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Product Selection Manual

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Hermetically Sealed Distribution Transformer | Epoxy Resin Cast Dry-Type Transformer | On-Load Tap-Changing Power Transformer | Pad-Mounted Transformer / Prefabricated Substation | ...



MINGRI ELECTRIC CO.,LTD.

S11-M Type 10kV Series Fully Sealed Distribution Transformer

Product Introduction

◇ Device Type: Outdoor Type

◇ Normal Ambient Operating Conditions: Altitude not exceeding 1000m;

Ambient temperature range: max. +40℃, min. -25℃

◇ Special Ambient Operating Conditions: Altitude exceeding 1000m;

Ambient temperature range: max. +40℃, min. -45℃ (Specify in detail when ordering)

◇ Installation Site: Environment free from corrosive gases and obvious dirt

Applicable Standards

◇ GB1094.1~2-1996 Power Transformers

◇ GB1094.3,5-2003 Power Transformers

◇ GB/T6451-2008 Technical Parameters and Requirements for Three-Phase Oil-Immersed Power Transformers

Model Definition

S 11 -M -□ /□

- Voltage Class (kV)
- Rated Capacity (kVA)
- Sealed Structure
- Performance Level Code
- Three-Phase Oil-Immersed Transformer

Product Features

◇ Compared with S9 type transformers, the no-load loss of this series is reduced by about 30% on average.

◇ The low-voltage winding adopts a cylindrical or spiral structure, featuring high mechanical strength, balanced ampere-turn distribution, and excellent short-circuit withstand capability.

◇ A positioning structure is added to the core and coil assembly to prevent displacement during transportation. Meanwhile, lock nuts are installed on all fasteners to ensure they remain tight during long-term operation, meeting the non-core-pulling requirement.

◇ The transformer adopts a corrugated oil tank, eliminating the conservator tank. The tank cover and rim are fully welded or bolted, extending the service life of the transformer oil.

◇ The product surface is treated with degreasing, derusting, and phosphating processes, followed by primer and topcoat spraying, which can meet the special application requirements in metallurgical, petrochemical systems, and humid and polluted areas.

◇ Selected components are used, with a fully sealed oil tank. Standard accessories such as pressure relief valves, signal thermometers, and gas relays are installed to ensure safe operation.

◇ This series features an attractive appearance and compact size, reducing installation footprint, making it an ideal maintenance-free high-quality product.

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S11-M Type
10kV Series Fully Sealed Distribution Transformer

Technical Parameters

Technical Parameters of S11-M Series 10kV Fully Sealed Distribution Transformers

Rated Capacity (kVA)	Voltage Combination			Connection Symbol	No-Load Loss (W)	Load Loss (W)	Short-Circuit Impedance (%)	No-Load Current (%)	Weight (kg)		Overall Dimensions (mm)	Wheelbase (mm)
	High Voltage (kV)	Tap Changer (%)	Low Voltage (kV)						Oil Weight	Total Weight	Length (L) × Width (W) × Height (H)	
30	6 6.3 6.6 10 10.5 11	±5 ±2×2.5	0.4	Yyn0 or Dyn11	100	600	4.0	1.8	80	300	830×590×980	400×400
50					130	870		1.7	100	360	880×600×1010	400×400
63					150	1040		1.6	110	420	910×650×1040	400×400
80					180	1250		1.5	125	480	930×700×1080	550×550
100					200	1500		1.4	135	550	940×710×1130	550×550
125					240	1800		1.3	145	650	950×720×1150	550×550
160					280	2200		1.2	155	750	1000×740×1220	550×550
200					340	2600		1.1	180	880	1040×750×1250	550×550
250					400	3050		1.0	215	1050	1340×750×1250	550×550
315					480	3650		0.9	240	1220	1350×780×1330	660×660
400					570	4300		0.8	300	1420	1460×840×1360	660×660
500					680	5150		0.8	340	1650	1480×860×1410	660×660
630					810	6200	4.5	0.7	380	2000	1570×930×1460	710×710
800					980	7500		0.7	585	2360	1700×1000×1540	820×820
1000					1150	10300		0.6	630	2720	1780×1060×1640	820×820
1250					1360	12000		0.5	650	3350	1840×1130×1690	920×820
1600					1640	14500		0.5	850	3950	1950×1180×1760	920×820
2000					1940	17200		0.4	900	4600	2050×1250×1830	1070×1070
2500					2300	20300	5.5	0.4	1000	5600	2160×1360×1870	1070×1070

Notes:

1. For technical parameters, overall dimensions and weight data of 10kV class distribution transformers with larger capacities, please contact our company.
2. Transformers with various voltage combinations, short-circuit impedances and connection methods can be provided according to user requirements.
3. Special transformers can be provided according to user requirements, such as rectifier transformers, furnace transformers, mining transformers, on-load tap-changing transformers, enclosed-type transformers, etc.
4. The weight and overall dimension data in the table are for reference only; no prior notice will be given for any changes.

S13-M Type 10kV Series Fully Sealed Distribution Transformer

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Product Introduction

- ◇ Device Type: Outdoor Type
- ◇ Normal Ambient Operating Conditions: Altitude not exceeding 1000m;
  Ambient temperature range: max. +40℃, min. -25℃
- ◇ Special Ambient Operating Conditions: Altitude exceeding 1000m;
  Ambient temperature range: max. +40℃, min. -45℃ (Specify in detail when ordering)
- ◇ Installation Site: Environment free from corrosive gases and obvious dirt

Applicable Standards

- ◇ GB1094.1~2-1996 Power Transformers
- ◇ GB1094.3,5-2003 Power Transformers
- ◇ GB/T6451-2008 Technical Parameters and Requirements for Three-Phase Oil-Immersed Power Transformers

Model Definition

S 13 -M -□/□

- Voltage Class (kV)
- Rated Capacity (kVA)
- Sealed Structure
- Performance Level Code
- Three-Phase Oil-Immersed Transformer

Product Features

- ◇ Compared with S11 type transformers, the no-load loss of this series is reduced by about 30% on average.
- ◇ The low-voltage winding adopts a cylindrical or spiral structure, featuring high mechanical strength, balanced ampere-turn distribution, and excellent short-circuit withstand capability.
- ◇ A positioning structure is added to the core and coil assembly to prevent displacement during transportation. Meanwhile, lock nuts are installed on all fasteners to ensure they remain tight during long-term operation, meeting the non-core-pulling requirement.
- ◇ The transformer adopts a corrugated oil tank, eliminating the conservator tank. The tank cover and rim are fully welded or bolted, extending the service life of the transformer oil.
- ◇ The product surface is treated with degreasing, derusting, and phosphating processes, followed by primer and topcoat spraying, which can meet the special application requirements in metallurgical, petrochemical systems, and humid and polluted areas.
- ◇ Selected components are used, with a fully sealed oil tank. Standard accessories such as pressure relief valves, signal thermometers, and gas relays are installed to ensure safe operation.
- ◇ This series features an attractive appearance and compact size, reducing installation footprint, making it an ideal maintenance-free high-quality product.

Technical Parameters

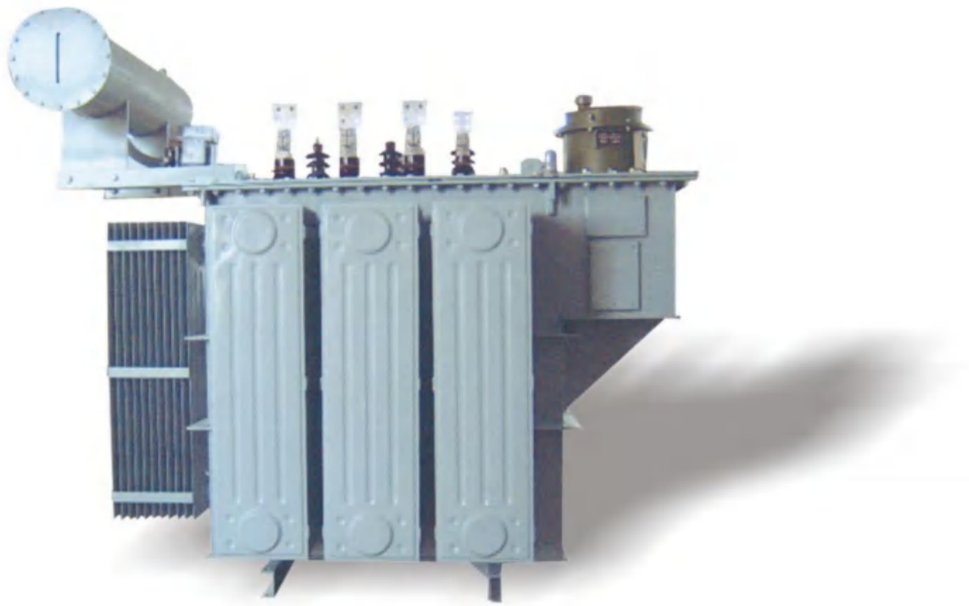
Technical Parameters of S13-M Series 10kV Fully Sealed Distribution Transformers

Rated Capacity (kVA)	Voltage Combination			Connection Symbol	No-Load Loss (W)	Load Loss (W)	Short-Circuit Impedance (%)	No-Load Current (%)	Weight (kg)		Overall Dimensions (mm)	Wheelbase (mm)
	High Voltage (kV)	Tap Changer (%)	Low Voltage (kV)						Oil Weight	Total Weight	Length (L) × Width (W) × Height (H)	
30	6 6.3 6.6 10 10.5 11	±5 ±2×2.5	0.4	Yyn0 or Dyn11	80	600	4.0	1.8	80	300	830×590×980	400×400
50					100	870		1.7	100	360	880×600×1010	400×400
63					110	1040		1.6	110	420	910×650×1040	400×400
80					130	1250		1.5	125	480	930×700×1080	550×550
100					150	1500		1.4	135	550	940×710×1130	550×550
125					170	1800		1.3	145	650	950×720×1150	550×550
160					200	2200		1.2	155	750	1000×740×1220	550×550
200					240	2600		1.1	180	880	1040×750×1250	550×550
250					290	3050		1.0	215	1050	1340×750×1250	550×550
315					340	3650		0.9	240	1220	1350×780×1330	660×660
400					410	4300		0.8	300	1420	1460×840×1360	660×660
500					480	5150		0.8	340	1650	1480×860×1410	660×660
630					570	6200		0.7	380	2000	1570×930×1460	710×710
800					700	7500		0.7	585	2360	1700×1000×1540	820×820
1000					830	10300		0.6	630	2720	1780×1060×1640	820×820
1250					970	12000	4.5	0.5	650	3350	1840×1130×1690	920×820
1600					1170	14500		0.5	850	3950	1950×1180×1760	920×820
2000					1455	17200		0.4	900	4600	2050×1250×1830	1070×1070
2500					1725	20300	5.5	0.4	1000	5600	2160×1360×1870	1070×1070

Notes:

1. For technical parameters, overall dimensions and weight data of 10kV class distribution transformers with larger capacities, please contact our company.
2. Transformers with various voltage combinations, short-circuit impedances and connection methods can be provided according to user requirements.
3. Special transformers can be provided according to user requirements, such as rectifier transformers, furnace transformers, mining transformers, on-load tap-changing transformers, enclosed-type transformers, etc.
4. The weight and overall dimension data in the table are for reference only; no prior notice will be given for any changes.

SZ11 Type 10kV Series On-Load Voltage Regulator Power Transformer



SZ11 Type 10kV Series On-Load Voltage Regulator Power Transformer

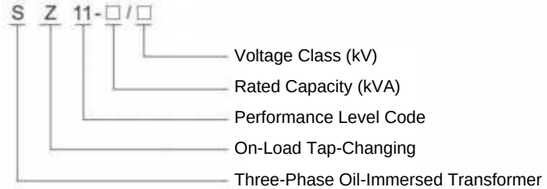
Product Introduction

- ◇ Device Type: Outdoor Type
- ◇ Normal Ambient Operating Conditions: Altitude not exceeding 1000m;
  Ambient temperature range: max. +40℃, min. -25℃
- ◇ Special Ambient Operating Conditions: Altitude exceeding 1000m;
  Ambient temperature range: max. +40℃, min. -45℃ (Specify in detail when ordering)
- ◇ Installation Site: Environment free from corrosive gases and obvious dirt

Applicable Standards

- ◇ GB1094.1~2-1996 Power Transformers
- ◇ GB1094.3,5-2003 Power Transformers
- ◇ GB/T6451-2008 Technical Parameters and Requirements for Three-Phase Oil-Immersed Power Transformers

Model Definition



Product Features

- ◇ On-load voltage regulation meets user voltage requirements, improves power supply quality, and saves energy.
- ◇ The core is made of high-quality high-permeability silicon steel sheets with full oblique step-lap joints, reducing the core's no-load loss and no-load current.
- ◇ The high-voltage winding adopts a multi-layer cylindrical structure to improve the impulse distribution. The winding uses a non-varnish impregnation process and is bound with shrink tape, enhancing the mechanical strength of the winding.

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SZ11 Type 10kV Series On-Load Voltage Regulator Power Transformer

Technical Parameters

Technical Parameters of SZ11 Series 10kV On-Load Tap-Changing Power Transformers

Rated Capacity (kVA)	Voltage Combination and Tap Range			Connection Symbol	No-Load Loss (W)	Load Loss (W)	Short-Circuit Impedance (%)	No-Load Current (%)	Weight (kg)		Overall Dimensions (mm)	Wheelbase (mm)
	High Voltage (kV)	Tap Changer (%)	Low Voltage (kV)						Oil Weight	Total Weight	Length (L) × Width (W) × Height (H)	
200	6 6.3 10	±4×2.5	0.4	Yyn0 Or Dyn11	480	3060	4.0	1.5	200	1000	1650×880×1350	550×550
250					560	3600		1.4	230	1100	1700×900×1500	550×550
315					670	4320		1.4	260	1300	1750×950×1600	660×660
400					800	5220		1.3	320	1500	1800×1100×1650	660×660
500					960	6210		1.2	360	1750	1850×1150×1700	660×660
630					1200	7650	4.5	1.1	400	2100	2000×1200×1750	710×710
800					1400	9360		1.0	620	2500	2300×1400×1850	820×820
1000					1700	10980		1.0	670	2900	2350×1450×1900	820×820
1250					1950	13050		0.9	690	3520	2400×1500×1950	920×820
1600					2400	15570		0.8	890	4150	2550×1550×2000	920×820
2000					2850	18900		0.8	950	4850	2780×1600×2280	1070×1070
2500					3300	22350	5.5	0.7	1130	5900	2950×1800×2400	1070×1070

Note: The weight and overall dimension data in the table are for reference only; no prior notice will be given for any changes.

SC(B)10 Type 10kV Series Resin Insulation Dry Type Power Transformer

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SC(B)10 Type 10kV Series Resin Insulation Dry Type Power Transformer

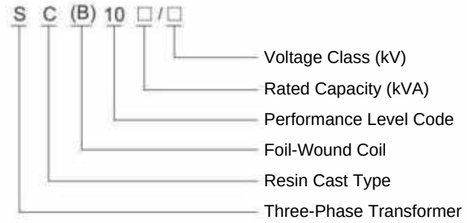
Product Introduction

This epoxy resin cast dry-type transformer is manufactured with high-quality materials , scientific formulations, and advanced production and testing equipment under strict processes. It features high reliability and long service life. Depending on the operating environment, it can be equipped with enclosures of different protection grades or used without an enclosure. As a replacement for oil-immersed transformers, it is suitable for important or special environments such as high-rise buildings, commercial centers, airports, tunnels, chemical plants, nuclear power stations, and ships

Applicable Standards

- ◇ GB6450-1986 Dry-Type Power Transformers
- ◇ GB/T10228-2008 Technical Parameters and Requirements for Dry-Type Power Transformers
- ◇ GB/T17211-1998 Loading Guide for Dry-Type Power Transformers
- ◇ GB1094.3-2003 Power Transformers - Part 3: Insulation Levels, Dielectric Tests and Air Clearances for External Insulation
- ◇ JB/T10088-2004 Sound Levels for 6~500kV Power Transformers
- ◇ JB/T56009-1998 Product Quality Grading for Dry-Type Power Transformers

Model Definition



Product Features

- ◇ Safe, fireproof, and pollution-free, it can operate directly at the load center.
- ◇ High mechanical strength, strong short-circuit withstand capability, low partial discharge, good thermal stability, high reliability, and long service life.
- ◇ Low loss, low noise, obvious energy-saving effect, and maintenance-free.
- ◇ Good heat dissipation and strong overload capacity; capacity can be increased with forced air cooling.
- ◇ Good moisture resistance, suitable for operation in high humidity and other harsh environments.
- ◇ Can be equipped with a comprehensive temperature monitoring and protection system. The intelligent signal temperature control system automatically monitors and displays the operating temperature of each three-phase winding on the same screen, automatically starts and stops the fan, and provides alarm and trip functions.
- ◇ Small size, light weight, small footprint, and low installation cost.

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SC(B)10 Type 10kV Series Resin Insulation Dry Type Power Transformer

Technical Parameters

Technical Parameters of SC(B)10 Series 10kV Epoxy Resin Cast Dry-Type Power Transformers

Rated Capacity (kVA)	Voltage Combination and Tap Range			Connection Symbol	No-Load Loss (W)	Load Loss (W) 120℃	No-Load Current (%)	Short-Circuit Impedance (%)	Main Unit Weight (kg)	Overall Dimensions (mm)		Wheelbase (mm)
	High Voltage (kV)	Tap Changer (%)	Low Voltage (kV)							Length (L) × Width (W) × Height (H) (Without Protective Enclosure)	Length (L) × Width (W) × Height (H) (With Protective Enclosure)	
30	6 6.3 6.6 10 10.5 11	±5 Or ±2×2.5	0.4	Yyn0 Or Dyn11	190	710	2.4	4	380	820×600×820		550×550
50					270	1000	2.1		480	850×600×850		550×550
80					370	1380	1.8		600	950×600×950		550×550
100					400	1570	1.8		750	1040×600×1000	1300×1000×1300	550×550
125					470	1850	1.6		850	1080×600×1050	1300×1000×1300	550×550
160					540	2130	1.6		950	1120×770×1100	1400×1000×1400	710×660
200					620	2530	1.4		1150	1160×770×1150	1450×1100×1450	710×660
250					720	2760	1.4		1350	1220×770×1200	1500×1150×1500	710×710
315					880	3470	1.2		1600	1260×770×1250	1550×1150×1550	710×710
400					980	3990	1.2		1750	1320×770×1300	1600×1150×1600	710×710
500					1160	4880	1.2		2050	1360×820×1350	1650×1200×1650	760×710
630					1300	5960	1.0	6	2400	1450×820×1410	1800×1250×1800	760×710
800					1520	6960	1.0		2700	1480×980×1550	1800×1250×1800	920×820
1000					1770	8130	1.0		3200	1520×980×1600	1850×1250×1850	920×820
1250					2090	9690	1.0		3700	1600×980×1650	1900×1250×1900	920×820
1600					2450	11730	1.0		4500	1680×980×1700	1950×1300×1950	920×920
2000					3050	14450	0.8		4800	1760×980×1800	2000×1300×2100	920×920
2500					3600	17170	0.8		5300	1900×980×1900	2200×1400×2200	1020×920

Notes:

1. For the on-load tap-changing SCZ(B)10 series transformers, only the following data are adjusted: the weight increases by 100kg, the side a (where the on-load tap-changer is installed) increases by 650mm, and the front b increases by 750mm.
2. The high-voltage side of the on-load tap-changing transformer can provide a voltage regulation range of ±4×2.5%.
3. The weight and overall dimension data in the table are for reference only; no prior notice will be given for any changes.

SC(B)11 Type 10kV Series Resin Insulation Dry Type Power Transformer

SC(B)11 Type 10kV Series
Resin Insulation Dry Type Power Transformer

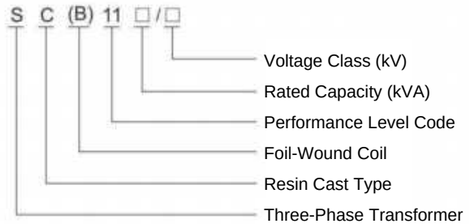
Product Introduction

This epoxy resin cast dry-type transformer is manufactured with high-quality materials , scientific formulations, and advanced production and testing equipment under strict processes. It features high reliability and long service life. Depending on the operating environment, it can be equipped with enclosures of different protection grades or used without an enclosure. As a replacement for oil-immersed transformers, it is suitable for important or special environments such as high-rise buildings, commercial centers, airports, tunnels, chemical plants, nuclear power stations, and ships

Applicable Standards

- ◇ GB6450-1986 Dry-Type Power Transformers
- ◇ GB/T10228-2008 Technical Parameters and Requirements for Dry-Type Power Transformers
- ◇ GB/T17211-1998 Loading Guide for Dry-Type Power Transformers
- ◇ GB1094.3-2003 Power Transformers - Part 3: Insulation Levels, Dielectric Tests and Air Clearances for External Insulation
- ◇ JB/T10088-2004 Sound Levels for 6~500kV Power Transformers
- ◇ JB/T56009-1998 Product Quality Grading for Dry-Type Power Transformers

Model Definition



Product Features

- ◇ Safe, fireproof, and pollution-free, it can operate directly at the load center.
- ◇ High mechanical strength, strong short-circuit withstand capability, low partial discharge, good thermal stability, high reliability, and long service life.
- ◇ Low loss, low noise, obvious energy-saving effect, and maintenance-free.
- ◇ Good heat dissipation and strong overload capacity; capacity can be increased with forced air cooling.
- ◇ Good moisture resistance, suitable for operation in high humidity and other harsh environments.
- ◇ Can be equipped with a comprehensive temperature monitoring and protection system. The intelligent signal temperature control system automatically monitors and displays the operating temperature of each three-phase winding on the same screen, automatically starts and stops the fan, and provides alarm and trip functions.
- ◇ Small size, light weight, small footprint, and low installation cost.

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SC(B)11 Type 10kV Series
Resin Insulation Dry Type Power Transformer

Technical Parameters

Technical Parameters of SC(B)11 Series 10kV Epoxy Resin Cast Dry-Type Power Transformers

Rated Capacity (kVA)	Voltage Combination and Tap Range			Connection Symbol	No-Load Loss (W)	Load Loss (W)	No-Load Current (%)	Short-Circuit Impedance (%)	Main Unit Weight (kg)	Overall Dimensions (mm)		Wheelbase (mm)
	High Voltage (kV)	Tap Changer (%)	Low Voltage (kV)							Length (L) × Width (W) × Height (H) (Without Protective Enclosure)	Length (L) × Width (W) × Height (H) (With Protective Enclosure)	
30	6 6.3 6.6 10 10.5 11	±5 Or ±2×2.5	0.4	Yyn0 Or Dyn11	170	710	2.4	4	380	820×600×820		550×550
50					250	1000	2.1		480	850×600×850		550×550
80					340	1380	1.8		600	950×600×950		550×550
100					360	1570	1.8		750	1040×600×1000	1300×1000×1300	550×550
125					430	1850	1.6		850	1080×600×1050	1300×1000×1300	550×550
160					490	2130	1.6		950	1120×770×1100	1400×1000×1400	710×660
200					560	2530	1.4		1150	1160×770×1150	1450×1100×1450	710×660
250					650	2760	1.4		1350	1220×770×1200	1500×1150×1500	710×710
315					800	3470	1.2		1600	1260×770×1250	1550×1150×1550	710×710
400					890	3990	1.2		1750	1320×770×1300	1600×1150×1600	710×710
500					1020	4880	1.2		2050	1360×820×1350	1650×1200×1650	760×710
630					1130	5960	1.0	6	2400	1450×820×1410	1800×1250×1800	760×710
800					1330	6960	1.0		2700	1480×980×1550	1800×1250×1800	920×820
1000					1550	8130	1.0		3200	1520×980×1600	1850×1250×1850	920×820
1250					1830	9690	1.0		3700	1600×980×1650	1900×1250×1900	920×820
1600					2140	11730	1.0		4500	1680×980×1700	1950×1300×1950	920×920
2000					2720	14450	0.8		4800	1760×980×1800	2000×1300×2100	920×920
2500					3200	17170	0.8		5300	1900×980×1900	2200×1400×2200	1020×920

Notes:

1. For the on-load tap-changing SCZ(B)11 series transformers, only the following data are adjusted: the weight increases by 100kg, the side a (where the on-load tap-changer is installed) increases by 650mm, and the front b increases by 750mm.
2. The high-voltage side of the on-load tap-changing transformer can provide a voltage regulation range of ±4×2.5%.
3. The weight and overall dimension data in the table are for reference only; no prior notice will be given for any changes.

SC(B)13 Type 10kV Series Resin Insulation Dry Type Power Transformer

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SC(B)13 Type 10kV Series Resin Insulation Dry Type Power Transformer

Product Introduction

This epoxy resin cast dry-type transformer is manufactured with high-quality materials , scientific formulations, and advanced production and testing equipment under strict processes. It features high reliability and long service life. Depending on the operating environment, it can be equipped with enclosures of different protection grades or used without an enclosure. As a replacement for oil-immersed transformers, it is suitable for important or special environments such as high-rise buildings, commercial centers, airports, tunnels, chemical plants, nuclear power stations, and ships

Applicable Standards

- ◇ GB6450-1986 Dry-Type Power Transformers
- ◇ GB/T10228-2008 Technical Parameters and Requirements for Dry-Type Power Transformers
- ◇ GB/T17211-1998 Loading Guide for Dry-Type Power Transformers
- ◇ GB1094.3-2003 Power Transformers - Part 3: Insulation Levels, Dielectric Tests and Air Clearances for External Insulation
- ◇ JB/T10088-2004 Sound Levels for 6~500kV Power Transformers
- ◇ JB/T56009-1998 Product Quality Grading for Dry-Type Power Transformers

Model Definition

S C (B) 13 □/□

- Voltage Class (kV)
- Rated Capacity (kVA)
- Performance Level Code
- Foil-Wound Coil
- Resin Cast Type
- Three-Phase Transformer

Product Features

- ◇ Safe, fireproof, and pollution-free, it can operate directly at the load center.
- ◇ High mechanical strength, strong short-circuit withstand capability, low partial discharge, good thermal stability, high reliability, and long service life.
- ◇ Low loss, low noise, obvious energy-saving effect, and maintenance-free.
- ◇ Good heat dissipation and strong overload capacity; capacity can be increased with forced air cooling.
- ◇ Good moisture resistance, suitable for operation in high humidity and other harsh environments.
- ◇ Can be equipped with a comprehensive temperature monitoring and protection system. The intelligent signal temperature control system automatically monitors and displays the operating temperature of each three-phase winding on the same screen, automatically starts and stops the fan, and provides alarm and trip functions.
- ◇ Small size, light weight, small footprint, and low installation cost.

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SC(B)13 Type 10kV Series Resin Insulation Dry Type Power Transformer

Technical Parameters

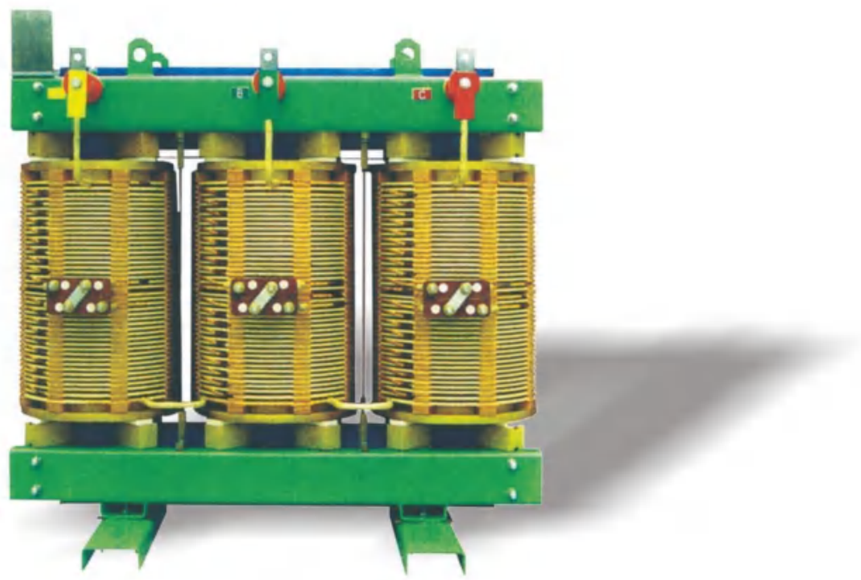
Technical Parameters of SC(B)13 Series 10kV Epoxy Resin Cast Dry-Type Power Transformers

Rated Capacity (kVA)	Voltage Combination and Tap Range			Connection Symbol	No-Load Loss (W)	Load Loss (W) 120°	No-Load Current (%)	Short-Circuit Impedance (%)	Main Unit Weight (kg)	Overall Dimensions (mm)		Wheelbase (mm)
	High Voltage (kV)	Tap Changer (%)	Low Voltage (kV)							Length (L) × Width (W) × Height (H) (Without Protective Enclosure)	Length (L) × Width (W) × Height (H) (With Protective Enclosure)	
30	6 6.3 6.6 10 10.5 11	±5 Or ±2×2.5	0.4	Yyn0 Or Dyn11	130	710	2.4	4	380	820×600×820		550×550
50					210	1000	2.1		480	850×600×850		550×550
80					280	1380	1.8		600	950×600×950		550×550
100					300	1570	1.8		750	1040×600×1000	1300×1000×1300	550×550
125					340	1850	1.6		850	1080×600×1050	1300×1000×1300	550×550
160					390	2130	1.6		950	1120×770×1100	1400×1000×1400	710×660
200					440	2530	1.4		1150	1160×770×1150	1450×1100×1450	710×660
250					520	2760	1.4		1350	1220×770×1200	1500×1150×1500	710×710
315					640	3470	1.2		1600	1260×770×1250	1550×1150×1550	710×710
400					710	3990	1.2		1750	1320×770×1300	1600×1150×1600	710×710
500					800	4880	1.2		2050	1360×820×1350	1650×1200×1650	760×710
630					900	5960	1.0	6	2400	1450×820×1410	1800×1250×1800	760×710
800					1060	6960	1.0		2700	1480×980×1550	1800×1250×1800	920×820
1000					1240	8130	1.0		3200	1520×980×1600	1850×1250×1850	920×820
1250					1460	9690	1.0		3700	1600×980×1650	1900×1250×1900	920×820
1600					1710	11730	1.0		4500	1680×980×1700	1950×1300×1950	920×920
2000					2170	14450	0.8		4800	1760×980×1800	2000×1300×2100	920×920
2500					2560	17170	0.8		5300	1900×980×1900	2200×1400×2200	1020×920

Notes:

1. For the on-load tap-changing SCZ(B)13 series transformers, only the following data are adjusted: the weight increases by 100kg, the side a (where the on-load tap-changer is installed) increases by 650mm, and the front b increases by 750mm.
2. The high-voltage side of the on-load tap-changing transformer can provide a voltage regulation range of ±4×2.5%.
3. The weight and overall dimension data in the table are for reference only; no prior notice will be given for any changes.

SG(B)10 Type 10kV Series Non-encapsulated Coil Dry Type Transformer



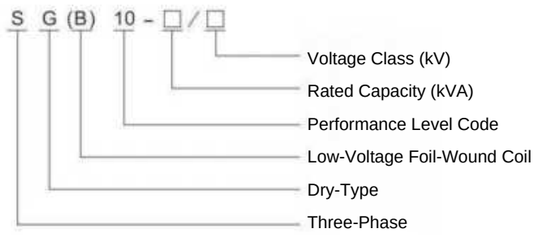
Product Introduction

This is a three-phase dry-type power transformer with non-encapsulated coils, manufactured using the NOMEX insulation system approved by UL (USA). It features safety, reliability, energy efficiency, fire resistance, explosion protection, and easy maintenance. With advanced design, reasonable structure, and attractive appearance, its key performance indicators (such as partial discharge level, no-load loss, load loss, noise, and adaptability to high-humidity environments) are superior to domestic standards. It can be installed in polluted and humid environments near lakes, seas, and rivers, as well as areas with high fire protection requirements and heavy loads. Suitable applications include high-rise buildings, airports, stations, docks, subways, hospitals, power plants, metallurgical industries, shopping centers, densely populated residential areas, and sites like petrochemical plants, nuclear power stations, and nuclear submarines.

Applicable Standards

◇ GB6450-1986 Dry-Type Power Transformers
◇ GB/T10228-1997 Technical Parameters and Requirements for Dry-Type Power Transformers
◇ GB/T17211-1998 Loading Guide for Dry-Type Power Transformers
◇ GB1094.3-2003 Power Transformers - Part 3: Insulation Levels, Dielectric Tests and Air Clearances for External Insulation
◇ JB/T10088-2004 Sound Levels for 6~500kV Power Transformers
◇ JB/T56009-1998 Product Quality Grading for Dry-Type Power Transformers

Model Definition



Product Features

◇ The carefully designed coil structure and vacuum impregnation process result in low partial discharge for the SG(B)10 transformer, with no cracking or insulation degradation throughout its service life.
◇ The high-voltage side adopts a continuous winding, and the low-voltage side uses foil winding. The whole unit undergoes vacuum impregnation and curing, supported by high-strength ceramic insulators, providing excellent resistance to sudden short-circuit currents.
◇ Flame-retardant, self-extinguishing, non-toxic, and fireproof.
◇ Almost no smoke is generated when the SG(B)10 transformer is burned under high-temperature open flame.
◇ The transformer uses Class H (180°C) insulation, with DuPont NOMEX® paper (Class C) as the main insulation material.
◇ The insulation layer is extremely thin and uniform, enabling strong short-time overload capacity. It can operate at 120% load continuously and 140% load for 3 hours without forced cooling. Thanks to the non-aging and elastic properties of the insulation material, it can immediately carry full load at -50°C.

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SG(B)10 Type 10kV Series
Non-encapsulated Coil Dry Type Transformer

Technical Parameters

Technical Parameters of SG(B)10 Series 10kV Non-Encapsulated Coil Dry-Type Transformers

Rated Capacity (kVA)	Voltage Combination and Tap Range			Connection Symbol	No-Load Loss (W)	Load Loss (W) 145℃	No-Load Current (%)	Short-Circuit Impedance (%)	Main Unit Weight (kg)	Overall Dimensions (mm)		Wheelbase (mm)
	High Voltage (kV)	Tap Changer (%)	Low Voltage (kV)							Length (L) × Width (W) × Height (H) (Without Protective Enclosure)	Length (L) × Width (W) × Height (H) (With Protective Enclosure)	
100	6 6.3 6.6 10 10.5 11	±5 Or ±2×2.5	0.4	Yyn0 Or Dyn11	400	2160	1.7	4	750	1050×600×1000	1300×1000×1500	550×550
160					560	3100	1.5		950	1120×770×1100	1400×1100×1500	710×660
200					650	3970	1.4		1150	1160×770×1150	1450×1100×1500	710×660
250					750	4670	1.3		13580	1220×770×1200	1500×1150×1500	710×710
315					880	5610	1.1		1600	1260×700×1250	1550×1150×1550	710×710
400					1040	6630	1.1		1750	1320×770×1300	1600×1150×1600	710×710
500					1200	7940	1.0		2050	1360×820×1350	1650×1200×1650	760×710
630					1340	9770	0.9	6	2400	1420×820×1400	1700×1200×1700	760×710
800					1690	11560	0.75		2800	1500×980×1550	1850×1250×1800	920×820
1000					1980	13340	0.65		3200	1550×980×1600	1850×1250×1850	920×820
1250					2380	15640	0.6		3800	1600×980×1650	1900×1250×1900	920×820
1600					2730	18100	0.6		4500	1700×980×1700	2000×1300×2100	920×920
2000					3320	21250	0.5		5600	1800×980×1800	2100×1300×2200	920×920
2500					4000	24730	0.45		6300	1850×980×1900	2100×1300×2300	1020×920

Notes:The overall dimensions and weight data in the table are for reference only; no prior notice will be given for any changes.

S11 Type 35kV Series Distribution Transformer

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S11 Type
35kV Series Distribution Transformer

Product Introduction

- ◇ Device Type: Outdoor Type
- ◇ Normal Ambient Operating Conditions: Altitude not exceeding 1000m.
- ◇ Special Ambient Operating Conditions: Altitude exceeding 1000m.
- ◇ Installation Site: Environment free from corrosive gases and obvious dirt.
- ◇ This product is a direct distribution transformer, which directly supplies industrial and agricultural power and lighting from the 35kV power grid.

Applicable Standards

- ◇ GB1094.1~2-1996 Power Transformers
- ◇ GB1094.3,5-2003 Power Transformers
- ◇ GB/T6451-2008 Technical Parameters and Requirements for Three-Phase Oil-Immersed Power Transformers

Model Definition

S 11-□/□

- Voltage Class (kV)
- Rated Capacity (kVA)
- Performance Level Code
- Three-Phase Oil-Immersed Transformer

Product Features

A series of reforms in materials, processes, and structures have been adopted for this product, bringing its electrical performance up to the advanced international level of similar products. Featuring high efficiency and low loss, it can save a significant amount of power consumption and operating costs, delivering remarkable social benefits.

The core is made of high-quality cold-rolled grain-oriented silicon steel sheets stacked with fully mitered joints. Vacuum oil filling is employed. The oil tank is square-shaped, and three types of radiators are available for user selection: corrugated, plate-type, and tubular.

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S11 Type
35kV Series Distribution Transformer

Technical Parameters

Technical Parameters of S11 Type 35kV Series Distribution Transformer

Rated Capacity (kVA)	Voltage Combination			Connection Symbol	No-Load Loss (W)	Load Loss (W)	Short-Circuit Impedance (%)	No-Load Current (%)	Weight (kg)		Overall Dimensions (mm)	Wheelbase (mm)
	High Voltage (kV)	Tap Changer (%)	Low Voltage (kV)						Oil Weight	Total Weight	Length (L) × Width (W) × Height (H)	
50	35 38.5	±5%	0.4	Yyn0	210	1210	6.5	2	230	650	1120×930×1450	550×550
100					290	2020		1.8	280	800	1120×950×1500	550×550
125					340	2380		1.7	330	920	1150×1000×1650	550×550
160					360	2840		1.6	340	950	1200×1000×1680	550×550
200					430	3330		1.5	350	1120	1350×1080×1720	660×660
250					510	3960		1.4	400	1300	1400×1100×1760	660×660
315					610	4770		1.4	450	1300	1950×950×1840	660×660
400					730	5760		1.3	500	1300	1980×1050×1900	660×660
500					860	6930		1.2	550	1300	2020×1150×1980	660×660
630					1040	8280		1.1	650	2400	2100×1200×2050	710×710
800					1230	9900		1.0	800	2900	2200×1250×2150	710×710
1000					1440	12150		1.0	950	3400	2300×1300×2200	820×820
1250					1760	14670		0.9	1080	4050	2400×1350×2250	820×820
1600					2120	17550		0.8	1180	4800	2450×1480×2300	820×820
2000					2510	20800		0.7	1250	5400	2500×1600×2400	1070×1070
2500					2970	24600		0.7	1480	6300	2580×1880×2500	1070×1070
3150					3800	29200		0.6	1750	7100	2700×2250×2630	1070×1070

Note:

1. For technical parameters, overall dimensions, and weight data of 35kV class transformers with larger capacities, please consult our company.
2. Transformers with various voltage combinations, short-circuit impedances, and connection methods can be provided according to user requirements.
3. The weight and overall dimension data in the table are for reference only; no prior notice will be given for any changes.

S11 Type 35kV/6-10kV Series Power Transformer

S11 Type
35kV/6-10kV Series Power Transformer

Product Introduction

This product complies with the national standards GB 1094 Power Transformers and GB/T 6451 Technical Parameters and Requirements for Three-Phase Oil-Immersed Power Transformers. A series of major reforms in materials, processes, and structures have been adopted, bringing its electrical performance up to the advanced international level of similar products. Featuring high efficiency and low loss, it can save a significant amount of power consumption and operating costs, delivering remarkable social benefits. It is a new product promoted by the state and one of the most popular among users.

Applicable Standards

◇ GB1094.1~2-1996 Power Transformers

◇ GB1094.3,5-2003 Power Transformers

◇ GB/T6451-2008 Technical Parameters and Requirements for Three-Phase Oil-Immersed Power Transformers

Model Definition

Product Features

◇ The core is made of high-quality high-permeability silicon steel sheets with fully mitered step-lap joints, which reduces the core's no-load loss and no-load current.

◇ The high-voltage winding adopts a continuous type, and the low-voltage winding is either continuous or spiral. The ampere-turn distribution is balanced, and the mechanical strength is high. A new insulation structure is applied to the transformer body, enhancing the short-circuit withstand capability.

◇ The oil tank is of barrel or bell-jar type, with corrugated walls for an aesthetic and compact appearance as well as high mechanical strength. Precision-machined flanges are used for key connections to prevent leakage.

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S11 Type
35kV/6-10kV Series Power Transformer

Technical Parameters

Technical Parameters of S11 Type 35kV Series Distribution Transformer

Rated Capacity (kVA)	Voltage Combination and Tap Range			Connection Symbol	Loss (kW)		Short-Circuit Impedance (%)	No-Load Current (%)	Weight (kg)		Overall Dimensions (mm)	Wheelbase (mm)
	High Voltage (kV)	Tap Changer (%)	Low Voltage (kV)		No-Load	Load			Oil Weight	Total Weigh	Length (L) × Width (W) × Height (H)	
1000	35 38.5	±5 ±2×2.5	6.3 10.5	Yd11	1.44	12.15	6.5	1.0	1000	3800	2400×1650×2500	820×820
1250					1.76	14.67		0.9	1050	4100	2430×1730×2500	820×820
1600					2.12	17.55		0.8	1100	4700	2470×1750×2530	820×820
2000					2.72	19.35		0.7	1200	5300	2600×1900×2600	1070×1070
2500					3.2	20.7		0.6	1350	6200	2650×2100×2700	1070×1070
3150					3.8	24.3	7	0.56	1550	7100	2750×2100×2700	1070×1070
4000					4.52	28.8		0.56	1750	8650	2800×2350×2800	1070×1070
5000					5.4	33.03		0.48	1950	10000	2900×2500×2900	1070×1070
6300					6.56	36.9	7.5	0.48	2350	11700	3300×2400×3150	1070×1070
8000			6.3 10.5	YNd11	9	40.5		0.42	2500	14500	3750×3100×3300	1475×1475
10000					10.88	47.7		0.42	2850	16500	3400×3200×3400	1475×1475
12500					12.8	56.7	8	0.4	3300	18500	3700×3250×3580	1475×1475
16000					15.2	69.3		0.4	3800	23000	4000×3400×3700	1475×1475
20000					18	83.7		0.4	4500	27200	4120×3500×3850	1475×1475

Note: The weight and overall dimension data in the table are for reference only; no prior notice will be given for any changes.

SZ11,SFZ11 Type 35kV Series On-load Regulator Power Transformer

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SZ11,SFZ11 Type 35kV Series On-load Regulator Power Transformer

Product Introduction

This product complies with the national standards GB 1094 Power Transformers and GB/T 6451 Technical Parameters and Requirements for Three-Phase Oil-Immersed Power Transformers. A series of major reforms in materials, processes, and structures have been adopted, bringing its electrical performance up to the advanced international level of similar products. Featuring high efficiency and low loss, it can save a significant amount of power consumption and operating costs, delivering remarkable social benefits. It is a new product promoted by the state and one of the most popular among users.

Applicable Standards

- ◇ GB 1094.1~2-1996 Power Transformers
- ◇ GB 1094.3,5-2003 Power Transformers
- ◇ GB/T 6451-1999 Technical Parameters and Requirements for Three-Phase Oil-Immersed Power Transformers

Model Definition

S F Z 11 □ / □

- Voltage Class (kV)
- Rated Capacity (kVA)
- Performance Level Code
- On-Load Tap-Changing
- Forced Air Cooling
- Three-Phase Oil-Immersed Transformer

Product Features

- ◇ Equipped with on-load tap-changing, it meets user voltage requirements, improves power supply quality, and saves energy.
- ◇ The core is made of high-quality high-permeability silicon steel sheets with fully mitered step-lap joints, which reduces the core's no-load loss and no-load current.
- ◇ The high-voltage winding adopts a continuous type, and the low-voltage winding is either continuous or spiral. The ampere-turn distribution is balanced, and the mechanical strength is high. A new insulation structure is applied to the transformer body, enhancing the short-circuit withstand capability.
- ◇ The oil tank is of barrel or bell-jar type, with corrugated walls for an aesthetic and compact appearance as well as high mechanical strength. Precision-machined flanges are used for key connections to prevent leakage.

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SZ11,SFZ11 Type 35kV Series On-load Regulator Power Transformer

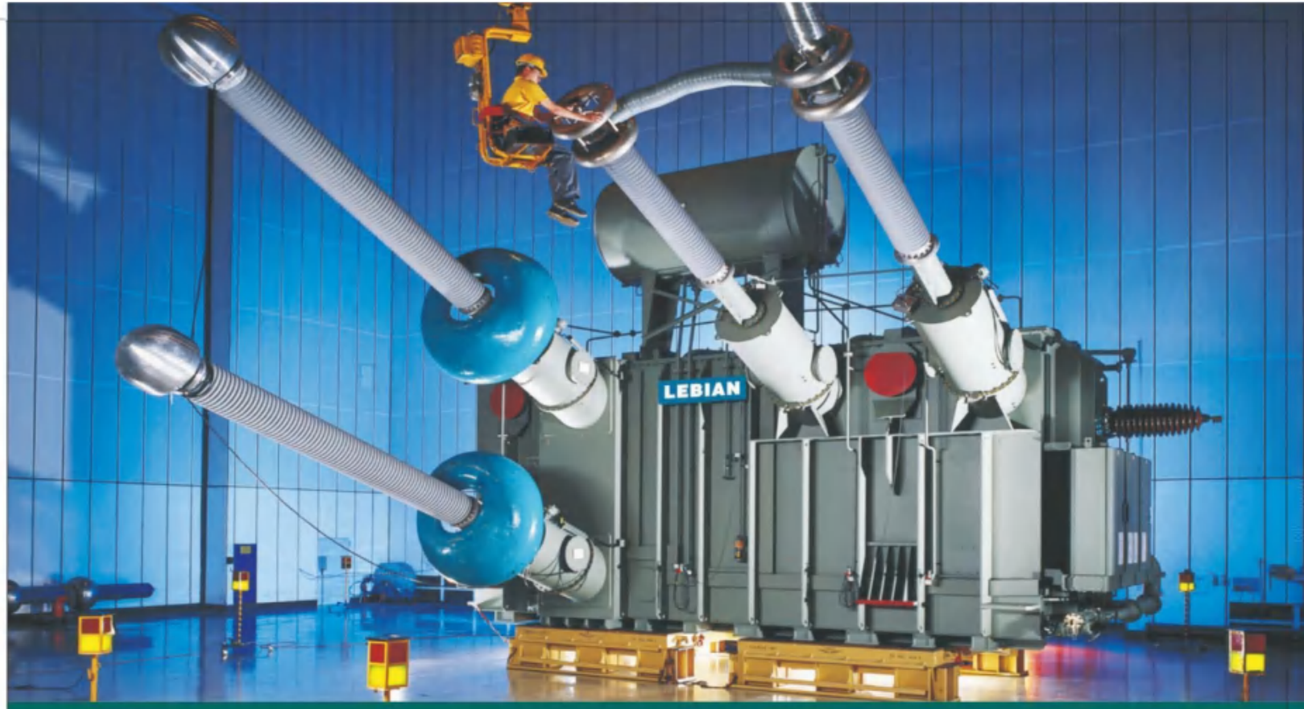
Technical Parameters

Technical Parameters of SZ11-2000~12500/35kV Series Three-Phase Oil-Immersed On-Load Tap-Changing Power Transformers

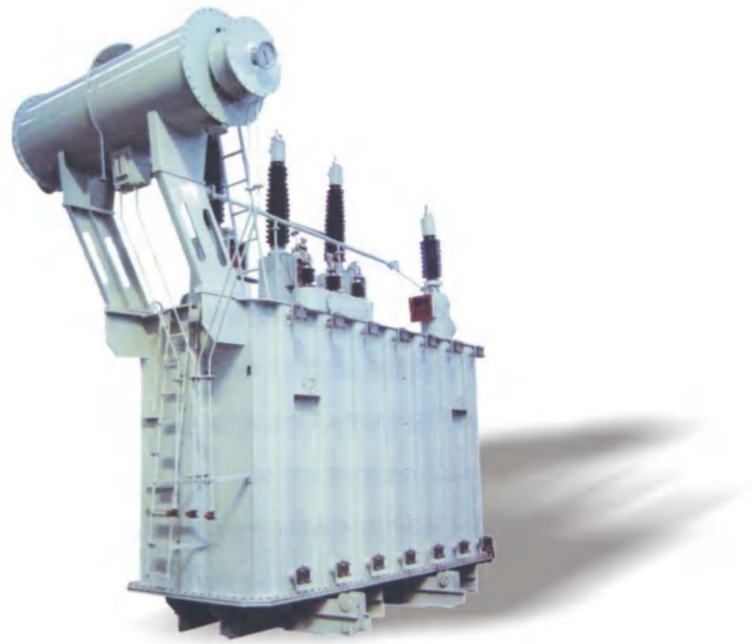
Type	Voltage Combination			Conne-ction Symbol	No-Load Loss (kW)	Load Loss (kW)	Short-Circuit Impeda-nce (%)	No-Load Current (%)	Weight (kg)		Overall Dimensions (mm)	Wheelbase (mm)
	High-Voltage (kV)	Tap-Changing (%)	Low-Voltage (kV)						Oil Weight	Total Weight	Length(L)×Width(W)×Height(H)	
SZ11-1600/35	35 38.5	±3% ×2.5	10.5 6.3 11	Yd11	2.3	18.5	6.5	1	1450	5050	2850×2050×2300	820×820
SZ11-2000/35					2.88	20.25		0.8	1600	5900	3020×2250×2650	1070×1070
SZ11-2500/35					3.4	21.73		0.8	1750	6950	3150×2280×2650	1070×1070
SZ11-3150/35					4.04	26.01	7	0.72	1950	7900	3300×2350×2900	1070×1070
SZ11-4000/35					4.84	30.69		0.72	2250	9100	3350×2500×3000	1070×1070
SZ11-5000/35					5.8	36		0.68	2500	10900	3500×2650×3050	1070×1070
SZ11-6300/35					7.04	38.7	7.5	0.68	2650	12500	3800×3150×3300	1070×1070
SZ11-8000/35				YNd11	9.84	42.75		0.6	3350	15500	4200×3160×3400	1475×1475
SZ11-10000/35					11.6	50.58		0.6	3750	18000	4500×3200×3500	1475×1475
SZ11-12500/35					13.68	59.85	8	0.56	4250	23500	4800×3200×3600	1475×1475
SZ11-16000/35					16.46	74.02		0.54	6300	26000	4900×3400×3700	1475×1475
SZ11-20000/35					19.46	87.14		0.54	7500	32500	5000×3500×4000	1475×1475

Note:

1. For performance parameters, overall dimensions, and weight data of 35kV class transformers with larger capacities, please consult our company.
2. For transformers with a capacity of 8000kVA and above, forced air cooling devices can also be provided according to user requirements (type: SFZ11).
3. The weight and overall dimension data in the table are for reference only; no prior notice will be given for any changes.



110kV Series Power Transformer



Product Introduction

Our 110kV class power transformers are developed based on advanced technologies absorbed from both domestic and international sources. Aiming to enhance product reliability, we have continuously improved R&D, processes, and structures, and implemented strict quality control. The resulting products feature low loss, low noise, low partial discharge, high mechanical and electrical strength, and fully sealed core-pull-free design, which can significantly reduce operating costs and improve the economic efficiency and safety of power grids.

Applicable Standards

- ◇ GB1094.1~GB1094.2-1996
- ◇ GB1094.3-2003
- ◇ GB1094.5-2003
- ◇ GB/T6451-1999
- ◇ IEC76

Model Definition

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- Voltage Class (kV)
- Rated Capacity (kVA)
- Performance Level Code (*)
- On-Load Tap-Changing (off-load tap-changing omitted)
- Three-Winding (two-winding omitted)
- Oil-Immersed Forced Air Cooling (self-cooling omitted)
- Three-Phase

(*) Type 9, 10, 11 or even lower loss products can be provided as required.

Product Features

- ◇ Core: Adopts fully mitered, multi-step joints and high-permeability silicon steel sheets, reducing no-load loss. Optimized cross-section design for core limbs and yokes improves clamping and reduces transformer noise.
- ◇ Winding: Supported by formed paper cylinders; inner windings have additional support points to enhance mechanical strength. Improved transposition and combined conductors effectively reduce load loss. Computer simulation of winding thermal fields optimizes heat dissipation and oil guiding, significantly reducing the temperature difference between copper and oil.
- ◇ Body & Insulation: Key parts use pulp-molded components for reasonable electric field distribution. All lead connections adopt cold-pressed joints to control partial discharge. The body is dried and pressurized as a whole, with a new clamping structure and more compression points ensuring tightness and reliability. Systematic electric field calculation of leads ensures reasonable and firm layout, greatly improving short-circuit withstand capability.
- ◇ Tank: Plate-reinforced steel tank with an elegant appearance. The control box is mounted on the transformer body, eliminating the need for a separate foundation (corrugated tanks are available upon customer request).
- ◇ Accessories: All valves are made of high-quality alloy steel to prevent leakage and ensure reliability. Square seamless steel pipes are used for radiator oil collection, eliminating leakage and improving the overall appearance.

MINGRI 110kV Series Power Transformer

Technical Parameters of SFZ9 Type 110kV Series Two-Winding On-Load Tap-Changing Power Transformer

Rated Capacity (kVA)	Voltage Combination and Tap Range			Connection Symbol	Loss (kW)		Short-Circuit Impedance (%)	No-Load Current (%)	Weight (kg)	Overall Dimensions(mm)	Wheelbase(mm)
	High-Voltage (kV)	Tap-Changing (%)	Low-Voltage (kV)		No-Load	Load				Length(L)×Width(W)×Height(H)	
10000	110 121	±8×1.25	6.6 6.3 10.5 11	YNd11	13.7	53	10.5	0.85	21500	5560×3500×4780	1475×1475
12500					15.7	63		0.8	25000	5650×3580×4850	
16000					18.4	77		0.75	30300	5700×3650×4900	2040×1475
20000					21.1	94		0.7	36000	5950×3850×5000	
25000					24.3	111		0.65	41500	5980×4100×5050	
31500					27.9	133		0.6	50100	6100×4120×5100	
40000					33.3	157		0.55	59000	6400×4250×5200	
50000					39.6	194		0.5	68000	6600×4450×5400	
63000					50.4	234		0.45	81000	6800×4650×5600	

Note: The overall dimensions and weight data in the table are for reference only; no prior notice will be given for any changes.

Technical Parameters of SFS9 Type 110kV Series Two-Winding On-Load Tap-Changing Power Transformer

Rated Capacity (kVA)	Voltage Combination and Tap Range				Connection Symbol	Loss (kW)		Short-Circuit Impedance (%)		No-Load Current (%)	Weight (kg)	Overall Dimensions(mm)	Wheelbase(mm)
	High-Voltage (kV)	Tap-Changing (%)	Medium Voltage (kV)	Low-Voltage (kV)		No-Load	Load	Step-Up	Step-Down			Length(L)×Width(W)×Height(H)	
10000	110 121	±2×2.5	35 38.5	6.6 6.3 10.5 11	Yyn0 Dyn11	15.3	67	High-Medium: 17-18 High-Low: 10.5 Medium-Low: 6.5	High-Medium: 10.5 High-Low: 17-18 Medium-Low: 6.5	0.9	24000	5350×3100×5000	1475×1475
12500						17.5	78			0.85	28500	5450×3150×5200	
16000						19.8	95			0.8	34000	5500×3200×5400	2040×1475
20000						23.4	112			0.75	38500	5600×3250×5500	
25000						26.5	133			0.7	44500	5800×3600×5650	
31500						30.6	157			0.65	52800	6250×3950×5800	
40000						36	189			0.6	62800	6500×4100×5900	
50000						43.5	225			0.55	73000	6750×4200×6050	
63000						51.2	270			0.5	88000	7000×4450×6250	

Note: The overall dimensions and weight data in the table are for reference only; no prior notice will be given for any changes.

KS9 Type 6-10kV Series Mining Oil-immerse Power Transformer

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KS9 Type 6-10kV Series Mining Oil-immerse Power Transformer

Product Introduction

◇ KS9 series mining transformers are suitable for coal mine underground central substations, shaft bottom yards, main air intake roadways and other places with gas but no explosion risk. They are also applicable to relatively humid tunnel environments.
◇ Normal ambient operating conditions: Altitude ≤ 1000m.
Ambient temperature: max +40℃, min -25℃.
◇ Special ambient operating conditions: Altitude > 1000m.
Ambient temperature: max +40℃, min -45℃. (Please specify in detail when ordering)
◇ Relative humidity of surrounding air ≤ 95% (at +25℃).
◇ Environment free from severe vibration and shock, with inclination angle to vertical plane ≤ 35°.

Applicable Standards

◇ JB3995-2006 ◇ GB1094.1-1996 ◇ GB1094.2-1996
◇ GB/1094.3-2003 ◇ GB/1094.5-2003

Model Definition

K S 9-□/□
- Voltage Class (kV)
- Rated Capacity (kVA)
- Performance Level Code
- Three-Phase
- Mining Type (General Type)

Product Features

◇ The tank has a robust structure and can withstand a pressure test of one atmosphere. There is no oil conservator on the tank cover. High and low voltage cable junction boxes are welded on both sides of the tank wall for cable connection. The high-voltage winding has rated voltage and ±5% tap voltage, which is adjusted via a tap changer. Voltage adjustment must be performed after cutting off the power supply and removing the weather cover of the tap changer on the tank wall.
◇ The low-voltage side of the transformer can be connected in "Y" configuration for 690V power supply, or reconnected in "△" configuration for 400V power supply. Six porcelain bushings are led out from the secondary terminals in the cable junction box for user modification.
◇ The entire transformer is lifted using lifting lugs welded on the tank wall. A trolley bracket is installed at the bottom of the transformer tank, with mounting holes for installing mine car rollers as required by the mine.

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KS9 Type 6-10kV Series Mining Oil-immerse Power Transformer

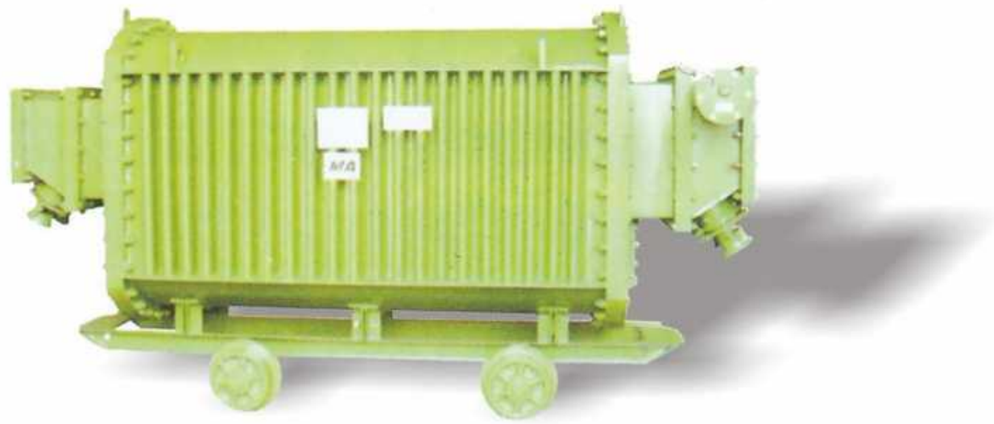
Technical Parameters

Technical Parameters of KS9 Type 6-10kV Series Mining Oil-immerse Power Transformer

Rated Capacity (kVA)	Voltage Combination			Connection Symbol	No-Load Loss (W)	Load Loss (W)	Short-Circuit Impedance (%)	No-Load Current (%)	Weight (kg)		Overall Dimensions (mm)	Wheelbase (mm)
	High Voltage (kV)	Tap Changer (%)	Low Voltage (kV)						Oil Weight	Total Weight	Length (L) × Width (W) × Height (H)	
50	6 6.3 10	±5 Or ±2×2.5	0.4 0.69	Yyn0 Or Yd11	170	870	4.0	2.0	90	400	1150×750×980	400×200
80					250	1250		1.8	120	550	1240×770×1010	550×220
100					290	1500		1.6	130	580	1250×780×1050	550×240
125					340	1800		1.5	140	650	1280×790×1080	550×240
160					400	2200		1.4	160	790	1350×820×1120	660×260
200					480	2600		1.3	190	900	1450×840×1130	660×260
250					560	3050		1.2	220	1040	1480×920×1200	660×300
315					670	3650		1.1	250	1200	1500×950×1250	660×300
400					800	4300		1.0	310	1410	1650×950×1400	660×320
500					960	5150		1.0	350	1620	1750×980×1500	660×340
630					1200	6200	4.5	0.9	400	1850	1800×1100×1550	710×360
800					1400	7500		0.9	600	2200	1900×1200×1700	820×380

Note: 1. Transformers with a low voltage of 1.2kV can be provided according to user requirements.
2. The weight and overall dimension data in the table are for reference only; no prior notice will be given for any changes.

KBSG9-50~1600/10 Mining Flameproof Dry Type Transformer



KBSG9-50~1600/10
Mining Flameproof Dry Type Transformer

Product Introduction

◇ KBSG9 series mining transformers (mobile substations) are suitable for mine environments with methane gas mixtures, coal dust and explosion hazards, as well as gas and steam environments that do not corrode metals or damage insulation. The transformer features high strength, low temperature rise, good heat dissipation and moisture resistance, and easy maintenance.

◇ Installation altitude ≤ 1000m (normal use); special environments shall be specified separately.

◇ Ambient temperature ≤ 40℃.

◇ Relative humidity of surrounding air ≤ 95% (at +25℃).

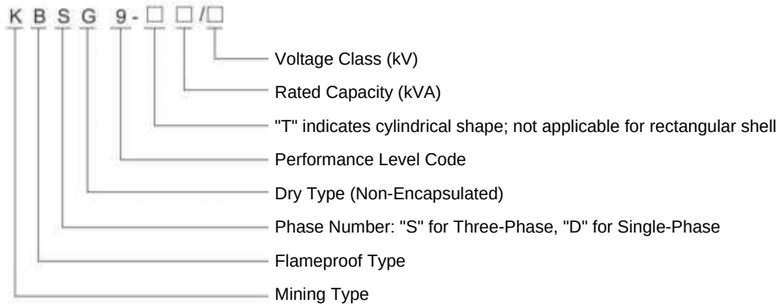
◇ Environment free from severe vibration and shock, with inclination angle to vertical plane ≤ 15°.

Applicable Standards

◇ JB3995-2006 ◇ GB1094.1-1996

◇ GB/1094.3-2003 ◇ GB/1094.5-2003

Model Definition



Product Features

The core of this series of transformers is made of high-quality low-loss grain-oriented silicon steel sheets, featuring low no-load loss, small no-load current and low noise. All insulation adopts Class H or Class C insulating materials with good thermal stability, enabling long-term full-load operation.

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KBSG9-50~1600/10
Mining Flameproof Dry Type Transformer

Technical Parameters

Technical Parameters of 6kV KBSG9 Mining Flameproof Dry-Type Transformer

Rated Capacity (kVA)	Voltage Combination (kV)	Connection Method	Short-Circuit Impedance (%)	Losses (W)		No-Load Current (%)	Weight (kg)	Overall Dimensions (mm) L×W×H
				No-Load	Load			
KBSG-50/6	High Voltage: 6kV Low Voltage: 0.693/0.4kV, 1.2/0.693kV, 3.45kV	Yy0(d11)	4	350	550	2.5	1250	2075×1100×1050
KBSG-80/6				450	780	2.5	1300	2150×1100×1100
KBSG-100/6				520	920	2.5	1400	2150×1100×1100
KBSG-160/6				700	1300	2.0	1500	2200×1100×1220
KBSG-200/6				820	1550	2.0	2100	2650×1100×1400
KBSG-250/6				950	1800	2.0	2470	2690×1100×1420
KBSG-315/6				1100	2150	1.8	2895	2830×1100×1410
KBSG-400/6				1300	2600	1.8	3260	2920×1100×1440
KBSG-500/6				1500	3100	1.5	3700	2990×1100×1475
KBSG-630/6				1800	3680	1.5	4120	3050×1100×1550
KBSG-800/6		Yy0(d11) Yyno		2050	4500	1.0	5300	3100×1100×1430
KBSG-1000/6				2350	5400	1.0	5700	3160×1100×1480
KBSG-1250/6		Yy0 Yyno		2750	6500	1.0	6600	3200×1100×1520
KBSG1600/6				3350	8000	0.8	7600	3260×1100×1570

Technical Parameters of 10kV KBSG9 Mining Flameproof Dry-Type Transformer

Rated Capacity (kVA)	Voltage Combination (kV)	Connection Method	Short-Circuit Impedance (%)	Losses (W)		No-Load Current (%)	Weight (kg)	Overall Dimensions (mm) L×W×H
				No-Load	Load			
KBSG-50/10	High Voltage: 10kV Low Voltage: 0.693/0.4kV, 1.2/0.693kV, 3.45kV	Yy0(d11)	4	390	680	2.5	1250	2075×1100×1050
KBSG-80/10				490	880	2.5	1300	2150×1100×1100
KBSG-100/10				560	1050	2.5	1400	2150×1100×1100
KBSG-160/10				800	1500	2.0	1500	2200×1100×1200
KBSG-200/10				950	1800	2.0	2200	2760×1100×1480
KBSG-250/10				1100	2100	2.0	2760	2800×1100×1510
KBSG-315/10				1300	2500	1.8	2990	2840×1100×1500
KBSG-400/10				1500	3000	1.8	3430	2940×1100×1550
KBSG-500/10				1750	3500	1.5	3800	3020×1100×600
KBSG-630/10				2000	4100	1.5	4380	3140×1100×1410
KBSG-800/10		Yy0(d11) Yyno		2300	5100	1.2	5400	3190×1100×1490
KBSG-1000/10			4.5	2600	6100	1.2	6500	3240×1100×1530
KBSG-1250/10		Yy0 Yyno		3100	7400	1.0	7100	3300×1100×1580
KBSG1600/10			5	3800	8500	1.0	8050	3350×1100×1630

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KBSG9-50~1600/10
Mining Flameproof Dry Type Transformer

Technical Parameters

Technical Parameters of 6kV KBSG9-T Mining Flameproof Dry-Type Transformer

Rated Capacity (kVA)	Voltage Combination (kV)	Connection Method	Short-Circuit Impedance (%)	Losses (W)		No-Load Current (%)	Weight (kg)	Overall Dimensions (mm) L×W×H
				No-Load	Load			
KBSG-T-50/6	High Voltage: 6kV Low Voltage: 0.693/0.4kV, 1.2/0.693kV, 3.45kV	Yy0(d11)	4	350	550	2.5	1250	2075×808×1050
KBSG-T-80/6				450	780	2.5	1300	2150×808×1100
KBSG-T-100/6				520	920	2.5	1400	2150×808×1100
KBSG-T-160/6				700	1300	2.0	1500	2290×815×1220
KBSG-T-200/6				820	1550	2.0	2200	2900×815×1220
KBSG-T-250/6				950	1800	2.0	2760	2400×1100×1255
KBSG-T-315/6				1100	2150	1.8	2990	2500×1100×1370
KBSG-T-400/6				1300	2600	1.8	3430	2600×1100×1445
KBSG-T-500/6				1500	3100	1.5	3800	2740×1100×1570
KBSG-T-630/6				1800	3680	1.5		
KBSG-T-800/6		Yy0(d11) Yyno		2050	4500	1.0		
KBSG-T-1000/6				2350	5400	1.0		
KBSG-T-1250/6		Yy0 Yyno		2750	6500	1.0		
KBSG-T-1600/6				3350	8000	0.8		

Technical Parameters of 10kV KBSG9-T Mining Flameproof Dry-Type Transformer

Rated Capacity (kVA)	Voltage Combination (kV)	Connection Method	Short-Circuit Impedance (%)	Losses (W)		No-Load Current (%)	Weight (kg)	Overall Dimensions (mm) L×W×H
				No-Load	Load			
KBSG-T-50/10	High Voltage: 10kV Low Voltage: 0.693/0.4kV, 1.2/0.693kV, 3.45kV	Yy0(d11)	4	390	680	2.5	1250	2575×720×870
KBSG-T-80/10				490	880	2.5	1300	2650×720×870
KBSG-T-100/10				560	1050	2.5	1400	2815×750×905
KBSG-T-160/10				800	1500	2.0	1500	2815×750×905
KBSG-T-200/10				950	1800	2.0	2200	2815×800×905
KBSG-T-250/10				1100	2100	2.0	2760	2815×900×980
KBSG-T-315/10				1300	2500	1.8	2990	2865×1100×1030
KBSG-T-400/10				1500	3000	1.8	3430	2865×1100×1090
KBSG-T-500/10				1750	3500	1.5		
KBSG-T-630/10				2000	4100	1.5		
KBSG-T-800/10		Yy0(d11) Yyno		2300	5100	1.2		
KBSG-T-1000/10			4.5	2600	6100	1.2		
KBSG-T-1250/10		Yy0 Yyno		3100	7400	1.0		
KBSG-T-1600/10			5	3800	8500	1.0		

ZGS11-H(Z) Combined Transformer

ZGS11-H(Z) Combined Transformer

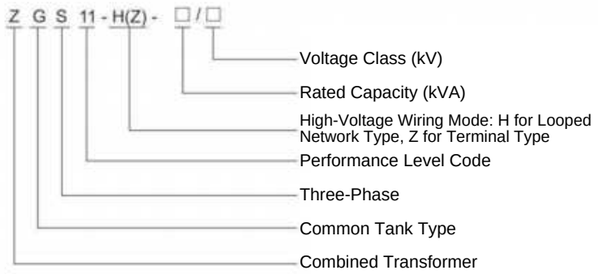
Product Introduction

◇ ZGS11 combined transformers are high-tech products independently developed by our company based on the technology of American padmounted transformers, also known as American-style box-type substations.
◇ With a capacity range of 200~1000kVA, they are suitable for 10kV distribution networks with neutral point insulated or low-resistance grounded systems, while the 400V system is a three-phase four-wire system with neutral point directly grounded.
◇ They feature strong integration, reliable power supply, small size, light weight and low noise, with looped network type and terminal type cable outgoing lines.
◇ Application of this product enables the 10kV power grid to extend deep into load centers, reducing line loss, improving power supply reliability and beautifying the urban environment, making it suitable for urban grid renovation.

Applicable Standards

◇ JB/T10217-2000 Combined Transformers
◇ GB1094.1~2-1996 Power Transformers
◇ GB3804-1990 AC High-Voltage Load Switches for 3~63kV
◇ GB7251.1-1997 Low-Voltage Switchgear and Controlgear – Part 1: Type-Tested and Partially Type-Tested Assemblies

Model Definition



Product Features

◇ Compared with Type "9" transformers, this product reduces no-load loss by 30.12% and average annual operating cost by 20.03%, with low noise, making it an environmentally friendly product.
◇ The transformer body, high-voltage load switch (or high-voltage load transfer switch), fuses, off-circuit tap-changer, etc., are all placed in a fully sealed oil tank, improving space utilization. Its volume is only about 1/3 of that of combined substations (also known as European-style substations) of the same voltage class and capacity, and the weight is also greatly reduced.
◇ High-voltage and low-voltage compartments are isolated and interlocked: the high-voltage compartment door can only be opened after the low-voltage compartment door is opened, and high-voltage terminals are fully insulated, ensuring high safety.
◇ It adopts a full-range protection method combining two-stage fuses (backup current-limiting fuses and plug-in fuses), which is safe and reliable, flexible in operation and convenient for fuse replacement.
◇ The oil tank is of fully sealed structure, isolating the oil inside from the outside, with no leakage and maintenance-free.

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ZGS11-H(Z) Combined Transformer

Technical Parameters

◇ ZGS11 combined transformers consist of high-voltage and low-voltage operating rooms and a transformer tank. The operating room contains high and low voltage terminals, load switches, operating handles for off-circuit tap-changers and plug-in fuses, pressure relief valves, oil level gauges, thermometers, etc. The transformer tank contains the transformer body, high-voltage load switches, plug-in fuses, backup current-limiting protection fuses, etc.
◇ The high-voltage incoming line is connected to the load switch via 10kV cross-linked cables through elbow connectors, straight plugs and bushing bases.
◇ The high-voltage side is protected by double fuses, i.e., backup current-limiting protection fuses and plug-in fuses.
◇ The high-voltage load switch is convenient for wiring and reliable in power supply, with terminal type and looped network type, which can be flexibly converted.
◇ The low-voltage room can be equipped with fixed or drawer-type low-voltage switchgear according to user needs, with various low-voltage electrical appliances and metering/protection instruments configured as required (Note: generally configured by the user).
◇ The oil tank is of fully sealed structure, adopting corrugated fin radiators, with compact structure and beautiful appearance.

Technical Parameters

Technical Parameters of ZGS11-H(Z)-200~1000/10 Combined Transformer

Rated Capacity (kVA)	Voltage Combination (kV)			Connection Symbol	No-Load Loss (W)	Load Loss (W)	Short-Circuit Impedance (%)	No-Load Current (%)	Weight (kg)			Overall Dimensions (mm)	High-Voltage Wiring Mode
	High Voltage	Tap (%)	Low Voltage						Body Weight	Oil Weight	Total Weight	L×W×H	
200	10	±2×2.5	0.4	Yyn0 Or Dyn11	335	2600	4.0	0.60	601	733	1894	1865×1240×1735	Looped Network Type (H) or Terminal Type (Z)
250					390	3050		0.50	716	749	2060	1865×1280×1735	
315					465	3650		0.45	835	733	2148	1865×1730×1735	
400					560	4300		0.40	1006	729	2375	1865×1440×1805	
500					670	5100		0.40	1156	747	2603	1865×1450×1805	
630					840	6200	4.5	0.40	1295	757	2826	1865×1450×1860	
800					980	7500		0.40	1521	872	3357	1865×1495×1860	
1000					1190	10300		0.30	1634	970	3704	1865×1510×1860	

Note: The weight and overall dimension data in the table are for reference only; no prior notice will be given for any changes.

YB□12-0.4 Series Prefabricated Substation (European Type Substation)

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YB□12-0.4 Series Prefabricated Substation (European Type Substation)

Product Introduction

YB□ series prefabricated substations are independently designed and developed by our company to meet the needs of urban power grid construction. This series is a complete set of power distribution equipment that integrates medium-voltage switchgear, transformers and low-voltage distribution equipment according to a certain wiring scheme.

This series is suitable for 12kV, 50Hz three-phase AC systems, with capacity ≤ 2500kVA, applied in residential quarters, commercial buildings, large construction sites , high-rise buildings, industrial and mining enterprises and temporary construction sites. It supports both looped network power supply and radial terminal power supply.

It features compact structure, high integration, safe and reliable operation, convenient maintenance and beautiful appearance; it also has the advantages of small size, small footprint, high selectivity, minimal on-site installation, short installation and commissioning period, and the ability to move with load centers.

Model Definition

□12-□/□-□

- Rated Maximum Capacity of Transformer (kVA)
- Rated Voltage of Transformer Low-Voltage Side (kV)
- Rated Voltage of Transformer High-Voltage Side (kV)
- Performance Level Code
- Structural Feature (M for "Mu" shape, P for "Pin" shape)
- Prefabricated Substation

Operating Conditions

◇ Ambient air temperature: max +40℃, min -25℃;
◇ Altitude: ≤ 1000m (up to 3000m with specially ordered transformers and low-voltage components);
◇ Vertical inclination: ≤ 5°, free from severe vibration and shock;
◇ Air humidity: ≤ 90% (at +25℃);
◇ Free from conductive dust, explosion hazards, and gases corrosive to metals and electrical components;
◇ Outdoor wind speed: ≤ 35m/s.

YB□12-0.4 Series Prefabricated Substation (European Type Substation)

Product Features

The enclosure is designed with reference to advanced foreign technologies and adjusted to actual conditions, featuring robustness, heat insulation and ventilation, good performance, dust prevention, small animal prevention, moisture resistance, beautiful appearance and convenient maintenance. Enclosure materials include aluminum alloy plate, steel plate, composite plate, stainless steel plate, non-metallic materials (glass fiber reinforced cement), etc.

The high-voltage side generally adopts load switches, or vacuum circuit breakers with complete anti-misoperation functions. Optional equipment includes XGN20-12L SF6 ring main units, HXGN15A, HXGN17 and other ring network switchgears. Transformers can be oil-immersed, fully sealed or dry-type. The substation has perfect protection performance, convenient operation, optional high and low voltage metering, and can be equipped with automatic reactive power compensation devices as required.

The box top cover is a double-layer structure filled with foam plastic for excellent heat insulation. The high and low voltage rooms have independent top plates, and the transformer room is equipped with anti-condensation and automatic temperature control monitoring, heating and cooling devices.

The box adopts natural ventilation, and forced ventilation equipment can be added. Dust-proof devices are installed on the outer side of door panels and side plates corresponding to the louver positions.

Transformer Compartment

Low-Voltage Compartment

Technical Parameters

Item	Unit	High-Voltage Electrical Equipment	Transformer	Low-Voltage Electrical Equipment
Rated Voltage	kV	12	10/0.4	0.4
Rated Current	A	630	144/3600	3600
Rated Frequency	Hz	50	50	50
Rated Capacity	kVA	42 (to earth/phase),48 (break)	50~2500	
1min Power Frequency Withstand Voltage	kV	75	35/28	2.0/2.5
Lightning Impulse Withstand Voltage	kV		75	
Enclosure Protection Class		IP23		
Noise Level	dB		Oil-immersed ≤55, Dry-type ≤65	
Overall Dimensions (L×W×H)	mm	4000×2300×2500~8600×3300×3000		

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