Qualification Documents



Shandong Tebian Electric Power Equipment Co. , Ltd.

Shandong Tebian Electric Power Equipment Co. , Ltd.

GENERAL MANAGER DELIVERS A SPEECH

Dear Friends from All Walks of Life,

Hope this message finds you well.

First of all, on behalf of all employees of Shandong Tebian Electrical Equipment Co., Ltd., I would like to express our gratitude to all new and existing customers for your care and support, as well as to friends from all sectors for your attention. It is precisely because of your concern and help that Shandong Tebian Electrical Equipment Co., Ltd. has been able to thrive to this day.

Since its establishment, Shandong Tebian Electrical Equipment Co., Ltd. has always placed product quality and corporate reputation as our top priorities. The quality policy we have consistently implemented is "Credibility as Solid as a Mountain, Quality as Precious as Gold." Through the joint efforts of all staff, our company obtained the ISO9001 Quality Management System Certification and ISO14001 Environmental Management System Certification in 2008. The "Daifeng" series of products have been awarded the titles of "National Quality Trustworthy Products" and "Famous Chinese Brands". These achievements would not have been possible without the hard work of all employees and the support of industry peers. Shandong Tebian Electrical Equipment Co., Ltd. will continue to uphold our quality policy, using our sincerity and dedication to meet your needs and earn your trust.

We are committed to integrity, striving to seek cooperation with all sectors of society. With the goal of building a first-class brand in the industry, we will make every effort to refine and strengthen the "Daifeng" brand in electrical equipment and electrical construction services. We aim to create new value for customers, pursue better benefits for our employees, contribute to the innovation, transformation, and future of the industry, and make greater contributions to society.

We will take practical actions to shape a new future for Shandong Tebian Electrical Equipment Co., Ltd.!

General Manager Fang Yuguo, together with all employees, pays tribute to friends from all walks of life!

Advanced technology, focusing on the field of power equipment for more than ten years

Building a complete full process industrial chain from research and development to providing solutions

Through multiple authoritative certifications such as ISO9001,we have been honored with national high-tech titles

Excellent product quality,able to operate stably even in harsh environments

Factory direct delivery,supporting on-demand customization of products

Bestselling globally, we are a high-quality leader in China's power equipment industry!

CONTENTS

>>> COMPANY PROFILE

At the majestic southern foothills of Mount Tai and the tranquil banks of the Wen River, Shandong Tebian Electric Power Equipment Co., Ltd. is located at the foot of Mount Tai, one of China's Five Great Mountains, at a prime junction between Jinan, the "City of Springs," and Qufu, the hometown of Confucius. We enjoy convenient transportation and a prominent geographical advantage.

After over thirty years of development, we have grown into a comprehensive enterprise integrating the entire industry chain, including power transformer and complete equipment manufacturing, power engineering construction, and power technology R&D. We have become a core force in the regional electric power industry!

We hold Class II general contracting qualification for power construction and Class II qualifications for installation, maintenance, and testing of power facilities. We own 3 invention patents and 6 utility model patents, with fixed assets exceeding 57 million yuan and more than 80 sets of advanced equipment.

Our products cover 35KV and below S13, S20, S22 series and other oil-immersed transformers, SCB12, SCB13, SCB14, SCB18 series and other dry-type transformers, YB series box-type substations, ZGS series American type box transformer, and high- and low-voltage complete equipment. These products meet diverse customer needs, and we have full-process capabilities for the R&D, design, production, and system integration of Photovoltaic Inverter and Energy Storage Integrated Cabinet and prefabricated substation.

We have supported many key domestic power projects. We also undertake electric power projects of 110kV and below, including management for connecting customer's installation, residential community power systems, photovoltaic and wind power generation. We offer a full chain of services including testing, inspection, and outsourced maintenance of power equipment and lines. With excellent technology and professional service, we deliver comprehensive smart power solutions for our customers.

Since our founding, we have been committed to innovation. In 2011, we successfully obtained ISO9001 quality management system certification and ISO14001 environmental management system certification, laying a solid foundation for service quality and green development. In 2022, we were awarded the titles of National High-tech Enterprise and technology-based small and medium-sized enterprise.

Our "Daifeng" brand transformers have powered mines and oilfields, not only supported high-speed rail infrastructure, 。

And illuminated livelihood improvement projects, but also supported the Belt and Road Initiative, and contributed to China's 2030/2060 dual carbon goals. These efforts have won recognition and support from friends at home and abroad!

At Shandong Tebian Electric Power Equipment Co., Ltd., we are committed to crafting high-quality, energy-efficient products as industry benchmarks. With sincere and attentive service, we aim to set industry examples. Rooted in "pragmatism and innovation" and driven by "quality and credibility," we forge the soul of our enterprise and the foundation of our service。 With high-quality development and new productive forces, we are charting a new chapter for the future of electric power!

>>> BASIC INFORMATION OF THE COMPANY

统一社会信用代码

营业执照

（副本）

名　　称

类　　型

法定代表人

经营范围

注册资本

成立日期

住　　所

登记机关

2023 年 08 月 15 日

开户许可证

核准号：J4630002490001　　编号：4510- 01991641

经审核，山东特变电力设备有限公司　　符合开户条件，准予开立基本存款账户。

法定代表人（单位负责人）房玉国　　开户银行 中国工商银行泰安市岱岳区支行新城分理处

账　号 1604010109020130490

发证机关（盖章）

20[illegible] 年 10 月 21 日

>>> BASIC INFORMATION OF THE COMPANY


质量管理体系认证证书
山东特变电力设备有限公司
山东利安雅国际认证服务有限公司


职业健康安全管理体系认证证书
山东特变电力设备有限公司
山东利安雅国际认证服务有限公司


环境管理体系认证证书
山东特变电力设备有限公司
山东利安雅国际认证服务有限公司

>>> BASIC INFORMATION OF THE COMPANY


建筑业企业资质证书

企业名称：
详细地址：
经济性质：
证书编号：D237154729
有效期：
备注：


安全生产许可证


中华人民共和国
承装(修、试)电力设施许可证
（副本）

>>> CORPORATE HONORS

>>> CORPORATE HONORS

>>> PATENT CERTIFICATE

>>> INSPECTION REPORT

>>> INSPECTION REPORT


型式试验报告
Type Test Report


型式试验报告
Type Test Report


检验（试验）报告
Test Report


检 验 报 告
TEST REPORT
国家高低压电器质量监督检验中心
甘肃电器科学研究院

>>> INSPECTION REPORT

>>> INSPECTION REPORT

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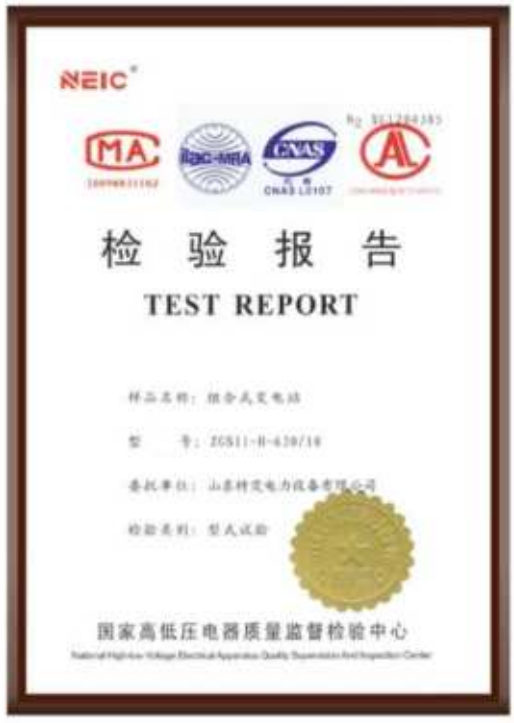


>>> INSPECTION REPORT

>>> INSPECTION REPORT


国家强制性产品认证

试验报告


国家强制性产品认证

试验报告


检验（试验）报告
Test Report


国家强制性产品认证
试验报告

>>> INSPECTION REPORT

>>> Product Introduction

◆ 35 kV OR LESS OIL-IMMERSED TRANSFORMER

10kV Distribution transformer

Model Description

S □ — M — XXXX / □

- Rated Power (kVA)
- Rated High Voltage (kV)
- Totally Enclosed
- Level Code
- Three-phase Transformer

10kV Power transformer with OLTC

Product Introduction

The oil immersed transformers produced by our company are suitable for power systems with an AC frequency of 50Hz and a rated working voltage of 35kV and below. They are used in various fields such as industry, agriculture, transportation, and urban communities, and are the main substation equipment in transmission and distribution networks. This series of products has the following technical characteristics:

1. The iron core is made of high-quality high magnetic conductivity cold-rolled oriented silicon steel sheets, which are processed through a fully automatic shearing production line to improve processing accuracy and lamination coefficient, fully ensuring the performance of cold-rolled silicon steel sheets. The clamping structure is designed reasonably to make the entire body a solid whole, while ensuring that the iron chip is in the optimal stress state, thereby reducing no-load losses.

2. The winding uses oxygen free copper wires from the same manufacturer and batch. The insulation between the wires and layers is made of high-density cable paper. The high-voltage winding adopts a multi-layer cylindrical or cake structure, strictly controlling the inter layer voltage and maximum field strength to ensure the insulation strength of the winding. Adopting a new insulation structure ensures the mechanical strength of the winding and improves its resistance to short-circuit impact.

At the same time, it improves the heat dissipation capacity of the coil, reduces the temperature rise of the hottest point of the winding, slows down the insulation aging rate, and extends the service life of the transformer.

3. The structure of the oil tank for small capacity distribution transformers is a fully sealed corrugated oil tank. The transformer oil does not come into contact with the surrounding air, which prevents the oil from absorbing external oxygen and moisture, thereby delaying the aging of the transformer oil and insulation materials. 5000kVA and above power transformers adopt bucket or bell jar type oil tanks and plate type radiator structures. Cooling fans can be installed on the plate according to requirements to increase additional cooling capacity. Oil pillows can be capsule or corrugated to isolate transformer oil from air.

4. The S11 and S13 series low loss power transformers comply with the national standards GB/T 1094 "Power Transformers" and GB/T 6451 "Technical Parameters and Requirements for Three phase Oil immersed Power Transformers", and have the characteristics of high efficiency, high reliability, low loss, and low noise. The S20 and S22 transformers are the latest energy-saving products developed by our company, which meet the national standard GB 20052 "Energy Efficiency Limits and Grades for Power Transformers" with energy efficiency levels of 1 and 2. Compared with the S11 and S13 products, the loss and noise levels are significantly reduced, reducing the total life cycle cost of transformers. They have good economic and social benefits and are key transmission equipment promoted by the country in the current and future periods.

35kV Distribution transformer

35kV Power transformer with OLTC

Use condition

1. **Maximum ambient temperature:** +40 ℃
2. **Minimum ambient temperature:** -25 ℃
3. **Altitude:** < 1000m
4. **Maximum monthly average relative humidity:** 90% (20 ℃)
5. **Installation location: Installed in places without fire,** explosion hazards, severe pollution, chemical corrosion, and severe vibration, indoors or outdoors.

Execution standards

- GB1094.1 Power Transformers Part 1: General Provisions
- GB1094.2 Power Transformers Part 2: Temperature Rise
- GB/T1094.3 Power Transformers Part 3: Insulation Level, Insulation Test, and External Insulation Air Gap
- GB/T6451 Technical Parameters and Requirements for Oil immersed Power Transformers
- GB/T3837 Method for Model Designation of Transformer Products
- GB20052 Energy Efficiency Limits and Grades for Power Transformers

S11-30 ～ 2500/10/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
30	6 6.3 10 10.5 11	±5% 或 ±2×2.5%	0.4	Yyn0 Dyn11	0.10	0.63/0.60	1.50	4.0
50					0.13	0.91/0.87	1.30	
63					0.15	1.09/1.04	1.20	
80					0.18	1.31/1.25	1.20	
100					0.20	1.58/1.50	1.10	
125					0.24	1.89/1.80	1.10	
160					0.28	2.31/2.20	1.00	
200					0.34	2.73/2.60	1.00	
250					0.40	3.20/3.05	0.90	
315					0.48	3.83/3.65	0.90	
400					0.57	4.52/4.30	0.80	
500					0.68	5.41/5.15	0.80	
630					0.81	6.20	0.60	4.5
800					0.98	7.50	0.60	
1000					1.15	10.3	0.60	
1250					1.36	12.0	0.50	
1600					1.64	14.5	0.50	
2000					1.94	18.3	0.40	5.0
2500					2.29	21.2	0.40	
Special note:	For transformers with a rated power of 500kVA and below, the load loss values above the diagonal line in the table apply to the Dyn11 connection symbol, and the load loss values below the diagonal line apply to the Yyn0 connection symbol.							

S13-30 ～ 2500/10/0.4 series technical parameters

Rated Power	Combination of various rated voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
30	6 6.3 10 10.5 1	±5% 或 ±2×2.5%	0.4	Yyn0 Dyn11	0.08	0.63/0.60	1.20	4.0
50					0.10	0.91/0.87	1.04	
63					0.11	1.09/1.04	0.96	
80					0.13	1.31/1.25	0.96	
100					0.15	1.58/1.50	0.88	
125					0.17	1.89/1.80	0.88	
160					0.20	2.31/2.20	0.80	
200					0.24	2.73/2.60	0.80	
250					0.29	3.20/3.05	0.72	
315					0.34	3.83/3.65	0.72	
400					0.41	4.52/4.30	0.64	
500					0.48	5.41/5.15	0.64	
630					0.57	6.20	0.48	4.5
800					0.70	7.50	0.48	
1000					0.83	10.3	0.48	
1250					0.97	12.0	0.40	
1600					1.17	14.5	0.40	
2000					1.36	18.3	0.32	5.0
2500					1.60	21.2	0.32	
Special note:	For transformers with a rated power of 500kVA and below, the load loss values above the diagonal line in the table apply to the Dyn11 connection symbol, and the load loss values below the diagonal line apply to the Yyn0 connection symbol.							

S20-30 ～ 2500/10/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
30	6 6.3 10 10.5 11	±5%或 ±2×2.5%	0.4	Yyn0 Dyn11	0.07	0.505/0.48	1.20	4.0
50					0.09	0.73/0.695	1.04	
63					0.10	0.87/0.83	0.96	
80					0.115	1.05/1.00	0.96	
100					0.135	1.265/1.20	0.88	
125					0.15	1.51/1.44	0.88	
160					0.18	1.85/1.76	0.80	
200					0.215	2.185/2.08	0.80	
250					0.26	2.56/2.44	0.72	
315					0.305	3.065/2.92	0.72	
400					0.37	3.615/3.44	0.64	
500					0.43	4.33/4.12	0.64	
630					0.51	4.96	0.48	4.5
800					0.63	6.00	0.48	
1000					0.745	8.24	0.48	
1250					0.87	9.60	0.40	
1600					1.05	11.6	0.40	
2000					1.225	14.64	0.32	5.0
2500					1.44	16.96	0.32	
Special note:	For transformers with a rated power of 500kVA and below, the load loss values above the diagonal line in the table apply to the Dyn11 connection symbol, while the load loss values below the diagonal line apply The consumption value is applicable to Yyn0 combination symbol.							

S22-30 ～ 2500/10/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
30	6 6.3 10 10.5 11	±5%或 ±2×2.5%	0.4	Yyn0 Dyn11	0.065	0.455/0.43	1.20	4.0
50					0.08	0.655/0.625	1.04	
63					0.09	0.785/0.745	0.96	
80					0.105	0.945/0.90	0.96	
100					0.12	1.14/1.08	0.88	
125					0.135	1.36/1.295	0.88	
160					0.16	1.665/1.585	0.80	
200					0.19	1.97/1.87	0.80	
250					0.23	2.30/2.195	0.72	
315					0.27	2.76/2.63	0.72	
400					0.33	3.25/3.095	0.64	
500					0.385	3.90/3.71	0.64	
630					0.46	4.46	0.48	4.5
800					0.56	5.40	0.48	
1000					0.665	7.415	0.48	
1250					0.78	8.64	0.40	
1600					0.94	10.44	0.40	
2000					1.085	13.18	0.32	5.0
2500					1.28	15.27	0.32	
Special note:	For transformers with a rated power of 500kVA and below, the load loss values above the diagonal line in the table apply to the Dyn11 connection symbol, and the load loss values below the diagonal line apply to the Yyn0 connection symbol.							

SZ11-200 ～ 2500/10/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	High Voltage	High Voltage Tap	Low Voltage					
200	6 6.3 10 10.5 11	±4×2.5%	0.4	Yyn0 Dyn11	0.38	2.90	1.00	4.0
250					0.44	3.42	0.90	
315					0.53	4.10	0.90	
400					0.64	4.95	0.80	
500					0.76	5.89	0.80	
630					0.96	7.26	0.60	4.5
800					1.12	8.89	0.60	
1000					1.36	10.4	0.60	
1250					1.56	12.3	0.50	
1600					1.92	14.7	0.50	
2000					2.27	18.6	0.40	5.0
2500					2.68	21.6	0.40	

SZ13-200 ～ 2500/10/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	High Voltage	High Voltage Tap	Low Voltage					
200	6 6.3 10 10.5 11	±4×2.5%	0.4	Yyn0 Dyn11	0.305	2.90	0.80	4.0
250					0.350	3.42	0.72	
315					0.425	4.10	0.72	
400					0.510	4.95	0.64	
500					0.610	5.89	0.64	
630					0.770	7.26	0.48	4.5
800					0.895	8.89	0.48	
1000					1.09	10.4	0.48	
1250					1.25	12.3	0.40	
1600					1.54	14.7	0.40	
2000					1.82	18.6	0.32	5.0
2500					2.14	21.6	0.32	

S11-50 ～ 2500/35/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
50	35 38.5	±5 ±2×2.5	0.4	Dyn11 Yyn0	0.16	1.20/1.14	1.3	6.5
100					0.23	2.01/1.91	1.1	
125					0.27	2.37/2.26	1.1	
160					0.28	2.82/2.68	1.0	
200					0.34	3.32/3.16	1.0	
250					0.40	3.95/3.76	0.95	
315					0.48	4.75/4.53	0.95	
400					0.58	5.74/5.47	0.85	
500					0.68	6.91/6.58	0.85	
630					0.83	7.86	0.65	
800					0.98	9.40	0.65	
1000					1.15	11.5	0.65	
1250					1.40	13.9	0.60	
1600					1.69	16.6	0.60	
2000					1.99	19.7	0.55	
2500					2.36	23.2	0.55	
Special note:	For transformers with a rated power of 500kVA and below, the load loss values above the diagonal line in the table apply to the Dyn11 connection symbol, and the load loss values below the diagonal line apply to the Yyn0 connection symbol.							

S13-50 ～ 2500/35/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
50	35 38.5	±5 ±2×2.5	0.4	Dyn11 Yyn0	0.130	1.14/1.08	1.0	6.5
100					0.185	1.91/1.81	0.88	
125					0.215	2.25/2.15	0.88	
160					0.225	2.68/2.55	0.80	
200					0.270	3.15/3.00	0.80	
250					0.320	3.75/3.57	0.76	
315					0.385	4.51/4.30	0.76	
400					0.465	5.45/5.20	0.68	
500					0.545	6.56/6.25	0.68	
630					0.665	7.47	0.52	
800					0.785	8.93	0.52	
1000					0.920	10.9	0.52	
1250					1.12	13.2	0.48	
1600					1.35	15.8	0.48	
2000					1.59	19.7	0.44	
2500					1.89	23.2	0.44	
Special note:	For transformers with a rated power of 500kVA and below, the load loss values above the diagonal line in the table apply to the Dyn11 connection symbol, and the load loss values below the diagonal line apply to the Yyn0 connection symbol.							

S11-630 ~ 31500/35/10.5 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	High Voltage	High Voltage Tap	Low Voltage					
630	35	±5 ±2×2.5	3.15 6.3 10.5	Yd11	0.83	7.86	0.65	6.5
800					0.98	9.40	0.65	
1000					1.15	11.5	0.65	
1250					1.40	13.9	0.55	
1600					1.69	16.6	0.45	
2000					2.17	18.3	0.45	
2500					2.56	19.6	0.45	
3150	35 38.5				3.04	23.0	0.45	7.0
4000					3.61	27.3	0.45	
5000					4.32	31.3	0.45	
6300					5.24	35.0	0.45	8.0
8000		±2×2.5	3.15 3.3 6.3 6.6 10.5	YNd11	7.20	38.4	0.35	
10000					8.70	45.3	0.35	
12500					10.0	53.8	0.30	
16000					12.1	65.8	0.30	
20000					14.4	79.5	0.30	
25000					17.0	94.0	0.25	10.0
31500					20.2	112	0.25	

S18-630 ~ 31500/35/10.5 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	High Voltage	High Voltage Tap	Low Voltage					
630	35	±5 ±2×2.5	3.15 6.3 10.5	Yd11	0.66	7.47	0.52	6.5
800					0.78	8.93	0.52	
1000					0.92	10.9	0.52	
1250					1.12	13.2	0.44	
1600					1.35	15.8	0.36	
2000					1.74	17.4	0.36	
2500					2.05	18.6	0.36	
3150	35 38.5				2.40	21.9	0.36	7.0
4000					2.90	25.9	0.36	
5000					3.50	29.7	0.36	
6300					4.20	33.3	0.36	8.0
8000		±2×2.5	3.15 3.3 6.3 6.6 10.5	YNd11	5.80	36.5	0.28	
10000					7.00	43.0	0.28	
12500					8.00	51.1	0.24	
16000					9.70	62.5	0.24	
20000					11.5	75.5	0.24	
25000					13.6	89.3	0.20	10.0
31500					16.2	106.4	0.20	

S20-3150 ~ 31500/35/10.5 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
3150	35 38.5	±5 ±2×2.5	3.15 6.3 10.5	Yd11	2.0	20.7	0.36	7.0
4000					2.3	24.6	0.36	
5000					2.8	28.2	0.36	
6300					3.4	31.5	0.36	8.0
8000		±2×2.5	3.15 3.3 6.3 6.6 10.5	YNd11	4.7	34.6	0.28	
10000					5.7	40.8	0.28	
12500					6.5	48.4	0.24	
16000					7.9	59.2	0.24	
20000					9.4	71.6	0.24	
25000					11.1	84.6	0.20	10.0
31500					13.1	100.8	0.20	

S22-3150 ~ 31500/35/10.5 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	High Voltage	High Voltage Tap	Low Voltage					
3150	35 38.5	±5 ±2×2.5	3.15 6.3 10.5	Yd11	1.7	20.7	0.36	7.0
4000					2.0	24.6	0.36	
5000					2.4	28.2	0.36	
6300					2.9	31.5	0.36	8.0
8000		±2×2.5	3.15 3.3 6.3 6.6 10.5	YNd11	4.0	34.6	0.28	
10000					4.8	40.8	0.28	
12500					5.5	48.4	0.24	
16000					6.7	59.2	0.24	
20000					7.9	71.6	0.24	
25000					9.4	84.6	0.20	10.0
31500					11.1	100.8	0.20	

SZ11-2000 ~ 31500/35/10.5 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
2000	35	±3×2.5	6.3 10.5	Yd11	2.30	19.2	0.50	6.5
2500					2.72	20.6	0.50	
3150	35 38.5				3.23	24.7	0.50	7.0
4000					3.87	29.1	0.50	
5000					4.64	34.2	0.50	
6300					5.63	36.7	0.50	8.0
8000			6.3 6.6 10.5	YNd11	7.87	40.6	0.40	
10000					9.28	48.0	0.40	
12500					10.9	56.8	0.35	
16000					13.1	70.3	0.35	
20000					15.5	82.7	0.35	
25000					18.3	97.8	0.30	10.0
31500					21.8	116	0.30	

SZ18-2000 ~ 31500/35/10.5 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
2000	35	±3×2.5	6.3 10.5	Yd11	1.84	18.2	0.40	6.5
2500					2.18	19.6	0.40	
3150	35 38.5				2.60	23.5	0.40	7.0
4000					3.10	27.6	0.40	
5000					3.70	32.5	0.40	
6300					4.50	34.9	0.40	8.0
8000			6.3 6.6 10.5	YNd11	6.30	38.6	0.32	
10000					7.40	45.6	0.32	
12500					8.70	54.0	0.28	
16000					10.5	66.8	0.28	
20000					12.4	78.6	0.28	
25000					14.6	92.9	0.24	10.0
31500					17.4	110.2	0.24	

SZ20-3150 ~ 31500/35/10.5 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75°C)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
3150	35 38.5		6.3 10.5	Yd11	2.1	22.2	0.40	7.0
4000					2.5	26.2	0.40	
5000					3.0	30.8	0.40	
6300					3.7	33.0	0.40	8.0
8000			6.3 6.6 10.5	YNd11	5.1	36.5	0.32	
10000					6.0	43.2	0.32	
12500					7.1	51.1	0.28	
16000					8.5	63.3	0.28	
20000					10.1	74.4	0.28	
25000					11.9	88.0	0.24	10.0
31500					14.2	104.4	0.24	

SZ22-3150 ~ 31500/35/10.5 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75°C)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
3150	35 38.5		6.3 10.5	Yd11	1.8	22.2	0.40	7.0
4000					2.1	26.2	0.40	
5000					2.6	30.8	0.40	
6300					3.1	33.0	0.40	8.0
8000			6.3 6.6 10.5	YNd11	4.3	36.5	0.32	
10000					5.1	43.2	0.32	
12500					6.0	51.1	0.28	
16000					7.2	63.3	0.28	
20000					8.5	74.4	0.28	
25000					10.1	88.0	0.24	10.0
31500					12.0	104.4	0.24	

>>> Product Introduction

◆ 35 kV OR LESS EPOXY RESIN CAST DRY-TYPE TRANSFORMER

10kV Dry-Type Transformer

Model Description

S C (B)- □—XXXX/ □

- Voltage level (kV)
- Rated Power (kVA)
- Foil wound coil
- Resin Cast
- Three-phase Transformer

35kV Dry-Type Transformer

Product Introduction

10kV epoxy resin cast dry-type transformer can be used as a replacement product for oil immersed distribution transformers, and is the most energy-efficient product among all types of dry-type transformers. It is particularly suitable for important places such as urban power grids, high-rise buildings, business centers, theaters, hospitals, hotels, tunnels, subways, underground power stations, laboratories, stations, docks, airports, and combination substations.

The SCB10-18 type produced by our factory is a low-noise and low loss epoxy resin cast dry-type transformer with a national product model certificate. SCB18 and SCB14 dry-type transformers are the latest energy-saving products developed by our company, which meet the national standard GB20052 materials, scientific formulas, strict processes, and high standards of testing, the product has the following characteristics:

1. High voltage windings are made of copper wire, low voltage windings are made of copper wire or copper foil, filled and wrapped with glass mesh cloth, and poured with unfilled epoxy resin under vacuum to form a sturdy cylindrical whole after curing, with high mechanical strength, low partial discharge, and high reliability. Flame retardant, explosion-proof, and non polluting to the environment. The insulation materials such as glass fiber used to wrap the coil have self extinguishing properties and will not generate arcs due to short circuits. The resin will not produce toxic or harmful gases under high heat.

2. The coil does not absorb moisture, and the iron core clamp has a special anti-corrosion protection layer, which can operate in 100% relative humidity and other harsh environments. Intermittent operation does not require dehumidification.

3. High resistance to short circuits and lightning strikes. The product has the material characteristics of epoxy resin, and the winding is cast as a whole, which is heated and cured to form a rigid body. Therefore, the mechanical strength of epoxy cast dry-type transformers is very high. Through sudden short-circuit tests, it has been proven that very few cast transformers are damaged due to short circuits. Epoxy cast dry-type transformers have an insulation breakdown field strength of 18-22KV/mm, and have approximately the same lightning impulse strength as oil immersed transformers of the same voltage level.
4. The resin layer on the inner and outer sides of the coil is thin and has good heat dissipation performance. Low loss, good energy-saving effect, economical operation, and maintenance free.
5. Small size, light weight, small footprint, low installation cost, no need to consider oil drainage tanks, fire prevention and firefighting facilities, and backup power sources.
6. Due to the absence of fire extinguishing or explosion concerns, it can be installed in a dispersed manner in the load center, fully close to the power consumption point, thereby reducing the cost of power lines and saving expensive low-voltage facilities.
7. The shell material is made of stainless steel or aluminum alloy. The protection level reaches IP20 and IP31.
The IP20 casing can prevent solid foreign objects with a diameter greater than 12mm from entering, while the IP31 casing can prevent solid foreign objects with a diameter greater than 2.5mm from entering and prevent water droplets from entering, thereby providing further safety protection for the transformer.
8. The transformer adopts an intelligent signal temperature control system, with analog output of 3-channel 4-20mA interface and digital output of RS232 or RS485 serial communication interface. It can automatically monitor and display the working temperature of each phase winding on the same screen, automatically start and stop the fan, and has functions such as alarm and trip settings.
9. The cooling method generally adopts natural air cooling (AN). For any protection level of transformer, an air cooling system (AF) can be configured to improve the short circuit
Overload capacity ensures safe operation. Under normal usage conditions, natural air cooling (AN) can continuously output 100% of its rated capacity. Under normal usage conditions, forced air cooling (AF) can achieve a 50% capacity increase and is suitable for various emergency overload or intermittent overload operations; Due to significant load losses and impedance voltage amplification, forced air cooling (AF) is generally not recommended for long-term continuous overload operation.

Use condition

1.Maximum ambient temperature:+40 ℃.
2. Minimum ambient temperature: -25 ℃.
3. Altitude: < 1000m.
4. Maximum monthly average relative humidity: 90% (20 ℃).

Execution standards

·GB1094.1 Power Transformers Part 1: General Provisions
·GB1094.2 Power Transformers Part 2: Temperature Rise
·GB/T1094.3 Power Transformers Part 3: Insulation Level, Insulation Test, and External Insulation Air Gap
·GB/T6451 Technical Parameters and Requirements for Oil immersed Power Transformers
·GB/T3837 Method for Model Designation of Transformer Products
·GB20052 Energy Efficiency Limits and Grades for Power Transformers

SCB10-30 ~ 2500/10/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
30	6 6.3 10 10.5 11	±5% 或 ±2×2.5%	0.4	Yyn0 Dyn11	0.19	0.71	2.0	4.0
50					0.27	1.00	2.0	
80					0.37	1.38	1.5	
100					0.40	1.57	1.5	
125					0.47	1.85	1.3	
160					0.54	2.13	1.3	
200					0.62	2.53	1.1	
250					0.72	2.76	1.1	
315					0.88	3.47	1.0	
400					0.98	3.99	1.0	
500					1.16	4.88	1.0	
630					1.34	5.88	0.85	
630					1.30	5.96	0.85	6.0
800					1.52	6.96	0.85	
1000					1.77	8.13	0.85	
1250					2.09	9.69	0.85	
1600					2.45	11.7	0.85	
2000					3.05	14.4	0.7	
2500					3.60	17.1	0.7	

SCB11-30 ~ 2500/10/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
30	6 6.3 10 10.5 11	±5% 或 ±2×2.5%	0.4	Yyn0 Dyn11	0.17	0.71	2.0	4.0
50					0.25	1.00	2.0	
80					0.34	1.38	1.5	
100					0.36	1.57	1.5	
125					0.42	1.85	1.3	
160					0.49	2.13	1.3	
200					0.56	2.53	1.1	
250					0.65	2.76	1.1	
315					0.79	3.47	1.0	
400					0.88	3.99	1.0	
500					1.05	4.88	1.0	
630					1.21	5.88	0.85	
630					1.17	5.96	0.85	6.0
800					1.37	6.96	0.85	
1000					1.59	8.13	0.85	
1250					1.88	9.69	0.85	
1600					2.21	11.7	0.85	
2000					2.72	14.4	0.7	
2500					3.20	17.1	0.7	

SCB12-30 ~ 2500/10/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
30	6 6.3 10 10.5 11	±5%或 ±2×2.5%	0.4	Yyn0 Dyn11	0.150	0.71	2.0	4.0
50					0.215	1.00	2.0	
80					0.295	1.38	1.5	
100					0.320	1.57	1.5	
125					0.375	1.85	1.3	
160					0.430	2.13	1.3	
200					0.495	2.53	1.1	
250					0.575	2.76	0.9	
315					0.705	3.47	0.8	
400					0.785	3.99	0.8	
500					0.930	4.88	0.8	
630					1.07	5.88	0.7	
630					1.04	5.96	0.7	6.0
800					1.21	6.96	0.7	
1000					1.41	8.13	0.7	
1250					1.67	9.69	0.7	
1600					1.96	11.7	0.7	
2000					2.44	14.4	0.6	
2500					2.88	17.1	0.6	

SCB13-30 ~ 2500/10/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
30	6 6.3 10 10.5 11	±5%或 ±2×2.5%	0.4	Yyn0 Dyn11	0.135	0.640	2.0	4.0
50					0.195	0.900	2.0	
80					0.265	1.240	1.5	
100					0.290	1.415	1.5	
125					0.340	1.665	1.3	
160					0.385	1.915	1.3	
200					0.445	2.275	1.1	
250					0.515	2.485	0.9	
315					0.635	3.125	0.8	
400					0.705	3.590	0.8	
500					0.835	4.390	0.8	
630					0.965	5.295	0.7	
630					0.935	5.365	0.7	6.0
800					1.09	6.265	0.7	
1000					1.27	7.315	0.7	
1250					1.50	8.720	0.7	
1600					1.76	10.555	0.7	
2000					2.19	13.005	0.6	
2500					2.59	15.445	0.6	

SCB14-30 ~ 2500/10/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
30	6 6.3 10 10.5 11	±5%或 ±2×2.5%	0.4	Yyn0 Dyn11	0.130	0.640	2.0	4.0
50					0.185	0.900	2.0	
80					0.250	1.240	1.5	
100					0.270	1.415	1.5	
125					0.320	1.665	1.3	
160					0.365	1.915	1.3	
200					0.420	2.275	1.1	
250					0.490	2.485	0.9	
315					0.600	3.125	0.8	
400					0.665	3.590	0.8	
500					0.790	4.390	0.8	
630					0.910	5.295	0.7	
630					0.885	5.365	0.7	6.0
800					1.035	6.265	0.7	
1000					1.205	7.315	0.7	
1250					1.420	8.720	0.7	
1600					1.665	10.555	0.7	
2000					2.075	13.005	0.6	
2500					2.450	15.445	0.6	

SCB18-30 ~ 2500/10/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
30	6 6.3 10 10.5 11	±5%或 ±2×2.5%	0.4	Yyn0 Dyn11	0.105	0.640	2.0	4.0
50					0.155	0.900	2.0	
80					0.210	1.240	1.5	
100					0.230	1.415	1.5	
125					0.270	1.665	1.3	
160					0.310	1.915	1.3	
200					0.360	2.275	1.1	
250					0.415	2.485	0.9	
315					0.510	3.125	0.8	
400					0.570	3.590	0.8	
500					0.670	4.390	0.8	
630					0.775	5.295	0.7	
630					0.750	5.365	0.7	6.0
800					0.875	6.265	0.7	
1000					1.020	7.315	0.7	
1250					1.205	8.720	0.7	
1600					1.415	10.555	0.7	
2000					1.760	13.005	0.6	
2500					2.080	15.445	0.6	

SCZB10-315 ~ 2500/10/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
315	6 6.3 6.6 10 10.5 11	±4×2.5	0.4	Dyn11 Yyn0	0.99	3.61	1.1	4.0
400					1.12	4.27	1.1	
500					1.29	5.22	1.1	
630					1.49	6.17	1.0	
630					1.44	6.36	1.0	6.0
800					1.71	7.50	1.0	
1000					1.98	8.78	0.85	
1250					2.34	10.4	0.85	
1600					2.72	12.4	0.85	
2000					3.42	15.2	0.7	
2500					3.96	18.1	0.7	

SCZB12-315 ~ 2500/10/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
315	6 6.3 6.6 10 10.5 11	±4×2.5	0.4	Dyn11 Yyn0	0.79	3.61	0.8	4.0
400					0.89	4.27	0.8	
500					1.03	5.22	0.8	
630					1.19	6.17	0.7	
630					1.15	6.36	0.7	6.0
800					1.36	7.50	0.7	
1000					1.58	8.78	0.7	
1250					1.87	10.4	0.7	
1600					2.17	12.4	0.7	
2000					2.73	15.2	0.6	
2500					3.16	18.1	0.6	

SCB10-50 ~ 2500/35/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
50	35 36 37 38.5	±5 ±2×2.5	0.4	Dyn11 Yyn0	0.45	1.42	2.3	6.0
100					0.63	2.09	2.0	
160					0.79	2.81	1.5	
200					0.88	3.32	1.5	
250					0.99	3.80	1.3	
315					1.17	4.51	1.3	
400					1.37	5.41	1.1	
500					1.62	6.65	1.1	
630					1.86	7.69	1.0	
800					2.16	9.12	1.0	
1000					2.43	10.4	0.75	
1250					2.83	12.7	0.75	
1600					3.24	15.4	0.75	
2000					3.82	18.2	0.75	
2500					4.45	21.8	0.75	

SCB11-50 ~ 2500/35/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
50	35 36 37 38.5	±5 ±2×2.5	0.4	Dyn11 Yyn0	0.41	1.42	2.1	6.0
100					0.57	2.09	1.8	
160					0.71	2.81	1.4	
200					0.80	3.32	1.4	
250					0.89	3.80	1.2	
315					1.06	4.51	1.2	
400					1.24	5.41	1.0	
500					1.46	6.65	1.0	
630					1.68	7.69	0.9	
800					1.95	9.12	0.9	
1000					2.19	10.4	0.7	
1250					2.55	12.7	0.7	
1600					2.92	15.4	0.7	
2000					3.44	18.2	0.7	
2500					4.01	21.8	0.7	

SCB12-50 ～ 2500/35/0.4 series technical parameters

Rated Power	Combination Of Various Rated Voltage			Connection Symbol	No-load Loss kW	Load Loss kW(75℃)	No-Load Current %	Impedance Voltage %
	Hign Voltage	Hign Voltage Tap	Low Voltage					
50	35 36 37 38.5	±5 ±2×2.5	0.4	Dyn11 Yyn0	0.360	1.42	2.1	6.0
100					0.505	2.09	1.8	
160					0.635	2.81	1.4	
200					0.705	3.32	1.4	
250					0.795	3.80	1.2	
315					0.935	4.51	1.2	
400					1.10	5.41	1.0	
500					1.30	6.65	1.0	
630					1.49	7.69	0.9	
800					1.73	9.12	0.9	
1000					1.94	10.4	0.7	
1250					2.26	12.7	0.7	
1600					2.59	15.4	0.7	
2000					3.06	18.2	0.7	
2500					3.56	21.8	0.7	

>>> Product Introduction

◆ YB □ -12/0.4kV SERIES HV/LV PREFABRICATED SUBSTATION

Product Introduction

The YB □ -12/0.4 series prefabricated substation is a complete set of transformer and distribution equipment that integrates high-voltage switchgear, power transformers, and low-voltage switchgear. It has a reasonable layout, small footprint, quick installation, metal enclosed shell and ground potential, safe and reliable structure, dust and small animal prevention, and good ventilation. It is suitable for residential areas, blocks, parks, buildings, commercial areas, industrial and mining enterprises, ports, railways, and construction sites as a permanent device, and can also be used as a power source for construction sites.

Model Description

YB □ - 12 / 0.4 □

- □ — Transformer Power (100 – 1600 kVA)
- 0.4 — Low voltage side rated voltage 0.4kV
- 12 — Hign voltage side rated voltage 12kV
- YB □ — High voltage/low voltage combined substation

Use Conditions

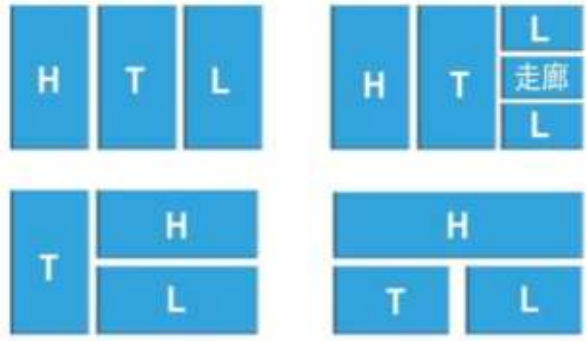
1. Altitude: generally not exceeding 2000m;
2. Surrounding temperature: -15 ℃~+40 ℃ (special ordering conditions: -50 ℃~+40 ℃ for severe cold climate; -5 ℃~+50 ℃ for extremely hot climate); 3. Relative temperature: daily average not exceeding 95%, monthly average not exceeding 90%;
4. Seismic intensity: horizontal acceleration not greater than 0 3g;
5. Places without frequent severe vibrations;
6. The surrounding air should not be significantly polluted by corrosive or flammable gases;
7. The installation inclination shall not exceed 3 degrees;
8. Wind speed ≤ 34m/s;

Note: If the usage conditions exceed the above regulations, the user and manufacturer shall negotiate to resolve the issue.

Basic technical parameters

Name	Unit	High voltage unit		Transformer	Low voltage unit
		Load switch	Fuse(box)		
Rated voltage	kV	12	12	10/0.4	0.4
Rated power	kVA			≤ 1600	
1min Power frequency withstand voltage test	kV	42		35	2.0、2.5
Lightning surge	kV	75/85		75	8.0
Rated current (main circuit))	A	630			
Rated breaking current	kA		31.5		
Short circuit closing current	kA	50			
Dynamic stable current	kA	20			10-65 (1s)
Noise level	dB			< 55	
Box shell protection level	The front perimeter is IP43, and the ventilation part of the top cover has a bottom of the box that is not lower than IP23				

Considering the diversity of power supply user needs, a modular structure is adopted in the structure of the transformer itself.
According to the type of high-voltage switch connected to the power grid, it can be divided into ring network type and terminal type. According to the arrangement of high and low voltage equipment:
The "eye" shaped structure (Figure 1-1,Figure 1-2); The "Pin" - shaped structure (Figure 1-3, Figure 1-4)



H-high voltage room
T-transformer room
L-low voltage room

Divided by the type of built-in transformer: oil immersed fully sealed transformer, dry-type transformer.
According to the selection of high-voltage switches, they can be divided into compressed air load switches, vacuum load switches, sulfur hexafluoride load switches, and vacuum circuit breakers.
According to the material of the box (shell), they can be divided into metal shell and non-metal shell. The non-metallic shell is made by adding fiberglass and special cement prefabricated composite as the shell material, which has high mechanical strength and impact resistance, is not easy to conduct heat, and has fire-resistant and flame-retardant properties. Compared with metal shells, it has better corrosion resistance and extremely long service life.
The design of the chassis is combined with the overall form and lifting method of the box type substation, using a common chassis. The chassis material is made of welded combination of channel steel and I-beam. The metal frame of high and low voltage electrical equipment, as well as the various parts of the transformer casing, have reliable connected grounding conductors with a minimum cross-section of not less than 30mm. There are terminals around the chassis that are connected to the grounding wire for users to choose a grounding point in any direction.
The top of the transformer room is a double-layer metal structure, equipped with insulation layer and ventilation duct, and equipped with automatic exhaust ventilation device. The opening and stopping of the ventilation device are controlled by the temperature monitoring device in the transformer room, and the temperature setting value is set at 80% to 90% of the allowable temperature.
There are doors on both sides of the transformer room for easy installation and maintenance of the transformer. A safety isolation net is also installed inside the door, and an alarm device is installed on the net door to prevent personnel from entering the live interval area and ensure equipment and personal safety.

>>> Product Introduction

◆ ZGS11 COMBINED TRANSFORMER

Product Introduction

Modular substations (also known as prefabricated substations) are more flexible and convenient to use than civil substations, and are widely used in urban network renovation, as well as high-rise buildings, residential communities, industrial parks, commercial centers, airports, stations, docks, schools, factories, and mining enterprises.

ZGS11 box transformer (commonly known as American box transformer) is mainly composed of transformer body, with 10kV load switch, plug-in fuse, backup current limiting fuse, and non excited tap changer installed in the transformer oil tank, forming a common box layout. ZGS11 transformer box, the high and low voltage front compartments are assembled on the transformer oil tank panel, arranged in a "cross" shape with the transformer.

The material of the super shell of the transformer oil tank is ordinary cold-rolled steel plate, and the front compartment of the transformer can also be made of ordinary cold-rolled steel plate, hot-dip galvanized steel plate, stainless steel plate, and aluminum alloy plate. Ordinary cold-rolled steel plates have low cost, while hot-dip galvanized steel plates and aluminum alloy plates have good corrosion resistance.

The combination method of ZGS11 box transformer has the advantages of reasonable design, small volume, light weight, low loss, low noise, compact structure, easy installation, simple maintenance, safe and reliable operation, and low price.

Model Description

Z G S - □ - □ - □ / □

- Voltage level (kV)
- Rated power (kVA)
- High voltage wiring scheme
  - H-ring network type
  - Z-terminal type
- Performance level code
- Three-phase
- Co box type
- Combined transformer

Use Condition

1. Surrounding air temperature
Indoor (outdoor) complete sets of equipment, the ambient air temperature shall not exceed+40 ℃, and the average temperature within 24 hours shall not exceed+35 ℃. The lower limit of indoor ambient air temperature is -5 ℃. The lower limit of outdoor ambient air temperature is:
(1) The temperature in temperate regions is -25 ℃.
(2) The temperature in extremely cold regions is -50 ℃. 2. Atmospheric conditions
(1) The atmospheric conditions of indoor complete equipment. The air is clean, and the relative humidity should not exceed 50% at a maximum temperature of+40 ℃. Allow for higher relative humidity at lower temperatures.
(2) Atmospheric conditions for outdoor complete equipment. When the maximum outdoor temperature is+25 ℃, the relative humidity can reach up to 100% in a short period of time.
(3) Special usage conditions
It is necessary to comply with applicable special requirements or special agreements reached between the manufacturer and the user. 3. Installation location
Installed in a place without severe impact vibration, fire, or corrosive gases, with good ventilation and a ground inclination of no more than 3 °.

Technical Parameter.

Technical parameters of transformer box

Number	Name	Unit	High voltage side	Transformer	Low voltage side
1	Rated frequency	HZ	50(60)		
2	Rated capacity	kVA	50 ~ 1250		
3	Rated voltage	kV	10		0.4
4	Rated operational voltage	kV	12		
5	Rated current (high-voltage electrical components)	A	5 ~ 630		
6	Rated short-circuit withstand time	S	2		1
7	Rated short-time withstand current	kA	12.5, 16, 20		15 ~ 75
8	Rated peak withstand current	kA	20, 31.5, 40		30 ~ 165
9	Power-frequency withstand voltage	kA	35	35	
10	Lightning impulse withstand voltage	kA	70	70	
11	Rated breaking current of high-voltage current limiting fuse	kA	50		
12	Protection grade		IP33	Fully sealed	IP33
13	Noise level	dB		≤ 55	

>>> Product Introduction

◆ DFW SERIES CABLE JUNCTION BOX

Product Introduction

The DFW series cable junction box (also known as cable branch box) is divided into two types: with switch and without switch. It is an outdoor high-voltage electrical equipment with a rated voltage of 12KV and a rated current of 630A, used for connecting and tapping power cables.

DFW series high-voltage cable junction boxes are composed of electrical elements, secondary elements and boxes, such as electrified touchable shielded silicone rubber cable connectors, cable accessories, SF6 load switches or ring network cabinets, vacuum circuit breakers, etc. They fully and flexibly use the advantages of cable connectors in series and parallel connection, and can be reliably combined according to user needs. They realize the characteristics of full sealing, full protection, full insulation, anti condensation, dust prevention, corrosion resistance, and maintenance free, and can operate outdoors all day long.

Material selection for high-voltage cable junction box: Cable junction box with switch:

1. Cold plate spraying 2, stainless steel plate spraying

3. Wooden decorative landscape type 4, non-metallic landscape type

5. SMC non-metallic composite material without switch cable distribution box:

1. Cold plate spraying 2, stainless steel plate spraying

Use Condition

1. Temperature: -40 ° C to+70 ° C. If it is below -40 ° C, please contact us;

2. Temperature: The daily average relative humidity should not exceed 95%, and the monthly average should not exceed 90%;

3. The daily average value of saturated vapor pressure shall not exceed 2.2Kpa, and the monthly average value shall not exceed 1.8Kpa;

4. The altitude does not exceed 2000 meters. If it exceeds the usage limit, please contact us;

The surrounding air is not significantly polluted by dust, smoke, corrosive or flammable gases, vapors, or salt spray;

5. The external insulation has a pollution resistance level of 11 and does not experience frequent severe vibrations.

Parameters

Project	Parameters
Rated voltage	12/24kV
Rated current	630A
Power-frequency withstand voltage	42/65kV
Lightning impulse voltage	75/125kV
Thermal stability current	20kA/2S
Loop resistance	≤ 100μΩ
Protection grade	IP43

>>> Product Introduction

◆ KYN28-12 ARMORED REMOVABLE AC METAL-ENCLOSED SWITCHGEAR

Product Introduction

The KYN28-12 armored movable AC metal enclosed switchgear is a complete set of distribution equipment for 3-12 kV three-phase AC single busbar and single busbar segmented systems. Mainly used for power plants, transmission of small and medium-sized generators, distribution of industrial and mining enterprises and institutions, and secondary substations of power systems for receiving and transmitting electricity, as well as starting large high-voltage motors. For the purpose of implementing control protection and monitoring, this switchgear meets the requirements of national standards and has interlocking functions to prevent pushing and pulling circuit breakers with load, prevent accidental opening and closing of circuit breakers, prevent closing of circuit breakers when the grounding switch is in the closed position, prevent accidental entry into live compartments, and prevent accidental closing of grounding switches when live. It can be equipped with VS1 vacuum circuit breakers or ABB's VD4 vacuum circuit breakers. It is actually a high-performance power distribution device.

Use Condition

1. The ambient air temperature shall not exceed+50 ℃, and the average temperature within 24 hours shall not exceed+35 ℃;
2. When the maximum temperature is+40 ℃, the relative humidity should not exceed 50%
+At 20 ℃, it can reach 90%; 3. Altitude not exceeding 2000M;
4. The surrounding air should not be significantly polluted by corrosive or flammable gases, water vapor, etc;
5. Earthquake: Intensity not exceeding 8 degrees.

Technical Parameter

Project		Unit	Parameter				
Rated voltage		kV	12				
Rated frequency		HZ	50/60				
Rated insulation level	1-minute power frequency withstand voltage	kV	42 (Isolation fracture: 48)				
	Lightning impulse withstand voltage		75 (Isolation fracture: 85)				
Rated current		A	630、1250、1600、2000、2500、3150、4000、5000				
Rated short-time withstand current (4s)		kA	20	25	31.5	40	50
Rated peak withstand current		kA	50	63	80	100	125
Rated short circuit breaking current		kA	20	25	31.5	40	50
Rated short-circuit closing current (peak)		kA	50	63	80	100	125
protection grade			The enclosure is IP4X, and when the circuit breaker chamber door is opened, it is IP2X				
External dimensions (Width x Depth x Height)	≤ 1250A	mm	800 (650) × 1500 × 2300 (note: cabinet width is 800mm at 40KA)				
	≥ 1600A		1000×1500×2300				

>>> Product Introduction

◆ XGN2-12 BOX-TYPE FIXED AC METAL-ENCLOSED SWITCHGEAR

Product Introduction

XGN2-12 box type AC metal enclosed switchgear is a complete set of indoor distribution equipment used for receiving and distributing electrical energy in 3, 6, and 10KV three-phase AC systems. It has functions such as circuit control, protection, and monitoring. Its busbar system consists of single busbar and single busbar with bypass busbar, and can derive a dual busbar structure.

This switchgear meets the requirements of national standards and has a complete set of mechanical anti misoperation locking devices with reliable performance, complete functions, simple structure, and easy operation, which can easily and effectively meet the requirements of the "five prevention" locking functions proposed by the two departments. Switchgear is suitable for power plants, substations, industrial and mining enterprises and institutions and other power distribution places.

Use Condition

1. Environmental temperature upper limit+40 ℃ lower limit -25 ℃ (indoor);
2. Altitude of 1000m;
3. The daily average relative temperature should not exceed 95%, and the monthly average should not exceed 90%;
4. The seismic intensity shall not exceed 8 degrees;
5. A place without fire, explosion hazards, serious pollution, chemical corrosion, and severe vibration.

Parameters

Project			Unit	Parameters					
Rated voltage			kV	12					
Rated frequency			HZ	50/60					
Rated insulation level	1-minute power frequency withstand voltage		kV	42（隔离断口：48）					
	Lightning impulse withstand voltage			75（隔离断口：85）					
Rated current			A	630、1250、1600、2000、2500、3150、4000、5000					
Rated short-time withstand current (4s)			kA	20	25	31.5	40	50	63
Rated peak withstand current			kA	50	63	80	130	130	160
Rated short circuit breaking current			kA	20	25	31.5	40	50	63
Rated short-circuit closing current (peak)			kA	50	63	80	130	130	160
protection grade				The enclosure is IP4X					
External dimensions (Width x Depth x Height)	≥ 1600A	≤ 1250A	mm	1200×1200×2600					
				1000×1200×2600					

>>> Product Introduction

◆ HXGN-12 BOX TYPE FIXED AC METAL-ENCLOSED RING-NETTWORK SWITCHGEAR

Product Introduction

The HXGN-12 AC metal enclosed ring network switchgear (referred to as ring network cabinet) is a newly designed and successfully developed high-voltage electrical product in accordance with the requirements of domestic rural and urban power grid transformation. After rigorous type testing and long-term trial operation assessment, all phase performance indicators have reached national and industry standards. It is suitable for 10kV three-phase AC 50Hz ring network or terminal power supply system, used for receiving and distributing electrical energy or overload and short circuit protection, especially suitable for oil-free, non maintenance and frequent operation places.

Use Condition

1. Altitude not exceeding 1000m
2. Surrounding air temperature: upper limit+40 ℃ lower limit -25 ℃
3. Relative humidity: Daily average not exceeding 95%, monthly average not exceeding 90%
4. The surrounding air is not significantly polluted by corrosive gases, flammable gases, water vapor, etc;
5. No frequent and intense vibrations.

Technical Parameter

Project		Unit	Parameter	
Rated voltage		kV	12	
Rated frequency		HZ	50/60	
Rated frequency Rated insulation level	1-minute power frequency withstand voltage	kV	42（隔离断口：48）	
	Lightning impulse withstand voltage		75（隔离断口：85）	
Rated current		A	630、1250	200
Rated short-time withstand current (4s)		kA	25	
Rated peak withstand current		kA	63	
Rated short-circuit breaking current (expected value)		kA	----	40
Rated short-circuit closing current (peak)		kA	63	80
Equipped with the maximum high-voltage fuse		A	200	
Rated transfer current		A	3150	
Rated current breaking times		次	100	
mechanical life		次	10000	
protection grade			The enclosure is IP3X	
Dimensions (width x depth x height)		mm	1000×1000×2200	

>>> Product Introduction

◆ MNS LOW-VOLTAGE DRAW-OUT SEITCH CABINET

Product Introduction

The MNS low-voltage withdrawable switchgear product has a compact design, strong structural versatility, flexible assembly, and adopts standard module design. It is a safe, economical, reasonable, and reliable new type of low-voltage withdrawable switchgear. The product has the characteristics of high breaking capacity, good dynamic and thermal stability, flexible electrical scheme, and high protection level. Each functional unit can operate relatively independently, and the outgoing functional unit can install up to 36 outgoing circuits. Up and down entry can be used

There are multiple options available for users to choose from, such as exit lines. This device complies with national and industry standards. The MNS type low-voltage withdrawable switchgear is suitable for three-phase AC 50, 60Hz, rated voltage 660V, and rated current

Use Condition

1. The ambient air temperature shall not exceed+40 ° C, not be lower than -5 ° C, and the average temperature within 24 hours shall not exceed+35 ° C.
2. The relative humidity of the surrounding air should not exceed 50% at a maximum temperature of 40 ° C, and a higher relative humidity is allowed at lower temperatures, such as 90% at+20 ° C. However, it should be considered that moderate condensation may occasionally occur due to temperature changes.
3. For indoor use, the altitude of the usage location shall not exceed 2000m
4. It should be installed in a place where there is no severe vibration and impact, and where electrical components are not subjected to undue corrosion.

Parameters

Project		Unit	Parameters
Rated voltage		V	AC380、AC660
Rated frequency		HZ	50
Rated current	Maximum working current of horizontal busbar	A	5500
	Maximum working current of vertical busbar		1000
Rated short-time withstand current		kA	100
Rated peak withstand current		kA	220
Dielectric strength		V/1min	2500
Rated insulation voltage		V	660
Control the capacity of the electric motor		kW	0.5~155
Protection grade			IP30/IP40
Dimensions (width x depth x height)		mm	600（800、1000）×600（800、1000）×2200

>>> Product Introduction

◆ GGD AC LOW-VOLTAGE DISTRIBUTION CABINET

Product Introduction

GGD AC low voltage distribution cabinet is used for power users such as power plants, substations, factories, and mining enterprises. It serves as an AC 50-60Hz distribution system with a rated working voltage of 380V and a rated working current up to 3150A. It is used for power conversion, distribution, and control of power, lighting, and distribution equipment. The GGD type AC low-voltage distribution cabinet is a new type of low-voltage distribution cabinet designed based on the requirements of the Ministry of Energy's power users and design departments, following the principles of safety, economy, rationality, and reliability. The product has the characteristics of high breaking capacity, good dynamic and thermal stability, flexible electrical scheme, convenient combination, strong series and practicality, novel structure, and high protection level. Can be used as a replacement product for low-voltage switchgear. The GGD type AC low-voltage distribution cabinet complies with national and industry standards.

Use Condition

1. The ambient air temperature shall not exceed+40 ℃ and not be lower than -5 ℃, and the average temperature within 24 hours shall not exceed+35 ℃.
2. For indoor installation and use, the altitude of the usage location shall not exceed 2000m.
3. The relative humidity of the surrounding air should not exceed 50 ℃ at a maximum temperature of+40 ℃, and a higher relative humidity is allowed at lower temperatures, such as 90% at+20 ℃. It should be considered that condensation may occur accidentally due to temperature changes.
4. Pollution level 3.
5. The inclination of the equipment during installation with respect to the vertical plane shall not exceed 5 °.
6. The equipment should be installed in places without severe vibration and impact, as well as in places where electrical components are not corroded.

Parameters

Project		Unit	Parameters
Rated voltage		V	AC380
Rated frequency		HZ	50
Rated current	Maximum working current of horizontal busbar	A	≤ 4000
	Maximum working current of vertical busbar		800、1600
Rated short-time withstand current (1s)		kA	15、30、50
Rated peak withstand current		kA	30、63、105
Dielectric strength		V/1min	2500
Rated insulation voltage		V	660
Protection grade			IP30/IP40
Dimensions (width x depth x height)		mm	600（800、1000）×600（800、1000）×2200

>>> Product Introduction

◆ GGJ LOW-VOLTAGE DISTRIBUTION REACTIVE POWER COMPENSATION INTEGRATED CABINET

Product Introduction

The GGJ type low-voltage distribution reactive power compensation comprehensive cabinet is a new type of outdoor distribution reactive power compensation comprehensive cabinet designed based on the principles of safety, economy, rationality, and reliability. A new type of outdoor comprehensive distribution box suitable for urban and rural power grid renovation, industrial and mining enterprises, street lighting, residential areas and other AC 50Hz, rated voltage 380V distribution systems, with multiple functions such as energy distribution, control, protection, reactive power compensation, and energy metering. At the same time, leakage protection function can be added according to user requirements. The product has the advantages of novel and reasonable structure, high protection level, easy installation, debugging, maintenance and repair. The product complies with national and industry standards and has passed 3C certification, making it an ideal low-voltage complete set of equipment for current power grid renovation.

Use Condition

1. Environmental temperature: -20 ℃ to+50 ℃
2. Relative humidity of the air: ≤ 90% (relative ambient temperature is between 20 ℃ and 25 ℃)
3. Altitude: not exceeding 2500m
4. Environmental conditions: Suitable for indoor installation (inside the box), not suitable for places with fire, explosion hazards, serious pollution, chemical corrosion, and severe vibration.
5. Installation position: The inclination angle perpendicular to the ground shall not exceed 5 °

Parameters

Project		Unit	Parameters
Rated voltage		V	AC380
Rated frequency		HZ	50
Rated current	Maximum working current of horizontal busbar	A	≤ 433
	Maximum working current of vertical busbar		———
Rated short-time withstand current (1s)		kA	15、30、50
Rated peak withstand current		kA	30、63、105
Dielectric strength		V/1min	2500
Rated insulation voltage		V	500
Protection grade			IP30
Dimensions (width x depth x height)		mm	600（800、1000）×600（800、1000）×2200

>>> Product Introduction

◆ XL-21 AC LOW-VOLTAGE POWER DISTRIBUTION BOX

Product Introduction

The XL-21 series power distribution box is one of the widely used power control and distribution equipment in low-voltage distribution systems. Due to its easy installation, flexible use, easy maintenance, economical and luxurious options, it can meet the needs of users. Suitable for use in power systems with AC 50Hz, rated working voltage of 380V, rated current of 630A and below, as power distribution, lighting distribution, and power control. The installation method of electrical components is beam or plate type; The system scheme is flexible in combination, easy to install, highly versatile, and easy to maintain and repair, meeting national and industry standards and other requirements. The XL type low-voltage power distribution box complies with the International Electrotechnical Commission IEC439-1 "Low voltage switchgear and control gear installations" and the national standard GB7251 "Low voltage switchgear and control gear installations". Suitable for power plants, substations, large buildings, and other electricity users. Suitable for AC 50Hz, rated voltage 500V and below, used for power control and distribution. XL-21 series indoor device, installed against the wall, with maintenance in front of the screen. The box has good dustproof characteristics and is suitable for use in chemical plants and dusty places.

Use Condition

1. Altitude not exceeding 2000 meters;
2. The ambient air temperature shall not exceed+40 ℃, and the average temperature within 24 hours shall not exceed+35 ℃. The ambient air temperature shall not be lower than -5 ℃;
3. Atmospheric conditions: The air is clean, and the relative humidity does not exceed 50% at a temperature of+40 ℃. Higher relative humidity is allowed at lower temperatures, such as 90% at+20 ℃;
4. Places without fire, explosion hazards, serious pollution, chemical corrosion, and severe vibration; During installation, the inclination with respect to the vertical plane should not exceed 5 °;
6. This product is suitable for transportation and storage at temperatures ranging from -25 ℃ to+55 ℃. Within a short period of time (not exceeding 24 hours), not exceeding+65 ℃;

Parameters

Project		Unit	Parameters
Rated voltage		V	AC380
Rated frequency		HZ	50
Rated current	Maximum working current of horizontal busbar	A	≤ 400
	Maximum working current of vertical busbar		————
Rated short-time withstand current (1s)		kA	15、30、50
Rated peak withstand current		kA	30、63、105
Dielectric strength		V/1min	2500
Rated insulation voltage		V	660
rotection grade			IP30
Dimensions (width x depth x height)		mm	400×700×1700

>>> Product Introduction

◆ JP COMPREHENSIVE DISTRIBUTION BOX

Product Introduction

The comprehensive distribution cabinet for distribution transformers, abbreviated as JP cabinet, has been widely used in rural power lines and various distribution stations with the continuous deepening of rural power grid transformation. JP cabinet is designed to meet the requirements of standardization, miniaturization, and outdoor use of low-voltage distribution equipment in rural areas. It integrates distribution, metering, protection (overload, short circuit, leakage, snow prevention), and capacitor reactive power compensation. JP cabinets have the following characteristics:

1. JP cabinets have three basic functions: metering, distribution, and reactive power compensation. Flexible configuration according to user needs. 2. The distribution box can prevent rain, dust, theft, leakage, lightning strikes, and electromagnetic interference, and has sufficient strength to ensure that it will not deform during transportation and installation. 3. Fully functional, with manual and automatic switching operation modes. Complete protection functions: overvoltage, overload, undervoltage, undercurrent, short circuit, phase loss, zero sequence over limit and other functions. 4. Quick response, good compensation effect, and reliable operation. 5. The grounding protection is complete, and the lower part of the cabinet is equipped with a main grounding screw and marked with a grounding symbol. The door and cabinet are connected by yellow green dual color wires, and the entire low-voltage switchgear constitutes a complete grounding protection circuit.

Parameters

Project	Unit	Parameters
Rated voltage	V	400
Rated frequency	HZ	50Hz/60Hz
Equipped with transformer capacity	kVA	10、20、30、50、63、80、100、125、160、200、250、315、400
Capacitor Grouping Bureau		Generally divided into levels 2, 3, 4, and 5, if the user has special requirements, configure according to the user's requirements
Feeder circuit	kA	Generally divided into 2 channels, each configured according to 80% to 100% of the total capacity of the transformer. If the user has special requirements, they shall be followed.
Compensation method		Three phase compensation
Control physical quantities		Reactive power or reactive current
Fastest response time	ms	≤ 20ms
The indoor protection level shall not be lower than		IP30， Outdoor not less than IP65

PRODUCT CASE

Disassembly Test Project of 110kV Fault Transformer of Institute of Electrical Engineering, Chinese Academy of Sciences

SZ20-16000KVA/35kV Transformer Procurement Project of Tianyuyuan New Energy Co., Ltd. in Bayannur City, Urad Front Banner, Inner Mongolia

Jinan Yingcheng Intelligent Manufacturing Industrial Park Power Transmission and Transformation Project SZ20-12500KVA/35kV Transformer Procurement

China University of Petroleum (East China) Guzhukou Science and Education Park New Energy and New Materials Experimental Building Dry type

Installation project of 20 dry-type transformers for Qingdao Dayungu Jinmaofu residential area supporting projectTransformer Procurement ProjectProject

Dongying Wanda Group S20-12500KVA/10.5kV

Export to Japan S11-1000KVA/6.6KV/0.4kV

Procurement Project of 35KV Main Transformer, Box type Substation, 10KV Transformer and Distribution Cabinet for Huanghua Coal to Electricity Project

PRODUCT CASE

Geely Group Yiyi Interconnected Box type Converter Station Project

The 35KVA project of Ningde Times Weiqiao Power Exchange Station in Zouping City

13.8 MW Distributed Photovoltaic Power Generation Project in Zhongding Industrial Park, Zhongde Intelligent Manufacturing Town, Ningguo, Anhui Province

Xinjiang Oriental Hope Nonferrous Metals Co., Ltd. 300000 m ³ Water Tank Distributed Photovoltaic Project Prefabricated Cabin and 3150kVA Box Transformer Procurement Project

Construction Project of Supporting Engineering for Xinxin Nengke Xingtai Power Exchange Station

Sinopec Shandong Mount Taishan Petroleum Co., Ltd. Tai'an Gas Station Charging Pile Project

Shanxi Xiangfen Supermarket 10KV Charging Pile Project

Shandong Tebian >>> ELECTRIC POWER CONSTRUCTION

◆ One stop service concept

Designing
Tailored the most cost-effective power system solution

→

Manufacturing
Having industry-leading power equipment

→

Installation service
Provide users with the most professional on-site installation services

↓

Assist in approval
Assist users in preparing high-quality approval documents

←

Maintenance
Provide users with high-quality equipment maintenance and upkeep

←

Hosting
Provide customers with comprehensive hosting services

◆ Construction section

◆ Main bussiness

- Manufacturing, engineering design, and construction of 35KV and below power distribution equipment
- Installation, testing, and system debugging of user power distribution equipment
- Operation, maintenance, and emergency repair of 35KV and below power lines and electrical equipment

◆ Service Commitment

The company promises to provide high-quality and efficient services as follows:

- Provide one-stop service for the contracted project from design, installation, acceptance to handover.
- During the warranty period:

1、 Equipment: We are responsible for handling and replacing product quality issues caused by our design, manufacturing, and other reasons. Ensure that the normal operating life of the product is not less than 20 years, and provide lifelong technical consultation and tracking services for the product according to the product file.

2、 Engineering: Troubleshooting and maintenance of the electrical facilities installed by our company.

- Provide equipment and power engineering technical consulting.
- 24-hour emergency power repair.
- Provide equipment handover training for user operation management personnel

◆ Experimental section

CONSTRUCTION CASE

Tai'an Housing and Urban Rural Development Bureau Leigushi Street Middle Section Renovation Project (Fuqian Street 10KV Distribution Room Power Relocation Project)

Rizhao Huanghai Mingzhu Square Power Engineering Construction Project

Power Construction Project of Wuzhongbei Commercial Residential and Financial Building in Qingyun County

Jimei Jiayueju Power Distribution Construction Project in Tai'an City

Xintai Tebian Electrician Lu Cable Company's 14th Five Year Plan for Power Distribution Civil engineering and electrical installation

Xintai Country Garden Lake Yuetianjing Residential Power Distribution Construction Project

Xintai City Kaiyuyuan Residential Power Distribution Construction Project

CONSTRUCTION CASE

Ningyang Lvjing Xintiandi Residential Power Distribution Construction Project

Ningyang Zhonghai Mingshi Haoting Residential Power Distribution Construction Project

Ningyang Ziwei Garden Residential Distribution Power Construction Project

Ningyang Lvjing Taoliju Residential Power Distribution Construction Project

Dongping County Experimental Primary School Wenhe Street Campus Construction Project Power Distribution Engineering

Kangqiao Danjun Residential Distribution Power Construction Project in Dongping County

MAIN ACHIEVEMENTS

1、Partial performance of 10KV oil immersed transformers

Number	Customer Name	Specification and model	Quantity (unit)
1	Xinjiang Yicheng Investment Co., Ltd	S11-3150/10	6
2	Xinfa Group Xinjiang Kexin Chemical New Materials Co., Ltd	S22-2000/10	5
3	Weiye Mining Co., Ltd., Kuche County, Xinjiang	S13-1600/10	3
4	Xizang Huaxin Electric Power Engineering Installation Co., Ltd	S11-2000/10	4
5	Inner Mongolia Wuhai Hairong Mining Co., Ltd	S13-1000/10	2
6	Hulunbuir Chagan Mining Co., Ltd	S11-2500/10	2
7	Inner Mongolia Luyang Energy saving Materials Co., Ltd	S22-2000/10	5
8	Hunan Changda Power Transmission and Transformation Construction Co., Ltd	S13-3150/10	6
9	Shanxi Baoshen Electrical Equipment Co., Ltd	S13-2000/10	6
10	Zhongyi Group (Jilin) New Energy Technology Co., Ltd	S11-2500/10	20
11	Jilin Deyun Electric Group Co., Ltd	S13-2000/10	14
12	Tangshan Sanyou Yuanda Fiber Co., Ltd	S13-2500/10	6
13	Tangshan Tebeier Electric Power Installation Engineering Co., Ltd	S11-2500/10	8
14	Huanghua Zhongcheng Electric Power Industry Co., Ltd	S13-2500/10	21
15	Huanghua Housing and Urban Rural Development Bureau	S13-1000/10	9
16	Zhengzhou Jingneng Electric Technology Co., Ltd	S13-1250/10	3
17	Dongfang Hope Group Dongming Plastic Co., Ltd	S20-800/10	15
18	China Railway 14th Bureau Group Co., Ltd	S11-1600/10	8
19	Jigang Group International Engineering Technology Co., Ltd	S11-2000/10	11
20	State Grid E-commerce Technology Co., Ltd	S11/S13-160 ~ S11/S13-2500/10	20
21	State Grid Shandong Electric Power Company Ningjin County Power Supply Company	S11/13-315 ~ S11/13-1600/10	45

22	State Grid Shandong Electric Power Company Pingyin County Power Supply Company	S11/13-250 ~ S11/13-1250/10	50
23	Shandong Huijiu Petroleum Equipment Co., Ltd. (China Wanda Dongying Project)	S20-12500/10.5	2
24	Furui Group Co., Ltd	SZ11-2500/10	12
25	Shandong Huijiu Petroleum Equipment Co., Ltd	S20-12500/10.5	4
26	Zibo Zichai New Energy Co., Ltd	S13-2500/10	6

2、Partial performance of 10KV dry-type transformer

Number	Customer Name	Specification and model	Quantity (unit)
1	Qinghai Guoxin Aluminum Industry Co., Ltd	SCB10-2500/10	8
2	Guangdong Yili Jian'an Engineering Co., Ltd. (Ningde Times Fujian Project)	SCB13-3150/10	6
3	Oriental Hope Group Ningxia Crystal New Energy Materials Co., Ltd	SCB14-1600/10	4
4	China Construction Third Engineering Group Co., Ltd	SCB13-1250/10	6
5	Beijing Zhongke Zhongdian Electric Power Engineering Management Co., Ltd	SCB11-2500/10	24
6	Shanxi Yaxin New Energy Technology Co., Ltd	SCB18-2500/10	8
7	Hunan Aibang Zhengming Environmental Protection Co., Ltd	SCB10-2000/10	5
8	Xi'an Aerospace Source Power Engineering Co., Ltd	SCB11-2000/10	8
9	Hangzhou Energy and Environmental Engineering Co., Ltd	SCB11-2500/10	4
10	Anhui Hailuo Resource Comprehensive Utilization Technology Co., Ltd	SCB14-2500/10	5
11	Shanghai Huatong Electromechanical (Group) Co., Ltd	SCB13-1600/10	4
12	Tangshan Sanyou Yuanda Fiber Co., Ltd	SCB13-2500/10	9
13	Cangzhou Zhongxing Industrial Group Co., Ltd. Huanghua Branch	ZSCB10-2000/10	6
14	Hebei Zongheng Group Iron and Steel Co., Ltd	SCB13-1600/10	10
15	Xingtai People's Hospital	SCB18-1600/10	2
16	Shandong Iron and Steel Group Rizhao Co., Ltd	SCB13-2000/10	18
17	Xinfa Group Shandong Electric Co., Ltd	SCB18-1600/10	10
18	qufu normal university	SCB10-2500/10	8
19	Weichai power company limited	SCB18-3150/10	2
20	Shandong Huachao Chemical Co., Ltd	SCB10-1600/10	5
21	Shandong Jinling Chemical Co., Ltd	SCB14-630/10	4

22	Dezhou Liuhe Power Engineering Co., Ltd	SCB13-1250/10	35
23	Qingdao Huaou Group Sihai Automation Control Engineering Co., Ltd	SCB12-2000/10	12
24	Qingdao Aixiang Building Materials Trading Co., Ltd	SCB14-2000/10	10
25	Yantai Zhuneng Electrical Technology Co., Ltd. - Rehabilitation University Project	SCB14-2000/10	6
27	Linyi Economic Development Zone Urban Construction Investment Co., Ltd	SCB10-1250/10	8
29	Shandong Baishate New Energy Technology Co., Ltd. (Official Power Project of Shile Renji 0 # Station)	SCB18-400/10.5	2
30	Tai'an City Urban Street Lamp Management Office	SCB10-200/10	36

3、Partial performance of 35KV transformer

Number	Customer Name	Specification and model	Quantity (unit)
1	Xinjiang Jinneng Mining Co., Ltd	S11-16000/35	4
2	Xinjiang Kunlun Electrical Equipment Co., Ltd	S11-10000/38.5	3
3	Alxa Jinzhen Electric Power Installation Co., Ltd	SZ11-16000/35	6
4	Chongqing Jinyuan Power Transmission and Transformation Engineering Co., Ltd	SC11-5000/35	2
5	Inner Mongolia Tianyuyuan 35KV Substation 2 # Main Transformer Expansion Project	SZ20-16000/35	1
6	Hunan Changda Power Transmission and Transformation Construction Co., Ltd	SZ13-31500/35	2
7	Jiangsu Tengyuan Electric Co., Ltd	SZ11-10000/35	2
8	Huanghua City Urban Investment Group Co., Ltd	S11-20000/35	3
9	Shengli Oilfield Xinbang Construction and Development Co., Ltd	S20-2000/35	2
10	Dongying High tech Zone Power Distribution Co., Ltd., Dongying City	S11-8000/35	2
11	Shandong Longyuan Petrochemical Co., Ltd	SZ11-10000/35	2
12	Shandong Weilande Precision Equipment Manufacturing Co., Ltd	S11-10000/35	2
13	Binzhou Jin'an Thermal Power Co., Ltd	SF10-16000/35	2
14	Shandong Guangfu Group Co., Ltd	S11-20000/35	3
15	Shandong Ruilaide Electric Co., Ltd	S11-8000/35	4
16	Shandong Jinsheng Marine Resources Development Co., Ltd	SF10-16000/35	1
17	Linyi Hengtong Power Transmission and Transformation Engineering Co., Ltd	S11-4000/35	3
18	Shandong Hongya Conductor Materials Co., Ltd	S11-3150/35	2
19	Shandong Huaming Carbon Co., Ltd	SZ13-31500/35	2
20	Shandong Binzhou Binbei Thermal Power Co., Ltd	S20-1250/35	2
21	Zibo Jinxin Mining Co., Ltd	S11-25000/35	1
22	Rizhao Iron and Steel Co., Ltd	S22-2000/35	2
23	Yingcheng Intelligent Manufacturing Industrial Park Power Transmission and Transformation Project	SZ20-12500/35 SZ20-5000/35	2 1

24	Qingdao Metro Line 8 Power Supply Introduction Project	SZ11-12500/35	1
25	Shandong Leiao New Energy Co., Ltd	SZ11-20000/35	4
26	Binzhou Boxing Lubei Intelligent Cold Chain Storage and Transportation Power Supply Project	SZ20-10000/35	2

4、Partial performance of prefabricated substations

Number	Customer Name	Specification and model	Quantity (unit)
1	Xizang Huaxin Electric Power Engineering Installation Co., Ltd	YB □ -800/10	6
2	Xinjiang Kunlun Electric Co., Ltd	YB □ -630/10	4
3	Dongfang Hope Group Xinjiang Nonferrous Metals Co., Ltd	YB □ -2500/10	2
4	Inner Mongolia Wuhai Hairong Mining Co., Ltd	YB □ -1250/10	3
5	Guangxi South China Construction Group Co., Ltd	YB □ -800/10	3
6	Hunan Changda Power Transmission and Transformation Construction Co., Ltd	YB □ -500/10	6
7	Dongfang Hope Group Shanxi Wuzhai Livestock Co., Ltd	YB □ -400/10	2
8	Huainan Construction Engineering Co., Ltd	YB □ -800/10	2
9	China Construction Eighth Engineering Division Group Co., Ltd	YB □ -800/10	20
10	Hebei Zongheng Group Fengnan Iron and Steel Co., Ltd	YB □ -1000/10	12
11	Huanghua Housing and Urban Rural Development Bureau	YB □ -800/10	4
12	Huanghua Zhongcheng Electric Power Industry Co., Ltd	YB □ -315/10	20
13	Cangzhou Bohai New Area Liwan Hotel Management Co., Ltd	YB □ -1600/10	2
14	Cangzhou Bohai New Area Urban Management Bureau	YB □ -400/10	4
15	Huanghua Xinchang Construction and Installation Engineering Co., Ltd	YB □ -630/10	5
16	Shandong Iron and Steel Group Rizhao Co., Ltd	YB □ -1250/10	10
17	China Railway 14th Bureau Group Co., Ltd. Changqing Branch	YB □ -2000/10	8
18	State Grid Shandong Electric Power Company Ningjin County Power Supply Company	YB □ -800/10	19

19	Shandong Expressway and Bridge Engineering Co., Ltd	YB □ -1000/10	2
20	Shandong Guoren Energy saving Technology Co., Ltd	YB □ -2000/10	4
21	Shandong Qingyun County Construction Engineering Company	YB □ -630/10	13
22	Ningjin Ningda Electric Power Installation Engineering Co., Ltd	YB □ -630/10	10
23	State Grid Shandong Comprehensive Energy Service Co., Ltd	YB □ -1000/10	6
24	Jinan Jinding Electric Power Installation Co., Ltd	YB □ -800/10	13
25	Tai'an Tengfei Industrial Co., Ltd. Dongping Branch	YB □ -630/10	4
26	Tai'an City Urban Street Lamp Management Office	YB □ -200/10	25

5、Partial performance of modular substations

Number	Customer Name	Specification and model	Quantity (unit)
1	Inner Mongolia Xinsheng Photovoltaic Technology Co., Ltd	ZGS11-1000/10.5	4
2	Kailu Shengda Optoelectronics Co., Ltd	ZGS11-1600/10.5	6
3	Inner Mongolia Jinwang Electric Power Development Co., Ltd	ZGS11-1250/10.5	5
4	Inner Mongolia Jinyi Photovoltaic Technology Co., Ltd	ZGS11-1250/10.5	4
5	Jiayuguan Suotong Coal Materials Co., Ltd	ZGS11-1250/10.5	2
6	Ningxia Zhongcheng Plastic Co., Ltd	ZGS11-1250/10.5	4
7	Tianshui Changtong Electrical Appliance Co., Ltd	ZGS11-1000/10.5	2
8	Hunan Changda Power Transmission and Transformation Construction Co., Ltd	ZGS11-400/10.5	10
9	Chongqing Baichuansheng Construction Engineering Co., Ltd	ZGS11-1250/10.5	2
10	Zhejiang Beite Intelligent Equipment Co., Ltd	ZGS11-1250/10.5	2
11	Qingdao Dinghengsheng New Energy Technology Co., Ltd	ZGS11-1600/10.5	4
12	Tianjin Xingyuan Petrochemical Engineering Co., Ltd	ZGS11-1600/10.5	1
13	Cangzhou China Railway Equipment Manufacturing Materials Co., Ltd	ZGSB20-Z-2500	2
14	Shandong Qingyun County Construction Engineering Company	ZGS11-1250/10.5	4
15	Shandong Shanda Century Technology Co., Ltd	ZGS11-1250/10.5	3
16	Shandong Ruijie Economic and Trade Co., Ltd	ZGS11-1250/10.5	5
17	Changyi Haineng Electrical Equipment Co., Ltd	ZGS11-100/10	4
18	Anhui Wanneng Electric Power Operation and Maintenance Co., Ltd	ZGS-1250/35/0.36	2
19	Hebei Zongheng Group Fengnan Iron and Steel Co., Ltd	ZGSB20-Z-1600	2
20	Shandong Puzhao Energy Co., Ltd	ZGS-1250/35	2

6、Performance of integrating high and low voltage switchgear in one and two stages

Number	Customer Name	Specification and model	Quantity (unit)
1	Weibeide (Inner Mongolia) Technology Co., Ltd	KYN28-12	6
2	Xi'an Mining Environmental Protection Technology Co., Ltd	KYN28-12	4
3	China Water Resources and Hydropower Seventh Engineering Bureau Co., Ltd. Fifth Branch Shuangjiangkou	GGD	6
4	Dexi Chemical (Shandong) Co., Ltd	MNS	8
5	Shandong Xinzhihui Electric Technology Co., Ltd	KYN28-12	32
6	Qingdao Xinzheng Heyuan Engineering Co., Ltd	KYN28-12	28
7	Jinan Zhongguangming Electric Appliance Factory	HXGN-12	10
8	Shandong Yuantai Electric Co., Ltd	KYN28-12	11
9	Shandong Nuoming Smart Power Energy Co., Ltd	KYN28A-12	22
10	Zhongruike Xinda Construction Group Co., Ltd	KYN28-12	5
11	Shandong Kailai Electrical Equipment Co., Ltd	HXGN-12	4
12	Ningjin County Center for Disease Control and Prevention	HXGN-12	3
13	Shandong Jiuhe Electric Power Engineering Co., Ltd	KYN28-12	2
14	Huantai Zhengtai Electric Appliance Co., Ltd	KYN61-40.5	3
15	Shandong Hongyang Mining Co., Ltd	GCS	5
16	Shandong Yanggu Huatai Chemical Co., Ltd	GGD	6
17	Shandong Xinyuan Textile Co., Ltd	GGD	8
18	Huabao Construction Group Co., Ltd	GGD	4
19	Shandong Expressway and Bridge Engineering Co., Ltd	HW-12	4
20	Tai'an Tengfei Industrial Co., Ltd. Dongping Branch	HXGN-12	5

7、Partial cases of general contracting for power construction

Number	Customer Name	Project name	Construction year
1	Rizhao Huanghai Mingzhu Plaza Real Estate Co., Ltd	Construction of Power Engineering (Internal Line) for Huanghai Mingzhu Square Project	2024
2	TBEA Shandong Luneng Mount Taishan Cable Co., Ltd	Lu Cable Company's 14th Five Year Plan for Power Supporting Projects	2024
3	Dezhou Deda Yiyuan Investment Group Co., Ltd	Lingcheng District Dongjie Area Shed Renovation Project Residential Power Supply and Distribution Project (Section 1)	2024
4	Cangzhou Road and Bridge Construction Group Co., Ltd	Construction Contract for Phase III of Power Engineering of Huanghua Green Circular Building Materials Comprehensive Processing Base	2024
5	Baixiang Food Group (Henan) Noodle Industry Co., Ltd	Electrical lifting project for production workshop	2024
6	Cangzhou Bohai New Area Huanghua City Agriculture and Rural Development Bureau	Huanghua High Standard Farmland Construction Project (treasury bond)	2024
7	Sinopec Shandong Mount Taishan Petroleum Co., Ltd	Construction of supporting transformers for charging stations in Tai'an area	2023
8	Shandong Hi-speed Company Limited	Weifang Section Shibu Station Transformer Maintenance Project	2023
9	China Petroleum Tai'an Branch	Tai'an Company Gas Station Transformer Maintenance Service Project	2023
10	Dongping County Education and Sports Bureau	Distribution Engineering of Wenhe Primary School Construction Project in Dongping County	2023
11	Jinan Inspur Optoelectronic Technology Park Investment Co., Ltd	Power Distribution Engineering of Inspur New Generation Intelligent Manufacturing Ecological Base Project	2022
12	Ningyang Agricultural Development and Construction Co., Ltd	China Supply and Marketing (Ningyang) Agricultural and Sideline Products Logistics Park Phase I 10KV Power Distribution Project	2022
13	Xiexin (Xingtai) Energy Technology Co., Ltd	Construction Contract for the Supporting Project of Xingtai	2022

		Power Exchange Station of GCL Energy Technology Co., Ltd	
14	Shandong Highway Port Development Group Co., Ltd	Tai'an (Ningyang) Modern Highway Port Project Transformer Procurement and Installation Project	2022
15	Tai'an Jinyanghua Real Estate Development Co., Ltd	Tai'an Jimei Jiayue Project Power Supply and Distribution Engineering	2021
16	Shandong Caifeng Real Estate Co., Ltd	Power Supply Project for the Wuzhongbei Commercial Residential Financial Building in Qingyun County	2021
17	Weifang Fenghuangshan State owned Capital Investment and Operation Management Co., Ltd	1600KVA Box Transformer and Supporting Cable Engineering for Fangzi Economic Development Zone Medical Care Center Project	2021
18	People's Government of Heguan Town, Qingzhou City	24500 acres of high standard farmland construction project in Heguan Town, Qingzhou City, Weifang City, Shandong Province	2020
19	Xintai Bihong Real Estate Development Co., Ltd	Electrical installation project of Xintai Country Garden Botanical Garden plot (Huyue Tianjing) in Tai'an City	2020
20	Tai'an Housing and Urban Rural Development Bureau	10KV Distribution Room Power Relocation Project in Fuqian Street, Middle Section of Leigushi Street	2019
21	Shandong University of Science and Technology Tai'an Campus	Shandong University of Science and Technology Tai'an Campus Power Supply Line Renovation Project	2019
22	Ningyang County Committee School of the CPC	School power supply construction of Ningyang County Committee of the CPC	2019
23	Tai'an Mount Taishan Zhiyang Technology Industrial City Co., Ltd	Ningyang County Wenmiao Street Office Gongjiatang Village Shantytown Renovation Project	2019
24	Xintai City Coordinated Urban and Rural Development Group Co., Ltd	Xintai City Urban and Rural Development Group Co., Ltd. Chengkai Yuyuan Project	2019
25	Tai'an Lvjing Real Estate Co., Ltd	Lvjing Xintiandi (Phase I) Power Distribution Project	2019
26	Ningyang Zhonghai Real Estate Development Co., Ltd	Zhonghai Mingshi Haoting Phase III Community Power Supply External Network Construction Project	2019
27	Tai'an Lvjing Real Estate Co., Ltd	Ningyang Lvjing Xintiandi (Phase II) Power Distribution Project	2019

28	Tai'an Lvjing Real Estate Co., Ltd	Ningyang County Lvjing Taoli Chunfeng Community No.1 Courtyard Taoli Chunfeng Power Distribution Project	2019
29	Chenjiazhuang Community, Aishan Street, Gangcheng District, Laiwu City	Power Supporting Project for Chenjiazhuang Resettlement Area in Aishan Street, Gangcheng District, Laiwu City	2019
30	China Construction Third Engineering Group Co., Ltd	Comprehensive Management Project of Jinshui River System in Pingyin County	2018
31	China Railway Tenth Bureau Eighth Division	Construction of 630KVA Box Transformer Power Supply at No.8 of China Railway Tenth Bureau	2018
32	Qingdao Electric Engineering Installation Co., Ltd. Pingdu Branch	New construction project for 12 districts, including 2 districts in Dongpanjiabu, 10KV Tianzhuang Town, Pingdu District, Qingdao	2018
33	Ningjin County Real Estate Comprehensive Development Co., Ltd	Power supply external network project for shantytown renovation and public rental housing construction project in Xibai area	2018
34	Tai'an Minfeng Investment Co., Ltd	Tai'an Customs Supervision Zone Power Pipeline Network Project	2018
35	Tai'an City Urban Street Lamp Management Office	Procurement of Box Transformers for the Maintenance and Renovation Project of City level Road Light Facilities in Tai'an City	2018
36	Tai'an Bisheng Real Estate Development Co., Ltd	Tai'an Daiyue Country Garden Electrical Installation Project	2018
37	Ningyang Guotou Country Garden Real Estate Development Co., Ltd	Ningyang Guotou Country Garden Temporary Construction Electricity Project	2018
38	Ningyang Zhonghai Real Estate Development Co., Ltd	Procurement and Installation Construction of 800KVA Transformer for Ningyang Zhonghai Mingshi Huating River Engineering Project	2018
39	Shandong Dongping Rongsheng Real Estate Co., Ltd	Shandong Dongping Rongsheng Real Estate Co., Ltd. 10KV Installation and Power Supply Project	2018
40	Shandong Xindi Real Estate Co., Ltd	Construction Contract for 10KV Installation and Power Supply Project in Block C of Gangji Dongyuan Huafu	2018
41	Tai'an Guanhai Real Estate Development Co., Ltd	10KV installation and power supply project in Dongping Jinyuefu residential area	2018

合作伙伴
Cooperative partner

山东高速 SDHS
东明石化
日照钢铁 RIZHAO STEEL
泰山钢铁 TAISHAN STEEL
三友集团 Sanyou Group
新华联合 SINOGIANT
中国中铁
碧桂园
新希望集团
山东钢铁集团 SHAN STEEL GROUP
CEM 中铁装备
中国航天
山东能源集团
SINOPEC
首钢集团
中粮地产 COFCO PROPERTY
信发集团
SINOSTEEL
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