

SCBH15 系列 10kV 非晶合金干式变压器

SCBH15 Series 10kV amorphous alloy dry transformer

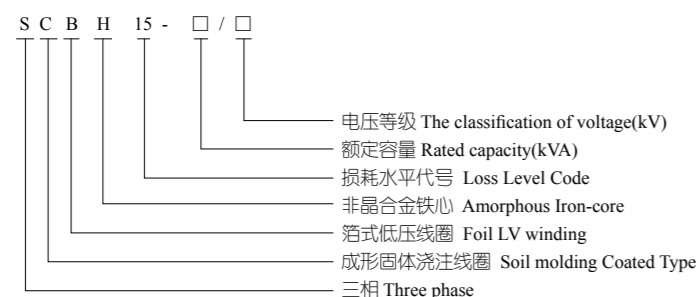
产品介绍 Product introduction

非晶合金干式变压器空载损耗比 GB/T10228 表 4 组 I 降低 75%，负载损耗比 GB/T10228 表 4 降低 15%，是当代最先进的节能干式变压器。
The No-load loss of SCBH 16 amorphous Dry type transformer is 75% less than GB/T10228 table 4groupI, Load loss is 15% less than GB/T10228 table 4, which is the most advanced energy conservation Dry-Type transformer.

产品特点 Product characteristics

使用条件	Service condition
环境温度: 最高气温 +40℃ 最低气温 -5℃ 最热月平均温度 +30℃ 最热年平均温度 +20℃	Ambient temperature: Highest air temperature +40℃ , Lowest air temperature -5℃ Lowest monthly average temperature +30℃ Hottest yearly average temperature +20℃
海拔不超过 1000m	The height above the sea level is below 1000m;
电源电压的波形近似于正弦波。 三相电源电压应大致对称。 安装环境无明显的污秽。 户内使用。	The power supply voltage's wave is similar to sine wave Three-phase power supply voltage is approximately symmetrical Installation without evidence filth. Service indoor.

型号含义 Model description



产品用途 Purpose

本产品具有空载损耗低、无油、阻燃自燃、耐潮、抗裂和免维修等优点。凡是现在使用普通干变的场所都可由非晶干变所取代，可用于高层建筑、商业中心、地铁、机场、车站、工矿企业和发电厂、特别适合于易燃、易爆等防火要求高的场所安装使用。

This product has the merit of low no-load loss, no oil, self burnout if prohibition is encountered, humidity endurance, anticrack, no maintenance. It may take replace etc. It may take replace any normal Dry Type Transformer at high building, business centre, subway, airport, bus station, industrial enterprise and power-plant, extremely suit for those site with high inflammable & explosive needs.

结构特点 Characteristics of the structure

本产品低压为箔式线圈，采用铜箔绕制，高压线圈采用 H 级高强度漆包线绕制，采用玻璃纤维加强的环氧树脂包封结构，具有优良的耐潮和抗裂性能。铁心由非晶合金带材卷而成，采用矩形截面、四柱五或三柱三柱结构。

The product adopt LV winding copper foil winding, HV winding rolled by paint coated thread, with glass fibre added insulation resin, which is good for humidity-bearing and anti-crack, the iron-core is made of Amorphous strip material, with rectangular section, four flame five column or three flame three column structure.

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性能参数 Functional data

相数 Phase: 3 相	绝缘耐热等级 Insulation level: F 级
频率 Frequency: 50Hz	绕组平均温升 Average Winding arising: 不大于 No more than 100K
局部放电 Partial charging: 不大于 No more than 10pC	噪音水平 Noise level: 声级符合 Sound Level conforms to JB/T 10088-2004

表 1 绝缘水平 Table 1 Insulation level

电压等级 kV The classification of voltage	设备最高电压有效值 kV kV (effective value)	额定短时工频耐受电压有效值 kV/min Rated Short-Time Power Frequency (effective value)	额定雷电冲击耐受电压全波 (峰值) kV Rated Full-waved Lightning Impulse Bearing Voltage (max)
≤ 1	≤ 1.1	3	3
6	7.2	25	25
10	12	35	35

表 2 性能参数 Table 2 Functional data

容量 Capacity (kVA)	电压组合 Voltage combination	高压分接范围 % HV tap Change	低压 HV (kV)	联结组标号 Vector group	空载损耗 No-load Loss W	空载电流 No-load current %	负载损耗 No-load Loss (120)W	抗阻电压 Impedance voltage(%)
100	6	± 2 × 2.5	0.4	Dyn 11 Yyn 0*	130	1.0	1570	4
160					170	0.9	2125	
200					200	0.8	2525	
250					230	0.8	2755	
315					280	0.7	3470	
400					300	0.7	3985	
500					360	0.6	4880	
630					420	0.6	5875	
800					480	0.5	6955	
1000					550	0.4	8125	
1250	660	0.4	9690					
1600	750	0.4	11730					

注：带“*”的联结组 Yyn0 适用于容量 ≤ 400kVA 的变压器
特殊规格或非标准产品的各项技术参数由供需双方协商确定。
Note: With the “*” vector group Yyn0 is suit for the transformer capacity is no more than 400kVA
The client should consult with supplier about the technical data when special model or non-standard product is needed.

节能效果 Effect of energy conservation

非晶干变的空载损耗比现行国标 GB/T10228-1997 中表 4 组 I 规定的数值降低四分之三。以 630kVA 为例，SCBH15-630/10 与 SC10-630/10 相比，空载损耗降低 925W。

假设：无功经济当量 k1=0.1kWh/kVar; 年运行时间 T=8760h; 电费单价 A=0.6 元/kWh; 年平均负载系数取 0.8，一台容量为 630kVA 的 SCBH15 型的非晶干变代替 SC10 型干变运行可降低运行损耗 P 为：
P=[1.345+0.1 × 1.6 × 630 × 10-2+5.875 × 0.82]-[0.42+0.1 × 0.5 × 630 × 10-2+5.875 × 0.82]=1.618kW
运行一年的经济效益和社会效益如下：
节约电能 14174 度 (kWh)、节约电能电费 8504 元、节煤 5.8 吨；少排放二氧化碳 11.7 吨、相当于增加净化空气的森林面积 31200m²

Amorphous Dry Type Transformer's No-load Loss is 3/4 less than the required data in GB/T10228-1997 Table 4 Group I, Compare SCBH15-630/10min SC10 Dry Type transformer, the No-load Loss deducted 925W.

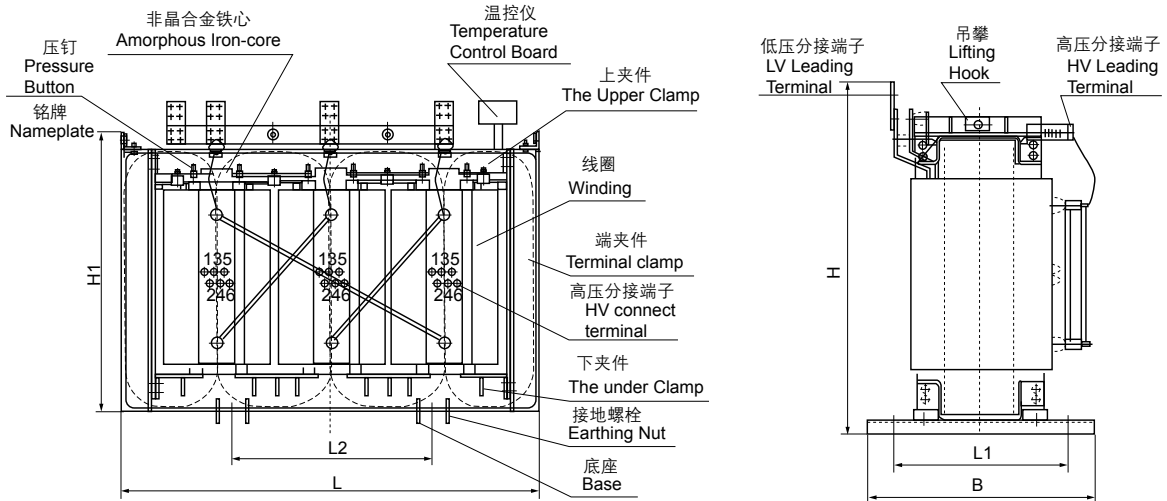
Suppose when k1=0.1kWh/kVar; working hour/year T=8760h payment of electricity charge=RMB 0.6 yuan/kWh, yearly onload modulus is 0.8, a SCBH 10 Amorphous Dry Type Transformer with the capacity is 630kVA can reduce loss P as following.

A year running economical and social benefit is,
save electricity energy 14174(kWh) Discharge less CO2 11.7T Save payment of electricity charge RMB 8504Yuan, Save Coal 5.8T, It is to say this increased 31200m² forest area.

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外形及安装尺寸 Outline dimension



型号 Model	尺寸 (mm) Dimension					总重 kg Total
	L	B	H	H1	$L_2 \times L_1 / 4 - \phi 26$	
SCBH15-315/10	1430	970	1210	1095	$660 \times 660 / 4 - \phi 26$	1800
SCBH15-400/10	1430	970	1380	1265	$660 \times 660 / 4 - \phi 26$	2150
SCBH15-500/10	1650	970	1275	1130	$820 \times 660 / 4 - \phi 26$	2530
SCBH15-630/10	1730	970	1430	1240	$820 \times 660 / 4 - \phi 26$	3000
SCBH15-800/10	1925	970	1490	1215	$820 \times 660 / 4 - \phi 26$	3400
SCBH15-1000/10	1925	970	1520	1335	$820 \times 660 / 4 - \phi 26$	4020
SCBH15-1250/10	1955	1070	1605	1365	$820 \times 660 / 4 - \phi 26$	4790
SCBH15-1600/10	2050	1070	1780	1455	$1070 \times 660 / 4 - \phi 26$	5780

注：尺寸仅供参考，安装、设计必须以本公司合同所提供的外形为准。

Note: Dimensions are just for reference. The actual installation and design are provided by the contract.