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CNC ELECTRIC




# CATALOGUE

## Power Transformer


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# About CNC

CNC was founded in 1988 specialized in Low-voltage electrical and Power Transmission and Distribution industries. We provide our customers with profitable growth by offering integrated comprehensive electrical solution.

CNC's key value is innovation and quality to ensure clients with safe, reliable products. We set up advanced assembly line, test center, R&D Center and quality control center. We have got the certificates of ISO9001, ISO14001, OHSAS18001 and CE, CB, SEMKO, KEMA, TUV etc.

As a leading manufacturer of electrical products in China, our business covers over 100 countries.

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# CONTENTS

# Structural Feature

## Iron core

The core is made of cold rolled,granular-oriented,low-loss and high magnetic conductive silicon steel sheet,which is of multi-step completely tited structure to reduce the loss and noice.

## Winding

Winding adopts entanglement or inner screened continuous type with phase insulation structure to ensure insulating strength.

# Structural Feature

## Active-parts assembly

Adoption of whole assembled phase insulation so as to reduce the assembly time and effectively guarantee the dimension and shape of the insulation structure.

## Routine test

After assembly, strict pre-factory testing is carried out in accordance with standards, and high-quality and reliable products are provided with superb testing technology and equipment.

# 10KV Oil-immersed Transformer

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## 10~20KV Oil-immersed Transformer

## S□-M Series Oil-immersed Fully Sealed

- The S□-M series three-phase oil-immersed transformer adopts a fully oil-filled, sealed corrugated oil tank. and the oil tank shell adapts to the expansion performance of the oil with its own elasticity and meets the heat dissipation requirements. It has the characteristics of high efficiency and low loss, which can save a lot of power consumption and operating costs, and is widely used in power plants, substations, industrial and mining enterprises, ports, airports and other environmental protection places.
- Standard: IEC60076-1, IEC60076-2, IEC60076-3, IEC60076-5, IEC60076-10.

**General**

# S□-M Series Oil-immersed Fully Sealed

## Selection

S □-M □/□

- High voltage level (KV):6~11KV
- Rated capacity (KVA):30~2500KVA
- M:Fully sealed structure
- Performance level code:9,11,13,14
- Three phase

## Operating conditions

1. Ambient temperature: maximum temperature: +40℃, minimum temperature: -25℃.
2. Average temperature of the hottest month:+30℃, average temperature in the hottest year: +20℃.
3. Altitude not exceeding 1000m.
4. The waveform of the power supply voltage is similar to a sine wave.
5. The three-phase supply voltage should be approximately symmetrical.
6. The total harmonic content of the load current shall not exceed 5% of the rated current.
7. Where to use: indoors or outdoors.

## Features

1. The product has the characteristics of high efficiency, low loss, low noise, etc.
2. High mechanical strength, balanced ampere-turn distribution, and strong short-circuit resistance.
3. Low no-load and load loss.
4. Small size, reliable operation, long service life, and maintenance free.



10~20KV Oil-immersed Transformer

S□-M Series Oil-immersed Fully Sealed

## Structure

- Iron core:
- The iron core is made of high-quality, high-performance, high-permeability silicon steel sheet, with low no-load loss.

- High/low voltage winding:
- The low-voltage winding of 500KVA and below is a layer type, and the new spiral type is used for 630KVA and above.
- It has the characteristics of high mechanical strength, balanced ampere turn distribution, and strong short-circuit resistance.

- Fully sealed structure:
- The product is a fully sealed structure. The vacuum oil filling process is used for the transformer packaging, which completely removes the moisture of the transformer, ensures the isolation of the transformer oil from the outside air, prevents the aging of the oil, and improves the operation reliability of the transformer.

- Positioning structure:
- The product body has added a positioning structure to prevent displacement during transportation, and all fasteners are equipped with fastening nuts to ensure that the fasteners do not loosen during long-term operation of the product.

- Oil tank:
- The oil tank adopts a corrugated oil tank.Simple process, high mechanical strength,good welding effect,not easy to leak,due to the strong fluidity of the oil, the heat dissipation capacity of the product is improved.

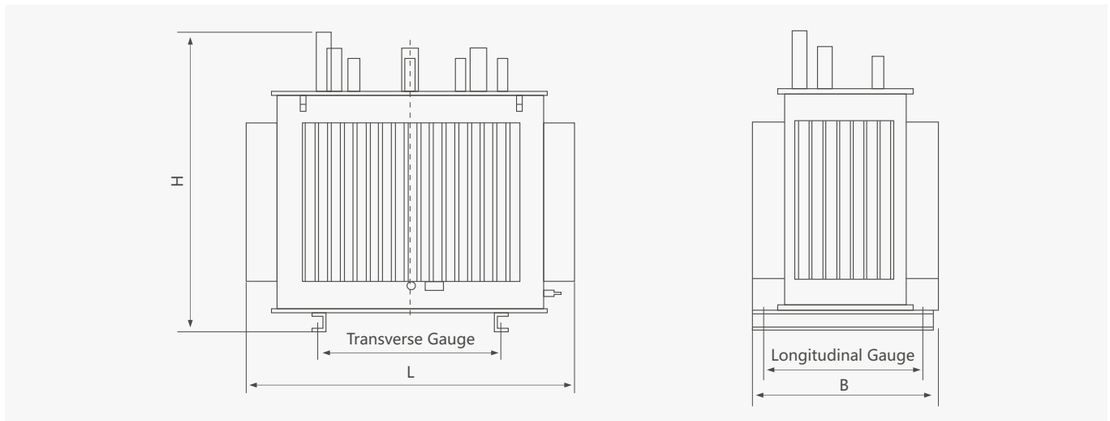
- Other configuration:
- Equipped with pressure relief valve, signal thermometer, ensures the safe operation of the transformer.

## S9-M 30~2500/10KV technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 30 | 6<br>6.3<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0<br>Yzn11 | 130 | 630/600 | 2.3 | 4.0 | 745 | 530 | 890 | 280 |
| 50 | | | | | 170 | 910/870 | 2.0 | | 790 | 560 | 940 | 365 |
| 63 | | | | | 200 | 1090/1040 | 1.9 | | 820 | 570 | 950 | 425 |
| 80 | | | | | 250 | 1310/1250 | 1.9 | | 850 | 580 | 1000 | 485 |
| 100 | | | | | 290 | 1580/1500 | 1.8 | | 900 | 620 | 1010 | 540 |
| 125 | | | | | 340 | 1890/1800 | 1.7 | | 880 | 630 | 1050 | 610 |
| 160 | | | | | 400 | 2310/2200 | 1.6 | | 950 | 690 | 1120 | 710 |
| 200 | | | | | 480 | 2730/2600 | 1.5 | | 990 | 730 | 1200 | 835 |
| 250 | | | | | 560 | 3200/3050 | 1.4 | | 1180 | 700 | 1200 | 970 |
| 315 | | | | | 670 | 3830/3650 | 1.4 | | 1230 | 760 | 1250 | 1125 |
| 400 | | | | | 800 | 4520/4300 | 1.3 | | 1260 | 800 | 1300 | 1310 |
| 500 | | | | | 960 | 5410/5150 | 1.2 | | 1400 | 900 | 1320 | 1530 |
| 630 | | | | Dyn11<br>Yyn0 | 1200 | 6200 | 1.1 | 4.5 | 1530 | 940 | 1350 | 1890 |
| 800 | | | | | 1400 | 7500 | 1.0 | | 1580 | 1000 | 1420 | 2185 |
| 1000 | | | | | 1700 | 10300 | 1.0 | | 1770 | 1180 | 1450 | 2480 |
| 1250 | | | | | 1950 | 12000 | 0.9 | | 1920 | 1290 | 1430 | 3020 |
| 1600 | | | | | 2400 | 14500 | 0.8 | | 1990 | 1340 | 1620 | 3550 |
| 2000 | | | | | 3000 | 17100 | 0.7 | 5.0 | 1950 | 1680 | 2100 | 4530 |
| 2500 | | | | | 3300 | 23200 | 0.7 | | 2020 | 1710 | 2100 | 5030 |

Note 1:for transformers with rated capacity of 500kVA and below, the load loss values above the diagonal line in the table are applicable to the Dyn11 or Yzn11 coupling group,and the load loss values below the diagonal line are applicable to the Yyn0 coupling group.
Note 2:when the average annual load rate of the transformer is between 35% and 40%, the maximum operating eficiency can be obtained by using the loss value in the table.

## Overall and mounting dimensions(mm)




Note:The dimensions and weights provided are only for reference in design and selection.The final size and weight are subject to our product drawings.



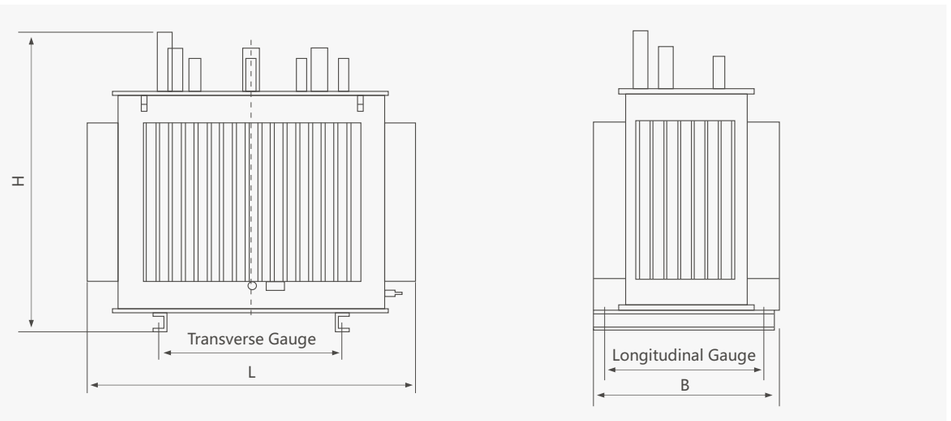
10~20KV Oil-immersed Transformer
S□-M Series Oil-immersed Fully Sealed

## S11-M 30~2500 /10KV technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0<br>Yzn11 | 100 | 630/600 | 1.5 | 4.0 | 690 | 510 | 920 | 275 |
| 50 | | | | | 130 | 910/870 | 1.3 | | 730 | 510 | 960 | 340 |
| 63 | | | | | 150 | 1090/1040 | 1.2 | | 750 | 550 | 1000 | 385 |
| 80 | | | | | 180 | 1310/1250 | 1.2 | | 790 | 620 | 1020 | 450 |
| 100 | | | | | 200 | 1580/1500 | 1.1 | | 790 | 700 | 1040 | 520 |
| 125 | | | | | 240 | 1890/1800 | 1.1 | | 840 | 800 | 1070 | 625 |
| 160 | | | | | 280 | 2310/2200 | 1.0 | | 1070 | 670 | 1130 | 695 |
| 200 | | | | | 340 | 2730/2600 | 1.0 | | 1140 | 750 | 1140 | 795 |
| 250 | | | | | 400 | 3200/3050 | 0.9 | | 1200 | 800 | 1190 | 955 |
| 315 | | | | | 480 | 3830/3650 | 0.9 | | 1300 | 860 | 1210 | 1085 |
| 400 | | | | | 570 | 4520/4300 | 0.8 | | 1380 | 900 | 1240 | 1290 |
| 500 | | | | | 680 | 5410/5100 | 0.8 | | 1450 | 950 | 1300 | 1590 |
| 630 | | | | Dyn11<br>Yyn0 | 810 | 6200 | 0.6 | 4.5 | 1500 | 970 | 1360 | 1850 |
| 800 | | | | | 980 | 7500 | 0.6 | | 1660 | 1140 | 1400 | 2210 |
| 1000 | | | | | 1150 | 10300 | 0.6 | | 1690 | 1190 | 1530 | 2570 |
| 1250 | | | | | 1360 | 12000 | 0.5 | | 1760 | 1230 | 1600 | 3115 |
| 1600 | | | | | 1640 | 14500 | 0.5 | | 1800 | 1250 | 1660 | 3520 |
| 2000 | | | | | 1940 | 18300 | 0.4 | 5.0 | 1930 | 1360 | 1490 | 4060 |
| 2500 | | | | | 2290 | 21200 | 0.4 | | 2080 | 1360 | 1570 | 5105 |

Note 1:for transformers with rated capacity of 500kVA and below, the load loss values above the diagonal line in the table are applicable to the Dyn11 or Yzn11 coupling group,and the load loss values below the diagonal line are applicable to the Yyn0 coupling group.
Note 2:when the average annual load rate of the transformer is between 35% and 40%, the maximum operating eficiency can be obtained by using the loss value in the table.

## Overall and mounting dimensions(mm)



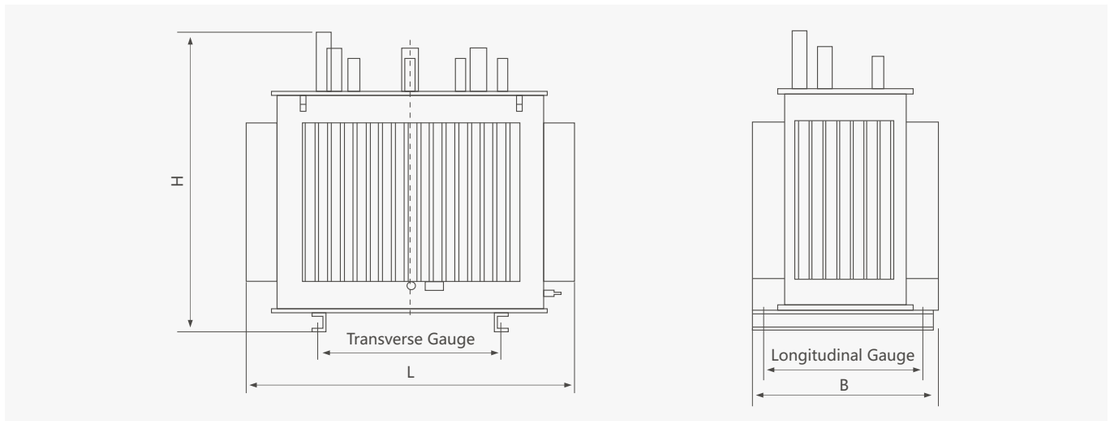

Note:The dimensions and weights provided are only for reference in design and selection.The final size and weight are subject to our product drawings.

## S13-M 30~2500 /10KV technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0<br>Yzn11 | 80 | 630/600 | 1.5 | 4.0 | 685 | 490 | 860 | 260 |
| 50 | | | | | 100 | 910/870 | 1.3 | | 725 | 520 | 955 | 365 |
| 63 | | | | | 110 | 1090/1040 | 1.2 | | 750 | 535 | 970 | 415 |
| 80 | | | | | 130 | 1310/1250 | 1.2 | | 770 | 565 | 985 | 465 |
| 100 | | | | | 150 | 1580/1500 | 1.2 | | 800 | 595 | 1000 | 545 |
| 125 | | | | | 170 | 1890/1800 | 1.1 | | 815 | 670 | 1010 | 585 |
| 160 | | | | | 200 | 2310/2200 | 1.1 | | 1015 | 645 | 1055 | 695 |
| 200 | | | | | 240 | 2730/2600 | 1.0 | | 1020 | 650 | 1115 | 810 |
| 250 | | | | | 290 | 3200/3050 | 1.0 | | 1140 | 730 | 1120 | 930 |
| 315 | | | | | 340 | 3830/3650 | 0.9 | | 1195 | 785 | 1175 | 1075 |
| 400 | | | | | 410 | 4520/4300 | 0.9 | | 1265 | 855 | 1195 | 1255 |
| 500 | | | | | 480 | 5410/5100 | 0.8 | | 1325 | 915 | 1240 | 1435 |
| 630 | | | | Dyn11<br>Yyn0 | 570 | 6200 | 0.8 | 4.5 | 1465 | 960 | 1295 | 1880 |
| 800 | | | | | 700 | 7500 | 0.6 | | 1515 | 995 | 1340 | 2145 |
| 1000 | | | | | 830 | 10300 | 0.6 | | 1605 | 1095 | 1460 | 2455 |
| 1250 | | | | | 970 | 12000 | 0.5 | | 1685 | 1145 | 1485 | 2840 |
| 1600 | | | | | 1170 | 14500 | 0.5 | | 1775 | 1225 | 1580 | 3310 |
| 2000 | | | | | 1550 | 18300 | 0.4 | 5.0 | 1855 | 1265 | 1600 | 3960 |
| 2500 | | | | | 1830 | 21200 | 0.4 | | 1885 | 1305 | 1780 | 4980 |

Note 1:for transformers with rated capacity of 500kVA and below, the load loss values above the diagonal line in the table are applicable to the Dyn11 or Yzn11 coupling group,and the load loss values below the diagonal line are applicable to the Yyn0 coupling group.
Note 2:when the average annual load rate of the transformer is between 35% and 40%, the maximum operating eficiency can be obtained by using the loss value in the table.

## Overall and mounting dimensions(mm)




Note:The dimensions and weights provided are only for reference in design and selection.The final size and weight are subject to our product drawings.



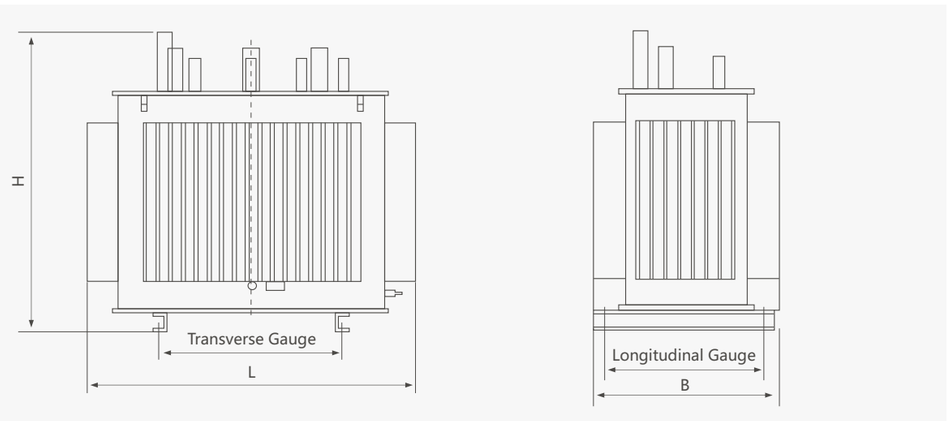
10~20KV Oil-immersed Transformer
S□-M Series Oil-immersed Fully Sealed

## S14-M 30~2500 /10KV technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0<br>Yzn11 | 80 | 505/480 | 1.5 | 4.0 | 785 | 710 | 880 | 370 |
| 50 | | | | | 100 | 730/695 | 1.3 | | 800 | 730 | 940 | 480 |
| 63 | | | | | 110 | 870/830 | 1.2 | | 815 | 720 | 970 | 535 |
| 80 | | | | | 130 | 1050/1000 | 1.2 | | 830 | 740 | 990 | 580 |
| 100 | | | | | 150 | 1260/1200 | 1.1 | | 875 | 790 | 1010 | 705 |
| 125 | | | | | 170 | 1510/1440 | 1.1 | | 875 | 770 | 1050 | 775 |
| 160 | | | | | 200 | 1850/1760 | 1.0 | | 935 | 820 | 1140 | 975 |
| 200 | | | | | 240 | 2180/2080 | 1.0 | | 995 | 870 | 1140 | 1140 |
| 250 | | | | | 290 | 2560/2440 | 0.9 | | 995 | 900 | 1180 | 1240 |
| 315 | | | | | 340 | 3060/2920 | 0.9 | | 1030 | 880 | 1250 | 1425 |
| 400 | | | | | 410 | 3610/3440 | 0.8 | | 1075 | 910 | 1270 | 1635 |
| 500 | | | | | 480 | 4330/4120 | 0.8 | | 1120 | 930 | 1320 | 1950 |
| 630 | | | | Dyn11<br>Yyn0 | 570 | 4960 | 0.6 | 4.5 | 1165 | 950 | 1350 | 2150 |
| 800 | | | | | 700 | 6000 | 0.6 | | 1210 | 1050 | 1390 | 2515 |
| 1000 | | | | | 830 | 8240 | 0.6 | | 1520 | 1020 | 1450 | 2635 |
| 1250 | | | | | 970 | 9600 | 0.5 | | 1630 | 1090 | 1540 | 3210 |
| 1600 | | | | | 1170 | 11600 | 0.5 | | 1680 | 1150 | 1600 | 3905 |
| 2000 | | | | | 1550 | 14600 | 0.4 | 5.0 | 1890 | 1300 | 1600 | 4130 |
| 2500 | | | | | 1830 | 16900 | 0.4 | | 1990 | 1360 | 1700 | 5250 |

Note 1:for transformers with rated capacity of 500kVA and below, the load loss values above the diagonal line in the table are applicable to the Dyn11 or Yzn11 coupling group,and the load loss values below the diagonal line are applicable to the Yyn0 coupling group.
Note 2:when the average annual load rate of the transformer is between 35% and 40%, the maximum operating eficiency can be obtained by using the loss value in the table.

## Overall and mounting dimensions(mm)



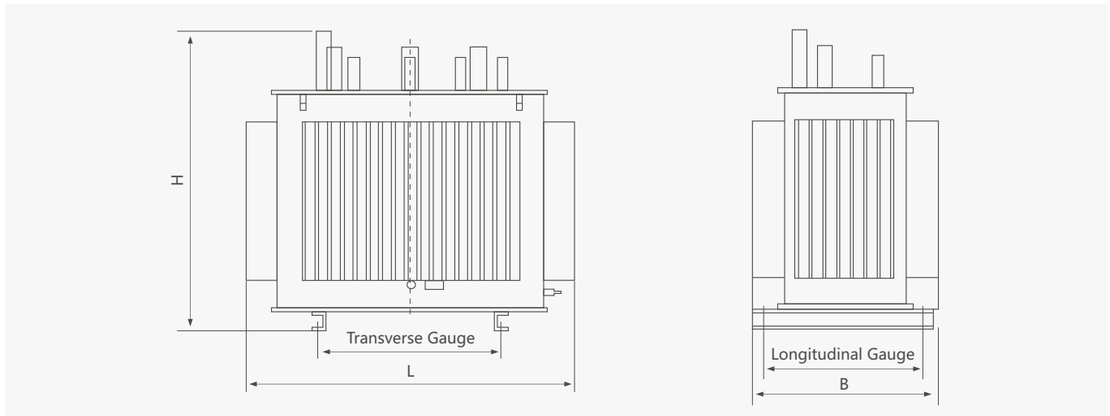

Note:The dimensions and weights provided are only for reference in design and selection.The final size and weight are subject to our product drawings.

## S20-30~2500/10KV technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0<br>Dyn5 | 70 | 505 | 1.20 | 4.0 | 785 | 710 | 880 | / |
| 50 | | | | | 90 | 730 | 1.04 | | 800 | 730 | 940 | / |
| 80 | | | | | 115 | 1050 | 0.96 | | 830 | 740 | 990 | / |
| 100 | | | | | 135 | 1265 | 0.88 | | 875 | 790 | 1010 | / |
| 125 | | | | | 150 | 1510 | 0.88 | | 875 | 770 | 1050 | / |
| 160 | | | | | 180 | 1850 | 0.80 | | 935 | 820 | 1140 | / |
| 200 | | | | | 215 | 2185 | 0.80 | | 995 | 870 | 1140 | / |
| 250 | | | | | 260 | 2560 | 0.72 | | 995 | 900 | 1180 | / |
| 315 | | | | | 305 | 3065 | 0.72 | | 1030 | 880 | 1250 | / |
| 400 | | | | | 370 | 3615 | 0.64 | | 1075 | 910 | 1270 | / |
| 500 | | | | | 430 | 4330 | 0.64 | | 1120 | 930 | 1320 | / |
| 630 | | | | | 510 | 4960 | 0.48 | 4.5 | 1165 | 950 | 1350 | / |
| 800 | | | | | 630 | 6000 | 0.48 | | 1210 | 1050 | 1390 | / |
| 1000 | | | | | 745 | 8240 | 0.48 | | 1520 | 1020 | 1450 | / |
| 1250 | | | | | 870 | 9600 | 0.40 | | 1630 | 1090 | 1540 | / |
| 1600 | | | | | 1050 | 11600 | 0.40 | | 1680 | 1150 | 1600 | / |
| 2000 | | | | | 1225 | 14640 | 0.32 | 5.0 | 1890 | 1300 | 1600 | / |
| 2500 | | | | | 1440 | 14840 | 0.32 | | 1990 | 1360 | 1700 | / |

Note 1:when the average annual load rate of the transformer is between 35% and 40%, the maximum operating eficiency can be obtained by using the loss value in the table.

## Overall and mounting dimensions(mm)




Note:The dimensions and weights provided are only for reference in design and selection.The final size and weight are subject to our product drawings.



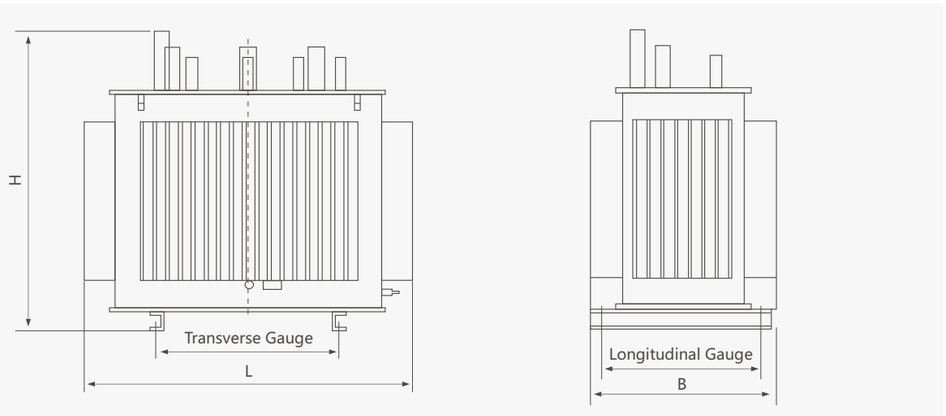


## S22-30~2500/10KV technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0<br>Dyn5 | 65 | 455 | 1.20 | 4.0 | 785 | 710 | 880 | / |
| 50 | | | | | 80 | 655 | 1.04 | | 800 | 730 | 940 | / |
| 80 | | | | | 105 | 945 | 0.96 | | 830 | 740 | 990 | / |
| 100 | | | | | 120 | 1140 | 0.88 | | 875 | 790 | 1010 | / |
| 125 | | | | | 135 | 1360 | 0.88 | | 875 | 770 | 1050 | / |
| 160 | | | | | 160 | 1665 | 0.80 | | 935 | 820 | 1140 | / |
| 200 | | | | | 190 | 1970 | 0.80 | | 995 | 870 | 1140 | / |
| 250 | | | | | 230 | 2300 | 0.72 | | 995 | 900 | 1180 | / |
| 315 | | | | | 270 | 2760 | 0.72 | | 1030 | 880 | 1250 | / |
| 400 | | | | | 330 | 3250 | 0.64 | | 1075 | 910 | 1270 | / |
| 500 | | | | | 385 | 3900 | 0.64 | | 1120 | 930 | 1320 | / |
| 630 | | | | | 460 | 4460 | 0.48 | 4.5 | 1165 | 950 | 1350 | / |
| 800 | | | | | 560 | 5400 | 0.48 | | 1210 | 1050 | 1390 | / |
| 1000 | | | | | 665 | 7415 | 0.48 | | 1520 | 1020 | 1450 | / |
| 1250 | | | | | 780 | 8640 | 0.40 | | 1630 | 1090 | 1540 | / |
| 1600 | | | | | 940 | 10440 | 0.40 | | 1680 | 1150 | 1600 | / |
| 2000 | | | | | 1085 | 13180 | 0.32 | 5.0 | 1890 | 1300 | 1600 | / |
| 2500 | | | | | 1280 | 13360 | 0.32 | | 1990 | 1360 | 1700 | / |

.Note 1:when the average annual load rate of the transformer is between 35% and 40%, the maximum operating eficiency can be obtained by using the loss value in the table.

## Overall and mounting dimensions(mm)




Note:The dimensions and weights provided are only for reference in design and selection.The final size and weight are subject to our product drawings.

# S□-M Series Oil-immersed Fully Sealed



## S-30~2500/10KV technical data

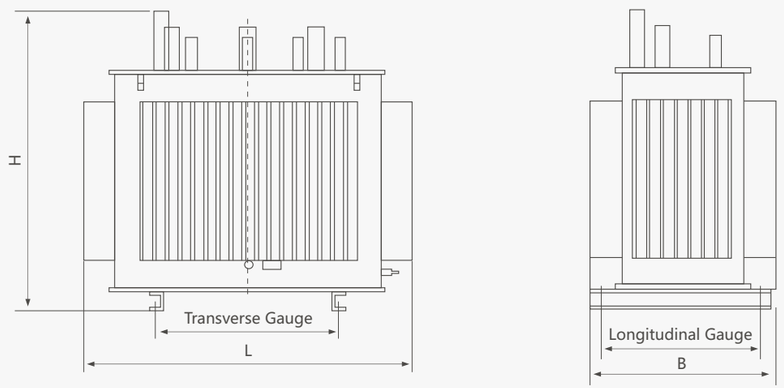
| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 25 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0<br>Dyn5 | 63 | 600 | 1.70 | 4 | 770 | 555 | 870 | 325 |
| 50 | | | | | 81 | 750 | 1.60 | | 820 | 660 | 935 | 420 |
| 100 | | | | | 130 | 1250 | 1.30 | | 870 | 670 | 950 | 540 |
| 160 | | | | | 189 | 1750 | 1.10 | | 930 | 690 | 1040 | 710 |
| 250 | | | | | 270 | 2350 | 0.96 | | 1200 | 770 | 1070 | 990 |
| 315 | | | | | 324 | 2800 | 0.88 | | 1270 | 830 | 1120 | 1130 |
| 400 | | | | | 387 | 3250 | 0.80 | | 1420 | 960 | 1190 | 1330 |
| 500 | | | | | 459 | 3900 | 0.80 | | 1420 | 960 | 1220 | 1560 |
| 630 | | | | | 540 | 4600 | 0.72 | 4.5 | 1500 | 1010 | 1285 | 1800 |
| 800 | | | | | 585 | 6000 | 0.64 | | 1650 | 1140 | 1350 | 2130 |
| 1000 | | | | | 693 | 7600 | 0.56 | | 1750 | 1200 | 1510 | 2500 |
| 1250 | | | | | 855 | 9500 | 0.56 | | 1800 | 1280 | 1580 | 2900 |
| 1600 | | | | | 1080 | 12000 | 0.48 | | 1860 | 1320 | 1620 | 3580 |
| 2000 | | | | | 1305 | 15000 | 0.48 | 5 | 1940 | 1350 | 1680 | 4080 |
| 2500 | | | | | 1575 | 18500 | 0.40 | | 2000 | 1400 | 1750 | 4600 |
| 3150 | | | | | 1980 | 23000 | 0.40 | | 2120 | 1420 | 1860 | 5100 |

## S-30~2500/20KV technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 25 | 20 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0<br>Dyn5 | 63 | 600 | 1.70 | 5.5 | 1090 | 600 | 1150 | 600 |
| 50 | | | | | 81 | 750 | 1.60 | | 1120 | 620 | 1180 | 800 |
| 100 | | | | | 130 | 1250 | 1.30 | | 1150 | 650 | 1290 | 1000 |
| 160 | | | | | 189 | 1750 | 1.10 | | 1160 | 675 | 1380 | 1100 |
| 250 | | | | | 270 | 2350 | 0.96 | | 1200 | 880 | 1400 | 1650 |
| 315 | | | | | 324 | 2800 | 0.88 | | 1230 | 920 | 1460 | 1780 |
| 400 | | | | | 387 | 3250 | 0.80 | | 1250 | 950 | 1580 | 1950 |
| 500 | | | | | 459 | 3900 | 0.80 | | 1390 | 960 | 1580 | 2300 |
| 630 | | | | | 540 | 4600 | 0.72 | 6 | 1450 | 980 | 1600 | 2400 |
| 800 | | | | | 585 | 6000 | 0.64 | | 1560 | 1020 | 1720 | 2850 |
| 1000 | | | | | 693 | 7600 | 0.56 | | 1700 | 1070 | 1790 | 3300 |
| 1250 | | | | | 855 | 9500 | 0.56 | | 1700 | 1070 | 1791 | 3600 |
| 1600 | | | | | 1080 | 12000 | 0.48 | | 1850 | 1130 | 1850 | 4000 |
| 2000 | | | | | 1305 | 15000 | 0.48 | | 2000 | 1280 | 1980 | 4600 |
| 2500 | | | | | 1575 | 18500 | 0.40 | | 2040 | 1320 | 2050 | 5350 |
| 3150 | | | | | 1980 | 23000 | 0.40 | | 2200 | 1400 | 2250 | 6300 |

Note 1:when the average annual load rate of the transformer is between 35% and 40%, the maximum operating eficiency can be obtained by using the loss value in the table.

## Overall and mounting dimensions(mm)




Note: The dimensions provided in the table are used as a reference for 20KV. The final size and weight of 10KV and 6KV are subject to our production drawings

10KV Oil-immersed Transformer

# SBH15 Series Amorphous Alloy Oil-immersed Transformer

## Standard

S B H 15 - □/□

- High voltage level(KV):6~11KV
- Rated capacity(KVA):30~2500KVA
- Performance level code:15
- Amorphous alloy core
- Low voltage foil coil
- Three phase

## Operating conditions

1. Ambient temperature: maximum temperature:+40℃, minimum temperature:-25℃.
2. Average temperature of the hottest month:+30℃, average temperature in the hottest year:+20℃.
3. Altitude not exceeding 1000m.
4. The waveform of the power supply voltage is similar to a sine wave.
5. The three-phase supply voltage should be approximately symmetrical.
6. The total harmonic content of the load current shall not exceed 5% of the rated current.
7. Where to use: indoors or outdoors.

## Features

1. The product has the characteristics of high efficiency, low loss, low noise, etc.
2. High mechanical strength, balanced ampere-turn distribution, and strong short-circuit resistance.
3. Low no-load and load loss.
4. Small size, reliable operation, long service life, and maintenance free.



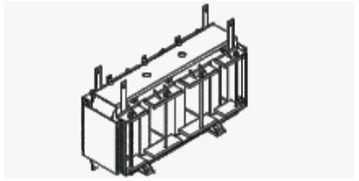
10KV Oil-immersed Transformer

SBH15 Series Amorphous Alloy Oil-immersed Transformer

- SBH15 series amorphous transformer is a low loss, high energy efficiency oil-immersed transformer. The iron core of this product is wound from amorphous alloy strip.
  Its no-load loss is more than 70%,lower than that of traditional transformers using silicon steel sheets as iron cores. It is a new generation of energy-saving, safe, green and environmentally friendly high-tech products.
- And it can replace ordinary oil-immersed transformers, and is mainly suitable for high-rise buildings, commercial centers, infrastructure, industrial and mining enterprises, power plants, etc.
- Standard：IEC60076-1, IEC60076-2, IEC60076-3, IEC60076-5, IEC60076-10.

**General**

# SBH15 Series Amorphous Alloy Oil-immersed Transformer



## Structure

- Iron core:
- The iron core is made of high-quality, high-performance, high-permeability silicon steel sheet, with low no-load loss.

- Other configuration:
- Equipped with and relief valve,signal thermometer, gas relay, ensures the safe operation of the transformer.

- Positioning structure:
- The product body has added a positioning structure to prevent displacement during transportation, and all fasteners are equipped with fastening nuts to ensure that the fasteners do not loosen during long-term operation of the product.

- Fully sealed structure:
- The product is a fully sealed structure. The vacuum oil filling process is used for the transformer packaging, which completely removes the moisture of the transformer, ensures the isolation of the transformer oil from the outside air, prevents the aging of the oil, and improves the operation reliability of the transformer.

- Oil tank:
- The transformer oil tank is composed of corrugated walls, The surface is sprayed with dust and the paint film is firm,With cooling function,The elasticity of corrugated heat sink can compensate for the volume change of transformer oil caused by temperature rise and fall, so there is no oil conservator in the fully sealed transformer, reducing the overall height of the transformer.





SBH15 Series Amorphous Alloy Oil-immersed Transformer

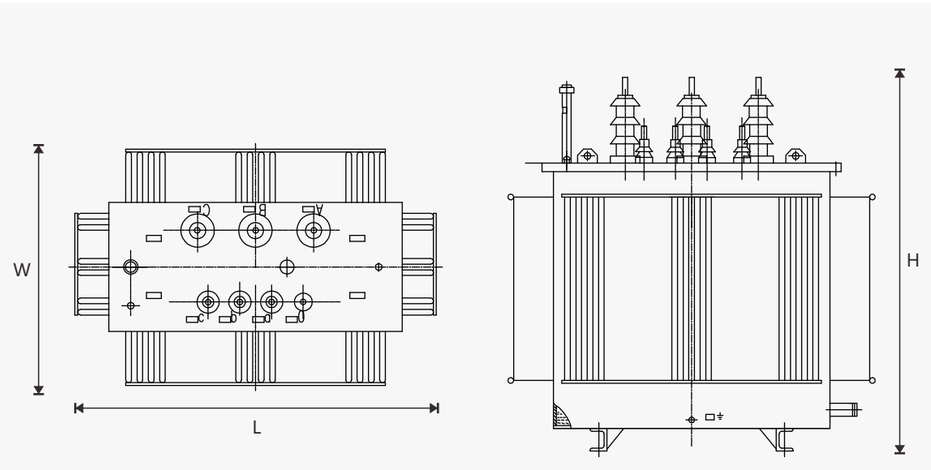
## SBH15 technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) | Dimensions | | | Gouge Horizontal and Vertical (a×b) | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±2×2.5<br>±5 | 0.4 | Dyn11 | 33 | 630/600 | 1.50 | 4.0 | 950 | 620 | 1040 | 400×550 | 680 |
| 50 | | | | | 43 | 910/870 | 1.20 | | 1060 | 7770 | 1070 | 400×660 | 890 |
| 63 | | | | | 50 | 1090/1040 | 1.10 | | 1240 | 920 | 1200 | 550×870 | 1030 |
| 80 | | | | | 60 | 1310/1250 | 1.00 | | 1240 | 920 | 1200 | 550×870 | 1170 |
| 100 | | | | | 75 | 1580/1500 | 0.90 | | 1280 | 920 | 1200 | 550×870 | 1230 |
| 125 | | | | | 85 | 1890/1800 | 0.80 | | 1320 | 940 | 1200 | 660×870 | 1400 |
| 160 | | | | | 100 | 2310/2200 | 0.60 | | 1340 | 940 | 1200 | 660×870 | 1470 |
| 200 | | | | | 120 | 2730/2600 | 0.60 | | 1340 | 940 | 1200 | 660×870 | 1540 |
| 250 | | | | | 140 | 3200/3050 | 0.60 | | 1370 | 1120 | 1260 | 660×1070 | 1720 |
| 315 | | | | | 170 | 3830/3650 | 0.50 | | 1370 | 1120 | 1330 | 660×1070 | 2000 |
| 400 | | | | | 200 | 4520/4300 | 0.50 | | 1520 | 1190 | 1360 | 820×1070 | 2400 |
| 500 | | | | | 240 | 5410/5150 | 0.50 | | 1890 | 1220 | 1470 | 820×1070 | 2950 |
| 630 | | | | | 320 | 6200 | 0.30 | 4.5 | 1960 | 1210 | 1550 | 820×1070 | 3500 |
| 800 | | | | | 380 | 7500 | 0.30 | | 2030 | 13110 | 1560 | 820×1070 | 4100 |
| 1000 | | | | | 450 | 10300 | 0.30 | | 2570 | 1350 | 1800 | 820×1070 | 5550 |
| 1250 | | | | | 530 | 12000 | 0.20 | | 2080 | 1540 | 1970 | 1070×1475 | 6215 |
| 1600 | | | | | 630 | 14500 | 0.20 | | 2560 | 1690 | 2380 | 1070×1475 | 6600 |
| 2000 | | | | | 750 | 18300 | 0.20 | 5.0 | 2660 | 1800 | 2400 | 1070×1475 | 6950 |
| 2500 | | | | | 900 | 21200 | 0.20 | | 2720 | 1800 | 2460 | 1070×1475 | 7260 |

Note 1 :for transformers with rated capacity of 500kVA and below,the load loss values above the diagonal line in the table are applicable to the Dyn11 or Yzn11 coupling group,and the load loss values below the diagonal line are applicable to the Yyn0 coupling group.

Note 2:when the average annual load rate of the transformer is belween 35% and 40%, the maximum operating eficiency can be obtained by using the loss value in the table.

## Overall and mounting dimensions(mm)




Note:The dimensions and weights provided are only for reference in design and selection.the final size and weight are subject to our prodect drawings.

## 10KV Oil-immersed Transformer

# S□-ML Series Three-dimensional Wound Core Oil-immersed Transformer

- S□-ML series three-dimensional wound core oil immersed transformer produced by the company is a new generation transiom product with more reasonable structure, lower operation noise, better performance and stronger reliabilty. The product breaks through the traditional plane structure and adopts three-phase symmetrical three-dimensional structure. The three cores are arranged in an equilateral triangle, and the length of the three magnetic circuits is consistent. It has the characteristics of high efficiency and low loss. It can save a lot of power consumption and operating costs,and has significant social benefits.It has been widely used in power plants,substations, industrial and mining enterprises, ports, airports and other places.
- Standard:IEC 60076-1, IEC60076-2, IEC 60076-3, IEC 60076-5, IEC 60076-10.

**General**



## 10KV Oil-immersed Transformer

# S□-ML Series Three-dimensional Wound Core Oil-immersed Transformer

### Standard

S □-M L - □/□

- High voltage, level (kV)
- Rated capacity(kva)
- Thee dimensional rolled iron core
- Fully sealed structure
- Functional level code (11,13,14)
- Three-phase

### Operating conditions

1. Ambient temperature:maximum temperature:+40℃, minimum temperature:-25℃.
2. Average temperature of the hottest month:+30℃, average temperature in the hottest year:+20℃.
3. Altitude not exceeding 1000m.
4. The waveform of the power supply voltage is similar to a sine wave.
5. The three-phase supply voltage should be approximately symmetrical.
6. The total harmonic content of the load current shall not exceed 5% of the rated current.
7. Where to use: indoors or outdoors.

### Features

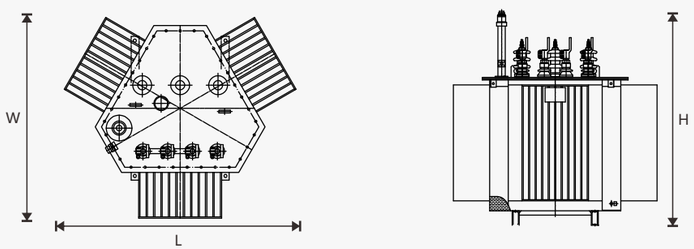
1. Optimized magnetic circuit design: the three-phase magnetic circuit length of three-dimensional wound core is completely equal, the sum of the three-phase magnetic circuit length is the shortest, the three-phase magnetic circuit is completely symmetrical, and the three-phase no-load current is completely balanced.
2. Low loss and remarkable energy-saving effect: the magnetization direcfion of three-dimensional coil core is completely consistent with the rolling direction of silicon steel sheet, the magnetic fux distribution is uniform throughout the magnetic circuit, and there is no obvious distorfioroft magnetic flux density in high resistance area and joint. On the premise of the same material, the process coefficient of core loss is significantly lower than that of laminated core, the core loss can be reduced by 10%-20%, and the no-load loss can be reduced by 25%-35%.
3. Low noise: as the three-dimensional core is made of slicon steel strip in a speciadl cor winding machine, there is no seam, so it will not produce the noise caused by the magnetic circuit discontinuity as the laminated core. Therefore, the voice of the product is greatly reduced, almost reaching the state of environmental protection mute, which is most suitable for indoor and residential use.
4. Strong overload capacity: the no-load loss and no-load current of this type of transformer are very small, so the calorific value of the product itself is vey low;in addition, the three-phase coils are arranged in three rectangle structure, forming a central natural airway-"exhaust chimney" between the coils. Because the temperature difference between the upper and lower yokes is 30-40 ℃, strong air convection is generated, and the cold air is replenished from below to the central channel, the heat radiates out from the inner slope of the upper yoke, and the heat generated by the transformer is quickly taken away in the natural circulation.
5. Compact structure and small occupation: the three-dimensional iron core makes the product compact in structure, the plane occupation area of the body is reduced by 10-15% compared with the traditional products, and the body height is reduced by 10-20%.

## S11-ML technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) | Sound power level (dB) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | | L | W | H | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0<br>Yzn11 | 100 | 630/600 | 0.30 | 4.0 | 48 | 945 | 815 | 920 | 290 |
| 50 | | | | | 130 | 910/870 | 0.24 | | 48 | 910 | 655 | 1030 | 390 |
| 63 | | | | | 150 | 1090/1040 | 0.23 | | 48 | 1005 | 870 | 995 | 395 |
| 80 | | | | | 180 | 1310/1250 | 0.22 | | 49 | 1025 | 705 | 970 | 455 |
| 100 | | | | | 200 | 1580/1500 | 0.21 | | 49 | 1095 | 750 | 990 | 515 |
| 125 | | | | | 240 | 1890/1800 | 0.20 | | 50 | 1105 | 955 | 1085 | 585 |
| 160 | | | | | 280 | 2310/2200 | 0.19 | | 50 | 940 | 830 | 1100 | 630 |
| 200 | | | | | 340 | 2730/2600 | 0.18 | | 52 | 1070 | 925 | 1050 | 745 |
| 250 | | | | | 400 | 3200/3050 | 0.17 | | 52 | 1160 | 1005 | 1150 | 915 |
| 315 | | | | | 480 | 3830/3650 | 0.16 | | 54 | 1130 | 980 | 1185 | 995 |
| 400 | | | | | 570 | 4520/4300 | 0.16 | | 54 | 1285 | 1110 | 1260 | 1205 |
| 500 | | | | | 680 | 5410/5150 | 0.16 | | 56 | 1300 | 1125 | 1335 | 1435 |
| 630 | | | | Dyn11<br>Yyn0 | 810 | 6200 | 0.15 | 4.5 | 56 | 1400 | 1215 | 1410 | 1790 |
| 800 | | | | | 980 | 7500 | 0.15 | | 58 | 1480 | 1285 | 1400 | 2080 |
| 1000 | | | | | 1150 | 10300 | 0.14 | | 58 | 1600 | 1295 | 1610 | 2500 |
| 1250 | | | | | 1360 | 12000 | 0.13 | | 60 | 1605 | 1330 | 1660 | 2985 |
| 1600 | | | | | 1640 | 14500 | 0.12 | | 60 | 1730 | 1485 | 1675 | 3745 |
| 2000 | | | | | 1940 | 18300 | 0.11 | 5.0 | 62 | 1850 | 1605 | 1795 | 4775 |
| 2500 | | | | | 2290 | 21200 | 0.11 | | 62 | 1910 | 1655 | 1835 | 5225 |

Note:the load loss values above the diagonal line in the table are applicable to the Dyn11 or Yzn11 coupling group,and the load loss values below the diagonal line are applicable to the Yyn0 coupling group.

| Capacity (KVA) | Installatuon dimensions | | | Low voltage line terminal | | | | | Low voltage 0 line terminal | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | E1 | E2 | D | Grapical | b | b1 | d | f | Grapical | b | b1 | d | f |
| 30 | 380 | 550 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 50 | 380 | 550 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 63 | 380 | 550 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 80 | 380 | 550 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 100 | 380 | 550 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 125 | 400 | 660 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 160 | 400 | 660 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 200 | 400 | 660 | 19 | 2 | 35 | 26 | 12.5 | 8 | 3 | 35 | 26 | 12.5 | 8 |
| 250 | 400 | 660 | 19 | 3 | 46 | 26 | 12.5 | 10 | 3 | 46 | 26 | 12.5 | 10 |
| 315 | 550 | 820 | 19 | 3 | 46 | 26 | 12.5 | 10 | 3 | 46 | 26 | 12.5 | 10 |
| 400 | 550 | 820 | 19 | 3 | 46 | 26 | 12.5 | 10 | 3 | 46 | 26 | 12.5 | 10 |
| 500 | 550 | 820 | 19 | 4 | 80 | 45 | 14.5 | 13 | 4 | 80 | 45 | 14.5 | 13 |
| 630 | 550 | 820 | 19 | 4 | 80 | 45 | 14.5 | 13 | 4 | 80 | 45 | 14.5 | 13 |
| 800 | 550 | 820 | 19 | 4 | 80 | 45 | 14.5 | 13 | 4 | 80 | 45 | 14.5 | 13 |
| 1000 | 550 | 1070 | 19 | 4 | 90 | 45 | 18 | 17 | 4 | 80 | 45 | 14.5 | 13 |
| 1250 | 550 | 1070 | 19 | 4 | 100 | 45 | 18 | 17 | 4 | 80 | 45 | 14.5 | 13 |
| 1600 | 550 | 1070 | 19 | 4 | 100 | 45 | 18 | 17 | 4 | 100 | 45 | 18 | 17 |
| 2000 | 600 | 1300 | 19 | 4 | 100 | 45 | 18 | 17 | 4 | 100 | 45 | 18 | 17 |
| 2500 | 600 | 1300 | 19 | 4 | 125 | 50 | 19 | 15 | 4 | 100 | 45 | 18 | 17 |




Note:The dimensions and weights provided are only for reference in design and selection.The final size and weight are subject to our prodect drawings.



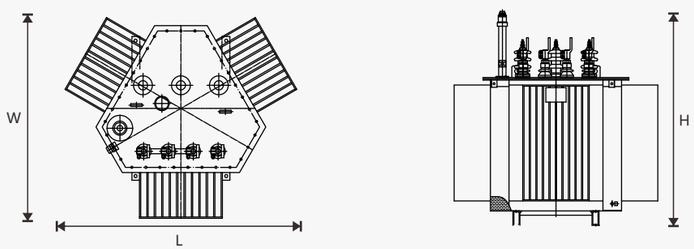
10KV Oil-immersed Transformer
S□-ML Series Three-dimensional Wound Core Oil-immersed Transformer

## S13-ML technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) | Sound power level (dB) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | | L | W | H | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0<br>Yzn11 | 80 | 630/660 | 0.30 | 4.0 | 48 | 695 | 650 | 890 | 257 |
| 50 | | | | | 100 | 910/870 | 0.24 | | 48 | 745 | 680 | 915 | 335 |
| 63 | | | | | 110 | 1090/1040 | 0.23 | | 48 | 945 | 820 | 1020 | 400 |
| 80 | | | | | 130 | 1310/1250 | 0.22 | | 49 | 1045 | 705 | 995 | 490 |
| 100 | | | | | 150 | 1580/1500 | 0.21 | | 49 | 890 | 795 | 1005 | 490 |
| 125 | | | | | 170 | 1890/1800 | 0.20 | | 50 | 905 | 815 | 1040 | 620 |
| 160 | | | | | 200 | 2310/2200 | 0.19 | | 50 | 1120 | 800 | 1105 | 775 |
| 200 | | | | | 240 | 2730/2600 | 0.18 | | 52 | 1075 | 930 | 1115 | 780 |
| 250 | | | | | 290 | 3200/3050 | 0.17 | | 52 | 1140 | 990 | 1220 | 985 |
| 315 | | | | | 340 | 3830/3650 | 0.16 | | 54 | 1145 | 990 | 1275 | 1150 |
| 400 | | | | | 410 | 4520/4300 | 0.16 | | 54 | 1260 | 945 | 1250 | 1250 |
| 500 | | | | | 480 | 5410/5150 | 0.16 | | 56 | 1320 | 1140 | 1325 | 1505 |
| 630 | | | | Dyn11<br>Yyn0 | 570 | 6200 | 0.15 | 4.5 | 56 | 1525 | 1320 | 1490 | 2400 |
| 800 | | | | | 700 | 7500 | 0.15 | | 58 | 1500 | 1300 | 1485 | 2470 |
| 1000 | | | | | 830 | 10300 | 0.14 | | 58 | 1585 | 1370 | 1540 | 2695 |
| 1250 | | | | | 970 | 12000 | 0.13 | | 60 | 1670 | 1445 | 1650 | 3245 |
| 1600 | | | | | 1170 | 14500 | 0.12 | | 60 | 1735 | 1505 | 1760 | 3995 |
| 2000 | | | | | 1550 | 18300 | 0.11 | 5.0 | 62 | 1890 | 1620 | 1720 | 4800 |
| 2500 | | | | | 1830 | 21200 | 0.11 | | 62 | 1940 | 1670 | 1860 | 5540 |

Note:the load loss values above the diagonal line in the table are applicable to the Dyn11 or Yzn11 coupling group,and the load loss values below the diagonal line are applicable to the Yyn0 coupling group.

| Capacity (KVA) | Installatuon dimensions | | | Low voltage line terminal | | | | | Low voltage 0 line terminal | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | E1 | E2 | D | Grapical | b | b1 | d | f | Grapical | b | b1 | d | f |
| 30 | 380 | 550 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 50 | 380 | 550 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 63 | 380 | 550 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 80 | 380 | 550 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 100 | 380 | 550 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 125 | 400 | 660 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 160 | 400 | 660 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 200 | 400 | 660 | 19 | 2 | 35 | 26 | 12.5 | 8 | 3 | 35 | 26 | 12.5 | 8 |
| 250 | 400 | 660 | 19 | 3 | 46 | 26 | 12.5 | 10 | 3 | 46 | 26 | 12.5 | 10 |
| 315 | 550 | 820 | 19 | 3 | 46 | 26 | 12.5 | 10 | 3 | 46 | 26 | 12.5 | 10 |
| 400 | 550 | 820 | 19 | 3 | 46 | 26 | 12.5 | 10 | 3 | 46 | 26 | 12.5 | 10 |
| 500 | 550 | 820 | 19 | 4 | 80 | 45 | 14.5 | 13 | 4 | 80 | 45 | 14.5 | 13 |
| 630 | 550 | 820 | 19 | 4 | 80 | 45 | 14.5 | 13 | 4 | 80 | 45 | 14.5 | 13 |
| 800 | 550 | 820 | 19 | 4 | 80 | 45 | 14.5 | 13 | 4 | 80 | 45 | 14.5 | 13 |
| 1000 | 550 | 1070 | 19 | 4 | 90 | 45 | 18 | 17 | 4 | 80 | 45 | 14.5 | 13 |
| 1250 | 550 | 1070 | 19 | 4 | 100 | 45 | 18 | 17 | 4 | 80 | 45 | 14.5 | 13 |
| 1600 | 550 | 1070 | 19 | 4 | 100 | 45 | 18 | 17 | 4 | 100 | 45 | 18 | 17 |
| 2000 | 600 | 1300 | 19 | 4 | 100 | 45 | 18 | 17 | 4 | 100 | 45 | 18 | 17 |
| 2500 | 600 | 1300 | 19 | 4 | 125 | 50 | 19 | 15 | 4 | 100 | 45 | 18 | 17 |




Note:The dimensions and weights provided are only for reference in design and selection.The final size and weight are subject to our prodect drawings.

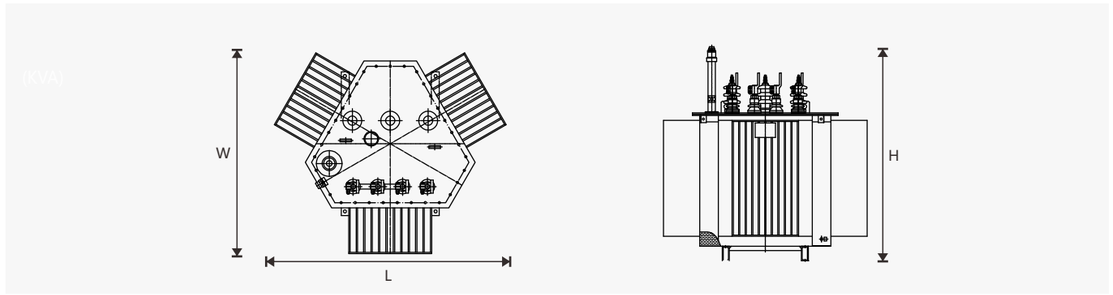
## S14-ML technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) | Sound power level (dB) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | | L | W | H | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0<br>Yzn11 | 80 | 505/480 | 0.30 | 4.0 | 48 | 695 | 650 | 890 | 257 |
| 50 | | | | | 100 | 730/695 | 0.24 | | 48 | 745 | 680 | 915 | 335 |
| 63 | | | | | 110 | 870/830 | 0.23 | | 48 | 945 | 820 | 1020 | 400 |
| 80 | | | | | 130 | 1050/1000 | 0.22 | | 49 | 1045 | 705 | 995 | 490 |
| 100 | | | | | 150 | 1260/1200 | 0.21 | | 49 | 890 | 795 | 1005 | 490 |
| 125 | | | | | 170 | 1510/1440 | 0.20 | | 50 | 905 | 815 | 1040 | 620 |
| 160 | | | | | 200 | 1850/1760 | 0.19 | | 50 | 1120 | 800 | 1105 | 775 |
| 200 | | | | | 240 | 2180/2080 | 0.18 | | 52 | 1075 | 930 | 1115 | 780 |
| 250 | | | | | 290 | 2560/2440 | 0.17 | | 52 | 1140 | 990 | 1220 | 985 |
| 315 | | | | | 340 | 3060/2920 | 0.16 | | 54 | 1145 | 990 | 1275 | 1150 |
| 400 | | | | | 410 | 3610/3440 | 0.16 | | 54 | 1260 | 945 | 1250 | 1250 |
| 500 | | | | | 480 | 4330/4120 | 0.16 | | 56 | 1320 | 1140 | 1325 | 1505 |
| 630 | | | | Dyn11<br>Yyn0 | 570 | 4960 | 0.15 | 4.5 | 56 | 1525 | 1320 | 1490 | 2400 |
| 800 | | | | | 700 | 6000 | 0.15 | | 58 | 1500 | 1300 | 1485 | 2470 |
| 1000 | | | | | 830 | 8240 | 0.14 | | 58 | 1585 | 1370 | 1540 | 2695 |
| 1250 | | | | | 970 | 9600 | 0.13 | | 60 | 1670 | 1445 | 1650 | 3245 |
| 1600 | | | | | 1170 | 11600 | 0.12 | | 60 | 1735 | 1505 | 1760 | 3995 |
| 2000 | | | | | 1550 | 14600 | 0.11 | 5.0 | 62 | 1890 | 1620 | 1720 | 4800 |
| 2500 | | | | | 1830 | 16900 | 0.11 | | 62 | 1940 | 1670 | 1860 | 5540 |

Note:the load loss values above the diagonal line in the table are applicable to the Dyn11 or Yzn11 coupling group,and the load loss

| Capacity | Installatuon dimensions | | | Low voltage line terminal | | | | | Low voltage 0 line terminal | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | E1 | E2 | D | Grapical | b | b1 | d | f | Grapical | b | b1 | d | f |
| 30 | 380 | 550 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 50 | 380 | 550 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 63 | 380 | 550 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 80 | 380 | 550 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 100 | 380 | 550 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 125 | 400 | 660 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 160 | 400 | 660 | 19 | 2 | 35 | 26 | 12.5 | 8 | 2 | 35 | 26 | 12.5 | 8 |
| 200 | 400 | 660 | 19 | 2 | 35 | 26 | 12.5 | 8 | 3 | 35 | 26 | 12.5 | 8 |
| 250 | 400 | 660 | 19 | 3 | 46 | 26 | 12.5 | 10 | 3 | 56 | 26 | 12.5 | 10 |
| 315 | 550 | 820 | 19 | 3 | 46 | 26 | 12.5 | 10 | 3 | 56 | 26 | 12.5 | 10 |
| 400 | 550 | 820 | 19 | 3 | 46 | 26 | 12.5 | 10 | 3 | 56 | 26 | 12.5 | 10 |
| 500 | 550 | 820 | 19 | 4 | 80 | 45 | 14.5 | 13 | 4 | 80 | 45 | 14.5 | 13 |
| 630 | 550 | 820 | 19 | 4 | 80 | 45 | 14.5 | 13 | 4 | 80 | 45 | 14.5 | 13 |
| 800 | 550 | 820 | 19 | 4 | 80 | 45 | 14.5 | 13 | 4 | 80 | 45 | 14.5 | 13 |
| 1000 | 550 | 1070 | 19 | 4 | 90 | 45 | 18 | 17 | 4 | 80 | 45 | 14.5 | 13 |
| 1250 | 550 | 1070 | 19 | 4 | 100 | 45 | 18 | 17 | 4 | 80 | 45 | 14.5 | 13 |
| 1600 | 550 | 1070 | 19 | 4 | 100 | 45 | 18 | 17 | 4 | 100 | 45 | 18 | 17 |
| 2000 | 600 | 1300 | 19 | 4 | 100 | 45 | 18 | 17 | 4 | 100 | 45 | 18 | 17 |
| 2500 | 600 | 1300 | 19 | 4 | 125 | 50 | 19 | 15 | 4 | 100 | 45 | 18 | 17 |

values below the diagonal line are applicable to the Yyn0 coupling group.




Note:The dimensions and weights provided are only for reference in design and selection.The final size and weight are subject to our prodect drawings.





10KV Oil-immersed Transformer

## S□-MD Series Buried Oil-immersed Transformer

- S□-MD series three-phase buried oil immersed transformer produced by the company is a kind of compact power distribution equipment which installs transformer, high-voltage load switch, fuse for protection in the same oil tank. The high-voltage and low-voltage incoming and outgoing lines adopt fully insulted, fully sealed and fully shielded waterproof joints, which do not occupy the surface space, can be immersed in water for a certain period of fime, and are maintenance free. It can be widely used in densely populted central city, streets, highways, bridges, tunnels, parking lots, airports,ports, tourist attractions and other power distribution systems,especially for places with strict requirements on height and floor area.
- In the product design, the special situation of ventilation and heat dissipation is fully considered, and the design of low loss and low temperature rise is adopted.According to the distribution mode, it can be divided into ring network distribution type and terminal distribution type to meet the different needs of users.
- Standard: IEC60076-1, IEC60076-2, EC 60076-3, IEC 60076-10.

**General**

# S□-MD Series Buried Oil-immersed Transformer

## Standard

S □-M D-H - □/□

- Rated voltage on high side
- Rated capacity(kva)
- (H Ring maintypeor Z Terminal type)
- Buried
- Fully sealed structure
- Performance leve
- Three phase

## Operating conditions

1. The maximum operating ambient temperature is+50℃ under natural ventilation,+40℃ under forced ventilation,+40℃ whenthe underground water depth does not exceed 1.5m,+45℃ when th underground water depth exceeds 1.5m.
2. Altitude:No more than 1000m.
3. The power supply voltage's wave is similar to sine wave.
4. Three-phase power supply voltage is approximately symmetrical.
5. The total harmonic content of load current shall not exceed 5% of rated current.

## Features

1. The product can be directly immersed in water or buried in underground tunnel, with protection degree of P68.
2. High corrosion resistance stainless steel box, safe and reliable, maintenance free design.
3. All components are installed on the box shell to facilitate inspection and maintenance. High voltage side with back-up and plug-in fuse, to give the transformer more secure protection.Load switch can be terminal type or ring network type, suitable for a variety of power supply systems.
4. The core made of high permeability silicon steel sheet or amorphous alloy material has lower no-load loss.
5. The high and low voltage incoming and outgoing lines adopt fully insulated, fully sealed and fully shielded waterproof joints, which makes the operation safer.
6. It adopts buried transformer and billboard type low-votage structure, which conforms to the urban ecological design concept, beautifies the environment and occupies a small area.

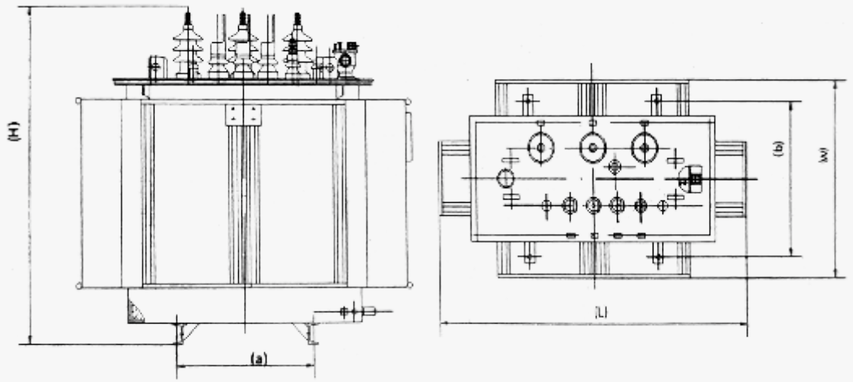


10KV Oil-immersed Transformer

# S□-MD Series Buried Oil-immersed Transformer

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) | Dimensions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H |
| 30 | 6.3<br>10 | ±2×2.5 | 0.4 | Dyn11<br>Yyn0 | 100 | 600 | 1.0 | 4.0 | 1025 | 625 | 995 |
| 50 | | | | | 135 | 870 | 0.9 | | 1075 | 640 | 1025 |
| 63 | | | | | 155 | 1040 | 0.9 | | 1125 | 665 | 1065 |
| 80 | | | | | 175 | 1250 | 0.8 | | 1150 | 675 | 1095 |
| 100 | | | | | 205 | 1500 | 0.8 | | 1180 | 695 | 1100 |
| 125 | | | | | 240 | 1750 | 0.7 | | 1200 | 705 | 1110 |
| 160 | | | | | 275 | 2100 | 0.7 | | 1235 | 725 | 1210 |
| 200 | | | | | 330 | 2500 | 0.7 | | 1295 | 745 | 1240 |
| 250 | | | | | 400 | 2950 | 0.7 | | 1365 | 755 | 1260 |
| 315 | | | | | 475 | 3500 | 0.7 | | 1335 | 755 | 1320 |
| 400 | | | | | 570 | 4200 | 0.7 | | 1395 | 780 | 1360 |
| 500 | | | | | 680 | 5000 | 0.7 | | 1465 | 825 | 1440 |
| 630 | | | | | 805 | 6000 | 0.6 | 4.5 | 1565 | 845 | 1460 |
| 800 | | | | | 980 | 7200 | 0.6 | | 1685 | 925 | 1560 |
| 1000 | | | | | 1155 | 10000 | 0.6 | | 1855 | 1095 | 1670 |
| 1250 | | | | | 1365 | 11800 | 0.6 | | 1925 | 1195 | 1700 |
| 1600 | | | | | 1645 | 14000 | 0.6 | | 1995 | 1235 | 1790 |

## Overall and mounting dimensions(mm)




Note:The dimensions and weights provided are only for reference in design and selection.The final size and weight are subject to our prodect drawings.

## 10KV Oil-immersed Transformer

# KS9 Three-phase Mining Oil-immersed Transformer

- KS9 series oil immersed mining transformer is suitable for central transformer substation, mining stop, general wind dypass and main wind dypass which has gas but has not explosive ganger. Moreover, it is suitable for the moisture environment.
- The iron cores of these series transformers adopt silicon steel slice, which is made of excellent low loss crystal granule. They have the advantages such as low no-load loss, small no-load current and low noise.

**General**



10KV Oil-immersed Transformer

KS9 Three-phase Mining Oil-immersed Transformer

## Standard

K S 9 - □ / □

- Rated voltage rating (kV)
- Rated capacity (kVA)
- Property level code
- Three-phase
- Mining use

## Operating conditions

1. Installation height do not exceed altitude of 1000m (for general), please point it out if it has special demand.
2. Ambient relative temperature no exceed 40℃.
3. Ambient relative humidity no exceed 95% (25℃).
4. No violent jounce and the vertical pitch not exceeding 15 degree.

## KS9 series of mining common type non-excitation tap-changing not exceeding distribution transformer technical data

| Rated capacity (kVA) | Voltage (kV) | Connection | Impedance voltage (%) | No-load loss(W) | Load loss(W) | No-load current (%) | Weight (t) | | | Boundary dimension | | | Gauge vertical/ horizontal (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machine weight | Oil weight | Overall weight | L | B | H | |
| 50 | H.V: 10 6 L.V: 0.69 0.4 | Yy0 Yd11 | 4.0 | 170 | 870 | 2.0 | 0.248 | 0.110 | 0.410 | 1240 | 830 | 1050 | 660/630 |
| 80 | | | | 250 | 1250 | 1.8 | 0.335 | 0.130 | 0.570 | 1260 | 830 | 1050 | |
| 100 | | | | 290 | 1500 | 1.6 | 0.360 | 0.140 | 0.610 | 1280 | 850 | 1150 | |
| 160 | | | | 400 | 2200 | 1.4 | 0.505 | 0.190 | 0.790 | 1355 | 860 | 1200 | |
| 200 | | | | 480 | 2600 | 1.3 | 0.585 | 0.210 | 1.050 | 1380 | 860 | 1250 | |
| 250 | | | | 560 | 3050 | 1.2 | 0.715 | 0.235 | 1.150 | 1440 | 890 | 1300 | |
| 315 | | | | 670 | 3650 | 1.1 | 0.820 | 0.255 | 1.270 | 1635 | 1020 | 1350 | |
| 400 | | | | 800 | 4300 | 1.0 | 0.980 | 0.290 | 1.580 | 1720 | 1070 | 1450 | |
| 500 | | | | 960 | 5100 | 1.0 | 1.155 | 0.335 | 1.790 | 1760 | 1080 | 1580 | 600/790 |
| 630 | | | 4.5 | 1200 | 6200 | 0.9 | 1.430 | 0.440 | 2.200 | 1890 | 1120 | 1600 | |
| 800 | | | | 1400 | 7500 | 0.9 | 1.860 | 0.530 | 2.850 | 1970 | 1170 | 1700 | |
| 1000 | | | | 1700 | 10300 | 0.7 | 2.035 | 0.610 | 3.430 | 2500 | 1300 | 1700 | |

Note:The dimensions and weights provided are only for reference in design and selection.The final size and weight are subject to our prodect drawings.

# 35KV Oil-immersed Transformer

CNC ELECTRIC





## 35KV Oil-immersed Transformer

## S□-35KV Series Non-excitation Voltage Regulating Transformer

- This kind of product is applied to power system of three-phase, 50Hz as well as 35kV and below,is the main transformer equipment of medium and small-sized transformer substation, supplies power distribution, power and illumination for the industry and agriculture.
- The company introduces in domestic and overseas advanced technique, adopts the latest material and optimizes design, which enables the product structure more reasonable, and greatly improves the product electric strength, mechanical strength and heat-sinking capability.

**General**

# S□-35KV Series Non-excitation Voltage Regulating Transformer

## Standard

S □ - □ / 35

- Primary side voltage of the product (kV)
- Rated capacity of the product (kVA)
- Code of performance level
  divided into series 9,10,11,13 according to national standard
- Phase number: three-phase-S

## Operating conditions

1. Altitude: ≤1000m.
2. Ambient temperature: the highest temperature +40℃,the highest monthly average temperature +30℃; The highest yearly average temperature +20℃.
3. Installation environment: inclination of installation place < 3°, no obvious dirt and corrosive or flammable gas.

## Features

1. Iron core:
   The iron core is made of high-quality cold-rolled silicon steel sheet, and adopts various forms such as fully biased multi-stage joints, without punch holes, wind cores, etc., and clamp them with stainless steel stays and epoxy glass tapes.
2. Coil:
   The conductor is made of high-quality oxygen-free copper enameled wire or paper-wrapped flat copper wire, and the coil is made of drum type, spiral type, improved spiral type, continuous type, staggered type and other types.
3. Oil tank:
   The oil tank is barrel type or shielded type, and the heat dissipation element adopts corrugated plate or electroplating radiator.The transformer is not equipped with a trolley, but a base that conforms to the national standard gauge is welded on the bottom of the box for your convenience.
4. Safety protection device:
   According to national standards and user requirements, the transformer can be equipped with the following safety protection devices:pressure relief valve, gas relay, signal thermometer, oil filter, oil conservator, oil sample valve, etc.





# S□-35KV Series Non-excitation Voltage Regulating ransformer

## S9-50~1600/35KV technical data

| Rated capacity (kVA) | Voltage combination | | | Connection symbol | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | H.V (kV) | Tapping range of high voltage | L.V (kV) | | | | | |
| 50 | 35 | ±5% | 0.4 | Dyn11 Yyn0 | 210 | 1270/1210 | 2.0 | 6.5 |
| 100 | | | | | 290 | 2120/2020 | 1.8 | |
| 125 | | | | | 340 | 2050/2380 | 1.7 | |
| 160 | | | | | 360 | 2970/2830 | 1.6 | |
| 200 | | | | | 430 | 3500/3330 | 1.5 | |
| 250 | | | | | 510 | 4160/3960 | 1.4 | |
| 315 | | | | | 610 | 5010/4770 | 1.4 | |
| 400 | | | | | 730 | 6050/5760 | 1.3 | |
| 500 | | | | | 860 | 7280/6930 | 1.2 | |
| 630 | | | | | 1040 | 8280 | 1.1 | |
| 800 | | | | | 1230 | 9900 | 1.0 | |
| 1000 | | | | | 1440 | 12150 | 1.0 | |
| 1250 | | | | | 1760 | 14670 | 0.9 | |
| 1600 | | | | | 2120 | 17550 | 0.8 | |

Note:The table above the load loss in the value of a slash aply to Dynll or znl1 coecin group, slash the botom of the load os values for Yyn0 connection group

## S9-800~31500/35KV technical data

| Rated capacity (kVA) | Voltage combination | | | Connection symbol | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | H.V (kV) | Tapping range of high voltage | L.V (kV) | | | | | |
| 800 | 35 | ±5% ±2×2.5% | 3.15 3.3 6.3 6.6 10.5 | Yd11 | 1250 | 9900 | 1.05 | 6.5 |
| 1000 | | | | | 1480 | 12150 | 1.00 | |
| 1250 | | | | | 1760 | 14670 | 0.90 | |
| 1600 | | | | | 2130 | 17550 | 0.85 | |
| 2000 | | | | | 2610 | 19350 | 0.75 | |
| 2500 | | | | | 3150 | 20700 | 0.75 | |
| 3150 | 38.5 35 | | | | 3870 | 24300 | 0.70 | 7.0 |
| 4000 | | | | | 4640 | 28800 | 0.70 | |
| 5000 | | | | | 5490 | 33030 | 0.60 | |
| 6300 | | | | | 6570 | 36900 | 0.60 | 8.0 |
| 8000 | | ±2×2.5% | | YNd11 | 9000 | 40500 | 0.55 | |
| 10000 | | | | | 10600 | 47700 | 0.55 | |
| 12500 | | | | | 12600 | 56700 | 0.50 | |
| 16000 | | | | | 15.3 | 69300 | 0.50 | |
| 20000 | | | | | 18090 | 84000 | 0.50 | |
| 25000 | | | | | 21510 | 99000 | 0.40 | 10.0 |
| 31500 | | | | | 25650 | 119000 | 0.40 | |

Note :outline dimension is designed according to requirements

# S□-35KV Series Non-excitation Voltage Regulating Transformer

## S11-50~1600/35KV technical data

| Rated capacity (kVA) | Voltage combination | | | Connection symbol | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | H.V (kV) | Tapping range of high voltage | L.V (kV) | | | | | |
| 50 | 35 | ±5 | 0.4 | Dyn11 Yyn0 | 170 | 1210/1150 | 2.00 | 6.5 |
| 100 | | | | | 230 | 2010/1920 | 1.80 | |
| 125 | | | | | 270 | 2380/2260 | 1.70 | |
| 160 | | | | | 290 | 2820/2690 | 1.60 | |
| 200 | | | | | 340 | 3330/3160 | 1.50 | |
| 250 | | | | | 410 | 3950/3760 | 1.40 | |
| 315 | | | | | 490 | 4760/5450 | 1.40 | |
| 400 | | | | | 580 | 5750/5470 | 1.30 | |
| 500 | | | | | 690 | 6920/6580 | 1.20 | |
| 630 | | | | | 830 | 7870 | 1.10 | |
| 800 | | | | | 980 | 9410 | 1.00 | |
| 1000 | | | | | 1150 | 11540 | 1.00 | |
| 1250 | | | | | 1410 | 13940 | 0.90 | |
| 1600 | | | | | 7000 | 16670 | 0.80 | |

Note:the load loss values above the diagonal line in the table are applicable to the Dyn11 coupling group,and the load loss values below the diagonal line are applicable to the Yyn0 coupling group.

## S11-630~31500/35KV technical data

| Rated capacity (kVA) | Voltage combination | | | Connection symbol | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | H.V (kV) | Tapping range of high voltage | L.V (kV) | | | | | |
| 630 | 35 | ±5 | 3.15<br>3.3<br>6.5<br>6.6<br>10.5 | Yd11 | 830 | 7780 | 1.10 | 6.5 |
| 800 | | | | | 980 | 9410 | 1.00 | |
| 1000 | | | | | 1150 | 11540 | 1.00 | |
| 1250 | | | | | 1410 | 13940 | 0.90 | |
| 1600 | | | | | 1700 | 16670 | 0.90 | |
| 2000 | | | | | 2180 | 18380 | 0.70 | |
| 2500 | | | | | 2560 | 19670 | 0.60 | |
| 3150 | 35<br>~38.5 | | | | 3040 | 23090 | 0.56 | 7.0 |
| 4000 | | | | | 3620 | 27360 | 0.56 | |
| 5000 | | | | | 4320 | 31380 | 0.48 | |
| 6300 | | | | | 5250 | 35060 | 0.48 | 8.0 |
| 8000 | | ±2×2.5 | | Ynd11 | 7200 | 38480 | 0.42 | |
| 10000 | | | | | 8700 | 45320 | 0.42 | |
| 12500 | | | | | 10080 | 53870 | 0.40 | |
| 16000 | | | | | 12160 | 65840 | 0.40 | |
| 20000 | | | | | 14400 | 79520 | 0.40 | |
| 25000 | | | | | 17020 | 94050 | 0.32 | 10.0 |
| 31500 | | | | | 20220 | 112860 | 0.32 | |

Note :outline dimension is designed according to requirements





# S□-35KV Series Non-excitation Voltage Regulating Transformer

## S13-50~2500/35KV technical data

| Rated capacity (kVA) | Voltage combination | | | Connection symbol | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | H.V (kV) | Tapping range of high voltage | L.V (kV) | | | | | |
| 50 | 35<br>38.5 | ±2×2.5<br>±5 | 0.4 | Dyn11 Yyn0 | 160 | 1200/1140 | 1.30 | 6.5 |
| 100 | | | | | 230 | 2010/1910 | 1.10 | |
| 125 | | | | | 270 | 2370/2260 | 1.10 | |
| 160 | | | | | 280 | 2820/2680 | 1.00 | |
| 200 | | | | | 310 | 3320/3160 | 1.00 | |
| 250 | | | | | 400 | 3950/3760 | 0.95 | |
| 315 | | | | | 480 | 4750/4530 | 0.95 | |
| 400 | | | | | 580 | 5740/5470 | 0.85 | |
| 500 | | | | | 680 | 6910/6580 | 0.85 | |
| 630 | | | | | 830 | 7860 | 0.65 | |
| 800 | | | | | 980 | 9400 | 0.65 | |
| 1000 | | | | | 1150 | 11500 | 0.65 | |
| 1250 | | | | | 1400 | 13900 | 0.60 | |
| 1600 | | | | | 1690 | 16600 | 0.60 | |
| 2000 | | | | | 1990 | 19700 | 0.55 | |
| 2500 | | | | | 2360 | 23200 | 0.55 | |

Note:the load loss values above the diagonal line in the table are applicable to the Dyn11 coupling group,and the load loss values below the diagonal line are applicable to the Yyn0 coupling group.

## S13-630~31500/35KV technical data

| Rated capacity (kVA) | Voltage combination | | | Connection symbol | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | H.V (kV) | Tapping range of high voltage | L.V (kV) | | | | | |
| 630 | 35 | ±2×2.5<br>±5 | 3.15<br>3.3<br>6.3<br>6.6<br>10.5 | Yd11 | 830 | 7860 | 0.65 | 6.5 |
| 800 | | | | | 980 | 9400 | 0.65 | |
| 1000 | | | | | 1150 | 11500 | 0.65 | |
| 1250 | | | | | 1400 | 13900 | 0.55 | |
| 1600 | | | | | 1690 | 16600 | 0.45 | |
| 2000 | | | | | 2170 | 18300 | 0.45 | |
| 2500 | | | | | 2560 | 19600 | 0.45 | |
| 3150 | 35<br>~38.5 | | | | 3040 | 23000 | 0.45 | 7.0 |
| 4000 | | | | | 3610 | 27300 | 0.45 | |
| 5000 | | | | | 4320 | 31300 | 0.45 | |
| 6300 | | | | | 5240 | 35000 | 0.45 | 8.0 |
| 8000 | | ±2×2.5 | | Ynd11 | 7200 | 38100 | 0.35 | |
| 10000 | | | | | 8700 | 45300 | 0.35 | |
| 12500 | | | | | 10000 | 53800 | 0.30 | |
| 16000 | | | | | 12100 | 65800 | 0.30 | |
| 20000 | | | | | 14400 | 79500 | 0.30 | |
| 25000 | | | | | 17000 | 94000 | 0.25 | 10.0 |
| 31500 | | | | | 20200 | 112000 | 0.25 | |

Note :outline dimension is designed according to requirements

## 35KV Oil-immersed Transformer

# SZ□-35KV Series On-load Voltage Regulating Transformer

- This kind of product is applied to power system of three-phase, 50Hz as well as 35kV and below,is the main transformer equipment of medium and small-sized transformer substation, supplies power distribution, power and illumination for the industry and agriculture.
- The company introduces in domestic and overseas advanced technique, adopts the latest material and optimizes design, which enables the product structure more reasonable, and greatly improves the product electric strength, mechanical strength and heat-sinking capability.

**General**



35KV Oil-immersed Transformer

SZ□-35KV Series On-load Voltage Regulating Transformer

## Standard

S Z □ - □/35

- High voltage level(kV)
- Rated capacityl(kVA)
- Characteristic code(9,10,11,13)
- On load voltage regulation
- Three-phase

## Operating conditions

1. Altitude: ≤1000m.
2. Ambient temperature: the highest temperature +40℃, the highest monthly average temperature +30℃; The highest yearly average temperature +20℃.
3. Installation environment: inclination of installation place < 3°, no obvious dirt and corrosive or flammable gas.

## Features

1. Iron core:
   The iron core is made of high-quality cold-rolled silicon steel sheet, and adopts various forms such as fully biased multi-stage j oints, without punch holes, wind cores, etc., and clamp them with stainless steel stays and epoxy glass tapes.
2. Coil:
   The conductor is made of high-quality oxygen-free copper enameled wire or paper-wrapped flat copper wire, and the coil is made of drum type, spiral type, improved spiral type, continuous type, staggered type and other types.
3. Oil tank:
   The oil tank is barrel type or shielded type, and the heat dissipation element adopts corrugated plate or electroplating radiator.The transformer is not equipped with a trolley, but a base that conforms to the national standard gauge is welded on the bottom of the box for your convenience.
4. Safety protection device:
   According to national standards and user requirements, the transformer can be equipped with the following safety protection devices:pressure relief valve, gas relay, signal thermometer, oil filter, oil conservator, oil sample valve, etc.

# SZ□-35KV Series On-load Voltage Regulating Transformer

## SZ9-35KV technical data

| Rated capacity (kVA) | Voltage combination | | | Connected group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | High voltage(kv) | Tapping range | Low voltage | | | | | |
| 2000 | 35 | ±3×2.5 | 6.3<br>10.5 | Yd11 | 2900 | 20200 | 0.90 | 6.5 |
| 2500 | | | | | 3400 | 22700 | 0.90 | |
| 3150 | 35~38.5 | | | | 4100 | 26000 | 0.80 | 7.0 |
| 4000 | | | | | 4900 | 30700 | 0.80 | |
| 5000 | | | | | 5800 | 36000 | 0.75 | |
| 6300 | | | | | 7000 | 38700 | 0.75 | 8.0 |
| 8000 | | | 6.3<br>6.6<br>10.5 | Ynd11 | 9900 | 43000 | 0.70 | |
| 10000 | | | | | 11600 | 50600 | 0.70 | |
| 12500 | | | | | 13800 | 59900 | 0.70 | |
| 16000 | | | | | 16200 | 73000 | 0.70 | |
| 20000 | | | | | 19500 | 84600 | 0.70 | |
| 25000 | | | | | 22500 | 100200 | 0.70 | 10.0 |
| 31500 | | | | | 26400 | 124000 | 0.60 | |

## SZ11-35KV technical data

| Rated capacity (kVA) | Voltage combination | | | Connected group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | High voltage(kv) | Tapping range | Low voltage | | | | | |
| 2000 | 35 | ±3×2.5 | 6.3<br>10.5 | Yd11 | 2300 | 19240 | 0.80 | 6.5 |
| 2500 | | | | | 2720 | 20640 | 0.80 | |
| 3150 | 35~38.5 | | | | 3230 | 24710 | 0.72 | 7.0 |
| 4000 | | | | | 3870 | 29160 | 0.72 | |
| 5000 | | | | | 4640 | 31200 | 0.68 | |
| 6300 | | | | | 5630 | 36770 | 0.68 | 7.5 |
| 8000 | | | 6.3<br>6.6<br>10.5 | Ynd11 | 7870 | 40610 | 0.60 | |
| 10000 | | | | | 9280 | 48050 | 0.60 | |
| 12500 | | | | | 10940 | 56860 | 0.56 | 8.0 |
| 16000 | | | | | 13170 | 70320 | 0.54 | |
| 20000 | | | | | 15570 | 82780 | 0.54 | |



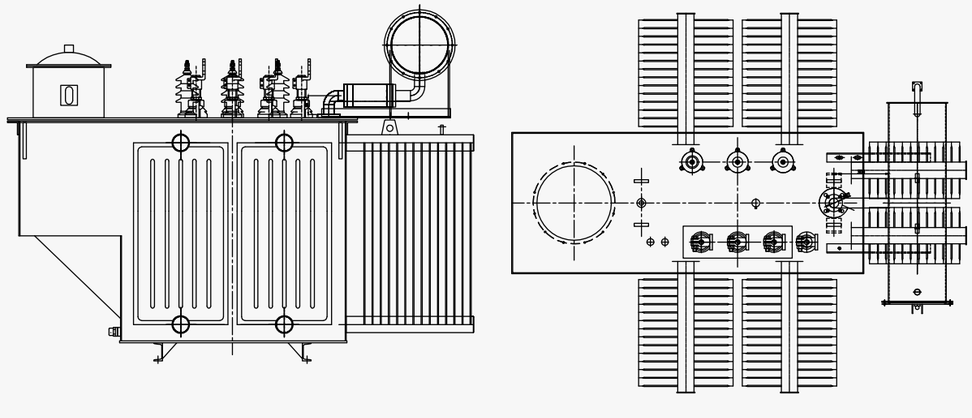


# SZ□-35KV Series On-load Voltage Regulating Transformer

## SZ13-35KV technical data

| Rated capacity (kVA) | Voltage combination | | | Connected group label | No-load loss(W) | Load loss(W) | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | High voltage(kv) | Tapping range | Low voltage | | | | | |
| 2000 | 35 | ±3×2.5 | 6.3<br>10.5 | Yd11 | 2300 | 19200 | 0.50 | 6.5 |
| 2500 | | | | | 2720 | 20600 | 0.50 | |
| 3150 | 35~38.5 | | | | 3230 | 24700 | 0.50 | 7.0 |
| 4000 | | | | | 3870 | 29100 | 0.50 | |
| 5000 | | | | | 4640 | 34200 | 0.50 | |
| 6300 | | | | | 5630 | 36700 | 0.50 | 8.0 |
| 8000 | | | 6.3<br>6.6<br>10.5 | Ynd11 | 7870 | 40600 | 0.40 | |
| 10000 | | | | | 9280 | 48000 | 0.40 | |
| 12500 | | | | | 1090 | 56800 | 0.35 | |
| 16000 | | | | | 1310 | 70300 | 0.35 | |
| 20000 | | | | | 1550 | 82100 | 0.35 | |
| 25000 | | | | | 1830 | 97800 | 0.30 | 10.0 |
| 31500 | | | | | 2180 | 716000 | 0.30 | |

## Overall and mounting dimensions(mm)



Note :outline dimension is designed according to requirements.

## Single Phase Oil-immersed Transformer

# D11 Single Phase Overhead Transformer

The CNC overhead transformer may be used alone for the supply of a single phase load or as one of three units in a bank for the supply of a three phase load. The unit may be direct mounted to a wooden or concrete pole, or cluster mounted on a pole for three phase use. Our single phase overhead distribution transformer is commonly used in various places including rural areas, remote regions and scattered villages to provide high quality power supply for daily lighting, agricultural production and industrial plants. Aside from these, it is also suitable for the energy saving projects for railway and urban grid.

**General**




Single Phase Oil-immersed Transformer

# D11 Single Phase Overhead Transformer

## Standard

D 11 - □/□

- High voltage level(kV)
- Rated capacityl(kVA)
- Characteristic code
- Single Phase

## Operating conditions

1. Air temperature: Maximum temperature: +40℃; Minimum temperature:-25℃
2. Humidity: Monthly average humidity 95%; Daily average humidity 90% .
3. Altitude above sea level: Maximum installation altitude: 2000m.
4. Ambient air not apparently polluted by corrosive and flammable gas, vapor etc.
5. No frequent violent shake
6. Note: * Beyond those services

## Features

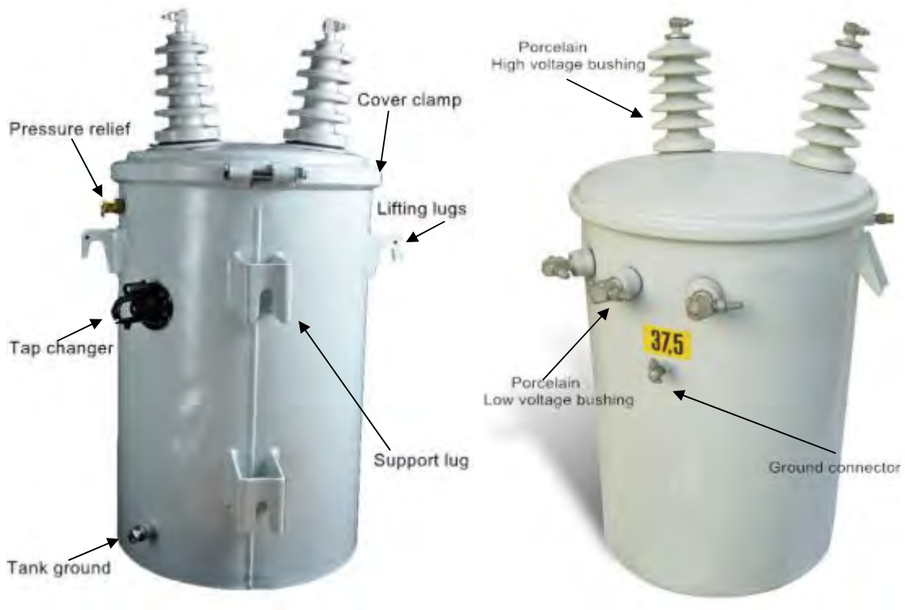
1. All units are built in accordance with both ANSI C57 12.00 and ANSI C57 12.20, except as modified to comply with customer specifications.
2. Mild steel tank with welded lifting lugs and hanger brackets for direct to pole mounting.
3. Single piece clamped cover band meets cover retention requirements of ANSI standards.
4. Electrostatically applied polyester powder paint
5. system for superior corrosion protection.
6. HV porcelain cover mounted bushings
7. Tank wall mounted porcelain or polymer low voltage bushings.
8. Tin-plated bronze terminals for connection to copper or aluminum.
9. Insulated cover for wildlife protection.
10. Laser engraved aluminum nameplate.
11. NON-PCB insulating oil.

# D11 Single Phase Overhead Transformer

## D11 Technical data

| Model | Rated Capacity (kVA) | Primary rating (V) | Tapping Range(%) | Secondary Rating (V) | Loss(W) | |
|---|---|---|---|---|---|---|
| | | | | | No load | loss Load loss |
| D11-3 | 3 | 34500/19920<br>33000/17321<br>30000/17320<br>20000/11547<br>13800/7967<br>13200/7620<br>11000/6350<br>or others | ±2x2.5%<br>±1 x 5%<br>Or others | 120-240<br>110-220<br>240-480<br>250-500<br>Or others | 12 | 45 |
| D11-5 | 5 | | | | 25 | 75 |
| D11-10 | 10 | | | | 50 | 120 |
| D11-15 | 15 | | | | 65 | 195 |
| D11-25 | 25 | | | | 105 | 290 |
| D11-37.5 | 37.5 | | | | 140 | 360 |
| D11-50 | 50 | | | | 180 | 500 |
| D11-75 | 75 | | | | 250 | 650 |
| D11-100 | 100 | | | | 275 | 850 |
| D11-167 | 167 | | | | 455 | 1410 |
| D11-250 | 250 | | | | 650 | 2000 |
| D11-333 | 333 | | | | 845 | 2500 |

Note: *The above parameter is only subject to our standard design, special requirement can be customized

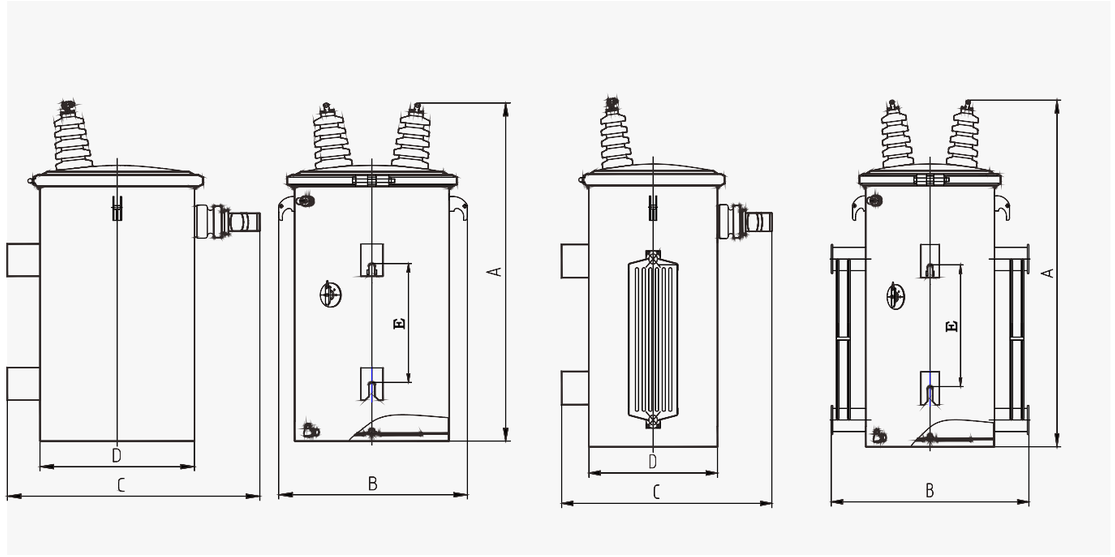







# D11 Single Phase Overhead Transformer

## Overall and mounting dimensions(mm)




| Model | Rated Capacity (kVA) | Overall size(mm) | | | | | Weight(kgs) | |
|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | Oil weight | Total weight |
| D11-3 | 3 | 760 | 430 | 530 | 330 | 286 | 20 | 105 |
| D11-5 | 5 | 780 | 430 | 530 | 330 | | 30 | 110 |
| D11-10 | 10 | 830 | 430 | 530 | 330 | | 30 | 130 |
| D11-15 | 15 | 850 | 480 | 580 | 380 | | 40 | 185 |
| D11-25 | 25 | 880 | 500 | 580 | 410 | | 45 | 210 |
| D11-37.5 | 37.5 | 930 | 560 | 640 | 460 | | 60 | 300 |
| D11-50 | 50 | 980 | 560 | 640 | 460 | | 70 | 335 |
| D11-75 | 75 | 980 | 680 | 720 | 554 | 591 | 103 | 460 |
| D11-100 | 100 | 1020 | 780 | 800 | 610 | | 123 | 530 |
| D11-167 | 167 | 1050 | 830 | 890 | 660 | | 155 | 670 |
| D11-250 | 250 | 1100 | 960 | 950 | 660 | | 247 | 950 |
| D11-333 | 333 | 1150 | 960 | 960 | 660 | | 250 | 1000 |

***Rating voltage:*** *13200/7620 or 11000/6350*

Note: *The above overall size and weight is for reference only,CNC technical dept have right to modify without prior notify.Transformer with capacity 75KVA and smaller has not radiator.

# 10~20KV Dry-type Transformer

CNC
ELECTRIC





## 10~20KV Dry-type Transformer

## SC(B)□ Series Epoxy Resin Dry-type Transformer

- The SC (B) series epoxy resin dry type transformers have the advantages of flame retardant, fireproof, explosion-proof, maintenance free, and small size due to their coils being encapsulated with epoxy resin. They can be directly installed in load centers and are widely used in power transmission and transformation systems, as important places as commercial residences, public buildings, airports, as well as in harsh environments like subways, smelters, ships, and marine drilling.
- Standard：IEC60076-1, IEC60076-11.

**General**

# SC(B)□ Series Epoxy Resin Dry-type Transformer

## Selection

S C (B) □ - □ / □

- High voltage level (KV):6~11KV
- Rated capacity (KVA):30~2500KVA
- Performance level code:9,11,13
- Low voltage foil coil
- Fixed molding (resin casting)
- Three phase

## Operating conditions

1. Ambient temperature: maximum temperature: +40℃, minimum temperature: -25℃.
2. Average temperature of the hottest month:+30℃, average temperature in the hottest year:+20℃.
3. Altitude not exceeding 1000m.
4. The waveform of the power supply voltage is similar to a sine wave.
5. The three-phase supply voltage should be approximately symmetrical.
6. The relative humidity of the surrounding air should be lower than 93%.
7. And there should be no water droplets on the surface of the coil
8. Where to use: indoors or outdoors.

## Features

1. The carefully designed coil structure and vacuum immersion treatment ensure that the SG (B) 10 transformer operates without partial discharge and will not exhibit crack performance throughout its service life. Its insulation level will remain in good condition as before.
2. The high-voltage part adopts continuous wire winding, low-voltage foil winding, vacuum immersion, curing treatment, and high-strength ceramic support, which has good resistance to sudden short circuit currents.
3. Flame retardant, explosion-proof, non-toxic, self-extinguishing, and fireproof
4. The SG (B) 10 transformer produces almost no smoke when burned in a high-temperature open flame
5. The insulation level of the transformer is Class H (180℃).
6. The insulation layer is very thin, with strong short-term overload capacity, without the need for forced cooling, and can overload by 120% for long term use, 140% lasting for 3 hours. Due to its elasticity and non aging properties, this insulation material can be fully loaded at one time at ± 50℃.



10~20KV Dry-type Transformer

SC(B)□ Series Epoxy Resin Dry-type Transformer

## Structure

- Iron core:
  - The iron core is made of high-quality oriented cold-rolled silicon steel sheet, with a laminated structure of 45° full oblique seam, and the core column is bound with insulating tape.
  - The surface of the iron core is sealed with insulating resin paint to prevent moisture and rust, and the clamps and fasteners are surface-treated to prevent rust.
- Low voltage copper foil coil:
  - The low-voltage winding is wound with high-quality copper foil, so that zero axial short-circuit stress can be achieved in the case of short circuit. The interlayer and winding end are insulated with thermosetting epoxy prepreg cloth. The whole winding is placed in the oven. After heating, the winding is aggregated into a solid whole. Scientific and reasonable design and pouring process make the product partial discharge less, noise lower, and heat dissipation capacity strong.
- High voltage winding:
  - The high-voltage winding adopts enamelled copper wire or film-coated copper wire, and glass fiber and epoxy resin composite material are used for insulation. Its expansion coefficient is similar to that of copper conductor, and it has good impact resistance, temperature change resistance, and crack resistance. All components of glass fiber and epoxy resin are self-extinguishing, flame retardant and non-polluting. Epoxy resin has good insulation properties and is especially suitable for making high-voltage coils.
- Temperature control device and air cooling system:
  - The temperature control device has the functions of failure alarm, over-temperature alarm, over-temperature trip, automatic/manual start and stop of the fan, and is connected to the computer through the RS485 interface for centralized monitoring and control.At the same time, it also has the function of "black gate", which can record the winding temperature of the transformer when it is powered off.
  - The air-cooling system adopts a cross-flow top-blowing cooling fan, which has the characteristics of low noise, high wind pressure, and beautiful appearance. It can run for a long time under the condition of forced air cooling at 125% of the rated load.
- Shell:
  - Protect the shell and provide further safety protection for the transformer,with protection levels such as IP20, IP23, etc.
  - The shell materials include cold-rolled steel plate, stainless steel plate, aluminum alloy, etc. for users to choose from.

# SC(B)□ Series Epoxy Resin Dry-type Transformer

## Structure

- The factory configuration of SCB without protective shell (IP00) is as follows
- 4 bi-directional flat wheels (when requested by the customer)
- 4 lugs
- Towing holes on the base
- 2 grounding points
- 1 nameplate
- 2 "Electric Hazard" warning signs
- No load voltage regulating tap, operated when the transformer is powered off, to adapt the transformer to the actual supply voltage
- High voltage side connecting rod with connecting wire from above
- Low-voltage outgoing busbar with upward outlet

- The factory configuration of SCB with IP21, IP23 metal protective shell is as follows
- All contents mentioned above for SCB without protective casing (Ip00)
- 1 set of IP21 metal protective housing, standard anti-corrosion protection



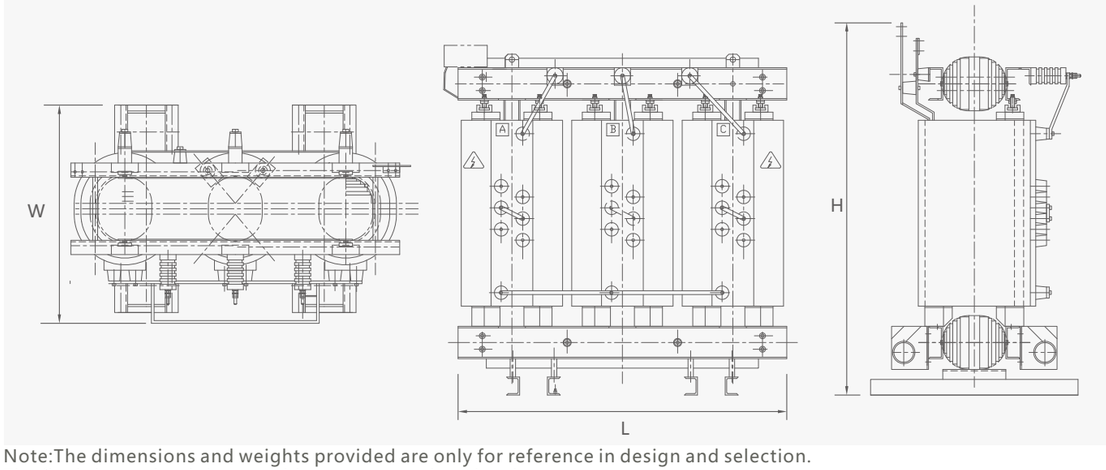


# SC(B)□ Series Epoxy Resin Dry-type Transformer

## SCB9-30~2500/10KV technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load Loss(w) 120℃ | No-load current (%) | Short circuit impedance(%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0 | 220 | 750 | 2.4 | 4.0 | 700 | 350 | 620 | 250 |
| 50 | | | | | 310 | 1060 | 2.4 | | 710 | 350 | 635 | 295 |
| 80 | | | | | 420 | 1460 | 1.8 | | 860 | 730 | 780 | 430 |
| 100 | | | | | 450 | 1670 | 1.8 | | 940 | 710 | 795 | 520 |
| 125 | | | | | 530 | 1960 | 1.6 | | 1000 | 710 | 860 | 670 |
| 160 | | | | | 610 | 2250 | 1.6 | | 1080 | 710 | 1020 | 840 |
| 200 | | | | | 700 | 2680 | 1.4 | | 1100 | 710 | 1060 | 960 |
| 250 | | | | | 810 | 2920 | 1.4 | | 1150 | 710 | 1100 | 1120 |
| 315 | | | | | 990 | 3670 | 1.2 | | 1150 | 770 | 1125 | 1230 |
| 400 | | | | | 1100 | 4220 | 1.2 | | 1190 | 870 | 1175 | 1485 |
| 500 | | | | | 1310 | 5170 | 1.2 | | 1230 | 870 | 1265 | 1580 |
| 630 | | | | | 1510 | 6220 | 1.0 | | 1465 | 870 | 1245 | 1840 |
| 630 | | | | | 1460 | 6310 | 1.0 | 6.0 | 1465 | 870 | 1245 | 1840 |
| 800 | | | | | 1710 | 7360 | 1.0 | | 1420 | 870 | 1395 | 2135 |
| 1000 | | | | | 1990 | 8610 | 1.0 | | 1460 | 870 | 1420 | 2500 |
| 1250 | | | | | 2350 | 10260 | 1.0 | | 1580 | 970 | 1485 | 2970 |
| 1600 | | | | | 2760 | 12400 | 1.0 | | 1640 | 1120 | 1715 | 3900 |
| 2000 | | | | | 3400 | 15300 | 0.8 | | 1780 | 1120 | 1710 | 4225 |
| 2500 | | | | | 4000 | 18180 | 0.8 | | 1850 | 1120 | 1770 | 4790 |

## Overall and mounting dimensions(mm)



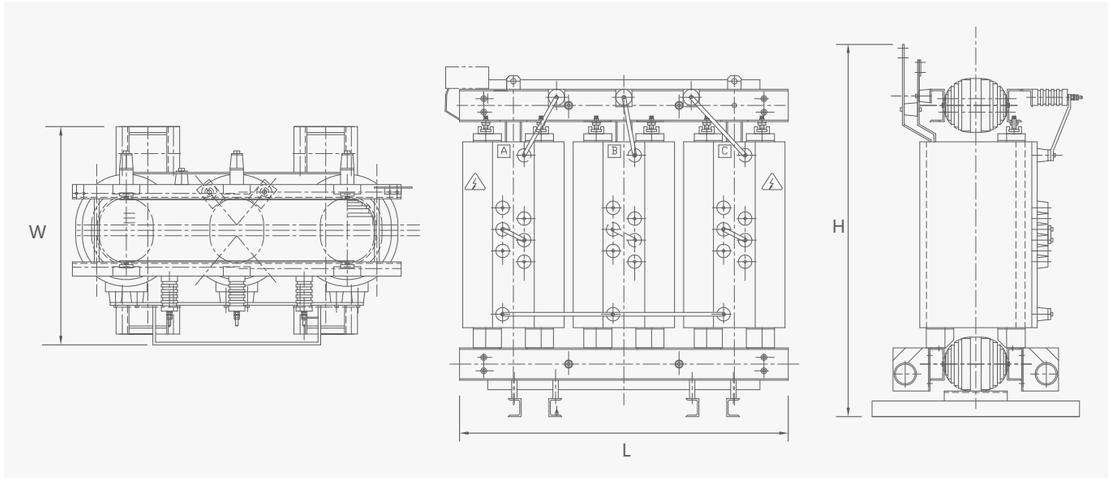

Note:The dimensions and weights provided are only for reference in design and selection.
The final size and weight are subject to our prodect drawings.

# SC(B)□ Series Epoxy Resin Dry-type Transformer

## SCB10-30~2500/10KV technical data

| Rated capacity (kVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load Loss(w) 120℃ | No-load current (%) | Short circuit impedance (%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0 | 190 | 710 | 2.0 | 4.0 | 580 | 450 | 650 | 300 |
| 50 | | | | | 270 | 1000 | 2.0 | | 600 | 450 | 650 | 380 |
| 80 | | | | | 370 | 1380 | 1.5 | | 880 | 500 | 800 | 470 |
| 100 | | | | | 400 | 1570 | 1.5 | | 970 | 500 | 820 | 560 |
| 125 | | | | | 470 | 1850 | 1.3 | | 970 | 500 | 860 | 650 |
| 160 | | | | | 540 | 2130 | 1.3 | | 980 | 650 | 950 | 780 |
| 200 | | | | | 620 | 2530 | 1.1 | | 1000 | 650 | 970 | 880 |
| 250 | | | | | 720 | 2760 | 1.1 | | 1040 | 760 | 1070 | 1030 |
| 315 | | | | | 880 | 3470 | 1.0 | | 1100 | 760 | 1110 | 1250 |
| 400 | | | | | 980 | 3990 | 1.0 | | 1170 | 760 | 1235 | 1400 |
| 500 | | | | | 1160 | 4880 | 1.0 | | 1190 | 760 | 1250 | 1600 |
| 630 | | | | | 1340 | 5880 | 0.85 | | 1220 | 760 | 1250 | 1900 |
| 630 | | | | | 1300 | 5960 | 0.85 | 6.0 | 1220 | 760 | 1250 | 1900 |
| 800 | | | | | 1520 | 6960 | 0.85 | | 1330 | 760 | 1330 | 2580 |
| 1000 | | | | | 1770 | 8130 | 0.85 | | 1350 | 920 | 1450 | 2850 |
| 1250 | | | | | 2090 | 9690 | 0.85 | | 1440 | 920 | 1550 | 3200 |
| 1600 | | | | | 2450 | 11700 | 0.85 | | 1510 | 1170 | 1620 | 3800 |
| 2000 | | | | | 3060 | 14400 | 0.7 | | 1530 | 1170 | 1785 | 4280 |
| 2500 | | | | | 3600 | 17100 | 0.7 | | 1560 | 1170 | 1930 | 5250 |

## Overall and mounting dimensions(mm)




Note:The dimensions and weights provided are only for reference in design and selection.
The final size and weight are subject to our prodect drawings.



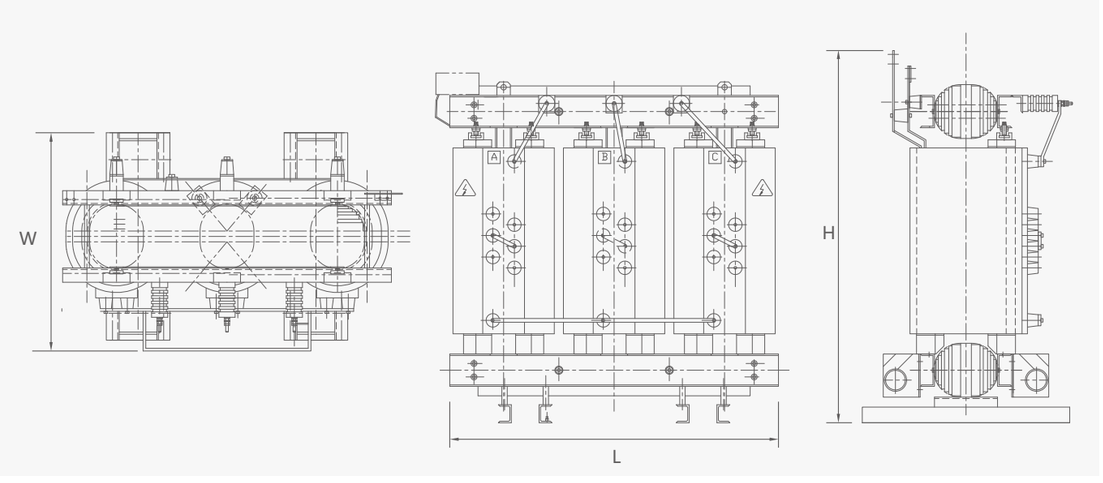


# SC(B)□ Series Epoxy Resin Dry-type Transformer

## SCB11-30~2500/10KV technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load Loss(w) 120℃ | No-load current (%) | Short circuit impedance(%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0 | 170 | 710 | 2.3 | 4.0 | 955 | 750 | 840 | 270 |
| 50 | | | | | 240 | 1000 | 2.2 | | 970 | 750 | 860 | 340 |
| 80 | | | | | 330 | 1380 | 1.7 | | 1015 | 750 | 925 | 460 |
| 100 | | | | | 360 | 1570 | 1.7 | | 1030 | 750 | 960 | 530 |
| 125 | | | | | 420 | 1850 | 1.5 | | 1060 | 750 | 1000 | 605 |
| 160 | | | | | 480 | 2130 | 1.5 | | 1090 | 900 | 1045 | 730 |
| 200 | | | | | 550 | 2530 | 1.3 | | 1105 | 900 | 1080 | 825 |
| 250 | | | | | 640 | 2760 | 1.3 | | 1180 | 900 | 1125 | 1010 |
| 315 | | | | | 790 | 3470 | 1.1 | | 1225 | 900 | 1140 | 1165 |
| 400 | | | | | 880 | 3990 | 1.1 | | 1330 | 900 | 1195 | 1490 |
| 500 | | | | | 1040 | 4880 | 1.1 | | 1345 | 900 | 1255 | 1650 |
| 630 | | | | | 1200 | 5880 | 0.9 | | 1540 | 1150 | 1175 | 1915 |
| 630 | | | | | 1170 | 5960 | 0.9 | 6.0 | 1540 | 1150 | 1175 | 1915 |
| 800 | | | | | 1360 | 6960 | 0.9 | | 1600 | 1150 | 1220 | 2305 |
| 1000 | | | | | 1590 | 8130 | 0.9 | | 1645 | 1150 | 1285 | 2690 |
| 1250 | | | | | 1880 | 9690 | 0.9 | | 1705 | 1150 | 1345 | 3225 |
| 1600 | | | | | 2200 | 11700 | 0.9 | | 1765 | 1150 | 1405 | 3805 |
| 2000 | | | | | 2740 | 14400 | 0.7 | | 1840 | 1150 | 1475 | 4435 |
| 2500 | | | | | 3240 | 17100 | 0.7 | | 1900 | 1150 | 1560 | 5300 |
| 1600 | | | | | 2200 | 12900 | 0.9 | 8.0 | 1765 | 1150 | 1405 | 3805 |
| 2000 | | | | | 2740 | 15900 | 0.7 | | 1840 | 1150 | 1475 | 4435 |
| 2500 | | | | | 3240 | 18800 | 0.7 | | 1900 | 1150 | 1560 | 5300 |

## Overall and mounting dimensions(mm)



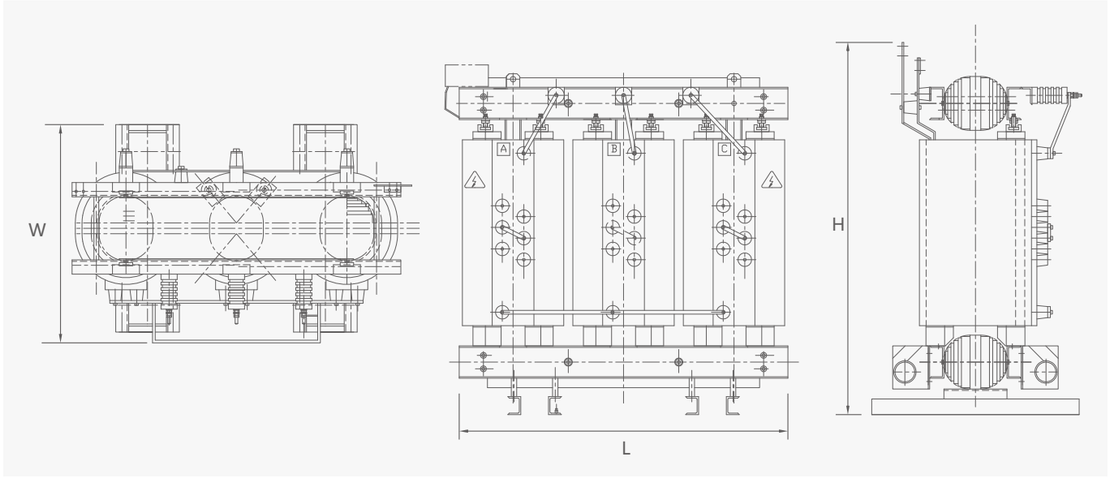

Note:The dimensions and weights provided are only for reference in design and selection.
The final size and weight are subject to our prodect drawings.

# SC(B)□ Series Epoxy Resin Dry-type Transformer

## SCB12-30~2500/10KV technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load Loss(w) 120℃ | No-load current(%) | Short circuit impedance(%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 30 | | | | | 150 | 710 | 2.3 | | 955 | 750 | 840 | 270 |
| 50 | | | | | 215 | 1000 | 2.2 | | 970 | 750 | 860 | 340 |
| 80 | | | | | 295 | 1380 | 1.7 | | 1015 | 750 | 925 | 460 |
| 100 | | | | | 320 | 1570 | 1.7 | | 1030 | 750 | 960 | 530 |
| 125 | | | | | 375 | 1850 | 1.5 | | 1060 | 750 | 1000 | 605 |
| 160 | | | | | 430 | 2130 | 1.5 | | 1090 | 900 | 1045 | 730 |
| 200 | | | | | 495 | 2530 | 1.3 | 4.0 | 1105 | 900 | 1080 | 825 |
| 250 | | | | | 575 | 2760 | 1.3 | | 1180 | 900 | 1125 | 1010 |
| 315 | 6 | | | | 705 | 3470 | 1.1 | | 1225 | 900 | 1140 | 1165 |
| 400 | 6.3 | | | | 785 | 3990 | 1.1 | | 1330 | 900 | 1195 | 1490 |
| 500 | 6.6 | ±5 | | Dyn11 | 930 | 4880 | 1.1 | | 1345 | 900 | 1255 | 1650 |
| 630 | 10 | ±2×2.5 | 0.4 | Yyn0 | 1070 | 5880 | 0.9 | | 1540 | 1150 | 1175 | 1915 |
| 630 | 10.5 | | | | 1040 | 5960 | 0.9 | | 1540 | 1150 | 1175 | 1915 |
| 800 | 11 | | | | 1210 | 6960 | 0.9 | | 1600 | 1150 | 1220 | 2305 |
| 1000 | | | | | 1410 | 8130 | 0.9 | | 1645 | 1150 | 1285 | 2690 |
| 1250 | | | | | 1670 | 9690 | 0.9 | 6.0 | 1705 | 1150 | 1345 | 3225 |
| 1600 | | | | | 1960 | 11700 | 0.9 | | 1765 | 1150 | 1405 | 3805 |
| 2000 | | | | | 2440 | 14400 | 0.7 | | 1840 | 1150 | 1475 | 4435 |
| 2500 | | | | | 2880 | 17100 | 0.7 | | 1900 | 1150 | 1560 | 5300 |
| 1600 | | | | | 1960 | 12900 | 0.9 | | 1765 | 1150 | 1405 | 3805 |
| 2000 | | | | | 2440 | 15900 | 0.7 | 8.0 | 1840 | 1150 | 1475 | 4435 |
| 2500 | | | | | 2880 | 18800 | 0.7 | | 1900 | 1150 | 1560 | 5300 |

## Overall and mounting dimensions(mm)




Note:The dimensions and weights provided are only for reference in design and selection.
The final size and weight are subject to our prodect drawings.



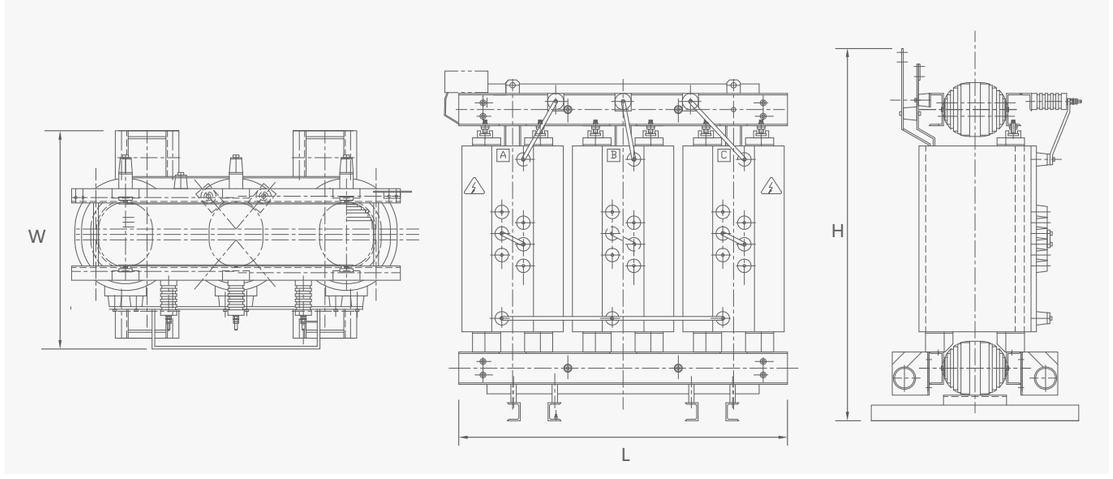


# SC(B)□ Series Epoxy Resin Dry-type Transformer

## SCB13-30~2500/10KV technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load Loss(w) 120℃ | No-load current (%) | Short circuit impedance(%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 30 | | | | | 135 | 640 | 2.3 | | 955 | 750 | 840 | 270 |
| 50 | | | | | 195 | 900 | 2.2 | | 970 | 750 | 860 | 340 |
| 80 | | | | | 265 | 1240 | 1.7 | | 1015 | 750 | 925 | 460 |
| 100 | | | | | 290 | 1410 | 1.7 | | 1060 | 750 | 960 | 560 |
| 125 | | | | | 340 | 1660 | 1.5 | | 1075 | 750 | 1000 | 630 |
| 160 | | | | | 385 | 1910 | 1.5 | | 1105 | 900 | 1045 | 770 |
| 200 | | | | | 445 | 2270 | 1.3 | 4.0 | 1120 | 900 | 1105 | 875 |
| 250 | | | | | 515 | 2480 | 1.3 | | 1195 | 900 | 1125 | 1055 |
| 315 | 6 | | | | 635 | 3120 | 1.1 | | 1555 | 1150 | 1175 | 1190 |
| 400 | 6.3 | | | | 705 | 3590 | 1.1 | | 1225 | 900 | 1140 | 1500 |
| 500 | 6.6 | ±5 | | Dyn11 | 835 | 4390 | 1.1 | | 1315 | 900 | 1190 | 1700 |
| 630 | 10 | ±2×2.5 | 0.4 | Yyn0 | 965 | 5290 | 0.9 | | 1345 | 900 | 1265 | 1985 |
| 630 | 10.5 | | | | 935 | 5360 | 0.9 | | 1555 | 1150 | 1175 | 1985 |
| 800 | 11 | | | | 1090 | 6260 | 0.9 | | 1600 | 1150 | 1220 | 2360 |
| 1000 | | | | | 1270 | 7310 | 0.9 | | 1660 | 1150 | 1285 | 2775 |
| 1250 | | | | | 1500 | 8720 | 0.9 | 6.0 | 1720 | 1150 | 1350 | 3310 |
| 1600 | | | | | 1760 | 10500 | 0.9 | | 1780 | 1150 | 1405 | 3940 |
| 2000 | | | | | 2190 | 13000 | 0.7 | | 1840 | 1150 | 1475 | 4595 |
| 2500 | | | | | 2590 | 15400 | 0.7 | | 1900 | 1150 | 1565 | 5495 |
| 1600 | | | | | 1760 | 11600 | 0.9 | | 1780 | 1150 | 1405 | 3940 |
| 2000 | | | | | 2190 | 14300 | 0.7 | 8.0 | 1840 | 1150 | 1475 | 4595 |
| 2500 | | | | | 2590 | 17000 | 0.7 | | 1900 | 1150 | 1565 | 5495 |

## Overall and mounting dimensions(mm)



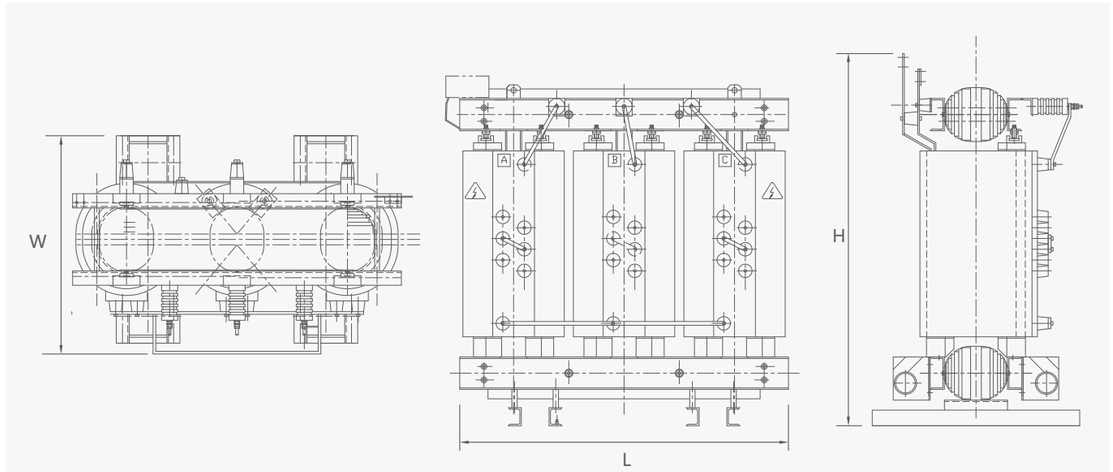

Note:The dimensions and weights provided are only for reference in design and selection.
The final size and weight are subject to our prodect drawings.

# SC(B)□ Series Epoxy Resin Dry-type Transformer

## SCB18-30~2500/10KV technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load Loss(w) 120℃ | No-load current (%) | Short circuit impedance(%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0<br>Dyn5 | 105 | 640 | 2.00 | 4.0 | 590 | 560 | 780 | / |
| 50 | | | | | 155 | 900 | 2.00 | | 590 | 545 | 870 | / |
| 80 | | | | | 210 | 1240 | 1.50 | | 720 | 620 | 845 | / |
| 100 | | | | | 230 | 1415 | 1.50 | | 840 | 610 | 1005 | / |
| 125 | | | | | 270 | 1665 | 1.30 | | 850 | 750 | 1010 | / |
| 160 | | | | | 310 | 1915 | 1.30 | | 870 | 790 | 1010 | / |
| 200 | | | | | 360 | 2275 | 1.10 | | 900 | 740 | 1020 | / |
| 250 | | | | | 415 | 2485 | 1.10 | | 900 | 750 | 1060 | / |
| 315 | | | | | 510 | 3125 | 1.00 | | 990 | 755 | 1110 | / |
| 400 | | | | | 570 | 3590 | 1.00 | | 1020 | 780 | 1160 | / |
| 500 | | | | | 670 | 4390 | 1.00 | | 1050 | 820 | 1150 | / |
| 630 | | | | | 775 | 5290 | 0.85 | | 1240 | 890 | 1150 | / |
| 630 | | | | | 750 | 5365 | 0.85 | 6.0 | 1290 | 940 | 1100 | / |
| 800 | | | | | 875 | 6265 | 0.85 | | 1300 | 920 | 1160 | / |
| 1000 | | | | | 1020 | 7315 | 0.85 | | 1360 | 895 | 1195 | / |
| 1250 | | | | | 1205 | 8720 | 0.85 | | 1420 | 920 | 1255 | / |
| 1600 | | | | | 1415 | 10555 | 0.85 | | 1500 | 1010 | 1360 | / |
| 2000 | | | | | 1760 | 13005 | 0.70 | | 1540 | 1010 | 1415 | / |
| 2000 | | | | | 2080 | 15445 | 0.70 | | 1700 | 1120 | 1415 | / |

## Overall and mounting dimensions(mm)




Note:The dimensions and weights provided are only for reference in design and selection.
The final size and weight are subject to our prodect drawings.





# SC(B)□ Series Epoxy Resin Dry-type Transformer

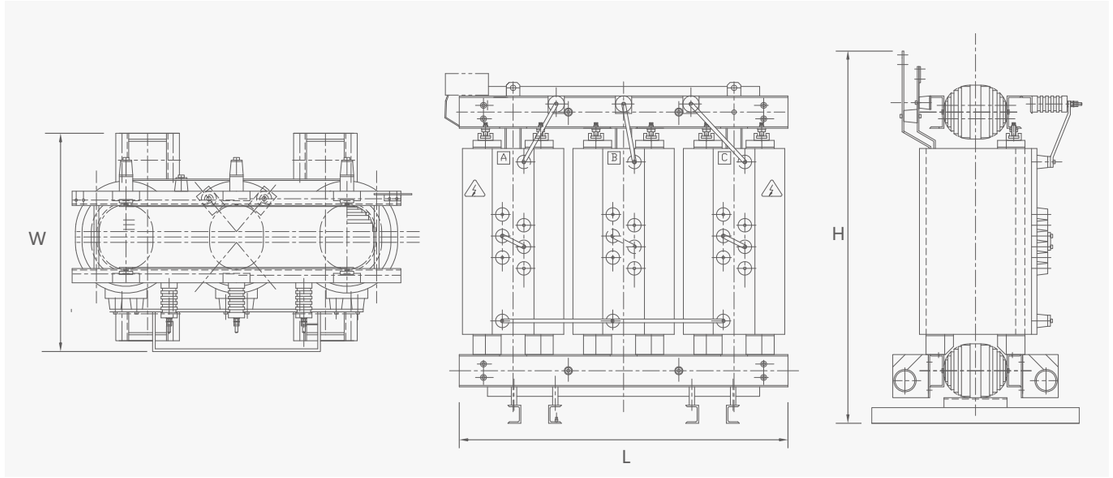
## SCB-30~2500/10KV technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load Loss(w) 120℃ | No-load current (%) | Short circuit impedance(%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 50 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0<br>Dyn5 | 180 | 1500 | 1.80 | 4 | 770 | 500 | 855 | 425 |
| 100 | | | | | 252 | 1800 | 1.60 | | 1090 | 600 | 900 | 650 |
| 160 | | | | | 360 | 2600 | 1.40 | | 1140 | 710 | 1040 | 825 |
| 250 | | | | | 468 | 3400 | 1.20 | | 1210 | 710 | 1150 | 1100 |
| 400 | | | | | 675 | 4500 | 1.00 | | 1350 | 710 | 1305 | 1550 |
| 630 | | | | | 990 | 7100 | 0.90 | 6 | 1470 | 710 | 1320 | 1930 |
| 800 | | | | | 1170 | 8000 | 0.90 | | 1490 | 870 | 1460 | 2240 |
| 1000 | | | | | 1395 | 9000 | 0.80 | | 1540 | 870 | 1560 | 2580 |
| 1250 | | | | | 1620 | 11000 | 0.80 | | 1620 | 870 | 1680 | 3058 |
| 1600 | | | | | 1980 | 13000 | 0.80 | | 1650 | 870 | 1730 | 3500 |
| 2000 | | | | | 2340 | 16000 | 0.60 | | 1760 | 1120 | 1890 | 4200 |
| 2500 | | | | | 2790 | 19000 | 0.60 | | 1820 | 1120 | 2010 | 4800 |
| 3150 | | | | | 3420 | 22000 | 0.60 | | 1820 | 1120 | 2050 | 5110 |

## SCB-30~2500/20KV technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load Loss(w) 120℃ | No-load current (%) | Short circuit impedance(%) | Dimensions | | | Total weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | | L | W | H | |
| 50 | 20 | ±5<br>±2×2.5 | 0.4 | Dyn11<br>Yyn0<br>Dyn5 | 180 | 1500 | 1.80 | 6 | 1120 | 850 | 1000 | 680 |
| 100 | | | | | 252 | 1800 | 1.80 | | 1160 | 850 | 1100 | 800 |
| 160 | | | | | 360 | 2600 | 1.40 | | 1200 | 900 | 1150 | 850 |
| 250 | | | | | 468 | 3400 | 1.20 | | 1250 | 900 | 1200 | 1100 |
| 400 | | | | | 675 | 4500 | 1.00 | | 1290 | 900 | 1200 | 2100 |
| 630 | | | | | 990 | 7100 | 0.90 | | 1340 | 900 | 1540 | 2280 |
| 800 | | | | | 1170 | 8000 | 0.90 | | 1400 | 900 | 1640 | 2280 |
| 1000 | | | | | 1395 | 9000 | 0.80 | | 1500 | 1200 | 1650 | 3160 |
| 1250 | | | | | 1620 | 11000 | 0.80 | | 1540 | 1200 | 1750 | 3600 |
| 1600 | | | | | 1950 | 13000 | 0.80 | | 1620 | 1200 | 1920 | 3850 |
| 2000 | | | | | 2340 | 16000 | 0.60 | | 1770 | 1200 | 2000 | 4700 |
| 2500 | | | | | 2790 | 19000 | 0.60 | | 1800 | 1200 | 2210 | 5600 |
| 3150 | | | | | 3420 | 22000 | 0.60 | 8 | 1830 | 1200 | 2200 | 6600 |

## Overall and mounting dimensions(mm)




Note:The dimensions provided in the table are used as a reference for 20KV. The final size and weight of 10KV and 6KV are subject to our production drawings.





## Carry

- The transformer is equipped with safe handling devices.
- For transformers without enclosures and transformers with top door openings, use the four lifting lugs of the transformer for lifting (must be lifted vertically, not diagonally); For transformers with 2 lifting lugs in the center of the top of the casing, use 2 lifting lugs for lifting. The angle formed by the sling should not exceed 60°.
- Firstly, the forking capacity of the forklift should be checked. If appropriate, the fork arm should be inserted into the base channel steel after removing the rollers.
- Pulling and moving the transformer should be carried out from the base. For this purpose, holes with a diameter of 27 mm are made on each side of the base. Dragging is possible in two directions: the axis of the base and the direction perpendicular to this axis.

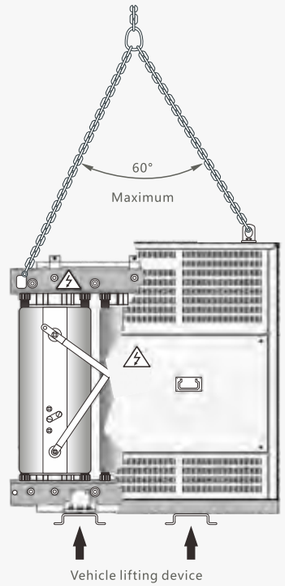



Figure 1- Lifting with a sling or forklift

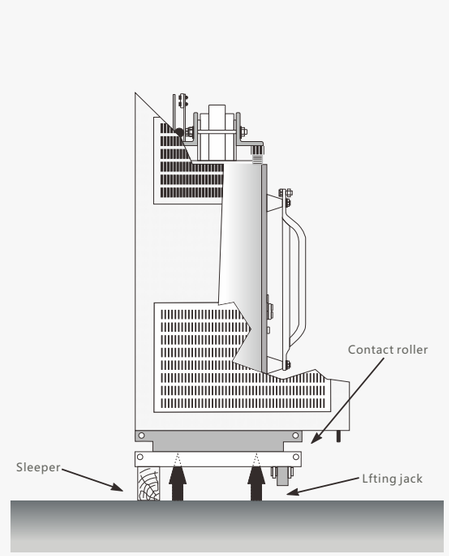



Figure 2- Installation of the roller

## 10KV Dry-type Transformer

# SCBH15 Series Amorphous Alloy Dry-type Transformer

- SCBH series amorphous alloy dry-type transformer is a dry-type transformer with low loss and high energy efficiency. Its no-load loss is more than 70% lower than that of traditional transformers using silicon steel sheets as iron cores. It is a new generation of energy-saving, safe, green and environmentally friendly high-tech products. This product can replace ordinary dry-type transformers, and is mainly suitable for high-rise buildings, commercial centers, infrastructure, industrial and mining enterprises, power plants, etc.
- Standard:IEC60076-1, IEC60076-11.

**General**



10KV Dry-type Transformer

SCBH15 Series Amorphous Alloy Dry-type Transformer

## Selection

S C (B) H 15 - □ / □

- High voltage level(KV):6~11KV
- Rated capacity(KVA):30~2500KVA
- Performance level code:15
- Performance level code: amorphous alloy iron core
- Low voltage foil coil
- Fixed molding (resin casting)
- Three phase

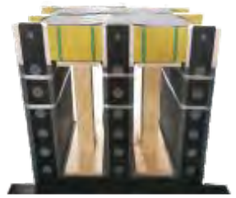
## Operating conditions

1. Ambient temperature: Maximum temperature:+40℃,Minimum temperature:-25℃.
2. Average temperature of the hottest month:+30℃,Average temperature in the hottest year:+20℃.
3. Altitude not exceeding 1000m.
4. The waveform of the power supply voltage is similar to a sine wave.
5. The three-phase supply voltage should be approximately symmetrical.
6. The relative humidity of the surrounding air should be lower than 93%, and there should be no water droplets on the surface of the coil.
7. Where to use: indoors or outdoors.

## Features

1. Low loss, good energy-saving effect, and economical operation.
2. Flame retardant, fireproof, explosion-proof and non-polluting.
3. Good moisture resistance and strong heat dissipation.
4. High mechanical strength, small partial discharge and high reliability.
5. Short-circuit resistance, high level of lightning impact, and large overload capacity.
6. Small size, light weight, small footprint, and convenient installation.

# SCBH15 Series Amorphous Alloy Dry-type Transformer



## Structure

- Iron core:
- The iron core is made of amorphous alloy material and adopts a three-phase three column structure.
- The iron core is suspended on the reinforced insulation board on the upper part of the coil, which is completely free from external force, and fully utilizes the characteristics of low no-load loss and low no-load current of the amorphous alloy material, and the energy saving effect is obvious.

- High and low voltage winding:
- The high and low voltage adopt rectangular winding, and the inner and outer layers are filled and wound with glass fiber mesh and glass ribbon, which are permeated and solidified with resin,and have strong resistance to cracking and sudden short circuit.

- Simple and beautiful structure:
- The transformer adopts a frame type clamp structure, and the coil is compressed by elastic compression nails, resulting in a simple and beautiful overall structure

- Advanced technology:
- Using vacuum film degassing, metering pump, static mixing and other advanced technologies,Ensure the proportioning accuracy and pouring quality of the epoxy mixture.
- The HTC winding adopts advanced "airway rod" technology,Not limited by the curvature radius of the winding, one or more axial air ducts can be set at the heating center of the winding according to design requirements to achieve the best heat dissipation effect of the entire machine,Simultaneously, multiple supporting ribs can be generated in the air duct, effectively enhancing the mechanical strength of the winding.



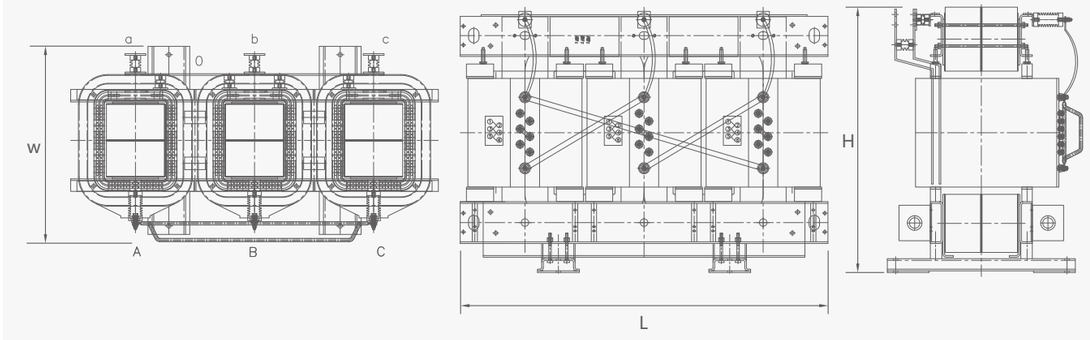
10KV Dry-type Transformer

SCBH15 Series Amorphous Alloy Dry-type Transformer

## SCB15 technical data

| Rated capacity (KVA) | Voltage combination | | | Connection group label | No-load loss(W) | Load Loss(w) 120℃ | No-load current(%) | Dimensions | | | Total weight (KG) | Short circuit impedance(%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High voltage (KV) | Tapping range | Low voltage (KV) | | | | | L | W | H | | |
| 30 | 6<br>6.3<br>6.6<br>10<br>10.5<br>11 | ±5<br>±2×2.5 | 0.4 | Dyn11 | 70 | 710 | 0.6 | 900 | 800 | 300 | 900 | 4.0 |
| 50 | | | | | 90 | 1000 | 0.5 | 955 | 900 | 350 | 900 | |
| 80 | | | | | 120 | 1380 | 0.5 | 985 | 960 | 400 | 950 | |
| 100 | | | | | 130 | 1570 | 0.5 | 1035 | 980 | 450 | 1250 | |
| 125 | | | | | 150 | 1850 | 0.4 | 1060 | 1000 | 500 | 1280 | |
| 160 | | | | | 170 | 2130 | 0.4 | 1120 | 1050 | 680 | 1320 | |
| 200 | | | | | 200 | 2530 | 0.4 | 1135 | 1105 | 770 | 1330 | |
| 250 | | | | | 230 | 2760 | 0.4 | 1170 | 1165 | 900 | 1330 | |
| 315 | | | | | 280 | 3470 | 0.3 | 1185 | 1225 | 1010 | 1360 | |
| 400 | | | | | 310 | 3990 | 0.3 | 1210 | 1300 | 1205 | 1380 | |
| 500 | | | | | 360 | 4880 | 0.3 | 1245 | 1380 | 1400 | 1400 | |
| 630 | | | | | 420 | 5880 | 0.3 | 1295 | 1355 | 1515 | 1410 | |
| 630 | | | | | 410 | 5960 | 0.3 | 1295 | 1355 | 1515 | 1410 | 6.0 |
| 800 | | | | | 480 | 6960 | 0.3 | 1375 | 1480 | 1880 | 1450 | |
| 1000 | | | | | 550 | 8130 | 0.2 | 1430 | 1525 | 2170 | 1480 | |
| 1250 | | | | | 650 | 9690 | 0.2 | 1480 | 1570 | 2525 | 1500 | |
| 1600 | | | | | 760 | 11730 | 0.2 | 1500 | 1710 | 2980 | 1520 | |
| 2000 | | | | | 1000 | 14450 | 0.2 | 1570 | 1735 | 3480 | 1550 | |
| 2500 | | | | | 1200 | 17170 | 0.2 | 1625 | 1825 | 4080 | 1600 | |
| 1600 | | | | | 760 | 12960 | 0.2 | 1500 | 1710 | 2980 | 1520 | 8.0 |
| 2000 | | | | | 1000 | 15960 | 0.2 | 1570 | 1735 | 3480 | 1550 | |
| 2500 | | | | | 1200 | 18890 | 0.2 | 1625 | 1825 | 4080 | 1600 | |

## Overall and mounting dimensions(mm)



## 10KV Dry-type Transformer

# SG(B)10 Insulated Three-phase Dry-type Transformer

The non-encapsulated coil three-phase dry type power transformer that adopt UL certificated NOMEX insulation system, with advantages of safe, reliable, energy saving, fireproof, explosion resistant, simple maintaining and so on. It has superior design, reasonable structure, elegant appearance, and its main performance index is superior to domestic standard, such as local discharge level, no-load loss, load loss,noise and capability of operating in serious humid environment, it can be installed in humid environment like places near lake, sea or river, also suitable for areas that require high fireproof capability and high load, such as high-rise, airport, station,dock,underground railway,hospital,electric power plant,metallurgy industry,shopping center, residential area, petrochemical industry, nuclear power station,nuclear submarine, etc.

**General**



10KV Dry-type Transformer

# SG(B)10 Insulated Three-phase Dry-type Transformer

## Standard

S G (B) 10 - □ / □

- Primary voltage measurement (kV)
- Rated capacity (kVA)
- Code of performance level
- The foil coll of low voltage
- Dry type, air self cooling
- Three phase

## Operating conditions

1. Ambient temperature: -50℃~+50℃.
2. Altitude:≤1000m.
3. Other requirements that are beyond the stipulation range of this technical manual,please negotiate with our technical department and indicate out when placing an order.

## Features

1. The elaborate designed coil structure and vacuum immersed treatment enable SG(B)10 transformer operates without local discharging,and no crack performance will be find during the whole service life, and its insulation level will be kept as good as beginning.
2. The high voltage part adopts continuous wire winding, LV foil winding, vacuum immersed, curing processed and high strength ceramics supporting, with fine withstand capability to paroxysmal short-circuit current.
3. Flame resisting, flameproof, nontoxic, self-extinguishing, fireproof.
4. When burn SG(B)10 transformer in high temperature and open fire, almost no fume will by produced.
5. Insulation of the transformer is H grade (180℃).
6. The insulation layer is very thin, with strong short-time over load capability,needless of forced cooling, can be overloaded for 120% for long term and 140% for 3 hours. As this kind of insulation material has elasticity and will not be aged,it can be full loaded at once under ±50℃.

# SG(B)10 Insulated Three-phase Dry-type Transformer

## SG(B)10 series of non-encapsulated coil three-phase dry type power transformer main technical parameters

1. Voltage grade:high voltage (kV): 3, 6, 6.3, 6.6, 10, 10.5, 11;Low voltage:0.4, 0.69.
2. High voltage tap range:±5% or ±2×2.5%.
3. Mark of joint group:Yyn0 or Dyn11.

| Model and capacity (kVA) | No-load loss(W) | | Load loss(W)(145℃) | | No-load current(%) | | Sound level(LPA)dB | | Short circuit impedance (%) | Body weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Enterprise standard | National standard | Enterprise standard | National standard | Enterprise standard | National standard | Enterprise standard | National standard | | |
| SG(B)10-100/10 | 405 | 510 | 1880 | 2550 | 2.4 | 2.4 | 40 | 55 | 4 | 590 |
| SG(B)10-160/10 | 560 | 700 | 2550 | 3650 | 2.0 | 2.0 | 42 | 58 | 4 | 870 |
| SG(B)10-200/10 | 660 | 820 | 3100 | 4680 | 2.0 | 2.0 | 42 | 58 | 4 | 970 |
| SG(B)10-250/10 | 760 | 950 | 3600 | 5500 | 1.8 | 2.0 | 44 | 58 | 4 | 1160 |
| SG(B)10-315/10 | 880 | 1100 | 4600 | 6600 | 1.8 | 1.8 | 46 | 60 | 4 | 1350 |
| SG(B)10-400/10 | 1040 | 1300 | 5400 | 7800 | 1.8 | 1.8 | 46 | 60 | 4 | 1580 |
| SG(B)10-500/10 | 1200 | 1500 | 6600 | 9350 | 1.8 | 1.8 | 47 | 62 | 4 | 1830 |
| SG(B)10-630/10 | 1340 | 1680 | 7900 | 11500 | 1.6 | 1.6 | 47 | 62 | 6 | 2060 |
| SG(B)10-800/10 | 1690 | 2120 | 9500 | 13600 | 1.3 | 1.6 | 48 | 63 | 6 | 2450 |
| SG(B)10-1000/10 | 1980 | 2480 | 11400 | 15700 | 1.3 | 1.4 | 48 | 63 | 6 | 2910 |
| SG(B)10-1250/10 | 2380 | 2980 | 12500 | 18400 | 1.3 | 1.4 | 49 | 65 | 6 | 3190 |
| SG(B)10-1600/10 | 2730 | 3420 | 13900 | 21300 | 1.3 | 1.4 | 50 | 66 | 6 | 4160 |
| SG(B)10-2000/10 | 3320 | 4150 | 17500 | 15000 | 1.2 | 1.2 | 50 | 66 | 6 | 4860 |
| SG(B)10-2500/10 | 4000 | 5000 | 20300 | 29100 | 1.2 | 1.2 | 51 | 67 | 6 | 5860 |

## Outline size list

| Model and capacity (kVA) | Non-enclosed type (without protective enclosure) | | | m | n | Non-enclosed type (without protective enclosure) | | | m | n |
|---|---|---|---|---|---|---|---|---|---|---|
| | L | H | B | | | L | H | B | | |
| SG(B)10-100/10 | 940 | 920 | 500 | 660 | 400 | 1340 | 1150 | 800 | 660 | 400 |
| SG(B)10-160/10 | 940 | 960 | 500 | 660 | 400 | 1340 | 1150 | 800 | 660 | 400 |
| SG(B)10-200/10 | 1100 | 1050 | 550 | 660 | 450 | 1500 | 1280 | 900 | 660 | 450 |
| SG(B)10-250/10 | 1120 | 1120 | 550 | 660 | 450 | 1500 | 1280 | 900 | 660 | 450 |
| SG(B)10-315/10 | 1190 | 1210 | 860 | 660 | 660 | 1700 | 1460 | 1000 | 660 | 660 |
| SG(B)10-400/10 | 1300 | 1330 | 860 | 820 | 660 | 1700 | 1460 | 1000 | 820 | 660 |
| SG(B)10-500/10 | 1330 | 1410 | 860 | 820 | 660 | 1900 | 1610 | 1000 | 820 | 660 |
| SG(B)10-630/10 | 1450 | 1365 | 860 | 820 | 660 | 1900 | 1610 | 1000 | 820 | 660 |
| SG(B)10-800/10 | 1500 | 1480 | 1020 | 820 | 820 | 2000 | 1770 | 1100 | 820 | 820 |
| SG(B)10-1000/10 | 1590 | 1570 | 1020 | 820 | 820 | 2000 | 1770 | 1100 | 820 | 820 |
| SG(B)10-1250/10 | 1610 | 1700 | 1270 | 1070 | 1070 | 2100 | 2130 | 1270 | 1070 | 1070 |
| SG(B)10-1600/10 | 1660 | 1770 | 1270 | 1070 | 1070 | 2100 | 2130 | 1270 | 1070 | 1070 |
| SG(B)10-2000/10 | 1700 | 1930 | 1270 | 1070 | 1070 | 2100 | 2130 | 1270 | 1070 | 1070 |
| SG(B)10-2500/10 | 1780 | 2090 | 1675 | 1475 | 1475 | 2200 | 2300 | 1675 | 1475 | 1475 |

Note:The dimensions and weights provided are only for reference in design and selection.
The final size and weight are subject to our prodect drawings.

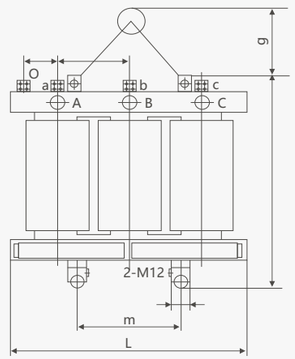




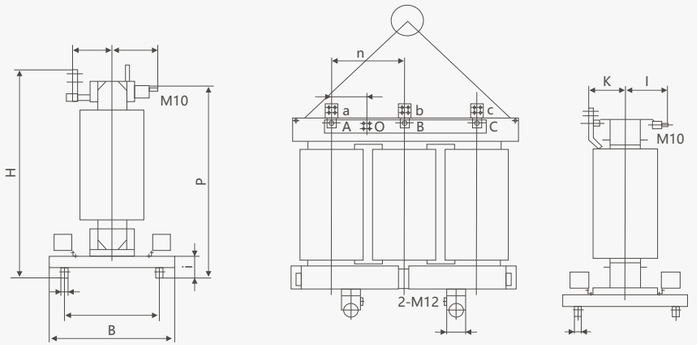
# SG(B)10 Insulated Three-phase Dry-type Transformer

## Overall and mounting dimensions(mm)

Size drawing of SG(B)10-100~400kVA

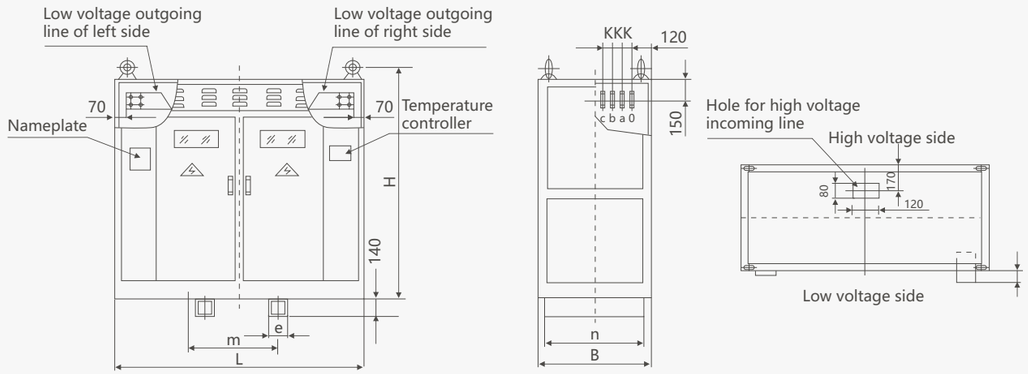



Size drawing of SG(B)10-500~2500kVA



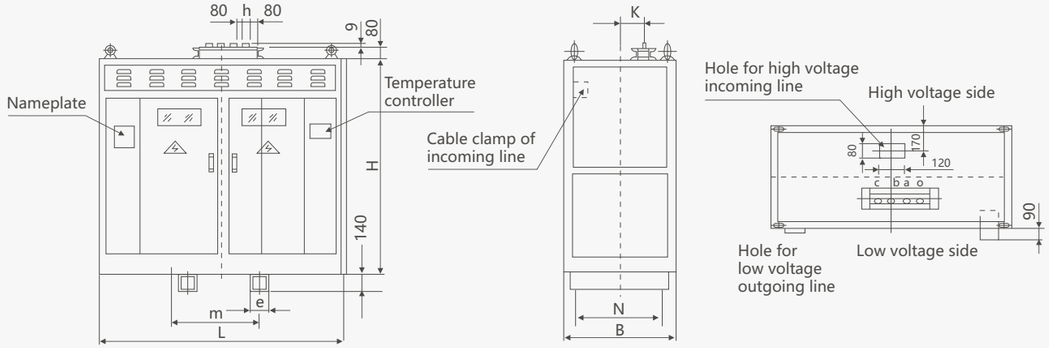

Note:the outline dimensions and track gauge dimensions covered in the catalog are only for reference.
welcome to contact us for accurate dimensions

## Outline diagram of standard side coiling out of SG(B)10 type non-encapsulated coil power transformer

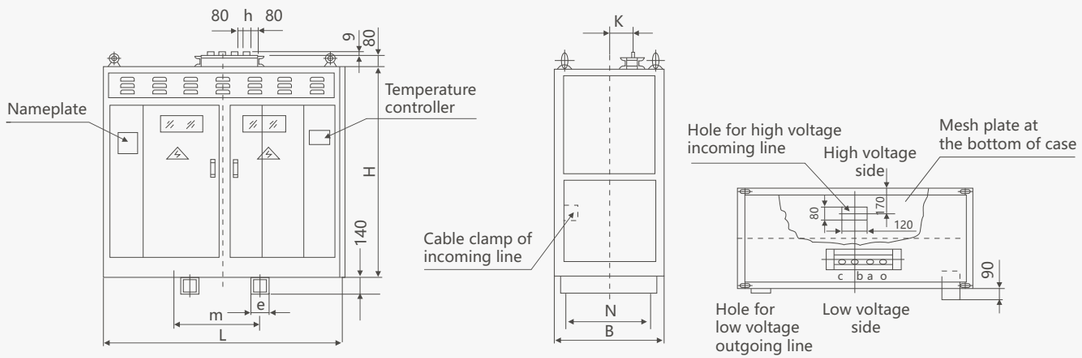


# SG(B)10 Insulated Three-phase Dry-type Transformer

## Outline diagram of IP20 of SG(B)10 type non-encapsulated coil power transformer (HS1)




## Outline diagram of IP20 of SG(B)10 type non-encapsulated coil power transformer (HS2)








# SG(B)10 Insulated Three-phase Dry-type Transformer

## Outline diagram of IP20 of SG(B)10 type non-encapsulated coil power transformer (HS3)

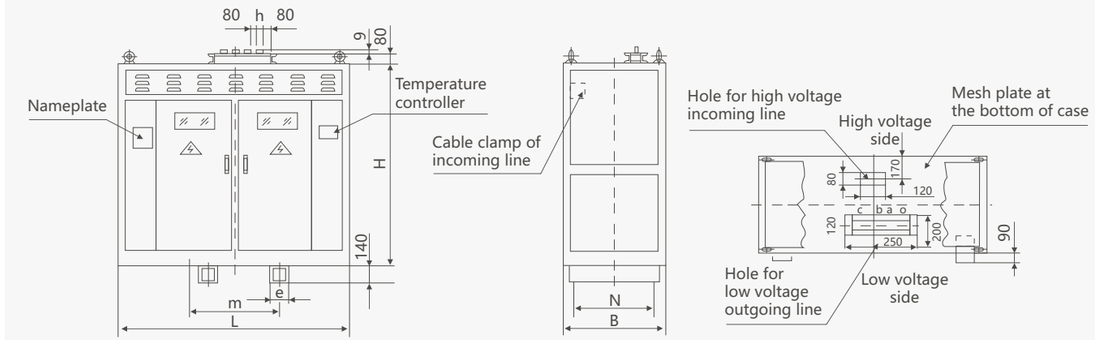
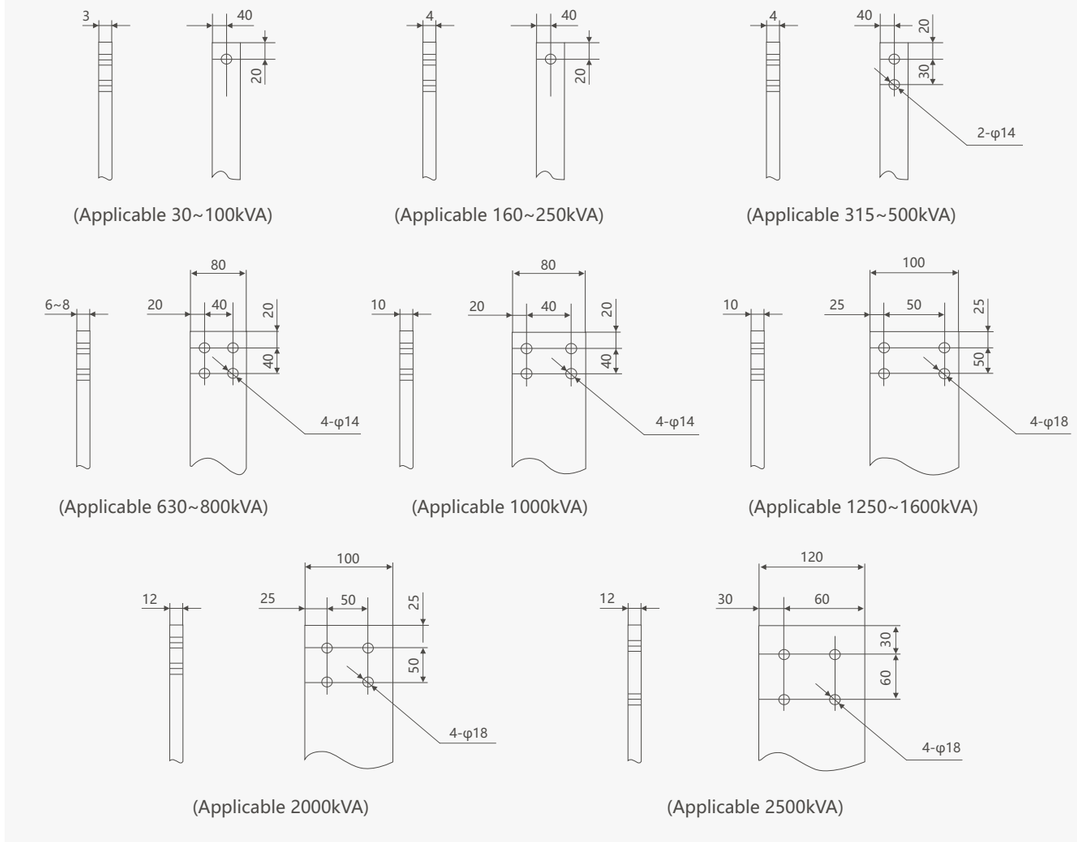



Diagram of LV terminal



# 35KV Dry-type Transformer

CNC ELECTRIC





## 35KV Dry-type Transformer

## SC(ZB)□ Series Dry-type Transformer

- This kind of product is applied to power system of three-phase, 50Hz as well as 35kV and below, is the main transformer equipment of medium and small-sized transformer substation, supplies power distribution, power and illumination for the industry and agriculture.
- The company introduces in domestic and overseas advanced technique, adopts the latest material and optimizes design, which enables the product structure more reasonable, and greatly improves the product electric strength, mechanical strength and heat-sinking capability.
- Standard: IEC726.

**General**

# SC(ZB)□ Series Dry-type Transformer

## Standard

SC(Z)B 10 - □ / □

- Rated HV(filling with the rated value)
- Rated capacity(kVA)
- Functionallevel code
- LV foil winding
- Dn-load tap changing
- Triple phase solid molding(epoxy casting)

## Features

1. Low loss, good energy-saving effect, and economical operation.
2. Flame retardant, fireproof, explosion-proof and non-polluting.
3. Good moisture resistance and strong heat dissipation.
4. High mechanical strength, small partial discharge and high reliability.
5. Short-circuit resistance, high level of lightning impact, and large overload capacity.
6. Small size, light weight, small footprint, and convenient installation.
7. Can be directly installed in the load center.

## External connecting mode

1.Coil out mode of high voltage terminal:
  a. Coil out from the top is standard
  b. Coil out from the bottom is acceptable
2.Coil out mode of low voltage terminal:
  a. Coil out from the top is standard
  b. Coil out from the bottom is acceptable
  c. Coil out from the horizontal side is acceptable





# SC(ZB)□ Series Dry-type Transformer

## SC(B)9-50~2500/35KV technical data

| Rated capacity (kVA) | Voltage combination | | | Connection | No-load loss (w) | Load Loss(w) 120℃ | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | H·V (kV) | Tapping range of high voltage | L·V (kV) | | | | | |
| 50 | 35<br>38.5 | ±5<br>±2*2.5 | 0.4 | Dyn11<br>Yyn0 | 500 | 1500 | 2.8 | 6.0 |
| 100 | | | | | 700 | 2200 | 2.4 | |
| 160 | | | | | 880 | 2960 | 1.8 | |
| 200 | | | | | 980 | 3500 | 1.8 | |
| 250 | | | | | 1100 | 4000 | 1.6 | |
| 315 | | | | | 1310 | 4750 | 1.6 | |
| 400 | | | | | 1530 | 5700 | 1.4 | |
| 500 | | | | | 1800 | 7000 | 1.4 | |
| 630 | | | | | 2070 | 8100 | 1.2 | |
| 800 | | | | | 2400 | 9600 | 1.2 | |
| 1000 | | | | | 2700 | 11000 | 1.0 | |
| 1250 | | | | | 3150 | 13400 | 0.9 | |
| 1600 | | | | | 3600 | 16300 | 0.9 | |
| 2000 | | | | | 4250 | 19200 | 0.9 | |
| 2500 | | | | | 4950 | 23000 | 0.9 | |

## SC(B)9-800~20000/35KV technical data

| Rated capacity (kVA) | Voltage combination | | | Connection | No-load loss (w) | Load Loss(w) 120℃ | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | H·V (kV) | Tapping range of high voltage | L·V (kV) | | | | | |
| 800 | 35<br>38.5 | ±5<br>±2*2.5 | 3.15<br>6<br>6.3<br>10<br>10.5<br>11 | Dyn11<br>Yd11<br>Yyn0 | 2500 | 9900 | 1.1 | 6.0 |
| 1000 | | | | | 2970 | 11500 | 1.1 | |
| 1250 | | | | | 3480 | 13600 | 1.0 | |
| 1600 | | | | | 4100 | 16300 | 1.0 | |
| 2000 | | | | | 4700 | 19200 | 0.9 | 7.0 |
| 2500 | | | | | 5400 | 23000 | 0.9 | |
| 3150 | | | | | 6700 | 25800 | 0.8 | 8.0 |
| 4000 | | | | | 7800 | 31000 | 0.8 | |
| 5000 | | | | | 9300 | 36800 | 0.7 | |
| 6300 | | | | | 11000 | 43000 | 0.7 | |
| 8000 | | | | | 12600 | 48500 | 0.6 | 9.0 |
| 10000 | | | | | 14400 | 58500 | 0.6 | |
| 12500 | | | | | 17500 | 68000 | 0.5 | |
| 16000 | | | | | 21500 | 80000 | 0.5 | |
| 20000 | | | | | 25500 | 90000 | 0.4 | 10.0 |

Note:Outline dimension is designed according to requirements.

## SC(B)10-50~2500/35KV technical data

| Rated capacity (kVA) | Voltage combination | | | Connection | No-load loss (w) | Load Loss(w) 120℃ | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | H·V (kV) | Tapping range of high voltage | L·V (kV) | | | | | |
| 50 | 35<br>38.5 | ±5<br>±2*2.5 | 0.4 | Dyn11<br>Yyn0 | 450 | 1420 | 2.30 | 6.0 |
| 100 | | | | | 630 | 2090 | 2.00 | |
| 160 | | | | | 790 | 2810 | 1.50 | |
| 200 | | | | | 880 | 3320 | 1.50 | |
| 250 | | | | | 990 | 3800 | 1.30 | |
| 315 | | | | | 1170 | 4510 | 1.30 | |
| 400 | | | | | 1370 | 5410 | 1.10 | |
| 500 | | | | | 1620 | 6650 | 1.10 | |
| 630 | | | | | 1860 | 7690 | 1.00 | |
| 800 | | | | | 2160 | 9120 | 1.00 | |
| 1000 | | | | | 2430 | 10400 | 0.75 | |
| 1250 | | | | | 2830 | 12700 | 0.75 | |
| 1600 | | | | | 3240 | 15400 | 0.75 | |
| 2000 | | | | | 3820 | 18200 | 0.75 | |
| 2500 | | | | | 4450 | 21800 | 0.75 | |

## SC(B)10-800~20000/35KV technical data

| Rated capacity (kVA) | Voltage combination | | | Connection | No-load loss (w) | Load Loss(w) 120℃ | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | H·V (kV) | Tapping range of high voltage | L·V (kV) | | | | | |
| 800 | 35<br>38.5 | ±5<br>±2*2.5 | 3.15<br>6<br>6.3<br>10<br>10.5<br>11 | Dyn11<br>Yd11<br>Yyn0 | 2250 | 9100 | 0.95 | 6.0 |
| 1000 | | | | | 2670 | 10900 | 0.95 | |
| 1250 | | | | | 3130 | 12900 | 0.85 | |
| 1600 | | | | | 3690 | 15400 | 0.85 | |
| 2000 | | | | | 4230 | 18200 | 0.75 | 7.0 |
| 2500 | | | | | 4860 | 21800 | 0.75 | |
| 3150 | | | | | 6030 | 24500 | 0.70 | 8.0 |
| 4000 | | | | | 7020 | 29400 | 0.70 | |
| 5000 | | | | | 8370 | 34900 | 0.60 | |
| 6300 | | | | | 9900 | 40800 | 0.60 | |
| 8000 | | | | | 11300 | 46000 | 0.50 | 9.0 |
| 10000 | | | | | 12900 | 55500 | 0.50 | |
| 12500 | | | | | 15700 | 64600 | 0.4 | |
| 16000 | | | | | 19300 | 76000 | 0.40 | |
| 20000 | | | | | 22900 | 85000 | 0.35 | 10.0 |

Note:Outline dimension is designed acco rding to requi rements.





## SCZ(B)9-35KV on-load tap changer technical data

| Rated capacity (kVA) | Voltage combination | | | Connection | No-load loss (w) | Load Loss(w) 120℃ | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | H·V (kV) | Tapping range of high voltage | L·V (kV) | | | | | |
| 2000 | 35<br>38.5 | ±4*2.5 | 6<br>6.3<br>10<br>10.5<br>11 | Dyn11<br>Yd11 | 5000 | 20000 | 0.90 | 7.0 |
| 2500 | | | | | 5800 | 23800 | 0.90 | |
| 3150 | | | | | 7000 | 26800 | 0.80 | |
| 4000 | | | | | 8200 | 32100 | 0.80 | |
| 5000 | | | | | 9700 | 38000 | 0.70 | 8.0 |
| 6300 | | | | | 11500 | 44000 | 0.70 | |
| 8000 | | | | | 13200 | 50000 | 0.60 | 9.0 |
| 10000 | | | | | 15100 | 60200 | 0.60 | |
| 12500 | | | | | 18300 | 70000 | 0.50 | |
| 16000 | | | | | 22500 | 82400 | 0.50 | |
| 20000 | | | | | 26500 | 92700 | 0.40 | 10.0 |

Note:Outline dimension is designed acco rding to requi rements.

## SCZ(B)10-35KV on-load tap changer technical data

| Rated capacity (kVA) | Voltage combination | | | Connection | No-load loss (w) | Load Loss(w) 120℃ | No-load current (%) | Short circuit impedance (%) |
|---|---|---|---|---|---|---|---|---|
| | H·V (kV) | Tapping range of high voltage | L·V (kV) | | | | | |
| 2000 | 35<br>38.5 | ±4*2.5 | 6<br>6.3<br>10<br>10.5<br>11 | Dyn11<br>Yd11 | 4500 | 10000 | 0.75 | 7.0 |
| 2500 | | | | | 5220 | 22600 | 0.75 | |
| 3150 | | | | | 6300 | 26400 | 0.70 | 8.0 |
| 4000 | | | | | 7380 | 30400 | 0.70 | |
| 5000 | | | | | 8730 | 36100 | 0.60 | |
| 6300 | | | | | 10300 | 41800 | 0.60 | |
| 8000 | | | | | 11800 | 47500 | 0.50 | 9.0 |
| 10000 | | | | | 13500 | 57100 | 0.50 | |
| 12500 | | | | | 16400 | 66500 | 0.40 | |
| 16000 | | | | | 20200 | 78200 | 0.40 | |
| 20000 | | | | | 23800 | 88000 | 0.35 | 10.0 |

Note:Outline dimension is designed according to requirements.