



互邦电力
HU BANG
ELECTRIC POWER

互依诚信 HONEST AND TRUSTWORTHY,
邦耀双赢 ACHIEVE A WIN-WIN SITUATION

产品手册
Product manual

江苏北辰互邦电力股份有限公司
Jiangsu Beichen Hubang Electric Power Co., Ltd.



互依诚信 • 邦耀双赢

HONEST AND TRUSTWORTHY • ACHIEVE A WIN-WIN SITUATION

企业简介 Company Profile

江苏北辰互邦电力股份有限公司坐落于江苏海安，临近上海交通便捷，是专业生产电力变压器的民营企业。

企业主要生产电压等级35kV及以下，容量31500kVA及以下的环氧树脂干式变压器、油浸式系列电力变压器、欧式箱变、美式箱变、管廊式变压器、地下式变压器、地埋景观式箱变、新能源风力光伏箱变、直流充电桩、变压器硅钢片、变压器铁芯、变压器油箱等产品。

企业已在新三板上市，股票代码：839335；企业占地面积39000m²，其中建筑面积20000m²，注册资金11776.8万元，总资产达8000万元，年产值达25000万元；企业通过了ISO体系认证，合理化应用企业先进的工艺设备、雄厚的技术力量来完善质保体系，确保了产品的优良品质。

江苏北辰互邦电力股份有限公司本着“互依诚信，邦耀双赢”的宗旨诚与天下客户共谋发展，共创佳绩。

Jiangsu Beichen Hubang Electric Power Co., Ltd. is located in Haian, Jiangsu Province, adjacent to Shanghai, with convenient transportation. It is a private enterprise specialized in power transformer production.

Enterprises mainly produce epoxy resin dry-type transformer, oil-immersed series power transformer, European box transformer, American box transformer, pipe gallery transformer, underground transformer, buried landscape box transformer, new energy wind photovoltaic box transformer, DC charging pile, silicon steel sheet of transformer, transformer core, transformer oil tank and other products with voltage class of 35kV and below and capacity of 31500kVA and below.

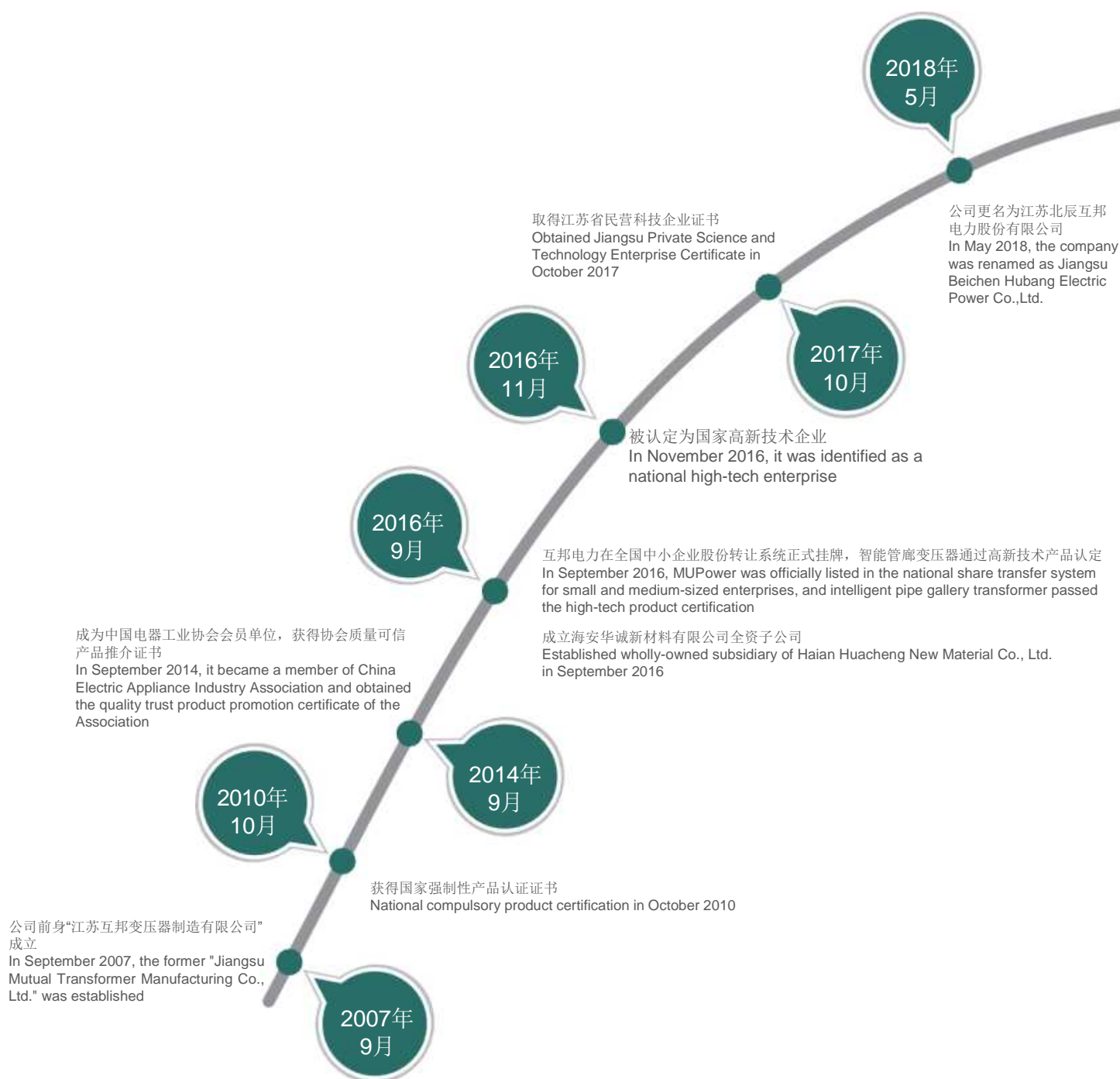
The enterprise has been listed on the NEEQ, stock code: 839335; The enterprise covers an area of 39000m², including 20000m² of building area, 117768000 yuan of registered capital, 80 million yuan of total assets and 250 million yuan of annual output; The enterprise has passed the ISO system certification, and the advanced process equipment and strong technical strength of the enterprise are reasonably applied to improve the quality assurance system, so as to ensure the excellent quality of the product.

We are committed to seek common development with customers all over the world and create good performance based on the tenet of "mutual reliance and integrity, and win-win".

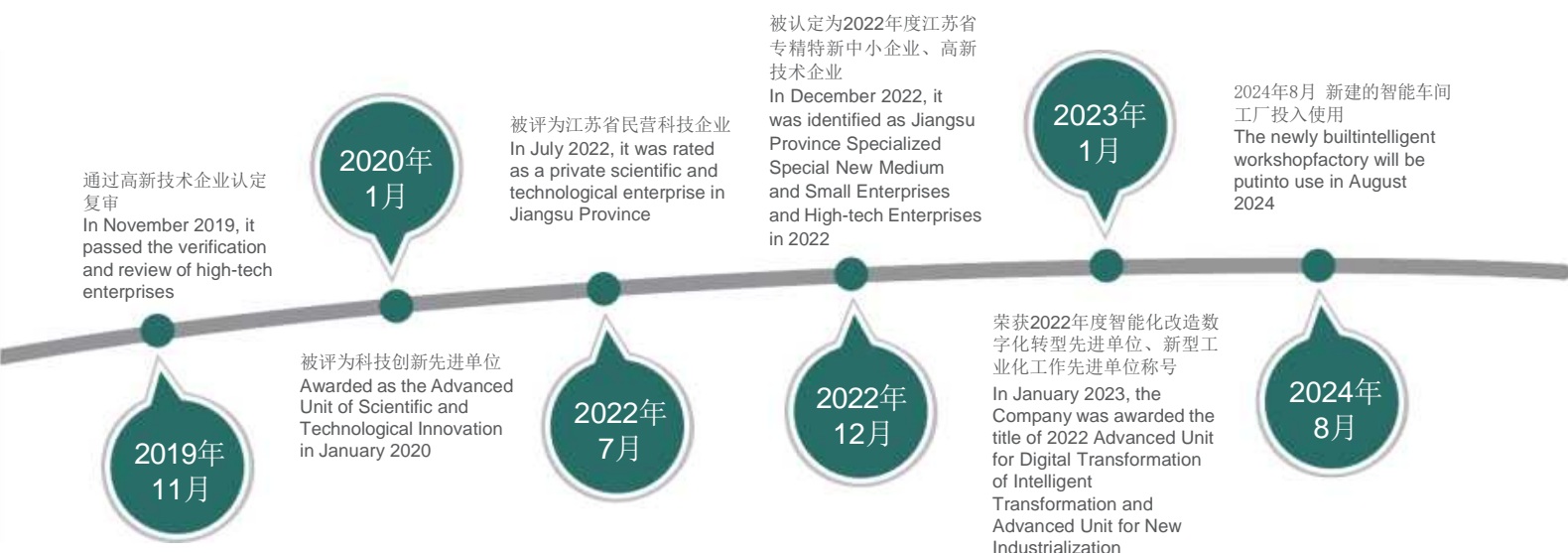
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企业发展史



HISTORY OF CORPORATE DEVELOPMENT





产品型式 试验报告

Product Type Test Report







企业/荣誉资 质/证书

Enterprise Honor Certificate



实力因荣誉而彰显，回首灯火阑珊，更多了一份傲步征程的豪迈
Strength can be reflected by achievements.

We get more confidence when we look back at our successes









10KV三相树脂绝缘干式电力变压器

10KV Three-phase Resin Insulated Dry-type Power Transformer

型号含义 Model meaning



S 三相 Three-phase	C 环氧树脂浇注型 Epoxy resin pouring type	(B) 低压箔绕 Low-voltage foil winding
12、13、14、18 性能水平代号 Code of performance level	□ / □ 额定容量/电压等级 Rated capacity/voltage class	

产品特点 Features

- ◎阻燃、防爆、无污染 Flame retardant, explosion-proof and non-polluting
- ◎抗短路能力强 Strong anti -short circuit ability
- ◎耐雷电冲击性能好 Lightning -resistant impact performance
- ◎维护费用低 Low maintenance cost
- ◎损耗低，节电效果好 Lost loss, good power saving effect
- ◎选配减震装置可更好解决共振现象 Selection and preparation of shock absorption device can better solve the resonance phenomenon

产品概述 Product description

10KV环氧浇注无励磁调压干式变压器，满足GB/T10228、GB20052版技术参数和要求。本型采用带填料的F级环氧树脂混合物，经真空脱气处理后，注入表面放有玻璃丝成型网格增强的线圈内干燥成型。

本型产品在机械强度、电气强度、耐热强度方面，均有显著的提升；绝缘材料具有阻燃、防爆、无污染性能；装置有温度监控系统的变压器可根据运行温度来控制风冷系统的启停。也可在极端温度情况下，发出高温报警信号、超温跳闸信号。本型产品可选购不锈钢、冷板喷型、铝合金三种材料为干变外壳，进出线可以选用上进上出，下进上出，下进下出方式。

10KV epoxy pouring non-excitation voltage regulation dry-type transformer, meeting technical parameters and requirements of GB/T10228 and GB20052 edition. Class F epoxy resin mixture with filler is adopted for this type. After vacuum degassing treatment, it is injected into the coil reinforced by glass wool forming mesh on the surface for dry forming.

The mechanical strength, electrical strength and heat resistance of this product are significantly improved; The insulating materials shall be flame retardant, explosion-proof and pollution-free; The transformer with temperature monitoring system can control the start and stop of the air cooling system according to the operating temperature. High temperature alarm signal and overtemperature trip signal can also be sent in case of extreme temperature. For this product, stainless steel, cold plate spray type and aluminum alloy can be purchased as the shell of dry transformer, and the incoming and outgoing lines can be top-in and top-out, bottom-in and top-out, and bottom-in and bottom-out.

10KV SC(B)12型三相树脂绝缘干式电力变压器性能参数
10KV SC(B)12 Type Three-phase Resin Insulated Dry-type Power
Transformer Performance Parameters

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压
	Rated voltage combination							
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (KW)	Load Loss (KW)	Impedance voltage (%)
	H. V (KV)	Tapping range of HV (%)	L. V (KV)					
SC12-30	6 6.3 10 10.5 11	$\pm 2 \times 2.5$	0.4	Dyn11	2.5	0.15	0.71	4.0
SC12-50					2.2	0.215	1	
SC12-80					2.1	0.295	1.38	
SC12-100					1.9	0.32	1.57	
SC12-125					1.7	0.375	1.85	
SC12-160					1.7	0.43	2.13	
SC(B) 12-200					1.5	0.495	2.53	
SC(B) 12-250					1.5	0.575	2.76	
SC(B) 12-315					1.3	0.705	3.47	
SC(B) 12-400					1.3	0.785	3.99	
SC(B) 12-500					1.3	0.93	4.88	
SC(B) 12-630					1.2	1.07	5.88	
SC(B) 12-630				1.2	1.04	5.96	6.0	
SC(B) 12-800				1.2	1.21	6.96		
SC(B) 12-1000				1.0	1.41	8.13		
SC(B) 12-1250				1.0	1.67	9.69		
SC(B) 12-1600				1.0	1.96	11.7		
SC(B) 12-2000				0.9	2.44	14.4		
SC(B) 12-2500				0.9	2.88	17.1		

10KV-SC(B)13型三相树脂绝缘干式电力变压器性能参数
10KV SC(B)13 Type Three-phase Resin Insulated Dry-type Power
Transformer Performance Parameters

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压
	Rated voltage combination							
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (KW)	Load Loss (KW)	Impedance voltage (%)
	H. V (KV)	Tapping range of HV (%)	L. V (KV)					
SC13-30	6 6.3 10 10.5 11	$\pm 2 \times 2.5$	0.4	Dyn11	2.5	0.135	0.64	4.0
SC13-50					2.2	0.195	0.9	
SC13-80					2.1	0.265	1.24	
SC13-100					1.9	0.29	1.41	
SC13-125					1.7	0.34	1.66	
SC13-160					1.7	0.385	1.91	
SC(B)13-200					1.5	0.445	2.27	
SC(B)13-250					1.5	0.515	2.48	
SC(B)13-315					1.3	0.635	3.12	
SC(B)13-400					1.3	0.705	3.59	
SC(B)13-500				Yyn0	1.3	0.835	4.39	
SC(B)13-630					1.2	0.965	5.29	
SC(B)13-630					1.2	0.935	5.36	
SC(B)13-800					1.2	1.09	6.26	
SC(B)13-1000					1.0	1.27	7.31	
SC(B)13-1250					1.0	1.5	8.72	
SC(B)13-1600					1.0	1.76	10.5	
SC(B)13-2000					0.9	2.19	13	
SC(B)13-2500					0.9	2.59	15.4	

10KV-SC(B) 14型三相树脂绝缘干式电力变压器性能参数
10KV SC(B)14 Type Three-phase Resin Insulated Dry-type Power
Transformer Performance Parameters

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压
	Rated voltage combination							
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (KW)	Load Loss (KW)	Impedance voltage (%)
	H. V (KV)	Tapping range of HV (%)	L. V (KV)					
SC14-30	6 6.3 10 10.5 11	$\pm 2 \times 2.5$	0.4	Dyn11	2.5	0.13	0.64	4.0
SC14-50					2.2	0.185	0.9	
SC14-80					2.1	0.25	1.24	
SC14-100					1.9	0.27	1.415	
SC14-125					1.7	0.32	1.665	
SC14-160					1.7	0.365	1.915	
SC (B) 14-200					1.5	0.42	2.275	
SC (B) 14-250					1.5	0.49	2.485	
SC (B) 14-315					1.3	0.6	3.125	
SC (B) 14-400					1.3	0.665	3.59	
SC (B) 14-500					1.3	0.79	4.39	
SC (B) 14-630					1.2	0.91	5.29	
SC (B) 14-630				1.2	0.885	5.365	6.0	
SC (B) 14-800				1.2	1.035	6.265		
SC (B) 14-1000				1.0	1.205	7.315		
SC (B) 14-1250				1.0	1.42	8.72		
SC (B) 14-1600				1.0	1.665	10.555		
SC (B) 14-2000				0.9	2.075	13.005		
SC (B) 14-2500				0.9	2.45	15.445		

10KV-SC(B) 18型三相树脂绝缘干式电力变压器性能参数
10KV SC(B)18 Type Three-phase Resin Insulated Dry-type Power
Transformer Performance Parameters

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压
	Rated voltage combination							
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (KW)	Load Loss (KW)	Impedance voltage (%)
	H. V (KV)	Tapping range of HV (%)	L. V (KV)					
SC18-30	6 6.3 10 10.5 11	$\pm 2 \times 2.5$	0.4	Dyn11	2.5	0.105	0.64	4.0
SC18-50					2.2	0.155	0.90	
SC18-80					2.1	0.21	1.24	
SC18-100					1.9	0.23	1.415	
SC18-125					1.7	0.27	1.665	
SC18-160					1.7	0.31	1.915	
SC (B) 18-200					1.5	0.36	2.275	
SC (B) 18-250					1.5	0.415	2.485	
SC (B) 18-315					1.3	0.51	3.125	
SC (B) 18-400					1.3	0.57	3.59	
SC (B) 18-500				Yyn0	1.3	0.67	4.39	6.0
SC (B) 18-630					1.2	0.775	5.29	
SC (B) 18-630					1.2	0.75	5.365	
SC (B) 18-800					1.2	0.875	6.265	
SC (B) 18-1000					1.0	1.02	7.315	
SC (B) 18-1250					1.0	1.205	8.72	
SC (B) 18-1600					1.0	1.415	10.555	
SC (B) 18-2000					0.9	1.76	13.005	
SC (B) 18-2500					0.9	2.08	15.445	

20KV三相树脂绝缘干式电力变压器

20KV Three-phase Resin Insulated Dry-type Power Transformer



型号含义 Model meaning

S 三相 Three-phase	C 环氧树脂浇注型 Epoxy resin pouring type	(B) 低压箔绕 Low-voltage foil winding
11、12、13 性能水平代号 Code of performance level	□ / □ 额定容量/电压等级 Rated capacity/voltage class	

产品特点 Features

- ◎ 阻燃、防爆、无污染 Flame retardant, explosion-proof and non-polluting
- ◎ 抗短路能力强 Strong anti-short circuit ability
- ◎ 耐雷电冲击性能好 Lightning-resistant impact performance
- ◎ 维护费用低 Low maintenance cost
- ◎ 损耗低，节电效果好 Lost loss, good power saving effect
- ◎ 选配减震装置可更好解决共振现象 Selection and preparation of shock absorption device can better solve the resonance phenomenon

产品概述 Product description

20KV环氧浇注无励磁调压干式变压器，适用于20KV电网，满足节能减排、低损耗、低噪需求。本型采用带填料的F级环氧树脂混合料，经真空脱气处理后，注入表面放有玻璃丝成型网格增强的线圈内干燥成型。

本型产品在机械强度、电气强度、耐热强度方面，均有显著的提升。绝缘材料具有阻燃、防爆、无污染性能；装置有温度监控系统的变压器可根据运行温度来控制风冷系统的启停；也可在极端温度情况下，发出高温警报信号、超温跳闸信号。本型产品可选购不锈钢、冷板喷塑、铝合金三种材料为干变外壳，进出线可以选用上进上出，下进上出，下进下出方式。

20KV epoxy pouring unlimited pressure -adjusted dry-type transformers, suitable for 20KV power grids to meet energy saving, emission reduction, low loss, low noise demand. This type uses a F-class epoxy resin mixed with a filler. After vacuuming, the surface is injected into the surface of the coil with a glass filament -shaped grid into the surface of the surface.

In terms of mechanical strength, electrical strength, and heat resistance, this type of products have significantly improved. The insulation material has flame retardant, explosion-proof, and pollution-free performance; transformers with a temperature monitoring system can control the start and stop of the air-cooled system according to the operating temperature; it can also issue a high-temperature alarm signal and ultra-temperature trip signal at extreme temperature. This type of product can buy three materials: stainless steel, cold plate spraying plastic, and aluminum alloy as dry transformer shells. The entry and exit lines can be used to get up and up, down and up, down and down.

20KV SC(B)11型三相树脂绝缘干式电力变压器性能参数
20KV SC(B)11 Type Three-phase Resin Insulated Dry-type Power
Transformer Performance Parameters

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压
	Rated voltage combination							
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (KW)	Load Loss (KW)	Impedance voltage (%)
	H.V (KV)	Tapping range of HV (%)	L.V (KV)					
SC11-50	20	$\pm 2 \times 2.5$	0.4	Dyn11	1.8	0.305	1.23	6.0
SC11-100					1.6	0.485	1.99	
SC11-160					1.4	0.6	2.47	
SC(B) 11-200					1.4	0.655	2.94	
SC(B) 11-250					1.2	0.755	3.42	
SC(B) 11-315					1.2	0.87	4.08	
SC(B) 11-400					1.0	1.03	4.84	
SC(B) 11-500					1.0	1.21	5.79	
SC(B) 11-630				Yyn0	0.9	1.37	6.84	
SC(B) 11-800					0.9	1.57	8.26	
SC(B) 11-1000					0.8	1.86	9.78	
SC(B) 11-1250					0.8	2.14	11.5	
SC(B) 11-1600					0.8	2.51	13.8	
SC(B) 11-2000					0.6	2.91	16.3	
SC(B) 11-2500					0.6	3.48	19.3	

20KV SC(B)12型三相树脂绝缘干式电力变压器性能参数
20KV SC(B)12 Type Three-phase Resin Insulated Dry-type Power
Transformer Performance Parameters

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压	
	Rated voltage combination								
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (KW)	Load Loss (KW)	Impedance voltage (%)	
	H.V (KV)	Tapping range of HV (%)	L.V (KV)						
SC12-50	20	$\pm 2 \times 2.5$	0.4	Dyn11	1.8	0.272	1.23	6.0	
SC12-100					1.6	0.432	1.99		
SC12-160					1.4	0.536	2.47		
SC(B) 12-200					1.4	0.584	2.94		
SC(B) 12-250					1.2	0.672	3.42		
SC(B) 12-315					1.2	0.776	4.08		
SC(B) 12-400					1.0	0.920	4.84		
SC(B) 12-500				22	Yyn0	1.0	1.080		5.79
SC(B) 12-630				24		0.9	1.220		6.84
SC(B) 12-800						0.9	1.400		8.26
SC(B) 12-1000						0.8	1.660		9.78
SC(B) 12-1250						0.8	1.900		11.5
SC(B) 12-1600						0.8	2.230		13.8
SC(B) 12-2000						0.6	2.590		16.3
SC(B) 12-2500						0.6	3.100		19.3

20KV-SC(B)13型三相树脂绝缘干式电力变压器性能参数
20KV SC(B)13 Type Three-phase Resin Insulated Dry-type Power
Transformer Performance Parameters

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压	
	Rated voltage combination								
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (KW)	Load Loss (KW)	Impedance voltage (%)	
	H.V (KV)	Tapping range of HV (%)	L.V (KV)						
SC13-50	20	$\pm 2 \times 2.5$	0.4	Dyn11	1.8	0.272	1.23	6.0	
SC13-100					1.6	0.432	1.99		
SC13-160					1.4	0.536	2.47		
SC(B) 13-200					1.4	0.584	2.94		
SC(B) 13-250					1.2	0.672	3.42		
SC(B) 13-315					1.2	0.776	4.08		
SC(B) 13-400					1.0	0.920	4.84		
SC(B) 13-500				22	Yyn0	1.0	1.080		5.79
SC(B) 13-630				24		0.9	1.220		6.84
SC(B) 13-800						0.9	1.400		8.26
SC(B) 13-1000						0.8	1.660		9.78
SC(B) 13-1250						0.8	1.900		11.5
SC(B) 13-1600						0.8	2.230		13.8
SC(B) 13-2000						0.6	2.590		16.3
SC(B) 13-2500						0.6	3.100		19.3

35KV三相树脂绝缘干式电力变压器

35KV Three-phase Resin Insulated Dry-type Power Transformer

型号含义 Model meaning

S 三相 Three-phase	C 环氧树脂浇注型 Epoxy resin pouring type	(B) 低压箔绕 Low-voltage foil winding
12 性能水平代号 Code of performance level	□ / □ 额定容量/电压等级 Rated capacity/voltage class	

产品特点 Features

- ◎ 阻燃、防爆、无污染 Flame retardant, explosion-proof and non-polluting
- ◎ 抗短路能力强 Strong anti-short circuit ability
- ◎ 耐雷电冲击性能好 Lightning-resistant impact performance
- ◎ 维护费用低 Low maintenance cost
- ◎ 损耗低，节电效果好 Lost loss, good power saving effect
- ◎ 选配减震装置可更好解决共振现象 Selection and preparation of shock absorption device can better solve the resonance phenomenon



产品概述 Product description

35KV环氧浇注无励磁调压干式变压器，适用于35KV电网配电及35KV光伏产品需求，节能减排需求，满足低损耗低噪需求。本型采用带填料的F级环氧树脂混合料，经真空脱气处理后，注入表面放有玻璃丝成型网格增强的线圈内干燥成型。

本型产品在机械强度、电气强度、耐热强度方面，均有显著的提升。绝缘材料具有阻燃、防爆、无污染性能；装置有温度监控系统的变压器可根据运行温度来控制风冷系统的启停；也可在极端温度情况下，发出高温警报信号、超温跳闸信号。本型产品可选购不锈钢、冷板喷塑、铝合金三种材料为干变外壳，进出线可以选用上进上出，下进上出，下进下出方式。

35KV epoxy pouring unlimited pressure-adjusted dry-type transformers, suitable for 35KV power grid distribution and 35kV photovoltaic product demand, energy conservation and emission reduction demand, and meet low loss and low noise demand. This type uses a F-class epoxy resin mixed with a filler. After vacuuming, the surface is injected into the surface of the coil with a glass filament-shaped grid into the surface of the surface.

In terms of mechanical strength, electrical strength, and heat resistance, this type of products have significantly improved. The insulation material has flame retardant, explosion-proof, and pollution-free

performance; transformers with a temperature monitoring system can control the start and stop of the air-cooled system according to the operating temperature; it can also issue a high -temperature alarm signal and ultra -temperature trip signal at extreme temperature. This type of product can buy three materials: stainless steel, cold plate spraying plastic, and aluminum alloy as dry transformer shells. The entry and exit lines can be used to get up and up, down and up,down and down.

35KV SC(B)12型三相树脂绝缘干式电力变压器性能参数
35KV SC (B) 12 Type Three-phase Resin Insulated Dry-type Power Transformer Performance Parameters

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压
	Rated voltage combination							
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (KW)	Load Loss (KW)	Impedance voltage (%)
	H.V (KV)	Tapping range of HV (%)	L.V (KV)					
SC12-50	35 36 37 38.5	±2×2.5	0.4	Dyn11	2.1	0.405	1.42	6.0
SC12-100					1.8	0.565	2.09	
SC12-160					1.4	0.71	2.81	
SC(B)12-200					1.4	0.79	3.32	
SC(B)12-250					1.2	0.89	3.8	
SC(B)12-315					1.2	1.05	4.51	
SC(B)12-400					1.0	1.23	5.41	
SC(B)12-500					1.0	1.45	6.65	
SC(B)12-630				Yyn0	0.9	1.67	7.69	
SC(B)12-800					0.9	1.94	9.12	
SC(B)12-1000					0.7	2.18	10.4	
SC(B)12-1250					0.7	2.54	12.7	
SC(B)12-1600					0.7	2.91	15.4	
SC(B)12-2000					0.7	3.43	18.2	
SC(B)12-2500					0.7	4.00	21.8	

CSD船用变压器

CSD Ship Transformer



型号含义 Model meaning

C 船用变压器 Ship transformer	S 三相S、单相D Three-phase S, Single phase D
D 防护型式(防水S/防滴D) Protective(Waterproof S/Drop D)	<input type="checkbox"/> / <input type="checkbox"/> 额定容量/电压等级 Rated capacity/voltage level

产品特点 Features

- ◎阻燃、防爆、无污染 Flame retardant, explosion-proof and non-polluting
- ◎抗短路能力强 Strong anti-short circuit ability
- ◎耐雷电冲击性能好 Lightning-resistant impact performance
- ◎维护费用低 Low maintenance cost
- ◎损耗低，节电效果好 Lost loss, good power saving effect
- ◎选配减震装置可更好解决共振现象 Selection and preparation of shock absorption device can better solve the resonance phenomenon

产品概述 Product description

船用变压器，是一种船舶使用的电力设备，用于为电网中提供动力、照明、隔离等作用。随着船舶大型化和电力推进的应用，船电系统的变压器状况发生率很大的变化。近几年来，采用交流高压电力装置的船舶日益增多，船舶规范通常建议船舶交流高压装置的标称系统电压为0.4-15kv，产品经CCS船级社认证，绝缘等级可分B、F、H级。

Ship transformer is a power equipment used by a ship to provide power, lighting, and isolation in power grids. With the application of large-scale ships and the application of electricity, the transformer status of the shipping system has changed a lot. In recent years, ships using AC high-voltage power devices have become increasingly increasing. The nominal voltage of the shipping high-voltage device of ships is usually 0.4-15kV. The product is certified by CCS Class Society, and the insulation level can be divided into B, F, H level.

适用环境和工作条件 Applicable environment and working conditions

环境温度-25~45℃，工频50~60Hz； The ambient temperature is -25 ~ 45 ° C, working frequency 50 ~ 60Hz;
空气相对湿度不大于95%； The relative humidity of the air is not more than 95%;

适用于船舶，海洋平台及其它场所上的照明、配电、或电网隔离用的变电设备； Lighting, power distribution, or power grids used on ships, marine platforms and other places;

安全、可靠性能要求高； Safe and reliability requirements high;

正常两台三相变压器：互为备用。 Normally two three-phase transformers: alternate.

10KV油浸式电力变压器

10KV Oil-immersed Power Transformer

型号含义 Model meaning

S 三相 Three-phase	13、20、22 性能水平代号 Performance level code
M 全密封 Full sealed	□ / □ 额定容量/电压等级 Rated capacity/voltage level



产品特点 Features

- ◎具有三防（防潮、防霉菌、防盐雾）性能
Has three anti -moisture (moisture -proof, mold-proof, salt -proof fog) performance
- ◎具有三护（温度、气体、压力）功能
With three protection (temperature, gas, pressure) function
- ◎运行可靠，维护方便
Reliable operation, convenient maintenance
- ◎适用于10KV电网户外或箱变内使用
Applicable to outdoor or box changes in 10KV power grid

产品概述 Product description

10kV油浸式变压器铁心采用高效、低损耗优质冷轧硅钢片，同时采用全斜接缝，智能工装设备剪切、叠装，降低变压器的空载损耗、空载电流和噪音。线圈采用高纯度无氧铜，低电密设计，有效降低负载损耗。采用优质层压木压装固定，绕组层间绝缘采用优质点胶纸作为绝缘材料，器身结构牢靠，器身能承受住各种运输颠簸冲击无位移。

根据用户需要可配备齐全的附件，如气体继电器、三合一保护装置、油压速动继电器等附件，产品性能水平达到国内先进水平。本系列产品满足GB20052能效需求。

The iron heart of 10kV Oil-immersed transformers uses high -efficiency, low loss of high -quality cold -rolled silicon steel sheet, and at the same time uses a full -to -be -oblique seam, the smart tooling equipment is cut and stacked to reduce the air load loss, air load current and noise of the transformer. The coil uses high -purity anaerobic copper, which is designed with a low -level design to effectively reduce load loss. The high -quality layer of wood pressure is fixed, and the insulation of the winding layer is used as the insulating material. The body structure is reliable.

According to the needs of users, they can be equipped with complete accessories, such as gas relay, three-in-one protective device, oil pressure speed mobile relay and other attachments, and the product performance level has reached the domestic advanced level. This series of products meet the energy efficiency needs of GB20052.

10KV S13型油浸式电力变压器性能参数
10KV S13 Type Oil-immersed Power Transformer
Performance Parameters

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压
	Rated voltage combination							
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (KW)	Load Loss (KW)	Impedance voltage (%)
	H. V (KV)	Tapping range of HV (%)	L. V (KV)					
S13-M-30	6 6.3 10 10.5 11	±2×2.5	0.4	Dyn11 Yyn0	1	0.08	0.63/0.60	4
S13-M-50					0.95	0.10	0.91/0.87	
S13-M-63					0.95	0.11	1.09/1.04	
S13-M-80					0.9	0.13	1.31/1.25	
S13-M-100					0.85	0.15	1.58/1.5	
S13-M-125					0.85	0.17	1.89/1.8	
S13-M-160					0.8	0.20	2.31/2.2	
S13-M-200					0.6	0.24	2.73/2.6	
S13-M-250					0.6	0.29	3.2/3.05	
S13-M-315					0.55	0.34	3.83/3.65	
S13-M-400					0.55	0.41	4.52/4.3	
S13-M-500					0.5	0.48	5.41/5.15	
S13-M-630				0.5	0.57	6.2	6	
S13-M-800				0.45	0.70	7.5		
S13-M-1000				0.45	0.83	10.3		
S13-M-1250				0.35	0.97	12		
S13-M-1600				0.35	1.17	14.5		
S13-M-2000				0.3	1.36	18.3		
S13-M-2500				0.3	1.60	21.2		

10KV S20型油浸式电力变压器性能参数
10KV S20 Type Oil-immersed Power Transformer
Performance Parameters

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压
	Rated voltage combination							
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (KW)	Load Loss (KW)	Impedance voltage (%)
	H.V (KV)	Tapping range of HV (%)	L.V (KV)					
S20-M-30	6 6.3 10 10.5 11	$\pm 2 \times 2.5$	0.4	Dyn11 Yyn0	0.80	0.07	0.505/0.480	4
S20-M-50					0.75	0.09	0.730/0.695	
S20-M-63					0.75	0.1	0.870/0.830	
S20-M-80					0.70	0.115	1.050/1.000	
S20-M-100					0.65	0.135	1.265/1.200	
S20-M-125					0.65	0.15	1.510/1.440	
S20-M-160					0.6	0.18	1.850/1.760	
S20-M-200					0.50	0.215	2.185/2.080	
S20-M-250					0.50	0.26	2.560/2.440	
S20-M-315					0.45	0.305	3.065/2.920	
S20-M-400					0.45	0.37	3.615/3.440	
S20-M-500					0.40	0.43	4.330/4.120	
S20-M-630					0.40	0.51	4.960	4.5
S20-M-800					0.35	0.63	6.000	
S20-M-1000					0.35	0.745	8.240	
S20-M-1250					0.30	0.87	9.600	
S20-M-1600					0.30	1.05	11.600	
S20-M-2000	11				0.25	1.225	14.640	5
S20-M-2500	11				0.25	1.44	14.840	

10KV S22型油浸式电力变压器性能参数
10KV S22 Type Oil-immersed Power Transformer
Performance Parameters

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压
	Rated voltage combination							
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (W)	Load Loss (W)	Impedance voltage (%)
	H. V (KV)	Tapping range of HV (%)	L. V (KV)					
S22-M-30	6 6.3 10 10.5 11	$\pm 2 \times 2.5$	0.4	Dyn11 Yyn0	0.80	0.065	0.455/0.430	4.0
S22-M-50					0.75	0.08	0.655/0.625	
S22-M-63					0.75	0.09	0.785/0.745	
S22-M-80					0.70	0.105	0.945/0.900	
S22-M-100					0.65	0.12	1.140/1.080	
S22-M-125					0.65	0.135	1.360/1.295	
S22-M-160					0.60	0.16	1.665/1.585	
S22-M-200					0.50	0.19	1.970/1.870	
S22-M-250					0.50	0.23	2.300/2.195	
S22-M-315					0.45	0.27	2.760/2.630	
S22-M-400					0.45	0.33	3.250/3.095	
S22-M-500					0.40	0.385	3.900/3.710	
S22-M-630				0.40	0.46	4.460	4.5	
S22-M-800				0.35	0.56	5.400		
S22-M-1000				0.35	0.665	7.415		
S22-M-1250				0.30	0.78	8.640		
S22-M-1600				0.30	0.94	10.440		
S22-M-2000				0.25	1.085	13.180	5.0	
S22-M-2500				0.25	1.28	13.360		

20KV油浸式电力变压器

20KV Oil-immersed Power Transformer

型号含义 Model meaning



S 三相 Three-phase	13 性能水平代号 Performance level code
M 全密封 Full sealed	<input type="checkbox"/> / <input type="checkbox"/> 额定容量/电压等级 Rated capacity/voltage level

产品特点 Features

- ◎具有三防（防潮、防霉菌、防盐雾）性能
Has three anti -moisture (moisture -proof, mold -proof, salt -proof fog) performance
- ◎具有三护（温度、气体、压力）功能
With three protection (temperature, gas, pressure) function
- ◎运行可靠，维护方便
Reliable operation, convenient maintenance
- ◎适用于20KV电网户外、箱变内使用
Applicable to the outdoor and box of 20KV power grid, inside the box change

产品概述 Product description

20KV油浸式变压器适用于降低线路损耗的20KV电网，本产品铁心采用高效、低损耗优质冷轧硅钢片，同时采用全斜接缝，智能工装设备剪切、叠装，降低变压器的空载损耗、空载电流和噪音。线圈采用高纯度无氧铜，低电密设计，有效降低负载损耗。采用优质层压木压装固定，绕组层间绝缘采用优质点胶纸作为绝缘材料，器身结构牢靠，器身能承受住各种运输颠簸冲击无位移。

根据用户需要可配备齐全的附件，如气体继电器、三合一保护装置、油压速动继电器等附件，产品性能水平达到国内先进水平。

20KV Oil-immersed transformers are suitable for 20KV power grids that reduce line loss. The iron heart of this product uses high -efficiency, low loss of high -quality cold -rolled silicon steel sheet, and at the same time use all -oblique seams, smart workshop equipment cutting, stacking, reducing air load loss of transformers, Clean current and noise. The coil uses high -purity anaerobic copper, which is designed with a low -level design to effectively reduce load loss. The high -quality layer of wood pressure is fixed, and the insulation of the winding layer is used as the insulating material. The body structure is reliable.

According to the needs of users, they can be equipped with complete accessories, such as gas relay, three -in -one protective device, oil pressure speed mobile relay and other attachments, and the product performance level has reached the domestic advanced level.

20KV S13型油浸式变压器性能参数
20KV S13 Type Oil-immersed Power Transformer
Performance Parameters

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压
	Rated voltage combination							
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (KW)	Load Loss (KW)	Impedance voltage (%)
	H. V (KV)	Tapping range of HV (%)	L. V (KV)					
30	20	±2×2.5	0.4	Dyn11	1.7	0.08	0.66/0.63	5.5
50					1.6	0.1	0.96/0.91	
63					1.5	0.12	1.14/1.09	
80					1.4	0.14	1.37/1.30	
100					1.3	0.16	1.64/1.57	
125					1.2	0.19	1.98/1.88	
160					1.1	0.23	2.41/2.30	
200					1.0	0.27	2.85/2.72	
250					0.96	0.32	3.34/3.18	
315				Yyn0	0.88	0.38	4.00/3.81	6.0
400					0.80	0.46	4.72/4.49	
500					0.80	0.54	5.64/5.38	
630					0.72	0.65	6.48	
800					0.64	0.78	7.84	
1000					0.56	0.92	10.70	
1250					0.56	1.10	12.50	
1600					0.48	1.33	15.10	
2000					0.48	1.56	19.10	
2500				0.40	1.87	22.20		

35KV油浸式电力变压器

35KV Oil-immersed Power Transformer



型号含义 Model meaning

S 三相 Three-phase	18、20、22 性能水平代号 Performance level code
M 全密封 Full sealed	<input type="text"/> / <input type="text"/> 额定容量/电压等级 Rated capacity/voltage level

产品特点 Features

- ◎具有三防（防潮、防霉菌、防盐雾）性能
Has three anti -moisture (moisture -proof, mold -proof, salt -proof fog) performance
- ◎具有三护（温度、气体、压力）功能
With three protection (temperature, gas, pressure) function
- ◎运行可靠，维护方便
Reliable operation, convenient maintenance
- ◎适用于35KV电网户外、箱变内使用
Suitable for 35KV power grid outdoor, box change inside

产品概述 Product description

35kV油浸式变压器适用于降低线路损耗的35KV电网，本产品铁心采用高效、低损耗优质冷轧硅钢片，同时采用全斜接缝，智能工装设备剪切、叠装，降低变压器的空载损耗、空载电流和噪音。线圈采用高纯度无氧铜，低电密设计，有效降低负载损耗。采用优质层压木压装固定，绕组层间绝缘采用优质点胶纸作为绝缘材料，器身结构牢靠，器身能承受住各种运输颠簸冲击无位移。

根据用户需要可配备齐全的附件，如金属储油柜、胶囊储油柜、气体继电器、三合一保护装置、油压速动继电器等附件，产品性能水平达到国内先进水平。

35kV Oil-immersed transformers are suitable for 35KV power grids that reduce line loss. The iron heart of this product uses high -efficiency, low loss of high -quality cold -rolled silicon steel sheet, and at the same time use all -oblique seams, smart tooling equipment cutting, overlapping, reducing air load consumption of transformers , Clean current and noise. The coil uses high -purity anaerobic copper, which is designed with a low -level design to effectively reduce load loss. The high -quality layer of wood pressure is fixed, and the insulation of the winding layer is used as the insulating material. The body structure is reliable.

According to the needs of users, they can be equipped with complete accessories, such as metal oil storage cabinets, capsule oil storage cabinets, gas relay, tri -in -one protection device, oil pressure speed mobile relay and other attachments. The product performance level has reached the domestic advanced level.

35KV S18型油浸式变压器性能参数 35KV S18 Type Oil-immersed Power Transformer Performance Parameters

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压
	Rated voltage combination							
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (KW)	Load Loss (KW)	Impedance voltage (%)
	H. V (KV)	Tapping range of HV (%)	L. V (KV)					
S18-M-50	35	±2×2.5	0.4	Dyn11 Yyn0	1.00	0.130	1.14/1.08	6.5
S18-M-100					0.88	0.185	1.91/1.81	
S18-M-125					0.88	0.215	2.25/2.15	
S18-M-160					0.80	0.225	2.68/2.55	
S18-M-200					0.80	0.270	3.15/3.00	
S18-M-250					0.76	0.320	3.75/3.57	
S18-M-315					0.76	0.385	4.51/4.30	
S18-M-400					0.68	0.465	5.45/5.20	
S18-M-500					0.68	0.545	6.56/6.25	
S18-M-630					0.52	0.665	7.47	
S18-M-800					0.52	0.785	8.93	
S18-M-1000					0.52	0.920	10.90	
S18-M-1250					0.48	1.120	13.20	
S18-M-1600					0.48	1.350	15.80	
S18-M-2000					0.44	1.590	19.70	
S18-M-2500					0.44	1.890	23.20	

35KV油浸式有载调压电力主变压器

35KV Oil-immersed On-load Voltage Regulation Power Main Transformer

型号含义 Model meaning



S 三相 Three-phase	<input type="checkbox"/> “F”为风冷，自冷无代号 “F” is air cool, self-cool without generation	<input type="checkbox"/> “Z”为有载调压， 无励磁调压无代号 “Z” is a load regulating, without the inspirational pressure without code
13、18、20、22 性能水平代号 Performance level code	<input type="checkbox"/> / <input type="checkbox"/> 额定容量/电压等级 Rated capacity/voltage level	

产品特点 Features

- ◎实现有载（带负荷）调压
Realize (with load) pressure regulation
- ◎远程自动或手动调压
Remote automatic or manual pressure adjustment
- ◎用户可连续供电，提高生产率，降低故障率
Users can continuously supply power, increase productivity, reduce the failure rate
- ◎可作为两电网间联络变压器
Can be used as a connection transformer between the two grids
- ◎可分配或调整负荷
Disable or adjust the load

产品概述 Product description

35KV油浸式有载调压电力主变压器，设计上采用先进材料、结构，工艺上进行了大幅度的改进和提高。高低压夹件采用钢拉带或上梁及侧梁拉紧，形成坚固的框架结构，增强铁芯夹紧力和耐受运输冲击能力。抗短路能力强，外观造型美观，运行可靠，损耗低，噪音小，达到国外同类产品先进水平。充分考虑市场用户对电压稳定的需求，采用国内知名上海华明、贵州长征产有载调压开关，在带负荷的情况下，根据电网波动进行频繁调压，有效提高供电质量，并且保证开关及设备安全、稳定地工作。

The 35KV oil-immersed on-load voltage regulation power main transformer, the design uses advanced materials and structures in the design. The process has been greatly improved and improved. High and low pressure clamps are tightened with steel straps or upper beams and side beams to form a solid framework structure to enhance the clamping force and tolerance transportation impact capabilities. The short-circuit ability is strong, the appearance is beautiful, the operation is reliable, the loss is low, and the noise is small, reaching the advanced level of similar foreign products. Fully considers the market users' demand for voltage stability, and adopt a well-known domestic Shanghai Huaming and Guifu Governor's production production. In the case of load, frequent pressure adjustment according to the power grid fluctuations, effectively improving the quality of power supply, and ensuring the switch and the switch and the switch and Work safely and stably.

适用环境和工作条件 Applicable environment and working conditions

两电网间联络变用；电压波动较大的电网；对电压稳定要求较高的环境或用户。

Two grids are used to change; grids with large voltage fluctuations; environments or users with higher voltage stability requirements.

35KV SZ13型油浸式有载调压电力主变压器性能参数
35KV SZ13 Type Oil-immersed On-load Voltage Regulation
Power Main Transformer Performance Parameter

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压
	Rated voltage combination							
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (W)	Load Loss (W)	Impedance voltage (%)
	H.V (KV)	Tapping range of HV (%)	L.V (KV)					
SZ13-2000	35	±3×2.5	10	Yd11	0.5	1.84	19.20	6.5
SZ13-2500					0.5	2.18	20.60	
SZ13-3150					0.5	2.58	24.70	7.0
SZ13-4000					0.5	3.10	29.10	
SZ13-5000					0.5	3.71	34.20	
SZ13-6300					0.5	4.50	36.70	
SZ13-8000				YNd11	0.4	6.30	40.60	7.5 或 8.0
SZ13-10000					0.4	7.42	48.00	
SZ13-12500					0.35	8.48	56.80	
SZ13-16000					0.35	10.48	70.30	
SZ13-20000					0.3	12.40	82.70	
SZ13-25000					0.3	14.64	97.80	10.0
SZ13-31500				0.3	17.44	116.00		

35KV SZ18型油浸式有载调压电力主变压器性能参数
35KV SZ18 Type Oil-immersed On-load Voltage Regulation
Power Main Transformer Performance Parameter

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压
	Rated voltage combination							
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (W)	Load Loss (W)	Impedance voltage (%)
	H.V (KV)	Tapping range of HV (%)	L.V (KV)					
SZ18-2000	35	±3×2.5	10	Yd11	0.4	1.84	18.2	6.5
SZ18-2500					0.4	2.18	19.6	
SZ18-3150					0.4	2.60	23.5	7.0
SZ18-4000					0.4	3.10	27.6	
SZ18-5000					0.4	3.70	32.5	
SZ18-6300					0.4	4.50	34.9	
SZ18-8000				YNd11	0.32	6.30	38.6	7.5 或 8.0
SZ18-10000					0.32	7.40	45.6	
SZ18-12500					0.28	8.70	54.0	
SZ18-16000					0.28	10.50	66.8	
SZ18-20000					0.28	12.40	78.6	
SZ18-25000					0.24	14.60	92.9	10.0
SZ18-31500					0.24	17.40	110.2	

35KV SZ20型油浸式有载调压电力主变压器性能参数
35KV SZ20 Type Oil-immersed On-load Voltage Regulation
Power Main Transformer Performance Parameter

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压
	Rated voltage combination							
Type	高压	高压分接范围	低压	Connection symbol	No-load Current (%)	No-load Loss (W)	Load Loss (W)	Impedance voltage (%)
	H.V (KV)	Tapping range of HV (%)	L.V (KV)					
SZ20-3150	35	±3×2.5	10	Yd11	0.4	2.1	22.2	7
SZ20-4000					0.4	2.5	26.2	
SZ20-5000					0.4	3.0	30.8	
SZ20-6300					0.4	3.7	33.0	
SZ20-8000				YNd11	0.32	5.1	36.5	7.5 或 8.0
SZ20-10000					0.32	6.0	43.2	
SZ20-12500					0.28	7.1	51.1	
SZ20-16000					0.28	8.5	63.3	
SZ20-20000					0.28	10.1	74.4	
SZ20-25000					0.24	11.9	88.0	
SZ20-31500					0.24	14.2	104.4	

35KV SZ22型油浸式有载调压电力主变压器性能参数
35KV SZ22 Type Oil-immersed On-load Voltage Regulation
Power Main Transformer Performance Parameter

型号	额定电压组合			联接组别	空载电流	空载损耗	负载损耗	阻抗电压
	Rated voltage combination							
Type	高压	高压分接范围	低压	Conection symbol	No-load Current (%)	No-load Loss (W)	Load Loss (W)	Impedance voltage (%)
	H. V (KV)	Tapping range of HV (%)	L. V (KV)					
SZ22-3150	35	±3×2.5	10	Yd11	0.4	1.8	22.2	7
SZ22-4000					0.4	2.1	26.2	
SZ22-5000					0.4	2.6	30.8	
SZ22-6300					0.4	3.1	33.0	
SZ22-8000				YNd11	0.32	4.3	36.5	7.5 或 8.0
SZ22-10000					0.32	5.1	43.2	
SZ22-12500					0.28	6.0	51.1	
SZ22-16000					0.28	7.2	63.3	
SZ22-22000					0.28	8.5	74.4	
SZ22-25000					0.24	10.1	88.0	
SZ22-31500					0.24	12.0	104.4	

YB(B)D型景观式地埋式变电站

YB(B)D Type Landscape Buried Substation

型号含义 Model meaning



YB
预装式变压器
Pre-installed
transformer

(B) D
景观式(半)地埋型
Landscape(half)
buried type

□ / □
额定容量/电压等级
Rated capacity/
voltage level

产品特点 Features

- (1) 箱体采用不锈钢制作、全密封，防护等级达IP68，可浸入水中运行。
- (2) 高、低压进出线采用防水全密封、全绝缘、全屏蔽的接线方式，运行更加安全。
- (3) 采用环烷基变压器油，确保具有良好的散热能力。
- (4) 绝缘耐热等级高，环保。
- (5) 后备及插入式熔断器，给予变压器更安全的保护。
- (1) The box is made of stainless steel and a full seal, and the protective level is IP68, which can be immersed in water.
- (2) The high and low pressure in and out lines use the wiring method of waterproof full seal, full insulation, and full shielding, and operate more safely.
- (3) Use cyclophoric transformer oil to ensure good heat dissipation capabilities.
- (4) High insulation and heat-resistant levels, environmental protection.
- (5) Repair and insertion fuses are safer to protect the transformer.

产品概述 Product description

半地埋箱式变电站（简称半地埋箱变，亦称景观型地埋箱变，是在充分研究和探讨现代城市建设和管理的基础上，新开发出的新一代箱式变压器。其主体部分埋入地下，占地很少，甚至不占地，视觉效果非常好，有效解决了城市用地紧张，与周边环境和谐统一，备受广大专家和用户的推崇。

半地埋箱式变电站是指该箱式变电站的成套装置安装于地面景观型灯箱内，变压器部分安装于全密封的箱体内部，并把整体设置于地平面以下，它和地面上箱式变电站，内部设备电气性能一样，同样是由10KV输入电压经变压器降为400V配电电压，再配送至使用负荷点，可用于环网配电系统，也可作为放射式电网终端供电的变电站。

半地埋箱变的景观型灯箱作为高、低压成套柜箱体，植入可更换的广告画或LED显示屏结构后，也可作为道路一条靓丽的风景线。其地下箱体具有极好的防腐能力和抗压能力，并具有绝对的密封性。努力解决目前电力设备在安装、维护等如架空线入地工程、沿海台风盐雾侵蚀、环境视觉诸多困难，引进吸收国外先进技术开发了环保型半地埋式箱式变电站。

Half-land buried box-type substation (the cylinder is called the half-ground buried box change, also known as the landscape-type buried box change, which is a new generation of box-type transformer developed on the basis of fully researching and discussing the construction and management of modern urban construction and management. The main part is buried underground, occupying very little, or even the land. The visual effect is very good. It effectively solves the contradiction between urban land tensions and urban psoriasis. It is harmoniously unified with the surrounding environment.

The half-ground buried box-type substation refers to the complete set of the box-type substation installed in the ground landscape light box, the transformer part is installed inside the full-sealing box, and the overall is set below the ground surface. It and the top box on the ground.

For the substation, the internal equipment is the same electrical performance. It is also reduced from 10kV input voltage to 400V power distribution voltage through transformers, and then sent to the use load point. It can be used for the loop network power distribution system.

The landscape light box with a half-ground buried box is used as a cabinet box as a high and low voltage. After implantation of replaceable advertising paintings or LED display structures, it can also be used as a beautiful landscape on the road. Its basement has excellent anti-corrosion ability and compressive ability, and has absolute sealing. Strive to solve the current engineering of electric equipment in installation and maintenance such as air lines, coastal typhoon salt erosion erosion, and many difficulties in environmental vision, and the introduction of an environmentally friendly half-ground buried box substation for foreign advanced technologies.

适应场景 Adaptation scene

城市公共配电、高层建筑、住宅小区、油田、公园、车站、机场、地铁、高速公路等供电场所

Urban public power distribution, high-rise buildings, residential communities, oil fields, parks, stations, airports, subways, highways and other power supply fields

YB(B)D型景观式地埋变电站功能 YB(B)D Type Function Of Landscape Buried Power Stations

预制式地坑基础

Prefabrication pit basis

(1) 地坑基础可采用6mm以上钢板预压成型，全密封结构，确保地表水及其它杂物不能进入地坑内；也可采用预制式钢筋混凝土结构，采用先进的防水技术处理，确保基础不渗漏。

(2) 地坑内安装有高低压电缆安装支架，方便电缆安装固定。

(3) 地坑内安装有防水照明灯，方便检修。

(1) The foundation of the pit can be formed with steel plates above 6mm or more to ensure that the surface water and other debris cannot enter the pit: prefabricated reinforced concrete structure can also be adopted, and advanced waterproof technology can be used leakage.

(2) Install a high and low voltage cable installation stand in the pit, which is convenient for the cable installation and fixation.

(3) Waterproof lighting is installed in the pit for easy maintenance.

广告灯箱式的户外开关设备

Advertising light box -type outdoor switch equipment

(1) 开关设备的保护外壳采用广告灯箱式结构，灯箱外壳的两门可全角度打开，并有气动弹簧支撑定位，便于开关设备的操作和维护。

(2) 灯箱外壳的两面为广告板，采用体积小、光源均匀的LED发光元件。

(3) 广告灯箱与开关设备的门锁独立设置，灯箱维护不影响开关设备运行。

(4) 开关设备采用双层门结构，防护等级达到IP34，第二层为仪表门，确保灯箱式外壳被破坏以后，低压柜仍然达到一个完整的户外的低压产品的保护水平。

(5) 隐藏在灯箱外壳中的风机可以自动对地坑基础内进行排风和送风来降低温度以及除湿。

(1) The protective shell of the switching device adopts an advertising light box structure. The two doors of the light box housing can be opened at all angles, and the pneumatic spring support positioning is convenient for the operation and maintenance of the switching equipment.

(2) The two sides of the lamp box housing are advertising boards, and LED emitting elements with small size and uniform light sources are used.

(3) The door locks of the advertising light box and the switching equipment are set independently. The maintenance of the light box does not affect the operation of the switch equipment.

(4) The switching equipment adopts a double -layer door structure, the protection level reaches IP34, and the second floor is the instrument door to ensure that after the light box -type shell is destroyed, the low pressure cabinet still reaches the protection level of a complete and independent outdoor low -pressure product.

(5) The fan hidden in the light box shell can automatically exhaust the air and send air supply to reduce temperature and dehumidification in the pit foundation.

地埋变的防水处理

Waterproof treatment of buried substation

地埋式箱变的地下式组合变压器允许浸没在水中运行，地坑基础内增加防水及排水进行了周全的设计，对于地下水位较低（低于地坑基础底部）的地区，采用预制式地坑结构，地坑顶部通风孔具备有效的通风和防雨能力，地坑基础底部铺设走水砂卵石，水可以直接渗入地下，对于地下水位较高（高于地坑基础底部）的地区，采用预制全封闭混凝土地坑结构，防止地表水流入及地下水渗入地坑内。

The underground combination transformer with the change of the ground box allows the immersion in the water, and the waterproof and drainage of the pit is fully designed within the foundation of the pit. For areas with a low groundwater level (lower than the bottom of the pit) The pits structure, the ventilation holes on the top of the pit have effective ventilation and rainproofing capacity. Putting water sand pebbles on the bottom of the pit, water can directly penetrate the ground. For areas with high groundwater level (higher than the bottom of the pit), use The prefabricated fully enclosed concrete pit structure prevents the inflow of surface water and the infiltration of groundwater into the ground pits.

地埋变的散热

Heat dissipation of buried substation

(1) 地下式变压器采用低损耗叠铁心、卷铁心或非晶合金铁心的产品，空载损耗及负载损耗都有很大程度的降低，所以发热量低。

(2) 变压器的耐热等级高，具有较大的温升裕度，也提高了变压器的过负荷能力。

(3) 地下式变压器采用环烷基变压器油（或高燃点油），确保产品具有良好的散热能力。

(4)在配电箱与基础地坑之间，设置了进风及出风风机，当地下式组合变压器的温升达到设定值时进行强送排风降温，保证地下式变压器的正常进行。

(1) The underground transformer uses low -loss iron -hearted, rolled iron -hearted or amorphous alloy iron heart products. The air load loss and load loss are largely reduced, so the heat is low.

(2) High heat -resistant levels of transformers have a high degree of temperature rise, and also improved the transformer's overload ability.

(3) The underground transformer uses a cyclophic transformer oil (or high -combustion point oil) to ensure that the product has good heat dissipation capabilities.

(4) Between the power distribution box and the basic ground pits, a air inlet and outlet are set up. When the temperature rise of the local underground combination transformer reaches the set value, it will be given to the air supply Essence.

YBD(S) 型全地埋式变电站

YBD(S) Type All-Place Buried Substation



型号含义 Model meaning

YB
预装式变压器
Pre-installed transformer

D(S)
全地埋型, S可
选型升降式
All-place buried
type, S can choose
lift type

□ / □
额定容量/电压等级
Rated capacity/
voltage level

产品特点 Features

高压室、低压室、变压器室都位于地下；搭配最新泛在物联网智能辅助系统：地下防水排水系统、新风控制系统、温控系统、除湿系统、照明系统等，同时检修窗口配备自动扶梯；光纤专网通道监测整体运行状态，实现后台同步传输，保障供电的安全可靠。

High -pressure rooms, low -voltage rooms, and transformer rooms are located underground; with the latest pan -in -IoT intelligent auxiliary system: groundwater waterproof and drainage system, fresh air control system, temperature control system, dehumidification system, lighting system, etc. At the same time, the window is equipped with escalators; optical fiber The special network channel monitor the overall operating status, realize the synchronous transmission of the background, and ensure the safety and reliability of power supply.



产品概述 Product description

全地埋型箱式变电站（简称全地埋式箱变），是在充分研究和探讨现代城市建设和管理的基础上，新开发出的新一代箱式变。其主体部分或全部埋入地下，占地很少，甚至不占地，视觉效果非常好，有效解决了城市用地紧张矛盾，与周边环境和谐统一，备受广大专家和用户的推崇。全地埋型箱式变电站是指该箱式变电站的成套装置全部安装于一个全密封的箱体内部并把整体设制于地平面以下，它和地面上箱式变电站，内部设备是相同的，同样是由10KV输入电压经变压器降为400V配电电压，再送配至使用负荷点，可用于环网配电系统，也可作为放射式电网终端供电的变电站。这种全地埋型又称地下变电站，它的箱体具有极好的防腐能力和抗压能力，并具有绝对的密封性。解决目前电力设备在安装、维护等如架空线入地工程、沿海台风盐雾侵蚀、环境视觉诸多困难，引进吸收国外先进技术开发了环保型非金属地埋式系列变电站产品。

A new generation of box -type box changes developed by the entire place of buried box -type transformer stations (referred to as the all -place buried box) are based on the full research and discussing the construction and management of modern cities. The main part or all of them are buried underground, occupying very little, or even the land, and the visual effect is very good. It effectively solves the tension and contradictions of urban land, harmoniously unified with the surrounding environment, and has been highly respected by experts and users. The whole place -type box -type substation means that the complete sets of the box -type substation are installed inside a fully sealed box and the overall is below the ground surface. It is also reduced by 10kV input voltage through transformers to 400V power distribution voltage, and then sent to the use of the load point. It can be used for the loop network power distribution system. This all -place buried type is also known as underground power station. Its box has excellent anti -corrosion ability and compressive ability, and has absolute sealing. Solving the current engineering equipment such as installation and maintenance, such as airlines such as airlines, coastal typhoon salt erosion erosion, and many difficulties in environmental vision, the introduction of absorption of advanced foreign technologies and developing environmentally friendly non -metal land buried series substations.

适应场景 Adaptation scene

城市公共配电、高层建筑、住宅小区、油田、公园、车站、机场、地铁、高速公路等供电场所

Urban public power distribution, high -rise buildings, residential communities, oil fields, parks, stations, airports, subways, highways and other power supply fields

YBD(S) 型地埋式变电站结构与功能

YBD(S) type buried substation structure and function

预制式地坑基础

Prefabrication pit basis

(1) 地坑基础可采用6mm以上钢板预压成型，全密封结构，确保地表水及其它杂物不能进入地坑内；也可采用预制式钢筋混凝土结构，采用先进的防水技术处理，确保基础不渗漏。

(2) 地坑底部设置有集水池，并安装有受自动非水系统控制的潜水泵。

(3) 地坑内安装有高低压电缆安装支架，方便电缆安装固定。

(4) 地坑内安装有防水照明灯，方便检修。

(5) 基础顶盖设有可打开的检修孔。

(1) The foundation of the pit can be formed with steel plates above 6mm or more to ensure that the surface water and other debris cannot enter the pit: prefabricated reinforced concrete structure can also be adopted, and advanced waterproof technology can be used leakage.

(2) There is a set of pools at the bottom of the pit, and a submersible pump controlled by an automatic non -water system is installed.

(3) Install a high and low voltage cable installation stand in the pit, which is convenient for the cable installation and fixation.

(4) Waterproof lighting is installed in the pit for easy maintenance.

(5) The foundation top cover has open maintenance holes.

地埋变的防水处理

Waterproof treatment of buried substation

地埋式箱变的地下式组合变压器允许浸没在水中运行，地坑基础内增加防水及排水进行了周全的设计。

对于地下水位较低（低于地坑基础底部）的地区，采用预制式地坑结构，地坑顶部通风孔具备有效的通风和防雨能力，地坑基础底部铺设走水砂卵石，水可以直接渗入地下，对于地下水位较高（高于地坑基础底部）的地区，采用预制全封闭混凝土地坑结构，防止地表水流入及地下水渗入地坑内。

The underground combination transformer with a bury -type box is allowed to be immersed in the water, and the water-proof and drainage of the pits are fully designed.

For areas with low groundwater levels (lower than the bottom of the pit), the prefabricated pit structure is adopted. The ventilation holes on the top of the pit have effective ventilation and rainproof capacity. The underground is infiltrated, and a prefabricated concrete pit structure is adopted for areas with high groundwater levels (higher than the bottom of the pit), preventing the inflow of surface water into the ground pits and underground water infiltration.

地埋变的散热

Heat dissipation of buried substation

(1) 地下式变压器采用低损耗叠铁心、卷铁心或非晶合金铁心的产品，空载损耗及负载损耗都有很大程度的降低，所以发热量低。

(2) 变压器的耐热等级高，具有较大的温升裕度，也提高了变压器的过负荷能力。

(3) 地下式变压器采用环烷基变压器油（或高燃点油），确保产品具有良好的散热能力。

(4) 在配电箱与基础地坑之间，设置了进风及出风风机，当地下式组合变压器的温升达到设定值时进行强送排风降温，保证地下式变压器的正常进行。

(1) The underground transformer uses low -loss iron -hearted, rolled iron -hearted or amorphous alloy iron heart products. The air load loss and load loss are largely reduced, so the heat is low.

(2) High heat -resistant levels of transformers have a high degree of temperature rise, and also improved the transformer's overload ability.

(3) The underground transformer uses a cycloaliphatic transformer oil (or high -combustion point oil) to ensure that the product has good heat dissipation capabilities.

(4) Between the power distribution box and the basic ground pits, a air inlet and outlet are set up. When the temperature rise of the local underground combination transformer reaches the set value, it will be given a strong exhaust air cooling to ensure the normal progress of the underground transformer.

地下式变压器

Underground Transformer



型号含义 Model meaning

S 三相 Three-phase	11、13、20、22 性能水平代号 Performance level code	M 全密封 Full seal
D 地埋型 Buried type	□ / □ 额定容量/电压等级 Rated capacity/voltage level	

产品特点 Features

适合街道、高速公路、桥梁、隧道、停车场、机场、港口、旅游景点等的照明和动力系统；

高低压进出线采用防水全密封、全绝缘、全屏蔽的接线方式；

保护系统充分考虑操作方便和安全性，配件采用美国Cooper、Roxtec品牌充分保证电气及密封性能；

内置油浸式负荷开关型，可采用绝缘操作杆操作地下式变压器，具有与组合变压器一样的运行方式；

充分考虑散热条件的特殊性，变压器采取了低损耗与低温度设计；

变压器IP68满足浸水长期运行需求。

Suitable for lighting and power systems such as streets, highways, bridges, tunnels, parking lots, airports, ports, tourist attractions, etc.

High and low pressure in and out of waterproof, waterproof full -seal, full insulation, full shielding wiring method;

The protection system fully considers the convenience and safety of operations. The accessories adopt the US Cooper and the RoXtec brand to fully ensure the electrical and sealing performance;

The built -in oil -immersed load switch type can be used to operate underground transformers in the insulation operating rod, which has the same operation method as a combination transform

Considering the particularity of heat dissipation conditions, the transformer is designed with low loss and low temperature;

The transformer IP68 can meet the requirements of waterproof entry protection and automatic drainage measures for installation in the cellar for long-term immersion operation.

产品概述 Product description

地下式变压器：一种可安装在地坑内的配电变压器或管廊变压器。一般安装在地坑、管廊、隧道里，不占用地表有效空间，不影响视觉效果，令供电设备和周围环境和谐统一，且可以避免遭受外界的无意或有意破坏，对设备周边环境和人员的影响也可减小到最低程度。

随着城市发展和城市电网改造的不断深入，安全、可靠、不占用地表空间的地下式变压器正逐步应用在中心城区的道路照明、属民用电以及

机场、城市广场、高速公路、桥梁、隧道照明等。

Underground transformer: a power distribution transformer or a gallery transformer that can be installed in the pit. Generally installed in the pit, pipe corridors, and tunnels. The effective space of the surface surface does not take up the valid space and does not affect the visual effect. The impact can also be reduced to the minimum.

With the continuous deepening of urban development and urban power grid transformation, underground transformers that are safe, reliable, and not occupying the surface space of the ground are gradually applying to road lighting, civilian electricity, and civilian electricity in the central urban area

Airport, urban square, highway, bridge, tunnel lighting, etc.

关于地下式变压器的防水措施

Waterproof measures for underground transformers

1、基础设计和制作时的防水考虑

顶部：通风孔具备有效防雨防水能力；

倒部：用防水混凝土材料对俩表面处理，使得渗水无法从地坑侧面侵入；

底部：安装地下式变压器的防水混凝土承重基座比地坑底面高300mm，平时从地面流到地坑的水都流到基座以下环形道上，不会浸泡到地下式变压器。

2、基础底部铺设走水砂卵石，水可以比较快渗入地面。

3、地下式变压器允许一定时段内浸没在水中0.5m以下运行，可抵御洪涝灾害，有效提高供电系统的可靠性。但为了地下式变压器的安全可靠运行，建议在洪水、长时间暴雨和雨季过后，检查地坑积水情况，如积水较多，建议采取抽水 and 清洁。

1. Waterproof consideration during basic design and production

Top: The ventilation hole has effective rainproof and waterproof ability;

Inside: Use waterproof concrete materials to treat the two surfaces, so that the seepage cannot invade from the side of the pit;

Bottom: The waterproof concrete load-bearing base of the underground transformer is 300mm higher than the bottom surface of the pits. The water flowing from the ground to the pit from the ground to the pits is flowing to the ring road below the base.

2. Put the water sand pebble at the bottom of the foundation, and the water can penetrate the ground faster.

3. The underground transformer limit allows the immersion in the water within 0.5m in a certain period of time, which can be derived from the flood disaster and effectively improve the reliability of the power supply system. However, for the safe and reliable operation of the underground transformer, it is recommended that after the flood, long-term violence and the rainy season, check the pits of water in the water. If there are more water, it is recommended to take water and clean.

关于地下式变压器温升控制的措施

Measures on the control of underground transformers temperature rise control

1、变压器低温升设计，顶层油温控制在45K左右，远低于国标规定的60K，设计思路为：

(1) 热负荷是直接与损耗成正比的，我公司设计生产的地下式变压器所用的原材料为低损耗产品，可满足GB20052能效需要，有效降低能耗。

(2) 绝缘油可采用矿物油、植物油，其良好的粘度-时间特性使得在温度升高时油的流动速度加快，确保产品具有良好的散热能力。

2、箱体结构

地下式变压器油箱按IP68设计，满足可浸水运行需求。

3、表面处理：

因地下式变压器本体安装于阴凉的地表下面，采用特殊的表面处理工艺，保证其具有良好的热量辐射能力和较强的耐腐蚀能力。

4、基础制作

地基与外界的散热靠热传导和空气对流，基础顶部可设置通风口及导风板，以加强空气循环。

1. The low temperature rising design of the transformer, the top layer of oil temperature control is around 45K, which is transported below the national standard 60K. The design ideas are:

(1) Thermal load is directly proportional to the loss. The raw materials used by the underground transformer designed and produced by our company are low-loss products, which can meet the energy efficiency needs of GB20052 and effectively reduce energy consumption.

(2) Insulation oil can be used for mineral oil and vegetable oil. Its good viscosity-time characteristics make the flow of oil when the temperature rises to speed up, ensuring that the product has good heat dissipation capabilities.

2. Box structure

The underground transformer fuel tank is designed by IP68 to meet the needs of soaking in water.

3. Surface treatment;

Because the underground transformer is installed under the cool surface, it uses a special surface treatment process to ensure that it has good heat radiation capabilities and strong corrosion resistance capabilities.

4. Basic production

The foundation of the foundation and the outside world is based on thermal conduction and air convection. The ventilation port and wind guide board can be set on the top of the foundation to strengthen the air circulation.

YB型预装式欧式变电站

YB Prefabricated European Style Substation



型号含义 Model meaning

YB
预装式
Pre-installation

□ / □
额定容量/电压等级
Rated capacity/
voltage level

□
结构形式：M为目字型，
P为品字型
Structural form: M is the font,
P is the type of character type

产品特点 Features

所有设备由制造厂一次成套供给，在制造厂内负责完成设计、制造，总装及二次配线，要经过型式试验的和出厂检查试验，能整体安全顺利地运送到用户现场，成套性强、体积小、节省占地面积。

All equipment is supplied by the manufacturer at one time. It is responsible for completing the design, manufacturing, total installation and secondary wiring in the manufacturer. It must be trials and the factory inspection test. It can be transported to the user's site smoothly and smoothly. Small volume, saving the area, location of the site, is more fast -moving.

能深入中压负荷中心，减少了网损，提高了供电质量。

Can deepen the center of the load, reduce network damage, and improve the quality of power supply.

适应现代城市电入地工程要求，变电站不用后可以异地再用，无顶重复投资。

Adapt to the requirements of modern urban electricity projects. After the substation is not used, it can be reused in different places.

产品概述 Product description

YB型高压/低压预装式变电站，是一种集高压电器、电力变压器、低压电器设备组合在一体的紧凑型成套配电装置。该装置具有成套性强、结构紧凑、体积小、便于移动、运行安全可靠、维护方便、造型美观等特点，是一种新型的变配电装置。

The YB high -voltage/low -voltage pre -installed substation is a compact set power distribution device that combines high -voltage electrical appliances, power transformers, and low -voltage electrical equipment. This device has the characteristics of strong setability, compact structure, small size, easy to move, safe and reliable operation, convenient maintenance, and beautiful shape. It is a new type of transformation and distribution device.

适应场景 Adaptation scene

城市公共配电、高层建筑、住宅小区、港口、油田、公园、车站、机场、地铁、高速公路等供电场所

Urban public power distribution, high -rise buildings, residential communities, ports, oil fields, parks, stations, airports, subways, highways and other power supply places

主要技术参数 main technical parameters

名称 Name	项目 Item	单位 Unit	参数 Data
高压元件 High-voltage component	额定频率 Rated frequency	Hz	50/60
	额定电压 Rated voltage	kv	12(24)
	工频耐受电压对地和相间 Work frequency tolerance voltage to the ground and each other	kv	42(65)
	雷电冲击耐压对地和相间 Lightning impact resistance to the ground and each other	kv	75(125)
	额定电流 Rated current	A	630
	额定短时耐受电流 Rated short -term tolerance current	kA/2S	20(16)
	额定峰值耐受电流 Rated peak tolerance current	kA	50(40)
低压元件 Low-voltage component	额定电压 Rated voltage	v	400
	主回路额定电流	A	100~4000
	额定短时耐受电流 Rated short-term tolerance current	kA	15~50
	额定峰值耐受电流 Rated peak tolerance current	kA	20~105
变压器 Transformer	额定容量 Rated Capacity	kVA	50~2500
	分接范围 Separate range		±2x2.5%或 ±5%
	联接组别 Connection group		D,yn11 或 Y,yno
	噪音 Noise	dB	≤55
	外壳防护等级 Shell protection level		IP33D

YBW型10kV国网标准型预装式变电站

YBW 10KV State Grid Standard Pre-installed Substation



产品优点 Product advantages

箱变尺寸小，节省占地面积，节省土建成本

The characteristic of box transformer size is that the external structure size and internal structure size are unified.

The box transformer is small in size, saving floor space and civil construction costs.

高压保护全面，分为终端型和环网型供电方式，适用范围较广

Comprehensive high-voltage protection, divided into terminal type and ring network power supply mode, with a wide range of applications

整体箱变共分为6个功能室，满足智能化预装式变电站的要求

The integrated box transformer is divided into 6 functional rooms to meet the requirements of intelligent prefabricated substations.

变压器放置于整体封闭的箱壳内，噪音及辐射较小

The transformer is placed in a completely enclosed box, so the noise and radiation are small.

箱变整体防护等级较高，可适用于盐雾及灰尘较大场所

The overall protection level of the box transformer is high, and it can be used in places with heavy salt spray and dust.

产品概述 Product description

按照国家电网公司“1135”配网运行服务管理战略要求，提高设备选型标准，健全质量控制体系，提升配电网设备耐用性，突出设备好的核心，依据安全可靠、坚固耐用、标准统一、通用互换的原则，全面推进配电设备标准化工作。

产品结构为目字形排列，供电方式为终端型或环网型。从左到右依次为高压室、变压器室、低压室。还可根据市场智能变电站的需要增设计量室、参数采集室、DTU室，整体箱变总计6个功能室，结构紧凑，功能全面。产品容量范围：630kVA及以下容量可满足3650*2200*2500mm（长*宽*高）尺寸要求，630kVA以上产品可根据实际情况调整。

In accordance with the requirements of the State Grid Corporation of China's "1135" distribution network operation service management strategy, we will improve equipment selection standards, improve the quality control system, improve the durability of distribution network equipment, and highlight the core of good equipment. Based on safety, reliability, durability, unified standards, Comprehensively promote the standardization of power distribution equipment based on the principle of universal interchange.

The product structure is arranged in a mesh shape, and the power supply method is terminal type or ring network type. From left to right are the high-voltage room, transformer room, and low-voltage room. Measurement rooms, data collection rooms, and DTU rooms can also be added according to the needs of smart substations in the market. The overall box-type substation has a total of 6 functional rooms, with a compact structure and comprehensive functions. Product capacity range: Capacities of 630kVA and below can meet the size requirements of 3650*2200*2500mm (length*width and height). Products above 630kVA can be adjusted according to actual conditions.

适应场景 Adaptation scene

适用于居民小区、码头、车站、高速公路、高架桥、工地临时用电等任何场所

Suitable for residential areas, docks, stations, highways, viaducts, construction sites, temporary power supply and other places

YJW型10kV国网紧凑型预装式变电站

YJW Type 10kV State Grid Compact Prefabricated Substation



产品优点 Product advantages

箱变尺寸较小，节省占地面积，占地面积约为欧变的1/3，节省土建成本

The size of the box transformer is smaller, saving floor space. The floor space is about 1/3 of the European transformer, saving civil construction costs.

高压保护全面，分为终端型和环网型供电方式，适用范围较广

Comprehensive high-voltage protection, divided into terminal type and ring network power supply mode, with a wide range of applications

整体箱变共分为6个功能室，满足智能化预装式变电站的要求

The integrated box transformer is divided into 6 functional rooms to meet the requirements of intelligent prefabricated substations.

变压器放置于整体封闭的箱壳内，噪音及辐射较小

The transformer is placed in a completely enclosed box, so the noise and radiation are small.

箱变整体防护等级较高，可适用于盐雾及灰尘较大场所
The overall protection level of the box transformer is high, and it can be used in places with heavy salt spray and dust.

产品概述 Product description

产品结构为目字形排列，供电方式为终端型或环网型。从左到右依次为高压室、变压器室、低压室。还可根据市场智能变电站的需要增设计量室、参数采集室、DTU室，整体箱变总计6个功能室，结构紧凑，功能全面。

产品容量范围：630kVA及以下容量可满足2650*1350*2100mm（长*宽*高）尺寸要求，630kVA以上产品可根据实际情况调整。

The product structure is arranged in a mesh shape, and the power supply method is terminal type or ring network type. From left to right are the high-voltage room, transformer room, and low-voltage room. Measurement rooms, data collection rooms, and DTU rooms can also be added according to the needs of smart substations in the market. The overall box-type substation has a total of 6 functional rooms, with a compact structure and comprehensive functions.

Product capacity range: Capacities of 630kVA and below can meet the size requirements of 2650*1350*2100mm (length*width*height), and products above 630kVA can be adjusted according to actual conditions.

适应场景 Adaptation scene

因产品的宽度只有1350mm，可适用于城市道路中间的绿化带中，不会影响车辆及行人的正常通行。因高压使用的是保护功能全面的环网柜，亦可适用于居民小区、码头、车站、高速公路、高架桥、工地临时用电等任何场所



Because the product is only 1350mm wide, it can be used in green belts in the middle of urban roads without affecting the normal passage of vehicles and pedestrians. Because the high voltage uses a ring main unit with comprehensive protection functions, it can also be applied to any place such as residential areas, docks, stations, highways, viaducts, construction sites, etc.

ZGS型美式变电站

ZGS American-style Substation



型号含义 Model meaning

Z 组合式变压器 Combined transformer	G 共箱式 Common box type
S 三相 Three-phase	 性能水平代号 Performance level code
 额定容量/电压等级 Rated capacity/ voltage level	

产品特点 Features

体积小，结构紧凑，占地面积小，安装方便。

Small size, compact structure, small footprint and easy installation.

低损耗、低噪音，低温升，超能牌容量负载能力强，抗突发短路能力强。

It has low energy consumption, low noise, low temperature rise, strong capacity and load capacity, and strong ability to withstand sudden short circuits.

接线方式灵活，既可用于终端系统，也可用于环网系统，转换方便，提高了供电可靠性。

The wiring method is flexible and can be used for both the terminal system and the ring network system. It is easy to convert and improves the reliability of power supply.

产品概述 Product description

ZGS系列组合式变压器即美式箱变，是根据城多电网建设发展和改造的需要研制的系列产品，它是将变压器身、开关设备、熔断器、分接开关，纸压配电装置等相应辅助设备组合的变压器，能满足用户电能计量、无功补偿，低压分路等各种配置要求。

ZGS型组合式变压器作为交流50Hz、6~10kV的电网中，额定容量为30-1600kVA的独立成套变配电装置，即可用于户外，也可用于户内。广泛适用于工业园区、城市住宅小区、商业中心、道路照明、高招建筑及临时施工现场等各种场所，其优点是：环保、占地面积小、安装方便。

ZGS series combined transformers, namely American box transformers, are a series of products developed according to the needs of urban power grid construction, development and transformation. Transformers combined with auxiliary equipment can meet various configuration requirements such as energy metering, reactive power compensation, and low-voltage shunting.

ZGS type combined transformer is an independent complete power transformation and distribution device with a rated capacity of 30-1600kVA in an AC 50Hz, 6~10kV power grid. It can be used outdoors or indoors. It is widely used in various places such as industrial parks, urban residential areas, commercial centers, road lighting, high-tech buildings and temporary construction sites. Its advantages are: environmental protection, small footprint and easy installation.

适应场景 Adaptation scene

城市公共配电、高层建筑、住宅小区、港口、油田、公园、车站、机场、地铁、高速公路等供电场所

Urban public power distribution, high-rise buildings, residential areas, ports, oil fields, parks, stations, airports, subways, highways and other power supply places

主要技术参数 main technical parameters

名称 Name	单位 Unit	参数 Data
额定电压 Rated voltage	原边 original side	KV 10/20/35
	副边 secondary side	KV 0.4
最高工作电压 Maximum working voltage	KV	12/24/40.5
额定频率 Rated frequency	HZ	50
额定容量 Rated Capacity	KVA	30-1600KVA
1 分钟工频耐压 1 minute power frequency withstand voltage	KV	42/65/95 (不含变压器) 42/65/95 (变压器) 42/65/95(Transformer not included) 42/65/95(Transformer)
BIL 冲击耐压 BIL impact withstand voltage	KV	75/125/185 油浸自冷式 Oil immersed self-cooling
冷却方式 cooling method		ONAN
无载调压 No load voltage regulation	KV	10/20/35 \pm 2x2.5%
环境温度 Environment temperature	℃	-45~+40
变压器允许油顶层温升 Allow top oil layer temp rise	K	≤ 55
变压器低压绕组温升 Transformer low voltage winding temp rise	K	≤ 65
变压器高压绕组温升 Transformer high voltage winding temp rise	K	≤ 65
噪音等级 Noise level	dB	≤ 55
防护等级 Protection level		IP33D

ZGS型新能源组合式变电站

ZGS Type New Energy Combined Substation



型号含义 Model meaning

Z 组合式变压器 Combined transformer	G 共箱式 Common box type
S 三相 Three-phase	<input type="text"/> 性能水平代号 Performance level code
<input type="text"/> / <input type="text"/> 额定容量/电压等级 Rated capacity/voltage level	Z.G 终端光伏 Terminal photovoltaic

产品概述 Product description

ZGS系列新能源组合式变压器正是为满足日益增长的光伏发电的供电要求，我公司在生产35KV组合式变压器的基础上，整合了国内外先进的技术，结合国内需求自行开发的系列产品，该产品是将变压器，负荷开关，高压熔断器安装在变压器的箱体内部，利用变压器的绝缘液体作为整个产品的绝缘和散热介质，采用全密封结构，具有体积小，重量轻，安装方便等优点。

ZGS series new energy combined transformers are precisely to meet the growing power supply requirements of photovoltaic power generation. On the basis of producing 35KV combined transformers, our company integrates advanced domestic and foreign technologies and develops a series of products by itself based on domestic needs. The product installs the transformer, load switch, and high-voltage fuse in the transformer box. It uses the insulating liquid of the transformer as the insulation and heat dissipation medium of the entire product. It adopts a fully sealed structure and has the advantages of small size, light weight, and easy installation.

产品特点 Features

箱变的整体布局结构紧凑、合理，外形体积小；各主元件之间联结方便，铜排用量大大减小；进出线电缆接线空间及检修空间较大，方便于装配、检修。箱体结构：所有金属结构件采用喷砂、热镀锌、喷漆处理，可保证设备在潮湿，重盐雾的环境中使用其耐锈蚀能力强，所有门板及墙板，均没有夹层，中间填充有聚氨酯及硅酸盐复合保温材料，它具有优良的隔热保温性能，保证设备在严寒环境中安全、迅速投入运行。

变压器主要采用三相双绕组油浸无载调压型低损耗电力变压器，根据要求还可配置其它类型的电力变压器。电力变压器在材料、工艺、结构上采取了一系列改革，使产品电气性能达到国际同类产品的先进水平，其空载损耗、负载损耗均低于国家标准要求，具有高效率、低损耗的特点，可节省大量的电耗和运行费用，社会效益显著。铁心采用优质冷轧晶粒取向硅钢片全斜接缝叠积方式，采用真空注油。

低压侧可采用智能型断路器或其它系列的低压断路器，起分配电能和保护线路及设备，免受过载、欠电压、短路、单相接地等故障的危害。同时低压侧设小型检修变压器，供用户检修现场提供电源。低压柜框架电气梁均采用热镀锌防腐处理。

The overall layout of the box transformer is compact, reasonable, and small in size; the main components are conveniently connected, and the amount of copper bars is greatly reduced; the incoming and outgoing cable wiring space and inspection space are large, making assembly and inspection easy. Box structure: All metal structural parts are sandblasted, hot-dip galvanized, and spray-painted to ensure that the equipment has strong corrosion resistance when used in humid and heavy salt spray environments. All door panels and wall panels have no interlayers and are filled in the middle. There are polyurethane and silicate composite insulation materials, which have excellent thermal insulation properties and ensure that the equipment can be put into operation safely and quickly in severe cold environments.

The transformer mainly adopts three-phase dual-winding oil-immersed no-load voltage-regulating low-loss power transformer. Other types of power transformers can also be configured according to requirements. The power transformer has adopted a series of reforms in materials, processes, and structure, making the electrical performance of the product reach the advanced level of similar international products. Its no-load loss and load loss are both lower than the national standard requirements, and it has the characteristics of high efficiency and low loss. It can save a lot of power consumption and operating costs, and has significant social benefits. The iron core is made of high-quality cold-rolled grain-oriented silicon steel sheets with full oblique joint stacking, and is filled with vacuum oil.

The low-voltage side can use intelligent circuit breakers or other series of low-voltage circuit breakers to distribute electric energy and protect lines and equipment from overload, undervoltage, short circuit, single-phase grounding and other faults. At the same time, a small maintenance transformer is installed on the low-voltage side to provide power at the user's maintenance site. The electrical beams of the low-voltage cabinet frame are all treated with hot-dip galvanizing for anti-corrosion.

主要技术参数
main technical parameters

名称 Name		单位 Unit	参数 Data
额定电压 Rated voltage	原边 original side	KV	33-38.5
	副边 secondary side	KV	0.8
最高工作电压 Maximum working voltage		KV	40.5
额定频率 Rated frequency		HZ	50
额定容量 Rated Capacity		KVA	800-4000
1 分钟工频耐压 1 minute power frequency withstand voltage		KV	95（不含变压器）85(变压器) 95(Transformer not included) 85(Transformer)
BIL 冲击耐压 BIL impact withstand voltage		KV	185
冷却方式 cooling method			油浸自冷式 Oil immersed self-cooling
无载调压 No load voltage regulation		kV	± 2x2.5%
环境温度 Environment temperature		℃	-45~+40
变压器允许油顶层温升 Allow top oil layer temp rise			≤55
变压器低压绕组温升 Transformer low voltage winding temp rise		K	≤65
变压器高压绕组温升 Transformer high voltage winding temp rise		K	≤65
噪音等级 Noise level		dB	≤55
防护等级 Protection level			IP33D

YB型新能源预装式箱式变电站

YB Type New Energy Prefabricated Box-type Substation



型号含义 Model meaning

YB
预装式
Pre-installation

□
M为目字型, P为品字型
M is the font,
P is the type of character type

□ / □
额定容量/电压等级
Rated capacity/voltage level

产品概述 Product description

风力组合式变压器系列产品为我公司专门为风力发电设计开发的产品, 风力发电机出口电压为0.69、0.95、1.14kV, 经变压器升压至35kV, 在35kV出线侧经多个回路组成一个联合单元后, 由35kV电缆线路输送至35/110kV升压站。

该预装式变电站是将升压变压器, 高压成套开关设备、低压成套开关设备以及电源变压器等辅助设备, 并与箱体合理组合而成的一种成套变电站产品。其性能完全符合GB/T17467《高压/低压预装式变电站》, 它是针对风力发电的特殊使用要求而开发出的一种新型预装式变电站, 具有成套性强、便于安装、施工周期短、运行费用低、结构强度高、防腐性能强等优点, 完全适用于自然条件比较恶劣的海滩、草原、荒漠等运行环境, 性能完全满足风电场使用要求。

The wind power combined transformer series products are specially designed and developed by our company for wind power generation. The outlet voltage of the wind turbine is 0.69, 0.95, 1.14kV, which is boosted to 35kV by the transformer. A joint unit is formed through multiple circuits on the 35kV outlet side. After that, it is transported to the 35/110kV booster station by the 35kV cable line.

The prefabricated substation is a complete substation product that reasonably combines a step-up transformer, a high-voltage switchgear complete set, a low-voltage switchgear complete set, a power transformer and other auxiliary equipment with a box. Its performance fully complies with GB/T17467 "High Voltage/Low Voltage Prefabricated Substation". It is a new type of prefabricated substation developed for the special use requirements of wind power generation. It has strong completeness, easy installation, short construction period, Low operating costs, high structural strength, anti-corrosion. With the advantages of strong performance, it is fully suitable for operating environments such as beaches, grasslands, and deserts with harsh natural conditions, and its performance fully meets the requirements of wind farms.

产品特点 Features

箱变的整体布局结构紧凑、合理, 外形体积小; 各主元件之间联结方便, 铜排用量大大减小; 进出线电缆接线空间及检修空间较大, 方便于装配、检修。箱体结构: 所有金属结构件采用喷砂、热镀锌、喷漆处理, 可保证设备在潮湿, 重盐雾的环境中使用其耐锈蚀能力强, 保证设备在严寒环境中安全、迅速投入运行。

电力变压器在材料、工艺, 结构上采取了一系列改革, 使产品电气性能达到国际同类产品的先进水平, 其空载损耗、负载损耗均低于国家标准要求, 具有高效率、低损耗的特点, 可节省大量的电耗和运行费用, 社会效益显著。铁心采用优质冷轧晶粒取向硅钢片全斜接缝叠积方式, 采用真空注油。

低压侧可采用智能型断路器或其它系列的低压断路器, 起分配电能和保护线路及设备, 免受过载、欠电压、短路、单相接地等故障的危害。同时低压侧设小型检修变压器, 供用户检修现场提供电源。低压柜框架电气梁均采用热镀锌防腐处理。

The overall layout of the box transformer is compact, reasonable, and small in size; the main components are conveniently connected, and the amount of copper bars is greatly reduced; the incoming and outgoing cable wiring space and inspection space are large, making assembly and inspection easy. Box structure: All metal structural parts are sandblasted, hot-dip galvanized, and spray-painted to ensure that the equipment has strong corrosion resistance when used in humid and heavy salt spray environments, and ensures that the equipment can be put into operation safely and quickly in severe cold environments.

The power transformer has adopted a series of reforms in materials, processes, and structure, making the electrical performance of the product reach the advanced level of similar international products. Its no-load loss and load loss are both lower than the national standard requirements, and it has the characteristics of high efficiency and low loss. It can save a lot of power consumption and operating costs, and has significant social benefits. The iron core is made of high-quality cold-rolled grain-oriented silicon steel sheets with full oblique joint stacking, and is filled with vacuum oil.

The low-voltage side can use intelligent circuit breakers or other series of low-voltage circuit breakers to distribute electric energy and protect lines and equipment from overload, undervoltage, short circuit, single-phase grounding and other faults. At the same time, a small maintenance transformer is installed on the low-voltage side to provide power at the user's maintenance site. The electrical beams of the low-voltage cabinet frame are all treated with hot-dip galvanizing for anti-corrosion.

主要技术参数 main technical parameters

名称 Name	单位 Unit	参数 Data
额定电压 Rated voltage	原边 original side KV	35
	副边 secondary side KV	0.69
最高工作电压 Maximum working voltage	KV	40.5
额定频率 Rated frequency	HZ	50
额定容量 Rated Capacity	KVA	1600+
1分钟工频耐压 1 minute power frequency withstand voltage	KV	95（不含变压器）85（变压器） 95(Transformer not included) 85(Transformer)
BIL 冲击耐压 BIL impact withstand voltage	KV	185
冷却方式 cooling method		油浸自冷式 Oil immersed self-cooling
无载调压 No load voltage regulation	kV	35 ± 2x2.5%
环境温度 Environment temperature	°C	-45~+40
变压器允许油顶层温升 Allow top oil layer temp rise		≤55
变压器低压绕组温升 Transformer low voltage winding temp rise	K	≤65
变压器高压绕组温升 Transformer high voltage winding temp rise	K	≤65
噪音等级 Noise level	dB	≤55
防护等级 Protection level		IP44D

120KW一体式直流充电桩

120KW Integrated DC Charging Pile



产品特点 Features

- ◎高防护：IP65防护等级，抗雨露防风沙
High protection: IP65 protection level, resistant to rain, dew and wind and sand
- ◎免维护：免灰尘维护、免模块维护、免维护费用
Maintenance-free: no dust maintenance, no module maintenance, no maintenance fees
- ◎高可靠：故障率低、收入稳定
High reliability: low failure rate, stable income
- ◎长寿命：使用寿命>10年、免设备更换费用
Long life: service life >10 years, no equipment replacement costs

产品概述 Product description

120kW一体式直流充电系统，利用充电架为电动汽车提供直流电能，提供反好的人机操作界面，具有相应的控制、计费、扣费、通信功能和保护功能。

本直流充电系统为电动汽车电池提供所需的直流电源，此系统集功率变换、充电控制、管理、查询、显示以及通讯于一体，通过与电池管理系统（BMS）通讯，实现对整个充电过程的智能化控制。

本产品采用模块化设计，拥有多重保护功能，人性化的画面提示功能，自动化的充电控制；产品提供CAN、以太网、GPRS等多种通信接口与监控中心或运营管理中心实时通信，并接受监控中心的指令限制车载充电机的输出功率等，实时监测充电架的连接状态，连接异常将立即终止充电，确保充电过程中的人身和车辆安全。

The 120kW integrated DC charging system uses the charging rack to provide DC power for electric vehicles, provides an excellent human-machine operation interface, and has corresponding control, billing, deduction, communication functions and protection functions.

This DC charging system provides the required DC power for electric vehicle batteries. This system integrates power conversion, charging control, management, query, display and communication. By communicating with the battery management system (BMS), it realizes the entire charging process. intelligent control.

This product adopts a modular design and has multiple protection functions, humanized screen prompts, and automated charging control. The product provides CAN, Ethernet, GPRS and other communication interfaces to communicate with the monitoring center or operation management center in real time and accept monitoring. The center's instructions limit the output power of the on-board charger, etc., and monitor the connection status of the charging rack in real time. If the connection is abnormal, charging will be terminated immediately to ensure personal and vehicle safety during the charging process.

直流充电桩技术参数表1
Technical Parameters Table of DC Charging Station 1

序号 NO	名称 Name	项目 Item	单位 Unit	参数 Data	备注 Remark
1	电气参数 Electrical parameters	交流输入电压 AC input voltage	V	三相 Three phase: 380±20%	
2		交流电源频率 AC power frequency	Hz	50±5	
3		输入功率因数 Input power factor		≥0.98	
4		真流电压调节范围 True current voltage adjustment range	V	250~750	
5		效率 Efficiency		≥0.93	可根据BMS自动调压 Can automatically adjust voltage according to BMS
6		直流电流输出 DC current output	A	0~200 (双枪 120kW 单边使用) 0~200 (double gun 120kW used on one side)	双枪均充 600V 以下恒流充电, 600V 以上恒功率充电: 两边使用最大电流的一半。 Both guns are charged with constant current charging below 600V and constant power charging above 600V: half of the maximum current is used on both sides.
7	充电模式 Charging mode	自动充电 automatic charging		支持 support	
8		按金额充电 Charge by amount		支持 support	
9		按电量充电 Charge according to the power			
11		设定时间充电 Set time to charge			
12	启动/停止充电方式 Start/stop charging mode	刷卡方式 Swipe card method		支持, 带卡号识别及计费功能 APP 收费 Support, with card number recognition and billing functions APP charging	
13		密码方式 Password method		支持 support	
14		噪声 Noise	dB	≤65	
15		低压辅助电源 Low voltage auxiliary power supply	V	24V	默认 24V

直流充电桩技术参数表2
Technical Parameters Table of DC Charging Station 2

序号 NO	名称 Name	项目 Item	单位 Unit	参数 Data	备注 Remark
16	保护功能 Protective function	短路保护 Short circuit protection		■	
17		过流保护 Overcurrent protection		■	
18		过/欠压 Over/under voltage		■	
19		反接保护 Reverse connection protection		■	
20		漏电保护器 Leakage protector		■	
21		过热保护 Overheating protection		■	
22		防雷 Lightning protection		■	
23		IP		IP54	
24		工作温度 Operating temperature	℃	整机 whole machine: -25~+55	
				模块 module: -40~+65	
25		环境湿度 environment humidity		10%~90%	
26		CAN		符合CAN2.0 标准, 扩展帧 Comply with CAN2.0 international standard, extended frame	
				速度 Speed: 250kbps	
27		RS485	bps	波特率 baud rate: 2400/4800/9600	
28	通信方式 Communication way	以太网 Ethernet		10M/100M 自适应 Adaptive	软件升级 后台管理 Software upgrade Backend management
29		无线通讯-GPRS		支持 support	移动/联通网络 后台管理 China Mobile/China Unicom Network Backend Management
30	扩展应用 Extended application	后台管理 Backstage management			
31		充电卡发卡及充值管理 Charging card issuance and recharge management			

KYN28A-12户内交流高压金属移开式开关设备

KYN28A-12 Indoor AC High Voltage Metal Removable Switchgear

型号含义 Model meaning



YB
预装式
Pre-installation

□
M为目字型,
P为品字型
M is the font, P is the
type of character type

□ / □
额定容量/电压等级
Rated capacity/voltage level

产品概述 Product description

KYN28A-12型户内交流高压金属移开式开关设备系三相交流50Hz、额定电压12kV、工作电流至4000A的户内成套配电装置。适用于发电厂、变电站、工矿企业等作为接受和分配电能之用，对电路起到控制保护和监测等功能，可以用于频繁操作的场所。

KYN28A-12 indoor AC high-voltage metal removable switchgear is an indoor complete power distribution device with three-phase AC 50Hz, rated voltage 12kV, and operating current up to 4000A. It is suitable for power plants, substations, industrial and mining enterprises, etc. to receive and distribute electric energy. It can control, protect and monitor circuits and can be used in places with frequent operations.

产品结构 Product structure

产品由柜体和可抽出部分（手车）两部分组成，柜体结构均采用敷铝锌板制作而成。用金属隔板分隔为断路器室（手车室）、主母线室、电缆室和继电器仪表室，并且所有金属结构均可靠接地，主母线室和断路器室设有独立的压力释放通道。

The product consists of two parts: the cabinet and the extractable part (handcart). The cabinet structure is made of aluminum-zinc plate. Metal partitions are used to separate the circuit breaker room (handcart room), main busbar room, cable room and relay instrument room, and all metal structures are reliably grounded. The main busbar room and circuit breaker room are equipped with independent pressure relief channels.

产品特点 Features

1. 安全可靠的“五防”联锁装置，能够有效防止：
 - a. 防止误分、误合断路器
 - b. 防止带负荷推拉断路器手车
 - c. 防止接地开关处于闭合状态时关合断路器
 - d. 防止带电运行时误合接地开关
 - e. 防止误入带电间隔

The safe and reliable "five prevention" interlocking device can effectively prevent:

 - a. Prevent mis-opening and mis-closing of circuit breakers
 - b. Prevent pushing and pulling circuit breaker handcars under load
 - c. Prevent the circuit breaker from closing when the grounding switch is in the closed state.
 - d. Prevent the grounding switch from being mistakenly closed during live operation.
 - e. Prevent entering the electrified interval accidentally
2. 可选配真空断路器，真空接触器负荷开关及隔离开关等
Optional vacuum circuit breakers, vacuum contactor load switch and isolation switch, etc.
3. 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，相同用途的手车具有良好的互换性
According to the use, it can be divided into circuit breaker handcars, voltage transformer handcars, metering handcars, isolation handcars, etc. Handcars with the same purpose have good interchangeability.
4. 断路器室和电缆室可分别加装加热器，防止凝露和腐蚀发生
Heaters can be installed in the circuit breaker room and cable room respectively to prevent condensation and corrosion.
5. 开关柜的外壳防护等级达到IP4X，隔室之间及断路器室门打开时防护等级为IP2X
The enclosure protection level of the switch cabinet reaches IP4X, and the protection level between compartments and when the circuit breaker room door is opened is IP2X.

主要技术参数 main technical parameters

项目 Item			单位 Unit	参数 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 Circuit breaker rated current			A	630、1250、1600、2000、 2500、3150、4000
额定短时耐受电流 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 making current (peak value)			kA	50、63、80、100
额定绝缘水平 Rated insulation level	1min 工频耐受电压 1min power frequency withstand voltage	极间、极对地间 Between poles, poles to the ground	kv	24、32、42
		断口间 between open contacts	kv	24、32、42
雷电冲击耐受电压(峰值)		极间、极对地间 Between poles, poles to the ground	kv	40、60、75
		断口间 between open contacts	kv	46、70、85
防护等级 Protection level	外壳为 IP4X，隔室间、断路器室门打开时为 IP2X The shell is IP4X, and the compartment and circuit breaker room doors are IP2X when open.			

GGD低压成套开关设备

GGD low voltage complete switchgear

型号含义 Model meaning



G
交流低压开关柜
AC low voltage switch
cabinet

D
电力用柜
Electric cabinet

G
电器元件为固定安装、固定路线
Electrical components are
fixedly installed and routed

执行标准 Implementation standards

GB7251.1

《低压成套开关设备和控制设备第一部分：型式试验和部分型式试验成套设备》

Low Voltage Switchgear and Control Equipment Part 1: Type Test and Partial Type Test Complete Equipment

IEC439-1

《低压成套开关设备和控制设备》

Low voltage complete sets of switchgear and control equipment

产品概述 Product description

GGD型交流低压配电柜适用于发电厂、变电所、石油化工部门、工矿企业、高层建筑等低压配电系统的动力配电和电动机控制中心、电容补偿等电力用户的交流频率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管转换、分配和控制之用。

GGD型交流低压配电柜是能源部以促进我国低压配电行业技术进步，加速低压配电成套开关设备的更新换代为宗旨而设计的低压配电屏。产品具有分断能力高、动热稳定性好、实用性强等特点。

GGD type AC low-voltage distribution cabinet is suitable for power distribution and motor control centers, capacitance compensation and other low-voltage distribution systems in power plants, substations, petrochemical sectors, industrial and mining enterprises, high-rise buildings and other power users with AC frequency of 50Hz and rated The power distribution system with working voltage 380V and rated working current up to 3150A is used for tube conversion, distribution and control of power lighting and power distribution equipment.

GGD type AC low-voltage distribution cabinet is a low-voltage distribution panel designed by the Ministry of Energy with the purpose of promoting technological progress in my country's low-voltage distribution industry and accelerating the upgrading of complete sets of low-voltage distribution switchgear. The product has the characteristics of high breaking capacity, good dynamic and thermal stability, and strong practicality.

产品特点 Features

1、GGD型交流低压配电柜采用通用柜配形式，构架采用8MF冷弯型钢局部焊接组装而成，并有20模的安装孔，通用系数高。

The GGD type AC low-voltage power distribution cabinet adopts a universal cabinet configuration. The frame is partially welded and assembled from 8MF cold-formed steel. It has 20 molded mounting holes and has a high universal coefficient.

2、GGD型交流低压配电柜充分考虑到柜体运行中的散热问题，在柜体上、下端均有不同数量的散热槽孔使密封的柜体自上而下形成一个自然通风道，达到散热的目的。

The GGD type AC low-voltage power distribution cabinet fully considers the heat dissipation problem during cabinet operation. There are different numbers of heat dissipation slots on the upper and lower ends of the cabinet so that the sealed cabinet forms a natural ventilation channel from top to bottom to achieve the best heat dissipation. Purpose.

3、装有电气元件的仪表门用多股铜软线与构架相连，柜内的安装件与构架间用滚花螺钉连接，整柜构成完整的接地保护电路。

The instrument door equipped with electrical components is connected to the frame with multi-strand soft cords, and the installation parts in the cabinet are connected to the frame with knurled screws. The entire cabinet forms a complete grounding protection circuit.

4、柜体表面采用静电喷塑工艺，附着力强，质感好，整柜呈亚光色调，避免了炫目效应。

The surface of the cabinet adopts electrostatic spraying process, which has strong adhesion and good texture. The whole cabinet has a matte color to avoid dazzling effect.

5、柜体的防护等级为IP30。

The protection level of the cabinet is IP30.

主要技术参数 main technical parameters

序号 NO	额定电流 Rated current	额定短路开断电流 (kA) Rated short circuit breaking current (kA)	额定短时耐受电流 (1s, kA) Rated short circuit breaking current (kA)	额定峰值耐受电流 (kA) Rated peak withstand current (kA)
GGD1	A	1000	15	30
	B	600 (630)		
	C	400		
GGD2	A	1500 (1600)	30	63
	B	1000		
	C			
GGD3	A	3150	50	105
	B	2500		
	C	2000		

GCS交流低压抽出式成套开关设备

GCS AC low voltage withdrawable complete set of switchgear



型号含义 Model meaning

G
封闭式开关柜
Closed switch cabinet

C
抽出式
Draw-out type

S
森源电气系统
Senyuan Electrical Systems

产品特点 Features

装置的主构架采用8MF型钢，构架采用和部分焊接的两种结构形式。主构上均有安装模数孔

The main frame of the device is made of 8MF steel, and the frame adopts two structural forms: welding and partial welding. There are mounting module holes on the main structure.

装置各种功能室严格分开，其隔室主要分为功能单元室、母线室、电缆室、各单元的功能作用对独立

The various functional rooms of the device are strictly separated. The compartments are mainly divided into functional unit rooms, busbar rooms, and cable rooms. The functions of each unit are independent.

装置设有采用将水平母线装置柜顶的传统设计，使电缆室上下均有出线通道

The device adopts the traditional design of installing the horizontal busbar on the top of the cabinet, so that there are outlet channels above and below the cable room.

产品概述 Product description

GCS适用于发电厂、变电站、石油化工部门、厂矿企业、饭店及高层建筑等低压配电系统的动力，配电和电动机控制中心，电容补偿的电动机控制中心，电容补偿的电能转换，分配与控制用。

在大单机容量的发电厂，大规模石化等行业的低压动力控制中心和电动机控制中心等电力使用其使用场合能满足与计算机接口的特殊需要。

装置时根据电力部主管上级、广大电力用户及设计部门的要求，为满足不断发展电力市场对增容、计算机接口、动力集中控制、方便安装维修、缩短事故处理时间等需要。本着安全、经济、合理、可靠原则设计的新型低压抽出式开关设备。产品具有分断、接通能力高、动稳定性好、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。可以做为低压抽出式开关设备的换代产品使用。

GCS is suitable for power, distribution and motor control centers of low-voltage distribution systems in power plants, substations, petrochemical sectors, factories and mines, hotels and high-rise buildings, capacitance compensation motor control centers, capacitance compensation power conversion, distribution and control use.

It can meet the special needs of computer interface in power plants with large unit capacity, low-voltage power control centers and motor control centers in large-scale petrochemical and other industries.

The installation is based on the requirements of the superiors in charge of the Ministry of Electric Power, the majority of power users and the design department, in order to meet the needs of the continuously developing power market for capacity expansion, computer interfaces, centralized power control, convenient installation and maintenance, and shortened accident handling time. A new type of low-voltage withdrawable switchgear designed based on the principles of safety, economy, reasonableness and reliability. The product has the characteristics of high breaking and making capacity, good dynamic stability, flexible electrical scheme, convenient combination, seriality, strong practicability, novel structure and high protection level. It can be used as a replacement product for low-voltage withdrawable switchgear.

主要技术参数 main technical parameters

序号 NO	项目 Item		单位 Unit	参 数 Data
1	额定工作电压 Rated working voltage		v	~380
2	额定频率 Rated frequency		Hz	50.6
3	额定绝缘电压 Rated insulation voltage		v	660
4	控制电动机容量 Control motor capacity		kw	0.5-155
5	机械寿命 Mechanical life		次 number of times	5000
6	额定电流 Rated current	水平母线 Horizontal bus	A	1600、2500、 4000、6300
		垂直母线 Vertical busbar		800、1000
		主电路触头接插件 Main circuit contact connector		100-630
		辅助电路触头接插件 Auxiliary circuit contact connector		20
		馈电电路最大电流 Maximum current of feed circuit		630
		受电电路 Power receiving circuit		1000、1600、 2000、2500
7	额定短时耐受电流（有效值、1S） Rated short-time withstand current (effective value, 1S)		kA	15、30、50
8	额定峰值耐受电流（峰值） Rated peak withstand current (peak value)		kA	30、63、105
9	介电强度（1min） Dielectric strength (1min)		v	2500

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Order need information

<input type="checkbox"/> 产品名称	<input type="checkbox"/> Product Name
<input type="checkbox"/> 型号等级	<input type="checkbox"/> Model and grade
<input type="checkbox"/> 额定容量	<input type="checkbox"/> Rated capacity
<input type="checkbox"/> 电压组合	<input type="checkbox"/> Voltage combination
<input type="checkbox"/> 调压范围	<input type="checkbox"/> Range of voltage regulation
<input type="checkbox"/> 调压方式	<input type="checkbox"/> Voltage regulation mode
<input type="checkbox"/> 频率	<input type="checkbox"/> frequency
<input type="checkbox"/> 联结组标号	<input type="checkbox"/> connection symbol
<input type="checkbox"/> 短路阻抗	<input type="checkbox"/> Short circuit impedance
<input type="checkbox"/> 外壳尺寸、材质	<input type="checkbox"/> Size and material of enclosure
<input type="checkbox"/> 进出线方式	<input type="checkbox"/> Incoming and outgoing line mode
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