

干式变压器

Dry-type Transformer

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树脂绝缘干式变压器

Cast Resin Insulation Dry-type Transformer



产品概述

公司于94年引进欧洲先进技术软件，通过CAD优化设计环氧树脂浇注的干式变压器。该产品铁心采用优质取向冷轧硅钢片材料，由德国GEORG公司的阶梯接缝铁心自动生产线制造并采用五阶步叠接缝新工艺，使铁心的空载性能大大提高。线圈采用Huntsman（原汽巴—嘉基）环氧树脂，由德国HEDRICH真空浇注设备完成线圈浇注过程。该产品树脂渗透性好、无气泡，因而局放量小。高、低压线圈紧密配合具有较强的结构强度，从而保证具有较强的抗短路能力和抗振动能力。该产品在正常使用条件下，使用寿命为30年，在运行寿命期内，按正常使用条件产品不会因温度变化导致线圈表面龟裂。

产品特点

低噪声低损耗

- 1)变压器的噪声来自铁心，本公司应用国内首家引进的德国GEORG公司阶梯接缝铁心自动生产线，采用Step—Lap新工艺，改善了铁心内部的磁路分布，以其特有的设备优势，降低了产品的噪声。
- 2)产品设计，采用CAD手段，选用优质的硅钢片，取较低的磁密使其远离饱和点，使得铁心中的谐波量减少，降低了噪声及空载损耗。
- 3)所有的夹紧部位均采用硅橡胶及弹性元件缓冲以减少振幅，降低噪声，同时在铁心外表面涂覆一定厚度的树脂，起到了隔音作用。

难燃不污染环境

- 1)优质树脂和玻璃纤维所组成的固体绝缘具有很高的电气强度(击穿电压不小于34kV/mm)，局部放电量小，可控制在 $\leq 5\text{pC}$ 范围内。
- 2)由于干式变压器所用的树脂和玻璃纤维复合绝缘材料在燃烧时产生的热量极小(约65mJ/kg)，因此具有阻燃自熄的特点。
- 3)干式变压器的铁心用树脂涂覆，线圈全部被树脂包封，因此可在空气相对湿度100%湿度下可靠运行，并具有很高的防腐能力。干式变压器同时还具有过负荷能力强，热稳定性好、体积小、重量轻、安装简单方便，免维护等优点。广泛用于高层建筑、商业中心、机场、车站、码头、地铁、工厂和地下配电站等。

Product Overview

We adopt optimized CAD design for cast resin dry type transformer with advanced technology software imported from Europe in 1994. The core is made of cold-rolled grain-oriented silicon steel sheet cut in step-lap by automatic cutting line from GEORG, Germany and laminated with method of fifth-order step-by-step stack technology. In this way, no-load performance of the core is greatly improved. The winding assembly is casted in the vacuum resin casting machine imported from Hedrich, Germany. The resin materials are provided by (HUNTSMAN) CIBA-GEIGY, Switzerland. All these equipment and material ensure good permeability, no bubbles of casted resin, which leads to minimum partial discharge and high capability to withstand short circuit. The HV and LV winding mate with each other tightly, which ensures solid strength of structure and capability to withstand short circuit and vibration. Under normal service condition, the service life of dry type transformer is 30 years. No crackle will form on the surface of transformer winding due to temperature variation as long as the transformer runs under normal service condition.

Product Characteristic

Low-noise low-loss

- 1)The core is made of high quality cold-rolled grain-oriented silicon-steel sheet. The lamination sheets are produced by automatic step-lap core lamination line from GEORG, Germany. Such method improves the distribution of magnetic circuit result in lowering the noise level.
- 2)Product design adopts CAD software. By selection of high-quality silicon steel sheet and applying lower flux density, noise and no-load loss are reduced due to lower the harmonics in the core.
- 3)All parts used for clamping apply silicone rubber and flexible elements as buffers in order to reduce the amplitude and noise of components, while the surface of core is coated with a certain thickness of resin, which plays a role of sound-proof.

Non-flammable, no pollution to environment

- 1)Solid electrical insulation composed of high quality resin and glass fiber could provide with high electrical strength (breakdown voltage $\geq 34\text{kV/mm}$) and partial discharge can be controlled in the range of $\leq 5\text{pC}$.
- 2)As resin and glass fiber composite materials used in dry-type transformer generate very little heat when in combustion (about 65mJ/kg), the transformer has characteristic of fire-retardant self-extinguishing.
- 3)Dry-type transformer core is coated with the resin, while the coil is all encapsulated by resin. The transformer can provide relative reliable operation in circumstance of 100% humidity, and has high anti-corrosion ability. Dry-type transformer also has good advantages such as strong overload capability, good thermal stability, compact size, light weight, easy to install, maintenance-free and so on. Dry-type transformer is widely used in high-rise buildings, commercial centers, airports, stations, ports, subway, factories and underground power distribution stations.

●铁心

铁心采用优质取向冷轧硅钢片材料，由德国GEORG公司的阶梯接缝铁心自动生产线制造并采用阶梯接缝(Step—Lap)新工艺。使磁路结构得到改善，阶梯接缝处的磁通密度降低。由一流的设备，优质的硅钢片以及先进的工艺，铁心的空载性能大大提高。与常规结构铁心比较，空载损耗，空载电流和噪声水平分别减少5%~6%、20%~30%和6%。

●线圈

树脂浇注高压线圈

高压线圈为分段层式结构，采用Huntsman(原瑞士CIBA)树脂系统材料，德国HEDRICH设备真空浇注。低压线圈采用箔式结构。先进的工艺保证了线圈具有局放量小，抗短路能力强的特点。

高压线圈调压范围

$Un \pm 5\%$ 和 $Un \pm 2 \times 2.5\%$ 无励磁调压以及 $Un \pm 4 \times 2.5\%$ 有载调压。

●温控装置

具有故障报警，超温报警，超温跳闸，三相巡检，启、停风冷装置等功能。还可配置计算机远程控制接口。

●冷却装置

采用辐流风机，具有噪声低，冷却效果好，安装方便等优点，加装风机可增加干式变压器的出力。

●新产品开发、质量控制

公司注重新产品研究开发，具有一支很强的设计、工艺、试验及材料检测的技术队伍。广泛应用CAD手段，可满足用户各种特种产品的订货要求。

产品采用IEC国际标准组织生产，通过ISO9001质量体系认证。由于采用现代化生产技术和严格的质量控制，产品能经受严格的出厂试验和型式试验，保证具有高标准的质量，优良的售后服务。

●Core

The core is made of high quality cold-rolled grainoriented silicon-steel sheet, laminated by automatic step-lap core lamination line imported from GEORG, Germany. Such method improves the distribution of magnetic circuit result in lowering the nose level. By selection of high-quality silicon steel sheet and applying advanced technology, equipment, no-load performance of transformer is improved. Compared with conventional core, no-load loss, no-load current and noise level are reduced by 5%~6%, 20%~30%, 6% respectively.

●Coil

Cast-resin high-voltage coil

High-voltage coil applies fractionation-layer structure, casted with Huntsman (the former Swiss CIBA) resin materials, Germany) and by HEDRICH vacuum casting equipment. Low-voltage coil applies foil structure. Advanced technology ensures little partial discharge of coil and strong ability to withstand short circuit.

Tapping range of high-voltage coil

$Un \pm 5\%$ and $Un \pm 2 \times 2.5\%$ OCTC, as well as $Un \pm 4 \times 2.5\%$ OLTC.

●Temperature control device

With fault alarm, over-temperature alarm, over-temperature tripping, three-phase polling, start and stop air-force cooling device and other functions. It can also configure computer remote control interface.

●Cooling device

Radial flow fan has advantages of low noise, good cooling effect, easy installation. It also improves the operation capacity by installing fans.

●New product development and quality control

QRE pays great attention to new product research and development. There is rich technical team working for design, technology, testing and materials control. With widely application of CAD, a variety of client's special requirement can be satisfied.

Transformers are produced according to IEC relevant standards. The company passed ISO9001 quality system authentication. By use of modern production technology and strict quality control, the product can pass strict factory testing and type testing to ensure high standards of quality.

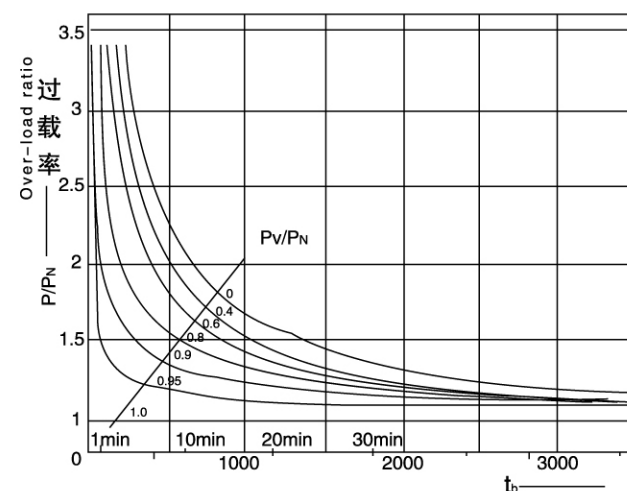
●过载能力

干式变压器在运行时，可允许短时过载，其短时过载曲线如下图a、b所示。图a、b分别给出了不同环境温度(40℃或20℃)和运行条件下，过载容量与过载时间的关系曲线。

P_N —额定容量

P_v —起始负载

P —过载容量



图a 环境温度 $\theta_H=40^\circ\text{C}$ 允许过载时间
Fig.a Ambient temperature $\theta_H=40^\circ\text{C}$ Overload time allowable

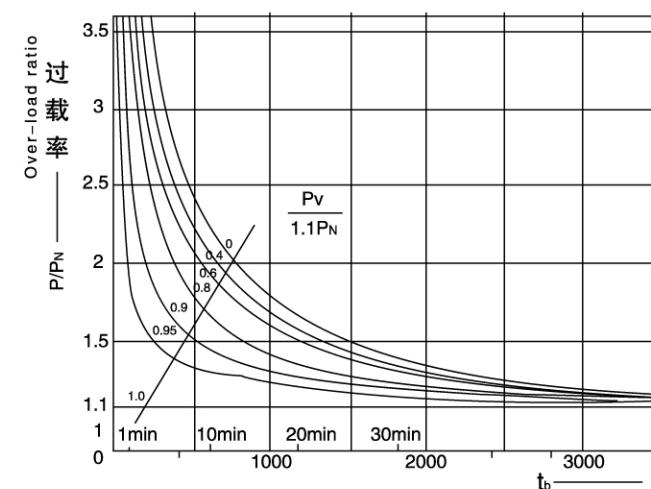
●Overload capacity

Short-term overload is allowed for Dry-type transformers during operation. The short-term overload curves are shown in following figures a, b. Figure a, b show overload capacity and overload time curve in different ambient temperatures (40°C or 20°C) and operating conditions respectively.

P_N - Rated capacity

P_v - Initial load

P - Overload capacity



图b 环境温度 $\theta_H=20^\circ\text{C}$ 允许过载时间
Fig.b Ambient temperature $\theta_H=20^\circ\text{C}$ Overload time allowable

产品标准：GB/T1 0228-2008、GBI 094.11-2007、IEC60076-11、DIN42523

Product standard : GB/T1 0228-2008, GBI 094.11-2007, IEC60076-11, DIN42523

技术参数 Technical Parameters

SC(B)系列F级绝缘干式变压器技术数据(频率均为: 50HZ)

额定电压: 高压6, 6.3, 10, 10.5, 11kV 低压0.4kV

分接范围: $\pm 5\%$; $\pm 2 \times 2.5\%$

联结组标号: Yyn0, Dyn11

绝缘水平: 10/0.4kV LI75AC35/AC3kV
6/0.4kV LI60AC25/AC3kV

Technical parameters for SC(B) Series F grade insulation dry-type distribution transformer (Frequency: 50HZ)

Rated voltage: HV-6, 6.3, 10, 10.5, 11 kV; LV-0.4kV

Tapping Range: $\pm 5\%$; $\pm 2 \times 2.5\%$

Vector Group: Dyn11; Yyn0

Insulation Level: 10/0.4kV: LI 75AC35/AC3kV
6/0.4kV: LI 60AC25/AC3kV

SC(B)9型10kV干式配电变压器技术参数和外形尺寸

Specification of 10kV (SC(B)9 Series) Dry Type Distribution Transformer

型号 Model	UK(%)	Po(W)	Pk(75°C) (W)	I ₀ (%)	Lp d(B/A)	Gt(kg)	外形尺寸 (mm) Outer dimension										低压 端子 L.V. terminal	参考 外形图 Reference Diagram
							a	b	c	d	e	f	g	h	k1	k2		
SC9-30/10	4	210	650	1.6	44	300	870	600	828	550	400	733	199	225	150	75	图一 Fig.1	外形图一 Diagram1
SC9-50/10		295	900	1.6	44	380	880	600	905	550	400	833	205	234	150	75		
SC9-80/10		400	1270	1.4	45	500	960	600	1010	550	400	938	214	243	150	75		
SC9-100/10		420	1450	1.4	45	550	970	600	1010	550	400	938	214	243	150	75		
SC9-125/10		490	1700	1.2	46	700	1000	600	1050	550	400	978	215	249	150	75		
SC9-160/10		580	1960	1.2	46	770	1030	650	1098	550	400	958	225	270	150	75		
SC9-200/10		650	2330	1.0	47	850	1060	720	1100	550	550	1018	223	257	150	75		
SCB9-250/10		750	2540	0.8	47	1010	1120	720	1145	550	550	988	240	268	150	75		
SCB9-315/10		910	3200	0.8	48	1145	1180	720	1130	550	550	988	281	275	395	150		
SCB9-400/10		1000	3680	0.8	48	1360	1220	720	1195	550	550	1085	292	283	410	150		
SCB9-500/10	6	1200	4510	0.6	48	1600	1250	830	1270	660	660	1175	297	288	425	150	图二 Fig.2	外形图二 Diagram2
SCB9-630/10		1390	5430	0.6	49	1900	1300	830	1370	660	660	1275	310	298	440	150		
SCB9-630/10		1350	5510	0.6	49	1830	1340	830	1295	660	660	1200	295	284	450	150		
SCB9-800/10		1630	6430	0.5	50	2245	1420	880	1395	820	660	1270	320	298	480	150		
SCB9-1000/10		1830	7510	0.5	50	2565	1500	880	1390	820	660	1265	330	308	505	150		
SCB9-1250/10		2170	8960	0.5	52	3160	1610	900	1500	820	660	1355	342	321	545	200		
SCB9-1600/10		2530	10830	0.5	52	3875	1730	920	1585	820	660	1445	375	332	585	200		
SCB9-2000/10		3200	13360	0.4	53	4480	1770	960	1705	820	660	1535	381	339	595	200		
SCB9-2500/10		3700	15870	0.4	54	5385	1840	990	1865	1070	820	1675	401	342	620	200		
SCB9-1600/10	8	2530	11960	0.5	52	3750	1730	920	1550	820	660	1410	346	321	585	200	图五 Fig.5	外形图五 Diagram5
SCB9-2000/10		3200	14760	0.4	53	4320	1770	920	1695	820	660	1525	375	332	595	200		
SCB9-2500/10		3700	17460	0.4	54	5385	1840	990	1840	1070	820	1650	390	342	620	200		
SCB9-3150/10		4300	22000	0.4	54	6340	2180	1020	1915	1070	820	1680	417	365	720	250		

SC(B)9干式配电变压器带IP20保护外壳外形尺寸

Outer dimensions of SC (B) 9 Dry-type distribution transformer with IP20 protection enclosure

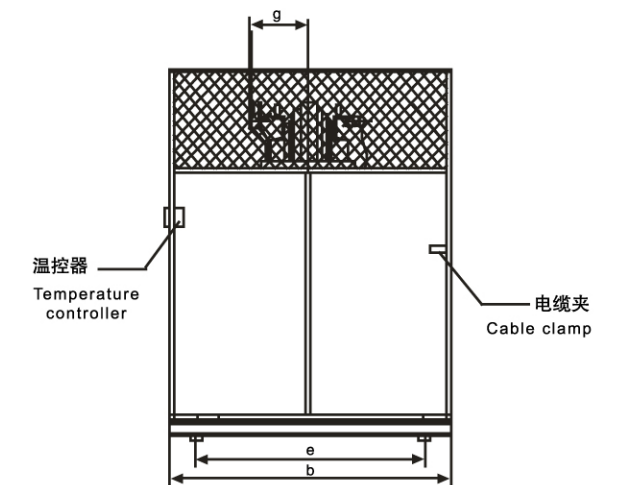
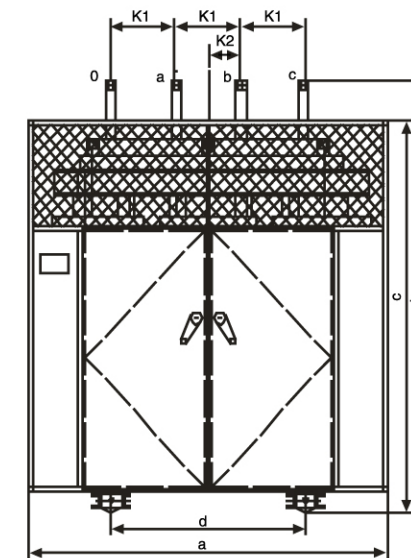
型号 Model	UK(%)	a	b	c	d	e	h	g	k1	k2	Gt(kg)
SC9-30/10	4	1450	1000	1260	550	820	1410	199	150	75	500
SC9-50/10		1450	1000	1260	550	820	1410	205	150		580
SC9-80/10		1450	1000	1260	550	820	1410	214	150		700
SC9-100/10		1450	1000	1260	550	820	1410	214	150		750
SC9-125/10		1450	1000	1260	550	820	1410	215	150		900
SC9-160/10		1450	1000	1260	550	820	1410	225	150		970
SC9-200/10		1500	1100	1310	550	820	1460	223	150		1050
SCB9-250/10		1500	1100	1310	550	820	1460	240	150		1210
SCB9-315/10		1700	1300	1310	550	1070	1460	281	130		1395
SCB9-400/10		1700	1300	1420	550	1070	1570	292	130		1610
SCB9-500/10	6	1700	1350	1480	660	1180	1630	297	130	0	1850
SCB9-630/10		1700	1350	1580	660	1180	1730	310	130		2150
SCB9-630/10		1700	1350	1580	660	1180	1730	295	130		2080
SCB9-800/10		1900	1350	1630	820	1180	1780	320	150		2540
SCB9-1000/10		1900	1350	1630	820	1180	1780	330	150		2865
SCB9-1250/10		2100	1350	1730	820	1180	1890	342	150		3560
SCB9-1600/10		2100	1350	1780	820	1180	1930	375	150		4275
SCB9-2000/10		2300	1500	1940	820	1180	2090	381	200		4980
SCB9-2500/10		2300	1600	2180	1070	1280	2380	401	225		5985
SCB9-3150/10		2500	1600	2250	1070	1280	2500	417	250		7000

• 低压接线端子与不带外壳产品端子相同

• L.V. connection terminals are the same with those of non-enclosure products.

SC(B)9干式配电变压器带IP20保护外壳外形图

Outline of SC(B)9 Dry-type Transformer with IP20 Protection enclosure.

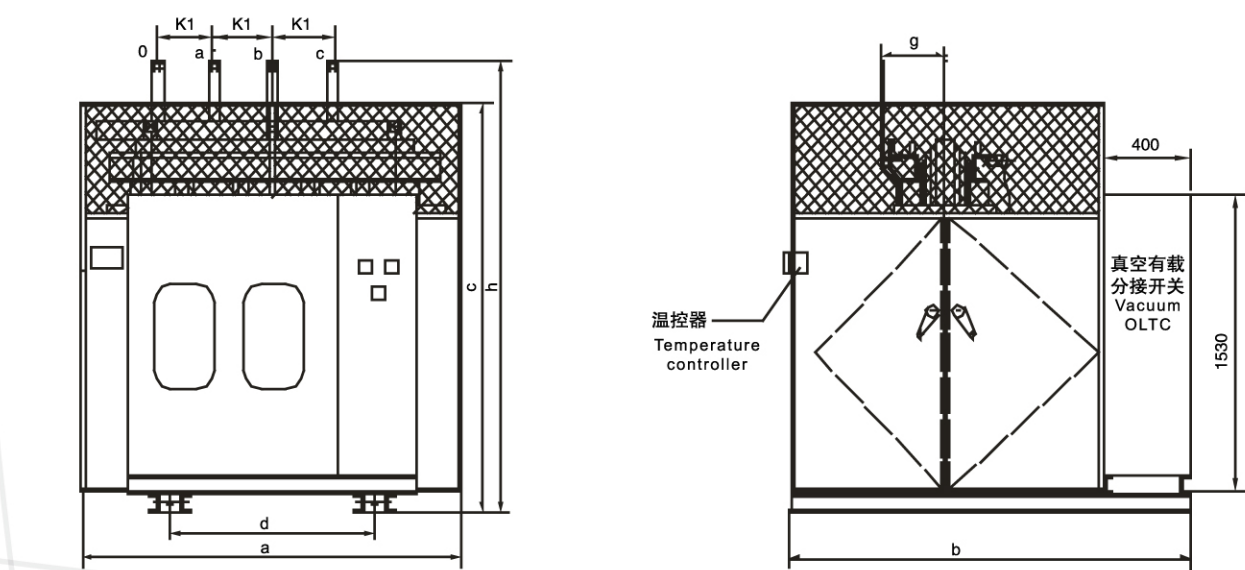


SC(B)Z9干式配电变压器带IP20保护外壳外形尺寸
Outer dimensions of SC (B) Z9 Dry-type distribution transformer with IP20 protection enclosure

型 号 Model	UK(%)	a	b	c	d	h	g	k1
SCBZ9-250/10	4	1500	1500	1310	550	1460	240	150
SCBZ9-315/10		1700	1700	1310	550	1460	281	130
SCBZ9-400/10		1700	1700	1420	550	1570	292	130
SCBZ9-500/10		1700	1750	1480	660	1630	297	130
SCBZ9-630/10		1700	1750	1580	660	1730	310	130
SCBZ9-630/10	6	1700	1750	1580	660	1730	295	130
SCBZ9-800/10		1900	1750	1630	820	1780	320	150
SCBZ9-1000/10		1900	1750	1630	820	1780	330	150
SCBZ9-1250/10		2100	1750	1730	820	1890	342	150
SCBZ9-1600/10		2100	1750	1780	820	1930	375	150
SCBZ9-2000/10		2300	1900	1940	820	2090	381	200
SCBZ9-2500/10		2300	2000	2180	1070	2380	401	225

- 有载变压器低压端子与无载调压配电变压器相同。
- 有载变压器不带外壳产品尺寸与带外壳尺寸原则上一样，其高度可适当降低。
- 带外壳有载变压器除有载开关侧外，其余三面开双门。
- 有载变压器并联运行时，必须配置同步控制器，且并联运行台数不能超过3台。
- 温控器装在外壳低压右侧。
- LV terminal of transformer with OLTC is same to that of transformer with OCTC.
- Dimension of transformer with OLTC but without enclosure is same to that of with enclosure in principle, while the height could be appropriately lowered.
- There are double doors on other three sides except on the side of OLTC for transformer with enclosure.
- Synchronous controller must be equipped while transformers with OLTC are in parallel operation. Transformers in parallel operation can't be more than 3 units.
- Install thermostat on the right side of enclosure.

SC(B)Z9有载调压干式配电变压器带IP20保护外壳外形图
Outline diagram of SC (B) Z9 Dry-type distribution transformer with IP20 protection enclosure

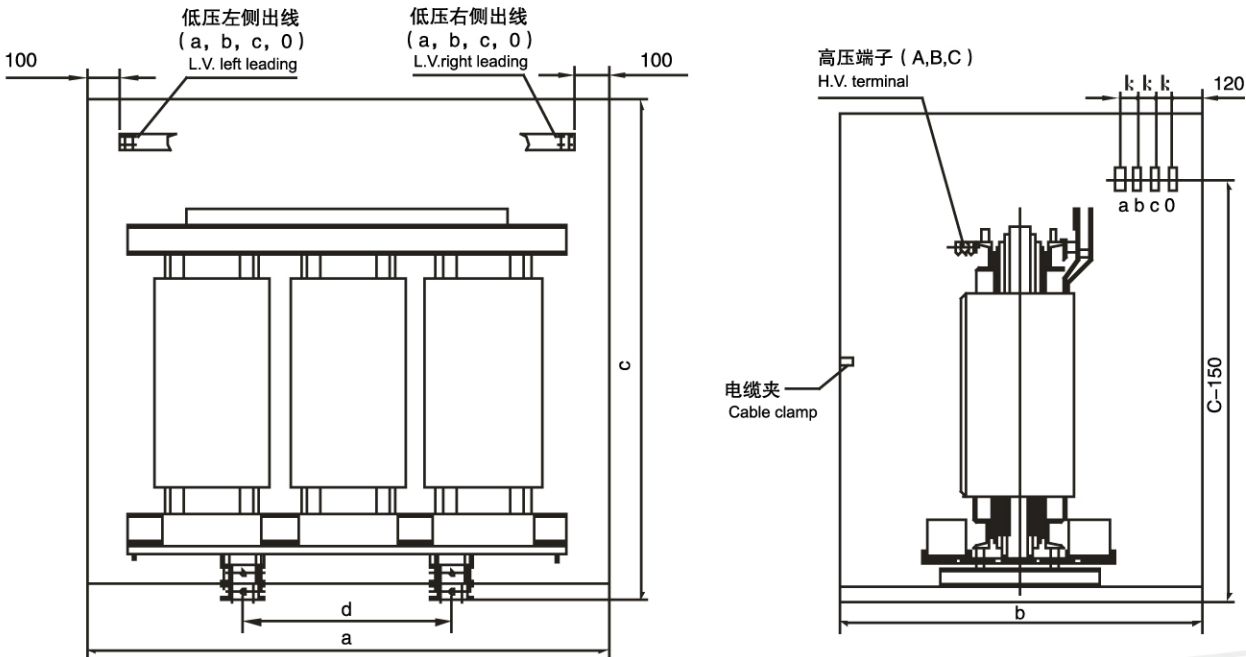


4. SC(B)系列标准横排侧出线外形尺寸
Outer dimensions of SC(B) series transformer with standard horizontal side leading

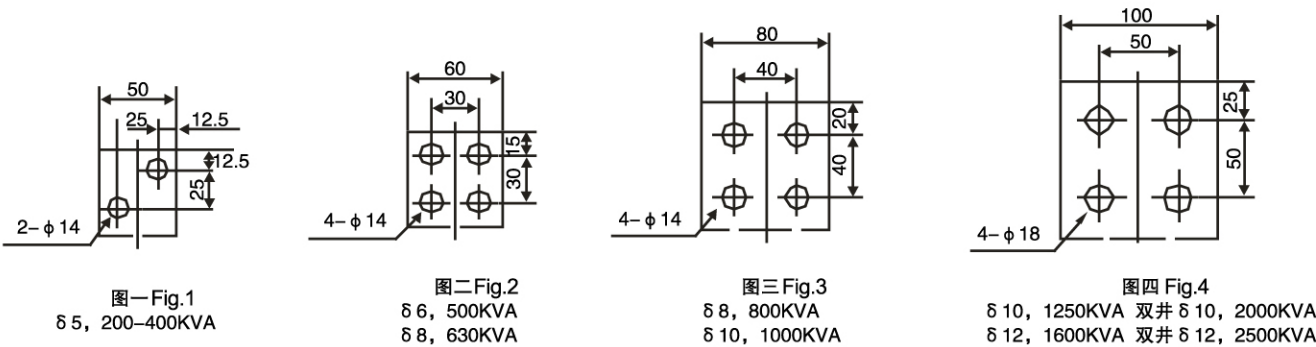
型 号 Model	UK(%)	a	b	c	d	k	侧出线低压 接线端子 英文缺失
SC9-200/10	4	1500	1100	2200	550	80	图1
SCB9-250/10		1500	1100	2200	550	80	
SCB9-315/10		1700	1300	2200	550	80	
SCB9-400/10		1700	1300	2200	550	80	
SCB9-500/10		1700	1350	2200	660	80	
SCB9-630/10	6	1700	1350	2200	660	80	图2
SCB9-630/10		1700	1350	2200	660	80	
SCB9-800/10		1900	1350	2200	820	80	图3
SCB9-1000/10		1900	1350	2200	820	80	
SCB9-1250/10		2100	1350	2200	820	120	图4
SCB9-1600/10		2100	1300	2200	820	120	
SCB9-2000/10		2300	1500	2300	820	120	
SCB9-2500/10		2300	1600	2300	1070	120	

- 对于额定容量小于200kVA的变压器，按常规出线，其侧出线由用户用软电缆自行联接。
- 容量2000，2500kVA,a,b,c三相采用双排出线，两出线排间距为12（2000kVA）或14（2500kVA）。
- 因变压器侧出零线在上方，对零线从底部引出的开关柜，建议变压器零线仍由上面进入开关柜。
- 温控器装在外壳低压右侧。
- For transformers with rated power less than 200kVA, outlet is as per regular leading, side-leading is connected by user's soft cable.
- For transformers with rated power 2000KVA or 2500KVA, a, b, c three phase leading is led in two rows, and the distance between the two rows is 12(2000KVA) or 14(2500KVA).
- For the switch cabinet from the bottom of which neutral leading is led, we suggest that the neutral leading should be led into the cabinet from the top of the transformer,because the side neutral leading is on the top of the transformer.
- Temperature controller is set at the right side of L.V.side.

SC(B)系列标准横排侧出线外形图
Outer dimensions of SC(B) series Transformer with standard horizontal side leading



侧出线低压接线端子图
Side Leading L.V. Connection Terminals Diagram



SC(B)10系列F级绝缘干式配电变压器技术数据(频率均为: 50HZ)
 额定电压: 高压6, 6.3, 10, 10.5, 11kV 低压 0.4kV
 分接范围: $\pm 5\%$; $\pm 2 \times 2.5\%$
 联接组别: Yyn0; Dyn11
 绝缘水平: 10/0.4kV LI75AC35/AC3 6/0.4kV LI60AC25/AC3
 Technical parameters for SC(B)10 series F grade insulation dry-type distribution transformer (Frequency:50Hz)
 Rated voltage: HV-6, 6.3, 10, 10.5, 11 kV;LV-0.4kV
 Tapping Range: $\pm 5\%$; $\pm 2 \times 2.5\%$
 Vector Group: Dyn11; Yyn0
 Insulation Level: 10/0.4kV: LI75AC35/AC3 6/0.4kV: LI60AC25/AC3

5. SC(B)10型10kV级干式配电变压器技术数据和外形尺寸
 Technical parameter and dimensions of S(B)10 10kV dry-type distribution transformer

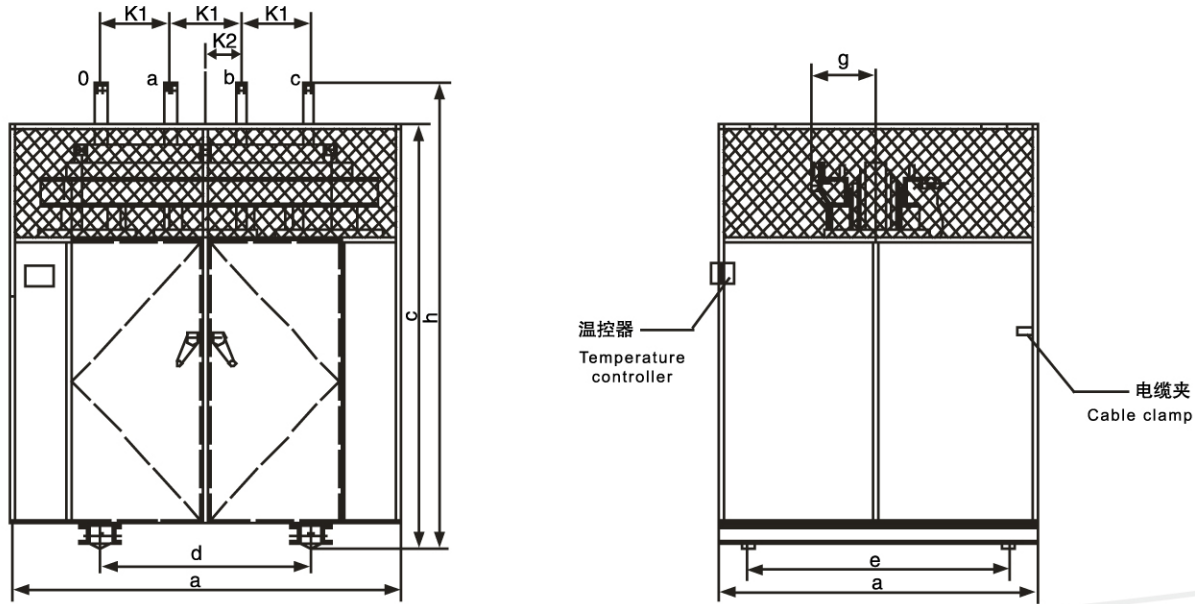
型号 Model	UK(%)	Po(W)	Pk(75°C) (W)	Io(%)	Lp dB(A)	Gti(kg)	外形尺寸 (mm) Outer dimension										低压端子 L.V. terminal	参考 外形图 Reference Diagram
							a	b	c	d	e	f	g	h	k1	k2		
SC10-30/10	4	195	623	1.4	43	320	880	600	840	550	400	753	199	225	150	75	外形图一	图一
SC10-50/10		270	880	1.4	43	400	900	600	925	550	400	853	205	234	150	75		
SC10-80/10		370	1215	1.2	44	520	960	600	1020	550	400	945	214	240	150	75		
SC10-100/10		400	1390	1.2	44	570	970	600	1030	550	400	958	214	243	150	75		
SC10-125/10		450	1630	1.0	45	720	1020	600	1070	550	400	998	215	249	150	75		
SC10-160/10		530	1870	1.0	45	800	1040	650	1110	550	400	978	225	270	150	75		
SC10-200/10		600	2230	0.8	46	870	1080	720	1115	550	550	1038	223	259	150	75		
SCB10-250/10		680	2420	0.7	46	1125	1140	720	1165	550	550	1008	240	268	150	75		
SCB10-315/10		820	3050	0.7	46	1245	1200	720	1150	550	550	1008	281	275	405	150		
SCB10-400/10		920	3500	0.7	47	1460	1240	720	1205	550	550	1105	292	283	420	150		
SCB10-500/10	6	1100	4290	0.5	47	1700	1270	850	1290	660	660	1195	297	288	435	150	外形图二	图二
SCB10-630/10		1260	5160	0.5	48	2100	1320	850	1390	660	660	1295	310	300	450	150		
SCB10-630/10		1210	5235	0.5	48	2030	1360	850	1315	660	660	1200	295	297	460	150		
SCB10-800/10		1460	6110	0.4	49	2445	1440	900	1415	820	660	1290	320	309	490	150		
SCB10-1000/10		1700	7140	0.4	49	2765	1525	900	1410	820	660	1285	330	312	515	150		
SCB10-1250/10		1960	8510	0.4	51	3360	1635	920	1520	820	660	1355	342	336	555	200		
SCB10-1600/10		2350	10290	0.4	51	4125	1755	950	1595	820	660	1445	375	335	595	200		
SCB10-2000/10		2900	12690	0.3	52	4680	1795	960	1715	820	660	1530	381	350	605	200		
SCB10-2500/10		3420	15080	0.3	52	5585	1865	1000	1875	1070	820	1670	401	342	630	250		
SCB10-2500/10																		

6. SC(B)10干式配电变压器带IP20保护外壳外形尺寸
 Outer dimension of SC(B)10 series dry-type distribution transformer with IP20 enclosure

型号 Model	UK(%)	a	b	c	d	e	h	g	k1	k2	Gt(kg)
SC10-30/10	4	1450	1000	1260	550	820	1410	199	150	75	640
SC10-50/10		1450	1000	1260	550	820	1410	223	150		700
SC10-80/10		1450	1000	1260	550	820	1410	210	150		800
SC10-100/10		1450	1000	1260	550	820	1410	214	150		850
SC10-125/10		1450	1000	1260	550	820	1410	215	150		1020
SC10-160/10		1450	1000	1260	550	820	1410	225	150		1070
SC10-200/10		1500	1100	1310	550	820	1460	223	150		1150
SCB10-250/10		1500	1100	1310	550	820	1465	240	150		1325
SCB10-315/10		1700	1300	1310	550	1070	1475	281	130		1480
SCB10-400/10		1700	1300	1420	550	1070	1585	292	130		1710
SCB10-500/10	6	1700	1350	1480	660	1180	1650	297	130	0	1950
SCB10-630/10		1700	1350	1580	660	1180	1750	310	130		2350
SCB10-630/10		1700	1350	1580	660	1180	1750	295	130		2280
SCB10-800/10		1900	1350	1630	820	1180	1800	320	150		2745
SCB10-1000/10		1900	1350	1630	820	1180	1800	330	150		3065
SCB10-1250/10		2100	1350	1730	820	1180	1910	342	150		3760
SCB10-1600/10		2100	1350	1780	820	1180	1950	375	150		4525
SCB10-2000/10		2300	1500	1940	820	1180	2090	381	200		5180
SCB10-2500/10		2300	1600	2180	1070	1280	2380	401	225		6185

- 低压接线端子与不带外壳产品端子相同
- L.V. connection terminals are the same with those of non-enclosure products

SC(B)10干式配电变压器带IP20保护外壳外形图
 Outline of SC(B)10 Dry-type Distribution Transformer with IP20 Protection enclosure



7.SC(B)Z10有载调压干式配电变压器带IP20保护外壳外形尺寸

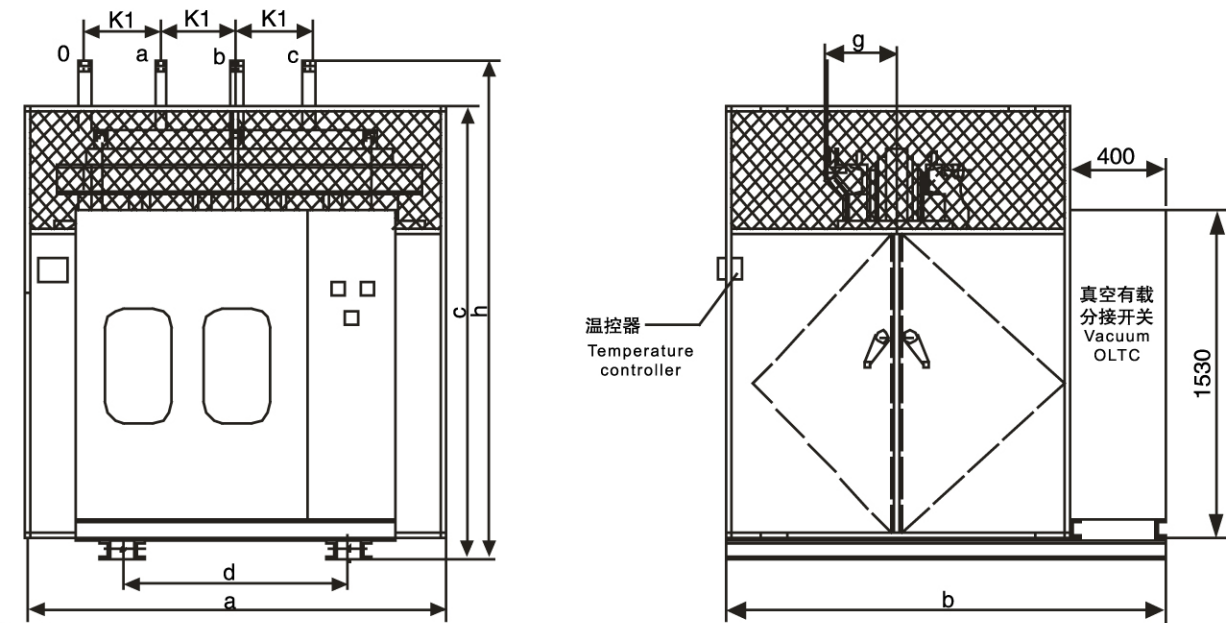
Outer dimension of SC(B)Z10 dry-type distribution transformer with OLTC with IP20 enclosure

型 号 Model	UK(%)	a	b	c	d	h	g	k1	Gt(kg)
SCBZ10-250/10	4	1500	1500	1310	550	1465	240	150	1645
SCBZ10-315/10		1700	1700	1310	550	1475	281	130	1800
SCBZ10-400/10		1700	1700	1420	550	1585	292	130	2030
SCBZ10-500/10		1700	1750	1480	660	1650	297	130	2270
SCBZ10-630/10		1700	1750	1580	660	1750	310	130	2670
SCBZ10-630/10	6	1700	1750	1580	660	1750	295	130	2600
SCBZ10-800/10		1900	1750	1630	820	1800	320	150	3065
SCBZ10-1000/10		1900	1750	1630	820	1800	330	150	3385
SCBZ10-1250/10		2100	1750	1730	820	1910	342	150	4080
SCBZ10-1600/10		2100	1750	1780	820	1950	375	150	4845
SCBZ10-2000/10		2300	1900	1940	820	2090	381	200	5500
SCBZ10-2500/10		2300	2000	2180	1070	2380	401	225	6505

- 有载变压器低压端子与无载调压配电变压器相同。
- 有载变压器不带外壳产品尺寸与带外壳尺寸原则上一样，其高度可适当降低。
- 带外壳有载变压器除有载开关侧外，其余三面开双门。
- 有载变压器并联运行时，必须配置同步控制器，且并联运行台数不能超过3台。
- L.V. terminals of on-load tapping transformer are same with off-load tapping distribution transformer.
- The dimensions of on-load tapping transformer without enclosure are same with that of transformers with enclosure in principle, and the height can be decreased properly.
- For on-load tapping transformers with enclosure, except for OLTC side, the other three sides are open in two directions.
- The synchronous control instrument must be set when on-load tapping transformers are in parallel operation, and the quality of transformers in shunt is not more than three.

SC(B)Z10有载调压干式配电变压器带IP20保护外壳外形图

Outline of SC(B)Z10 Dry-type Distribution Transformers with OLTC with IP20 Protection enclosure



SC(B)系列20kV级树脂绝缘干式配电变压器技术数据（频率均为：50HZ）

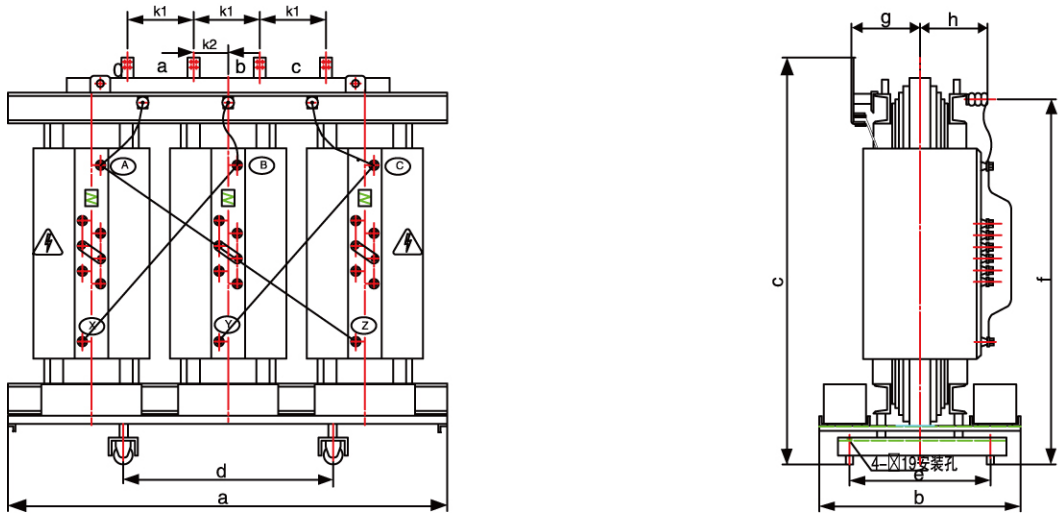
额定电压:高压20 (24, 22, 20, 10) kV;低压0.4kV
分接范围:± 5%; ± 2 × 2.5%
联结组标号:Yyn0, Dyn11
绝缘水平:10kV时 LI75AC35/AC3kV;20kV时 LI125AC50/AC3kV

Technical parameters for SC(B) Series 20kV cast resin dry-type distribution transformer (Frequency: 50HZ)

Rated voltage:HV-20 (24, 22, 20, 10) kV;LV-0.4kV
Tapping Range: ± 5%; ± 2 × 2.5%
Vector Group: Dyn11; Yyn0
Insulation Level: 10kV: LI75AC35/AC3kV;20kV: LI125AC50/AC3kV

20kV单电压50~250kVA外形图

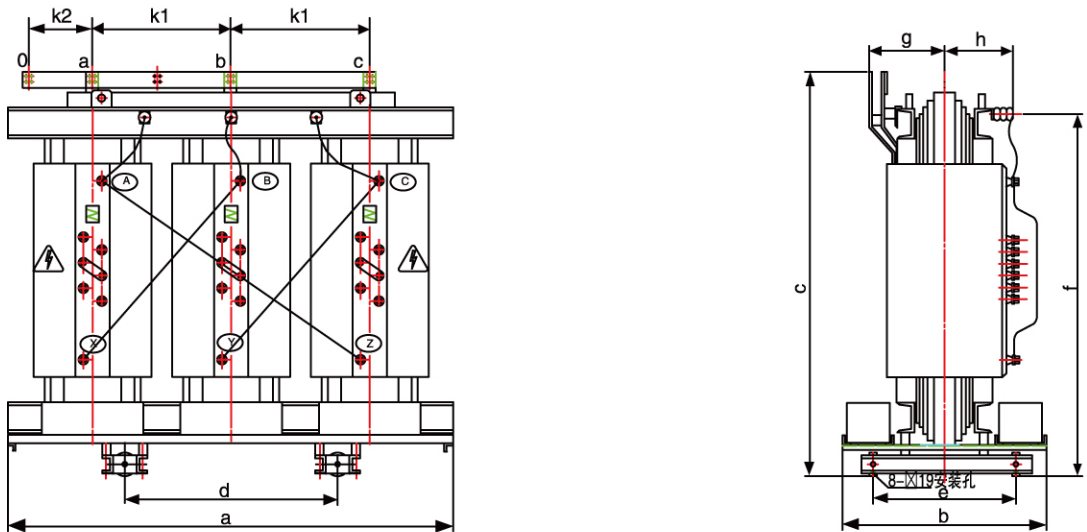
Outline Diagram for 50~250kVA, 20kV series Transformer with single voltage ratio



外形图三 Outline diagram 3

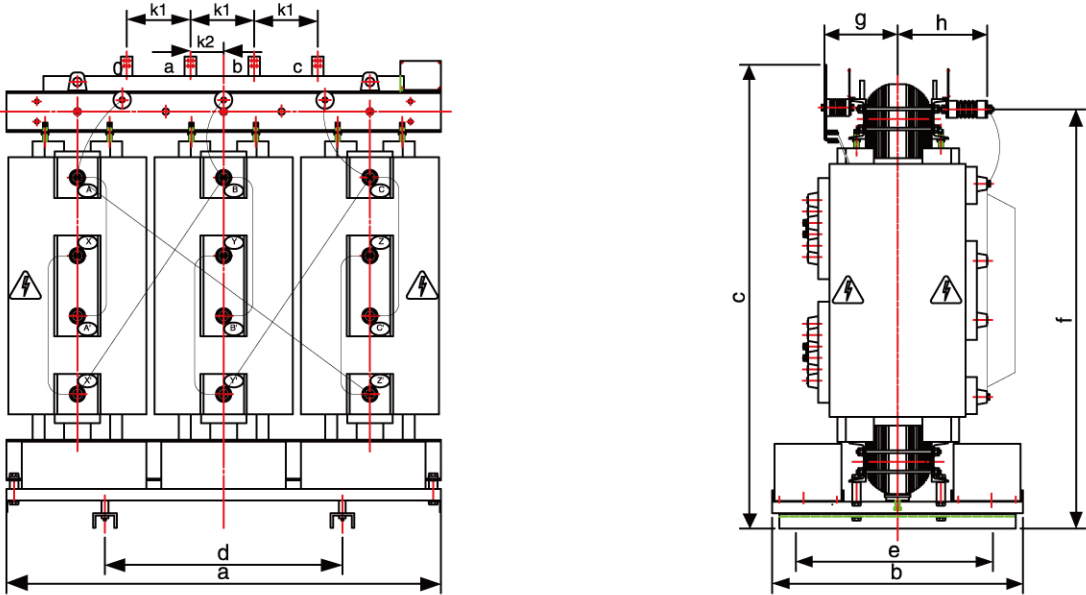
20kV单电压315~2500kVA外形图

Outline Diagram for 315~2500kVA, 20kV series Transformer with single voltage ratio



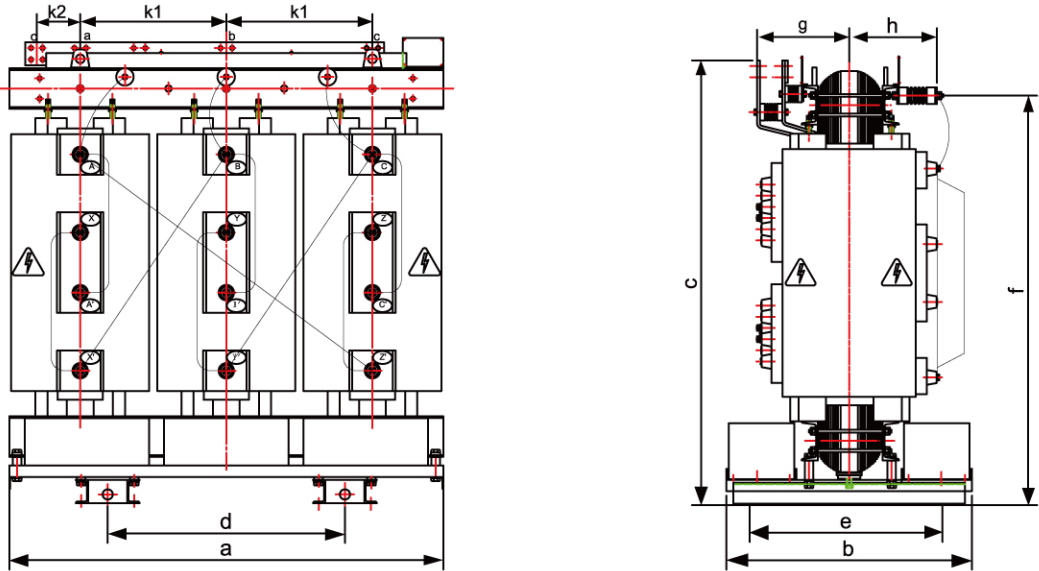
外形图四 Outline diagram 4

20（10）kV双电压50-250kVA外形图
Outline Diagram for 50~250kVA, 20(10)kV series Transformer with dual-volatge ratio



外形图五 Outline diagram 5

20（10）kV双电压315-2500kVA外形图
Outline Diagram for 315~2500kVA, 20(10)kV series Transformer with dual-volatge ratio



外形图六 Outline diagram 6

SC(B)9型20kV级干式配电变压器技术参数和外形尺寸)
Technical parameters & Outer Dimensions for SC(B)9 Series 20kV dry-type distribution transformer

型号 Model		UK (%)	Po (W)	Pk (75℃)	Io (%)	Lp dB (A)	Gt (kg)	外形尺寸 (mm) Dimension												低压端子 LV Terminal	参考外形图 Reference Outline diagram	L × B × H(防护外壳) (mm) Protective Enclosure LxBxH
								a	b	c	d	e	f	g	h	k1	k2					
SC9-50/20 (10) -0.4	6		360	1135	2.0	46	480	1180	600	940	550	400	910	230	340	150	75	图一 Fig. 1	外形图三 Outline diagram 3	1700 × 1350 × 1400		
SC9-100/20 (10) -0.4			570	1835	1.6	46	650	1250	600	1225	550	400	1095	245	345	150	75			1700 × 1350 × 1660		
SC9-160/20 (10) -0.4			710	2270	1.2	46	950	1280	600	1230	550	400	1100	265	350	150	75			1700 × 1350 × 1660		
SC9-200/20 (10) -0.4			780	2710	1.2	48	1200	1360	720	1250	550	550	1120	270	355	150	75			1900 × 1350 × 1680		
SC9-250/20 (10) -0.4			895	3145	1.2	48	1430	1390	720	1330	550	550	1180	275	360	150	75			1900 × 1350 × 1730		
SCB9-315/20 (10) -0.4			1025	3755	1.0	48	1500	1410	720	1370	550	550	1240	280	370	450	130	图二 Fig. 2	外形图四 Outline diagram 4	2100 × 1400 × 1770		
SCB9-400/20 (10) -0.4			1215	4455	1.0	50	1680	1450	720	1400	550	550	1280	290	380	470	130			2100 × 1400 × 1800		
SCB9-500/20 (10) -0.4			1425	5330	1.0	50	1900	1480	830	1450	660	660	1340	300	390	485	130	图三 Fig. 3	外形图四 Outline diagram 4	2100 × 1400 × 1840		
SCB9-630/20 (10) -0.4			1615	6290	0.8	50	2200	1500	830	1495	820	660	1384	309	400	505	130			2100 × 1500 × 1880		
SCB9-800/20 (10) -0.4			1850	7600	0.8	51	3100	1630	830	1655	820	660	1530	330	420	550	150	图四 Fig. 4	外形图六 Outline diagram 6	2300 × 1500 × 2040		
SCB9-1000/20 (10) -0.4			2185	8995	0.6	51	3500	1700	830	1680	820	660	1555	341	440	575	150			2300 × 1500 × 2060		
SCB9-1250/20 (10) -0.4			2520	10610	0.6	51	3600	1720	900	1750	820	660	1660	342	450	585	150	图五 Fig. 5	外形图六 Outline diagram 6	2400 × 1500 × 2130		
SCB9-1600/20 (10) -0.4			2945	12750	0.6	52	4600	1880	920	1940	820	660	1770	375	450	635	150			2500 × 1600 × 2330		
SCB9-2000/20 (10) -0.4			3420	15060	0.4	52	5260	2100	960	1980	1070	820	1815	380	470	680	200	图六 Fig. 6	外形图六 Outline diagram 6	2700 × 1600 × 2370		
SCB9-2500/20 (10) -0.4			4085	17810	0.4	52	6410	2230	990	2070	1070	820	1890	400	490	730	200			图七 Fig. 7	2800 × 1700 × 2460	

注：1、双电压技术参数和外形尺寸同上表
2、表中数据仅供参考，公司保留更改数据
Notes: 1. Dual-voltage technical parameters and dimensions refers to above table.
2. Above parameters are subject to change without prior notice.

SC(B)9-35kV级干式配电变压器技术参数和外形尺寸
Technical parameters & Outer dimensions for SC(B)9 Series 35kV dry-type distribution transformer

型号 Model	UK(%)	Po(W)	Pk(75℃) (W)	Io(%)	Lp dB(A)	Gt(kg)	联结组标号 Vector Group	本体尺寸 (mm) 长X宽X高 Transformer LXWXH	防护外壳尺寸 (mm) 长X宽X高 Protective Enclosure LXWXH	轨距 (mm) Rail Distance
SC9-30/35	6	360	1050	2.4	49	500	Yyn0	1320X750X1300	2100X1500X2000	820X660
SC9-50/35		500	1310	2.2	49	620		1330X750X1475	2100X1500X2000	
SC9-80/35		520	1750	1.8	49	800		1360X815X1468	2100X1500X2000	
SC9-100/35		600	1920	1.6	50	1100	Yyn0 或 /or Dyn11	1420X700X1585	2200X1600X2000	1070X820
SC9-125/35		760	2440	1.6	50	1220		1420X900X1500	2200X1600X2000	
SC9-160/35		860	2590	1.6	50	1350		1450X920X1550	2200X1600X2000	
SC9-200/35		960	3050	1.2	50	1500		1490X920X1690	2200X1600X2150	
SCB9-250/35		1080	3500	1.2	51	1700		1490X920X1760	2200X1600X2150	
SCB9-315/35		1250	4150	1.0	51	1900		1550X850X1650	2350X1650X2150	
SCB9-400/35		1530	4980	1.0	51	2150		1740X885X1695	2350X1650X2300	
SCB9-500/35		1780	6100	0.8	52	2580		1810X920X1695	2400X1650X2300	
SCB9-630/35		2050	7070	0.8	52	2800		1870X925X2005	2400X1650X2400	
SCB9-800/35		2400	8380	0.6	52	3450		1880X1030X1925	2600X1700X2500	
SCB9-1000/35		2700	9600	0.6	52	4000		1970X1060X1965	2700X1700X2500	
SCB9-1250/35		3150	11700	0.4	53	4350		1980X1050X1980	2700X1700X2500	
SCB9-1600/35		3580	14220	0.4	53	5235		2050X1050X2080	2800X1700X2580	
SCB9-2000/35		4200	16740	0.4	54	6330		2200X1050X2150	2900X1700X2630	
SCB9-2500/35		4900	20040	0.4	55	7550		2300X1100X2130	3000X1800X2580	
SCB9-3150/35	8	5850	24000	0.35	56	7800		2500X1270X2325	3200X2100X2850	1070X1070
SCB9-4000/35	13	6800	28500	0.35	57	9600		2660X1270X2368	3350X2100X3000	

SC10-35kV级无载调压干式电力变压器技术参数和外形尺寸
Technical parameters & Outer dimensions for SC10 Series 35kV dry-type distribution transformer with OCTC

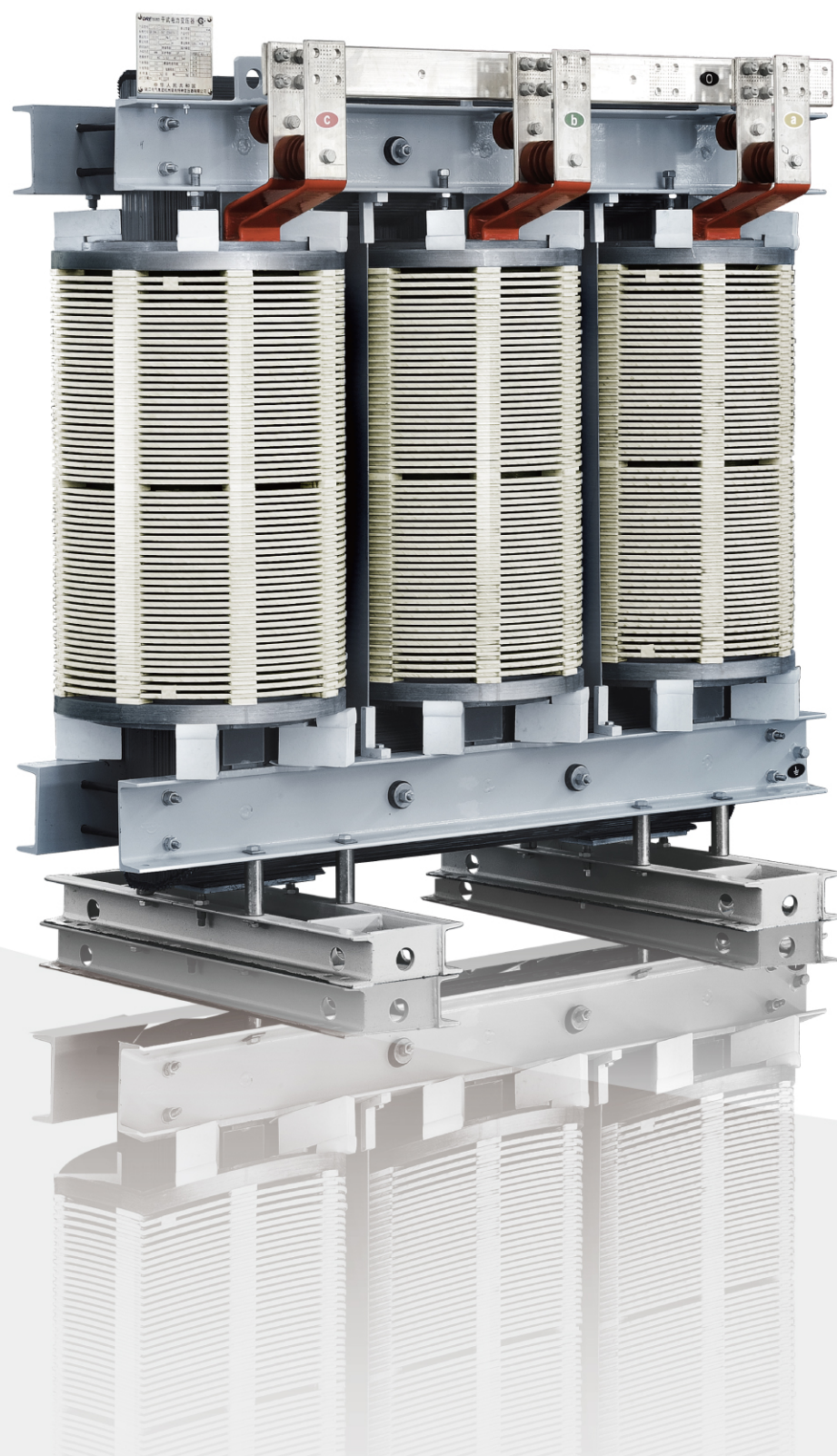
型号 Model	高压电压 (kV) H.V.	低压电压 (kV) L.V.	高压分接 (%) Trapping Range	UK(%)	Po(W)	Pk(75℃) (W)	Io(%)	Lp dB(A)	Gt(kg)	联结组标号 Vector Group	本体尺寸 (mm) 长X宽X高 Transformer LXWXH	轨距 (mm) Rail Distance
SC10-800/35	35 或 /or 38.5	3 或 /or 6 6.3 10 10.5 11	±5 或 /or ±2×2.5%	6	2140	8210	0.6	50	3250	Yyn0 或 /or Yd11 或 /or Dyn11	1880X1000X1925	820X660
SC10-1000/35					2540	9540	0.6	50	3900		1970X1000X2100	
SC10-1250/35					2980	11280	0.6	52	4800		2050X1000X2180	
SC10-1600/35				7	3510	13520	0.5	52	5500		2150X1000X2250	1070X820
SC10-2000/35					4020	15930	0.5	53	6230		2200X1200X2300	
SC10-2500/35					4620	19080	0.5	54	7200		2350X1200X2350	
SC10-3150/35			±3×2.5%	8	5730	21400	0.4	57	9850	Yd11 或 /or YNd11 或 /or Dyn11	2500X1200X2430	1475X1475
SC10-4000/35					6670	25720	0.4	57	10500		2600X1600X2535	
SC10-5000/35					7950	30530	0.4	58	12800		2880X1675X2580	
SC10-6300/35				9	9410	35670	0.3	58	15960		2950X1675X2650	
SC10-8000/35					10780	40230	0.3	60	18210		3000X1850X2850	
SC10-10000/35					12310	48530	0.3	60	23800		3100X1850X3070	
SC10-12500/35			10	10	14960	56410	0.2	60	29600		3300X1850X3335	2X1020X1475
SC10-16000/35					18380	66360	0.2	62	36500		3800X1900X3380	
SC10-20000/35					21800	74660	0.2	62	40200		3850X1900X3415	

SCZ10-35kV级有载调压干式电力变压器技术参数和外形尺寸
Technical parameters & Outer dimensions for SCZ10 Series 35kV dry-type distribution transformer with OLTC

型号 Model	高压电压 (kV) H.V.	低压电压 (kV) L.V.	高压分接 (%) Trapping Range	UK(%)	Po(W)	Pk(75℃) (W)	Io(%)	Lp dB(A)	Gt(kg)	联结组标号 Vector Group	本体尺寸 (mm) 长X宽X高 Transformer LXWXH	轨距 (mm) Rail Distance
SCZ10-4000/35	35 或 /or 38.5	3 或 /or 6 6.3 10 10.5 11	±4×2.5%	8	7010	26630	0.4	56	11800	Yyn0 或 /or Yd11	3480X2570X2535	1475X1475
SCZ10-5000/35					8300	31520	0.4	58	14000		3480X2570X2500	
SCZ10-6300/35					9830	36500	0.3	58	17060		3480X2600X2650	
SCZ10-8000/35			±4×2.5%	9	11290	41480	0.3	60	19310	Yd11 或 /or YNd11 或 /or Dyn11	3480X2600X2850	2X1020X1475
SCZ10-10000/35					12910	49940	0.3	60	25000		3480X2600X3070	
SCZ10-12500/35					15650	58070	0.2	62	30600		3480X2650X3335	
SCZ10-16000/35				10	19240	68360	0.2	62	37600		3800X2950X3380	
SCZ10-20000/35					22660	76900	0.2	62	41300		3850X2950X3415	

非包封H级绝缘干式变压器

H-grade non-sealed insulation dry-type Transformer



产品概述

采用美国UL认可的NOMEX绝缘材料生产的非包封H级绝缘三相干式电力变压器，具有安全、可靠、节能、防火、防爆、维护简单等优点。其设计先进、结构合理、外形美观、主要性能指标均优于国内标准，如局放水平、空载损耗、负载损耗、噪声以及能适应高湿度环境使用等。可安装在靠近湖、海、河边污秽潮湿的环境及防火要求高、负荷较大的地区，适用于高层建筑、机场、车站、码头、地铁、医院、电厂、冶金行业、购物中心、居民密集区、核潜艇等场所。

产品特点

- 1.精心设计的线圈结构及真空压力浸渍处理工艺使SGB10变压器局部放电电极其微小 $\leq 5\text{PC}$ ，并且在整个使用寿命期内，无任何龟裂现象，无绝缘水平下降现象。
- 2.高压采用连续式绕组、低压箔绕，采用真空压力浸渍及高温固化处理并采用高强度二苯醚材料或陶瓷支撑，具有很好的绝缘性能和抗突发短路能力。
- 3.难燃、阻燃、无毒、自熄、防火。
- 4.在高温明火燃烧下，SGB10变压器几乎无任何烟雾产生。
- 5.变压器绝缘耐热等级为H级（ 180°C ）。
- 6.绝缘层极薄且均匀，短时过负荷能力极强，无需强制冷却，可120%长期过负荷，140%过负荷3小时。由于这种绝缘材料不老化且有弹性，因此在 $\pm 50^{\circ}\text{C}$ 条件下可立即加载。

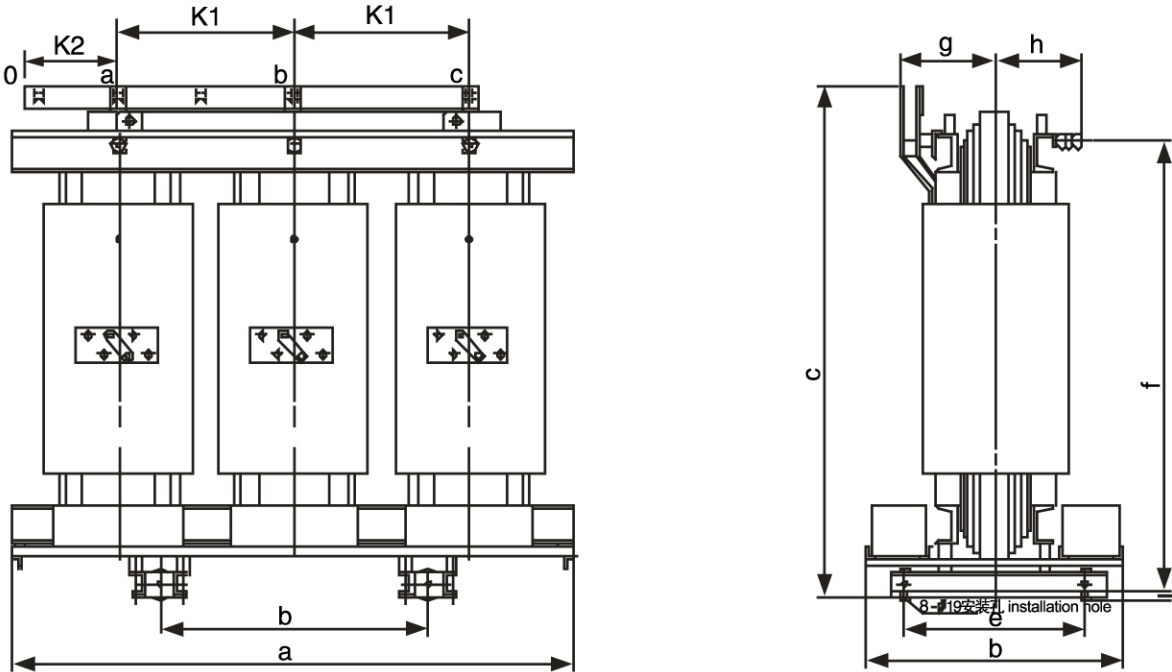
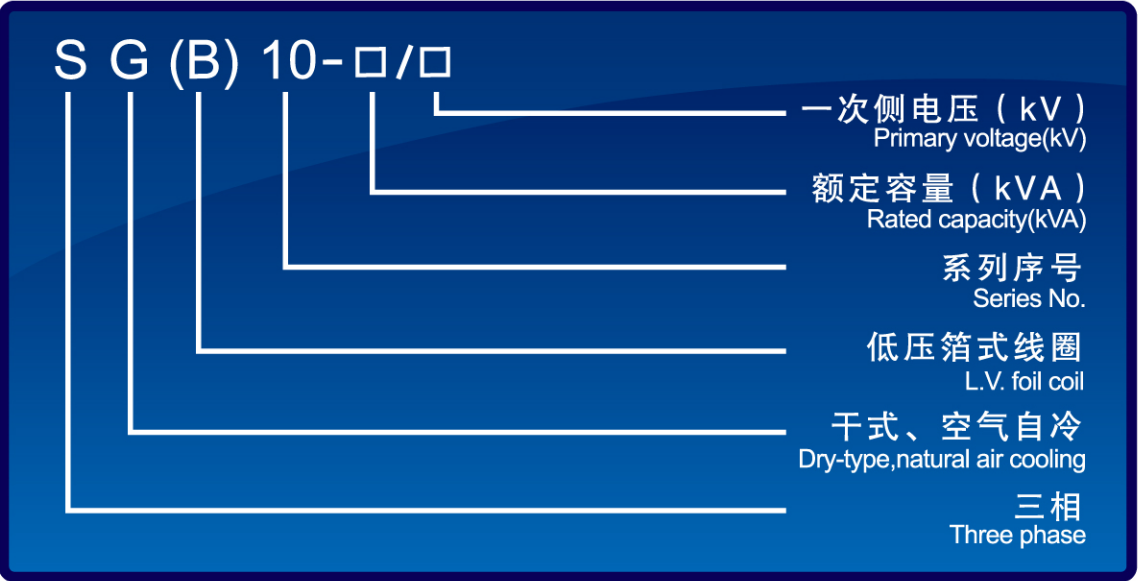
Product Overview

H-grade non-sealed insulation 3-phase dry-type transformer is insulated with UL approved NOMEX insulation paper. Such transformer holds advantages like safe, reliable, energy-saving, flame-proof, explosion-proof, easy maintenance and so on. With advanced design, reasonable structure, pleasant looking, its key performance such as partial discharge, no-load loss, load loss, noise level are better than GB national standards. It is suitable for application in high humidity circumstance. The transformer can be installed the areas near the lake, sea, river, polluted and humid environment and where demands for higher flame-proof & load. It is suitable for installation of high-rise building, air-port, station, dock, subway, hospital, power plant, metallurgical industry, shopping center, densely populated area, as well as petrochemical industry, nuclear power plant, nuclear submarines and other places.

Product Characteristic

1. With well-designed coil structure and vacuum pressure impregnation treatment process, SGB10 transformer's partial discharge is very tiny, say $\leq 5\text{PC}$. And in the entire working life period, there is not any cracking and reduction of insulation level.
2. With application of continuous winding on HV side, foil winding on LV side, and vacuum pressure impregnation treatment, high-strength diphenyl ether material or ceramic support, the transformer is of good insulation properties and resistance to dynamic short-circuit.
3. The transformer has advantages of flame proof, flame retardant, non-toxic, self-extinguishing, fire-proof.
4. SGB10 transformer produces virtually no smoke when burning at high temperatures.
5. Transformer's insulation heat-resistant grade is H (180°C).
6. The insulation layer is thin and uniform, which guarantee the transformer to have strong short-term overload capacity without forced cooling, say 120% long-term overload, 140% over-load for 3 hours. Because of no aging property and flexibility of this insulation material, the transformer can be fully loaded immediately under the conditions of $\pm 50^{\circ}\text{C}$.

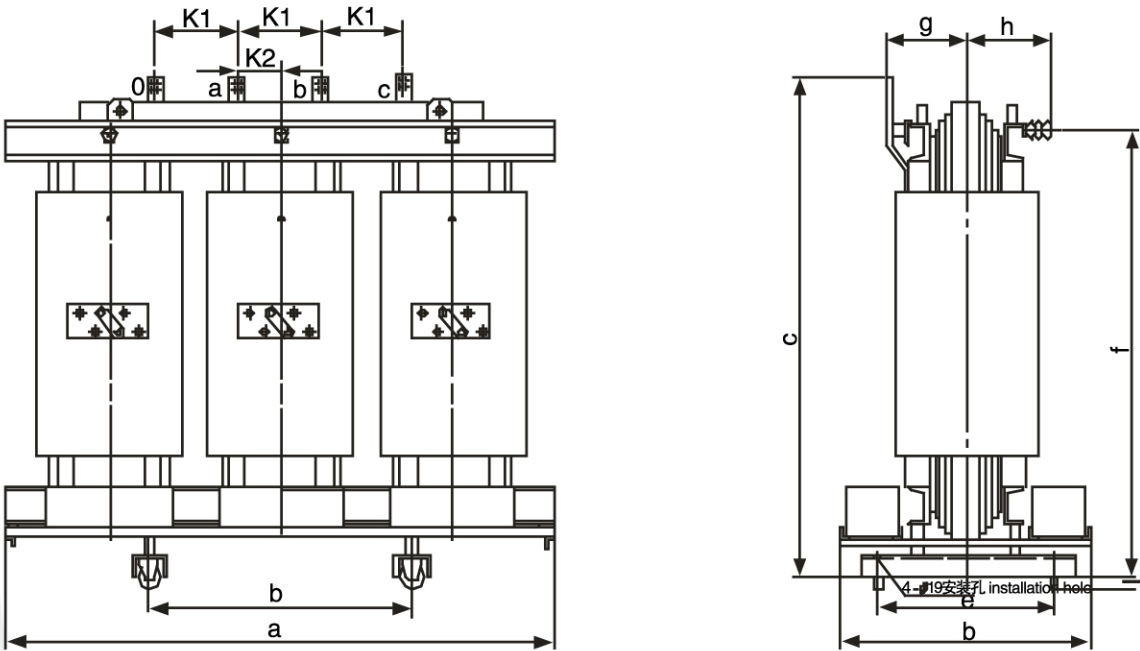
型号说明 Model Coding



外形图二 Outline diagram 2

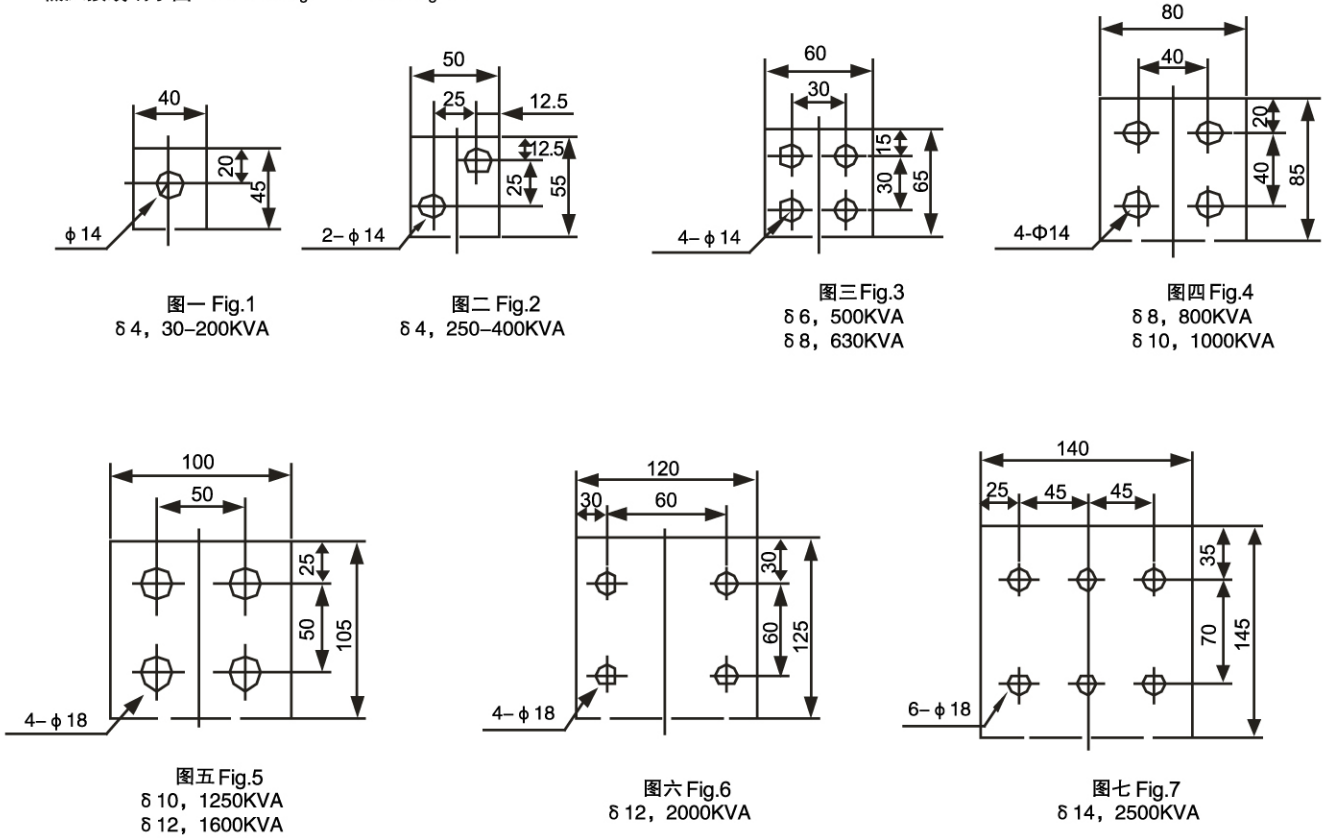
结构图 Structure Chart

SG (B) 10型10kV级干式配电变压器外形图
Outline Diagram for 100~250kVA, 10kV (SG(B)) series dry-type distribution Transformer



外形图一 Outline diagram 1

低压接线端子图 Low-voltage terminal diagram



技术参数 Technical Parameters

SG(B)系列H级干式配电变压器技术数据 (频率均为50Hz)

额定电压: 高压6, 6.3, 10, 10.5, 11kV 低压0.4kV

联结组标号: Yyn0;Dyn11

分接范围: $\pm 5\%$; $\pm 2 \times 2.5\%$

绝缘水平: 10/0.4kV LI75AC35/AC3kV

6/0.4kV LI60AC25/AC3kV

Technical parameters for SG(B) Series H-grade insulation dry-type distribution transformer (Frequency: 50Hz)

Rated voltage: HV-6, 6.3, 10, 10.5, 11kV; LV-0.4kV

Vector Group: Yyn0; Dyn11

Tapping Range: $\pm 5\%$; $\pm 2 \times 2.5\%$

Insulation Level: 10/0.4kV LI75AC35/AC3kV

6/0.4kV LI60AC25/AC3kV

SG(B)10型10kV级干式配电变压器技术参数和外形尺寸

Technical parameters & Outer Dimensions for SG(B)10 Series 10kV dry-type distribution transformer

型号 Model	UK(%)	Po(W)	Pk(75℃) (W)	I ₀ (%)	Lp d(BA)	Gt(kg)	外形尺寸 (mm) Outer dimension										低压 端子 L.V. terminal	参考 外形图 Reference Diagram
							a	b	c	d	e	f	g	h	k1	k2		
SG10-100/10	4	405	1380	1.4	45	645	960	600	1080	550	400	883	200	240	150	75	图一 Fig.1	外形 图一 Diagram1
SG10-160/10		550	1870	1.2	46	810	1060	600	1090	550	400	950	225	250	150	75		
SG10-200/10		630	2225	1.0	47	980	1110	700	1145	550	550	998	223	264	150	75		
SG10-250/10		730	2420	0.8	47	1070	1170	700	1225	550	550	1058	198	266	150	75		
SGB10-315/10		890	3050	0.8	48	1180	1200	700	1190	550	550	1053	281	275	405	150		
SGB10-400/10		990	3500	0.8	48	1310	1220	720	1275	660	550	1175	293	286	410	150		
SGB10-500/10	6	1060	4535	0.6	48	1600	1230	830	1330	660	660	1235	297	288	415	150	图二 Fig.2	外形 图二 Diagram2
SGB10-630/10		1215	5385	0.6	49	1950	1320	830	1370	660	660	1270	294	300	450	150		
SGB10-630/10		1170	5560	0.6	49	1850	1340	830	1340	820	660	1235	300	288	450	150		
SGB10-800/10		1385	6470	0.5	50	2245	1400	880	1445	820	660	1325	320	298	470	150		
SGB10-1000/10		1575	7670	0.5	50	2500	1470	880	1435	820	660	1320	330	308	495	150		
SGB10-1250/10		1830	9145	0.5	52	3200	1580	900	1510	820	660	1370	342	321	530	200		
SGB10-1600/10		2430	11160	0.5	52	3875	1690	920	1585	820	660	1435	375	335	560	200		
SGB10-2000/10		2700	13485	0.4	53	4480	1770	960	1695	820	660	1525	381	339	595	200		
SGB10-2500/10		3150	16120	0.4	54	5385	1840	990	1855	1070	820	1665	401	345	620	250		
SGB10-2500/10																		

使用环境

1、环境温度: $-25^{\circ}\text{C} \sim +50^{\circ}\text{C}$ 。

2、海拔高度: $\leq 1000\text{M}$ 。

3、其他超出本技术条件规定的内容, 由用户与技术部协商处理, 并在订货时注明。

Ambient conditions:

1. Ambient temperature: $-25^{\circ}\text{C} \sim +50^{\circ}\text{C}$ 。

2. Altitude above sea level: $\leq 1000\text{M}$ 。

3. Other specil requirement could be neqotiated.

SG(B)10干式配电变压器带IP20保护外壳外形尺寸

Outer Dimensions for SG(B)10 Series dry-type distribution transformer with IP20 Enclosure

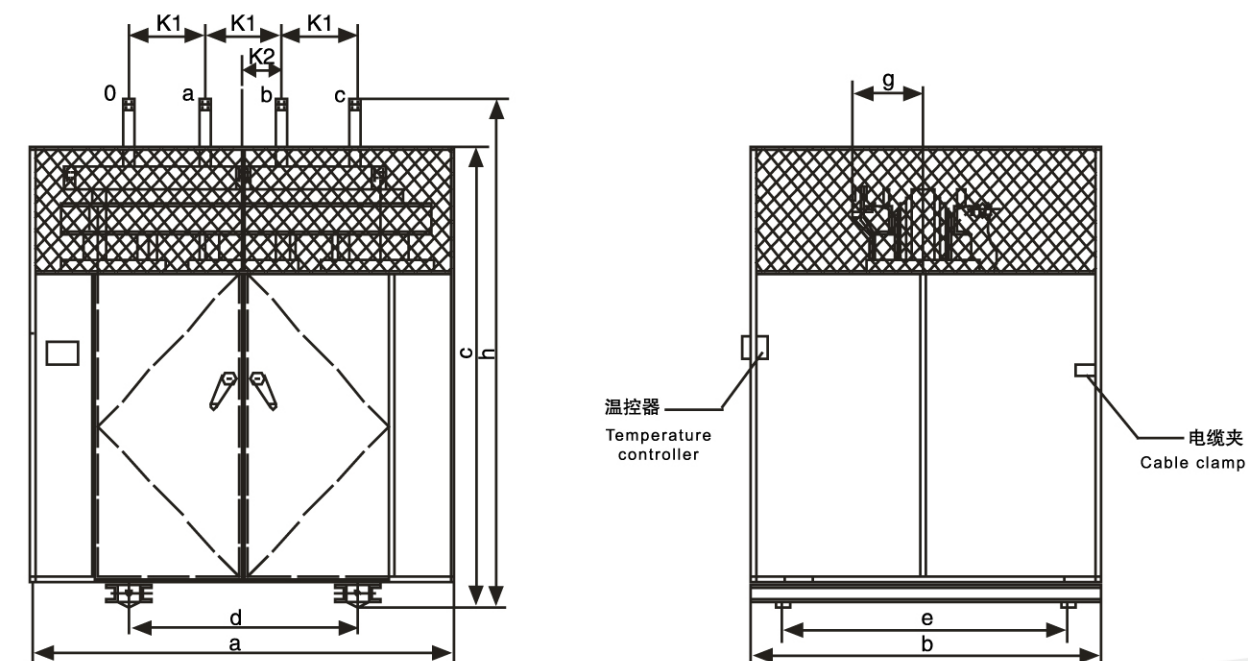
型号 Model	UK(%)	a	b	c	d	e	h	g	k1	k2	Gt(kg)
SG10-100/10	4	1450	1000	1270	550	700	1420	195	150	75	795
SG10-180/10		1450	1000	1470	550	700	1620	195	150		960
SG10-200/10		1500	1100	1460	550	820	1610	249	150		1030
SG10-250/10		1500	1100	1460	550	820	1610	255	130		1195
SGB10-315/10		1700	1300	1510	550	1070	1660	270	130		1425
SGB10-400/10		1700	1300	1430	550	1070	1580	293	130		1710
SGB10-500/10	6	1700	1350	1530	660	1180	1680	297	130	0	1880
SGB10-630/10		1700	1350	1580	660	1180	1730	294	130		2230
SGB10-630/10		1700	1350	1580	660	1180	1730	300	130		2040
SGB10-800/10		1900	1350	1700	820	1180	1850	320	150		2540
SGB10-1000/10		1900	1350	1630	820	1180	1780	330	150		2800
SGB10-1250/10		2100	1350	1730	820	1180	1880	342	150		3470
SGB10-1600/10		2100	1350	1780	820	1180	1930	375	150		4150
SGB10-2000/10		2300	1500	1940	820	1180	2090	381	200		5070
SGB10-2500/10		2300	1600	2180	1070	1280	2380	401	225		5750

• 低压接线端子与不带外壳产品端子相同

• L.V. connection terminals are the same with those of non-shell products.

SG(B)10干式配电变压器带IP20保护外壳外形图

Outline Diagram for SG(B)10 Series dry-type distribution transformer with IP20 Enclosure



产品应用领域

干式变压器具有优越的安全性，可安装在人员密集的负荷中心。因此在世界各地越来越普遍地用于电厂、高层建筑、商业中心、剧院、医院、实验室、机场、高校、居民小区、船舶、港口、车站、机场、石油化工厂、地下铁道、隧道、矿井和其他重要场所。



Applications

Dry-type transformers has excellent safety characteristic, which can be installed in the intensive load centers. Therefore, they are becoming more widely used in power plants, high-rise buildings, commercial centers, theaters, hospitals, laboratories, airports, universities, residential area, ships, seaports, railway stations, petrochemical plants, underground railways, tunnels, mines and other important places.



服务承诺

- 1.及时向顾客提供按合同规定的全部技术资料和图纸。有义务在必要时邀请顾客参与供方的技术设计审查。
- 2.按顾客要求的时间到现场进行技术服务，指导顾客按供方的技术资料和图纸要求进行安装、调试与整套试运及试生产。
- 3.对于顾客选购的与合同设备有关的配套设备，我方主动提供满足设备接口要求的技术条件和资料。
- 4.严格执行供需双方就有关问题召开会议的纪要或签订的协议。
- 5.按合同规定为顾客举办有关设备安装、调试、使用、维护技术的业务培训班。
- 6.加强售前、售中、售后服务，把“24小时服务”、“超前服务”、“全过程服务”、“终身服务”贯彻在产品制造、安装、调试、修理的全过程。
- 7.随时满足顾客对备品备件的要求。

Service Guarantee

- 1.To provide all technical information and drawings as per contract promptly. QRE is oblided to invite client, if neccessary, to attend technical design review.
- 2.To carry out spot technical service as per client's sche-dule, offer guideness for installation and commission-ing according to technical information and drawings.
- 3.For relevant auxiliary equipment procured by customers, QRE will provide related technical information to meet requirement of equipment interface.
- 4.To execute stipulations in MOU or agreement signed by seller and buyer strictly.
- 5.To train staff from client for equipment installation, commissioning, application, maintenance as stipulated in the contract.
- 6.To reinforce pre-sales, mid-sales, after-sales service, to carry out “24-hour service”, “service in advance”, “overall process service”, “lifelong service” in our manufacturing, installation, commissioning and main-tance.
- 7.To meet spare parts' requirement by customers at any time.

■ 尊敬的用户朋友,如果您有服务需求,可以发送Email给我们,或者直接电话与我们联系:
用户服务中心:0571-82583638, 0571-82583088, 0571-82583928
传 真: 0571-82583618, 0571-82582309

Dear clients, if there is any enquiry or requirement, please feel free to send email: intl@qre.com.cn
or make phone call directly to service center:
+86-571-82583638, 82583088, 82583928
Fax:+86-571-82583618, 82582309

订 货 需 知

选用本公司产品时，请提供以下数据，以便更好地为阁下提供服务

变压器型号: _____

额定容量: _____kVA

相数: ☐三相
☐单相

频率: ☐50HZ
☐60HZ

额定高压（高压/低压）: _____

分接范围: ± _____× _____ %

绝缘水平: LI _____AC _____/LI _____AC _____kV

联结组标号: ☐Dyn11
☐Yyn0
☐其他 _____

阻抗电压Uk: _____

冷却方式: ☐AN
☐AF

外壳防护等级: ☐IP00
☐IP20
☐其它 _____

高压进线方式: ☐下进线
☐上进线
☐其它 _____

低压出线方式: ☐上出线
☐下出线
☐标准横排侧出线
☐其它 _____

对温控器的要求: 1.功能配置
☐常规功能
☐带RS48/232接口
☐带4—20mA模拟电流输出
2.温控器相关控制线长
温度传感电缆长度
☐5m（标准配置）
☐10m
☐20m
☐其他 _____
RS485/232信号线长度
☐2m（标准配置）
☐其它 _____

对产品的其它要求:

注:

1.制造厂还可以根据用户提出的特殊要求进行设计制造:

2.以上数据仅供用户参考选用，最终尺寸以产品外形为准。

Order Instructions

When you choose our company product，please offer following data。

Transformer model: _____

Rated capacity: _____kVA

Phase: ☐Three-phase
☐Single-phase

Frequency: ☐50HZ
☐60HZ

Rated voltage（H.V/L.V）: _____

Tapping range: ± _____× _____ %

Insulation level: LI _____AC _____/LI _____AC _____kV

Vector group: ☐Dyn11
☐Yyn0
☐other _____

Impedance Uk: _____

Cooling method: ☐AN
☐AF

Enclosure protection class: ☐IP00
☐IP20
☐other _____

H.V method: ☐down line
☐upper inlet line
☐other _____

L.V. outlet line method:
☐upper outlet line
☐down outlet line
☐standard horizontal side outlet line
☐other _____

Requirement of temperature controller:
1.Function required
☐regular function
☐with RS485/232 interface
☐with 4-20mA analog current output
2.Length of control cable connected
with temperature control instrument temperature sensor cable.
☐5m(standard)
☐10m
☐20m
☐other _____
Length of RS485/232 signal wire
☐2m(standard allocate)
☐other _____
Other requirement

1.We also can design special products according to customer's particular requirements.

2.The final dimension is subject to outline drawing.