

诚信卓越 士林伟业  
GOOD FAITH & GREAT SHILIN



# 变压器系列

Transformer Series



江苏士林电气集团有限公司  
JIANGSU SHILIN ELECTRIC GROUP CO., LTD.

德者居上

智者在侧

能者居前



只有站在顾客的角度着想，  
才能真正赢得市场。  
士林严格按照国家规格的有关标准，  
本着方便用户、服务大众的原则，  
并根据客户的需求不断创新，  
提高整体服务水平，  
以优质的服务提升了品牌附加值。

Only from the customer's point of view,  
only in this way can we really win the market.  
Shilin strictly conforms to the relevant standards of the national specifications,  
in line with the principle of user-friendly and public service,  
and constantly innovate according to the needs of customers,  
improve the overall service level,  
with high quality service, the added value of the brand has been enhanced.



## 公司简介

江苏士林电气集团有限公司创立于2002年，位于江苏省扬中市，注册资金10018万元，是集输配电成套、电力电气、光伏新能源、新能源汽车零部件等产品研发、制造、销售、服务于一体的现代化高新技术企业。

公司通过了CCS中国船级社质量管理体系认证、ISO9001质量体系认证、ISO14001环境管理体系认证、IATF16949质量体系认证、能源体系管理认证和“CQC”“ECM”“EAC”等产品认证。公司被评为“省科技型中小企业”、“省质量信用AAA级企业”、“省资信AAA级企业”、“重合同、守信用企业”和“省级绿色工厂”、“国家级知识产权优势企业”、“国家级专精特新小巨人企业”。

公司与ABB、施耐德和西门子母线强强联合，在国内外市场上共同生产和合作经营各类电气产品。专业化制造：储能箱变、高低压配电柜、变压器、智能断路器、全绝缘管型母线、耐火3h浇注母线、柔性风电机管型母线、照明母线、密集型母线槽、IP68防水、防腐母线槽、复合玻璃钢桥架、耐火电缆桥架、一次滚压成型环形筋节能高强度电缆桥架、光伏支架、管廊支架、抗震支架、新能源汽车部件等系列产品。公司建有省博士后创新实践基地、省级工程技术中心，多项产品获得国家和省级高新技术产品鉴定，拥有完全自主知识产权。特别是公司生产的绝缘管母线、浇注防水母线是国内生产规模较大，产品系列齐全且专利技术处于国内外领先地位，在工控、供配电等领域享有较高的品牌知名度与市场占有率。

公司以先进的创新技术、卓越的品质和遍布全国各大城市的营销服务网络，成就了“士林电气”品牌，确保了“士林产品”和“士林服务”在行业市场中的排头兵地位。士林的产品被广泛应用于国内举世瞩目的大型项目—上海世博会、南京青奥会、田湾核电站……，士林的用户遍布：国家电网、轨道交通、发电系统、石油化工、造船海工、新能源光伏、工矿、汽车和政府工程等各项领域并获得一致好评。

“士林电气”始终秉承“专业、品质、共赢”的企业理念，汇集国内外精英才俊，走自主创新发展之路，实现士林电气工程技术和专业化服务技术的双提升，达到士林产品从“士林制造”到“士林创造”的新发展，在中国电气产业中，展示自己的综合实力和高端水平。

公司热诚欢迎与各大设计院所、广大用户和关心和支持士林发展的社会精英真诚合作，携手致力于我国电气事业的发展和繁荣。

## Company Profile

Jiangsu Shilin Electric Group Co., Ltd. was founded in 2002, located in Yangzhong City, Jiangsu Province, with a registered capital of 100.18 million yuan (U.S.\$ 14.3Million), is a modern high-tech enterprise integrating research and development, manufacturing, sales and service of power transmission and distribution sets, electric power, photovoltaic energy and electrical automobile parts.

The company has passed the CCS (China Classification Society) quality management system certification, ISO9001 quality system certification, ISO14001 environmental management system certification, IATF16949 quality system certification, energy system management certification and CQC, ECM, EAC and other product certificates. The company has been awarded as "Provincial Science and Technology SME", "Provincial Quality Credit AAA Grade Enterprise", "Provincial Credit AAA Grade Enterprise", "Contract-keeping and Trustworthy Enterprise", "Provincial environmental-friendly Enterprise", "National Intellectual Property Advantage Enterprise", "National Specialized Little Giant Enterprise".

The company has joined forces with ABB, Schneider, and Siemens Busbar to jointly produce and cooperate in the operation of various electrical products in domestic and foreign markets. The company specializes in the manufacture of energy storage box substations, high/ low voltage distribution cabinets, intelligent circuit breakers, fully insulated tubular busbars, fire-resistant cast busbars (3 hours), flexible wind power tubular busbars, lighting busbars, dense busway, IP68 waterproof and anticorrosion busway, composite glass fibre reinforced plastic (FRP) tray, fire-resistant cable tray, one-time roll-forming annular rib energy-saving and high-strength cable tray, photovoltaic bracket, corridor bracket, seismic bracket, electrical automotive components, etc. The company has a provincial post-doctoral innovation practice base, and a provincial engineering technology centre, many products have won the national and provincial high-tech product identification, with completely independent intellectual property rights. Especially the insulated pipe busbar and cast waterproof busbar produced by the company are the largest production scale in China, with a complete product series and the leading patent technology at home and abroad, enjoying high brand awareness and market share in the field of industrial control, power supply and distribution.

The company's advanced innovative technology, excellent quality and marketing service network throughout the country's major cities, the achievements of the "Shihlin Electric" brand, ensure that the "Shihlin products" and "Shihlin services" in the industry market leader position. Shihlin's products have been widely used in world-renowned large-scale projects in China, such as the Shanghai World Expo, Nanjing Youth Olympic Games, Tianwan Nuclear Power Station, etc. Shihlin's customers are worldwide, such as the national power grid, rail transport, power generation system, petrochemical industry, shipbuilding and offshore, photovoltaic energy, mining, automotive and governmental projects, etc., and have won unanimous praise.

Shihlin Electric always adheres to the corporate philosophy of "professionalism, quality and win-win", gathers domestic and foreign elites and talents, takes the road of independent innovation and development, realises the double enhancement of Shihlin's electrical engineering technology and professional service, and achieves the development of Shihlin's products from "Made in Shihlin" to "Created in Shihlin". to show their comprehensive strength and high-end level in the Chinese electrical industry.

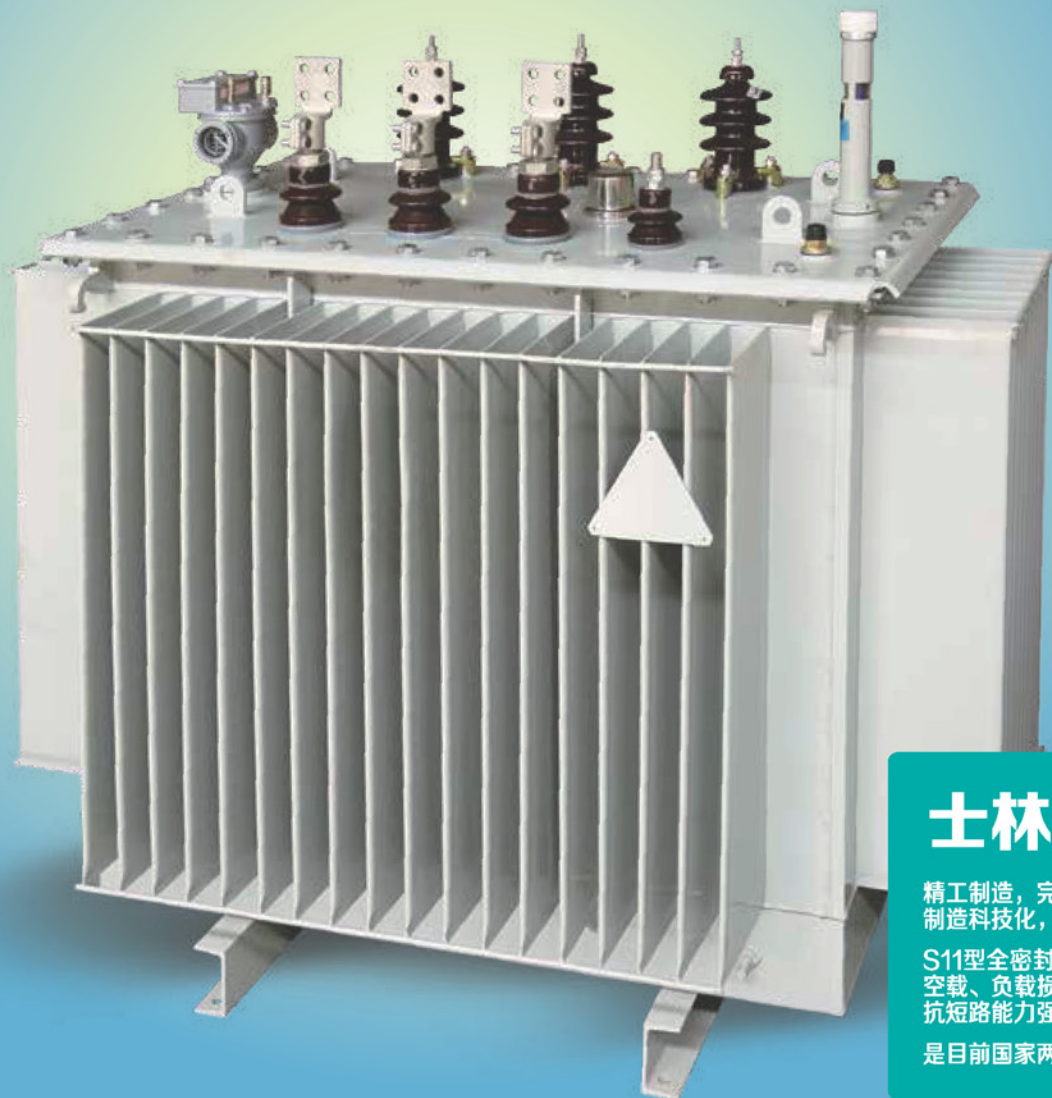
The company welcomes design institutes, users and social elites who care and support the development of Shihlin, hand in hand to commit to the development and prosperity of China's electrical industry.

# 【安全可靠 / 节能环保】

Safe and reliable / environmental protecting and energy saving

## S11型油浸式电力变压器

S11 series oil-immersed power transformer



### 士林变压器

精工制造，完备的产业链条；  
制造科技化，管理科学化；

S11型全密封油浸式电力变压器，  
空载、负载损耗低，耐雷电冲击，  
抗短路能力强，节能效果显著。

是目前国家两网改造的理想选择！

#### ■ 产品概述

本公司研发生产的S11-M系列全密封油浸式电力变压器具有低损耗、低噪音、高效率的优点，可取得良好的节能效果并减少污染。全密封式变压器与普通油浸式变压器相比，取消了储油柜，油体积的变化由波纹油箱的波纹片的弹性来自动调节补偿，变压器与空气隔绝，防止和减缓油的劣化和绝缘老化，增强运行可靠性，正常运行免维护。

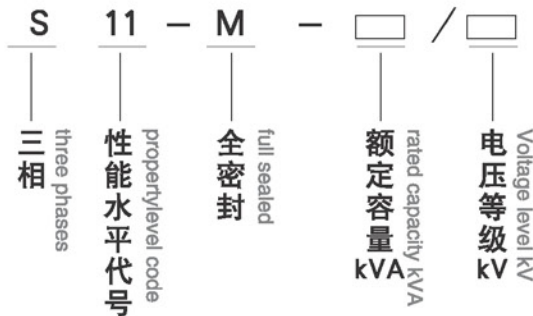
#### ■ Product overview

S11-M series sealed oil-immersed transformer equipment which is developed by our company has advantages of low loss, low noise and high efficiency, and is able to achieve good energy saving effect and reduce pollution. Compared with ordinary oil-immersed transformer, fully sealed transformer cancels oil reservoir. The change of oil volume is automatically compensated by elasticity of corrugated plate in corrugated fuel tank. Transformer is isolated from air to prevent and reduce oil deterioration and insulation aging, enhance operation reliability. Normal operation is free from maintenance.

## 11 type oil-immersed power transformer

Environment protection and energy conservation, safe and reliable. It's your reliable choice!  
It's an Ideal equipment for urban, rural and plant power distribution network center.

### 型号含义 Type meaning



### 产品特点

1. 变压器铁心采用进口优质冷轧硅钢片叠积而成，大大降低空载损耗和空载电流，并对铁心进行绑扎，保证铁心的紧实度，降低噪音。
2. 高低压绕组用无氧铜绕制，低压绕组500kVA及以下采用双层圆筒式结构，630kVA及以上采用双螺旋或四螺旋结构，高压绕组采用多层圆筒式结构。
3. 变压器联结组采用Dyn11，减少谐波对电网的影响，改善供电质量。
4. 变压器为全密封结构，延长使用寿命，免吊心，免维修。
5. 实测噪音值低于标准。

本系列变压器经正常运输后，不需作吊心检查，即可安装有关的零部件，进行验收项目试验，合格后即可投入运行。

### Product features

- 1, Transformer core is made of stacked imported high-quality cold-rolled silicon steel sheets. This has reduced the no-load loss and current greatly and conduct bind for iron core, is able to ensure the compactness of iron core and reduce noises.
- 2, High and low voltage winding is made of oxygen-free copper. Low-voltage winding 500kVA and below adopts double-cylinder structure; 630kVA and above adopt double-helix or four-spiral structure; high-voltage winding adopts multi-layer cylindrical structure.
- 3, Transformer connection group adopts Dyn11 to reduce effect of harmonics on network and improve power-supply quality.
- 4, Transformer is full sealed structure which can prolong service life, and avoid hanging core and maintenance.
- 5, Measured noise value is lower than standard.

This series transformers needn't to do hanging center inspection after normal operation, namely, it is able to install related components. Conduct verification test, if qualified, it can be put into operation.

### S11型10KV双绕组系列主要产品性能参数:

S11type 10kV double winding series main product property parameters

型号 Type	额定容量 Rated capacity (KVA)	联结组标号 Connection group grade	电压组合 Voltage combination (KV)			空载损耗 No-load loss (W)	负载损耗 (W) Load Loss (W) Dy/Yy	空载电流(%) No-load current(%)	短路阻抗(%) Short-circuit resistance(%)
			高压 High voltage	分接范围 Tapping range	低压 Low voltage				
S11-M-30	30	Yyn0 or Dyn11	6 6.3 10 10.5 11	±5% or ±2×2.5%	0.4	100	630/600	2.3	4.0
S11-M-50	50					130	910/870	2.0	4.0
S11-M-63	63					150	1090/1040	1.9	4.0
S11-M-80	80					180	1310/1250	1.9	4.0
S11-M-100	100					200	1580/1500	1.8	4.0
S11-M-125	125					240	1890/1800	1.7	4.0
S11-M-160	160					280	2310/2200	1.6	4.0
S11-M-200	200					340	2730/2600	1.5	4.0
S11-M-250	250					400	3200/3050	1.4	4.0
S11-M-315	315					480	3830/3650	1.4	4.0
S11-M-400	400					570	4520/4300	1.3	4.0
S11-M-500	500					680	5410/5100	1.2	4.0
S11-M-630	630					810	6200	1.1	4.5
S11-M-800	800					980	7500	1.0	4.5
S11-M-1000	1000					1150	10300	1.0	4.5
S11-M-1250	1250					1360	12800	0.9	4.5
S11-M-1600	1600					1640	14500	0.8	4.5
S11-M-2000	2000					2280	17820	0.6	5.0
S11-M-2500	2500					2700	20700	0.6	5.0

注：表中斜线左方的负载损耗值适用于Dyn11或Yzn11联结组，斜线右方的负载损耗适用于Yyn0。

Note: the load loss above slash in the table applies to Dyn11 or Yzn11 connection group, and the load loss below the slash applies to Yyn0.

【安全可靠 / 节能环保】

## S13型油浸式电力变压器

S13 series oil-immersed power transformer

城市和农村广大配电网中心理想的配电设备  
Ideal electricity distribution equipment for urban and rural distribution network center.

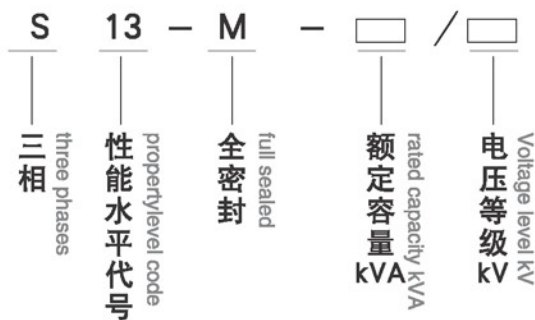


## 13 type oil-immersed power transformer

节能环保 安全可靠 您的信赖之选!

Environment protection and energy conservation, safe and reliable. It's your reliable choice!

### 型号含义 Type meaning



### 产品概述

S13型是我公司在原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，通过对铁心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。自主开发的产品。

空载损耗平均下降了37%。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。

### Product overview

S13 type is one independently developed product of our company which is based on S11 type transformer, and developed through research and application of new material and new technology, and by manner of independently innovation and technology introduction. It optimizes and designs iron core and winding structure and achieve the target of reducing no-load loss and noise.

The no-load loss decreases 37% by an average. Noise level decreases 20% comparing to current national standard JB/T 10088-2004. Product properties has reached domestic advanced level.

### S13型10KV双绕组系列主要产品性能参数:

S13 type 10kV double winding series main product property parameters

型号 Type	额定容量 Rated capacity (KVA)	联结组别号 Connection group grade	电压组合 Voltage combination (KV)			空载损耗 No-load loss (W)	负载损耗 (W) Load Loss (W)		空载电流(%) No-load current(%)	短路阻抗(%) Short-circuit resistance(%)
			高压 High voltage	分接范围 Tapping range	低压 Low voltage		Dy	Yy		
S13-M-30	30	Yyn0 or Dyn11	10 6.3 6	± 5% ± 2 × 2.5%	0.4	80	630	600	2.3	4.0
S13-M-50	50					100	910	870	2.0	
S13-M-63	63					110	1090	1040	1.9	
S13-M-80	80					130	1310	1250	1.9	
S13-M-100	100					150	1580	1500	1.8	
S13-M-125	125					170	1890	1800	1.7	
S13-M-160	160					200	2310	2200	1.6	
S13-M-200	200					240	2730	2600	1.5	
S13-M-250	250					290	3200	3050	1.4	
S13-M-315	315					340	3830	3650	1.4	
S13-M-400	400					410	4520	4300	1.3	
S13-M-500	500					480	5410	5150	1.2	
S13-M-630	630					570	6200	6200	1.1	
S13-M-800	800					700	7500	7500	1.0	
S13-M-1000	1000					830	10300	10300	1.0	
S13-M-1250	1250					970	12000	12000	0.9	
S13-M-1600	1600					1170	14500	14500	0.8	
S13-M-2000	2000					1510	17800	17800	0.8	
S13-M-2500	2500					1780	20700	20700	0.7	
S13-M-3150	3150					2100	24300	24300	0.7	
按客户需求 According to customers' requirements										

【安全可靠 / 节能环保】

## S20型能效二级油浸式变压器

S20 energy efficiency two-stage oil-immersed transformer

城市和农村广大配电网中心理想的配电设备

Ideal electricity distribution equipment for urban and rural distribution network center.

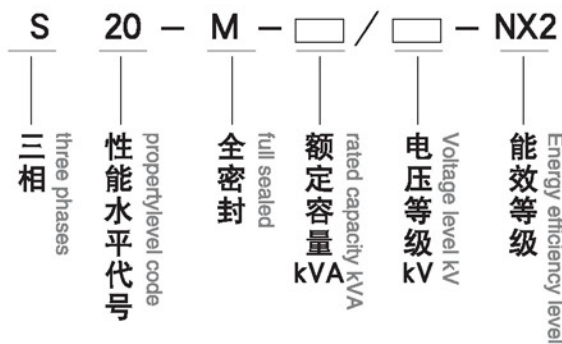


## S20 energy efficiency two-stage oil-immersed transformer

节能环保 安全可靠 您的信赖之选!

Environment protection and energy conservation, safe and reliable. It's your reliable choice!

### 型号含义 Type meaning



### 产品概述

GB20052-2020标准节能型产品能效二级油浸式变床器是我公司通过新材料、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新设计，达到降低空载损耗及噪音的目的，自主开发的产品。

噪声水平与现行国标JB/T10088-2016比较平均下降20%，产品性能水平达到国内先进水平。

### Product overview

GB20052-2020 standard energy-saving product energy-efficiency two-stage oil-immersed bed transformer is a product independently developed by our company through the combination of research and application of new materials and new technology, independent innovation and technology introduction, and through the optimization and innovation of new design of iron core and coil structure to achieve the purpose of reducing no-load loss and noise.

Compared with the current national standard JB/T10088-2016, the noise level decreases by an average of 20%, and the product performance level reaches the domestic advanced level.

### S20型10KV双绕组系列主要产品性能参数:

S20 type 10kV double winding series main product property parameters

型号 Type	额定容量 Rated capacity (KVA)	联结组标号 Connection group grade	电压组合 Voltage combination (KV)			空载损耗 No-load loss (W)	负载损耗 (W) Load Loss (W)		短路阻抗(%) Short-circuit resistance(%)
			高压 High voltage	分接范围 Tapping range	低压 Low voltage		Dy	Yy	
S20-M-30	30	Yyn0 Dyn11	10 6.3 6	±5% ±2×2.5%	0.4	70	505	480	4
S20-M-50	50					90	730	695	
S20-M-63	63					100	870	830	
S20-M-80	80					115	1050	1000	
S20-M-100	100					135	1265	1200	
S20-M-125	125					150	1510	1440	
S20-M-160	160					180	1850	1760	
S20-M-200	200					215	2185	2080	
S20-M-250	250					260	2560	2440	
S20-M-315	315					305	3065	2920	
S20-M-400	400					370	3615	3440	
S20-M-500	500					430	4330	4120	
S20-M-630	630					510	4960		
S20-M-800	800					630	6000		
S20-M-1000	1000					745	8240		
S20-M-1250	1250					870	9600		
S20-M-1600	1600					1050	11600		
S20-M-2000	2000					1225	14640		
S20-M-2500	2500					1440	14840		

## S22型能效一级油浸式变压器

S22 type energy efficiency primary oil immersed transformer

城市和农村广大配电网中心理想的配电设备

Ideal electricity distribution equipment for urban and rural distribution network center.

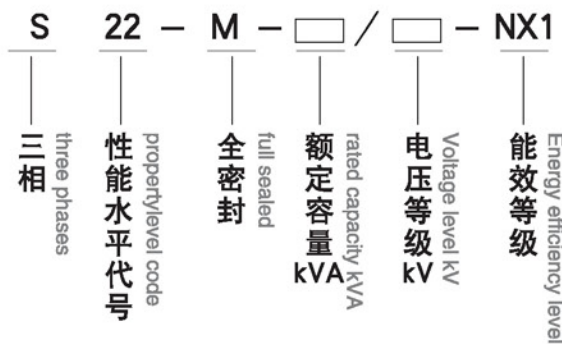


## S22 type energy efficiency primary oil immersed transformer

优化创新新设计，更节能 更环保

Environment protection and energy conservation, safe and reliable. It's your reliable choice!

### 型号含义 Type meaning



### 产品概述

GB20052-2020标准节能型产品能效二级油浸式变压器是我公司通过新材料、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新设计，达到降低空载损耗及噪音的目的，自主开发的产品。

噪声水平与现行国标JB/T10088-2016比较平均下降20%，产品性能水平达到国内先进水平。相较于能效二级产品，能效一级产品损耗更低。

### Product overview

GB20052-2020 standard energy-saving product energy-efficiency two-stage oil-immersed bed transformer is a product independently developed by our company through the combination of research and application of new materials and new technology, independent innovation and technology introduction, and through the optimization and innovation of new design of iron core and coil structure to achieve the purpose of reducing no-load loss and noise.

Compared with the current national standard JB/T10088-2016, the noise level decreases by an average of 20%, and the product performance level reaches the domestic advanced level. Compared with the second-level energy efficiency products, the first-level energy efficiency products have lower losses.

### S22型10KV双绕组系列主要产品性能参数:

S20 type 10kV double winding series main product property parameters

型号 Type	额定容量 Rated capacity (KVA)	联结组标号 Connection group grade	电压组合 Voltage combination (KV)			空载损耗 No-load loss (W)	负载损耗 (W) Load Loss (W)		短路阻抗(% Short-circuit resistance(%))
			高压 High voltage	分接范围 Tapping range	低压 Low voltage		Dy	Yy	
S20-M-30	30	Yyn0 Dyn11	10 6.3 6	±5% ±2×2.5%	0.4	65	455	430	4
S20-M-50	50					80	655	625	
S20-M-63	63					90	785	745	
S20-M-80	80					105	945	900	
S20-M-100	100					120	1140	1080	
S20-M-125	125					135	1360	1295	
S20-M-160	160					160	1665	1585	
S20-M-200	200					190	1970	1870	
S20-M-250	250					230	2300	2195	
S20-M-315	315					270	2760	2630	
S20-M-400	400					330	3250	3095	
S20-M-500	500					385	3900	3710	
S20-M-630	630					460	4460		
S20-M-800	800					560	5400		
S20-M-1000	1000					665	7415		
S20-M-1250	1250					780	8640		
S20-M-1600	1600					940	10440		
S20-M-2000	2000					1085	13180		
S20-M-2500	2500					1280	13360		
								5	

【安全可靠 / 节能环保】

# S13立体卷铁心油浸式变压器

S13 type oil-immersed power transformer

**国家级PCCC节能认证产品**



节能环保高性能  
全新上市  
**New!**

## S13 type oil-immersed power transformer

更低损耗 更低噪音 更高机械强度

是工厂、农村和城市输电网络中心的理想设备

### 型号含义/Type meaning



### 产品特点：(与传统叠铁心变压器相比)

**低损耗:** 由于立体卷铁心油浸式变压器具有无缝磁阻小、角部磁路与硅钢片导磁方向一致、卷绕紧密填充系数高、铁心重量轻等特点。它与传统叠铁心油浸式变压器相比，空载损耗Po可降低18%~28%。空载电流Io下降50%~60%。节能效果显著，运行经济。

**低噪音:** 立体卷铁心油浸式变压器的噪声水平比叠铁心油浸式变压器低5~10分贝。是十分理想的静音产品。

**高机械强度:** 立体卷铁心都采用正圆形的铁心截面，抗短路能力比长圆截面好。并且垫块覆盖率高，紧固效果好，极大地提高了产品的抗短路能力。

### Product features

**Low loss:** as three-dimensional roll iron oil-immersed transformer with seamless magnetoresistance, corner magnetic circuit and silicon steel magnetic direction are same, winding compacting filling coefficient is high, iron core weight is light many and other features. Compared with traditional stacked iron core oil-immersed transformers, the no-load loss rate can be reduced by 18%~28%. No-load current reduces 50%~60%. Energy saving effect is remarkable, and running is economic.

**Low noise:** three-dimensional roll iron core oil-immersed transformer noise is 5-10dB lower than stacked iron core oil-immersed transformer. It's an ideal mute product.

**High mechanical strength:** three-dimensional roll iron core adopts circle iron section which has better anti-short circuit capacity than long circle section. And has higher pad covering rate and good fixing effect. It has improved product anti-short circuit capability.

### S13型10KV双绕组系列主要产品性能参数:

S13 type 10kV duplex winding series main product property parameters

型号 Type	额定容量 Rated capacity (KVA)	联结组标号 Connection group grade	电压组合 Voltage combination (KV)			空载损耗 No-load loss (W)	负载损耗 (W) Load Loss (W)		空载电流(%) No-load current(%)	短路阻抗(%) Short-circuit resistance(%)
			高压 High voltage	分接范围 Tapping range	低压 Low voltage		Dy	Yy		
S13-M.RL-30	30	Yyn0 或 Dyn11	10 6.3 6	±5% ±2×2.5%	0.4	80	630	600	2.3	4
S13-M.RL-50	50					100	910	870	2	
S13-M.RL-80	80					130	1310	1250	1.9	
S13-M.RL-100	100					150	1580	1500	1.8	
S13-M.RL-125	125					170	1890	1800	1.7	
S13-M.RL-160	160					200	2310	2200	1.6	
S13-M.RL-200	200					240	2730	2600	1.5	
S13-M.RL-250	250					290	3200	3050	1.4	
S13-M.RL-315	315					340	3830	3650	1.4	
S13-M.RL-400	400					410	4520	4300	1.3	
S13-M.RL-500	500					480	5410	5150	1.2	
S13-M.RL-630	630					570	6200	6200	1.1	
S13-M.RL-800	800					700	7500	7500	1	
S13-M.RL-1000	1000					830	10300	10300	1	
S13-M.RL-1250	1250					970	12000	12000	0.9	
S13-M.RL-1600	1600					1170	14500	14500	0.8	
S13-M.RL-2000	2000					1510	17800	17800	0.8	
S13-M.RL-2500	2500					1780	20700	20700	0.7	
S13-M.RL-3150	3150					2100	24300	24300	0.7	

节能降耗更环保  
运行可靠高性能

Energy saving, environmental protection  
Operation reliable, high-quality property

# 35kV级电力变压器

## 35kV power transformer



### ■ 型号含义 Model meaning

S	□	□	□	—	□	□
—	—	—	—	—	—	—
三相 three phases	"F"为风冷 self-cooling has no code F is air cooling	"Z"为有载调压 no code Z is load voltage regulation non-excitation voltage regulation has no code	性能水平代号 property/level code	—	额定容量 kVA Rated capacity kVA	电压等级 kV Rated voltage kV

### ■ 产品概述

该系列产品在设计上比较先进，在材料、结构和工艺上进行了大幅度的改进和提高。高低压夹件采用钢拉带或上梁及侧梁拉紧，形成坚固的框架结构，增强铁芯夹紧力和耐受运输冲击能力。抗短路能力强，外观造型美观，运行可靠，损耗低，噪音小，达到国外同类产品先进水平。本公司生产的SZ11-8000 / 35变压器样机一次性通过国家变压器检测中心进行的突发短路试验，高低压线圈设纵向油道有利于散热，可大幅度降低铜油温差及线圈内部的最热点温升。

This series of products is advance on design, and has a substantial improvement in material, structure and technology. High and low voltage clamps adopt steel strap or up beam or side beam for tightening, and form a firm frame structure, are able to enhance iron core clamping force and tolerance to transport impact. It has strong anti-short circuit ability, beautiful appearance, reliable operation, low loss, low noise and has achieved advance level of similar foreign products. The SZ11-8000/35 transformer produced by our company has passed through the burst short-circuit test conducted by National Transformer Testing Center. High and low voltage coil has longitudinal oil tunnel for heat dissipation and can reduce copper oil temperature difference and coil internal highest temperature rising significantly.

# 35kV power transformer

造型美观 工艺先进 运行可靠

是工厂、农村和城市输电网络中心的理想设备

## 800KVA~31500KVA三相双绕组无励磁调压电力变压器：

800KVA~31500KVA three-phase duplex winding power transformer of no-excitation voltage regulation:

型号 Type	额定容量 Rated capacity (KVA)	联结组标号 Connection group grade	电压组合 Voltage combination (KV)			负载损耗 (W) Load Loss (W)		空载电流(%) No-load current(%)	短路阻抗(%) Short-circuit resistance(%)
			高压 High voltage	分接范围 Tapping range	低压 Low voltage	Dy	Yy		
S11-630	630	Yd11	35	± 5%	3.15 6.3 10.5	830	7870	1.10	6.5
S11-800	800					980	9410	1.00	
S11-1000	1000					1150	11540	1.00	
S11-1250	1250					1410	13940	0.90	
S11-1600	1600					1700	16670	0.80	
S11-2000	2000					2180	18380	0.70	
S11-2500	2500					2560	19670	0.60	
S11-3150	3150					3040	23090	0.56	
S11-4000	4000					3620	27360	0.56	
S11-5000	5000					4320	31380	0.48	
S11-6300	6300	YNd11	35 ~ 38.5	± 5% or ± 2 × 2.5%	3.15 6.3 10.5 3.15 3.3 6.3 6.6 10.5 11	5250	35060	0.48	7.0
S11-8000	8000					7200	38500	0.42	
S11-10000	10000					8700	45300	0.42	
S11-12500	12500					10080	53900	0.40	
S11-16000	16000					12160	65800	0.40	
S11-20000	20000					14400	79500	0.40	
S11-25000	25000					17020	94100	0.32	
S11-31500	31500					20220	112900	0.32	

注1：额定容量为6300KVA及以下的变压器，可提供高压分接范围为±2×2.5%的产品。

注2：低于低压电压为10.5KV和11KV的变压器，可提供联结组标号为Dyn11的产品。

注3：额定容量为3150KVA及以上的变压器，-5%分接位置为最大电流分接。

Note 1: transformer with 6300KVA or less rated capacity can provide products whose high-voltage tapping range is ±2×2.5%.

Note 2: 10.5KV and 11KV transformer lower than low voltage can provide products with connection symbol of Dyn11.

Note 3: transformer with 3150KVA or more rated capacity has the greatest tapping current on -5% tapping position.

## 2000KVA~20000KVA三相双绕组有载调压电力变压器

2000KVA~20000KVA three-phase duplex winding power transformer of on-load voltage regulation

型号 Type	额定容量 Rated capacity (KVA)	联结组标号 Connection group grade	电压组合 Voltage combination (KV)			空载损耗 No-load loss	负载损耗 (W) Load Loss (W)	空载电流(%) No-load current(%)	短路阻抗(%) Short-circuit resistance(%)		
			高压 High voltage	分接范围 Tapping range	低压 Low voltage						
SZ11-2000	2000	Yd11	35	± 3 × 2.5%	6.3	2300	19240	0.80	6.5		
SZ11-2500	2500				10.5	2720	20640	0.80			
SZ11-3150	3150				35 ~ 38.5	± 3 × 2.5%	6.3	3230		24710	0.72
SZ11-4000	4000						10.5	3870		29160	0.72
SZ11-5000	5000						4640	34200		0.68	
SZ11-6300	6300						5630	36800		0.68	
SZ11-8000	8000	YNd11	35 ~ 38.5	± 3 × 2.5%	6.3	7870	40600	0.60	7.5		
SZ11-10000	10000				6.6	9280	48100	0.60			
SZ11-12500	12500				10.5	10940	56900	0.56			
SZ11-16000	16000				13170	70300	0.54				
SZ11-20000	20000				11	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。

注2：最大电流分接为-7.5%分接位置。

Note 1: 10.5KV and 11KV transformer lower than low voltage can provide products with connection symbol of Dyn11.

Note 2: the greatest tapping current happens on -7.5% tapping position.

在分接级数和级电压不变的情况下，允许增加负分接级数，减少正分接级数，或增加正分接级数，减少负分接级数，如(35.5) × 2.5%；(35.5) × 2.5%等。

Under the circumstance that tapping step and voltage grade keep unchanged, negative tapping step is allowed to increase and positive tapping step is allowed to decrease, or positive tapping step is allowed to increase and negative tapping step is allowed to decrease. Such as (35.5) × 2.5% and (35.5) × 2.5%.

【安全可靠 / 节能环保】

# SH15型非晶合金变压器

SH15 type amorphous alloy transformer

国家级PCCC节能认证产品  
Tianhua transformer



More energy efficient,  
More environment friendly,  
More reliable

更节能、更环保  
更可靠

## SH15 type amorphous alloy transformer

环保节能 城乡电网改造最优选择!

Beautiful appearance, advance technology, reliable operation

Ideal electricity distribution equipment for urban, rural and plant distribution network center.

## ■ 型号含义 Type meaning



## ■ 产品概述

该产品是充油密封型。原理同密封型电力变压器。非晶合金的基础元素是铁、镍、钴、硅、硼、碳等组成。是一种向同性的软磁材料，磁化功率小，不存在阻碍畴壁移动的结构缺陷，厚度极薄，只有0.027mm，填充系数相应变小，只有0.75~0.8，电阻率很高，是硅钢板的3~6倍，硬度是硅钢片的5倍，非晶合金材料对应力特别敏感。

SH15-M-30~2500/6~10系产品，空载损耗在GB/T6541标准值基础上下降70%。执行标准GB/T25446-2010《油浸式非晶合金铁心配电变压器技术参数》。

## ■ Product overview

This product is oil-filled sealing type. The theory is the same with that of closed-type power transformer. The basic elements of amorphous alloy are iron, nickel, cobalt, silicon, boron, carbon and so on. It is a kind of isotropic soft magnetic material with low magnetic power and without structure defect which hinders the movement of domain wall. It is extremely thin, only 0.027mm. The filling coefficient is as smaller as 0.75-0.8, the specific resistance is high which is about 3-6 times of that of silicon steel plate and the hardness of it is 5 times of that of silicon steel sheet. Amorphous alloy materials are highly profitable. Load loss of SH15-M-30~2500/6~10 series products is decreased by 15% compared to the standard value set forth in GB/T 6451. The no-load loss is decreased by 70% compared to the standard value set forth in GB/T6541. The standard JB/T10318-2002 Technical Parameters of Oil-immersed Amorphous Alloy Core Distribution Transformers is executed.

## ■ SH15-M密封式非晶合金电力变压器 : SH15-M sealed amorphous alloy power transformer:

型号 Type	额定容量 Rated capacity (KVA)	联结组标号 Connection group grade	电压组合 Voltage combination (KV)			空载损耗 No-load loss	负载损耗 (W) Load Loss (W)	空载电流(%) No-load current(%)	短路阻抗(%) Short-circuit resistance(%)
			高压 High voltage	分接范围 Tapping range	低压 Low voltage				
SH15-M-30	30	Dyn11	6 6.3 10 10.5 11	±5% or ±2×2.5%	0.4	33	630/600	1.50	4.0
SH15-M-50	50					43	910/870	1.20	4.0
SH15-M-63	63					50	1090/1040	1.10	4.0
SH15-M-80	80					60	1310/1250	1.00	4.0
SH15-M-100	100					75	1580/1500	0.90	4.0
SH15-M-125	125					85	1890/1800	0.80	4.0
SH15-M-160	160					100	2310/2200	0.60	4.0
SH15-M-200	200					120	2730/2600	0.60	4.0
SH15-M-250	250					140	3200/3050	0.60	4.0
SH15-M-315	315					170	3830/3650	0.50	4.0
SH15-M-400	400					200	4520/4300	0.50	4.0
SH15-M-500	500					240	5140/5150	0.50	4.0
SH15-M-630	630					320	6200	0.30	4.5
SH15-M-800	800					380	7500	0.30	4.5
SH15-M-1000	1000					450	10300	0.30	4.5
SH15-M-1250	1250					530	12000	0.20	4.5
SH15-M-1600	1600					630	14500	0.20	4.5
SH15-M-2000	2000					750	18300	0.20	5.0
SH15-M-2500	2500					900	21200	0.20	5.0

注1: 当铁心为三相三柱时, 根据需要也可采用Yyn0联结组。

注2: 对于额定容量为500KVA及以下的三相变压器, 表中斜线左方的负载损耗值适用于Dyn11联结组, 斜线右方的负载损耗值适用于Yyn0联结组。

Note 1: when the core is three-phase three column, according to need can also be used Yyn0 group.

Note 2: for rated capacity of 500KVA and following the three-phase transformer, above the diagonal values of loss of load application in Dyn11 connection group, below the diagonal load loss value applicable to Yyn0 connected node.

# SC(B)10型干式变压器

## SC(B)10 dry-type transformer



节能环保、免维护、  
防火性能更好、  
无污染、安装方便!

### ■ 型号含义

S	C	B	10	-	□	/	□
—	—	—	—	—	—	—	—
三相	环氧树脂浇注型	低压箔式绕组	性能水平代号		额定容量 (kVA)		电压等级 (kV)
three phases	epoxy resin casting	low voltage foil winding	property level code		rated capacity kVA		voltage level kV

### ■ 产品概述

本公司生产的干式变压器其性能指标符合各项标准,经用户使用证明,运行可靠,达到国家先进水平。该系列产品采用国外先进的制造技术,设计图纸及技术文件齐全、正确、清晰,生产设备先进,制造工艺稳定,测定手段完备,为生产优质的产品提供了坚实的保障。

The performance indicators of dry-type transformers produced by our company conform to various standards. Transformers operate reliably through user's verification and has reached national advanced level. This series products adopts foreign advanced manufacturing technology. Design drawings and technical documents are completed, correct and clear. Manufacturing facilities are advanced. Manufacturing process is stable, measurement method is completed. All the above provide a solid guarantee for production of high-quality products.

### ■ SC(B)10型10KV系列主要性能参数:

Main performance parameters for SC (B) 10 10kV series:

型号 Type	额定容量 Rated capacity (KVA)	联结组标号 Connection group grade	电压组合 Voltage combination (KV)			空载损耗 No-load loss	负载损耗 (W) Load Loss (W)		空载电流(%) No-load current(%)	短路阻抗(%) Short-circuit resistance(%)
			高压 High voltage	分接范围 Tapping range	低压 Low voltage		PK120℃	PK145℃		
SC10-30	30	Yyn0 or Dyn11	10 6.3 6	$\pm 5\%$ $\pm 2 \times 2.5\%$ or $\pm 3$ $-1 \times 2.5\%$	0.4	190	710	760	2.0	4.0
SC10-50	50					270	1000	1070	2.0	
SC10-80	80					370	1380	1480	1.5	
SC10-100	100					400	1570	1690	1.5	
SC10-125	125					470	1850	1980	1.3	
SCB10-160	160					550	2130	2280	1.3	
SCB10-200	200					630	2530	2710	1.1	
SCB10-250	250					720	2760	2960	1.1	
SCB10-315	315					880	3470	3730	1.0	
SCB10-400	400					980	3990	4280	1.0	
SCB10-500	500					1160	4880	5230	1.0	
SCB10-630	630					1350	5880	6290	0.85	
SCB10-630	630					1300	5960	6400	0.85	
SCB10-800	800					1520	6960	7460	0.85	
SCB10-1000	1000					1770	8130	8760	0.85	
SCB10-1250	1250					2090	9690	10300	0.85	6.0
SCB10-1600	1600					2450	11700	12500	0.85	
SCB10-2000	2000					3050	14400	15500	0.7	
SCB10-2500	2500					3600	17100	18400	0.7	
SCB10-1600	1600					2450	12900	13900	0.85	8.0
SCB10-2000	2000					3050	15900	17100	0.7	
SCB10-2500	2500					3600	18800	20200	0.7	

### ■ SC(B)10型35KV无励磁调压电力变压器主要性能参数:

Main performance parameters for SC (B) 10 30-35KV voltage regulating power transformer without excitation

型号 Type	联结组标号 Connection group grade	电压组合 Voltage combination (KV)			空载损耗 No-load loss	负载损耗 (W) Load Loss (W)		空载电流(%) No-load current(%)	短路阻抗(%) Short-circuit resistance(%)
		高压 High voltage	分接范围 Tapping range	低压 Low voltage		PK120℃	PK145℃		
SC10-50	Dyn11 Yd11 Yyn0	35 ~ 38.5	$\pm 5\%$ $\pm 2 \times 2.5\%$	3.5 6 6.3 10 10.5 11	450	1420	1520	2.3	6.0
SC10-100					630	2090	2230	2.0	
SC10-160					790	2810	3000	1.5	
SC10-200					880	3320	3550	1.5	
SC10-250					990	3800	4060	1.3	
SC10-315					1170	4510	4820	1.3	
SC10-400					1370	5410	5790	1.1	
SC10-500					1620	6650	7110	1.1	
SC10-630					1860	7690	8230	1.0	
SC10-800					2160	9120	9760	1.0	
SC10-1000					2430	10400	11100	0.75	
SC10-1250					2830	12700	13600	0.75	
SC10-1600					3240	15400	16500	0.75	
SC10-2000	3820	18200	19500	0.75					
SC10-2500	4450	21800	23300	0.75					

### ■ 绝缘水平 Insulation level

电压等级 kV Voltage classes KV	最高运行电压kV(有效值) Maximum running voltage KV (effective value)	额定短时工频耐压kV(有效值)/1分钟 Rated short-time power frequency withstand voltage KV (effective value)/1 minute	额定雷电冲击耐受电压 kV (峰值) Rated lightning impulse withstand voltage kV (peak value)	
			全波 Full wave	截波 Clipped wave
0.4	0.46	5	75	85
10	12	35	75	
20	24	50	125	
35	42	70	170	

【安全可靠 / 节能环保】

# SC(B)12型干式变压器

SC(B)12 dry-type transformer

国家级PCCC节能认证产品  
Tianhua transformer



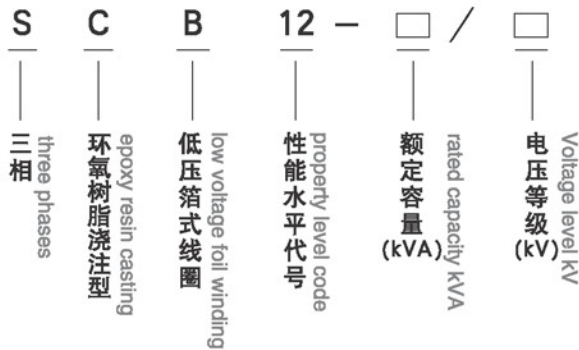
节能环保、免维护、  
防火性能更好、  
无污染、安装方便!

## SC(B)12 dry-type transformer

电站、工厂、医院、机场、隧道、化工厂、核电站最理想选择!

Ideal option for power station, plant, hospital, airport, tunnel, chemical plant, nuclear power plant.

### ■ 型号含义 Type meaning



### ■ 产品特点

**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, 可控制在5PC以下。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。

### ■ Product features

**Low loss:** the product no-load loss is 20% lower than the SC (B) 11 type product with an excellent energy saving effect, economic-efficient operation and without maintenance.

**Low noise:** the product noise level is 10-15 db lower than the existing professional standard JB/T10088-2004 Sound Level of 6-220KV Transformer

**Low partial discharge:** resin mixture adopts foreign leading-edge mixing method and film type vacuum deaerator to evenly mix the mixture and remove the bubble in the bottom part of mixture. The product has a low partial discharge which can be controlled at 5PC. Both high voltage and low voltage coils can be poured in vacuum pressure so as to enable a encapsulating of resin insulation and immersion among layers and inter-turns. The poured part has a compact solidity structure with anti-flaming, anti-explosion and environmental protection features.

Glass fiber and other raw materials of winding coil have self-extinguishing property and will not produce arc due to short circuit. Resin will not produce harmful gas under high temperature.

**Great mechanical strength:** resin with fillings can lower the differences of dilatation coefficient, cure shrinkage rate and internal stress as well as increase the hardness of condensate within the poured area. Precast and fashioned reinforcing materials are placed in the seal coat of epoxy resin which is painted on the inside and outside surface of high and low-voltage coil, making the structure as compact as the reinforced concrete so that the mechanical strength is greater than epoxy resin which can bear the electro-dynamic action caused by sudden short-circuit without damage.

### ■ SC(B)12型干式变压器主要性能参数 :

Main performance parameters for SC(B)12 10kV series:

型号 Type	额定容量 Rated capacity (KVA)	联结组标号 Connection group grade	电压组合 Voltage combination (KV)			空载损耗 No-load loss	负载损耗 (W) Load Loss (W)		空载电流(%) No-load current(%)	短路阻抗(%) Short-circuit resistance(%)
			高压 High voltage	分接范围 Tapping range	低压 Low voltage		PK120℃	PK145℃		
SC12-30	30	Yyn0 or Dyn11	10	± 5% or ± 2 × 2.5%	0.4	150	710	760	1.7	4.0
SC12-50	50					215	1000	1070	1.7	
SC12-80	80					295	1380	1480	1.28	
SC12-100	100					320	1570	1690	1.28	
SC12-125	125					375	1850	1980	1.11	
SC(B)12-160	160					430	2130	2280	1.11	
SC(B)12-200	200					495	2530	2710	0.94	
SC(B)12-250	250					575	2760	2960	0.94	
SC(B)12-315	315					705	3470	3730	0.85	
SC(B)12-400	400					785	3990	4280	0.85	
SC(B)13-500	500		930	4880	5230	0.85				
SC(B)12-630	630		1070	5880	6290	0.72				
SC(B)12-630	630		1040	5960	6400	0.72				
SC(B)12-800	800		1210	6960	7460	0.72				
SC(B)12-1000	1000		1410	8130	8760	0.72				
SC(B)12-1250	1250		1670	9690	10370	0.72				
SC(B)12-1600	1600		1960	11730	12580	0.72				
SC(B)12-2000	2000		2440	14450	15560	0.6				
SC(B)12-2500	2500		2880	17170	18450	0.6				

【安全可靠 / 节能环保】

SC(B)13型干式变压器  
SC(B)13 dry-type transformer

国家级PCCC节能认证产品  
Tianhua transformer



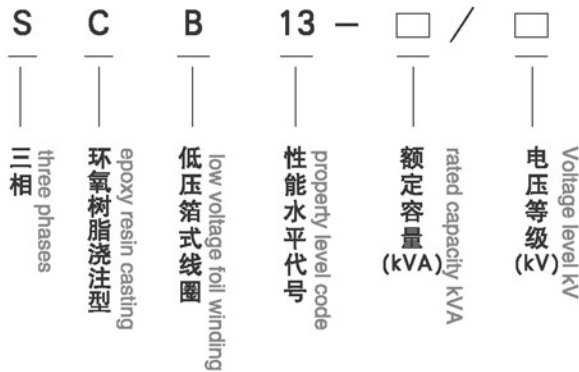
节能环保、免维护、  
防火性能更好、  
无污染、安装方便!

## SC(B)13 dry-type transformer

电站、工厂、医院、机场、隧道、化工厂、核电站最理想选择!

Ideal option for power station, plant, hospital, airport, tunnel, chemical plant, nuclear power plant.

### ■ 型号含义 Type meaning



### ■ 产品特点

**低损耗:** 产品空载损耗比SCB10型产品降低30%以上, 负载损耗比SCB11型产品降低10%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/T10088-2016《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, 可控制在5PC以下。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。

### ■ Product features

**Low loss:** the product no-load loss is 30% lower than the SC (B) 10 type product with an excellent energy saving effect, The load loss is more than 10% lower than that of SCB11 type. economic-efficient operation and without maintenance.

**Low noise:** the product noise level is 10-15 db lower than the existing professional standard JB/T10088-2016 Sound Level of 6-220KV Transformer

**Low partial discharge:** resin mixture adopts foreign leading-edge mixing method and film type vacuum deaerator to evenly mix the mixture and remove the bubble in the bottom part of mixture. The product has a low partial discharge which can be controlled at 5PC. Both high voltage and low voltage coils can be poured in vacuum pressure so as to enable a encapsulating of resin insulation and immersion among layers and inter-turns. The poured part has a compact solidity structure with anti-flaming, anti-explosion and environmental protection features.

Glass fiber and other raw materials of winding coil have self-extinguishing property and will not produce arc due to short circuit. Resin will not produce harmful gas under high temperature.

**Great mechanical strength:** resin with fillings can lower the differences of dilatation coefficient, cure shrinkage rate and internal stress as well as increase the hardness of condensate within the poured area. Precast and fashioned reinforcing materials are placed in the seal coat of epoxy resin which is painted on the inside and outside surface of high and low-voltage coil, making the structure as compact as the reinforced concrete so that the mechanical strength is greater than epoxy resin which can bear the electro-dynamic action caused by sudden short-circuit without damage.

### ■ SC(B)13型干式变压器主要性能参数 :

Main performance parameters for SC(B)13 10kV series:

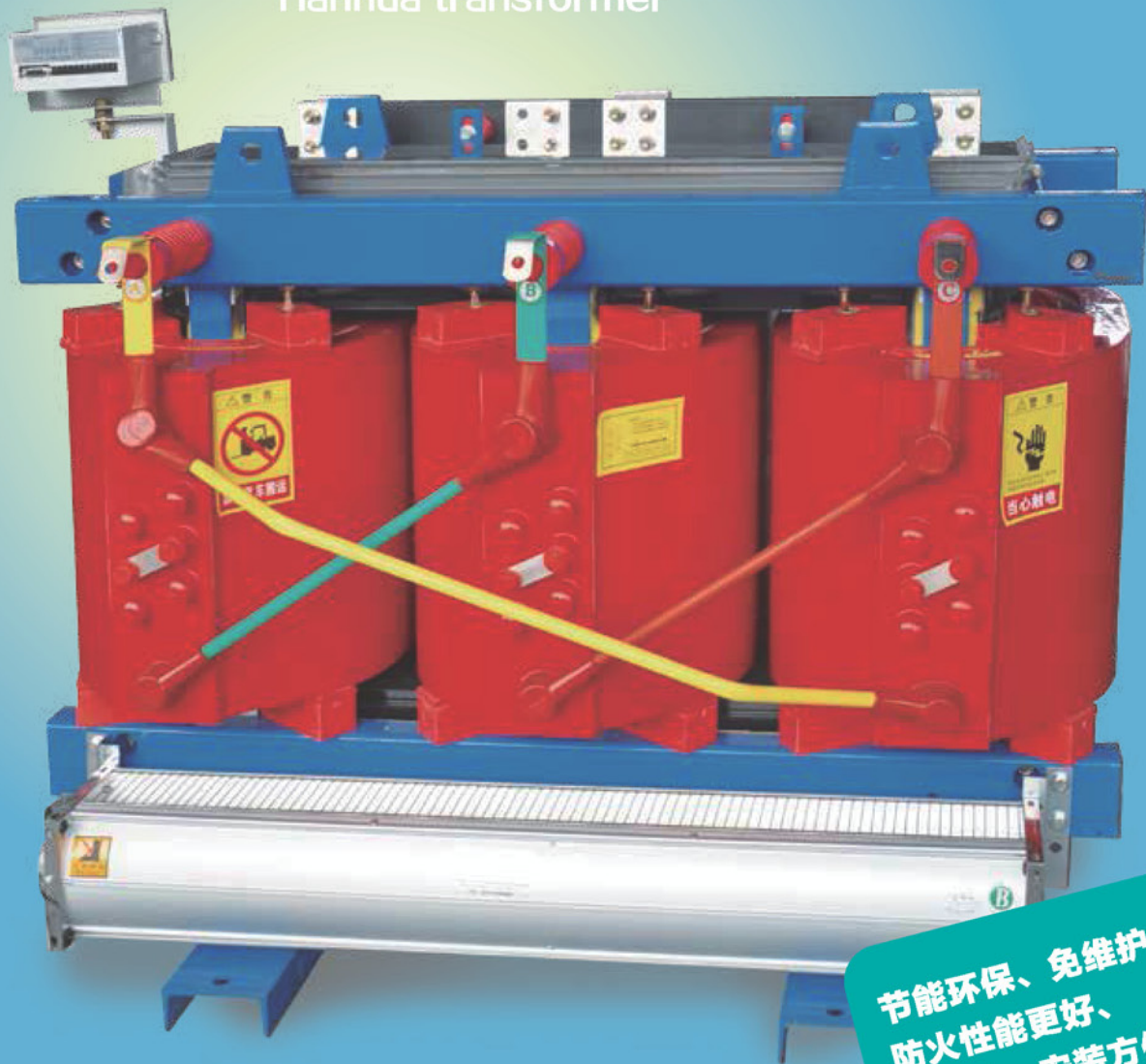
型号 Type	额定容量 Rated capacity (KVA)	联结组标号 Connection group grade	电压组合 Voltage combination (KV)			空载损耗 No-load loss	负载损耗 (W) Load Loss (W)		空载电流(%) No-load current(%)	短路阻抗(%) Short-circuit resistance(%)
			高压 High voltage	分接范围 Tapping range	低压 Low voltage		PK120℃	PK145℃		
SC13-30	30	Yyn0 or Dyn11	10 6.3 6	±5% ±2×2.5% or +3 -1×2.5%	0.4	135	640	685	1.7	4.0
SC13-50	50					195	900	965	1.7	
SC13-80	80					265	1240	1330	1.28	
SC13-100	100					290	1415	1520	1.28	
SC13-125	125					340	1665	1780	1.11	
SC(B)13-160	160					385	1915	2050	1.11	
SC(B)13-200	200					445	2275	2440	0.94	
SC(B)13-250	250					515	2485	2665	0.94	
SC(B)13-315	315					635	3125	3355	0.85	
SC(B)13-400	400					705	3590	3850	0.85	
SC(B)13-500	500		835	4390	4705	0.85				
SC(B)13-630	630		965	5290	5660	0.72				
SC(B)13-630	630		935	5365	5760	0.72				
SC(B)13-800	800		1095	6265	6715	0.72				
SC(B)13-1000	1000		1275	7315	7885	0.72				
SC(B)13-1250	1250		1505	8720	9335	0.72				
SC(B)13-1600	1600		1765	10555	11320	0.72				
SC(B)13-2000	2000		2195	13005	14005	0.6				
SC(B)13-2500	2500		2590	15455	16605	0.6				

## SCB14型能效二级干式变压器

SCB14 energy-efficiency two-stage  
dry-type transformer

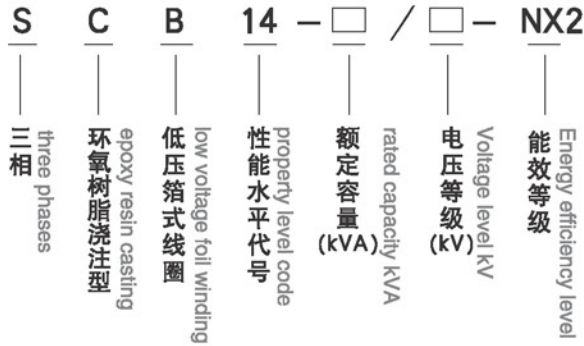
**国家级PCCC节能认证产品**

Tianhua transformer



节能环保、免维护、  
防火性能更好、  
无污染、安装方便！

■ 型号含义 Type meaning



■ 产品特点

- GB20052-2020标准节能型产品能效二级干式变压器具有抗短路能力强、维护工作量小、运行效率高、体积小、噪音低等优点，常用于防火、防爆等性能要求高的场所。安全，防火，无污染，可直接运行于高负荷用电；
- 采用国内先进技术，机械强度高，抗短路能力强，局部放电小，热稳定性好，可靠性高，使用寿命长；
- 低损耗，低噪音，节能效果明显，免维护；
- 散热性能好，过载能力强，强迫风冷状态下可短时超容量运行；
- 具有一定的防潮性能，可以在高湿度的恶劣环境下运行；
- 手式变压器可配备完善的温度检测和保护系统。采用智能信号温控系统，可自动检测和巡回显示三相绕组各自的工作温度，可自动启动、停止风机，并有报警、跳闸等功能设置；
- 体积小，重量轻，占地空间少，安装费用低。

■ Product features

GB20052-2020 standard energy-saving product energy-efficiency two-stage dry-type transformer has the advantages of strong short-circuit resistance, small maintenance workload, high operating efficiency, small size, low noise, and is often used in places with high performance requirements such as fire prevention and explosion protection. Safe, fireproof, pollution-free, and can be directly used for high load power consumption; Adopt domestic advanced technology, high mechanical strength, strong short-circuit resistance, small partial discharge, good thermal stability, high reliability and long service life:  
 Low loss, low noise, obvious energy-saving effect, maintenance-free;  
 Good heat dissipation performance, strong overload capacity, and short-term over-capacity operation under forced air cooling;  
 It has certain moisture-proof performance, and can operate in harsh environment with high humidity;  
 The hand transformer can be equipped with a complete temperature detection and protection system. Intelligent signal temperature control system is adopted, which can automatically detect and patrol display the working temperature of each three-phase winding, automatically start and stop the fan, and have alarm, trip and other function settings;  
 Small size, light weight, small floor space and low installation cost.

■ SCB14型能效二级干式变压器主要性能参数：

Main performance parameters of SCB14 energy efficiency secondary dry type transformer:

型号 Type	额定容量 Rated capacity (KVA)	联结组标号 Connection group grade	电压组合 Voltage combination (KV)			空载损耗 No-load loss	负载损耗 (W) Load Loss (W)		空载电流(%) No-load current(%)	短路阻抗(%) Short-circuit resistance(%)
			高压 High voltage	分接范围 Tapping range	低压 Low voltage		PK120℃	PK145℃		
SC14-30	30	Yyn0 or Dyn11	10 6.3 6	± 5% ± 2x2.5% ± 3或 -1 x2.5%	0.4	135	640	685	1.7	4.0
SC14-50	50					195	900	965	1.7	
SC14-80	80					265	1240	1330	1.28	
SC14-100	100					290	1415	1520	1.28	
SC14-125	125					340	1665	1780	1.11	
SC(B)14-160	160					385	1915	2050	1.11	
SC(B)14-200	200					445	2275	2440	0.94	
SC(B)14-250	250					515	2485	2665	0.94	
SC(B)14-315	315					635	3125	3355	0.85	
SC(B)14-400	400					705	3590	3850	0.85	
SC(B)14-500	500		835	4390	4705	0.85				
SC(B)14-630	630		965	5290	5660	0.72				
SC(B)14-630	630		935	5365	5760	0.72				
SC(B)14-800	800		1095	6265	6715	0.72				
SC(B)14-1000	1000		1275	7315	7885	0.72				
SC(B)14-1250	1250		1505	8720	9335	0.72				
SC(B)14-1600	1600		1765	10555	11320	0.72				
SC(B)14-2000	2000		2195	13005	14005	0.6				
SC(B)14-2500	2500		2590	15455	16605	0.6				
										6.0

# SCB18型能效一级干式变压器

SCB14 energy-efficiency two-stage  
dry-type transformer

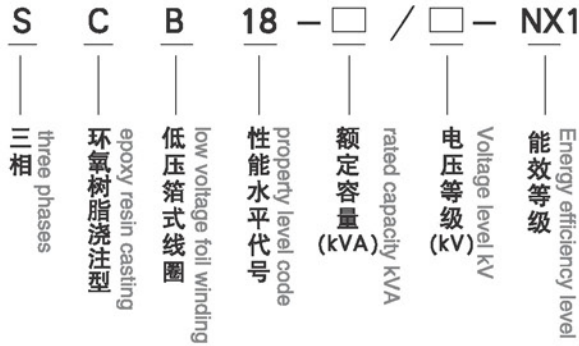
**国家级PCCC节能认证产品**

Tianhua transformer



节能环保、免维护、  
防火性能更好、  
无污染、安装方便!

■ 型号含义 Type meaning



■ 产品特点

- GB20052-2020标准节能型产品能效一级干式变压器具有抗短路能力强、维护工作量小、运行效率高、体积小、噪音低等优点，常用于防火、防爆等性能要求高的场所。安全，防火，无污染，可直接运行于高负荷用电；
- 采用国内先进技术，机械强度高，抗短路能力强，局部放电小，热稳定性好，可靠性高，使用寿命长。
- 低损耗，低噪音，节能效果明显，免维护；
- 散热性能好，过负载能力强，强迫风冷状态下可短时超容量运行；
- 具有一定的防潮性能，可以在高湿度的恶劣环境下运行；
- 干式变压器可配备完善的温度检测和保护系统。采用智能信号温控系统，可自动检测和巡回显示三相绕组各自的工作温度，可自动启动、停止风机，并有报警、跳闸等功能设置；
- 体积小，重量轻，占地空间少，安装费用低。

■ Product features

GB20052-2020 standard energy-saving product energy-efficiency two-stage dry-type transformer has the advantages of strong short-circuit resistance, small maintenance workload, high operating efficiency, small size, low noise, and is often used in places with high performance requirements such as fire prevention and explosion protection. Safe, fireproof, pollution-free, and can be directly used for high load power consumption; Adopt domestic advanced technology, high mechanical strength, strong short-circuit resistance, small partial discharge, good thermal stability, high reliability and long service life; Low loss, low noise, obvious energy-saving effect, maintenance-free; Good heat dissipation performance, strong overload capacity, and short-term over-capacity operation under forced air cooling; It has certain moisture-proof performance, and can operate in harsh environment with high humidity; The hand transformer can be equipped with a complete temperature detection and protection system. Intelligent signal temperature control system is adopted, which can automatically detect and patrol display the working temperature of each three-phase winding, automatically start and stop the fan, and have alarm, trip and other function settings; Small size, light weight, small floor space and low installation cost.

■ SCB18型能效一级干式变压器主要性能参数：

Main performance parameters of SCB18 energy efficiency primary dry type transformer:

型号 Type	额定容量 Rated capacity (KVA)	联结组标号 Connection group grade	电压组合 Voltage combination (KV)			空载损耗 No-load loss	负载损耗 (W) Load Loss (W)		空载电流(%) No-load current(%)	短路阻抗(%) Short-circuit resistance(%)
			高压 High voltage	分接范围 Tapping range	低压 Low voltage		PK120℃	PK145℃		
SC18-30	30	Yyn0 or Dyn11	10 6.3 6	± 5% ± 2x2.5% ± 3或 -1 x2.5%	0.4	105	640	685	1.7	4.0
SC18-50	50					155	900	965	1.7	
SC18-80	80					210	1240	1330	1.28	
SC18-100	100					230	1415	1520	1.28	
SC18-125	125					2740	1665	1780	1.11	
SC(B)18-160	160					310	1915	2050	1.11	
SC(B)18-200	200					360	2275	2440	0.94	
SC(B)18-250	250					415	2485	2665	0.94	
SC(B)18-315	315					510	3125	3355	0.85	
SC(B)18-400	400					570	3590	3850	0.85	
SC(B)18-500	500					670	4390	4705	0.85	
SC(B)18-630	630					775	5290	5660	0.72	
SC(B)18-630	630					720	5365	5760	0.72	
SC(B)18-800	800					875	6265	6715	0.72	
SC(B)18-1000	1000					1020	7315	7885	0.72	
SC(B)18-1250	1250					1205	8720	9335	0.72	
SC(B)18-1600	1600					1415	10555	11320	0.72	
SC(B)18-2000	2000					1760	13005	14005	0.6	
SC(B)18-2500	2500					2080	15455	16605	0.6	

# 【安全可靠 / 节能环保】

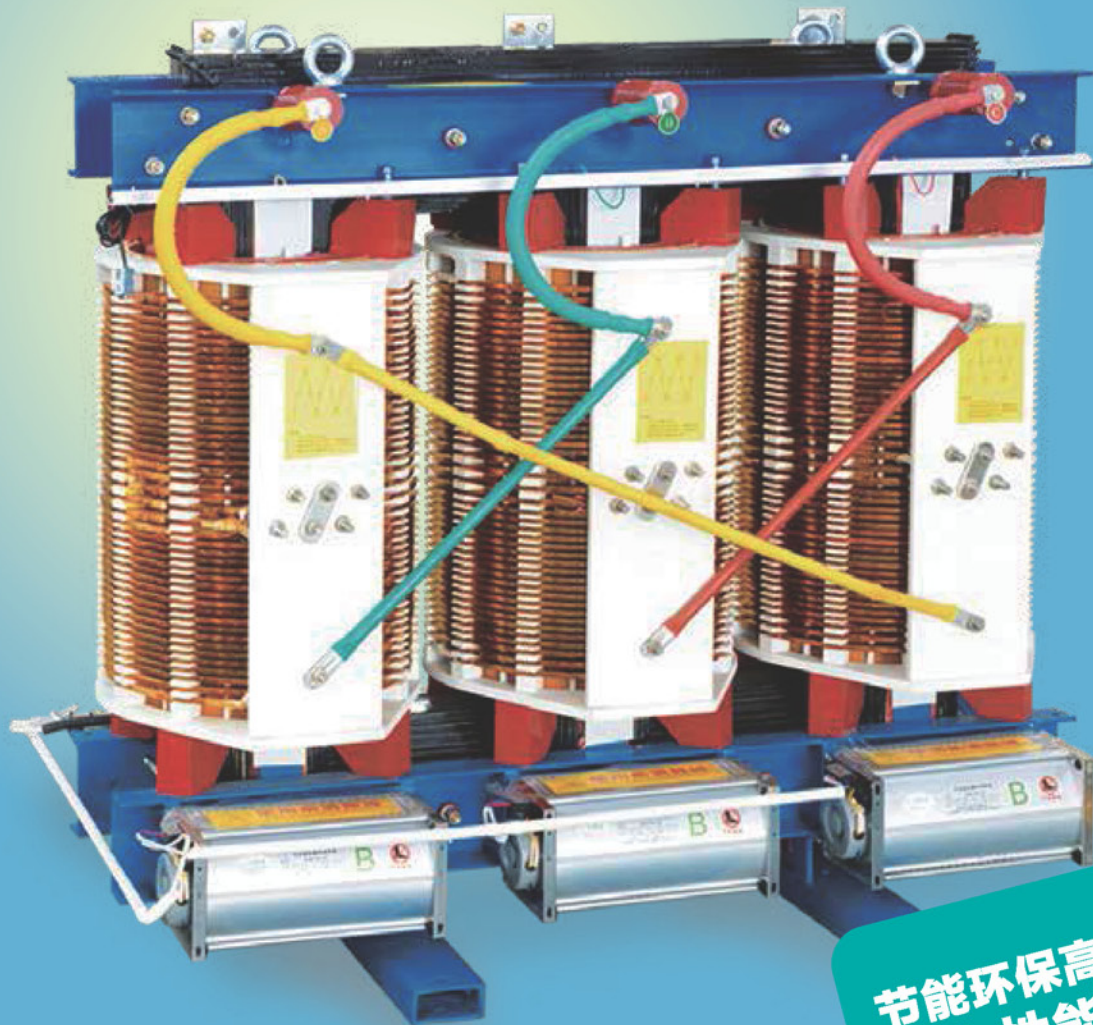
## SG(B)13系列非包封线圈

SC(B)13 series unwrapped winding

承受热冲击能力强、过负载能力大、防火性能高

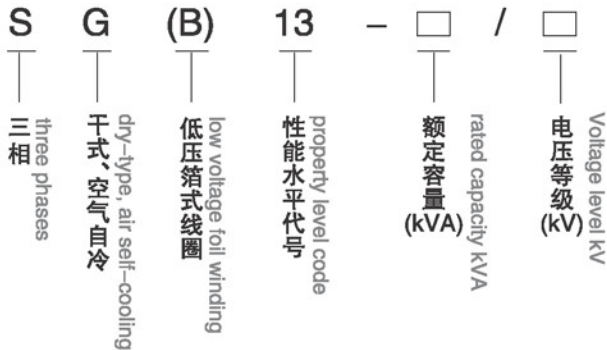
Strong ability to bear heat shock; strong over load capacity;

Strong fireproof ability.



节能环保高性能  
防火性能更高

### ■ 型号含义



### ■ 产品概述

采用美国UL认可的NOMEX绝缘系统生产的非包封线圈三相干式电力变压器，具有安全、可靠、节能、防火、防爆、维护简单等优点。其设计先进、结构合理、外形美观、主要性能指标均优于国内标准，如：局放水平、空载损耗、负载损耗、噪声以及能适应高湿度环境使用等，可安装在靠近湖、海、河边污秽潮湿的环境及防火要求高，负荷较大的地区，适用于高层建筑、机场、车站、码头、地铁、医院、电厂、冶金行业、购物中心、居民密集区以及石油化工、核电站、核潜艇等场所。

It adopts non-encapsulated coil three-phase dry-type power transformer produced by NOMEX insulation system approved by United States UL, which characterized by safety, reliability, energy saving, fire protection, anti-explosion, simple maintenance and so on. It boasts advances design, reasonable structure, good-looking appearance and main performance indexes which are superior to national standard, such as partial discharge level, no-load loss, load loss, noise and adaption to high-humidity atmosphere. It can be installed in dirty wet environment near lake, sea, river and in area with high fire protection requirements and large load, suitable for high-rise building, airport, station, wharf, metro, hospital, power plant, metallurgical industry, shopping center, residential concentration area and petroleum chemical industry, nuclear power plant, nuclear submarine and other places.

### ■ 产品特点

1. 精心设计的线圈结构及真空浸渍处理工艺使SG(B)10变压器无局部放电产生，并且在整个寿命期内，无任何龟裂现象，无绝缘水平下降现象。
2. 高压采用连续式绕组、低压箔绕，整体真空浸渍及固化处理并采用高强度陶瓷支撑，有很好的突发短路电流的承受能力。
3. 难燃、阻燃、无毒、自熄、防火。
4. 在高温明火燃烧下，SG(B)10变压器几乎无任何烟雾产生。
5. 变压器为H级(180℃)绝缘。
6. 绝缘层极薄且均匀。短时过负荷能力极强，无需强制冷却，可120%长期过负荷、140%过负荷3小时。由于这种绝缘材料不老化且有弹性，因此在±50℃条件下可立即加满载。

1. The well-designed coil structure and vacuum impregnation treatment process makes SG (B) 10 transformer free of partial discharge and free of fracturing or insulation level decline during the whole shelf life.
2. Continuous winding, low-voltage foil burning, overall vacuum impregnation and curing process, as well as support of high-strength ceramics are adopted for high voltage, which has good bearing capacity for sudden short-circuit current.
3. Nonflammable, flame retarded, nontoxic, self-extinguishing, fireproofing.
4. SG (B) 10 transformer almost produces zero smoke under high temperature and flaming conditions.
5. The transformer is of Class H (180℃) insulation.
6. The insulation layer is very thin and uniform. The short-term overload capacity is strong, forced cooling is unnecessary, 120% of long-term overload, and 140% of overload for 3 hours are possible. Since such insulating material is of anti-aging and flexible, full load immediately is possible under the condition of ±50℃.

### ■ 使用条件

1. 环境温度：-50℃~+50℃。
  2. 海拔高度：≤1000m。
  3. 其它超出本技术条件规定的内容，由用户与技术部协商处理，并在订货时注明。
1. Ambient temperature: -50℃ - +50℃.  
2. Altitude: ≤1000m.  
3. Users shall process together with the Technical Department through negotiation for other contents beyond those specified in the technical condition, and indicate during ordering.

### ■ SG(B)13系列非包封线圈三相式电力变压器：

SG (B) 10-series non-encapsulated coil three-phase dry-type power transformer:

型号及容量kVA Model and rated capacity (KVA)	A组 A group				B组 B group				短路抗阻% Short-circuit resistance(%)
	空载损耗 W No-load loss(W)	不同绝缘耐热等级下的负载损耗 (W) Load loss of different insulation heat resistance (W)			空载损耗 W No-load loss(W)	不同绝缘耐热等级下的负载损耗 (W) Load loss of different insulation heat resistance (W)			
		B(100℃)	F(120℃)	H(145℃)		B(100℃)	F(120℃)	H(145℃)	
SG(B)13-30	190	670	710	760	180	700	740	790	4.0
SG(B)13-50	270	940	1000	1070	250	1010	1060	1140	
SG(B)13-80	370	1290	1380	1480	330	1370	1470	1570	
SG(B)13-100	400	1480	1570	1690	360	1600	1690	1830	
SG(B)13-125	470	1740	1850	1980	420	1870	1980	2120	
SG(B)13-160	540	2000	2130	2280	490	2120	2320	2480	
SG(B)13-200	620	2370	2530	2710	580	2550	2690	2880	
SG(B)13-250	720	2590	2760	2960	660	2880	3070	3300	
SG(B)13-315	880	3270	3470	3730	780	3450	3690	3970	
SG(B)13-400	980	3750	3990	4280	890	4100	4350	4640	
SG(B)13-500	1160	4590	4880	5230	1040	4870	5160	5530	
SG(B)13-630	1340	5530	5880	6290	1200	5810	6140	6560	
SG(B)13-630	1300	5610	5960	6400	1160	5950	6330	6800	
SG(B)13-800	1520	6550	6960	7460	1370	6960	7380	7900	
SG(B)13-1000	1770	7650	8130	8760	1560	8250	8730	9420	
SG(B)13-1250	2090	9100	9690	10370	1810	9830	10390	11140	
SG(B)13-1600	2450	11050	11730	12580	2400	11990	12770	13650	
SG(B)13-2000	3050	13600	14450	15560	2700	14450	15300	16540	
SG(B)13-2500	3600	16150	17170	18450	3150	17380	18420	19720	
SG(B)13-1600	2450	12280	12960	13900	2400	12930	13720	14690	
SG(B)13-2000	3050	15020	15960	17110	2700	15770	16720	18060	
SG(B)13-2500	3600	17760	18890	20290	3150	18700	19840	21330	



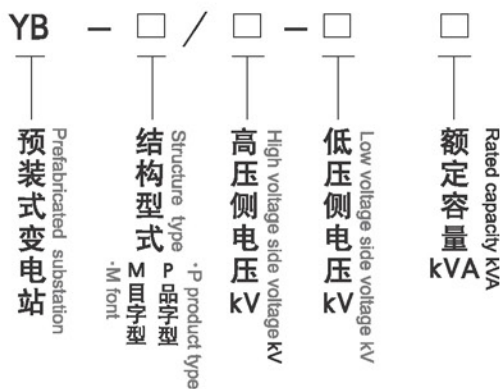
## YB预装式变电站

### YB prefabricated substation

结构紧凑、成套性强、运行可靠、维护方便、造型美观  
是城乡电网首选的配变变电成套设备

Compact structure; strong nature of complete set; reliable operation;  
easy maintenance; beautiful appearance;  
Preferred complete set for urban and rural power distribution.

#### ■ 型号含义 Model meaning



#### ■ 产品特点 Product features

本产品是本公司为满足城乡电网建设的需要，在ZGS型组合式变压器的基础上自行设计的系列产品。具有体积小、结构紧凑、现场安装调试周期短、可取代传统的变电站(所)。并能满足用户电能计量、无功补偿、高、低压各种方案等配制要求，代表着中小型变电站(所)的发展方向。本产品适用于工矿企业、车站、码头、机场、公共场所、高层建筑及居民小区的10kV、50Hz、30~1600kVA的电力用户，既可适用于环网供电也适用于终端供电。

The products are the series products self-designed by the Company based on ZGS combined transformers to meet the needs of urban and rural power grid construction. With a small size, compact structure, and short-term of on-site installation and commissioning, it can replace the traditional substation (station). It can also meet configuration requirements of various programs such as the user power metering, reactive power compensation, high and low voltage, representing the development direction of small and medium-sized substations (stations). This product is suitable for industrial and mining enterprises, station, wharf, airports, public places, high-rise buildings and 10kv, 50Hz, 30~1600kVA power users in residential areas, applying for not only power supply network but also for terminal.

#### ■ 产品概述 Product overview

组合式变电站：组合的并经过型式试验的成套设备。主要元件：变压器、高压开关设备和控制设备、低压开关设备和控制设备、相应的内部连接线(电缆、母排和其他)和辅助设备。组合式变电站通过电缆连接，可以从它的内部或外部进行操作，能够在地面上或地面下(部分或全部)安装。

Combined substation: complete equipment assembly and passed type-tested. Main components: transformers, high-voltage switchgear and control equipment, low-voltage switchgear and control equipment, the corresponding internal wiring (cables, bus bars and other), and auxiliary equipment. Combined substation can be operated inside or outside through the cable. It can be (in part or in whole) mounted on the ground or under the ground.

#### ■ 使用条件 Service conditions

- 1、安装地点:户外;
- 2、海拔: <1000m;
- 3、最高环境温度: +40℃;
- 4、最高月平均气温: +35℃;
- 5、最高年平均气温: +20℃;
- 6、最低环境气温: -25℃(户外)
- 7、最大日温差: 25℃;
- 8、日照强度: 0.1w/cm<sup>2</sup>(风速0.5m/s);
- 9、污秽等级: III级;
- 10、防雨水等级: 3级;
- 11、相对湿度: 最高月平均: 90%(20℃);  
最高日平均: 95%(20℃)
- 12、耐地震能力: 地面水平加速度0.2g;  
地面垂直加速度0.1g;
- 13、安装地点的倾斜度: 不大于3度。

1. Installation location: Outdoor;
2. Altitude: <1000m;
3. Maximum ambient temperature: +40℃;
4. Maximum monthly average temperature: +35℃;
5. Maximum annual average temperature: +20℃;
6. Minimum ambient temperature: -25℃ (outdoor);
7. Maximum daily temperature difference: 25℃;
8. Sunshine intensity: 0.1w/cm<sup>2</sup> (wind speed 0.5m/s);
9. Contamination level: Level III;
10. Anti-rain level: Level 3;
11. Relative humidity: maximum monthly average: 90% (20℃);  
Maximum daily average: 95% (20℃);
12. Earthquake-resistant capability: ground horizontal acceleration 0.2g;  
Ground vertical acceleration 0.1g;
13. Inclination of the installation site: less than 3 degrees.

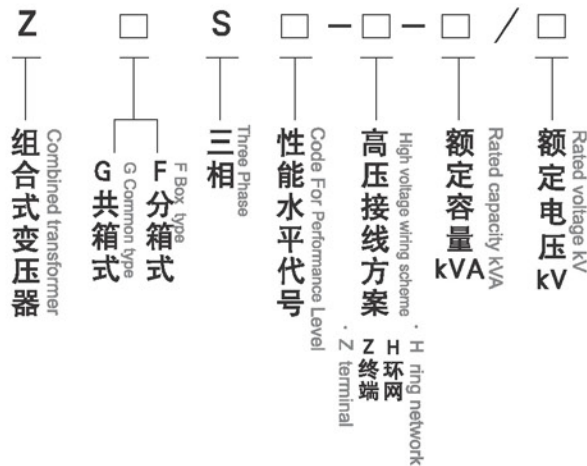


## ZGS型组合式变电站 ZGS combined substation

供电可靠、结构合理、操作方便、经济实用、美观大方  
专门为我国城市配网而设计制造

Reliable power supply, reasonable structure, easy operation, economical and practical, beautiful and generous  
Specifically for the city of China's urban design and manufacturing

### ■ 型号含义 Model meaning



### ■ 产品概述 Product overview

ZGS系列组合式变压器即美式变压器，是根据城乡电网建设发展和改造的需要研制的系列产品。它是将变压器器身、开关设备、熔断器、分接开关、低压配电装置等相应辅助设备组合的变压器，能满足用户电能计量、无功补偿、低压分路等各种配制要求。ZGS型组合式变压器作为交流50Hz、6~10kV的网络中，额定容量为30~2500KVA的独立成套变配电装置，既可用于户外，也可用于户内。广泛适用于工业园区、城市住宅小区、商业中心、道路照明、高层建筑及临时施工现场等各种场所。其优点是：环保、占地面积小、运输灵活等。

ZGS series combined transformers, also called American transformers, are a series of products as required by the construction development and transformation of rural and urban grid. It is a kind of transformer combined by auxiliary equipment including the body of transformer, switchgear, fuse, disassembling switches, low-voltage power distribution unit, which can meet the requirement of configurations such as electric power measurement, reactive compensation and low-voltage shunt. The ZGS combined transformer, in AC 50Hz, 6~10KV network, whose nominal capacity is 63~1600KVA, is an independent set of transformation and distribution device, which can be both applied to outdoor and indoor, generally used in industrial zone, urban residential district, commercial center, high-rise buildings and temporary construction sites.

### ■ 产品特点 Product features

- 体积小，结构紧凑，占地面积小，安装方便。
- 低损耗、低噪音，低温升，超铭牌容量负载能力强，抗突发短路能力强。
- 全封闭、全绝缘结构，运行安全可靠。
- 接线方式灵活，既可用于终端系统，也可用于环网系统，转换方便，提高了供电可靠性。
- 操作方便，维护方便，生产周期短，工程造价低。
- Small in size, compact structure, small occupation of space, easy installation.
- Low loss, noise and temperature rise; super nameplate capacity and high load bearing; high resistance of sudden short-circuit capacity.
- Full enclosed and insulated structure, stable and reliable operation.
- Flexible wiring with easy conversion, which could be both connected to the terminal system and looped network system; more chance of power supply.
- Easy operation and maintenance; short-term production phase; low construction costs.

### ■ 产品参数

- IP防护等级：IP33
- 外形尺寸根据用户图纸设计后可提供

### ■ Product parameters

- P protection class: IP33
- Dimensions according to the user's drawings can be provided



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