 7 |
| 80000 | | | | | 0. 50 | | | 73. 7 | 323. 0 |
| 100000 | | | | | 0. 50 | | | 87. 1 | 381. 8 |

### 6300kVA~100000kVA 带 OLTC 的双绕组变压器
6300kVA~100000kVA two-winding transformer with OLTC

| 额定容量 Rated capacity (kVA) | 额定电压和分接范围 Rated Voltage and tapping range | | | 矢量组 Vector group | 空载电流 No-load current (%) | 短路阻抗 Impedance voltage (%) | 空载损耗 No-load losses (kW) | 有载损耗 On load losses (kW) |
|---|---|---|---|---|---|---|---|---|
| | 高压 High voltage | 分接范围 Tapping range | 低压 Low voltage | | | | | |
| 6300 | 110 | ±8×1.25% | 6.3, 6.6, 10.5, 11 | YNd11 | 0.8 | 10.5 | 10 | 36 |
| 8000 | | | | | 0.8 | | 12 | 45 |
| 10000 | | | | | 0.74 | | 14.2 | 53 |
| 12500 | | | | | 0.74 | | 16.8 | 63 |
| 16000 | | | | | 0.69 | | 20.2 | 77 |
| 20000 | | | | | 0.69 | | 24 | 93 |
| 25000 | | | | | 0.64 | | 28.4 | 110 |
| 31500 | | | | | 0.64 | | 33.8 | 133 |
| 40000 | | | | | 0.58 | | 40.4 | 156 |
| 50000 | | | | | 0.58 | | 47.8 | 194 |
| 63000 | | | | | 0.52 | | 56.8 | 234 |
| 75000 | | | | | 0.63 | | 64.7 | 266.7 |
| 80000 | | | | | 0.63 | | 67.9 | 297.9 |
| 100000 | | | | | 0.63 | | 80.3 | 330.9 |

### 6300kVA~100000kVA 带 OLTC 的三绕组变压器
6300kVA~100000kVA three-winding transformer with OLTC

| 额定容量 Rated capacity (kVA) | 额定电压和分接范围 Rated Voltage and tapping range | | | 矢量组 Vector group | 空载电流 No-load current (%) | 短路阻抗 Impedance voltage (%) | 空载损耗 No-load losses (kW) | 有载损耗 On load losses (kW) |
|---|---|---|---|---|---|---|---|---|
| | 高压 High voltage | 中压 Medium voltage | 低压 Low voltage | | | | | |
| 6300 | 110±8/×12.5% | 35, 37, 38.5 | 6.3, 6.6, 10.5, 11 | YNyn0d11 | 0.95 | HV~MV:10.5<br>HV~LV:17.5~18.5<br>MV~LV:6.5 | 12.0 | 47 |
| 8000 | | | | | 0.95 | | 14.4 | 56 |
| 10000 | | | | | 0.89 | | 17.1 | 66 |
| 12500 | | | | | 0.89 | | 20.2 | 78 |
| 16000 | | | | | 0.84 | | 24.2 | 95 |
| 20000 | | | | | 0.84 | | 28.6 | 112 |
| 25000 | | | | | 0.78 | | 33.8 | 133 |
| 31500 | | | | | 0.78 | | 40.2 | 157 |
| 40000 | | | | | 0.73 | | 48.2 | 189 |
| 50000 | | | | | 0.73 | | 56.9 | 225 |
| 63000 | | | | | 0.67 | | 67.7 | 270 |
| 75000 | | | | | 0.84 | | 77.2 | 307.7 |
| 80000 | | | | | 0.84 | | 81.0 | 323 |
| 100000 | | | | | 0.84 | | 95.7 | 381.8 |

⚠ 注：1. 对于带 O.L.T.C 的变压器，临时提供降压结构产品。
2. 高压 / 中压 / 低压线圈容量分布为 (100/100/100)%。
3. 矢量组标签可根据需要选用 YNd11y10。
4. 最大电流分接在 10%分接位置。
5. 根据客户要求，中压的电压值或分接位置可与上表不同。

Note: 1. For transformer with O.L.T.C, temporarily provide step-down structure product.
2. Distribution of HV/MV/LV coil capacity is (100/100/100) %
3. Vector group label can be YNd11y10 according to requirements.
4. Maximum current tap at-10% tap position.
5. According to customer demand, voltage value or tapping position of MV can be different from those in the above tables.





# 35kV 油浸式电力变压器
35KV OIL IMMERSED POWER TRANSFORMER

## 产品概述 Product Overview

我公司生产的 35kV( 有载 ) 电力变压器是吸收国内外先进技术的基础上，针对我国城乡电网改造自行研制开发的新产品，其产品性能优于 GB/6451-2008《油浸式电力变压器技术参数和要求》，完全符合 GB1094《电力变压器》标准及国际电工委员会推荐标准 IEC60076，该产品具有低损耗、低噪声、免吊心的特点，其在安全性、可靠性、经济性等方面都有很大的提高。

该系列电力变压器适用于 35kV、50Hz 输变电系统，在城网改造、工矿企事业及 35kv 变电所中作主变压器之用，可在带负荷的情况下，对变压器实现远距离调压。产品技术性能指标达国内领先水平。

The 35kV ( on load) power transformer produced by our company is a new product developed by ourselves for the transformation of urban and rural power grids on the basis of absorbing the advanced technology at home and abroad. Its performance is superior to the technical parameters and requirements of oil immersed power transformer (GB/6451-2008), which fully conforms to the GB1094 power transformer standard and iec60076 recommended by International Electrotechnical Commission. This product has The characteristics of low loss，low noise and no lifting center are greatly improved in safety，reliability and economy.

This series of power transformers are suitable for 35kV, 50Hz power transmission and transformation system. They are used as main transformers in urban power grid reconstruction, industrial and mining enterprises and 35kV substations. They can realize remote voltage regulation for transformers with load. The technical performance index of the product reaches the leading level in China.

## 技术参数 Technical Parameter

### 800kVA~31500kVA 三相双绕组无励磁调压电力变压器主要技术参数
Main technical parameters of 800kVA~31500kVA three-phase double winding non excitation voltage regulating power transformer

| 额定容量 Rated capacity (kVA) | 电压组合 Voltage combination | | | 联结组标号 Connection symbol | 空载损耗 No-load loss (W) | 负载损耗 Load Loss (W) 75℃ | 空载电流 No-load current (%) | 短路阻抗 Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | 高压 High voltage (kV) | 高压分接范围 High voltage tapping range (%) | 低压 Low voltage (kV) | | | | | |
| 630 | 35 | ±5% | 3.15<br>6.3<br>10.5 | Yd11 | 830 | 7870 | 1.10 | 6.5 |
| 800 | | | | | 980 | 9410 | 1.00 | 6.5 |
| 1000 | | | | | 1150 | 11540 | 1.00 | 6.5 |
| 1250 | | | | | 1410 | 13940 | 0.90 | 6.5 |
| 1600 | | | | | 1700 | 16670 | 0.80 | 6.5 |
| 2000 | | | | | 2180 | 18380 | 0.70 | 6.5 |
| 2500 | | | | | 2560 | 19670 | 0.60 | 6.5 |
| 3150 | 35~38.5 | ±5%或<br>±2×5% | 3.15<br>3.3<br>6.3<br>6.6<br>10.5<br>11 | YNd11 | 3040 | 23090 | 0.56 | 7.0 |
| 4000 | | | | | 3620 | 27360 | 0.56 | 7.0 |
| 5000 | | | | | 4320 | 31380 | 0.48 | 7.0 |
| 6300 | | | | | 5250 | 35060 | 0.48 | 7.5 |
| 8000 | | | | | 7200 | 38500 | 0.42 | 7.5 |
| 10000 | | | | | 8700 | 45300 | 0.42 | 7.5 |
| 12500 | | | | | 10080 | 53900 | 0.40 | 8.0 |
| 16000 | | | | | 12160 | 65800 | 0.40 | 8.0 |
| 20000 | | | | | 14400 | 79500 | 0.40 | 8.0 |
| 25000 | | | | | 17020 | 94100 | 0.32 | 8.0 |
| 31500 | | | | | 20220 | 112900 | 0.32 | 8.0 |

## 型号含义 Model Meaning

S Z □ - □ / □

- 电压等级 (kV) Voltage level (kV)
- 额定容量 (kVA) Rated capacity(kVA)
- 损耗水平代号 Loss Level Code
- 有载调压 On load tap changing
- 三相 Three-phase



### 2000kVA~20000kVA 三相双绕组有载调压电力变压器主要技术参数

Main technical parameters of 2000kVA~20000kVA three-phase double winding on load voltage regulating power transformer

| 额定容量 Rated capacity (kVA) | 电压组合 Voltage combination | | | 联结组标号 Connection symbol | 空载损耗 No-load loss (W) | 负载损耗 Load Loss (W) 75℃ | 空载电流 No-load current (%) | 短路阻抗 Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | 高压 High voltage (kV) | 高压分接范围 High voltage tapping range (%) | 低压 Low voltage (kV) | | | | | |
| 2000 | 35 | ±3×2.5% | 6.3<br>10.5 | Yd11 | 2300 | 19240 | 0.80 | 6.5 |
| 2500 | | | | | 2720 | 20640 | 0.80 | 6.5 |
| 3150 | 35-38.5 | | | | 3230 | 24710 | 0.72 | 7.0 |
| 4000 | | | | | 3870 | 29160 | 0.72 | 7.0 |
| 5000 | | | | | 4640 | 34200 | 0.68 | 7.0 |
| 6300 | | | | | 5630 | 36800 | 0.68 | 7.5 |
| 8000 | | | 6.3<br>6.6<br>10.5<br>11 | YNd11 | 7870 | 40600 | 0.60 | 7.5 |
| 10000 | | | | | 9280 | 48100 | 0.60 | 7.5 |
| 12500 | | | | | 10940 | 56900 | 0.56 | 8.0 |
| 16000 | | | | | 13170 | 70300 | 0.54 | 8.0 |
| 20000 | | | | | 15570 | 82800 | 0.54 | 8.0 |

⚠ 注：1. 对于低压电压为 10.5kV 和 11kV 的变压器，可提供联结组标号为 Dyn11 的产品。
2. 最大电流分接为 -7.5%分接位置。

Note: 1. For transformers with low voltage of 10.5kV and 11kV, products with connection group label of dyn11 can be provided.
2. The maximum current tapping position is-7.5% .





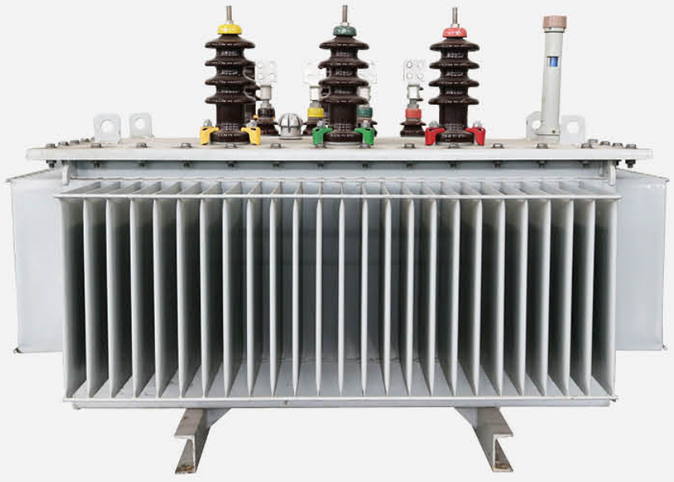
# 油浸式非晶合金配电变压器

OIL IMMERSED AMORPHOUS ALLOY DISTRIBUTION TRANSFORMER

## 产品概述 Product Overview

非晶合金是一种新型的导磁材料，主要以铁、硅、硼类金属元素所构成，采用快速冷冻凝固生产工艺，非晶合金材料的金属原子排列呈无序非晶状态。具有铁磁性良好、机械性能高、耐腐性能好、制作工艺简单，成材率高等特点。非晶合金在物理性能、化学性能和机械性能等方面与晶态合金都有显著的不同。以非晶合金加工而成的变压器铁心与传统硅钢铁心相比，具有更利于被磁化和去磁等特点，空载损耗降低 80%。

Amorphous alloy is a new type of magnetic conducting material, which is mainly composed of iron, silicon and boron. The metal atoms of amorphous alloy are arranged in disordered amorphous state by rapid freezing and solidification process. It has the characteristics of good ferromagnetism, high mechanical properties, good corrosion resistance, simple manufacturing process and high yield. There are significant differences in physical properties, chemical properties and mechanical properties between amorphous alloys and crystalline alloys. Compared with the traditional silicon steel core, the transformer core made of amorphous alloy is more favorable for magnetization and demagnetization, and the no-load loss is reduced by 80%.



## 适用范围 Scope Of Application

非晶合金变压器具有显著的环保节能优点，符合节能要求发展的趋势，推广和应用该产品，将带来十分良好的经济效益和社会效益，市场前景广阔。

产品将广泛应用于各类住宅、商业建筑、公共没施、矿工企业、发电企业及城乡电网。

Amorphous alloy transformer has obvious advantages of environmental protection and energy saving, which conforms to the development trend of energy saving requirements. The promotion and application of this product will bring very good economic and social benefits, and has a broad market prospect.

Products will be widely used in various types of residential, commercial buildings, public facilities, mining enterprises, power generation enterprises and urban and rural power grids.

## 型号含义 Model Meaning

S (B) H 15 – M – □ / 10 – 0.4

| | | |
|---|---|---|
| 低压侧电压 (kV) | LV side voltage (kV) | 0.4 |
| 高压侧电压 (kV) | HV side voltage (kV) | 10 |
| 容量（kVA） | Capacity (kVA) | □ |
| 全密封 | Fully Sealed | M |
| 性能水平等级 | Performance Level | 15 |
| 非晶合金 | Amorphous alloy | H |
| 低压箔式 | LV foil type | (B) |
| 三相 | Three-phase | S |

## 技术参数 Technical Parameter

### S(B)H15-M 型三相全密封无励磁调压配电变压器技术参数

Technical parameters of S(B)H15-M three-phase full seal non excitation voltage regulating distribution transformer

| 额定容量 Rated capacity (kVA) | 电压组合 Voltage combination | | | 联结组标号 Connection symbol | 空载损耗 No-load loss (W) | 负载损耗 Load Loss (W) 75℃ | 空载电流 No-load current (%) | 短路阻抗 Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | 高压 High voltage (kV) | 高压分接范围 High voltage tapping range (%) | 低压 Low voltage (kV) | | | | | |
| 30 | 6<br>6.3<br>10<br>10.5<br>11 | ±5%或<br>±2×2.5% | 0.4 | Dyn11 | 30 | 630 | 1.7 | 4 |
| 50 | | | | | 40 | 910 | 1.3 | 4 |
| 80 | | | | | 60 | 1310 | 1.1 | 4 |
| 100 | | | | | 80 | 1580 | 1.0 | 4 |
| 125 | | | | | 90 | 1890 | 0.9 | 4 |
| 160 | | | | | 100 | 2310 | 0.7 | 4 |
| 200 | | | | | 120 | 2730 | 0.7 | 4 |
| 250 | | | | | 140 | 3200 | 0.7 | 4 |
| 315 | | | | | 170 | 3830 | 0.5 | 4 |
| 400 | | | | | 200 | 4540 | 0.5 | 4 |
| 500 | | | | | 240 | 5410 | 0.5 | 4 |
| 630 | | | | | 320 | 6200 | 0.3 | 4.5 |
| 800 | | | | | 380 | 7500 | 0.3 | 4.5 |
| 1000 | | | | | 450 | 10300 | 0.3 | 4.5 |
| 1250 | | | | | 530 | 12000 | 0.2 | 4.5 |
| 1600 | | | | | 630 | 14500 | 0.2 | 4.5 |
| 2000 | | | | | 750 | 18300 | 0.2 | 5.0 |
| 2500 | | | | | 900 | 21200 | 0.2 | 5.0 |





# S13 型油浸式电力变压器

## S13 OIL IMMERSED POWER TRANSFORMER

节能环保、安全可靠，您的信赖之选
城市和农村配电网络中心理想的配电设备



## 产品概述 Product Overview

S13 型能效三级油浸式配电变压器是我公司在原 S11 配电变压器基础上，通过新材料、新工艺的研究运用及自主创新与技术引进结合的方式，通过对铁芯及线圈结构的优化创新设计，达到降低空载损耗及噪音的目的而自主开发的产品。噪声水平与现行国标 JB/T10088-2004 比较平均下降 20%，产品性能水平达到国内先进水平。

S13 energy-efficient three-stage oil-immersed distribution transformer is my company in the original S11 distribution transformer on the basis of the research and application of new materials, new technologies and independent innovation andt technology introduction combination of ways, through the optimization of the core and coil structure of the innovative design, to achieve the purpose of reducing the no-load loss and noise of the independent development of the product. The noise level has been reduced by 20% on average compared with the current national standard JB/T10088-2004, and the performance level of the product has reached the domestic advanced level.

## 技术参数 Technical Parameter

### S13-M型10kV三相全密封无励磁调压配电变压器技术参数

Technical data of S13-M 10kV three-phase full seal non excitation voltage regulating distribution transformer

| 额定容量 Rated capacity (kVA) | 电压组合 Voltage combination | | | 联结组标号 Connection symbol | 空载损耗 No-load loss (W) | 负载损耗 Load Loss (W) 75℃ | 空载电流 No-load current (%) | 短路阻抗 Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | 高压 High voltage (kV) | 高压分接范围 High voltage tapping range (%) | 低压 Low voltage (kV) | | | | | |
| 30 | 6<br>10<br>10.5<br>11 | ±5%或<br>±2×2.5% | 0.4 | Dyn11<br>或<br>Yyn0 | 80 | 630/600 | 2.1 | 4 |
| 50 | | | | | 100 | 910/870 | 1.9 | 4 |
| 80 | | | | | 130 | 1310/1250 | 1.8 | 4 |
| 100 | | | | | 150 | 1580/1500 | 1.6 | 4 |
| 125 | | | | | 170 | 1890/1800 | 1.5 | 4 |
| 160 | | | | | 200 | 2310/2200 | 1.4 | 4 |
| 200 | | | | | 240 | 2730/2600 | 1.3 | 4 |
| 250 | | | | | 390 | 3200/3050 | 1.2 | 4 |
| 315 | | | | | 340 | 3830/3650 | 1.1 | 4 |
| 400 | | | | | 410 | 4520/4300 | 1.0 | 4 |
| 500 | | | | | 480 | 5410/5150 | 1.0 | 4 |
| 630 | | | | | 570 | 6200 | 0.9 | 4.5 |
| 800 | | | | | 700 | 7500 | 0.8 | 4.5 |
| 1000 | | | | | 830 | 10300 | 0.7 | 4.5 |
| 1250 | | | | | 970 | 12000 | 0.6 | 4.5 |
| 1600 | | | | | 1170 | 14500 | 0.6 | 4.5 |
| 2000 | | | | | 1360 | 18000 | 0.5 | 4.5 |
| 2500 | | | | | 1610 | 21000 | 0.4 | 4.5 |

## S13-M型20kV三相全密封无励磁调压配电变压器技术参数

Technical data of S13-M 20kV three-phase full seal non excitation voltage regulating distribution transformer

| 额定容量 Rated capacity (kVA) | 电压组合 Voltage combination | | | 联结组标号 Connection symbol | 空载损耗 No-load loss (W) | 负载损耗 Load Loss (W) 75℃ | 空载电流 No-load current (%) | 短路阻抗 Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | 高压 High voltage (kV) | 高压分接范围 High voltage tapping range (%) | 低压 Low voltage (kV) | | | | | |
| 30 | 20 | ±5%或 ±2×2.5% | 0.4 | Dyn11 或 Yyn0 | 80 | 690/660 | 2.0 | 5.5 |
| 50 | | | | | 100 | 1010/960 | 1.9 | 5.5 |
| 63 | | | | | 110 | 1200/1150 | 1.8 | 5.5 |
| 80 | | | | | 130 | 1440/1370 | 1.7 | 5.5 |
| 100 | | | | | 150 | 1730/1650 | 1.5 | 5.5 |
| 125 | | | | | 170 | 2080/1980 | 1.5 | 5.5 |
| 160 | | | | | 200 | 2540/2420 | 1.3 | 5.5 |
| 200 | | | | | 140 | 3000/3860 | 1.2 | 5.5 |
| 250 | | | | | 190 | 3520/3360 | 1.1 | 5.5 |
| 315 | | | | | 340 | 4210/4010 | 1.0 | 5.5 |
| 400 | | | | | 410 | 4970/4730 | 0.9 | 5.5 |
| 500 | | | | | 480 | 5940/5660 | 0.9 | 5.5 |
| 630 | | | | | 570 | 6820 | 0.8 | 6 |
| 800 | | | | | 700 | 8250 | 0.7 | 6 |
| 1000 | | | | | 830 | 12000 | 0.6 | 6 |
| 1250 | | | | | 970 | 13200 | 0.6 | 6 |
| 1600 | | | | | 1170 | 15950 | 0.5 | 6 |
| 2000 | | | | | 1380 | 19140 | 0.5 | 6 |
| 2500 | | | | | 1640 | 22220 | 0.4 | 6 |

⚠ 注：1. 对于额定容量为 500kVA 及以下的变压器，表中斜线上方的负载损耗适用于 Dyn11 联结组别，斜线下方的负载损耗值适用于 Yyn0 联结组别。
2. 根据用户需要可提供订制。

Note: 1. For transformers with rated capacity of 500kVA and below, the load loss above the inclined line in the table is applicable to Dyn11 connection group, and the load loss below the inclined line is applicable to Yyn0 connection group.
2. It can be customized according to the needs of users.

## 绝缘水平 Insulation Level

| 电压等级 Voltage grade (kV) | 最高运行电压 kV（有效值） Maximumoperating voltage (effective value) | 额定短时工频耐压 kV（有效值）/ 分钟 Rated short duration Power frequency with stand voltage kV/minute | 额定雷电冲击耐受电压 kV（峰值） Rated lightning impulse with stand voltage kV（peak） | |
|---|---|---|---|---|
| | | | 全波 Full wave | 截波 Chopped wave |
| 0.4 | 0.46 | 5 | 75 | 85 |
| 10 | 12 | 35 | 75 | 85 |
| 20 | 23 | 55 | 125 | 140 |





# SCBH15 型干式非晶合金铁芯配电变压器

SCBH15 DRY TYPE AMORPHOUS ALLOY CORE DISTRIBUTION TRANSFORMER

## 产品概述 Product Overview

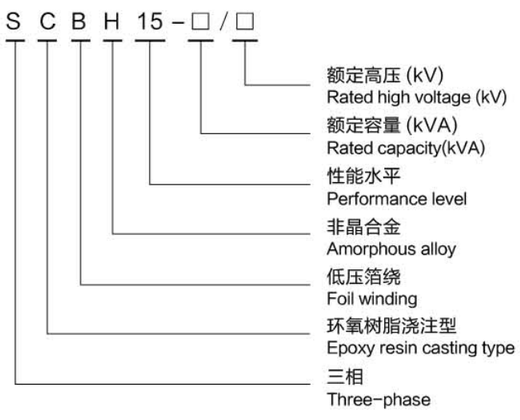
非晶合金材料具有铁磁性良好、机械强度高、耐蚀性能好、制作工艺简单、成材率高的特点。以非晶合金加工而成的变压器铁心与传统硅钢铁芯相比，具有更利于被磁化和去磁等特点，空载损耗比GB/T10228 规定值降低70%-80%，可大大降低运行费用，节能效果显著。

SCBH15 系列非晶合金干式变压器是一种新型高效节能变压器产品。产品采用三相五柱或三相三柱式结构，铁芯四周采用框架结构保护，结构紧凑合理，抗短路能力强。低压线圈采用优质铜箔，铜箔两边呈圆弧形，消除因普通铜箔边缘毛刺的质量隐患。高压线圈采用分段圆筒式结构，德国 HTT 薄绝缘带填料技术，真空压力镜面浇注工艺，强度高，稳定性好，确保局部放电量小于 10PC。由于其突出的节能环保特性，具有良好的经济效益和社会效益，被广泛应用于机场、车站、城市电网、高层建筑及发电厂等。

Amorphous alloy materials have the characteristics of good ferromagnetism, high mechanical strength, good corrosion resistance, simple manufacturing process and high yield. Compared with the traditional silicon steel core, the transformer core made of amorphous alloy is easier to be magnetized and demagnetized. The no-load loss is 70% – 80% lower than the value specified in GB/T10228, which can greatly reduce the operating cost and save energy.

SCBH15 series amorphous alloy dry-type transformer is a new type of high efficiency and energy-saving transformer. The product adopts three-phase five column or three-phase three column structure, the core is protected by frame structure, the structure is compact and reasonable, and the short-circuit resistance is strong. The low-voltage coil adopts high-quality copper foil, both sides of which are arc-shaped, so as to eliminate the quality hidden trouble caused by the edge burr of common copper foil. The high-voltage coil adopts segmented cylinder structure, German htt thin insulation belt packing technology, vacuum pressure mirror casting technology, with high strength and good stability, to ensure that the local discharge is less than 10pc. Because of its outstanding characteristics of energy conservation and environmental protection, with govod economic and social benefits, it is widely used in airports, stations, urban power grids, high-rise buildings and power plants.

## 型号含义 Model Meaning






## 技术规范 Technical Specifications

- 电压等级：6kV、10kV
- 频率：50Hz
- 分接范围：±2×2.5%、±5%
- 联结组别：Dyn11、Yyn0
- 容量范围：30~3150kVA
- 绝缘水平：6kV LI60 AC20、10kV LI75 AC35
- 绝缘等级：F 级或 H 级
- 调压方式：无励磁调压或有载调压

- Voltage level: 6kV、10kV
- Frequency: 50Hz
- Tapping range: ±2x2.5%、±5%
- Connection group: Dyn11、Yyn0
- Capacity range: 30~3150 kVA
- Insulation level: 6kV LI60 AC20、10kV LI75 AC35
- Insulation level: F or H
- Voltage regulation mode: no excitation voltage regulation or on load voltage regulation

## 技术参数 Technical Parameter

**SCBH15型6kV、10kV 级干式非晶合金铁芯配电变压器技术参数**

Performance parameters of scbh15 6kV and 10kV dry-type amorphous alloy core distribution transformer

| 额定容量 Rated capacity (kVA) | 电压组合 Voltage combination | | | 联结组标号 Connection symbol | 空载损耗 No-load loss (W) | 负载损耗 Load Loss (W) 75℃ | | 空载电流 No-load current (%) | 短路阻抗 Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|---|
| | 高压 High voltage (kV) | 高压分接范围 High voltage tapping range (%) | 低压 Low voltage (kV) | | | F(120°) | H(145°) | | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5%或±2×5% | 0.4 | Dyn11<br>或<br>Yyn0 | 70 | 710 | 760 | 1.6 | 4 |
| 50 | | | | | 90 | 1000 | 1070 | 1.4 | 4 |
| 80 | | | | | 120 | 1380 | 1480 | 1.3 | 4 |
| 100 | | | | | 130 | 1570 | 1680 | 1.2 | 4 |
| 125 | | | | | 150 | 1850 | 1980 | 1.1 | 4 |
| 160 | | | | | 170 | 2130 | 2280 | 1.1 | 4 |
| 200 | | | | | 200 | 2530 | 2710 | 1.0 | 4 |
| 250 | | | | | 230 | 2760 | 2960 | 1.0 | 4 |
| 315 | | | | | 280 | 3470 | 3730 | 0.9 | 4 |
| 400 | | | | | 310 | 3990 | 4280 | 0.8 | 4 |
| 500 | | | | | 360 | 4880 | 5230 | 0.8 | 4 |
| 630 | | | | | 420 | 5880 | 6290 | 0.7 | 4 |
| 630 | | | | | 410 | 5960 | 6400 | 0.7 | 6 |
| 800 | | | | | 480 | 6960 | 7460 | 0.7 | 6 |
| 1000 | | | | | 550 | 8130 | 8760 | 0.6 | 6 |
| 1250 | | | | | 650 | 9690 | 10370 | 0.6 | 6 |
| 1600 | | | | | 760 | 11730 | 12580 | 0.6 | 6 |
| 2000 | | | | | 1000 | 14450 | 15560 | 0.5 | 6 |
| 2500 | | | | | 1200 | 17170 | 18450 | 0.5 | 6 |





# SC(B)13 型干式电力变压器

SC(B)13 TYPE DRY POWER TRANSFORMER

## 型号含义 Model Meaning

S C (B)13-□ / □

- 电压等级 (kV) Voltage level (kV)
- 额定容量 (kVA) Rated capacity(kVA)
- 性能水平代号 Performance level code
- 低压箔式线圈 Low voltage foil coil
- 环氧树脂浇注型 Epoxy resin casting type
- 三相 Three-phase



## 产品特点 Product Features

- **低损耗** 产品空载损耗比 SCB11 型产品降低 20%以上，节能效果优异，运行经济，免维护。
- **低噪声** 产品噪声水平比现行专业标准 JB/T10088-2004《6-220KV 级变压器声级》低 10-15 分贝以上。
- **低局放** 树脂混合料采用国外最先进的搅拌方法和真空薄膜脱气两种技术，使混合料搅拌均匀，彻底排除了混合料内的气泡。产品仅有极低的局部放电量。高、低压线圈均在真空和压力下浇注，使树脂绝缘既具有全包封性，又具有层匝间浸渍性。浇注体具有致密的固化结构，阻燃、防爆、不污染环境。
- 缠绕线圈的玻璃纤维等绝缘材料具有自熄特性，不会因短路产生电弧，高热下树脂不会产生有毒有害气体。
- **高机械强度** 带填料的树脂使浇注体内的膨胀系数差异小，固化收缩率小，内应力小，固化物的硬度高，在高、低压线圈的内外表面环氧树脂包封层内，放置有预制成型的加强材料，具有犹如钢筋混凝土一样的致密结构，因而机械强度还大于纯环氧树脂，能承受突发短路电动力作用而无损伤。

- **Low loss:**the product no-load loss is more than 20% lower than that of SCB11 type products，with excellent energy-saving effect, economical operation and maintenance-free.
- **Low noise:**the noise level of the product is more than 10-15 dB lower than the current professional standard JB/T10088-2004 "6-220KV transformer sound level".
- **Low partial discharge:**the resin mixture adopts the most advanced mixing method and vacuum film degassing technology, which makes the mixture mix uniformly and completely excludes the air bubbles in the mixture. The product only has very low partial discharge. High and low voltage coils are cast under vacuum and pressure, so that the resin insulation has both full encapsulation and layer turn-to-turn impregnation. The casting body has a dense cured structure, flame retardant, explosion-proof, and does not pollute the environment.
- The glass fiber and other insulating materials for winding coils have self-extinguishing characteristics, which will not produce arcs due to short circuits, and the resin will not produce toxic and harmful gases under high heat.
- **High mechanical strength:**the resin with filler makes the coefficient of expansion difference within the casting body is small, the curing shrinkage rate is small, the internal stress is small, the hardness of the cured material is high, in the internal and external surfaces of the epoxy resin encapsulation layer of the high-voltage and low-pressure coils, there is a prefabricated reinforcing material placed in the layer, which has the same dense structure as the reinforced concrete, and thus the mechanical strength is greater than that of the pure epoxy resin, and it can withstand the action of sudden short-circuit electric force without any damage.

## 使用条件 Service Conditions

- 安装高度：海拔不大于 2000 米；
- 电源电压的波形：类似于正弦波；
- 多相电源电压的对称性：多相变压器所连接的电源电压应近似对称；
- 环境温度：-50℃ ~+50℃
- Installation height：altitude not exceeding 2000 meters；
- Waveform of the supply voltage：similar to a sine wave；
- Symmetry of multiphase power supply voltage：The power supply voltage connected to the multiphase transformer should be approximately symmetrical；
- Environmental temperature：-50℃ ~+50℃ .

## 技术参数 Technical Parameter

### SCB13型6kV、10kV 级无励磁调压配电变压器技术参数

Performance paremeters of type SCB13 6kV and 10kv non excitation voltage regulating distribution transformer

| 额定容量 Rated capacity (kVA) | 电压组合 Voltage combination | | | 联结组标号 Connection symbol | 空载损耗 No-load loss (W) | 负载损耗 Load Loss (W) 75℃ | | 空载电流 No-load current (%) | 短路阻抗 Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|---|
| | 高压 High voltage (kV) | 高压分接范围 High voltage tapping range (%) | 低压 Low voltage (kV) | | | F(120°) | H(145°) | | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5%或±2×5% | 0.4 | Dyn11<br>或<br>Yyn0 | 135 | 640 | 685 | 2.3 | 4 |
| 50 | | | | | 195 | 900 | 965 | 2.2 | 4 |
| 80 | | | | | 265 | 1240 | 1330 | 1.7 | 4 |
| 100 | | | | | 290 | 1410 | 1520 | 1.7 | 4 |
| 125 | | | | | 340 | 1660 | 1780 | 1.5 | 4 |
| 160 | | | | | 385 | 1910 | 2050 | 1.5 | 4 |
| 200 | | | | | 445 | 2270 | 2440 | 1.3 | 4 |
| 250 | | | | | 515 | 2480 | 2660 | 1.3 | 4 |
| 315 | | | | | 635 | 3120 | 3350 | 1.1 | 4 |
| 400 | | | | | 705 | 3590 | 3850 | 1.1 | 4 |
| 500 | | | | | 835 | 4390 | 4700 | 1.1 | 4 |
| 630 | | | | | 965 | 5290 | 5660 | 0.9 | 4 |
| 630 | | | | | 935 | 5360 | 5740 | 0.9 | 6 |
| 800 | | | | | 1095 | 6260 | 6700 | 0.9 | 6 |
| 1000 | | | | | 1275 | 7310 | 7830 | 0.9 | 6 |
| 1250 | | | | | 1505 | 8720 | 9340 | 0.9 | 6 |
| 1600 | | | | | 1765 | 10550 | 11300 | 0.9 | 6 |
| 2000 | | | | | 2195 | 13000 | 13920 | 0.7 | 6 |
| 2500 | | | | | 2195 | 15450 | 16540 | 0.7 | 6 |
| 3150 | | | | | 3110 | 18490 | 19800 | 0.7 | 6 |

## 绝缘水平 Insulation Level

| 电压等级 Voltage grade (kV) | 最高运行电压 kV（有效值） Maximumoperating voltage (effective value) | 额定短时工频耐压（有效值）/ 分钟 Rated short duration Power frequency with stand voltage kV/minute | 额定雷电冲击耐受电压 kV（峰值） Rated lightning impulse with stand voltage kV(peak) | |
|---|---|---|---|---|
| | | | 全波 Full wave | 截波 Chopped wave |
| 0.4 | 0.46 | 5 | 75 | 85 |
| 10 | 12 | 35 | 75 | 85 |
| 20 | 24 | 50 | 125 | 85 |
| 35 | 42 | 70 | 170 | 85 |





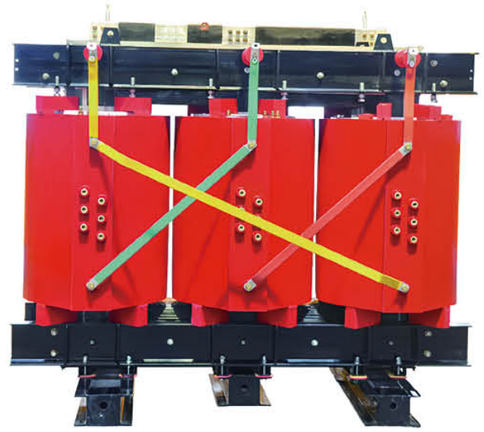
# SC(B)18 型干式电力变压器

SC(B)18 TYPE DRY POWER TRANSFORMER

## 型号含义 Model Meaning

S C (B)18-□ / □

- 电压等级 (kV) Voltage level (kV)
- 额定容量 (kVA) Rated capacity(kVA)
- 性能水平代号 Performance level code
- 低压箔式线圈 Low voltage foil coil
- 环氧树脂浇注型 Epoxy resin casting type
- 三相 Three-phase



## 性能参数 Service Conditions

- 相数：3 相；
- 频率：50Hz；
- 绝缘耐热等级：F 级；
- 绕组平均温升：≤ 100k；
- 局部放电量：小于 10pC。
- Number of phases: 3 phases；
- Frequency: 50Hz；
- Insulation and heat resistance level: F level；
- Average temperature rise of winding: ≤ 100k；
- Partial discharge capacity：less than 10pC.

## 产品用途 Product Usage

SC(B)18 型环氧树脂浇注干式电力变压器根据标准《干式电力变压器》制造。本产品性能损耗低、节能效果好、运行经济，免维护。除工艺结构先进，抗短路、雷电冲击水平高外，还具有阻燃、防潮、防尘、噪音低等特点，可深入负荷。广泛适用于高层建筑、机场、车站、码头、电厂、变电站等。特别适合于易燃易爆等防火要求高的场所安装使用。

本公司生产的标准型变压器为不带外壳，防护等级为IP00，如客户需要可提供防护等级为IP20 和IP23 的外壳。外壳可根据客户要求选用普通钢板、不锈钢板、铝合金等材料制作，并作酸洗、磷化、喷塑等处理。温度控制显示仪、负荷测录仪安装在外壳低压侧，方便用户观察，可靠。

SC(B)18 epoxy resin cast dry type power transformer is manufactured according to the standard "Dry type Power Transformer" . This product has low performance loss，good energy-saving effect, economical operation, and maintenance free. In addition to advanced process structure, high resistance to short circuits and lightning impacts, it also has characteristics such as flame retardancy, moisture resistance, dust prevention，and low noise, which can penetrate deep into the load. Widely applicable to high-rise buildings, airports, stations, docks, power plants, substations, etc.Especially suitable for installation and use in places with high fire protection requirements, such as flammable and explosive materials.

The standard transformer produced by our company does not come with an enclosure and has a protection level of IP00. If customers require it, we can provide enclosures with protection levels of IP20 and IP23. The shell can be made of ordinary steel plate, stainless steel plate, aluminum alloy and other materials according to customer requirements, and can be treated with acid pickling, phosphating,spray molding, etc. The temperature control display and load measurement recorder are installed on the low-voltage side of the enclosure, making it convenient for users to observe and reliable.

# 特种变压器光伏电站用绕组双分裂干式变压器

SPECIAL TRANSFORMER DOUBLE SPLIT DRY-TYPE TRANSFORMER WITH WINDING FOR PHOTOVOLTAIC POWER STATION



## 产品概述 Product Overview

太阳能作为一种清洁型能源，是目前技术成熟、具有大规模开发条件的可再生能源。而光伏发电系统则利用太阳能电池组经光电转化的低压直流电经直流防雷汇流柜和配电柜，进入光伏并网逆变器进行直交流的转化为低压交流电，再汇入升压变压器，使电压上升到额定电压等级电网电压，完成并网工作。此变压器并入 10kV 等电压等级电网，具有低损耗、低噪音、抗污染、抗短路能力强等特点，在分布式光伏电站等领域得到广泛应用。

此类变压器低压输出两个电压，低压电压可同时或单独运行。各分裂绕组的总容量就是该分裂变压器的额定容量。两个低压绕组的出线均为铜排出线，且在线圈的上部两侧位置，比之常规的轴向上下出线方式，极大的方便了用户接线操作。

As a kind of clean energy, solar energy is a renewable energy with mature technology and large-scale development conditions. The photovoltaic power generation system uses the photovoltaic conversion of low-voltage direct current of solar cells through the DC lightning protection combiner cabinet and distribution cabinet to enter the photovoltaic grid connected inverter for direct AC conversion into low-voltage alternating current, and then into the step-up transformer to make the voltage rise to the rated voltage level grid voltage and complete the grid connection work. The transformer is incorporated into 10kV power grid with low loss, low noise, anti pollution and strong short-circuit resistance. It is widely used in distributed photovoltaic power plants and other fields.

These transformers output two voltages at low voltage, which can be operated simultaneously or separately. The total capacity of each split winding is the rated capacity of the split transformer. The outgoing lines of the two low-voltage windings are copper bars, and at the upper two sides of the coil, compared with the conventional axial up-down outgoing line mode, it greatly facilitates the user's wiring operation.





# 预装式变电站（美式）

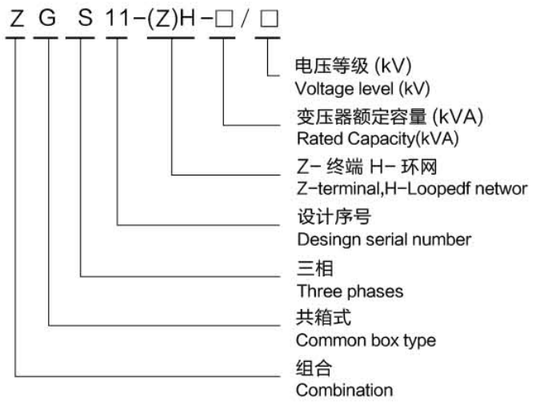
PREFABRICATED SUBSTATION（AMERICAN TYPE）

## 产品概述 Product Overview

ZGS11-(Z)H 智能型组合箱变是配电网自动化编程终端最基本的模块组合化、紧凑小型化、集成智能化的理想变电站设备。可达到三相联动，无缺相运行、无瞬间断电。可配远程遥控设备实现四遥功能，可手动、电动操作，免维护，减少维修人员及费用。广泛适用于公园厂区、车站码头、宾馆别墅、住宅小区等场所。

ZGS11-(Z)H intelligent combination box transformer is the most basic module combination, compact and miniaturized, integrated and intelligent ideal substation equipment for distribution network automation programming terminal. It can achieve three-phase linkage, no phase loss operation and no instantaneous power failure. It can be equipped with remote control equipment to realize four remote functions, manual and electric operation, maintenance free, and reduce maintenance personnel and costs. It is widely used in Park, factory area, station wharf, hotel villa, residential area and other places.

## 型号含义 Model Meaning






## 使用条件 Service Conditions

- 周围空气温度：-35℃ ~40℃；
- 海拔高度：≤ 1000m；
- 户外风速：≤ 35m/s；
- 相对湿度：日平均不大于 95%，月平均不大于 90%；
- 污秽等级：Ⅱ、Ⅲ、Ⅳ类；
- 地震烈度：不超过 8 度；
- 安装地点：无火灾、无爆炸危险或剧烈震动、严重污秽、化学腐蚀、地面倾斜角度小于 5 度的场所。
- 超出上述规定的使用条件下使用时，请用户与本公司协商处理，并在订货时注明。

- Ambient air temperature：-35℃~40℃；
- Altitude：≤ 1000M；
- Outdoor wind speed：≤ 35m/s
- Relative humidity：daily average not more than 95 %，monthly average not more than 90%；
- Pollution level: Class II，III and IV；
- Seismic intensity: no more than 8 degrees；
- Installation location: places without fire, explosion or violent vibration, serious pollution, chemical corrosion, and ground inclination less than 5 degrees；
- In case of use beyond the above-mentioned conditions, please consult with our company for handling and indicate when ordering.

# 片式散热器

CHIP RADIATOR

## 产品概述 Product Overview

片式散热器是用于油浸式变压器、电抗器等变压器类产品的冷却装置，是按照中华人民共和国专业标准 JB/T5347-1999 变压器用片式散热器设计制造的。按连接方式可分为固定式和可拆式两种型式；按冷却方式可分为自冷式、风冷式及强油风冷式三种型式。本厂生产的片式散热器有固定式、可折式、底吹式各种规格系列，欢迎用户选用。

Chip radiator is used for oil-immersed transformer, reactor and other transformer products cooling device, is in accordance with the People's Republic of China professional standards JB/T5347-1999 transformer with chip radiator design and manufacture. According to the connection mode can be divided into fixed and detachable two types; according to the cooling mode can be divided into self-cooling type, air-cooled and strong oil air-cooled three types. Our factory produces piece radiator has fixed, folding type, bottom blowing type various specifications series, welcome users to choose.

## 型号含义 Model Meaning

P □ □-□/□

- 散热片宽度 (mm) Width of heat sink (mm)
- 每组片数 Pieces per group
- 中心距（mm） Center distance
- C：可折式 G：固定式 C: Foldable G: Fixed
- 片式散热器 Chip radiator



## 使用须知 Instructions For Use

- PC 型可拆式散热器上集流管上有放气塞作放气用，下集流管上有放油塞作放油用。当变压器注油时，应将每组散热器上的放气塞放开，待放气孔有油溢出时，再将放气塞拧紧。
- 运输、安装、冲洗时不得将散热片的油道碰瘪、损坏。
- 用户如对散热器进行密封试验，其压力不得大于 120kPa。
- 用户如需对热散器进行真空强度试验，应在不充油状态下进行，绝对压强不大于 133Pa，持续时间不大于 10min。
- 散热器装用前，请用户检查塑料盖板或钢盖板是否密封完好，如有损坏致使内部被污秽时需进行清理，以保证内部清洁。
- PC type detachable radiator has a bleeder plug on the upper collector pipe for bleeder, and an oil bleeder plug on the lower collector pipe for oil bleeder. When the transformer is filled with oil, the bleeder plugs on each group of radiators should be released, and then the bleeder plugs should be tightened when oil overflows from the bleeder holes.
- Transportation, installation and flushing shall not deflate or damage the oil channel of the radiator.
- If the user conducts a sealing test on the heat sink, the pressure shall not be greater than 120kPa.
- If the user needs to carry out vacuum strength test on the heat sink, it should be carried out under the state of not filling oil, the absolute pressure is not more than 133Pa, and the duration is not more than 10min.
- Before the radiator is installed, users should check whether the plastic cover or steel cover is well sealed, and if it is damaged so that the interior is polluted, it should be cleaned to ensure that the interior is clean.





## 安装方式 Installation Mode

- PG 型固定式散热器（见图 1）直接焊接在变压器箱壁上使用。
- PC 型可拆式散热器（见图 2、图 3、图 4）用法兰紧固在变压器箱壁管接头上使用，上、下集流管上各有一个搭子，可用来安装连接散热 G9 的拉板。
- 底吹式散热器（见图 5、图 6），每两组散热器悬挂一只风机，当同侧散热器组数为奇数时，中间那组散热器可不安装风机。在每组散热的下集流管上有两块吊板。长短两根扁钢分别固定在两组散热器的前后吊板上，然后风机通过三块弯板连接在扁钢上。
- PG type fixed radiator ( see Figure 1 ) directly welded to the transformer box wall use.
- PC-type detachable radiator ( see Figure 2,Figure 3，Figure 4 ) with a flange fastened to the transformer wall pipe joints to use, on the upper and lower collector tubes have a lap, can be used to install the connection of the cooling G9 pull plate.
- Bottom-blowing radiator ( see Figure 5，Figure 6 ) , every two groups of radiators hanging a fan, when the number of groups of radiators on the same side of the odd number of radiators, the middle of the group of radiators can not be installed fan. In each group of cooling under the collector pipe there are two hanging plate. Long and short of two flat steel were fixed in two groups of radiators before and after the hanging plate, and then the fan through three pieces of curved plate connected to the flat steel.

## 片式散热器连接图 Chip Radiator Connection Diagram

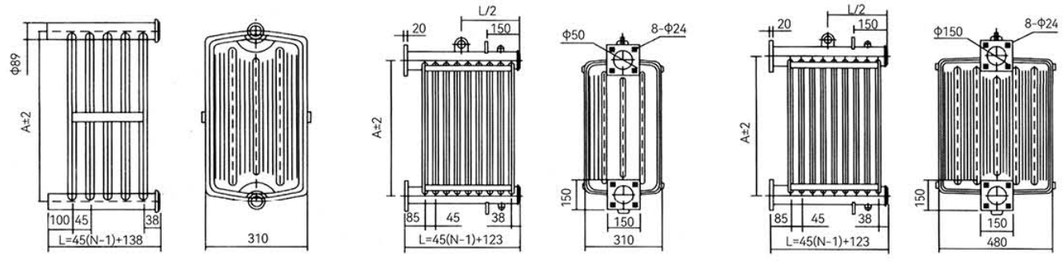



图 1.PG 型片式散热器
Figure 1.Model PG Flake Radiator




图 2.PC 型片式散热器
Figure 2. PC type chip heat sink




图 3.PC 型片式散热器
Figure 3. PC type plate heat sink

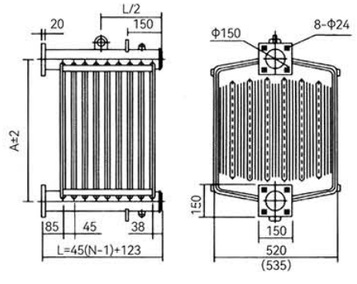



图 4.PC 型片式散热器
Figure 4.PC type chip heat sink

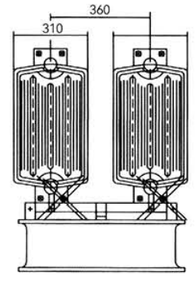



图 5. 底吹式片式散热器
Figure 5. Bottom-blown chip radiator

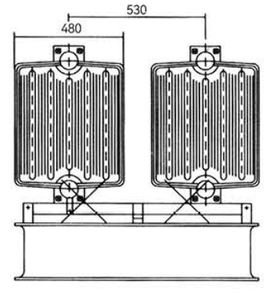



图 6. 底吹式片式散热器
Figure 6. Bottom-blown chip radiator

# 伺服电液数控折弯机

SERVO ELECTRO-HYDRAULIC CNC PRESS BRAKE

## 设备介绍 Equpment Introduction

机身采用整体焊接及整体加工结构，机身主要部件均采用 ANSYS 有限元分析软件进行分析，确保了机床的可靠性及整机的精度。数控系统采用电液同服折弯机专用数控系统，可实现折弯角度图形编程、角度修正补偿，折弯压力自动计算与自动调整，自动计算工作台变形补偿量、工件展开长度、压底折弯压力、开口距离、后挡料自动退让等功能。

The machine body adopts an overall welded and machined structure, and the main components of the machine body are analyzed using ANSYS finite element analysis software to ensure the reliability and accuracy of the machine.

The numerical control system adopts a dedicated numerical control system for electro-hydraulic servo bending machines，which enables graphical programming of bending angles, angle correction compensation, automatic calculation and adjustment of bending pressure, automatic calculation of workbench deformation compensation, workpiece unfolding length, bottom pressing bending pressure, opening distance, automatic backstop compensation, and other functions.

## DA53T 电液折弯机数控系统

DA53T electro-hydraulic bending machine numerical control system

荷兰 DeLem-DA53T 是基本的数控系统，具有高效率的性能。美观现代、流线型铸塑外壳，优雅而实用，允许在底部面板安装用于机床操作的按钮和选择器开关。集成的 DA 数控编程。有液压工序指定功能，可以让机器调整和测试工作减少。按键一次就可以生成数控程序，自动计算所有的轴位置直接进行生产。

数控系统采用先进新技术，高柔性、操作便捷 USB 接口提供了快速备份产品和模具。彩色的 TFT 显示和时尚的用户界面清晰，可为快速编程提供方便。DA-0ffine 为离线编程提供解决方案。

The Dutch Delem-DA53T is a basic numerical control system with high efficiency. The beautiful, modern, streamlined cast plastic housing is elegant and practical, allowing buttons and selector switches for machine operation to be installed on the bottom panel. The integrated DA-53T numerical control system has a Delem 2D graphical programming design tool for convenient numerical control programming.It has a hydraulic process designation function that allows the machine to adjust and test work to be reduced. The buttons can generate a numerical control program once, automatically calculating all axis positions for direct production.

The numerical control system adopts advanced new technologies, with high flexibility and convenient operation. The USB interface provides fast backup of products and molds. The colorful TFT display and stylish user interface are clear and convenient for rapid programming. DA-0ffine provides a solution for offline programming.








# 交换台大包围光纤激光切割机

LASER EXCHANGEABLE TABLE

## 设备介绍 Equpment Introduction

全新封闭式设计，双工作台快速交换，可边加工边下料，速度快、切缝小、断面光滑、操作简便、能耗低，适合大批量连续加工，凸显切割竞争优势。光纤交换台大包围激光切割机。

A brand new closed design with dual workbenches for quick exchange, capable of cutting while cutting, fast speed, small cutting seams, smooth cross-section, easy operation, low energy consumption, suitable for large-scale continuous processing, highlighting cutting competitive advantages. Fiber optic switching station large surround laser cutting machine.

**大包围防护设计**
**大幅面激光防护玻璃**

Large enclosure protection design
Large format laser protective glass



### 品牌激光器 Brand Laser

光纤激光器采用风冷紧凑型结构设计，以半导体光纤作激光发生介质，绿色环保，机械结构简单，光路恒定，基本免维护，切割性能稳定。

The fiber laser adopts an air-cooled compact structure design，using semiconductor fibers as the laser generation medium, which is green and environmentally friendly. The mechanical structure is simple, the optical path is constant, basically maintenance free, and the cutting performance is stable.



### 自动调焦切割头 Automatic Focusing Cutting Head

配备自动调焦切割头，可根据材料厚度自动准确调节焦点，适用多种焦距；高速切割，节省时间。

Equipped with an automatic focusing cutting head, it can automatically and accurately adjust the focus according to the material thickness, suitable for various focal lengths; High speed cutting saves time.



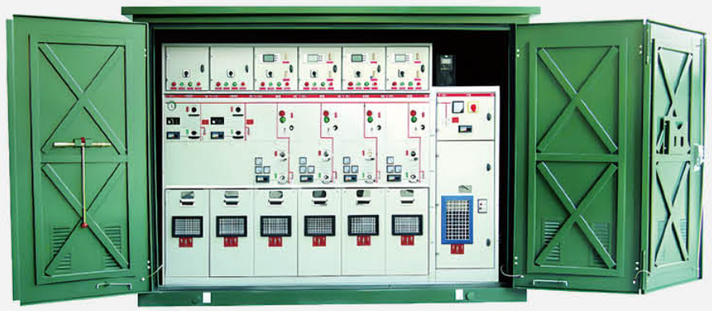

## 技术参数 Technical Parameter

| 型号 Model | 3015 | 4020 | 6020 | 6025 | 8025 |
|---|---|---|---|---|---|
| 切割范围 Cutting range | 3000 ×1500mm | 4000 ×2000mm | 6000 ×2000mm | 6000 ×2500mm | 8000 ×2500mm |
| 激光功率 Laser power | < 20000W | < 20000W | < 20000W | 3000~20000W | 3000~20000W |
| 最大定位加速度 Max.positioning acceleration | 20m/s² | 20m/s² | 20m/s² | 20m/s² | 20m/s² |
| 定位精度 Positioning accuracy | ±0. 02mm/m | ±0. 02mm/m | ±0. 02mm/m | ±0. 02mm/m | ±0. 02mm/m |
| 重复定位精度 Repositon accuracy | ±0. 03mm | ±0. 03mm | ±0. 03mm | ±0. 03mm | ±0. 03mm |

参数如有变动，恕不另行通知。 Parameters change without notice.

# DFWK-12 系列户外环网柜

DFWK-12 SERIES OUTDOOR RING MAIN UNIT



## 产品概述 Product Overview

DFWK-12 系列户外环网柜是公司采用国外先进技术，根据我国各区域配电网络特点和城市配网电缆化改造的实际情况，开发、生产的具有国际一流水准的充气式户外环网柜。

DFWK-12 系列户外环网柜采用 HRM16-12/24 系列 SF6 全密封全绝缘环网开关设备，该开关设备具有模块化、可扩展、全绝缘、全密封、安全可靠、免维护等优点，适用于任何恶劣环境，被广泛应用于工业园区、居民区、街道、机场、各种建筑物、繁华商业中心等场所。

DFWK-12 系列户外环网柜标准电压等级 12kV、24kV，可扩展配网自动化功能，实现环网柜的智能化，让电网更坚强更智慧。

DFWK-12 series outdoor ring main unit is an inflatable outdoor ring main unit developed and produced by the company using advanced foreign technology, based on the characteristics of distribution networks in various regions of China and the actual situation of urban distribution network cable transformation, with international first-class standards.

The DFWK-12 series outdoor ring main unit adopts the HRM16-12/24 series SF6 fully sealed and insulated ring main unit switchgear. This switchgear has the advantages of modularity, scalability, full insulation, full sealing, safety and reliability, and maintenance free. It is suitable for any harsh environment and is widely used in industrial parks, residential areas, streets, airports, various buildings, bustling commercial centers, and other places.

The DFWK-12 series outdoor ring main unit has standard voltage levels of 12kV and 24kV, and can expand the automation function of the distribution network, realizing the intelligence of the ring main unit and making the power grid stronger and smarter.





## 型号含义 Model Meaning

DFWK – 12 / H – □

- 开关类型及数量 Switch type and quantity
- 环网型 Ring network type
- 额定电压等级 Rated voltage level
- 电缆分接箱 Cable Distribution box

## 使用条件 Service Conditions

- 环境温度：最高温度 +50℃，最低温度 −40℃，最高日平均温度不超过 35℃。
- 相对湿度：日平均值不超过 95%，月平均值不超过 90%。
- 风速：不超过 35m/s。
- 污秽等级：III 级。
- 地震烈度：8 度。
- 地面倾斜度：不大于 3 度。
- 安装地点：安装在没有火灾，爆炸或剧烈震动、通风良好、无腐蚀性气体的场所。

- Environmental temperature: maximum temperature+50 ℃ , minimum temperature−40 ℃ , maximum daily average temperature not exceeding 35℃ .
- Relative humidity: The daily average does not exceed 95% , and the monthly average does not exceed 90%.
- Wind speed：not exceeding 35m/s.
- Pollution level: Level III.
- Earthquake intensity: 8 degrees.
- Ground inclination: not greater than 3 degrees.
- Installation location: Install in a place without fire, explosion, or severe vibration, with good ventilation, and without corrosive gases.

### 特殊条件 Special conditions

- 当设备安装在海拔高度为 1000 米以上时，需特别注明，以便公司在制造时对 SF6 压力进行调整。
- 如果涉及特殊恶劣条件，请务必向公司咨询。

- When the equipment is installed at an altitude of over 1000 meters, special instructions should be given so that the company can adjust the SF6 pressure during manufacturing.
- If there are special and harsh conditions involved, please be sure to consult the company.

# KYN28A-12 型金属铠装中置移开式开关设备

KYN28A-12 METAL ARMORED MIDDLE MOUNTED REMOVABLE SWITCH EQUIPMENT



## 产品概述 Product Overview

KYN28A-12 型户内交流金属铠装中置式开关设备。它适用于三相交流额定电压 12kV，额定频率 50Hz 电力系统，用于接受和分配电能并对电路实行控制、保护及监测。

KYN28A-12 indoor AC metal armored mid mounted switchgear. It is suitable for three-phase AC power systems with a rated voltage of 12kV and a rated frequency of 50Hz. It is used to receive and distribute electrical energy, and to control, protect, and monitor circuits

## 符合标准 Compliant With Standards

- GB 3906-2006《3.6~40.5kV 交流金属封闭开关设备和控制设备》
- GB11022-89《高压开关设备通用技术条件》
- IEC298(1990)《额定电压 1kV 以上 50kV 及以下交流金属封闭开关设备和控制设备》
- DL404-97《户内交流高压开关柜订货技术条件》
- GB 3906—2006 3.6~40.5kV AC Metal Enclosed Switchgear and Control Equipment.
- GB11022-89 General Technical Conditions for High Voltage Switchgear.
- IEC 298(1990)"AC metal enclosed switchgear and control equipment for rated voltages above 1kV and below 50kV".
- DL 404-97 "Technical Conditions for Ordering Indoor AC High Voltage Switchgear".





## 型号含义 Model Meaning

K Y N 28A - 12 / □ □

- 环境特征代号 Environmental characteristic code
  - TH- 用于湿热带 TH – for use in humid tropical regions
  - TA- 用于干热带 TA – for use in dry tropical regions
  - G- 用于高海拔 G–Used for high altitude
- 一次回路方案 Primary circuit scheme
- 额定电压 Rated voltage
- 设计序号 Desingn serial number
- 户内 indoor
- 移开式（手车中置式） Mobile (center mounted handcart )
- 金属封闭铠装式 Metal enclosed armored type

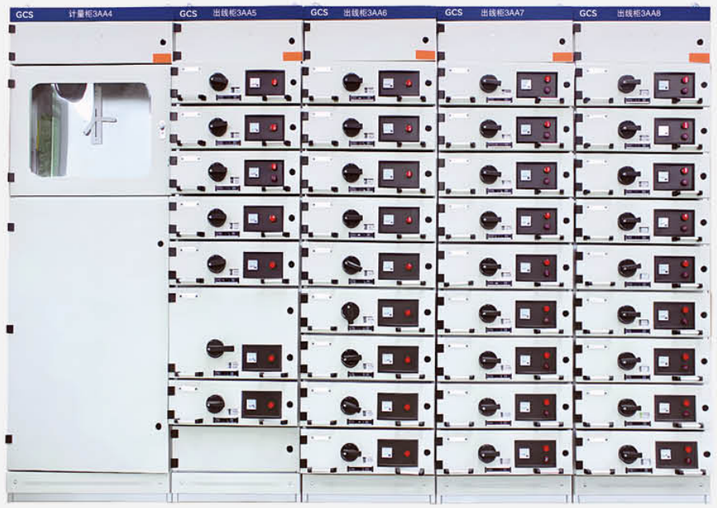
## 使用条件 Service Conditions

- 周围空气温度：最高温度 +40℃，最低温度 −15℃。
- 相对湿度：日平均相对湿度：≤ 95%；日平均水蒸气压力不超过 2. 2kPa; 月平均相对湿度：≤ 90%；月平均水蒸气力不超过 1. 8kPa。
- 海拔高度：1000m 以下。
- 地震烈度：不超过 8 度。
- 周围空气应不受腐蚀性或可燃气体、水蒸气等明显污染。
- 无剧烈震动场所。
- 超出 GB3906 规定的正常条件下使用时，由用户和本公司协商。

- Surrounding air temperature: maximum temperature+40℃ , minimum temperature−15℃.
- Relative humidity：Daily average relative humidity: ≤ 95% ; The daily average water vapor pressure does not exceed 2. 2kPa; Monthly average relative humidity: ≤ 90% ; The monthly average water vapor pressure does not exceed 1. 8kPa.
- Altitude: Below 1000m.
- Earthquake intensity: not exceeding 8 degrees.
- The surrounding air should not be significantly polluted by corrosive or combustible gases, water vapor, etc.
- No severe vibration in the area.
- When using beyond the normal conditions specified in GB 3906, the user and our company shall negotiate.

# GCS 型低压抽出式成套开关设备

GCS TYPE LOW VOLTAGE DRAW OUT SWITCHGEAR



## 产品概述 Product Overview

GCS 型低压抽出式成套开关设备适用于发电厂、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 400V、660V，额定电流为 5000A 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。

MNS 采用的柜体结构具有高度的灵活性，根据客户的需求或不同使用场合，柜体内可安装多种型号及规格元器件。根据不同的用电设备，多种类型的馈电单元可以装在同一列柜或同一台柜中，可通过组合结构实现安全可靠，安装、检修、维护便捷并降低生产成本。符合国家 IEC60439-1、GB7251. 1 及 JB/T9611 等相关标准。

The MNS low-voltage withdrawable switchgear is suitable for distribution systems in industries such as power generation, petroleum, chemical, metallurgical, textile, and high-rise buildings. In places with high automation levels such as large power plants and petrochemical systems that require computer interfaces, low-voltage complete distribution equipment is used for distribution, centralized control of motors, and reactive power compensation in power generation and supply systems with a three-phase AC frequency of 50(60) Hz, rated working voltage of 400V, 660V, and rated current of 5000A and below.

The cabinet structure adopted by MNS has a high degree of flexibility, and various models and specifications of components can be installed inside the cabinet according to customer needs or different usage scenarios. According to different electrical equipment, multiple types of feeding units can be installed in the same cabinet or in the same cabinet. They can be combined to achieve safety and reliability, convenient installation, maintenance, and maintenance, and reduce production costs. Complies with relevant national standards such as IEC60439-1, G87251. 1, and JB/T9611.





## 型号含义 Model Meaning

G C S - □ □ □ □

- 外形尺寸 External dimensions
- 主电路方案编号 Main circuit scheme number
- 短时耐受电流（kA） Short time withstand current (kA)
- 额定电流（A） Rated current (A)
- 电力系统 Power system
- 抽出式 Pull-out type
- 封闭式开关柜 Enclosed switchgear

## 使用条件 Service Conditions

- 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于 +35℃。
- 户内使用，使用地点的海拔高度不大于 2000 米。
- 周围空气没有明显地受到尘埃、烟、腐蚀性或可燃性气体蒸汽或盐雾的污染。
- 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%，应考虑到由于温度的变化，可能会偶然产生凝露的影响。
- 装置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 ( 符台 GB7251. 1-2005)。
- 设备应安装在无剧烈振动和冲击的地方。
- 用户有特殊要求时可与我公司协商解决。

- The ambient air temperature shall not exceed+40℃，not be lower than-5℃，and its average temperature shall not exceed+35℃ within 24 hours.
- Indoor use, with an altitude of no more than 2000 meters at the location of use;
- The surrounding air is not significantly contaminated by dust, smoke, corrosive or flammable gas vapors or salt mist;
- The relative humidity of the surrounding air should not exceed 50% at the highest temperature of+40℃ . A larger relative humidity is allowed at lower temperatures, such as 90% at+20℃ . It should be considered that condensation may occur accidentally due to temperature changes;
- When installing the device, the inclination from the vertical plane shall not exceed 5 degrees, and the entire cabinet column shall be relatively flat (in accordance with GB7251.1-2005).
- The equipment should be installed in a place without severe vibration and impact.
- When users have special requirements, they can negotiate with our company to resolve them.

# GGD 型成套开关设备

GGD TYPE COMPLETE SWITCHGEAR



## 产品概述 Product Overview

GGD型成套开关设备适用于发电厂、变电所、工矿企业等电力用户作为交流 50Hz，额定工作电压 380V，额定电流至 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。该产品分断能力高，额定短时耐受电流达 50kA。线路方案灵活、组合方便、实用性强、结构新颖等特点。

该产品是我国组装式、固定面板开关柜的代表产品之一。

本产品符合：GB7251《低压成套开关设备和控制设备》、IEC439《低压成套开关设备和控制设备》等标准。

The GGD type complete switchgear is suitable for power plants, substations, industrial and mining enterprises and other power users as power conversion, distribution, and control equipment in distribution systems with AC 50Hz, rated working voltage 380V, and rated current up to 3150A. This product has high breaking capacity and a rated short-term withstand current of 50kA. The line scheme is flexible, easy to combine, practical, and structurally novel.

This product is one of the representative products of assembled and fixed panel switchgear in China.

This product complies with standards such as GB7251 "Low voltage switchgear and control equipment" and IEC439 "Low voltage switchgear and control equipment" .

## 型号含义 Model Meaning

G G D – □ – □

- 主电路方案代号 Main circuit scheme code
- 设计序号 Design serial number
- 电力用柜 Power cabinet
- 固定安装、固定接线 Fixed installation and fixed wiring
- 交流低压配电柜 AC low-voltage distribution cabinet

## 使用条件 Service Conditions

- 环境温度：-5℃ ~+40℃，24 小时内的平均温度≤ +35℃。
- 相对温度在最高温度为 +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%。
- 无腐蚀性及爆炸性气体，无导电及能破坏绝缘的尘埃。
- 无显著摇动和冲击振动的场合，垂直安装，倾斜度不应大于 5 度。
- 产品安装使用时，使用地点的海拔高度不超过 2000M。
- 用户对上述条件不能满足时应与制造厂协商。

- Environmental temperature：-5℃ ~+40℃ , average temperature within 24 hours ≤ +35℃.
- The relative temperature should not exceed 50% at the highest temperature of+40℃ , and a relatively high relative humidity is allowed at lower temperatures, such as 90% at +20℃.
- No corrosive or explosive gases, no conductive or dust that can damage insulation.
- In situations where there is no significant shaking or impact vibration, when installed vertically, the inclination should not exceed 5 degrees.
- When installing and using the product, the altitude of the place of use shall not exceed 2000M.
- When users are unable to meet the above conditions, they should negotiate with the manufacturer.

# TYPICAL PROJECT
# 合作案例

感恩有你，合作共赢，我们常怀一颗感恩的心，感谢时代和社会赋予我们成长的机会和空间，感谢客户和合作伙伴给我们的支持与关照。我们将竭尽所能的生产高品质的变压器回馈新老客户。

Thank you for your cooperation and win-win situation. We always hold a grateful heart, grateful to the times and society for giving us opportunities and space for growth, and grateful to customers and partners for their support and care. We will do our best to produce high-quality transformers to give back to new and old customers.




中国航空工业集团
Aviation Industry Corporation of China



北京大兴机场
Beijing Daxing Airport




中国人民银行监管中心
Pepple's Bank of China Supervision Center




2022 北京冬奥会
2022 Beijing Winter Olympics



中国酒泉卫星发射中心
China Jiuquan Satellite Launch Center



中国水利
China Water Resources



武汉五环体育中心
Wuhan Wuhuan Sports Center




吉利控股集团
Geely Holding Group



中国石化
Sinopec



中广核集团
China General Nuclear Power Group



G20（杭州）峰会
G20（Hangzhou) Summit

## 全球重点业绩 / Global Typical Projects

### 南美 110kv 变压器供货项目
South America 110kv Transformer Supply Project





本项目为天宏在部分市场推行的变压器本地供油试点项目。为进一步降低产品成本，在征得客户许可的情况下，本项目采购阿根廷供应商的变压器油并直接交付到项目所在地，此过程节省了变压器油进入中国的进口关税和进出中国的海运费，可以综合降低变压器成本约6%。目前支持本业务模式的市场包括：南美洲，西班牙，法国，意大利。

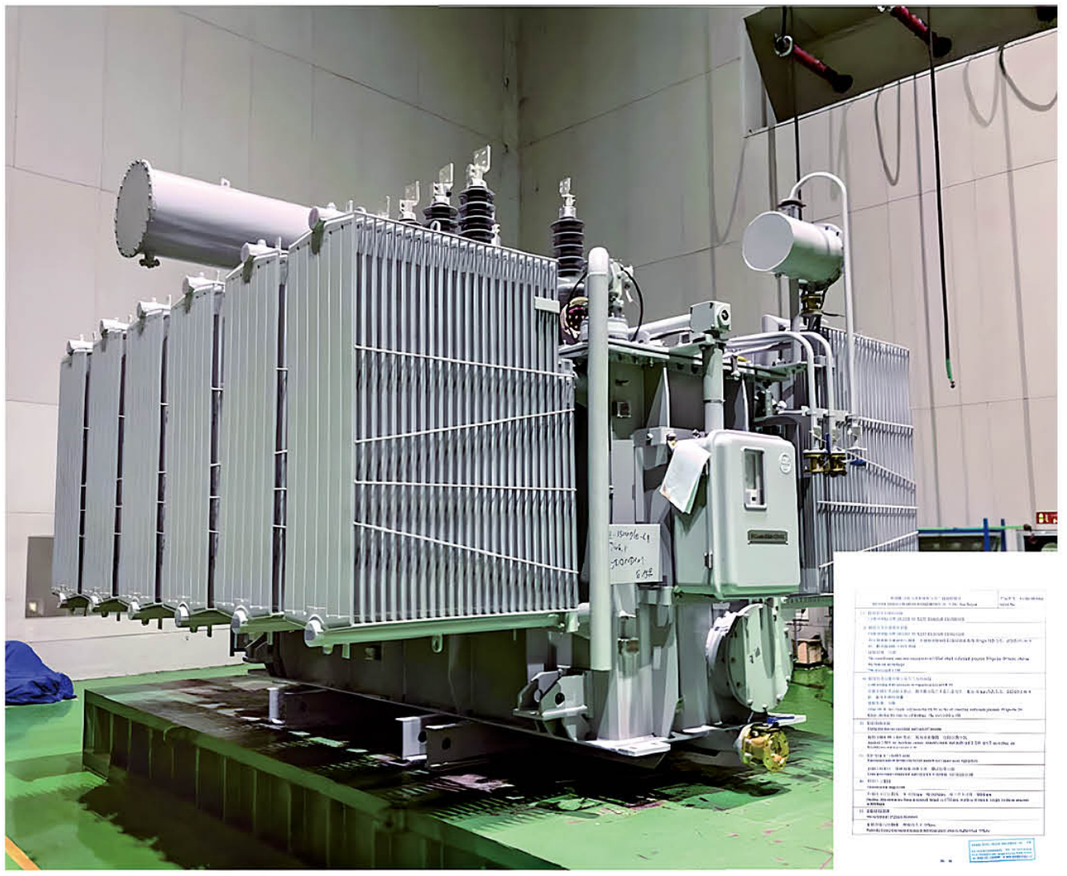
This is a pilot project of transformer oil local supply, vigorously implemented by Tianhong in some markets. In order to further reduce the product cost, with the permission of the customer, the transformer oil from Argentina is purchased and delivered directly to the project site. This process saves the import tariff and sea freight of transformer oil into and out of China, and can comprehensively reduce the transformer cost by about 6%. At present, this business model is available in the markets include South America, Spain, France and Italy.





全球重点业绩 / Global Typical Projects

### 东南亚变电站项目
Southeast Asia Substation Project



东南亚变电站项目，要求所有电气设备表面防腐需满足 C4M 等级，我司供应的电气设备严格执行该防腐要求，在 C4M 等级下漆膜厚度达到 200μm. 表面防腐一次性通过检验，并制定了完善的包装方案，确保产品的表面防腐层在运输过程中不被损坏。

Southeast Asia Substation Project, it is required that the surface anti-corrosion of all electrical quipment shall meet the C4M level. The electrical equipment supplied by our company shall strictly comply with the anti-corro-sion requirements. Under the C4M level, the paint film thickness reaches 200 μ m. The surface anti-corrosion has passed the inspection at one time, and a suitable packaging scheme has been formulated to ensure that the surface anti-corrosion coating of the product is not damaged during transportation.

# CUSTOMER & PARTNER

## 客户与合作伙伴



ZTE中兴 · HUAWEI · 中国电建 POWERCHINA · 中国西电 CHINA XD · 国家电网 STATE GRID 许继集团有限公司 XJ GROUP CORPORATION · 中国移动 China Mobile · 中国电信 CHINA TELECOM · CEEC 中国能建

中国中铁 · 中国华能 CHINA HUANENG · 中国石化 SINOPEC · ABB · NR · TOZZIgreen · INGEMAS MEXICO. S.A. de C.V. · PHILIPS Lighting

VT VEX TRADERS · cnfl Compañía Nacional de Fuerza y Luz, S.A. · TBEA SWCC · PS · MAN · TBEA 特变电工 · ESEMEC COMPANIA DE SUMINISTROS ELECTROMECANICOS S.A. · AEE POWER

ENERGIA Y PETROLEOS Enerperol S.A. · Claro · GRUPO ice · Electroval · isastur isotron · SIEMENS energy · TS TRANSFORMERS · VOITH

ENDE CORPORACIÓN · Enosa · PRODIEL · edenco buena energia · cobra · ENERSYS · aldesa Grupo · Schneider Electric

INPROEL S.A. EQUIPOS Y MATEAIALES ELECTRICOS · INGINEX INGENIERIA INDUSTRIAL EXPORTADORA · elecnor · RED ELÉCTRICA DE ESPAÑA · grupo saesa · ENGIE · Perkins · SELEGSA

SADEVEN ENGINEERING & CONSTRUCTION Ltd. · Société Nationale d'Electricité · Coopelesca FORJANDO EL DESARROLLO DE LA ZONA NORTE · ETHIOPIAN ELECTRIC POWER · TSK · tigo · Honeywell · SEDEMI

KALLA A GROUP OF COMPANIES · enemek · Achilles · GRUPO RTIZ · CNEL EP · LTL HOLDINGS Local Engineering, at its Global best · enel · epm estamos ahi.

# GLOBAL NETWORK
## 全球营销网络




## 立足中国，走向世界

在强手如林的市场竞争中，只有眼光远大，勇于开拓，才能成为行业中的佼佼者。因此我们一直坚持着“有市场，才有出路”的经营方针，积极开拓市场，目前已经在全国各地建立了稳定的销售渠道。

天宏电力科技有限公司在致力于开拓国内市场时，同时加大对国际市场的关注，产品出口到 30 多个国家和地区，并取得客户的一致好评。

## BASED ON CHINA，TO THE WORLD

In the fiercely competitive market, only with a broad vision and the courage to explore can one become a leader in the industry. Therefore, we have always adhered to the business policy of "where there is a market, there is a way out", actively exploring the market, and currently have established stable sales channels throughout the country.

Tianhong Electric Power Technology is committed to exploring the domestic market while increasing its attention to the international market. Its products are exported to more than 30 countries and regions and have received unanimous praise from customers.