



富士电机—用户可信赖的品牌

Fuji Electric — A Reliable Brand For Customers

SCLB 系列 树脂绝缘干式变压器

SCLB Series
Resin Casting Dry-Type
Transformer

富士电机(中国)有限公司

节能型树脂干式变压器 Energy saving resinated dry type transformer

以通用的系列实现超高的效率
节省电力的效能

Carry out ultrahigh efficiency by the universal series

Save capacity of electric power

与 8 型对比: 减少损失 16%

减少设备运转费

减少二氧化碳

In comparison with the 8-type, the loss is reduced by 16%.

The cost of equipment operation is reduced.

The carbon dioxide is reduced.

负载损耗、无负载损耗、全部损失的比较和节省能源的效果(本公司的产品)

Comparison no load loss, no-load loss and total loss and the result of energy saving (product of our company)

■ 三相(Triphase) 50Hz 1000kVA 10/0.4kV Dyn11

	空载损 No-load loss (W)	负载损 Load loss (W)	全载损 Total loss (W)	比率 Rate (%)
8 型 the 8-type	2,210	9560	11770	100
10 型 the 10-type	1,770	8130	9900	84

8 型全损失 : $(2210 + 9560 \times 0.75^2) \div 1000 \times 24 \times 365 \times 0.8 = 53200$

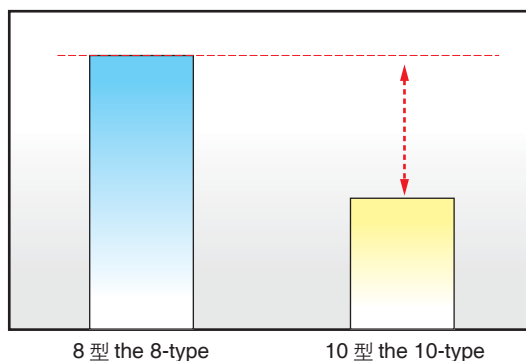
10 型全损失 : $(1770 + 8130 \times 0.75^2) \div 1000 \times 24 \times 365 \times 0.8 = 44500$

Total loss of the 8-type: $(2210 + 9560 \times 0.75^2) \div 1000 \times 24 \times 365 \times 0.8 = 53200$

Total loss of the 10-type: $(1770 + 8130 \times 0.75^2) \div 1000 \times 24 \times 365 \times 0.8 = 44500$

差 : 8700 RMB

Margin: 8700 RMB



(本公司标准品) Standard product of our company

损失减少 1870W
节省人民币为年 8700 元
Loss reduction: 1870W
Renminbi saving of 8700 Yuan per year

1) 8 型: 标准, 10 型: 设计值

2) 电力料金: 0.8 RMB/kWh

1) The 8-type: standard, the 10-type: design value

2) Electric power charge: 0.8 RMB/kWh

10 型的产品采用本公司独有的技术, 实现了低损耗、降低运营费。

The 10-type product adopts the unique technique of our company, realizing low loss and operation costs.

丰富的类型 Abundant types

对应的输入机械(低压 400 / 200V)为代表
节约能源的(薄型系列)适用于多种领域

Corresponding input mechanism (low pressure 400/200V) as the representative

The energy saving (thin type series) can apply to various fields.

电 压 等 级 Voltage Class		低 压 Low Voltage (400V 级) (400V Class) (200V 级) (200V Class)		高 压(10kV 级) High Voltage(10kV Class)	
绝缘耐热等级 Insulation and Heat Resistance Class		F 级 F Class		F 级 F Class	
相 数 Phase Number		单 相 Single Phase	三 相 Three Phases	单 相 Single Phase	三 相 Three Phases
标准容量 (kVA) Standard Capacity (kVA)	10			 	
	20				
	30				
	50				
	80				
	100				
	125				
	160				
	200				
	250				
	315				
	400				
	500				
	630				
	630				
	800				
	1000				
	1250				
	1600				
	2000				
	2500				
	3150				
	4000				

短交货期的对策

标准和非标准: 1~2 周 特殊品: 0.5~1 个月 可以提供产品。

Countermeasure of short delivery period

Standard and non-standard: 1~2 weeks, specific product: the product can be available within 0.5~1 month

很高的信赖程度 High confidence level

具有优秀的绝缘性能(真空浇铸)

安全性高适用于一切领域

With excellent insulation property (vacuum casting)

With high security and apply to all the fields.

优异的绝缘性能

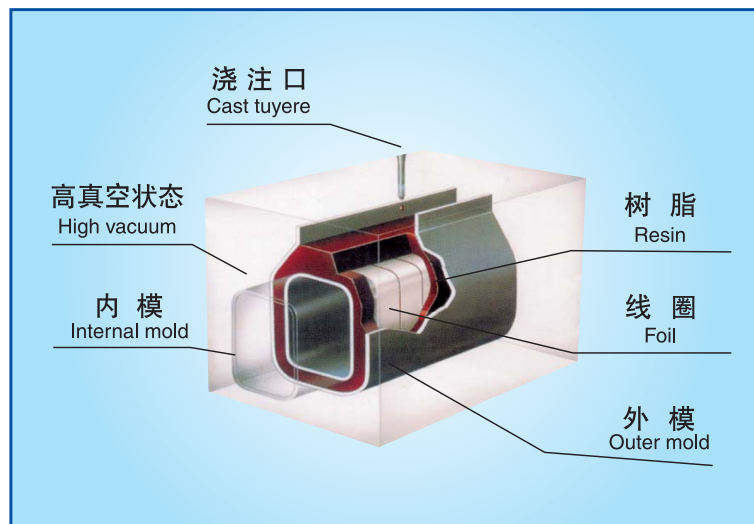
由于采用了真空浇铸的方法不发生局部放电

干式变压器的线圈，用模具真空浇铸的方法制作，具有不产生气泡的优异特性，而成为绝缘可靠性高的线圈。

Excellent insulation property

Partial discharge will not occur due to vacuum casting.

The wire coiling of the dry tpe transformer is made by means of mould vacuum casting, which features the excellent characteristics of no air bubble occurring and becomes the wire coiling with highly reliable insulation



薄板卷线方式

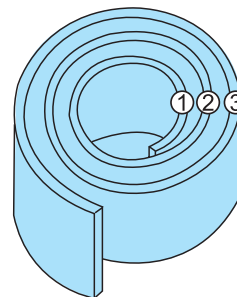
层间的负荷电压只有一层的电压量的薄板卷线，是绝缘可靠性高的卷线。

另外由于占有面积的比率低而能够实现小型化。

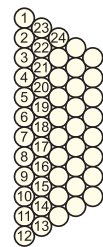
Sheet coiling means

The sheet coiling with its interlaminated load voltage of only one layer of voltage amount is coiling with highly reliable insulation.

Furthermore, it can realize miniaturization due to its low area occupation.



箔式线圈
Foil winding



注式线圈
Cylinder winding

高度的安全性 With high security

本身的消灭性

浇铸成型的干式变压器具有本身的消灭性，而成为不易燃的产品。

With its own fire-extinguishing feature

The casting dry type transformer has its own fire-extinguishing feature and thus is becomes the non-flammable product.

用喷火器燃烧 2 分钟后
Burnt with the flame thrower for two minutes



停止燃烧 15 秒后完全熄火
And after stopping burning for 15 seconds,
it is completely extinguished.



危险标志

贴有运转中的干式变压器的线圈不得触摸的危险标志，以提醒引起注意。

Dangerous mark

It is attached by dangerous mark of "do not touch the running wire coiling of the dry type transformer" to remind to attention.



保护外壳的联锁

配电柜的门打开的时候，警报铃鸣响或者变压器的电源切断，可以按用户要求设置。

可以和低压柜呈直线排列

与各种配电柜可以呈直线排列，连接方法、尺寸、和其他可按用户要求制作。

Interlock for case shell protection

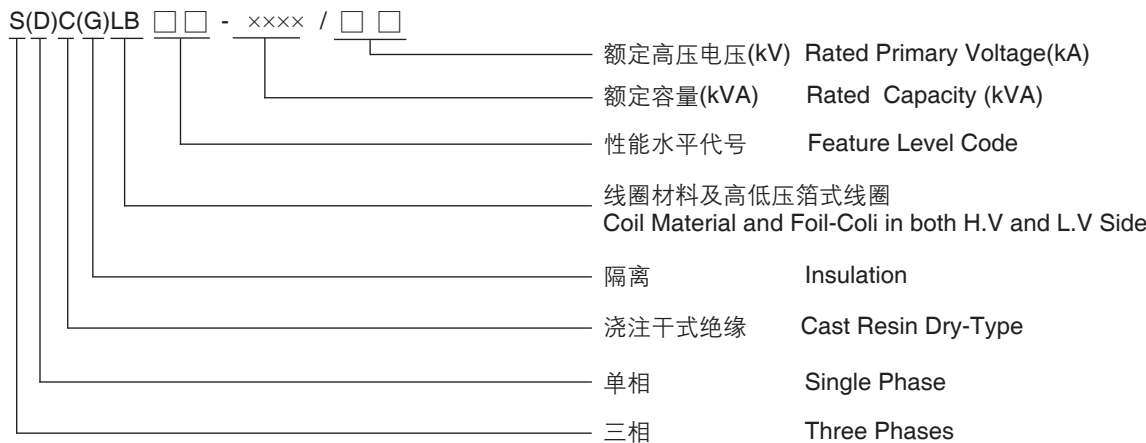
When the door of power distributing cabinet is open, the alarm will ring or the power of transformer is cut off, which can be set up as per the requirements of user. It can be linear arranged with the low-pressure cabinet. It can be linear arranged with various power distributing cabinets, and the connecting method, dimension and others can be made as per the requirements of user.



SCLB 10 系列 10kV 级 30~2500 kVA 干式配电变压器

SCLB 10 Series 10kV Class 30-2500kVA Dry-Type in the distribution Transformer

型号标志 Type Designation and Legend



产品标准 Products Standard

变压器 Transformer	标准三相 Standard Three Phases	配有载调压(OLTC) With On-Load Tap Changer	三相低压变 Three Phases Low-Voltage
型 号 Type	SCLB10	SCZLB	SGCLB
标 准 Standards	GB1094.11-2007	GB/T10228-2008	GB1094.11-2007
相 数 Number of Phases	三相 Three Phases		三相 Three Phases
频 率 (Hz) Frequency(Hz)	50		
一次电压 (kV) Rated Primary Voltage and Tap Voltage	F10.5-F10.25-R10.00-F9.75-F9.50 (F6.60-F6.45-R6.30-F6.15-F6.00)	F11.00-F10.75-F10.50-F10.25 -R10.00-F9.75-F9.00 (F6.90-F6.75-F6.60-F6.45 -R6.30-F6.15-F6.00-F5.85-F5.70)	FO.40-RO.38-FO.36
二次电压 (kV) Rated Secondary Voltage	0.4		0.21
额定容量 (kVA) Rated Capacity	30~500; 630~2500	315~500; 630~2500	10~1000
联接组别 Connection Symbol	Yyno(DynII)	Yyno(DynII)	Yd1
绝缘耐热等级 Insulation Class	F		
绝缘水平(kV) Insulation Levels	耐压 A C. Test	35/3 (25/3)	3/3
	雷电 BIL	75 (60)	——

注: (1)同时可根据用户需要设计制造各类非标规格的变压器
design and manufacture kinds of nonstandard transformers according to the requirements of the customers at the same time
(2)三相 30kVA,50kVA 变压器建议采用 Yyno

SCLB 10 系列 10kV 级 30~2500 kVA 干式配电变压器

SCLB 10 Series 10kV Class 30-2500 kVA Dry-Type in the distribution Transformer

■ 技术参数 Technical Data

型号 Type	空载损耗 No-Load Loss Po (w)	负载损耗 On-Load Loss Pk (w)		空载电流 No-Load Current Io(%)	阻抗电压 Impedance Voltage Uk(%)	声压级 Noise Level Lap(dB)
	SCLB10	75℃	120℃			
SCLB10-30/10	190	620	710	2.8	4	优于 JB/T10088-1999 行业标准(平均低 10%) Superior to JB/T10088-1999 Trade standard(average under 10%)
SCLB10-50/10	270	870	1000	2.0		
SCLB10-80/10	370	1200	1380	1.8		
SCLB10-100/10	400	1370	1570	1.7		
SCLB10-125/10	470	1570	1800	1.4		
SCLB10-160/10	550	1830	2100	1.0		
SCLB10-200/10	630	2200	2530	1.3		
SCLB10-250/10	720	2390	2750	0.9		
SCLB10-315/10	870	2960	3400	0.7		
SCLB10-400/10	980	3440	3950	0.7		
SCLB10-500/10	1150	4170	4800	0.5		
SCLB10-630/10	1350	5120	5880	0.6	6	
SCLB10-630/10	1300	5130	5900	0.6		
SCLB10-800/10	1520	6000	6900	0.5		
SCLB10-1000/10	1770	7050	8130	0.5		
SCLB10-1250/10	2090	8350	9600	0.5		
SCLB10-1600/10	2450	10200	11700	0.5		
SCLB10-2000/10	3320	12300	14200	0.5		
SCLB10-2500/10	4000	14930	17170	0.5		



SCLB10 系列 10kV 级 30~2500 kVA 干式配电变压器

SCLB 10 Series 10kV Class 30-2500 kVA Dry-Type in the distribution Transformer

■ 外形尺寸 (不带外壳) Dimensions(Without Enclosure)

型号 Type	尺寸(mm) Dimensions												重量 GW (kg)	安装孔 Hole (φ)	端子圈 Terminals	
	x	Y	Z	XS	YS	XH	XN	YH	YL	ZH	ZL	ZW			P	S
SCLB10(9) (8)-30/10	760	480	690	450	420	236	90	244	148	525	723	50	245	15	图 1 Fig-1	图 3 Fig-3
SCLB10(9) (8)-50/10	810	500	760	450	420	256	90	254	158	575	783	50	348			
SCLB10(9) (8)-80/10	810	880	810	550	420	272	95	263	174	585	810	50	460			
SCLB10(9) (8)-100/10	810	880	870	550	420	274	95	275	178	645	870	50	504			
SCLB10(9) (8)-125/10	960	900	885	550	420	286	140	259	165	655	885	50	535			
SCLB10(9) (8)-160/10	1080	920	927	550	840	308	140	273	181	677	927	50	630			
SCLB10(9) (8)-200/10	1100	920	997	550	840	316	140	268	183	765	997	50	780			
SCLB10(9) (8)-250/10	1150	920	1139	660	840	328	140	280	190	889	1139	50	925	20	图 2 Fig-2	图 4 Fig-4
SCLB10(9) (8)-315/10	1190	920	1239	660	840	332	140	279	194	988	1239	50	1080			
SCLB10(9) (8)-400/10	1268	920	1299	660	820	352	140	302	214	1029	1299	50	1300			
SCLB10(9) (8)-500/10	1500	920	1379	820	820	433	130	321	187	1072	1379	100	1620			
SCLB10(9) (8)-630/10 Uk=4	1600	920	1404	820	820	479	130	343	191	1097	1404	100	1760			
SCLB10(9) (8)-630/10 Uk=6	1600	920	1389	820	820	479	130	343	181	1089	1389	100	1800			
SCLB10(9) (8)-800/10	1670	920	1444	820	820	501	130	355	196	1137	1444	100	2090			
SCLB10(9) (8)-1000/10	1690	920	1654	820	820	505	155	359	199	1307	1654	100	2480			
SCLB10(9) (8)-1250/10	1740	920	1699	820	820	523	155	365	202	1352	1699	100	2800			
SCLB10(9) (8)-1600/10	1840	1170	1854	1070	1070	553	245	380	211	1487	1854	100	3420			
SCLB10(9) (8)-2000/10	2050	1170	1831	1070	1070	609	245	413	227	1464	1831	100	4200			
SCLB10(9) (8)-2500/10	2050	1170	2006	1070	1070	641	245	425	229	1619	2006	100	5100			
SCLB10(9) (8)-3150/10	2845	1800	2360	1070	1680	780	275	498	336	1622	2080	100	7500			

注: 1. 30kVA~200kVA/ 不带风机的尺寸和重量。250kVA~2500kVA/ 带风机的尺寸和重量。

Note: 1.The weight and dimension shown above for 30-200kVA are without cooling fans,and for 250kVA~2500kVA are with the cooling fans.

SCLB10-30/10~SCLB10-2500/10

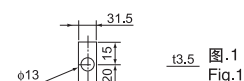
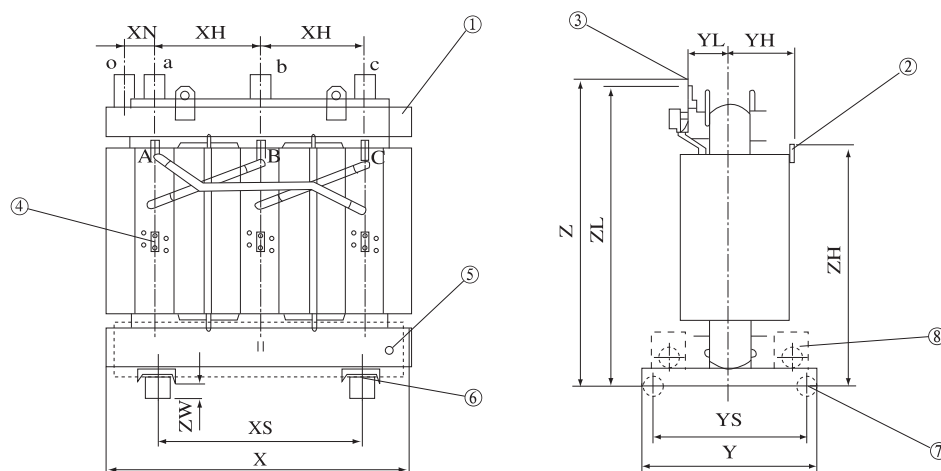


图.1
Fig.1

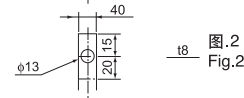


图.2
Fig.2

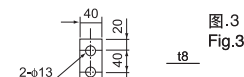


图.3
Fig.3

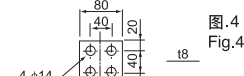


图.4
Fig.4

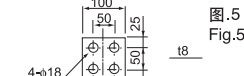


图.5
Fig.5

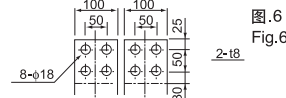


图.6
Fig.6



图.7
Fig.7

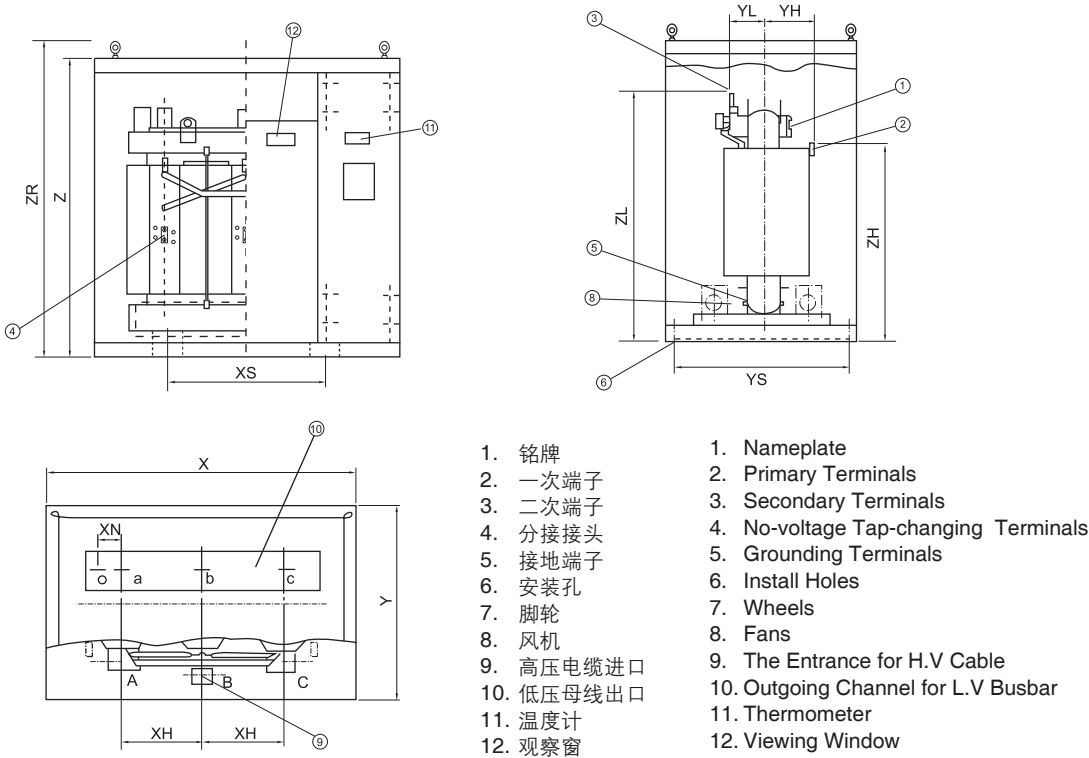
SCLB10 系列 10kV 级 30~2500 kVA 干式配电变压器

SCLB 10 Series 10kV Class 30-2500kVA Dry-Type in the distribution Transformer

■ 外形尺寸 (带外壳) Dimensions (With Enclosure)

型号 Type	尺寸(mm) Dimensions												重量 GW (kg)
	X	Y	Z	ZR	XS	YS	XH	XN	YH	YL	ZH	ZL	
SCLB10 -30/10	1200	800	1140	1195	450	680	236	90	244	148	525	723	427
SCLB10 -50/10	1200	800	1240	1295	450	680	256	90	254	158	575	783	547
SCLB10 -80/10	1200	1060	1300	1355	550	940	272	95	265	174	705	930	664
SCLB10 -100/10	1200	1060	1310	1365	550	940	274	95	275	178	765	990	715
SCLB10 -125/10	1450	1100	1370	1425	550	980	286	140	259	165	775	1005	758
SCLB10 -160/10	1450	1100	1430	1485	550	980	308	140	273	181	797	1047	860
SCLB10 -200/10	1450	1100	1600	1655	550	980	316	140	268	183	885	1117	1061
SCLB10 -250/10	1450	1100	1620	1675	660	980	328	140	280	190	1009	1259	1208
SCLB10 -315/10	1450	1100	1650	1705	660	980	332	140	279	194	1108	1359	1367
SCLB10 -400/10	2000	1300	1650	1705	660	1180	352	140	302	214	1149	1419	1594
SCLB10 -500/10	2000	1300	1700	1755	820	1180	434	130	321	187	1192	1499	2010
SCLB10 -630/10 $U_k=4\%$	2000	1300	1800	1855	820	1180	479	130	343	191	1217	1524	2141
SCLB10 -630/10 $U_k=6\%$	2000	1300	1800	1855	820	1180	479	130	343	181	1209	1509	2181
SCLB10 -800/10	2000	1300	1850	1905	820	1180	501	130	355	196	1257	1564	2478
SCLB10 -1000/10	2000	1300	2070	2125	820	1180	505	155	359	199	1427	1774	2939
SCLB10 -1250/10	2000	1300	2250	2305	820	1180	523	155	365	202	1472	1819	3287
SCLB10 -1600/10	2200	1600	2320	2375	1070	1480	553	165	380	211	1607	1974	3996
SCLB10 -2000/10	2500	1600	2400	2455	1070	1480	609	165	413	227	1584	1951	4874
SCLB10 -2500/10	2500	1600	2500	2555	1070	1480	641	165	425	229	1724	2171	5793

注： 1. 30kVA~200kVA/ 不带风机的尺寸和重量。250kVA~2500kVA/ 带风机的尺寸和重量。
Note: 1.The weight and dimension shown above for 30-200kVA are without cooling fans,and for 250kVA~2500kVA are with the cooling fans.





SCLB10 系列 10kV 级 250~2500 kVA 干式配电变压器

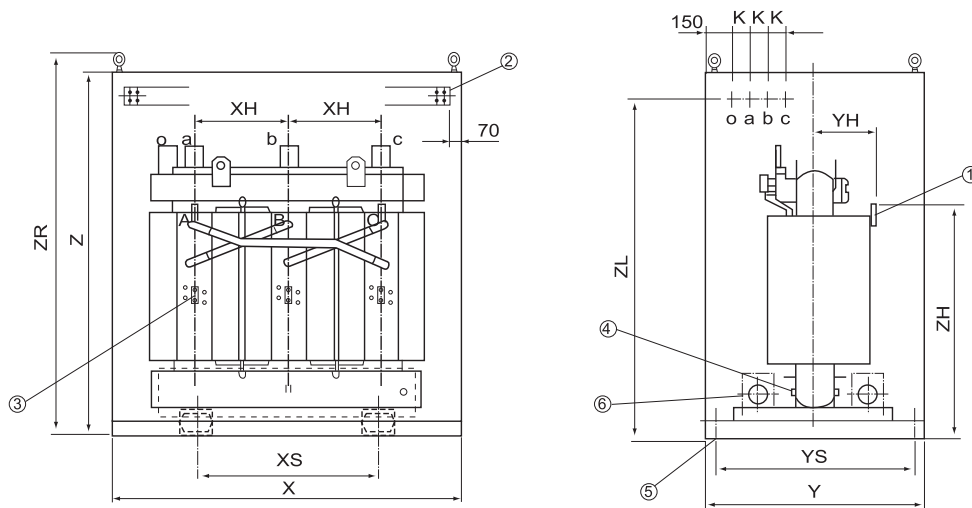
SCLB 10 Series 10kV Class 250-2500 kVA Dry-Type in the distribution Transformer

■ 外形尺寸 (低压标准横排侧出线) Dimensions(L.V. Side Standard Horizontal Outgoing Arrangement)

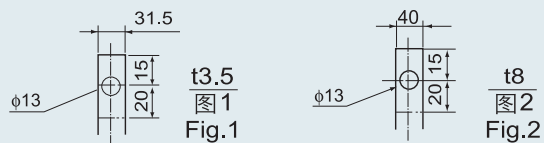
型号 Type	尺寸(mm) Dimensions											端子图 Terminals	
	X	Y	Z	ZR	XS	YS	XH	YH	ZH	ZL	K	P	S
SCLB10 -250/10	1450	1100	2200	2255	660	980	328	280	1009	2050	100	图 1 Fig-1	图 A Fig.A
SCLB10 -315/10	1450	1100	2200	2255	660	980	332	279	1108	2050	100		
SCLB10 -400/10	2000	1300	2220	2255	660	1180	352	302	1149	2050	100		
SCLB10 -500/10	2000	1300	2200	2255	820	1180	434	321	1133	2050	100		
SCLB10 -630/10 $U_k=4\%$	2000	1300	2200	2255	820	1180	479	343	1217	2050	100	图 2 Fig.2	图 B Fig.B
SCLB10 -630/10 $U_k=6\%$	2000	1300	2200	2255	820	1180	479	343	1209	2050	100		
SCLB10 -800/10	2000	1300	2200	2255	820	1180	501	355	1257	2050	100		
SCLB10 -1000/10	2000	1300	2200	2255	820	1180	505	359	1427	2050	100		图 C Fig.C
SCLB10 -1250/10	2000	1300	2200	2255	820	1180	523	365	1472	2050	100		
SCLB10 -1600/10	2000	1600	2450	2505	1070	1480	553	380	1607	2300	120		图 D Fig.D
SCLB10 -2000/10	2500	1600	2450	2705	1070	1480	609	418	1584	2300	120		
SCLB10 -2500/10	2500	1600	2650	2705	1070	1480	641	434	1724	2500	120		

注： 1. 30kVA~200kVA/ 不带风机的尺寸。250kVA~2500kVA/ 带风机的尺寸。

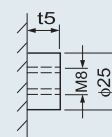
Note: 1.The data shown above for 30kVA~200kVA are without cooling fans,and for 250kVA~2500kVA are including cooling fans.



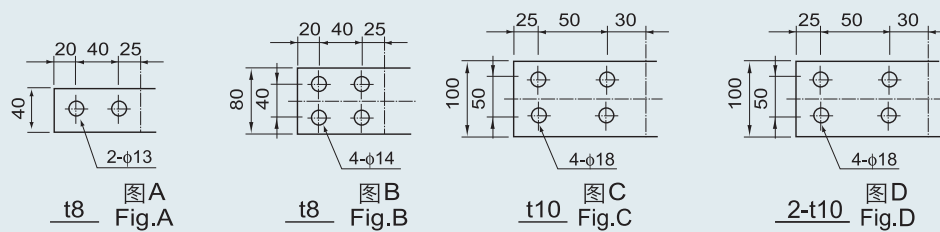
① 一次端子 Primary Terminals



⑤ 接地端子 Grounding Terminals



② 二次引出排 Secondary Terminals



SCZLB 10 系列 10kV 315~2500 kVA 有载调压系列

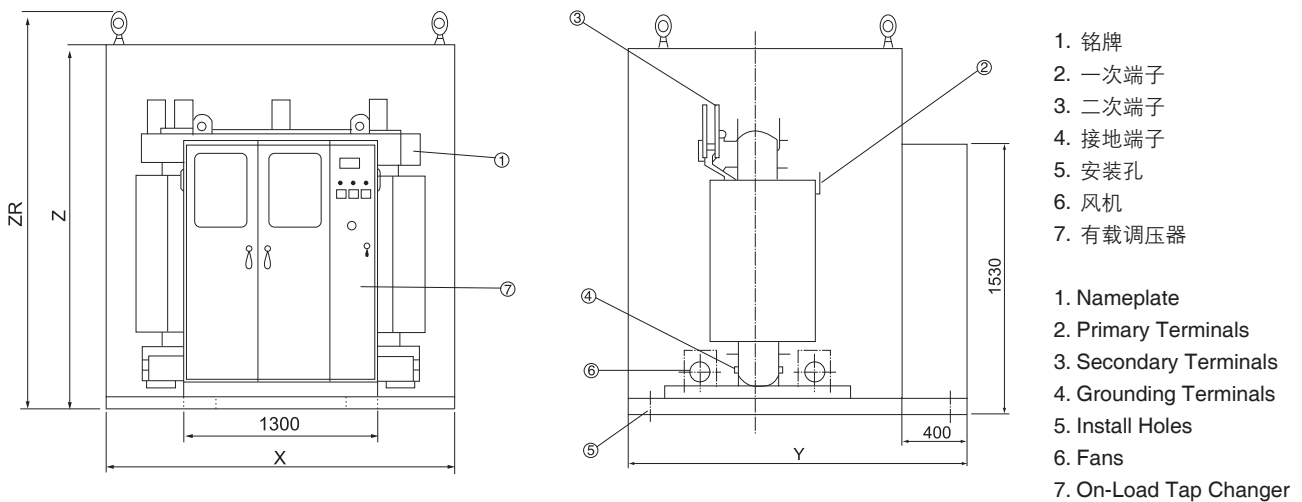
SCZLB 10 Series 10kV 315-2500 kVA Loaded Voltage regulating Series

■ 外形尺寸 (带外壳) Dimensions (With Enclosure)

型号 Type	尺寸(mm) Dimensions				重量 GW (kg)
	X	Y	Z	ZR	
SCZLB10-315/10	1550	1800	1650	1740	1990
SCZLB10 -400/10	1600	1800	1650	1740	2375
SCZLB10 -500/10	1800	1800	1700	1790	2570
SCZLB10 -630/10 Uk=4%	2000	2000	1800	1906	2680
SCZLB10 -630/10 Uk=6%	2000	2000	1800	1906	2750
SCZLB10 -800/10	2000	2000	1850	1956	3240
SCZLB10 -1000/10	2050	2300	2070	2176	3740
SCZLB10 -1250/10	2050	2300	2250	2356	4150
SCZLB10 -1600/10	2200	2450	2320	2446	4930
SCZLB10 -2000/10	2650	2450	2400	2526	5890
SCZLB10 -2500/10	2650	2450	2500	2626	6830

注： 1. 技术参数请参照第 1 页（但是只能作为参考）待确定有载调压开关型号后决定。

Note: 1. For the technical data please see P.1 above(for reference only).



SCLB 12 系列 10kV 级 30~2500 kVA 干式配电变压器

SCLB 12 Series 10kV Class 30~2500 kVA Dry-Type in the distribution Transformer

■ 产品标准 Products Standard

标准	Standards	GB1094.11-2007
相数	Number of Phases	三相
频率	Frequency (Hz)	50
一次电压	Primary Voltage (kV)	F10.5-F10.25-R10.0-F9.75-F9.5
二次电压	Secondary Voltage (kV)	0.4

额定容量	Rated Capacity (kVA)	30~2500
联接组别	Connection Symbol	Dyn11
绝缘耐热等级	Insulation Class	F
绝缘水平 (kV)	耐压 AC	35/3
Insulation Levels	雷电 LI	75

■ 技术参数 (500~2500kVA) Technical Data (500~2500kVA)

型号 Type	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(%)	阻抗电压 Impedance Voltage Uk(%)		
		75℃	120℃				
SCLB12-500/10	950	4240	4880	0.8	4		
SCLB12-630/10	1070	5180	5960	0.6	6		
SCLB12-800/10	1240	6050	6960				
SCLB12-1000/10	1420	7070	8130				
SCLB12-1250/10	1670	8430	9690	0.5		6	
SCLB12-1600/10	2030	10200	11730				
SCLB12-2000/10	2660	12570	14450	0.4			6
SCLB12-2500/10	3200	14930	17170				

■ 优点 (与本公司的 10 型产品对比)

Features (In comparison with the 10-type)

- ① 减少空载损耗 20% ① reducing no load loss by 20%.
- ② 减少二氧化碳 ② reducing carbon dioxide
- ③ 降低噪音 3~4dB ③ reducing noise by 3~4dB

■ 损耗的比较和节省能源的效果(与本公司的 10 型产品对比)

Comparison the loss and the result of energy saving

(In comparison with the 10-type)

3Φ 50Hz 1000kVA 10/0.4kV Dyn11

	空载损 No-Load Loss Po(W)	负载损 Load Loss Pk(W)	全载损 Total loss (W)
10 型 the 10-type	1770	8130	9900
12 型 the 12-type	1420	8130	9550

电费比较

10 型: $(1,770 + 8,130 \times 0.75^2) \div 1,000 \times 24 \times 365 \times 0.8 = 44,500$

12 型: $(1,420 + 8,130 \times 0.75^2) \div 1,000 \times 24 \times 365 \times 0.8 = 42,000$

(负载率:75% 电费:0.8RMB/kWh)

节省人民币:2500RMB/年

Electric power charge compare

10-type: $(1,770 + 8,130 \times 0.75^2) \div 1,000 \times 24 \times 365 \times 0.8 = 44,500$

12-type: $(1,420 + 8,130 \times 0.75^2) \div 1,000 \times 24 \times 365 \times 0.8 = 42,000$

(Load factor:75% Electric power charge:0.8RMB/kWh)

Renminbi saving: 2500RMB/year

注: 外形尺寸(带外壳)相应参见 P7-P10



图 1. SCLB12-800/10

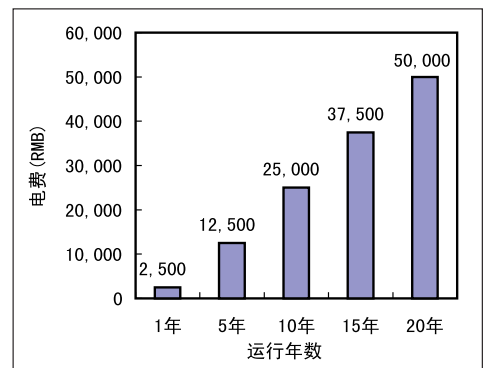


图 2. 10 型与 12 型电费差

SCLB 10 系列 20kV 级 315~2500 kVA 干式配电变压器

SCLB 10 Series 20kV Class 315~2500 kVA Dry-Type in the distribution Transformer

■ 产品标准 Products Standard

标准	Standards	GB1094.11-2007	额定容量	Rated Capacity (kVA)	315~2500
相数	Number of Phases	三相	联接组别	Connection Symbol	Dyn11
频率	Frequency (Hz)	50	绝缘耐热等级	Insulation Class	F
一次电压	Primary Voltage (kV)	F21.0-F20.5-R20.0-F19.5-F19.0 (F10.5-F10.25-R10-F9.75-F9.5)	绝缘水平 Insulation Levels (kV)	耐压 AC	50/3
二次电压	Secondary Voltage (kV)	0.4		雷电 BIL	125

■ 技术参数 Technical Data

型号 Type	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(%)	阻抗电压 Impedance Voltage Uk(%)
		75℃	120℃		
SCLB10-315/20(10)	960	3550	4060	0.7	6
SCLB10-400/20(10)	1140	4210	4820	0.6	
SCLB10-500/20(10)	1330	5030	5760		
SCLB10-630/20(10)	1510	5940	6800	0.5	
SCLB10-800/20(10)	1730	7180	8220		
SCLB10-1000/20(10)	2040	8500	9730		
SCLB10-1250/20(10)	2360	10200	11480		
SCLB10-1600/20(10)	2760	12040	13790		
SCLB10-2000/20(10)	3200	14220	16280		
SCLB10-2500/20(10)	3820	16830	19270	0.4	

■ 特点 Features of Products

- ① 低损耗
- ② 低噪音
- ③ 小型轻量
- ④ 可以制造 10-20kV 切换型

- ① Low Loss Design
- ② Low Noise Design
- ③ Compact Size, Light Weight Design
- ④ 10-20kV switch type can be produced.



图 1. SCLB10-2500/20(10-20kV 切换型)
(在沈阳国家变压器质量监督检验中心试验中的照片)



图 2. SCLB10-800/20

SCLB 10 系列 20kV 级 315~2500 kVA 干式配电变压器

SCLB 10 Series 20kV Class 315~2500 kVA Dry-Type in the distribution Transformer

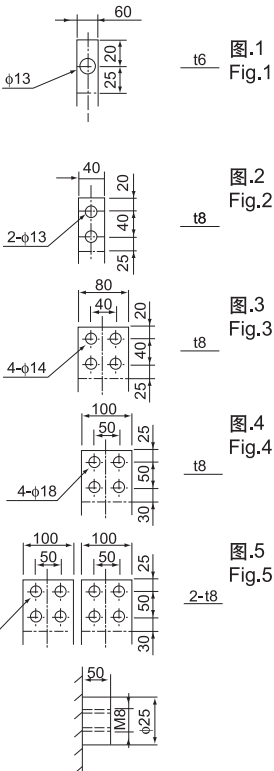
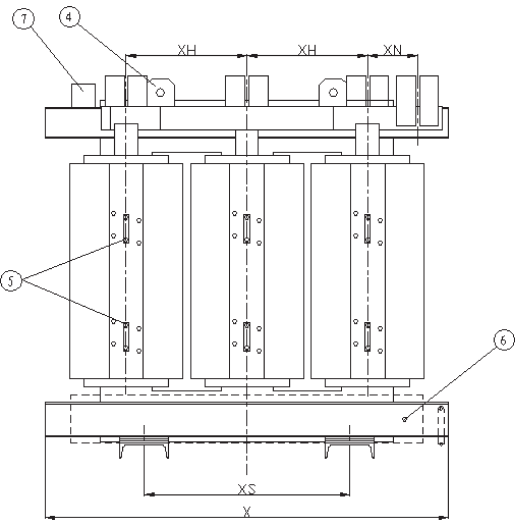
外形尺寸 (不带外壳) Dimensions(Without Enclosure)

型号 Type	尺寸(mm) Dimensions											重量 GW (kg)	安装孔 Hole (φ)	端子圈 Terminals	
	x	Y	Z	XS	YS	XH	XN	YH	YL	ZH	YN			P	S
SCLB10-315/20(10)	1600	920	1619	820	820	500	155	587	174	1113		1500	20	图 1 Fig-1	图 2 Fig-2
SCLB10-400/20(10)	1600	920	1628	820	820	500	155	587	180	1127		1650	20		图 3 Fig-3
SCLB10-500/20(10)	1600	920	1695	820	820	522	130	598	183	1199		1900	20		
SCLB10-630/20(10)	1600	920	1729	820	820	532	130	607	194	1203		2100	20		图 4 Fig-4
SCLB10-800/20(10)	1690	920	1794	820	820	552	130	613	191	1243		2500	20		
SCLB10-1000/20(10)	1800	1100	1824	820	1000	568	155	619	208	1208		2900	20		图 5 Fig-5
SCLB10-1250/20(10)	2000	1200	1919	820	1100	588	155	630	215	1303		3400	20		
SCLB10-1600/20(10)	2100	1170	1991	1070	1070	628	260	650	217	1315	289	4500	20		
SCLB10-2000/20(10)	2150	1170	2061	1070	1070	672	260	672	236	1365	308	5500	20		
SCLB10-2500/20(10)	2200	1170	2067	1070	1070	714	260	692	285	1450	360	6500	20		

注：315kVA~2500kVA/ 带风机的尺寸和重量。

Note: The weight and dimension shown above for 315-2500kVA are without cooling fans.

SCLB10-315/20(10)~SCLB10-2500/20(10)



SCLB 10 系列 20kV 级 315~2500 kVA 干式配电变压器

SCLB 10 Series 20kV Class 315~2500 kVA Dry-Type in the distribution Transformer

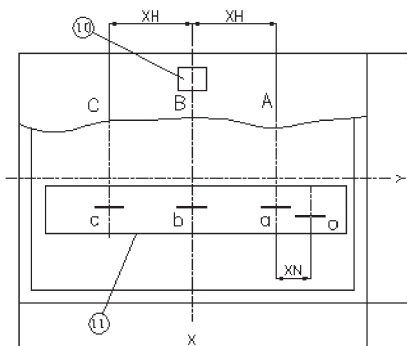
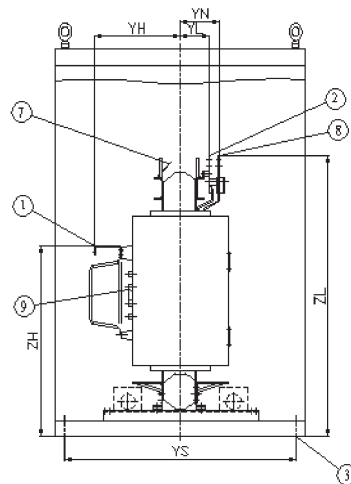
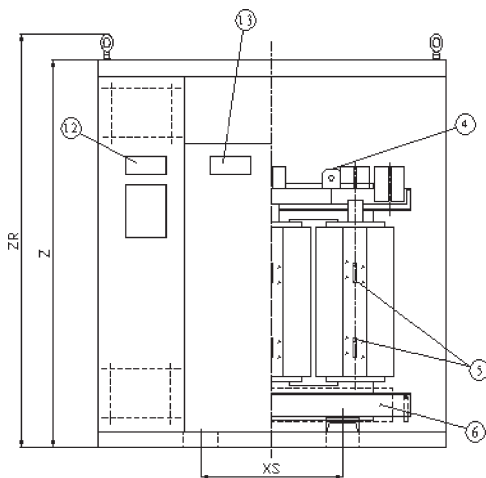
■ 外形尺寸 (不带外壳) Dimensions(Without Enclosure)

型号 Type	尺寸(mm) Dimensions													重量 GW (kg)
	X	Y	Z	ZR	XS	YS	XH	XN	YH	YL	ZH	ZL	YN	
SCLB10-315/20(10)	2000	1800	2200	2255	820	1680	500	155	587	174	1233	1739		2000
SCLB10-400/20(10)	2000	1800	2200	2255	820	1680	500	155	587	180	1247	1748		2150
SCLB10-500/20(10)	2000	1800	2200	2255	820	1680	522	130	598	183	1319	1815		2400
SCLB10-630/20(10)	2300	1800	2200	2255	820	1680	532	130	607	194	1323	1849		2700
SCLB10-800/20(10)	2300	1800	2200	2255	820	1680	552	130	613	191	1363	1914		3100
SCLB10-1000/20(10)	2300	1800	2200	2255	820	1680	568	155	619	208	1328	1944		3500
SCLB10-1250/20(10)	2300	1800	2200	2255	820	1680	588	155	630	215	1423	2039		3900
SCLB10-1600/20(10)	2600	2000	2600	2655	1070	1880	628	260	650	217	1435	2111	289	5200
SCLB10-2000/20(10)	2600	2000	2600	2655	1070	1880	672	260	672	236	1485	2181	308	6200
SCLB10-2500/20(10)	2600	2000	2600	2655	1070	1880	714	260	692	285	1570	2187	360	7200

注: 315kVA~2500kVA/带风机的尺寸和重量。

Note: The weight and dimension shown above for 315-2500kVA are without cooling fans.

SCLB10-315/20(10)~SCLB10-2500/20(10)



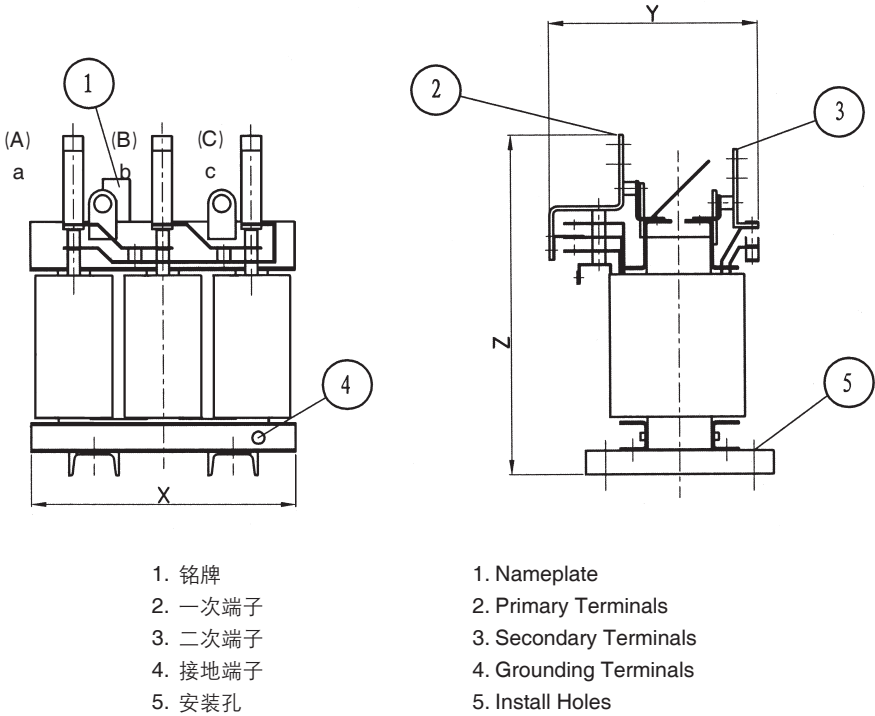
- | | |
|-------------------|--------------------------------------|
| 1. 一次端子 | 1. Primary Terminals |
| 2. 二次端子 | 2. Secondary Terminals |
| 3. 安装孔 | 3. Install Holes |
| 4. 吊环 | 4. Lif |
| 5. 分接接头 | 5. No-voltage Tap-changing Terminals |
| 6. 接地端子 | 6. Grounding Terminals |
| 7. 铭牌 1. | 7. Nameplate |
| 8. 中性点端子 | 8. Neutral Term |
| 9. 双电压(20/10)切换接点 | 9. Dual-Voltage(20/10)Tap-Chang |
| 10. 高压电缆进口 | 10. The Entrance for H.V Cable |
| 11. 低压母线出口 | 11. Outgoing Channel for L.V Busbar. |
| 12. 温度计 | 12. Thermometer |
| 13. 观察窗 | 13. Viewing Window |

SGCLB 系列 30~500kVA 低压干式变压器
SGCLB Series 30-500kVA Low Voltage Dry-Type Transformer

外形尺寸 (不带外壳) Dimensions(Without Enclosure)

型号 Type	尺寸 (mm) Dimensions		
	X	Y	Z
SGCLB-30/0.38	535	425	695
SGCLB-50/0.38	545	425	785
SGCLB-80/0.38	580	455	810
SGCLB-100/0.38	600	495	810
SGCLB-125/0.38	615	495	865
SGCLB-160/0.38	670	595	870
SGCLB-200/0.38	765	595	880
SGCLB-250/0.38	840	615	880
SGCLB-315/0.38	1020	615	1050
SGCLB-400/0.38	1020	625	1150
SGCLB-500/0.38	1030	625	1150

注： 1. 30kVA~500kVA/ 不带风机的尺寸。同时可为用户制作至 2000kVA 的低压变压器
Note: 1.The dimension shown above for 30kVA-315kVA are without cooling fans.



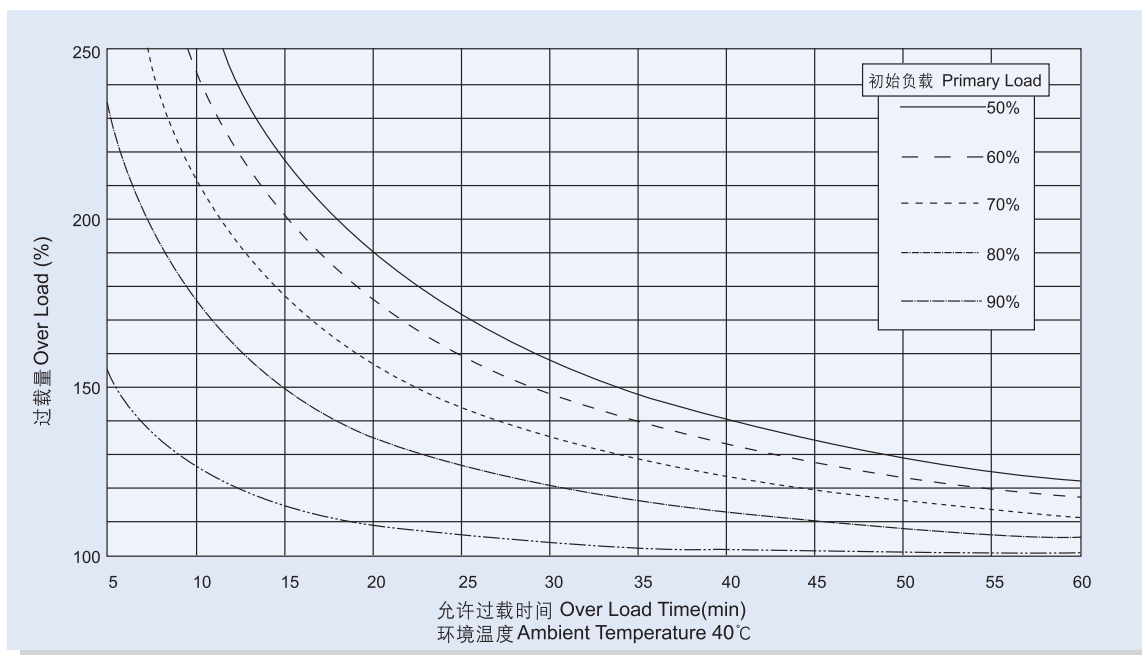
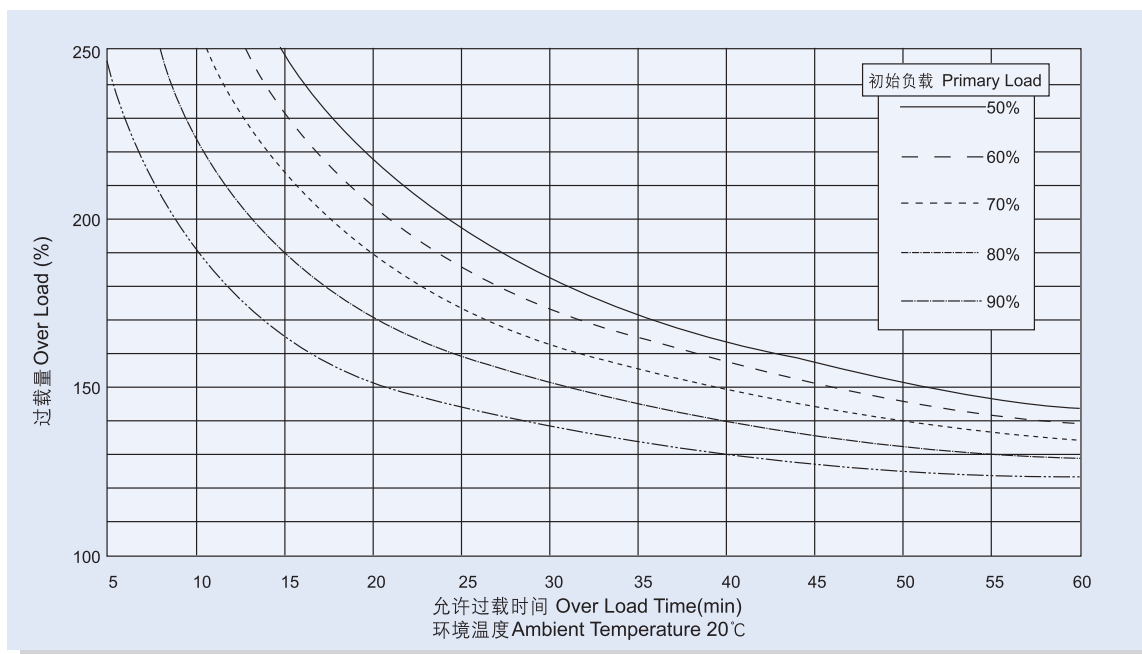


■ 过载能力 Overload Capability

干式变压器过载运行时，考虑环境温度及初始负载，按 IEC905 或 GB/T17221 干式变压器负载导则决定其过载率及容许负载时间。
我公司的干式变压器的过载能力如下表所示(630kVA 及以上为例)：

When the dry-type transformer works at overload status according to the regulations of IEC 905 or GB/T1F 221.its overload ratio and overload endurance time are depending on the ambient temperature and its initial load.

The overload capability of our company's dry-type transformer(630kVA and above) is shown as follows.



■ 自冷与强迫风冷 Air Natural Cooling and Forced Air Cooling

干式变压器冷却方式分为自然空气冷却(AN)和强迫空气冷却(AF)。

The cooling method of dry-type power transformer is divided in air natural cooling (AN) and forced air cooling(AF)

冷却方式如下表所示：

The cooling method is shown as follows:

冷却方式 Cooling Way	正常条件下允许的使用容量 Allowed used capacity under normal conditions	其它 others
自然空气冷却 (AN) Air Natural Cooling (AN)	100% 的额定容量下连续运行 Operation with 100% rated capacity continually	
强迫空气冷却 (AF) Forced Air Cooling (AF)	150% 的额定容量下较长时间连续运行 Operation with 150% rated capacity within a long period continually	负载损耗和阻抗电压增幅较大 Increased the on-load losses and impedance voltage with a bigger margin

无论自然空气冷却 (AN) 还是强迫空气冷却 (AF) 的变压器，在通风能力较差的环境下运行变压器的话，应采用具有独立的通风系统，(2~4m³/min)/kW 以上。

Under poor ventilation ambient the independent ventilation system with ventilation capacity more than(2~4m³)/min should be used not only for the AN transformer but also for the AF transformer.

风机数量，功率及电源配置如下表所示：

The cooling fans Nos.,capacity and power sources are disposed as follows:

额定容量 Rated Capacity (kVA)	≤ 160	200~500	630~1600	2000~2500
风机数量 × 功率 Cooling fan Nos x Capacity (W)	4 × 38	4 × 44	4 × 50	4 × 60
风机电源 Power Sources for Cooling fan (V)	~220			



■ 产品保护等级 Protection Class

产品的一般保护等级为 IP00,即变压器不配外壳, 户内使用。如用户需要, 可配带外壳, 即 IP20,IP23 和 IP30 等。

IP20 可防止直径大于 12mm 的异物进入, 并可抵抗以外撞击。

IP23 除具有 IP20 的功能以外, 还可防止与垂直线成 60 度角以内的水滴滴入。

The normal protection class for indoor transformer is IP00 (without enclosure). IP20, IP23 and IP30(with enclosure)are available on request.

IP20 can provide protection against entrance of alien objects with a diameter bigger than 12mm and withstand accidental impact.

IP23 can not only function like IP20,but can also prevent entrance of waterdrops at a vertical angle of less than 60 degrees.

■ 温控、温显系统 Temperature Control and Temperature Indicating System

为了变压器的安全运行, 温控系统预埋在低压绕阻的 Pt100 测温元件测取温度信号, 并根据绕阻温度, 控制冷却风机运行, 发出超温警报信号直至超温跳闸信号。

温控系统的设定温度按 JB/T7631-94 标准调整。(请参照下表)

In order to keep the safe operation of transformer the temperature measuring element Pt100 of the temperature control system was inserted in the L.V. Coil to measure the temperature According to coil temperature measured it controls the operation of the cooling fans, gives alarm signal and tripping signal when over temperature is detected.

The setting temperature is adjusted as per the standard of JB/T7631-94(Please see the following Table)

冷却方式 Cooling way	绕组温度 Coil temperature	信号输出 Output signal
自然风冷时 AN	大于 130℃ >130℃	输出超温报警信号 Over temperature alarm
	大于 150℃ >150℃	输出跳闸信号 Tripping signal
强迫风冷时 AF	大于 100℃ >100℃	输出自动启动风机信号 Auto-start cooling fan
	小于 80℃ < 80℃	输出自动停止风机信号 Auto-stop cooling fan
	大于 130℃ >130℃	输出超温报警信号 Over temperature alarm
	大于 150℃ >150℃	输出跳闸信号 Tripping signal

也可根据用户需要，按 JB/T7631-94 标准规定作适当调整。

温显系统通过预埋在低压绕阻的 Pt100 热敏电阻测取温度信号，具有以下功能。

- 显示各相绕阻温度。

● 通过连接计算机，实现远程温度控制。(根据用户的需要可带 RS232 或 RS485 或 4~20mA 的计算机通讯接口)。

● 根据用户的需要可配置与其配套的带声光控制的温控箱。

温控箱，温显器可以安装在离变压器一定距离内，也可安装在变压器柜内或中央监控室内。

- 温控箱标准引线：15 米
- 温控器引线：2.6 米

也可根据用户需要加长。

温控，温显系统原理框图如下：

It also can be adjusted appropriately according to the regulation of standard JB/T7631-94 as per the request of the customer.

By measuring the temperature signal with the Pt100 thermosensitive resistance inserting in the L.V.Coil, the temperature indicating system is of the following features:

- Indicating the temperature of every phase of coil.

● By connecting with computer, it can be remote controlled (as per the request of the customer, it can be equipped with interface transducer of RS232 or RS485 of computer communication interface of 4~20mA)

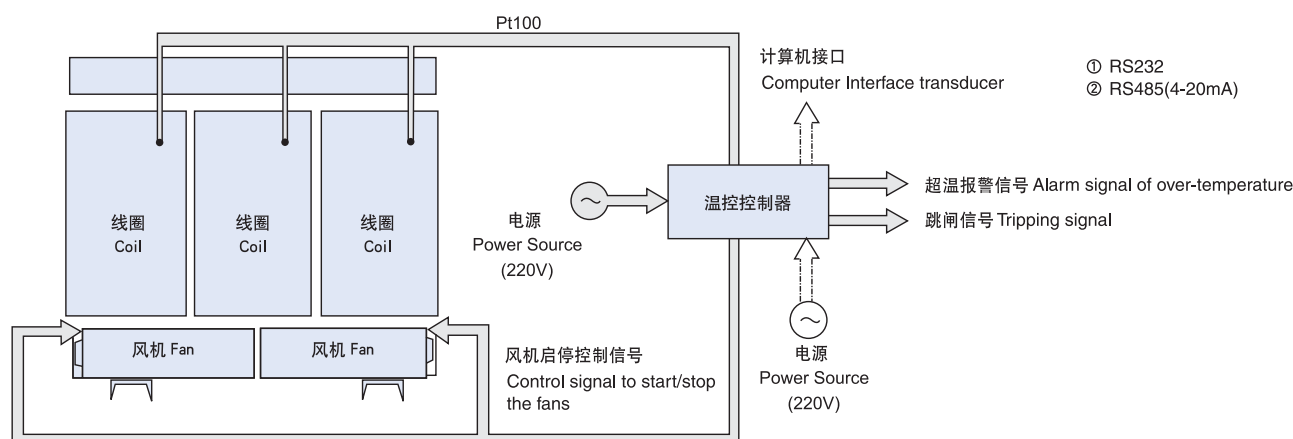
● As per the requirement of the customer it also can be equipped with the temperature control box with voice and light control.

The temperature control box, temperature indicating device can be assembled within a certain distance to the transformer, it can also be installed inside the transformer enclosure or in the central control room.

- The standard length of cable for temperature control box: 15M.

● The cable length for temperature indicating device: 2.6M, the length can be extended as per the need of customer.

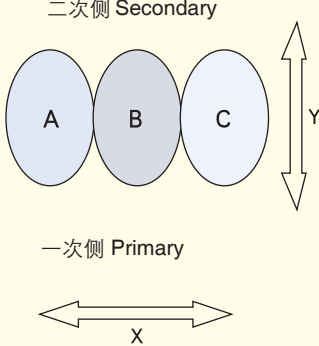
The principle frame diagram of the temperature control, temperature indicating system are shown as follows:





■ 订货须知 Ordering Guides

订货时请提供以下要求: When ordering please give the following information:

● 订货数量	Quantities Ordered	台
● 交货期	Time of Delivery	
● 产品型号	Product Type	
● 额定容量	Rated Capacity	kVA
● 相数	Number of Phases	☐ 单相 Single Phase ☐ 三相 Three Phases
● 频率	Frequency	☐ 50Hz ☐ 60Hz
● 一次额定电压	Rated Primary Voltage	kV
● 二次额定电压	Rated Secondary Voltage	kV
● 分接范围	Tapping Range	± × %
● 联接组别	Vector Group	☐ Yyn0 ☐ Dyn11 ☐ 其他 Other
● 阻抗电压	Impedance Voltage	%
● 冷却方式	Cooling Method	☐ AN ☐ AF
● 保护外壳等级	Degree of Protection	☐ IP00 ☐ IP20 ☐ IP23 ☐ 其他 Other
● 一次侧进线方式	Primary incoming way	☐ 上面进 Top-in ☐ 下面进 Botton-in 见 P8
● 二次侧出线方式	Secondary outgoing way	☐ 上面出 Top-out 见 P8 ☐ 下面出 Botton-out ☐ 标准横排侧出线 见 P10 Standard Horizontal Outgoing ☐ 其他 Other
● 是否配置温控系统	Equipped with or without temperature control System	☐ 是 Yes ☐ 否 No
● 温控系统安装位置 Assembled Location of the temperature control System ☐ 变压器上部 The upper part of transformer ☐ 一次 · A 相侧 Pri.A side ☐ 一次 · C 相侧 Pri.C side ☐ 二次 · A 相侧 Sec.A side ☐ 二次 · C 相侧 Sec.C side ☐ 保护外壳 On the protection enclosure ☐ 一次 · A 相侧 Pri.A side ☐ 一次 · C 相侧 Pri.C side ☐ 二次 · A 相侧 Sec.A side ☐ 二次 · C 相侧 Sec.C side ☐ 其他 Other		
● 是否要脚轮 With the wheel or not ☐ 是 Yes ☐ 否 No		
● 脚轮移动方向 wheel move direction ☐ X ☐ Y		
二次侧 Secondary  一次侧 Primary X		
● 其他特殊要求 Miscellanies _____ _____ _____ _____ _____ _____ _____		

用户 _____ 设计院 _____

上海富士电机变压器有限公司 _____



此环境象征标志显示了富士电机集团对环保的姿态。

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