MINGKONG

TRANSFORMER SELECTION GUIDE

Product range and technical specifications
Dimensions and operating conditions



Product family illustration



Power infrastructure concept illustration

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HENAN MINGKONG TECHNOLOGY CO., LTD.

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SC(B)-NX1

能效一级干式变压器 / Energy-efficiency grade 1 dry-type transformer

产品概述 / Product Overview



SC（B）-NX1型能效一级干式变压器，是各类干式变压器中性能最优的产品之一，特别适用于城市电网、高层建筑、商务中心、剧院、医院、宾馆、隧道、地铁、车站、码头、机场、地下电站、试验室、组合变电站等重要场所。

The SC(B)-NX1 type 1 energy-efficient dry-type transformer is one of the best-performing products among all types of dry-type transformers. It is especially suitable for urban power grids, high-rise buildings, business centers, theaters, hospitals, hotels, tunnels, and subways. , Stations, wharfs, airports, underground power stations, test rooms, combined substations and other important places.

型号含义 / Model meaning

S C (B) - □ / □ - NX1

- NX1 — 能效等级 Energy efficiency rating
- □ — 电压等级 Voltage level
- □ — 额定容量 Rated Capacity
- (B) — 低压可采用箔式线圈 Low voltage can use foil coil
- C — 环氧树脂浇注型 Epoxy resin casting type
- S — 三相 Three phase

SC(B)-NX1

产品特点 / Product Features

产品特点

- 低损耗：产品空载损耗比SCB10型产品降低30%以上，所有损耗均低于SCB13型干式变压器，节能效果好，运行经济，免维护。
- 低噪声：产品噪声水平比行专业标准JB/T10088-2016《6-220kV级变压器声级》低10-15分贝以上。
- 低局放：树脂混合料采用国外先进的搅拌方法和真空薄膜脱气两种技术，使混合料搅拌均匀，彻底排除了混合料内的气泡。产品仅有极低的局部放电量，可控制在5PC以下。高、低压线圈均在真空和压力下浇注，使树脂绝缘既具有全包封性，又具有层匝间浸渍性。浇注体具有致密的固化结构，阻燃、防爆、不污染环境。
  缠绕线圈的玻璃纤维等绝缘材料具有自熄特性，不会因短路产生电弧，高热下树脂不会产生有毒有害气体。
- 高机械强度：带填料的树脂使浇注体内的膨胀系数差异小，固化收缩率小，内应力小，固化物的硬度高，在高、低压线圈的内外表面环氧树脂包封层内，放置有预制成型的加强材料，具有尤如钢筋混凝土一样的致密结构，因而机械强度还大于纯环氧树脂，能承受突发短路电动力作用而无损伤。

Product Features

- Low loss: The no-load loss of the product is more than 30% lower than that of the SCB10 product, and all losses are lower than the SCB13 dry-type transformer, with excellent energy-saving effect, economic operation, and maintenance-free.
- Low noise: The noise level of the product is more than 10-15 decibels lower than the professional standard JB/T10088-2016 "6-220kV transformer sound level".
- Low partial discharge: The resin mixture adopts foreign advanced mixing methods and vacuum film degassing technologies to make the mixture evenly stirred and completely eliminate air bubbles in the mixture. The product has only very low partial discharge, which can be controlled below 5PC. Both the high and low voltage coils are cast under vacuum and pressure, so that the resin insulation has both full encapsulation and inter-turn impregnation. The pouring body has a dense solidified structure, flame-retardant, explosion-proof, and does not pollute the environment.
  Insulating materials such as glass fiber winding the coil have self-extinguishing characteristics, will not generate arc due to short circuit, and the resin will not generate toxic and harmful gases under high heat.
- High mechanical strength: The resin with filler makes the expansion coefficient difference in the casting body small, the curing shrinkage rate is small, the internal stress is small, and the hardness of the cured product is high. In the epoxy resin encapsulation layer of the inner and outer surfaces of the high and low voltage coils, there are The prefabricated reinforcing material has a dense structure like reinforced concrete, so the mechanical strength is greater than that of pure epoxy resin, and it can withstand the sudden short-circuit electromotive force without damage.

SC(B)-NX1

技术参数 / Technical Parameters

电压组合 / Voltage combination (KV)

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	高压 H.V. (kV)	高压分接范围 High voltage tap range (%)	低压 L.V. (kV)	空载电流 No-load current (%)	负载损耗 Load loss (W)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
30	Dyn11 Yyn0	10 6.3 6	±5 ±2×2.5% 或 −1 +3 ×2.5%	0.4	2.00	640	135	4.0
50					2.00	900	195	
80					1.50	1240	265	
100					1.50	1415	290	
125					1.30	1665	340	
160					1.30	1915	385	
200					1.10	2275	445	
250					1.10	2485	515	
315					1.00	3125	635	
400					1.00	3590	705	
500					1.00	4390	835	
630					0.85	5290	965	
630					0.85	5365	935	6.0
800					0.85	6265	1095	
1000					0.85	7315	1275	
1250					0.85	8720	1505	
1600					0.85	10555	1765	
2000					0.70	13005	2195	
2500					0.70	15455	2590	

SC(B)-NX2

能效二级干式变压器 / Energy-efficiency grade 2 dry-type transformer

产品概述 / Product Overview

SC（B）-NX2型能效一级干式变压器，是各类干式变压器中性能最优的产品之一，特别适用于城市电网、高层建筑、商务中心、剧院、医院、宾馆、隧道、地铁、车站、码头、机场、地下电站、试验室、组合变电站等重要场所。



The SC(B)-NX2 type 2 energy-efficient dry-type transformer is one of the best-performing products among all types of dry-type transformers. It is especially suitable for urban power grids, high-rise buildings, business centers, theaters, hospitals, hotels, tunnels, and subways. , Stations, wharfs, airports, underground power stations, test rooms, combined substations and other important places.

型号含义 / Model meaning

S C (B) - □ / □ - NX2

- NX2：能效等级 / Energy efficiency rating
- □（第二个）：电压等级 / Voltage level
- □（第一个）：额定容量 / Rated Capacity
- (B)：低压可采用箔式线圈 / Low voltage can use foil coil
- C：环氧树脂浇注型 / Epoxy resin casting type
- S：三相 / Three phase

SC(B)-NX2

产品特点 / Product Features

产品特点

- 低损耗：产品空载损耗比SCB10型产品降低20%以上，所有损耗均低于SCB12型干式变压器，节能效果好，运行经济，免维护。
- 低噪声：产品噪声水平比行专业标准JB/T10088-2016《6-220kV级变压器声级》低10-15分贝以上。
- 低局放：树脂混合料采用国外先进的搅拌方法和真空薄膜脱气两种技术，使混合料搅拌均匀，彻底排除了混合料内的气泡。产品仅有极低的局部放电量，可控制在5PC以下。高、低压线圈均在真空和压力下浇注，使树脂绝缘既具有全包封性，又具有层匝间浸渍性。浇注体具有致密的固化结构，阻燃、防爆、不污染环境。
  缠绕线圈的玻璃纤维等绝缘材料具有自熄特性，不会因短路产生电弧，高热下树脂不会产生有毒有害气体。
- 高机械强度：带填料的树脂使浇注体内的膨胀系数差异小，固化收缩率小，内应力小，固化物的硬度高，在高、低压线圈的内外表面环氧树脂包封层内，放置有预制成型的加强材料，具有尤如钢筋混凝土一样的致密结构，因而机械强度还大于纯环氧树脂，能承受突发短路电动力作用而无损伤。

Product Features

- Low loss: The no-load loss of the product is more than 30% lower than that of the SCB10 product, and all losses are lower than the SCB13 dry-type transformer, with excellent energy-saving effect, economic operation, and maintenance-free.
- Low noise: The noise level of the product is more than 10-15 decibels lower than the professional standard JB/T10088-2016 "6-220kV transformer sound level".
- Low partial discharge: The resin mixture adopts foreign advanced mixing methods and vacuum film degassing technologies to make the mixture evenly stirred and completely eliminate air bubbles in the mixture. The product has only very low partial discharge, which can be controlled below 5PC. Both the high and low voltage coils are cast under vacuum and pressure, so that the resin insulation has both full encapsulation and inter-turn impregnation. The pouring body has a dense solidified structure, flame-retardant, explosion-proof, and does not pollute the environment.
  Insulating materials such as glass fiber winding the coil have self-extinguishing characteristics, will not generate arc due to short circuit, and the resin will not generate toxic and harmful gases under high heat.
- High mechanical strength: The resin with filler makes the expansion coefficient difference in the casting body small, the curing shrinkage rate is small, the internal stress is small, and the hardness of the cured product is high. In the epoxy resin encapsulation layer of the inner and outer surfaces of the high and low voltage coils, there are The prefabricated reinforcing material has a dense structure like reinforced concrete, so the mechanical strength is greater than that of pure epoxy resin, and it can withstand the sudden short-circuit electromotive force without damage.

SC(B)-NX2

技术参数 / Technical Parameters

电压组合 / Voltage combination (KV)

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	高压 H.V. (kV)	高压分接范围 High voltage tap range (%)	低压 L.V. (kV)	空载电流 No-load current (%)	负载损耗 Load loss (W)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
30	Dyn11 Yyn0	10 6.3 6	±5 ±2×2.5% 或 −1 +3 ×2.5%	0.4	2.00	710	150	4.0
50					2.00	1000	215	
80					1.50	1380	295	
100					1.50	1570	320	
125					1.30	1850	375	
160					1.30	2130	430	
200					1.10	2530	495	
250					1.10	2760	575	
315					1.00	3470	705	
400					1.00	3990	785	
500					1.00	4880	930	
630					0.85	5880	1070	
630					0.85	5960	1040	6.0
800					0.85	6960	1210	
1000					0.85	8130	1410	
1250					0.85	9690	1670	
1600					0.85	11730	1960	
2000					0.70	14450	2440	
2500					0.70	17170	2880	

SC(B)10

Transformer series



产品概述/Product Overview

本系列产品用于将10KV，20KV，35kV电网电源直接降低为400V配电电源或10kV输电电源为用户供电，由于具有显著优点，为越来越多的工程所采用。其主要优点有：减少占地和多级变电工程建设，具有显著的社会效益。节省工程投资，提高经济效益。减少10kV输变电环节，使运行维护费用明显降低。采用高压小电流代替低压大电流输电，减少线路损耗，降低线路运行成本。35kV，20kV电源直接进入用电中心，有效提高供电的可靠性。

This series of products is used to directly reduce the power supply of 10kV、 20kV and 35kV power grids to 400V power distribution power supply or10kV power transmission power supply. Because of its significant advantages, it is used in more and more projects. Its main advantages are: Reducing the construction of land occupation and multi—level substation projects has significant social benefits. Save engineering investment and improve economic efficiency. Reduce the 1okV power transmission and transformation link, so that the operation and maintenance costs are significantly reduced. The use of high voltage and small current instead of low voltage and large current transmission reduces line losses and reduces line operating costs. The 35kV and 2okV power supplies directly enter the power consumption center, effectively improving the.reliability of the power supply.

SC(B)10 10kV级、20kV级、35kV级干式变压器

10kV class,20kV class, 35kV class dry type transformer

型号含义 / Model meaning

S C (B) 10 - □ / □

- 电压等级 Voltage level
- 额定容量RatedCapacity
- 性能水平代号Performancelevelcode
- 低压可采用箔式线圈Lowvoltagecanusefoilcoil
- 环氧树脂浇注型Epoxyresincastingtype
- 三相Threephase

产品特点/ProducrFeatures

我公司生产的SC（B）10系列10KV级、20KV级、35KV级无励磁调压干式变压器属低损耗产品，符合国家标准GB6450，GB/T10228和IEC726的要求，并具有以下特点：

高性能、低损耗，为9型系列的换代产品。

选用优质硅钢片，同时大幅降低磁通密度，减小运行中硅钢片磁致伸缩量，有效降低噪音。

优化高压线圈结构，改善了层间电压和电容的分布，大大提高了产品耐受大气过电压和操作过电压的冲击能力，同时也改善了电场分布，使产品局放量进一步降低。

可配置温控系统和风冷装置，在负荷过大时自动启动风机冷却装置，有效提高设备过负荷能力。

The SC(B) 10 series 10kV class 、 20kV class and 35kV class non—exciting voltage regulating dry type transformers produced by our company are low—loss products, which meet the requirements of national standards GB6450, GB/T10228 and IEC726, and have the following characteristics:

High performance, low loss, and a replacement for the 9 series.

•Select high-quality silicon steel sheet, and greatly reduce the magnetic flux density, reduce the amount of magnetostriction of the silicon steel sheet during operation, and effectively reduce noise.

•Optimize the structure of the high—voltage coil, improve the distribution of voltage and capacitance between the layers, greatly improve the product's ability to withstand the atmospheric overvoltage and operating overvoltage, and also improve the electric field distribution, so that the product volume is further reduced.

• The temperature control system and air-cooling device can be configured to automatically start the fan cooling device when the load is too large, which can effectively improve the overload capacity of the equipment.

绝缘水平 / Insulation level

电压等级 Voltage level (kV)	最高运行电压（有效值） Maximum operating voltage (effective value) (kV)	额定短时工频耐压（有效值）/1分钟 Rated short-time power frequency withstand voltage (Effective value)/ 1 minute (kV)	额定雷电冲击耐受电压（峰值）（kV） Rated lightning impulse withstand voltage (peak value)	
			组I Group I	组II Group II
0.4	0.46	3	–	–
10	12	35	60	75
20	24	50	95	125
35	42	70	145	170

SC(B)10 10kV级、20kV级、35kV级干式变压器

10kV class,20kV class, 35kV class dry type transformer

技术参数/Technical Parameters

10kV级SC（B）10系列电变压器性能参数表

10kV class SC (B) 10 series electric transformer performance parameter table

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV) 高压 (H.V.)	高压分接范围 High voltage tap range(%)	低压 (L.V.)	空载电流 No-load current (%)	负载损耗 Load loss (W)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
30	Dyn11 Yyn0	10 6.3 6	±5 ±2×2.5% 或 $^{-1}_{+3}$ ×2.5%	0.4	2.00	710	190	4.0
50					2.00	1000	270	
80					1.50	1380	370	
100					1.50	1570	400	
125					1.30	1850	470	
160					1.30	2130	540	
200					1.10	2530	620	
250					1.10	2760	720	
315					1.00	3470	880	
400					1.00	3990	980	
500					1.00	4880	1160	
630					0.85	5880	1340	
630					0.85	5960	1300	6.0
800					0.85	6960	1520	
1000					0.85	8130	1770	
1250					0.85	9690	2090	
1600					0.85	11700	2450	
2000					0.70	14440	3050	
2500					0.70	17170	3600	
1600					0.85	12900	2450	8.0
2000					0.70	15900	3050	
2500					0.70	18890	3600	

20kV级SC（B）10系列无励磁调压配电变压器性能参数表

20kV class SC (B) 10 series non-excitation voltage regulating distribution transformer performance parameter table

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV) 高压 (H.V.)	高压分接范围 High voltage tap range(%)	低压 (L.V.)	空载电流 No-load current (%)	不同的绝缘耐热等级下的负载损耗（W） Load loss at different insulation heat ratings B (100°C)	F (120°C)	H (145°C)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
50	Yyn0 Dyn11	20 22 24	±5 2×2.5	0.4	2.2	1160	1230	1230	340	6.0
100					2.0	1880	1990	2130	540	
160					1.6	2340	2470	2660	675	
200					1.6	2800	2940	3140	740	
250					1.4	3260	3420	3710	840	
315					1.4	3890	4080	4370	970	
400					1.2	4650	4840	5180	1150	
500					1.2	5510	5790	6170	1350	
630					1.0	6530	6840	7360	1530	
800					1.0	7810	8260	8830	1750	
1000					0.8	9230	9780	10450	2070	
1250					0.8	10920	11540	12350	2380	
1600					0.8	13090	13870	14860	2790	
2000					0.6	15480	16380	17570	3240	
2500					0.6	18380	19380	20710	3870	
2000					0.6	16910	17860	19000	3240	8.0
2500					0.6	20230	21280	22700	3870	

注：表中所列的负载损耗为括号内参考温度（见GB1094.11的规定）下的值。

Note: The load loss listed in the table is the value under the reference temperature in parentheses (see GB1094.11)

SC(B)10 10kV级、20kV级、35kV级干式变压器

10kV class,20kV class, 35kV class dry type transformer

技术参数/Technical Parameters

35kV级SC（B）10系列无励磁调压配电变压器性能参数表

35kV class SC (B) 10 series non-excitation voltage regulating distribution transformer performance parameter table

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV)			空载电流 No-load current (%)	不同的绝缘耐热等级下的负载损耗（W） Load loss at different insulation heat ratings			空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
		高压 (H.V.)	高压分接范围 High voltage tap range(%)	低压 (L.V.)		B (100°C)	F (120°C)	H (145°C)		
50	Yyn0 Dyn11	35 ~ 38.5	±5 2×2.5	0.4	2.6	1350	1420	1520	450	6.0
100					2.2	1970	2080	2230	630	
160					1.6	2650	2810	3010	790	
200					1.6	3130	3320	3560	880	
250					1.4	3560	3800	4060	990	
315					1.4	4250	4510	4820	1170	
400					1.2	5090	5410	5770	1370	
500					1.2	6240	6650	7070	1620	
630					1.0	7260	7690	8260	1860	
800					1.0	8550	9120	9730	2160	
1000					0.8	9880	10450	11210	2430	
1250					0.7	12060	12730	13580	2830	
1600					0.7	14630	15480	16530	3240	
2000					0.7	17190	18240	19470	3820	
2500					0.7	20610	21850	23370	4450	

注：表中所列的负载损耗为括号内参考温度（见GB1094.11的规定）下的值。

Note: The load loss listed in the table is the value under the reference temperature in parentheses (see GB1094.11).

35kV级SC（B）10系列无励磁调压干式电力变压器性能参数表

35kV class SC (B) 10 series non-excitation voltage regulating dry power transformer performance parameter table

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV)			空载电流 No-load current (%)	不同的绝缘耐热等级下的负载损耗（W） Load loss at different insulation heat ratings			空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
		高压 (H.V.)	高压分接范围 High voltage tap range(%)	低压 (L.V.)		B (100°C)	F (120°C)	H (145°C)		
800	Dyn11 Yd11 Yyn0	35 ~ 38.5	±5 2×2.5	3.15 6 6.3 10 10.5 11	0.9	8930	9400	10070	4860	6.0
1000					0.9	10260	10920	11680	2250	
1250					0.8	12160	12920	13770	2673	
1600					0.8	14630	15480	16530	3130	
2000					0.7	17190	18240	19570	3690	7.0
2500					0.7	20610	21850	23370	4230	
3150					0.6	23080	24510	26120	6030	8.0
4000					0.6	27930	29450	31350	7020	
5000					0.5	32960	34960	37330	8370	
6300					0.5	38470	40850	43600	9900	
8000	Dyn11 Yd11 YNd11				0.4	43410	46070	49300	11340	9.0
10000					0.4	52720	55570	59470	12960	
12500				6 6.3 10 10.5 11	0.3	60800	64600	69060	15750	
16000					0.3	71720	76000	80560	19350	
20000					0.3	80750	85500	91480	22950	10.0

注：表中所列的负载损耗为括号内参考温度（见GB1094.11的规定）下的值。

Note: The load loss listed in the table is the value under the reference temperature in parentheses (see GB1094.11).

SC(B)12

Transformer series



产品概述/Product Overview

SC（B）12型环氧树脂浇注干式变压器，可作为油浸式配电变压器的更新换代产品，是各类干式变压器中性能最优的产品之一，特别适用于城市电网、高层建筑、商务中心、剧院、医院、宾馆、隧道、地铁、车站、码头、机场、地下电站、试验室、组合变电站等重要场所。

SC (B) 12 type epoxy resin cast dry—type transformer can be used as a replacement product for oil—immersed distribution transformers. It is one of the best—performing products among all types of dry—type transformers. It is especially suitable for urban power grids and high-rise buildings. , Business centers, theaters, hospitals, hotels, tunnels, subways, stations, docks, airports, underground power stations, test rooms, combined substations and other important places.

SC(B)12

型号含义 / Model meaning

S C (B) 12 - □ / □

- 电压等级 Voltage level
- 额定容量 Rated Capacity
- 性能水平代号Performancelevelcode
- 低压可采用箔式线圈Lowvoltagecanusefoilcoil
- 环氧树脂浇注型Epoxyresincastingtype
- 三相Threephase

SC(B)12环氧树脂浇注干式变压器

Epoxy resin cast dry-type transformer

产品特点/ProducrFeatures

低损耗：产品空载损耗比SCB10型产品降低20%以上，所有损耗均低于SCB12型干式变压器，节能效果好，运行经济，免维护。

低噪声：产品噪声水平比行专业标准JB/T10088-2016《6-220kV级变压器声级》低10-15分贝以上。

低局放：树脂混合料采用国外先进的搅拌方法和真空薄膜脱气两种技术，使混合料搅拌均匀，彻底排除了混合料内的气泡。产品仅有极低的局部放电量，可控制在5PC以下。高、低压线圈均在真空和压力下浇注，使树脂绝缘既具有全包封性，又具有层匝间浸清性。浇注体具有致密的固化结构，阻燃、防爆、不污染环境。

缠绕线圈的玻璃纤维等绝缘材料具有自熄特性，不会因短路产生电弧，高热下树脂不会产生有毒有害气体。

高机械强度：带填料的树脂使浇注体内的膨胀系数差异小，固化收缩率小，内应力小，固化物的硬度高，在高、低压线圈的内外表面环氧树脂包封层内，放置有预制成型的加强材料，具有尤如钢筋混凝土一样的致密结构，因而机械强度还大于纯环氧树脂，能承受突发短路电动力作用而无损伤。

Low loss: The no-load loss of the product is more than 30% lower than that of the SCB10 product, and all losses are lower than the SCB13 dry—type transformer, with excellent energy—saving effect, economic operation, and maintenance—free.

Low noise: The noise level of the product is more than 10-15 decibels lower than the professional standard JB/T10088-2016 "6-220kV transformer sound level".

Low partial discharge: The resin mixture adopts foreign advanced mixing methods and vacuum film degassing technologies to make the mixture evenly stirred and completely eliminate air bubbles in the mixture. The product has only very low partial discharge, which can be controlled below 5PC. Both the high and low voltage coils are cast under vacuum and pressure, so that the resin insulation has both full encapsulation and inter-turn impregnation. The pouring body has a dense solidified structure, flame—retardant, explosion—proof, and does not pollute the environment.

Insulating materials such as glass fiber winding the coil have self—extinguishing characteristics, will not generate arc due to short circuit, and the resin will not generate toxic and harmful gases under high heat.

•High mechanical strength: The resin with filler makes the expansion coefficient difference in the casting body small, the curing shrinkage rate is small, the internal stress is small, and the hardness of the cured product is high. In the epoxy resin encapsulation layer of the inner and outer surfaces of the high and low voltage coils, there are The prefabricated reinforcing material has a dense structure like reinforced concrete, so the mechanical strength is greater than that of pure epoxy resin, and it can withstand the sudden short—circuit electromotive force without damage.

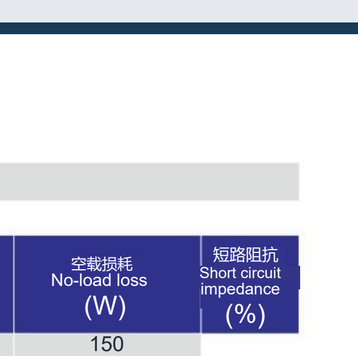
SC(B)12 / SC(B)12 wound core

技术参数/Technical Parameters

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV) 高压 (H.V.)	高压分接范围 High voltage tap range(%)	低压 (L.V.)	空载电流 No-load current (%)	负载损耗 Load loss (W)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
30	Dyn11 Yyn0	10 6.3 6	±5 ±2×2.5% 或 $^{-1}_{+3}$×2.5%	0.4	2.00	710	150	4.0
50					2.00	1000	215	
80					1.50	1380	295	
100					1.50	1570	320	
125					1.30	1850	375	
160					1.30	2130	430	
200					1.10	2530	495	
250					1.10	2760	575	
315					1.00	3470	705	
400					1.00	3990	785	
500					1.00	4880	930	
630					0.85	5880	1070	
630					0.85	5960	1040	6.0
800					0.85	6960	1210	
1000					0.85	8130	1410	
1250					0.85	9690	1670	
1600					0.85	11700	1960	
2000					0.70	14440	2440	
2500					0.70	17170	2880	

SC(B)12

Three-dimensional wound-core transformer



产品概述/Product Overview

SC（B）12型立体卷铁芯干式变压器，可作为油浸式配电变压器的更新换代产品，是各类干式变压器中性能最优的产品之一，特别适用于城市电网、高层建筑、商务中心、剧院、医院、宾馆、隧道、地铁、车站、码头、机场、地下电站、试验室、组合变电站等重要场所。

SC (B) 12 type Three—dimensional wound core dry—type transformer can be used as a replacement product for oil—immersed distribution transformers. It is one of the best—performing products among all types of dry—type transformers. It is especially suitable for urban power grids and high—rise buildings. , Business centers, theaters, hospitals, hotels, tunnels, subways, stations, docks, airports, underground power stations, test rooms, combined substations and other important places.

SC(B)12 wound core

型号含义/Model meaning

S C (B) 12 - R L □ / □

- 电压等级 Voltage level
- 额定容量RatedCapacity
- 三维立体 Three-dimensional
- 卷铁芯 Rolled iron core
- 性能水平代号Performancelevelcode
- 低压可采用箔式线圈Lowvoltagecanusefoilcoil
- 环氧树脂浇注型Epoxyresincastingtype
- 三相 Three phase

SC(B)12立体卷铁芯干式变压器

Three-dimensional wound core dry-type transformer

产品特点/ProducrFeatures

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

低噪声：立体卷铁芯干式变压器的噪声水平比叠铁芯干式变压器低5~10分贝。比现行专业标准JB/T10088-2016《6-220kV级变压器噪声》低15~20分贝以上，是十分理想的静音产品。

低局放：树脂混合材料采用国外先进的搅拌方法和真空薄膜脱气两种技术，使混合料搅拌均匀，彻底排除了混合料中间的气泡，高低压线圈均在真空压力下浇注，树脂绝缘具有全包封性，层匝间也有完全地浸透性。产品局部放电量控制在5PC以下。浇注体具有致密的固化结构，阻燃、防爆、不污染环境。

高机械强度：立体卷铁芯都采用正圆形的铁芯截面，抗短路能力比长圆截面好。带填料的树脂使浇注体内的膨胀系数差异小、固化收缩率小、内应力小、固化物的硬度高，在高低压线圈的内外表面环氧树脂包封层内放置有预制成型的加强材料，具有钢筋混凝土一样的致密结构，因而机械强度远大于纯环氧树脂，所以该产品能承受突发短路电动力而无损伤。

•Low loss: Because the three—dimensional wound core dry—type transformer has the characteristics of small jointless magnetic resistance, the magnetic circuit at the corners and the direction of the silicon steel sheet are consistent, the winding tightly packed coefficient is high, and the iron core is light in weight. Compared with the traditional laminated core dry—type transformer, the no—load loss Po can be reduced by 18%~28%. The no-load current Io drops by 50%~60%. The energy saving effect is remarkable, and the operation is economical.

•Low noise: The noise level of the three—dimensional wound core dry—type transformer is 5—10 decibels lower than that of the laminated core dry-type transformer. It is more than 15-20 decibels lower than the current professional standard JB/T10088-2016 "6-220kV transformer noise", which is a very ideal silent product.

•Low partial discharge: The resin mixture adopts foreign advanced mixing methods and vacuum film degassing technologies to make the mixture uniformly stirred and completely eliminate the bubbles in the mixture. The high and low pressure coils are cast under vacuum pressure. The resin insulation has Full encapsulation, there is also complete permeability between the layers. The partial discharge of the product is controlled below 5PC. The pouring body has a dense solidified structure, flame—retardant, explosion—proof, and does not pollute the environment.

High mechanical strength: The three—dimensional rolled iron core adopts a round core section, which has better short—circuit resistance than long round section. The resin with filler makes the expansion coefficient difference in the casting body small, the curing shrinkage rate is small, the internal stress is small, and the hardness of the cured product is high. Prefabricated reinforcing materials are placed in the epoxy resin encapsulation layer on the inner and outer surfaces of the high and low voltage coils. It has a dense structure like reinforced concrete, so the mechanical strength is much greater than pure epoxy resin, so the product can withstand sudden short—circuit electromotive force without damage.

SC(B)12 wound core / SC(B)13

技术参数 / Technical Parameters

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV) 高压 (H.V.)	高压分接范围 High voltage tap range(%)	低压 (L. V.)	空载电流 No-load current (%)	负载损耗 Load loss (W)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
250	Dyn11 Yyn0	10 6.3 6	±5 ±2×2.5%	0.4	1.10	2760	575	4.0
315					1.10	3470	705	
400					1.10	3990	785	
500					0.85	4880	930	
630					0.85	5960	1040	6.0
800					0.85	6960	1215	
1000					0.85	8130	1415	
1250					0.85	9690	1670	
1600					0.85	11730	1960	
2000					0.70	14450	2440	
2500					0.70	17170	2880	

SC(B)13

Transformer series



产品概述/Product Overview

SC（B）13型环氧树脂浇注干式变压器，可作为油浸式配电变压器的更新换代产品，是各类干式变压器中性能最优的产品之一，特别适用于城市电网、高层建筑、商务中心、剧院、医院、宾馆、隧道、地铁、车站、码头、机场、地下电站、试验室、组合变电站等重要场所。

SC (B) 13 type epoxy resin cast dry—type transformer can be used as a replacement product for oil—immersed distribution transformers. It is one of the best—performing products among all types of dry—type transformers. It is especially suitable for urban power grids and high-rise buildings. , Business centers, theaters, hospitals, hotels, tunnels, subways, stations, docks, airports, underground power stations, test rooms, combined substations and other important places.

型号含义 / Model meaning

S C (B) 13 - □ / □

- 电压等级 Voltage level
- 额定容量 Rated Capacity
- 性能水平代号Performancelevelcode
- 低压可采用箔式线圈Lowvoltagecanusefoilcoil
- 环氧树脂浇注型Epoxyresincastingtype
- 三相Threephase

SC(B)13环氧树脂浇注干式变压器

Epoxy resin cast dry-type transformer

产品特点/ProducrFeatures

低损耗：产品空载损耗比SCB10型产品降低30%以上，负载损耗比SCB11型产品降低10%以上，节能效果优异，运行经济，免维护。

低噪声：产品噪声水平比现行专业标准JB/T10088-2016《6-220kV级变压器声级》低10-15分贝以上。

低局放：树脂混合料采用国外先进的搅拌方法和真空薄膜脱气两种技术，使混合料搅拌均匀，彻底排除了混合料内的气泡。产品仅有极低的局部放电量，可控制在5PC以下。高、低压线圈均在真空和压力下浇注，使树脂绝缘既具有全包封性，又具有层匝间浸清性。浇注体具有致密的固化结构，阻燃、防爆、不污染环境。

缠绕线圈的玻璃纤维等绝缘材料具有自熄特性，不会因短路产生电弧，高热下树脂不会产生有毒有害气体。

高机械强度：带填料的树脂使浇注体内的膨胀系数差异小，固化收缩率小，内应力小，固化物的硬度高，在高、低压线圈的内外表面环氧树脂包封层内，放置有预制成型的加强材料，具有尤如钢筋混凝土一样的致密结构，因而机械强度还大于纯环氧树脂，能承受突发短路电动力作用而无损伤。

Low loss: The no-load loss of the product is more than 30% lower than that of the SCB11 product, and the load loss is more than 10% lower than that of the SCB10 product. The energy-saving effect is excellent, the operation is economical, and maintenance-free.

•Low noise: The noise level of the product is more than 10—15 decibels lower than the current professional standard JB/ T 10088-2016 "6—220kV transformer sound level".

•Low partial discharge: The resin mixture adopts foreign advanced mixing methods and vacuum film degassing technologies to make the mixture evenly stirred and completely eliminate air bubbles in the mixture. The product has only very low partial discharge, which can be controlled below 5PC. Both the high and low voltage coils are cast under vacuum and pressure, so that the resin insulation has both full encapsulation and inter—turn impregnation. The pouring body has a dense solidified structure, flame—retardant, explosion—proof, and does not pollute the environment.
Insulating materials such as glass fiber winding the coil have self—extinguishing characteristics, will not generate arc due to short circuit, and the resin will not generate toxic and harmful gases under high heat.

•High mechanical strength: The resin with filler makes the expansion coefficient difference in the casting body small, the curing shrinkage rate is small, the internal stress is small, and the hardness of the cured product is high. In the epoxy resin encapsulation layer of the inner and outer surfaces of the high and low voltage coils, there are The prefabricated reinforcing material has a dense structure like reinforced concrete, so the mechanical strength is greater than that of pure epoxy resin, and it can withstand the sudden short—circuit electromotive force without damage.

技术参数/Technical Parameters

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV) 高压 (H.V.)	高压分接范围 High voltage tap range(%)	低压 (L.V.)	空载电流 No-load current (%)	负载损耗 Load loss (W)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
30	Dyn11 Yyn0	10 6.3 6	±5 ±2×2.5% 或 $^{-1}_{+3}$ ×2.5%	0.4	2.00	640	135	4.0
50					2.00	900	195	
80					1.50	1240	265	
100					1.50	1410	290	
125					1.30	1660	340	
160					1.30	1910	385	
200					1.10	2270	445	
250					1.10	2480	515	
315					1.00	3120	635	
400					1.00	3590	705	
500					1.00	4390	835	
630					0.85	5290	965	
630					0.85	5360	935	6.0
800					0.85	6260	1090	
1000					0.85	7310	1270	
1250					0.85	8720	1500	
1600					0.85	10500	1760	
2000					0.70	13000	2190	
2500					0.70	15400	2590	

SCBH15/16

Transformer series



产品概述/Product Overview

本公司运用成熟技术开发设计的SCBH15，SGBH16型非晶合金干式变压器，性能优越，产品安全、可靠、环保，可深入负荷中心，适应高密度负荷的现代化大城市发展的需要。该产品大幅度降低了空载损耗、负载损耗，是当今世界最先进的干式变压器。
本产品具有阻燃、自熄、耐潮、抗潮、抗裂和免维护等优点，可广泛用于高层建筑、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。

The company uses SCBH15 and SGBH16 amorphous alloy dry—type transformers developed and designed with mature technology. It has superior performance, safe, reliable and environmentally friendly products. It can penetrate deep into the load center and meet the needs of the development of modern large cities with high density loads. This product greatly reduces the no—load loss and load loss, and is the most advanced dry—type transformer in the world.
This product has the advantages of flame retardant, sel—extinguishing, moisture resistance, crack resistance and maintenance—free. It can be widely used in high—rise buildings, commercial centers, subways, airports, railway stations, industrial and mining enterprises and power plants, especially suitable for flammable, Installation and use in places with high fire resistance requirements such as explosion.

SCBH15/16 10kV非晶合金干式变压器

10kV amorphous alloy dry type transformer

型号含义 / Model meaning

S C (B) H 15 - □ / □

- 电压等级 Voltage level
- 额定容量RatedCapacity
- 性能水平代号Performancelevelcode
- 非晶合金Amorphousalloy
- 低压可采用箔式线圈Lowvoltagecanusefoilcoil
- 环氧树脂浇注型Epoxyresincastingtype
- 三相 Three phase

产品特点/ProducrFeatures

本铁芯由非晶合金带材卷制而成，采用矩形截面，三相五柱结构或三相三柱结构，空载损耗比普通的干式变压器降低四分之三，节能效果显著。

低压线圈采用铜箔绕制，高压线圈采用环氧树脂经真空浇注而成或者选用Nomex绝缘材料，采用连续式结构，并经VPI真空加压设备多次浸渍H级无溶剂绝缘、高温烘焙固化，机械强度高，散热效果好，承受短路能力强。

阻燃、防爆、不污染、防火等级高。噪音低、体积小、安装简单、免维护。

局部放电量小、绝缘水平高、产品使用寿命长。

“三防”能力极佳，无龟裂现象。

本产品寿命期后能分解回收，永不污染环境。

过载能力强，120%负载下可长期安全运行。

The iron core is made of amorphous alloy strip, adopts rectangular cross section, three—phase five—column structure or three—phase three—column structure, and the no—load loss is reduced by three—quarters compared with the ordinary dry—type transformer, and the energy saving effect is remarkable.

The low—voltage coil is wound by copper foil, the high-voltage coil is made of epoxy resin by vacuum casting or Nomex insulating material is used, and the continuous structure is used, and the H—class solvent-free insulation and high—temperature baking curing are repeatedly impregnated by VPI vacuum pressure equipment. High mechanical strength, good heat dissipation and strong short-circuit capability.

•Flame retardant, explosion—proof, non—polluting, high fire rating.

•Low noise, small size, simple installation and maintenance—free.

•Small partial discharge, high insulation level and long product life.

The "three-proof" ability is excellent and there is no cracking.

• This product can be decomposed and recycled after the life of the product, and will never pollute the environment.

•Strong overload capability, long-term safe operation under 120% load.

技术参数/Technical Parameters

SCBH15非晶合金干式变压器技术参数/SCBH15amorphousalloydrytypetransformertechnicalparameters

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV) 高压 (H. V.)	高压分接范围 High voltage tap range(%)	低压 (L.V.)	空载电流 No-load current (%)	不同的绝缘耐热等级下的负载损耗（W） Load loss at different insulation heat ratings B (100°C)	F (120°C)	H (145°C)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
30	Dyn11	6 6.3 6.6 10 10.5 11	±5 ±2×2.5	0.4	1.6	670	710	760	70	4.0
50					1.4	940	1000	1070	90	
80					1.3	1290	1380	1480	120	
100					1.2	1480	1570	1690	130	
125					1.1	1740	1850	1980	150	
160					1.1	2000	2130	2280	170	
200					1.0	2370	2530	2710	200	
250					1.0	2590	2760	2960	230	
315					0.9	3270	3470	3730	280	
400					0.8	3750	3990	4280	310	
500					0.8	4590	4880	5230	360	
630					0.7	5530	5880	6290	420	

SCBH15/16 10kV非晶合金干式变压器

10kV amorphous alloy dry type transformer

技术参数 / Technical Parameters

SCBH15非晶合金干式变压器技术参数/SCBH15amorphousalloydrytypetransformertechnicalparameters

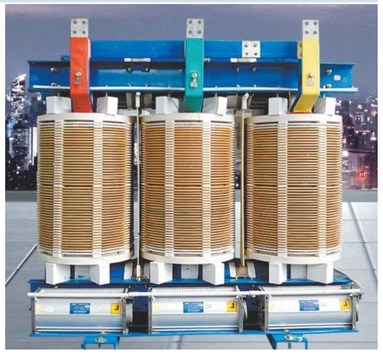
额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV) 高压 (H.V.)	高压分接范围 High voltage tap range(%)	低压 (L.V.)	空载电流 No-load current (%)	不同的绝缘耐热等级下的负载损耗（W） Load loss at different insulation heat ratings B (100°C)	F (120°C)	H (145°C)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
630	Dyn11	6 6.3 6.6 10 10.5 11	±5 ±2×2.5	0.4	0.7	5610	5960	6400	410	6.0
800					0.7	6550	6960	7460	480	
1000					0.6	7650	8130	8760	550	
1250					0.6	9100	9690	10370	650	
1600					0.6	11050	11730	12580	760	
2000					0.5	13600	14450	15560	1000	
2500					0.5	16150	17170	18450	1200	
1600					0.6	12280	12960	13900	760	8.0
2000					0.5	15020	15960	17110	1000	
2500					0.5	17760	18890	20290	1200	

SCBH16非晶合金干式变压器技术参数/SCBH16amorphousalloydrytypetransformertechnicalparameters

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV) 高压 (H.V.)	高压分接范围 High voltage tap range(%)	低压 (L.V.)	空载电流 No-load current (%)	不同的绝缘耐热等级下的负载损耗（W） Load loss at different insulation heat ratings B (100°C)	F (120°C)	H (145°C)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
30	Dyn11	6 6.3 6.6 10 10.5 11	±5 ±2×2.5	0.4	1.6	635	675	720	70	4.0
50					1.4	895	950	1015	90	
80					1.3	1225	1310	1405	120	
100					1.2	1405	1490	1605	130	
125					1.1	1655	1760	1880	150	
160					1.1	1900	2025	2165	170	
200					1.0	2250	2405	2575	200	
250					1.0	2460	2620	2810	230	
315					0.9	3105	3295	3545	280	
400					0.8	3560	3790	4065	310	
500					0.8	4360	4635	4970	360	
630					0.7	5255	5585	5975	420	
630					0.7	5330	5660	6080	410	6.0
800					0.7	6220	6615	7085	480	
1000					0.6	7265	7725	8320	550	
1250					0.6	8645	9205	9850	650	
1600					0.6	15340	11145	11950	760	
2000					0.5	12920	13725	14780	1000	
2500					0.5	15340	16310	17525	1200	
1600					0.6	11660	12310	13200	760	8.0
2000					0.5	14270	15160	16250	1000	
2500					0.5	16870	17940	19270	1200	

SG(B)10

Transformer series



产品概述/Product Overview

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

The non—encapsulated coil three—phase dry power transformer produced by the US UL approved NOMEX insulation system has the advantages of safety, reliability, energy saving, fire prevention, explosion protection, and simple maintenance. Its advanced design, reasonable structure, beautiful appearance, and main performance indicators are better than domestic standards, such as: partial discharge level, no—load loss, load loss, noise, and can be used in a high—humidity environment. It can be installed near lakes, seas, and seas. The dirty and humid environment by the river and the areas with high fire protection requirements and heavy load are suitable for high—rise buildings, airports, stations, wharfs, subways, hospitals, power plants, metallurgical industries, shopping centers, densely populated areas, petrochemicals, nuclear power plants, and nuclear submarines. And other places.

SG(B)10 非包封干式变压器
Non-encapsulated dry-type transformer

型号含义 / Model meaning

S G (B) 10 - □ / □

- 电压等级 Voltage level
- 额定容量RatedCapacity
- 性能水平代号 Performance level code
- 低压箔式绕组 Low voltage foil winding
- 干式、空气自冷Dry、Aircooling
- 三相Threephase

产品特点/Features

精心设计的线圈结构及真空浸渍处理工艺使SG（B）10变压器无局部放电产生，并且在整个寿命期内，无任何龟裂现象，无绝缘水平下降现象。

高压采用连续式绕组、低压箔绕，整体真空浸渍及固化处理并采用高强度陶瓷支撑，有很好的突发短路电流的承受能力。

难燃、阻燃、无毒、自熄、防火。

变压器为H级（180℃）绝缘。

绝缘层极薄且均匀。短时过负荷能力极强，无需强制冷却，可120%长期过负荷、140%过负荷3小时。由于这种绝缘材料不老化且有弹性，因此在±50℃条件下可立即加满载。

The well-designed coil structure and vacuum impregnation treatment process make the SG(B)10 transformer no partial discharge, and there is no cracking phenomenon and no insulation level drop during the whole life.

- The high voltage adopts continuous winding, low voltage foil winding, the whole vacuum impregnation and curing treatment and adopts high—strength ceramic support, which has a good ability to withstand sudden short—circuit current.
- Flame—retardant, flame—retardant, non—toxic, self—extinguishing, and fireproof.

The transformer is H-class (180° C) insulation.

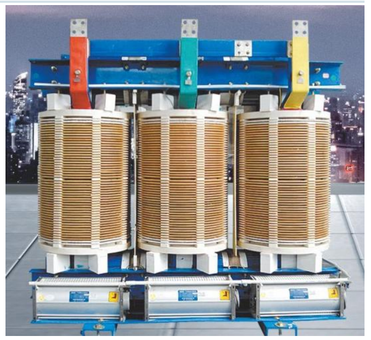
- The insulating layer is extremely thin and uniform. The short—term overload capacity is extremely strong, without forced cooling, 120% long—term overload, 140% overload for 3 hours. Since this insulating material is not aging and elastic, it can be fully loaded immediately at ±50°C.

技术参数 / Technical Parameters

额定容量 Rated Capacity (KVA)	空载损耗 No-load loss (W)	不同绝缘耐热等级下的负载损耗 Load loss under diferent insulation and heat resistance grades (W)			短路阻抗 Short circuit impedance (%)
		B(100°C)	F (120°C)	H (145°C)	
250	720	2590	2760	2960	4.0
315	880	3270	3470	3730	
400	980	3750	3990	4280	
500	1160	4590	4880	5230	
630	1340	5530	5880	6290	
630	1300	5610	5960	6400	6.0
800	1520	6550	6960	7460	
1000	1770	7650	8130	8760	
1250	2090	9100	9690	10370	
1600	2450	11000	11700	12500	
2000	3050	13600	14400	15500	
2500	3600	16100	17100	18400	
1600	2450	12200	12900	13900	
2000	3050	15000	15900	17100	8.0
2500	3600	17700	18800	20200	

SG(Z)(B)11

Transformer series



SG(Z)(B)11

产品概述/Product Overview

非包封H级三相干式电力变压器，具有安全、可靠、节能、防火、防爆、不产生有害气体、不污染环境、维护简单等优点。其设计先进、结构合理、外形美观。主要性能指标均优于国内标准，在整个使用寿命期间都保持极佳的电气性能和机械性能。最适用于防火要求高、负荷波动较大以及污秽潮湿的环境中，如高层建筑、机场、车站、码头、地铁、医院、电厂、冶金行业、购物中心、居民密集区以及石油化工、核电站、核潜艇等场所。

Non—encapsulated H—class three—phase dry—type power transformer has the advantages of safety, reliability, energy saving, fire prevention, explosion-proof, no harmful gas, no pollution to the environment, and simple maintenance. Its advanced design, reasonable structure and. beautiful apearance. The main performance indicators are superior to domestic standards and maintain excellent electrical and mechanical performance throughout the life of the product, It is most suitable for environments with high fire protection requirements, high load fluctuations.
and dirty and humid environments, such as high—rise buildings, airports, stations, terminals, subways, hospitals, power plants, metallurgical industries, shopping centers, residential areas, and petrochemicals, nuclear power plants, and nuclear submarines. And other places.

SG(Z)(B)11 10kV非包封H级干式电力变压器
10kV non-encapsulated H-class dry power transformer

型号含义 / Model meaning

S G (Z) (B) 11 - □ / □

- 电压等级 Voltage level
- 额定容量RatedCapacity
- 性能水平代号 Performance level code
- 低压箔式绕组 Low voltage foil winding
- 有载调压 On-load voltage regulation
- 干式Dry
- 三相 Three phase

产品特点/Features

高低压线圈选用Nomex绝缘材料，并经VPI真空加压设备多次浸渍国际先进无剂清漆，外用高强度H级绝缘材料密封，并高温固化，保证运行条件下无局部放电产生。

高压线圈采用机械强度高，散热条件好（高低压线圈均采用了可在200℃以上长期使用Nomex绝缘材料）的连续结构，避免了多层圆筒式线圈层间电压高、散热能力差、容易热击穿以及机械强度低的缺点，从而提高产品运行的可靠性。

- High and low voltage coils are made of Nomex insulation material, and are impregnated with international advanced agent-free varnish by VPI vacuum pressure equipment. The external high-strength H-grade insulation material is sealed and cured at high temperature to ensure no partial discharge under operating conditions.
- High—voltage coils have high mechanical strength and good heat dissipation conditions (high and low voltage coils use a continuous structure of Nomex insulation materials that can be used for more than 200°C for a long time), which avoids high voltage between layers of multi—layer cylindrical coils and poor heat dissipation. It has the disadvantages of easy thermal breakdown and low mechanical strength, thus improving the reliability of product operation.

SG(Z)(B)11 / SM-NX1

技术参数 / Technical Parameters

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV)	空载电流 No-load current (%)	负载损耗 Load loss (W)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
30	Yyn0 Dyn11	6~10±2×2.5%/0.4	2.4	760	170	4.0
50			2.4	1070	240	
80			1.8	1480	330	
100			1.8	1690	360	
125			1.6	1980	420	
160			1.6	2280	480	
200			1.4	2710	550	
250			1.4	2960	640	
315			1.2	3730	790	
400			1.2	4280	880	
500			1.2	5230	1040	
630			1.0	6290	1200	
630			1.0	6400	1170	6.0
800			1.0	7460	1360	
1000			1.0	8760	1590	
1250			1.0	10370	1880	
1600			1.0	12580	2200	
2000			0.8	15560	2740	
2500			0.8	18450	3240	
1600			0.1	13900	2200	8.0
2000			0.8	17110	2740	
2500			0.8	20290	3240	

SM-NX1

Transformer series



产品概述/Product Overview

节能型产品能效一级油浸式变压器是我公司通过新材料、新工艺的研究运用及自主创新与技术引进结合的方式，通过对铁芯及线圈结构的优化创新设计，达到降低空载损耗及噪音的目的，自主开发的产品。
噪声水平与现行国标JB/T10088-2004比较平均下降20%，产品性能水平达到国内先进水平。

Energy—saving product energy—efficient first—class oil—immersed transformer is our company through the research and application of new materials, new technology and the combination of independent innovation and technology introduction, through the optimization and innovative design of the core and coil structure, to reduce no—load loss and noise The purpose of self—developed products.
Compared with the current national standard JB/ T 10088—2004, the noise level has dropped by an average of 20%, and the product performance level has reached the domestic advanced level.

SM-NX1 能效一级油浸式变压器
Energy efficiency class 1 oil-immersed transformer

型号含义 / Model meaning

S - M - □ / □ - NX1

- 能效等级Energyefficiencyrating
- 电压等级 Voltage level
- 额定容量RatedCapacity
- 全密封 Fully sealed
- 三相Threephase

技术参数/Technical Parameters

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV)			空载电流 No-load current (%)	负载损耗 Load loss(W)		空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
		高压 High voltage	分接范围 Tap range	高压 Low voltage		Dy	Yy		
30	Yyn0 Dyn11	10 6.3 6	±5% ±2×2.5%	0.4	1.5	505	480	80	4.0
50					1.3	730	695	100	
63					1.2	870	830	110	
80					1.2	1050	1000	130	
100					1.1	1265	1200	150	
125					1.1	1510	1440	170	
160					1.0	1850	1760	200	
200					1.0	2185	2080	240	
250					0.9	2560	2440	290	
315					0.9	3065	2920	340	
400					0.8	3615	3440	410	
500					0.8	4330	4120	480	
630					0.6	4960	4960	570	4.5
800					0.6	6000	6000	700	
1000					0.6	8240	8240	830	
1250					0.5	9600	9600	970	
1600					0.5	11600	11600	1170	

SM-NX2

Transformer series



产品概述/Product Overview

节能型产品能效二级油浸式变压器是我公司通过新材料、新工艺的研究运用及自主创新与技术引进结合的方式，通过对铁芯及线圈结构的优化创新设计，达到降低空载损耗及噪音的目的，自主开发的产品。
噪声水平与现行国标JB/T10088-2004比较平均下降20%，产品性能水平达到国内先进水平。

Energy—saving product energy—efficient secondary—class oil—immersed transformer is our company through the research and application of new materials, new technology and the combination of independent innovation and technology introduction, through the optimization and innovative design of the core and coil structure, to reduce no—load loss and noise The purpose of self—developed products.
Compared with the current national standard JB/ T 10088—2004, the noise level has dropped by an average of 20%, and the product performance level has reached the domestic advanced level.

SM-NX2 能效二级油浸式变压器
Energy efficiency class 2 oil-immersed transformer

型号含义 / Model meaning

S - M - □ / □ - NX2

- 能效等级Energyefficiencyrating
- 电压等级 Voltage level
- 额定容量RatedCapacity
- 全密封 Fully sealed
- 三相Threephase

技术参数/Technical Parameters

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV)			空载电流 No-load current (%)	负载损耗 Load loss(W)		空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
		高压 High voltage	分接范围 Tap range	高压 Low voltage		Dy	Yy		
30	Yyn0 Dyn11	10 6.3 6	±5% ±2×2.5%	0.4	1.5	630	600	80	4.0
50					1.3	910	870	100	
63					1.2	1090	1040	110	
80					1.2	1310	1250	130	
100					1.1	1580	1500	150	
125					1.1	1890	1800	170	
160					1.0	2310	2200	200	
200					1.0	2730	2600	240	
250					0.9	3200	3050	290	
315					0.9	3830	3650	340	
400					0.8	4520	4300	410	
500					0.8	5410	5150	480	
630					0.6	6200	6200	570	
800					0.6	7500	7500	700	
1000					0.6	10300	10300	830	4.5
1250					0.5	12000	12000	970	
1600					0.5	14500	14500	1170	

S11/13

Transformer series



产品概述/Product Overview

S11，S13系列型全密封油浸式变压器适用于交流50Hz、额定工作电压20kV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, S13 series full-sealed oil-immersed transformers are suitable for power systems with AC 50Hz and rated working voltages of 2okV and below, as distribution transformers for petroleum, metallurgy, chemical, textile, light industry and other dusty places.

型号含义/Model meaning

S 11 - M □ / □

- 高压侧电压等级Highvoltagesidevoltagelevel
- 容量Capacity（KVA）
- 全密封Fullysealed
- 设计序号DesignNumber
- 三相Threephase

S11/13 20kV 油浸式配电变压器

20kV oil-immersed distribution transformer

产品特点/Features

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：高压统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±10mm

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；

Iron core

The core is made of high permeability magnetic grain oriented cold rolled silicon steel sheet. The iron core is a new type of iron core, and the full oblique jointed iron core has a core section of a multi—stepped step, and the iron yoke and the iron core have equal sections.

•Winding

The winding adopts corrugated oil passage, no immersion paint process, and the tightening belt is tied; the windings are concentric coils: the high—voltage winding has taps corresponding to the tapping voltage requirements, and is led to the tap changer, the switch is mounted on the box cover, and needs to be cut off. The tap voltage can be changed after the power supply.

•Safety protection device

The 30—2000kVA transformer is equipped with a pressure relief valve;

A gas relay with an alarm and trip terminal can be installed according to user requirements;

•Oil temperature measuring device

The transformer is equipped with a tube holder of a glass thermometer, and the tube seat is arranged at the top of the oil tank and protrudes into the oil by 120 ± 10 mm;

The 1000-2000kVA transformer is equipped with an outdoor signal thermometer;

• Transformer tank

The transformer tank is composed of corrugated walls with dust on the surface Spray and paint film is firm. The corrugated fins not only have a cooling function, but also have a "breathing"function. The elasticity of the corrugated fins can compensate for the change in the volume of the transformer oil caused by the temperature rise and fall. Therefore, the fully sealed transformer has no oil storage cabinet, which reduces the overall height of the transformer

The transformer is vacuum—filled during packaging, completely removing the moisture in the transformer, and the transformer oil is not in contact with the air. Effectively prevent oxygen and moisture from intruding into the transformer, resulting in a decrease in the insulation performance of the transformer and the possibility of aging of the transformer oil, so the oil sample test is performed irregularly;

S11/13 20kV油浸式配电变压器

20kV oil-immersed distribution transformer

技术参数 / Technical Parameters

S11-M型20kV油浸式配电变压器 Oil immersed distribution transformer

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV) 高压 (H.V.)	高压分接范围 High voltage tap range(%)	低压 (L.V.)	空载电流 No-load current (%)	负载损耗 Load loss (W)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
30	Dyn11 Yyn0	6 6.3 6.6 10 10.5 11	±5 ± 2 × 2.5%	0.4 0.69	2.3	630/600	100	4.0
50					2.0	910/870	130	
63					1.9	1090/1040	150	
80					1.9	1310/1250	180	
100					1.8	1580/1500	200	
125					1.7	1890/1800	240	
160					1.6	2310/2200	280	
200					1.5	2730/2600	340	
250					1.4	3200/3050	400	
315					1.4	3830/3650	480	
400					1.3	4520/4300	570	
500					1.2	5410/5150	680	
630					1.1	6200	810	4.5
800					1.0	7500	960	
1000					1.0	10300	1150	
1250					0.9	12000	1360	
1600					0.8	14500	1640	
2000					0.8	19800	1960	5.0
2500					0.7	23000	2310	

S13-M型20kV油浸式配电变压器 Oil immersed distribution transformer

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV) 高压 (H.V.)	高压分接范围 High voltage tap range(%)	低压 (L.V.)	空载电流 No-load current (%)	负载损耗 Load loss (W)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
50	Dyn11 Yyn0	20 22 24	±5 ±2×2.5%	0.4	2.0	1270/1210	170	6.5
100					1.8	2120/2020	230	
125					1.7	2500/2380	270	
160					1.6	2970/2830	290	
200					1.5	3500/3330	340	
250					1.4	4160/3960	410	
315					1.4	5010/4770	490	
400					1.3	6050/5760	580	
500					1.2	7280/6930	690	
630					1.1	8280	830	
800					1.0	9900	980	
1000					1.0	12150	1150	
1250					0.9	14670	1410	
1600					0.8	17550	1700	

35 kV oil-immersed transformers

Transformer series



产品概述/Product Overview

该系列产品在设计上比较先进，在材料、结构和工艺上进行了大幅度的改进和提高。高低压夹件采用钢拉带或上梁及侧梁拉紧，形成坚固的框架结构，增强铁芯夹紧力和耐受运输冲击能力。抗短路能力强，外观选型美观，运行可靠，损耗低，噪音小，达到国外同类产品先进水平。

This series of products is relatively advanced in design,and has been greatly improved with enhanced materials, structures and processes. The high and low pressure clamps are tensioned by steel straps or upper beams and side beams to form a strong frame structure that enhances the core clamping force and the abililty to withstand transport shocks. It has strong anti-short circuit capability, beautiful appearance selection, reliable operation, low loss and low noise, reaching the advanced level of similar foreign products.

型号含义 / Model meaning

S □ □ □ - □ / □

- 电压等级 Voltage level
- 额定容量Ratedcapacity（KVA）
- 性能水平代号Performancelevelcode
- 无励磁调压无代号Non-excitationvoltageregulationwithoutcode
  "Z"为有载调压 "Z" is on-load voltage regulation
- "F"为风冷自冷无代号"F"isair-cooled，self-cooling，nocode
- 三相Threephase

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

执行标准/Executivestandard

GB1094.1-2《电力变压器总则》《油浸式变压器的温长》
GB1094.3《绝缘水平、绝缘试验和外绝缘空气间隙》
GB1094.5《电力变压器承受短路的能力》
GB/T6451《油浸式电力变压器技术参数和要求》
GB/T15164《油浸式电力变压器负载导则》
GB2536《变压器油》

GB 1094.1-2 "General Rules for Power Transformers" The Temperature of Oil-immersed Transformers"
GB 1094.3 "Insulation level, insulation test and external insulation air gap"
GB 1094.5 "The ability of power transformers to withstand short circuits"
GBIT 6451 "Technical parameters and requirements for oil—immersed power transformers"
GB/T 15164 "Guidelines for Oil—immersed Power Transformers"
GB2536 "Transformer Oil"

35 kV oil-immersed transformers

技术参数/Technical Parameters

S11型35kV油浸式电力变压器（50kVA-1600KVA三相双绕组无励磁调压配电变压器）
S11 35kV oil immersed power transformer (50kVA-1600kVA three-phase double winding non-excitation voltage regulating distribution transformer)

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

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。
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.For transformers with rated capacity of 500KVA and below, the load loss value above the diagonal line in the table is applicable to the Dyn11 connection group，and the load loss value below the diagonal line is applicable to the YynO connection group.
2 .according to user needs, can provide high voltage tapping range of ± 2 x 2.5%of the transformer.

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

35 kV oil-immersed transformers

技术参数 / Technical Parameters

S11型35kV油浸式电力变压器（630kVA-31500kVA三相双绕线组无励磁调压电力变压器）
S11 35kV oil immersed power transformer (630kVA-31500kVA three-phase double winding group non-excitation voltage regulating power transformer)

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV) 高压 (H. V.)	高压分接范围 High voltage tap range(%)	低压 (L.V.)	空载电流 No-load current (%)	负载损耗 Load loss (W)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
8000	Yd11	35 ~ 38.5	±2×2.5%	3.15 3.3 6.3 6.6 1.05 11	0.42	38480	7200	7.5
10000					0.42	45320	8700	
12500					0.40	53870	10800	8.0
16000					0.40	65840	12160	
20000					0.40	79520	14400	
25000					0.32	94050	17020	
31500					0.32	112860	20200	

注1:外形尺寸根据用户具体需要进行设计.Note 1: The external dimensions are designed according to the specific needs of the user.

SZ11型35kV有载调压油浸式电力变压器（2000kVA-20000KVA有载调压电力变压器）
SZ11 35kV on-load tap change oil immersed power transformer (2000kVA-20000kVA on-load tap change power transformer)

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV) 高压 (H.V.)	高压分接范围 High voltage tap range(%)	低压 (L. V.)	空载电流 No-load current (%)	负载损耗 Load loss (W)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
2000	Yd11	35	±3×2.5%	6.3 10.5	0.80	19240	2300	6.5
2500					0.80	20640	2720	
3150		35 ~ 38.5	±3×2.5%	6.3 10.5	0.72	24710	3230	7.0
4000					0.72	29160	3870	
5000					0.68	34200	4640	
6300					0.68	36770	5630	7.5
8000	Ynd11				0.60	40610	7870	
10000					0.60	48050	9280	8.0
12500		35 ~ 38.5	±3×2.5%	6.3 6.6 10.5 11	0.56	56860	10940	
16000					0.54	70320	13170	
20000					0.54	82780	15570	

SBH15-M

Transformer series



产品概述/Product Overview

执行标准Executivestandard

变压器可把电网电压变换成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络中理想的配电设备。

The transformer can convert the grid voltage into the voltage required by the system or load to realize the transmission and distribution of electric energy. This transformer can be used in outdoor power distribution systems instead of silicon steel core transformers. The large amount of network access of this product can achieve good energy saving effect and reduce pollution to the atmosphere. This product is especially suitable for areas where there is insufficient power and load fluctuations and where daily maintenance is difficult. Because the transformer adopts a fully sealed structure, the insulating oil and the insulating medium are not polluted by the atmosphere, so it can operate in a humid environment. It is an ideal power distribution equipment in urban and rural distribution networks.

SBH15-M 10kV.20kV油浸式非晶合金变压器

10kV, 20kV oil-immersed amorphous alloy transformer

型号含义 / Model meaning

S B H 15 - M - □ / □

- 电压等级 Voltage level (kV)
- 额定容量RatedCapacity
- 密封式Sealed
- 性能水平代号 Performance level code
- 非晶合金铁芯Amorphousalloycore
- 铜箔低压线圈 Copper foil low voltage coil
- 三相Threephase

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 products, the no—load loss is reduced by about 75% compared with the S9 type transformer;
Low loss, low heat generation, low temperature rise, stable operation;
Advanced and reasonable structure, strong resistance to short circuit:
High overload capacity, safe and reliable, strong corrosion resistance and maintenance—free.

技术参数 / Technical Parameters

S11型35kV油浸式电力变压器（50kVA-1600KVA三相双绕组无励磁调压配电变压器）
S11 35kV oil immersed power transformer (50kVA-1600kVA three-phase double winding non-excitation voltage regulating distribution transformer)

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

注：当铁芯为三相三柱时，根据需要也可需采用Yy110联结组。

Note: When the iron core is a three-phase three-column, the Yy110 coupling group can also be used as needed.

S11-M

Transformer series



产品概述/Product Overview

本公司研发生产的S11-M系列全密封油浸式电力变压器具有低损耗、低噪声、高效率的优点，可取得良好的节能效果并减少污染。

全密封式变压器与普通油浸式变压器相比，取消了储油柜，油体积的变化由波纹油箱的波纹片的弹性来自动调节补偿，变压器与空气隔绝，防止和减缓油的劣化和绝缘老化，增强运行可靠性，正常运行免维护。

The S 1 1 —M series fully sealed oil—immersed power transformer developed and produced by our company has the advantages of low loss, low noise, and high efficiency, which can achieve good energy—saving effects and reduce pollution.

Compared with ordinary oil—immersed transformers, fully sealed transformers eliminate the oil conservator. The change of oil volume is automatically adjusted and compensated by the elasticity of the corrugated sheet of the corrugated oil tank. The transformer is isolated from the air to prevent and slow down the deterioration of the oil and the aging of the insulation. , Enhance the reliability of operation, and the normal operation is maintenance—free.

S11-M 10kV油浸式配电变压器
10kV oil-immersed distribution transformer

型号含义 / Model meaning

S 11 - M - □ / □

- 电压等级 Voltage level (kV)
- 额定容量RatedCapacity（kVA）
- 密封式Sealed
- 性能水平代号Performancelevelcode
- 三相 Three phase

使用条件/Conditions of Use

环境温度：不高于+40C，不低于-25C；
空气相对湿度：月平均值不大于90%；
海拔高度：不超过1000米；
无火灾、爆炸、严重污秽、化学腐蚀以及剧烈震动的场所。

•Ambient temperature: no higher than +40C , not lower than —25C;
•Relative humidity of air: the monthly average is not more than 90%;
•Altitude: no more than 1000 meters;
•Locations free from fire, explosion, severe contamination, chemical corrosion and severe vibration.

产品特点/Features

变压器铁芯采用进口优质冷轧硅钢片叠积而成，大大降低空载损耗和空载电流，并对铁芯进行绑扎，保证铁芯的紧实度，降低噪音。

高低压绕组用无氧铜绕制，低压绕组500kVA及以下采用双层圆筒式结构。630kVA及以上采用箔式线圈，高压绕组采用多层圆筒式结构。

变压器联接组采用Dyn11，减少谐波对电网的影响，改善供电质量。

变压器为全密封结构，延长使用寿命，免掉芯，免维修。

实测噪音值低于标准。

• The transformer core is made of imported high—quality cold—rolled silicon steel sheets, which greatly reduces the no—load loss and no—load current. The core is tied to ensure the tightness of the core and reduce noise.

The high and low voltage windings are made of oxygen-free copper, and the low voltage windings of 500kVA and below adopt a double-layer cylindrical structure. 630kVA and above adopt foil coil, high voltage winding adopts multilayer cylindrical structure.

The transformer connection group adopts Dyn11 to reduce the impact of harmonics on the power grid and improve the quality of power supply.

• The transformer is a fully sealed structure, which prolongs the service life, avoids core loss and maintenance.
• The measured noise value is lower than the standard.

S11-M 10kV 油浸式配电变压器
10kV oil-immersed distribution transformer

执行标准/Executivestandard

GB1094.1《电力变压器总则》
GB1094.3《绝缘水平、绝缘试验和外绝缘空气间隙》
GB1094.5《电力变压器承受短路的能力》
GB/T6451《三相油浸式电力变压器技术参数和要求》
GB/T15164《油浸式电力变压器负载导则》
JB/T3837《变压器类产品型号编制方法》
JB/T501《电力变压器试验导则》
GB2536《变压器油》

GB 1094.1 "General Rules for Power Transformers"
GB 1094.3 "Insulation level, insulation test and external insulation air gap"
GB 1094.5 "The ability of power transformers to withstand short circuits"
GBIT 6451 "Three-phase Technical parameters and requirements for oil-immersed power transformers"
GB/T 15164 "Guidelines for Oil—immersed Power Transformers"
JB/ T 3837 "Model compilation method for transformer products"
JB/ T 501 "Test Guidelines for Power Transformers"
GB2536 "Transformer Oil"

技术参数/Technical Parameters

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV) 高压 (H.V.)	高压分接范围 High voltage tap range(%)	低压 (L.V.)	空载电流 No-load current (%)	负载损耗 Load loss (W)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
30	Dyn11 Yyn0	6 6.3 10 10.5 11	±5 ±2×2.5%	0.4	1.50	630/600	100	4.0
50					1.30	910/870	130	
63					1.20	1090/1040	150	
80					1.20	1310/1250	180	
100					1.10	1580/1500	200	
125					1.10	1890/1800	240	
160					1.00	2310/2200	280	
200					1.00	2730/2600	340	
250					0.90	3200/3050	400	
315					0.90	3830/3650	480	
400					0.80	4520/4300	570	
500					0.80	5410/5150	680	
630					0.60	6200	810	4.5
800					0.60	7500	980	
1000					0.60	10300	1150	
1250					0.50	12000	1360	
1600					0.50	14500	1640	
2000					0.40	18300	1940	5.0
2500					0.40	21200	2290	

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。
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.For transformers with rated capacity of 500KVA and below, the load loss value above the diagonal line in the table is applicable to the Dyn11 connection group，and the load loss value below the diagonal line is applicable to the YynO connection group.
2 . according to user needs, can provide high voltage tapping range of ± 2 x 2.5%of the transformer.

S13-M
Transformer series



产品概述/Product Overview

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

The S13 type is based on the original S11 distribution transformer. Through the research and application of new materials and new processes, and the combination of independent innovation and technology introduction, through the optimization and innovative design of the core and coil structure, it can reduce the no—load loass and noise(the goal of independently developed products).
Compared with the current national standard JB/ T 10088—2004, the noise level has dropped by an average of 20%, and the product performance level has reached the domestic advanced level.

S13-M 10kV油浸式配电变压器
10kV oil-immersed distribution transformer

型号含义 / Model meaning

S 13 - M - □ / □

- 电压等级 Voltage level (kV)
- 额定容量RatedCapacity（kVA）
- 密封式Sealed
- 性能水平代号Performancelevelcode
- 三相 Three phase

使用条件/Conditions of Use

环境温度：不高于+40C，不低于-25C；
空气相对湿度：月平均值不大于90%；
海拔高度：不超过1000米；
无火灾、爆炸、严重污秽、化学腐蚀以及剧烈震动的场所。

•Ambient temperature: no higher than +40C , not lower than —25C;
•Relative humidity of air: the monthly average is not more than 90%;
•Altitude: no more than 1000 meters;
•Locations free from fire, explosion, severe contamination, chemical corrosion and severe vibration.

S13-M

技术参数/Technical Parameters

额定容量 Rated Capacity (KVA)	联结组标号 Junction group label	电压组合 Voltage combination (KV) 高压 (H.V.)	高压分接范围 High voltage tap range(%)	低压 (L. V.)	空载电流 No-load current (%)	负载损耗 Load loss (W)	空载损耗 No-load loss (W)	短路阻抗 Short circuit impedance (%)
30	Dyn11 Yyn0	6 6.3 10 10.5 11	±5 ±2×2.5%	0.4	1.50	630/600	100	4.0
50					1.30	910/870	130	
63					1.20	1090/1040	150	
80					1.20	1310/1250	180	
100					1.10	1580/1500	200	
125					1.10	1890/1800	240	
160					1.00	2310/2200	280	
200					1.00	2730/2600	340	
250					0.90	3200/3050	400	
315					0.90	3830/3650	480	
400					0.80	4520/4300	570	
500					0.80	5410/5150	680	
630					0.60	6200	810	
800					0.60	7500	980	
1000					0.60	10300	1150	4.5
1250					0.50	12000	1360	
1600					0.50	14500	1640	
2000					0.40	18300	1940	5.0
2500					0.40	21200	2290	

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。

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.For transformers with rated capacity of 500KVA and below, the load loss value above the diagonal line in the table is applicable to the Dyn11 connection group，and the load loss value below the diagonal line is applicable to the YynO connection group.

2.according to user needs, can provide high voltage tapping range of ± 2 x 2.5%of the transformer.

MINGKONG

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