Saudi General Electric Manufacturing Co.,Ltd

Address : M.A Aziz Road, Chattogram-4204, Bangladesh

https://www.sgemco.com

Saudi General Electric Manufacturing Co.,Ltd

Company profile

Saudi General Electric Manufacturing Co. Ltd. (SGEMCO), was established for implementing the agreement signed between Engineering Dimension and General Electric Manufacturing Co. Ltd. on March 07, 2019.

Company incorporated on April 30, 2019 and got Bangladesh Investment Development Authority (BIDA) approval on August 18, 2019.

SGEMCO located at Chattogram, a beautiful port city of Bangladesh, with total project area around 21 acres.

We are targeting to develop production unit of Transformers, Precision Engineering Products, Elevators, Circuit-breakers and Steel-structures etc. And currently we can produce Three Phase Distribution Transformer with different range of capacity annually 10,000 pieces.

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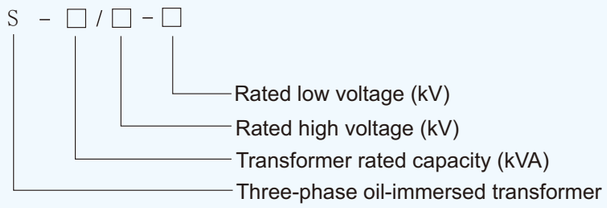
CONTENTS

S series 10kV three-phase oil-immersed type power transformer

Summary

The S series three-phase oil-immersed transformer, its product performance fully complies with the International Electrotechnical Commission recommended standard IEC-60076,which using high quality cold-rolled silicon steel, The coil is used quality copper without oxygen and attractive in appearance, safety, widely used in urban and rural industrial and agricultural network.

Model and meaning



S series 10kV three-phase oil-immersed type power transformer

Functions and features

- High reliability, advanced performance and economical index is reasonable;
- The iron core using three levels of the joins seam of ladder type. The surface curing paint coating as to reduce waste and noise;
- Winding novel structure, reasonable design of oil way and new insulation structure, improved mechanical strength and raise short-circuit withstand ability;
- More type of oil tank. Beautiful, generous.

Technical parameters

S series 10kV three-phase oil-immersed type power transformer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	No-load loss (W)	Load loss (W)	No-load current (%)	Short-circuit impedance (%)	Weight (kg)		Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	L.V (kV)						Oil weight	Total weight	L	B	H	
30	6 6.3 11	±2×2.5% +1 -3 ×2.5% ±5%	0.415	Dyn11 Yyn0	130	600	2.1	4	70	295	1060	720	1130	400×400
50					155	810	2.0		85	390	1105	740	1180	400×400
63					200	1040	1.9		95	440	1130	745	1215	400×400
80					250	1250	1.8		100	510	1125	755	1280	400×400
100					245	1635	1.6		110	550	1130	815	1315	400×400
125					340	1800	1.5		125	660	1240	825	1380	550×550
160					400	2200	1.4		140	760	1280	840	1420	550×550
200					435	2820	1.3		160	900	1360	855	1450	550×550
250					520	3180	1.2		195	1090	1530	965	1330	550×550
315					670	3650	1.1		215	1235	1420	1050	1530	550×550
400					800	4300	1.0		280	1510	1540	1115	1605	660×660
500					960	5100	1.0		305	1740	1595	1280	1665	660×660
630					1200	6200	0.9	4.5	410	2185	1955	1325	1885	660×660
800					1400	7500	0.8		450	2550	1975	1335	1960	820×820
1000					1700	10300	0.7		525	2910	2000	1340	2010	820×820
1250					1950	12800	0.6		605	3460	2065	1350	2075	820×820
1600					2400	14500	0.6		665	4020	2130	1375	2135	820×820

Note: the weight and size are for reference only, if the data are subject to change without notice

S9-M , S11-M-type totally-sealing oil-immersed distribution transformer

Summary

The oil tank of completely isolated transformer is sealed inside and outside. The volume of transformer oil changes through the bellows expansion of compensation, the water and oxygen gas can't go into the tank, slowed the ageing speed of insulating materials. Before running the products don't need to do. the test of hung core. After running maintenance free, greatly improves the reliability of operation and service life.

The products using PC-CAD software design, its product performance fully complies with the International Electrotechnical Commission recommended standard IEC-60076, The product has beautiful appearance and safe operation. Fully sealed oil-immersed transformer is suitable for power systems with AC 50Hz and rated working voltage of 10kV and below. As petroleum, metallurgy, chemical, textile, light industry and other large enterprises and dusty places the distribution transformers.

Model and meaning

S □ – M – □ / □ – □

- Rated low voltage (kV)
- Rated high voltage (kV)
- Transformer rated capacity (kVA)
- Sealed
- Design serial number
- Three-phase oil-immersed transformer

S9-M , S11-M-type totally-sealing oil-immersed distribution transformer

Functions and features

- In transformer oil are not exposed to air, guarantee of transformer oil does not need any treatment can be used for 40 years;
- Seals are made of high-quality acrylate rubber, which can effectively prevent aging;
- Transformer tank using sealed structure, maintenance free.

Technical parameters

S9-M type totally-sealing oil-immersed distribution transformer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	No-load loss (W)	Load loss (W)	No-load current (%)	Short-circuit impedance (%)	Weight (kg)		Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	L.V (kV)						Oil weight	Total weight	L	B	H	
30	6 6.3 11 13.8	±2×2.5% +1 -3 ×2.5% ±5%	0.415	Dyn11 Yyn0	130	600	2.10	4.0	70	295	835	555	915	400×400
50					155	810	2.00		85	390	860	630	945	400×400
63					200	1040	1.90		90	430	890	720	980	400×400
80					250	1250	1.80		115	500	900	730	1015	400×400
100					245	1635	1.60		120	555	910	740	1030	400×400
125					340	1800	1.50		130	660	935	745	1090	550×550
160					400	2200	1.40		165	780	970	750	1135	550×550
200					435	2820	1.30		175	900	1005	795	1185	550×550
250					520	3180	1.20		200	1060	1040	830	1210	550×550
315					670	3650	1.10		230	1240	1430	840	1280	550×550
400					800	4300	1.00		265	1440	1470	860	1325	660×660
500					960	5100	1.00		305	1740	1550	900	1430	660×660
630					1200	6200	0.90	4.5	410	2180	1665	940	1480	660×660
800					1400	7500	0.80		470	2560	1750	1005	1560	820×820
1000					1700	10300	0.70		520	2745	1785	1025	1715	820×820
1250					1950	12000	0.60		600	3540	1970	1170	1745	820×820
1600					2400	14500	0.60		660	4160	2015	1190	1810	820×820

S11-M type totally-sealing oil-immersed distribution transformer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	No-load loss (W)	Load loss (W)	No-load current (%)	Short-circuit impedance (%)	Weight (kg)		Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	L.V (kV)						Oil weight	Total weight	L	B	H	
30	6 6.3 11 13.8	±2×2.5% +1 -3 ×2.5% ±5%	0.415	Dyn11 Yyn0	100	600	1.30	4.0	75	305	750	480	990	400×400
50					130	870	1.20		80	405	800	500	1030	400×400
63					150	1040	1.20		95	455	830	580	1060	400×400
80					180	1250	1.10		105	510	840	600	1115	400×400
100					200	1500	1.10		120	580	890	615	1145	400×400
125					240	1800	1.00		130	670	910	645	1185	550×550
160					280	2200	1.00		140	810	915	700	1280	550×550
200					340	2600	0.90		160	890	1000	730	1240	550×550
250					400	3050	0.90		175	1020	1260	740	1290	550×550
315					480	3650	0.80		185	1170	1280	750	1385	550×550
400					570	4300	0.80		215	1410	1310	760	1435	660×660
500					680	5100	0.60		260	1645	1365	765	1510	660×660
630					810	6200	0.60	4.5	310	2070	1485	815	1590	660×660
800					980	7500	0.60		370	2445	1640	930	1615	820×820
1000					1150	10300	0.50		425	2800	1750	1120	1630	820×820
1250					1360	12000	0.50		480	3320	1860	1130	1860	820×820
1600					1640	14500	0.40		550	4175	1975	1175	1900	820×820

Note: the weight and size are for reference only, if the data are subject to change without notice

S13-M·RL-type oil-immersed stereo roll core distribution transformer

Summary

The core material of S13-M·RL-type oil-immersed stereo roll core distribution transformer adopts high permeability oriented cold rolled silicon steel sheet, winding into a closed frame structure, annealing treatment is adopted, the core filling coefficient is large.

The three-phase magnetic circuits are equal and shortest, there is no air gap in the magnetic circuit, high and low voltage coil in iron core column continuous winding, coaxial degree good, winding tight, Has the advantages of low consumption, low noise, is the new generation of similar products of high technology, high performance, energy-saving and environmental protection products. S13-M·RL-type oil-immersed stereo roll core distribution transformer for AC 50Hz. Rated working voltage of 10kV and below the power system, as petroleum, metallurgy, chemical, textile, light industry and other large enterprises and dusty places the distribution transformers.

Model and meaning

S □- M ● R L- □/□-□

- Rated low voltage (kV)
- Rated high voltage (kV)
- Transformer rated capacity (kVA)
- Roll core
- Three-dimensional
- Sealed
- Design serial number
- Three-phase oil-immersed transformer

S13-M·RL-type oil-immersed stereo roll core distribution transformer

Functions and features

- Silicon steel sheet is continuously rolled, the iron core is seamless, the magnetic flux direction is completely consistent with the crystal orientation of silicon steel sheet, and no-load loss and no-load current are greatly reduced;
- The three-dimensional wound iron core has the characteristic of low harmonic current;
- The three-phase magnetic circuit is symmetrical, the magnetic circuit lengths of the three core columns are completely consistent and short, the magnetic resistance is consistent, and the three phases are balanced;
- The three-dimensional triangular frame has high structural strength, uniform mechanical strength and strong short-circuit resistance;
- The noise is 10 ~ 20db lower than that of transformer with laminated core structure.

Technical parameters

S13-M·RL-type oil-immersed stereo roll core distribution transformer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	No-load loss (W)	Load loss (W)	No-load current (%)	Short-circuit impedance (%)	Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	L.V (kV)						L	B	H	
30	6 6.3 11	±2×2.5% +1 -3 ×2.5% ±5%	0.415	Dyn11 Yyn0	80	630	0.30	4	1010	680	1150	400×400
50					100	910	0.24		1030	685	1250	400×400
63					110	1090	0.23		1050	700	1280	400×400
80					130	1310	0.22		1120	730	1320	400×400
100					150	1580	0.21		1150	995	1350	400×400
125					170	1890	0.20		1050	920	1360	400×400
160					200	2310	0.19		1100	950	1390	400×400
200					240	2730	0.18		1115	970	1410	400×550
250					290	3200	0.17		1190	1050	1450	400×550
315					340	3830	0.16		1230	1070	1450	550×550
400					410	4520	0.16		1395	1100	1470	550×550
500					480	5410	0.16		1470	1200	1580	550×660
630					570	6200	0.15	4.5	1570	1250	1590	550×660
800					700	7500	0.15		1570	1350	1620	550×660
1000					830	10300	0.14		1760	1500	1680	660×660
1250					970	12000	0.13		1770	1530	1720	660×660
1600					1170	14500	0.12		1800	1550	1800	660×660

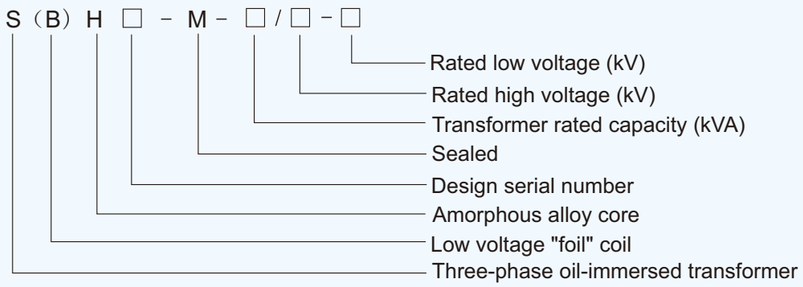
Note: the weight and size are for reference only, if the data are subject to change without notice

SH15 -type oil-immersed amorphous alloy core distribution transformers

Summary

SH15 series amorphous alloy fully sealed transformer is a new type of transformer with amorphous metal as the core material, the amorphous alloy material has the lowest core loss value, superior loss performance under various conditions, high saturation magnetic induction strength, low coercive force, ultra low loss, low exciting current and good temperature stability, compared with the transformer with silicon steel sheet as core, the no-load loss of amorphous alloy transformer is reduced by more than 70%and the no-load current is reduced by about 50%, load loss is reduced by about 20%, and the energy-saving effect is very obvious, At present, it is a kind of green and environment-friendly high-efficiency energy-saving transformer with ideal energy-saving effect.

Model and meaning



SH15 -type oil-immersed amorphous alloy core distribution transformers

Functions and features

- The iron core adopts a single frame or a three-phase five-column wound iron core, and the iron core clamping adopts a thin plate forming frame structure;
- The low-voltage coil is of foil winding type, making it low in loss and strong in short circuit resistance;
- Transformer oil tank adopts sealed structure, maintenance-free;
- Design optimization, advanced and reasonable structure, and overall performance index reaching the world advanced level.

Technical parameters

SH 15 -type oil-immersed amorphous alloy core distribution transformers

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	No-load loss (W)	Load loss (W)	No-load current (%)	Short-circuit impedance (%)	Weight (kg)	Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	L.V (kV)							L	B	H	
30	6 6.3 11	±2×2.5% +1 -3 ×2.5% ±5%	0.415	Dyn11 Yyn0	33	630	1.70	4	480	885	780	1005	550×600
50					43	910	1.30		620	1215	820	1035	550×660
63					50	1090	1.20		700	1260	830	1040	550×660
80					60	1310	1.10		800	1310	840	1050	550×660
100					75	1580	1.00		880	1320	885	1060	550×660
125					85	1890	0.90		955	1360	900	1095	550×660
160					100	2310	0.70		1095	1410	910	1140	550×660
200					120	2730	0.70		1240	1465	910	1200	550×660
250					140	3200	0.70		1450	1540	920	1240	550×660
315					170	3830	0.50		1680	1580	920	1300	660×660
400					200	4520	0.50		2070	1705	945	1360	660×660
500					240	5410	0.50		2330	1655	1000	1400	660×660
630					320	6200	0.30	4.5	2800	1840	1140	1415	820×900
800					380	7500	0.30		3340	1950	1170	1485	820×900
1000					450	10300	0.20		3555	2110	1250	1495	820×900
1250					530	12000	0.20		4270	2290	1370	1530	820×900
1600					630	14500	0.20		4860	2040	1410	1560	820×900
2000					530	12000	0.20		6160	2330	1650	1680	1070×1070
2500					630	14500	0.20		6300	2550	1780	1750	1070×1070

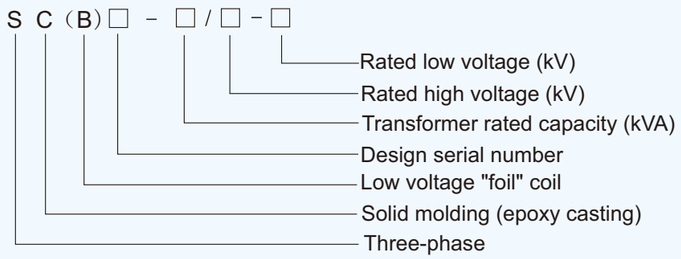
Note: the weight and size are for reference only, if the data are subject to change without notice

SC (B)-series epoxy resin cast dry-type transformer

Summary

Epoxy resin cast dry-type transformer has high safety, non-pollute, and flame proof, which can be installed directly on the load center with the merits of free maintenance, easy installation, low combined operation cost, low loss and excellent humidity resistance. The transformer can be operated normally under 100% humidity and put into motion without dry in advance when out of use, It shares the properties of low partial electricity local discharge, low noise and large heat dispel capability, it can be operated with the rated load of 120% under the forced air cooling conditions.

Model and meaning



SC (B)-series epoxy resin cast dry-type transformer

Functions and features

- High voltage winding with polyester enameled wire wound, with glass fiber filling in vacuum condition with epoxy resin curing temperature after pouring, forming strong overall. good mechanical strength and small partial discharge, the low-voltage winding using a whole copper foil, ampere turns distributed balance and strong resist the short circuit capacity.
- The core using cold-rolled orientation silicon steel, reasonable choice of magnetic flux density, effectively reduce no-load loss;
- Flame retardant well, the explosion-proof, no pollution and can be installed in the load centers;
- Coil not moisture absorption, low noise, good effect of heat;
- Low wastage, energy saving, running economy, maintenance-free, small volume, light weight, convenient installation.

Technical parameters

SC(B) series 10kV epoxy resin cast dry transformer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	SC(B)9-set loss (W)		SC(B)10-set loss (W)		No-load current (%)	Short-circuit impedance (%)	Equitment's body weight (kg)	Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	L.V (kV)		No-load loss	Load loss	No-load loss	Load loss				L	B	H	
30	6 6.3 11	±2×2.5% +1 -3 ×2.5% ±5%	0.415	Dyn11 Yyn0	220	750	190	710	2.0	4	230	780	440	795	400×400
50					310	1060	270	1000	2.0		300	780	440	795	400×400
80					420	1460	370	1380	1.5		525	980	620	975	550×550
100					450	1670	400	1570	1.5		580	980	620	990	550×550
125					530	1960	470	1850	1.3		650	980	620	1040	550×550
160					610	2230	540	2130	1.3		830	1070	620	1050	550×550
200					700	2680	620	2530	1.1		880	1070	620	1080	550×550
250					810	2920	720	2760	1.1		1080	1200	800	1140	660×660
315					990	3670	880	3470	1.0		1200	1200	860	1150	660×660
400					1100	4220	980	3990	1.0		1570	1340	920	1200	820×820
500					1310	5170	1160	4880	1.0		1760	1340	920	1290	820×820
630					1460	6310	1300	5960	0.85	6	1860	1360	920	1330	820×820
800					1710	7360	1520	6960	0.85		2190	1360	920	1390	820×820
1000					1990	8610	1770	8130	0.85		2670	1560	1020	1425	820×820
1250					2350	10250	2090	9690	0.85		3080	1590	1020	1520	820×820
1600					2760	12400	2450	11700	0.85		3840	1710	1020	1670	820×820
2000					3400	15300	3050	14400	0.7		5100	1890	1020	1920	820×820
2500					4000	18180	3600	17100	0.7		6100	1950	1020	2010	820×820

SC(B) series 35kV epoxy resin cast dry transformer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	SC(B)9-set loss (W)		SC(B)10-set loss (W)		No-load current (%)	Short-circuit impedance (%)
	H.V (kV)	High tapping range	L.V (kV)		No-load loss	Load loss	No-load loss	Load loss		
30	33 36.5	±2×2.5% +1 -3 ×2.5% ±5%	0.415	Dyn11 Yyn0	360	1200	320	1130	2.5	6
50					500	1500	450	1420	2.3	
80					520	2000	460	1890	2.0	
100					700	2200	630	2090	2.0	
125					760	2790	680	2635	1.5	
160					880	2960	790	2810	1.5	
200					980	3500	880	3320	1.5	
250					1100	4000	990	3800	1.3	
315					1310	4750	1170	4510	1.3	
400					1530	5700	1370	5410	1.1	
500					1800	7000	1620	6650	1.1	
630					2070	8100	1860	7690	1.0	
800					2400	9600	2160	9120	1.0	
1000					2700	11000	2430	10400	0.75	
1250					3150	13400	2830	12700	0.75	
1600					3600	16300	3240	15400	0.75	
2000					4250	19200	3820	18200	0.75	
2500					4950	23000	4450	21800	0.75	

Note: the weight and size are for reference only, if the data are subject to change without notice

SG(B)-series H grade insulated dry-type transformer

Summary

Apart from the advantages of SC series, this series of non-encapsulated coil three-phase dry-type power transformers have carefully designed coil structure and vacuum impregnation treatment process, so that SG(B)10 transformer has no partial discharge, and there is no crack phenomenon and no insulation level drop phenomenon during its service life.

High voltage adopts continuous winding, low voltage foil winding, whole vacuum impregnation and curing treatment, and adopts high strength ceramic support. It has good capability of withstanding sudden short circuit, and is flame retardant, non-toxic, self-extinguishing and fireproof.

NOMEX paper is used as insulation material, and the insulation grade is H grade. The insulation layer is extremely thin and uniform, and has extremely strong short-term overload capacity. It does not need forced cooling and can overload 120% for a long time and 140% for 3 hours. The insulation material is not aging and elastic, so it can be operated immediately with full load at ±50℃.

Can be installed in dirty and humid environment near lakes and rivers and in areas with high fire prevention requirements and heavy load. It is suitable for high-rise buildings, airports, railway stations, docks, subways, hospitals, power plants, metallurgical industries, densely populated areas, petrochemical, nuclear power plants, nuclear submarines and other places.

Model and meaning

S G (B)□ – □ / □ – □

- Rated low voltage (kV)
- Rated high voltage (kV)
- Transformer rated capacity (kVA)
- Design serial number
- Low voltage "foil" coil
- Dry-type (air self-cooling)
- Three-phase

SG(B)-series H grade insulated dry-type transformer

Functions and features

- It is safe, fireproof and pollution-free, and can be directly operated in the load center.
- High mechanical strength, strong short circuit resistance, small 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 performance and strong overload capacity, which can improve capacity operation when forced air cooling.
- Good moisture resistance, suitable for operation in high humidity and other harsh environments
- Perfect temperature monitoring and protection system. The intelligent signal temperature control system is adopted, which can automatically detect and display the respective working temperatures of the two-phase windings, automatically start and stop the fan, and have alarm, trip and other devices.
- Small volume, light weight, small floor space and low installation cost.

Technical parameters

SG(B)-series 10kV H grade insulated dry-type transformer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	SG(B)9-set loss (W)		SG(B)10-set loss (W)		No-load current (%)	Short-circuit impedance (%)	Equitment's body weight (kg)	Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	L.V (kV)		No-load loss	Load loss	No-load loss	Load loss				L	B	H	
30	6 6.3 11	±2×2.5% +1 -3 ×2.5% ±5%	0.415	Dyn11 Yyn0	220	800	190	760	2.0	4	340	900	600	610	550×550
50					310	1130	270	1070	2.0		425	960	600	660	550×550
80					420	1560	370	1480	1.5		565	1050	600	790	550×550
100					450	1780	400	1690	1.5		620	1100	600	840	550×550
125					530	2100	470	1980	1.3		810	1190	660	900	550×550
160					610	2410	540	2280	1.3		870	1230	660	1030	550×550
200					700	2870	620	2710	1.1		1030	1260	660	1030	550×550
250					810	3120	720	2960	1.1		1140	1270	650	1310	660×550
315					990	3930	880	3730	1.0		1610	1320	770	1140	800×700
400					1100	4520	980	4280	1.0		1800	1340	800	1185	800×700
500					1310	5530	1160	5230	1.0		1900	1420	800	1250	800×700
630					1460	6750	1300	6400	0.85	6	2050	1550	800	1320	800×700
800					1710	7880	1520	7460	0.85		2490	1590	1000	1540	800×1020
1000					1990	9210	1770	8760	0.85		2700	1650	1120	1550	800×1020
1250					2350	10980	2090	10300	0.85		3200	1680	1200	1690	800×1100
1600					2760	13270	2450	12500	0.85		3900	1700	920	1700	1070×820
2000					3400	16370	3050	15500	0.7		4800	1790	1300	1730	1070×1210
2500					4000	19460	3600	18400	0.7		5400	1850	1410	1770	1070×1300

Note: the weight and size are for reference only, if the data are subject to change without notice

35kV series three-phase oil-immersed transformer

Summary

35kV series three-phase oil-immersed transformers by adopting a novel insulation structure, the anti-short circuit capability is improved, the iron core is made of high quality cold rolled grain oriented silicon steel sheet, High-and low-voltage windings are made of high-quality oxygen-free copper wire and adopt multi-layer cylindrical process structure; All fasteners adopt special anti-loosening treatment, with high mechanical strength, strong short-circuit resistance, beautiful appearance, reliable operation, low loss and low noise, and have been widely used in various power distribution systems.

Model and meaning

S □ – □ / □ – □

- Rated low voltage (kV)
- Rated high voltage (kV)
- Transformer rated capacity (kVA)
- Design serial number
- Three-phase oil-immersed transformer

35kV series three-phase oil-immersed transformer

Functions and features

- The iron core is processed by advanced longitudinal and transverse shear line equipment, using ladder model multilevel juncture, dispersed air gap distribution, Improved magnetic flux direction, Reduced no-load loss, no-load current and noise;
- The iron core adopts pull plate, pressure ring, special glue for silicon steel end face and a series of integral structures and measures to improve the mechanical strength;
- New type of high and low voltage winding structure, reasonable design of tap area and oil passage, improved mechanical strength and short circuit resistance:
- The fuel tank has a bell-type or large-cap structure, which is beautiful in appearance

Technical parameters

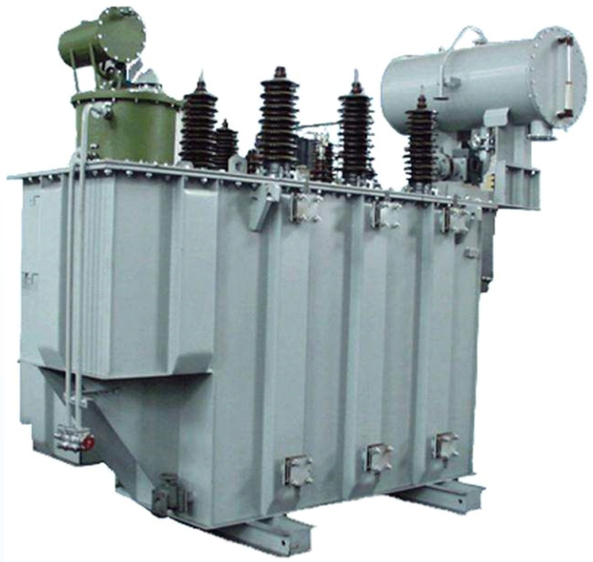
50~2500/35 series three-phase double winding non-excitation voltage regulating distribution transformer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	9-type loss (kW)		11-type loss (kW)		13-type loss (kW)		No-load current (%)	Short-circuit impedance (%)	Weight (kg)		Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	L.V (kV)		No-load loss	Load loss	No-load loss	Load loss	No-load loss	Load loss			Oil weight	Total weight	L	B	H	
50	33 36.5	±2×2.5% +1 -3 ×2.5% ±5%	0.415	Dyn11 Yyn0	0.21	1.22	0.17	1.20	0.13	1.20	1.30	6.5	280	770	1000	1000	1600	660×660
100					0.29	2.03	0.24	2.01	0.19	2.01	1.10		290	900	1050	1050	1710	660×660
125					0.33	2.39	0.27	2.37	0.22	2.37	1.10		330	1000	1100	1080	1800	660×660
160					0.37	2.84	0.29	2.82	0.23	2.82	1.00		390	1200	1160	1130	1860	660×660
200					0.44	3.33	0.34	3.32	0.27	3.32	1.00		440	1400	1230	1180	1940	660×660
250					0.51	3.96	0.40	3.95	0.32	3.95	0.95		500	1600	1300	1230	2000	660×660
315					0.61	4.77	0.48	4.75	0.39	4.75	0.95		550	1850	1400	1270	2070	820×820
400					0.73	5.76	0.57	5.74	0.47	5.74	0.85		610	2100	1510	1320	2150	820×820
500					0.86	6.93	0.68	6.91	0.55	6.91	0.85		700	2600	1620	1350	2240	820×820
630					1.05	8.28	0.81	7.86	0.67	7.86	0.65		850	3100	1750	1370	2330	820×820
800					1.23	9.90	0.98	9.40	0.79	9.40	0.65		950	3500	1900	1380	2400	820×820
1000					1.44	12.15	1.16	11.50	0.92	11.50	0.65		1180	3900	2165	1400	2485	820×820
1250					1.76	14.67	1.37	13.90	1.12	13.90	0.65		1210	4400	2230	1500	2600	820×820
1600					2.12	17.65	1.66	16.60	1.35	16.60	0.60		1250	5100	2300	1650	2700	820×820
2000					2.65	19.35	2.12	18.28	1.70	18.28	0.60		1330	6000	2450	1800	2820	1070×1070
2500					3.20	23.50	2.56	21.20	2.05	21.20	0.60		1390	6310	2700	2280	2590	1070×1070

800 ~ 31500 / 35 three-phase double winding non excitation voltage regulating power transformer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	9-type loss (kW)		11-type loss (kW)		13-type loss (kW)		No-load current (%)	Short-circuit impedance (%)	Weight (kg)		Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	L.V (kV)		No-load loss	Load loss	No-load loss	Load loss	No-load loss	Load loss			Oil weight	Total weight	L	B	H	
800	33 36.5	±2×2.5% +1 -3 ×2.5% ±5%	3.15 6.3 6.6 11 13.8	Yd11	1.23	9.90	0.98	9.40	0.79	9.40	0.65	6.5	700	3200	2200	1190	1930	820×820
1000					1.44	12.15	1.15	11.50	0.92	11.50	0.65		850	3500	2350	1300	2000	820×820
1250					1.76	14.67	1.40	13.90	1.12	13.90	0.55		1010	3840	2500	1420	2170	820×820
1600					2.12	17.55	1.69	16.60	1.36	16.60	0.45		1200	5000	2600	1600	2350	820×820
2000					2.72	19.35	2.17	18.30	1.74	18.30	0.45		1280	6000	2730	1750	2550	820×820
2500					3.20	20.70	2.56	19.60	2.05	19.60	0.45		1400	7000	2870	1900	2730	820×820
3150					3.80	24.30	3.04	23.00	2.44	23.00	0.45	7	1500	7500	2950	2100	2910	1070×1070
4000					4.52	28.80	3.61	27.30	2.89	27.30	0.45		1800	9000	3000	2380	3000	1070×1070
5000					5.40	33.03	4.32	31.30	3.46	31.30	0.45		2200	11000	3050	2500	3050	1070×1070
6300					6.56	36.90	5.24	35.00	4.20	35.00	0.45	8	2700	13000	3100	2760	3100	1070×1070
8000				Yd11 YNd11	9.00	40.50	7.20	38.40	5.76	38.40	0.35		3200	15700	3350	3050	3250	1475×1475
10000					10.88	47.70	8.70	45.30	6.96	45.30	0.35		3500	18000	3450	3300	3350	1475×1475
12500					12.60	56.70	10.00	53.80	8.00	53.80	0.30		3900	20800	3600	3500	3400	1475×1475
16000					15.20	69.30	12.10	65.80	9.68	65.80	0.30		4400	19500	3800	3600	3650	1475×1475
20000					18.00	83.70	14.40	79.50	11.52	79.50	0.30		5300	23000	1750	1120	1630	1475×1475
25000					21.28	99.0	17.00	94.0	13.60	94.0	0.25	10	6500	26600	1860	1130	1860	1475×1475
31500					25.28	118.8	20.20	112.0	16.16	112.0	0.25		8000	30000	1975	1175	1900	1475×1475

Note: the weight and size are for reference only, if the data are subject to change without notice



10~35kV SZ series on load voltage regulating power transformer

Summary

10~35 kV class SZ series on-load voltage-regulating power transformer is a kind of power transformer that can regulate voltage under load conditions, it is more advanced in design and has made great improvements in materials, structure and technology, the core is made of high-quality cold-rolled silicon steel sheet, with full oblique seams and no perforation structure, the High and Low pressure side clamps are tension by steel pull belt or upper beam and side beam to form a firm frame structure, which enhances the clamping force of the iron core and the ability to withstand transportation impact, the coil is made of high quality oxygen-free copper, the transformer is beautiful in appearance and safe in operation.

It is suitable for areas where the voltage fluctuation of power grid is relatively frequent, enterprises or places where the voltage requirements are relatively stable.

Model and meaning

S Z □ – □ / □ – □

- Rated low voltage (kV)
- Rated high voltage (kV)
- Transformer rated capacity (kVA)
- Design serial number
- On-load voltage regulation
- Three-phase oil-immersed transformer

10~35kV SZ series on load voltage regulating power transformer

Functions and features

- On load voltage regulation, high reliability, advanced performance level and reasonable economic index;
- Step type three-level joint is adopted for iron core, and the surface is painted with curing paint, which reduces the loss and noise;
- Novel winding structure, reasonable oil passage design, new insulation structure, improved mechanical strength and short circuit resistance
- The oil tank is diversified, beautiful and generous.

Technical parameters

200~2500/35 series three-phase double winding non-excitation voltage regulating distribution transformer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	9-type loss (kW)		11-type loss (kW)		13-type loss (kW)		No-load current (%)	Short-circuit impedance (%)	Weight (kg)		Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	L.V (kV)		No-load loss	Load loss	No-load loss	Load loss	No-load loss	Load loss			Oil weight	Total weight	L	B	H	
200	6.3 6.6 11 13.8	±3×2.5% ±4×2.5%	0.415	Dyn11 Yyn0	0.48	3.06	0.38	2.90	0.30	2.90	1.5	4.0	420	1550	1400	1120	1650	550×550
250					0.56	3.60	0.44	3.42	0.35	3.42	1.4		435	1600	1420	1130	1690	550×550
315					0.67	4.32	0.53	4.10	0.42	4.10	1.4		475	1630	1530	1200	1760	660×660
400					0.80	5.22	0.64	4.95	0.51	4.95	1.3		505	2030	1630	1210	1850	660×660
500					0.96	6.21	0.76	5.89	0.61	5.89	1.2		550	2110	1640	1230	1890	660×660
630					1.20	7.65	0.96	7.26	0.77	7.26	1.1	4.5	625	2670	1660	1350	1960	660×660
800					1.40	9.36	1.12	8.89	0.90	8.89	1.0		1055	4240	2600	1600	2730	820×820
1000					1.70	10.98	1.36	10.40	1.09	10.40	1.0		1120	4490	2630	1680	2750	820×820
1250					1.95	13.05	1.56	12.30	1.25	12.30	0.9		1280	5150	2660	1700	2780	820×820
1600					2.40	15.57	1.92	14.70	1.54	14.70	0.8		1380	6210	2720	1820	2970	820×820
2000					2.84	79.72	2.27	18.60	1.82	18.60	0.7	5.0	1420	6530	2800	2230	2980	1070×1070
2500					3.35	22.90	2.68	21.60	2.14	21.60	0.7		1570	6680	2900	2280	3080	1070×1070

800 ~ 31500 / 35 three-phase double windi楚才ng non excitation voltage regulating power transformer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	9-type loss (kW)		11-type loss (kW)		13-type loss (kW)		No-load current (%)	Short-circuit impedance (%)	Weight (kg)		Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	L.V (kV)		No-load loss	Load loss	No-load loss	Load loss	No-load loss	Load loss			Oil weight	Total weight	L	B	H	
800	33 36.5	±3×2.5% ±4×2.5%	6.3 6.6 11 13.8	Yd11	1.32	10.5	1.19	9.98	0.952	9.98	1.30	6.5	1650	4790	2870	1810	2570	1070×1070
1000					1.57	12.8	1.42	12.2	1.136	12.2	1.20		1760	5210	3150	1890	2650	1070×1070
1250					1.86	15.4	1.68	14.6	1.344	14.6	1.10		2010	6080	3510	2040	2690	1070×1070
1600					2.25	18.5	2.03	17.6	1.624	17.6	1.10		1920	6610	3560	2050	2740	1070×1070
2000					2.88	20.3	2.3	19.2	1.84	19.2	1.00		2160	7440	3680	2070	2850	1070×1070
2500					3.4	21.8	2.72	20.6	2.176	20.6	1.00		2580	8240	3780	2220	2890	1070×1070
3150					4.04	26	3.23	24.7	2.584	24.7	0.90	7	2680	8500	3850	2310	2950	1070×1070
4000					4.84	30.7	3.87	29.1	3.096	29.1	0.90		2960	11000	4120	2380	3150	1070×1070
5000					5.8	36	4.64	34.2	3.712	34.2	0.85		3050	12000	4210	2510	3220	1070×1070
6300					7.04	38.7	5.63	36.7	4.504	36.7	0.85	8	4050	14600	4320	3000	3290	1475×1475
8000				Yd11 YNd11	9.84	42.8	7.87	4.6	6.296	4.6	0.75		4200	17100	4500	3100	3680	1475×1475
10000					11.6	50.6	9.28	48	7.424	48	0.75		7480	20100	4560	3500	3750	1475×1475
12500					13.68	59.9	10	56.8	8	56.8	0.70		8010	23000	4590	3580	3830	1475×1475
16000					16.46	74	13.1	70.3	10.48	70.3	0.60		8560	27000	4650	3700	4000	1475×1475
20000					19.46	87.1	15.5	82.7	12.4	82.7	0.50		10030	33000	5200	4200	4280	1475×1475
25000					22.88	104	18.3	97.8	14.64	97.8	0.50	10	12300	42600	5320	4350	4340	1475×1475
31500					27.25	123	21.8	116	17.44	116	0.40		13500	51100	5450	4420	4450	1475×1475

Note: the weight and size are for reference only, if the data are subject to change without notice

66kV level oil-immersed power transformer

Summary

66kV level oil-immersed power transformer products have the characteristics of "four low and one high", i.e. low loss, low noise, low temperature rise, low partial discharge, high reliability, free lifting inspection of iron core, no oil leakage, etc. The product adopts advanced design software for electromagnetic calculation, and calculates and analyzes the main and longitudinal insulation, impulse voltage gradient distribution, end electric field distribution, short-circuit thermal stability and dynamic stability strength of the transformer through the computer, so as to ensure the design margin of the transformer and the safe and reliable operation of the transformer.

66kV level oil-immersed power transformer mainly used in power stations, industrial and mining enterprises, users with power and power distribution system etc. Its product performance indicators fully comply with the International Electrotechnical Commission recommended standard IEC-60076.

Model and meaning

S (F) Z □ – □ / □ – □

- Rated low voltage (kV)
- Rated high voltage (kV)
- Transformer rated capacity (kVA)
- Design serial number
- On-load voltage regulation
- Air cooling
- Three-phase oil-immersed transformer

66kV level oil-immersed power transformer

Functions and features

- High reliability, advanced performance level and reasonable economic index;
- Performance characteristics of high impedance, low loss, low noise, low temperature rise and low local discharge;
- The product has maintenance free and high reliability;
- The oil tank is of various forms and elegant appearance;
- Production type: including new products of self cooling, maintenance free, box edge welding and other structures.

Technical parameters

66kV S(F)9, S(F)11, S(F)13 three-phase double winding non excitation voltage regulating transformer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	9-type loss (kW)		11-type loss (kW)		13-type loss (kW)		No-load current (%)	Short-circuit impedance (%)	Weight (kg)		Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	L.V (kV)		No-load loss	Load loss	No-load loss	Load loss	No-load loss	Load loss			Oil weight	Total weight	L	B	H	
630	63 66 69	±2×2.5% +1 -3 ×2.5% ±5%	6.3 6.6 11	Yd11	1.60	7.50	1.20	7.10	0.96	7.10	1.40	8.0	--	--	--	--	--	820×820
800					1.90	9.00	1.50	8.50	1.20	8.50	1.35		--	--	--	--	--	820×820
1000					2.20	10.40	1.70	9.80	1.36	9.80	1.30		--	--	--	--	--	820×820
1250					2.60	12.60	2.00	11.90	1.60	11.90	1.30		--	--	--	--	--	820×820
1600					3.10	14.80	2.40	14.00	1.92	14.00	1.25		--	--	--	--	--	820×820
2000					3.60	17.50	2.80	16.60	2.24	16.60	1.20		--	--	--	--	--	820×820
2500					4.30	20.70	3.40	19.60	2.72	19.60	1.10		--	--	--	--	--	1070×1070
3150				Yd11 YNd11	5.10	24.30	4.00	23.00	3.20	23.00	1.05		--	--	--	--	--	1070×1070
4000					6.00	28.80	4.80	27.30	3.84	27.30	1.00		--	--	--	--	--	1070×1070
5000					7.20	32.40	5.70	30.70	4.56	30.70	0.85		--	--	--	--	--	1070×1070
6300					9.20	36.00	7.30	34.20	5.84	34.20	0.75	9.0	5.4	18.4	3800	3800	3900	1475×1475
8000					11.20	42.70	8.90	40.50	7.12	40.50	0.75		5.9	20.8	3900	3900	4050	1475×1475
10000					13.20	50.40	10.50	47.80	8.40	47.80	0.70		6.9	23.2	4080	3950	4200	1475×1475
12500					15.60	59.80	12.40	56.80	9.92	56.80	0.70		7.7	28.5	4100	4000	4250	2040×2040
16000					18.80	73.50	15.00	69.80	12.00	69.80	0.65		8.5	28.7	4450	4030	4400	2040×2040
20000					22.00	89.10	17.60	84.60	14.08	84.60	0.65		9.5	34.9	4500	4100	4450	2040×2040
25000					26.00	105.3	20.80	100	16.64	100	0.60		9.8	38	4600	4150	4520	2040×2040
31500					30.80	126.9	24.60	120	19.68	120	0.55		11.3	46.5	4650	4400	4600	2040×2040
40000					36.80	148.9	29.40	141	23.52	141	0.55		13.1	54.2	4750	4600	4780	2040×2040
50000					44.00	184.5	35.20	167	28.16	167	0.50		14.3	63	4900	4650	4820	2040×2040
63000					52.00	222.3	41.60	198	33.28	198	0.45		15.9	69.2	5000	4700	5000	2040×2040

66kV S(F)Z9, S(F)Z11, S(F)Z13 three-phase double winding on-load voltage regulating power transformer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	9-type loss (kW)		11-type loss (kW)		13-type loss (kW)		No-load current (%)	Short-circuit impedance (%)	Weight (kg)		Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	L.V (kV)		No-load loss	Load loss	No-load loss	Load loss	No-load loss	Load loss			Oil weight	Total weight	L	B	H	
6300	63 66 69	±8×1.25%	6.3 6.6 11	Yd11 YNd11	10	36	8.0	34.2	6.4	34.2	0.75	9~11	7.1	21.4	5000	3800	3900	1475×1475
8000					12	42.7	9.6	40.5	7.7	40.5	0.75		7.6	24.1	5200	3900	4050	1475×1475
10000					14.2	50.4	11.3	47.8	9.0	47.8	0.70		8.7	26.7	5380	3950	4200	1475×1475
12500					16.8	59.8	13.4	56.8	10.7	56.8	0.70		9.5	30.3	5400	4000	4250	2040×2040
16000					20.2	73.5	16.1	69.8	12.9	69.8	0.65		10.4	32.7	5750	4030	4400	2040×2040
20000					24	89.1	19.2	84.6	15.4	84.6	0.65		11.6	38.2	5800	4100	4450	2040×2040
25000					28.4	105	22.7	100	18.2	100	0.60		11.9	39.6	5900	4150	4520	2040×2040
31500					33.7	127	26.9	120	21.5	120	0.55		13.5	52.3	5950	4400	4600	2040×2040
40000					40.3	149	32.2	141	25.8	141	0.55		15.3	60.8	6050	4600	4780	2040×2040
50000					47.6	185	38.0	167	30.4	167	0.50	10~12	16.9	71	6200	4650	4820	2040×2040
63000					56.2	222	44.9	198	35.9	198	0.45		18.6	77.2	6300	4700	5000	2040×2040

Note: the weight and size are for reference only, if the data are subject to change without notice

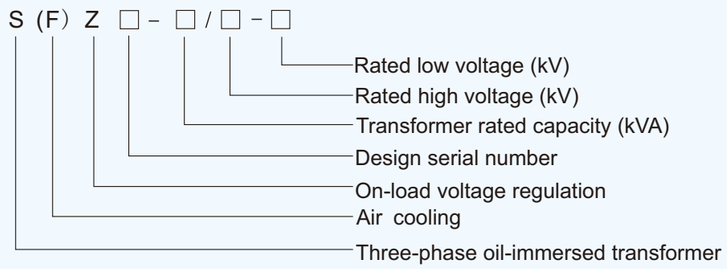
110kV level oil-immersed power transformer

Summary

Optimized design and reasonable structure of 110kV power transformers. A series of major reforms have been adopted in materials, processes, and structures. The core is made of high-permeability grain-oriented high-quality cold-rolled silicon steel sheets and stacked in multiple steps; The winding has reasonable structure and advanced technology; The structure and technology guarantee that it has the characteristics of small size, light weight, high efficiency, low loss, low noise, strong short-circuit resistance and reliable operation. It can reduce a lot of power grid losses and operating costs, and has significant economic benefits.

It is widely used in various substations and power plants and has been well received by users. Its product performance fully meets the IEC-60076 recommendation standard of the International Electrotechnical Commission.

Model and meaning



110kV level oil-immersed power transformer

Functions and features

- The bell jar type oil tank adopts the bent corrugated structure to reduce the weld, improve the process ability, enhance the mechanical strength of the oil tank, and have a beautiful appearance;
- The iron core structure is independent and adopts D-shaped iron yoke 45°oblique seam;
- The winding design is reasonable, the coil adopts the internal and external bracing structure, and the high-strength hard paper cylinder is used between each coil and between the coil and the iron core. Improve the initial distribution of impulse voltage, improve the reliability of insulation and insulation life: improve the dynamic stability of transformer under external fault short circuit;
- The lead wire adopts cold-press welding technology, core-winding assy it adopts many advanced technologies such as integral suit and hard paper barrel processing;
- Core-winding assy and the oil tank are positioned in an all-round way, thus reliably ensuring that the core-winding assy in the oil tank cannot be displaced due to bumpy transportation.

Technical parameters

Main technical parameters for 110kV level S(F)9, S(F)11, S(F)13 Series three-phase two winding non-excitation-tap-changing power transformer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	9-type loss (kW)		11-type loss (kW)		13-type loss (kW)		No-load current (%)	Short-circuit impedance (%)	Weight (kg)		Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	L.V (kV)		No-load loss	Load loss	No-load loss	Load loss	No-load loss	Load loss			Oil weight	Total weight	L	B	H	
6300	110 121	±2×2.5% +1 -3 ×2.5% ±5%	6.3 6.6 11 13.8 15.75 18 20	Yd11 YNd11	9.3	36	7.4	35	5.9	35	0.77	10.5	7.3	21.6	4150	4710	4320	1475×1475
8000					11.2	45	8.9	42	7.1	42	0.77		8.1	24.4	4270	4760	4470	1475×1475
10000					13.2	53	10.5	50	8.4	50	0.72		9.2	28.8	4650	4810	4580	1475×1475
12500					15.6	63	12.4	59	9.9	59	0.72		10.1	32.7	4700	4860	4690	2040×2040
16000					18.8	77	15.0	73	12.0	73	0.67		11.1	36.5	5040	4880	4830	2040×2040
20000					22.0	93	17.6	88	14.1	88	0.67		12.2	41.4	5120	5120	4840	2040×2040
25000					26.0	110	20.8	104	16.6	104	0.62		12.5	45.5	5250	5340	5020	2040×2040
31500					30.8	133	24.6	123	19.7	123	0.60		14.8	52.2	5300	5380	5100	2040×2040
40000					36.8	156	29.4	148	23.5	148	0.56		16.5	60.5	5420	5430	5300	2040×2040
50000					44.0	194	35.2	175	28.2	175	0.52		18.2	69.3	5570	5430	5340	2040×2040
63000					52.0	234	41.6	208	33.3	208	0.48		20.2	80.2	5680	5520	5630	2040×2040
75000					59.0	278	47.2	236	37.8	236	0.42	12~14	22.8	95	5790	5600	5750	2040×2040
90000					68.0	320	54.4	272	43.5	272	0.38		26	108	5880	5650	5880	2040×2040
100000					84.8	397	67.8	337	54.2	337	0.34		29	132	5990	5700	6000	2040×2040
150000					100.2	472	80.1	399	64.1	399	0.30		33	156	6100	5780	6150	2040×2040
180000					112.5	532	90.0	457	72.0	457	0.25		37.3	178	6200	5820	6300	2040×2040

Note: the weight and size are for reference only, if the data are subject to change without notice

110kV level oil-immersed power transformer

Main technical parameters for 110kV level S(F)Z9, S(F)Z11, S(F)Z13 Series three-phase two winding on-load-tap-changing power transformer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	9-type loss (kW)		11-type loss (kW)		13-type loss (kW)		No-load current (%)	Short-circuit impedance (%)	Weight (kg)		Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	L.V (kV)		No-load loss	Load loss	No-load loss	Load loss	No-load loss	Load loss			Oil weight	Total weight	L	B	H	
6300	110 121	±8×1.25%	6.3 6.6 11 13.8 18 20	Yd11 YNd11	10	36	8.0	35	6.4	35	0.80	10.5	7.8	23.9	5450	4710	4320	1475×1475
8000					12	45	9.6	42	7.7	42	0.80		8.4	26.8	5570	4760	4470	1475×1475
10000					14.2	53	11.3	50	9.0	50	0.74		9.6	31.4	5950	4810	4580	1475×1475
12500					16.8	63	13.4	59	10.7	59	0.74		10.5	35.6	6010	4860	4690	2040×2040
16000					20.2	77	16.1	73	12.9	73	0.69		11.5	39.7	6340	4880	4830	2040×2040
20000					24	93	19.2	88	15.4	88	0.69		12.9	45	6420	5120	4840	2040×2040
25000					28.4	110	22.7	104	18.2	104	0.64		13.2	49.9	6550	5340	5020	2040×2040
31500					33.8	133	27.0	123	21.6	123	0.64		15	56.6	6600	5380	5100	2040×2040
40000					40.4	156	32.3	156	25.8	156	0.58		17	65.6	6720	5430	5300	2040×2040
50000					47.8	194	38.2	194	30.6	194	0.58		18.8	75.1	6880	5520	5340	2040×2040
63000					56.8	234	45.4	232	36.3	232	0.52		20.6	87.1	6930	5540	5630	2040×2040

Main technical parameters for 110kV level S(F)9, S(F)11, S(F)13 Series three-phase three winding non-excitation-tap-changing power transformer

Rated power (kVA)	Voltage combination and tapping range				Connection symbol	9-type loss (kW)		11-type loss (kW)		13-type loss (kW)		No-load current (%)	Short-circuit impedance (%)		Weight (kg)		Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	M.V (kV)	L.V (kV)		No-load loss	Load loss	No-load loss	Load loss	No-load loss	Load loss		?step-up	step-down?	Oil weight	Total weight	L	B	H	
6300	110 121	±2×2.5% +1 -3 ×2.5% ±5%	33 36.5	6.3 6.6 11 13.8 18 20	YNyn0d11	11.2	47	8.9	44	7.1	44	0.82	H.V-M.V 18~19 H.V-L.V 10.5 M.V-L.V 6.5	H.V-M.V 10.5 H.V-L.V 18~19 M.V-L.V 6.5	8.5	28.6	5240	4500	4900	1475×1475
8000						13.3	56	10.6	53	8.5	53	0.78			8.9	30.3	5310	1600	4960	1475×1475
10000						15.8	66	12.6	62	10.1	62	0.74			9.45	32.6	5390	1660	5020	1475×1475
12500						18.4	78	14.7	74	11.8	74	0.70			9.98	36.3	5450	4700	5100	2040×2040
16000						22.1	95	17.9	91	14.3	91	0.66			10.9	42.7	5520	4750	5180	2040×2040
20000						26.4	112	21.1	106	16.9	106	0.65			13.5	51.3	5600	4800	5220	2040×2040
25000						30.8	133	24.6	126	19.7	126	0.60			14.3	56.3	5680	4890	5300	2040×2040
31500						36.8	157	29.4	149	23.5	149	0.60			15.4	64.5	5700	4950	5400	2040×2040
40000						43.6	189	34.8	179	27.8	179	0.55			17.7	74.9	5760	5020	5500	2040×2040
50000						52.0	225	41.6	213	33.3	213	0.55			19.5	86.4	5800	5100	5600	2040×2040
63000						61.6	270	49.2	256	39.4	256	0.50			22	97.2	5900	5200	5700	2040×2040

Note: the weight and size are for reference only, if the data are subject to change without notice

110kV level oil-immersed power transformer

Main technical parameters for 110kV level S(F)Z9, S(F)Z11, S(F)Z13 Series three-phase three winding on-load-tap-changing power transformer

Rated power (kVA)	Voltage combination and tapping range				Connection symbol	9-type loss (kW)		11-type loss (kW)		13-type loss (kW)		No-load current (%)	Short-circuit impedance (%)	Weight (kg)		Outline Dimension (mm)			Gauge (mm)
	H.V (kV)	High tapping range	M.V (kV)	L.V (kV)		No-load loss	Load loss	No-load loss	Load loss	No-load loss	Load loss			Oil weight	Total weight	L	B	H	
6300	110 121	±2×2.5% +1 -3 ×2.5% ±5%	33 36.5	6.3 6.6 11 13.8 15.75 18 20	YNyn0d11	12	47	9.6	44	7.7	44	0.95	HV-LV 10.5 HV-LV 18~19 HV-LV 10.5	9	34	6980	4220	4680	1475×1475
8000						14.4	56	11.5	53	9.2	53	0.95		11.5	38	7080	4450	4890	1475×1475
10000						17.1	66	13.6	62	10.9	62	0.89		12.8	41.5	7160	4580	5100	1475×1475
12500						20.2	78	16.1	74	12.9	74	0.89		15.2	45.4	7300	4800	5150	2040×2040
16000						24.2	95	19.3	90	15.4	91	0.84		16	48.2	7400	4900	5300	2040×2040
20000						28.6	112	22.8	106	18.2	106	0.84		17	56.7	7450	5000	5500	2040×2040
25000						33.8	133	27	126	21.6	126	0.78		19.2	63.7	7500	5100	5520	2040×2040
31500						40.2	157	32.1	149	25.7	149	0.78		22.2	75.8	7550	5200	5580	2040×2040
40000						48.2	189	38.5	179	30.8	179	0.73		25.7	87.9	7700	5250	5700	2040×2040
50000						56.9	225	45.5	213	36.4	213	0.73		28.7	96.9	7750	5400	5800	2040×2040
63000						67.7	270	54.1	256	43.3	256	0.67		31.5	108	7850	5450	5850	2040×2040

Note: the weight and size are for reference only, if the data are subject to change without notice

220kV level oil-immersed power transformer

Summary

The 220kV transformer produced by our company uses special computer and verification program to carry out all-round optimization design and verification on transformer core, coil, body, lead, oil tank and other components to ensure product performance. Superior process equipment, careful material selection and efficient production make the transformer small in size, light in weight, low in loss, low in partial discharge and low in noise.

This product has the advantages of superior quality, energy conservation and environmental protection, convenient installation and maintenance, reliable operation, stability, reliability, economy and environmental protection. It is suitable for power plants, substations, large-scale industrial, mining and petrochemical enterprises, etc. its product performance fully conforms to iec-60076 recommended by International Electrotechnical Commission.

Model and meaning

S (F) Z □ - □ / □ - □

- Rated low voltage (kV)
- Rated high voltage (kV)
- Transformer rated capacity (kVA)
- Design serial number
- On-load voltage regulation
- Air cooling
- Three-phase oil-immersed transformer

220kV level oil-immersed power transformer

Functions and features

- The advanced and reliable calculation program is adopted for electrical calculation to qualitatively and quantitatively analyze the field strength distribution and oil flow distribution of the coil to ensure sufficient electrical strength.
- The core adopts high-quality cold-rolled silicon steel sheet, full oblique joint, scientific and reasonable control of core clamping force, effectively reducing the core loss and electromagnetic noise.
- Advanced process measures, automatic cutting of iron core, high precision, small burr, non overlapping iron yoke process, double curing adhesive applied on the surface, advanced iron core tension device and iron core column binding; coil vertical winding, with numerical control tension device; the body adopts phase suit process, low pressure inner supporting hard paper cylinder, to enhance short-circuit resistance; the lead adopts overall pre assembly; The equipment body adopts the fully automatic control kerosene gas-phase drying process; the General Assembly implements the pre assembly of the dust-free purification room.
- Multi coil integral assembly and constant pressure drying measures shall be adopted for the body of the transformer to ensure uniform contraction and less rebound of the coil. All internal insulating parts and metal structural parts shall be processed in circular angle to reduce local discharge and effectively improve the electrical strength and short-circuit resistance of the transformer.
- The bell jar type oil tank adopts the most suitable cooling mode to minimize the temperature rise of oil level and winding. The whole plate bending plate is used in the structure, with beautiful appearance.

Technical parameters

31500~420000/220 series three-phase double winding transformers without excitation changer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	9-type loss (kW)		11-type loss (kW)		13-type loss (kW)		No-load current (%)	Short-circuit impedance (%)
	H.V (kV)	High tapping range	L.V (kV)		No-load loss	Load loss	No-load loss	Load loss	No-load loss	Load loss		
31500	220 230	±2×2.5% +1 -3 ×2.5% ±5%	6.3 6.6 11 13.8	YNd11	35.00	135.00	28.00	128.00	22.40	128.00	0.70	12~14
40000					41.00	157.00	32.00	149.00	25.60	149.00	0.70	
50000					49.00	189.00	39.00	179.00	31.20	179.00	0.65	
63000					58.00	220.00	46.00	209.00	36.80	209.00	0.65	
75000			11 13.8		67.00	250.00	53.00	237.00	42.40	237.00	0.60	
90000					77.00	288.00	61.00	273.00	48.80	273.00	0.55	
120000					94.00	345.00	75.00	338.00	60.00	338.00	0.55	
150000			11 13.8 15.75 18 20		112.00	405.00	89.00	400.00	71.20	400.00	0.50	
160000					117.00	425.00	93.00	420.00	74.40	420.00	0.49	
180000					128.00	459.00	102.00	459.00	81.60	459.00	0.46	
240000					160.00	567.00	128.00	538.00	102.40	538.00	0.42	
300000					189.00	675.00	151.00	641.00	120.80	641.00	0.38	
360000			15.75 18 20		217.00	774.00	173.00	735.00	138.40	735.00	0.38	
370000					221.00	790.00	176.00	750.00	140.80	750.00	0.38	
400000					234.00	837.00	187.00	795.00	149.60	795.00	0.35	
420000					242.00	868.00	193.00	824.00	154.40	824.00	0.35	

31500~180000/220 series three-phase double winding transformer on-load changer

Rated power (kVA)	Voltage combination and tapping range			Connection symbol	9-type loss (kW)		11-type loss (kW)		13-type loss (kW)		No-load current (%)	Short-circuit impedance (%)
	H.V (kV)	High tapping range	L.V (kV)		No-load loss	Load loss	No-load loss	Load loss	No-load loss	Load loss		
31500	220 230	±8×1.25%	3.15 6.3 6.6 11 13.8	YNd11	38.00	135.00	30.00	128.00	24.00	128.00	0.70	12~14
40000					45.00	157.00	36.00	149.00	28.80	149.00	0.63	
50000					54.00	189.00	43.00	179.00	34.40	179.00	0.56	
63000					63.00	220.00	50.00	209.00	40.00	209.00	0.56	
90000					80.00	288.00	61.00	273.00	48.80	273.00	0.49	
120000					99.00	346.00	79.00	338.00	63.20	338.00	0.49	
150000					116.00	405.00	92.00	400.00	73.60	400.00	0.42	
180000					135.00	468.00	108.00	459.00	86.40	459.00	0.42	

Note: the weight and size are for reference only, if the data are subject to change without notice

Electric furnace transformer

Summary

An electric furnace transformer is used to supply power to an electric furnace, which lowers the high voltage to the furnace-required lower voltage.

Its type varies with the type of electric furnace, so the transformer has many types. Currently we manufacture following types: Arc furnace transformers used for steel-smelting (including load-ratio voltage regulator type, no-load voltage regulator type, and built-in reactor type);Blast furnace transformers used for smelting of iron alloy, silicon compounds, calcium carbide (single phase, three-phase, load ratio voltage regulator and no-load voltage regulator).All are energy-saving products with low power loss. The cooling modes are self-cooling mode, forced water cooling mode, etc.

Model and meaning

□ □ □ □ □ □ – □ / □

- Voltage class (kV)
- Rated power (kVA)
- Built-in accessories: Flux leakage changing group -, built-in reactor K,
- Way of voltage regulation:
  Non-excited voltage regulation-, Load ratio voltage regulation
- Way of oil circulations: Natural circulation -, forced oil circulation P
- Type of cooling devices:
  Oil immersed self-cooling - , Air cooling F, ater cooling S
- Number of phases: D-single phase, S- three-phase
- Application:
  H- Steel-smelting arc furnace, HJ- Ladle fining furnace, HZ- Electric slag furnace, HC- calcium carbide furnace, HK- Mining heat furnace, HG- Power frequency induction furnace

Electric furnace transformer

Technical parameters

Non-excitation-tap-changing Arc Furnace Transformer Technical Parameters

Rated power (kVA)	With Series reactor										No Series reactor				
	Primary Voltage (kV)	Secondary Voltage (V)	Rated Secondary Current (A)	Type of taping	Connection symbol	Short-Circuit impedance (%)	Series reactor		No-load loss (kW)	Load loss (kW)	No-load current (%)	No-load loss (kW)	Load loss (kW)	No-load current (%)	Short-Circuit impedance	
							Rated power (kvar)	Reactance Voltage Drop (%)							Big (%)	Small (%)
630	6.3 6.6 11 13.8	200	1819	no-load tap changing	Dd0 Dy11	8~9	120	19	2.4	8.6	3.0	2.2	11.0	3.0	24~26	10~11
800		170	2609				150		2.7	11.0	2.9	2.7	13.5	2.9		
1000		116 98	2887				190		3.1	14.0	2.9	3.1	16.0	2.8		
1250		210	3437				200	16	3.6	17.5	2.6	3.7	18.5	2.6	22~24	9~10
1600		180	4399				260		4.1	22.0	2.5	4.6	24.0	2.5		
2000		121 104	5499				320		4.6	27.0	2.4	5.6	28.0	2.4		
2500		220	6561			7~8	280	11.2	5.2	32.0	2.3	6.7	34.5	2.3	21~23	8~9
3150		190 127 110	8267				350		6.0	39.0	2.2	8.0	41.5	2.2		
4000		240	9623				340	8.5	7.6	46.0	2.1				19~21	7~8
5000		210 139 121	12028				360		9.4	54.0	2.0					
6300		260	13900				430	5.7	11.8	63.0	1.9					
8000		240 210 139	17765				460		15.0	74.0	1.8					

On-load-tap-changing Arc Furnace Transformer Technical Parameters

Rated power (kVA)	Primary Voltage (kV)	Secondary Voltage (V)		Secondary Step Voltage (V)	Rated Secondary Current (A)	Regulation Voltage Step	Connection symbol	Short-Circuit impedance (%)	Cooling Method
		Invariables Power	Invariables Current						
10000	33 66	280~240	240~100	10	24 056	5 Steps Invariables Power 14 Steps Invariables Current	Dd0 Yd11 YNd11	7~8	OFWF OFAF
12500		314~270	270~116	11	26 729				
16000	33 66 110 121	353~305	305~137	12	30 287			6~7 (35kV level) 7.5~8.5 (66,110kV level)	
20000		392~340	340~158	13	33 962				
25000		436~380	380`184	14	37 984				
31500		489~425	425~201	16	42 792				
40000		547~475	475~223	18	48 619				
50000		610~530	530~250	20	54 467				
63000		673~585	585~277	22	62 176				
80000		760~660	660~310	25	69 982				

Electroslag Furnace Transformer Technical Parameters

Type	Rated power (kVA)	Rated Voltage		Connection symbol	Weight (kg)			Overall dimension L×W×H (mm)	Gauge W×N (mm)
		Primary (kV)	Secondary (V)		Active part	Oil	Total		
HZD-400/11	400	11	60/55/51/47/44	Ii0	1300	1430	3390	2220×1570×2390	820×820
HZDZ-500/11	500	11	70/67/64/62/60/58/56/53/50	Ii0	1400	710	2920	2200×2000×2070	660×1070
HZD-630/11	630	11	70/63.2/57.6/53/49/45.6/42.6/40	Ii0	1450	975	3600	2200×2040×2150	550×1070
HZD-700/11	700	11	70/64/56/52/47	Ii0	1750	990	4000	2100×1630×2600	820×1070
HZDZ-800/11	800	11	87/83/79/77/75/73/70/65/60	Ii0	1880	965	3860	2400×2000×2200	660×1070
HZD-1000/11	1000	11	80/75/72.5/70/67.5/65/60/55/50	Ii0	2800	1130	5450	2470×2400×2350	660×1070
HTZ-1118/6.3	1118	6.3	260/238/216/194/172/150/128/106/84/62/40	YaT	2800	2300	7100	2800×2210×2280	1070×1435
HTZ-1474/6.3	1474	6.3	275/250/225/200/175/150/125/100/80/60	YaT	2900	2450	7650	2950×2210×2430	1070×1435
HZDSP-1620/11	1620	11	90~55 (8 gear)	Ii0	3200	2010	7050	2500×1570×2850	820×1260
HZDSPZ-1620/6.3	1620	6.3	90~45.2 (27 gear)	Ii0	3250	2650	7200	2600×1620×2700	820×1505
HSZ-1794/6.3	1794	6.3	260/238/216/194/172/150/128/106/84/62/40	Ya0,Dd0	4100	2750	9050	2800×2360×2500	1070×1505
HZDSPZ-2400/11	2400	11	96~56 (18 gear)	Ii0	5080	3810	11500	2450×1900×3100	1070×1505

Note: the weight and size are for reference only, if the data are subject to change without notice

Electric furnace transformer

Ladle-furnace Transformer Technical Parameters

Type	Rated power (kVA)	Rated Voltage		Connection symbol	Weight (kg)			Overall dimension L×W×H (mm)	Gauge W×N (mm)
		Primary (kV)	Secondary (V)		Active part	Oil	Total		
HJSSP-2400/11	2400	11	200/190/110/104/180	D-Y,d0-11	3550	2100	6800	2400×1670×2685	1070×1070
HJSSP-2400/13.8	2400	13.8	210/196/113/100/173	D-Y,d0-11	3700	2100	6950	2400×1670×2685	1070×1070
HJSSP-2800/11	2800	11	190/175/160/110/101/92.5	D-Y,d0-11	5000	2750	10000	2800×1900×3300	1070×1070
HJSSP-3150/11	3150	11	210/195/180/165/150	Yd11	5500	3350	10400	2820×1840×3180	1505×1505
HJSSP-3200/33	3200	33	210/195/170/121/112.5/98	D-Y,d0-11	6480	4130	13900	3150×1900×3550	1505×1505
HJSSP-4000/11	4000	11	210/195/180/155	Dd0	6580	4230	13370	3000×2000×3500	1505×1505
HJSSP-5000/11	5000	11	210/195/180/165/121	D-Y,d0-11	7080	4300	14500	3000×2000×3750	1505×1505
HJSSP-6300/33	6300	33	215/200/185/170/155	Yd11	9500	7000	19000	3700×2200×4500	1505×1505
HJSSP-7000/11	7000	11	216/202/188/175/161	Dd0	9800	4650	17500	3600×2200×3600	1505×1505
HJSSP-7000/33	7000	33	220/205/191/175/160/145	Yd11	10200	7000	21600	4350×2400×4500	1505×1505
HJSSP-10000/11	10000	11	240/210/180/160/139/121	D-Y,d0-11	14800	10500	31500	3800×2700×4200	1505×1505
HJSSP-12000/33	12000	33	260~150 (13 gear)	Yd11	15500	10000	33200	4000×2700×4650	1505×1505
HJSSP-13000/33	13000	33	240~150 (19 gear)	Yd11	17200	11000	36700	4300×2900×4500	2000×2000
HJSSP-18000/33	18000	33	344~231 (13 gear)	Yd11	20800	12900	41200	4700×4200×4700	2000×2000

10kV Arc Furnace Transformer Technical Parameters

Type	Rated power (kVA)	Rated Voltage		Connection symbol	Regulation Voltage Step	Type of taping	Short-Circuit impedance (%)	No-load loss (kW)	Load loss (kW)	Weight (T)			
		Primary (kV)	Secondary (V)							Active part	Oil	Tran-sportation	Total
HS-650/11	650	11	130~75	D-Y,d0-11	5	No-load	20	1.9	10	1.84	1.68	4.5	4.75
HS-1250/11	1250	11	210~160	D-Y, d0-11	5	No-load	21	2.9	15.7	3.39	2.58	7.6	8.12
HS-1600/11	1600	11	85~65	Yd11	5	No-load	6.0	5.1	17.4	5.37	3.37	11	11
HSZ-2000/11	2000	11	300~140	Yd11	15	On-load	4/6	5.3	33.7	5.3	5.02	13.8	13.8
HSSPK-2500/11	2500	11	220~110	D-Y,d0-11	6	No load, electric	21/9	5.4	32.7	5.85	3.1	9.2	11.1
HS-3000/11	3000	11	220~110	D-Y, d0-11	5	No load, electric	19/9	5.2	26.2	5.09	3.79	11.8	11.8
HSSP-3200/11	3200	11	240~104	Dd0	5	No load, electric	18/7	7.7	40.9	6.68	4.51	13	14.8
HSSP-4200/11	4200	11	240~160	D-Y, d0-11	5	No load, electric	18.5	7.3	33.2	6.75	4.21	14.3	14.3
HSSP-5500/6	5500	6	212~150	Dd0	5	No load, electric	8	10.1	47	9.86	5.29	17	18.5
HSSPK-5500/6	5500	6	260~139	Dd0	8	No load, electric	9	7.5	60	8.5	5.4	15	15.6
HSSP-6300/6	6300	6	207~158	Yd11	5	No load, electric	7.5	8.5	58.2	9.17	4.99	17	19.2
HJSSP-7500/11	7500	11	240~140	D-Y, d0-11	6	No load, electric	6.4	10.7	78.2	11.4	5.57	20	22.3
HSSPZ-8000/13.8	8000	13.8	300~140	Yd11	17	On-load	7	11.8	99.8	13.1	7.9	25	28.5
HJSSPZ-8000/11	8000	11	240~149	Dd0	9	On-load	7.5	9.8	76.8	9.3	6.3	19	21.8
HSSPZ-9000/6	9000	6	240~85	Yd11	17	On-load	7	13.7	121.6	14.4	10.8	30.7	32.4
HSSP-12500/11	12500	11	325~166	Dd0	11	No load, electric	8	12.4	145.7	13.1	7.6	24	27.4
HJSSPZ-14000/11	14000	11	325~205	Dd0	13	On-load	6.5	13.2	134.6	14	6.3	39.5	24

Note: the weight and size are for reference only, if the data are subject to change without notice

Electric furnace transformer

33kV Arc Furnace Transformer Technical Parameters

Type	Rated power (kVA)	Rated Voltage		Connection symbol	Regulation Voltage Step	Type of taping	Short-Circuit impedance (%)	No-load loss (kW)	Load loss (kW)	Weight (T)			
		Primary (kV)	Secondary (V)							Active part	Oil	Tran-sportation	Total
HSSPZ-1500/33	1500	33	290~157	Yd11	10	On-load	5.5	2.6	23	5.3	2.8	8.7	9.3
HSSP-3200/33	3200	33	240~138	D-Y,d0-11	4	No load, electric	7	5.3	41.1	6.16	4.88	13	14.3
HSSPK-3200/33	3200	33	240~138	D-Y,d0-11	5	No load, electric	18.65	5.3	91.1	6.38	5.42	13	15.2
HJSSP-5000/33	5000	33	212~155	Yd11	5	No load, electric	7.5	9.3	55	8.22	5.66	15	18
HJSSP-5500/33	5500	33	240~130	Yd11	6	No load, electric	7.5	9.1	52.5	8.45	5.66	15	18
HJSSP-7000/33	7000	33	240~140	Yd11	8	No load, electric	7	9.4	77	10.8	8	22	25.1
HJSSPZ-9000/33	9000	33	239~163	Yd11	9	On-load	6.5	11.6	97	11.8	7.7	23	26.8
HSSP-9000/33	9000	33	320~180	Yd11	8	No load, electric	8.5	11	116	12.6	6.1	18	23
HJSSPZ-10000/33	10000	33	260~188	Yd11	9	On-load	6	17.2	187	17.5	11.7	35	38.7
HSSPZ-10000/33	10000	33	300~160	Yd11	11	On-load	8.5	12	97	13.1	7.1	23	26
HSSPZ-12500/33	12500	33	250~150	Yd11	9	On-load	6.5	19.7	134	18.5	12.6	37	40.5
HSSP-12500/33	12500	33	340~195	Yd11	11	No load, electric	9	13.9	154	13.9	9.8	28	32
HSSP-15000/33	15000	33	353~160	D-Y,d0-11	8	No load, electric	8	20	107	19.1	8.1	31	34.5
HSSPZ-16000/33	16000	33	375~200	Yd11	15	On-load	8	16.4	161	18.4	10.4	30	36
HJSSPZ-16000/33	16000	33	310~190	Yd11	13	On-load	7	19.2	195.6	18.1	13	36	41.8
HSSPZ-20000/33	20000	33	400~270	Yd11	13	On-load	7	20.7	207.7	19.1	11.6	36	40.5
HJSSPZ-20000/33	20000	33	320~170	Dd0	11	On-load	6.5	30.4	313.6	31.4	18.5	54	60.2
HSSPZ-25000/33	25000	33	509~302	Yd11	13	On-load	7.5	28.5	272.6	27.1	16	46	49.6

Blast furnace, calcium carbide furnace Transformer Technical Parameters

Type	Rated power (kVA)	Rated Voltage		Connection symbol	Regulation Voltage Step	Type of taping	Short-Circuit impedance (%)	No-load loss (kW)	Load loss (kW)	Weight (T)			
		Primary (kV)	Secondary (V)							Active part	Oil	Tran-sportation	Total
HKS-1000/11	1000	11	72~64	Dd0	5	No-load	6.5	3.02	14	2.9	2.87	7.965	7.965
HKS-1600/11	1600	11	345~199	D-Y, d0-11	8	No-load	7	4.06	18.26	3.8	2.91	8.98	8.98
HKS-3000/11	3000	11	126~70	Dd0	8	No-load	7	5.33	45	3.4	3.8	10.3	12.2
HKSSP-3150/11	3150	11	230~130	Yd11	5	No-load	7	5.36	31.02	7.3	3.5	12.4	14.12
HKSSPZ-4000/6	4000	6	200~59	Yd11	15	On-load	4.5	11.2	37	11.9	9.52	24.58	28.3
HKSSP-4500/11	4500	11	120~92	Dd0	8	No-load	6.5	8.33	48.82	8.1	4.8	15.64	17.25
HKSSP-6000/11	6000	11	140~100	Yd11	7	No-load	8	9.2	66.6	9.2	6.07	16.9	18.66
HKSSPZ-6300/11	6300	11	134~110	Dd0	9	On-load	6	7.7	66.5	7.5	6.92	17.5	19.8
HKSSP-3200/33	3200	33	230~150	Yd11	5	No-load	7	7.11	40.13	7	5.6	15.1	16.2
HKSSP-5600/33	5600	33	270~160	Yd11	7	No-load	6	8.77	53.2	9.3	7.05	19	21
HKSSP-6300/33	6300	33	140~100	Yd11	9	No-load	7.5	9.01	69.87	9.3	6.38	18.1	21.2
HKSSP-10000/33	10000	33	350~170	Yd11	9	No-load	7	10.1	79.7	20.3	9.3	33.2	37
HKSSP-12500/33	12500	33	365~153	Yd11	5	No-load	7	16.6	95	14.9	8.7	28.7	30
HCS-1000/11	1000	11	80~60	Yd11	5	No-load	6	3.73	12.2	3.3	3.0	7.9	7.9
HCS-1800/11	1800	11	105~75	Yd11	5	No-load	7	5.4	28.8	4.6	3.0	10	10
HCSSP-3000/11	3000	11	80~108	Dd0	8	No-load	6.5	3.9	65.5	6.6	4.2	13.7	13.7
HCSSP-5000/11	5000	11	120~95	Yd11	5	No-load	6.5	10.23	44.6	9.6	5.8	18.2	19.8
HCSSP-8000/11	8000	11	128~112	Dd0	5	No-load	7	11.9	94	10.7	8.8	19	21.83
HCSSP-6300/33	6300	33	126~98	Yd11	8	No-load	8	8.1	87.6	9.4	5.5	16.3	19
HCSSPZ-10000/33	10000	33	164~98	D-Y,d0-11	19	On-load	7	16.8	91.35	17.8	14.7	37	41.2
HCSSPZ-12500/33	12500	33	165~126	Dd0	13	No-load	6.5	16.8	112.1	14.1	8.9	25.4	28.8

Note: the weight and size are for reference only, if the data are subject to change without notice

Rectifier transformer

Summary

They are widely used in electrolysis, electrochemical, driving, traction static de-dusting, DC power transmission fields where rectification power source is necessary. A rectiformer is used for power supply of rectifying devices, most industrial DC power sources is transformed from an AC network via rectifying devices consisting of a rectiformer and a rectifier. It is widely used in electrolysis, electrochemical, traction, driving. DC transmission, frequency conversion and rectified power source fields. According to user's requirements, the secondary winding phase difference can be designed to 30°,15°,75°,for rectification of 6-phase,12-phase 24-phase and 48-phase.

Model and meaning

□□□□□□□□– □ / □

- Voltage class (kV)
- Rated power (kVA)
- Built-in accessories:
  Without built-in accessories, Balance reactor K, Saturated reactor HK
- Way of voltage regulation:
  No-excitation regulation or without voltage regulation, Load ration voltage regulation by line side winding Z, Load ratio regulation by built-in verica or by series regulating transformer T, Regulation by self saturating reactor B
- Way of oil circulations: Natural circulation-, Forced oil circulation P
- Type of cooling devices: Natural cooling, Air cooling F, Water cooling S
- External insulating medium of winding: Transformer oil, Air (dry-type) G
- Number of phases of line side: D--single phase S--three-phases
- Application:
  ZH-- electrochemical electrolysis, ZQ--traction, ZS--driving, ZZ-- DC transmission for Transmission
  ZP--AC frequency, ZB--General industry

Rectifier transformer

Technical parameters

Forced oil water-cooled Series rectifier transformer

Type	Rated power (kVA)	Rated Voltage (V)		Connection symbol	Weight (kg)			Overall dimension L×W×H (mm)	Gauge W×N (mm)
		Line side (kV)	Valve side (V)		Active part	Oil	Total		
HSSP-800/11	800	11	400	Dyn11	1580	660	3240	2160×1625×1855	820×820
HSSP-2000/33	2000	33	400	Yyn0	3320	1280	5735	2600×1260×2740	1070×1070
HSSP-4000/33	4000	33	950	Dd0y11	5410	2040	9540	2570×1745×2720	1475×1475
HSSP-6300/33	6300	33	10000	D(±7.5°)dyn	8600	4860	18260	3340×1875×3370	1475×1475
HSSP-7000/33	7000	33	950	Dd0y11	8570	3390	14700	3185×985×3475	1475×1475
HSSP-8000/33	80000	33	950	Dd0y11	9170	3590	15520	3340×1870×3490	1475×1475
HSSP-9000/33	9000	33	950	Dd0y11	9920	4070	15740	3240×1915×3720	1475×1475
HSSP-10000/33	10000	33	1000	D(±7.5°)dyn	11090	4400	18850	3410×1915×3845	1475×1475

Note: the weight and size are for reference only, if the data are subject to change without notice

Rectifier transformer

Ladle-furnace Transformer Technical Parameters

Type	Rated powe (kVA)	Rated Voltage (V)		Connection symb	Weight (kg)			Overall dimension L×W×H (mm)
		Line side (kV)	Valve side (V)		Active part	Oil	Total	
ZS-800/11	800	11	400	Dyn11	1390	575	2675	1860×1620×1950
ZS-900/6	900	6	400	Dd0y11	1650	870	3350	1930×1540×2030
ZS-1000/11	1000	11	575	Dy11	1535	650	3220	1960×1800×2320
ZS-1200/6.3	1200	6.3	420	Dd0y11	2000	1040	4200	2050×1660×2350
ZS-1250/11	1250	11	660	Dy11	1700	810	3600	1960×1820×2200
ZS-1250/11	1250	11	575	Dd0y11	2050	1070	4280	1990×1580×2340
ZS-1500/11	1500	11	660	Dd0y11	2480	1190	4940	2200×1870×2330
ZS-1500/11	1500	11	420	Dd0	2260	920	4560	2000×1690×2240
ZS-1560/11	1560	11	600~380	Dy11y11	2420	1200	4840	2150×1800×2430
ZS-1600/11	1600	11	650	Dd0y11	2590	1160	5140	2320×1950×2270
ZS-1800/11	1800	11	420	Dd0	2770	1030	5400	2400×2200×2380
ZS-1800/11	1800	11	575	Dd0yn11	2800	1010	5150	2120×1880×2320
ZS-2000/6.3	2000	6.3	630	Dd0y11	2900	1380	6100	2250×1940×2500
ZS-2000/6	2000	6	720	Dd0	2685	1120	5690	2320×2330×2360
ZS-2000/11	2000	11	710	Dd0y11	2900	1830	5800	2580×2320×2360
ZS-2250/11	2250	11	420	Dy11	3215	1085	6135	2320×2110×2430
ZS-2400/11	2400	11	660	Dd0y11	3165	1430	6740	2440×2240×2510
ZS-2500/33	2500	33	600~400	Dy11y11	4070	1750	7860	2600×2350×2800
ZS-2500/6	2500	6	660	Dd0y11	3450	1550	7200	2500×2310×2475
ZS-2500/11	2500	11	660	Dyn11	3390	1210	6300	2250×1880×2390
ZS-2800/11	2800	11	575×3	Dyn11	4550	2160	9480	4370×1450×2485
ZS-3000/6	3000	6	575×3	Dyn11	5060	3020	11280	4670×1680×2585
ZS-3000/6	3000	6	690	Dd0y11	3900	1640	7600	2500×2200×2650
ZS-3150/11	3150	11	575	Dd0y11	4600	1850	9000	2700×2400×2750
ZS-3300/11	3300	11	640	Dd0y11	4375	1895	8680	2600×2400×2690
ZS-3500/6.3	3500	6.3	850	Dyn11	4100	1360	7500	2280×1860×2580
ZS-3900/11	3900	11	700	Dd0y11	4830	2160	9570	2840×2770×2590
ZS-4000/33	4000	33	1250	Dd0y11	5300	2420	10700	2800×3050×3020
ZS-4500/6	4500	6	660	Dd0y11	5315	2640	11200	3000×2770×3000
ZS-4800/6	4800	6	710	Dd0y11	5600	2580	11100	2730×2570×2848
ZS-5500/11	5500	11	850	Dd0y11	6500	2460	11700	2900×2070×2820
ZS-7000/11	7000	11	950	Dd0y11	8020	3520	15300	3000×2630×3370
ZS-7000/13.8	7000	13.8	850	Dd0y11	7950	3400	15050	3000×3600×3010
ZS-7500/33	7500	33	700	Dd0y11	8800	4170	17300	3180×2860×3685
ZS-8000/66	8000	66	1550	Dd0y11	10400	7700	23900	4180×3860×4200
ZS-9000/11	9000	11	1000	Dd0y11	10080	5430	20870	3150×3965×3275
ZS-10000/33	10000	33	1650	Dd0y11	11830	5810	23660	3385×3545×3550
ZS-10000/33	10000	33	630	Dd0y11	12040	6050	24380	3460×3880×3640
ZS-10000/33	10000	33	1000	Dd0y11	11110	6140	23420	3360×3800×3780
ZS-10000/11	10000	11	1850	Dd0y11	11250	5500	22630	3310×3710×3210
ZS-12500/11	12500	11	1650	Dd0y11	12810	6550	26710	3580×3870×3410
ZS-12500/11	12500	11	1550	Dd0y11	12530	6580	26310	3530×3760×3410
ZS-16000/33	16000	33	1500	Dd0y11	18170	8460	35200	4685×3780×4085

Note: the weight and size are for reference only, if the data are subject to change without notice

Saudi General Electric
Rectifier transformer

Rectifier transformer

33kV Arc Furnace Transformer Technical Parameters

Type	Rated power (kVA)	Rated Voltage (V)		Connection symbol	Weight (kg)			Overall dimension L×W×H (mm)	Gauge W×N (mm)
		Line side (kV)	Valve side (V)		Active part	Oil	Total		
ZHSZK-400/11	400	11	50	Dy11y11	1225	1357	4020	2690×1740×2150	820×820
ZHSK-500/6.3	500	6.3	193	Dy11y5	1100	780	2720	2080×1340×2060	660×660
ZHSK-500/11	500	11	119	Dy11y5	1380	910	3020	1750×1490×2220	820×820
ZHSK-630/11	630	11	255	Dy11y11	1600	910	3350	1885×1460×2165	820×820
ZHSK-800/0.38	800	0.38	168	Dy11y5	1570	900	3710	1850×1900×2320	660×660
ZHSK-800/11	800	11	168	Dy11y5	1665	980	3900	1925×1900×2380	820×820
ZHSK-900/0.38	900	0.38	209	Yyn6yn0	1700	960	3800	2050×1800×2320	660×660
ZHSZK-1000/11	1000	11	140	Dy11y5	3500	1840	6840	2700×1900×2500	820×820
ZHSK-1250/11	1250	11	280	Yy6y0	2640	1460	5450	2170×1660×2560	820×820
ZHSK-1500/11	1500	11	239	Dy11y5	2660	1560	5870	2380×2120×2580	820×820
ZHSK-1600/11	1600	11	246	Dy11y5	2730	1640	6160	2400×2140×2580	820×820
ZHSK-1800/33	1800	33	211	Yy6y0	3300	2200	7300	2550×1830×3080	1070×1070
ZHSK-2000/11	2000	11	238	Yy6y0	3230	1900	6800	2500×1980×2750	1070×1070
ZHSK-2700/6	2700	6	265	Dy11y5,Yyd0d6	4140	2840	9680	3100×2500×2500	1070×1070
ZHSK-3000/11	3000	11	79	Dy11y5,Yyd0d6	4380	3100	1090	3500×2780×2660	1505×1505
ZHSK-3500/11	3500	11	270	Yy6y0	4430	4200	11880	3680×3150×2900	1505×1505
ZHSZK-4000/33	4000	33	280	Yy6y0	6200	5700	15300	3400×2800×3300	1505×1505
ZHSTK-6300/33	6300	33	260	Y/Z(±15°)y0y6	13800	12000	31500	4300×3000×3500	2000×2000
ZHSFTK-8000/33	8000	33	220	Za(+7.5°)Z(±15°)y0y6	18300	14000	37400	4800×3800×4300	2000×2000
ZHSFTK-8000/33	8000	33	220	Za(-7.5°)Z(±15°)y0y6	18300	14000	37400	4800×3800×4300	2000×2000
ZHSFTK-10000/33	10000	33	200	Za(+7.5°)Z(±15°)y0y6	19800	15600	42000	5000×4000×4800	2000×2000
ZHSFTK-10000/33	10000	33	200	Za(-7.5°)Z(±15°)y0y6	19800	15600	42000	5000×4000×4800	2000×2000
ZHSFFK-16000/33	16000	33	180	Za(+7.5°)Z(±15°)y0y6	24000	20000	53000	5300×4200×4700	2×2000×2000
ZHSFTK-16000/33	16000	33	180	Za(-7.5°)Z(±15°)y0y6	2400	20000	53000	5300×4200×4700	2×2000×2000
ZHSTK-20000/33	20000	33	320	Za(+7.5°)Z(±15°)y0y6	27000	25000	66000	7000×4500×4800	2×2000×2000
ZHSTK-20000/33	20000	33	320	Za(-7.5°)Z(±15°)y0y6	27000	25000	66000	7000×4500×4800	2×2000×2000
ZHSZ-4500/11	4500	11	356	Dd0d6	10000	5000	19800	4300×3100×3600	2000×2000
ZHSZ-6400/33	6400	33	378	Yd5d11	11000	5500	21600	4400×3200×3800	2000×2000
ZHSFPT-6800/33	6800	33	150	Ya0/Dd̲d6Yd11d5	14500	10500	28800	4230×2500×3730	2000×2000
ZHSZ-7600/33	7600	33	226	Yd5d11	16200	10000	33600	4600×3560×4560	2000×2000
ZHST-9000/33	9000	33	260	Ya0/Dd̲d6Yd11d5	17600	11000	37000	4700×3700×4650	2000×2000
ZHSSPT-12500/33	12500	33	450	Ya0/Dd̲d6Yd11d5	19500	13800	40500	5200×3800×4700	2000×2000
ZHSSPFT-16000/33	16000	33	300	Ya0/Z(±15°)d11d5	22000	19000	51000	5800×4000×4750	2×2000×2000
ZHST-20000/33	20000	33	500	Ya0/Z(±15°)d11d5	24000	22000	58000	6800×4400×4500	2×2000×2000
ZHSFT-31500/110	31500	110	480	YNZ(+3.75°)y0y6d5d11	41000	27000	83000	7700×4650×5300	2×2000×2000
ZHSFT-31500/110	31500	110	480	YNZ(-3.75°)y0y6d5d11	41000	27000	83000	7700×4650×5300	2×2000×2000
ZHSFT-31500/110	31500	110	480	YNZ(+11.25°)y0y6d5d11	41000	27000	83000	7700×4650×5300	2×2000×2000
ZHSFT-31500/110	31500	110	480	YNZ(-11.25°)y0y6d5d11	41000	27000	83000	7700×4650×5300	2×2000×2000
ZHSFPT-50000/110	50000	110	730	YNZ(0°)y0y6d5d11	52300	29500	97500	8580×4800×5800	2×2000×2000
ZHSFPT-50000/110	50000	110	730	YNZ(+10°)y0y6d5d11	52300	29500	97500	8580×4800×5800	2×2000×2000
ZHSFPT-50000/110	50000	110	730	YNZ(-10°)y0y6d5d11	52300	29500	97500	8580×4800×5800	2×2000×2000
ZHSFPT-63000/110	63000	110	660	YNZ(+18.75° -11.25°)d5d11	63000	35000	120000	8800×5300×6100	2×2000×2000
ZHSFPT-63000/110	63000	110	660	YNZ(+11.25° -18.75°)d5d11	63000	35000	120000	8800×5300×6100	2×2000×2000
ZHSFPT-63000/110	63000	110	660	YNZ(+26.25° -3.75°)d5d11	63000	35000	120000	8800×5300×6100	2×2000×2000
ZHSFPT-63000/110	63000	110	660	YNZ(+3.75° -26.25°)d5d11	63000	35000	120000	8800×5300×6100	2×2000×2000

Note: the weight and size are for reference only, if the data are subject to change without notice

YB□-12 series prefabricated substation
(European type box type distribution substation)

Summary

YB□-12 Series prefabricated substation is our company designed products of meet the needs of the construction of city power net, With compact structure, complete easy, reliable safe of operation, convenient maintenance, beautiful modeling, has advantages of small occupation area, convenient to move, production cycle is short etc.

YB□-12 AC 50Hz , 6kV - 10kV power grid, in the rating capacity of 50kVA -1600kVA independent distribution device. Suitable for urban high-rise buildings, residential area, mines, hotels, park, oilfield, the airport, seaport, shopping mall, railway and temporary facilities inside and outside door.

YB□-12 prefabricated substation series can be used to ring network distribution system, but also can be used as radiation type terminal power supply.

Model and meaning

Y B 27 – 12 / □

- □ — Transformer rated capacity (kVA)
- 12 — High voltage side rated voltage (kV)
- 27 — Design serial number
- B — Substation
- Y — Prefabricated type

YB□-12 series prefabricated substation
(European type box type distribution substation)

Functions and features

- The product consists of HV distribution unit, transformer and LV distribution unit and is divided into HV chamber, transformer chamber and LV. The HV chamber has complete functions it with HXGNO-10 ring main unit forms the primary supply system, may be arranged into several supply modes (ring main supply, terminal supply and dual-source supply) and also may be provided with HV metering elements to meet requirements on HV metering, Model S9,S11 and other low loss oil-immersed transformers or dry transformers else may be selected, The transformer chamber is designed to have automatic forced air cooling system and lighting system, The LV chamber can constitute user-required power supply schemes in a panel type or cabinet type structure, provide several functions (power distribution, lighting distribution, reactive power compensation, and metering of electrical power)to meet users' different requirements, and facilitate supply management and improve power supply quality
- The HV chamber is compact in structure and is provided with mis-operation preventive interlocking function. Each chamber has automatic and forced lighting device. In addition, all elements in HV and LV chamber are reliable in performance and easy in operation, which makes the products safe and reliable in running and easy in operation and maintenance
- It adopts both natural ventilation and forced ventilation to reach good ventilation and cooling effects. The transformer chamber and LV chamber are provided with air ducts. The blower fan has a temperature controller to automatically start and stop as per the preset temperature, thus ensuring on-load running of transformer.
- The casing body prevents rain water and foreign matters from entrance and it is made of hot-galvanized color steel sheet or anti-rust aluminum alloy sheet and subjected to anti-corrosion treatment. It looks artistic keeps long-term corrosion-water and dust-proof under outdoor conditions, and prolongs service life of transformer.

Technical parameters

Rated voltage
High voltage side：12kV
Low voltage side：0.4kV
Auxiliary loop: AC 110V, 220V, 380V

Rated current
High voltage: 400A, 600A
Low voltage: 100A- 2500A

Transformer rated capacity (kVA)
50,100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600

Rated Frequency
50Hz(60Hz)

Rated short time withstand current
High-voltage switchgear
12kV：16kA 2s(4s)
20kA 2s(4s)

Low-voltage switchgear
250kVA-315kVA:15kA
400kVA-800kVA:30kA
1000kVA and above: According to the actual short-circuit current
Note: the following: 200kVA and bellow: free test

Rated peak withstand current
High-voltage switchgear
12kV:40kA. 50kA
Rated short-circuit making current

Low-voltage switchgear
250kVA-315kVA:30kA 400kVA-800kVA:63kA
1000kVA and above: According to 2.2 times rated short-time withstand current (peak)

Insulation level

Withstand voltage value of high voltage electrical equipment Unit: (kV)

Rated voltage	Lightning shock withstand voltage		1 min power frequency withstand voltage	
	To the earth and interphase	Isolation clearance	To the earth and interphase	Isolation clearance
12	75	85	42	48

YB□-12 series prefabricated substation (European type box type distribution substation)

Withstand voltage value of low voltage electrical equipment **Unit: (V)**

Rated voltage	60≤Ui≤300	300≤Ui≤660
Frequency withstand voltage	2000	2500

Transformer withstand voltage **Unit: (kV)**

Rated voltage	7.2	12
Frequency withstand voltage (1min)	25 (20)	35 (28)
Shock withstand voltage peak (1.2/50 μs)	60	75

Note 1：in() is the dry type transformer standard，
Note 2: this form is only applicable to the normal conditions of use, and other conditions of use value should be revised according to the standard of update，
Rated noise level
Oil-immersed transformer: ≤50dB
Dry type transformer: ≤55dB
Reactive power compensation standard for 30% of transformer capacity (According to user requirement)

Structure characteristics

- This design is considered to supply customers margin of diversity, in case a modular structure change itself, each box can be changed by the following forms.
- According to the high voltage switch power form points: ring network type, terminal type.
- According to the high and low voltage equipment's in the way points: "目" type structure (FIG. 1-1 , 1-2), "品" type structure (FIG. 1-3, I - 4).
- According to the inside oil-immersed transformer type points: the whole sealing transformer, dry type transformer.
- According to the high voltage switch selection points: air injection load switch, vacuum load switch, SF6 load switch.
- According to material of box body (shell) : shading metal shell, nonmetal shell.

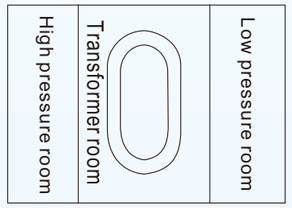


FIG 1-1

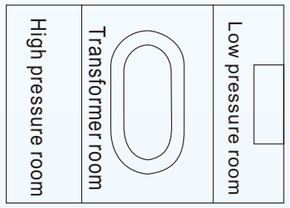


FIG 1-2

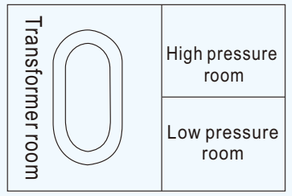


FIG 1-3

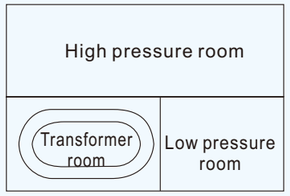


FIG 1-4

YB□-12 series prefabricated substation (European type box type distribution substation)

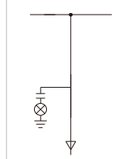
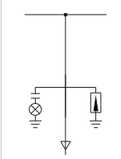
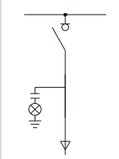
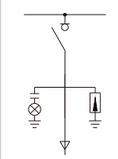
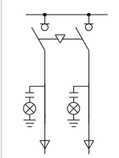
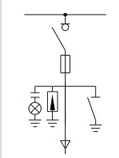
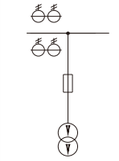
Combination by the chassis design and prefabricated substation overall form and lifting way, and adopted the common chassis. Chassis of materials used CHANNEL steel and I-BEAM steel by welding, metal frame of high or low voltage electric equipment. transformer shell parts are reliable connected between the ground conductor, no less than the minimum section 30mm2. In the round of chassis with grounding connected terminals, for users connected in any direction location choice connect parts.

The top of transformer chamber for double metal structure, internal with heat insulation layer and ventilation way, equipped with automatic exhaust ventilation equipment, ventilation's open and stopped by auto-control of the temperature monitoring device of transformer room, the temperature setting value according to allow 80 t0 90 percent of the temperature setting.

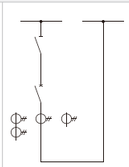
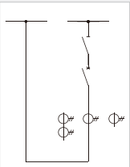
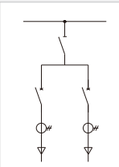
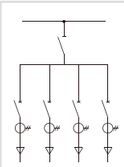
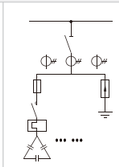
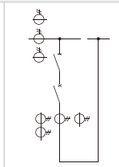
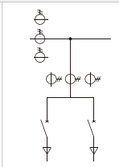
The two side of transformer room with doors, it is easy to installation and maintenance, In the door equipment with separation net, the net door equipment with interlock alarming device, prevent personnel straying to charged interval area, ensure the safety of the equipment's and personnel.

The main circuit wiring schemes

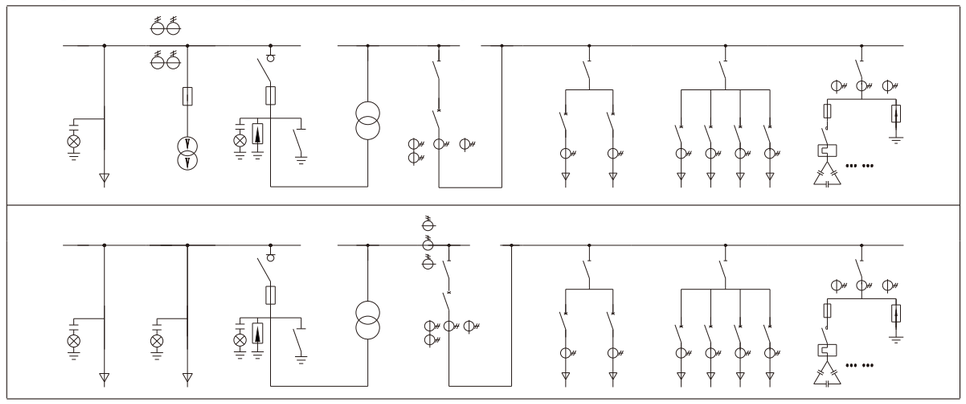
1.Main circuit schemes of high voltage

Plan No							
Single graph							
Use							

2.Main circuit schemes of low voltage

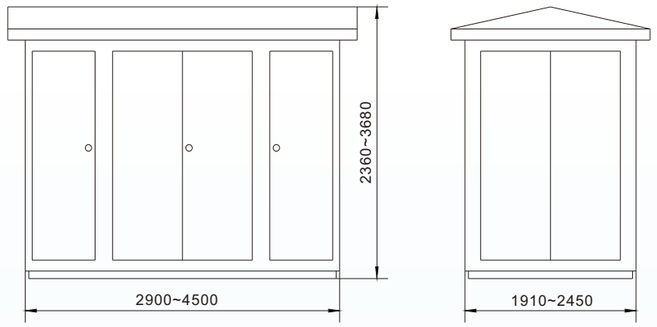
Plan No							
Single graph							
Use							

3.High and low voltage combination of typical scheme

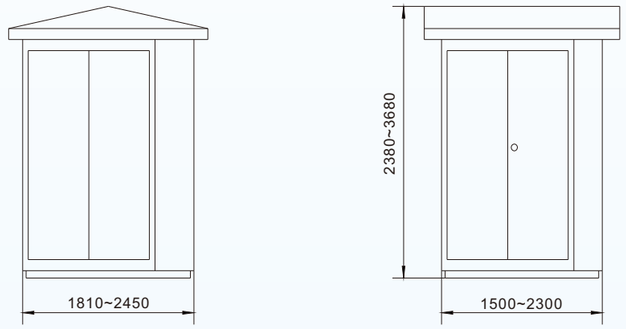


YB□-12 series prefabricated substation (European type box type distribution substation)

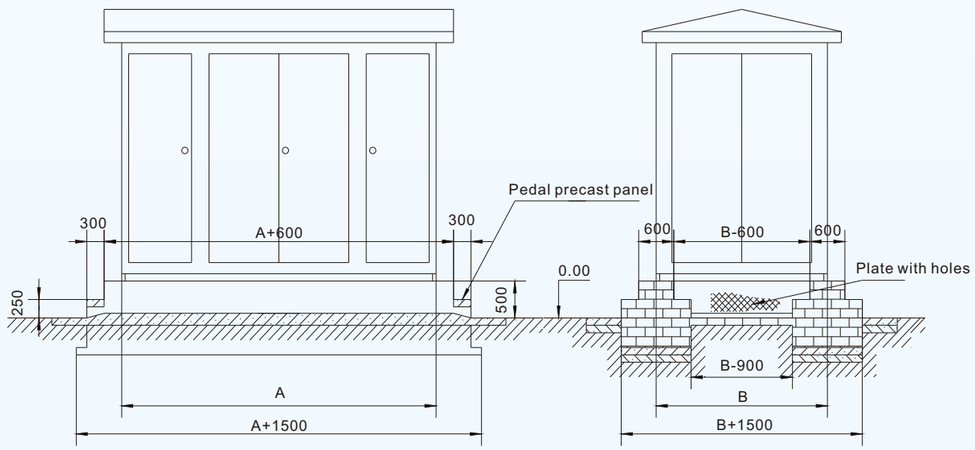
Overall dimension and installation base drawing



YB□-overall drawing ("目 " type permutation)



YB□-overall drawing ("品 " type permutation)



Overall dimension and installation base drawing

Saudi General Electric
YB□-12 series prefabricated substation
(European type box type distribution substation)

YB□-12 series prefabricated substation (European type box type distribution substation)

Using environmental conditions

- Elevation Height: ≤1000m
- Ambient air temperature: -25℃~+40℃
- Earthquake intensity: ≤ 8°
- Outdoor winds: no more than 35m /s
- Installed in without fire and explosion danger, chemical corrosion and serious, excessive vibration.

Note: the above conditions cannot meet the demands, users can negotiate with the factory

Description

- In this foundation pit excavation, need to soil ramming, moisture, loose, debris ramming foundation reinforcement. Foundation construction site in high relief, in case of foundation surrounding water damage.
- Install pier with concrete soil pouring, also can build by laying bricks in its top and wall with 1:25, 20mm thick, cement mortar flour, install pier should be built on the flat reinforced steel plate
- Prefabricated operation step plate is prefabrication reinforced concrete slab
- At least two nearby anchor bolt having grounding in string
- Basic bottom weight is not less than 2000kg /m^2
- The anchor bolt depending on the specific circumstances.
- In Figure A, B, C represent the box type substation's length, width and height of selected scheme, when ordering please to ask the manufacturer.

Order notice

In order should provide the following data:

a) Substation model;

b) Transformer type and capacity,

c) High-voltage chamber, low-voltage chamber wiring schemes and choose type and parameters of electrical components.

d)Shell color;

e) If the customer has other requirements when order, discuss with the factory face to face.

ZGS combined transformer (American box variable)

Summary

ZGS combined transformer (American type box type distribution substation), which is launched the first generation of the localization of American box by our company. This product is used as a cable distribution of an important power unit, set high voltage control and protection substation integrated distribution equipment complete preinstalled products, which are widely used in urban and rural distribution network. This product will high-voltage load switch, high-voltage fuse in transformer tank, together with the transformer body. Adopts the tank all sealing structure, with the oil temperature meter, oil level meter oil, pressure gauge, pressure relief valves, oil out valve to monitoring of transformer components operation conditions. Using interpolation type dry out the fuse, fuse silk does not affect the performance of transformer oil. According to the requirements of the low-pressure feed into the complex degree, reinforced, and the standard products and comprehensive three forms of housing design and users in the selection, unit to more agile and more economic.

Model and meaning

ZGS □－12 / 0.4 - □ / □

- Type: H-- ring net type Z-- terminal type
- Transformer rated capacity (kVA)
- The low-pressure side rated voltage (kV)
- High side rated voltage (kV)
- Design serial number
- Prefabricated substation (American)

ZGS combined transformer (American box variable)

Using environmental conditions

- Elevation Height: ⩽1000m
- Ambient air temperature: -25℃~+40℃
- Earthquake intensity: ⩽ 8°
- Outdoor winds: no more than 35m /s
- Installed in without fire and explosion danger, chemical corrosion and serious, excessive vibration.

Note: the above conditions cannot meet the demands, users can negotiate with the factory

Technical parameters

Load switch parameters

Rated current A	Rated voltage kV	Shock withstand voltage kV	Frequency withstand voltage kV	Thermal stability current kA/s	Dynamic stability current kA/s	Short-circuit making current kA	load Times of operation	Mechanical Times of operation
400	12	75（85）	42（48）	12.5/2	31.5	31.5	100	2000
630	12	75（85）	42（48）	16/4	40	40	100	3000

Note:() for the fracture parameters

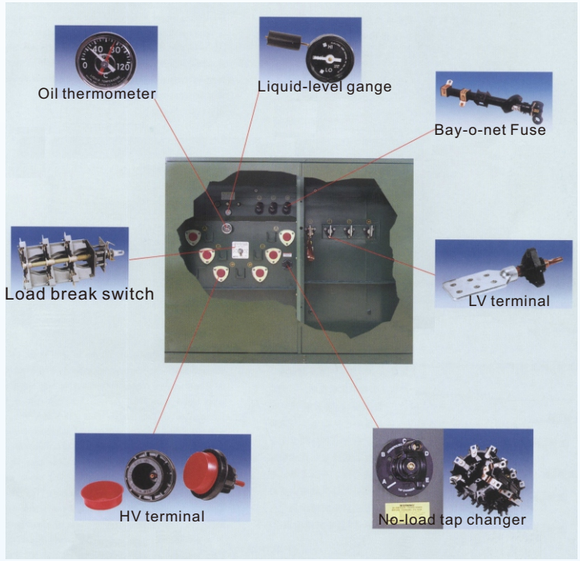
name	unit	Technical Parameters
Rated voltage	kV	10/0.4 (High / low)
Maximum operating voltage	kV	12（High side)
Rated frequency	Hz	50
Rated Capacity	kVA	30-2500
1-minute power frequency withstand voltage	kV	35
Lightning impulse voltage	kV	75
cooling method	12	ONAN
High-voltage fuse breaking current reserve	kA	50
Plug-in fuse breaking current	kA	2.5
Ambient temperature	℃	-35 ~ +40
Coil allowable temperature rise	℃	65
No-load voltage regulation	---	±5% ±2×2.5%
Noise Level	db	50
Protection class	---	IP43

ZGS combined transformer (American box variable)

Structure characteristics

- Compact structure, small volume, only with capacity for domestic parts in Europe box type substation 1/3~1/5, greatly reduce the area.
- All seal, all insulation structure, and no insulation distance, reliable to protect personal safety.
- High-voltage cables, which can be used to ring network and can be used for measuring device can be mounted to the terminal, power supply is flexible, and high reliability.
- Transformer performance excellence: low loss, low noise, low temperature rise; overload ability is strong, anti-short circuit, strong shock resistant capability.
- To satisfy various demands of low voltage switch, can choose according to plan and design by them self.
- Protection grade IP33

Structural drawing



Order notice

Users should provide the following information such as order

a) Transformer models and capacity;

b) The high and low voltage circuit wiring diagrams;

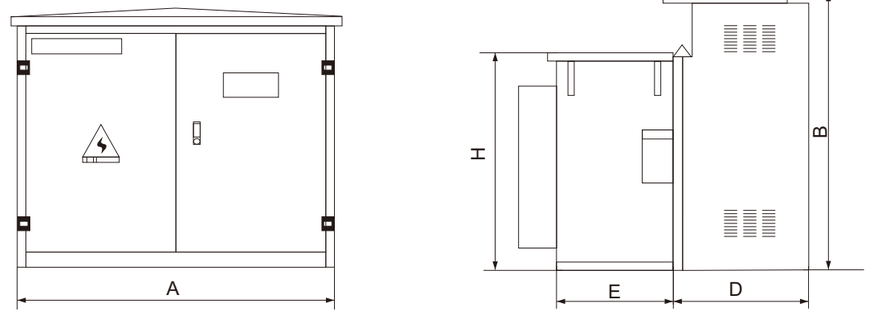
c) Have special requirements of circuit component model and parameter;

d) Shell color: no special requirements, determined by the manufacturer;

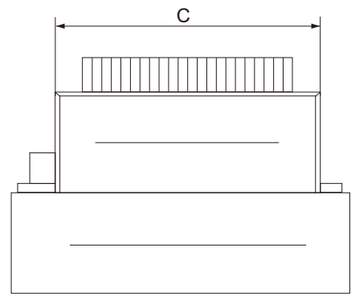
e) Spare parts, the name, quantity and other requirements.

ZGS combined transformer (American box variable)

Profile dimension and installation foundation drawings

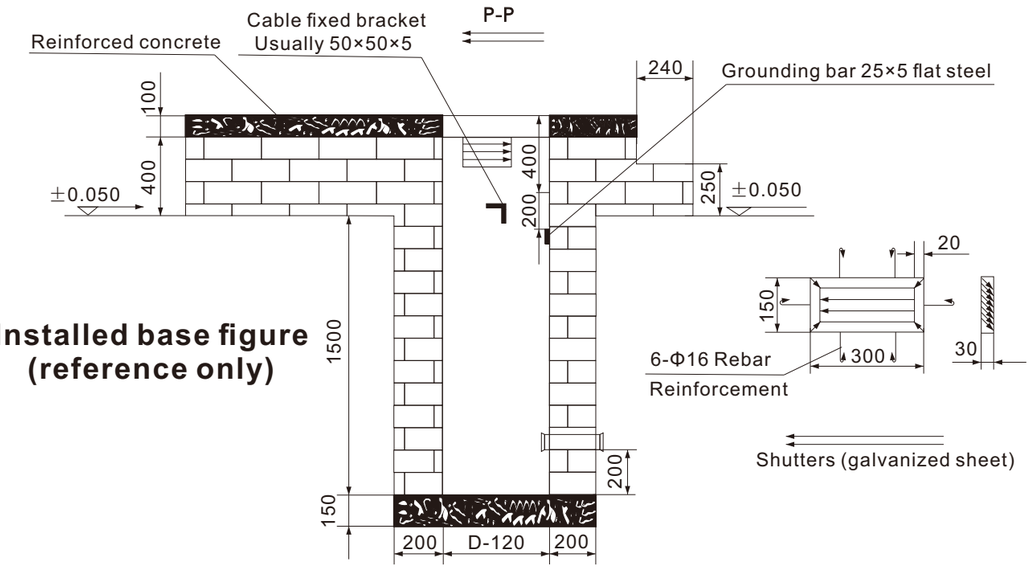


Overall dimension drawing (reference only)

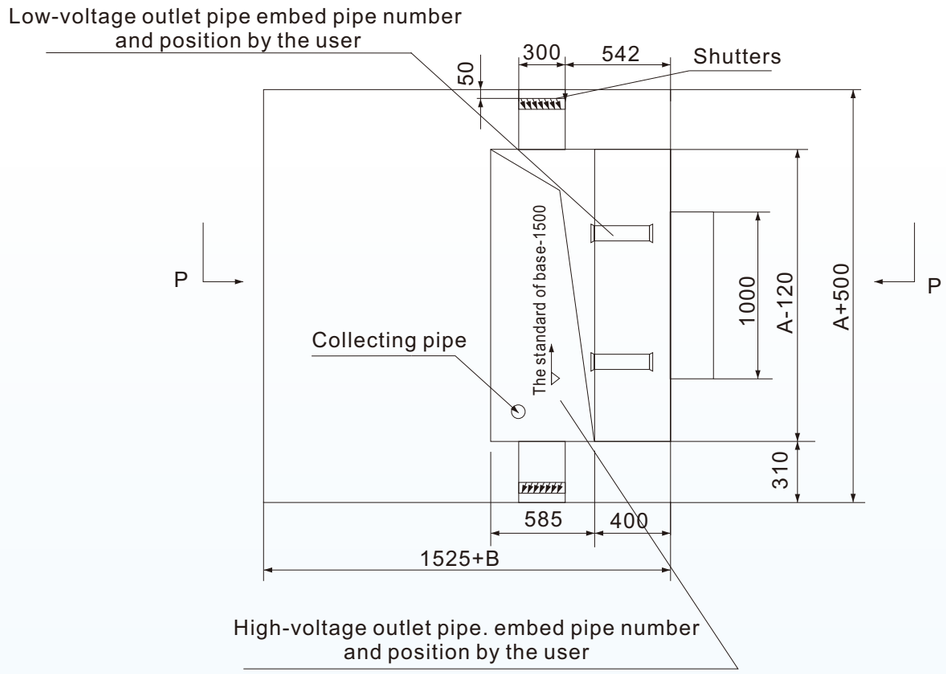


Standard overall dimension					
Capacity (kVA)	30~250	315~400	500~630	800~1250	1600~2500
A	1840	1840	1840	2000	2200
B	1780	1780	1780	1780	1780
C	1250	1450	1550	1700	2000
D	705	705	705	705	705
E	555	555	625	765	855
H	1400	1500	1500	1500	1550

Installed base figure (reference only)

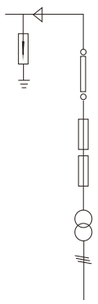
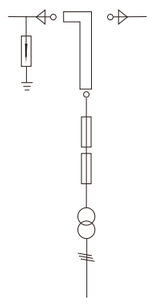
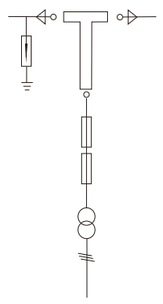
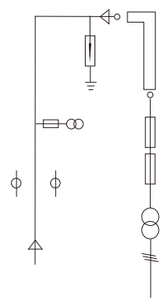


ZGS combined transformer (American box variable)



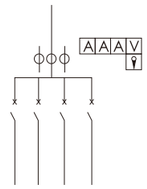
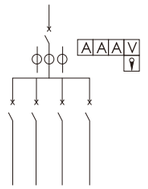
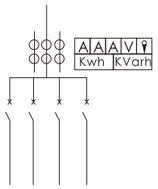
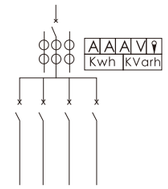
Main circuit scheme drawings

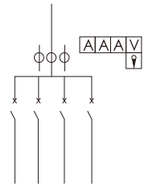
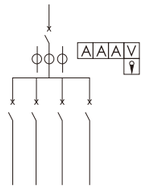
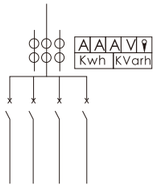
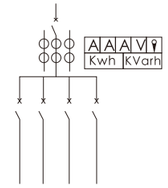
A high-voltage primary scheme

No.	I	II	III	IV
System schemes	 Terminal power supply	 Double power supply	 Ring network double power supply	 High-voltage measurement schemes
FYN-12 High-voltage load switch	315A~630A	315A~630A	315A~630A	315A~630A

ZGS combined transformer (American box variable)

Low voltage main wiring schemes

Type	Plan 1	Plan 2	Plan 3	Plan 4
The main electrical wiring				
Components	Branch switch 100A~630A	Main switch 630A~1600A Branch switch 100A~630A	Branch switch 100A~630A	Main switch 630A~1600A Branch switch 100A~630A

Type	Plan 5	Plan 6	Plan 7	Plan 8
The main electrical wiring				
Components	Branch switch 100A~630A Compensation capacity 30kVar~300kVar	Main switch 630A~1250A Branch switch 100A~630A Compensation capacity 30kVar~300kVar	Branch switch 100A~630A Compensation capacity 30kVar~300kVar	Main switch 630A~1250A Branch switch 100A~630A Compensation capacity 30kVar~300kVar

Order notice

a) Product model
b) High voltage rated voltage (kV) voltage regulating progression and percentage
c) Low voltage rated voltage (kV)
d) Impedance voltage percentage (%)
e) Link group label
f) Cooling method
g) Special requirements (such as water temperature, altitude, photograph, frequency, on-load tap-changer insulation level, with car),

DFW-12kV European cable distribution boxes

Product overview

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

Model and meaning

DFW □ – □ □

- A lightning arrester for the band with no default
- The number of loops (a total phase into the outlet)
- Voltage level
- Cable distribution boxes

Conditions of Use

- Ambient temperature: -30℃～+40℃;
- Winds: Pretty 34m/s (not more than 700Pa);
- Relative humidity: daily average relative humidity less than 95%, the monthly average relative humidity less than 95%;
- Earthquake: horizontal acceleration is not greater than 0.4m/s2, the vertical acceleration is not greater than 0.15m/s2 installation site gradient: less than 3°;
- Surroundings: the ambient air pollution is not obvious corrosive, flammable gas, vapor, etc., the installation site without severe vibration.

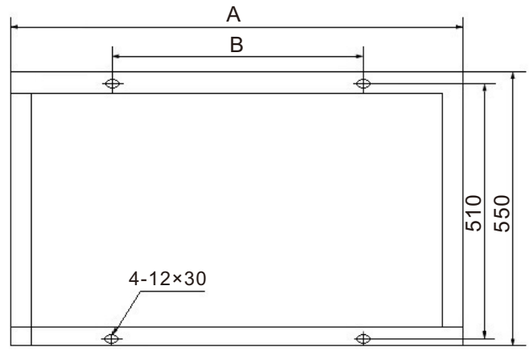
Note: The order of this product outside the above specified conditions, please consult with the company.

DFW-12kV European cable distribution boxes

The main technical parameters

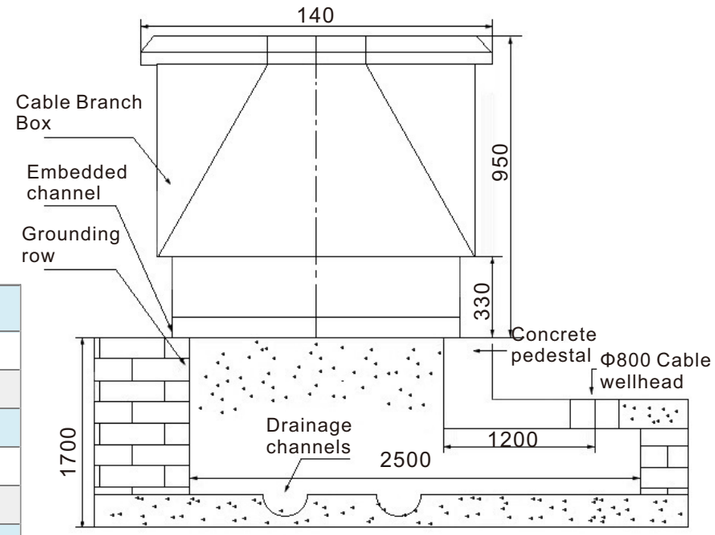
No	Name	Parameter
1	Rated voltage	12kV
2	Rated current	630A
3	Dynamic stability current	50kA/0.3s
4	Thermal stability current	20kA/3s
5	1min power frequency withstand voltage	42kV
6	15 minutes DC voltage	52kV
7	Lightning impulse withstand voltage	105kV
8	Case protection class	IP33

European cable distribution boxes foundation plans



Ground mounting dimensions

distribution box	A	B
2	540	340
3	540	340
4	740	540
5	840	640
6	940	740
7	1040	840



Foundation plans

KYN61-40.5 Armored remove AC metal-enclosed switchgear

Product overview

KYN61-40,5(Z) type armored remove AC metal-enclosed switchgear (hereinafter referred to as "switching equipment") which applies to three-phase AC 50Hz power system for power plants, substations and industrial and mining enterprises distribution room acceptance and distribution of electric energy use, and circuit implementation of control, protection and monitoring.

This product meets the standards: IEC 62271-1" High-voltage switchgear and control gear - Part 1: Common specifications for alternating current switchgear and control gear", IEC 60298" A. C. metal-enclosed switchgear and control gear for rated voltages above 1kV and up to and including 52kV".

Model and meaning

K Y N 61 - 40.5 - □ / □ - □

- Rated short-circuit breaking current (kA)
- Rated current
- Z sulfur hexafluoride SF6 vacuum circuit breaker types
- Rated voltage (kV)
- Design No
- Indoor
- Removable
- Metal sheathed

KYN61-40.5 Armored remove AC metal-enclosed switchgear

Conditions of Use

- Ambient temperature:-10℃～+40℃;
- Altitude: ≤1000m;
- Relative Humidity: daily average ≤95%, the monthly average of ≤90%;
- Surroundings: does not apply to corrosion, severe contamination, flammable gases and violent vibration;
- Earthquake intensity: not exceed 8degrees;
- Note: The order of this product outside the above specified conditions, please consult with the company.

Functions and Features

The switchgear structure is designed in accordance with the requirements of the armored metal-enclosed switchgear in the IEC60298 standards, the overall cabinet and can be extracted from the portion (handcart) two graded composition. Cabinet structure is assembled with bolted combination molding; metal separator separates the circuit breaker switch inside the cabinet room, the main bus room, cable roam and relay instrument room. Shell protection grade IP 3X, among compartment protection class IP 2X, and reliable grounding all metal structures, between the main circuit compartment exhaust system with separate pressure release channel.

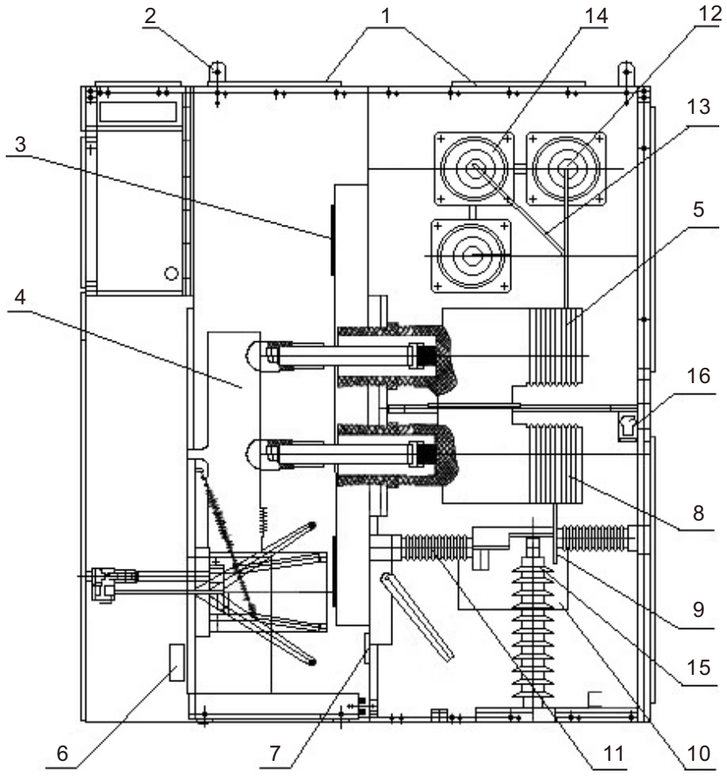
Withdrawals handcart according to the purpose can be divided into: Circuit breaker handcart, voltage transformer handcart, metrology handcart, isolating handcart and so on, ail kinds of handcarts same dimensions, the same purpose trolley with good interchangeability; Handcart in the cabinet there is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

The main technical parameters

Project		Unit	Parameter
Rated voltage		kV	40.5
Rated insulation level	Lightning impulse withstand voltage (full wave)	kV	185
	Power frequency withstand voltage (1min)	kV	95
Rated frequency		Hz	50
Rated current		A	630; 1250; 1600; 2000
Rated short circuit breakir	Power frequency withstand voltage (1min)	kV	20、25、31.5
Rated short-circuit current (peak)		kV	50、63、80
Rated dynamic current (peak)		kV	50、63、80
4s Thermal current(rms)		kV	20、25、31.5
Enclosure rating	Vacuum circuit breaker cabinet	mm	IP4X
Dimensions(L × W ×H)	SF6 crowbar cabinet	mm	1400×2200×2600

Equipment Chart

A.instrument room
B.circuit breaker room
C.bus room
D.cable room
E.a small bus rooms
1.the pressure-release plate
2.rings
3.the shutter
4.circuit breakers
5.contact box
6.the second plug
7.heating means
8.the current transformer
9.cable
10.an insulating spacer
11.grounding switch
12.the main bus
13.branch busbar
14.bus bushing
15.arrester
16.lights



Switchgear structure diagram

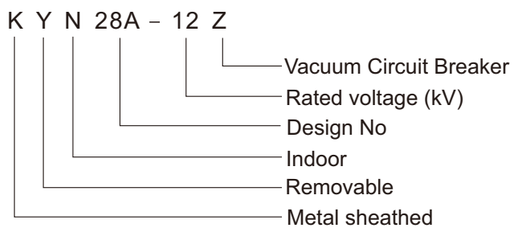
KYN28A-12 Armored remove AC metal-enclosed switchgear

Product overview

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

This product meets the standards: IEC 62271-1" High-voltage switchgear and controlgear - Part 1: Common specifications for alternating current switchgear and controlgear", IEC60298" A.C.metal-enclosed switchgear and controlgear for rated voltages above 1kV and up to and including 52kV".

Model and meaning



KYN28A-12 Armored remove AC metal-enclosed switchgear

Conditions of Use

- Ambient temperature:-10℃～+40℃;
- Relative humidity: daily average relative
- Humidity: ≤95%,daily average vapor pressure not exceeding 2.2kPa; monthly mean relative humidity ≤90%; the average monthly water vapor pressure not exceeding 1.8kPa:
- Altitude: ≤1000m;
- Seismic intensity: no more than 8;
- Surroundings: air should not be obviously polluted corrosive or flammable gases, water vapor, no severe vibration place

Note: The order of this product outside the above specified conditions, please consult with the company.

The main technical parameters

Project		Unit	Data
Rated voltage		kV	3.6, 7.2, 12
Rated frequency		Hz	50
Breaker rating		A	630, 1250, 1600, 2000, 2500, 3150
Switchgear rated current		A	630, 1250, 1600, 2000, 2500, 3150
Rated short time withstand current (4S)		kA	20, 25, 31.5, 40
Rated peak withstand current (peak)		kA	50, 63, 80 ,100
Rated short circuit breaking current		kA	20, 25, 31.5, 40
Rated short-circuit current (peak)		kA	50, 63, 80, 100
Rated insulation level 1min Power frequency withstand voltage	Pole, the pole on the ground between	kV	24, 32, 42
	Fracture between	kV	24, 32, 42
Lightning impulse withstand voltage (peak)	Pole, the pole on the ground between	kV	40, 60, 75
	Fracture between	kV	40, 70, 85
Protection class			Shell IP4X, among compartment, When the circuit breaker compartment door open for the IP2X

Functions and Features

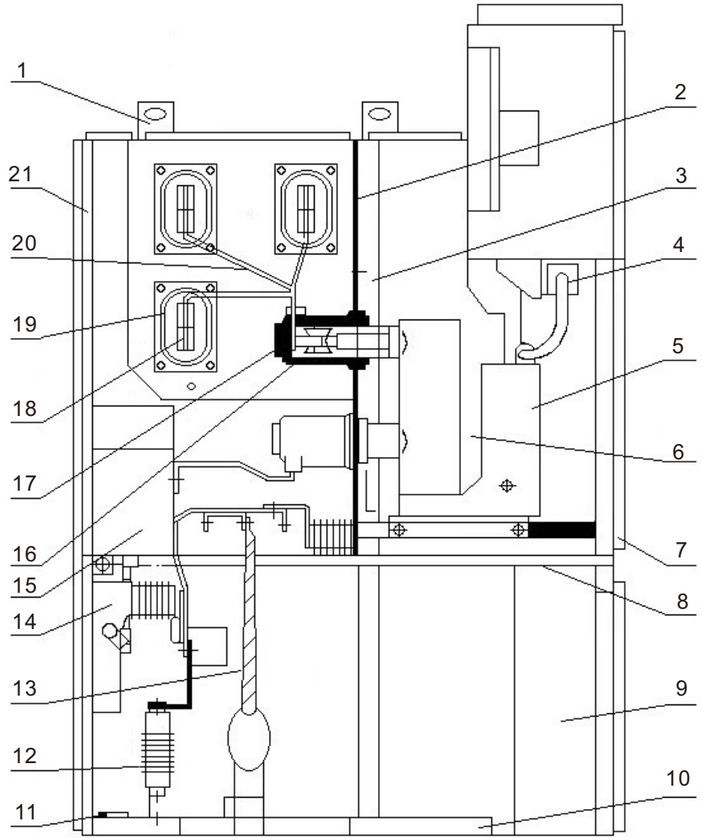
The switchgear structure is shown in the figure below. Full Metal modular assembly structure, enclosure with anti-corrosion ability of imported aluminum zinc plate manufacture, without surface treatment, the high-precision CNC machining equipment, using advanced multi-fold process, connecting rivet nuts, high-strength bolt connection, high precision, light weight, high strength.

Switching equipment can be equipped with the Company's production of VS1 series; VS4 series; ZN65 series of vacuum circuit breakers, wide adaptability, strong interchangeability. Used with a working position, test position, each position has to locate and display device, safe and reliable.

Cable compartment can hold up to nine single-core cables, the device has a reliable mechanical and electrical interlock device, fully meet the "Five Anti" requirements. Each room has a relief channel, ensure operational safety.

Equipment Chart

1.Bus room
2.Circuit breaker room
3.Cable compartment
4.Meter relay
1.The pressure relief device
2.Removable baffle
3.The separator(valve)
4.The second plug
5.The circuit breaker
6.The heating means
7.Withdrawable horizontal partition
8.Earthling switch operating mechanism
9.The control wire groove
10.The bottom plate
11.The ground bus
12.Arrester
13.Cable
14.Grounding switch
15.Current transformer
16.Contact box
17.Static contact means
18.The main bus
19.Bus bushing
20.Branch bus



Switchgear structure diagram

HXGN□-12 Box-type fixed AC metal-enclosed switchgear

Product overview

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

The RMU comply with IEC 60298” A. C. metal-enclosed switchgear and controlgear for rated voltages above 1kV and up to and including 52kV”, the relevant provisions of IEC 60420” High-voltage alternating current switch-fuse combinations”.

Model and meaning

H X G N □ 12 □ R □

- Rated current (A)
- Fuses
- F: SF6 Load switch Z: vacuum load switch
  None: The compressor load switch
- Rated voltage
- Design No
- Indoor
- Fixed
- Box-type structure
- Ring Main Units

HXGN□-12 Box-type fixed AC metal-enclosed switchgear

Conditions of Use

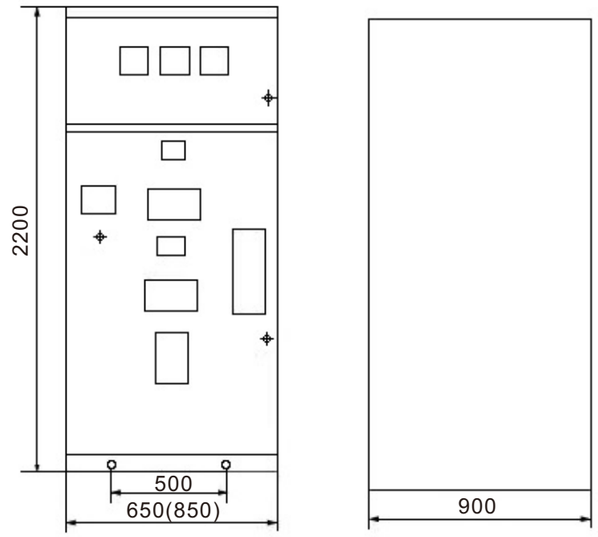
- Ambient temperature:-15℃～+40℃;
- Altitude: ≤1000m;
- Humidity: daily average of not more than 95%, the daily average water vapor pressure does not exceed 2.2kPa; on average less than 90%, water vapor pressure on average less than 1.8 kPa;
- Seismic intensity: no more than 8;
- No significant contamination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

The main technical parameters

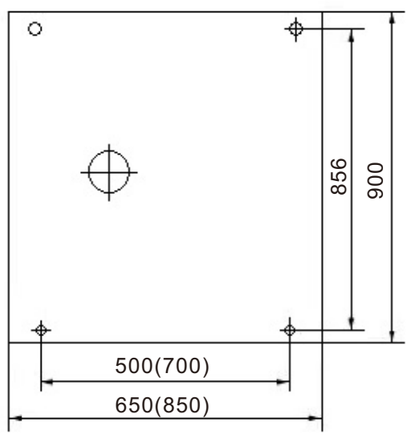
No	Project		Unit	FN12-10	FZN25-12
1	Rated voltage		kV	12	
2	1min Power frequency withstand voltage		kV	On the ground and white 42; isolated fracture	
3	Lightning impulse voltage(peak)		kV	On the ground and white 75; isolated fracture	
4	Rated frequency		Hz	50	
5	Main busbar rated current		A	630	
6	Load switch	Rated current	Secondary	630	
7		Electrical life at rated current	kVA	Not less than 100	
8		Breaking load transformer capacity	kVA/s	1250	
9		Rated thermal current	kA	20/4 20/2 grounding switch	
10		Rated dynamic current (peak)	kA	50	
11		Rated short-circuit current(peak)	kA	50	
12		Fuse rated current	kA	100	
13		Rated transfer current	kA	1500	2000
14		Rated short circuit breaking current	kA	315	
15		Models equipped with fuses		S□LAJ - 12(XRNT□ -10)	
16	Mechanical life		Secondary	2000	1000
17	1min power frequency voltage auxiliary circu		kV	2	
18	Electric actuator operating voltage		V	（DC）220；110	
19	Protection class			IP2X	
20	Dimensions (width×depth×height)		mm	650(850)×900×2000(2200)	

HXGN□-12 Box-type fixed AC metal-enclosed switchgear

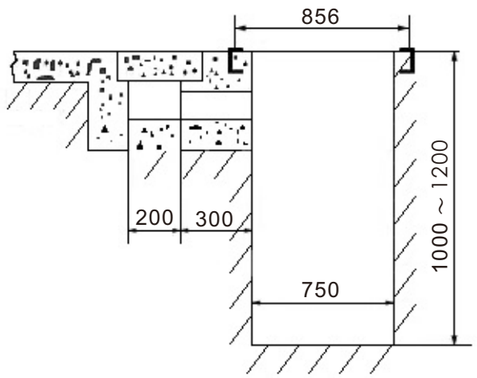
Mounting dimensions(mm)



Dimensions



Mounting dimensions(mm)



Foundation construction plans)

HXGN15-12(SF6) Unit AC metal-enclosed ring network switching equipment

Product overview

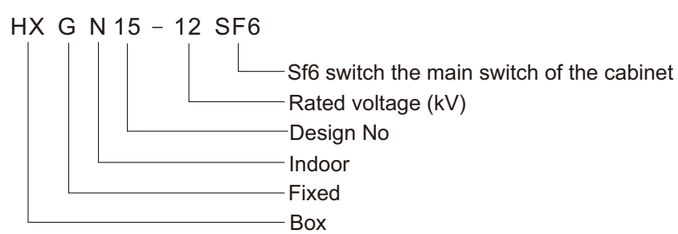
HXGN15-12 (SF6) type unit AC metal-enclosed ring network switching equipment (hereinafter referred to as RMU) is our next-generation introduction of foreign advanced technology and in accordance with the requirements of domestic and rural power network reform of and to design, successfully developed high-voltage electrical products, The technical performance indicators full IEC62271-200:2003 and IEC60298 standards

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

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

HXGN15-12 (SF6) type unit AC metal-enclosed ring network switching equipment, for AC 50Hz, 12kV power network, as the acceptance and distribution of electric energy use. SF6 switch the main switch of the cabinet.

Model and meaning



HXGN15-12(SF6) Unit AC metal-enclosed ring network switching equipment

Conditions of Use

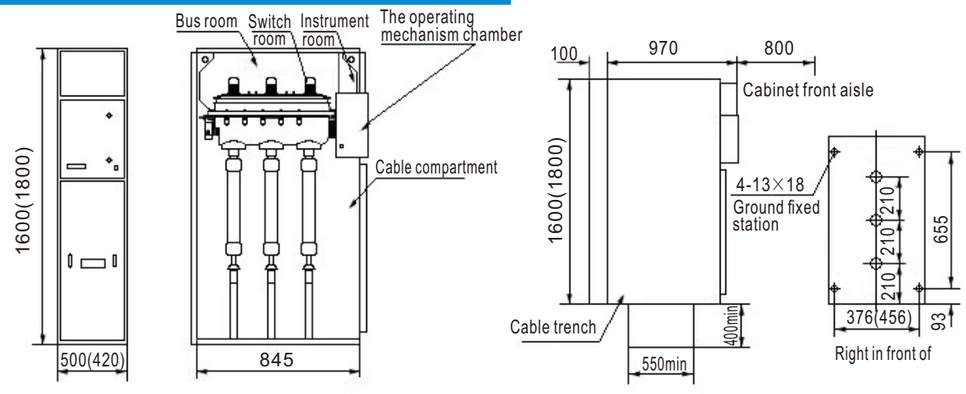
- Ambient temperature: -25℃～+40℃;
- Altitude: not exceed 2000m;
- Relative humidity: daily average of not more than 95%; on average less than 90%;
- Surroundings: ambient air from corrosive gas or flammable gases significant pollution, water vapor and the like; no recurrent severe vibration.

Note: Out of the above normal conditions of use, the user can consult with the company.

The main technical parameters

No	Name	Unit	Data
1	ted voltage	kV	12
2	Rated frequency	Hz	50
3	Main busbar rated current / fuse maximum rated current	A	630, 125
4	The main circuit, grounding circuit rated short time withstand current	kA/s	20, 3
5	The main circuit, grounding circuit rated peak withstand current	kA	50
6	The main circuit, grounding circuit rated short-circuit current	kA	50
7	Full capacity load switch breaking number	Secondary	100
8	Fuse breaking current	kA	31.5, 40
9	Rated closed loop breaking current	A	630
10	Rated transfer current	A	1600
11	Mechanical life	Secondary	2000
12	1 min power frequency withstand voltage (peak)relative, on the /isolation fracture	kV	42, 48
13	Lightning impulse withstand voltage(peak) phase, on the groun /isolation fracture	kV	75, 85
14	Secondary circuit 1min power frequency withstand voltage	kV	2
15	Protection class		IP3X

Overall and installation dimensions (mm)



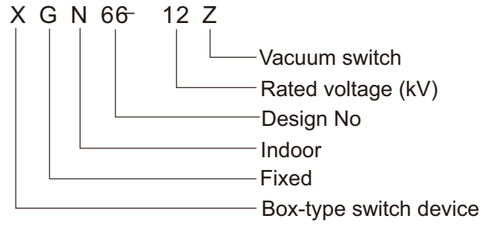
XGN66–12(Z) Fixed-enclosed switchgear

Product overview

XGN66-12(Z) type fixed enclosed switchgear (hereinafter referred to as Switchgear) is our next-generation suite of high-voltage electrical products, this product can meet the requirements of the international standard IEC60298 " A. C. metal-enclosed switchgear and controlgear for rated voltages above 1kV and up to and including 52kV ".

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

Model and meaning



XGN66–12(Z) Fixed-enclosed switchgear

Conditions of Use

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

Note: Out of the above normal conditions of use, the user can consult with the company.

Structural features

- Angle steel welded cabinet made of high quality; Circuit breaker compartment located in the cabinet (lower) portion, installation, commissioning and easy maintenance. Standard equipped with VS1 breaker, and a pressure release channel, to ensure personal safety;
- The use of advanced and reliable rotary isolation switch, circuit breaker can safely enter the room at the main bus overhaul charged;
- The protection level of the whole cabinet is IP2X;
- It offers reliable full-featured mandatory mechanical locking device, simple and effective to achieve the “Five Anti” requirements;
- Reliable grounding system;
- Equipped with observation windows on the door, it can be clearly observed operating state cabinet member;
- The operating mechanism locking using the same cabinet with the JSXGN XGN2-12 latching mechanism is simple and reliable and convenient and practical;
- Inlet and outlet cables below the front portion of the cabinet for easy user access.

The main technical parameters

No	Roject	Unit	Technical Parameters
1	Rated voltage	kV	3.6, 7.2, 12
2	Rated Power frequency withstand voltage	kV	On the ground; white; 42; Fracture
3	Rated lightning impulse withstand voltage	kV	On the ground; white; 75; Fracture
4	Rated frequency	Hz	50
5	Rated current	A	630, 1250
6	Rated short circuit breaking current (rms)	kA	20, 25, 31.5
7	Rated short-circuit current (peak)	kA	50, 63, 80
8	Rated dynamic current (peak)	kA	50, 63, 80
9	Rated thermal stability current 4s (RMS)	kA	20, 25, 31.5
10	Protection class		IP2X
11	Dimensions (width × depth x height)	mm	900×1000×2300
12	Weight	kg	≈600

XGN66–12(Z) Fixed-enclosed switchgear

Structural features

1.Doors
2.Lighting
3.Observation window
4.The operating mechanism
5.A small door
6.Instrument door
7.Brow
8.Bus wall hushing
9.Bolts
10.Washers
11.Washers
12.Nut
13.Isolation switch
14.Trolley
15.After closing plate
16.Current transformer
17.The vacuum circuit breaker
18.Isolation switch
19.The sensor
20.Bolts
21.Washers
22.Washers
23.Skeleton
24.Arrester

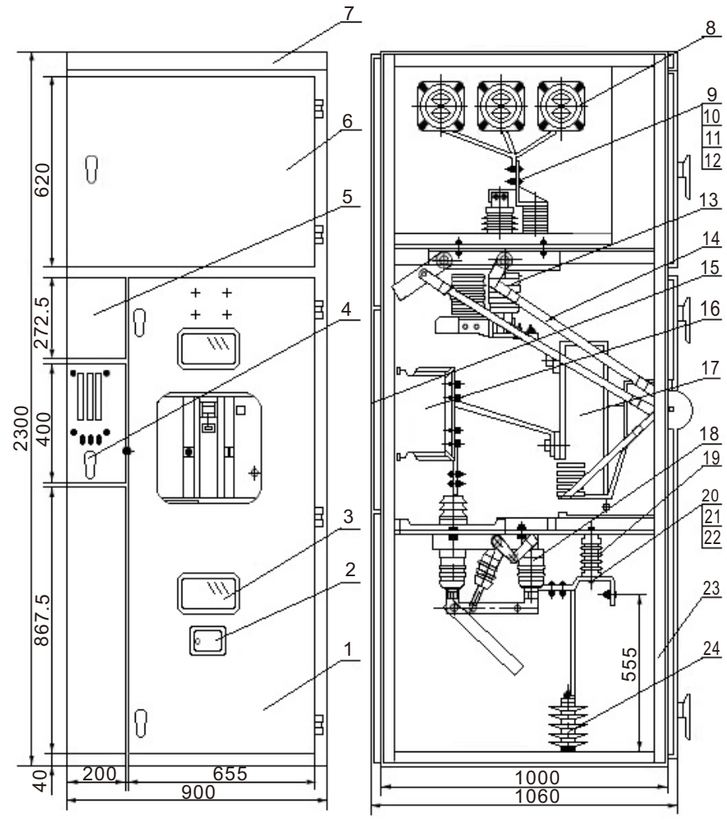


Figure 1: Schematic layout switchgear

XGN□-12 Intelligent solid insulation cabinet

Product overview

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

XGN □-12 RMU based on our proven vacuum interrupter design, no maintenance, 10,000 operating life.

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

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

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

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

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

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

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

XGN□-12 Intelligent solid insulation cabinet

Model and meaning

X G N □ - 12 □ □

- Rated short-circuit breaking current (KA)
- Rated Current (A)
- Rated voltage (KV)
- Design No.
- Indoor equipment
- Fixed
- Solid insulation

Conditions of Use

- Altitude: not exceed 1000m;
- Ambient temperature: -25℃~-40℃.24-hour average temperature does not exceed+35℃;
- Horizontal inclination of not more than 3°;
- Earthquake intensity: not more than 8;
- Installation place: no severe vibration and shock and explosion dangerous.
- Note: Out of the above normal conditions of use, the user can consult with the company.

Product advantage

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

The main technical parameters

Project	Unit	Parameter
conventional		
Rated voltage	kV	12
Rated frequency	Hz	50
Power Frequency Pressure	kV/min	42/48
Lightning impulse voltage	kV	75/85
Arc duration	s	≥0.5
(Except metering cabinet) once part Protection class		IP67
Cabinet protection grade		IP4X
Inter compartment protection class		IP2X
Operating Supply Voltage		DC24, 48, 110, 220, AC1

Bus system	Unit	Parameter
Rated current	A	360/1250
Rated short time withstand current	kA/S	20/4 (25/4)
Rated peak withstand current	kA	50 (63)

Load switch unit	Unit	Parameter
Rated current	A	630
Rated short-circuit current	kA	50
Rated short time withstand current	kA/S	20/4
Load switch mechanical life	Secondary	M2 10000
Load switch Electrical life	Secondary	E3

GGJ Intelligent low voltage reactive compensation devices

Product overview

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

This product complies with: IEC60439 "Low-voltage switchgear and controlgear assemblies" and other standards.

Model and meaning

GGJ − □ − □ / □ □

- Wiring: D angular wiring, Y star connection
- Voltage rating: 230V, 400V
- Compensation capacity: kvar
- Compensation convenience:
  1 dynamic compensation, routine can be omitted
- Compensation cabinet

GGJ Intelligent low voltage reactive compensation devices

Conditions of Use

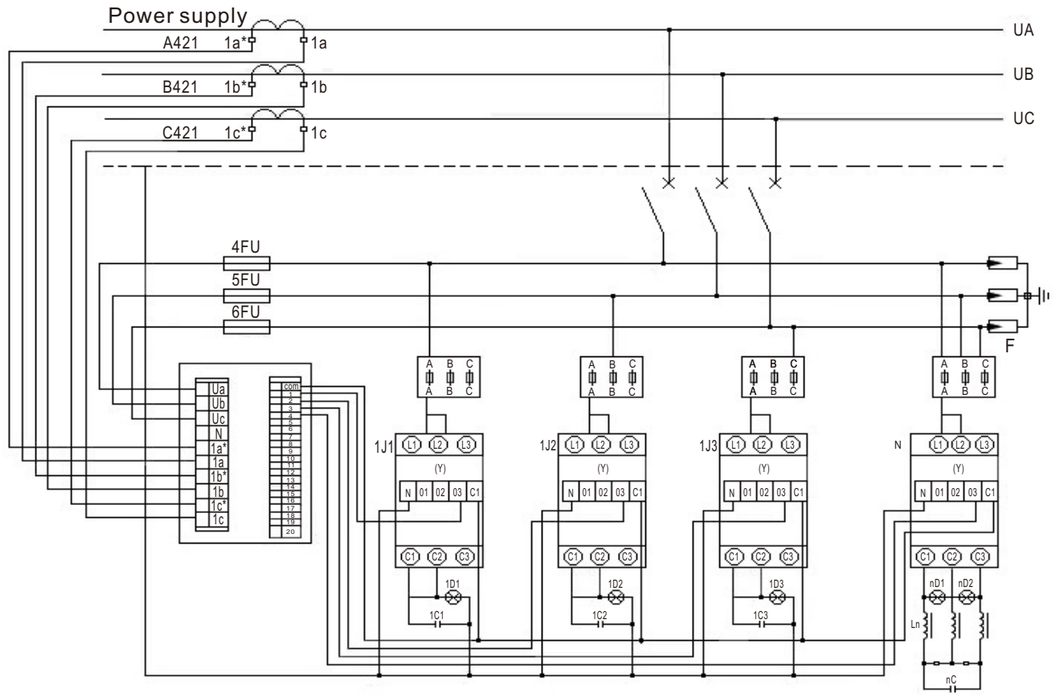
- Ambient temperature: -5℃～+40℃;
- Relative humidity: less than 90% (20℃);
- Altitude: not exceed 2000m;
- Surroundings: the surrounding medium without the risk of explosion, not enough to corrode metal and damage the gas, no conductive dust, vibration should not be strenuous to install, no rain and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

Note: Out of the above normal conditions of use, the user can consult with the company.

Product features

- Strong general performance, The compensation cabinet at home and abroad with a variety of any combination, such as MNS, GCK, GGD, etc;
- Diverse and flexible compensation capacitor combination, having a Y-type compensation. A-type compensation, Y+A combination of compensation;
- Communication diversity, With RS-232/485 communication interface, GPRS wireless module or modules to implement long-distance communication;
- Safe and accurate control, the implementation of zero voltage trigger, no inrush current into zero removed, no high pressure breaking:
- The service life is long, and the service life is more than 100,000 hours without maintenance.

Examples principle device system



GGD Low-voltage switchgear

Product overview

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

GGD Low-voltage switchgear is a new type of low-voltage distribution cabinet designed according to the principle of safety, economy, rationality and reliability, The product has the characteristics of high breaking ability, good dynamic and thermal stability, flexible electrical scheme, convenient combination, series, strong practicability, novel structure, high protection level, etc. It can be used as a replacement product for low-voltage switchgear.

GGD Low-voltage switchgear line with IEC 439 " Low - voltage switchgear and control equipment".

Model and meaning

G G D □ – □ □

- Auxiliary circuit program code
- Main circuit program code
- Design No.: Breaking capacity of 15kA breaking capacity of 30kA capacity of 50kA
- Power with cabinet
- Electrical components fixed installation, fixed wiring
- Low-voltage distribution cabinet

GGD Low-voltage switchgear

Conditions of Use

- Altitude: not exceed 2000m;
- Ambient temperature: -5℃～+40℃,the average temperature within 24h shall not exceed+35℃;
- Relative humidity: The maximum temperature is +40℃ not more than 50%, should be permitted at lower temperatures greater relative temperature (for example+20 when 90%) taking into account changes in temperature may occasionally produce condensate Lu impact;
- Equipment installation and the vertical gradient of not more than 5°;
- Equipment should be installed in the absence of severe vibration and impact areas, and enough to make electrical components from corrosion sites;

When users have special requirements can be resolved through consultation with the manufacturer.

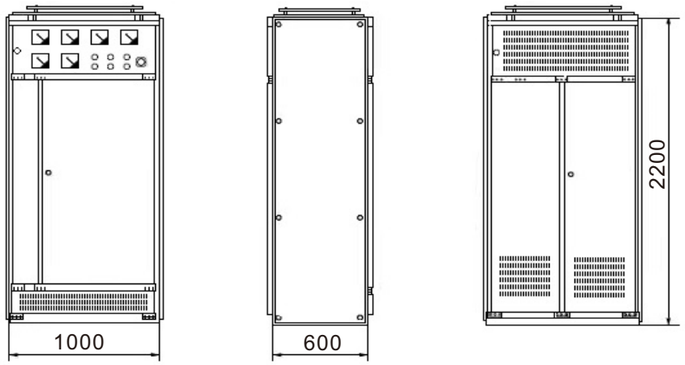
The main technical parameters

Model	Rated voltage(V)	Rated current(A)		Rated short Breaking current (kA)	Rated short time withstand current(1s)(kA)	Rated peak withstand current(kA
GGD1	350	A	1000	15	15	30
GGD1	380	B	600(630)	15	15	30
GGD1	380	C	400	15	15	30
GGD2	380	A	1500(1600)	30	30	63
GGD2	380	B	1000	30	30	63
GGD2	380	C	600	30	30	63
GGD3	380	A	3150	50	50	105
GGD3	380	B	2500	50	50	105
GGD3	380	C	2000	50	50	105

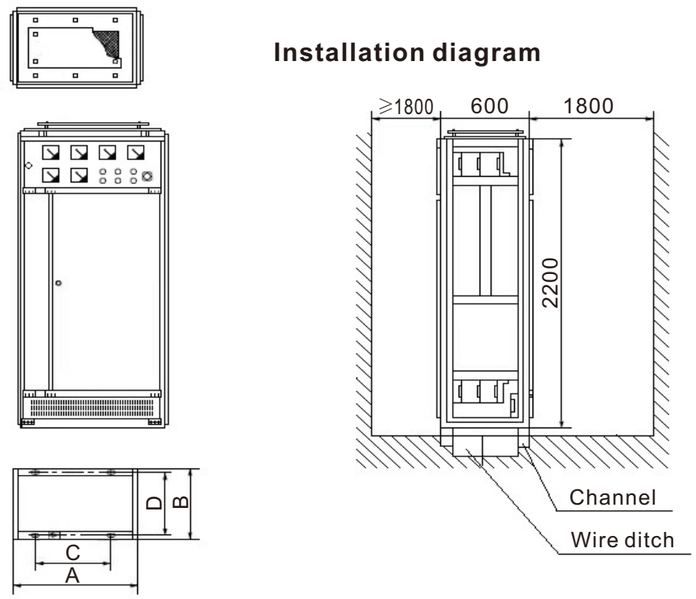
GGD Low-voltage switchgear

Shape and size (mm)

Schematic outline



Installation diagram



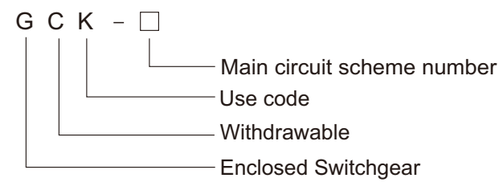
product code	A(mm)	B(mm)	C(mm)	D(mm)	D(mim)
GGD06	600	600	450	556	556
GGD06A	600	800	450	756	756
GGD08	800	600	650	556	556
GGD08A	800	800	650	756	756
GGD10	1000	600	850	556	556
GGD10A	1000	800	850	756	756
GGD12	1200	800	1050	756	756

GCK Low-voltage withdrawable switchgear

Product overview

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

Model and meaning



GCK Low-voltage withdrawable switchgear

Conditions of Use

- Altitude: not exceed 2000m;
- Ambient temperature: not higher than +40℃, and the average temperature within 24h not higher than +35℃, the ambient air temperature is not lower than -50℃;
- Atmospheric conditions: air cleaner, the relative humidity at a temperature of +40℃ not more than 50%, at a lower temperature allows a higher relative humidity, such as columns:+20 ℃ at 90%;
- Installation place: no fire, explosion, serious pollution, chemical corrosion and violent vibration of the place;
- And the vertical tilt does not exceed 5°;
- This product is suitable for the following temperature transport and storage: -25℃～+55℃, in a short time (less than 24h)does not exceed + 70℃.

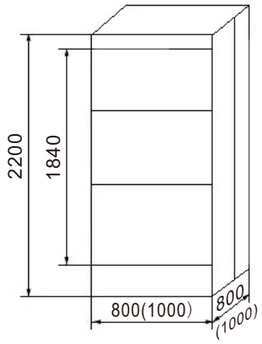
If the above conditions of use cannot be met, by the user to the manufacturer side when ordering consultation.

The main technical parameters

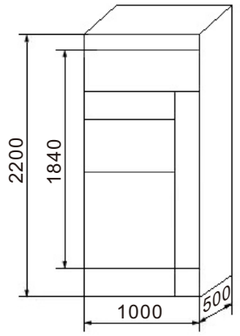
Rated frequency		50
Rated operating voltage (V)		380;660
Rated insulation voltage (V)		660
Rated operating current (A)	The level of bus	630~3150
	Vertical Bus	600
Rated short time withstand current	The level of bus	80kA(Effective value) /1s
	Vertical Bus	50kA(Effective value) /1s
Rated peak withstand current	The level of bus	176kA/0.1s
	Vertical Bus	110kA/0.1s
Main circuit connector (A)		200;400
Auxiliary circuit connector (A)		10
1 minute power frequency withstand voltage(V)		2500
Protection class		IP40
Operation		Locally, remote, automatic

GCK Low-voltage withdrawable switchgear

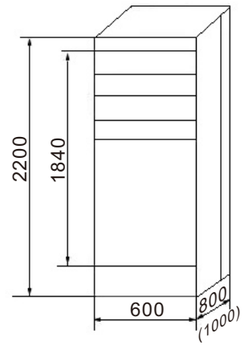
Shape and size (mm)

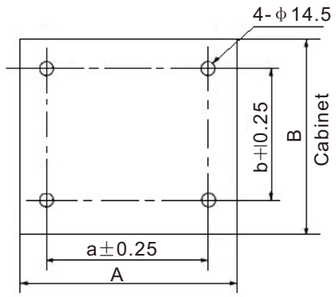


PC cabinet Dimensions



Wall installation of MCC cabinet Dimensions





MCC cabinet away from the wall mounted Dimensions

Cabinet width (A)	Cabinet depth (B)	Installation pitch (a)	Installation pitch (a)
800	500	685	385
600	800	485	685
600	1000	485	885
800	800	685	685
800	1000	685	885
1000	800	885	685
1000	1000	885	885

product code	A(mm)	B(mm)	C(mm)	D(mm)
GGD06	600	600	450	556
GGD06A	600	800	450	756
GGD08	800	600	650	556
GGD08A	800	800	650	756
GGD10	1000	600	850	556
GGD10A	1000	800	850	756
GGD12	1200	800	1050	756

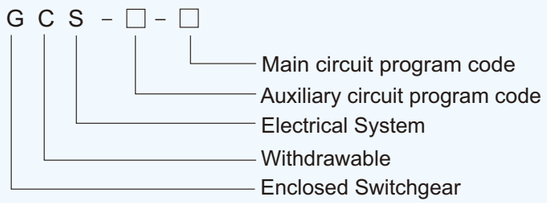
GCS Low-voltage withdrawable switchgear

Product overview

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

The design of the device conforms to IEC439-1 “Low-voltage switchgear and control equipment”Standard requirements

Model and meaning



GCS Low-voltage withdrawable switchgear

Device characteristics

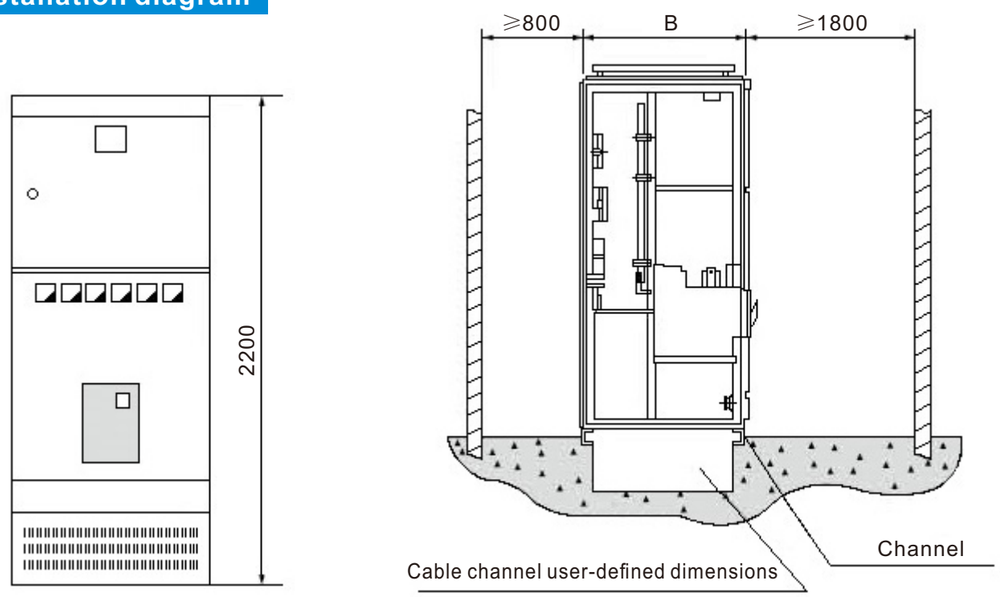
- Increase the heat capacity of the adapter, the additional temperature reduced significantly due to the temperature rise adapter connectors, cable head, and spacer plates brought;
- Between the functional units, the partition between the compartments clear, reliable, due to failure of a unit without affecting the other units of work, so that failure limitations in the minimum range;
- Bus flat-mounted arrangement makes moving the device, good thermal stability, can withstand 80/176 kA short circuit current impact;
- Number of single cabinet MCC cabinet circuit 22 times more to take full account of large unit capacity power generation, petrochemical and other industries automation electric gate (machine) group needs;
- Connecting means and external cables in the cable compartment is completed. the cable can be up and down and out. Current transformer means in the cable compartment, making easy installation and maintenance;
- The same power distribution system, it can match by limiting short-circuit current limiting reactors, stable bus voltage at a certain value, but also reduce the component part of the short-circuit strength requirements; Drawer unit has a sufficient number of secondary connectors (1 unit and more than 32 pairs, 1/2 units of 20 pairs), can satisfy the computer interface and automatic control loop requirements on the number of contacts.

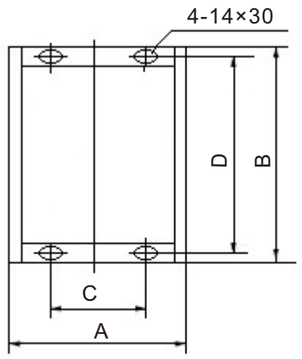
The main technical parameters

Man circuit rated voltage(V)		AC380 (400) , (660)
Auxiliary circuit Rated voltage (V)		AC 220, 380(400) / DC110/220
Rated frequency (Hz)		50(60)
Rated insulation voltage (V)		660(1000)
Rated current (A)	The level of bus	≤4000
	Vertical Bus (MCC)	1000
Bus bar rated short time withstand current (kA/1s)		50, 80
Bus bar rated peak withstand current (kA/0.1s)		105, 176
Power frequency test voltage(V/1min)	The main circuit	2500
	Auxiliary circuit	1760
Bus bar	Three-phase four-wire system	A, B. C. PEN
	Three-phase five-wire system	A, B. C. PEN
Protection class		IP30, IP40

GCS Low-voltage withdrawable switchgear

Installation diagram





Universal cabinet Code	A	B	C	D	Remark
GCS-TG1010-4	1000	1000	850	956	
GCS-TG0810-4	800	1000	650	956	
GCS-TG0808-4	800	800	850	756	
GCS-TG0608-4	600	800	450	756	

MNS Low-voltage withdrawable switchgear

Product overview

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

This series of low-voltage withdrawable switchgear for power plants, substations, petrochemical, metallurgy rolling, transportation and energy, textile and other industrial enterprises and residential areas, high-rise buildings and other places, as AC 50-60Hz. rated working voltage AC power converters 660V and below the power system of power distribution equipment, distribution and control purposes.

The technical standard of this product meets the requirements of IEC439 "Low Voltage Switchgear and Control Equipment" and other standards.

Normal environmental conditions

- Altitude: not exceed 2000m;
- Air temperature: -5℃～+40℃, and 24n average temperature does not exceed +35℃;
- Atmospheric conditions: air cleaner, the relative humidity at the highest temperature is +40℃, not more than 50%, at a lower temperature allows a higher relative humidity, for example +20℃ al 90%, but should take into account changes in temperature, there may occasionally produce condensation;
- This device adapted to these temperatures during transport and storage: the range between -25℃ to +55℃ in a short time (less than 24h) up to +70℃, in extreme temperatures in these devices should not be subjected to any irreversible damage, and should be able to work under normal conditions;
- If the above conditions are not met, the user and the manufacturer shall be resolved through consultation;

When this device is used in offshore oil drilling platforms and nuclear power plants, it should be entered into separate technology agreement.

MNS Low-voltage withdrawable switchgear

Basic parameters

Rated insulation voltage		660V (1000)V
Rated working voltage		380V.660V
The maximum operating current of the main bus		5000A
Main busbar rated withstand current		100kA/1s
Main busbar rated peak withstand current		220kA/0.1s
Distribution bus (vertical bus) the maximum operating curre		1000A
Distribution bus (vertical bus) Peak current	Standard	105kA(Maximum)/0.1s
	Enhanced	176kA(Maximum)/0.1s

Cabinet structure

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

Switchgear Type

1.The cabinet power distribution center (PC): can Emax, MT, 3WN, AH, ME circuit breakers and other series.

2.The motor control center cabinet(MCC): assembled by the size of the drawer is made, each circuit using high off the main switch or rotary molded case circuit breaker with fuse load switch. Automatic power factor compensation cabinet (with manual, automatic and remote power factor compensation device).

A power distribution center (PC) cabinet (mm)

Hgh	Wide	Deep			Remark
H	B	T	T1	T2	
2200	400	1000	800	200	The main bus adapter
2200	400	1000	800	200	F_1s-1250-2000 ME630~1605
2200	600	1000	800	200	F_2s-2500
2200	800	1000	800	200	F_4s-3200 ME2000~3200
2200	1000	1000	800	200	F_5s-4000 ME3205
2200	1200	1000	800	200	ME4005

A power distribution center (PC) cabinet (mm)

High	Wide			Deep			Remark
H	B	B1	B2	T	T1	T2	
2200	1000	600	400	600	400	200	Single operation
2200	1000	600	400	100	400	200	Duplex operation

XL-21 Low-voltage power distribution cabinet

Product overview

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

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

Model and meaning

X L 21– □

- Scheme No
- Design No.
- Power control
- Control box

Structure

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

XL-21 Low-voltage power distribution cabinet

Knife fuse combination switch

Model	Rated Current (A)	Melt rated current (A)	Remark
HR3-400/34	400	150，200，250，300，350，400	No melt when mounting the insulating bla

Air Circuit Breakers

Model	Rated Current (A)	Tripping setting current(A)	Remark
MLM5 - 40/390	20	7，10，15，20，30，40	
MLM1 - 100/300	100	15，20，25，30，40，50，60，80，100	
MLM1 - 250/300	250	100，120，140，170，200，225，250	

Current Transformer

Model	Primary current (A)	Secondary current (A)	Remark
LM-0.5	75，100，150，200，300，600	5	

Fuses

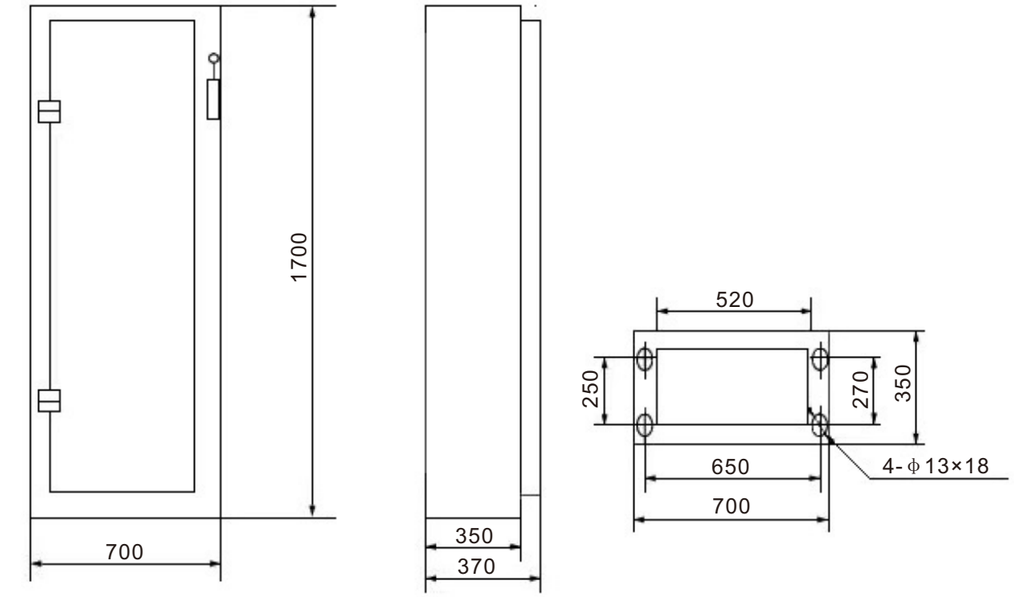
Model	Fuses	Fuse rated current (A)	Remark
RL1-15	15	2，4，5，6，10，15	
RL1-60	60	20，25，30，35，40，50，60	
RL1-100	100	30，40，50，60，80，100	
RL1-200	200	80，100，120，150，200	
RL1-400	400	150，200，250，300，350，400	

AC contactor

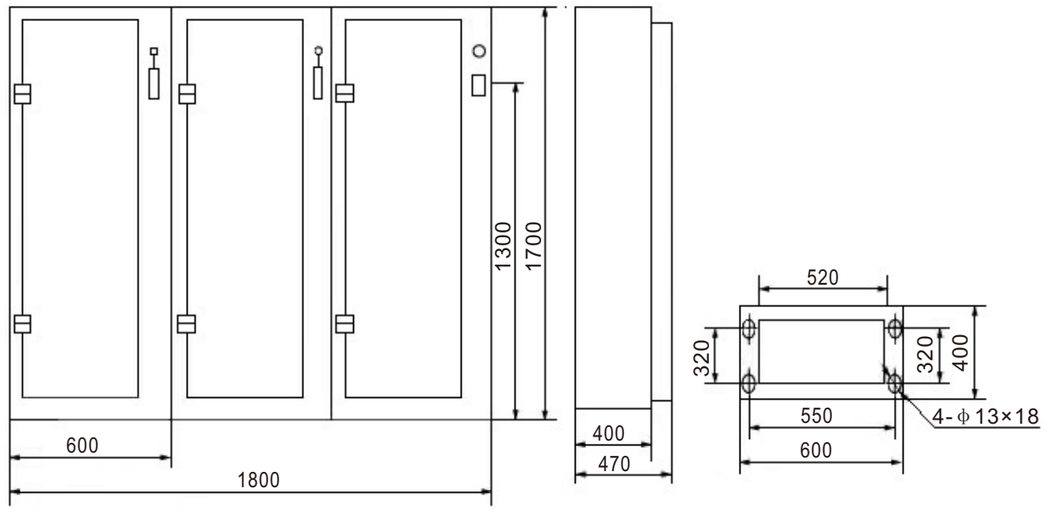
Model	Rated Current (A)	Attract coil voltage (V)	Remark
MLC3-10	10	AC 110 220 380	
MLC3-20	20		
MLC3-40	40		
MLC3-80	80		
MLC3-150	150		

XL-21 Low-voltage power distribution cabinet

Shape and size (mm)



A structure installation Dimensions　　Foot-mounted



B structure installation Dimensions　　Foot-mounted

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

Product overview

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

Model and meaning

JP – □ / □

- Man circuit scheme number
- Transformer capacity
- Comprehensive Distribution

Use of the environment

- Ambient temperature: -25℃～+40℃;
- Altitude: not more than 2000m;
- Relative humidity: daily average of not more than 90%, on average less than 90%;
- Installation place: in the absence of severe vibration and shock, non-corrosive gas.

Saudi General Electric
JP Integrated distribution box (compensation/Control/Terminal/lighting)

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

Structural features

Discrete and horizontal box structure, the shell is made of high-quality non-pound 2mm steel plate bending multi-fold process (or the use of honeycomb sandwich structure of stainless steel double-composite panels, flame retardant, environmental protection, thermal insulation, anti-condensation properties),using a special stainless steel welding technology, high overall strength after forming the cabinet, the surface smooth as a mirror, leaving no trace of the weld; internal mounting beam (board) for the hot dip galvanizing process, to ensure that twenty years does not rust; front casing open, user-friendly operation and maintenance, high elastic around the door inlaid with anti-aging sealing strip, are equipped with every shade of two door locks, Ming lock with attempts to prevent rust storm hood; closed with a metering chamber seal means; incoming cable box side with rain preventing foreign bodies through the tube, the bottom punch ventilation holes and cable entry hole, top with a duct and screen, waterproof, rust, dust, foreign body functions, protection class: IP54.

The main technical parameters

Name	Unit	Parameter
Transformer capacity	KVA	30~400
Rated working voltage	V	AC400
Operating voltage auxiliary circuit	V	AC220, AC380
Rated frequency	Hz	50
Rated current	A	≤630
Rated leakage current	mA	30-300Adjustable
Protection class		IP54

Case structure diagram

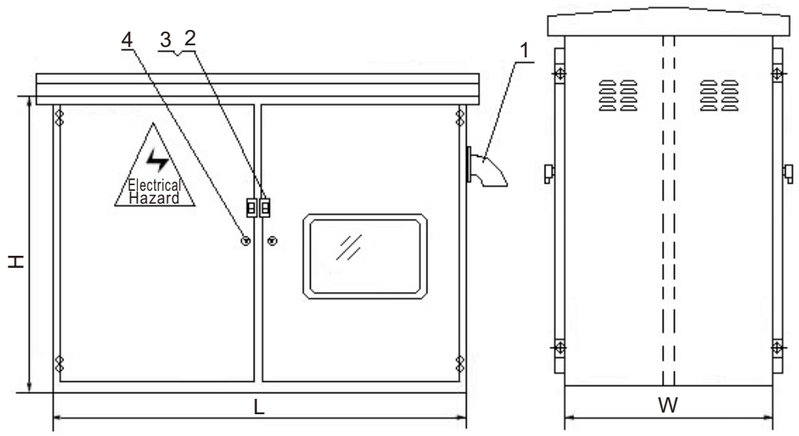
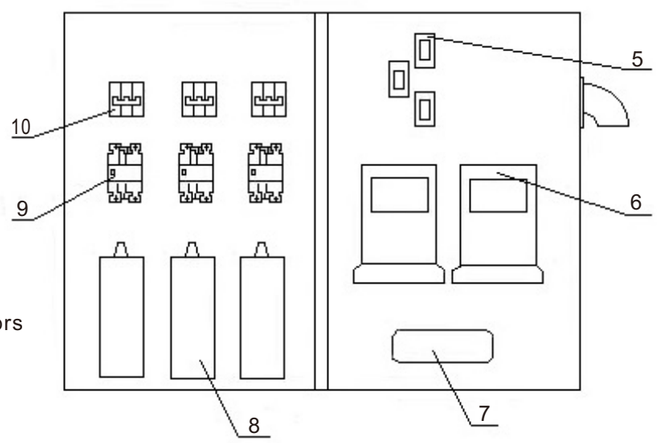


Figure 1: Schematic outdoor box (horizontal)

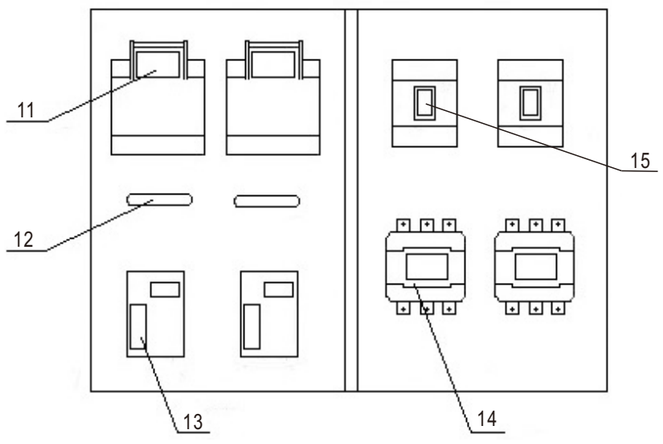
JP Integrated distribution box (compensation/Control/Terminal/lighting)

Case structure diagram

1. Into the cable through the tube
2. Door locks (Ming lock)
3. Box locks rain
4. Door locks (Built-in lock)
5. The current transformer
6. Meter
7. The junction box
8. The capacitor
9. The switched capacitor contactors
10. Small circuit breakers
11. Isolation switch
12. Zero sequence transformers
13. Leakage relay
14. Outlet AC contactor
15. Outlet air switch



Internal component layout (front)

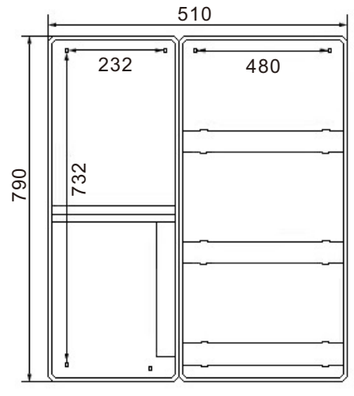


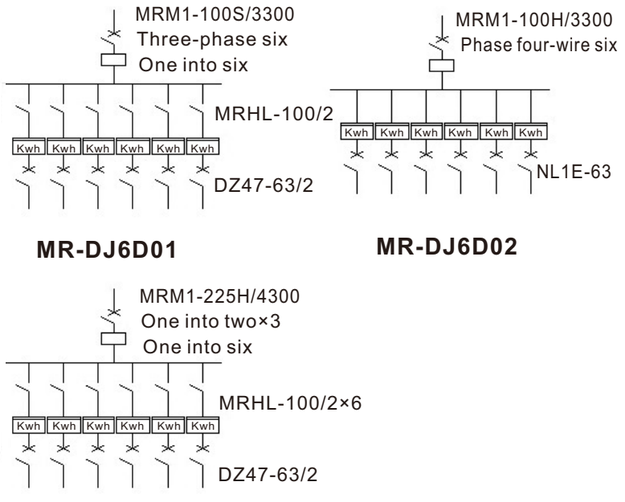
Internal component layout (back)

Model and main configuration example

Model	Accessory Name	Model	Quantity
MR-DJ6D01	Circuit breakers (line)	MRM1-100S/3300	1
MR-DJ6D01	Terminals (line)	Three-phase six	1
MR-DJ6D01	Zero line terminal (line)	One into six	1
MR-DJ6D01	Isolation switch (line)	MRHL-100/2	6
MR-DJ6D01	Circuit breakers (outlet)	DZ47-63/2	6
MR-DJ6D02	Circuit breakers (line)	MRM1-100H/3300	1
MR-DJ6D02	Terminals (line)	Phase four-wire six	1
MR-DJ6D02	Leakage circuit breakers (outlet)	NL1E-63	6
MR-DJ6D03	Circuit breakers (line)	MRM1-225H/4300	1
MR-DJ6D03	Switch terminal (line)	One into two	3
MR-DJ6D03	Switch terminal (line)	One into six	1
MR-DJ6D03	Isolation switch (line)	MRHL-100/2	6
MR-DJ6D03	Circuit Breakers (outlet)	DZ47-63/2	6

Overall and installation dimensions（mm）



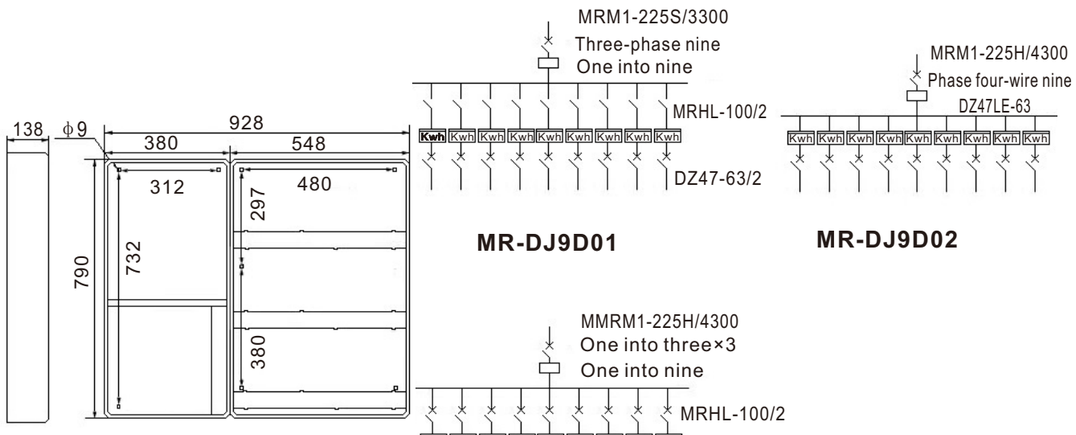


(Nine) Mount single-phase meter box

Model and main configuration example

Model	Accessory Name	Model	Quantity
MR-DJ9D01	Circuit breakers (line)	MRM1-225S/3300	1
MR-DJ9D01	Terminals (line)	Three-phase nine	1
MR-DJ9D01	Zero line terminal (line)	One into nine	1
MR-DJ9D01	Isolation switch (line)	MRHL-100/2	9
MR-DJ9D01	Circuit breakers (outlet)	DZ47-63/2	9
MR-DJ9D02	Circuit breakers (line)	MRM1-225H/4300	1
MR-DJ9D02	Terminals (line)	Phase four-wire nine	1
MR-DJ9D02	Leakage circuit breakers (outlet)	DZ47LE-63	9
MR-DJ9D03	Circuit breakers (line)	MRM1-225H/4300	1
MR-DJ9D03	Switch terminal (line)	One into three	3
MR-DJ9D03	Switch terminal (line)	One into nine	1
MR-DJ9D03	Isolation switch (line)	MRHL-100/2	9
MR-DJ9D03	Circuit Breakers (outlet)	DZ47-63/2	9

Overall and installation dimensions（mm）



MR-DJ9D01

MR-DJ9D02

MR-DJ9D03