10(6)kV 级 S9 系列无励磁调压低损耗变压器技术参数

Parameters for S9 Series Non-excited Low Loss Transformers of 10(6)kV with Tap Changer

高压 HV:10(11,10.5,6.3,6)kV 低压 LV:0.4kV 联结组别 Connection symbol:Yyn0 高压分接范围 HV Tapping Range: ± 5 %

型号 Type	额定容量 Rated power (kVA)	空载损耗 No-load loss (W)	负载损耗 On-load loss (W)	阻抗电压 Impedance voltage (%)	空载电流 No-load current (%)	重量 (kg)Weight		外形尺寸 (mm)Dimensions							吊高 Lifting height (mm)
						油重 Oil weight	总重 Total weight	L	W	H	E	M	N	H1	
S9-10/10	10	60	270	4.0	2.8	55	195	895	450	890	400	180	80	760	1600
S9-20/10	20	110	460		2.8	70	255	965	450	920	400	200	100	785	1650
S9-30/10	30	130	600		2.1	80	290	975	520	970	400	200	100	840	1750
S9-50/10	50	170	870		2.0	95	400	1025	520	1080	400	200	100	945	1930
S9-63/10	63	200	1040		1.9	105	445	1045	620	1120	550	200	100	985	1980
S9-80/10	80	240	1250		1.8	125	535	1140	620	1165	550	200	100	1030	2070
S9-100/10	100	290	1500		1.6	145	610	1245	675	1280	550	200	100	1040	2040
S9-125/10	125	340	1800		1.5	150	690	1200	710	1325	550	200	100	1060	2130
S9-160/10	160	400	2200		1.4	170	800	1255	805	1335	550	200	100	1070	2150
S9-200/10	200	480	2600		1.3	190	945	1295	885	1385	550	200	100	1120	2250
S9-250/10	250	560	3050		1.2	215	1085	1330	890	1430	660	250	120	1165	2260
S9-315/10	315	670	3650		1.1	255	1290	1360	1020	1480	660	250	120	1215	2500
S9-400/10	400	800	4300		1.0	305	1530	1390	1080	1560	660	250	120	1295	2600
S9-500/10	500	960	5100		1.0	335	1745	1470	1090	1605	660	250	120	1340	2600
S9-630/10	630	1200	6200	4.5	0.9	405	2070	1755	1050	1745	820	300	160	1425	3500
S9-800/10	800	1400	7500		0.8	515	2545	2115	960	1950	820	300	160	1530	3600
S9-1000/10	1000	1700	10300		0.7	565	2915	2180	990	1960	820	300	180	1540	3600
S9-1250/10	1250	1950	12000		0.7	660	3410	2310	1140	2045	820	300	180	1630	3800
S9-1600/10	1600	2400	14500		0.7	760	4075	2360	1160	2105	1070	300	180	1685	3800
S9-2000/10	2000	3000	18000	6	0.7	1025	4980	2300	1945	2215	1070	400	200	1795	4300
S9-2500/10	2500	3500	25000		0.6	1170	5645	2375	2025	2325	1070	400	200	1825	4350
S9-3150/10	3150	4100	26500		0.5	1300	6700	2530	2165	2395	1070	400	200	1885	4400
S9-4000/10	4000	5300	30000		0.5	1500	7780	3240	2045	2650	1070	400	200	2160	5500

本表所列数据仅供参考，以工厂提供的正式图纸为准。

The data listed in the table are for reference only,formal figures provided are taken as standard.

10(6)kV 级 S9 系列无励磁调压低损耗变压器技术参数

Parameters for S9 Series Non-excited Low Loss Transformers of 10(6)kV with Tap Changer

高压 HV:10(11,10.5,6.3,6)kV 低压 LV:6.3(3.15,3)kV 联结组别 Connection symbol:Y,d11 高压分接范围 HV Tapping Range: ± 5 %

型号 Type	额定容量 Rated power (kVA)	空载损耗 No-load loss (W)	负载损耗 On-load loss (W)	阻抗电压 Impedance voltage (%)	空载电流 No-load current (%)	重量 (kg)Weight		外形尺寸 (mm)Dimensions							吊高 Lifting height (mm)
						油重 Oil weight	总重 Total weight	L	W	H	E	M	N	H1	
S9-400/10	400	870	4300	4.5	1.5	435	2065	1650	1220	1515	660	200	200	1420	3000
S9-500/10	500	1030	5100	4.5	1.4	560	2360	1710	1220	1730	660	200	200	1610	3000
S9-630/10	630	1150	6200	4.5	1.3	660	2770	1795	1210	1975	820	200	200	1645	3500
S9-800/10	800	1400	7500	5.5	1.2	715	3165	2140	1240	2345	820	200	200	1655	4000
S9-1000/10	1000	1650	9200	5.5	1.1	825	3675	2205	1895	2395	820	240	240	1695	4000
S9-1250/10	1250	1950	12000	5.5	1.0	935	4190	2270	1930	2450	820	240	240	1750	4500
S9-1600/10	1600	2350	14500	5.5	0.9	1135	4910	2360	1950	2430	1070	240	240	1730	4500
S9-2000/10	2000	2800	17500	5.5	0.9	1145	5190	2465	1970	2470	1070	300	240	1845	4500
S9-2500/10	2500	3300	19500	5.5	0.8	1310	6320	2630	1990	2550	1070	300	300	1845	4600
S9-3150/10	3150	3900	23000	5.5	0.8	1565	7690	2640	2020	2640	1070	300	300	1940	4600
S9-4000/10	4000	4800	26000	5.5	0.7	2050	8520	3290	2300	2740	1070	300	300	2040	5000
S9-5000/10	5000	5700	30000	5.5	0.7	2085	10735	2800	3030	2950	1070	300	300	2250	5000
S9-6300/10	6300	6800	35000	5.5	0.6	2430	13100	2880	3190	3170	1070	300	300	2420	6300

本表所列数据仅供参考，以工厂提供的正式图纸为准。

The data listed in the table are for reference only,formal figures provided are taken as standard.

10(6)kV 级 S9 系列无励磁调压低损耗变压器技术参数

Parameters for S9 Series Non-excited Low Loss Transformers of 10(6)kV with Tap Changer

高压 HV:10(11,10.5,6.3,6)kV 低压 LV:0.4kV 联结组别 Connection symbol:D,yn11 高压分接范围 HV Tapping Range: ± 5 %

型号 Type	额定容量 Rated power (kVA)	空载损耗 No-load loss (W)	负载损耗 On-load loss (W)	阻抗电压 Impedance voltage (%)	空载电流 No-load current (%)	重量 (kg)Weight		外形尺寸 (mm)Dimensions							吊高 Lifting height (mm)
						油重 Oil weight	总重 Total weight	L	W	H	E	M	N	H1	
S9-50/10	50	175	870	4	2.4	140	515	1050	680	1135	550	160	120	1010	2300
S9-63/10	63	210	1030	4	2.3	160	580	1070	710	1160	550	160	120	1030	2300
S9-80/10	80	250	1240	4	2.1	180	680	1150	800	1310	550	160	120	1060	2300
S9-100/10	100	290	1470	4	2.0	185	735	1200	810	1370	550	160	120	1115	2300
S9-125/10	125	340	1720	4	1.9	205	855	1250	745	1445	550	200	120	1170	2400
S9-160/10	160	390	2100	4	1.8	235	990	1290	830	1480	550	200	120	1215	2450
S9-200/10	200	470	2500	4	1.7	280	1190	1380	620	1520	550	200	120	1300	2400
S9-250/10	250	570	2900	4	1.6	300	1330	1350	930	1590	550	200	120	1370	2400
S9-315/10	315	680	3450	4	1.5	330	1525	1420	995	1690	550	200	120	1420	3000
S9-400/10	400	810	4200	4	1.4	350	1725	1450	1035	1720	660	200	120	1455	3000
S9-500/10	500	970	4950	4	1.3	480	2330	1560	1320	1950	660	200	120	1555	3100
S9-630/10	630	1150	5800	5	1.2	690	2755	1775	1350	2070	820	200	120	1600	4350
S9-800/10	800	1400	7500	5	1.0	780	3610	2100	1630	2320	820	300	170	1825	4600
S9-1000/10	1000	1650	9200	5	0.9	965	4330	2410	1760	2450	820	300	170	1950	4400
S9-1250/10	1250	1950	11000	5	0.9	1150	5040	2450	1800	2540	820	300	170	2040	4500
S9-1600/10	1600	2350	14000	6	0.8	1200	5500	2550	1830	2600	1070	300	170	2145	4500
S9-2000/10	2000	3000	18000	6	0.8	1445	6335	2550	2080	2650	1070	300	170	2215	4800
S9-2500/10	2500	3500	22500	6	0.8	1600	6920	2610	2150	2680	1070	300	170	2165	4510

本表所列数据仅供参考，以工厂提供的正式图纸为准。

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10(6)kV 级非晶合金节能变压器技术参数

Parameters for Energy-saved Amorphous Alloy Transformers of 10(6)kV

高压 HV:10(11,10.5,6.3,6)kV 低压 LV:0.4kV 联结组别 Connection symbol:Yyd0 或 Dyn11 高压分接范围 HV Tapping Range: ± 5%

型号 Type	额定容量 Rated power (kVA)	空载损耗 No-load loss (W)	负载损耗 On-load loss (W)	阻抗电压 Impedance voltage (%)	空载电流 NO-load current (%)	重量(kg) Weight		外形尺寸(mm) Dimensions							吊高 Lifting height (mm)
						油重 Oil weight	总重 Total weight	L	W	H	E	M	N	H1	
SH11-30/10	30	35	600	4	1.0	155	455	1195	640	1065	550	200	100	795	2150
SH11-50/10	50	50	870		0.9	170	580	1235	655	1095	550	200	100	825	2200
SH11-63/10	63	60	1040		0.9	195	655	1295	705	1145	550	200	100	875	2200
SH11-80/10	80	70	1250		0.8	215	770	1410	760	1180	550	250	100	905	2230
SH11-100/10	100	85	1500		0.8	230	830	1405	800	1165	550	250	100	900	2250
SH11-125/10	125	100	1800		0.7	245	900	1380	850	1195	660	250	100	930	2270
SH11-160/10	160	115	2200		0.6	275	1070	1450	910	1235	660	250	100	970	2280
SH11-200/10	200	135	2600		0.6	305	1240	1640	920	1280	660	250	100	1000	2300
SH11-250/10	250	160	3050		0.6	355	1445	1630	1010	1320	660	250	120	1040	2400
SH11-315/10	315	165	3650		0.5	395	1720	1740	940	1432	660	250	100	1170	2500
SH11-400/10	400	230	4300		0.5	500	2065	1940	1070	1560	660	250	100	1180	3000
SH11-500/10	500	280	5100		0.47	540	2450	1940	1075	1530	660	250	160	1145	2800
SH11-630/10	630	320	6200	4.5	0.45	615	2715	2110	1285	1535	820	250	160	1150	3000
SH11-800/10	800	380	7500		0.4	810	3420	2345	1600	1805	820	300	160	1320	3300
SH11-1000/10	1000	450	10300		0.38	925	3870	2350	1650	1815	820	300	200	1330	3300
SH11-1250/10	1250	550	12000		0.35	1025	4525	2455	1690	1905	820	300	200	1420	3400

本表所列数据仅供参考，以工厂提供的正式图纸为准。

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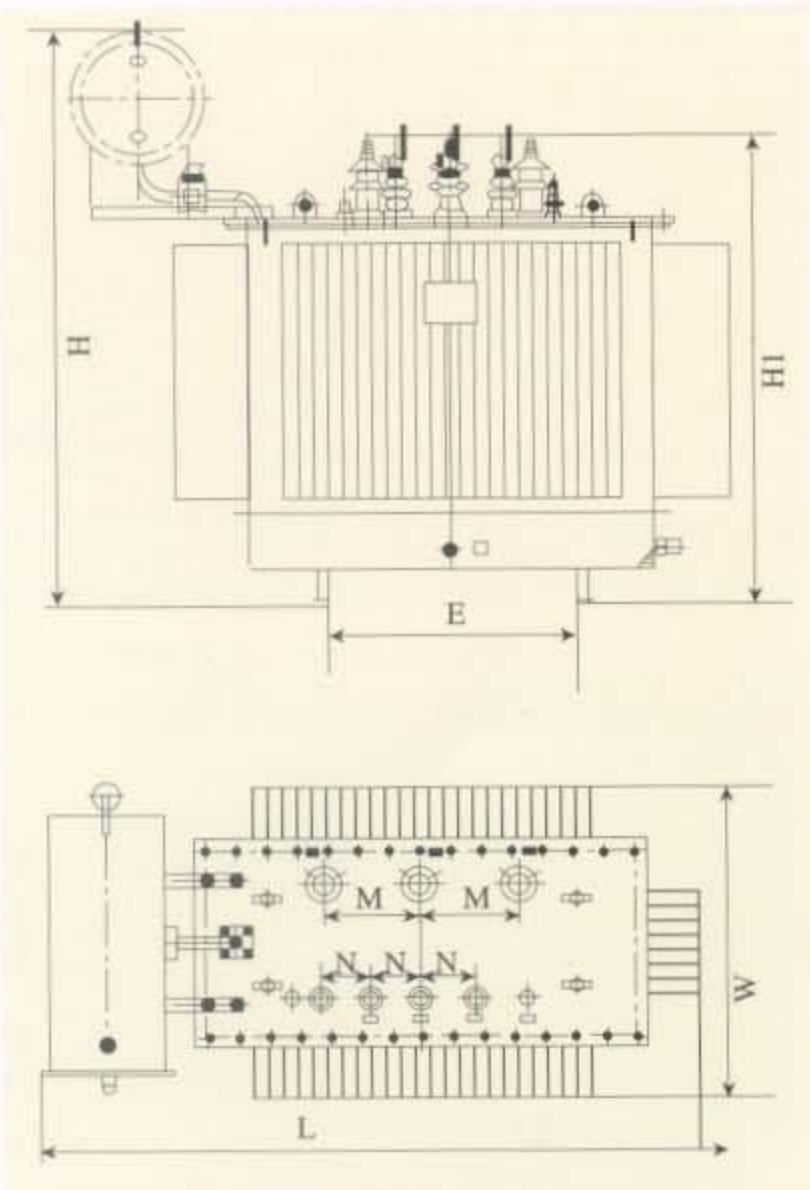

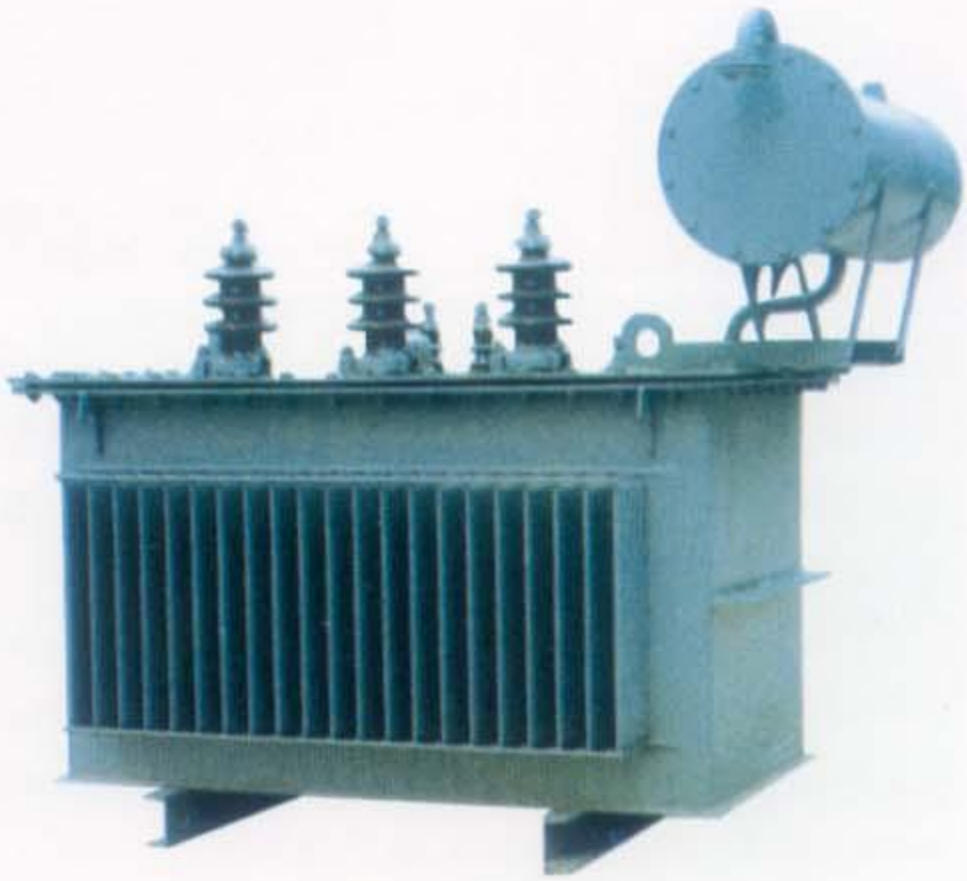

10(6)kV 级 SZ9 系列有载调压变压器技术参数

Parameters for SZ9 Series ON-load Transformers of 10(6)kV with Tap Changer

高压 HV:10(6.3,6)kV 低压 LV:0.4kV 联结组别 Connection symbol:Yyn0 高压分接范围 HV Tapping Range: ± 4 × 2.5%

型号 Type	额定容量 Rated power (kVA)	空载损耗 No-load loss (W)	负载损耗 On-load loss (W)	阻抗电压 Impedance voltage (%)	空载电流 NO-load current (%)	重量(kg) Weight		外形尺寸(mm) Dimensions							吊高 Lifting height (mm)
						油重 Oil weight	总重 Total weight	L	W	H	E	M	N	H1	
SZ9-200/10	200	420	3000	4.0	1.8	255	1025	1450	1100	1435	550	200	100	1170	3100
SZ9-250/10	250	510	3600		1.7	280	1160	1445	1155	1465	660	200	120	1200	3200
SZ9-315/10	315	610	4320		1.6	340	1390	1350	1170	1535	660	200	120	1270	3300
SZ9-400/10	400	730	5200		1.5	365	1635	1630	1175	1595	660	200	120	1330	3400
SZ9-500/10	500	870	6200		1.4	410	1870	1470	1205	1730	660	200	120	1350	3450
SZ9-630/10	630	1120	7650	4.5	1.3	555	2300	1960	1375	1815	820	200	160	1430	3500
SZ9-800/10	800	1350	9300		1.2	620	2730	2400	1280	1890	820	300	160	1500	3500
SZ9-1000/10	1000	1600	10900		1.1	655	3115	2455	1940	2075	820	300	180	1550	3500
SZ9-1250/10	1250	1870	13000		1.0	780	3720	2545	1955	2095	820	320	200	1670	3700
SZ9-1600/10	1600	2400	15570		0.9	1010	4525	2620	1780	2150	1070	320	200	1730	3900
SZ9-2000/10	2000	3000	18000	6	0.8	1190	5220	2775	1970	2340	1070	320	200	1835	4300
SZ9-2500/10	2500	3500	27000		0.8	1400	6050	2900	2170	2630	1070	400	300	2100	4500

本表所列数据仅供参考，以工厂提供的正式图纸为准。

The data listed in the table are for reference only,formal figures provided are taken as standard.

35kV 级 SZ9 系列有载调压变压器技术参数

Parameters for SZ9 Series On-load Transformers of 35kV with Tap Changer

高压 HV:35(38.5)kV 低压 LV:0.4kV 联结组别 Connection symbol:Yyn0 高压分接范围 HV Tapping Range: ± 3 × 2.5%

型号 Type	额定容量 Rated power (kVA)	空载损耗 No-load loss (W)	负载损耗 On-load loss (W)	阻抗电压 Impedance voltage (%)	空载电流 NO-load current (%)	重量(kg) Weight		外形尺寸(mm) Dimensions							吊高 Lifting height (mm)
						油重 Oil weight	总重 Total weight	L	W	H	E	M	N	H1	
SZ9-315/35	315	650	5080	6.5	1.5	1080	2725	2800	1220	2020	820	400	200	1710	3400
SZ9-400/35	400	780	6050		1.4	1100	2990	2860	1310	2130	820	400	200	1800	3500
SZ9-500/35	500	910	7270		1.3	1180	3450	2950	1430	2260	820	400	200	1950	3750
SZ9-630/35	630	1120	8700		1.2	1255	4220	3085	1500	2350	1070	400	200	2030	4600
SZ9-800/35	800	1320	10390		1.1	1585	4945	3050	1670	2450	1070	400	200	2180	4900
SZ9-1000/35	1000	1550	12810		1.0	1670	5680	3120	1740	2455	1070	400	200	2190	5000
SZ9-1250/35	1250	1890	15380		0.95	1750	6025	3160	1800	2470	1070	400	200	2200	5100
SZ9-1600/35	1600	2300	18480		0.9	1810	6440	3200	1920	2510	1070	400	200	2250	5150
SZ9-2000/35	2000	2880	20470		0.9	1950	7020	3270	2050	2540	1070	400	200	2280	5180
SZ9-2500/35	2500	3500	23000		0.8	2025	7330	3415	2110	2640	1070	400	200	2345	5200

本表所列数据仅供参考，以工厂提供的正式图纸为准。

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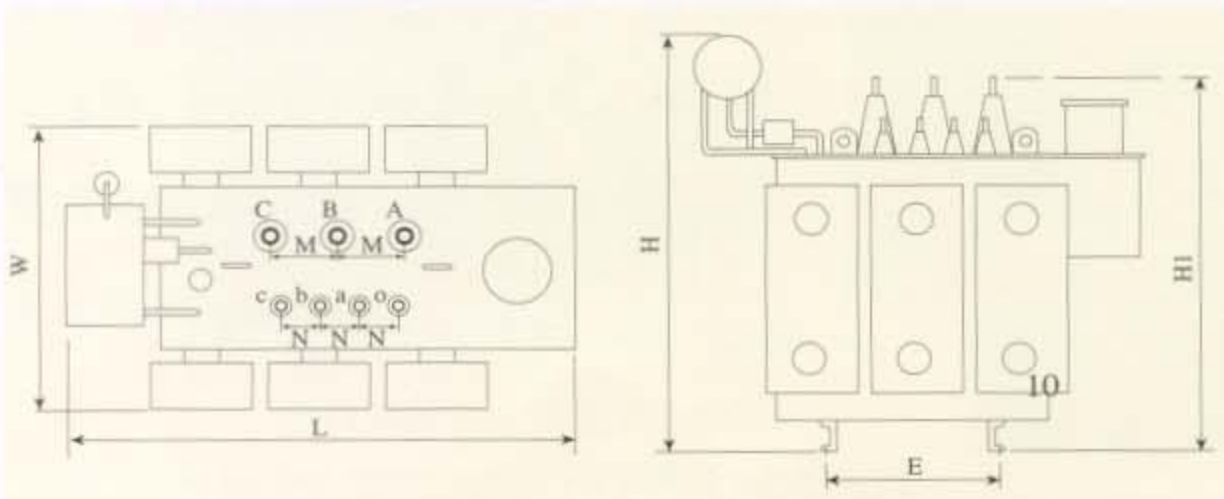

35kV 级 S9(SF9)系列无励磁调压低损耗变压器技术参数

Parameters for S9,SF9 Series Non-excited Low Loss Transformers of 35kV with Tap Changer

高压 HV:35(38.5) 低压 LV:10.5(6.3,3.15)kV 联结组别 Connection symbol:Yd11 高压分接范围 HV Tapping Range: ± 5 %

型号 Type	额定容量 Rated power (kVA)	空载损耗 No-load loss (W)	负载损耗 On-load loss (W)	阻抗电压 Impedance voltage (%)	空载电流 No-load current (%)	重量 (kg)Weight		外形尺寸 (mm)Dimensions							吊高 Lifting height (mm)
						油重 Oil weight	总重 Total weight	L	W	H	E	M	N	H1	
S9-630/35	630	1040	8280	6.5	1.05	975	3310	1980	1300	2290	820	400	300	1970	4550
S9-800/35	800	1250	9900		1.05	1045	3860	2060	1650	2320	820	400	300	2010	4550
S9-1000/35	1000	1480	1215		1.00	1120	4260	2210	1840	2430	820	400	300	2180	4600
S9-1250/35	1250	1760	14650		0.90	1250	4610	2345	1900	2480	1070	400	300	2185	4600
S9-1600/35	1600	2130	17550		0.85	1320	5460	2390	1950	2490	1070	400	300	2210	4700
S9-2000/35	2000	2720	18500		0.75	1360	5630	2545	2040	2500	1070	400	300	2210	4700
S9-2500/35	2500	3200	20700		0.75	1445	6370	2560	2125	2510	1070	400	320	2215	4700
S9-3150/35	3150	3800	24300	7	0.70	1670	7600	2810	2090	2535	1070	400	320	2240	4700
S9-4000/35	4000	4520	28500		.070	1810	8600	2890	2175	2585	1070	500	400	2290	4800
S9-5000/35	5000	5400	33000		0.60	2040	9980	2970	2130	2850	1070	500	400	2395	5300
S9-6300/35	6300	6550	37000	7.5	0.60	2435	11940	3130	2330	2900	1070	500	400	2440	5300
SF9-8000/35	8000	9200	41000		0.55	3250	16100	4000	3020	3520	1475	710	400	2980	5600
SF9-10000/35	10000	11000	47800		0.55	3590	17100	4100	3060	3860	1475	770	400	3360	6000
SF9-12500/35	12500	12800	56700	8	0.50	4140	21250	4200	3250	3920	1475	830	400	3420	6000
SF9-16000/35	16000	15200	69500		0.50	5010	23900	4350	3210	4050	1475	855	400	3530	6500
SF9-20000/35	20000	18000	83700		0.50	5980	32680	4550	3600	4310	1475	950	400	3700	7300
SF9-25000/35	25000	21300	99000		0.40	6620	36900	4680	3920	4400	1475	950	400	3910	7300
SF9-31500/35	31500	25300	119000		0.40	7100	39900	4900	4100	4500	1475	970	400	4020	7400

本表所列数据仅供参考，以工厂提供的正式图纸为准。

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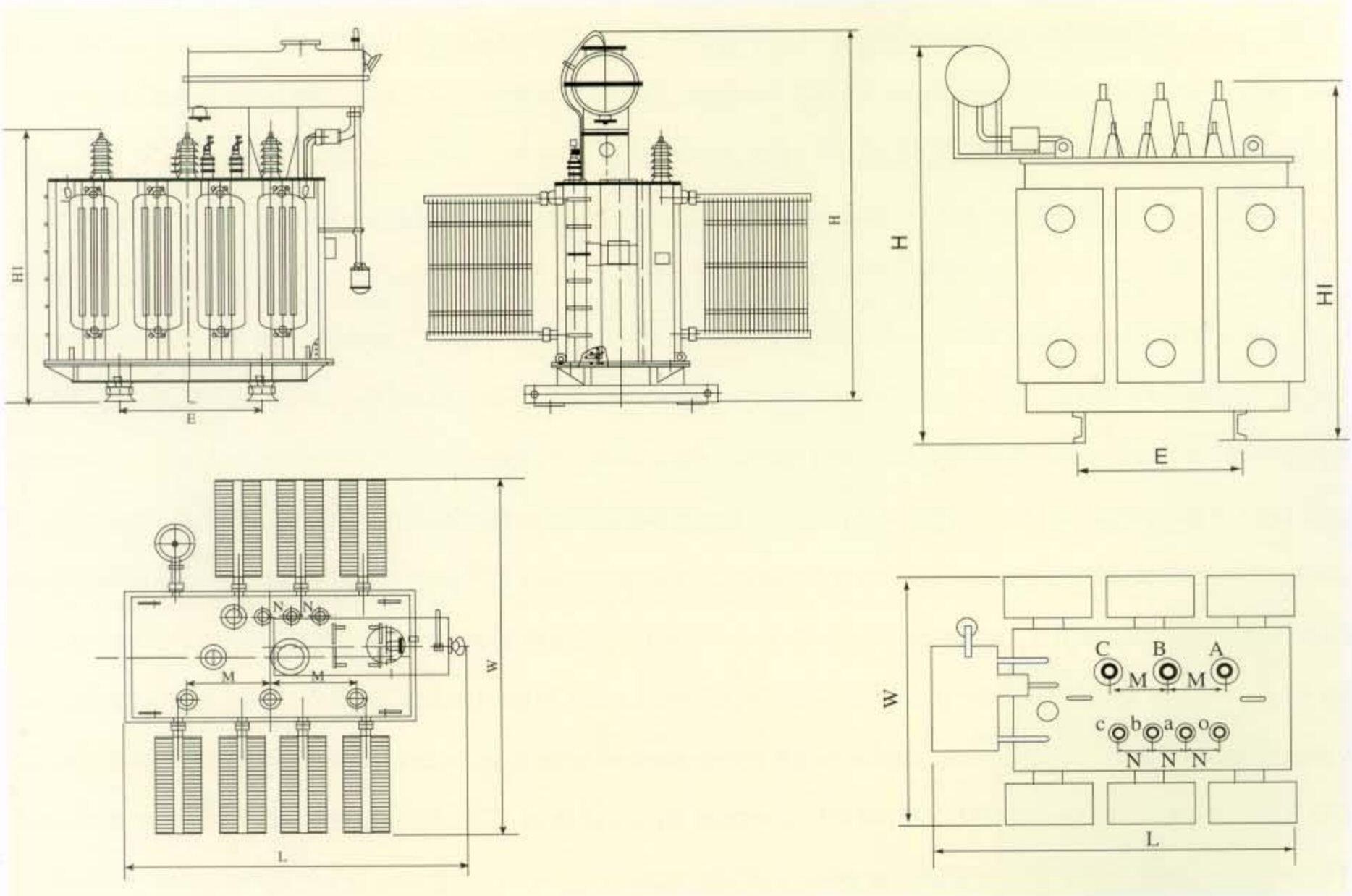

8000kVA 及以上外形结构图

Figures for 8000kVA Transformer and above

6300kVA 及以下外形结构图

Figures for 6300kVA Transformer and below

110kV 级油浸电力变压器

110kV Oil-immersed Power Transformers

本产品适用于电力系统中的升压或降压，以达到电力输配的目的，也可用于不同电压电网中的联络。

9型110kV电力变压器包括双绕组无励磁调压（SF9）、三绕组无励磁调压（SFS9）、双绕组有载调压（SFZ9）、三绕组有载调压（SFSZ9）四个系列，是90年代推出的新一代节能产品。

本产品吸收了国外同类产品的长处，采用计算机优化设计，选用优质材料，并以生产过程的严格工艺管理，极大地提高了产品的电气和机械性能。与现行国家标准GB/T6451-1999相比，空载损耗平均下降22%，具有显著的节能和改善电网质量的效果。在绝缘件制造、线圈绕制、器身结构的重要部件和工序，吸收国外技术，采取多项设计、工艺措施，有效地增强变压器的抗短路能力，提高电网运行的可靠性。

本产品经机电部、电力部联合鉴定通过，评认达到国内先进水平，完全符合国家标准GB/1094-1996和GB/T6451-1999的规定要求。

The products apply to step-up and step-down in power system of power transmission and distribtion or connection in different power net work.Type 9 110kV power transformers include four series of double windings with non-excited tap changer(SF9),triple windings with non-excited tap changer(SFS9), double windings with on-load tap changer(SFZ9)and triple windings with on-load tap changer(SFSZ9). They are new generation of energy-saved products putting out in 90's.

The products raise the electric and machenical capabilities by absorbing the advantages of the same products abroad,utilizing advanced design,selecting quality materials and controlling strictly during the process.Comparing to the present state standard GB/T6451-1999,no-load loss decreases 22% averagely, gaining the effect of saving energy and improving net work quality conspicuously,In key components and process such as insulator manufacture,coil winding and transformer constructure,multiple design and technology facility are adopted by absorbing foreign technology to increase the transformers capability of antishort circuit and raise the reliability of net iperation.

The products pass the inspections by the Ministry of Machinery & Electric Industry and the Power Ministry,reach the domestic advanced level and meet the state standard GB1094-1996 and GB/T6451-1999.

35kV 级 S9 系列无励磁调压低损耗变压器技术参数

Parameters for S9 Series Non-excited Low Loss Transformers of 35kV Tap Changer

高压 HV:35kV　低压 LV:0.4kV　联结组别 Connection symbol:Yyn0　高压分接范围 HV Tapping Range: ± 5 %

型号 Type	额定容量 Rated power (kVA)	空载损耗 No-load loss (W)	负载损耗 On-load loss (W)	阻抗电压 Impedance voltage (%)	空载电流 No-load current (%)	重量 (kg)Weight		外形尺寸 (mm)Dimensions							吊高 Lifting height (mm)
						油重 Oil weight	总重 Total weight	L	W	H	E	M	N	H1	
S9-50/35	50	210	1200	6.5	2.00	285	755	1120	915	1575	660	380	80	1465	3200
S9-80/35	80	260	1560		1.90	380	1065	1170	945	1640	660	380	120	1530	3250
S9-100/35	100	300	2020		1.80	405	1105	1260	1025	1700	660	400	120	1600	3300
S9-125/35	125	340	2380		1.70	470	1310	1420	1030	1770	660	400	120	1670	3400
S9-160/35	160	370	2840		1.65	540	1610	1750	1030	1855	660	400	120	1755	3450
S9-200/35	200	430	3330		1.55	555	1770	1820	1060	1910	660	400	120	1760	3550
S9-250/35	250	510	3960		1.40	565	1805	1980	1070	1950	660	400	120	1765	3500
S9-315/35	315	620	4770		1.40	625	2035	2040	1090	1985	660	400	120	1785	3700
S9-400/35	400	740	5760		1.30	700	2120	2060	1120	2155	820	400	160	1950	4000
S9-500/35	500	870	6930		1.30	785	2740	2110	1160	2200	820	400	170	1970	4100
S9-630/35	630	1040	8280		1.25	870	3220	2180	1200	2210	820	400	170	1980	4100
S9-800/35	800	1230	9900		1.05	905	3420	2215	1230	2275	820	400	180	1990	4200
S9-1000/35	1000	1450	12200		1.00	1085	4050	2270	1690	2280	820	400	200	2110	4300
S9-1250/35	1250	1760	14650		0.95	1105	4400	2285	1825	2560	1070	400	200	2250	4350
S9-1600/35	1600	2150	17600		0.90	1185	5095	2345	1820	2660	1070	400	200	2350	4550
S9-2000/35	2000	2600	19500		0.90	1485	6050	2450	2040	2710	1070	400	200	2415	4900
S9-2500/35	2500	3300	21500		0.80	1580	6900	2580	2100	2850	1070	400	200	2550	5000

本表所列数据仅供参考，以工厂提供的正式图纸为准。

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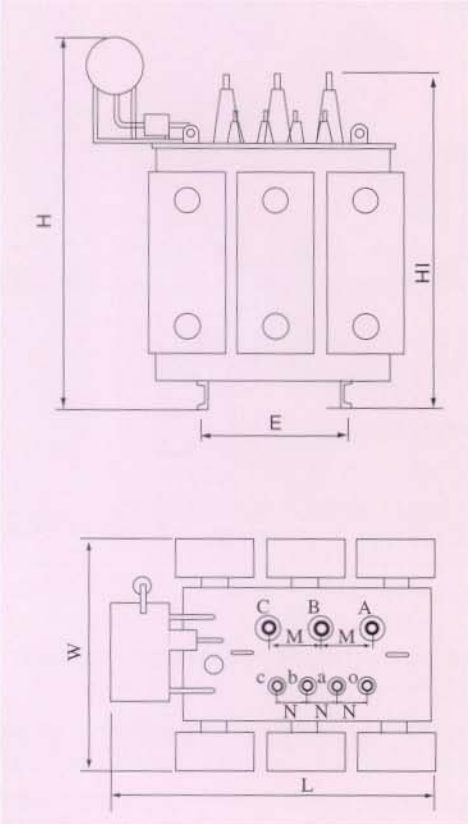

35kV 级 SZ9、SFZ9 系列有载调压变压器技术参数

Parameters for SZ9、SFZ9 Series On-load Transformers of 35kV with Tap Changer

高压 HV:35(38.5)kV 低压 LV:10.5(11,6.6,6.3)kV 联结组别 Connection symbol:Y,d11(YNd11) 高压分接范围 HV Tapping Range: ± 3 × 2.5%

型号 Type	额定容量 Rated power (kVA)	空载损耗 No-load loss (W)	负载损耗 On-load loss (W)	阻抗电压 Impedance voltage (%)	空载电流 NO-load current (%)	重量(kg) Weight		外形尺寸(mm) Dimensions							吊高 Lifting height (mm)
						油重 Oil weight	总重 Total weight	L	W	H	E	M	N	H1	
SZ9-1000/35	1000	1800	12500	6.5	1.2	1160	4560	2850	1670	2210	1070	400	300	1710	4800
SZ9-1250/35	1250	2200	14800		1.2	1325	4780	3225	1810	2330	1070	450	320	2050	4850
SZ9-1600/35	1600	2600	17600		1.1	1410	5580	3260	1910	2340	1070	450	300	2060	4900
SZ9-2000/35	2000	2850	18700		1.0	1520	5875	3357	1970	2345	1070	450	400	2085	5000
SZ9-2500/35	2500	3400	21700		1.0	1860	6975	3435	1980	2510	1070	450	400	2210	5000
SZ9-3150/35	3150	4040	26000	7	0.9	2145	8225	3660	2160	2700	1070	500	400	2245	5000
SZ9-4000/35	4000	4850	30700		0.9	2165	9040	3665	2185	2740	1070	450	400	2285	5000
SZ9-5000/35	5000	5800	36000		0.85	2465	10500	3850	2295	2840	1070	450	400	2385	5300
SZ9-6300/35	6300	7050	38700	7.5	0.85	2830	12465	3975	2475	2900	1070	500	400	2445	5300
SZ9-8000/35	8000	9900	43000		0.75	3120	14800	4170	3000	3750	1475	740	400	2880	5600
SZ9-10000/35	10000	11600	50600		0.75	3900	17450	4230	3080	3860	1475	740	400	3360	6000
SZ9-12500/35	12500	13700	59850	8	0.70	4500	21680	4395	3270	3920	1475	830	400	3420	6000
SZ9-16000/35	16000	16000	75600		0.70	5570	24360	4500	3210	4050	1475	855	400	3530	6250
SZ9-20000/35	20000	18900	91000		0.65	6820	33100	4830	3600	4200	1475	925	400	3700	6650
SZ9-25000/35	25000	22300	10500		0.65	7200	37600	5020	3920	4410	1475	950	400	3910	7200
SZ9-31500/35	31500	26000	127000		0.60	7800	40660	5200	4110	4590	1475	970	400	4020	7400

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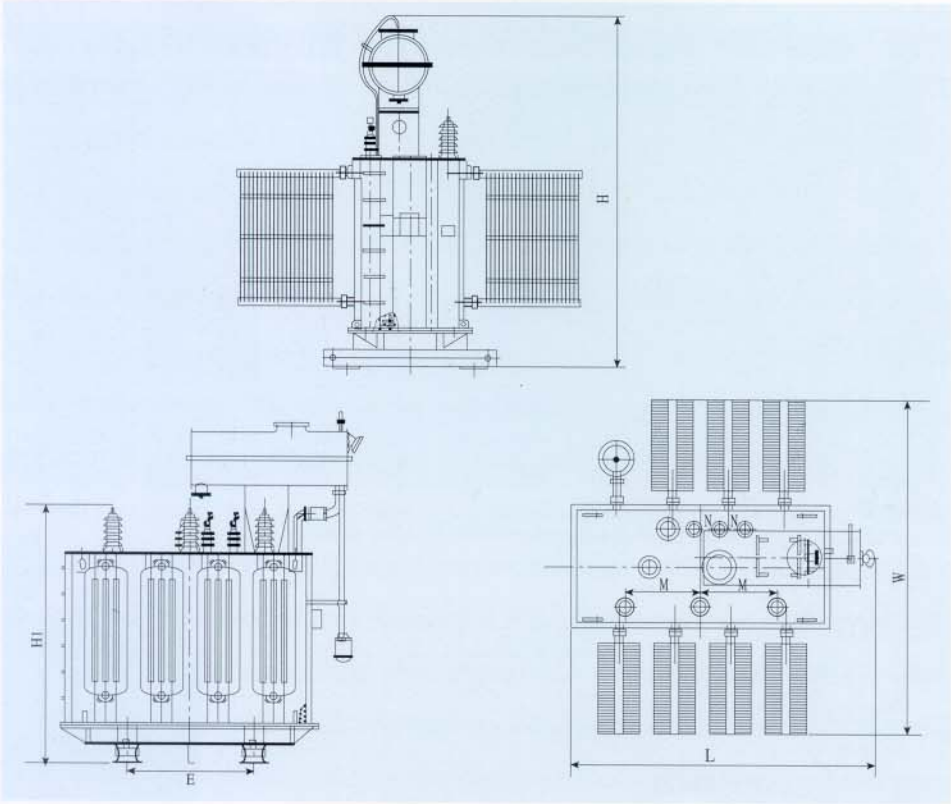


8000kVA 及以上外形结构图

Figures for 8000kVA Transformer and above

S9;SF9 系列 35kV 级节能型油浸式电力变压器

S9,SF9 Series Energy-saved and Oil-immersed Power Transformers of 35kV

本产品用于将 35kV 输电电压直接降为 0.4kV 配电压为用户供电,或将 10.5（6.3,3.0）kV 电压转换为 38.5（35）kV，也可反向转换，供输电或配电使用。

本系列变压器是我厂90年代初引进并消化国外变压器设计制造技术研制开发的节能型产品，除符合国家标准GB1094-1996（等效采用IEC76/1993）和GB/T6451-1999的全部技术要求外，电气性能明显优于按现行国家标准生产的产品，即总损耗比 GB/T6451-1999 的规定值低 15～25%，因此选用本系列产品，用户可获得良好的节能经济效益。

The products apply to power supplying for 35kV transmitting voltage to reduce directly to 0.4kV distribution voltage,change 10.5(6.3,3.0) kV voltage to 38.5(35)kV or transfer adversly for transmission or distribution.

This series of transformers are developed in 1990’s after introducing and digesting transformer design and manufacture technology abroad.In accordance with the state standard GB 1094-1996(equivalent to IEC76-1993)and GB/T6451-1999,the electric capability is obviously better than the product made according to the current state standard,i.e.the total losses are 15~25% lower than the value of GB/T6451-1999.Therefore,you can acquire great econonic effect of saving energy to select this series.

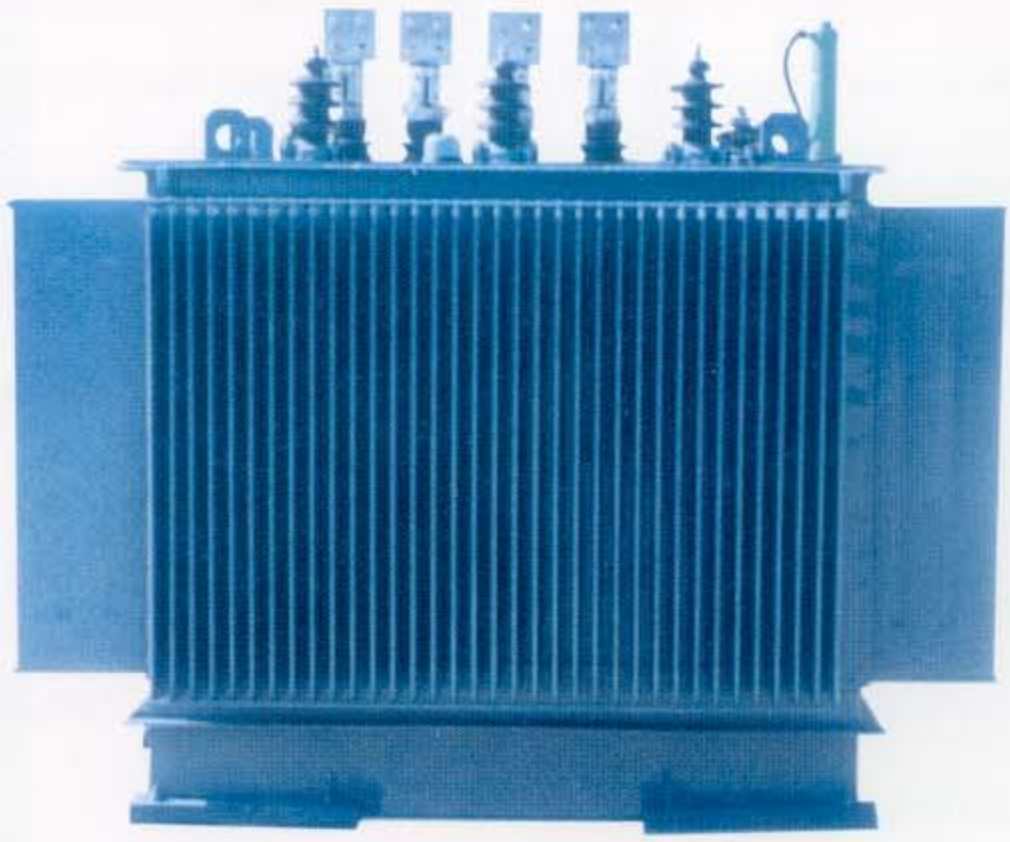
S9-M 系列全密封配电变压器

S9-M 系列全密封变压器电压等级为 6,10kV,容量为 30~2000kVA。具有低损耗（比国标空载损耗下降 20% 左右，负载损耗下降 10% 左右）、可靠性高、免维护的特点，将越来越多地应用于输变电网。本系列产品的主要特点是采用各种措施，使变压器油与空气及阳光完全隔绝，避免变压器油氧化和受潮，以减缓变压器绝缘的老化，减少变压器的日常维护和维修，延长变压器的使用寿命。

变压器在储存及运行中，可以发生一百度左右的温度变化，变压器油的体积变化可达到 7% 左右，普通中小型油浸变压器是安装带油封吸湿器的储油柜来解决这个问题。但变压器油通过吸湿器与大气相通，吸湿器内硅胶的吸湿作用有限，大气中的潮气难免会进入变压器油中，使变压器油老化，绝缘强度降低，用户需要经常更换硅胶和处理变压器油，花费大量精力定期维修和检修变压器。我厂开发 S9-M 全密封变压器的技术关键是采用波纹油箱，解决变压器油因热涨冷缩引起的体积变化问题。

我厂从德国GEORG公司引进波纹成型生产线和自动焊接设备制造的波纹油箱，波纹壁在一定压力范围内可产生弹性变形，利用波纹油箱容积随压力变化而产生的变化来容纳变压器油的膨胀，使变压器油与空气完全隔绝，油质及绝缘便不易老化，延长了产品使用寿命，并可大大减少维护的工作量，甚至免维护。

我厂运用计算机优化设计的S9-M系列全密封变压器，采用优质硅钢片和无氧铜导线制造铁心和线圈，用优质钢板制造波纹油箱。每台产品均装有压力释放阀及变压器温度油位指示计。压力释放阀在变压器内部压力增大时可自动释放压力，以保护变压器。容量在 800kVA 及以上产品配置有电接点的信号温度计和压力释放阀，可以用于报警或跳闸。



S9-M 系列全密封配电变压器技术参数

Parameters for S9-M Series Seal Distribution Transformers

高压 HV:10(11,10.5,6.3,6)kV 低压 LV:0.4kV 联结组别 Connection symbol:Yyd0 或 Dyn11 高压分接范围 HV Tapping Range: ± 5%

型号 Type	额定容量 Rated power (kVA)	空载损耗 No-load loss (W)	负载损耗 On-load loss (W)	阻抗电压 Impedance voltage (%)	空载电流 NO-load current (%)	重量(kg) Weight		外形尺寸(mm) Dimensions							吊高 Lifting height (mm)
						油重 Oil weight	总重 Total weight	L	W	H	E	M	N	H1	
S9-M-30/10	30	130	600	4.0	2.1	70	295	795	540	860	400	200	100	850	1750
S9-M-50/10	50	170	870		2.0	95	400	845	540	970	400	200	100	945	1980
S9-M-63/10	63	200	1040		1.9	100	445	860	635	1010	550	200	100	985	1980
S9-M-80/10	80	250	1250		1.9	125	540	1150	690	1050	550	200	100	1030	2070
S9-M-100/10	100	290	1500		1.6	135	610	1180	690	1040	550	200	100	1010	2040
S9-M-125/10	125	340	1800		1.5	150	690	1200	695	1060	550	200	100	1060	2100
S9-M-160/10	160	400	2200		1.4	170	800	1250	715	1100	550	200	100	1070	2150
S9-M-200/10	200	480	2600		1.3	190	945	1355	775	1140	550	200	100	1120	2250
S9-M-250/10	250	560	3050		1.2	215	1085	1385	795	1190	660	250	120	1165	2260
S9-M-315/10	315	670	3650		1.1	245	1290	1420	810	1240	660	250	120	1215	2500
S9-M-400/10	400	800	4300		1.0	290	1530	1490	870	1320	660	250	120	1295	2600
S9-M-500/10	500	960	5100		0.9	325	1745	1615	965	1400	660	250	120	1340	2600
S9-M-630/10	630	1200	6000	4.5	0.8	385	2000	1620	875	1425	820	300	160	1400	3500
S9-M-800/10	800	1400	7500		0.7	515	2545	1650	900	1565	820	300	160	1530	3500
S9-M-1000/10	1000	1700	10300		0.6	535	2730	1745	1070	1600	820	300	180	1540	3600
S9-M-1250/10	1250	1950	12000		0.6	625	3230	1940	1220	1690	820	300	180	1630	3800
S9-M-1600/10	1600	2400	14500	4.5	0.6	700	3660	1990	1240	1735	1070	300	180	1690	3800
S9-M-2000/10	2000	3000	18000	6	0.6	960	4625	2090	1320	1860	1070	400	200	1790	4000
S9-M-2500/10	2500	3500	25000		0.6	1110	5505	2365	1960	1880	1070	400	200	1825	4000

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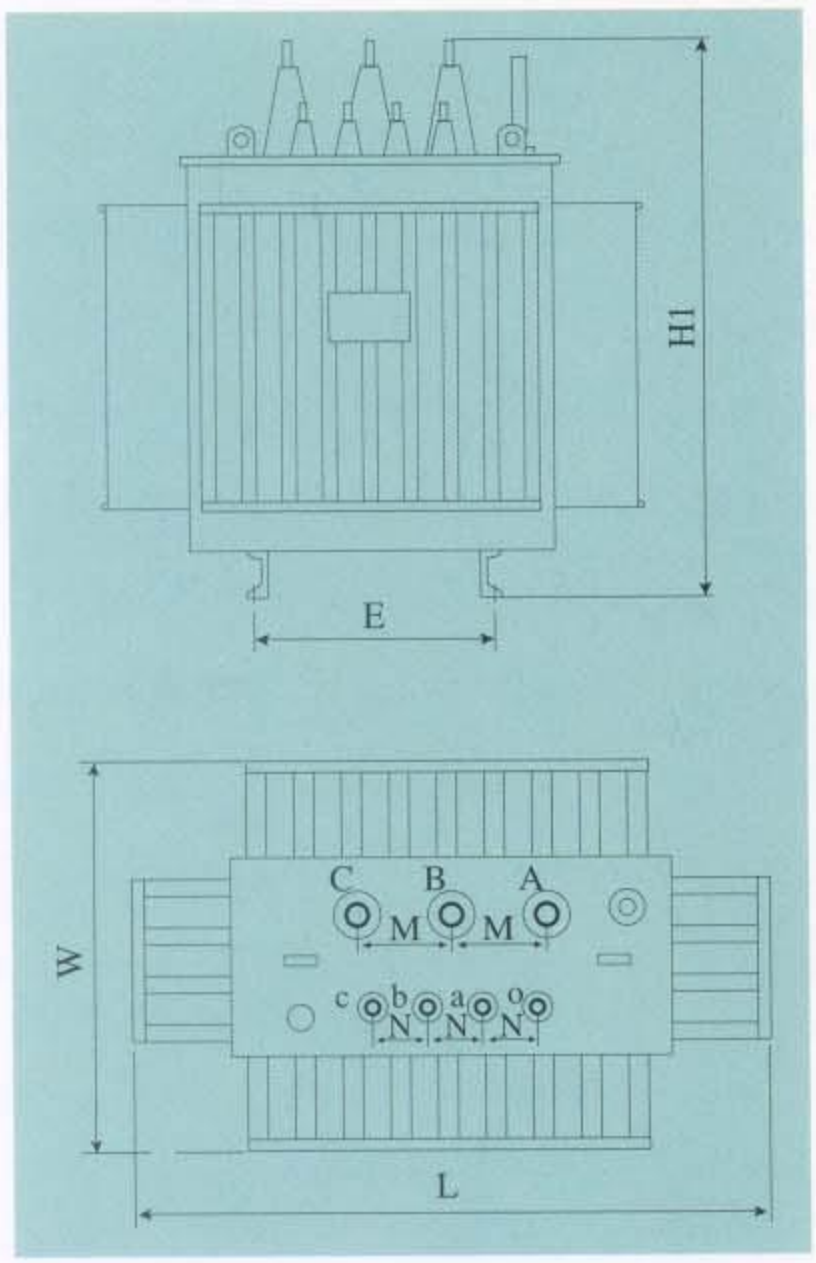

S12 系 列 变 压 器

S12 Series Transformers

型 号 Type	高压 H.V (V)	低压 L.V (V)	空载损耗 Po (V)	负载损耗 Pk (V)	阻 抗 Uk (V)	空载电流 Io (%)	油 重 Oil (Kg)	总 重 Total (Kg)	长 × 宽 × 高 L × W × H (mm)
S12-50/22	22000	400	210	1050	4	1.3	152	510	1290 × 690 × 1336
S12-100/22	22000	400	340	1750	4	1.3	217	760	1505 × 750 × 1470
S12-160/22	22000	400	480	2350	4	1.2	282	980	1700 × 850 × 1550
S12-160/33	33000	400	500	2350	4	1.2	435	1405	1720 × 980 × 1650
S12-250/33	33000	400	700	3250	4	1.0	465	1460	1710 × 1050 × 1817
S12-250/22	22000	400	670	3250	4	1.0	420	1390	1500 × 980 × 1680
S12-500/10	10000	400	1030	4950	4	0.9	390	1840	1540 × 800 × 1660
S12-1000/10	10000	400	1700	9200	4.5	0.8	870	2950	2350 × 1030 × 2360

本表所列数据仅供参考，以工厂提供的正式图纸为准。

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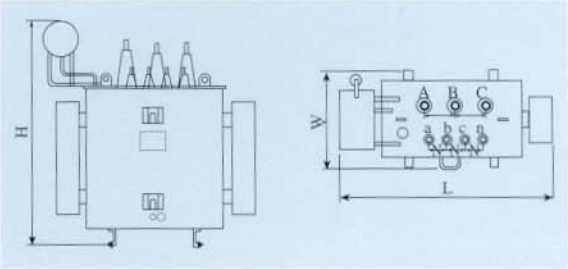
本系列是我厂自行设计的供出口的三相变压器
本系列产品根据 IEC76 或德国 DIN 标准制造

Three-phase transformers are designed by our factory for export.The products are manufactured and tested in accordance wihth IEC76 or DIN standard.



CSP 全自动保护型单相柱上式配电变压器

Conventional Single-phase Pole-mounted Distribution Transformers

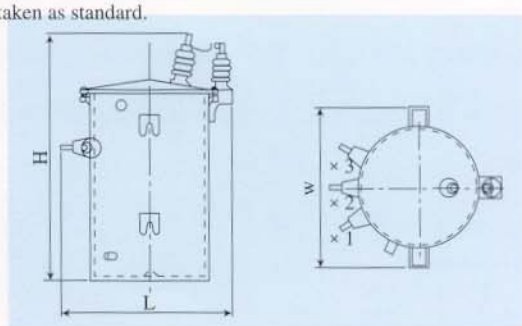
额定容量 Rated power (kVA)	额定电压 Rated Voltage(kV) 高压 H.V (V)	分接 Tapping	低压 L.V (V)	极 性 Polarity	空载损耗 No-load Loss Po(W)	负载损耗 Load Loss Pk(W)	空载电流 No-load Current Io(%)	阻抗 Impedance Uk(%)	外形尺寸 Dimensions(mm) 长 L	宽 W	高 H	重 量 Weight(kg) 油 Oil	器身 Boby	总重 Total
10	12.47 Grdy/7.2 or 13.2 Grdy/7.62 or 13.8 Grdy/7.97	±2×2.5%	0.12/0.24 or 0.24/0.48	Additive	65	195	3.5	2.5	530	630	980	45	65	140
15					90	195	3.0		550	650	980	50	90	170
25					110	420	2.8		610	650	1060	60	115	220
37.5					165	560	2.5		650	720	1090	75	145	265
50					190	690	2.2		760	810	1100	95	190	340

本表所列数据仅供参考，以工厂提供的正式图纸为准。

The data listed in the table are for reference only,formal figures provided are taken as standard.

CSP全自保护型单相柱上式配电变压器系专为居民住宅区和商业区的照明及动力用的电源设备而设计的变压器。

Type CSP (completely self protected)single phase pole-mounted distribution transformers are specifically designed for illumination of residential and commercial areas and diversified power applications.



S9 系列 6kV 和 10kV 级节能型油浸式电力变压器

S9 Series Energy-saved and Oil-immersed Transformers of 6kV and 10kV

S9 系列 6kV 和 10kV 级电力变压器是我厂吸收国外设计制造技术自行研究开发的低损耗变压器，用于电力线路的降压配电或升压输电。该系列产品选用优质材料和合理的结构，运用 CAD 设计手段，使产品达到可靠、节能效果。与现行国家标准 GB/T6451-1999 相比，总损耗下降 15-25%，达到国际先进水平，且结构合理坚固，可靠性高。欢迎用户选用本系列产品，它可为用户带来节约能耗和安全运行的显著经济效益。

本系列产品的额定容量为30 ~ 6300kVA，包含各种标准电压组合，也可以按照用户的特殊需要提供非标准电压组合产品。

产品的标准依据是 GB1094-1996,GB/T6451-1999 和 IEC76-1993。

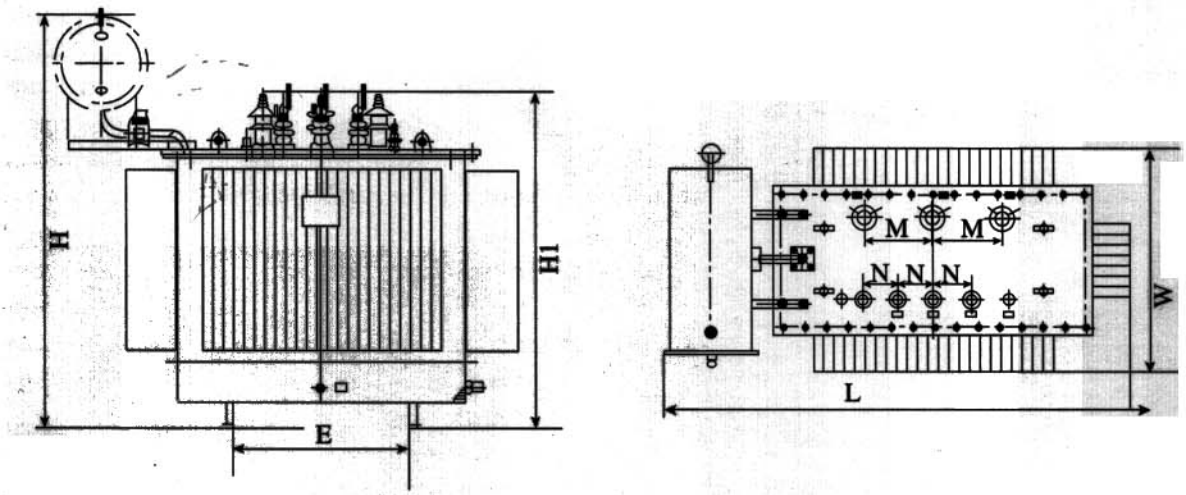
S9 series 6kV and 10kV power trasformers are low loss transformers developed by introducing design and manufacturing technology from abroad and apply to step-down distribution and step-up transmission with CAD design.The series products reach the reliable and energy-save effect by using high quality materials and reasonable constructions.Comparing with the current state standard GB/T6451-1999, the total losses reduce 15~25% which reaching the international advanced level.With the tight construction and high reliability,the products will save energy and operate safely to bring you obviously effect.

The rated power of the series products is 30-6300kVA including several standard voltages combination. Non-standard voltages combination products will also be provided for the special requirements.

The standard is on the basis of GB 1094-1996,GB/T6451-1999 and IEC76-1993.

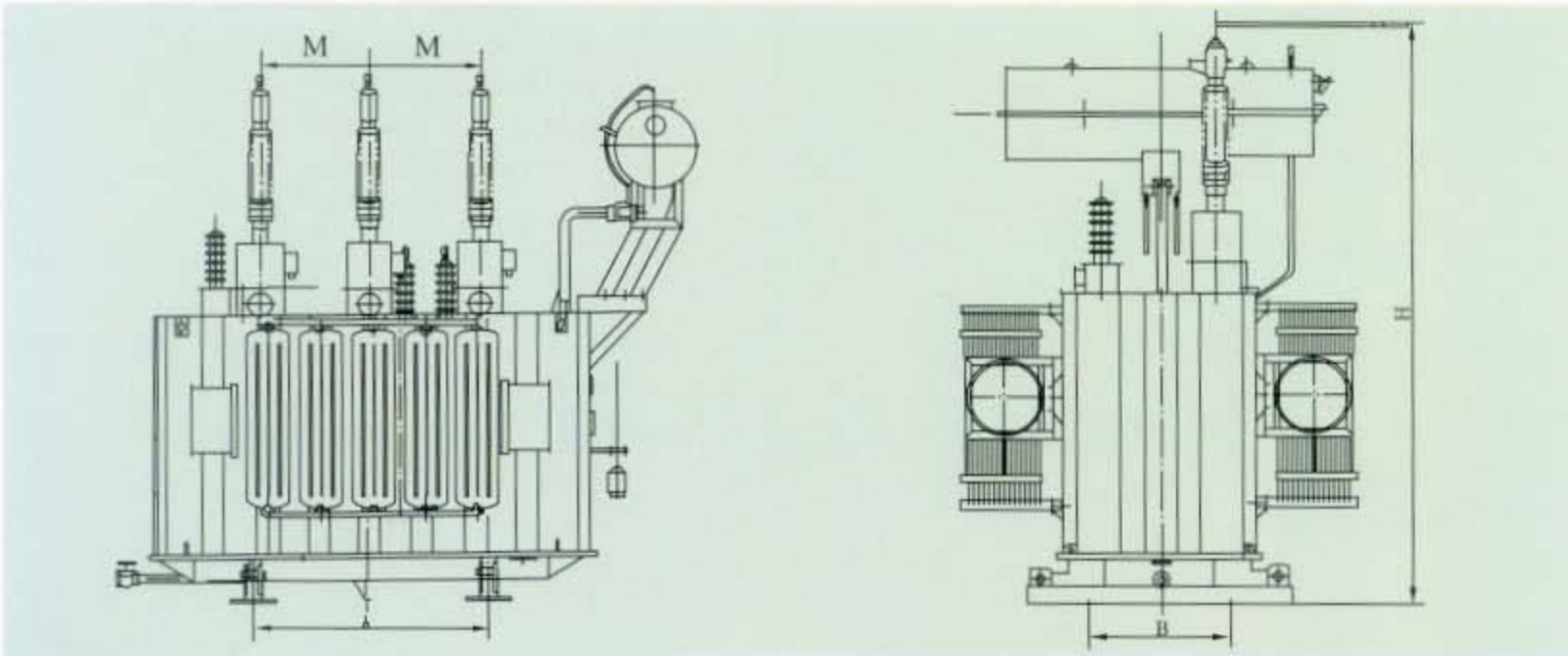
波 纹 油 箱 结 构 图

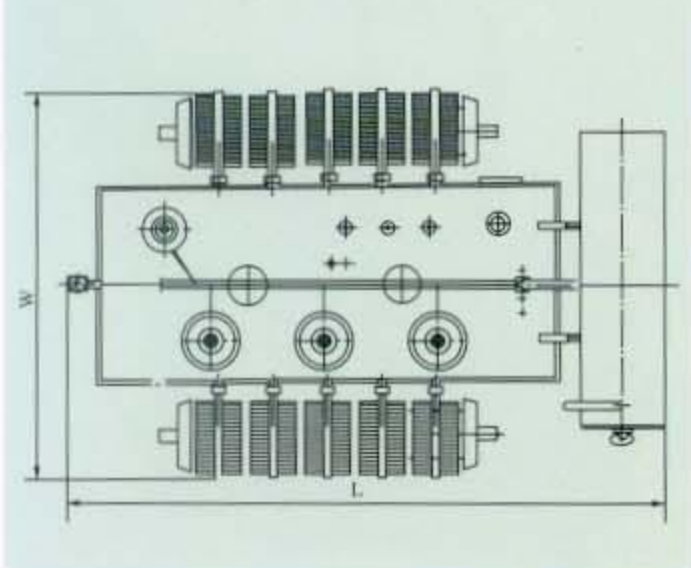
Figures for Corrugated Tank

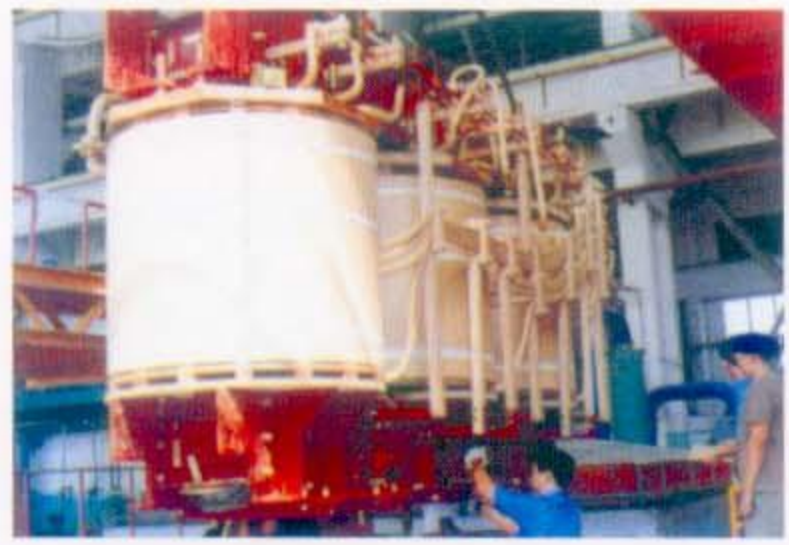


SF9 系 列

SF9 Series







SF9 系列 110kV 级双绕组无励磁调压电力变压器技术参数

Parameters for SF9 Series Tri-winding Non-excited Power Transformers of 110kV with Tap Changer

额定高压 Rated HV:110,121kV ± 2 × 2.5%　　**联结组标号** Connection symbol:YNd11

额定低压 Rated LV:6.3,6.6,10.5,11kV

绝缘水平 Insulation level:LI480AC200-LI250AC95(LI325AC140)/LI75AC35(LI60AC25)

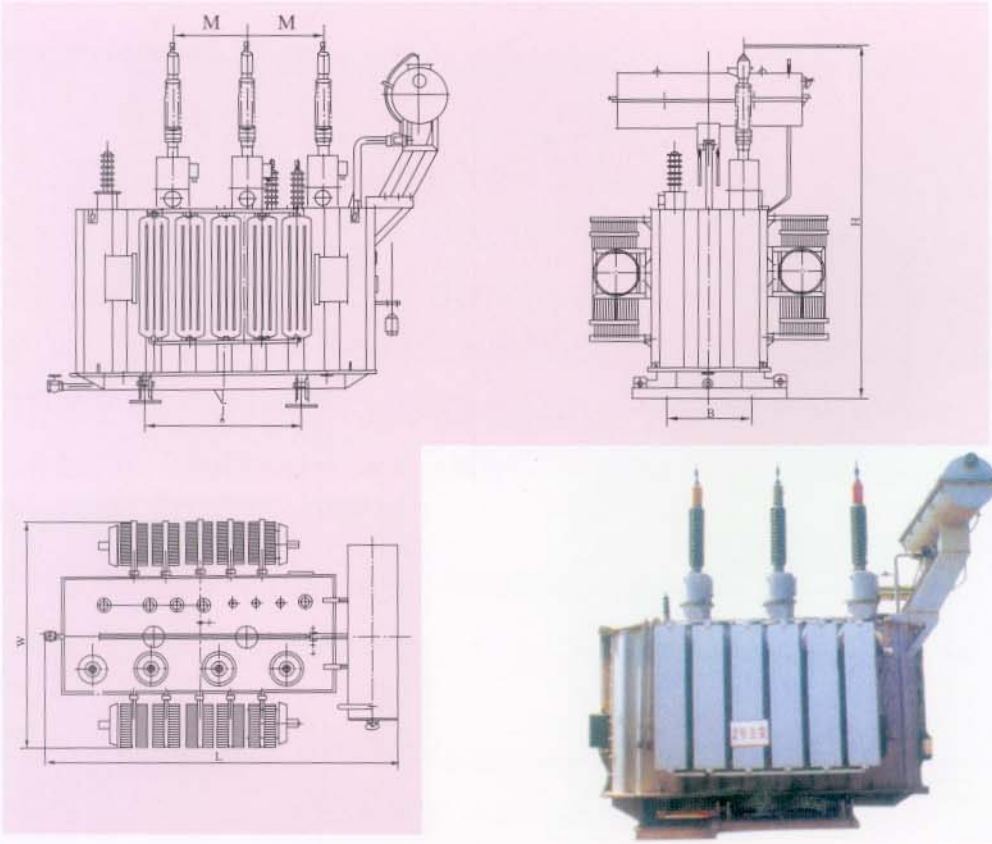
型 号 Type	空载损耗 NO-load loss (kW)	负载损耗 ON-load loss (kW)	空载电流 No-load current (%)	阻抗电压 Impedance voltage (%)	总 重 Total weight (t)	运输总重 Transporting weight (t)	总油重 Total oil weight (t)	上节吊重 Lifting weight (t)	外 形 尺 寸 (mm)Dimensions						
									A	B	L	W	H	M	H1
S9-6300/110	8.8	36.9	0.85		17.70	15.80	4.45	1.72	1475	1475	3670	3140	4100	1050	1570
SF9-8000/110	10.6	45.0	0.80		19.20	17.50	5.10	1.80	1475	1475	3740	3250	4150	1080	1580
SF9-10000/110	12.5	53.0	0.75		21.20	20.00	5.30	1.95	1475	1475	4020	3730	4200	1100	1590
SF9-12500/110	14.5	63.0	0.70		24.60	22.50	5.80	2.30	1475	1475	4050	3770	4360	1120	1595
SF9-16000/110	17.5	77.4	0.65		30.00	27.00	6.60	2.50	1475	1475	4060	3820	4450	1160	1630
SF9-20000/110	19.5	93.6	0.60	10.5	33.00	30.30	7.70	2.70	1475	1475	4310	3960	4570	1050	1650
SF9-25000/110	22.5	110.7	.055		39.30	35.20	9.20	3.00	1475	1475	4350	4010	4780	1050	1690
SF9-31500/110	26.5	133.0	0.50		44.50	39.10	9.60	3.70	2040	1475	4590	4620	5320	1085	1850
SF9-40000/110	32.0	156.5	0.45		52.50	45.90	11.10	4.20	2040	1475	4780	4800	5550	1145	1890
SF9-50000/110	39.0	194.4	0.40		61.60	55.10	13.70	4.40	2040	1475	5200	5020	5700	1275	1950
SF9-63000/110	45.0	234.0	0.35		70.50	63.30	15.30	4.95	2040	2040	5260	5100	5860	1230	2050

本表所列数据仅供参考，以工厂提供的正式图纸为准。

The data listed in the table are for reference only,formal figures provided are taken as standard.

SFS9 系 列

SFS9 Series



SFS9 系列 110kV 级三绕组无励磁调压电力变压器技术参数

Parameters for SFS9 Series Tri-winding Non-excited Power Transformers of 110kV with Tap Changer

额定高压 Rated HV:110,121kV ± 2 × 2.5% **额定中压** Rated MV:38.5,35kV ± 2 × 2.5%& ± 5%

额定低压 Rated LV:6.3,6.6,10.5,11kV **联结组标号** Connection symbol:YNynod11

绝缘水平 Insulation level:LI480AC200-LI250AC95(LI325AC140)/LI200AC85/LI75AC35(LI60AC25)

型 号 Type	空载损耗 NO-load loss (kW)	负载损耗 ON-load loss (kW)	空载电流 No-load current (%)	阻抗电压 Impedance voltage (%)	总 重 Total weight (t)	运输总重 Transporting weight (t)	总油重 Total oil weight (t)	上节吊重 Lifting weight (t)	外 形 尺 寸 (mm)Dimensions						
									A	B	L	W	H	M	H1
SS9-6300/110	10.8	47.7	0.65	高－中 (高－低) 17-18 高－低 (高－中) 10.5 中－低 6.5	21.20	19.10	7.20	1.70	1475	1475	4700	3190	4200	1100	1640
SFS9-8000/110	12.5	56.7	0.60		23.50	20.70	7.90	1.85	1475	1475	4765	3280	4350	1165	1670
SFS9-10000/110	14.8	66.6	0.60		26.40	23.00	8.30	2.10	1475	1475	4790	3615	4480	1160	1680
SFS9-12500/110	17.0	78.3	0.55		29.80	25.90	8.90	2.35	1475	1475	4870	4100	4490	1205	1700
SFS9-16000/110	19.8	95.4	0.55		36.75	31.20	9.35	2.55	1475	1475	5100	4400	4550	1250	1780
SFS9-20000/110	23.4	112.5	0.50		40.80	36.55	10.30	3.10	2040	1475	5150	4900	4750	1440	1800
SFS9-25000/110	26.8	133.2	0.50		46.95	40.50	11.45	3.80	2040	1475	5300	4680	4940	1245	1850
SFS9-31500/110	30.0	157.5	0.45		54.70	48.80	14.40	4.40	2040	1475	5590	4830	5200	1290	1960
SFS9-40000/110	35.0	189.0	0.45		63.25	56.40	15.85	4.95	2040	1475	6100	5010	5500	1255	2000
SFS9-50000/110	43.0	225.0	0.40		70.50	63.00	18.50	5.30	2040	1475	6300	5150	5600	1295	2020
SFS9-63000/110	51.0	270.0	0.40		80.20	74.00	20.30	6.10	2040	2040	6400	5260	5710	1350	2060

本表所列数据仅供参考，以工厂提供的正式图纸为准

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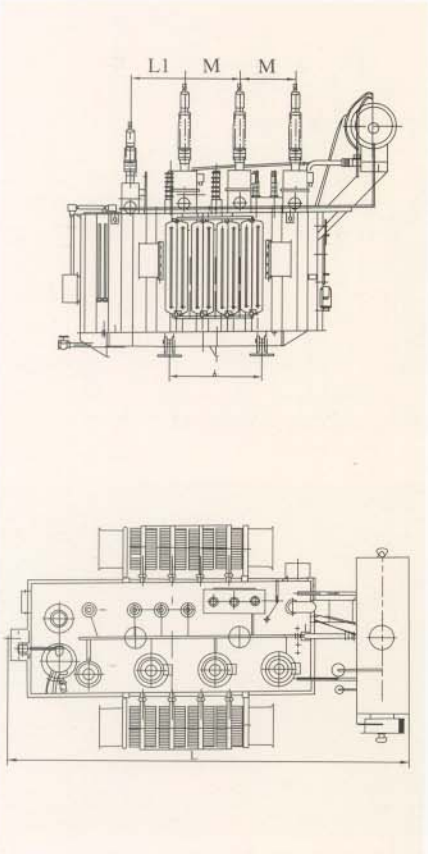
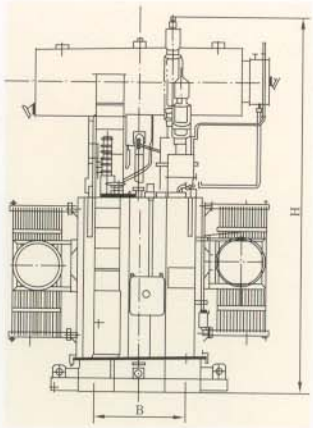
SFSZ9 系 列

SFSZ9 Series





SFSZ9 系列 110kV 级三绕组有载调压电力变压器技术参数

Parameters for SFS9 Series Tri-winding Power Transformers of 110kV with On load Tap Changer

额定高压 Rated HV:110,121kV ± 8 × 1.25% **额定中压** Rated MV:38.5,35kV ± 2 × 2.5%& ± 5%

额定低压 Rated LV:6.3,6.6,10.5,11kV **联结组标号** Connection symbol:YNynod11

绝缘水平 Insulation level:LI480AC200-LI250AC95(LI325AC140)/LI200AC85/LI75AC35(LI60AC25)

型 号 Type	空载损耗 NO-load loss (kW)	负载损耗 ON-load loss (kW)	空载电流 NO-load current (%)	阻抗电压 Impedance voltage (%)	总 重 Total weight (t)	运输总重 Transporting weight (t)	总油重 Total oil weight (t)	上节吊重 Lifting weight (t)	外 形 尺 寸(mm) Dimensions						
									A	B	L	W	H	M	H1
SSZ9-6300/10	12.20	47.7	0.65	高－中 (高－低) 17-18 高－低 (高－中) 10.5 中－低 6.5	25.2	22.0	9.7	2.3	2040	1475	5380	3360	4510	1185	1600
SFSZ9-8000/110	14.0	56.7	0.60		28.3	24.1	10.5	2.5	2040	1475	5640	3510	4710	1215	1650
SFSZ9-10000/110	15.0	66.6	0.60		32.2	27.3	11.2	2.75	2040	1475	5910	3800	4870	1125	1680
SFSZ9-12500/110	18.9	78.3	0.55		36.0	30.3	12.2	3.1	2040	1475	5950	4080	5250	1195	1700
SFSZ9-16000/110	22.0	95.4	0.55		40.6	35.5	13.3	3.5	2040	1475	6000	4250	5380	1185	1690
SFSZ9-20000/110	25.0	112.5	0.50		45.8	40.2	14.9	4.3	2040	1475	6130	4320	5610	1125	1690
SFSZ9-25000/110	29.0	133.2	0.50		52.0	47.0	16.9	4.8	2040	1475	6360	4500	5760	1220	1850
SFSZ9-31500/110	33.0	157.5	0.45		65.5	57.8	19.4	5.1	2040	1475	6800	4520	5900	1265	1880
SFSZ9-40000/110	38.5	189.0	0.45		72.9	62.9	21.6	5.4	2040	1475	7280	4830	6220	1430	1920
SFSZ9-50000/110	46.5	225.0	0.40		82.2	71.0	23.7	6.1	2040	1475	7340	5290	6300	1520	2010
SFSZ9-63000/110	56.0	270.0	0.40		94.8	83.7	26.1	6.7	2040	2040	7530	5370	6420	1620	2020

本表所列数据仅供参考，以工厂提供的正式图纸为准。

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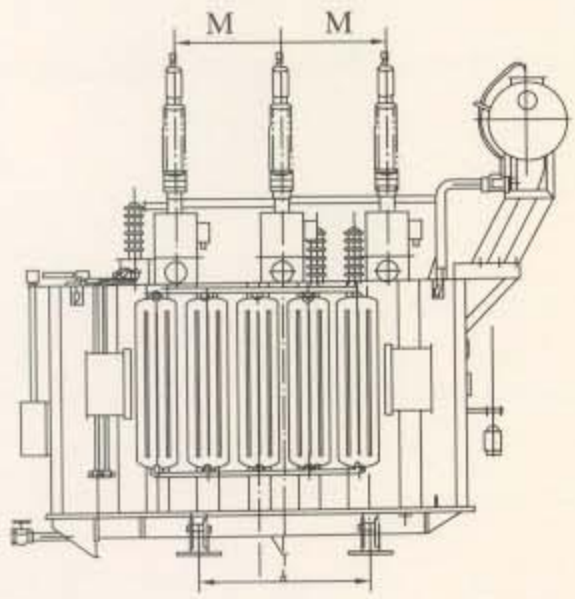
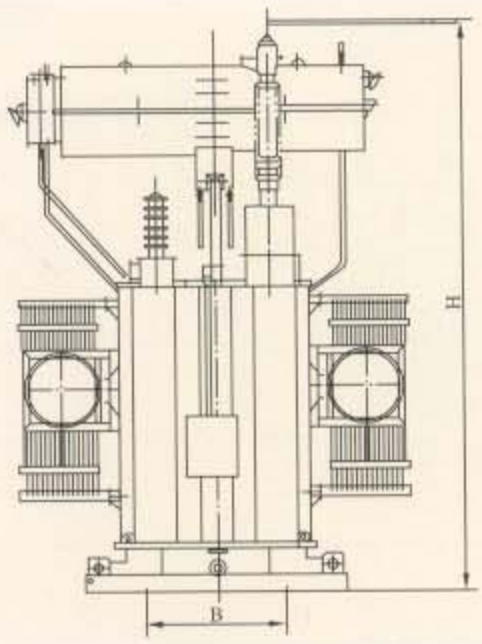
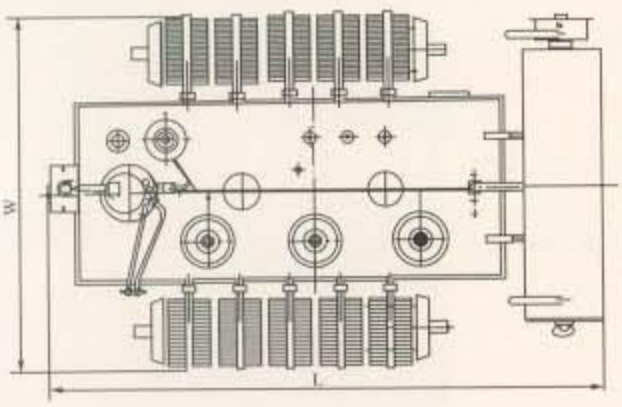
SFZ9 系 列

SFZ9 Series







SFZ9 系列 110kV 级双绕组有载调压电力变压器技术参数

Parameters for SFZ9 Series Double-winding Power Transformers of 110kV with On-load Tap Changer

额定高压 Rated HV:110,121kV ± 8 × 1.25%　额定中压 Rated MV:38.5,35kV ± 2 × 2.5%& ± 5%

额定低压 Rated LV:6.3,6.6,10.5,11kV　　联结组标号 Connection symbol:YNynod11

绝缘水平 Insulation level:LI480AC200-LI250AC95(LI325AC140)/LI200AC85/LI75AC35(LI60AC25)

型 号 Type	空载损耗 NO-load loss (kW)	负载损耗 ON-load loss (kW)	空载电流 No-load current (%)	阻抗电压 Impedance voltage (%)	总 重 Total weight (t)	运输总重 Transporting weight (t)	总油重 Total oil weight (t)	上节吊重 Lifting weight (t)	外 形 尺 寸 (mm)Dimensions						
									A	B	L	W	H	M	H1
SZ9-6300/110	10.0	36.9	0.85	10.5	20.9	18.4	6.6	1.9	1475	1475	4695	3190	4200	1100	1630
SFZ9-8000/110	12.0	45.0	0.80		22.8	20.0	7.2	2.2	1475	1475	4765	3280	4350	1165	1650
SFZ9-1000/110	14.0	53.1	0.75		25.3	22.5	8.0	2.4	2040	1475	4810	3560	4510	1200	1650
SFZ9-12500/110	16.0	63.0	0.70		28.6	24.9	8.5	2.7	2040	1475	4870	4100	4590	1205	1660
SFZ9-16000/110	18.5	77.4	0.65		32.6	28.7	9.1	3.1	2040	1475	5100	4400	4650	1250	1710
SFZ9-20000/110	22.0	93.6	0.60		37.6	32.9	11.0	3.6	2040	1475	5150	4530	4700	1240	1750
SFZ9-25000/110	24.5	110.7	0.55		44.1	38.5	11.3	4.2	2040	1475	5300	4680	4780	1245	1760
SFZ9-31500/110	29.5	133.2	0.50		54.0	46.2	13.3	4.8	2040	1475	5590	4830	5200	1255	1960
SFZ9-40000/110	35.0	156.6	0.45		59.5	52.0	14.5	5.1	2040	1475	6100	4970	5500	1290	1980
SFZ9-50000/110	42.0	194.4	0.40		68.0	59.3	16.5	5.4	2040	1475	6300	5100	5600	1295	1990
SFZ9-63000/110	49.5	234.0	0.35		73.8	64.0	18.1	6.2	2040	2040	6390	5260	5710	1350	2010

本表所列数据仅供参考，以工厂提供的正式图纸为准。

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