



## CAST RESIN TRANSFORMER

Precision Crafted   Perfect Quality



China Electric Equipment (Jiangsu) Transformer Manufacture Co.,Ltd

Address: 188 Ganglong Road, Yangzhong Economic Development zone, ZhenJiang City, Jiangsu Province, China


Tel: 0511-88222224   18014583377

Website: [www.ceegpower.com](http://www.ceegpower.com)

V 2021.12



All data on this catalog printed by CEEG are used for illuminating the relative information of this series of products. CEEG has any right to do any improvements for it whenever the technology should be upgraded or the production craftwork should be renewed possibly, or do some necessary correction because of the literal error and inaccurate information of this manual without any prior notice. When you make your orders, please keep in touch with relative personnel in order to confirm if your information is right.



|                               |                                    |                                           |                                  |                                  |                                 |
|-------------------------------|------------------------------------|-------------------------------------------|----------------------------------|----------------------------------|---------------------------------|
| <b>11</b><br>Product Features | <b>03</b><br>Company Profile       | <b>07</b><br>Product Family               | <b>18</b><br>Technical Parameter | <b>37</b><br>Special Application | <b>39</b><br>Use & Installation |
| <b>13</b><br>Accessories      | <b>15</b><br>Manufacturing Process | <b>41</b><br>References & Qualificationss |                                  |                                  |                                 |



## COMPANY PROFILE

1



# 为世界输出优质动力

## Delivering Premium Power To The World



## Delivering Premium Power To The World

### ► FORESIGHT

### ► INNOVATION

### ► RESPONSIBILITY

China Electric Equipment (Jiangsu) Transformer Manufacture Co., Ltd. is a modern enterprise integrating manufacturing, sales and scientific research. It has a complete set of shearing machines, automatic wrapping machine, robotic automatic laminating machine, German Hedrich vacuum casting tank, vacuum impregnation, electric transfer vehicle and other advanced equipments representing a high level in the industry, and is the first in the industry to develop and apply transformer collaborative design platform to effectively combine product data, product development and production process. CEEG's products include VPI transformer, cast resin transformer, semi-envelope transformer, oil-immersed transformers, traction transformers, 220kV power transformers, 110kV power transformer, mining explosion-proof transformer, mining explosion-proof switches, high and low voltage switchgear, frequency conversion transformer, amorphous alloy transformer, anti-harmonic transformer, Scott transformer, substation, wind power transformer, marine transformer, etc. Its sales cover many industries such as electric power, electronics, hydropower, nuclear power, wind power, coal mines, communications, construction, petroleum, chemical industry, aviation, transportation, railroad, etc.

Walking with giants and keeping pace with the world. CEEG has established long-term strategic partnerships with world-class companies such as DuPont, Schneider, DSI. Pursuing innovation, fulfilling responsibilities, and constantly surpassing products, quality, services and actions, it has developed into a domestic giant power transmission and distribution equipment supplier with a solid industrial foundation. Its cast resin dry type transformers have been exported to more than 40 countries and regions in the world.



Founded in 1990, CEEG has been focusing on manufacturing for 30 years and exporting quality power equipment to the world with the core values of "Vision, Innovation and Responsibility". So far, CEEG has three major industries: power transmission and distribution, new energy and system solutions, with industrial bases in Nanjing and Yangzhong.

CEEG was successively awarded the honorary titles of National Innovative Enterprise, Top 500 Asian Brands, Most Influential Brand of China Electrical Industry, China Environmental Label, and National Contract-observing and Creditable Enterprise.

**1990**  
Year of establishment



# 2

## PRODUCT FAMILY



- |    |    |    |                                |                               |                               |
|----|----|----|--------------------------------|-------------------------------|-------------------------------|
| 01 | 02 | 03 | 1. Amorphous Metal Transformer | 2. VPI Transformer            | 3. Cast Resin Transformer     |
| 04 | 05 | 06 | 4. 220kV Power Transformer     | 5. 220kV Traction Transformer | 6. 110kV Traction Transformer |
| 07 | 08 | 09 | 7. 110kV Power Transformer     | 8. Auto Transformer           | 9. 110kV Mobile Transformer   |





|    |    |    |
|----|----|----|
| 01 | 02 | 03 |
| 04 | 05 | 06 |
| 07 | 08 | 09 |

1. 35kV Power Transformer
2. 20kV Transformer
3. 11kV Distribution Transformer
4. 35kV Cast Resin Transformer
5. 35kV Traction Transformer
6. 11kV Traction Transformer
7. Harmonic Mitigating Transformer
8. Substation
9. Substation

|    |    |    |
|----|----|----|
| 01 | 02 | 03 |
| 04 | 05 | 06 |
| 07 | 08 | 09 |

1. Mining HV Switchgear
2. Mining Flame-proof Substation
3. Mining LV Switchgear
4. Rectifier Transformer
5. Ocean Platform Transformer
6. Marine Transformer
7. AFWF Transformer
8. Integrated PV Step-up Transformer
9. New Energy Substation





3

## PRODUCT FEATURES



**10kV Transformer**

1. Low loss, low partial discharge and low noise;
2. The product performance parameters of SCB11, SCB12 and SCB13 series are better than GB and IEC standards;
3. It is safe, flame-retardant, fireproof and pollution-free, and can be directly installed in the load center;
4. Maintenance free, convenient installation and low comprehensive operation cost;
5. Low temperature rise and high product reliability;
6. Stable structure and strong seismic capacity;
7. Moisture proof, corrosion-resistant, wide application range.



**35kV Transformer**

1. Through the dynamic thermal stability simulation analysis, the winding structure is reasonably arranged and has strong short-circuit resistance;
2. Low loss, low noise and low partial discharge;
3. It can also operate under overload for a long time without air cooling, with strong overload capacity;
4. Winding capacitance distribution is reasonable and impact resistance is strong;
5. The product has the characteristics of flame retardant and self extinguishing, non-toxic and harmful gas generation, green and environmental protection.



**Traction Rectifier Transformer**

1. Low temperature rise, strong overload capacity and reliable operation under class VI load conditions
2. The key technical parameters are well balanced, the load is evenly distributed, and the amount of non characteristic harmonics is effectively reduced.
3. The coil adopts axial double split structure, which can eliminate the balance reactor and smooth the output DC waveform.
4. High mechanical strength, good moisture resistance, partial discharge  $\leq 10\text{pc}$ .
5. Low noise and electromagnetic radiation pollution.



## 4

## ACCESSORIES

## + Enclosure

The enclosure can be divided into indoor type and outdoor type. There are several observation windows on the enclosure, and the enclosure can be sprayed with the color of the user's choice.

The degree of protection of the enclosure is generally divided into IP20 or IP23. IP20 prevents the ingress of solid foreign objects larger than 12 mm and protects against accidental shocks. In addition to the functions of IP20, IP23 can also prevent water drops from entering within 60 degrees from the vertical, which is suitable for outdoor installation.

The material of the enclosure is divided into: ordinary steel sheet, plastic injection molding, stainless steel sheet, aluminum alloy composite sheet, etc.



## + Temperature Controller

All transformers are equipped with an overheating protection device. The overheat protection device detects and controls the temperature of the transformer by means of a PT thermistor built into the low voltage coil and outputs a digital signal via the RS232 / 485 communication interface. The device provides the following functions:

1. during the operation of the transformer, the temperature value of the three-phase winding is displayed on a circuit.
2. display of the temperature value of the hottest phase winding.
3. overtemperature alarm and overtemperature shutdown.
4. audible and visual alarm and fan start.



## + Air Cooling Device

The cooling mode of dry-type transformer is divided into natural air cooling (AN) and forced air cooling (AF).

Natural air cooling (AN) can continuously provide 120% of the rated power under normal operating conditions.

Forced air cooling (AF) can increase the capacity by 50% under normal operating conditions, which is suitable for all types of emergency overloads or intermittent overload operation. Due to the large increase in load losses and impedance resistance, forced air cooling (AF) is generally not recommended for long-term continuous overload operation.



## + Copper Bar

1. in general, the incoming and outgoing modes of the cables are divided into: upper incoming & outgoing, lower incoming & outgoing, side incoming & outgoing.

2. for transformer with rated power  $\leq 200\text{KVA}$ , the conventional outgoing mode is still used, and the side outgoing line is connected by the user with a cable.

3. if the rated power is  $\geq 1600\text{KVA}$ , a, b, and c use double-row feeder lines with a spacing of 10 (1600200kva) or 12 (2500kva).

4. since the zero line is at the top of the transformer, it is recommended that the transformer zero line still enters the switchgear from the top if the zero line is brought out from the bottom of the switchgear.





## MANUFACTURING PROCESS



The high-voltage winding conductor is wound with high-quality conductor and reinforced with long and short cut glass fiber felt. It is poured by the world's most advanced Heidrich vacuum pouring system under vacuum. Effectively restrain the occurrence of partial discharge, and the partial discharge is  $\leq 5\text{pc}$ .



The low-voltage winding adopts high-quality foil conductor and is wound on an automatic foil winding machine. The foil winding machine adopts the patented technology of "foil wire hydraulic energy-saving tension crimping device", high-precision detection of  $\pm 0.5\text{mm}$  and advanced argon arc welding technology, which plays a key role in ensuring the quality of coil winding.

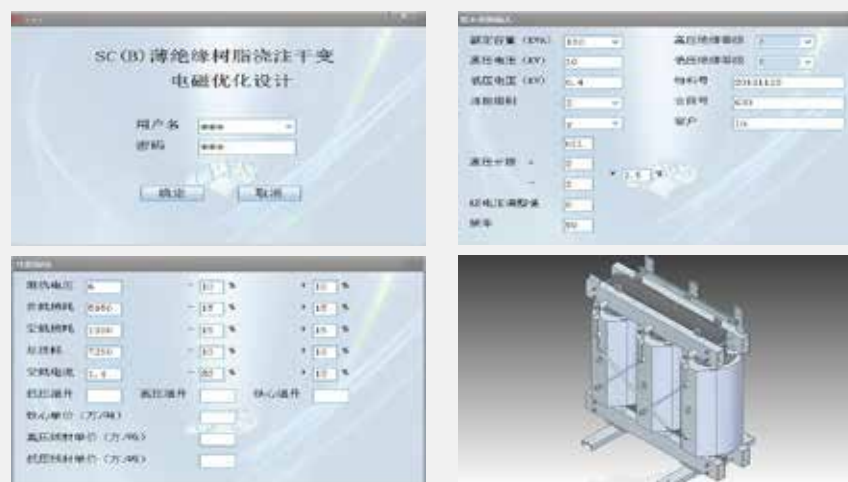


The iron core adopts high-quality high magnetic conductivity oriented silicon steel sheet,  $45^\circ$  full oblique step lapping process, and the surface adopts special moisture-proof and rust proof coating, which effectively reduces the no-load loss, no-load current and noise level.

## MANUFACTURING PROCESS

## DESIGN

Based on more than 30 years of design, manufacturing and experimental experience in the transformer industry, CEEG has developed a set of advanced "three-dimensional + parametric" design software, which can realize automatic design, cost optimization and simulation. Fully considering the requirements of the national and industrial standards, ensuring the advanced design of products.





## TESTING



All products strictly control the production process and quality links, and conduct strict test and inspection according to national standards and customer customized requirements before leaving the factory, including partial discharge inspection, lightning resistance and electric shock inspection, noise inspection and other necessary inspection items. Advanced test and detection equipment and perfect inspection and detection system ensure the high quality and high quality of products.

# 6

## TECHNICAL PARAMETER

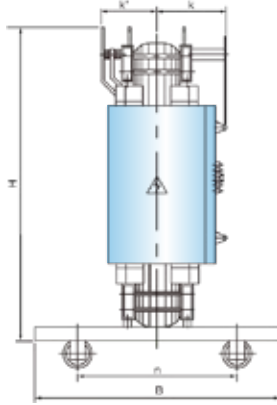
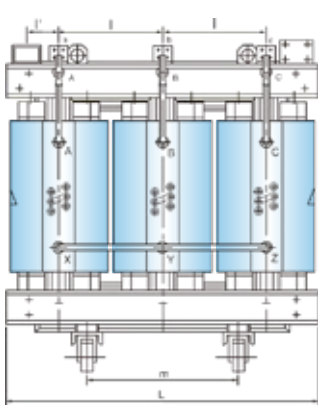


SC(B) 10-100~2500/10

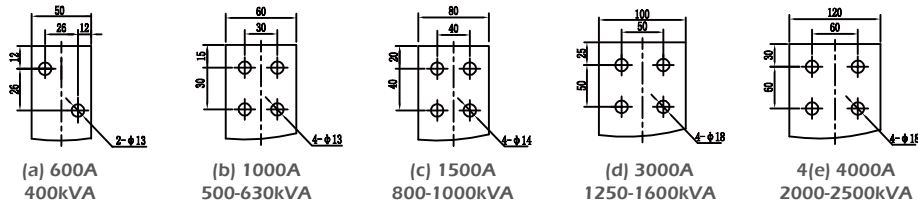
HV: 10 (10.5,11,6.6,6.3,6)kV      Vector Group: Dyn11, Yyn0  
LV: 0.4kV      Tapping Range: ±2×2.5%

| Model             | Uk % | P0 (W) | Pk (75°)<br>(W) | I0% | LPA(AN)dB | Gauge<br>m x n (mm) | Transformer Dimension<br>LxBxH (mm) | Enclosure Size (top outging<br>line) (footing included) | Enclosure Size (side outging<br>line) (footing included) |
|-------------------|------|--------|-----------------|-----|-----------|---------------------|-------------------------------------|---------------------------------------------------------|----------------------------------------------------------|
| SC (B) 10-100/10  | 4    | 400    | 1371            | 0.7 | 42        | 550×550             | 960×750×804                         | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 10-125/10  | 4    | 470    | 1616            | 0.7 | 43        | 550×550             | 960×750×804                         | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 10-160/10  | 4    | 540    | 1860            | 0.7 | 43        | 550×550             | 1040×750×859                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 10-200/10  | 4    | 620    | 2209            | 0.7 | 43        | 550×550             | 1040×750×874                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 10-250/10  | 4    | 720    | 2410            | 0.7 | 43        | 660×660             | 1090×860×856                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 10-315/10  | 4    | 880    | 3030            | 0.7 | 45        | 660×660             | 1100×860×923                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 10-400/10  | 4    | 980    | 3484            | 0.7 | 45        | 660×660             | 1120×860×913                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 10-500/10  | 4    | 1160   | 4260            | 0.6 | 46        | 660×660             | 1240×860×953                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 10-630/10  | 4    | 1340   | 5134            | 0.6 | 46        | 820×660             | 1360×860×956                        | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 10-630/10  | 6    | 1300   | 5200            | 0.6 | 48        | 820×660             | 1380×860×938                        | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 10-800/10  | 6    | 1520   | 6020            | 0.5 | 49        | 820×820             | 1450×1020×993                       | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 10-1000/10 | 6    | 1770   | 7090            | 0.4 | 50        | 820×820             | 1510×1020×1058                      | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 10-1250/10 | 6    | 2090   | 8460            | 0.4 | 51        | 820×820             | 1530×1020×1140                      | 1900×1600×1800                                          | 1900×1600×2200                                           |
| SC (B) 10-1600/10 | 6    | 2450   | 10240           | 0.3 | 51        | 820×1070            | 1560×1150×1223                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 10-2000/10 | 6    | 3050   | 12600           | 0.3 | 52        | 1070×1070           | 1580×1150×1273                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 10-2500/10 | 6    | 3600   | 15000           | 0.3 | 53        | 1070×1070           | 1700×1150×1383                      | 2200×1600×2200                                          | 2200×1600×2200                                           |
| SC (B) 10-1600/10 | 8    | 2450   | 11263           | 0.3 | 51        | 820×1070            | 1590×1150×1198                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 10-2000/10 | 8    | 3050   | 13882           | 0.3 | 52        | 1070×1070           | 1660×1150×1298                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 10-2500/10 | 8    | 3600   | 16414           | 0.3 | 53        | 1070×1070           | 1720×1150×1493                      | 2200×1600×2200                                          | 2200×1600×2200                                           |

Note: The data given in this manual is for planning and selection purposes only. Final data may vary.



LV Terminal Busbar



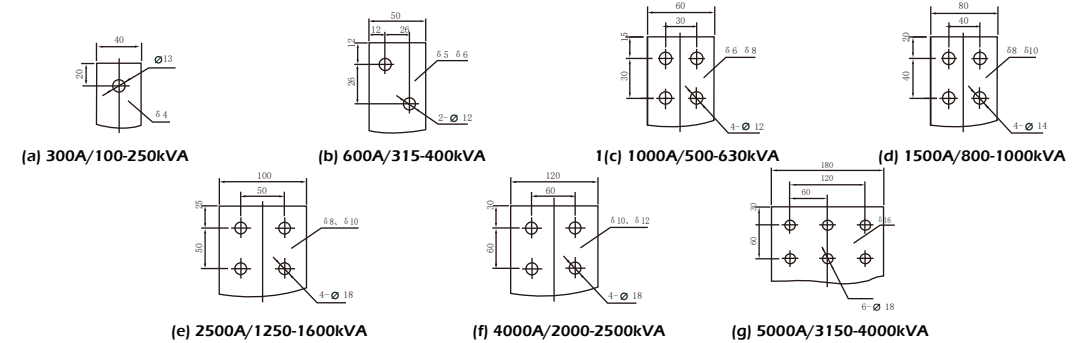
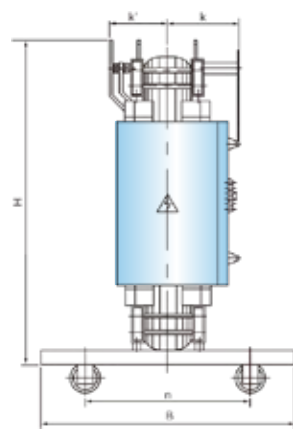
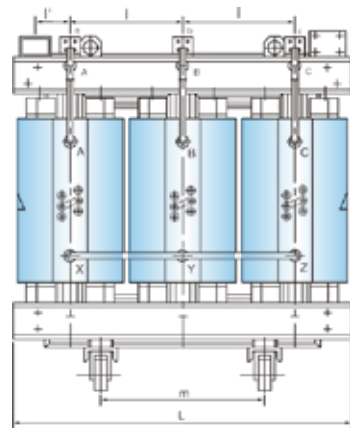
SC(B) 11-100~2500/10

HV: 10 (10.5,11,6.6,6.3,6)kV  
LV: 0.4kV

Vector Group: Dyn11, Yyn0  
Tapping Range: ±2×2.5%

| Model             | Uk % | PO (W) | Pk (75°)<br>(W) | I0% | LPA(AN)dB | Gauge<br>m x n (mm) | Transformer Dimension<br>LxBxH (mm) | Enclosure Size (top outging<br>line) (footing included) | Enclosure Size (side outging<br>line) (footing included) |
|-------------------|------|--------|-----------------|-----|-----------|---------------------|-------------------------------------|---------------------------------------------------------|----------------------------------------------------------|
| SC (B) 11-100/10  | 4    | 360    | 1371            | 0.7 | 42        | 550×550             | 960×750×804                         | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 11-125/10  | 4    | 423    | 1616            | 0.7 | 43        | 550×550             | 960×750×804                         | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 11-160/10  | 4    | 486    | 1860            | 0.7 | 43        | 550×550             | 1040×750×859                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 11-200/10  | 4    | 558    | 2209            | 0.7 | 43        | 550×550             | 1040×750×874                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 11-250/10  | 4    | 648    | 2410            | 0.7 | 43        | 660×660             | 1090×860×856                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 11-315/10  | 4    | 792    | 3030            | 0.7 | 45        | 660×660             | 1100×860×923                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 11-400/10  | 4    | 882    | 3484            | 0.7 | 45        | 660×660             | 1120×860×913                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 11-500/10  | 4    | 1044   | 4260            | 0.6 | 46        | 660×660             | 1240×860×953                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 11-630/10  | 4    | 1206   | 5134            | 0.6 | 46        | 820×660             | 1360×860×956                        | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 11-630/10  | 6    | 1170   | 5200            | 0.6 | 48        | 820×660             | 1380×860×938                        | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 11-800/10  | 6    | 1368   | 6020            | 0.5 | 49        | 820×820             | 1450×1020×993                       | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 11-1000/10 | 6    | 1593   | 7090            | 0.4 | 50        | 820×820             | 1510×1020×1058                      | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 11-1250/10 | 6    | 1881   | 8460            | 0.4 | 51        | 820×820             | 1530×1020×1140                      | 1900×1600×1800                                          | 1900×1600×2200                                           |
| SC (B) 11-1600/10 | 6    | 2205   | 10240           | 0.3 | 51        | 820×1070            | 1560×1150×1223                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 11-2000/10 | 6    | 2745   | 12600           | 0.3 | 52        | 1070×1070           | 1580×1150×1273                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 11-2500/10 | 6    | 3240   | 15000           | 0.3 | 53        | 1070×1070           | 1700×1150×1383                      | 2200×1600×2200                                          | 2200×1600×2200                                           |
| SC (B) 11-1600/10 | 8    | 2205   | 11263           | 0.3 | 51        | 820×1070            | 1590×1150×1198                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 11-2000/10 | 8    | 2745   | 13882           | 0.3 | 52        | 1070×1070           | 1660×1150×1298                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 11-2500/10 | 8    | 3240   | 16414           | 0.3 | 53        | 1070×1070           | 1720×1150×1493                      | 2200×1600×2200                                          | 2200×1600×2200                                           |

Note: The data given in this manual is for planning and selection purposes only. Final data may vary.



LV Terminal Busbar



SC(B) 12-100~2500/10

HV: 10 (10.5,11,6.6,6.3,6)kV  
LV: 0.4kV

Vector Group: Dyn11, Yyn0  
Tapping Range: ±2×2.5%

| Model             | Uk % | P0 (W) | Pk (75°)<br>(W) | I0% | LPA(AN)dB | Gauge<br>m x n (mm) | Transformer Dimension<br>LxBxH (mm) | Enclosure Size (top outging<br>line) (footing included) | Enclosure Size (side outging<br>line) (footing included) |
|-------------------|------|--------|-----------------|-----|-----------|---------------------|-------------------------------------|---------------------------------------------------------|----------------------------------------------------------|
| SC (B) 12-100/10  | 4    | 320    | 1371            | 0.7 | 42        | 550×550             | 970×750×810                         | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 12-125/10  | 4    | 375    | 1616            | 0.7 | 43        | 550×550             | 970×750×810                         | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 12-160/10  | 4    | 430    | 1860            | 0.7 | 43        | 550×550             | 1050×750×860                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 12-200/10  | 4    | 495    | 2209            | 0.7 | 43        | 550×550             | 1060×750×880                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 12-250/10  | 4    | 575    | 2410            | 0.7 | 43        | 660×660             | 1000×860×950                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 12-315/10  | 4    | 705    | 3030            | 0.7 | 45        | 660×660             | 1030×860×996                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 12-400/10  | 4    | 785    | 3485            | 0.7 | 45        | 660×660             | 1050×860×1041                       | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 12-500/10  | 4    | 930    | 4261            | 0.6 | 46        | 660×660             | 1090×860×1190                       | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 12-630/10  | 4    | 1070   | 5135            | 0.6 | 46        | 820×660             | 1170×860×1256                       | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 12-630/10  | 6    | 1040   | 5205            | 0.6 | 48        | 820×660             | 1210×860×1123                       | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 12-800/10  | 6    | 1215   | 6080            | 0.5 | 49        | 820×820             | 1230×1020×1161                      | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 12-1000/10 | 6    | 1415   | 7098            | 0.4 | 50        | 820×820             | 1320×1020×1274                      | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 12-1250/10 | 6    | 1670   | 8460            | 0.4 | 51        | 820×820             | 1420×1020×1133                      | 1900×1600×1800                                          | 1900×1600×2200                                           |
| SC (B) 12-1600/10 | 6    | 1960   | 10241           | 0.3 | 51        | 820×1070            | 1490×1150×1398                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 12-2000/10 | 6    | 2440   | 12616           | 0.3 | 52        | 1070×1070           | 1500×1150×1408                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 12-2500/10 | 6    | 2880   | 14990           | 0.3 | 53        | 1070×1070           | 1570×1150×1483                      | 2200×1600×2200                                          | 2200×1600×2200                                           |
| SC (B) 12-1600/10 | 8    | 1960   | 11263           | 0.3 | 51        | 820×1070            | 1530×1150×1350                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 12-2000/10 | 8    | 2440   | 13882           | 0.3 | 52        | 1070×1070           | 1610×1150×1416                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 12-2500/10 | 8    | 2880   | 16414           | 0.3 | 53        | 1070×1070           | 1720×1150×1508                      | 2200×1600×2200                                          | 2200×1600×2200                                           |

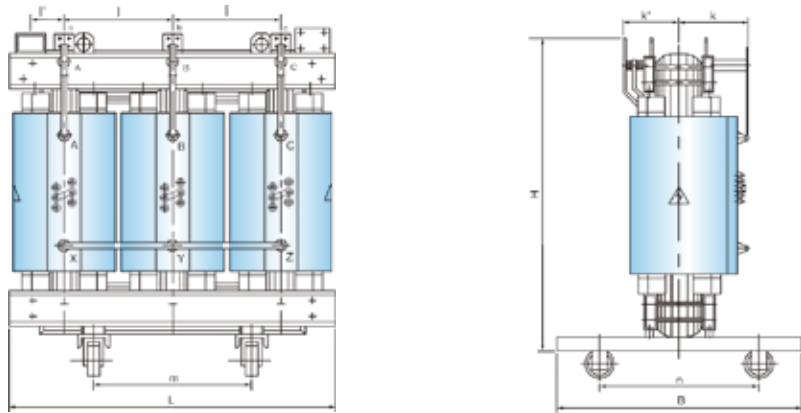
Note: The data given in this manual is for planning and selection purposes only. Final data may vary.

SC(B) 13-100~2500/10

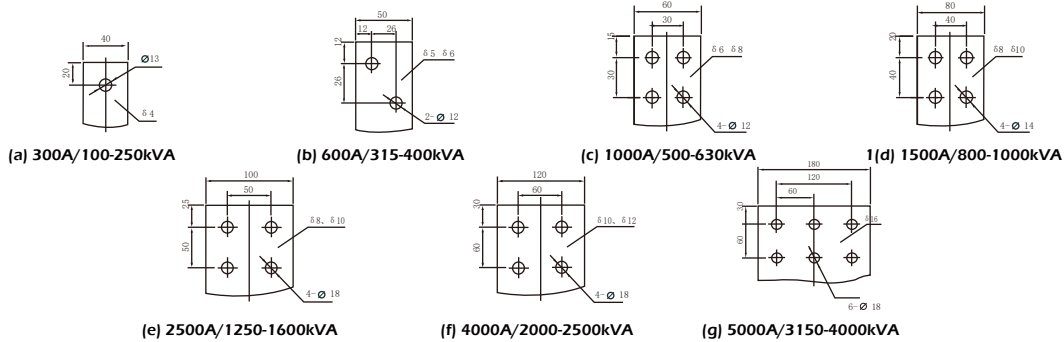
HV: 10 (10.5,11,6.6,6.3,6)kV      Vector Group: Dyn11, Yyn0  
LV: 0.4kV      Tapping Range: ±2×2.5%

| Model             | Uk % | P0 (W) | Pk (75°)<br>(W) | I0% | LPA(AN)dB | Gauge<br>m x n (mm) | Transformer Dimension<br>LxBxH (mm) | Enclosure Size (top outging<br>line) (footing included) | Enclosure Size (side outging<br>line) (footing included) |
|-------------------|------|--------|-----------------|-----|-----------|---------------------|-------------------------------------|---------------------------------------------------------|----------------------------------------------------------|
| SC (B) 13-100/10  | 4    | 290    | 1236            | 0.7 | 42        | 550×550             | 990×750×790                         | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 13-125/10  | 4    | 340    | 1454            | 0.7 | 43        | 550×550             | 990×750×830                         | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 13-160/10  | 4    | 385    | 1672            | 0.7 | 43        | 550×550             | 1060×750×880                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 13-200/10  | 4    | 445    | 1990            | 0.7 | 43        | 660×660             | 980×860×900                         | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 13-250/10  | 4    | 515    | 2170            | 0.7 | 43        | 660×660             | 1000×860×920.5                      | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 13-315/10  | 4    | 635    | 2730            | 0.7 | 45        | 660×660             | 1030×860×996                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 13-400/10  | 4    | 705    | 3135            | 0.7 | 45        | 660×660             | 1060×860×1038                       | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 13-500/10  | 4    | 835    | 3835            | 0.6 | 46        | 660×660             | 1120×860×1180                       | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC (B) 13-630/10  | 4    | 965    | 4620            | 0.6 | 46        | 820×660             | 1170×860×1256                       | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 13-630/10  | 6    | 935    | 4685            | 0.6 | 48        | 820×660             | 1210×860×1103                       | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 13-800/10  | 6    | 1095   | 5470            | 0.5 | 49        | 820×820             | 1230×1020×1161                      | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 13-1000/10 | 6    | 1275   | 6390            | 0.4 | 50        | 820×820             | 1320×1020×1274                      | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC (B) 13-1250/10 | 6    | 1505   | 7615            | 0.4 | 51        | 820×820             | 1350×1020×1353                      | 1900×1600×1800                                          | 1900×1600×2200                                           |
| SC (B) 13-1600/10 | 6    | 1765   | 9216            | 0.3 | 51        | 820×1070            | 1390×1150×1373                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 13-2000/10 | 6    | 2195   | 11355           | 0.3 | 52        | 1070×1070           | 1500×1150×1426                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 13-2500/10 | 6    | 2590   | 13500           | 0.3 | 53        | 1070×1070           | 1570×1150×1483                      | 2200×1600×2200                                          | 2200×1600×2200                                           |
| SC (B) 13-1600/10 | 8    | 1715   | 10137           | 0.3 | 51        | 820×1070            | 1610×1150×1273                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 13-2000/10 | 8    | 2135   | 12494           | 0.3 | 52        | 1070×1070           | 1610×1150×1416                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC (B) 13-2500/10 | 8    | 2520   | 14773           | 0.3 | 53        | 1070×1070           | 1610×1150×1563                      | 2200×1600×2200                                          | 2200×1600×2200                                           |

Note: The data given in this manual is for planning and selection purposes only. Final data may vary.



LV Terminal Busbar





**SC(B)14-100~2500/10**

HV: 10 (10.5,11,6.6,6.3,6)kV  
LV: 0.4kV

Vector Group: Dyn11, Yyn0  
Tapping Range:  $\pm 2 \times 2.5\%$

| Model           | Uk % | P0 (W) | Pk (75°)<br>(W) | IO% | LPA(AN)dB | L×B×H(mm)      | Gauge<br>m x n (mm) | Enclosure Size (top outgoing<br>line) (footing included) | Enclosure Size (side outgoing<br>line) (footing included) |
|-----------------|------|--------|-----------------|-----|-----------|----------------|---------------------|----------------------------------------------------------|-----------------------------------------------------------|
| SC(B)14-100/10  | 4    | 270    | 1240            | 0.7 | 42        | 1050×750×790   | 550×550             | 1700×1400×1600                                           | 1700×1400×2200                                            |
| SC(B)14-125/10  | 4    | 320    | 1450            | 0.7 | 42        | 1050×750×830   | 550×550             | 1700×1400×1600                                           | 1700×1400×2200                                            |
| SC(B)14-160/10  | 4    | 365    | 1670            | 0.7 | 42        | 1100×750×880   | 550×550             | 1700×1400×1600                                           | 1700×1400×2200                                            |
| SC(B)14-200/10  | 4    | 420    | 1990            | 0.7 | 43        | 1090×750×900   | 550×550             | 1700×1400×1600                                           | 1700×1400×2200                                            |
| SC(B)14-250/10  | 4    | 490    | 2170            | 0.7 | 43        | 1150×860×940   | 660×660             | 1700×1400×1600                                           | 1700×1400×2200                                            |
| SC(B)14-315/10  | 4    | 600    | 2730            | 0.7 | 45        | 1180×860×970   | 660×660             | 1700×1400×1600                                           | 1700×1400×2200                                            |
| SC(B)14-400/10  | 4    | 665    | 3140            | 0.7 | 45        | 1290×860×990   | 660×660             | 1700×1400×1600                                           | 1700×1400×2200                                            |
| SC(B)14-500/10  | 4    | 790    | 3830            | 0.6 | 46        | 1260×860×1030  | 660×660             | 1700×1400×1600                                           | 1700×1400×2200                                            |
| SC(B)14-630/10  | 4    | 910    | 4610            | 0.6 | 46        | 1300×860×1120  | 820×660             | 1900×1500×1800                                           | 1900×1500×2200                                            |
| SC(B)14-630/10  | 6    | 885    | 4690            | 0.6 | 46        | 1390×860×1060  | 820×660             | 1900×1500×1800                                           | 1900×1500×2200                                            |
| SC(B)14-800/10  | 6    | 1035   | 5470            | 0.4 | 49        | 1450×1020×1070 | 820×820             | 1900×1500×1800                                           | 1900×1500×2200                                            |
| SC(B)14-1000/10 | 6    | 1205   | 6430            | 0.4 | 50        | 1510×1020×1110 | 820×820             | 1900×1500×1800                                           | 1900×1500×2200                                            |
| SC(B)14-1250/10 | 6    | 1420   | 7610            | 0.4 | 51        | 1540×1020×1160 | 820×820             | 2000×1600×2000                                           | 2000×1600×2200                                            |
| SC(B)14-1600/10 | 6    | 1665   | 9230            | 0.3 | 51        | 1650×1150×1230 | 820×1070            | 2000×1600×2000                                           | 2000×1600×2200                                            |
| SC(B)14-2000/10 | 6    | 2075   | 11420           | 0.3 | 52        | 1730×1150×1330 | 1070×1070           | 2200×1600×2200                                           | 2200×1600×2200                                            |
| SC(B)14-2500/10 | 6    | 2450   | 13540           | 0.3 | 53        | 1810×1150×1370 | 1070×1070           | 2200×1600×2200                                           | 2200×1600×2200                                            |
| SC(B)14-1600/10 | 8    | 1665   | 10160           | 0.3 | 51        | 1650×1150×1190 | 820×1070            | 2000×1600×2000                                           | 2000×1600×2200                                            |
| SC(B)14-2000/10 | 8    | 2075   | 12530           | 0.3 | 52        | 1730×1150×1300 | 1070×1070           | 2200×1600×2200                                           | 2200×1600×2200                                            |
| SC(B)14-2500/10 | 8    | 2450   | 14830           | 0.3 | 53        | 1810×1150×1320 | 1070×1070           | 2200×1600×2200                                           | 2200×1600×2200                                            |

Note: The data given in this manual is for planning and selection purposes only. Final data may vary.

SC(B) 18-100~2500/10

HV: 10 (10.5,11,6.6,6.3,6)kV      Vector Group: Dyn11, Yyn0  
LV: 0.4kV      Tapping Range: ±2×2.5%

| Model            | Uk % | P0 (W) | Pk (75°)<br>(W) | I0% | LPA(AN)dB | Gauge<br>m x n (mm) | Transformer Dimension<br>LxBxH (mm) | Enclosure Size (top outging<br>line) (footing included) | Enclosure Size (side outging<br>line) (footing included) |
|------------------|------|--------|-----------------|-----|-----------|---------------------|-------------------------------------|---------------------------------------------------------|----------------------------------------------------------|
| SC(B) 18-100/10  | 4    | 230    | 1240            | 0.7 | 42        | 550×550             | 1050×750×790                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC(B) 18-125/10  | 4    | 270    | 1450            | 0.7 | 42        | 550×550             | 1050×750×830                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC(B) 18-160/10  | 4    | 310    | 1670            | 0.7 | 42        | 550×550             | 1100×750×880                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC(B) 18-200/10  | 4    | 360    | 1990            | 0.7 | 43        | 550×550             | 1090×750×900                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC(B) 18-250/10  | 4    | 415    | 2170            | 0.7 | 43        | 660×660             | 1150×860×940                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC(B) 18-315/10  | 4    | 510    | 2730            | 0.7 | 45        | 660×660             | 1180×860×970                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC(B) 18-400/10  | 4    | 570    | 3140            | 0.7 | 45        | 660×660             | 1290×860×990                        | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC(B) 18-500/10  | 4    | 670    | 3830            | 0.6 | 46        | 660×660             | 1260×860×1030                       | 1700×1400×1600                                          | 1700×1400×2200                                           |
| SC(B) 18-630/10  | 4    | 775    | 4610            | 0.6 | 46        | 820×660             | 1300×860×1120                       | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC(B) 18-630/10  | 6    | 750    | 4690            | 0.6 | 46        | 820×660             | 1390×860×1060                       | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC(B) 18-800/10  | 6    | 875    | 5470            | 0.4 | 49        | 820×820             | 1450×1020×1070                      | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC(B) 18-1000/10 | 6    | 1020   | 6430            | 0.4 | 50        | 820×820             | 1510×1020×1110                      | 1900×1500×1800                                          | 1900×1500×2200                                           |
| SC(B) 18-1250/10 | 6    | 1205   | 7610            | 0.4 | 51        | 820×820             | 1540×1020×1160                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC(B) 18-1600/10 | 6    | 1415   | 9230            | 0.3 | 51        | 820×1070            | 1650×1150×1230                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC(B) 18-2000/10 | 6    | 1760   | 11420           | 0.3 | 52        | 1070×1070           | 1730×1150×1330                      | 2200×1600×2200                                          | 2200×1600×2200                                           |
| SC(B) 18-2500/10 | 6    | 2080   | 13540           | 0.3 | 53        | 1070×1070           | 1810×1150×1370                      | 2200×1600×2200                                          | 2200×1600×2200                                           |
| SC(B) 18-1600/10 | 8    | 1415   | 10160           | 0.3 | 51        | 820×1070            | 1650×1150×1190                      | 2000×1600×2000                                          | 2000×1600×2200                                           |
| SC(B) 18-2000/10 | 8    | 1760   | 12530           | 0.3 | 52        | 1070×1070           | 1730×1150×1300                      | 2200×1600×2200                                          | 2200×1600×2200                                           |
| SC(B) 18-2500/10 | 8    | 2080   | 14830           | 0.3 | 53        | 1070×1070           | 1810×1150×1320                      | 2200×1600×2200                                          | 2200×1600×2200                                           |

SC(B) 10-200~2500/20

HV: 20 (22, 24)kV      Vector Group: Dyn11, Yyn0  
LV: 0.4kV      Insulation Level: LI 125 AC 50 / LI AC 3      Tapping Range: ±2×2.5%

| Model               | Uk % | P0 (W) | Pk (75°)<br>(W) | I0% | LPA(AN)dB | Gauge<br>m x n (mm) | Transformer Dimension<br>LxBxH (mm) | Enclosure Dimension<br>(footing included) |
|---------------------|------|--------|-----------------|-----|-----------|---------------------|-------------------------------------|-------------------------------------------|
| SC ( B ) 10-200/20  | 6    | 730    | 2565            | 1.0 | 47        | 660×660             | 1425×860×1184                       | 1650×1400×1660                            |
| SC ( B ) 10-250/20  | 6    | 840    | 2985            | 1.0 | 47        | 820×660             | 1450×860×1317                       | 2000×1400×1660                            |
| SC ( B ) 10-315/20  | 6    | 970    | 3560            | 0.9 | 48        | 820×820             | 1460×1020×1339                      | 2000×1400×1865                            |
| SC ( B ) 10-400/20  | 6    | 1150   | 4225            | 0.8 | 48        | 820×820             | 1490×1020×1344                      | 2100×1450×1965                            |
| SC ( B ) 10-500/20  | 6    | 1350   | 5055            | 0.8 | 50        | 820×820             | 1580×1070×1471                      | 2100×1450×1965                            |
| SC ( B ) 10-630/20  | 6    | 1530   | 5970            | 0.7 | 50        | 820×820             | 1580×1070×1616                      | 2200×1500×2065                            |
| SC ( B ) 10-800/20  | 6    | 1750   | 7210            | 0.6 | 51        | 820×820             | 1580×1070×1681                      | 2300×1550×2065                            |
| SC ( B ) 10-1000/20 | 6    | 2070   | 8540            | 0.5 | 52        | 820×820             | 1700×1070×1536                      | 2300×1650×2165                            |
| SC ( B ) 10-1250/20 | 6    | 2380   | 10040           | 0.5 | 52        | 1070×1070           | 1760×1270×1621                      | 2400×1700×2300                            |
| SC ( B ) 10-1600/20 | 6    | 2790   | 12050           | 0.4 | 53        | 1070×1070           | 1900×1270×1781                      | 2500×1800×2400                            |
| SC ( B ) 10-2000/20 | 6    | 3240   | 14230           | 0.4 | 53        | 1070×1070           | 2060×1270×2081                      | 2700×1800×2500                            |
| SC ( B ) 10-2500/20 | 6    | 3870   | 16850           | 0.3 | 54        | 1070×1070           | 2260×1270×2016                      | 2800×1900×2700                            |

Note: The data given in this manual is for planning and selection purposes only. Final data may vary.

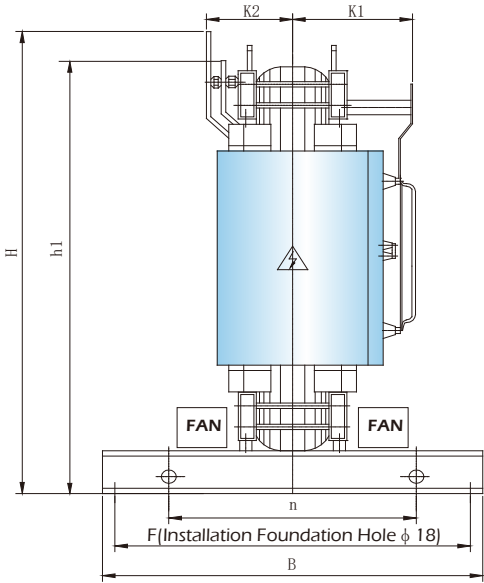
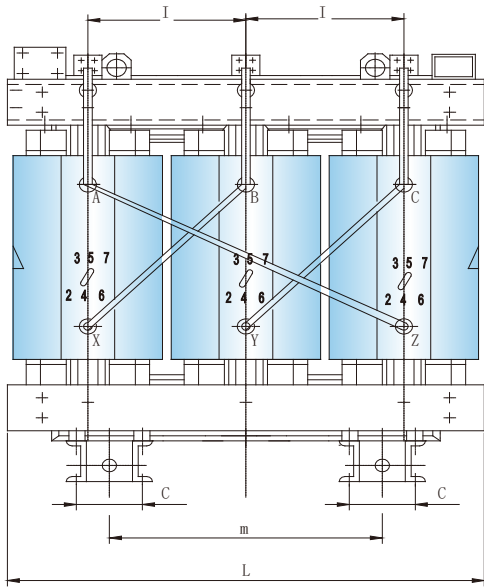


SC(B) 10-250~2500/35

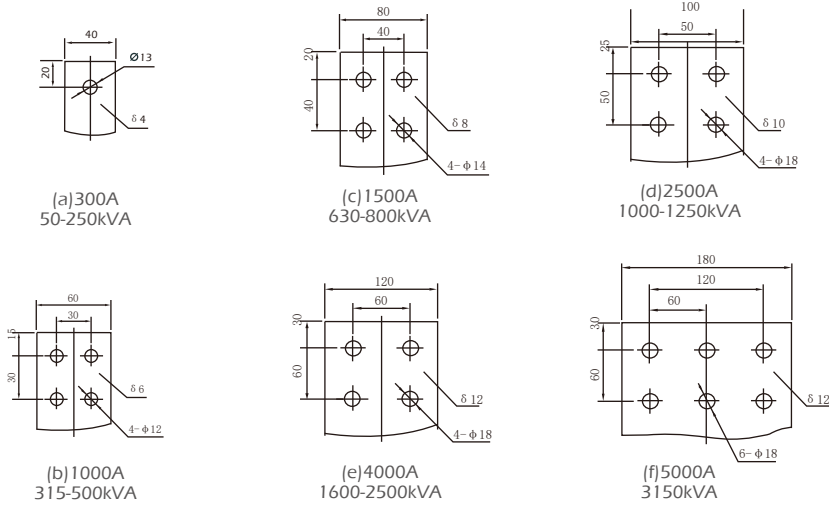
HV: 35(38.5, 37.5, 36.5, 33) kV      Vector Group: Dyn11, Yyn0  
LV: 0.4kV      Tapping Range: ±2×2.5%

| Model         | UK% | P0(W) | PK(W)75° | I0%  | LPA(AN)dB | Gauge<br>m x n (mm) | Transformer Dimension<br>LxBxH (mm) | Enclosure Dimension<br>LxBxH (mm) |
|---------------|-----|-------|----------|------|-----------|---------------------|-------------------------------------|-----------------------------------|
| SC10-250/35   | 6   | 990   | 3250     | 0.73 | 52        | 820×820             | 1470×1000×1591                      | 2300×1700×2000                    |
| SC10-315/35   | 6   | 1180  | 3900     | 0.6  | 52        | 820×820             | 1580×1100×1870                      | 2600×1800×2300                    |
| SC10-400/35   | 6   | 1380  | 4700     | 1.6  | 52        | 820×820             | 1790×1100×1700                      | 2600×1800×2100                    |
| SCB10-500/35  | 6   | 1620  | 5700     | 0.43 | 52        | 820×820             | 1620×1100×1930                      | 2420×1800×2300                    |
| SCB10-630/35  | 6   | 1860  | 6600     | 0.36 | 52        | 820×820             | 1720×1100×1970                      | 2520×1900×2350                    |
| SCB10-800/35  | 6   | 2160  | 7800     | 0.63 | 53        | 820×820             | 1840×1200×2000                      | 2650×1900×2350                    |
| SCB10-1000/35 | 6   | 2430  | 9100     | 0.47 | 53        | 1070×820            | 2070×1200×1980                      | 2870×1900×2350                    |
| SCB10-1250/35 | 6   | 2840  | 11000    | 0.4  | 53        | 1070×1070           | 2180×1400×2000                      | 2980×2000×2450                    |
| SCB10-1600/35 | 6   | 3240  | 13400    | 0.3  | 55        | 1070×1070           | 2000×1300×2270                      | 2800×2000×2650                    |
| SCB10-2000/35 | 6   | 3825  | 15928    | 0.28 | 55        | 1070×1070           | 2130×1300×2340                      | 3200×2200×2700                    |
| SCB10-2500/35 | 6   | 4460  | 18641    | 0.52 | 55        | 1070×1070           | 2240×1400×2370                      | 3000×2000×2700                    |

Note: The data given in this manual is for planning and selection purposes only. Final data may vary.



LV Terminal Busbar

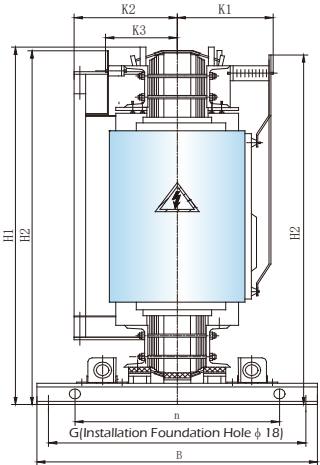
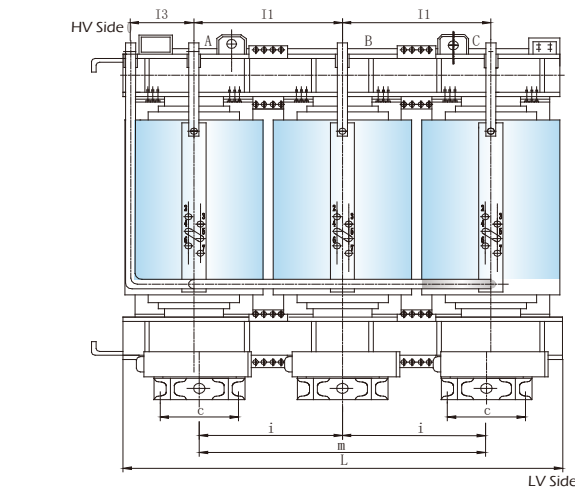


SC11-800~25000/35

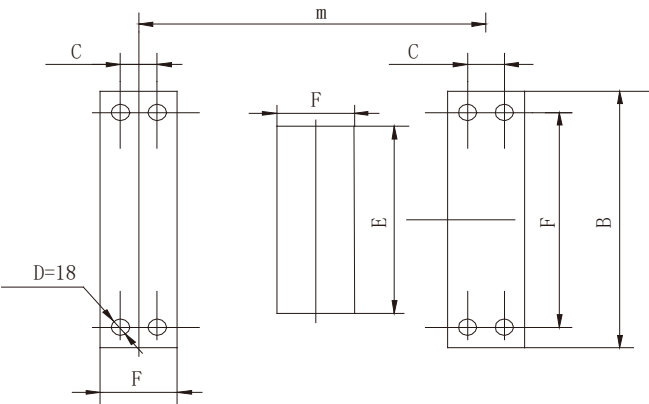
HV: 35 (38.5, 37.5, 36.5, 33)kV      Vector Group: Yd11, YNd11, Dyn11  
LV: 10.5 (11, 6.0, 6.3, 3.15)kV      Tapping Range: ±2×2.5%

| Model         | UK% | P0(W) | PK(W)75° | I0%  | LPA(AN)dB | Gauge<br>m x n (mm) | Transformer Dimension<br>LxBxH (mm) |
|---------------|-----|-------|----------|------|-----------|---------------------|-------------------------------------|
| SC11-800/35   | 6   | 2025  | 9400     | 0.6  | 50        | 1475×820            | 2210×1070×1680                      |
| SC11-1000/35  | 6   | 2400  | 10900    | 0.6  | 50        | 1475×820            | 2280×1070×1720                      |
| SC11-1250/35  | 6   | 2815  | 12900    | 0.5  | 50        | 1475×1070           | 2380×1200×1810                      |
| SC11-1600/35  | 6   | 3320  | 15400    | 0.5  | 50        | 1475×1070           | 2405×1400×2285                      |
| SC11-2000/35  | 7   | 3805  | 18200    | 0.45 | 52        | 1475×1070           | 2530×1400×2330                      |
| SC11-2500/35  | 7   | 4370  | 21800    | 0.45 | 52        | 1475×1070           | 2650×1400×2345                      |
| SC11-3150/35  | 8   | 5425  | 24500    | 0.4  | 53        | 2040×1475           | 2980×1400×2360                      |
| SC11-4000/35  | 8   | 6315  | 29400    | 0.4  | 53        | 2040×1475           | 3120×1600×2410                      |
| SC11-5000/35  | 8   | 7530  | 34900    | 0.35 | 54        | 2040×1475           | 3170×1600×2460                      |
| SC11-6300/35  | 8   | 8910  | 40800    | 0.35 | 54        | 2040×1475           | 3250×1800×2565                      |
| SC11-8000/35  | 9   | 10170 | 46000    | 0.3  | 56        | 2040×1475           | 3390×1800×2675                      |
| SC11-10000/35 | 9   | 11610 | 55500    | 0.25 | 60        | 2040×1475           | 3570×2000×2765                      |
| SC11-12500/35 | 9   | 14130 | 64600    | 0.2  | 60        | 2040×1475           | 3770×2000×2885                      |
| SC11-16000/35 | 9   | 17370 | 76000    | 0.2  | 62        | 2300×1475           | 4200×2000×3150                      |
| SC11-20000/35 | 10  | 20610 | 85500    | 0.2  | 62        | 2580×1475           | 4610×2000×3460                      |
| SC11-25000/35 | 10  | 24390 | 101000   | 0.2  | 64        | 2580×1475           | 4810×2000×3490                      |

Note: The data given in this manual is for planning and selection purposes only. Final data may vary.



LV Terminal Busbar



ZQSC series 10kV 800~3300kVA Traction Rectifier Transformer

| Model        | UK% | P0(W) | PK(W) | I0%  | LPA(AN)dB | Dimension      |
|--------------|-----|-------|-------|------|-----------|----------------|
| ZQSC-800/10  | 6.2 | 1794  | 5959  | 0.33 | 54        | 2250×1400×2300 |
| ZQSC-1000/10 | 6.2 | 1882  | 7360  | 0.28 | 54        | 2250×1450×2400 |
| ZQSC-1250/10 | 6.2 | 2729  | 8615  | 0.32 | 54        | 2350×1500×2500 |
| ZQSC-1600/10 | 6.2 | 3300  | 8864  | 0.27 | 55        | 2600×1600×2500 |
| ZQSC-1800/10 | 6.5 | 3397  | 10600 | 0.25 | 55        | 2600×1600×2550 |
| ZQSC-2000/10 | 6.8 | 3574  | 11094 | 0.25 | 55        | 2650×1700×2600 |
| ZQSC-2500/10 | 8   | 3943  | 13548 | 0.21 | 56        | 2700×1750×2700 |
| ZQSC-2750/10 | 8   | 4023  | 13917 | 0.2  | 56        | 2800×1750×2800 |
| ZQSC-3300/10 | 8   | 4070  | 15245 | 0.24 | 57        | 2800×1800×2900 |

ZQSCB series 35kV 1600~4400kVA Traction Rectifier Transformer

| Model         | UK% | P0(W) | PK(W) | I0% | LPA(AN)dB | Dimension      |
|---------------|-----|-------|-------|-----|-----------|----------------|
| ZQSCB-1600/35 | 8   | 3600  | 15400 | 0.9 | 53        | 2280×1300×2420 |
| ZQSCB-2000/35 | 8   | 4200  | 18000 | 0.9 | 53        | 2340×1300×2595 |
| ZQSCB-2500/35 | 8   | 4800  | 21000 | 0.9 | 54        | 2500×1400×2620 |
| ZQSCB-2750/35 | 8   | 4900  | 22000 | 0.9 | 54        | 2500×1400×2750 |
| ZQSCB-3000/35 | 8   | 5700  | 23000 | 0.8 | 54        | 2620×1600×2625 |
| ZQSCB-3300/35 | 8   | 6200  | 25000 | 0.8 | 55        | 2590×1600×2745 |
| ZQSCB-4000/35 | 8   | 7000  | 29000 | 0.8 | 55        | 2660×1800×2770 |
| ZQSCB-4400/35 | 8   | 7500  | 31000 | 0.7 | 56        | 2730×1800×2795 |

Note: The data given in this manual is for planning and selection purposes only. Final data may vary.

20kV 800~20000kVA Non-excitation Voltage Regulating Power Transformer

| Capacity kVA | Voltage Ratio |                |        | Vector Group | P0(kW) | PK(kW) |       | I0% | Uk% | LPA(AN)dB |
|--------------|---------------|----------------|--------|--------------|--------|--------|-------|-----|-----|-----------|
|              | HV(kV)        | Tapping Range% | LV(kV) |              |        | 75°    | 100°  |     |     |           |
| 800          | 13.8          |                | 3      | Yd11         | 2300   | 7640   | 8750  | 1.5 | 6   | 52        |
| 1000         |               |                |        |              | 2500   | 9690   | 11100 | 1.5 | 6   | 52        |
| 1250         |               |                |        |              | 3100   | 11790  | 13500 | 1.3 | 6   | 52        |
| 1600         |               |                |        |              | 3630   | 13800  | 15800 | 1.3 | 6   | 54        |
| 2000         |               |                |        |              | 4240   | 15800  | 18100 | 1.1 | 7   | 55        |
| 2500         |               |                |        |              | 4850   | 18160  | 20800 | 1.1 | 7   | 55        |
| 3150         |               |                |        | YNd11        | 6160   | 21830  | 25000 | 0.9 | 8   | 56        |
| 4000         |               |                |        |              | 6930   | 25320  | 29000 | 0.9 | 8   | 56        |
| 5000         |               |                |        |              | 7810   | 28990  | 33200 | 0.7 | 8   | 58        |
| 6300         |               |                |        |              | 9980   | 33960  | 38900 | 0.7 | 8   | 60        |
| 8000         |               |                |        |              | 12280  | 38420  | 44000 | 0.6 | 8   | 60        |
| 10000        | 24            |                | 11     |              | 14410  | 43650  | 50000 | 0.6 | 8   | 62        |
| 12500        |               |                |        |              | 18150  | 47150  | 54000 | 0.6 | 8   | 63        |
| 16000        |               |                |        |              | 22660  | 53260  | 61000 | 0.5 | 8   | 64        |
| 20000        |               |                |        |              | 27170  | 62430  | 71500 | 0.5 | 8   | 65        |

Note: According to the requirements, the high-voltage tapping range of urban transformer can be ± 2 × 2.5%, The data given in this manual is for planning and selection purposes only. Final data may vary.



# SPECIAL APPLICATIONS

## • Traction Rectifier Transformer

The rated capacity is 800 ~ 4400kva, the voltage level is 10 and 35kV, and the number of rectified pulses is 12 pulses and 24 pulses. Among them, the harmonic pollution of 24 pulse rectifier circuit to power grid is 50% lower than that of 12 pulse rectifier circuit, so the filter device can be omitted. It is suitable for the power supply system of urban subway and rail transit.

## • Excitation Rectifier Transformer

Rated capacity 315 ~ 3000 × 3KVA, with voltage levels of 10, 13.8, 15.75, 20 and 22kv. It usually adopts single-phase structure, high-voltage isolated phase enclosed bus incoming line and shielding between high-voltage coils. It is suitable for the static excitation system of hydropower plant and thermal power plant.

## • General Rectifier Transformer

The rated capacity is 315 ~ 4000kva, and the voltage level is 10 and 35kV. It is suitable for the rectifier system of general industrial and mining enterprises.

## • H-bridge Rectifier Transformer

The rated capacity is 315 ~ 2500KVA, the voltage level is 3 and 6kV, and each set has 3 ~ 9 windings per phase. Two can be combined to form H-bridge rectifier through phase-shifting connection. It is suitable for AC-AC Variable frequency power supply system of motor.

## • Transformers for marine and oil production platforms

The rated capacity is 30 ~ 10000kva and the voltage class is 0.38 and 35kV. It has passed the certification of China Classification Society and obtained the marine product type approval certificate of China Classification Society. It is suitable for marine and oil production platform power supply system.

## • Transformers for nuclear power plants

The rated capacity is 1000 ~ 1250kva and the voltage level is 10kV. It has passed the experimental examination and certification of dry-type transformer for IE nuclear power station. It is suitable for nuclear island class ie electrical system for nuclear power plant and nuclear reactor equipment.

## • Transformer for Electrified Railway

The rated capacity is 20 ~ 315KVA, the voltage level is 27.5kV, and the connection groups are Dyn11, Li0 and iiny0 (two-phase to three-phase). It can be used for the auxiliary power system of traction substation, switching post, at post and section post of electrified railway.

## • Dual Voltage Switching Transformer

The rated capacity is 30 ~ 2500kVA and the voltage grade is 6 and 10kV. The voltage (6kV and 10kV) can be transformed by changing the connection group or the connection mode of exchange winding section. It is suitable for power supply systems with different voltages.

**Other special-purpose dry-type transformers produced by our company are not explained one by one. If you need other special-purpose dry-type transformers, please contact us.**



# USE & INSTALLATION

# 8

## Service Conditions

1. The installation site shall not be flooded by water, the altitude shall not exceed 1000m, and the ambient temperature shall not be higher than 40 °C. The relative humidity is 100%, and the environment is 40 °C to - 25 °C (- 25 °C requires on-load tap changer and temperature controller).

2. The installation site shall be clean, free of conductive dust and corrosive gas, and have good ventilation or artificial ventilation conditions.

3. During product installation, it shall be 300mm away from walls and other obstacles, and there shall be a distance of 300mm between adjacent transformers. For distribution boxes and other places with limited installation space, the above distance can be adjusted appropriately.

## Packaging & Transportation

1. The products can be partially disassembled and transported (such as on-load tap changer, temperature controller, air cooling device, enclosure, etc. can be packaged separately) or packed as one piece in packaging boxes for transportation.

2. During the lifting process of the package, ropes shall be hung on sleepers at the four corners at the bottom of the package. Special lifting devices should be used to lift the products after the package is opened. It can be lifted 100 mm-150 mm above the ground first, and then formally lifted after there is no abnormality.

3. During transportation, there shall be no upward and downward slope greater than 15 ° on the road. In order to ensure that the vehicle can bear the load evenly, the product center of gravity shall be located on the vertical centerline of the vehicle during loading. In order to prevent displacement and rollover during transportation, the long axis direction of the product shall be consistent with the transportation direction, and the product shall be firmly bound on the vehicle.

4. During transportation, the product shall be placed on a level surface, and the product shall be firmly bound on the vehicle. The product shall be placed on a level surface, and the product shall be firmly bound on the vehicle.



## Visual inspection before installation

1. After opening the package, remove the protective device and check the external conditions, especially paying attention to the mechanical integrity of the coil and iron core, the compression degree of the coil and iron core, and the bolt fastening at the connection.

2. After inspection, all fasteners, coils and iron core pressing parts must be tightened in turn without any looseness.

3. Use dry compressed air or clean cloth to clean the dust and dirt on the product.

4. When the storage time is long and there are water droplets or condensation on the transformer surface, it shall be dried until the insulation resistance of the coil is qualified.



## Inspection before operation

1. Measure the DC resistance of high and low voltage windings

(whether the data is consistent with the data given in the factory test certificate).

2. Check the grounding of the iron core to see whether the grounding is reliable and whether foreign matters are overlapping.

3. Test insulation resistance



## Energizing

1. Before putting into operation, the transformer shall be put into trial operation under no-load, and the protection system shall be checked and adjusted after 3 times of impulse closing.

2. When the product leaves the factory, the tap positions of voltage regulation at the high-voltage side are connected according to the rated position. Voltage adjustment is required during operation. Corresponding tap connection can be carried out according to the decomposition voltage indicated on the nameplate (when there is no excitation voltage regulation), and it must be carried out when the transformer power supply is cut off.



## REFERENCES & QUALIFICATIONS



- |    |    |                                                                  |                                       |
|----|----|------------------------------------------------------------------|---------------------------------------|
| 01 | 02 | 01. Beijing Olympic Wukesong Sports Center                       | 02. Beijing Olympic Badminton Stadium |
| 03 | 04 | 03. Beijing Olympic Badminton Stadium                            | 04. Nanjing Metro Line 4              |
| 05 |    | 05. Huangpu River Crossing Tunnel Project of Shanghai World Expo |                                       |





Rio Tinto project in Australia



Shenzhou V manned space project



Philippine cement plant



Beijing South Railway Station



Guangdong Hong Kong Sea crossing bridge



Subic Bay solar power station in the Philippines



Beijing Capital Airport



Shanghai Disney



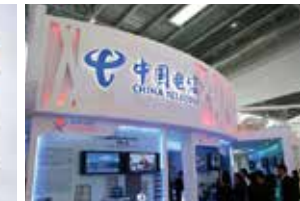
CHINA INTERNATIONAL IMPORT EXPO



China Mobile



China Unicom



China Telecom



Wuxi Metro



Sinopec Shengli Construction Engineering Co., Ltd



CNOOC ZOJE Petrochemical Co., Ltd



Beijing Electric Power Company



China Shipbuilding Industry Co., Ltd



Liaoning Electric Power Company



SEPCOIII Electric Power Construction Co., Ltd



Shanxi Electric Power Company



Tianjing Electric Power Company



China Gezhouba Group Corporation



SIEMENS China



China Nuclear Power Engineering Co., Ltd



China National Nuclear Corporation 404 Co., Ltd



Datong Coal Mine Group



BaoSteel



Capital Aerospace Machinery Co., Ltd



China Railway 12th Bureau Electrification Engineering Co., Ltd



