POWER

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# Transformer selection

Product Technical Manual

## Oil immersed transformer | Dry type transformer

THE POWER OF ENGINEERING HZMI® POWER

Innovation in technology and engineering processes can bring users more reliable and efficient electrification.

The high reliability of distribution networks, the popularization of new energy, new energy power, and microgrids, and other new technical problems, the generation and solution of these new challenges in the field of energy and new energy, Hertzman DAVIDCLOUD energy management system and supporting intelligent components provide a package of solutions to face challenges together with customers.

Industry and manufacturing industries focus on the reliability and economy of energy. In the fields of heavy industry and manufacturing, Hertzman explores the high reliability of power distribution systems under extreme power conditions. Through research and simulation in various unknown fields, new cognition and innovation and improvement of process engineering have been obtained. These efforts have made the high reliability of Hertzman power distribution systems recognized by users around the world.

Hertzman believes in the power of technology and engineering, actively explores the unknown world, and strives to build the world and create a better life together driven by electrification and digital technology.

# S13 oil immersed transformer

## Model meaning

| S | 13 | -M | - □ | / □ |
|---|---|---|---|---|
| Three-phase | Performance level code | Fully sealed | Rated capacity kVA | Voltage level kV |

## Overview

The three-phase oil-immersed distribution transformer produced by our company adopts a new insulation structure to improve the short-circuit resistance; the iron core is made of high-quality cold-rolled silicon steel sheets; the high-voltage windings are made of high-quality oxygen-free copper wire and adopt a multi-layer cylindrical structure; all fasteners are specially treated to prevent loosening.
The product has the characteristics of high efficiency and low loss, which can save a lot of power consumption and operating costs, and has significant social benefits. It is a high-tech product promoted by the country.

## S13 10kV double winding series main product performance parameters

| Model | Rated capacity(kVA) | Connection group label | Voltage combination (kV) | | | No-load loss (W) | Dy Load loss (w) | Yy Load loss (w) | No-load current | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | High Voltage | Tap range | Low pressure | | | | | |
| S13-M-30 | 30 | Yyn0 or Dyn11 | 10<br>6.3<br>6 | ±5%<br>±2x2.5% | 0.4 | 80 | 630 | 600 | 1.5 | 4 |
| S13-M-50 | 50 | | | | | 100 | 910 | 870 | 1.3 | |
| S13-M-63 | 63 | | | | | 110 | 1090 | 1040 | 1.2 | |
| S13-M-80 | 80 | | | | | 130 | 1310 | 1250 | 1.2 | |
| S13-M-100 | 100 | | | | | 150 | 1580 | 1500 | 1.1 | |
| S13-M-125 | 125 | | | | | 170 | 1890 | 1800 | 1.1 | |
| S13-M-160 | 160 | | | | | 200 | 2310 | 2200 | 1 | |
| S13-M-200 | 200 | | | | | 240 | 2730 | 2600 | 1 | |
| S13-M-250 | 250 | | | | | 290 | 3200 | 3050 | 0.9 | |
| S13-M-315 | 315 | | | | | 340 | 3830 | 3650 | 0.9 | |
| S13-M-400 | 400 | | | | | 410 | 4520 | 4300 | 0.8 | |
| S13-M-500 | 500 | | | | | 480 | 5410 | 5150 | 0.8 | |
| S13-M-630 | 630 | | | | | 570 | 6200 | 6200 | 0.6 | 4.5 |
| S13-M-800 | 800 | | | | | 700 | 7500 | 7500 | 0.6 | |
| S13-M-1000 | 1000 | | | | | 830 | 10300 | 10300 | 0.6 | |
| S13-M-1250 | 1250 | | | | | 970 | 12000 | 12000 | 0.5 | |
| S13-M-1600 | 1600 | | | | | 1170 | 14500 | 14500 | 0.5 | |
| S13-M-2000 | 2000 | | | | | 1550 | 18300 | 18300 | 0.4 | 5 |
| S13-M-2500 | 2500 | | | | | 1830 | 21200 | 21200 | 0.4 | |

# SH15 Amorphous Alloy Transformer

## 型号含义

| S | (B) | H | 15 | -M | - □ | / |
|---|---|---|---|---|---|---|
| Three-phase | Low Voltage Foil Coil | Amorphous alloy core | Performance level code | Fully sealed | Rated capacity kVA | Voltage level kV |

## Product Overview

This product is an oil-filled sealed type. The principle is the same as that of a sealed power transformer. The basic elements of amorphous alloys are iron, nickel, cobalt, silicon, boron, carbon, etc. It is an isotropic soft magnetic material with low magnetization power and no structural defects that hinder the movement of domain walls. It is extremely thin, only 0.027mm, and the filling factor is correspondingly small, only 0.75~0.8. The resistivity is very high, 3~6 times that of silicon steel sheets, and the hardness is 5 times that of silicon steel sheets. Amorphous alloy materials are particularly sensitive to stress.

SH15-M-30~2500/6~10 series products, the no-load loss is reduced by 70% based on the GB/T6541 standard value. Implementation standard GB/T25446-2010 "Technical parameters of oil-immersed amorphous alloy iron core distribution transformers"

## SH15 amorphous alloy transformer main product performance parameters

| Model | Rated capacity(kVA) | Connection group label | Voltage combination (kV) | | | No-load loss (W) | Dy Load loss (w) | Yy Load loss (w) | No-load current | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | High Voltage | Tap range | Low pressure | | | | | |
| SH15-M-30 | 30 | Dyn11 | 6<br>6.3<br>10<br>10.5<br>11 | ±5%<br>or<br>±2x2.5% | 0.4 | 33 | 630 | 600 | 1.5 | 4 |
| SH15-M-50 | 50 | | | | | 43 | 910 | 870 | 1.2 | |
| SH15-M-63 | 63 | | | | | 50 | 1090 | 1040 | 1.1 | |
| SH15-M-80 | 80 | | | | | 60 | 1310 | 1250 | 1 | |
| SH15-M-100 | 100 | | | | | 75 | 1580 | 1500 | 0.9 | |
| SH15-M-125 | 125 | | | | | 85 | 1890 | 1800 | 0.8 | |
| SH15-M-160 | 160 | | | | | 100 | 2310 | 2200 | 0.6 | |
| SH15-M-200 | 200 | | | | | 120 | 2730 | 2600 | 0.6 | |
| SH15-M-250 | 250 | | | | | 140 | 3200 | 3050 | 0.6 | |
| SH15-M-315 | 315 | | | | | 170 | 3830 | 3650 | 0.5 | |
| SH15-M-400 | 400 | | | | | 200 | 4520 | 4300 | 0.5 | |
| SH15-M-500 | 500 | | | | | 240 | 5410 | 5150 | 0.5 | |
| SH15-M-630 | 630 | | | | | 320 | 6200 | | 0.3 | 4.5 |
| SH15-M-800 | 800 | | | | | 380 | 7500 | | 0.3 | |
| SH15-M-1000 | 1000 | | | | | 450 | 10300 | | 0.3 | |
| SH15-M-1250 | 1250 | | | | | 530 | 12000 | | 0.2 | |
| SH15-M-1600 | 1600 | | | | | 630 | 14500 | | 0.2 | |
| SH15-M-2000 | 2000 | | | | | 750 | 18300 | | 0.2 | 5 |
| SH15-M-2500 | 2500 | | | | | 900 | 21200 | | 0.2 | |

# 35kV power transformer

## Model meaning

| S | □ | □ | 15 | – □ | / □ |
|---|---|---|---|---|---|
| Three-phase | "F stands for wind cooling, self cooling, no code | "Z is for on-load voltage regulation No code for off-excitation voltage regulation | Performance level code | Rated capacity kVA | Voltage level kV |

## Overview

The 35kV series power transformers are relatively advanced in design, with significant improvements and enhancements in materials, structure and technology. The high and low voltage clamps are tightened with steel straps or upper beams and side beams to form a solid frame structure, enhance the core clamping force and withstand transportation impact. It has strong short-circuit resistance, beautiful appearance, reliable operation, low loss and low noise, reaching the advanced level of similar foreign products.

The SZ13-20000/35 transformer prototype produced by our company passed the sudden short-circuit test conducted by the National Transformer Testing Center at one time. The high and low voltage coils are equipped with longitudinal oil channels, which are conducive to heat dissipation and can greatly reduce the copper-oil temperature difference and the hottest temperature rise inside the coil.

## 630kVA~31500kVA three–phase double winding non–excitation voltage regulating power transformer

| Model | Rated capacity(kVA) | Connection group label | Voltage combination (kV) High Voltage | Tap range | Low pressure | No-load loss (W) | Load loss (w) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|---|
| S11-630 | 630 | Yd11 | 35 | ±5% or ±2x2.5% | 3.15 6.3 10.5 | 830 | 7860 | 0.65 | 6.5 |
| S11-800 | 800 | | | | | 980 | 9400 | 0.65 | |
| S11-1000 | 1000 | | | | | 1150 | 11500 | 0.65 | |
| S11-1250 | 1250 | | | | | 1400 | 13900 | 0.55 | |
| S11-1600 | 1600 | | | | | 1690 | 16600 | 0.45 | |
| S11-2000 | 2000 | | | | | 2170 | 18300 | 0.45 | |
| S11-2500 | 2500 | | | | | 2560 | 19600 | 0.45 | |
| S11-3150 | 3150 | | 35~38.5 | ±5% or ±2x2.5% | 3.15 6.3 10.5 | 3040 | 23000 | 0.45 | 7 |
| S11-4000 | 4000 | | | | | 3610 | 27300 | 0.45 | |
| S11-5000 | 5000 | | | | | 4320 | 31300 | 0.45 | |
| S11-6300 | 6300 | | | | | 5240 | 35000 | 0.45 | |
| S11-8000 | 8000 | YNd11 | 35~38.5 | ±5% or ±2x2.5% | 3.15 3.3 6.3 6.6 10.5 | 7200 | 38400 | 0.35 | 8 |
| S11-10000 | 10000 | | | | | 8700 | 45300 | 0.35 | |
| S11-12500 | 12500 | | | | | 10000 | 53800 | 0.3 | |
| S11-16000 | 16000 | | | | | 12100 | 65800 | 0.3 | |
| S11-20000 | 20000 | | | | | 14400 | 79500 | 0.3 | |
| S11-25000 | 25000 | | | | | 17000 | 94000 | 0.25 | 10 |
| S11-31500 | 31500 | | | | | 20200 | 112000 | 0.25 | |

# 35kV power transformer

Our company produces on–load voltage regulation and off–excitation voltage regulation

Two series of power transformers

## Implementation Standards

GB 1094.1–2 "General Principles for Power Transformers" "Temperature Rise of Power Transformers"
GB 1094.3 "Insulation Level, Insulation Test and External Insulation Air Clearance"
GB 1094.5 "Short Circuit Withstand Capacity of Power Transformers"
GB/T 6451 "Technical Parameters and Requirements for Oil–Immersed Power Transformers"
GB/T 15164 "Load Guidelines for Oil–Immersed Power Transformers"
GB 2536 "Transformer Oil"

## 2000kVA~20000kVA three–phase double–winding on–load voltage regulating power transformer

| Model | Rated capacity(kVA) | Connection group label | Voltage combination (kV) | | | No-load loss (W) | Load loss (w) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|---|
| | | | High Voltage | Tap range | Low pressure | | | | |
| SZ11-2000 | 2000 | Yd11 | 35 | ±3x2.5% | 6.3<br>10.5 | 2300 | 19200 | 0.5 | 6.5 |
| SZ11-2500 | 2500 | | | | | 2720 | 20600 | 0.5 | |
| SZ11-3150 | 3150 | | | | | 3230 | 24700 | 0.5 | |
| SZ11-4000 | 4000 | | 35~38.5 | ±3x2.5% | 6.3<br>10.5 | 3870 | 29100 | 0.5 | 7 |
| SZ11-5000 | 5000 | | | | | 4640 | 34200 | 0.5 | |
| SZ11-6300 | 6300 | | | | | 5630 | 36700 | 0.5 | |
| SZ11-8000 | 8000 | YNd11 | 35~38.5 | ±3x2.5% | 6.3<br>6.6<br>10.5 | 7870 | 40600 | 0.4 | 8 |
| SZ11-10000 | 10000 | | | | | 9280 | 48000 | 0.4 | |
| SZ11-12500 | 12500 | | | | | 10900 | 56800 | 0.35 | |
| SZ11-16000 | 16000 | | | | | 13100 | 70300 | 0.35 | |
| SZ11-20000 | 20000 | | | | | 15500 | 82700 | 0.3 | |
| SZ11-25000 | 25000 | | | | | 18300 | 97800 | 0.3 | 10 |
| SZ11-31500 | 31500 | | | | | 21800 | 115000 | 0.3 | |

When the number of taps and the step voltage remain unchanged, it is allowed to increase the number of negative taps and reduce the number of positive taps, or increase the number of positive taps and reduce the number of negative taps, such as (35)x2.596; (35)x2.5%, etc.

# SG(B)12, SC(B)12 type mains transformer

The best choice for power stations, factories, hospitals, airports, tunnels, chemical plants, and nuclear power plants

## Model meaning

| S | G/C | B | 12 | – □ | / □ |
|---|---|---|---|---|---|
| Three-phase | G: Non-encapsulated type (H grade)<br>C: Epoxy resin casting type | Foil coils can be used for low voltage | Performance level code | Rated capacity kVA | Voltage level kV |

## Overview

Due to the advantages of strong short-circuit resistance, low maintenance workload, high operating efficiency, small size and low noise, dry-type transformers are often used in places with high requirements for fire protection and explosion-proof performance. Safe, fireproof, pollution-free, can be directly operated in high-load electricity consumption;

Adopting domestic advanced technology, high mechanical strength, strong short-circuit resistance, small partial discharge, good thermal stability, high reliability and long service life;
Low loss, low noise, obvious energy saving effect, maintenance-free;
Good heat dissipation performance, strong overload capacity, can be operated in short-term over-capacity under forced air cooling;
It has certain moisture-proof performance and can operate in harsh environments with high humidity;
Dry-type transformers can be equipped with a complete temperature detection and protection system. The intelligent signal temperature control system can automatically detect and display the working temperature of each three-phase winding, automatically start and stop the fan, and has alarm, trip and other function settings;
Small size, light weight, small footprint, low installation cost.

## Main performance parameters of SC(B)12 series main transformers

| Model | Rated capacity(kVA) | Connection group label | Voltage combination (kV) | | | No-load loss (W) | Load loss (W) 120°C (F) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|---|
| | | | High Voltage | Tap range | Low pressure | | | | |
| SC12-30 | 30 | Yyn0 or Dyn11 | 10<br>6.3<br>6 | ±5%<br>±2×2.5%<br>or<br>+3<br>-1 ×2.5% | 0.4 | 150 | 710 | 2 | 4 |
| SC12-50 | 50 | | | | | 215 | 1000 | 2 | |
| SC12-80 | 80 | | | | | 295 | 1380 | 1.5 | |
| SC12-100 | 100 | | | | | 320 | 1570 | 1.5 | |
| SC12-125 | 125 | | | | | 375 | 1850 | 1.3 | |
| SC(B)12-160 | 160 | | | | | 430 | 2130 | 1.3 | |
| SC(B)12-200 | 200 | | | | | 495 | 2530 | 1.1 | |
| SC(B)12-250 | 250 | | | | | 575 | 2760 | 1.1 | |
| SC(B)12-315 | 315 | | | | | 705 | 3470 | 1 | |
| SC(B)12-400 | 400 | | | | | 785 | 3990 | 1 | |
| SC(B)12-500 | 500 | | | | | 930 | 4880 | 1 | |
| SC(B)12-630 | 630 | | | | | 1070 | 5880 | 0.85 | |
| SC(B)12-630 | 630 | | | | | 1040 | 5960 | 0.85 | |
| SC(B)12-800 | 800 | | | | | 1210 | 6960 | 0.85 | |
| SC(B)12-1000 | 1000 | | | | | 1410 | 8130 | 0.85 | |
| SC(B)12-1250 | 1250 | | | | | 1670 | 9690 | 0.85 | 6 |
| SC(B)12-1600 | 1600 | | | | | 1960 | 11700 | 0.85 | |
| SC(B)12-2000 | 2000 | | | | | 2440 | 14400 | 0.7 | |
| SC(B)12-2500 | 2500 | | | | | 2880 | 17100 | 0.7 | |

# SC(B)13 Resin Insulated Dry Type Transformer

## Model meaning

| S | G/C | (B) | 13 | - □ | / □ |
|---|---|---|---|---|---|
| Three-phase | G: Non-encapsulated type (H grade)<br>C: Epoxy resin casting type | Foil coils can be used for low voltage | Performance level code | Rated capacity kVA | Voltage level kV |

## Overview

Due to the advantages of strong short-circuit resistance, low maintenance workload, high operating efficiency, small size and low noise, dry-type transformers are often used in places with high requirements for fire protection and explosion-proof performance. Safe, fireproof, pollution-free, can be directly operated in high-load electricity consumption;
Adopting domestic advanced technology, high mechanical strength, strong short-circuit resistance, small partial discharge, good thermal stability, high reliability and long service life;
Low loss, low noise, obvious energy saving effect, maintenance-free;
Good heat dissipation performance, strong overload capacity, can be operated in short-term over-capacity under forced air cooling;
It has certain moisture-proof performance and can operate in harsh environments with high humidity;
Dry-type transformers can be equipped with a complete temperature detection and protection system. The intelligent signal temperature control system can automatically detect and display the working temperature of each three-phase winding, automatically start and stop the fan, and has alarm, trip and other function settings;
Small size, light weight, small footprint, low installation cost.

## Main performance parameters of SC (B) 13 dry-type transformer series

| Model | Rated capacity(kVA) | Connection group label | Voltage combination (kV) | | | No-load loss (W) | Load loss (W) 120°C (F) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|---|
| | | | High Voltage | Tap range | Low pressure | | | | |
| SC13-30 | 30 | Yyn0 or Dyn11 | 10<br>6.3<br>6 | ±5%<br>±2×2.5%<br>or<br>+3<br>-1 ×2.5% | 0.4 | 135 | 640 | 2 | 4 |
| SC13-50 | 50 | | | | | 195 | 900 | 2 | |
| SC13-80 | 80 | | | | | 265 | 1240 | 1.5 | |
| SC13-100 | 100 | | | | | 290 | 1410 | 1.5 | |
| SC13-125 | 125 | | | | | 340 | 1660 | 1.3 | |
| SC(B)13-160 | 160 | | | | | 385 | 1910 | 1.3 | |
| SC(B)13-200 | 200 | | | | | 445 | 2270 | 1.1 | |
| SC(B)13-250 | 250 | | | | | 515 | 2480 | 1.1 | |
| SC(B)13-315 | 315 | | | | | 635 | 3120 | 1 | |
| SC(B)13-400 | 400 | | | | | 705 | 3590 | 1 | |
| SC(B)13-500 | 500 | | | | | 835 | 4390 | 1 | |
| SC(B)13-630 | 630 | | | | | 965 | 5290 | 0.85 | |
| SC(B)13-630 | 630 | | | | | 935 | 5360 | 0.85 | 6 |
| SC(B)13-800 | 800 | | | | | 1090 | 6260 | 0.85 | |
| SC(B)13-1000 | 1000 | | | | | 1270 | 7310 | 0.85 | |
| SC(B)13-1250 | 1250 | | | | | 1500 | 8720 | 0.85 | |
| SC(B)13-1600 | 1600 | | | | | 1760 | 10500 | 0.85 | |
| SC(B)13-2000 | 2000 | | | | | 2190 | 13000 | 0.7 | |
| SC(B)13-2500 | 2500 | | | | | 2590 | 15400 | 0.7 | |

# SC(B)H15 Amorphous Alloy Dry-Type Transformer

## Model meaning

| S | C | (B) | H | 15 | - □ | / □ |
|---|---|---|---|---|---|---|
| Three-phase | Epoxy resin casting type | Foil coils can be used for low voltage | Amorphous alloy | Performance level code | Rated capacity kVA | Voltage level kV |

## Overview

Low consumption and energy saving: The core is made of amorphous alloy material, and the no-load loss and no-load current are low, which is equivalent to 30% of silicon steel sheet. The no-load loss of amorphous alloy dry-type transformer is 75% lower than the value specified in GB/T10228, which can greatly reduce the operating cost and achieve significant energy saving effect.

Strong corrosion resistance: The amorphous alloy core is fully encapsulated by resin and high-temperature resistant silicone to effectively prevent rust and amorphous alloy fragments from falling off, thereby effectively protecting the core and coil.

Low noise: In order to reduce the operating noise of the product, a reasonable working magnetic flux density is selected during product design, the core and coil structure is improved during product processing, and special noise reduction materials and processes are used. The noise of the product is about 5 to 15 decibels lower than the national standard GB/T10088.

Strong short-circuit resistance: The product adopts a three-phase three-column structure, and the clamping structure of the core and coil is compact and reasonable. The amorphous alloy dry-type transformer produced by Huabian was the first in China to pass the sudden short-circuit test.

Low partial discharge: Due to the use of epoxy resin vacuum casting, the product has low temperature rise, long service life, strong heat dissipation capacity, and can operate at 150% rated load under air-cooled conditions. The temperature control protection system equipped with the product provides reliable guarantee for the safe operation of the amorphous alloy dry-type transformer.

## SC(B)H15 Amorphous Alloy Dry-Type Transformer

| Model | Rated capacity(kVA) | Connection group label | Voltage combination (kV) | | | No-load loss (W) | Load loss (W) 120°C (F) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|---|
| | | | High Voltage | Tap range | Low pressure | | | | |
| SCH15-30 | 30 | Dyn11 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5%<br>±2×2.5% | 0.4 | 70 | 710 | 0.6 | 4 |
| SCH15-50 | 50 | | | | | 90 | 1000 | 0.5 | |
| SCH15-80 | 80 | | | | | 120 | 1380 | 0.5 | |
| SCH15-100 | 100 | | | | | 130 | 1570 | 0.5 | |
| SCH15-125 | 125 | | | | | 150 | 1850 | 0.4 | |
| SCH15-160 | 160 | | | | | 170 | 2130 | 0.4 | |
| SCH15-200 | 200 | | | | | 200 | 2530 | 0.4 | |
| SCH(B)15-250 | 250 | | | | | 230 | 2760 | 0.4 | |
| SCH(B)15-315 | 315 | | | | | 280 | 3470 | 0.3 | |
| SCH(B)15-400 | 400 | | | | | 310 | 3990 | 0.3 | |
| SCH(B)15-500 | 500 | | | | | 360 | 4880 | 0.3 | |
| SCH(B)15-630 | 630 | | | | | 420 | 5880 | 0.3 | |
| SCH(B)15-630 | 630 | | | | | 410 | 5960 | 0.3 | |
| SCH(B)15-800 | 800 | | | | | 480 | 6960 | 0.3 | |
| SCH(B)15-1000 | 1000 | | | | | 550 | 8130 | 0.2 | |
| SCH(B)15-1250 | 1250 | | | | | 650 | 9690 | 0.2 | 6 |
| SCH(B)15-1600 | 1600 | | | | | 760 | 11700 | 0.2 | |
| SCH(B)15-2000 | 2000 | | | | | 1000 | 14400 | 0.2 | |
| SCH(B)15-2500 | 2500 | | | | | 1200 | 17100 | 0.2 | |
| SCH(B)15-1600 | 1600 | | | | | 760 | 12900 | 0.2 | |
| SCH(B)15-2000 | 2000 | | | | | 1000 | 15900 | 0.2 | 8 |
| SCH(B)15-2500 | 2500 | | | | | 1200 | 18800 | 0.2 | |

# SC(B)18 Resin Insulated Dry Type Transformer

## Model meaning

| S | C | (B) | 18 | - □ | / □ |
|---|---|---|---|---|---|
| Three-phase | Epoxy resin casting type | Foil coils can be used for low voltage | Performance level code | Rated capacity kVA | Voltage level kV |

## Overview

- Due to the advantages of strong short-circuit resistance, low maintenance workload, high operating efficiency, small size, and low noise, dry-type transformers are often used in places with high requirements for fireproof and explosion-proof performance. Safe, fireproof, pollution-free, and can be directly operated in high-load electricity consumption;
- Adopting domestic advanced technology, high mechanical strength, strong short-circuit resistance, small partial discharge, good thermal stability, high reliability, and long service life;
- Low loss, low noise, obvious energy-saving effect, and maintenance-free;
- Good heat dissipation performance, strong overload capacity, and can be operated in short-term over-capacity under forced air cooling;
- With certain moisture-proof performance, it can operate in harsh environments with high humidity;
- Dry-type transformers can be equipped with a complete temperature detection and protection system. The intelligent signal temperature control system can automatically detect and display the working temperature of each three-phase winding, automatically start and stop the fan, and has alarm, trip and other function settings;
- Small size, light weight, small footprint, low installation cost.

## SC(B)18 resin insulated dry-type transformer main product performance parameters

| Model | Rated capacity(kVA) | Connection group label | Voltage combination (kV) | | | No-load loss (W) | Load loss (W) 120℃ (F) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|---|
| | | | High Voltage | Tap range | Low pressure | | | | |
| SC18-30 | 30 | Yyn0 or Dyn11 | 10<br>6.3<br>6 | ±5%<br>±2×2.5%<br>or<br>+3<br>-1 ×2.5% | 0.4 | 105 | 640 | 2 | 4 |
| SC18-50 | 50 | | | | | 155 | 900 | 2 | |
| SC18-80 | 80 | | | | | 210 | 1240 | 1.5 | |
| SC18-100 | 100 | | | | | 230 | 1410 | 1.5 | |
| SC18-125 | 125 | | | | | 270 | 1660 | 1.3 | |
| SC(B)18-160 | 160 | | | | | 310 | 1910 | 1.3 | |
| SC(B)18-200 | 200 | | | | | 360 | 2270 | 1.1 | |
| SC(B)18-250 | 250 | | | | | 415 | 2480 | 1.1 | |
| SC(B)18-315 | 315 | | | | | 510 | 3120 | 1 | |
| SC(B)18-400 | 400 | | | | | 570 | 3590 | 1 | |
| SC(B)18-500 | 500 | | | | | 670 | 4390 | 1 | |
| SC(B)18-630 | 630 | | | | | 775 | 5290 | 0.85 | |
| SC(B)18-630 | 630 | | | | | 750 | 5360 | 0.85 | 6 |
| SC(B)18-800 | 800 | | | | | 875 | 6260 | 0.85 | |
| SC(B)18-1000 | 1000 | | | | | 1020 | 7310 | 0.85 | |
| SC(B)18-1250 | 1250 | | | | | 1205 | 8720 | 0.85 | |
| SC(B)18-1600 | 1600 | | | | | 1415 | 10500 | 0.85 | |
| SC(B)18-2000 | 2000 | | | | | 1760 | 13000 | 0.7 | |
| SC(B)18-2500 | 2500 | | | | | 2080 | 15400 | 0.7 | |

# SC(B)H19 Amorphous Alloy Dry-Type Transformer Main Performance Parameters

## Model meaning

| S | C | (B) | H | 19 | - □ | / □ |
|---|---|---|---|---|---|---|
| Three-phase | Epoxy resin casting type | Foil coils can be used for low voltage | Amorphous alloy | Performance level code | Rated capacity kVA | Voltage level kV |

## Overview

Due to the advantages of strong short-circuit resistance, low maintenance workload, high operating efficiency, small size and low noise, dry-type transformers are often used in places with high requirements for fire protection and explosion-proof performance. Safe, fireproof, pollution-free, can be directly operated in high-load electricity consumption;
Adopting domestic advanced technology, high mechanical strength, strong short-circuit resistance, small partial discharge, good thermal stability, high reliability and long service life;
Low loss, low noise, obvious energy saving effect, maintenance-free;
Good heat dissipation performance, strong overload capacity, can be operated in short-term over-capacity under forced air cooling;
It has certain moisture-proof performance and can operate in harsh environments with high humidity;
Dry-type transformers can be equipped with a complete temperature detection and protection system. The intelligent signal temperature control system can automatically detect and display the working temperature of each three-phase winding, automatically start and stop the fan, and has alarm, trip and other function settings;
Small size, light weight, small footprint, low installation cost.

## SC(B)H19 Amorphous Alloy Dry-Type Transformer Main Performance Parameters

| Model | Rated capacity(kVA) | Connection group label | Voltage combination (kV) | | | No-load loss (W) | Load loss (W) 120°C (F) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|---|
| | | | High Voltage | Tap range | Low pressure | | | | |
| SCH19-30 | 30 | Dyn11 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5%<br>±2×2.5% | 0.4 | 50 | 640 | 0.6 | 4 |
| SCH19-50 | 50 | | | | | 60 | 900 | 0.5 | |
| SCH19-80 | 63 | | | | | 85 | 1240 | 0.5 | |
| SCH19-100 | 80 | | | | | 90 | 1415 | 0.5 | |
| SCH19-125 | 100 | | | | | 105 | 1665 | 0.4 | |
| SCH19-160 | 125 | | | | | 120 | 1915 | 0.4 | |
| SCH19-200 | 160 | | | | | 140 | 2275 | 0.4 | |
| SCH(B)19-250 | 200 | | | | | 160 | 2485 | 0.4 | |
| SCH(B)19-315 | 250 | | | | | 195 | 3125 | 0.3 | |
| SCH(B)19-400 | 315 | | | | | 215 | 3590 | 0.3 | 6 |
| SCH(B)19-500 | 400 | | | | | 250 | 4390 | 0.3 | |
| SCH(B)19-630 | 500 | | | | | 295 | 5290 | 0.3 | |
| SCH(B)19-630 | 630 | | | | | 290 | 5365 | 0.3 | |
| SCH(B)19-800 | 800 | | | | | 335 | 6265 | 0.3 | |
| SCH(B)15-1000 | 1000 | | | | | 385 | 7315 | 0.2 | |
| SCH(B)15-1250 | 1250 | | | | | 455 | 8720 | 0.2 | |
| SCH(B)15-1600 | 1600 | | | | | 530 | 10555 | 0.2 | |
| SCH(B)15-2000 | 2000 | | | | | 700 | 13005 | 0.2 | |
| SCH(B)15-2500 | 2500 | | | | | 840 | 15445 | 0.2 | |

# 35kV Dry Type Power Transformer

The best choice for power stations, factories, hospitals, airports, tunnels, chemical plants, and nuclear power plants

## Overview

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Adopting domestic advanced technology, high mechanical strength, strong short-circuit resistance, small partial discharge, good thermal stability, high reliability and long service life;
Low loss, low noise, obvious energy saving effect, maintenance-free;
Good heat dissipation performance, strong overload capacity, can be operated in short-term over-capacity under forced air cooling;
It has certain moisture-proof performance and can operate in harsh environments with high humidity;
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Small size, light weight, small footprint, low installation cost.

## 35kV three–phase cast resin thin insulation dry–type power transformer

| Model | Rated capacity (kVA) | High Voltage (kV) | Low pressure (kV) | Connection group label | No-load loss (W) | Load loss at different insulation thermal ratings (W) | | | Load loss (kw) | Short circuit impedance (%) | No-load current (%) | W.T (kg) | Overall dimensions (mm) | | | gauge |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 100°C | 120°C | 145°C | | | | | Length | Width | Height | |
| SC9-800 | 800 | 35<br>38.5 | 0.4 | Yyn0<br>Dyn11 | 2250 | 8930 | 9405 | 10070 | 8.41 | 6 | 1.8 | 3350 | 1920 | 1140 | 1940 | 820 |
| SC9-1000 | 1000 | | | | 2673 | 10260 | 10925 | 11685 | 9.6 | | 1.8 | 4100 | 1950 | 1140 | 1950 | 820 |
| SC9-1250 | 1250 | | | | 3132 | 12160 | 12920 | 13775 | 11.7 | | 1.6 | 4500 | 2050 | 1140 | 2040 | 820 |
| SC9-1600 | 1600 | | | | 3690 | 14630 | 15485 | 16530 | 14.15 | | 1.6 | 5560 | 2200 | 1140 | 2100 | 820 |
| SC9-2000 | 2000 | | 3.15;<br>6;<br>6.3;<br>10;<br>10.5;<br>11 | Yd11 | 4230 | 17195 | 18240 | 19570 | 16.6 | 7 | 1.5 | 6540 | 2340 | 1140 | 2430 | 1070 |
| SC9-2500 | 2500 | | | | 4860 | 20615 | 21850 | 23370 | 20 | | 1.5 | 6980 | 2450 | 1140 | 2440 | 1070 |
| SC9-3150 | 3150 | | | | 6030 | 23085 | 24510 | 26125 | 22.5 | 8 | 1.3 | 9100 | 2650 | 1580 | 2370 | 1070 |
| SC9-4000 | 4000 | | | | 7020 | 27930 | 29450 | 31350 | 27 | | 1.3 | 10120 | 2750 | 1580 | 2250 | 1475 |
| SC9-5000 | 5000 | | | | 8370 | 32965 | 34960 | 37335 | 31.8 | | 1.1 | 12250 | 2980 | 1580 | 2370 | 1475 |
| SC9-6300 | 6300 | | | | 9900 | 38475 | 40850 | 43605 | 37.3 | | 1.1 | 15670 | 3060 | 1580 | 2600 | 2000 |
| SC9-8000 | 8000 | | | Yd11<br>YNd11 | 11340 | 43415 | 46075 | 49305 | 41.4 | 9 | 1 | 18150 | 3080 | 2240 | 2855 | 2000 |
| SC9-10000 | 10000 | | | | 12960 | 52725 | 55575 | 59470 | 49.9 | | 1 | 22340 | 3150 | 2240 | 2950 | 2300 |
| SC9-12500 | 12500 | | | | 15750 | 60800 | 64600 | 69065 | 54.5 | | 0.5 | 37500 | 4390 | 2800 | 3260 | 2500 |
| SC9-16000 | 16000 | | | | 19350 | 71725 | 76000 | 80560 | 54.5 | | 0.5 | 37500 | 4390 | 2800 | 3260 | 2500 |
| SC9-20000 | 20000 | | | | 22950 | 80750 | 85500 | 91485 | 54.5 | | 0.5 | 37500 | 4390 | 2800 | 3260 | 2500 |