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# TRANSFORMER SUBSTATION

ZHEJIANG SEATRUST POWER CO., LTD





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Advanced production equipment,  
Reliable quality

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## PRODUCTION PROCESS

Advanced production equipment,  
Reliable quality

### Silicon steel sheet



### Winding



## PRODUCTION PROCESS

Advanced production equipment,  
Reliable quality

### Assembly



### Sheet metal manufacturing



## PRODUCTION PROCESS

Advanced production equipment,  
Reliable quality

### Oven equipment



### Test



## PRODUCTION PROCESS

Advanced production equipment,  
Reliable quality

### Finished products



# OIL IMMERSION TRANSFORMER

> Infinite Technology  
Perfect Motivity



Zhejiang SeaTrust Power Co., Ltd

## OIL IMMERSION TRANSFORMER

### > Features of Products

The three-phase oil-immersed distributing transformer applies new type insulating structure and makes short-circuit resistance strong. The iron core is made of high-quality cold-rolled silicon-steel plate. High-voltage winding group is made up of high-quality oxygen-free copper lines and it adopts multilayered drum type structure. All fasteners have been processed with special treatment to prevent them from loosening.

As a high-tech product that is promoted by the county, the product has many advantages such as high efficiency, low loss. Its social benefits are remarkable that it will save much of electricity consumption and operating cost.

### > Reliable Structure

With the foundation of traditional frames and proved techniques our company made a great improvement for instance. We employ spiral loops with longitudinal oil path to produce a better interior cooling effect;

We improve the effectual support of the loop's terminal face to strengthen the anti-short circuit electricity capability;

We employ new suspending structure and instrument-positioning frames to guarantee that the long distance transport and movement will be more reliable. In addition to those above, we have lots of novel and dependable frames that wait to serve you.

We are sure that, when you choose more advanced transformers, you will enjoy greater technique intensity.

### > Excellent Materials

Because we use oxygen-free copper lines of lower resistivity, which will become smoother and burr-free after series of additional surface treatment so the load loss of our transformer is lower and the electric performance is 1S better.

We use high-quality silicon-steel plates which are of lower unit loss, and the no-load of the transformers is lower.

We use high quality wooden laminating insulation pieces which won't split or move even under the influence of short circuit.

We use thoroughly filtrated transformer oil containing less water gas and impurities which makes our transformers work better.

We use high quality rubber sealing material which can prevent the transformers from aging or leakage.

All raw materials have passed the quality testing and all the raw material factories have passed through the national standard ISO9000 inspection.



## Zhejiang SeaTrust Power Co., Ltd

### > Good Technology And Economic Performance

Compare with S7 series product, S9 series product reduces the no-load loss by 10%, load loss by 24%, and no-load electric current by 46%, as a result, the operating cost will drop by 19%.

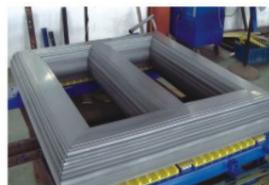
Improved from S9 series product, S11 series product reduces the no-load loss by 30%; no-load electric current by 70-65%; average temperature by 10K; noise level by 2-4 db; and double the products' service life. Even under 20% overloads, it can also work for a long period of time.



### > Sealed Tank(M)

The "M" in S11 (M) R-stands for omniseal structure that the oil tank employed. Compared with common oil-immersed transformer, omniseal oil-immersed transformer taking off oil storage cabinet adopts wing-like corrugation for replacing oil tube as component of heat dispersion. The corrugated oil tank which is made up of high-quality cool-rolled plates is produced on the special produce lines. The wing-like corrugation will expand and compress as that the volume of transformer dose, so that the transformer is separated from the atmosphere and can prevent or slower deterioration of oil and breathing of insulation. All these ensure the reliability of operation and without maintenance.

After the treatment of deoiling, derusting and parkerizing, the surface of corrugated oil tank is coated with paint which can provide rain-proofing, damp-proofing and salt haze-proofing. It is suitable for the use in the environment. such as metallurgy, petrochemical industry and mining, etc.



### > Core-rolled(R)

The "R" in S11(M) R-stands for ribbon-wound core, It applies low-loss cold-steel plate of high-quality, It has high degree of mechanization and it is not necessary to shear and punch which eliminate horizontal and longitudinal power connection of traditional iron core. So it secures lower no-load current to make the level of transformer's reactive-power loss and noise lower which can conform to environmental requirements. With monolithic type iron core and compact coil it has further short-circuit resistance.

### > Transformer Standards

GB 1094.1-1996	GB 1094.2-1996	JB/T10088-2004
GB 1094.3-2003	GB 1094.5-2003	GB/T 10237-1988
GB/T 6451-2008	GB/T 7595-1987	JB/T 3837-2010
IEC 60076		



## Zhejiang SeaTrust Power Co., Ltd

### > Transformer Service Condition

The height above sea level is below 1000m;

Ambient temperature:

Highest air temperature +40°C;

Highest daily average air temperature +30°C;

Highest annual average air temperature +20°C;

Lowest outdoor air temperature -25°C.

### > Transformer Special Service Condition

The height above sea level is below 1000m;

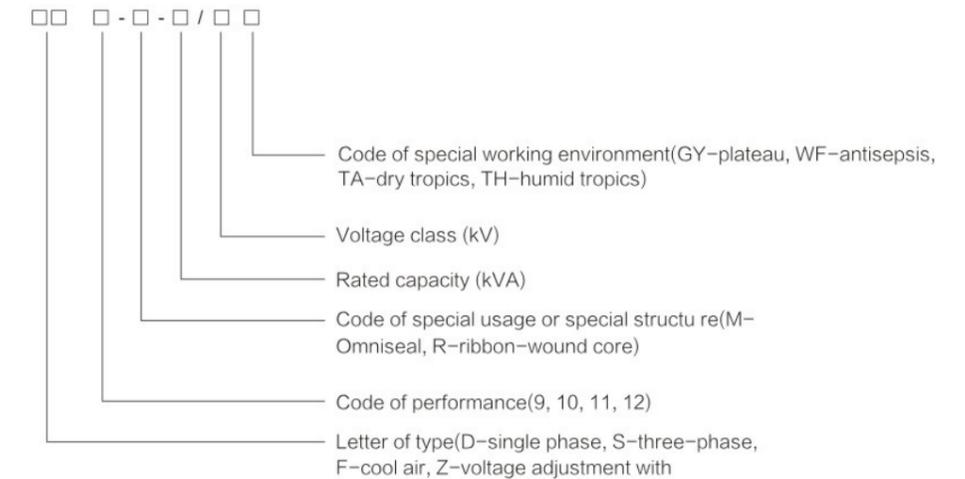
Ambient temperature:

Highest air temperature +40°C;

Lowest air temperature -45°C;

(defines in detail when placing an order)

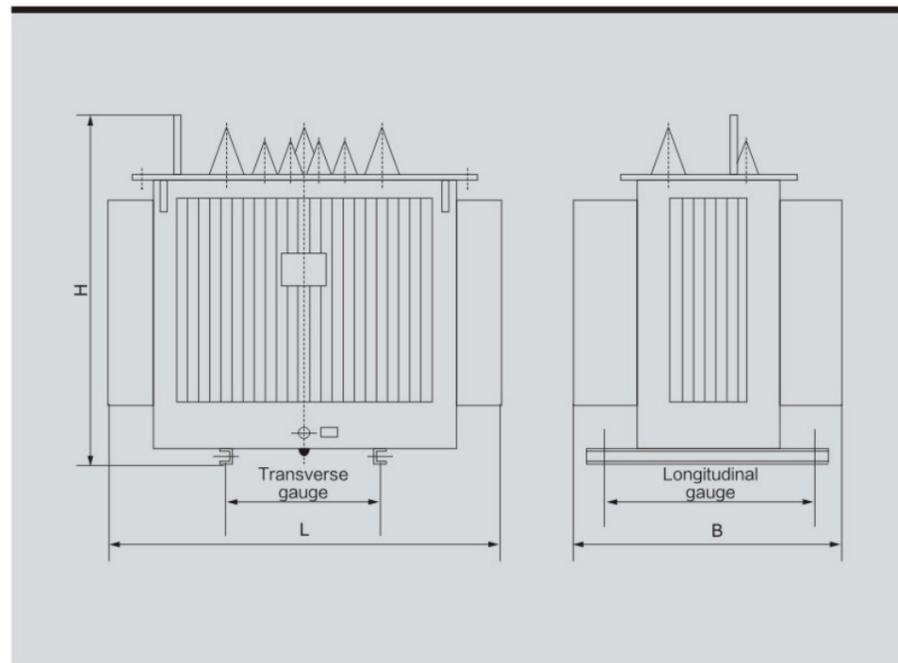
### > Transformer Type Meaning



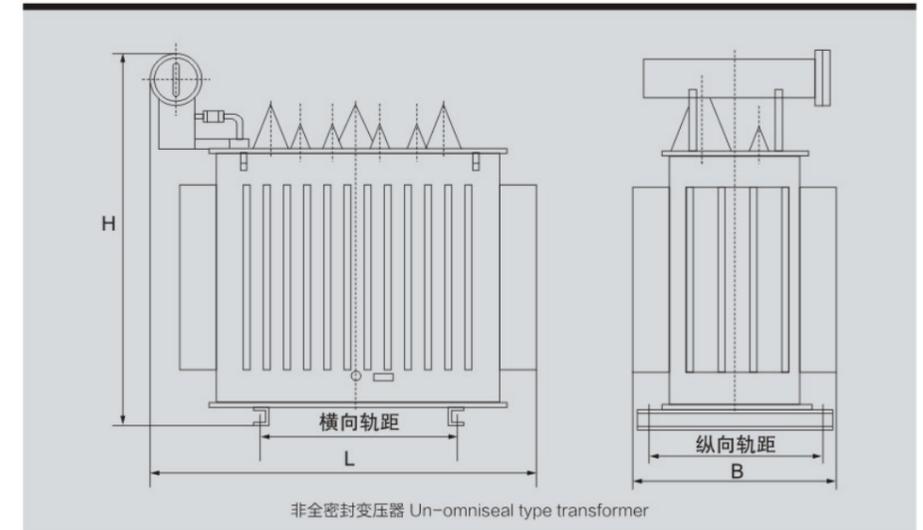
> Tech data of 11kV D9 series distribution transformer

rated capacity (kVA)	Voltage group		connection method	impedance voltage	Loss		no-load current (%)	weight(kg)			(L × B × H)(mm) outline dimension	gauge vertical/horizontal	
	High-voltage	Low-voltage			no-load	load		omachine weight	oil weight	gross weight			
5	11	0.22	ii0	3.5	35	145	4	50	40	130	530 × 450 × 850	400/250	
10					55	260	3.5	65	40	150	560 × 450 × 870	400/300	
16					65	365	3.2	80	40	180	600 × 450 × 920	400/300	
20					80	430	3.0	100	50	205	620 × 450 × 940	400/300	
30					100	625	2.5	115	50	225	700 × 450 × 980	400/300	
40					10.5	125	775	2.5	150	55	270	700 × 480 × 1040	400/300
50					10	150	950	2.3	175	70	310	650 × 510 × 1100	400/300
63					6.3	180	1135	2.1	190	80	340	660 × 520 × 1100	400/300
80					6	200	1400	2.0	240	100	420	770 × 530 × 1120	450/300
100					240	165	1.9	295	100	490	840 × 600 × 1150	450/300	
125					285	1950	1.8	370	110	560	890 × 740 × 1160	500/400	
160					365	2365	1.7	430	130	650	950 × 790 × 1170	500/400	

> Transformer special service conditions



> Transformer special service conditions



> Tech data of 11kV S9、S9-M series distribution transformer

rated capacity (kVA)	Voltage group		connection method	impedance voltage	Loss		no-load current (%)	weight(kg)			(L × B × H)(mm) outline dimension	gauge vertical/horizontal
	High-voltage	Low-voltage			no-load	load		omachine weight	oil weight	gross weight		
5	11	0.4	Yyno	4	0.07	0.35	4	50	45	145	550 × 450 × 800	400/350
10					0.09	0.40	3.5	70	55	185	550 × 450 × 800	400/350
20					0.11	0.52	3.0	110	60	235	660 × 505 × 850	400/350
30					0.13	0.63/0.6	2.3	130	65	265	660 × 530 × 870	450/340
50					0.17	0.91/0.87	2.0	195	80	365	740 × 600 × 930	450/380
63					0.20	1.09/1.04	1.9	230	80	400	720 × 620 × 100	450/380
80					0.25	1.31/1.25	1.9	260	95	460	770 × 640 × 1030	450/430
100					0.29	1.58/1.5	1.8	300	95	510	820 × 710 × 970	550/450
125					0.34	1.89/1.8	1.7	335	115	585	1040 × 680 × 1080	550/470
160					0.40	2.31/2.2	1.6	405	130	685	1090 × 670 × 1130	550/520
200					0.48	2.73/2.6	1.5	490	150	810	1160 × 760 × 1090	550/520
250					0.56	3.23/3.05	1.4	565	170	935	1215 × 775 × 1180	650/550
315					0.67	3.83/3.65	1.4	655	200	1095	1345 × 890 × 1205	650/550
400					0.80	4.52/4.3	1.3	840	250	1385	1450 × 935 × 1240	650/550
500					0.96	5.41/5.15	1.2	935	235	1505	1410 × 970 × 1290	750/600
630					1.20	6.2	1.1	1100	330	1830	1595 × 1040 × 1315	850/660
800					1.40	7.5	1.0	1360	370	2225	1765 × 1170 × 1350	850/660
1000					1.70	10.3	1.0	1455	475	2555	1855 × 1255 × 1490	850/660
1250					1.95	12.0	0.9	1715	545	3140	1885 × 1270 × 1590	850/660
1600					2.40	14.5	0.8	2095	630	3680	1950 × 1620 × 2020	850/700
2000	2.80	19.8	0.8	2340	715	4190	2060 × 1740 × 2050	820/820				
2500	3.30	23.0	0.7	2920	830	5100	2250 × 1800 × 2100	1070/1070				

note: tapping range of high-voltage: ± 5%, ± 2 × 2.5%; frequency: 50Hz;



## Zhejiang SeaTrust Power Co., Ltd

### > Tech data of 11kV S11、S11M series distribution transformer

rated capacity (kVA)	Voltage group		connection method	impedance voltage	Loss		no-load current (%)	weight(kg)			(L × B × H)(mm) outline dimension	gauge vertical/horizontal	
	High-voltage	Low-voltage			no-load	load		omachine weight	oil weight	gross weight			
10	11	10.5	0.4	Yyno	4	0.065	0.4	3.5	90	55	220	650 × 450 × 880	400/350
20						0.08	0.52	3.0	140	60	270	720 × 490 × 950	400/350
30						0.1	0.63/0.6	2.3	185	70	330	750 × 490 × 970	450/340
50						0.13	0.91/0.87	2.0	260	80	430	770 × 550 × 1030	450/380
63						0.15	1.09/1.04	1.9	260	85	440	800 × 600 × 1040	450/380
80						0.18	1.31/1.25	1.9	320	95	520	790 × 600 × 1070	450/430
100						0.2	1.58/1.5	1.8	355	100	570	830 × 640 × 1050	550/450
125						0.24	1.89/1.8	1.7	425	115	675	1070 × 700 × 1150	550/470
160						0.28	2.31/2.2	1.6	510	130	790	1120 × 700 × 1220	550/520
200						0.34	2.73/2.6	1.5	550	145	850	1080 × 690 × 1160	550/520
250					0.4	3.23/3.05	1.4	630	165	985	1160 × 740 × 1190	650/550	
315					0.48	3.83/3.65	1.4	755	190	1155	1230 × 800 × 1240	650/550	
400					0.57	4.52/4.3	1.3	910	225	1405	1310 × 860 × 1250	650/550	
500					0.68	5.41/5.15	1.2	1050	240	1600	1370 × 890 × 1350	750/600	
630					0.81	6.2	1.1	1250	310	1945	1580 × 1060 × 1310	850/660	
800					0.96	7.5	1.0	1540	365	2350	1640 × 1060 × 1500	850/660	
1000					1.15	10.3	1.0	1690	405	2645	1720 × 1160 × 1540	850/660	
1250					1.36	12.0	0.9	1965	560	3230	1790 × 1190 × 1740	850/660	
1600					1.64	14.5	0.8	2355	650	3805	1830 × 1210 × 1850	850/700	
2000					1.96	19.8	0.8	2570	615	4245	2190 × 1900 × 1950	820/820	
2500	2.31	23.0	0.7	3130	810	5280	2180 × 1940 × 2250	1070/1070					

nonte: tapping range of high-voltage: ± 5%, ± 2 × 2.5%; frequency: 50Hz;

### > Tech data of 11kV SZ9 series distribution transformer

rated capacity (kVA)	Voltage group		connection method	impedance voltage	Loss		no-load current (%)	weight(kg)			(L × B × H)(mm) outline dimension	gauge vertical/horizontal	
	High-voltage	Low-voltage			no-load	load		omachine weight	oil weight	gross weight			
200	11	10.5	0.4	Yyno	4	0.48	3.06	1.5	510	210	960	1440 × 780 × 1140	550/520
250						0.56	3.6	1.4	600	230	1105	1480 × 800 × 1200	650/550
315						0.67	4.32	1.4	690	260	1315	1600 × 860 × 1210	650/550
400						0.8	5.22	1.3	890	310	1570	1680 × 940 × 1300	650/550
500						0.96	6.21	1.2	990	310	1710	1660 × 1040 × 1310	750/600
630						1.2	7.65	1.1	1160	400	2050	1810 × 1140 × 1350	850/660
800						1.4	9.36	1.0	1430	430	2480	1890 × 1210 × 1380	850/660
1000						1.7	10.98	1.0	1530	540	2830	1950 × 1260 × 1510	850/660
1250						1.95	13.05	0.9	1800	610	3460	1960 × 1280 × 1660	850/660
1600						2.4	15.57	0.8	2200	700	4060	2350 × 1620 × 2020	850/700
2000					2.8	21.26	0.8	2460	800	4620	2460 × 1740 × 2050	820/820	
2500					3.3	24.69	0.7	3070	910	5630	2650 × 1800 × 2100	1070/1070	

nonte: tapping range of high-voltage: ± 5%, ± 2 × 2.5%; frequency: 50Hz;



## Zhejiang SeaTrust Power Co., Ltd

### > Tech data of 11kV SZ11 series distribution transformer

rated capacity (kVA)	Voltage group		connection method	impedance voltage	Loss		no-load current (%)	weight(kg)			(L × B × H)(mm) outline dimension	gauge vertical/horizontal	
	High-voltage	Low-voltage			no-load	load		omachine weight	oil weight	gross weight			
200	11	10.5	0.4	Yyno	4	0.34	3.06	1.5	540	270	1110	1400 × 740 × 1190	550/520
250						0.40	3.60	1.4	640	290	1270	1420 × 790 × 1210	650/550
315						0.48	4.32	1.4	730	320	1500	1540 × 850 × 1240	650/550
400						0.57	5.22	1.3	940	370	1780	1590 × 940 × 1250	650/550
500						0.68	6.21	1.2	1040	370	1920	1650 × 1000 × 1350	750/600
630						0.81	7.65	1.1	1220	460	2280	1810 × 1200 × 1310	850/660
800						0.96	9.36	1.0	1500	500	2740	1860 × 1090 × 1500	850/660
1000						1.15	10.98	1.0	1610	520	3060	1910 × 1260 × 1570	850/660
1250						1.36	13.05	0.9	1880	700	3710	1960 × 1280 × 1740	850/660
1600						1.64	15.57	0.8	2290	780	4350	2330 × 1800 × 1910	850/700
2000					1.96	21.26	0.8	2560	900	4950	2580 × 1900 × 1950	820/820	
2500					2.31	24.69	0.7	3170	1010	6020	2580 × 1940 × 2250	1070/1070	

nonte: it can supply voltage regulating range of ± 4 × 2.5% for hing-voltage of-load regulation transformer

### > Tech data of 11kV S9 series power transformer

rated capacity (kVA)	Voltage group		connection method	impedance voltage	Loss		no-load current (%)	weight(kg)			(L × B × H)(mm) outline dimension	gauge vertical/horizontal	
	High-voltage	Low-voltage			no-load	load		omachine weight	oil weight	gross weight			
200	11	10.5	0.4	Yyno	4.5	0.42	3.15	1.5	530	180	940	1240 × 820 × 1130	660 × 660
250						0.51	3.6	1.4	580	200	1000	1320 × 840 × 1150	660 × 660
315						0.61	4.3	1.4	720	230	1210	1380 × 880 × 1200	660 × 660
400						0.73	5.2	1.3	810	260	1420	1530 × 1020 × 1240	660 × 660
500						0.88	6.2	1.2	910	280	1550	1610 × 1100 × 1290	660 × 660
630						1.03	7.29	1.1	1160	420	2040	1620 × 1120 × 1340	820 × 820
800						1.26	8.91	1.0	1350	470	2380	1810 × 1260 × 1390	820 × 820
1000						1.48	10.44	1.0	1495	510	2605	1900 × 1300 × 1440	820 × 820
1250						1.75	12.42	0.9	1750	615	3090	1910 × 1260 × 1620	820 × 820
1600						2.11	14.85	0.8	1980	630	3500	1950 × 1610 × 1810	820 × 820
2000					2.52	17.82	0.8	2410	800	4360	2050 × 1800 × 2000	820 × 820	
2500					2.97	20.7	0.8	2850	850	5330	2150 × 1960 × 2160	1070 × 1070	
3150					3.51	24.3	0.7	3190	1270	6360	2285 × 2260 × 2290	1070 × 1070	
4000					4.32	28.8	0.7	3750	1580	7120	2400 × 2420 × 2390	1070 × 1070	
5000					5.13	33.03	0.7	4650	1830	8760	2480 × 2580 × 2510	1070 × 1070	
6300					6.12	36.9	0.6	6020	2310	11460	2530 × 2760 × 2725	1070 × 1070	
8000					8.4	40.5	0.6	7310	2520	13680	2600 × 2800 × 2980	1475 × 1475	
10000					10.15	47.7	0.6	8670	2860	16150	2720 × 2820 × 3180	1475 × 1475	

nonte: tapping range of high-voltage: ± 5%, ± 2 × 2.5%; frequency: 50Hz;

### > Tech data of 20kV S11 series distribution transformer

rated capacity (kVA)	Voltage group		connection method	impedance voltage	Loss			weight(kg)			(L × B × H)(mm) outline dimension	gauge vertical/horizontal
	High-voltage	Low-voltage			no-load	load	no-load current (%)	omachine weight	oil weight	gross weight		
50	23	0.4	Yyno	5.5	0.17	1.15	2.0	200	145	465	920 × 610 × 1000	450/380
100					0.23	1.92	1.8	330	165	635	920 × 680 × 1100	550/450
125					0.27	2.26	1.7	395	185	745	960 × 780 × 1120	550/470
160					0.29	2.69	1.6	505	205	885	1160 × 710 × 1180	550/520
200					0.34	3.16	1.5	580	225	995	1190 × 730 × 1190	550/520
250					0.41	3.76	1.4	695	245	1130	1280 × 820 × 1210	650/550
315					0.49	4.53	1.4	745	260	1285	1380 × 910 × 1240	650/550
400					0.58	5.47	1.3	865	305	1500	1430 × 950 × 1320	650/550
500					0.69	6.58	1.2	985	335	1710	1520 × 1020 × 1360	750/600
630					0.83	7.87	1.1	1165	385	2010	1680 × 1150 × 1380	850/660
800					0.98	9.41	1.0	1335	415	2315	1810 × 1280 × 1430	850/660
1000					1.15	11.54	1.0	1655	515	2985	1840 × 1290 × 1540	850/660
1250					1.4	13.94	0.9	1890	630	3460	1850 × 1300 × 1730	850/660
1600					1.7	16.67	0.8	2220	710	4015	1920 × 1350 × 1790	850/700
2000					2.18	20.43	0.8	2530	730	4425	2020 × 1770 × 2040	820/820
2500					2.56	21.85	0.8	3165	795	5260	2080 × 1800 × 2130	1070/1070

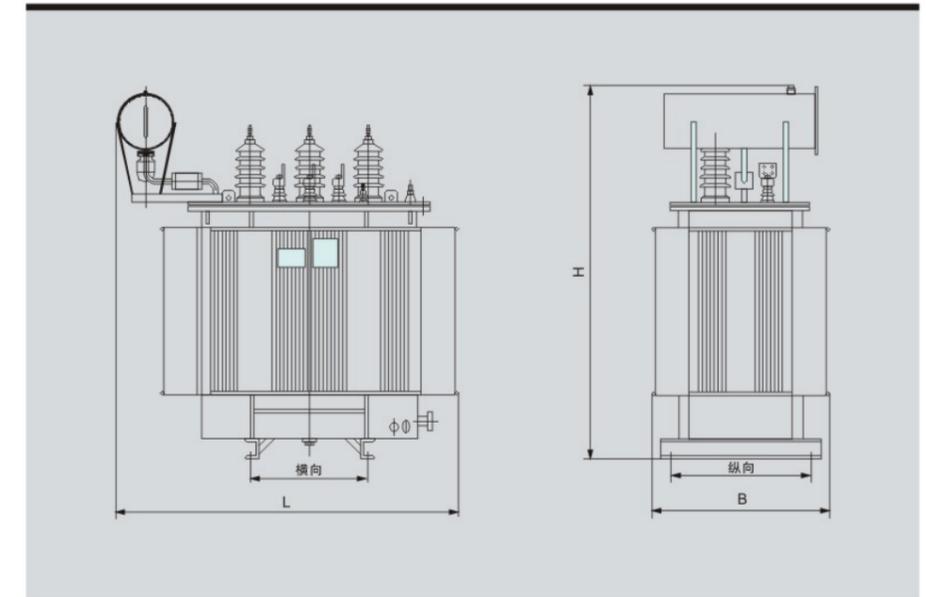
note: tanning range of high-voltage: ±5%, ±2 × 2.5%; frequency: 50Hz;

### > Tech data of 20kV/11kV S11 series dual voltage conversion distribution transformer

rated capacity (kVA)	Voltage group		connection method	impedance voltage	Loss			weight(kg)			(L × B × H)(mm) outline dimension	gauge vertical/horizontal
	High-voltage	Low-voltage			no-load	load	no-load current (%)	omachine weight	oil weight	gross weight		
50	20/10	0.4	Yyno	5.5	0.17	1.15	2.0	200	185	515	920 × 610 × 1150	450/380
100					0.23	1.92	1.8	330	210	695	920 × 680 × 1250	550/450
125					0.27	2.26	1.7	395	235	810	960 × 780 × 1270	550/470
160					0.29	2.69	1.6	505	255	950	1160 × 710 × 1330	550/520
200					0.34	3.16	1.5	580	280	1065	1190 × 730 × 1340	550/520
250					0.41	3.76	1.4	695	300	1200	1280 × 820 × 1360	650/550
315					0.49	4.53	1.4	745	320	1360	1380 × 910 × 1390	650/550
400					0.58	5.47	1.3	865	370	1580	1430 × 950 × 1470	650/550
500					0.69	6.58	1.2	985	400	1790	1520 × 1020 × 1510	750/600
630					0.83	7.87	1.1	1165	460	2100	1680 × 1150 × 1530	850/660
800					0.98	9.41	1.0	1335	495	2420	1810 × 1280 × 1580	850/660
1000					1.15	11.54	1.0	1655	590	3080	1840 × 1290 × 1690	850/660
1250					1.4	13.94	0.9	1890	630	3460	1850 × 1300 × 1730	850/660
1600					1.7	16.67	0.8	2220	710	4015	1920 × 1350 × 1790	850/700
2000					2.18	20.43	0.8	2530	830	4555	2020 × 1770 × 2290	820/820
2500					2.56	21.85	0.8	3165	905	5400	2080 × 1800 × 2280	1070/1070

note: tanning range of high-voltage: ±5%, ±2 × 2.5%; frequency: 50Hz;

### > Transformer special service conditions



### > Tech data of 33kV S9 series distribution transformer

rated capacity (kVA)	Voltage group		connection method	impedance voltage	Loss			weight(kg)			(L × B × H)(mm) outline dimension	gauge vertical/horizontal
	High-voltage	Low-voltage			no-load	load	no-load current (%)	omachine weight	oil weight	gross weight		
50	38.5	0.4	Yyno	6.5	0.21	1.21	2.0	195	205	590	1000 × 950 × 1450	550/550
100					0.29	2.02	1.8	320	240	790	1080 × 1000 × 1600	550/550
125					0.34	2.38	1.7	395	270	950	1100 × 1030 × 1630	660/660
160					0.36	2.83	1.6	460	285	1020	1130 × 1060 × 1630	660/660
200					0.43	3.33	1.5	555	325	1170	1190 × 1060 × 1670	660/660
250					0.51	3.96	1.4	630	340	1340	1260 × 1160 × 1700	660/660
315					0.61	4.77	1.4	720	400	1530	1280 × 1240 × 1790	660/660
400					0.73	5.76	1.3	830	490	1780	1960 × 880 × 1900	820/820
500					0.86	6.93	1.2	930	510	1960	2020 × 940 × 1920	820/820
630					1.04	8.28	1.1	1085	600	2290	2070 × 1010 × 2010	820/820
800					1.23	9.9	1.0	1270	660	2640	2240 × 1040 × 2150	820/820
1000					1.44	12.15	1.0	1495	735	3100	2300 × 1200 × 2150	820/820
1250					1.76	14.67	0.9	1775	830	3630	2450 × 1280 × 2250	1070/1070
1600					2.12	17.55	0.8	2140	935	4235	2220 × 1510 × 2350	1070/1070
2000					2.61	21.5	0.8	2535	1035	4910	2310 × 1740 × 2440	1070/1070
2500					3.15	23.0	0.8	3140	1190	5840	2370 × 1840 × 2490	1070/1070

note: it can supply voltage regulating range of ±5% or ±2 × 2.5% for high-voltage of transformer

## > Tech data of 33kV S9 series power transformer

rated capacity (kVA)	Voltage group		connection method	impedance voltage	Loss		no-load current (%)	weight(kg)			(L × B × H)(mm) outline dimension	gauge vertical/horizontal
	High-voltage	Low-voltage			no-load	load		machine weight	oil weight	gross weight		
200	38.5 36.5 35 33	10.5 10 6.3 6	Yd11	6.5	0.43	3.33	1.5	580	350	1250	1230 × 1200 × 1830	660/660
250					0.52	3.96	1.4	665	380	1475	1280 × 1250 × 1830	660/660
315					0.61	4.77	1.4	785	440	1640	1310 × 1270 × 1920	660/660
400					0.75	5.76	1.3	905	525	1870	1960 × 830 × 2010	820/820
500					0.87	6.93	1.2	1060	590	2225	2050 × 880 × 2080	820/820
630					1.04	8.28	1.1	1220	630	2420	2120 × 1000 × 2130	820/820
800					1.23	9.9	1.0	1350	700	2780	2290 × 1120 × 2150	820/820
1000					1.44	12.15	1.0	1575	775	3290	2380 × 1140 × 2250	820/820
1250					1.76	14.67	0.9	1810	880	3845	2420 × 1220 × 2370	820/820
1600					2.12	17.55	0.8	2190	960	4295	2300 × 1510 × 2420	820/820
2000				2.72	19.35	0.7	2460	1090	4890	2320 × 1750 × 2450	820/820	
2500				3.2	20.7	0.6	3010	1205	5660	2380 × 1840 × 2530	1070/1070	
3150				3.8	24.3	0.56	3785	1500	7600	2550 × 2220 × 2620	1070/1070	
4000				4.52	28.8	0.56	4690	1790	8500	2670 × 2390 × 2670	1070/1070	
5000				5.4	33.03	0.48	5570	2015	9790	2870 × 2450 × 2750	1070/1070	
6300				6.56	36.9	0.48	7380	2460	12620	3100 × 2580 × 2950	1475/1475	
8000				9.0	40.5	0.42	8870	2650	14100	3250 × 2680 × 3150	1475/1475	
10000				10.88	47.7	0.42	10020	2930	16500	3320 × 2720 × 3230	1475/1475	
12500				12.6	56.7	0.4	12880	3710	19780	3410 × 2950 × 3410	1475/1475	
16000				15.2	69.3	0.4	16120	4280	23950	3520 × 3180 × 3570	1475/1475	
20000	18.0	83.7	0.4	18580	5230	29600	3730 × 3560 × 3990	1475/1475				
25000	21.28	99.0	0.32	22970	6370	35350	4110 × 4120 × 4220	2040/2040				
31500	25.28	118.8	0.32	27600	7740	41900	4760 × 4570 × 4390	2040/2040				

note: it can supply voltage regulating range of ±5% or ±2 × 2.5% for high-voltage of transformer

## > Tech data of 33kV SZ9 series on-load regulation power transformer

rated capacity (kVA)	Voltage group		connection method	impedance voltage	Loss		no-load current (%)	weight(kg)			(L × B × H)(mm) outline dimension	gauge vertical/horizontal
	High-voltage	Low-voltage			no-load	load		machine weight	oil weight	gross weight		
800	38.5 36.5 35 33	10.5 10 6.3 6	Yd11	6.5	1.3	10.4	1.0	1350	700	2780	2790 × 1220 × 2150	820/820
1000					1.52	12.8	1.0	1575	775	3290	2830 × 1240 × 2250	820/820
1250					1.86	15.4	0.9	1810	880	3845	2870 × 1310 × 2370	820/820
1600					2.24	18.43	0.8	2190	960	4295	2900 × 1510 × 2420	820/820
2000					2.88	20.25	0.7	2460	1090	4890	2920 × 1750 × 2450	820/820
2500					3.4	21.73	0.6	3010	1205	5660	2980 × 1840 × 2530	1070/1070
3150					4.04	26.01	0.56	3785	1500	7600	3150 × 2220 × 2620	1070/1070
4000					4.84	30.69	0.56	4690	1790	8500	3270 × 2390 × 2670	1070/1070
5000					5.8	36.00	0.48	5570	2015	9790	3470 × 2450 × 2750	1070/1070
6300					7.04	38.7	0.48	7380	2460	12620	3700 × 2580 × 2950	1475/1475
8000				9.84	42.75	0.42	8870	2650	14100	3850 × 2680 × 3150	1475/1475	
10000				11.6	50.58	0.42	10020	2930	16500	3920 × 2720 × 3230	1475/1475	
12500				13.66	59.85	0.4	12880	3710	19780	4010 × 2950 × 3410	1475/1475	
16000				16.46	74.02	0.4	16120	4280	23950	4120 × 3180 × 3570	1475/1475	
20000				19.46	87.14	0.4	18580	5230	29600	4330 × 3560 × 3990	1475/1475	

note: it can supply voltage regulating range of ±3 × 2.5% or ±2 × 2.5% for high-voltage of on-load regulation transformer

# TRIANGLE DIMENSIONAL WOUND CORE POWER TRANSFORMERS

> Infinite Technology  
Perfect Motivity



## > Three-dimensional triangular core power transformer Profile

Power transformers, electricity-based products is extremely wide application. For decades, China and around the world have longterm extension of Insert-type power transformers, its performance nas not been fundamentally improved. The Golden Triangle company developed S13-M-RL, S11-M-RL series three-dimensional triangular core power transformer which is the core power transformer revolutionary generation, which is more reasonable, better performance, energy-sawng and a new energy-efficient transformers.

With the second urban and rural power grid construction and launched transformation of the power how to-mprove the tech nological content of power transformer to better implemtent the national energy-saving and environmental protection policies and actively promote energy saving, low consumption, environmental protection and application of new products has become an important issue. Three-dimensional core power transformer produced by Golden Triangle is a kind of traditional materials, bul much quieter reducing in the loss and saving materials in full compliance with inemational and domestic low-carbon econo my and energy-saving emission reduction policies and guidelines. The product has been incorporated into the national energy efficiency power plant the first batch of selected energy-saving products; national resource conservation and environmental protection of the central budget investment projects; State Economic and Trade Commission, the original Guodian Company has issued a document to promote the energysaving products; Shen power transformer will promote the iron triangle as a plug-piece core transformers, flat roll core power transformer as the replacement products.

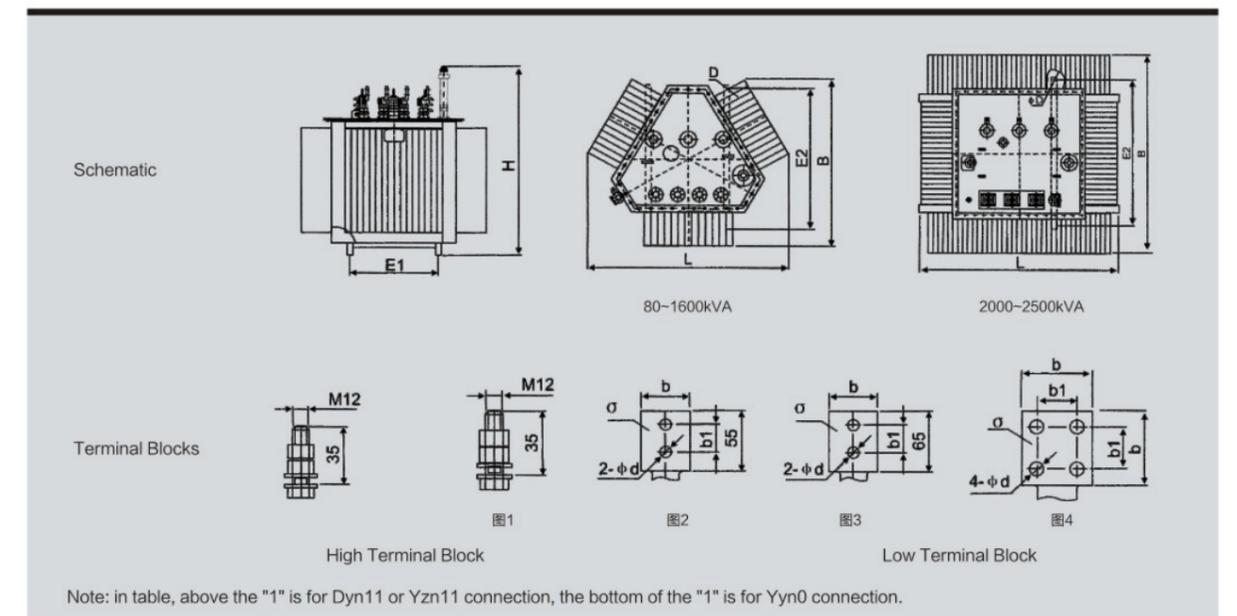
## > Different sort of "core"

Triangular core without cutting, and no punching, eliminating the traditional transformer horizontal, vertical joints, reducing the reluctance; cross section appear a circular core fill factor is the largest, triangle threekimensional structure to make it equal to three-phase magnetic circuit, and the shortest. Realizing the ideal transformer core structure. And the shortest. Realizing the ideal transformer core structure.

Triangular three-dimensional core is the continuous steel strip from thenarrow to width, and then from wide to narrow First winding three semicircular cross-section inner core, then three-dimensional inner rcores assembled together, and constitute the three a core pillar of the ttriangular cross-section similar to a circular three-dimensional core. Completely symmetrical three-phase equivalenmagnetic circuit, shortening the iron yoke, the core columns fill factor high its structure is recognized as the ideal structure of power transformers, which is flat roll core can not match, the tests showed a triangle of three-dimensional volume core power transformer is More than flat items of test data viume core power transformer triangular three-dimensional core structure is a major breakthrough and leap for he power transformer core. Lts birth known as "core power transformers revolution." Therefore. three-dimensional volume triangular core power transformer is a recognized as energysaving, enviro nmental protection ultra-quiet green power transformer.

## > S13-M.RL-80~2500/10 new energy-saving three-dimensional triangular wound core transformer

Capacity(kVA)	80	100	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	
Voltage Combination	HV	10 ± 5%										10 ± 2 × 2.5%				
	LV	0.4														
No-load loss(W)	130	150	200	240	290	340	410	480	570	700	830	970	1170	1540	1810	
Load loss(W)	1310/	1580/	2310/	2730/	3200/	3830/	4520/	5410/	6200	7500	10300	12000	14500	18270	21210	
	1250	1500	2200	2600	3050	3650	4300	5100								
No-load Current(%)	0.22	0.21	0.19	0.18	0.17	0.16	0.16	0.15	0.15	0.14	0.13	0.12	0.11	0.1	0.1	
Short-circuit impedance(%)	4	4	4	4	4	4	4	4	4.5	4.5	4.5	4.5	4.5	4.5	5.5	
body weight(kg)	313	356	484	556	655	756	896	1044	1352	1613	1703	2065	2592	3024	3607	
Oil Weight(kg)	146	148	185	228	263	277	323	433	414	496	656	694	1045	1295	1605	
Total weight(kg)	553	607	797	937	1091	1239	1437	1872	2085	2481	3000	3404	4459	5404	6643	
Dimensions(mm)	L	1096	1096	1080	1109	1196	1275	1306	1483	1395	1503	1717	1728	1880	1740	1840
	B	722	722	935	960	1036	1104	1131	1284	1210	1302	1487	1497	1628	1690	1780
	H	1314	1334	1411	1444	1457	1467	1542	1592	1649	1711	1726	1836	1938	1970	2090
Installation dimensions(mm)	E1	380	380	400	400	400	550	550	550	550	550	550	550	660	660	
	E2	550	550	660	660	660	820	820	820	820	820	1070	1070	1300	1300	
	D	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
low-voltage phase line Terminal(mm)	Graph	1	2	2	3	3	3	3	4	4	4	4	4	4	4	
	b	38	38	55	55	55	55	80	80	80	100	100	120	120	155	
	b1	24	24	30	30	30	30	45	45	45	50	50	60	60	50	
	d	12.5	12.5	12.5	12.5	12.5	12.5	14.5	14.5	14.5	18	18	18	18	18	
	σ	6.5	6.5	6.5	9	9	9	15	15	15	18	18	18	18	18	
Low-voltage 0-line Terminal(mm)	Graph	2	2	3	3	3	3	4	4	4	4	4	4	4	4	
	b	38	38	55	55	55	55	80	80	80	80	80	100	100	100	
	b1	24	24	30	30	30	30	45	45	45	45	45	50	50	50	
	d	12.5	12.5	12.5	12.5	12.5	12.5	14.5	14.5	14.5	14.5	14.5	18	18	18	
	σ	6.5	6.5	6.5	9	9	9	15	15	15	15	15	18	18	18	

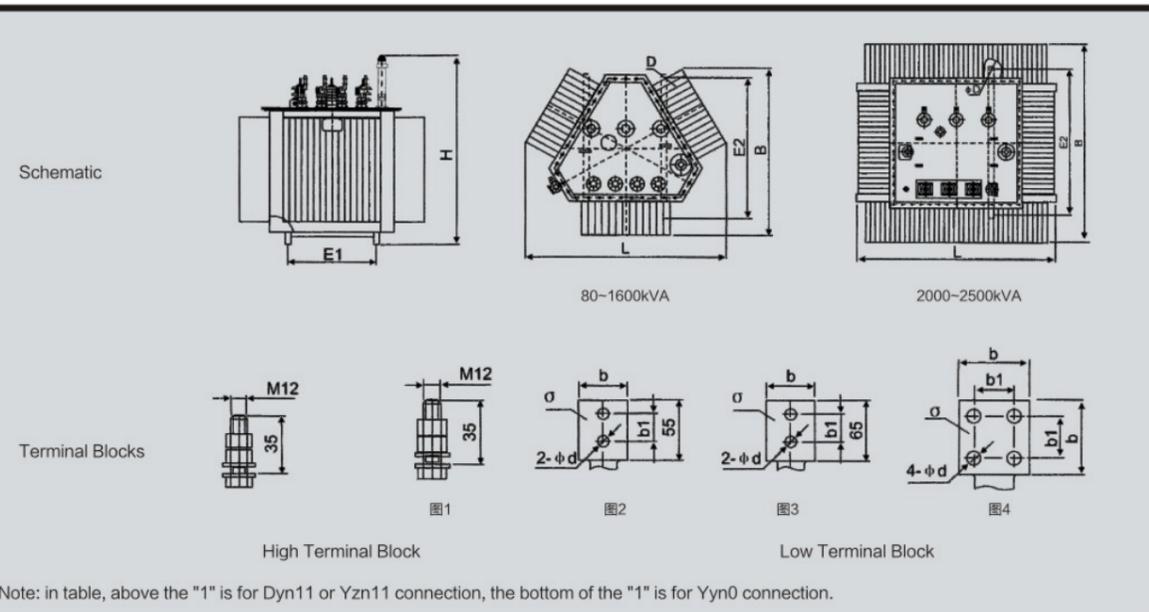
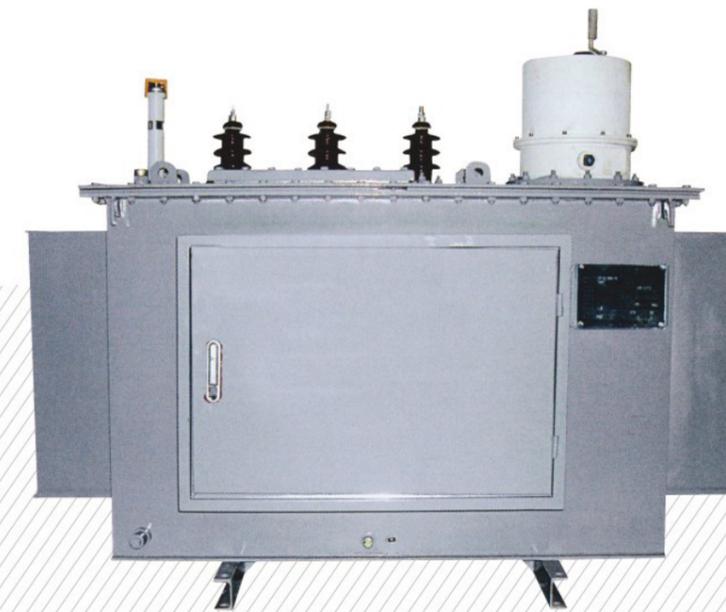


> S13-M.RL-80~2500/10~20 new energy-saving three-dimensional triangular wound core transformer

Capacity(kVA)	80	100	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	
Voltage Combination	HV	10 ± 5%								10 ± 2 × 2.5%						
	LV	0.4														
No-load loss(W)	130	150	200	240	290	340	410	480	570	700	830	970	1170	1540	1810	
Load loss(W)	1310/	1580/	2310/	2730/	3200/	3830/	4520/	5410/	6200	7500	10300	12000	14500	18270	21210	
	1250	1500	2200	2600	3050	3650	4300	5100								
No-load Current(%)	0.22	0.21	0.19	0.18	0.17	0.16	0.16	0.15	0.15	0.14	0.13	0.12	0.11	0.1	0.1	
Short-circuit impedance(%)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	6	6	6	6	6	6	6	
body weight(kg)	313	356	484	556	655	756	896	1044	1352	1613	1703	2065	2592	3024	3607	
Oil Weight(kg)	146	148	185	228	263	277	323	433	414	496	656	694	1045	1295	1605	
Total weight(kg)	553	607	797	937	1091	1239	1437	1872	2085	2481	3000	3404	4459	5404	6643	
Dimensions(mm)	L	1096	1096	1080	1109	1196	1275	1306	1483	1395	1503	1717	1728	1880	1740	1840
	B	722	722	935	960	1036	1104	1131	1284	1210	1302	1487	1497	1628	1690	1780
	H	1314	1334	1411	1444	1457	1467	1542	1592	1649	1711	1726	1836	1938	1970	2090
Installation dimensions(mm)	E1	380	380	400	400	400	550	550	550	550	550	550	550	660	660	
	E2	550	550	660	660	660	820	820	820	820	820	1070	1070	1300	1300	
	D	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
low-voltage phase line Terminal(mm)	Graph	1	2	2	3	3	3	3	4	4	4	4	4	4	4	4
	b		38	38	55	55	55	55	80	80	80	100	100	120	120	155
	b1		24	24	30	30	30	30	45	45	45	50	50	60	60	50
	d		12.5	12.5	12.5	12.5	12.5	12.5	14.5	14.5	14.5	18	18	18	18	19
	σ		6.5	6.5	6.5	9	9	9	15	15	15	18	18	18	18	15
Low-voltage 0-line Terminal(mm)	Graph		2	2	3	3	3	3	4	4	4	4	4	4	4	4
	b		38	38	55	55	55	55	80	80	80	80	80	100	100	100
	b1		24	24	30	30	30	30	45	45	45	45	45	50	50	50
	d		12.5	12.5	12.5	12.5	12.5	12.5	14.5	14.5	14.5	14.5	14.5	18	18	18
	σ		6.5	6.5	6.5	9	9	9	15	15	15	15	15	18	18	18

> Infinite Technology  
Perfect Motivity

## TRANSFORMER LOAD TRANSFER CAPACITY





## Zhejiang SeaTrust Power Co., Ltd

### > Features of products

S11-M-ZT-type load transfer capacity transformer is our independent research and development of new products. The product my company received two patents. The product is a new technology energy saving transformer, the rated capacity and two with the size of the rated capacity of two operation modes can be automatically convened, it solves the 10kV distribution network of seasonal changes in the ratio between load transformer loss caused big problems to overcome the no-load transformer power transfer capacity caused by manually adjusting operation and maintenance capacity problems. With S11-M-ZT-type variable-load transfer capacity compared to two Dutch Lady S11 type transformers, the first lower cost of equipment purchase and installation costs, and reduced floor space, reduce construction period, operation and maintenance workload decreased. Also S11-M-ZT-type transformer load transfer capacity compared with the S11-type ordinary transformer, transformer load loss decreased 50%. In addition to the seasonal load changes applied to relatively large range of rural power grids, also applies to significant load changes day and night urban commercial districts, development zones, industrial zones, the radio area and oil.

### > Reliable structure

With the fundament of traditional frames and proved techniques, our company made a great improvement, for instance:

we employ spiral loops with longitudinal oil path to produce a better interior cooling effect;

we improve the effectual support of the loop's terminal face to strengthen the anti-short circuit electricity capability;

we employ new suspending structure and instrument-positioning frames to guarantee that the long distance transport and movement will be more reliable.

In addition to those above, we have lots of novel and dependable frames that wait to serve you.

We are sure that, when you choose more advanced transformers, you will enjoy greater technique intensity.

### > Excellent materials

Because we use oxygen-free copper lines of lower resistivity, which will become smoother and burr-free after series of additional surface treatment. so the load loss of our transformer is lower and the electric performance is better.

We use high-quality silicon-steel plates which are of lower unit loss, and the no-load of the transformers is lower.

We use high quality wooden laminating insulation pieces, which won't split or move even under the influence of short circuit.

We use thoroughly filtrated transformer oil containing less water, gas and impurities, which makes our transformers work better

We use high quality rubber sealing material, which can prevent the transformers from aging or leakage.

All raw materials has passed the quality testing, and all the raw material factories has pass through the national standard ISO9000 inspection.



## Zhejiang SeaTrust Power Co., Ltd

### > Good Technology and economic performance

The product can significantly reduce the transformer load loss 50-60%

Reduce reactive power consumption 20-30%

According to the National Power Research institute estimates:

If the technology used in rural comprehensive network, annual savings of 10 billion kWh of electricity;

Annual savings of 3 million tons of standard coal equivalent tons of emissions CO2800.

The project has been attached great importance to the national grid, into national Electric Power Research Institute to undertake the national 11 Five power-saving scheme, incorporated into the construction of new countryside construction of the power specification.

### > Sealed Tank(M)

The "M" in S11(M) stands for omniseal structure that the oil tank employed. Compared with common oil-immersed transformer, omniseal oil-immersed transformer taking off oil storage cabinet adopts wing-like corrugation for replacing oil tube as component of heat dispersion. The corrugated oil tank which is made up of high-quality cool-rolled plates is produced on the special produce lines. The wing-like corrugation will expand and compresses that the volume of transformer dose, so that the transformer is separated from the atmosphere and can prevent or slower deterioration of oil and breathing of insulation. All these ensure the reliability of operation and without maintenance.

After the treatment of deoiling, derusting and parkerizing, the surface of corrugated oil tank is coated with paint which can provide rain-proofing, damp-proofing and salt haze-proofing. It is suitable for the use in the environment, such as metallurgy, petrochemical industry and mining, etc.

### > Transformer standards

GB 1094.1-1996 GB 1094.2-1996 GB 1094.3-2003 GB 1094.1 GB 1094.5-2003  
JB/T10088-2004 GB/T10237-1988 GB/T6451-2008 GB/T7595-1987 JB/T3837-1998  
JB/T10778-2007

### > Transformer service condition

Altitude less than 1000M.

Highest temperature +40°C

Warmest month average temperature +30°C

The highest annual average air temperature +20°C

Outdoor minimum temperature of -25°C

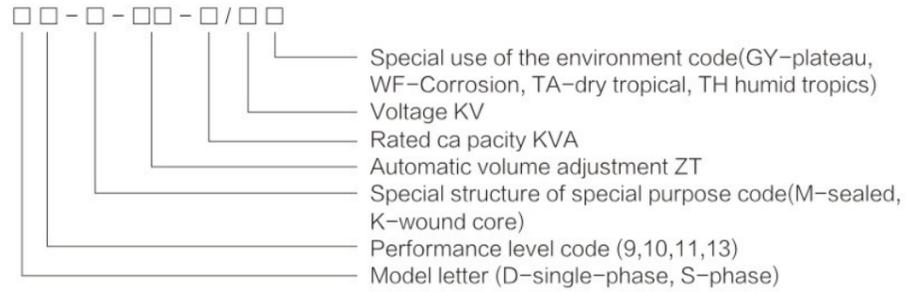
Special use transformer

Elevation of more than 1000M

Highest temperature +40°C

Minimum temperature of -45°C (specify when ordering)

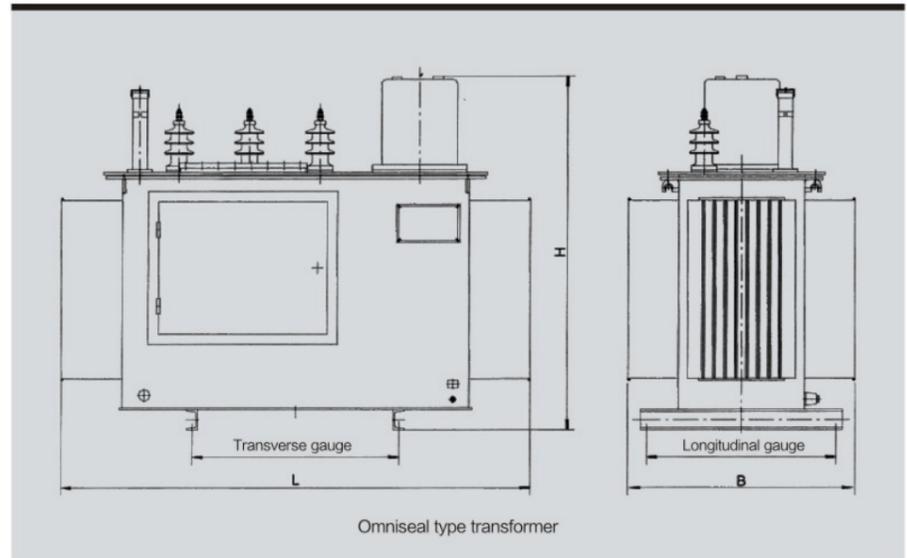
## > Transformer Type Meaning



## > S11-M-ZT load transfer capacity transformer parameters

rated capacity (kVA)	Voltage group		connection method	impedance voltage	Loss		no-load current (%)	weight(kg)			(L × B × H)(mm) outline dimension	gauge vertical/horizontal			
	High-voltage	Low-voltage			no-load	load		omachine weight	oil weight	gross weight					
630/200	10	0.4	Yyno	4.5	810(340)	8030(3060)	1.3(1.8)	1455	600	2600	2040 × 1150 × 1470	820 × 820			
500/160					680(280)	6620(2600)	1.4(1.9)	1150	495	2130	1925 × 1090 × 1455	820 × 820			
400/125					570(240)	5480(2130)	1.5(2)	970	415	1860	1870 × 1060 × 1450	820 × 820			
315/100					480(220)	4540(1770)	1.6(2.1)	860	385	1540	1780 × 1005 × 1315	820 × 820			
250/80					11	Dyn11	4	400(180)	3780(1480)	1.7(2.2)	680	340	1390	1705 × 980 × 1270	820 × 750
200/63								340(150)	3215(1230)	1.8(2.4)	585	310	1235	1685 × 960 × 1240	820 × 750
160/50								280(130)	2590(1030)	1.9(2.5)	505	290	1090	1650 × 940 × 1200	820 × 750
100/30								200(100)	1580(630)	2.1(2.8)	360	240	870	1540 × 885 × 1150	820 × 750

## > Transformer special service conditions



# DRY TYPE TRANSFORMER

> Infinite Technology  
Perfect Motivity





## Zhejiang SeaTrust Power Co., Ltd

### > Features of Products

With the advanced technology brought in from overseas, we developed SC9, SCB9 series and SC10, SCB10 series padding thin-insulation dry-type distributing transformer whose winding is sealed up with epoxy, therefore the resin insulating dry-type transformer is flame-retardant, explosion-proof, free from maintenance and pollution, and it is compacted and can go deep into load center. Besides, with scientific and reasonable design and coating craftwork, it has advantages of low partial discharge capacity, low noise, good heat dispersion and it can run over a long time with 40% rated load in the circumstance of cold wind. It applies intelligent thermal controller and has the functions that it will alarm when there is fault or the temperature is exceeded and switch off as well as the function of "black box". It can be monitored and controlled by connecting it to the computer through its RS485 serial interface.

Therefore, it is widely used in the places such as hotel, restaurant, airport, power plant, hospital, skyscraper, shopping center, and residential areas and other adverse environments like subways, smelt and power plant, ship, offshore drilling platform, etc.

### > Core

The iron core adopts imported high-quality cold-rolled silicon-steel plate a three steps fully-inclined echelon joint form. The colligation of the core adopts the F grade non-latitude belt and its winding enveloped by epoxy resin cast. The non-load loss and non-load current, core noise are reduced. The outlook of the product is improved by special treatment of the surface of fasteners and clamp pieces.

### > High-voltage winding

High-voltage winding applies vacuum pouring of padding epoxy resin which, at high level, reduces partial discharge capacity and elevates the electric strength of coils. The inside and outside of the winding is buildup with glass fiber grid overlay which strengthens the mechanical robustness and improves the resistance of short-circuits and ensures the coils will never crack.

### > Low-voltage winding

Low-voltage winding applies the structure that winded by copper foil which solves the problem that the axle would point to the helix angle when winds and make the ampere-turn of winding distribute evenly. Meanwhile, the coils apply axial fan which improves the heat dispersion. Between the layers of winding, it applies DMD epoxy resin preliminary dip cloth and makes it whole solidification forming.

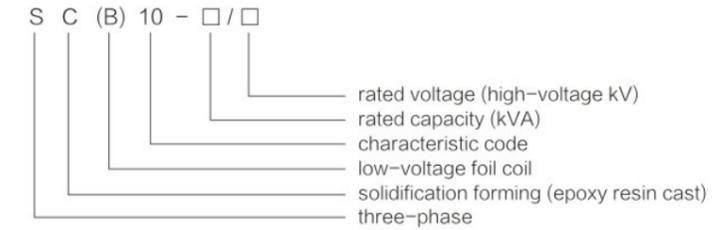
### > Production technology

The coil can be wound on the high-accuracy winding machine, the low-winding adoption the structure that the winding by copper foil. Firstly, to cast glass fiber around the external and internal of the windings, there designed to be armed air passage for transformer of large capacity. Afterward, to vacuum dry it. The whole casting and solidifying process completely to carry on an operation according to the craft request and see a circumstance to carry on adjustment. The precise process ensures free bubble and free hole of winding. make the transformer for making into attain superior quality circulate result.



## Zhejiang SeaTrust Power Co., Ltd

### > Transformer Type Meaning



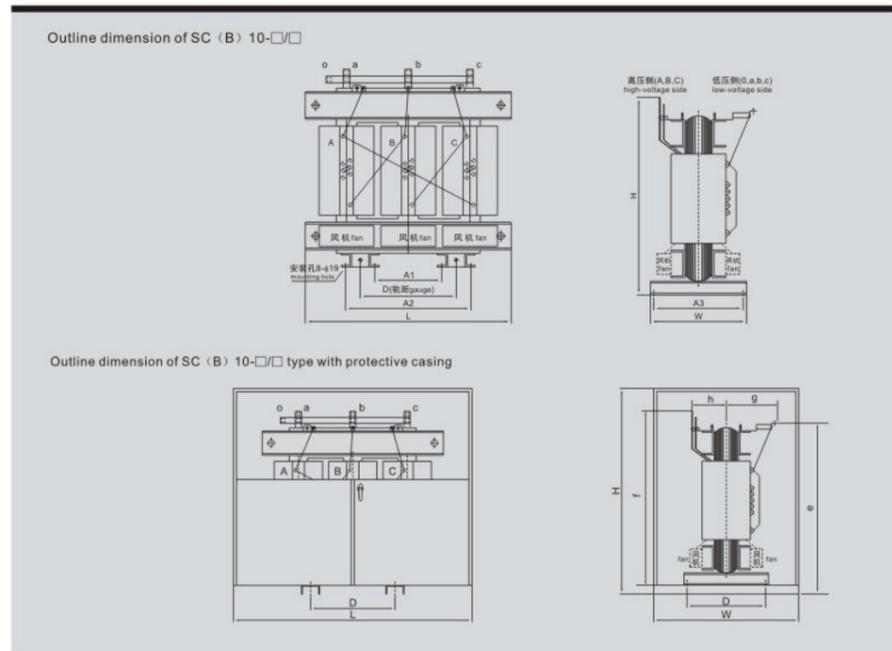
### > Product standard

GB/T10228-1997 GB6450-1986 JB/T10088-2004 GB4208-1993  
 Rated high-voltage: 10(11, 10.5, 6.6, 6.3, 6)kV  
 Rated low-voltage: 0.4kV  
 Connection group: Dyn11, Yyn0  
 Tapping range of high-voltage: ± 5%, ± 2 × 2.5%  
 Insulating level: LI 75AC35/LI 0AC5  
 Frequency: 50Hz

### > Tech data of 10KV SC(B)10 series resin insulation dry-type power transformer

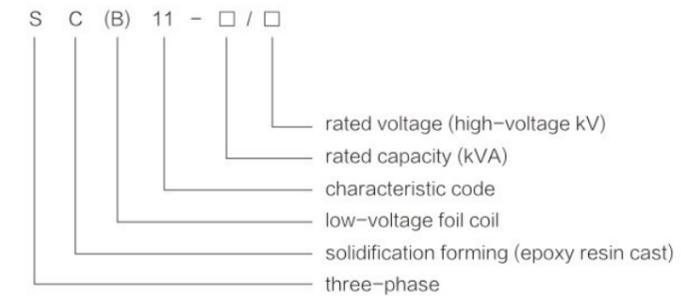
rated capacity (kVA)	Voltage group (kV)	connection method	impedance voltage	Loss		no-load current (%)	insulating level	weight(kg)
				no-load	load			
10	High pressure	Dyn11 or Yun0	4	0.135	0.305	4.0	F/F	130
20				0.170	0.595	3.5		170
30				0.195	0.705	2.6		330
50				0.270	0.995	2.2		380
63				0.330	1.210	2.2		440
80				0.370	1.380	2.2		510
100				0.400	1.570	2.0		590
125				0.470	1.850	1.8		650
160				0.545	2.130	1.8		780
200				0.625	2.530	1.6		930
250				0.720	2.760	1.6		1040
315				0.880	3.470	1.4		1180
400				0.975	3.990	1.4		1450
500				1.160	4.880	1.4		1630
630				1.345	5.870	1.2		1900
630				Low pressure				1.300
800	1.520	6.955	1.2				2290	
1000	1.770	8.130	1.1				2700	
1250	2.090	9.690	1.1				3130	
1600	2.450	11.73	1.1				3740	
2000	3.320	14.45	1.0				4150	
2500	4.000	17.17	1.0				4810	
3150	5.140	22.50	0.8				5800	
4000	5.960	27.00	0.8				7100	

> Outline dimension



rated capacity (kVA)	outline dimension(mm)							outline dimension with protective casing(mm)							
	L	W	H	D	A1	A2	A3	L	W	H	D	e	f	g	h
10	600	450	490	400	400	400	400	900	800	850	400	470	490	240	180
20	600	450	560	400	400	400	400	900	800	850	400	540	560	240	180
30	620	450	650	400	400	400	400	1050	900	1000	400	620	650	220	180
50	620	450	750	400	400	400	400	1050	900	1050	400	700	750	220	180
63	750	500	760	400	400	400	450	1050	1000	1150	400	710	760	240	185
80	750	500	760	400	400	400	450	1100	1000	1150	400	710	760	250	195
100	750	500	890	400	400	400	450	1150	1100	1250	400	800	890	250	195
125	1060	600	1020	550	550	550	550	1350	1050	1200	550	970	1020	315	260
160	1060	600	1060	550	550	550	550	1400	1050	1250	550	1020	1060	315	260
200	1060	710	1120	660	660	660	660	1450	1100	1350	660	1060	1120	320	265
250	1100	710	1140	660	660	660	660	1500	1150	1400	660	1110	1140	320	275
315	1150	710	1195	660	660	660	660	1500	1200	1450	660	1150	1195	330	280
400	1260	870	1285	660	660	660	660	1600	1250	1600	660	1200	1285	360	320
500	1290	870	1355	820	820	820	820	1600	1300	1650	820	1260	1355	370	330
630	1450	870	1420	820	820	820	820	1800	1300	1700	820	1350	1415	360	320
630(Impedance6%)	1500	870	1370	820	820	820	820	1850	1300	1650	820	1300	1370	350	310
800	1550	870	1570	820	820	820	820	1900	1300	1800	820	1480	1570	375	330
1000	1600	870	1665	820	820	820	820	1950	1300	1950	820	1520	1665	370	325
1250	1680	1120	1765	1070	1070	1070	1070	2050	1350	2000	1070	1600	1765	385	340
1600	1750	1120	1860	1070	1070	1070	1070	2100	1400	2100	1070	1690	1860	410	370
2000	1770	1120	1865	1070	1070	1070	1070	2150	1500	2100	1070	1700	1865	430	405
2500	1870	1120	1950	1070	1070	1070	1070	2200	1500	2200	1070	1720	1950	440	420
3150	1950	1120	1900	1070	1070	1070	1070	2350	1600	2250	1070	1750	1980	455	435
4000	2100	1120	2050	1070	1070	1070	1070	2400	1600	2300	1070	1850	2050	470	450

> Transformer Type Meaning



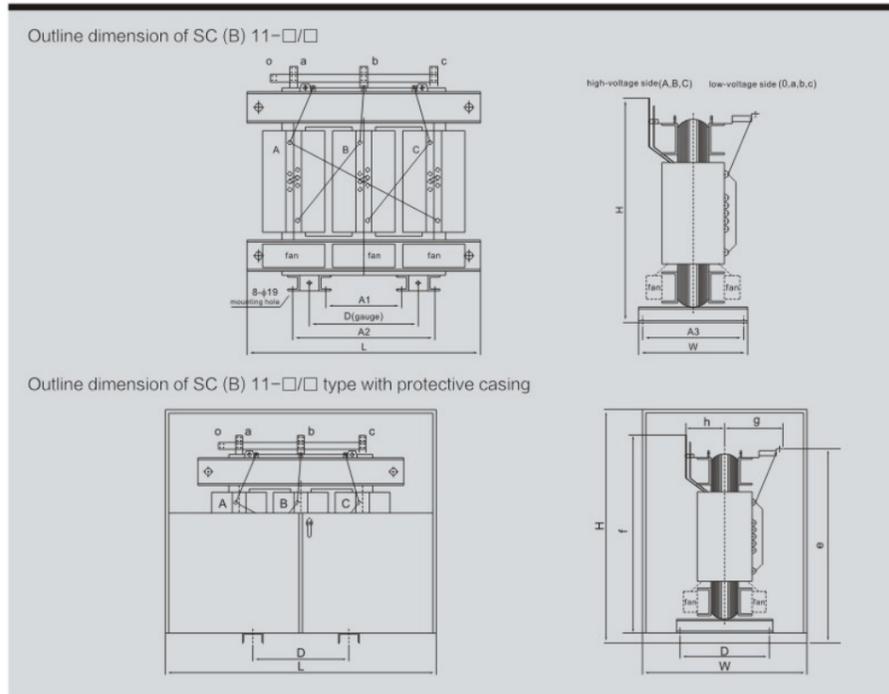
> Product standard

GB/T10228-1997 GB6450-1986 JB/T10088-2004 GB4208-1993  
 Rated high-voltage: 10(11, 10.5, 6.6, 6.3, 6)kV  
 Rated low-voltage: 0.4kV  
 Connection group: Dyn11, Yyn0  
 Tapping range of high-voltage: ± 5%, ± 2 × 2.5%  
 Insulating level: LI 75AC35/LI 0AC5  
 Frequency: 50Hz

> Tech data of 11kV SC(B)11series resin insulation dry-type power transformer

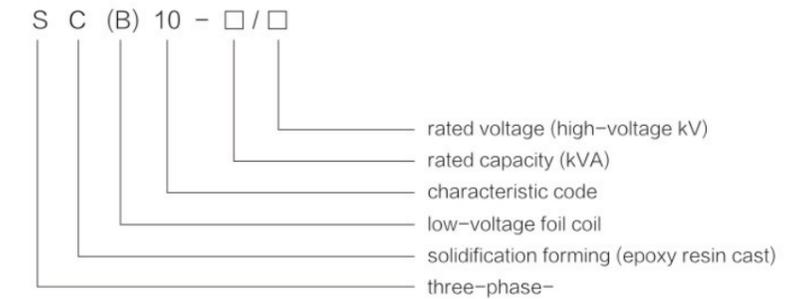
rated capacity (kVA)	Voltage group (kV)	Connection method	dissipation (kW)		no-load current (%)	impedance voltage (%)	insulating level	weight (kg)
			no-load	(120°C) load				
10	High pressure	Dyn11 or Yyn0	0.121	0.290	3.8	4	F/F	130
20			0.153	0.565	3.3			170
30			0.176	0.670	2.5			330
50			0.243	0.896	2.0			380
63			0.314	1.150	2.0			440
80			0.333	1.311	2.0			510
100			0.360	1.492	1.9			590
125			0.423	1.758	1.7			650
160			0.491	2.023	1.7			780
200			0.563	2.403	1.5			930
250			0.648	2.622	1.5			1040
315			0.792	3.297	1.3			1180
400			0.878	3.791	1.3			1450
500			1.044	4.636	1.3			1630
630			1.211	5.577	1.1			1900
630			1.117	5.662	1.1			1900
800	1.444	6.607	1.1	2290				
1000	1.593	7.724	1.0	2700				
1250	1.881	9.206	1.0	3130				
1600	2.205	11.14	1.0	3740				
2000	2.988	13.73	0.9	4150				
2500	3.600	16.31	0.8	4810				
3150	4.626	21.38	0.7	5800				
4000	5.364	25.65	0.7	7100				

## > Transformer special service conditions



rated capacity (kVA)	outline dimension(mm)							outline dimension with protective casing(mm)							
	L	W	H	D	A1	A2	A3	L	W	H	D	e	f	g	h
10	600	450	490	400	400	400	400	900	800	850	400	470	490	240	180
20	600	450	560	400	400	400	400	900	800	850	400	540	560	240	180
30	620	450	650	400	400	400	400	1050	900	1000	400	620	650	220	180
50	620	450	750	400	400	400	400	1050	900	1050	400	700	750	220	180
63	750	500	760	400	400	400	400	1050	1000	1150	400	710	760	240	185
80	750	500	760	400	400	400	400	1100	1000	1150	400	710	760	250	195
100	750	500	890	400	400	400	400	1150	1100	1250	400	800	890	250	195
125	1060	600	1020	550	550	550	550	1350	1050	1200	550	970	1020	315	260
160	1060	600	1060	550	550	550	550	1400	1050	1250	550	1020	1060	315	260
200	1060	710	1120	660	660	660	660	1450	1100	1350	660	1060	1120	320	265
250	1100	710	1140	660	660	660	660	1500	1150	1400	660	1110	1140	320	275
315	1150	710	1195	660	660	660	660	1500	1200	1450	660	1150	1195	330	280
400	1260	870	1285	660	660	660	660	1600	1250	1600	660	1200	1285	360	320
500	1290	870	1355	820	820	820	820	1600	1300	1650	820	1260	1355	370	330
630	1450	870	1420	820	820	820	820	1800	1300	1700	820	1350	1415	360	320
630(impedance6%)	1500	870	1370	820	820	820	820	1850	1300	1650	820	1300	1370	350	310
800	1550	870	1570	820	820	820	820	1900	1300	1800	820	1480	1570	375	330
1000	1600	870	1665	820	820	820	820	1950	1300	1950	820	1520	1665	370	325
1250	1680	1120	1765	1070	1070	1070	1070	2050	1350	2000	1070	1600	1765	385	340
1600	1750	1120	1860	1070	1070	1070	1070	2100	140	2100	1070	1690	1860	410	370
2000	1770	1120	1865	1070	1070	1070	1070	2150	1500	2100	1070	1700	1865	430	405
2500	1870	1120	1950	1070	1070	1070	1070	2200	1500	2200	1070	1720	1950	440	420
3150	1950	1120	1900	1070	1070	1070	1070	2350	1600	2250	1070	1750	1980	455	435
4000	2100	1120	2050	1070	1070	1070	1070	2400	1600	2300	1070	1850	2050	470	450

## > Transformer Type Meaning



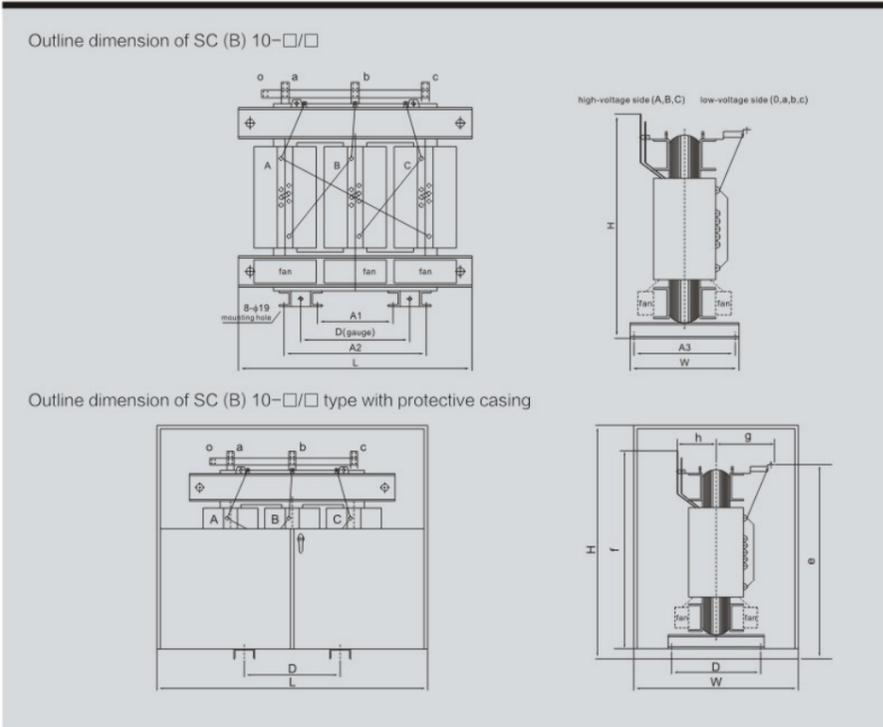
## > Product standard

GB/T10228-1997 GB6450-1986 JB/T10088-2004 GB4208-1993  
 Rated high-voltage: 10(11, 10.5, 6.6, 6.3, 6)kV  
 Rated low-voltage: 0.4kV  
 Connection group: Dyn11 or Yyn0  
 Tapping range of high-voltage: ± 5% or ± 2 × 2.5%  
 Insulating level: LI 75AC35/LI 0AC5  
 Frequency: 50Hz

## > Tech data of 33kV SC(B)10 series resin insulation dry-type power transformer

rated capacity (kVA)	Voltage group (kV)	Connection method	dissipation (kW)		no-load current (%)	Impedance voltage (%)	Insulating level	weight (kg)
			no-load	(120°C) load				
50	High pressure 35-38.5 Low pressure 0.4	Dyn11 or Yyn0	0.500	1.500	2.8	6	F/F	610
100			0.700	2.200	2.4			915
160			0.880	2.960	1.8			1200
200			0.980	3.500	1.8			1400
250			1.100	4.000	1.6			1600
315			1.310	4.750	1.6			1800
400			1.530	5.700	1.4			2200
500			1.800	7.000	1.4			2500
630			2.070	8.100	1.2			2900
800			2.400	9.600	1.2			3500
1000			2.700	11.00	1.0			4200
1250			3.150	13.40	0.9			4900
1600			3.600	16.30	0.9			5800
2000			4.250	19.20	0.9			6600
2500			4.950	23.00	0.9			7500

> Transformer special service conditions



rated capacity (kVA)	outline dimension(mm)							outline dimension with protective casing(mm)							
	L	W	H	D	A1	A2	A3	L	W	H	D	e	f	g	h
50	1000	870	1160	550	550	550	820	1700	1400	1300	550	1120	1160	580	220
100	1100	870	1350	550	550	550	820	1800	1400	1500	550	1300	1350	580	220
160	1500	870	1380	820	820	820	820	2200	1500	1600	820	1320	1380	515	260
200	1530	870	1420	820	820	820	820	2250	1500	1650	820	1400	1420	520	265
250	1550	870	1450	820	820	820	820	2300	1500	1700	820	1410	1450	520	275
315	1580	870	1550	820	820	820	820	2300	1600	1800	820	1520	1550	530	280
400	1740	870	1710	820	820	820	820	2450	1600	1950	820	1650	1710	560	320
500	1740	870	1900	820	820	820	820	2450	1600	2100	820	1800	1900	570	330
630	1860	870	1980	820	820	820	820	2550	1700	2250	820	1900	1980	560	320
800	1860	870	2180	820	820	820	820	2550	1700	2400	820	2100	2180	575	330
1000	1900	1120	2265	1070	1070	1070	1070	2600	1800	2500	1070	2125	2265	570	325
1250	1950	1120	2355	1070	1070	1070	1070	2650	1800	2600	1070	2285	2355	585	340
1600	2000	1120	2380	1070	1070	1070	1070	2700	1800	2650	1070	2300	2380	610	370
2000	2100	1120	2480	1070	1070	1070	1070	2800	1800	2700	1070	2380	2480	630	405
2500	2200	1120	2550	1070	1070	1070	1070	2900	1800	2800	1070	2420	2550	640	420

# ENVIRONMENTAL PROTECTION DRY-TYPE POWER TRANSFORMER

> Infinite Technology  
Perfect Motivity



### > Features of products

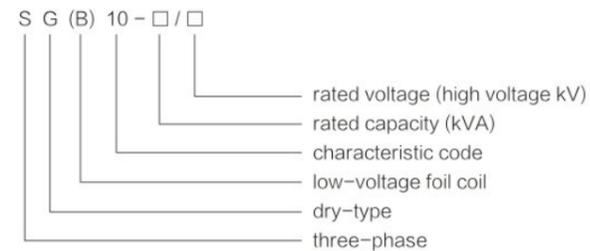
SG(B) 10 type—this series Dry-type Distributing Transformer has strong withstanding of thermal shock, overload capability. Beside, it has many good points such as flame-retardant, low-loss, and low partial discharge capacity, low noise, no harmful gas and no pollution. It is insensitive of humidity and dust, compacted, no crack and so it is easy to be maintained. Therefore, it is suitable for the using in the adverse circumstances of high requirement for fire protection, high degree of load fluctuation and dirty, moist, such as airport, power plant, metallurgy, hospital, skyscraper, shopping center, and residential areas and other special environments like oil, chemical industry, nuclear power plant, nuke, etc.

### > Shield Cover

We could provide the shell of protective grade IP20 and IP23. if it is required by the users.

IP20 configuration of transformer prevent foreign matter whose diameter is bigger than 12mm from entering into the casing; and IP23 configuration can also prevent water whole angle to vertical line is less than 60—from drenching into casing. To ensure the ventilation of cold air, the base plate and the top of the shell are made up of mesh plates.

### > Type Meaning



### > Using Condition

Basis 1.2 item of GB 6450-1986, 《Dry Power Transformer》, When environment the tallest temperature >40°C, the altitude >1000 ms, carry on correction according to the country relevant standard. Put forward while requesting customer indent.

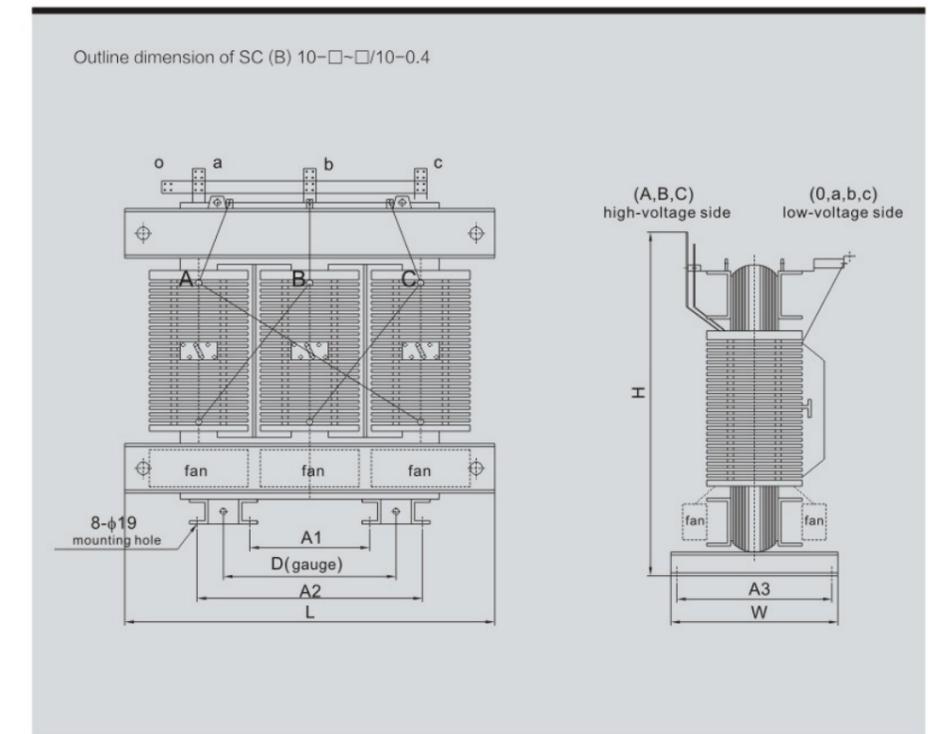
### > Product standard

- GB1094.11-2007. Dry power transformer
- GB/T 10228-1997. the technical Parameter and requirement for dry power transformer
- GB/T 17211-1998. load guideline for dry power transformer
- JB/T 10088-2001, 6~220kV grade power transformer sound level
- GB 4208-1993, case shell protection grade (IP code)

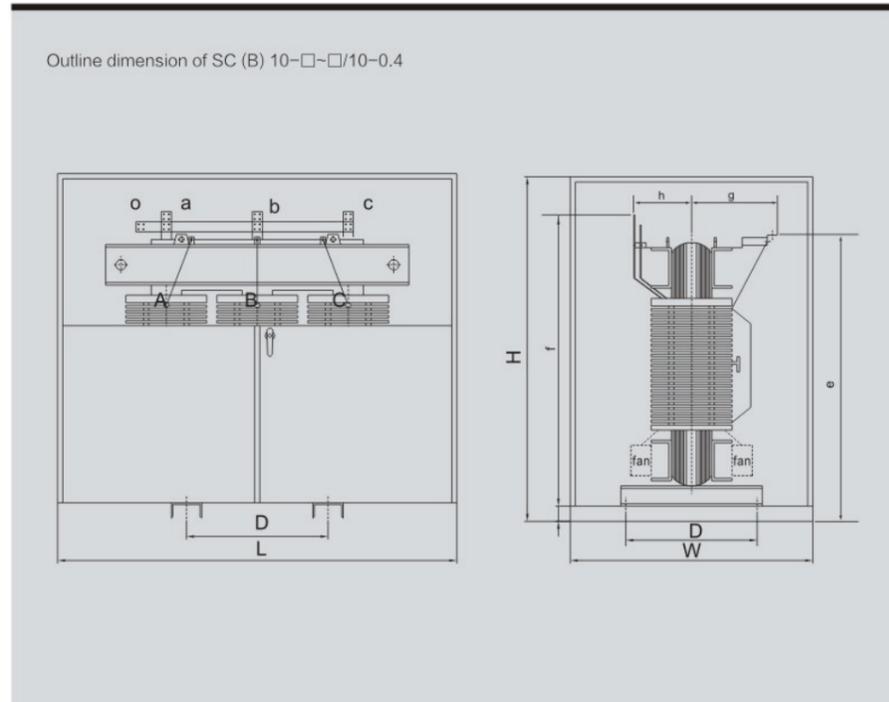
### > Tech data of 10kV SG10 Series H-grade insulation dry-type power transformer

rated capacity (kVA)	Voltage group (kV)	Connection method	dissipation (kW)		no-load current (%)	impedance voltage (%)	insulating level	weight (kg)
			no-load	(120°C) load				
80	High pressure	Dyn11 or Yyn0	0.370	1.75	2.2	4	F/F	490
100			0.400	2.17	2.0			520
125			0.470	2.59	1.8			650
160			0.545	3.10	1.8			740
200			0.625	3.97	1.6			850
250			0.720	4.68	1.6			1005
315			0.880	5.61	1.4			1270
400			0.975	6.63	1.4			1470
500			1.160	7.95	1.4			1750
630			1.300	9.78	1.2			1900
800	Low pressure		1.520	11.56	1.2	6		2290
1000			1.770	13.35	1.1			2700
1250			2.090	15.64	1.1			3130
1600			2.450	18.11	1.1			3740
2000			3.320	21.25	1.0			4500
2500			4.000	24.74	1.0			5340

### > Dimensions

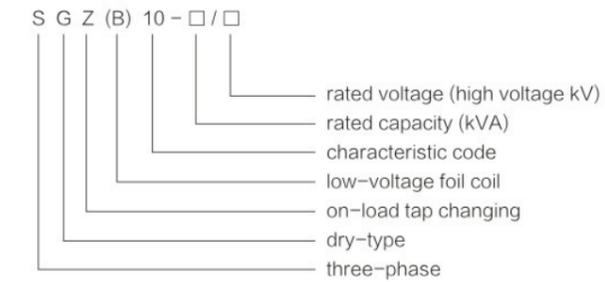


> Dimensions



rated capacity (kVA)	outline dimension(mm)							outline dimension with protective casing(mm)							
	L	W	H	D	A1	A2	A3	L	W	H	D	e	f	g	h
80	950	550	910	550	550	550	500	1250	1000	1330	550	1070	1080	270	225
100	950	600	910	600	600	600	550	1280	1100	1330	600	1070	1075	285	245
125	970	600	920	600	600	600	550	1300	1050	1350	600	1075	1080	290	245
160	1000	710	965	660	660	660	660	1330	1050	1350	660	1120	1125	295	245
200	1040	710	990	660	660	660	660	1360	1100	1400	660	1145	1150	300	260
250	1090	710	1045	660	660	660	660	1400	1150	1450	660	1200	1210	305	265
315	1120	710	1120	660	660	660	660	1500	1200	1500	660	1260	1280	315	275
400	1240	850	1185	820	820	820	820	1600	1250	1600	820	1280	1345	355	310
500	1290	850	1220	820	820	820	820	1650	1300	1650	820	1315	1380	355	310
630	1500	870	1370	820	820	820	820	1850	1300	1650	820	1300	1370	355	310
800	1550	870	1570	820	820	820	820	1900	1300	1800	820	1480	1570	375	330
1000	1600	870	1665	820	820	820	820	1950	1300	1950	820	1520	1665	370	325
1250	1680	1120	1765	1070	1070	1070	1070	2050	1350	2000	1070	1600	1765	385	340
1600	1750	1120	1860	1070	1070	1070	1070	2100	1400	2100	1070	1690	1860	410	370
2000	1870	1120	1880	1070	1070	1070	1070	2150	1500	2200	1070	1720	1880	420	380
2500	2120	1120	1950	1070	1070	1070	1070	2400	1500	2200	1070	1800	1950	430	390

> Type Meaning



> Product standard

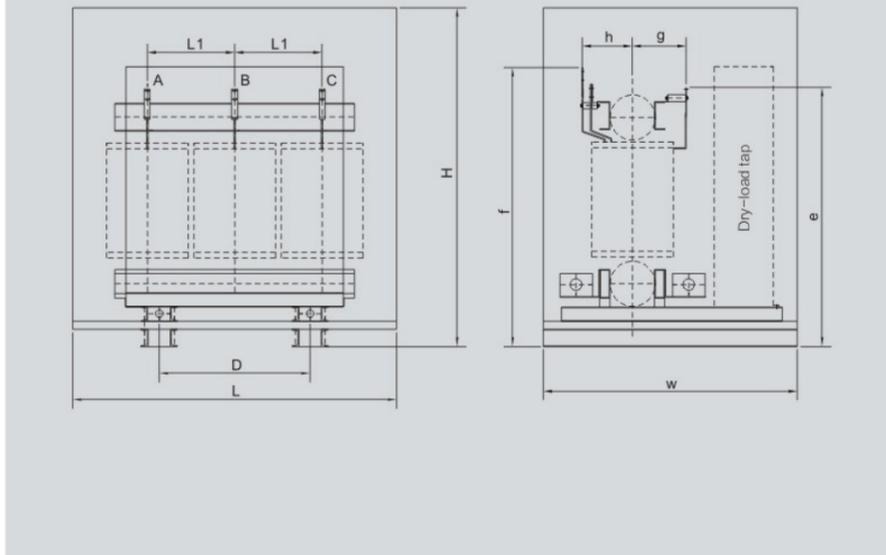
GB/T10228-2008 GB1094.11-2007 JB/T10088-2004 GB4208-1993  
 Rated high-voltage: 10(11, 10.5, 6.6, 6.3, 6)kV  
 Rated low-voltage: 0.4kV  
 Tapping range of high-voltage: ( $\pm 4 \times 2.5\%$ ) or ( $\pm 3 \times 2.5\%$ )

> Tech data of 11kV SG10 series on-load regulation H-grade insulation dry-type power transformer

rated capacity (kVA)	Voltage group (kV)	Connection method	dissipation (kW)		no-load current (%)	impedance voltage (%)	insulating level	weight (kg)	
			no-load	(120°C) load					
200	High pressure 11	Dyn11 or Yyn0	0.690	4.27	1.6	4	F/F	1370	
250			0.790	5.11	1.6			1520	
315			0.970	6.17	1.4			1790	
400			1.080	7.29	1.4			200	
500			10.5	1.280	8.75	1.4		6	2270
630			10	1.475	10.67	1.2			2530
800			6.3	1.670	12.61	1.2			2930
1000			6	1.950	14.49	1.1			3200
1250			0.4	2.300	17.11	1.1			3770
1600			2.700	19.92	1.1	4120			
2000	3.680	23.37	1.0	5170					
2500	4.400	27.18	1.0	5860					

> Dimensions

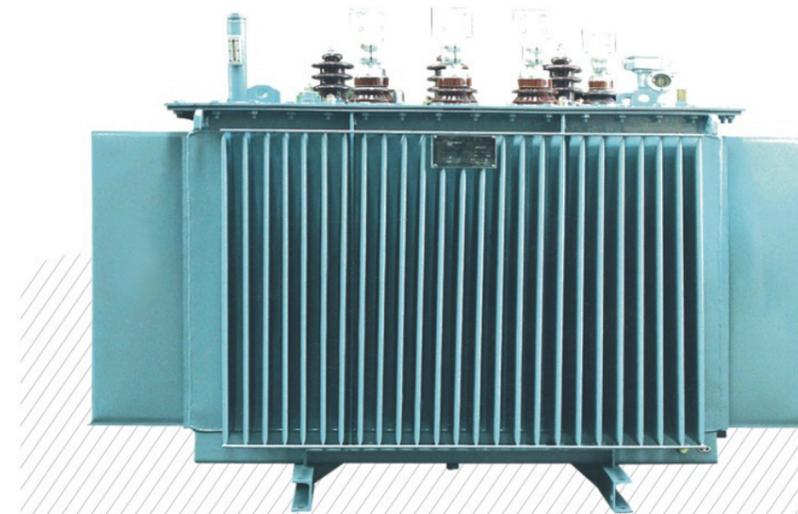
Outline dimension of SGZ (B) 10-□-□/10-0.4



rated capacity (kVA)	outline dimension with protective casing(mm)								
	L	L1	W	H	D	e	f	g	h
200	1360	365	1600	2100	660	1145	1150	300	260
250	1400	375	1600	2100	660	1200	1210	305	265
315	1500	385	1600	2100	660	1260	1280	315	275
400	1600	420	1600	2100	820	1280	1345	355	310
500	1650	435	1700	2100	820	1315	1380	355	310
630	1850	470	1700	2100	820	1300	1370	355	310
800	1900	490	1700	2100	820	1480	1570	375	330
1000	1950	510	1700	2300	820	1520	1665	370	325
1250	2050	535	1800	2300	1070	1600	1765	385	340
1600	2100	560	1800	2300	1070	1690	1860	410	370
2000	2150	610	1800	2300	1070	1720	1880	420	380
2500	2400	690	1800	2300	1070	1800	1950	430	390

# AMORPHOUS METAL DISTRIBUTION TRANSFORMER

> Infinite Technology  
Perfect Motivity



### > Product introduce

Transformers can transform the voltage of a network into the voltage matching the system or load and fulfill power transferring and distributing. Taking the place of transformers with silicon steel core, AMDT can be widely applied in outdoor power distribution network systems, which is magnificently energy saving and can lessen air pollution. It is especially applicable for areas with insufficient power supply or fluctuating load and where daily maintenance is hard. The hermetically sealed construction of AMDT prevents the oil and insulation material from being polluted, so the unit can serve in a humid environment. AMDTs are the ideal equipment supplying power for distribution network in urban and rural areas.

### > Features

The core is wound with amorphous alloy ribbons, which possesses a no-load loss as low as about 20% that of a S9 type transformer (with silicon steel core); The LV coils are wound with copper foil, which reinforces the ability to withstand short circuit for the transformer. AMDT with connection Dyn11 can lighten harmonics impact on the network and improve the quality of the power supplied; The tank and cover are welded together, forming a hermetically sealed construction which lengthens the service life of AMDT and makes it repair-free; The vacuum oil filling eliminates all bubbles in the coils to ensure stable characteristics of insulation; Each transformer passes a full-wave lightning impulse test before delivery to ensure its safety operation. A peak voltage 25% higher than the value required by state standard is applied during the test.

### > Transformer Type Meaning



### > Tech data of 11kV S(B)H15-M series amorphous metal distribution transformer

rated capacity (kVA)	Voltage group		connection method	impedance voltage	Loss			weight(kg)			(L × B × H)(mm) outline dimension	gauge vertical/horizontal
	High-voltage	Low-voltage			no-load	load	no-load current (%)	machine weight	oil weight	gross weight		
30					0.033	0.600	1.7	240	80	410	920 × 600 × 980	400 × 550
50					0.043	0.870	1.3	310	110	510	950 × 620 × 1040	400 × 550
63					0.050	1.040	1.2	350	125	570	990 × 670 × 1040	400 × 550
80					0.060	1.250	1.1	410	135	630	1030 × 720 × 1040	400 × 660
100					0.075	1.500	1.0	475	150	720	1060 × 770 × 1070	400 × 660
125					0.085	1.800	0.9	550	170	830	1060 × 900 × 1070	400 × 660
160	11				0.100	2.200	0.7	630	190	960	1060 × 930 × 1150	400 × 660
200		10.5			0.120	2.600	0.7	670	210	1040	1110 × 930 × 1170	550 × 820
250					0.140	3.050	0.7	750	240	1160	1180 × 1010 × 1180	550 × 820
315	10	0.4	Dyn11	4	0.170	3.650	0.5	810	265	1240	1180 × 1010 × 1180	550 × 820
400					0.200	4.300	0.5	860	290	1330	1200 × 1010 × 1180	550 × 820
500		6.3			0.240	5.150	0.5	950	320	1460	1270 × 1160 × 1200	660 × 1070
630		6			0.320	6.200	0.3	1120	380	1860	1450 × 1240 × 1330	820 × 1070
800					0.380	7.500	0.3	1340	410	2230	1520 × 1380 × 1460	820 × 1070
1000					0.450	10.30	0.3	1620	540	2700	1720 × 1460 × 1510	820 × 1070
1250					0.530	12.00	0.2	1900	640	3180	1780 × 1500 × 1690	820 × 1070
1600					0.630	14.50	0.2	2560	680	4240	1880 × 1540 × 1970	820 × 1070
2000					0.750	17.40	0.2	2900	960	4920	2080 × 1580 × 1970	820 × 1070
2500					0.900	20.20	0.2	3940	1160	6560	2350 × 1580 × 2020	820 × 1070

note: tapping range of high-voltage: ± 5% or ± 2 × 2.5%; frequency: 50Hz; insulating level: L175AC35/L10AC5



## Zhejiang SeaTrust Power Co., Ltd

# RESIN INSULATION AMORPHOUS METAL DRY-TYPE POWER TRANSFORMER

> Infinite Technology  
Perfect Motivity



### > Product introduce

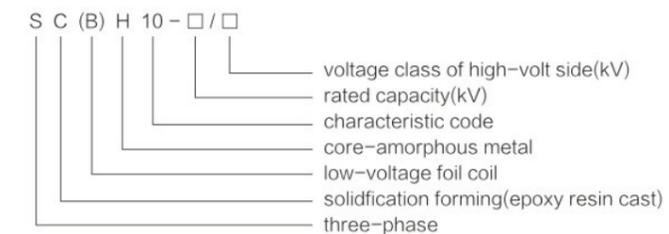
No-load loss of AMDRT is 75% lower than that of GB/T10228 Table 4 group, load loss is 15% lower than that of GB/T10228 Table 4. It is contemporary the most advanced energy saving dry-type transformer. The dry-type transformer is without oil, so it is danger of burning and can be installed indoor as well as be entered into load center to meet the needs of high-density load development in modern metropolises.

AMDRTS possess such advantages as low no-load loss, no oil, flame retardation and self-extinguishing, moisture resistance, crack resistance, maintenance-free etc. Amorphous dry-type transformers can be used to replace all common dry-type transformers which now are used in many places. They can be used in high buildings, commerce centers, subways, airports, train stations, enterprises and power plants. They are especially suitable for installing and using in such places where strict fireproof requirements, including anti-combustible and anti-explosive, must be met.

### > Features

The LV windings of this product are foil windings, they are wound with copper foils. The HV windings are wound with H class high-strength enamel wires, and enveloped by epoxy resin reinforced with the glass-fiber, which possess excellent moisture-resistant and crack-resistant characteristics. The core is wound with amorphous alloy ribbons. A structure of rectangular section and of four-frame and five-leg is adopted for the core.

### > Type meaning



### > Tech data of 11kV SC(B)10 series resin insulation amorphous metal dry-type power transformer

rated capacity (kVA)	Voltage group		connection method	impedance voltage	Loss			insulating level	weight (kg)	(L × B × H)(mm) outline dimension	gauge vertical/horizontal
	High-voltage	Low-voltage			no-load	load	no-load current (%)				
100	11 10.5 10 6.3 6	0.4	Dyn11 or Yyno	4	0.013	1.570	0.8	F/F	890	950 × 600 × 960	550 × 550
160					0.017	2.100	0.8		1170	1220 × 600 × 1060	550 × 550
200					0.200	2.500	0.7		1400	1270 × 710 × 1160	660 × 660
250					0.230	2.750	0.7		1560	1350 × 760 × 1240	660 × 660
315					0.280	3.460	0.6		1770	1370 × 870 × 1260	820 × 820
400					0.300	3.980	0.6		2180	1460 × 870 × 1360	820 × 820
500					0.360	4.870	0.6		2440	1490 × 870 × 1430	820 × 820
630					0.420	5.870	0.5		2850	1760 × 1120 × 1490	1070 × 1070
800				0.480	6.950	0.5	3430		1850 × 1120 × 1610	1070 × 1070	
1000				0.550	8.100	0.4	4050		1900 × 1120 × 1170	1070 × 1070	
1250				0.660	9.700	0.4	4690		2030 × 1120 × 1880	1070 × 1070	
1600				0.750	11.70	0.4	5610		2100 × 1120 × 1970	1070 × 1070	
2000				1.040	14.45		5820		2120 × 1120 × 1990	1070 × 1070	
2500				1.250	17.17		6730		2190 × 1120 × 2110	1070 × 1070	

## THREE-PHASE OIL-IMMERSED DISTRIBUTING TRANSFORMER

> Infinite Technology  
Perfect Motivity



## Zhejiang SeaTrust Power Co., Ltd

### > Features of Products

As one kind of distributing transformer for mining use. KS9 series transformer has many advantages, such as compacted body, reasonable structure, low in spoilage, good in heat-dispersion and, easy to go into a well.

This series of product adopt high-permeance cold-rolled grain-oriented silicon-steel plate of high-quality. The iron core applies echelon form iterative accumulation. The core pole which is multilevel circular cross-section can ensure of low noise and low spoilage. The structure of gasoline tank is very firm. Both side of tank are welded with cable junction boxes of high and low voltage which are used for wiring. High-voltage loops need tapping voltage that is 5% of rated voltage. It is using the tap switch to change the voltage. When the voltage exchanges, the power must be cut off first, then unveil the wind-rain cover on the tap switch to counterchange the voltage. The low voltage side of the transformer can be connect the type 'Y' of 693V or the type "D" of 400V to supply power. And inside the cable junction box has a secondary terminal which educes six insulators for users' option. The joint hinges that welded on the casing are available and drawing cover-plate is mounted beneath the base. There are mounting holes in the drawing cover-plate used for being addly-installed with mine-car' contact roller whenmine needing.

### > Practicable Confiners

The oil-immersed distributing transformer is applied to the capacity 630KVA or below, and the voltage 10KV or below. This product is normal one which has no requirement of explosion-proof. The main function of the product is for mine illumination when distributing power for mining as well as for the driving power. This series of transformers will not need lift-machine examination after transportation. It is allowed to assemble the unshipped spare pads for checking and acceptance.

### > Comply Standards

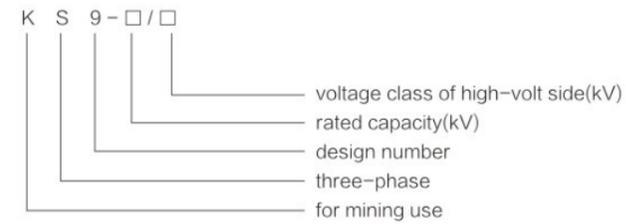
Standards for this series of product:

GB1094.1-2-1996、GB1094.3,5-2003、GB/T6451-2008、GB12173-2008.

### > Using environment and working condition

- 1、The installment highly does not surpass elevation 1000m, the special environment gives the explanation in addition
- 2、Ambient temperature:  
Highest air temperature+40°C;  
Highest daily average air temperature+25°C;  
Highest annual average air temperature+20°C;  
Lowest outdoor air temperature-20°C.
- 3、The surrounding air relative humidity is not bigger than 95%(+25°C when)
- 4、Installs under the mine pit although has the coal dust, the gas, but non-explosion hazard place;
- 5、The supply voltage profile is approximate to the sine wave;

> Transformer Type Meaning



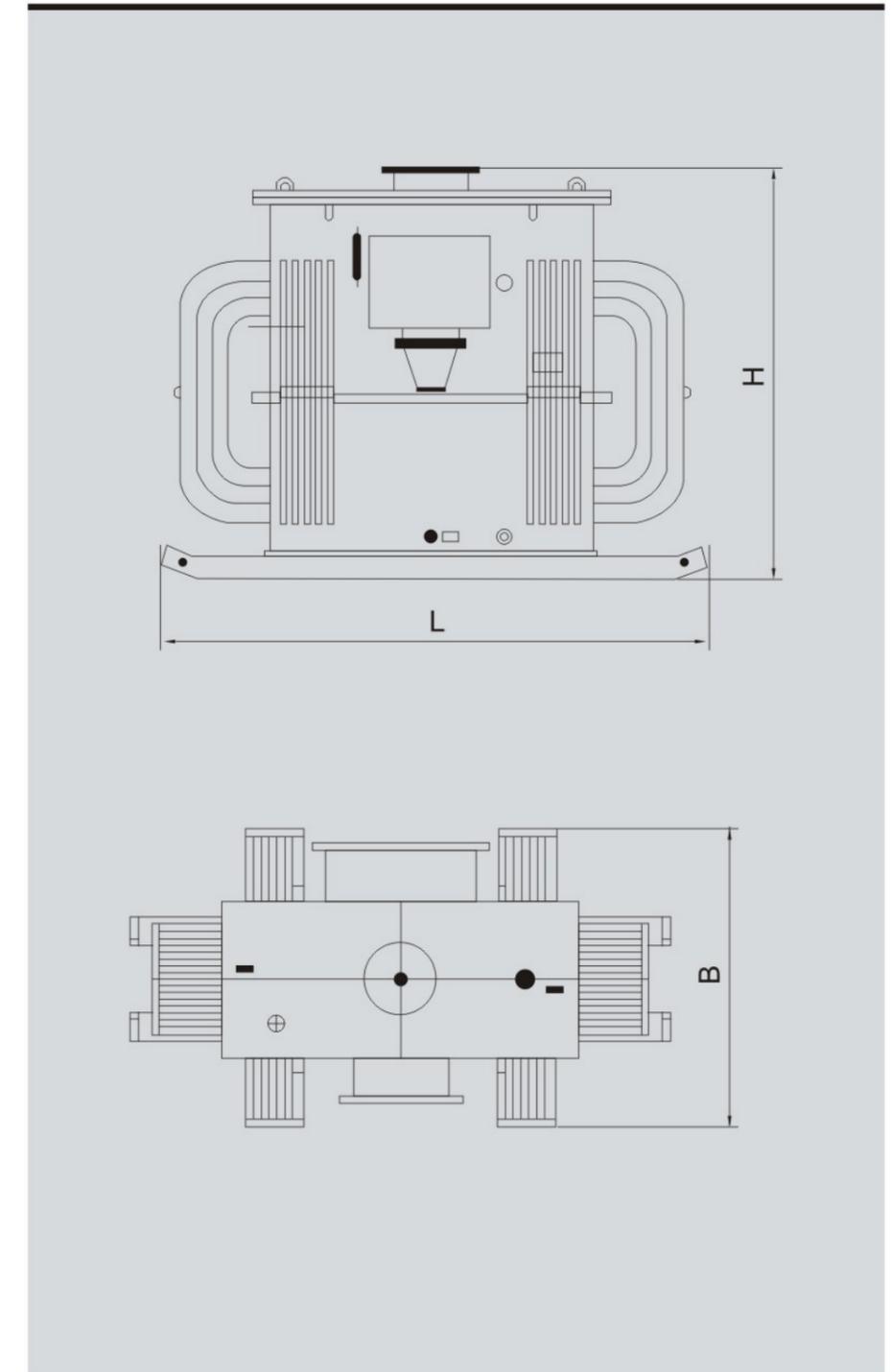
> KS9 series oil immersed mining transformer

rated capacity (kVA)	Voltage group (kV)	connection method	impedance voltage	Loss (kW)		no-load current (%)	weight (kg)			(L × B × H) outline dimension (mm)
				no-load	load		omachine weight	oil weight	gross weight	
50	High pressure 10	Yyo-d11	4	0.17	0.87	2.0	230	80	390	1200 × 950 × 900
80				0.25	1.25	1.8	310	100	530	1300 × 950 × 950
100				0.29	1.50	1.6	360	110	600	1300 × 950 × 1000
125				0.34	1.80	1.5	425	120	690	1300 × 950 × 1000
160				0.40	2.20	1.4	480	140	810	1350 × 950 × 1040
200	0.48			2.60	1.3	580	170	955	1400 × 970 × 1080	
250	Low pressure 0.693/0.4			0.56	3.05	1.2	670	180	1100	1450 × 1000 × 1100
315				0.67	3.65	1.1	775	240	1305	1500 × 1000 × 1150
400				0.80	4.30	1.0	940	280	1570	1600 × 1050 × 1150
500			0.96	5.10	1.0	1155	300	1790	1650 × 1050 × 1200	
630		4.5	1.20	6.20	0.9	1310	345	2150	1650 × 1120 × 1220	

> KS11 series oil immersed mining transformer

rated capacity (kVA)	Voltage group (kV)	connection method	impedance voltage	Loss (kW)		no-load current (%)	weight (kg)			(L × B × H) outline dimension (mm)
				no-load	load		omachine weight	oil weight	gross weight	
50	High pressure 10	Yyo-d11	4	0.13	0.67	2.0	242	84	410	1200 × 950 × 900
80				0.19	0.96	1.8	326	105	557	1300 × 950 × 950
100				0.22	1.15	1.6	378	116	630	1300 × 950 × 1000
125				0.26	1.38	1.5	446	126	725	1300 × 950 × 1000
160				0.3	1.69	1.4	504	147	851	1350 × 950 × 1040
200	0.37			2	1.3	609	179	1003	1400 × 970 × 1080	
250	Low pressure 0.693/0.4			0.43	2.35	1.2	704	189	1155	1450 × 1000 × 1100
315				0.52	2.81	1.1	814	252	1370	1500 × 1000 × 1150
400				0.62	3.31	1.0	987	294	1649	1600 × 1050 × 1150
500			0.74	3.92	1.0	1213	315	1880	1650 × 1050 × 1200	
630		4.5	0.92	4.77	0.9	1376	362	2258	1650 × 1120 × 1220	

> Transformer special service conditions



# MINING EXPLOSION ISOLATION DRY TRANSFORMER

> Infinite Technology  
Perfect Motivity

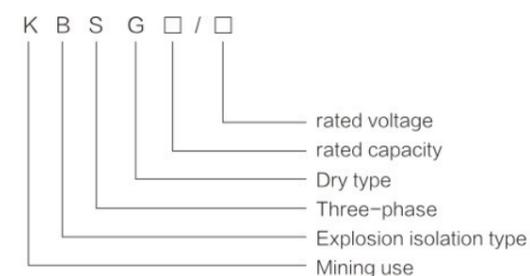


## Zhejiang SeaTrust Power Co., Ltd

### > Features of Products

The KBSG series mining explosion isolation dry transformer conforms to new GB 8286, mineral product separates explode migration transformer substation requests. Insulating the material adopts C class or H class to insulate, hot stability good, cooling offway a doption ANAN, be applicable to there are air and coal dust of the methane mixture, and there is the mineral well, mineral mountain, tunnel of explosion danger etc. environment, also be app licable to shortage with air and steam environment which decays metals and breakage to insulate. Settle the frequency as 50 Hz. a primary voltage is 6 kVs or 10 kVs, andneuterqender not to connect ground for the power system, for use various motive equipments in the environment with various use electricity device to provide power supply.

### > Transformer Type Meaning



### > Using environment and worki ng cond ition

- 1、 The installment highly does not surpass elevation 1000m, the special environment gives the explanation in addition
  - 2、 Amblent temperature:
    - Highest air temperature+40℃;
    - Highest daily average air temperature+30℃;
    - Highest annual average air temperature+20℃;
    - Lowest outdoor air temperature-5℃.
  - 3、 The surrounding air relative humidity is not bigger than 95%(+25℃ when)
  - 4、 In has the methane and the coal dust, also has the explosion hazard in the mine pit;
  - 5、 Does not have, the vibration as well as with the gradient does not surpass in 15° environment
  - 6、 Does not have sufficiently the dipping and the insulation gas and the steam;
  - 7、 No-water drop place;
  - 8、 The supply voltage profile is approximate to the sine wave;
  - 9、 The three-phase supply voltage approximate is symmetrical;
- (When extracts this condition stipulation, separate consultation)

> Product standard

GB 8286-2005      GB3836-2000  
 GB/T10228-2008    GB1094.11-2007

> Tech deata of 6kV KBSG series dry type mining explosion isolation dry type transformer

rated capacity (kVA)	Voltage group (kV)	connection method	impedance voltage	Loss (kW)		no-load current (%)	(L × B × H) outline dimension (mm)	weight (kg)	gauge (mm)			
				no-load	load							
50	High pressure (6 ± 5%); Low pressure 0.693/0.4	Yy0 (d11)	4	350	550	2.5	2225 × 950 × 1160	1350	600			
100			4	520	920	2.5	2500 × 950 × 1430	1600				
200			4	820	1550	2	2640 × 950 × 1445	2050				
250			4	950	1800	2	2750 × 965 × 1530	2300				
315			4	1100	2150	1.8	2830 × 975 × 1540	2500				
400			4	1300	2600	1.8	2830 × 995 × 1550	2650				
500			4	1500	3100	1.5	2850 × 1050 × 1570	3100				
630			4	1800	3680	1.5	3020 × 1080 × 1450	4310				
800			1.2/0.693	Yy0 (d11) Dyn11	4	2050	4500	1.0		3020 × 1080 × 1510	4650	900
1000			1.2		4	2350	5400	1.0		3030 × 1130 × 1540	5150	
1250	3.45	4	2750		6500	1.0	3120 × 1160 × 1610	5900				
1600	4	3350	8000		0.8	3120 × 1200 × 1750	7250					
2000	4.5	3800	9500		0.6	3225 × 1220 × 1790	10820					
2500	5	4500	10600		0.6	3580 × 1230 × 1850	13850					
3150	5.5	5300	12500		0.6	3820 × 1260 × 1890	18250					
4000	6	6100	14000		0.6	3930 × 1400 × 1920	20810					

> Tech deata of 11kV KBSG series dry type mining explosion isolation dry type transformer

rated capacity (kVA)	Voltage group (kV)	connection method	impedance voltage	Loss (kW)		no-load current (%)	(L × B × H) outline dimension (mm)	weight (kg)	gauge (mm)			
				no-load	load							
50	High pressure (10 ± 5%); Low pressure 0.693/0.4	Yy0 (d11)	4	390	680	2.5	2310 × 950 × 1295	1400	600			
100			4	560	1050	2.5	2430 × 950 × 1430	1800				
200			4	950	1800	2	2730 × 950 × 1525	2200				
250			4	1100	2100	2	2760 × 950 × 1540	2500				
315			4	1300	2500	1.8	2800 × 980 × 1555	2800				
400			4	1500	3000	1.8	2950 × 1050 × 1610	3000				
500			4	1750	3500	1.5	2950 × 1050 × 1610	3300				
630			4	2000	4100	1.5	3200 × 1080 × 1450	4400				
800			1.2/0.693	Yy0 (d11) Dyn11	4	2300	5100	1.2		3200 × 1080 × 1600	4700	900
1000			1.2		4.5	2600	6100	1.2		3200 × 1110 × 1675	5900	
1250	3.45	4.5	3100		7400	1.0	3250 × 1125 × 1740	6500				
1600	5	3800	8500		1.0	3450 × 1245 × 1830	8300					
2000	5	4500	9700		0.7	3665 × 1250 × 1900	10900					
2500	5.5	5200	10800		0.7	3780 × 1390 × 1900	13930					
3150	5.5	6100	12800		0.7	3880 × 1390 × 1900	18350					
4000	6	7000	15000		0.7	4210 × 1450 × 1900	20910					

Note: The above data provides a reference only, movable transformer substation the basis switch of the shape size of transformer substation different but different

## DRY TYPE MINING EXPLOSION ISOLATION MOVABLE TRANSFORMER SUBSTATION

> Infinite Technology  
Perfect Motivity





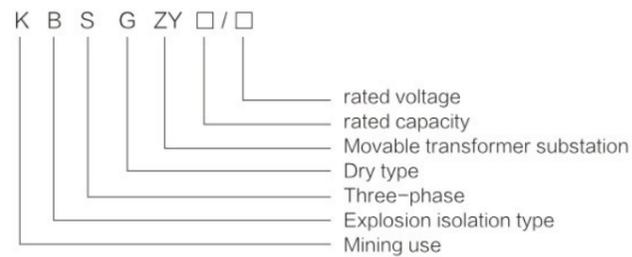
## Zhejiang SeaTrust Power Co., Ltd

### > Features of Products

The mineral product separates the explode migration transformer substation separates the explode migration transformer substation by the mineral product with the do-like transformer. the high-pressured load switch either the high pressure and the low pressure switch or the low pressure guarantees is composed. Has the leakage. the leakage, the overload, short-circuits, the performance.

KBSGZY series dry type mining explosion isolation movable transformer substation is a kind of movable whole set distribution and transformation device. It is suitable for not only mines filled with firedamp mixed gas, grime and explosive gas, but also the gas and steam environment that can not erode metal and insulation.

### > Transformer Type Meaning



### > Using environment and working condition

- 1、The installment highly does not surpass elevation 1000m, the special environment gives the explanation in addition.
- 2、Ambient temperature:  
 Highest air temperature+40°C;  
 Highest daily average air temperature+30°C;  
 Highest annual average air temperature+20°C;  
 Lowest outdoor air temperature-5°C.
- 3、The surrounding air relative humidity is not bigger than 95%(+25°C when)
- 4、In has the methane and the coal dust, also has the explosion hazard in the mine pit;
- 5、Does not have, the vibration as well as with the gradient does not surpass in 15° environment
- 6、Does not have sufficiently the dipping and the insulation gas and the steam;
- 7、No-water drop place;
- 8、The supply voltage profile is approximate to the sine wave;
- 9、The three-phase supply voltage approximate is symmetrical;  
 (When extracts this condition stipulation, separate consultation)



## Zhejiang SeaTrust Power Co., Ltd

### > Product standard

GB 8286-2005 GB3836-2000  
 GB/T10228-2008 GB1094.11-2007

### > Tech data of 6kV KBSGZY series dry type mining explosion isolation movable transformer substation

rated capacity (kVA)	Voltage group (kV)	connection method	impedance voltage	Loss (kW)		no-load current (%)	(L × B × H) outline dimension (mm)	weight (kg)	gauge (mm)		
				no-load	load						
50	High pressure (6 ± 5%); Low pressure 0.693/0.4	Yy0 (d11)	4	350	550	2.5	3290 × 950 × 1160	2350	600		
100			4	520	920	2.5	3580 × 950 × 1430	2600			
200			4	820	1550	2	3710 × 950 × 1445	3050			
250			1.2/0.693	Yy0 (d11)	4	950	1800	2	3820 × 965 × 1530	3300	600
315					4	1100	2150	1.8	3870 × 975 × 1540	3500	
400					4	1300	2600	1.8	3890 × 995 × 1550	3600	
500					4	1500	3100	1.5	3910 × 1050 × 1570	4100	900
630					4	1800	3680	1.5	4085 × 1080 × 1450	5360	
800					4	2050	4500	1.0	4085 × 1080 × 1510	5680	
1000					3.45	Yy0 (d11)	4	2350	5400	1.0	4100 × 1130 × 1540
1250	4	2750					6500	1.0	4190 × 1160 × 1610	6700	
1600	4	3350					8000	0.8	4190 × 1200 × 1750	9230	
2000	4.5	3800					9500	0.6	4570 × 1220 × 1790	9930	900
2500	5	4500	10600	0.6			4580 × 1230 × 1850	13830			
3150	5.5	5300	12500	0.6			4820 × 1260 × 1890	17250			
4000	6	6100	14000	0.6			4930 × 1400 × 1920	19810			

### > Tech data of 11kV KBSGZY series dry type mining explosion isolation movable transformer substation

rated capacity (kVA)	Voltage group (kV)	connection method	impedance voltage	Loss (kW)		no-load current (%)	(L × B × H) outline dimension (mm)	weight (kg)	gauge (mm)		
				no-load	load						
50	High pressure (10 ± 5%); Low pressure 0.693/0.4	Yy0 (d11)	4	390	680	2.5	3200 × 950 × 1295	2400	600		
100			4	560	1050	2.5	3580 × 950 × 1430	2800			
200			4	950	1800	2	3990 × 950 × 1525	3200			
250			1.2/0.693	Yy0 (d11)	4	110	2100	2	4020 × 950 × 1540	3500	600
315					4	1300	2500	1.8	4050 × 980 × 1555	3800	
400					4	1500	3000	1.8	4200 × 1050 × 1610	4000	
500					4	1750	3500	1.5	4200 × 1050 × 1610	4300	900
630					4	2000	4100	1.5	4370 × 1080 × 1450	5400	
800					4	2300	5100	1.2	4370 × 1080 × 1600	5700	
1000					3.45	Yy0 (d11)	4.5	2600	6100	1.2	4400 × 1110 × 1675
1250	4.5	3100					7400	1.0	4480 × 1125 × 1740	7300	
1600	5	3800					8500	1.0	4640 × 1245 × 1830	9300	
2000	5	4500					9700	0.7	4665 × 1250 × 1900	11900	900
2500	5.5	5200	10800	0.7			4870 × 1390 × 1900	14930			
3150	5.5	6100	12800	0.7			4880 × 1390 × 1900	19350			
4000	6	7000	15000	0.7			5210 × 1450 × 1900	21910			