



中国·台力电气有限公司
TAILI ELECTRIC CO.,LTD.



产品选型手册

PRODUCTS CATALOG

产品选型手册



中国·台力电气有限公司
TAILI ELECTRIC CO.,LTD.

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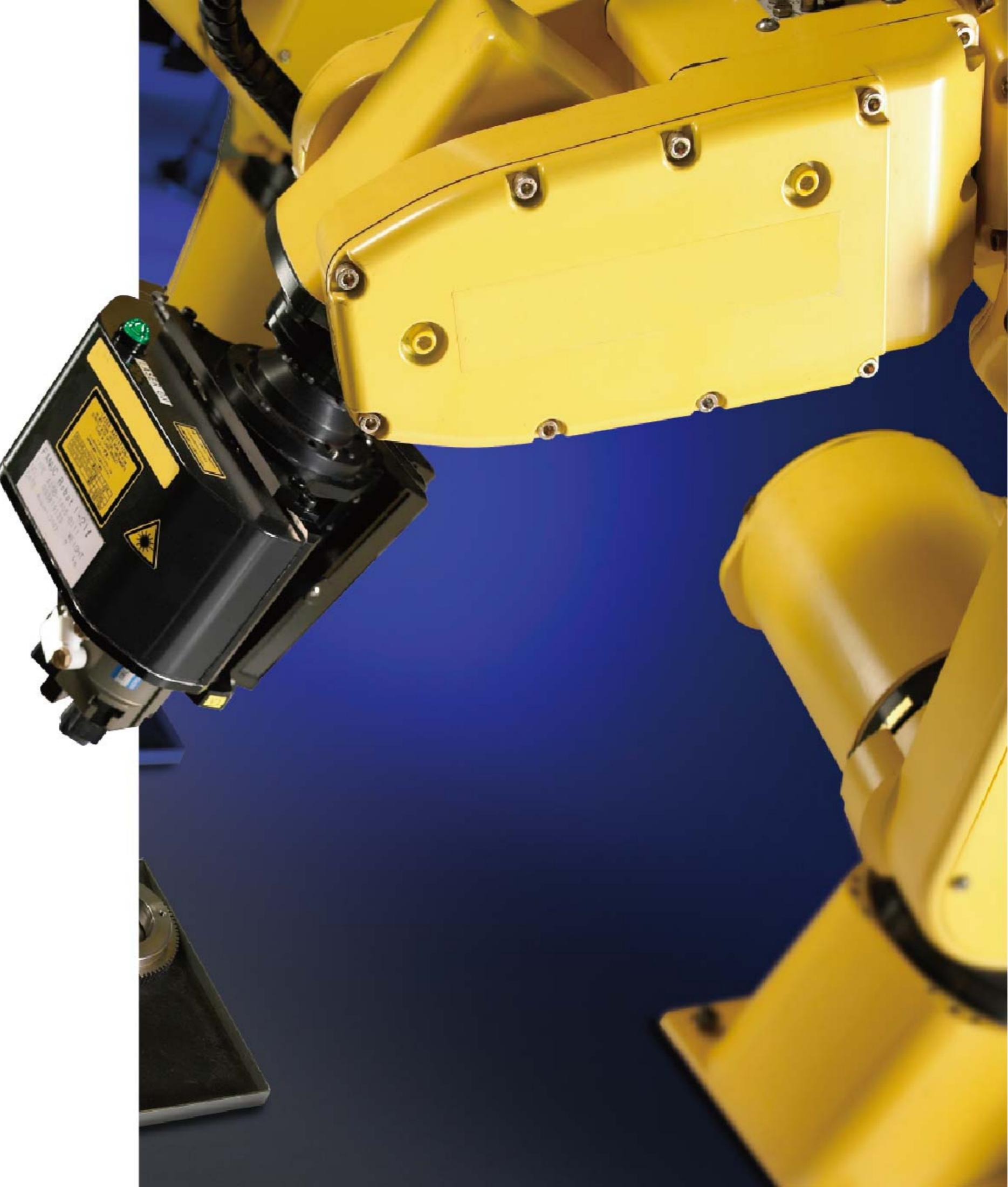


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助电力事业一臂之力
Help the power industry a helping hand



专业制造高压电器
20余年

只为您安全用电

Specialized in manufacturing high-voltage electrical

More than 20 years

OSafe use of electricity only for you



ABOUT US

企业简介



台力品牌创建于1992年，总部坐落在中国电器之都浙江省乐清市，是一家无区域性大型电力产品研发制造企业，累计占地面积3万平方米，现有员工500多人，总公司旗下包括浙江台力电气有限公司、上海台力变压器有限公司、西安二变变压器有限公司、台力电气成套公司、台力电气高压公司、温州台力进出口有限公司。

公司拥有先进的生产流水线设备和精湛的制造工艺，专业的技术骨干力量，专业生产10kV、35kV、110kV、220kV级的油浸式电力变压器、10kV、35kV级的绝缘树脂浇注干式变压器，H级绝缘环保型干式变压器，非晶合金油浸式变压器、非晶合金树脂绝缘干式变压器、6kV、10kV级矿用移动变电站，以及矿用油浸式三相变压器，高压真空断路器等输配电产品。预装式变电站、组合式变电站、风能箱式变电站、高低压开关柜及输配电设备、产品广泛使用于电力、铁路、矿业、船运等领域。

台力人本着“以人才作支撑，用技术获效益，树品牌为发展”的经营方针，坚持“质量第一、用户至上、以满足用户需求”为宗旨，积极开拓国内外市场，产品销售全国并远销东南亚、中东、非洲等多个国家和地区。

Taili Brands, founded in 1992, Headquarters is located in China Electric Capital Yueqing City, Zhejiang Province, is a non-regional large power product development, and manufacturing enterprises, a total area of 30,000 square meters, more than 500 employees, including its head office in Zhejiang Taili Electric Co., Ltd ,Shanghai taili Transformer Co., Ltd.Xian Erbian Transformer Co., Ltd. Taili Electric High pressure company. Wenzhou Taili import and export Co., Ltd.

The company has advanced production line equipment and superb manufacturing technology, professional technical backbone, professional production of 10kV, 35kV, 110kV, 220kV class oil-immersed power transformers, 10kV, 35kV insulation level of cast resin dry-type transformers, H class insulation environmentally friendly dry-type transformers, oil-immersed amorphous alloy transformer, amorphous alloy resin insulation dry-type transformers, 6kV, 10kV level mine mobile substation, mining and oil-immersed three-phase transformers, vacuum circuit breakers and other high voltage transmission and distribution electrical products. Prefabricated substations, modular substation, wind power substation, low voltage switch cabinet and power transmission and distribution equipment, products widely used in electric power, railways, mining, shipping, and other fields.

Taili force people in a "people for the support, with the benefits of technology by the tree brand development" business principles, adhere to the "quality first, customer first, to meet user demand" for the purpose, and actively explore the domestic market, sales the country and exported to many countries and regions in Southeast Asia, the Middle East, and Africa.



变压器系列



低压成套系列



高压成套系列



高压真空断路器系列



Enterprise Qualification
企业资质



1

干式变压器系列 Dry-type transformers Series

- 08 SCZ(B)11型35kV环氧树脂浇注干式电力变压器 Epoxy resin casting dry type power transformers
09 SCB10型6~10kV环氧树脂浇注干式配电变压器 Epoxy resin cast dry-type distribution transformers
01-05 SCB13型6~10kV树脂绝缘干式变压器 Resin dry type transformers
06 SCB11型6~10kV环氧树脂浇注干式配电变压器 Epoxy resin cast dry-type distribution transformers
07 SCB11型20kV环氧树脂浇注干式电力变压器 Epoxy resin casting dry type power transformers
10 SCB10型20kV环氧树脂浇注干式电力变压器 Epoxy resin casting dry type power transformers
11 SCZ(B)10型35kV环氧树脂浇注干式电力变压器 Epoxy resin casting dry type power transformers
12-14 SGB10型6~10kV环保型干式变压器 Environmentally friendly dry-type transformers
15-17 SGB11型6~10kV环保型干式变压器 Environmentally friendly dry-type transformers
19-22 S13-M·RL型6~10kV油浸式立体卷铁心配电变压器 Oil-dimensional wound core distribution transformers

2 油浸式立体卷铁心配电变压器系列 Oil-immersed tridimensional toroidal-core distribution transformers

- 24-26 S13-M型6~10kV油浸式配电变压器 Oil-immersed power transformers
26 S13-M型20kV油浸式配电变压器 Oil-immersed power transformers

3 油浸式变压器系列 Oil-immersed transformers

- 27 S11-M型6~10kV油浸式配电变压器 Oil-immersed power transformers
27 S11-M型20kV油浸式配电变压器 Oil-immersed power transformers
29 S13型35kV油浸式电力变压器 Oil-immersed power transformers
29 S11型35kV油浸式电力变压器 Oil-immersed power transformers
30 SZ11型35kV有载调压油浸式电力变压器 Load tap oil-immersed power transformers

4 非晶合金变压器系列 Amorphous alloy transformer series

- 32-34 10kV、20kV油浸式非晶合金铁芯配电变压器 10KV、20KV Immersed amorphous alloy core distribution transformers
34-35 SBH15-M型 6~10kV非晶合金油浸式变压器 Crystal alloy oil-immersed transformers
36 SBH15-M型20kV非晶合金油浸式变压器 Amorphous alloy oil-immersed transformers
37-40 SC(B)H15型6~10kV非晶合金干式变压器 Amorphous alloy dry-type transformers

5

高过载配电变压器系列 High overload distribution transformers series

- 43-43 S11-M型6~10kV高过载配电变压器 High overload distribution transformers
44 S13-M型6~10kV高过载配电变压器 High overload distribution transformers

6

有载调容变压器系列 Load transfer capacity transformers

- 46-47 S11-M.ZT型10kV有载调容变压器 Load transfer capacity transformers
47 S13-M.ZT型10kV有载调容变压器 Load transfer capacity transformers

7

箱式变电站系列 Box-type substation series

- 49-51 YB□-12/0.4户外预装式变电站(欧式) Outdoor prefabricated substation (European)
52-53 ZGS□-12/0.4(F·R)预装式箱式变电站(美式) Prefabricated substation (American)
54-55 DFW-12kV欧式电缆分接箱 European cable distribution boxes

8

高压开关柜系列 High Voltage Switchgear Series

- 57-59 KYN61-40.5铠装移开式交流金属封闭开关设备 Armored remove AC metal I-enclosed switchgear
60-62 KYN28A-12铠装移开式交流金属封闭开关设备 Armored remove AC metal-enclosed switchgear
63-65 HXGN□-12箱型固定交流金属封闭开关设备 Box-type fixed AC metal-enclosed switchgear
66-67 HXGN15-12(SF₆)单元式交流金属封闭环网开关设备 U you too AC metal-enclosed ring network switching equipment
68-70 XGN66-12(Z)固定式封闭开关设备 Fixed-enclosed switchgear
71-72 TLGXGN□-12智能固体绝缘柜 Intelligent solid insulation cabinet

9

低压开关柜系列 Low-Voltage Switchgear Series

- 74-75 GJG低压无功智能补偿装置 Intelligent low voltage reactive compensation devices
76-78 GGD低压成套开关柜 Low-voltage switchgear
79-81 GCK低压抽出式开关柜 Low-voltage withdrawable switchgear
82-84 GCS低压抽出式开关柜 Low-voltage withdrawable switchgear

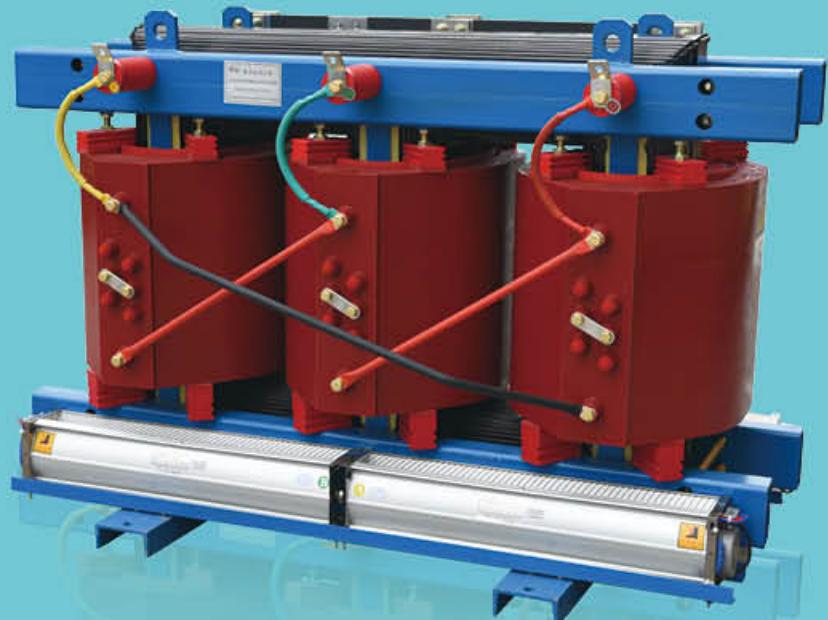
低压开关柜系列 Low-Voltage Switchgear Series

高压真空断路器系列 High voltage vacuum circuit breaker Series

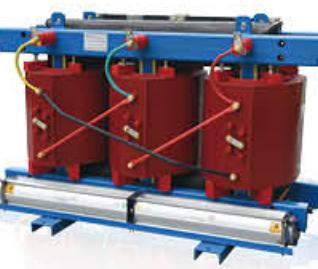
- 85-86 MNS低压抽出式开关柜 Low-voltage withdrawable switchgear
87-89 XL-21低压动力配电柜 Low-voltage power distribution cabinet
90-92 JP综合配电箱(补偿/控制/终端/照明) Integrated distribution box (compensation Control/Terminal/lighting)
93-94 (六户) (九户) 单相集装型电表箱 (Six) (nine) Mount single-phase meter box
95-96 高压真空断路器系列 High voltage vacuum circuit breaker Series

干式变压器系列

Dry-type transformers series



以人才作支撑,用技术获效益,树品牌为发展

中国·台力电气有限公司
www.cntal.com树脂绝缘干式变压器
Resin dry type transformers产品概述
Product overview

树脂绝缘干式变压器安全, 难燃防火, 无污染, 可直接安装在负荷中心。免维护、安装简便, 综合运行成本低、损耗低, 防潮性能好, 可在 100% 湿度下正常运行, 停运后不经预干燥即可投入运行。局部放电量低、噪音小, 散热能力强, 强迫风冷条件下可以 120% 额定负载运行。配备有完善的温度保护控制系统, 为变压器安全运行提供可靠保障, 可靠性高。据对已经投入运行的 10000 多台产品的运行研究, 产品的可靠性指标达到国际先进水平。

It is safe, non-pollute, and flame proof, which can be installed directly on the load center with the merits of free maintenance, easy installation, low combined operationcost, low loss and excellent humidity resistance. The transformer can be operated normally under 100% humidity and put into motion without dry in advance when out of use. It shares the properties of low partial electricity local discharge, low noise and large heat dispel capability, it can be operated with the rated load of 120% under the forced air cooling conditions. With perfect temperature protectcontrol system to ensure safty operation of the transformer Referring to the operation research of 10 thousand transformers have been putto use, their reliability norm have reached advanced international standard.

铁芯
Iron core

铁芯采用优质取向冷轧硅钢片材料制造, 45° 全斜接缝结构, 心柱采用绝缘带绑扎, 铁芯表面采用绝缘树脂漆密封以防潮防锈, 夹件及紧固件经表面处理以防止锈蚀。

此外, 本公司还开发了多阶步叠铁芯工艺, 铁芯由剪切线自动堆栈, 铁芯成型采用不叠上铁轭方案, 有效地降低了空载损耗、空载损耗、空载电流和铁芯噪音。

Core alignment with high-quality cold-rolled silicon steel material, 45° miter joints structure, stem with insulation tape binding, the core surface is sealed with insulating resin paint rust proof, clamps and fasteners surface treated with prevent corrosion.

In addition, the company also developed a multi-stage step-stack core technology, the core stack automatically by the shear line, forming the core does not use the stack of yoke program, effectively reducing the load loss, load loss, no-load current and the core noise.

树脂绝缘干式变压器 Resin dry type transformers

低压箔式线圈 Lv foaled winding

对于低电压、大电流线圈，其短路时的短路应力较大，同时低压匝数较少，低压电流越大采用线绕型式其安匝不平稳问题越突出，散热问题也需着重考虑，此时低压采用箔式绕组可较好解决上述问题，首先箔式产品不存在轴向匝数和轴向绕制螺旋角，高低压绕组安匝平衡，短路时变压器轴向应力较小，其次由于其绝缘较薄，工艺上又可容易设置多层风道，散热问题也较好解决。我厂低压箔式线圈是 STOLLBERG 公司生产的自动箔式绕线机上自动绕制。

内部焊接在绕线机上采用氩气保护焊接，精度高，焊接电阻小，无外部焊接过程。绕组层间采用 DMD 绝缘，绕制完毕后端部用树脂密封固化。

For low voltage, high current coil, short circuit stress short-circuit its larger, while less low pressure turns, the greater the use of low-voltage electric current ampere-turns wound type whose more prominent issue is not stable, heat issues also need to focus on to consider, at this time use low-voltage foil winding can better solve the problem, first of all there is no axial foil product axially winding turns and a helix angle, high and low voltage winding ampere-turns balance, axial stress is small transformer short circuit, Second, because the insulation is thin, the process can be easily set up multi-duct, cooling problems are better solved. I plant low-voltage foil coils are produced on STOLLBERG automatic foil winding machine automatic winding,

Internal welding using the winding machine argon arc welding, high precision, small resistance welding, no external welding process. DMD insulation layer using inter-winding, winding complete rear end portion sealed with a resin cured.

高压浇注线圈 Hv casted winding

主要材料和特性:
Main material and characteristics:

线圈采用 F 级绝缘的铜导线作导体，玻璃纤维与环氧树脂复合材料作绝缘，其膨胀系数与铜导体相近，具有良好的抗冲击、抗温度变化、抗裂性能。玻璃纤维和环氧树脂所有组成成份都具有自熄性，不会持续燃烧，也不会产生有毒气体和污染环境。环氧树脂具有良好的绝缘特性，特别适合制作高电压等级的线圈。

Class F coil insulated copper wire as conductor, glass fiber and epoxy resin composite materials for insulation, its coefficient of expansion similar to the copper conductor, with good impact resistance, temperature changes, crack resistance. Glass fiber and epoxy resin constituent all have self-extinguishing, it does not continue to burn, it does not produce toxic gases and pollute the environment. Epoxy resin has good insulating properties, particularly suitable for the production of high-voltage coil level.

制造工艺:
Manufacturing process:

线圈在高精度绕线机上绕制。绕制时在线圈内外层铺敷玻璃纤维，变压器容量较大时设计有通风道。线圈绕制完毕后进行真空干燥。整个浇注及固化过程按照工艺部门通过计算机网络传输至浇注控制终端的工艺曲线完成。所有过程可在计算机终端随时监视并由计算机根据情况自动调整。精密的制造过程使线圈无气泡、空穴。

The windings wound on the high-accuracy winding machine, when winding paved cast glass fibre around the external and internal of the windings, there be armed air passage for transformer of large capacity, Then dry it in vacuum. The whole casting and solidifying process is performed according to the process curve of casting control terminal, which transferred through computer network by process department, every process can be monitored momentarily and adjusted for the various surroundings. The precise process ensures free bubble and free hole of winding.

温控装置和风冷系统 Protec shield cover

保护外壳对变压器作进一步的安全保护，防护等级有 IP20 Ip23 等，外壳材料有冷轧钢板，不锈钢板、铝合金板等供用户选择。

低压出线用标准母线排出线，侧出线和顶出线均可，也可以根据用户的需求设计特殊的出现方式。

The shell makes further protection for transformer. For users option, the grade of protection has IP20, IP23, ect. and the material has sort of cold-rolled steel plates and stainless steel plates, ect. The low-voltage outgoing line can adopt the method of standard bus bar group outgoing line, outgoing on the transverse side and upper part as well as the very method that designed by the users.

进线方式示意图 Leading-in drawing

配电变压器可根据不同的接口形式制造常规出线、标准封闭母线出线和标准侧出线，也可根据用户要求设计特殊出线方式。

Routine lead, standard closed busbar lead type and standard side lead for the distribution transformer, with special lead way produced to meet the customer's demand.

树脂绝缘干式变压器 Resin dry type transformers

产品特点 Product Features

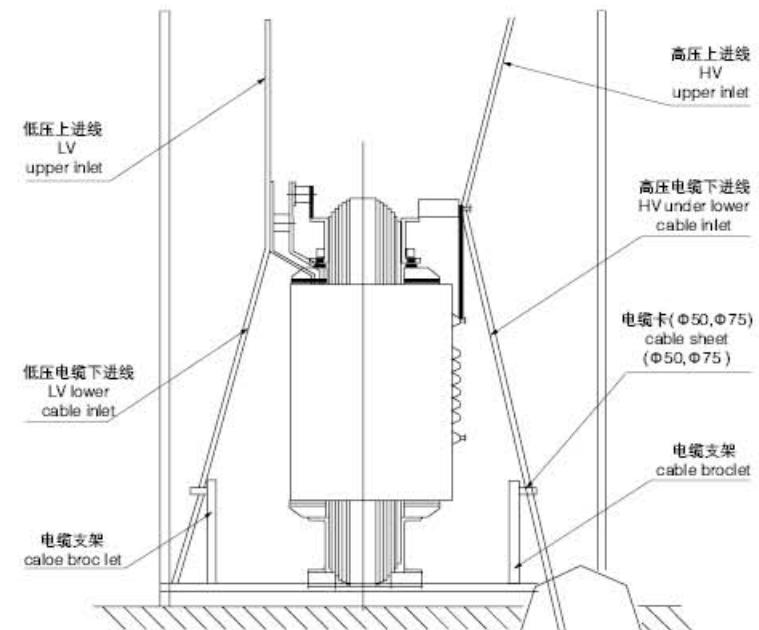
低损耗、运行成本低，节能效果明显；
阻燃，防火、防爆、无污染；
防潮性能好、散热能力强；
局放低、噪音小、免维护；
机械强度高、抗短路能力强、寿命长；

Low Loss, Low Operating Cost, Energy-saving Effect Is Obvious;
Flame, Fire, Explosion, Pollution-free;
Moisture Performance, Heat Dissipation Ability;
Board Lowered, Noise, Maintenance-free;
High Mechanical Strength, Resistance To Short-circuit Capability, Long Life

使用环境 Product characteristics

使用条件
Service condition
环境温度
Ambient temperature
△最高气温 +40°C
△最低气温 -5°C
△最热月平均温度 +30°C
△最热年平均温度 +20°C
海拔不超过 1000m
电源电压的波形近似于正弦波
三相电源电源电压应大致对称
安装环境无明显的污移
户内使用

Service condition
Ambient temperature
△ Highest air temperature +40°C,
△ Lowest air temperature -5°C,
△ Hottest monthly average temperature
+30°C
△ Hottest yearly average temperature +20°C
The height above the sea level is below
1000m;
The power supply voltage's wave is similar to
sine wave
Three-phase power supply voltage is
approximately symmetrical
Installation without evidence filth.
Service indoor.



SCB13 型 6~10kV

环氧树脂浇注干式配电变压器
Epoxy resin cast dry-type distribution transformers

型号含义 Model and meaning



产品标准 Product standards

GB/T 10228-2008 GB1094.11-2007
 额定高压 Rated HV: 10(10.5,11,6,6.3, 6.6)kV
 额定低压 Rated LV: 0.4kV
 分接范围 Tap connection range:
 无励磁调压 Non-exciting regulation($\pm 5\%$, $\pm 2 \times 2.5\%$)
 有载调压 On-load regulation($\pm 4 \times 2.5\%$)
 联结组别 Vector group: D yn11or Y yn0
 绝缘水平 Insulation level : LI75AC35/AC5

SCB11 型 6~10kV

环氧树脂浇注干式配电变压器
Epoxy resin cast dry-type distribution transformers

型号含义 Model and meaning



产品标准 Product standards

GB/T 10228-2008 GB1094.11-2007
 额定高压 Rated HV: 10(10.5,11,6,6.3, 6.6)kV
 额定低压 Rated LV: 0.4kV
 分接范围 Tap connection range:
 无励磁调压 Non-exciting regulation($\pm 5\%$, $\pm 2 \times 2.5\%$)
 有载调压 On-load regulation($\pm 4 \times 2.5\%$)
 联结组别 Vector group: D yn11or Y yn0
 绝缘水平 Insulation level : LI75AC35/AC5

6KV, 10KV 级 11 型干式无励磁调压配电变压器空载耗损和负载耗损
6KV, 10KV class 11 dry-type distribution transformers without excitation regulator load loss and load loss

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combinationand Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss (W)	负载损耗 Load loss (W)	空载电流 No-load current(%)	短路阻抗 Short circuit impedance(%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range(%)	低压 Low pressure (kV)					
30					130	710	2.6	4
50					190	1000	2.2	4
80					260	1380	2.2	4
100					280	1570	2	4
125					330	1850	1.8	4
160					380	2130	1.8	4
200	6			Dyn11	435	2530	1.6	4
250	6.6				505	2760	1.6	4
315	6.6	$\pm 5\%$	$\pm 2 \times 2.5\%$		615	3470	1.4	4
400	10				685	3990	1.4	4
500	10.5				810	4880	1.4	4
630	11				940	5880	1.2	4
630					910	5960	1.2	6
800					1065	6960	1.2	6
1000					1240	8130	1.1	6
1250					1460	9690	1.1	6
1600					1715	11730	1.1	6
2000					2135	14450	1.0	6
2500					2520	17170	1.0	6

注: 1. 表中斜线上方的负载损耗适用于 Dyn11 联接组, 斜线下方的负载损耗值适用于 Yyn0 联接组。 2. 其它容量的产品性能参数, 由用户与制造厂协商确定。

Note: 1. load loss slash table above apply to join the group Dyn11 load loss slash Yyn0 below values apply to join the group.

2. other capacity product performance parameters, determined by the user in consultation with the manufacturer.

额定容量 Rated capacity (kVA)	电压组合及分接范围 Range of voltage and tap			联结组标号 Vector Group Symbol	空载损耗 No-load loss (W)	负载损耗 Load loss (W)	空载电流 No-load current(%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range(%)	低压 Low pressure (kV)					
30					170	710	2.6	4
50					240	1000	2.2	4
80					330	1380	2.2	4
100					360	1570	2	4
125					420	1850	1.8	4
160					490	2130	1.8	4
200	6			Dyn11	560	2530	1.6	4
250	6.6				650	2760	1.6	4
315	6.6	$\pm 5\%$	$\pm 2 \times 2.5\%$		790	3470	1.4	4
400	10				880	3990	1.4	4
500	10.5				1045	4880	1.4	4
630	11				1210	5880	1.2	4
630					1170	5960	1.2	6
800					1370	6960	1.2	6
1000					1590	8130	1.1	6
1250					1880	9690	1.1	6
1600					2205	11730	1.1	6
2000					2745	14450	1.0	6
2500					3240	17170	1.0	6

注: 有载调压系列变压器仅对以下两项数据作调整: 1. 重量增加 100kg; 2. 有载开关布置在变压的侧面 a 增加 650mm 或正面 b 增加 750mm;

Note: On-load regulation series transformer regulates the two data items as follows: 1. Weight increase 100kg;

2. Transformation flank a increase 650mm or face b increase 750mm assigned by on-load switch;

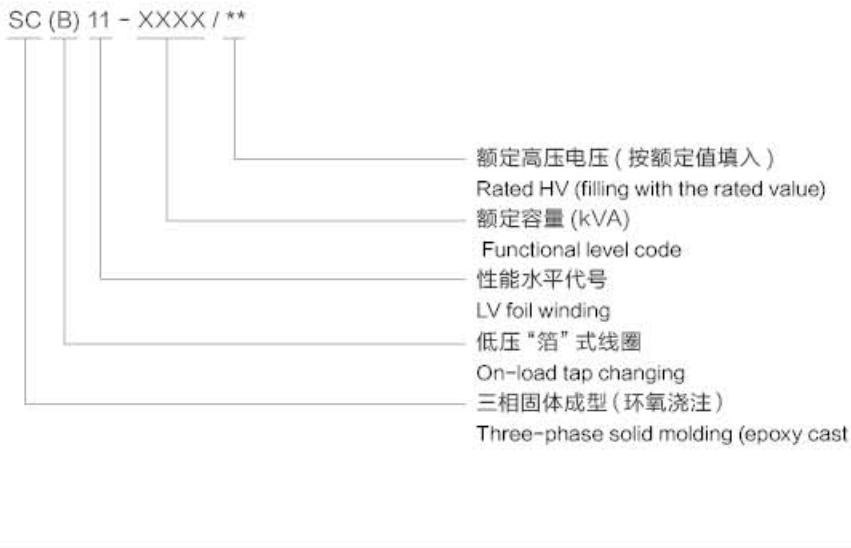
SCB11 型 20kV

环氧树脂浇注干式电力变压器

Epoxy resin casting dry type power transformers

型号含义

Model and meaning



产品标准

Product standards

GB/T 10228-2008 GB1094.11-2007
 额定高压 Rated HV: 20(22、24)kV
 额定低压 Rated LV: 0.4kV
 分接范围 Tap connection range:
 无励磁调压 Non-exciting regulation($\pm 5\%$, $\pm 2 \times 2.5\%$)
 有载调压 On-load regulation($\pm 4 \times 2.5\%$)
 联结组别 Vector group: D yn11 or Y yn0
 绝缘水平 Insulation level : LI125AC50/AC5

SCZ(B)11 型 35kV

环氧树脂浇注干式电力变压器

Epoxy resin casting dry type power transformers

35kV 级无励磁调压配电变压器

35kv non-excited tap-changing transformer

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combinationand Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss (W)	负载损耗 Load loss (W)	空载电流 No-load current(%)	短路阻抗 Short circuit impedance(%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
800	35-38.5	$\pm 5 \pm 2 \times 2.5\%$	0.4	Dyn11 Yyn0	2000	9900	1.1	6.0
1000					2375	11500	1.1	6.0
1250					2785	13600	1.0	6.0
1600					3280	16300	1.0	6.0
2000					3760	19200	0.9	7.0
2500					4320	23000	0.9	7.0
3150					5360	25800	0.8	8.0
4000					6240	31000	0.8	8.0
5000					7440	36800	0.7	8.0
6300					8800	43000	0.7	8.0
8000					10080	48500	0.6	9.0
10000					11520	58500	0.6	9.0
12500					14000	68000	0.5	9.0
16000					17200	80000	0.5	9.0
20000					20400	90000	0.4	10.0

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combinationand Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss (W)	负载损耗 Load loss (W)	空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
50	20 24 22	$\pm 5\% \pm 2 \times 2.5\%$	0.4	Dyn11 Yyn0	340	1300	2.2	6
100					540	2100	2	6
160					675	2600	1.8	6
200					740	3100	1.6	6
250					845	3600	1.6	6
315					970	4300	1.4	6
400					1150	5100	1.4	6
500					1350	6100	1.4	6
630					1530	7200	1.2	6
800					1755	8700	1.2	6
1000					2070	10300	1.1	6
1250					2385	12150	1.1	6
1600					2790	14600	1.1	6
2000					3240	17250	1.0	8
2500					3870	20400	1.0	8

注: 1、表中斜线上方的负载损耗适用于 Dyn11 联接组, 斜线下方的负载损耗值适用于 Yyn0 联接组。 2、其它容量的产品性能参数, 由用户与制造厂协商确定。

Note: 1, load loss slash table above apply to join the group Dyn11 load loss slash Yyn0 below values apply to join the group.

2, other capacity product performance parameters, determined by the user in consultation with the manufacturer.

35kV 级有载调压电力变压器

35kv on-load tap-changing power transformer

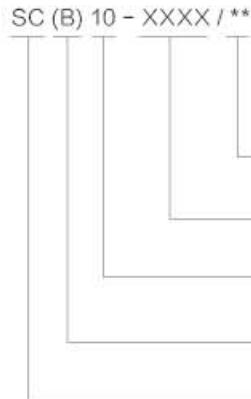
额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combinationand Tap range			联结组标号 Vector Group Symbol	SC(ZB)9 系列		SC(ZB)11 系列		空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)		空载损耗 No-load loss (W)	负载损耗 Load loss (W)	空载损耗 No-load loss (W)	负载损耗 Load loss (W)		
2000	35-38.5	$\pm 4 \times 2.5\%$	6 6.3 10 10.5 11	Dyn11 Yd11	5000	17470	4500	16590	0.8	7.0
2500					5800	20790	5220	19750	0.8	7.0
3150					7000	23410	6300	22240	0.7	7.0
4000					8200	28030	7380	26630	0.7	7.0
5000					9700	33190	8730	31530	0.6	8.0
6300					11500	38430	10350	36510	0.6	8.0
8000					13200	43670	11880	41480	0.5	9.0
10000					15100	52580	13590	49950	0.5	9.0
12500					19300	61130	16470	58080	0.5	9.0
16000					22500	71960	20250	68370	0.5	9.0
20000					26500	80960	23850	76910	0.4	10.0

SCB10 型 6~10kV

环氧树脂浇注干式配电变压器

Epoxy resin cast dry-type distribution transformers

型号含义 Model and meaning



额定高压电压 (按额定值填入)
Rated HV (filling with the rated value)
额定容量 (kVA)
Functional level code
性能水平代号
LV foil winding
低压“箔”式线圈
On-load tap changing
三相固体成型 (环氧浇注)
Three-phase solid molding (epoxy cast)

产品标准 Product standards

GB/T 10228-2008 GB1094.11-2007

额定高压 Rated HV: 10(10.5,11,6,6.3, 6.6)kV

额定低压 Rated LV: 0.4kV

分接范围 Tap connection range:

无励磁调压 Non-exciting regulation($\pm 5\%$, $\pm 2 \times 2.5\%$)

有载调压 On-load regulation($\pm 4 \times 2.5\%$)

联结组别 Vector group: D yn11 or Y yn0

绝缘水平 Insulation level : LI75AC35/AC5

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combination and Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss (W)	负载损耗 Load loss (W)	空载电流 No-load current(%)	短路阻抗 Short circuit impedance(%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range(%)	低压 Low pressure (kV)					
30	6	$\pm 5\%$ $\pm 2 \times 2.5\%$	0.4	Dyn11 Yyn0	190	710	2.6	4
50					270	1000	2.2	4
80					370	1380	2.2	4
100					400	1570	2	4
125					470	1850	1.8	4
160					540	2130	1.8	4
200					620	2530	1.6	4
250					720	2760	1.6	4
315					880	3470	1.4	4
400					980	3990	1.4	4
500					1160	4880	1.4	4
630					1340	5880	1.2	4
630					1300	5960	1.2	6
800					1520	6960	1.2	6
1000					1770	8130	1.1	6
1250					2090	9690	1.1	6
1600					2450	11730	1.1	6
2000					3050	14450	1.0	6
2500					3600	17170	1.0	6

注: 1. 表中斜线上方的负载损耗适用于 Dyn11 联接组, 斜线下方的负载损耗值适用于 Yyn0 联接组。 2. 其它容量的产品性能参数, 由用户与制造厂协商确定。

Note: 1. load loss slash table above apply to join the group Dyn11 load loss slash Yyn0 below values apply to join the group.

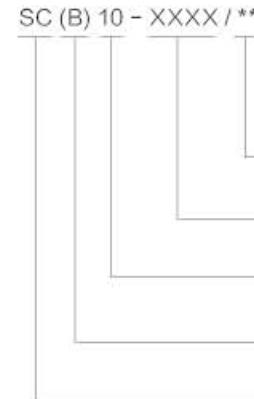
2. other capacity product performance parameters, determined by the user in consultation with the manufacturer.

SCB10 型 20kV

环氧树脂浇注干式电力变压器

Epoxy resin casting dry type power transformers

型号含义 Model and meaning



额定高压电压 (按额定值填入)
Rated HV (filling with the rated value)
额定容量 (kVA)
Functional level code
性能水平代号
LV foil winding
低压“箔”式线圈
On-load tap changing
三相固体成型 (环氧浇注)
Three-phase solid molding (epoxy cast)

产品标准 Product standards

GB/T 10228-2008 GB1094.11-2007

额定高压 Rated HV: 20(22, 24)kV

额定低压 Rated LV: 0.4kV

分接范围 Tap connection range:

无励磁调压 Non-exciting regulation($\pm 5\%$, $\pm 2 \times 2.5\%$)

有载调压 On-load regulation($\pm 4 \times 2.5\%$)

联结组别 Vector group: D yn11 or Y yn0

绝缘水平 Insulation level : LI125AC50/AC5

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combination and Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss(W)	空载电流 No-load current(%)	短路阻抗 Short circuit impedance(%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range(%)	低压 Low pressure (kV)					
50	20	$\pm 5\%$ $\pm 2 \times 2.5\%$	0.4	Dyn11 Yyn0	305	1300	2.2	6
100	22	$\pm 5\%$ $\pm 2 \times 2.5\%$	0.4	Dyn11 Yyn0	485	2100	2	6
160	24	$\pm 5\%$ $\pm 2 \times 2.5\%$	0.4	Dyn11 Yyn0	605	2600	1.8	6
200					665	3100	1.6	6
250					760	3600	1.6	6
315					875	4300	1.4	6
400					1035	5100	1.4	6
500					1215	6100	1.4	6
630					1375	7200	1.2	6
800					1580	8700	1.2	6
1000					1860	10300	1.1	6
1250					2145	12150	1.1	6
1600					2510	14600	1.1	6
2000					2915	17250	1.0	8
2500					3480	20400	1.0	8

SCZ(B)10 型 35kV

环氧树脂浇注干式电力变压器
Epoxy resin casting dry type power transformers

35kV 级无励磁调压配电变压器

35kv non-excited tap-changing transformer

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combinationand Tap range			联结组标号 Vector Group Symbol	SCB9 系列		SCB10 系列		空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)		空载损耗 No-load loss (W)	负载损耗 Load loss (W)	空载损耗 No-load loss (W)	负载损耗 Load loss (W)		
800	35 38.5	$\pm 5 \pm 2 \times 25\%$	0.4	Dyn11 Yyn0	2500	9900	2250	9400	0.3	6.0
1000					2970	11500	2673	10930	0.24	6.0
1250					3480	13600	3132	12920	0.22	6.0
1600					4100	16300	3690	15490	0.21	6.0
2000					4700	19200	4230	18240	0.2	7.0
2500					5400	23000	4860	21850	0.19	7.0
3150					6700	25800	6030	24510	0.18	8.0
4000					7800	31000	7020	29450	0.17	8.0
5000					9300	36800	8370	34960	0.16	8.0
6300					11000	43000	9900	40850	0.16	8.0
8000					12600	48500	11340	46080	0.16	9.0
10000					14400	58500	12960	55580	0.15	9.0
12500					17500	68000	15750	64600	0.15	9.0
16000					21500	80000	19350	76000	0.14	9.0
20000					25500	90000	22950	85500	0.13	10.0

注: 1、表中斜线上方的负载损耗适用于 Dyn11 联接组, 斜线下方的负载损耗值适用于 Yyn0 联接组。 2、其它容量的产品性能参数, 由用户与制造厂协商确定。

Note: 1, load loss slash table above apply to join the group Dyn11 load loss slash Yyn0 below values apply to join the group.

2, other capacity product performance parameters, determined by the user in consultation with the manufacturer.

环保干式变压器

Environmental Protection
Dry transformer



产品概述

Product overview

SGB(H)10 型 H 级绝缘干式电力变压器承受热冲击能力强, 过负载能力大、难燃, 防火性能高、低损耗、局部放电量小、噪声低、不产生有害气体、不污染环境、对湿度不敏感、体积小、不开裂、维护简便。因此最适宜于防火要求高、负荷波动大以及污秽潮湿的恶劣环境中。如机场、发电厂、冶金作业、医院、高层建筑、购物中心、居民密集区以及石油化工、核电站、核潜艇等特殊环境中。

SGB (H) 10 type H-class insulation dry-type power transformers ability to withstand thermal shock, overload capacity, high flame retardant, fire resistance, low loss, low partial discharge capacity, low noise, no harmful gases, do not pollute the environment, insensitive to humidity, small, no cracking, easy to maintain. Therefore most suitable fire protection requirements high load fluctuation and dirty wet harsh environments. Such as airports, power plants, metallurgical operations, hospitals, high-rise buildings, shopping centers, densely populated areas as well as petrochemical, nuclear power plants, nuclear submarines and other special environment.

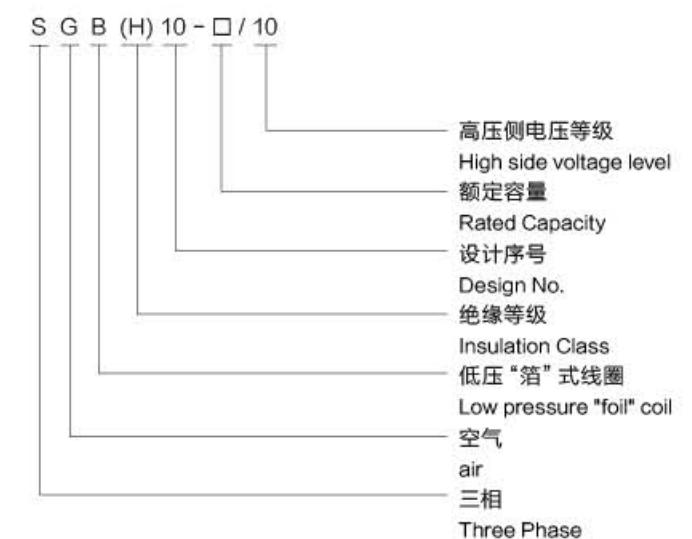
35kV 级有载调压电力变压器

35kv on-load tap-changing power transformer

额定容量 Rated capacity (kVA)	电压组合及分接范围 Range of voltage and tap			联结组标号 Vector Group Symbol	空载损耗 No-load loss (W)	负载损耗 Load loss (W)	空载电流 No-load current(%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range(%)	低压 Low pressure (kV)					
2000	35~38.5	$\pm 4 \times 2.5$	6 6.3 10 10.5 11	Dyn11 Yd1	4250	20000	0.9	7.0
2500					4930	23800	0.9	7.0
3150					5950	26800	0.8	7.0
4000					6970	32100	0.8	7.0
5000					8230	38000	0.7	8.0
6300					9780	44000	0.7	8.0
8000					11220	50000	0.6	9.0
10000					12840	60200	0.6	9.0
12500					15560	70000	0.5	9.0
16000					19130	82400	0.5	9.0
20000					22530	92700	0.4	10.0

型号含义

Model and meaning



SGB10 型 6~10kV

环保型干式变压器

Environmentally friendly dry-type transformers

工作条件 work condition

海拔高度: 不超过 1000m;
电源电压的波形: 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: 最高气温 +40°C ; 最高日平均气温 +30°C ; 最高年平均气温 +20°C ; 最低气温 -30°C (适用于户内式变压器)。

Altitude: not exceed 1000m;
Supply voltage waveform: similar to a sine wave;
Symmetry multiphase power supply voltage:
polyphase transformer connected supply voltage
should be approximately symmetrical.
Ambient temperature: Maximum temperature +
40°C ; the highest dailaverage temperature +
30°C ; The highest annualaverage temperature
is+ 20°C ; minimum tem-perature of -30°C (su-
itable for indoor type tra-nformer).

结构特征 Structure

SGB10 系列是采用杜邦 NOMEK® 纸为基础的绝缘系统, 在变压器的整个使用寿命期间都保持极佳的电气性能和机械性能。NOMEK® 不易老化, 耐收缩及抗压缩, 加上弹力特强, 因此可以确保变压器即使使用数年之后, 线圈仍保持结构紧密, 并且能够承受短路的压力。

高标的的安全性, 无可燃性树脂, 无有毒气体, 不助燃。
单位 kVA 的体积和重量减少
紧急过负载的能力增加
修理、维护方便
噪音低
对湿度、灰尘、污染不敏感
运行无局部放电及永无“龟裂”的可能
设计灵活, 可按客户的要求设计制成所需要的任何规格。

SGB10 series is the use of paper-based DuPont NOMEK® insulation systems, during the entire life of the transformer maintains excellent electrical and mechanical properties. NOMEK® not aging, resistance to shrinkage and resistance to compression, coupled with an exceptionally strong elasticity, thus ensuring even for several years after the transformer coil remains compact, and can withstand the pressure of a short circuit.

High standards of safety, no flammable resin, no toxic gas, no combustion.
Reducing the size and weight unit kVA
Increase the capacity of the emergency overload
Repair, easy to maintain
Low noise
Humidity, insensitive to dust, pollution
Run no partial discharge and never "crack" may
Design flexibility, customers can request the
design of any specification made need.

主要技术参数 The main technical parameters

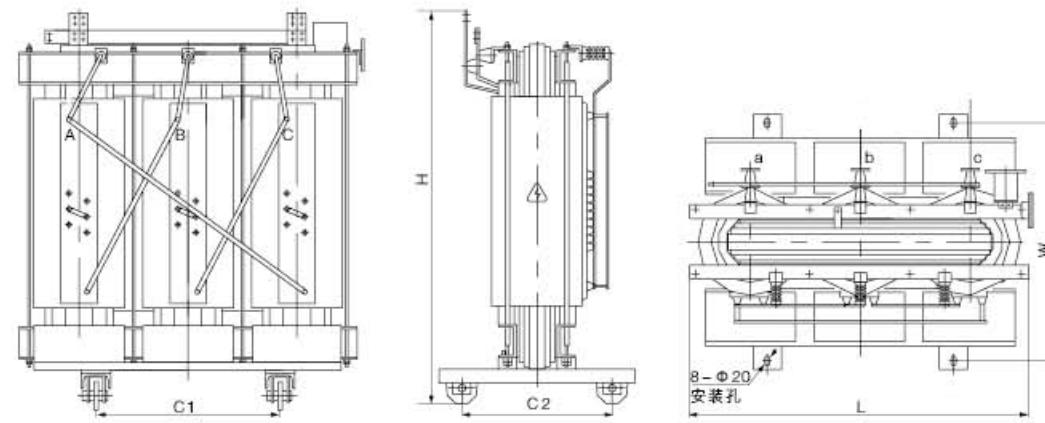
额定容量 Rated capacity (kVA)	电压组合及分接范围 Range of voltage and tap			联结组标号 Vector Group Symbol	空载损耗 No-load loss (W)	负载损耗 Load loss (W)	空载电流 No-load current(%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range(%)	低压 Low pressure (kV)					
80					370	1750	2.2	4
100					400	2170	2.0	4
125					470	2590	1.8	4
160					545	3100	1.8	4
200					625	3970	1.6	4
250					720	4680	1.6	4
315	6.3	6.6		Dyn11	880	5610	1.4	4
400	10				975	6630	1.4	4
500	10.5	±5%	0.4	Yd1	1160	7950	1.4	4
630	11	±2×2.5%			1300	9780	1.2	6
800					1520	11560	1.2	6
1000					1770	13350	1.1	6
1250					2090	15640	1.1	6
1600					2450	18110	1.1	6
2000					3320	21250	1.0	6
2500					4000	24740	1.0	6

SGB10 型 6~10kV

环保型干式变压器

Environmentally friendly dry-type transformers

外形及安装尺寸 (mm) Overall and installation dimensions(mm)



额定容量 Rated capacity (kVA)	外形及安装尺寸 Shape and installation dimensions (mm)				
	L	W	H	C1	C2
100	1060	750	880	660	660
160	1140	750	1050	660	660
200	1180	750	1150	660	660
250	1200	750	1200	660	660
315	1240	750	1210	660	660
400	1350	900	1240	660	820
500	1360	900	1320	820	820
630	1440	900	1350	820	820
800	1500	900	1440	820	820
1000	1550	900	1500	820	820
1250	1600	1100	1650	820	820
1600	1700	1100	1750	820	820
2000	1750	1250	1800	1070	1070
2500	1800	1250	1950	1070	1070

SGB11 型 6~10kV

环保型干式变压器
Environmentally friendly dry-type transformers



产品概述 Product overview

SGB(H)11型 H 级绝缘干式电力变压器承受热冲击能力强, 过负载能力大、难燃, 防火性能高、低损耗、局部放电量小、噪声低、不产生有害气体、不污染环境、对湿度不敏感、体积小、不开裂、维护简便。因此最适宜于防火要求高、负荷波动大以及污秽潮湿的恶劣环境中。如机场、发电厂、冶金作业、医院、高层建筑、购物中心、居民密集区以及石油化工、核电站、核潜艇等特殊环境中。

SGB (H) 11 type H-class insulation dry-type power transformers ability to withstand thermal shock, overload capacity, high flame retardant, fire resistance, low loss, low partial discharge capacity, low noise, no harmful gases, do not pollute the environment, insensitive to humidity, small, no cracking, easy to maintain. Therefore most suitable fire protection requirements high load fluctuation and dirty wet harsh environments. Such as airports, power plants, metallurgical operations, hospitals, high-rise buildings, shopping centers, densely populated areas as well as petrochemical, nuclear power plants, nuclear submarines and other special environment.

SGB11 型 6~10kV

环保型干式变压器
Environmentally friendly dry-type transformers

工作条件 work condition

安装高度: 海拔不超过 1000m;
电源电压的波形: 似正弦波;
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:
最高气温 +40°C ; 最高日平均气温 +30°C ; 最高年平均气温 +20°C ; 最低气温 -30°C (适用于户内式变压器)。

Installation Altitude: not exceed 1000m;
Supply voltage waveform: similar to a sine wave;
Symmetry multiphase power supply voltage: polyphase transformer connected supply voltage should be approximately symmetrical.

Ambient temperature:
Maximum temperature +40°C ; the highest daily average temperature +30°C ; The highest annual average temperature is +20°C ; minimum temperature of -30°C (suitable for indoor type transformer).

结构特征 Structure

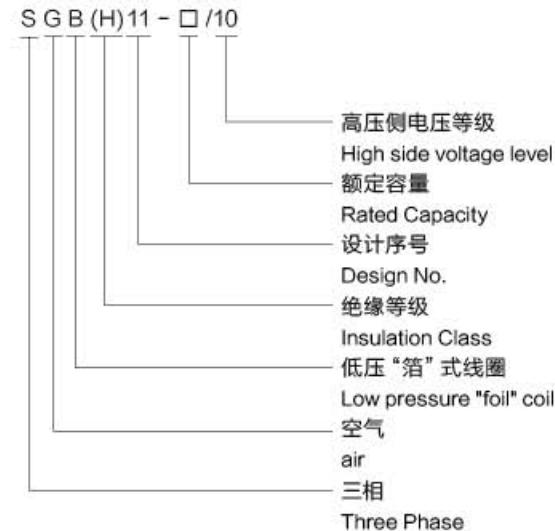
SGB11 系列是采用杜邦 NOMEK® 纸为基础的绝缘系统, 在变压器的整个使用寿命期间都保持极佳的电气性能和机械性能。NOMEK® 不易老化, 耐收缩及抗压缩, 加上弹力特强, 因此可以确保变压器即使使用数年之后, 线圈仍保持结构紧密, 并且能够承受短路的压力。

高标准的安全性, 无可燃性树脂, 无有毒气体, 不助燃。
单位 kVA 的体积和重量减少
紧急过负载的能力增加
修理、维护方便
噪音低
对湿度、灰尘、污染不敏感
运行无局部放电及永无“龟裂”的可能
设计灵活, 可按客户的要求设计制成所需要的任何规格。

SGB10 series is the use of paper-based DuPont NOMEK® insulation systems, during the entire life of the transformer maintains excellent electrical and mechanical properties. NOMEK® not aging, resistance to shrinkage and resistance to compression, coupled with an exceptionally strong elasticity, thus ensuring even for several years after the transformer coil remains compact, and can withstand the pressure of a short circuit.

High standards of safety, no flammable resin, no toxic gas, no combustion.
Reducing the size and weight unit kVA
Increase the capacity of the emergency overload
Repair, easy to maintain
Low noise
Humidity, insensitive to dust, pollution
Run no partial discharge and never "crack" may
Design flexibility, customers can request the design of any specification made need.

型号含义 Model and meaning



主要技术参数 The main technical parameters

额定容量 Rated capacity (kVA)	电压组合及分接范围 Range of voltage and tap			联结组标号 Vector Group Symbol	空载损耗 No-load loss (W)	负载损耗 Load loss (W)	空载电流 No-load current(%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range(%)	低压 Low pressure (kV)					
80	6.3 6.6 10 10.5 11	±5% ±2×2.5%	0.4	Dyn11 Yyn0	340	1750	2.2	4
100					360	2170	2.0	4
125					430	2590	1.8	4
160					490	3100	1.8	4
200					560	3970	1.6	4
250					650	4680	1.6	4
315					790	5610	1.4	4
400					880	6630	1.4	4
500					1050	7950	1.4	4
630					1170	9780	1.2	6
800					1370	11560	1.2	6
1000					1590	13350	1.1	6
1250					1880	15640	1.1	6
1600					2210	18110	1.1	6
2000					2990	21250	1.0	6
2500					3600	24740	1.0	6

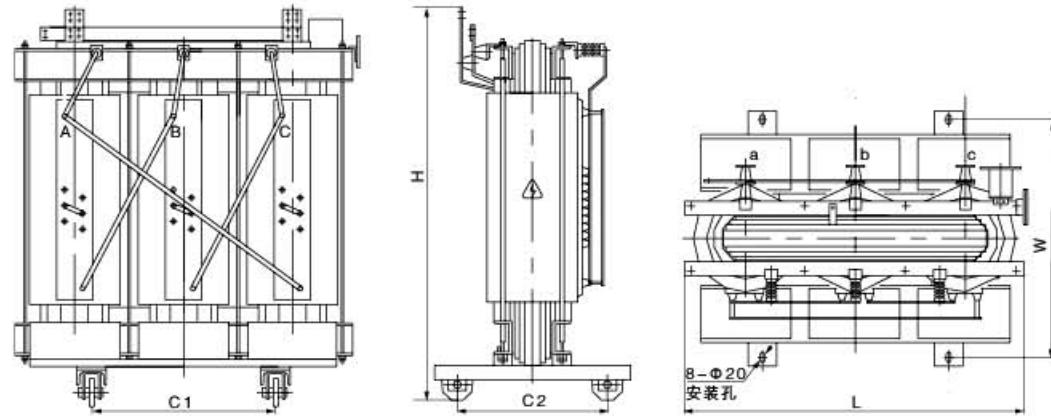
SGB11 型 6~10kV

环保型干式变压器

Environmentally friendly dry-type transformers

外形及安装尺寸 (mm)

Overall and installation dimensions(mm)



额定容量 Rated capacity (kVA)	外形及安装尺寸 Shape and installation dimensions (mm)				
	L	W	H	C1	C2
100	1060	750	880	660	660
160	1140	750	1050	660	660
200	1180	750	1150	660	660
250	1200	750	1200	660	660
315	1240	750	1210	660	660
400	1350	900	1240	660	820
500	1360	900	1320	820	820
630	1440	900	1350	820	820
800	1500	900	1440	820	820
1000	1550	900	1500	820	820
1250	1600	1100	1650	820	820
1600	1700	1100	1750	820	820
2000	1750	1250	1800	1070	1070
2500	1800	1250	1950	1070	1070



油浸式立体卷铁心配电变压器系列

Oil-immersed tridimensional toroidal-core distribution transformers



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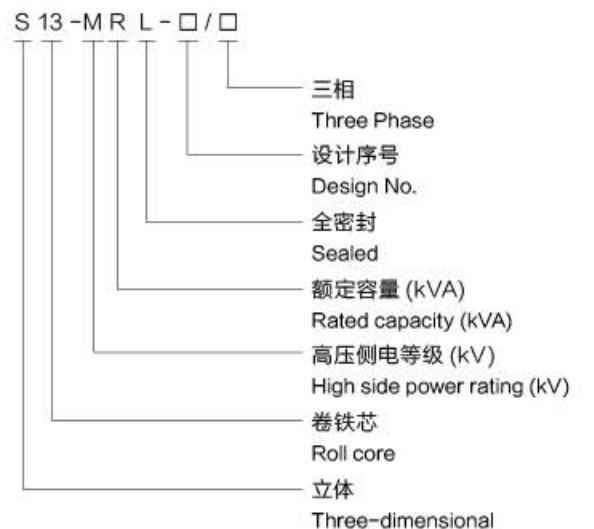


产品概述 Product overview

S13-M.RL-80~1600/10型全密封油浸式变压器适用于交流50Hz、额定工作电压10kV及以下的电力系统中，作为石油、冶金、化工、纺织、轻工等企业及粉尘较大场所的配电变压器。

S13-M.RL-80~1600/10-type full-sealed oil-immersed transformers for AC 50Hz, rated working voltage of 10kV and below the power system, as petroleum, metallurgy, chemical, textile, light industry and other corporate and relatively dust Great place for distribution transformers.

型号含义 Model and meaning



工作条件 work condition

海拔高度：不超过1000m；
环境温度：-40℃ ~+40℃

Altitude: not exceed 1000m
Ambient temperature: -40 °C ~+40 °C

结构特征 Structure

◆铁芯

采用材质性能不低于2a7ZH100冷轧硅钢片，三相三柱立体对称结构，有最短及最平衡的三相磁路；每组（卷）芯片由薄钢带在专用铁芯卷绕机上绕制，压力均匀紧实；铁芯框经真空退火处理，消除应力，提高电磁性能。

三角形铁芯不需裁剪及冲剪加工，消除了传统铁芯的横向、纵向接缝，减少了磁阻；铁芯柱横截面呈圆形，铁芯的填充系数最大，三角形立体结构使它的三相磁回路相等并且最短，实现了人们梦寐以求的理想变压器的铁芯结构。

◆绕组

绕组采用瓦楞油道，不浸漆工艺，紧缩带绑扎；绕组均为铜芯式线圈；高压绕组具有对应分接电压要求的抽头，引至分接开关上，开关安装在箱盖上，且需切断电源后方可变换分接电压。

◆安全保护装置

80~1600kVA 变压器均装有压力释放阀；根据用户需求可安装具有报警和跳闸端子气体

继电器；

◆油温测更装置
变压器均装有玻璃温度计的管座，管座设在油箱顶部，伸入油箱内 120±10mm；
容量在 1000kVA 以上的变压器装有户外式信号温度计；

◆变压器油箱

变压器油箱由波纹壁构成，表面采用粉尘静电喷涂，漆膜牢固。波纹散热片不但具有冷却功能，而且具有“呼吸”功能，波纹散热器的弹性可补偿因温度升降而引起的变压器油体积的变化。因此全密封变压器没有储油柜，降低了变压器整体高度；
全密封变压器，在装配时采用真空注油工艺，完全去除了变压器中的潮气，变压器油不与空气接触。有效地防止氧气和水分侵入变压器而导致变压器绝缘性能下降和变压器油老化的可能，因此不定期进行油样实验。

◆ core

Using material properties not less than 2a7ZH100 cold-rolled silicon steel sheet; symmetrical three-phase three-dimensional structure column, there is the shortest and the most balanced of the three-phase magnetic circuit; each group (volume) chip from a thin strip on a dedicated core winding machine winding even pressure tight; the core box by vacuum annealing, eliminate stress, improve electromagnetic properties.

Triangular core without cutting and punching processing, eliminating the lateral, longitudinal seams traditional core, reducing the reluctance; leg circular cross-section, the maximum core fill factor, so that its three-dimensional structure triangle three-phase magnetic circuit are equal and shortest achieve a core structure that people dream of ideal transformer.

◆ winding

Windings corrugated oil passage, not dipping process, tightening belt lashing; both copper core coil winding; high voltage winding has a corresponding tap tap voltage requirements, lead to a tap on the switch, the switch is mounted on the cover, and the need After cutting off the power supply before converting voltage tap.

◆ security devices

80~1600kVA transformers are equipped with a pressure release valve;
Can be installed with alarm and trip relays gas terminals according to user needs;

◆ more oil measuring device

Headers transformers are equipped with a glass thermometer, tube socket located on the top of the tank, inserted into the fuel tank 120 ± 10mm;

Capacity over 1000kVA transformer type equipped with outdoor thermometer signal;

◆ transformer tank

Constituted by a corrugated wall transformer tank, the surface electrostatic spraying dust, the film firmly. Corrugated fins not only has a cooling function, but also has "breathing" function, the elastic bellows radiator transformer oil can compensate for variations in volume caused by temperature lift. Therefore, there is no conservator sealed transformer, the transformer reduces the overall height;

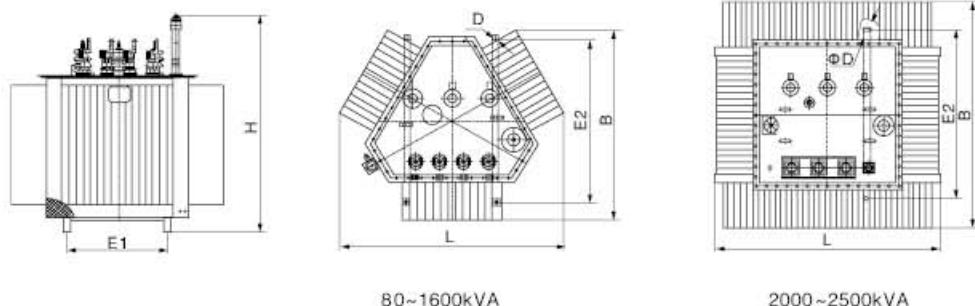
Sealed transformer, vacuum oiling in the assembly process, completely removes moisture in transformers, transformer oil is not in contact with air. Effectively prevent oxygen and moisture intrusion caused by transformer insulation transformers and transformer oil aging performance possible, so from time to time oil sample test.

S13-M·RL 型 6~10kV

油浸式立体卷铁心配电变压器

Oil-dimensional wound core distribution transformers

结构简图 Schematic



接线端子 Terminal Blocks

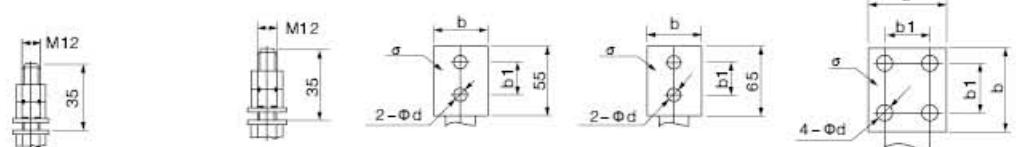


图1

图2

图3

图4

高压接线端子 High Terminal Block

低压接线端子 Low Terminal Blocks

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combination and Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
30	6	$\pm 5\%$ $\pm 2 \times 2.5\%$	0.4	Dyn11 Yzn11 Yyn0	80	630/600	0.3	4.0
50					100	910/870	0.24	4.0
63					110	1090/1040	0.23	4.0
80					130	1310/1250	0.22	4.0
100					150	1580/1500	0.21	4.0
125					170	1890/1800	0.2	4.0
160					200	2310/2200	0.19	4.0
200					240	2730/2600	0.18	4.0
250				Dyn11 Yyn0	290	3200/3050	0.17	4.0
315					340	3830/3650	0.16	4.0
400					410	4520/4300	0.16	4.0
500					480	5410/5150	0.16	4.0
630					570	6200	0.15	4.5
800					700	7500	0.15	4.5
1000					830	10300	0.14	4.5
1250					970	12000	0.13	4.5
1600					1170	14500	0.12	4.5

注: 1. 表中斜线上方的负载损耗适用于 Dyn11 联接组, 斜线下方的负载损耗值适用于 Yyn0 联接组。 2. 其它容量的产品性能参数, 由用户与制造厂协商确定。

Note: 1. load loss slash table above apply to join the group Dyn11 load loss slash Yyn0 below values apply to join the group.

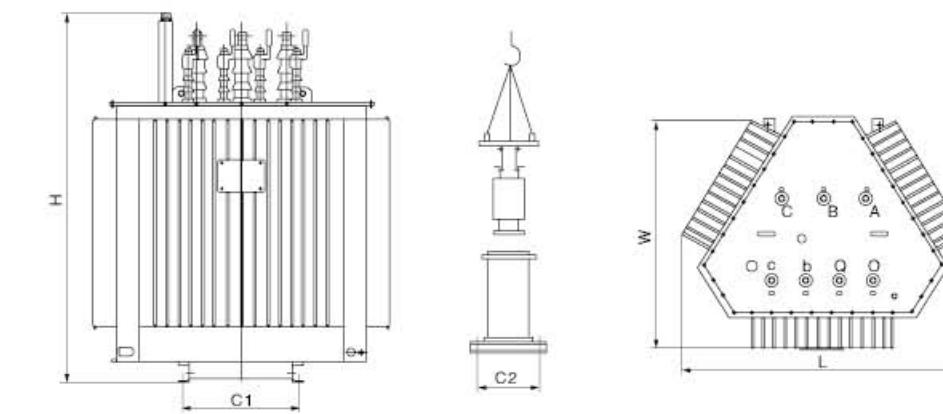
2. other capacity product performance parameters, determined by the user in consultation with the manufacturer.

S13-M·RL 型 6~10kV

油浸式立体卷铁心配电变压器

Oil-dimensional wound core distribution transformers

外形及安装尺寸 (mm)
Overall and installation dimensions (mm)



额定容量 Rated capacity (kVA)	外形及安装尺寸 Shape and installation dimensions (mm)				
	L	W	H	C1	C2
30	1010	680	1150	400	400
50	1030	685	1250	400	400
80	1120	730	1320	400	400
100	1150	995	1350	400	400
125	1050	920	1360	400	400
160	1100	950	1390	400	400
200	1115	970	1410	400	550
250	1190	1050	1450	400	550
315	1230	1070	1450	550	550
400	1395	1100	1470	550	550
500	1470	1200	1580	550	660
630	1570	1250	1590	550	660
800	1570	1350	1620	550	660
1000	1760	1500	1680	660	660
1250	1770	1530	1720	660	660
1600	1800	1550	1800	660	660
2000	1840	1700	1850	820	820
2500	1880	1780	1900	820	820



油浸式配电变压器系列 Oil-immersed distribution transformers series



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油浸式配电变压器
Oil-immersed distribution
transformers

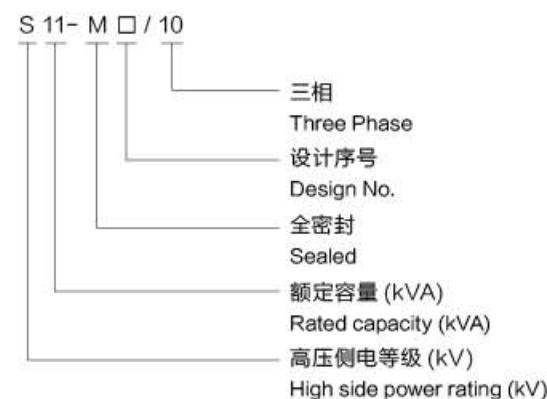


产品概述 Product overview

S11-M-30~2000/10型全密封油浸式变压器适用于交流 50Hz、额定工作电压 10kV 及以下的电力系统中,作为石油、冶金、化工、纺织、轻工等企业及粉尘较大场所的配电变压器。

S11-M-30~2000/10-type full-sealed oil-immersed transformers for AC 50Hz, rated working voltage of 10kV and below the power system, as petroleum, metallurgy, chemical, textile, light industry and other large enterprises and dust place the distribution transformers.

型号含义 Model and meaning



工作条件 work condition

◇ 安装高度: 海拔不超过 1000m ;
◇ 环境温度: -40℃ ~ +40℃

Installation Altitude: not exceed 1000m;
ambient temperature: -40 ℃ ~ +40 ℃

油浸式配电变压器
Oil-immersed distribution
transformers

结构特征
Structure

◇铁芯
铁芯选用高导磁晶粒取向冷轧硅钢片。铁芯为新式铁芯，全斜接缝迭积式铁芯，其铁芯柱为多级阶梯的圆截面，铁轭与铁芯为等截面。
◇绕组
绕组采用瓦楞油道，不浸漆工艺，紧缩带绑扎；绕组均为同心式线圈：高压绕组具有对应分接电压要求的抽头，引至分接开关上，开关安装在箱盖上、且需切断电源后方可变换分接电压。
◇安全保护装置
30~2000kVA 变压器装有压力释放阀；根据用户需求可安装具有报警和跳闸端子的气体继电器；
◇油温测量装置
变压器均装有玻璃温度计的管座，管座设在油箱顶部，伸入油内 120 ± 10 mm；1000~2000kVA 变压器装有户外式信号温度计；
◇变压器油箱
变压器油箱由波纹壁构成，表面采用粉尘喷涂、漆膜牢固。波纹散热片不但具有冷却功能，而且具有“呼吸”功能，波纹散热片的弹性可补偿因温度升降而引起的变压器油体积的变化。因此全密封变压器没有储油柜，降低了变压器整体高度；
变压器在封装时采用真空注油工艺，完全去除了变压器中的潮气，变压器油不与空气接触。有效地防止氧气和水分侵入变压器而导致变压器绝缘性能下降和变压器油老化的可能，因此不定期进行油样试验；

◇ core
Core is made of high permeability grain oriented cold-rolled silicon steel. The core of the new core, miter joints convolution type iron core, its legs of circular cross section multi-step, the yoke and the core of constant section.
◇ winding
Windings corrugated oil passage, not dipping process, tightening belt lashing; concentric coil windings are: high voltage winding has a corresponding tap tap voltage requirements, lead to a tap on the switch, the switch is mounted on the cover, and the need to cut After the power supply before converting voltage tap.
◇ security devices
30~2000kVA transformer equipped with a pressure release valve;
Can be installed with alarm and trip relays gas terminals according to user needs;
◇ oil temperature measurement device
Headers transformers are equipped with time oil sample test;

箱顶部，伸入油内 120 ± 10 mm；
1000~2000kVA 变压器装有户外式信号温度计；

变压器油箱由波纹壁构成，表面采用粉尘喷涂、漆膜牢固。波纹散热片不但具有冷却功能，而且具有“呼吸”功能，波纹散热片的弹性可补偿因温度升降而引起的变压器油体积的变化。因此全密封变压器没有储油柜，降低了变压器整体高度；
变压器在封装时采用真空注油工艺，完全去除了变压器中的潮气，变压器油不与空气接触。有效地防止氧气和水分侵入变压器而导致变压器绝缘性能下降和变压器油老化的可能，因此不定期进行油样试验；

a glass thermometer, tube socket located on the top of the tank, inserted into the oil 120 ± 10 mm;
1000~2000kVA transformer type equipped with outdoor thermometer signal;

◇ transformer tank
Constituted by a corrugated wall transformer tank, the surface dust
Spray, paint firm. Corrugated fins not only has a cooling function, but also changes in the volume of transformer oil "breathe" elasticity, corrugated fins may compensate for temperature caused by lifting. Therefore, there is no conservator sealed transformer, the transformer reduces the overall height;

Transformer vacuum oiling process at the time of packaging, completely removes moisture from the transformer, transformer oil is not in contact with air. Effectively prevent oxygen and moisture intrusion caused by transformer insulation, transformers and transformer oil aging performance possible, so from time to time oil sample test;

S13-M 型 6~10kV

油浸式配电变压器
Oil-immersed distribution transformers

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combinationand Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
30				Dyn11 Yzn11 Yyn0	80	630/600	1.8	4
50					100	910/870	1.6	4
63					110	1090/1040	1.6	4
80					130	1310/1250	1.5	4
100					150	1580/1500	1.4	4
125					170	1890/1800	1.4	4
160	6				200	2310/2200	1.3	4
200	6.3				240	2730/2600	1.2	4
250	6.6	± 5 $\pm 2 \times 2.5\%$	0.4		290	3200/3050	1.2	4
315	10				340	3830/3650	1.1	4
400	10.5				410	4520/4300	1.1	4
500	11				480	5410/5150	1.0	4
630					570	6200	0.9	4.5
800					700	7500	0.8	4.5
1000				Dyn11 Yyn0	830	10300	0.8	4.5
1250					970	12000	0.7	4.5
1600					1170	14500	0.6	4.5

S13-M 型 20kV

油浸式配电变压器
Oil-immersed distribution transformers

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combinationand Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
50				Dyn11 Yyn0	170	1270/1210	2.00	6.5
100					230	2120/2020	1.80	6.5
125					270	2500/2380	1.70	6.5
160					290	2970/2830	1.60	6.5
200					340	3500/3330	1.50	6.5
250					410	4160/3960	1.40	6.5
315	20	± 5 $\pm 2 \times 2.5\%$	0.4		490	5010/4770	1.40	6.5
400	22				580	6050/5760	1.30	6.5
500	24				690	7280/6930	1.20	6.5
630					830	8280	1.10	6.5
800					980	9900	1.00	6.5
1000					1150	12150	1.00	6.5
1250					1410	14670	0.90	6.5
1600					1700	17550	0.80	6.5

注: 1. 表中斜线上方的负载损耗适用于 Dyn11 联接组，斜线下方的负载损耗值适用于 Yyn0 联接组。

Note: 1. slash the top of the table load loss applicable to Dyn11 join groups, load loss slash Yyn0 below values apply to join the group.

2. 其它容量的产品性能参数，由用户与制造厂协商确定。

S11-M 型 6~10kV

油浸式配电变压器

Oil-immersed distribution transformers

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combinationand Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low ressure (kV)					
30					100	630/600	2.3	4
50					130	910/870	2.0	4
63					150	1090/1040	1.9	4
80					180	1310/1250	1.9	4
100					200	1580/1500	1.8	4
125					240	1890/1800	1.7	4
160					280	2310/2200	1.6	4
200	11				340	2730/2600	1.5	4
250	10.5				400	3200/3050	1.4	4
315	10	±5 ±2×2.5%		Yyn0	480	3830/3650	1.4	4
400	6.3		0.4	Dyn11	570	4520/4300	1.3	4
500	6		0.69		680	5410/5150	1.2	4
630					810	6200	1.1	4.5
800					960	7500	1.0	4.5
1000					1150	10300	1.0	4.5
1250					1360	12000	0.9	4.5
1600					1640	14500	0.8	4.5
2000					1960	19800	0.8	5
2500					2310	23000	0.7	5

S11-M 型 20kV

油浸式电力变压器

Oil-immersed power transformers

30kVA~1600kVA 三相双绕组无励磁调压配电变压器

30kva~1600kva 3-phase duplex winding non-excited tap-changing distribution transformer

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combinationand Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low ressure (kV)					
50					210	1270/1210	2.00	6.5
100					290	2120/2020	1.80	6.5
125					340	2500/2380	1.70	6.5
160					360	2970/2830	1.60	6.5
200					430	3500/3330	1.50	6.5
250					510	4160/3960	1.40	6.5
315	20	±5% ±2×2.5%		Dyn11	610	5010/4770	1.40	6.5
400	22		0.4	Yyn0	730	6050/5760	1.30	6.5
500	24				860	7280/6930	1.20	6.5
630					1040	8280	1.10	6.5
800					1230	9900	1.00	6.5
1000					1440	12150	1.00	6.5
1250					1760	14670	0.90	6.5
1600					2120	17550	0.80	6.5

注: 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值适用于 Dyn11 或 Yzn11 联结组, 斜线下方的负载损耗值适用于 Yyn0 联结组。

Note: Rated capacity 500kVA and below transformer, the load loss above the oblique line in the table applies to Dyn11 or Yzn11; the load loss below the oblique line applies to Yyn0.



35kV 油浸式电力变压器

35kV oil-immersed power
transformers



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S13型 35kV

油浸式电力变压器

Oil-immersed power transformers

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combinationand Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
50					130	1200/1140	1.30	6.5
100					185	2010/1910	1.10	6.5
125					215	2370/2260	1.10	6.5
160					225	2820/2680	1.00	6.5
200					270	3320/3160	1.00	6.5
250					320	3950/3760	0.95	6.5
315	35	±5%	0.4	Dyn11	385	4750/4530	0.95	6.5
400	38.5	±2×2.5%		Yyn0	465	5740/5470	0.85	6.5
500					545	6910/6580	0.85	6.5
630					665	7860	0.65	6.5
800					785	9400	0.65	6.5
1000					920	11500	0.65	6.5
1250					1120	13900	0.60	6.5
1600					1350	16600	0.60	6.5

注: 1、根据要求变压器的高压分接范围可供 ±2×2.5%。 2、其它容量的产品性能参数,由用户与制造厂协商确定。

Note: 1, according to the requirements of high voltage transformer tap range for ± 2×2.5%.

2, other capacity product performance parameters, determined by the user in consultation with the manufacturer.

S11型 35kV

油浸式电力变压器 Oil-immersed power transformers

50kVA~1600kVA 三相双绕组无励磁调压配电变压器

50kva~1600kva 3-phase duplex winding non-excited tap-changing distribution transformer

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combinationand Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
50					130	1200/1140	1.30	6.5
100					185	2010/1910	1.10	6.5
125					215	2370/2260	1.10	6.5
160					225	2820/2680	1.00	6.5
200					270	3320/3160	1.00	6.5
250					320	3950/3760	0.95	6.5
315	35	±5%	0.4	Dyn11	385	4750/4530	0.95	6.5
400	38.5	±2×2.5%		Yyn0	465	5740/5470	0.85	6.5
500					545	6910/6580	0.85	6.5
630					665	7860	0.65	6.5
800					785	9400	0.65	6.5
1000					920	11500	0.65	6.5
1250					1120	13900	0.60	6.5
1600					1350	16600	0.60	6.5
2000					1590	19700	0.55	6.5
2500					1890	23200	0.55	6.5

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值适用于 Dyn11 联结组, 斜线下方的负载损耗值适用于 Yyn0 连接组。

注 2: 根据用户需要, 可提供高压分接范围为 ±2×2.5% 的变压器。

Note 1: Rated capacity 500kVA and below transformer, the load loss above the oblique line in the table applies to Dyn11 or Yzn11; the load loss below the oblique line applies to Yyn0.

Note 2: According to requirements, the transformer can supply HV tap change ±2×2.5%.

S11型 35kV

油浸式电力变压器

Oil-immersed power transformers

630kVA~31500kVA 三相双绕线组无励磁调压电力变压器

630kva~31500kva triple phase duplex winding non exciting regulating power transformer

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combinationand Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
630					830	7870	1.10	6.5
800					980	9410	1.00	6.5
1000					1150	11540	1.00	6.5
1250	35	±5%		Yd11	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					3040	23090	0.56	7.0
4000	35~38.5	±5%		Yd11	3620	27360	0.56	7.0
5000					4320	31380	0.48	7.0
6300					5250	35060	0.48	7.0
8000					7200	38480	0.42	7.5
10000					8700	45320	0.42	7.5
12500					10080	53870	0.40	8.0
16000	35~38.5	±2×2.5%		Yd11	12160	65840	0.40	8.0
20000					14400	79520	0.40	8.0
25000					17020	94050	0.32	8.0
31500					20220	112860	0.32	8.0

注 1: 外形尺寸根据用户具体需要进行设计。

Note 1: Outline dimension is designed according to requirements.

SZ11型 35kV

有载调压油浸式电力变压器 Load tap oil-immersed power transformers

2000kVA-20000kVA 有载调压电力变压器

2000kVA-20000kVA OLTC power transformer

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combination and Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
2000					2300	19240	0.80	6.5
2500	35	±3×2.5	6.3 10.5	Yd11	2720	20640	0.80	6.5
3150					3230	24710</		



非晶合金变压器系列 Amorphous alloy transformer series



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10kV、20kV 油浸式非晶合金铁芯配电变压器
10KV、20KV Immersed amorphous alloy core distribution transformers



产品概述 Product overview

变压器可把电网电压变换为系统或负载所需要的电压,实现电能的传递与分配。本变压器可取代硅钢片铁芯的变压器而广泛使用于户外的配电系统。本产品的大量入网运行可取得良好的节能效果并可减少对大气的污染。本产品特别适用于电能不足和负荷波动大以及难以进行日常维护的地区。由于变压器采用全密封结构,绝缘油和绝缘介质不受大气污染,因而可在潮湿的环境中运行,是城市和农村广大配电网中理想的配电设备。

Transformer can change the electrical net voltage into the voltage system or load needed, which realize electrical energy's transit and allot. This kind of transformer can take replace of silicon steel iron-core transformer and widely used in the outdoor distribution system. Large quantity of this product put into use may save the energy and reduce air-pollution. Which is extremely suit for the area lack of electrical energy, big load fluctuate, difficult to maintenance. As the transformer adopt omniseal structure, it can be in motion in heavy humidity and best for the city and rural distribution network.

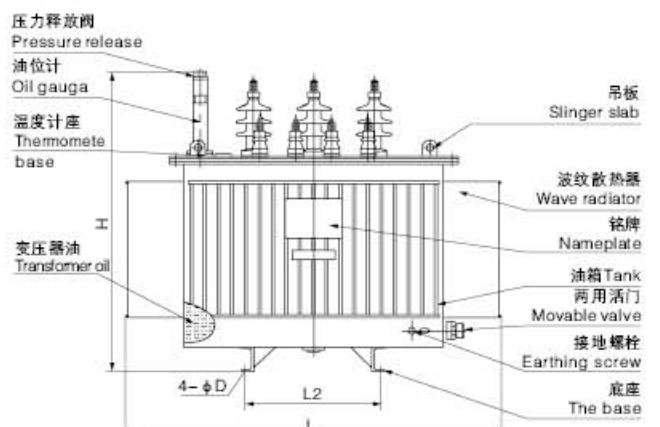
型号含义 Model and meaning

S	B	H	15	-	M	-	□	/	□
电压等级 (kV) The classification of Voltage (kV)									
额定容量 Rated capacity (kVA)									
密封式 Omniseal type									
性能水平代号 Functional level code									
非晶合金铁芯 Amorphous Iron-core									
铜箔低压线圈 Copper LV winding									
三相 Three phase									

10kV、20kV 油浸式非晶合金铁芯配电变压器 10KV、20KV OIL-IMMERSED Amorphous alloy core distribution transformers

产品特点 Features

节能产品, 空载损耗比 S9 型变压器降低 75% 左右;
损耗低、发热少、温升低, 运行稳定;
结构先进合理、抗短路能力强;
超载能力强、安全可靠、耐腐蚀性能强, 免维护。
Energy Saving, No-load Loss Is 75% Less Than S9 Series;
Low Loss, Low Noise, Low Temperature Rise, Steady Work;
Advanced Structure, High Anti Short Circuit;
High Overload Ability, Safe And Reliable, High Resistant To Corrosion, Free Maintenance.



产品外形图 Product outline drawing

通过短路试验 Pass the short-circiut test

由于非晶合金铁芯不能承受机械力的作用, 加之矩形线圈的机械强度较弱, 因此非晶合金变压器通过短路试验成为变压器领域的一个技术难题。本公司运用成熟的技术经验成功地攻克了这一难关, 自行设计开发 SBH15-M-2500/10 配电变压器。在沈阳国家变压器质量监督检验中心一举通过了短路试验, 这标志着本公司的非晶合金变压器的设计制造技术处于国际领先水平。

As Amorphous Distribution Transformer can't bear mechanical force, and rectangle winding's mechanical intensity is week, it is a big difficulty for Amorphous Distribution Transformer pass the Short-circiut Test, my company has captured this difficulty .exploited SBH15-M-2500/10 Distribution Transformer, it has passed the Short-circiut Test in Shen Yang National Transformer Quality Supervision Testing Center. It demonstrates that my company's Amorphous Distribution Transformer design has came to the international advanced level.

产品绝缘水平 Insulation level

电压等级 Voltage level(kV)	设备最高电压有效值 Highest electrical equipment RMS voltage(kV)	额定短时工频耐受电压有效值 Rated frequency withstand voltage rms (kV/min)	额定雷电冲击耐受电压全波峰值 Rated lightning impulse withstand voltage full wave peak(kV)
≤ 1	≤ 1	5	--
6	6.9	25	75
10	11.5	35	95
20	23	55	125

10kV、20kV 油浸式非晶合金铁芯配电变压器 10KV、20KV OIL-IMMERSED Amorphous alloy core distribution transformers

产品符合标准 Products standard

GB 1094.1-1996 电力变压器第一部分总则
GB 1094.2-1996 电力变压器第二部分温升
GB 1094.3-2003 电力变压器第三部分绝缘水平和绝缘试验
The third part of GB 1094.3-2003 Power transformer insulation levels and dielectric tests
GB 1094.5-2008 电力变压器第五部分承受短路的能力
GB311.1-1997 高压输变电设备绝缘配合
GB/T25446-2010 油浸式非晶合金铁芯配电变压器技术参数和要求
IEC 60076 电力变压器
ANSI/C57.12.00 油浸式配电、电力及调压变压器通用技术要求
GB 1094.1-1996 Power transformers PART I GENERAL PROVISIONS
GB 1094.2-1996 Power transformers second part of the temperature rise
The third part of GB 1094.3-2003 Power transformer insulation levels and dielectric tests
GB 1094.5-2008 Power transformers ability to withstand short circuit Part V
GB311.1-1997 high-voltage power transmission equipment insulation coordination
GB / T25446-2010 oil-immersed amorphous alloy core distribution transformers technical parameters and requirements
IEC 60076 Power Transformer
ANSI / C57.12.00 oil-immersed distribution, power and regulating transformers General technical requirement

SBH15-M 型 6~10kV

非晶合金油浸式变压器

Crystal alloy oil-immersed transformers

单相油浸式非晶合金铁芯配电变压器

Single phase oil immersed amorphous alloy distribution transformer

额定容量 Rated capacity (kVA)	电压组合 Voltage combination			联组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
5					20	150	2.4	3.5
10					20	260	2.2	3.5
16					20	370	2.0	3.5
20					30	430	1.8	3.5
30	6			II0 II6	30	630	1.6	3.5
40	6.3				40	780	1.4	3.5
50	10	±5% ±2× 2.5%			40	1100	1.2	3.5
63	10.5				50	1140	1.0	3.5
80	11				60	1400	0.9	3.5
100					70	1650	0.8	3.5
125					90	1950	0.7	3.5
	0.22~0.24							

SBH15-M 型 6~10kV

非晶合金油浸式变压器

Crystal alloy oil-immersed transformers

油浸式非晶合金铁芯配电变压器

Oil immersed amorphous alloy distribution transformer

额定容量 Rated capacity (kVA)	电压组合 Voltage combination			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
30	6 6.3 6.6 10 10.5 11	$\pm 5\%$ $\pm 2 \times 2.5\%$	0.4	Dyn11 Yyn0	33	630/600	1.70	4.0
50					43	910/870	1.30	4.0
63					50	1090/1040	1.20	4.0
80					60	1310/1250	1.10	4.0
100					75	1580/1500	1.00	4.0
125					85	1890/1800	0.90	4.0
160					100	2310/2200	0.70	4.0
200					120	2730/2600	0.70	4.0
250					140	3200/3050	0.70	4.0
315					170	3830/3650	0.50	4.0
400					200	4520/4300	0.50	4.0
500					240	5410/5150	0.50	4.0
630					320	6200	0.30	4.5
800					380	7500	0.30	4.5
1000					450	10300	0.20	4.5
1250					530	12000	0.20	4.5
1600					630	14500	0.20	4.5
2000					750	17400	0.20	5.0
2500					900	20200	0.20	5.0

注: 当铁芯为三相三柱时, 根据需要也可采用 Yy110 联结组。

Note: If the core is 3-phase 3-pole, vector group Yyn0 can be used according to requirements.

SBH15-M 型 20kV

非晶合金油浸式变压器

Amorphous alloy oil-immersed transformers

油浸式非晶合金铁芯电力变压器

Oil-immersed amorphous alloy core power transformer

额定容量 Rated capacity (kVA)	电压组合 Voltage combination			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
30	24 22 20	$\pm 5\%$ $\pm 2 \times 2.5\%$	0.4	Dyn11 Yyn0	30	40	690/660	1.50
50					50			
63					63			
80					80			
100					100			
125					125			
160					160			
200					200			
250					250			
315					315			
400					400			
500					500			
630					630			
800					800			
1000					1000			
1250					1250			
1600					1600			
2000					2000			
2500					2500			

注 1: 当铁芯为三相三柱时, 根据需要也可采用 Yyn0 联结组。

注 2: 对于额定容量为 500kV 及以下的变压器, 表中斜线上方的负载损耗值适用于 Dyn11 联结组, 斜线下方的负载损耗值适用于 Yyn0 联结组。

注 3: 如果用户需要, 也可选用其它损耗值。

注 4: 根据用户需要, 可提供其它高压分接范围的变压器。

Note 1: if the core is 3-phase 3-pole vector group Yyn0 can be used according to requirements.

Note 2: rated capacity 500kV and below transformer, the load loss above the oblique line in the table applies to Dyn11 or Yzn11; the load loss below the oblique line applies to Yyn0

Note 3: according to requirements, other loss values can be provided.

Note 4: according to requirements, other tap change can be provided.

SC(B)H15 型 6~10kV

非晶合金干式变压器
Amorphous alloy dry-type transformers

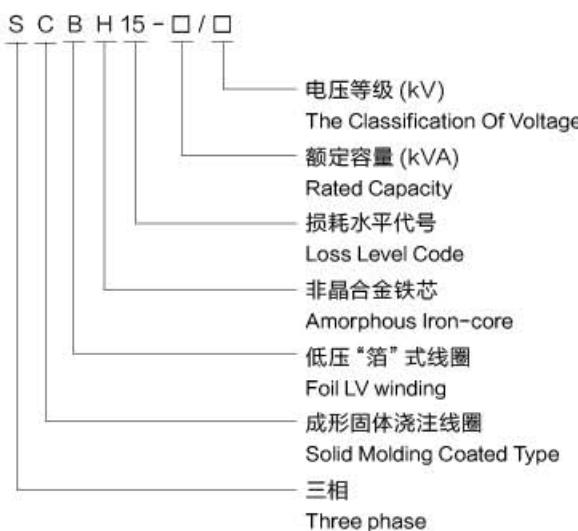


产品概述 Product overview

非晶合金干式变压器空载损耗比 GB/T10228 表 4 组 I 降低 75%，负载损耗比 GB/T10228 表 4 降低 15%，是当代最先进的节能型干式变压器。

The no-load loss of SCBH16 amorphous dry type transformer is 75% less than GB/T10228 table 4 group I, load loss is 15% less than GB/T 10228 table 4, which is the most advanced energy conservation dry-type transformer.

型号含义 Model and meaning



产品特点 Features

节能环保，空载损耗比常规 10 型干变低 70%~80%;
三防能力强，动热稳定性高;
投资回收期短，客户长期受益。

Energy saving and environment protection, no-load loss is 70%~80% less than S10 series;
Fireproofing, explosion-proof;
Short payback period of investment, more benefits

SC(B)H15 型 6~10kV

非晶合金干式变压器
Amorphous alloy dry-type transformers

产品用途 Purpose

本产品具有空载损耗低、无油、阻燃自熄、耐潮、抗裂和免维修等优点。凡是现在使用普通干变的场所都可由非晶干变所取代，可用于高层建筑、商业中心、地铁、机场、车站、工矿企业和发电厂。特别适合于易燃、易爆等防火要求高的场所安装使用。

This product has the merit of low no-load loss, no oil, self burnout if prohibition is encountered, humidity endurance, anticrack, no maintenance etc. It may take replace any normal Dry-Type Transformer at high building, business centre, subway, airport, bus station, industrial enterprise and power-plant, extremely suit for those site with high inflammable & explosive needs.

结构特点 Structural features

本产品低压为箔式线圈，采用铜箔绕制，高压线圈采用 H 级高强度漆包线绕制，采用玻璃纤维加强的环氧树脂包封结构，具有优良的耐潮和抗裂性能。铁芯由非晶合金带材卷而成，采用矩形截面、四框五柱或三框三柱结构。

The product adopt LV winding copper foil winding, HV winding rolled by paint coated thread, with glass fibre added insulation resin, which is good for humidity-bearing and anti-crack, the iron-core is made of Amorphous strip material, with rectangular section, four flame five column or three flame three column structure.

使用环境 Use of the environment

使用条件	Service condition
环境温度	Ambient temperature
△最高气温 +40℃	△ Highest air temperature +40℃ ,
△最低气温 -25℃	△ Lowest air temperature -25℃ ,
△最热月平均温度 +30℃	△ Hottest monthly average temperature +30℃
△最热年平均温度 +20℃	△ Hottest yearly average temperature +20℃
海拔不超过 1000m	The height above the sea level is below 1000m;
电源电压的波形近似于正弦波	The power supply voltage's wave is similar to sine wave
三相电源电源电压应大致对称	Three-phase power supply voltage is approximately symmetrical
安装环境无明显的污秽	Installation without evidence filth.
户内使用	Service indoor

产品标准 Product standards

GB/T22072-2008 GB1094.11-2007
额定高压 Rated HV: 10(10.5, 11, 6, 6.3, 6.6)kV
额定低压 Rated LV: 0.4kV
分接范围 Tap connection range:
△无励磁调压 Non-exciting regulation: (±5%, ±2×2.5%)
△有载调压 On-load regulation: (±4×2.5%)
联结组别 Vector group: D yn11 or Y yn0
绝缘水平 Insulation level: LI75AC35/AC5

SC(B)H15 型 6~10kV

非晶合金干式变压器
Amorphous alloy dry-type transformers

性能参数 Performance parameters

额定容量 Rated capacity (kVA)	电压组合 Voltage combination			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	空载电流 No-load current(%)	负载损耗 Load loss (W)	短路阻抗 Short circuit impedance(%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
30					70	630/600	1.6	4.0
50					90	910/870	1.5	4.0
80					120	1310/1250	1.3	4.0
100					130	1580/1500	1.2	4.0
125					150	1890/1800	1.1	4.0
160					170	2310/2200	1.1	4.0
200					200	2730/2600	1.0	4.0
250					230	3200/3050	1.0	4.0
315	6	6.3	±5%	Dyn11	280	3830/3650	0.9	4.0
400	6.6	6.6	±2×2.5%	Yyn0	310	4520/4300	0.8	4.0
500	10	10.5			360	5410/5150	0.8	4.0
630	10.5	11			420	6200	0.7	4.0
630					410	5960	0.7	6
800					480	7500	0.7	6
1000					550	10300	0.6	6
1250					650	12000	0.6	6
1600					760	14500	0.6	6
2000					1000	13725	0.5	6
2500					1200	16310	0.5	6

注: 带“*”的联结组 Yyn0 适用于容量≤400kVA 的变压器; 特殊规格或非标产品的各项技术参数由供需双方协商确定。

Note: With the “*” vector group Yyn0 is suitable for the transformer capacity is no more than 400kVA;

The client should consult with the supplier about the technical data when special model or non-standard product is needed.

外形尺寸 (mm) Dimensions(mm)

型号 Model	尺寸 Dimension(mm)					重量 Weight
	L	B	H	H1	L2×L1/4-Φ26	
SCBH15-315/10	1430	970	1210	1095	660×660/4-Φ26	1800
SCBH15-400/10	1430	970	1380	1265	660×660/4-Φ26	2150
SCBH15-500/10	1650	970	1275	1130	820×660/4-Φ26	2530
SCBH15-630/10	1730	970	1430	1240	820×660/4-Φ26	3000
SCBH15-800/10	1925	970	1490	1215	820×660/4-Φ26	3400
SCBH15-1000/10	1925	970	1520	1335	820×660/4-Φ26	4020
SCBH15-1250/10	1955	1070	1605	1365	820×660/4-Φ26	4790
SCBH15-1600/10	2050	1070	1780	1455	1070×660/4-Φ26	5780

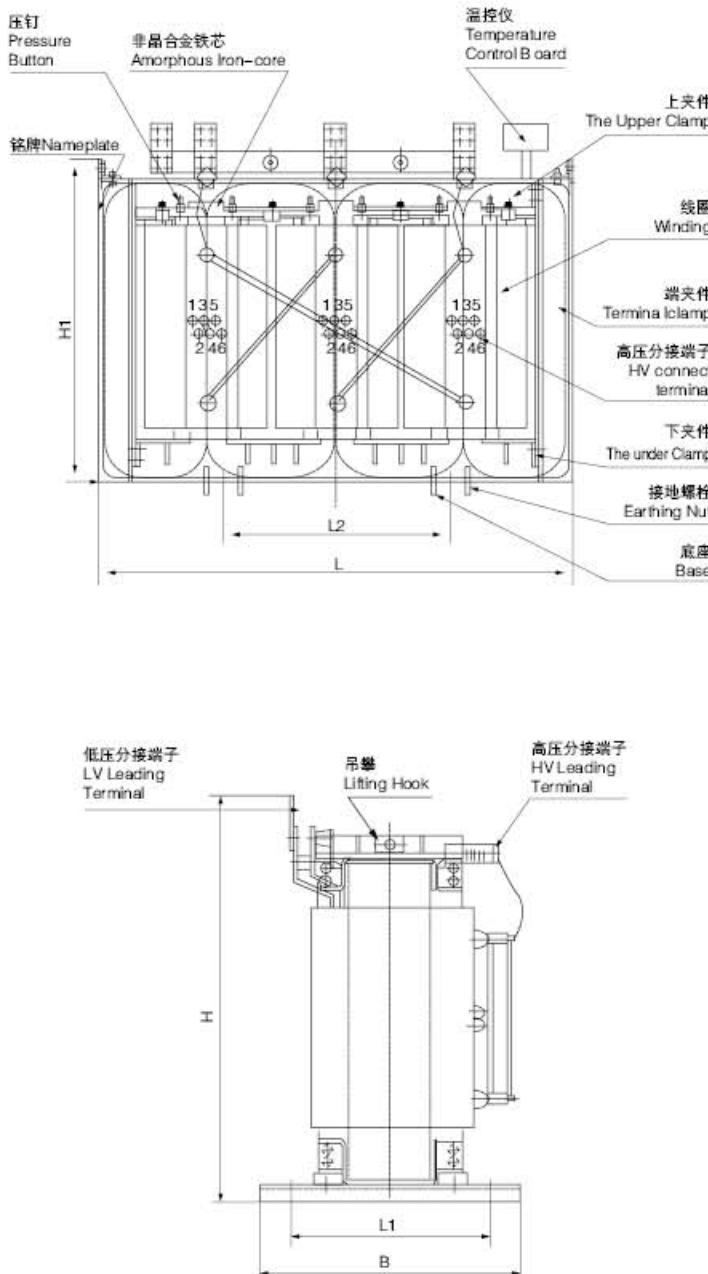
注: 尺寸仅供参考, 安装、设计必须以本公司合同所提供的外形尺寸为准。

Note: Dimensions are just for reference. The actual installation and design are provided by the contract.

SC(B)H15 型 6~10kV

非晶合金干式变压器
Amorphous alloy dry-type transformers

产品外形结构图 Product outline structure drawing





高过载配电变压器系列 High overload distribution transformers series



以人才作支撑,用技术获效益,树品牌为发展

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高过载配电变压器 High overload distribution transformers



产品概述 Product overview

近年来随着流动人口的不断增加,农村用电出现高温季节及春节期间农村地区配电变压器短时段严重过载运行的问题。为了解决此类用电问题,我公司响应国家电网公司近年来倡导的积极开展农网高过载能力配电变压器研制及应用工作,研制开发了高过载能力配电变压器。

高过载能力配电变压器根据农网综合台区典型负荷特点,高过载配变过载性能将满足 1.5 倍额定容量 6 小时、1.75 倍额定容量 3 小时、2.0 倍额定容量 1 小时阶段性连续运行的设计要求,且不影响变压器正常使用寿命。高过载能力配电变压器避免了由于人口流动,农村出现的短时段用电严重过载问题,降低了电网运行成本,提高了电网运行安全,是未来农村配网变压器选择的一大方向。

In recent years, with the increasing mobility of the population, the hot season, and distribution transformers in rural areas during the Spring Festival period of severe overload short run problem of rural electricity appears. In order to solve such problem of electricity, the company response to the State Grid Corporation of China in recent years advocated actively develop rural power distribution transformers and high overload capacity application work, we developed a high overload capacity distribution transformers. High overload capacity integrated rural power distribution transformer station area based on typical load characteristics, high overload distribution transformer overload performance will meet the 1.5 times the rated capacity of six hours, 1.75 times the rated capacity of 3 hours, 2.0 times the rated capacity of one hour of continuous operation stage design requirements, and does not affect the normal life of the transformer. High overload capacity distribution transformer avoids the migration of rural electricity appeared short period of severe overload, reduce operating costs grid, improve the safe operation of

型号含义 Model and meaning

高过载能力配电变压器(以下简称“高过载配电”)的产品型号的组成型式和型号编制方法按 JB/T 3837 的规定如下所示:

The type and composition of model for high overload capacity distribution transformers (hereinafter referred to as "high overload Distribution") in accordance with the provisions of the Model JB / T 3837 is as follows:

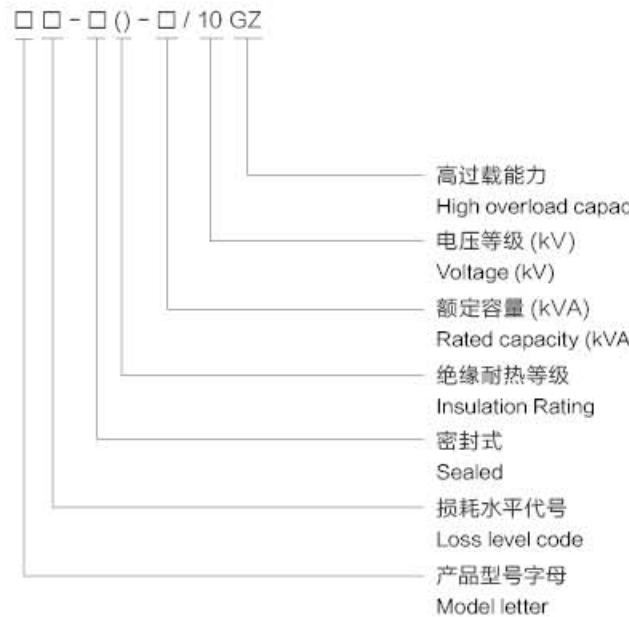
S11-M 型 6~10kV

高过载配电变压器

型号含义 Model and meaning

示例：一台三相、油浸、自冷、双绕组、无励磁调压、绝缘耐热等级为F级，损耗水平代号为“11”，额定容量为100kVA的kV电压等级密封式高过载配电型号表示为：S11-M(F)-100/10GZ。

Example: a three-phase, oil-immersed, self-cooled, two-winding, non-excitation voltage, heat insulation class F loss level code-named "13", the rated capacity of 100kVA sealed kV voltage level with high overload electric model is expressed as: S11-M (F)-100/10GZ.



使用环境 Use of the environment

使用条件	Service condition
环境温度	Ambient temperature
△最高气温 +40℃	△ Highest air temperature +40℃ ,
△最低气温 -25℃	△ Lowest air temperature -25℃ ,
△最热月平均温度 +30℃	△ Hottest monthly average temperature +30℃
△最热年平均温度 +20℃	△ Hottest yearly average temperature +20℃
海拔不超过 1000m	The height above the sea level is below 1000m;
电源电压的波形近似于正弦波	The power supply voltage's curve is similar to sine wave
三相电源电源电压应大致对称	Three-phase power supply voltage is approximately symmetrical
安装环境无明显的污秽	Installation without evidence filth.
户内使用	Service indoor

性能参数

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combination and Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current(%)	短路阻抗 Short circuit impedance(%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
50	10	±5%	0.4	Dyn11	130	910/870	1.1	4
100	10.5	±2×2.5%	0.4	Yyn0	200	1580/1500	1	4
200	11				340	2730/2600	0.9	4

注：1. 根据要求变电压的高压分接范围可供 $\pm 2 \times 2.5\%$ 。 2. 其它容量的产品性能参数，由用户与制造厂协商确定。

Note: 1. according to the requirements of high voltage transformer tap range for $\pm 2 \times 2.5\%$.

2. other capacity product performance parameters, determined by the user in consultation with the manufacturer.

S13-M 型 6~10kV

高过载配电变压器

性能参数

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combination and Tap range			联结组标号 Ve ctor Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current(%)	短路阻抗 Short circuit impedance(%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
50	10				100	910/870	0.8	4
100	10.5	±5% ±2×2.5%	0.4	Dyn11 Yyn0	150	1580/1500	0.7	4
200	11				240	2730/2600	0.6	4

注：1、根据要求变压器的高压分接范围可供 $\pm 2 \times 2.5\%$ 。 2、其它容量的产品性能参数，由用户与制造厂协商确定。

Note: 1. according to the requirements of high voltage transformer tap range for $\pm 2 \times 2.5\%$.

2. other capacity product performance parameters, determined by the user in consultation with the manufacturer.



有载调容变压器系列 Load transfer capacity transformers



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有载调容变压器
Load transfer capacity
transformers



产品概述 Product overview

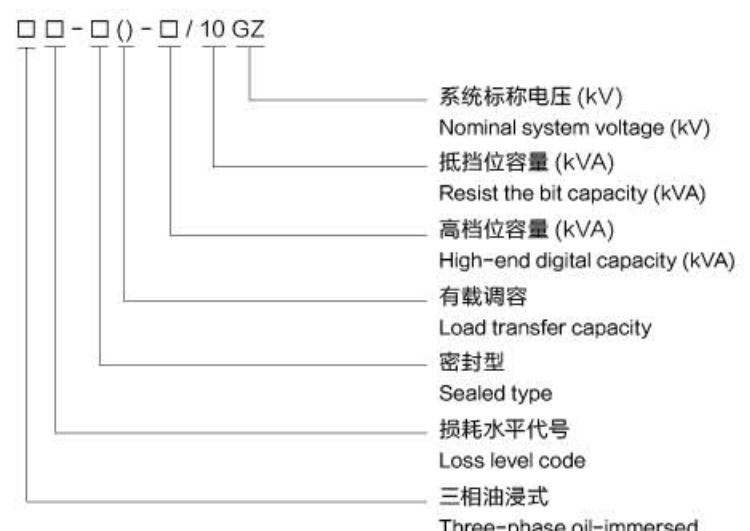
长期以来,我国农村电网具有负荷分散、季节性强、平均负荷率低的特点,在农网建设与改造中选用的变压器应符合农网的负荷特点,进一步降低变压器的空载损耗和空载电流,满足当前和今后数年内,新装和更换的配电变压器具有技术先进性和运行可靠性。而我公司生产的有载调容变压器正是根据农网这一特点设计的变压器,完全可以满足农网的需求。有载调容变压器通过智能控制器对调容开关进行调整,从而完成变压器高、低容量的自动转换过程,是一种新技术节能型配电变压器。

采用 S11-ZT 型有载调容相比两台 S11 型子母变压器,首先降低了设备购置和安装成本费,而且占地空间缩小,建设周期缩短,运行维护工作量明显减少。同时 S11-ZT 型同有载调容变压器 S11 型普通变压器相比,变压器空载损耗下降 50% 以上。因此有载调容变压器是未来农村供电的最佳选择。

For a long time, China's rural power grid has a load distribution, seasonal, low average load characteristics, in rural power grid construction and transformation of choice should be consistent with the load characteristics of rural power transformer further reduce the transformer load loss and no-load current to meet current technical sophistication and reliability and the next few years, new clothes and replacement distribution transformers have. And I produced the load transfer capacity of rural power transformer according to this feature is the design of the transformer, fully meet the needs of rural power grids. Load transfer capacity of the transformer reversed through intelligent controller switches to adjust capacity to complete transformer high, low capacity automatic conversion process is a new energy-saving technology distribution transformers.

Use S11-ZT-load tuning capacitor variations compared to the two picture-S11 type transformer, first reduce equipment purchase costs and installation costs, and floor space narrowing, shortening the construction period, operation and maintenance significantly reduce the workload. Meanwhile S11-ZT-type load transfer capacity compared with have S11 type transformer ordinary transformer, the transformer load loss decreased by 50%. Therefore, load transfer capacity of the transformer is the best choice for the future of rural electrification.

型号含义 Model and meaning



在调容变压器产品型号的组成形式中,将抵挡位的额定容量写在括号中,其它型号编制方法按 JB/T3837 的规定,示例如右图所示:

In the composition in the form of transfer capacity transformers models, the rated capacity to resist bit written in parentheses, other models compilation method prescribed JB / T3837, the example shown at right:

S11-M.ZT 型 10kV

有载调容变压器

Load transfer capacity transformers

性能参数

Performance parameters

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combinationand Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current(%)	短路阻抗 Short circuit impedance(%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
160(50)	10 10.5 11	$\pm 4 \times 2.5\%$ $\pm 3 \times 2.5\%$ $\pm 2 \times 2.5\%$	0.4	Dyn11 Yyn0	280(130)	2590(1030)	1.6(0.9)	4(4.0)
200(63)					340(150)	3215(1230)	1.5(0.9)	4(4.0)
250(80)					400(180)	3780(1480)	1.4(0.7)	4(4.0)
315(100)					480(200)	4540(1770)	1.4(0.7)	4(4.0)
400(125)					570(240)	5480(2130)	1.3(0.6)	4(4.0)
500(160)					680(280)	6520(2600)	1.2(0.6)	4(4.0)
630(200)					810(340)	8030(3060)	1.1(0.5)	4.5(4.0)

注：其它容量的产品性能参数，由用户与制造厂协商确定。

Note: Additional capacity product performance parameters, determined by the user in consultation with the manufacturer.

S13-M.ZT 型 10kV

有载调容变压器

Load transfer capacity transformers

性能参数

Performance parameters

额定容量 Rated capacity (kVA)	电压组合及分接范围 Voltage Combinationand Tap range			联结组标号 Vector Group Symbol	空载损耗 No-load loss(W)	负载损耗 Load loss (W)	空载电流 No-load current(%)	短路阻抗 Short circuit impedance(%)
	高压 high pressure (kV)	高压分接范围 High pressure tap range (%)	低压 Low pressure (kV)					
160(50)	10 10.5 11	$\pm 4 \times 2.5\%$ $\pm 3 \times 2.5\%$ $\pm 2 \times 2.5\%$	0.4	Dyn11 Yyn0	200(100)	2590(1030)	1.3(0.6)	4(4.0)
200(63)					240(110)	3215(1230)	1.2(0.6)	4(4.0)
250(80)					292(130)	3780(1480)	1.1(0.6)	4(4.0)
315(100)					340(150)	4540(1770)	1.1(0.6)	4(4.0)
400(125)					410(170)	5480(2130)	1.0(0.5)	4(4.0)
500(160)					480(200)	6520(2600)	0.9(0.5)	4(4.0)
630(200)					570(240)	8030(3060)	0.8(0.4)	4.5(4.0)

注：其它容量的产品性能参数，由用户与制造厂协商确定。

Note: Additional capacity product performance parameters, determined by the user in consultation with the manufacturer.



箱式变电站系列
Box-type substation series



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YB □ -12/0.4

户外预装式变电站(欧式)
Outdoor prefabricated substation (European)

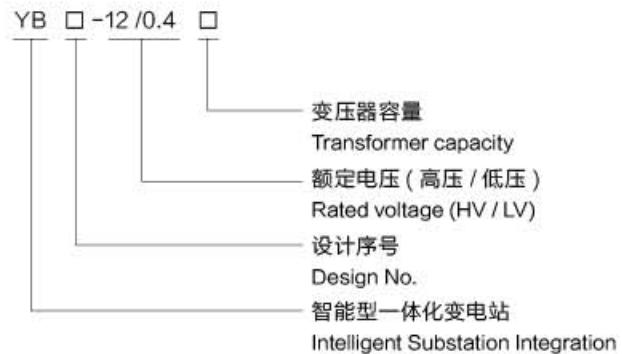


产品概述 Product overview

YB □ -12/0.4 户外预装式变电站(欧式),广泛用于城市电网改造、住宅小区、高层建筑、工矿、宾馆、商场、机场、铁路、油田、码头、高速公路以及临时性用电设施等户内外场所。

YB □ -12/0.4 Outdoor prefabricated substation (European). Widely used in urban power grids, residential quarters, high-rise building, mining, hotels, shopping malls, airports, railways, oil fields, terminals, highways and electricity facilities and other temporary indoor and outdoor venues.

型号含义 Model and meaning



使用条件 Conditions of Use

海拔高度: 不超过 1000m;
环境温度: -25℃ ~+40℃;
相对湿度: 日平均值不大于 95%, 月平均值不大于 90%;
安装场所: 无火灾爆炸危险导电尘埃化学腐蚀性气体及剧烈震动的场所若超出以上条件时, 用户可与我公司协商。

Altitude less than 1000m;
Ambient temperature: -25 ℃ ~+40 ℃ ;
Relative humidity: daily average of not more than 95%, on average less than 90%;
Installation place: no fire, explosion, conductive dust, chemical corrosion and severe vibration gas properties, if the above conditions are exceeded, the user can consult with our company.

YB □ -12/0.4

户外预装式变电站(欧式)
Outdoor prefabricated substation (European)

功能及特点 Functions and Features

高压开关设备、变压器、低压开关设备三位一体,成套性强;
高、低压保护完善,运行安全可靠,维护简单;
占地少,投资省、生产周期短、移动方便;接线方案灵活多样;
结构独特:独特蜂窝式结构双层(复合板)外壳坚固,隔热又散热通风、美观、防护等级高,

High voltage switchgear, transformers, low voltage switchgear Trinity, complete and strong;
High and low voltage protection improved, safe and reliable operation, easy maintenance;
Small footprint, low investment, short production cycle, easy to move;
Flexible wiring scheme;
Unique structure: a unique double honeycomb structure (composite board) housing firm, insulation and cooling ventilation, beautiful,

外壳材料有不锈钢钛合金、铝合金、冷轧板、彩钢板可选;
型式多样:通用型、别墅型、紧凑型等多种样式;
高压环网柜内可装配网自动化终端(FTU)实现短路及单相接地故障的可靠检测,具备“四遥”功能,便于配网自动化升级。

high degree of protection, housing material stainless steel titanium alloy, aluminum alloy, cold rolled sheet, color steel optional;
Diverse types: general-purpose, villas, compact and other styles;
High-pressure ring network cabinet can be equipped with automated terminal (FTU) short-circuit and reliable single-phase ground fault detection, with "four remote" function, easy distribution automation upgrade.

负荷开关技术参数 Load switching technology parameters

名称 name	单位 unit	FN12-12 负荷开关 Load Switch	FZM12-12 真空负荷开关 Vacuum load switch
额定电压 Rated voltage	kV	10	10
最高工作电压 Maximum operating voltage	kV	12	12
额定频率 Rated frequency	Hz	50	50
额定电流 Rated current	Hz	630	630
额定开断负荷电流 Rated breaking load current	A	630	630
热稳定电流(有效值) Thermal stability current (rms)	kA/S	20/2	20/4
动稳定电流 Dynamic stability current	kA	50	50
短路关合电流(峰值) Short-circuit current (peak)	kA	50	50
满负荷开断次数 Full load breaking times	次 Secondary	20	10000
机械寿命 Mechanical life	次 Secondary	2000	10000
1min 工频耐压(相间及对地) 1min power frequency withstand voltage (phase and ground)	kV	42	42
雷电冲击电压(相对及对地) Lightning impulse voltage (relative and on the ground)	kV	75	75

YB □ -12/0.4

户外预装式变电站 (欧式)
Outdoor prefabricated substation (European)

高压熔断器技术参数 High-voltage fuse technical parameters

序号 Load switching		额定电压 Rated voltage(KV)	开断电流 Breaking current(A)	开断电流 Breaking current(KA)	熔体额定电流 Melt the rated current(A)
英国型号 British model	国内型号 Domestic Model				
SDL※J		12	40	31.5	6.3, 10, 16, 20, 25, 31.5, 40
SFL※J	XRNT-12	12	100	31.5	50, 63, 71, 80, 100
SKL※J		12	125	31.5	125

*注: 由是否安装撞针器确定, N 为无撞针, A 为有撞针。

*Note: The striker is determined by whether or not to install, N is no striker, A to have striker.

序号 No	脱扣器形式 Release form	脱扣器额定电流 Rated currentA	通断能力 Breaking capacity KA(AC380V)
DW15-630	热 - 电磁性或电子型 Thermal - magnetic or electronic type	315, 400, 630	40
DW15-1000	热 - 电磁性或电子型 Thermal - magnetic or electronic type	630, 800, 1000	50
DW15-1600	热 - 电磁性或电子型 Thermal - magnetic or electronic type	1600	50
DW15-2500	热 - 电磁性或电子型 Thermal - magnetic or electronic type	1600, 2000, 2500	60
CW1-2000	智能型 Smart	630, 800, 1000, 1250, 1600, 2000	65(80)
CW1-3200	智能型 Smart	2000, 2500, 3200	100

注: (80) 为高分子断型。

Note: (80) is a polymer-off type.

ZGS □ -12/0.4(F·R)

预装式箱式变电站 (美式)
Prefabricated substation (American)



产品概述 Product overview

ZGS □ -12/0.4 预装式箱式变电站 (美式), 本产品是吸收国外最新先进技术, 结合国内实际情况研制开发的, 整台产品具有体积小、安装维护简便、低噪音、低损耗、防盗、过负荷能力强、全保护等特点。适用于新建小区、绿化带、公园、车站宾馆、工地、机场等场所。

ZB 系列预装式箱式变电站 (美式), 适用于 10kV 环网供电, 双电源供电或终端供电系统中, 作为变电、计量、补偿控制和保护装置。

本产品符合下列标准:

GB/T17467-1998《高压低压预装式变电站》

DL/T537-93《6-35KV 箱式变电站订货技术条件》

ZGS □ -12/0.4 Prefabricated substation (American). The latest product is the absorption of foreign advanced technology, combined with the actual situation developed, the entire product is small, easy installation and maintenance, low noise, low loss, theft, overload capability, full protection and so on. It applies to new residential, green belts, parks, railway stations hotels, construction sites, airports and other places.

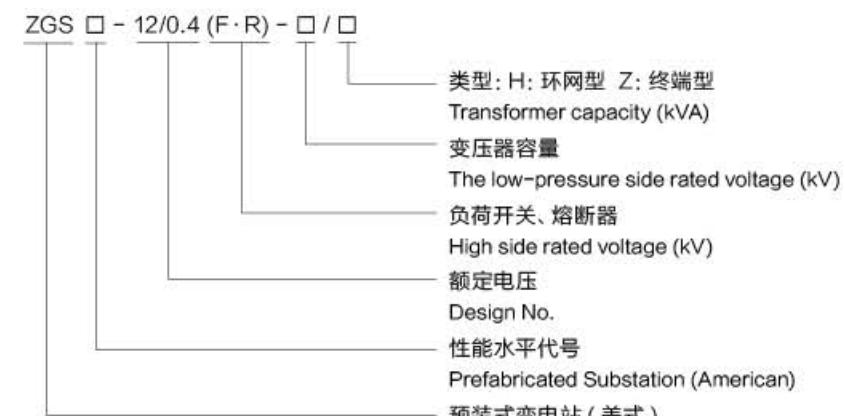
ZB Series Prefabricated Substation (American), applicable to 10kV ring network power supply, dual power supply or terminal power supply system, as a transformer, metering, compensation control and protection devices.

This product meets the following criteria:

GB / T17467-1998 "high voltage and low voltage prefabricated substation"

DL / T537-93 "6-35KV box-type substation orders and technical conditions"

型号含义 Model and meaning



正常使用条件 Normal conditions of use

海拔高度 : 不超过 1000m;

环境温度: -35℃ ~+40℃;

相对湿度: 日平均值不大于 95%, 月平均值不大于 90%;

安装场所: 无火灾、爆炸危险、化学腐蚀性气体及通风良好的场所, 地面倾角不大于 3°。

Altitude: not exceed 1000m;

Ambient temperature: -35 ℃ ~ +40 ℃;

Relative humidity: daily average of not more than 95%, on average less than 90%;

Installation place: no fire, explosion, chemical corrosive gas and well-ventilated place, the ground angle of not more than 3°

ZGS □ -12/0.4(F·R)

预装式箱式变电站(美式)

Prefabricated substation (American)

功能及特点 Functions and Features

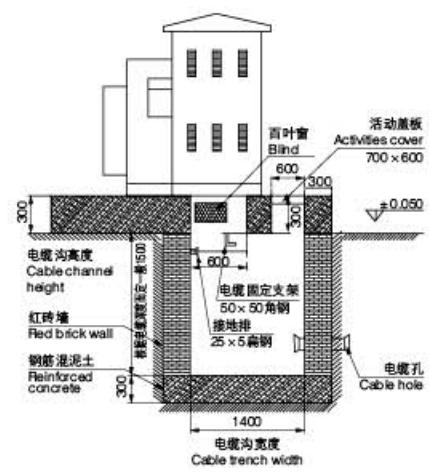
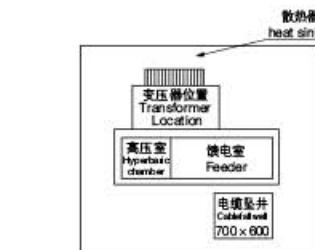
全绝缘、全密封、免少维护、可靠保证人身安全；结构紧凑、体积仅为同容量欧变的 1/3-1/5，高度低；可采用分箱式结构，避免变压器油箱内油的污染；高压侧采用双熔丝全范围保护，大大降低成本；即可用环网，也可用于终端，电缆头可在 200A 负荷电流时紧急插拔；

Fully insulated, sealed, low maintenance-free, reliable guarantee personal safety; Compact structure, with the capacity of Europe changed only 1/3-1/5, high and low; Box-type structure can be divided, to avoid contamination of the transformer oil tank; High side fuse the full range of dual protection, greatly reduce the cost; You can use the ring can also be used to end the cable head can plug in an emergency 200A load current; Honeycomb sandwich box with dual composite

箱体采用蜂窝式双夹层复合板，隔温又散热的功能；低压侧加装电子缺相保护器，当系统内出现不正常电压时，可快速分断主进开关；高压侧油浸式负荷开关或 SF6 负荷开关，可电动升级，为实现配网自动化打下基础；采用油浸式 S9 或性能更优的 S11 系列变压器。

panels, compartment temperature and cooling function; The low pressure side of the installation of electronic phase protection, when abnormal voltage is present in the system, you can quickly open the main feed switch; Oil high side load switch or SF6 load switch, electric upgrade, to achieve distribution automation lay the foundation; Using oil-immersed S9 or better performance S11 series transformer.

主要技术参数 The main technical parameters



名称 name	单位 unit	技术参数 Technical Parameters
额定电压 Rated voltage	kV	10/0.4(高压 / 低压)(High / low)
最高工作电压 Maximum operating voltage	kV	12(高压侧)(High side)
额定频率 Rated frequency	Hz	50
额定容量 Rated Capacity	kVA	50-1600
1分钟工频耐压 1 minute power frequency withstand voltage	kV	35
雷电冲击电压 Lightning impulse voltage	kV	75
冷却方式 cooling method		油浸自冷 ONAN
高压后备熔断器开断电流 High-voltage fuse breaking current reserve	KA	50
插入式熔断器开断电流 Plug-in fuse breaking current	KA	2.5
环境温度 Ambient temperature	℃	-35~+40
线圈允许温升 Coil allowable temperature rise	℃	65
无载调压 No-load voltage regulation		±5% 或 ±2×2.5%
噪声等级 Noise Level	db	50
防护等级 Protection class		IP43

DFW-12kV

欧式电缆分接箱
European cable distribution boxes

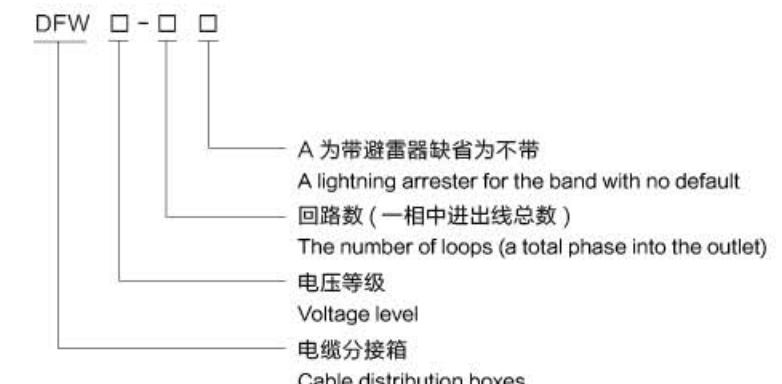


产品概述 Product overview

DFW-12kV 欧式电缆分接箱，欧式电缆分接箱是近年来广泛用于电力配网系统中的电缆化工程设备，它的主要特点是双向开门、利用穿墙套管作为连接母排，具有长度小、电缆排列清楚、三芯电缆不需要大跨度交叉等显著优点。其所采用的电缆接头符合 DIN47636 标准。一般采用额定电流 630A 螺栓固定连接式电缆接头。

DFW-12kV European cable distribution boxes, European cable distribution boxes are widely used in power in recent years in the cable distribution network systems engineering equipment, its main feature is a two-way door, use wall bushing as the connection busbar, with a small length of cable arrangement clear, three-core cable does not require the large span crossing and other significant advantages. Their use of cable joint in line with DIN47636 standards. Generally the rated current of 630A bolted connection cable connector.

型号含义 Model and meaning



使用条件 Conditions of Use

环境温度: -30℃ ~+40℃;
风速: 相当 34m/s(不大于 700Pa);
相对湿度: 日相对湿度平均值不大于 95%，月相对湿度平均值不大于 95%;
防震: 水平加速度不大于 $0.4m/s^2$, 垂直加速度不大于 $0.15m/s^2$, 安装地点倾斜度不大于 3°;
周围环境: 周围空气不受腐蚀性、可燃性气体、水蒸气等明显污染, 安装地点无剧烈震动。
Ambient temperature: -30℃ ~+40℃;
Winds: Pretty 34m/s (not more than 700Pa);
Relative humidity: daily average relative humidity less than 95%, the monthly average relative humidity less than 95%;
Earthquake: horizontal acceleration is not greater than $0.4m/s^2$, the vertical acceleration is not greater than $0.15m/s^2$ installation site gradient: less than 3° ;
surroundings: the ambient air pollution is not obvious corrosive, flammable gas, vapor, etc, the installation site without severe vibration.

DFW-12kV

欧式电缆分接箱

European cable distribution boxes

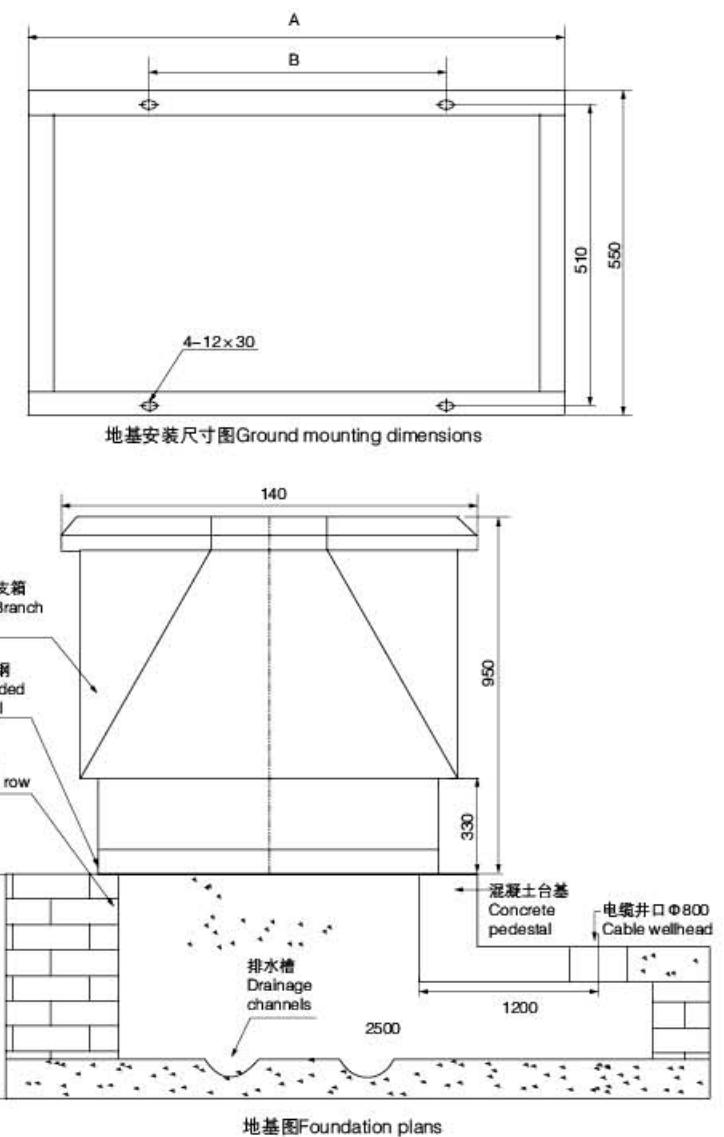
主要技术参数

The main technical parameters

序号 No.	名称 name	参数 parameter
1	额定电压 Rated voltage	12kV
2	额定电流 Rated current	630A
3	动稳定电流 Dynamic stability current	50kA/0.3s
4	热稳定电流 Thermal stability current	20kA/3s
5	1min 工频耐压 1min power frequency withstand voltage	42kV
6	15 分钟直流耐压 15 minutes DC voltage	52kV
7	雷电冲击耐压 Lightning impulse withstand voltage	105kV
8	箱体防护等级 Case protection class	IP33

欧式电缆分接箱地基图

European cable distribution boxes foundation plans



高压开关柜系列 High Voltage Switchgear Series



以人才作支撑,用技术获效益,树品牌为发展

中国·台力电气有限公司
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KYN61-40.5

铠装移开式交流金属封闭开关设备
Armored remove AC metal-enclosed switchgear

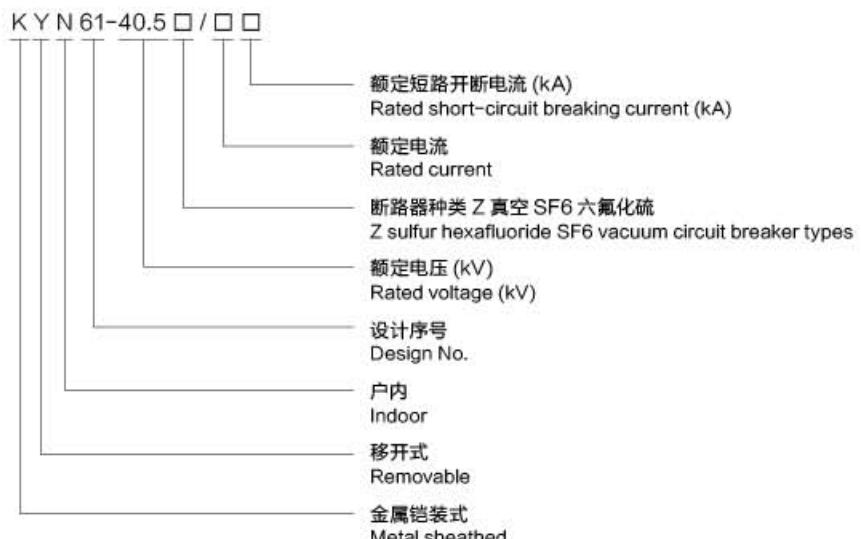


产品概述 Product overview

KYN61-40.5(Z) 铠装移开式交流金属封闭开关设备(以下简称“开关设备”)它适用于三相交流50Hz电力系统,用于发电厂、变电所及工矿企业的配电室接受和分配电能之用,并对电路实行控制、保护及监测。本产品符合标准: GB3906《3~35kV交流金属封闭开关设备》, GB/T11022《高压开关设备和控制设备标准共用技术要求》IEC60298《额定电压1kV以上及50kV以下交流金属封闭开关设备和控制设备》

KYN61-40.5 (Z) type armored remove AC metal-enclosed switchgear (hereinafter referred to as "switching equipment") which applies to three-phase AC 50Hz power system for power plants, substations and industrial and mining enterprises distribution room acceptance and distribution of electric energy use, and circuit implementation of control, protection and monitoring. This product meets the standards: GB3906 "3 ~ 35kV AC metal-enclosed switchgear", GB / T11022 "high-voltage switchgear and control equipment standards common technical requirements", IEC60298 "rated voltage above 1kV and 50kV ac metal-enclosed switchgear and control equipment".

型号含义 Model and meaning



使用条件 Conditions of Use

周围温度: -10°C ~ +40°C;
海拔高度: ≤ 1000m;
相对湿度: 日平均值 ≤ 95%, 月平均值 ≤ 90%;
周围环境: 不适用于有腐蚀、严重污秽, 可燃性气体及剧烈振动的场所;
地震烈度: 不能超过 8 度。

Ambient temperature: -10°C ~ +40°C;
Altitude: ≤ 1000m;
Relative Humidity: daily average ≤ 95%, the monthly average of ≤ 90%;
surroundings: does not apply to corrosion, severe contamination, flammable gases and violent vibration;
Earthquake intensity: not exceed 8 degrees.

KYN61-40.5

铠装移开式交流金属封闭开关设备
Armored remove AC metal-enclosed switchgear

功能及特点 Functions and Features

开关柜结构 GB3906-2006 和 IEC298 中铠装金属封闭开关设备标准而设计, 整体由柜体和可抽出部分(手车)两部分组成。柜体结构为组装式, 用螺栓栓接组合成型, 用金属隔板将开关柜体内部隔为断路器室、主母线室、电缆室和继电器仪表室。外壳防护等级达到 IP3X, 各隔室间防护等级为 IP2X, 并且所有金属结构件可靠接地, 主回路系统的隔间

有独立排气的压力释放通道。

手车根据用途可分为断路器手车、电压互感器手车、计量手车、隔离手车等, 各类手车的外形尺寸相同, 相同用途的手车具有良好的互换性; 手车在柜内有试验/隔离位置和工作位置, 每一处位置都设有联锁装置以保证手车处于以上两位置时不能随便移动。

Switchgear structure GB3906-2006 and IEC298 in armored metal-enclosed switchgear standard design, the overall cabinet and can be extracted from the portion (handcart) two graded composition. Cabinet structure is assembled with bolted combination molding, metal separator separates the circuit breaker switch inside the cabinet room, the main bus room, cable room and relay instrument room. Shell protection grade IP3X, among compartment protection class IP2X, and reliable grounding all metal structures, between the main circuit compartment exhaust system with separate

pressure release channel.

Withdrawable circuit breaker can be divided according to use, voltage transformer handcart, metrology handcart, isolating handcart and so on, all kinds of handcarts same dimensions, the same purpose trolley with good interchangeability; Handcart in the cabinet there is the test / disconnected position and the working position, every position has interlock device to ensure that can not be moved when the trolley is more than just two locations.

主要技术参数 The main technical parameters

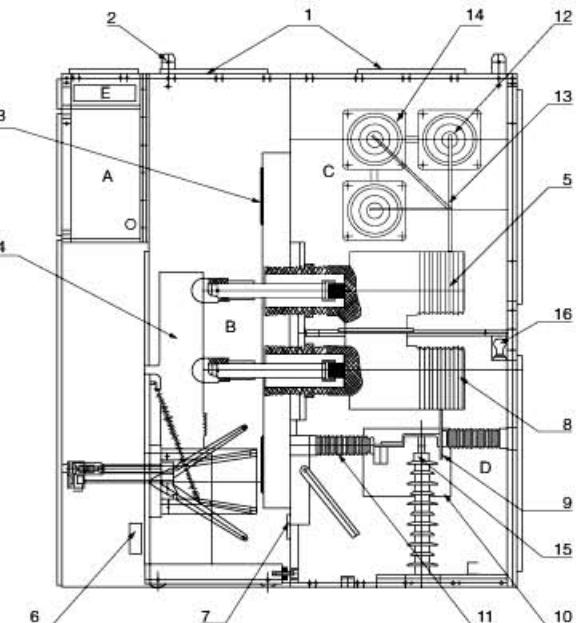
项目 project	单位 unit		参数 parameter
额定电压 Rated voltage	kV	40.5	
额定绝缘水平 Rated insulation level	kV	185	
额定频率 Rated frequency	Hz	50	
额定电流 Rated current	A	630; 1250; 1600; 2000	
额定短路开断时间 Rated short circuit breaking time	kV	20, 25, 31.5	
额定短路关合电流 (峰值) Rated short-circuit current (peak)	kV	50, 63, 80	
额定动稳定电流 (峰值) Rated dynamic current (peak)	kV	50, 63, 80	
4s 热稳定电流 (有效值) 4s thermal current (rms)	kV	20, 25, 31.5	
外壳防护等级 Enclosure rating	mm	IP4X	
外形尺寸 (L×W×H) Dimensions (L×W×H)	mm	1400×2200×2600	

KYN61-40.5

铠装移开式交流金属封闭开关设备
Armed remove AC metal-enclosed switchgear

设备结构图 Equipment Chart

A、仪表室	A、 instrument room
B、断路器室	B、 circuit breaker room
C、母线室	C、 bus room
D、电缆室	D、 cable room
E、小母线室	E、 a small bus room
1、泄压板	1. the pressure-release plate
2、吊环	2. rings
3、活门	3. the shutter
4、断路器	4. circuit breakers
5、触头盒	5. contact box
6、二次插头	6. the second plug
7、加热装置	7. heating means
8、电流互感器	8. the current transformer
9、电缆	9. cable
10、绝缘隔板	10. an insulating spacer
11、接地开关	11. grounding switch
12、主母线	12. the main bus
13、支母线	13. branch busbar
14、母线套管	14. bus bushing
15、避雷器	15. arrester
16、照明灯	16. lights



KYN28A-12

铠装移开式交流金属封闭开关设备
Armed remove AC metal-enclosed switchgear



产品概述 Product overview

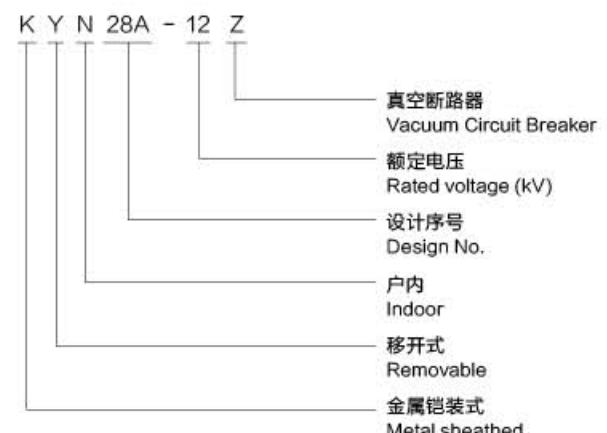
KYN28A-12(Z) (GZS1) 铠装移开式交流金属封闭开关设备(以下简称“开关设备”)它适用于三相交流 50Hz 电力系统, 用于接受和分配电能并对电路实行控制、保护及监测。

本产品符合标准: GB3906《3~35kV 交流金属封闭开关设备》、GB/T11022《高压开关设备和控制设备标准共用技术要求》、IEC60298《额定电压 1kV 及以上交流金属封闭开关设备和控制设备》。

KYN28A-12 (Z) (GZS1) type armored remove AC metal-enclosed switchgear (hereinafter referred to as "switching equipment") which applies to three-phase AC 50Hz power system for receiving and distributing power and circuit implementation of control, protection and monitoring.

This product meets the standards: GB3906 "3 ~ 35kV AC metal-enclosed switchgear", GB / T11022 "high-voltage switchgear and control equipment standards common technical requirements", IEC60298 "rated voltage 1kV and above AC metal-enclosed switchgear and control equipment."

型号含义 Model and meaning



KYN28A-12

铠装移开式交流金属封闭开关设备

Armored remove AC metal-enclosed switchgear

使用条件 Conditions of Use

周围温度: 15°C ~ +40°C;
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%; 月平均水蒸气压力不超过 1.8KPa;
海拔高度: ≤ 1000m;

Ambient temperature: 15°C ~ +40°C ;
Relative humidity: daily average relative humidity: ≤ 95%, daily average vapor pressure not exceeding 2.2KPa; monthly mean relative humidity ≤ 90%; the average monthly water vapor pressure not exceeding 1.8KPa;

地震烈度: 不超过 8 级;
周围环境: 空气应不受腐蚀性或可燃气体、水蒸气等明显污染, 无剧烈振动场所;
超出 GB3906 规定的正常条件下使用时, 由用户和本公司协商。

Altitude: ≤ 1000m;
Seismic intensity: no more than 8;
Surroundings: air should not be obviously polluted corrosive or flammable gases, water vapor, no severe vibration place;
Under normal conditions of use specified beyond GB3906, negotiated by the user and the company.

主要技术参数 The main technical parameters

项目 project	单位 unit	数据 data
额定电压 Rated voltage	kV	3.6, 7.2, 12
额定频率 Rated frequency	Hz	50
断路器额定电流 Breaker rating	A	630, 1250, 1600, 2000, 2500, 3150
开关设备额定电流 Switchgear rated current	A	630, 1250, 1600, 2000, 2500, 3150
额定短时耐受电流 (4S) Rated short time withstand current (4S)	kA	20, 25, 31.5, 40
额定峰值耐受电流 (峰值) Rated peak withstand current (peak)	kA	50, 63, 80, 100
额定短路开断电流 Rated short circuit breaking current	kA	20, 25, 31.5, 40
额定短路关合电流 (峰值) Rated short-circuit current (peak)current (peak)	kA	50, 63, 80, 100
额定绝缘水平 1min 工频耐受电压 Rated insulation level 1minpower frequency withstand voltage	极间、极对地间 Pole, the pole on the ground between 断口间 Fracture between	kV 24, 32, 42 kV 24, 32, 42
雷电冲击耐受电压 (峰值) Lightning impulse withstand voltage (peak)	极间、极对地间 Pole, the pole on the ground between 断口间 Fracture between	kV 40, 60, 75 kV 46, 70, 85
防护等级 Protection class		外壳为 IP4X, 隔室间、断路器室门打开时为 IP2X。 Shell IP4X, among compartment, when the circuit breaker compartment door open for the IP2X

KYN28A-12

铠装移开式交流金属封闭开关设备

Armored remove AC metal-enclosed switchgear

结构特点 Structural features

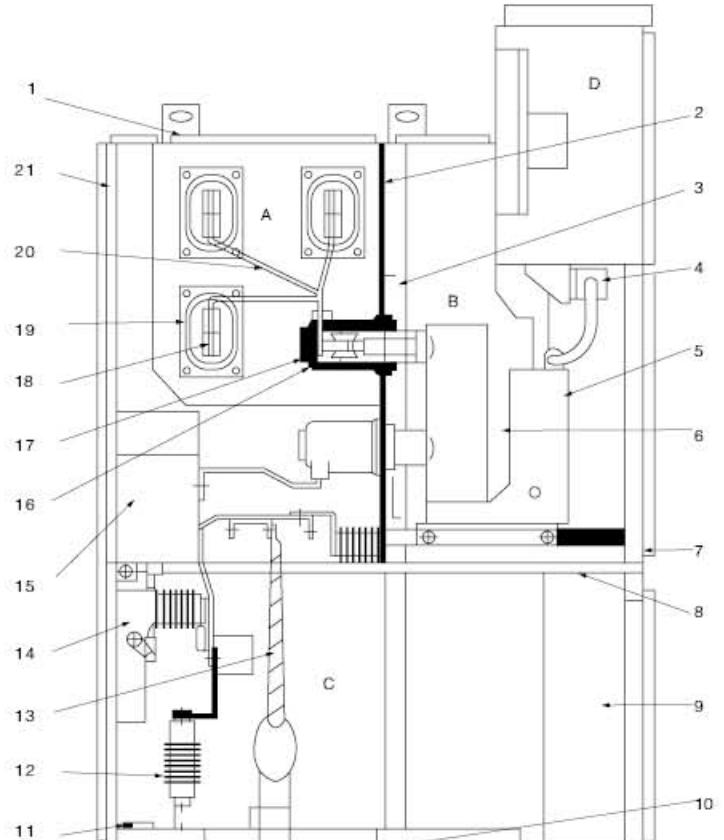
开关设备结构见下图。全金属模块化组装式结构, 柜体采用防腐蚀能力强的进口敷铝锌板制造, 无需表面处理, 经 CNC 高精度设备加工, 采用先进的多重折边工艺, 连接用拉铆螺母、高强度螺栓连接, 精度高、重量轻、强度好。开关设备可配装本公司生产的 VS1 系列、

VD4 系列、ZN65 系列等真空断路器, 适应性强, 互换性强。手车设有工作位置, 试验位置, 各位置均有定位和显示装置, 安全可靠。电缆室可装多达 9 根单芯电缆, 设备有可靠的机械、电气联锁装置, 完全满足“五防”要求。各室设有泄压通道, 确保运行人身安全。

Switching the device structure shown below. Full Metal modular assembly structure, enclosure with anti-corrosion ability of imported aluminum zinc plate manufacture, without surface treatment, the high-precision CNC machining equipment, using advanced multi-fold process, connecting rivet nuts, high-strength bolt connection, high precision, light weight, high strength.
Switching equipment can be equipped with the Company's production of VS1

series, VD4 series, ZN65 series of vacuum circuit breakers, wide adaptability, strong interchangeability. Used with a working position, test position, each position has to locate and display device, safe and reliable. Cable compartment can hold up to nine single-core cables, the device has a reliable mechanical and electrical interlock device, fully meet the "Five Anti" requirements. Each room has a relief channel, ensure operational safety.

- | | |
|-------------|--|
| A. 母线室 | A. bus room |
| B. 断路器手车室 | B. circuit breaker room |
| C. 电缆室 | C. cable compartment |
| D. 继电器仪表 | D. meter relay |
| 1. 泄压装置 | 1. the pressure relief device |
| 2. 装卸式隔板 | 2. removable baffle |
| 3. 隔板(活门) | 3. the separator (valve) |
| 4. 二次插头 | 4. the second plug |
| 5. 断路器手车 | 5. the circuit breaker |
| 6. 加热装置 | 6. the heating means |
| 7. 可抽出式水平隔板 | 7. withdrawable horizontal partition |
| 8. 接地开关操作机构 | 8. earthing switch operating mechanism |
| 9. 控制导线槽 | 9. the control wire groove |
| 10. 底板 | 10. the bottom plate |
| 11. 接地母线 | 11. the ground bus |
| 12. 避雷器 | 12. arrester |
| 13. 电缆 | 13. cable |
| 14. 接地开关 | 14. grounding switch |
| 15. 电流互感器 | 15. current transformer |
| 16. 触头盒 | 16. contact box |
| 17. 静触头装置 | 17. static contact means |
| 18. 主母线 | 18. the main bus |
| 19. 母线套管 | 19. bus bushing |
| 20. 分支母线 | 20. branch bus |
| 21. 外壳 | 21. housing |



开关设备结构示意图 Switchgear structure diagram

HXGN □ -12

箱型固定交流金属封闭开关设备
Box-type fixed AC metal-enclosed switchgear



产品概述 Product overview

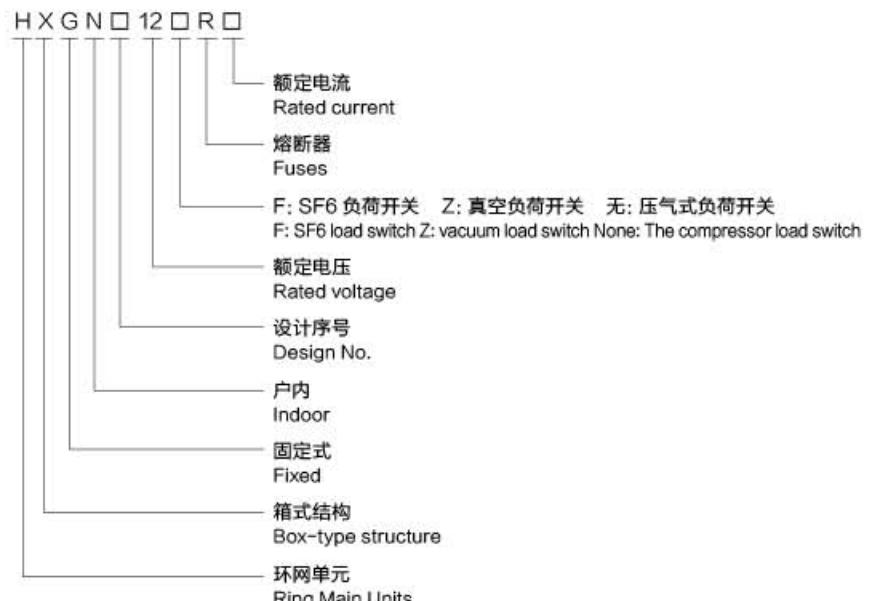
HXGN □ -12 箱式固定交流金属封闭开关设备(简称环网柜),是为城市电网改造和建设需要而生产的新型高压开关设备。在供电系统中亦作为开断负荷电流和短路电流以及关合短路电流之用,本环网柜配用 FZRN25、FZRN21 真空负荷开关,操作机构为弹簧机构,该机构既可手动操作,也可电动操作。接地开关和隔离刀配用手动操作机构,本环网柜成套性好、体积小、无燃烧和爆炸危险,还具有可靠的“五防”功能。

本环网柜符合 GB3906《3-35kV 交流金属封闭开关设备》、IEC60420《高压交流负荷开关熔断器组合电器》标准的有关规定。

HXGN □ -12 box-type fixed AC metal-enclosed switchgear (hereinafter referred RMU), is for urban power grids and construction needs and production of new high-voltage switchgear. In the power supply system also serves as breaking load current and short circuit current and closing short-circuit current purposes, this RMU equipped with FZRN25, FZRN21 vacuum load switch operating mechanism is a spring mechanism that can manual operation, but also electric operating. Grounding switch and isolation knife equipped with manual operation mechanism, this ring network cabinet complete sets of strong, small volume, no fire and explosion hazard, but also a reliable "Five Anti" feature.

The RMU comply with GB3906 "3-35kV AC metal-enclosed switchgear", the relevant provisions of IEC60420 "high-voltage AC load switch fuse combinations" standards.

型号含义 Model and meaning



HXGN □ -12

箱型固定交流金属封闭开关设备
Box-type fixed AC metal-enclosed switchgear

正常使用条件 Normal conditions of use

周围温度: -15℃ ~+40℃;
海拔高度: 1000m 及以下;
湿度条件: 日平均值不大于 95%, 水蒸气压
力日平均值不超 2.2kPa; 月平均值不大于
90%, 水蒸气压力月平均值不超过 1.8kPa;

地震烈度: 不超过 8 级;
没有腐蚀性或可燃性气体等明显污染的场所。
注: 超出上述正常使用条件时, 用户可与本公司协商。

Ambient temperature: -15 ℃ ~+40 ℃ ;
Altitude: 1000m and below;
humidity: daily average of not more than 95%,
the daily average water vapor pressure does
not exceed 2.2kPa; on average less than
90%, water vapor pressure on average less
than 1.8kPa;
Seismic intensity: no more than 8;
no significant contamination of corrosive or
flammable gases.
Note: Out of the above normal conditions of
use, the user can consult with the company.

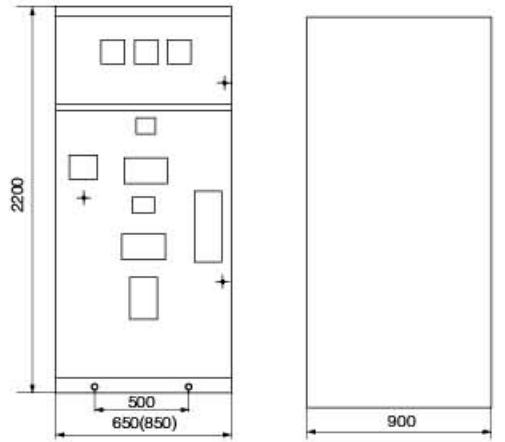
主要技术参数 The main technical parameters

序号 No	项目 project	单位 unit	FN12-10	FZN25-12
1	额定电压 Rated voltage	kV	12	
2	1min 工频耐受电压 1min Power frequency withstand voltage	kV	对地及相间 42; 隔离断口 481 On the ground and white 42; isolated fracture 481	
3	雷电冲击电压 (峰值) Lightning impulse voltage (peak)	kV	对地及相间 75; 隔离断口 85 On the ground and white 75; isolated fracture 85	
4	额定频率 Rated frequency	Hz	50	
5	主母线额定电流 Main busbar rated current	A	630	
6	额定电流 Rated current	A	630	
7	额定电流下电寿命 Electrical life at rated current	次 Secondary	不小于 100 Not less than 100	
8	开断空载变压器容量 Breaking load transformer capacity	kVA	1250	
9	负荷开关 negative Lotus open turn off			
10	额定热稳定电流 Rated thermal current	kA/s	20/4; 接地开关 20/2 20/4; 20/2 grounding switch	
11	额定动稳定电流 (峰值) Rated dynamic current (peak)	kA	50	
12	额定短路关合电流 (峰值) Rated short-circuit current (peak)	kA	50	
13	熔断器额定电流 Fuse rated current	kV	100	
14	额定转移电流 Rated transfer current	kV	1500 2000	
15	额定短路开断电流 Rated short circuit breaking current	kA	315	
16	配用熔断器型号 Models equipped with fuses		S □ LAJ-12(XRNT □ -10)	
17	机械寿命 Mechanical life	次	2000 10000	
18	辅助回路 1min 工频耐压 1min power frequency voltage auxiliary circuit	kV	2	
19	电动操动机构工作电压 Electric actuator operating voltage	V	交直流 (DC) 220; 110	
20	防护等级 Protection class		IP2X	
	外形尺寸 (宽 X 深 X 高) Dimensions (width X depth X height)	mm	650(850)X900X2000(2200)	

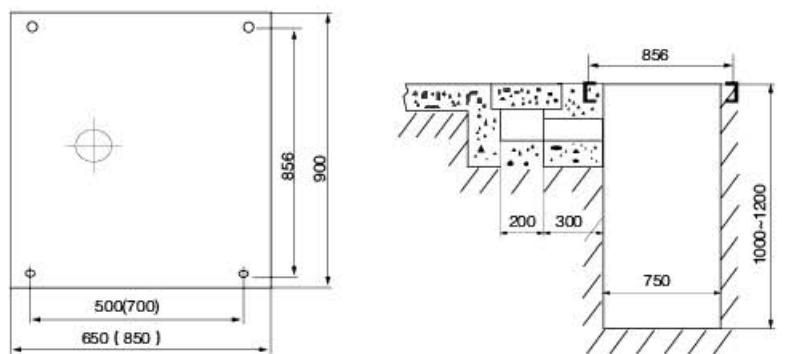
HXGN □ -12

箱型固定交流金属封闭开关设备
Box-type fixed AC metal-enclosed switchgear

安装尺寸 (mm) Mounting dimensions(mm)



外形尺寸 Dimensions



安装尺寸 Mounting dimensions 基础施工图 Foundation construction plans

HXGN15-12(SF6)

单元式交流金属封闭环网开关设备
Unit AC metal-enclosed ring network switching equipment



产品概述 Product overview

HXGN15-12(SF6) 单元式交流金属封闭环网开关设备（以下简称环网柜）是我们在引进国外先进技术并按照国内农电及城网改造之要求而自行设计、研制成功的新一代高压电器产品。各项技术性能指标全 IEC62271-200:2003 和 GB3906 标准。

环网柜的主开关、操作机构及元器件采用 ABB 公司原装件或采用进口部件国内组装生产的 SFL-12/24 型开关设备，也可根据用户需要配装 ABB 公司原装 HAD/US 型 SF6。断路器或 VD4-S 型真空断路器。其操作方式分为动、电动两种。

柜体经数控机床加工后铆接而成，防护等级达到 IP3X，并有可靠的机械联锁和防误操作功能。本产品具有体积小、重量轻、外型美观、操作简便、长寿命、高参数、无污染、少维护等极具显著的特点。

XGN15-12 (SF6) 型单元式交流金属封闭环网开关设备，适用于交 50Hz、12kV 的电力网络中，作为电能的接受和分配之用。柜内主开关为 SF6 开关

HXGN15-12 (SF6) type unit AC metal-enclosed ring network switching equipment (hereinafter referred to as RMU) is our next-generation introduction of foreign advanced technology and in accordance with the requirements of domestic and rural power network reform of and to design, successfully developed high-voltage electrical products. The technical performance indicators full IEC62271-200: 2003 and GB3906 standards.

RMU main switch, operating mechanism and components used by ABB original parts or domestic assembly of imported components produced SFL-12/24-type switch device, according to user needs equipped with ABB's original HAD / US type SF6. Breaker or VD4-S vacuum circuit breakers. Its operation includes, electric two kinds.

After CNC machining cabinet riveted, protection grade IP3X, and have reliable mechanical interlock and anti-misuse features. This product has a small size, light weight, good looks, easy operation, long life, high-parameter, non-polluting, less maintenance and other highly notable features.

XGN15-12 (SF6) type unit AC metal-enclosed ring network switching equipment, for AC 50Hz, 12kV power network, as the acceptance and distribution of electric energy use. SF6 switch the main switch of the cabinet

型号含义 Model and meaning

HX G N 15 - 12 SF6	
	柜内主开关为 SF6 开关 SF6 switch the main switch of the cabinet
	电压等级 Voltage (kV)
	设计序号 Design No.
	户内 Indoor
	固定式 Fixed
	箱式 Box

HXGN15-12(SF₆)

单元式交流金属封闭环网开关设备

Unit AC metal-enclosed ring network switching equipment

使用条件

Conditions of Use

环境温度: -25°C ~+40°C,
海拔高度: 不超过 2000m;
相对湿度: 日平均值不大于 95%; 月平均值不大于 90%;
周围环境: 周围空气不受腐蚀气体或可燃性气体、水蒸气等明显污染; 无经常性的剧烈振动。

Ambient temperature: -25°C ~+40°C;
Altitude: not exceed 2000m;
Relative humidity: daily average of not more than 95%; on average less than 90%;
surroundings: ambient air from corrosive gas or flammable gases significant pollution, water vapor and the like; no recurrent severe vibration.

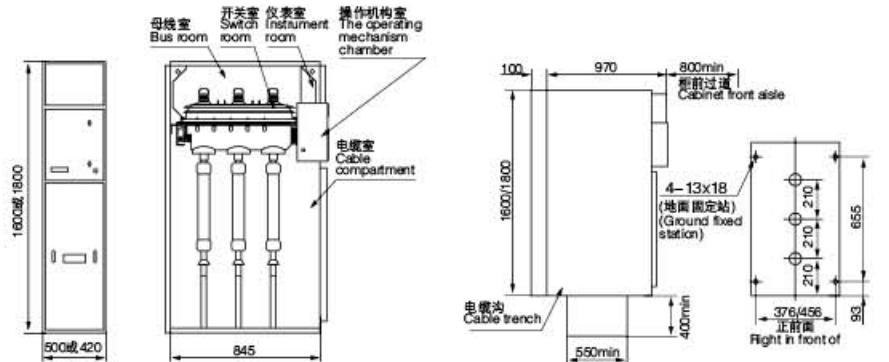
主要技术参数

The main technical parameters

序号 No	名称 name	单位 unit	数据 data
1	额定电压 Rated voltage	kV	12
2	额定频率 Rated frequency	Hz	50
3	主母线额定电流 / 熔断器最大额定电流 Main busbar rated current / fuse maximum rated current	A	630, 125
4	主回路、接地回路额定短时耐受电流 The main circuit, grounding circuit rated short time withstand current	kA/S	20, 3
5	主回路、接地回路额定峰值耐受电流 The main circuit, grounding circuit rated peak withstand current	kA	50
6	主回路、接地回路额定短路关合电流 The main circuit, grounding circuit rated short-circuit current	kA	50
7	负荷开关满容量开断数 Full capacity load switch breaking number	次	100
8	熔断器开断电流 Fuse breaking current	kA	31.5, 40
9	额定闭环开断电流 Rated closed loop breaking current	A	630
10	额定转移电流 Rated transfer current	A	1600
11	机械寿命 Mechanical life	次	2000
12	1 min 工频耐压 (峰值) 相对、对地 / 隔离断口 1 min power frequency withstand voltage (peak) relative, on the ground / isolation fracture	kV	42, 48
13	雷电冲击耐受电压 (峰值) 相间、对地 / 隔离断口 Lightning impulse withstand voltage (peak) phase, on the ground / isolation fracture	kV	75, 85
14	二次回路 1min 工频耐压 Secondary circuit 1min power frequency withstand voltage	kV	2
15	防护等级 Protection class	IP3X	IP3X

外形及安装尺寸 (mm)

Overall and installation dimensions(mm)



XGN66-12(Z)

固定式封闭开关设备

Fixed-enclosed switchgear



产品概述

Product overview

XGN66-12(Z) 固定式封闭开关设备 (以下简称开关柜) 是我公司新一代高压电器成套产品, 符合国家标准 GB3906《-35kV 交流金属封闭开关设备》电力部 DLT404《户内交流高压开关柜订货技术条件》的要求, 也满足国际标准 IEC60298《1kV 以上 52kV 以下交交流金属封闭开关设备和控制设备的要求》。

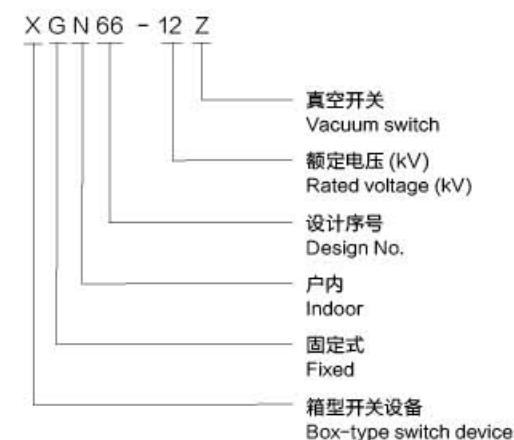
该产品吸收了国外的先进技术它体积小仅是普通开关柜体积的50% 断路器具有可靠性高, 性能好; “五防” 联锁机构可靠、简单等优点。开关柜是 3.6、7.2、12kV 三相交流电 50Hz 单母线分段的户内成套装置, 作为接受和分配电能之用。并具有对电路进行控制、保护和监测等功能, 可使用在各类型发电厂、变电站及工矿企业, 高层建筑等场所, 也可与环网柜组合应用于开闭所中。

XGN66-12(Z) type fixed enclosed switchgear (hereinafter referred to as Switchgear) is our next-generation suite of high-voltage electrical products, in line with the national standard GB3906 within " -35kV AC metal-enclosed switchgear" Ministry DLT404 "Indoor AC High Voltage Switchgear order technical "requirements, but also meet the international standard IEC60298" 1kV less than 52kV AC metal-enclosed switchgear and control equipment requirements.*

The product is absorbed foreign advanced technology, it is small, only 50% of normal volume of switchgear, circuit breakers with high reliability, good performance; reliable "Five Anti" interlock mechanism, simple. Switchgear is within 3.6,7.2,12kV three-phase AC 50Hz single busbar indoor sets of devices, as the acceptance and distribution of electric energy. And having the circuit control, protection and monitoring functions can be used in all types of power plants, substations and industrial and mining enterprises, high-rise buildings and other places, it can also be applied in combination with RMU in opening and closing.

型号含义

Model and meaning



XGN66-12(Z)

固定式封闭开关设备

Fixed-enclosed switchgear

使用条件

Conditions of Use

海拔高度: 不超过 1000m;
环境温度: -25℃ ~+40℃, 24 小时内平均温度不超过 +35℃;
水平倾斜度不大于 3°;
地震烈度: 不超过 8 级;
安装场所: 无剧烈振动和冲击及爆炸危险地。

Altitude: not exceed 1000m;
Ambient temperature: -25℃ ~+40℃, 24-hour average temperature does not exceed +35℃;
Horizontal inclination of not more than 3°;
Earthquake intensity: not more than 8;
Installation place: no severe vibration and shock and explosion dangerous.

结构特点

Structural features

柜体采用优质角钢焊接而成;
断路器室位于柜体中(下)部, 安装、调试、维护方便。标准配装 VS1 断路器, 并设有压力释放通道, 确保人身安全;
采用先进可靠的旋转式隔离开关, 可在主母线带电下安全进入断路器室检修;
整柜防护等级 IP2X;
设有可靠功能齐全的强制性机械闭锁装置, 简

便有效达到“五防”要求;
具有可靠的接地系统;
门上装有观察窗, 可清楚观察到柜内元件的工作状态;
操作机构闭锁采用同 XGN2-12 柜用的 JSXGN 闭锁机构, 简单可靠方便实用;
进出线电缆低于柜体前部, 方便用户连接。

mechanical locking device, simple and effective to achieve the "Five Anti" requirements;
Reliable grounding system;
Equipped with observation windows on the door, it can be clearly observed operating state cabinet member;
The operating mechanism locking using the same cabinet with the JSXGN XGN2-12 latching mechanism is simple and reliable and convenient and practical;
Inlet and outlet cables below the front portion of the cabinet for easy user access.

主要技术参数 The main technical parameters

序号 No	项目 project	单位 unit	技术参数 Technical Parameters
1	额定电压 Rated voltage	kV	3.6, 7.2, 12
2	额定工频耐受电压 Rated power frequency withstand voltage	kV	对地, 相间: 42; 断口: 48 On the ground, white: 42; Fracture: 48
3	额定雷电冲击耐受电压 Rated lightning impulse withstand voltage	kV	对地, 相间: 75; 断口: 85 On the ground, white: 75; Fracture: 85
4	额定频率 Rated frequency	Hz	50
5	额定电流 Rated current	A	630, 1250,
6	额定短路开断电流 (有效值) Rated short circuit breaking current (rms)	kA	20, 25, 31.5,
7	额定短路关合电流 (峰值) Rated short-circuit current (peak)	kA	50, 63, 80,
8	额定动稳定电流 (峰值) Rated dynamic current (peak)	kA	50, 63, 80
9	额定热稳定电流 4s(有效值) Rated thermal stability current 4s (RMS)	kA	20, 25, 31.5
10	防护等级 Protection class		IP2X
11	外形尺寸 (宽 × 深 × 高) Dimensions (width×depth×height)	mm	900×1000×2300
12	重量 weight	Kg	≈ 600

XGN66-12(Z)

固定式封闭开关设备

Fixed-enclosed switchgear

结构特点

Structural features

- | | |
|-----------|--------------------------------|
| 1. 柜门 | 1, doors |
| 2. 照明灯 | 2, lighting |
| 3. 观察窗 | 3, observation window |
| 4. 操作机构 | 4, the operating mechanism |
| 5. 小门板 | 5, a small door |
| 6. 仪表门 | 6, instrument door |
| 7. 眉头 | 7, brow |
| 8. 母线穿墙套管 | 8, bus wall bushing |
| 9. 螺栓 | 9, bolts |
| 10. 垫圈 | 10, washers |
| 11. 垫圈 | 11, washers |
| 12. 螺母 | 12, nut |
| 13. 隔离开关 | 13, isolation switch |
| 14. 拉杆 | 14, trolley |
| 15. 后封板 | 15, After closing plate |
| 16. 电流互感器 | 16, current transformer |
| 17. 真空断路器 | 17, the vacuum circuit breaker |
| 18. 隔离开关 | 18, isolation switch |
| 19. 传感器 | 19, the sensor |
| 20. 螺栓 | 20, bolts |
| 21. 垫圈 | 21, washers |
| 22. 垫圈 | 22, washers |
| 23. 骨架 | 23, skeleton |
| 24. 避雷器 | 24, arrester |

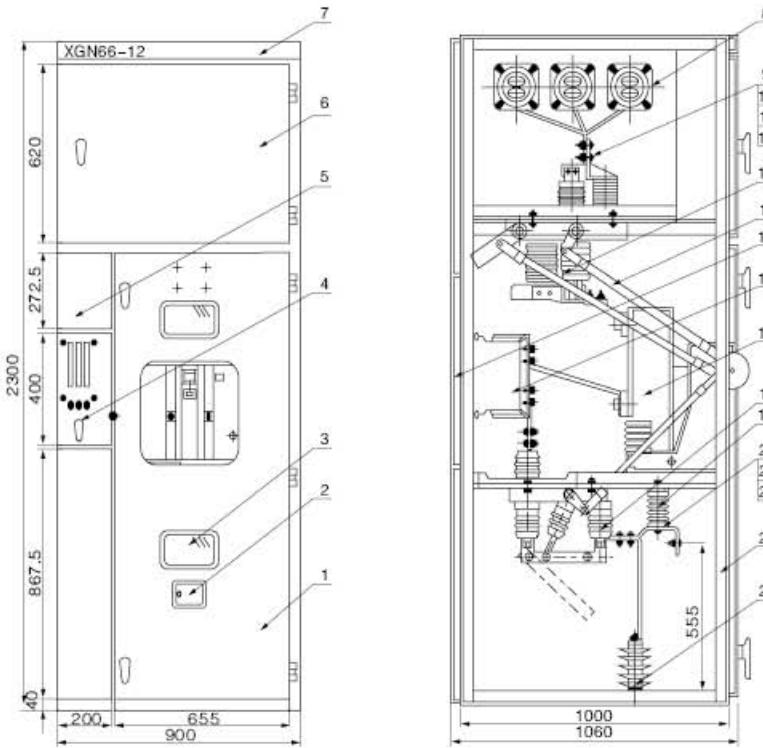


图 1: 开关柜布置示意图 Figure 1: schematic layout switchgear

TLXGN □ -12

智能固体绝缘柜
Intelligent solid insulation cabinet



产品概述 Product overview

TLXGN □ -12 智能固体绝缘柜，是本公司新一代固体绝缘环网柜，适合智能电网应用。该系统具有高水平的运行安全性，广泛应用于 12kV 二次配电系统。

TLXGN □ -12 环网柜基于本公司成熟的真空灭弧室进行设计，无需维护，10,000 次操作寿命获得认证。

柜内所有高压带电部件均采用单相绝缘。所用材料经过特别打造，提供极佳的绝缘性能及优异的散热特性。此外，经过特殊设计的绝缘结构，有效的优化了周围电场分布，因此最大限度地降低了内部燃弧的任何风险。

在 TLXGN □ -12 柜内，一次部件及机构都位于全封闭式的箱体里，保护整个系统免受环境的影响。真空灭弧室及固体绝缘的使用确保 TLXGN □ -12 的完全绿色环保。这些技术的采用使 TLXGN □ -12 成为 SF6 环网柜的完美替代解决方案。

同时，由于不需要对气体压力进行常规测试或其他例行维护，设备周期后也无需额外的回收成本，因此也极大降低了产品的全周期使用成本。

TLXGN □ -12 系统设计紧凑，可从前部电缆仓实现电缆的下进下出连接，因此该系统十分节省宝贵的占地空间，便于在严苛的环境下使用。

所有部件都完全封闭在经过 20kA/1s 防内部燃弧权威验证安全的金属外壳里。

在操作人员的安全方面，TLXGN □ -12 的设计也万无一失。

此外，除了面板集成的模拟分合闸位置显示外，通过柜体前方的可视观察窗可直观的观察到内部刀闸的合 / 分及接地触头状态。

TLXGN □ -12 intelligent solid insulation cabinet, it is the company's new generation of solid-insulated RMU for smart grid applications. The system has a high level of operational safety, widely used in 12kV secondary distribution system.

TLXGN □ -12 RMU based on our proven vacuum interrupter design, maintenance, certified 10,000 operating life.

All high-voltage live parts inside are made of single-phase insulation. Materials used specially to create, provide excellent insulation properties and excellent heat dissipation characteristics. In addition, through special insulation structure design, effective optimization of the surrounding electric field distribution, thus minimizing any risk of internal arcing.

In TLXGN □ -12 cabinet, and a member agencies are located in a fully enclosed box, the entire system is protected from the environment. Vacuum interrupter and the use of solid insulation ensure TLXGN □ -12 completely green. These techniques make TLXGN □ -12 SF6 RMU become the perfect alternative solution.

At the same time, there is no need for routine testing of gas pressure or other routine maintenance, and need extra recovery period after the equipment costs, but also greatly reduces the product life-cycle cost.

TLXGN □ -12 system design compact, the front of the cable compartment Realization cable connection into the next out, so the system is saving valuable floor space, easy to use in harsh environments.

All components are completely sealed after 20kA/1s internal arc proof of authority to verify the safety of the metal housing.

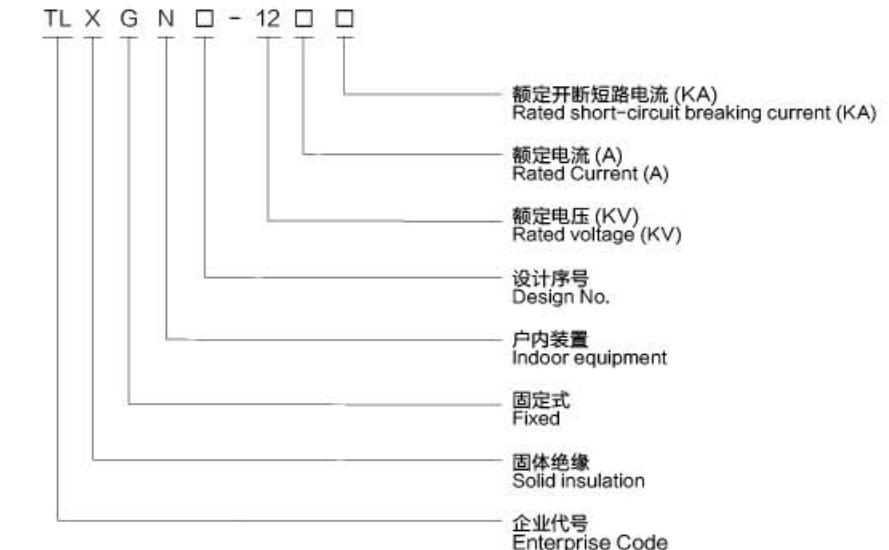
In terms of security of the operator, TLXGN □ -12 design is foolproof.

In addition to the integrated analog sub-closing panel position display, it can be visually observed inside the knife close / ground contacts and status by visual observation window in front of the cabinet.s

TLXGN □ -12

智能固体绝缘柜
Intelligent solid insulation cabinet

型号含义 Model and meaning



绿色环保 Green

最精简的零部件设计；
完全采用环保性材料设计；
不使用 SF6 气体作为灭弧及绝缘；
一次回路采用最少的接点设计，确保运行期间低能耗；
只使用可重复使用和 / 或可回收使用的材料。

The most streamlined design components;
Full use of environmentally friendly materials design;
Do not use SF6 gas as extinguishing and insulation;
A circuit with a minimum contact design ensures low energy consumption during operation;
Use only reusable and / or recyclable materials.

主要技术参数 The main technical parameters

项目 project	单位 unit	参数 parameter
常规 conventional		
额定电压 Rated voltage	kV	12
额定频率 Rated frequency	Hz	50
工频耐压 Power Frequency Pressure	KV/min	42/48
雷电冲击电压 Lightning impulse voltage	KV	75/85
燃弧持续时间 Arc duration	s	≥ 0.5
一次部件防护等级 (计量柜除外) (Except metering cabinet) once part Protection class		IP67
柜体防护等级 Cabinet protection grade		IP4X
隔室间防护等级 Inter compartment protection class		IP2X
操作电源电压 Operating Supply Voltage	DC24、48、110 220、AC110、220	

母线系统 Bus system	单位 unit	参数 parameter
额定电流 Rated current	A	360/1250
额定短时耐受电流 Rated short time withstand current	KA/S	20/4(25/4)
额定峰值耐受电流 Rated peak withstand current	KA	50(63)

负荷开关单元 Load switch unit	单位 unit	参数 parameter
额定电流 Rated current	A	630
额定短路关合电流 Rated short-circuit current	KA	50
额定短时耐受电流 Rated short time withstand current	KA/S	20/4
负荷开关机械寿命 Load switch mechanical life	次 Secondary	M2 10000
负荷开关电气寿命 Load switch Electrical life	次 Secondary	E3



低压开关柜系列 Low-voltage switchgear series



以人才作支撑,用技术获效益,树品牌为发展

中国·台力电气有限公司
www.cntal.com

GGJ

低压无功智能补偿装置

Intelligent low voltage reactive compensation devices



产品概述 Product overview

GGJ 低压无功智能补偿装置,由于本装置能有效改善用电负荷的功率因数,降低线损,提高变压器的实际负载能力,具有显著的节能效果,同时在系统中采用特定的电抗器,还可以有效防止谐波放大、有效吸收大部分谐波电流,使谐电压总畸变率限值及各次谐波电流含量限值符合国家标准,达到谐波治理的目的。而如果使用普通的接触器投切电容器组,带来的将会是大的浪涌电流,慢的补偿时间、高的维护费用和短的使用寿命,因此,我们建议用户在以下场合,能优先考虑使用动态无功补偿装置如:工矿企业的变电所、生产车间及民用建筑等的低压电网中,特别适合负荷经常变化,无功功率不稳定 的输配电系统。

本产品符合: G8/T1 5576-2008《低压成套无功功率补偿设备》、IEC60439《低压成套开关设备和控制设备》等标准。

GGJ intelligent low-voltage reactive power compensation device, Since the device can effectively improve the electricity load power factor, reduce line losses, improve the actual load capacity of the transformer, with significant energy savings, while using a specific reactor in the system, but also effectively prevent harmonic amplification, the effective absorption most harmonic current, voltage total harmonic distortion rate limit and each harmonic current content limits in line with national standards, to achieve the purpose of harmonic governance. And if you use an ordinary contactor switching capacitor banks, will bring large inrush current, slow compensation time, high maintenance costs and short service life, therefore, we recommend that users in the following cases, be given priority consider using dynamic reactive power compensation devices, such as: industrial and mining enterprises and other substations, production workshop and civil low-voltage grid, especially suitable for frequent load changes, unstable reactive power transmission and distribution systems.

This product complies with: G8 / T1 5576-2008 "Low-voltage reactive power compensation device", IEC60439 "Low-voltage switchgear and control equipment" and other standards.

型号含义 Model and meaning



GGJ

低压无功智能补偿装置

Intelligent low voltage reactive compensation devices

使用条件

Conditions of Use

环境温度: -5°C ~+40°C;
相对湿度: 不超过 90%(20°C);
海拔高度: 不超过 2000m;
周围环境: 周围介质无爆炸危险, 无足以损坏及腐蚀金属的气体, 无导电尘埃, 安装地不宜剧烈振动, 无雨雪侵蚀。

Ambient temperature: -5°C ~+40°C;
Relative humidity: less than 90%(20°C);
Altitude: not exceed 2000m;
Surroundings: the surrounding medium without the risk of explosion, not enough to corrode metal and damage the gas, no conductive dust, vibration should not be strenuous to install, no rain and erosion.

产品特点

Features

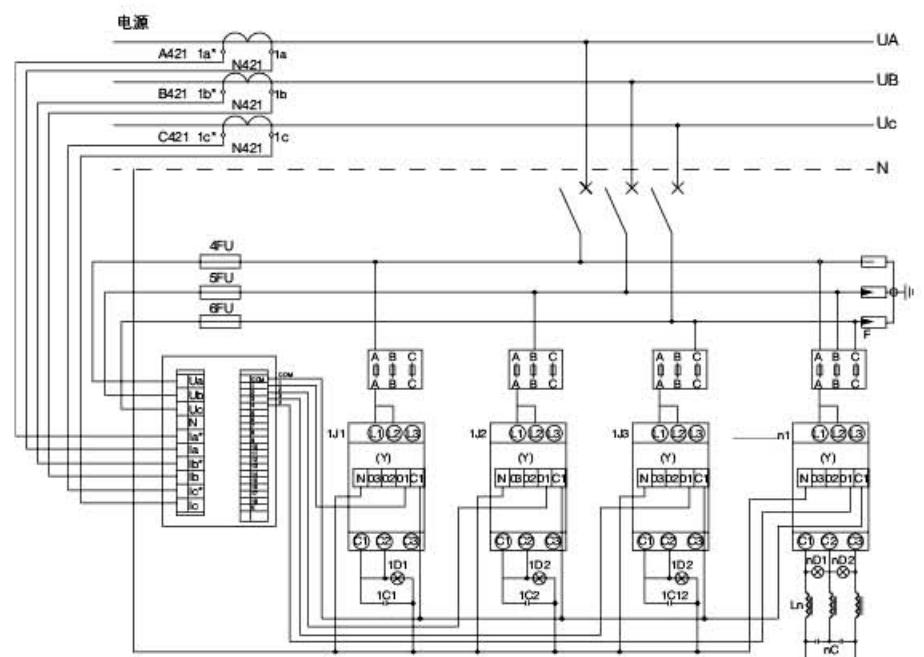
通用性能强。该补偿柜可与国内外各种任意柜体进行组合, 如 MNS、GCK、GGD 等; 电容补偿组合方式多样灵活。具有 Y型补偿方式、A型补偿方式、Y+A组合补偿方式; 通讯方式多样性。具备 RS-232/485 通讯接口, 无线数传模块或 GPRS 模块实行远距离通讯;

控制准确安全。实行电压过零触发, 投入时无浪涌电流过零切除, 分断时不产生高压; 使用寿命长, 在免维护下, 使用寿命长达 10 万小时以上。

Strong general performance. The compensation cabinet cabinet at home and abroad with a variety of any combination, such as MNS, GCK, GGD, etc; Diverse and flexible compensation capacitor combination. Having a Y-type compensation, A-type compensation, Y + A combination of compensation; Communication diversity. With RS-232/485 communication interface, GPRS wireless module or modules to implement long-distance communication; Safe and accurate control. The implementation of zerovoltage trigger, no inrush current into zero removed, no high pressure breaking; Long service life, under maintenance, service life of up to 100,000 hours.

装置系统原理举例

Examples principle device system



GGD

低压成套开关柜

Low-voltage switchgear



产品概述

Product overview

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

GGD 低压成套开关柜, 是根据能源部主管上级与广大电力用户及设计部门的要求, 本着安全、经济、合理、可靠的原则设计的新型低压配电柜。产品具有分断能力高、动热稳定性好、电气方案灵活、组合方便、系列性、实用性强、结构新颖、防护等级高等特点, 可作为低压成套开关设备的更新换代产品使用。

GGD 低压成套开关柜符合 IEC439《低压成套开关设备和控制设备》, GB7251《低压成套开关设备》等标准。

GGD Low-voltage switchgear for power plants, substations, industrial enterprises and other power users of AC 50Hz, rated working voltage 380V, rated current up to 3150A of the distribution system, as electrical energy conversion power, lighting and power distribution equipment, distribution and control purposes.

GGD Low-voltage switchgear, based on the higher charge of the Department of Energy and the majority of electricity users and the requirements of the design department, in a safe, economic, rational and reliable design principles of new low-voltage distribution cabinet. Products with high breaking capacity, dynamic thermal stability, electrical program flexible combination of convenience, family, practical, novel structure, high level of protection, can be used as low-voltage switchgear equipment replacement products.

GGD Low-voltage switchgear line with IEC439 "Low-voltage switchgear and control equipment", GB7251 "Low-voltage switch equipment" and other standards.

型号含义

Model and meaning

GGD□-□□	辅助电路方案代号 Auxiliary circuit program code
	主电路方案代号 Main circuit program code
	设计序号 : 分断能力为 15kA 分断能力为 30kA 分断能力为 50kA Design No.:Breaking capacity of 15kA breaking capacity of 30kA capacity of 50kA
	电力用柜 Power with cabinet
	电器元件固定安装、固定接线 Electrical components fixed installation, fixed wiring
	交流低压配电柜 AC low-voltage distribution cabinet

GGD

低压成套开关柜

Low-voltage switchgear

使用条件

Conditions of Use

海拔高度: 不得超过 2000m;
周围温度: -5℃ ~+40℃, 24h 内的平均温度不得高于 + 35℃;
相对湿度: 在最高温度为 +40℃ 时不超过 50%, 应在较低温度时允许有较大的相对温度 (例如 +20℃ 时为 90%) 考虑到由于温度的

变化可能会偶然产生凝露的影响;
设备安装时与垂直面的倾斜度不超过 5° ;
设备应安装在无剧烈震动和冲击的地方, 以及不足以使电器元件受到腐蚀的场所;
用户有特殊要求时可与制造厂协商解决。
Altitude: not exceed 2000m;
Ambient temperature: -5℃ ~+40℃ , the average temperature within 24h shall not exceed + 35℃;
Relative humidity: The maximum temperature is+40C not more than 50%, should be permitted at lower temperatures greater relative temperature (for example+20C when 90%) taking into account changes in temperature may occasionally produce condensate Lu impact;

Equipment installation and the vertical gradient of not more than 5° ;
Equipment should be installed in the absence of severe vibration and impact areas, and enough to make electrical components from corrosion sites;
When users have special requirements can be resolved through consultation with the manufacturer.

主要技术参数

The main technical parameters

型号 model	额定电压 Rated voltage(V)	额定电流 Rated current(A)	额定短路 开断电流 (kA) Rated short circuit Breaking current (kA)	额定短时耐受电流 Rated short time withstand current (1s)(kA)	额定峰值 耐受电流 Rated peak withstand current(kA)
GGD1	380	A 1000	15	15	30
GGD1	380	B 600(630)	15	15	30
GGD1	380	C 400	15	15	30
GGD2	380	A 1500(1600)	30	30	63
GGD2	380	B 1000	30	30	63
GGD2	380	C 600	30	30	63
GGD3	380	A 3150	50	50	105
GGD3	380	B 2500	50	50	105
GGD3	380	C 2000	50	50	105

GGD

低压成套开关柜

Low-voltage switchgear

外形及尺寸 (mm)

Shape and size (mm)

外形示意图 Schematic outline

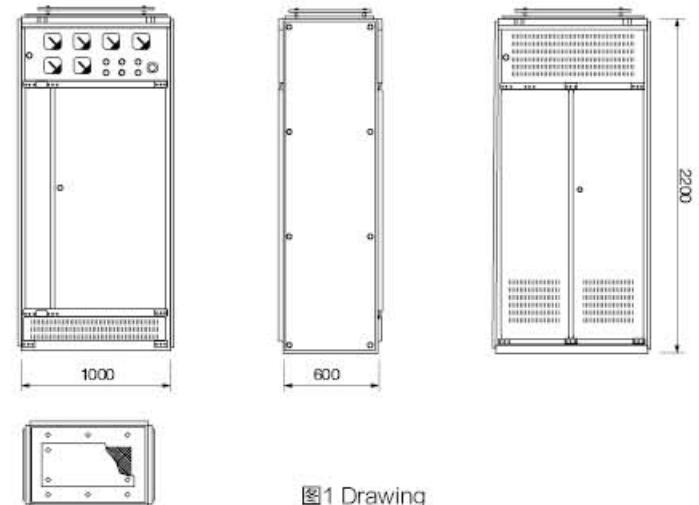


图1 Drawing

安装示意图 Installation diagram

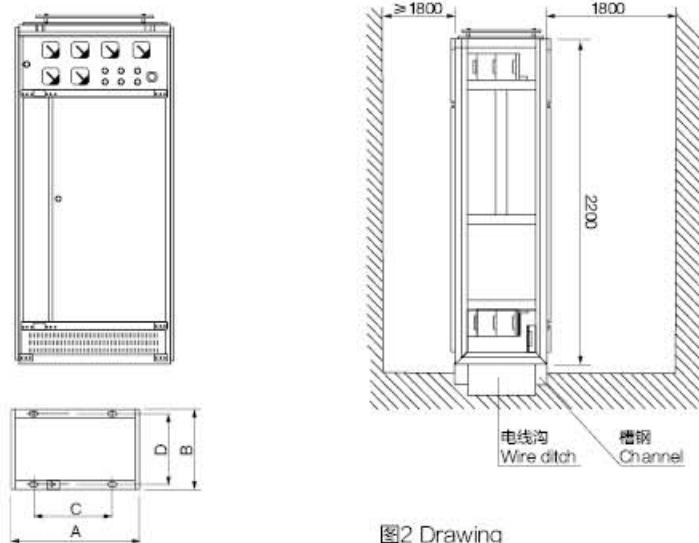


图2 Drawing

产品代号 product code	A(mm)	B(mm)	C(mm)	D(mm)	D(mm)
GGD06	600	600	450	556	556
GGD06A	600	800	450	756	756
GGD08	800	600	650	556	556
GGD08A	800	800	650	756	756
GGD10A	1000	600	850	556	556
GGD10A	1000	800	850	756	756
GGD12	1200	800	1050	756	756

GCK

低压抽出式开关柜

Low-voltage withdrawable switchgear

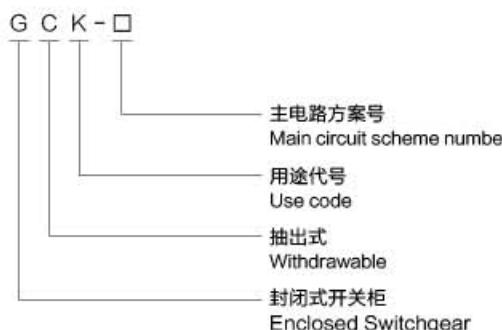


产品概述 Product overview

GCK 低压抽出式开关柜由动力配电中心 (PC) 柜和电动机控制中心 (MCC) 二部分组成，适用于发电厂、变电站、工矿企业等电力用户作为交流 50Hz，最大工作电压至 660V，最大工作电流至 3150A 的配电系统中，作为动力配电、电动机控制及照明等配电设备的电能转换分配控制之用。

GCK Low-voltage withdrawable switchgear two parts by the power distribution center (PC) cabinet and motor control center (MCC), for power plants, substations, industrial and mining enterprises and other power users as AC 50Hz, maximum working voltage up to 660V, maximum work current up to 3150A power distribution system, as the electricity power distribution, motor control and lighting and other power distribution equipment conversion distribution control purposes.

型号含义 Model and meaning



GCK

低压抽出式开关柜

Low-voltage withdrawable switchgear

使用条件 Conditions of Use

海拔高度: 不超过 2000m;
周围温度: 不高于 +40℃，并且 24h 内平均温度不高于 +35℃，周围空气温度不低于 -50℃;
大气条件: 空气清洁，相对湿度在温度为 +40℃ 时不超过 50%，在温度较低时允许有较高的相对湿度，例如: +20℃ 时为 90%;

如上述使用条件不能满足时，应由用户在订货时向制造厂方提出，协商解决。
If the above conditions are not met, by the user to the manufacturer side when ordering consultation.

安装场所: 没有火灾，爆炸危险，严重污秽，化学腐蚀及剧烈震动的场所；
与垂直面倾斜不超过 5°；
本产品适合以下温度运输储存: -25℃ ~ +55℃，在短时间内 (不超过 24h) 不超过 +70℃。

Installation place: no fire, explosion, serious pollution, chemical corrosion and violent vibration of the place;
And the vertical tilt does not exceed 5° ;
This product is suitable for the following temperature transport and storage: -25℃ ~ +55℃ , in a short time (less than 24h) does not exceed + 70°C .

主要技术参数 The main technical parameters

额定工作频率 Rated frequency	50	
额定工作电压 (V) Rated operating voltage (V)	380, 660	
额定绝缘电压 (V) Rated insulation voltage (V)	660	
额定工作电流 (A) Rated operating current (A)	水平母线 The level of bus	630-3150
	垂直母线 Vertical Bus	600
额定短时耐受电流 Rated short time withstand current	水平母线 The level of bus	80kA(有效值)/1 秒
	垂直母线 Vertical Bus	50kA(有效值)/1 秒
额定峰值耐受电流 Rated peak withstand current	水平母线 The level of bus	176kA/0.1s
	垂直母线 Vertical Bus	110kA/0.1s
主电路接插件 (A) Main circuit connector (A)	200, 400	
辅助电路接插件 (A) Auxiliary circuit connector (A)	10	
工频耐压 1 分钟 (V) 1 minute power frequency withstand voltage (V)	2500	
防护等级 Protection class	IP40	
操作方式 Operation	就地, 远方, 自动 Locally, remote, automatic	

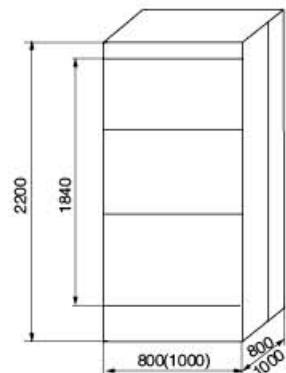
GCK

低压抽出式开关柜

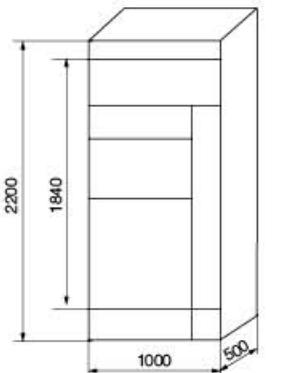
Low-voltage withdrawable switchgear

外形及尺寸 (mm)

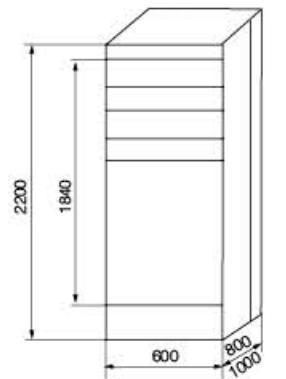
Shape and size (mm)



PC 柜外形尺寸
PC cabinet Dimensions



靠墙安装的 MCC 柜外形尺寸
Wall installation of MCC cabinetDimensions



离墙安装的 MCC 柜外形尺寸
MCC cabinet away from the wall mounted Dimensions

柜宽 (A) Cabinet width (A)	柜深 (B) Cabinet depth (B)	安装孔距 (a) Installation pitch (a)	安装孔距 (b) Installation pitch (b)
800	500	685	385
600	800	485	685
600	1000	485	885
800	800	685	685
800	1000	685	885
1000	800	885	685
1000	1000	885	885

产品代号 product code	A(mm)	B(mm)	C(mm)	D(mm)
GGD06	600	600	450	556
GGD06A	600	800	450	756
GGD08	800	600	650	556
GGD08A	800	800	650	756
GGD10A	1000	600	850	556
GGD10A	1000	800	850	756
GGD12	1200	800	1050	756

GCS

低压抽出式开关柜

Low-voltage withdrawable switchgear

产品概述

Product overview

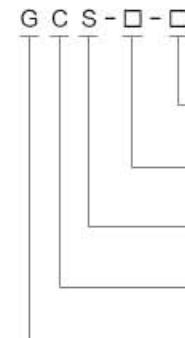


GCS 低压抽出式开关柜，装置适用于发电厂、石油、化工、冶金、纺织、高层建筑等行业的配电系统。在大型发电厂、石化系统等自动化程度高，要求与计算机接口的场所，作为三相交流频率为 50(60)Hz，额定工作电压为 380V(400V), (660V)，额定电流为 4000A 及以下的发、供电系统中的配电、电动机集中控制、无功功率补偿使用的低压成套配电装置。

GCS low-voltage withdrawable switchgear. equipment for power plants, petroleum, chemical, metallurgy, textile, high-rise construction industry distribution system. High degree of automation in large power plants, petrochemical systems, computer interface requirements and place, as the three-phase AC frequency of 50 (60) Hz, rated working voltage of 380V (400V), (660V), rated current 4000A and below the hair, the power supply system in power distribution, motor centralized control, low voltage power distribution equipment used in reactive power compensation.

型号含义

Model and meaning



- 主电路方案号
Main circuit scheme number
- 辅助电路方案号
Auxiliary circuit scheme number
- 电气系统
Electrical System
- 抽出式
Withdrawable
- 封闭式开关柜
Enclosed Switchgear

性能指标

Performance

装置的设计符合下列标准

IEC439-1 低压成套开关设备和控制设备

GB7251 低压成套开关设备

ZBK360001 低压抽出式成套开关设备

Design of the device meets the following criteria

IEC439-1 Low-voltage switchgear and control equipment

GB7251 Low-voltage switchgear

ZBK360001 low-voltage withdrawable switchgear

GCS

低压抽出式开关柜

Low-voltage withdrawable switchgear

基本参数

Basic parameters

主电路额定电压 (V) Main circuit rated voltage (V)		交流 380(400)、(660)
辅助电路额定电压 (V) Auxiliary circuit Rated voltage (V)	交流 cross flow 220、380(400)	直流 straight flow 110/220
额定频率 (Hz) Rated frequency (Hz)		50(60)
额定绝缘电压 (V) Rated insulation voltage (V)		660(1000)
额定电流 (V) Rated current (V)	水平母线 The level of bus 垂直母线 (MCC) Vertical Bus (MCC)	≤ 4000 1000
母线额定短时耐受电流 (kA/1s) Busbar rated short time withstand current (kA/1s)	50.80	
母线额定峰值耐受电流 (kA/0.1s) Busbar rated peak withstand current (kA/0.1s)	105, 176	
工频试验电压 (V/1min) Power frequency test voltage (V/1min)	主电路 The main circuit 辅助电路 Auxiliary circuit	2500 1760
母线 Bus bar	三相四线制 Three-phase four-wire system 三相五线制 Three-phase five-wire system	A, B, C, PEN A, B, C, PE, N
防护等级 Protection class	IP30, IP40	

装置特点

Device characteristics

提高转接件的热容量，较大幅度的降低由于转接件的温升给接插件、电缆头、间隔板带来的附加温升；功能单元之间、隔室之间的分隔清晰、可靠，不因某一单元的故障而影响其它单元工作，使故障局限在最小范围；母线平置式排列使装置的动、热稳定性好，能承受 80/176kA 短路电流的冲击；MCC 柜单柜的回路数量多到 22 回，充分考虑大单机容量发电，石化系统等行业自动

化电动门（机）群的需要；装置与外部电缆的连接在电缆隔室中完成，电缆可以上下进出。电流互感器装置于电缆隔室内，使安装维修方便；同一电源配电系统，可以通过限流电抗器匹配限制短路电流，稳定母线电压在一定的数值，还可部分降低对元器件短路强度的要求；抽屉单元有足够的二次插接件（1 单元及以上为 32 对，1/2 单元为 20 对），可满足计算机接口和自控回路对接点数量的要求。

Increase the heat capacity of the adapter, the additional temperature reduced significantly due to the temperature rise adapter connectors, cable head, spacer plates brought; Between the functional units, the partition between the compartments clear, reliable, due to failure of a unit without affecting the other units of work, so that failure limitations in the minimum range; Bus flat-mounted arrangement makes moving the device, good thermal stability, can withstand 80/176kA short circuit current impact; Number of single cabinet MCC cabinet circuit 22 times more to take full account of large unit capacity power generation, petrochemical

and other industries automation electric gate (machine) group needs; Connecting means and external cables in the cable compartment is completed, the cable can be up and down and out. Current transformer means in the cable compartment, making easy installation and maintenance; The same power distribution system, it can match by limiting short-circuit current limiting reactors, stable bus voltage at a certain value, but also reduce the component part of the short-circuit strength requirements; Drawer unit has a sufficient number of secondary connectors (1 unit and more than 32 pairs, 1/2 units of 20 pairs), can satisfy the computer interface and automatic control loop requirements on the number of contacts.

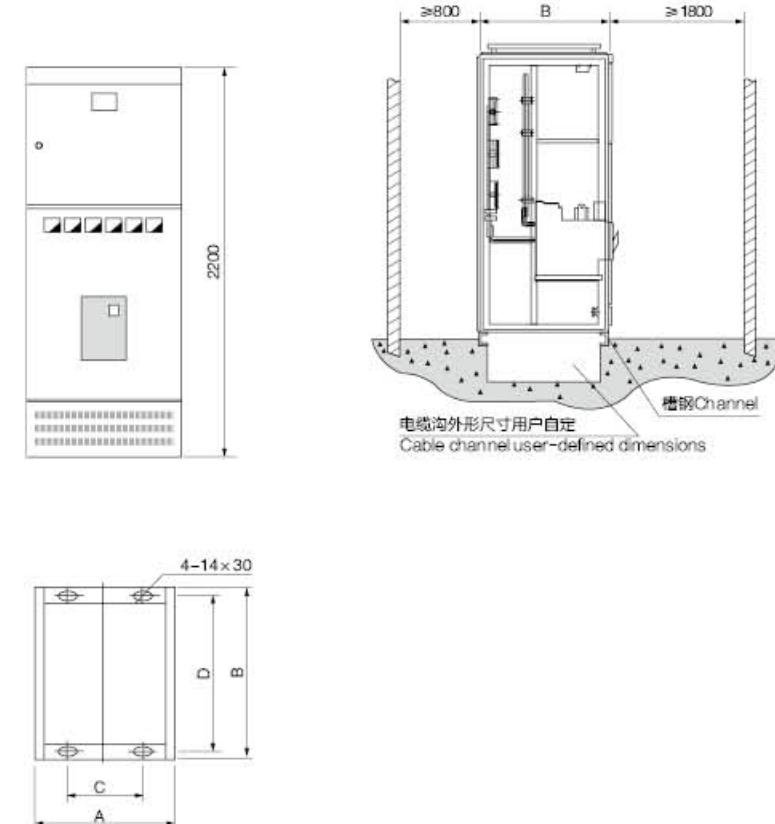
GCS

低压抽出式开关柜

Low-voltage withdrawable switchgear

安装示意图

Installation diagram



通用柜代号 Universal cabinet Code	A	B	C	D	E	备注 Remark
GCS-TG1010-4	1000	1000	850	956	60	400×400
GCS-TG0810-4	800	1000	650	956	160	200×400
GCS-TG0808-4	800	800	850	756	60	400×400
GCS-TG0608-4	600	800	450	756	160	200×400

MNS

低压抽出式开关柜

Low-voltage withdrawable switchgear



产品概述 Product overview

MNS 低压抽出式开关柜，是一种用标准模块由工厂组装 (FBA) 的组合式柜型，其技术已达到国际先进水平。

本系列低压抽出式开关柜适用于发电厂、变电站、石油化工、冶金轧钢、交通能源、轻工纺织等厂矿企业和住宅小区、高层建筑等场所、作为交流 50~60Hz, 额定工作电压交流 660V 及以下的电力系统的配电设备的电能转换、分配及控制之用。本装置符合 GB72511 《低压成套开关设备》及 JB/T9961《低压抽出式成套开关设备》国家专业标准、并符合 IEC439-1、VDE0660 第五部分等国际专业标准。

MNS Low-voltage withdrawable switchgear is a factory-standard module assembly (FBA) modular container type, its technology has reached the international advanced level.

This series of low-voltage withdrawable switchgear for power plants, substations, petrochemical, metallurgy rolling, transportation and energy, textile and other industrial enterprises and residential areas, high-rise buildings and other places, as AC 50~60Hz, rated working voltage AC power converters 660V and below the power system of power distribution equipment, distribution and control purposes. This device complies with GB72511 "Low-voltage switch off equipment" and JB/T9961 "Low-voltage withdrawable switchgear" national professional standards, and in accordance with international professional standards IEC439-1, VDE0660 Part V like.

正常使用环境条件 Normal environmental conditions

海拔高度: 不超过 2000m;
空气温度: -5℃ ~+40℃, 并且 24h 内其平均温度不高于 +35℃;
大气条件: 空气清洁, 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高的相对湿度, 例如 +20℃ 时为 90%, 但应考虑到温度变化, 有可能会偶然地产生凝露;
本装置适用于以下温度的运输和储存过程: -25℃ 至 +55℃ 的范围之间, 在短时间内 (不超过 24h) 可达 +70℃, 在这些极限温度下装置不应遭到任何不可恢复的损伤, 而且在正常条件下应能正常工作;
如果上述使用条件不能满足时, 应由用户和制造厂协商解决;
当本装置使用于海上石油钻采平台和核电站时, 应另行签订技术协议。

Altitude: not exceed 2000m;
Air temperature: -5℃ ~+40℃, and 24h average temperature does not exceed +35℃;
Atmospheric conditions: air cleaner, the relative humidity at the highest temperature is +40℃
not more than 50%, at a lower temperature allows a higher relative humidity, for example +20℃ at 90%, but should take into account changes in temperature, there may occasionally produce condensation;

This device adapted to these temperatures during transport and storage: the range between -25 ℃ to +55 ℃ in a short time (less than 24h) up to +70 ℃ , in extreme temperatures in these devices should not be subjected to any irreversible damage, and should be able to work under normal conditions;
If the above conditions are not met, the user and the manufacturer shall be resolved through consultation;
When this device is used in offshore oil drilling platforms and nuclear power plants, it should be entered into separate technology agreement.

MNS

低压抽出式开关柜

Low-voltage withdrawable switchgear

基本参数 Basic parameters

额定绝缘电压 Rated insulation voltage	660V(1000)V				
额定工作电压 Rated working voltage	380V, 660V				
主母线最大工作电流 The maximum operating current of the main bus	5000A				
主母线额定耐受电流 Main busbar rated withstand current	100kA/1s				
主母线额定峰值耐受电流 Main busbar rated peak withstand current	220kA/0.1s				
配电母线 (垂直母线) 最大工作电流 Distribution bus (vertical bus) the maximum operating current	1000A				
配电母线 (垂直母线) 峰值电流: Distribution bus (vertical bus) Peak current:	<table border="1"> <tr> <td>标准型 Standard</td> <td>105kA(最大值 Maximum)/0.1s</td> </tr> <tr> <td>加强型 Enhanced</td> <td>176kA(最大值 Maximum)/0.1s</td> </tr> </table>	标准型 Standard	105kA(最大值 Maximum)/0.1s	加强型 Enhanced	176kA(最大值 Maximum)/0.1s
标准型 Standard	105kA(最大值 Maximum)/0.1s				
加强型 Enhanced	176kA(最大值 Maximum)/0.1s				

柜体结构 Cabinet structure

开关柜柜体基本结构是由 C 型材装配组成。C 型材是以 E=25mm 为模数安装孔的钢板弯制而成。全部柜架及内层隔板都作镀锌纯化处理。四周门板, 侧板则作高压静电喷塑。

The basic structure of the switchgear cabinet is composed by a C-shaped profile assembly. C profiles with steel bending modulus E = 25mm mounting holes of the system. All cabinet and inner partitions are made of galvanized purification treatment. Four weeks the door, side panels will be used for electrostatic spray.

开关柜类型 Switchgear Type

1. 动力配电中心柜 (PC): 可采用 Emax、MT、3WN、AH、ME 等系列等断路器。
2. 电动机控制中心柜 (MCC): 由大小抽屉组装而成, 各回路主开关采用高分断塑壳断路器或旋转式带熔断器的负荷开关。功率因数自动补偿柜 (带有手动、自动及远动功率因数补偿装置)

1. The cabinet power distribution center (PC): can Emax, MT, 3WN, AH, ME circuit breakers and other series.
2. The motor control center cabinet (MCC): assembled by the size of the drawer is made, each circuit using high off the main switch or rotary molded case circuit breaker with fuse load switch. Automatic power factor compensation cabinet (with manual, automatic and remote power factor compensation device)

A 动力配电中心 (PC) 柜 (mm) A power distribution center (PC) cabinet (mm)

高 high H	宽 wide B	深 deep T T1 T2			备注 Remark
		T	T1	T2	
2200	400	1000	800	200	主母线转接 The main bus adapter
2200	400	1000	800	200	F _s -1250-2000 ME630-1605
2200	600	1000	800	200	F _s -2500
2200	800	1000	800	200	F _s -3200 ME2000-3200
2200	1000	1000	800	200	F _s -4000 ME3205
220	1200	1000	800	200	ME4005

B 电动机控制中心 (MCC) 柜 (mm) B motor control center (MCC) cabinet (mm)

高 high H	宽 wide B1 B2	深 deep T T1 T2			备注 Remark
		T	T1	T2	
2200	1000 600 400	600	400	200	单面操作 Single operation
2200	1000 600 400	1000	400	200	双面操作 Duplex operation

XL-21

低压动力配电柜

Low-voltage power distribution cabinet



产品概述 Product overview

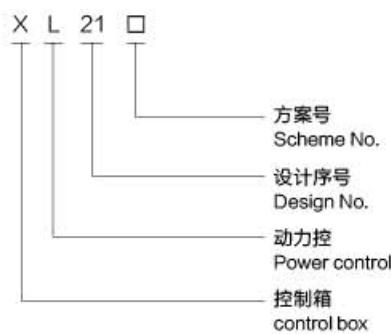
XL-21 低压动力配电柜，适用于发电厂及工矿企业中，在交流电压 500 伏及以下的三相四线系统作动力配电之用。

XL-21 低压动力配电柜户内装置墙安装，屏前检修。

XL-21 low-voltage power distribution cabinet for power plants and industrial and mining enterprises, the AC voltage of 500 volts and below the three-phase four-wire system for power distribution purposes.

XL-21 wall means within the low-voltage power distribution cabinet door installation, front panel overhaul.

型号含义 Model and meaning



结构特征 Structure

XL-21 低压动力配电柜系封闭式，外壳用钢板变制而成，刀开关操作手柄装于前右柱上部，可以作为切换电源之用。配电箱前面装有一只电压表，指示母线的电压。配电箱前面有门，门打开后配电箱内全部设备敞露、便于检修维护。本配电箱用用国内自行设计的型组件，具有结构紧凑，检修方便，线路方案可以灵活组合等特点。配电箱除装有空气断路器和熔断器作为短路保护外，还装有接触器和热继电器，箱前门可装操作按钮和指示灯。

XL-21 closed-end and low-voltage power distribution cabinet, shell steel plate change from the system, knife switch operating handle mounted on the front right column section, it can be used as a switching power supply purposes. Front distribution box is equipped with a voltage meter, indicating voltage bus. Distribution box in front of a door, the door open all the equipment distribution box Chang Lu, easy repair and maintenance. The distribution box with the use of domestic self-designed type components, with a compact, easy maintenance, line scheme can be flexibly combined features. In addition to distribution box is equipped with air circuit breakers and fuses as short-circuit protection, but also equipped with contactors and thermal relays, box door can be mounted operation buttons and LEDs.

XL-21

低压动力配电柜

Low-voltage power distribution cabinet

刀熔组合开关 Knife fuse combination switch

型号 model	额定电流 (A) Rated Current (A)	熔体额定电流 (A) Melt rated current (A)	备注 Remark
HR3-400/34	400	150, 200 250, 300, 350, 400	装隔离刀片时无溶体 No melt when mounting the insulating blade

空气断路器 Air Circuit Breakers

型号 model	额定电流 (A) Rated Current (A)	脱扣器整定电流 (A) Tripping setting current (A)	备注 Remark
MLM5-40/390	20	7, 10, 15, 20, 30, 40	
MLM1-100/300	100	15, 20, 25, 30, 40, 50, 60, 80, 100	
MLM1-250/300	250	100, 120, 140, 170, 200, 225, 250	

电流互感器 Current Transformer

型号 model	初级电流 (A) Primary current (A)	初级电流 (A) Primary current (A)	备注 Remark
LM-0.5	75, 100, 150, 200, 300, 600	5	

熔断器 Fuses

型号 model	熔断器 Fuses	熔断体额定电流 (A) Fuse rated current (A)	备注 Remark
RL1-15	15	2, 4, 5, 6, 10, 15	
RL1-60	60	20, 25, 30, 35, 40, 50, 60	
RL1-100	100	30, 40, 50, 60, 80, 100	
RL1-200	200	80, 100, 120, 150, 200	
RL1-400	400	150, 200, 250, 300, 350, 400	

交流接触器 AC contactor

型号 model	额定电流 (A) Rated Current (A)	吸引线圈电压 (V) Attract coil voltage (V)	备注 Remark
MLC3-10	10		
MLC3-20	20		交流 110 220
MLC3-40	40		380
MLC3-80	80		
MLC3-150	150		

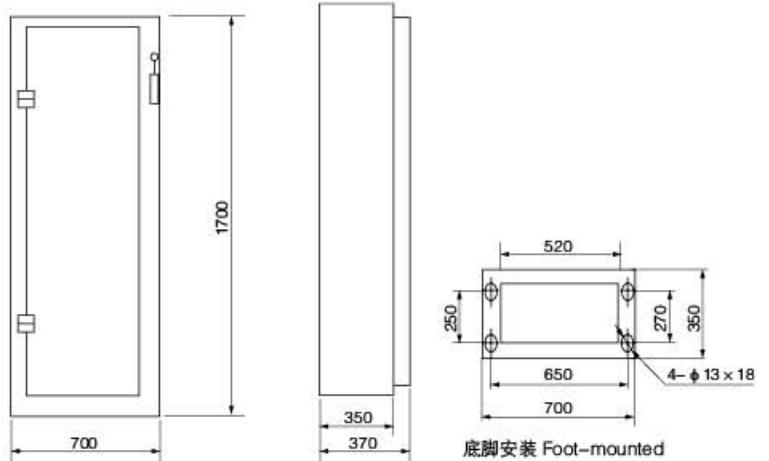
XL-21

低压动力配电柜

Low-voltage power distribution cabinet

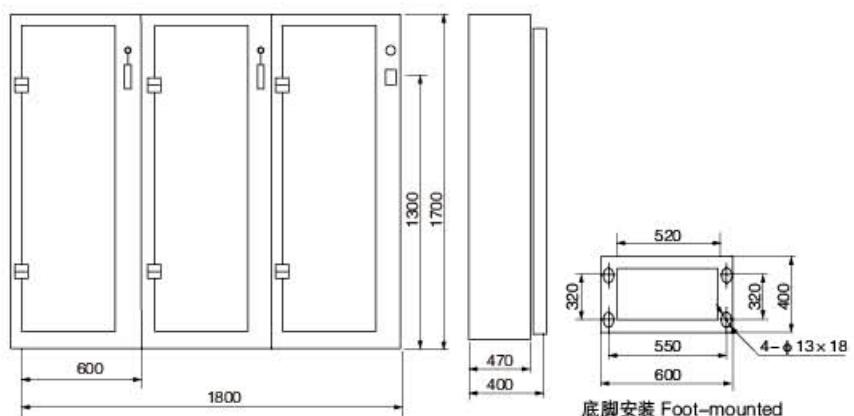
外形及尺寸 (mm)

Shape and size (mm)



A型结构安装外形尺寸

A structure installation Dimensions



B型结构安装外形尺寸

B structure installation Dimensions

JP

综合配电箱(补偿/控制/终端/照明)

Integrated distribution box (compensation/Control/Terminal/lighting)



产品概述

Product overview

JP 综合配电箱, 是集计量、出线、无功补偿等 多功能于一体达到户外综合配电装置, 具有短路、过载、过电压、漏电保护等功能, 体积小、外型美观、经济实用, 安装于户外柱上变压器的电杆上, 是城乡电网改造的新一代理想配电产品。

JP series of outdoor integrated distribution box, is a set of metering, outlet, reactive power compensation and other functions into one comprehensive reach outdoor distribution equipment, has a short circuit, overload, over-voltage, leakage protection and other functions, small size, appearance, economy practical, outdoor column transformer mounted on poles, is ideal for a new generation of urban and rural power grids and distribution products.

型号含义

Model and meaning

JP - □ / □

主回路方案号
Main circuit scheme number
变压器容量
Transformer capacity
综合配电箱
Comprehensive Distribution

使用环境

Use of the environment

环境温度: -25℃ +40℃;

相对湿度: 日平均值不大于 90%, 月平均值不大于 90%;

海拔高度: 不大于 2000m;

安装场所: 在无剧烈震动和冲击、无腐蚀性气体的场所。

Ambient temperature: -25℃ +40℃ ;

Relative humidity: daily average of not more than 90%, on average less than 90%;

Altitude: not more than 2000m;

Installation place: in the absence of severe vibration and shock, non-corrosive gas.

结构特点 Structural features

箱体结构分立式和卧式，外壳采用 2mm 优质不锈钢板经多重折边工艺弯制(或采用蜂窝结构的不锈钢双夹层复合板)，具有阻燃、环保、隔热、防凝露等性能，采用特殊不锈钢焊接工艺，箱体成型后整体强度高，表面光洁如镜，不留焊缝痕迹；内部安装梁(板)为热镀锌工艺处理，确保二十年内不绣蚀；箱体前后开门，便于用户操作和检修，门四

Discrete and horizontal box structure, the shell is made of high-quality non-porous 2mm steel plate bending multi-fold process (or the use of honeycomb sandwich structure of stainless steel double-composite panels, flame retardant, environmental protection, thermal insulation, anti-condensation properties), using a special stainless steel welding technology, high overall strength after forming the cabinet, the surface smooth as a mirror, leaving no trace of the weld; internal mounting beam (board) for the hot dip galvanizing process, to ensure that twenty

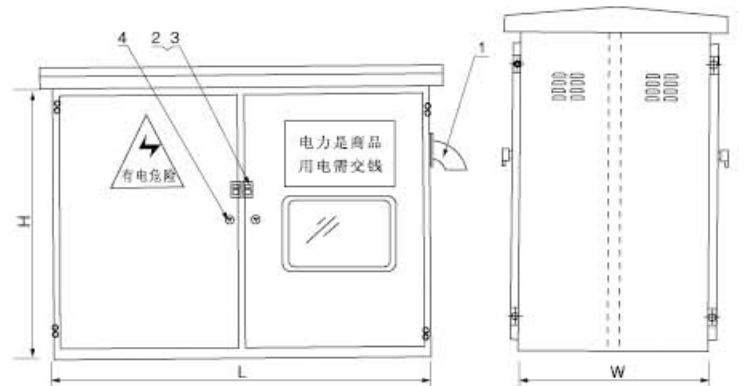
years does not rust; front casing open, user-friendly operation and maintenance, high elastic around the door inlaid with anti-aging sealing strip, are equipped with every shade of two door locks, Ming lock with attempts to prevent rust storm hood; closed with a metering chamber seal means; incoming cable box side with rain preventing foreign bodies through the tube, the bottom punch ventilation holes and cable entry hole, top with a duct and screen, waterproof, rust, dust, foreign body functions, protection class: IP54.

主要技术参数 The main technical parameters

名称 name	单位 unit	参数 parameter
变压器容量 Transformer capacity	KVA	30~400
额定工作电压 Rated working voltage	V	AC400
辅助回路工作电压 Operating voltage auxiliary circuit	V	AC220, AC380
额定频率 Rated frequency	Hz	50
额定电流 Rated current	A	≤ 630
额定漏电动作电流 Rated leakage current	mA	30~300 可调 Adjustable
防护等级 Protection class		IP54

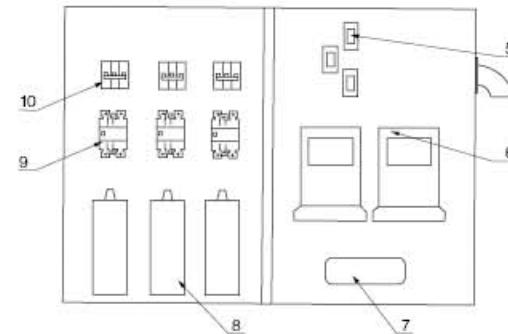
箱体结构示意图 Case structure diagram

- 1. 进线电缆穿管
- 2. 门锁(明锁)
- 3. 门锁防雨盒
- 4. 门锁(暗锁)
- 5. 电流互感器
- 6. 计量表
- 7. 接线盒
- 8. 电容器
- 9. 切换电容接触器
- 10. 小型断路器
- 11. 隔离开关
- 12. 零序互感器
- 13. 漏电继电器
- 14. 出线交流接触器
- 15. 出线空气开关

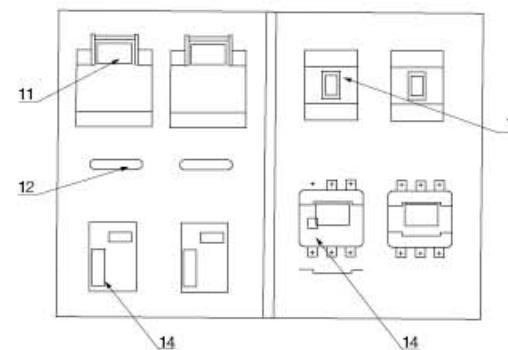


图一：户外箱结构示意图(卧式)
Figure 1: Schematic outdoor box (horizontal)

结构特点 Structural features



内部元件布置(正面)
Internal component layout (front)



内部元件布置(背面)
Internal element arrangement (back)

- 1. 进线电缆穿管
- 2. 门锁(明锁)
- 3. 门锁防雨盒
- 4. 门锁(暗锁)
- 5. 电流互感器
- 6. 计量表
- 7. 接线盒
- 8. 电容器
- 9. 切换电容接触器
- 10. 小型断路器
- 11. 隔离开关
- 12. 零序互感器
- 13. 漏电继电器
- 14. 出线交流接触器
- 15. 出线空气开关

- 1. into the cable through the tube
- 2. door locks (Ming lock)
- 3. box locks rain
- 4. door locks (Mortice)
- 5. the current transformer
- 6. meter
- 7. the junction box
- 8. the capacitor
- 9. the switched capacitor contactors
- 10. small circuit breakers
- 11. isolation switch
- 12. zero sequence transformer
- 13. leakage relay
- 14. outlet AC contactor
- 15. outlet air switch

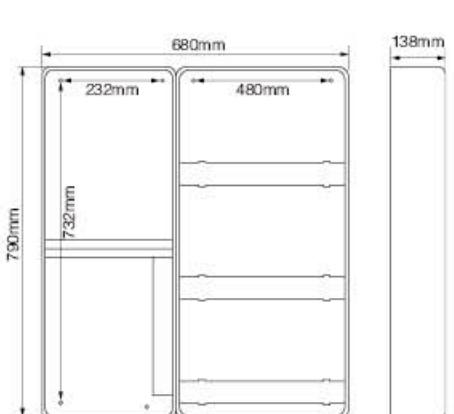
六户

(六户) 单相集装型电表箱
(Six) Mount single-phase meter box

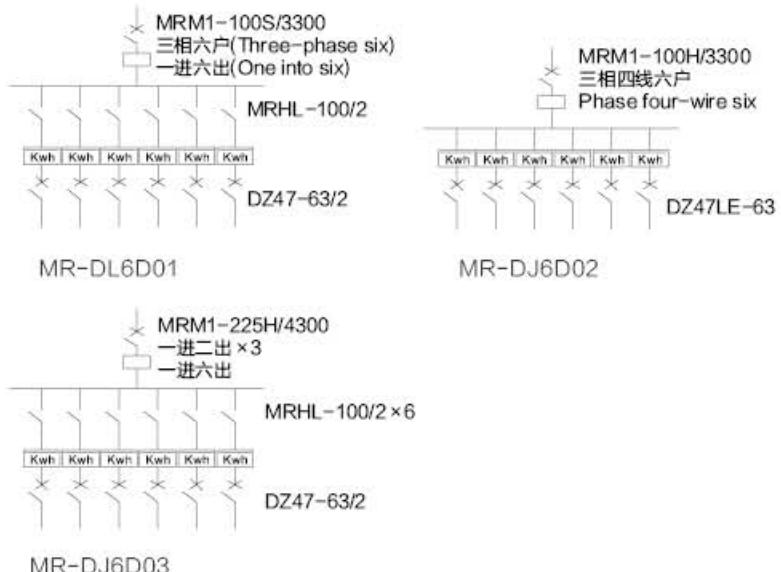
产品型号及主要配置范例
Model and main configuration example

型号 model	配件名称 Accessory Name	型号 model	数量 uantity
MR-DJ6D01	断路器(进线) Circuit breakers (line)	MRM1-100S/3300	1
MR-DJ6D01	接线端子(进线) Terminals (line)	三相六户 Three-phase six	1
MR-DJ6D01	零线端子(进线) Zero line terminal (line)	一进六出 One into six	1
MR-DJ6D01	隔离开关(进线) Isolation switch (line)	MRHL-100/2	6
MR-DJ6D01	断路器(出线) Circuit Breakers (outlet)	DZ47-63/2	6
MR-DJ6D02	断路器(进线) Circuit breakers (line)	MRM1-100H/4300	1
MR-DJ6D02	接线端子(进线) Terminals (line)	三相四线六户 Phase four-wire six	1
MR-DJ6D02	漏电断路器(出线) Leakage circuit breakers (outlet)	NL1E-63	6
MR-DJ6D03	断路器(进线) Circuit breakers (line)	MRM1-225H/4300	1
MR-DJ6D03	开关端子(进线) Switch terminal (line)	一进二出 One into two	3
MR-DJ6D03	开关端子(进线) Switch terminal (line)	一进六出 One into six	1
MR-DJ6D03	隔离开关(进线) Isolation switch (line)	MRHL-100/2	6
MR-DJ6D03	断路器(出线) Circuit Breakers (outlet)	DZ47-63/2	6

外形及安装尺寸(mm)
Overall and installation dimensions (mm)



六户电表箱接线图
Six meter box wiring diagram



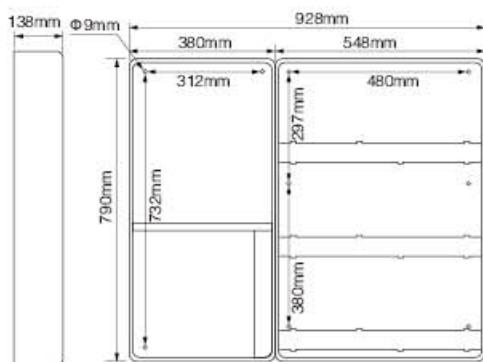
九户

单相集装型电表箱
(Nine) Mount single-phase meter box

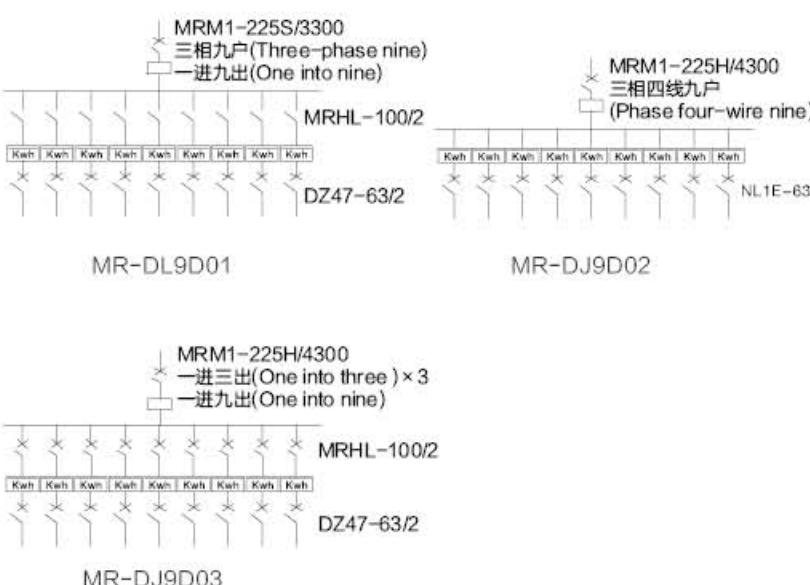
产品型号及主要配置范例
Model and main configuration example

型号 model	配件名称 Accessory Name	型号 model	数量 uantity
MR-DJ9D01	断路器(进线) Circuit breakers (line)	MRM1-225S/3300	1
MR-DJ9D01	接线端子(进线) Terminals (line)	三相九户 Three-phase nine	1
MR-DJ9D01	零线端子(进线) Zero line terminal (line)	一进九出 One into nine	1
MR-DJ9D01	隔离开关(进线) Isolation switch (line)	MRHL-100/2	9
MR-DJ9D01	断路器(出线) Circuit Breakers (outlet)	DZ47-63/2	9
MR-DJ9D02	断路器(进线) Circuit breakers (line)	MRM1-225H/4300	1
MR-DJ9D02	接线端子(进线) Terminals (line)	三相四线九户 Phase four-wire nine	1
MR-DJ9D02	漏电断路器(出线) Leakage circuit breakers (outlet)	DZ47LE-63	9
MR-DJ9D03	断路器(进线) Circuit breakers (line)	MRM1-225H/4300	1
MR-DJ9D03	开关端子(进线) Switch terminal (line)	一进三出 One into three	3
MR-DJ9D03	开关端子(进线) Switch terminal (line)	一进九出 One into nine	1
MR-DJ9D03	隔离开关(进线) Isolation switch (line)	MRHL-100/2	9
MR-DJ9D03	断路器(出线) Circuit Breakers (outlet)	DZ47-63/2	9

外形及安装尺寸
Overall and installation dimensions



九户电表箱接线图
Nine meter box wiring diagram



高压真空断路器系列

High voltage vacuum circuit breaker Series

ZW7-40.5 户外高压真空断路器
Outdoor high voltage vacuum circuit breaker



ZW20-12F 户外高压智能分界断路器
Outdoor high voltage circuit breaker intelligent demarcation



ZW32-12M 户外高压智能永磁断路器
Outdoor high voltage circuit breaker intelligent permanent magnet



ZW8-12 户外高压真空断路器
Outdoor high voltage vacuum circuit breaker



FZW28-12F 分界真空断路器
Outdoor high voltage circuit breaker intelligent permanent magnet



ZW32-12F 户外高压智能分界断路器
Outdoor high voltage circuit breaker intelligent demarcation



高压真空断路器系列

High voltage vacuum circuit breaker Series

VS1-12 户内高压真空断路器
Indoor high-voltage vacuum circuit breaker



FKN12-12D 户内交流高压负荷开关
Indoor AC high voltage load switch



GW4 户外高压隔离开关
Outdoor high-voltage isolation switch



ZN85-40.5 户内高压真空断路器
Indoor high-voltage vacuum circuit breaker



FZRN25 真空负荷开关和组合电器
And vacuum load switch combined electrical apparatus



GW5 户外高压隔离开关
Outdoor high-voltage isolation switch

