



**ZTELEC GROUP**

Powered Green & Reliability

**Oil-immersed  
transformer**

**油浸式变压器**





## Oil immersed transformer 油浸式变压器

### ► Overview 概述

Our company can produce a variety of oil immersed transformers with high voltage up to 35kV and capacity up to 31500kVA, including S9, S11 series and S13, S15 series of energy-saving products. The product is widely used in industrial and mining enterprises, agriculture, civil construction and other distribution sites as well as places with more oil and chemical substances in oil and chemical industries.

我公司可生产电压等级 35kV 及以下，容量为 31500kVA 及以下的系列品种油浸式变压器。品种包括 S9 和 S11 系列产品及 S13 和 S15 系列节能产品，该产品广泛应用于工矿企业、农业、民用建筑等配电场所以及石油、化工行业中多油污、多化学物质的场所。

### ► Implementation standards 执行标准

GB1094: Power transformer

GB1094 《电力变压器》

IEC60076: Power transformer

IEC60076 《电力变压器》

GB/T6451: Specification and technical requirements of  
oil immersed power transformers

GB/T6451 《油浸式电力变压器技术参数和要求》

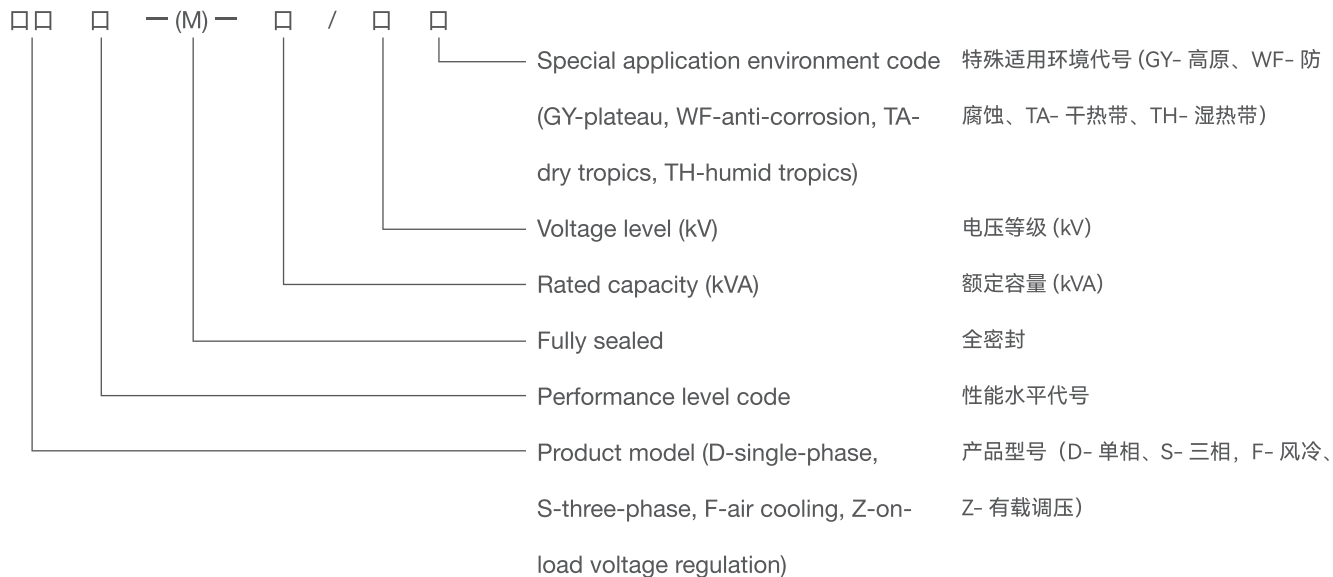
JB/T10088: 6kV~500kV power transformer noise level

JB/T10088 《6kV-500kV 级电力变压器声级》

GB/T7595: Quality standard of transformer oil in service

GB/T7595 《运行中变压器油质量标准》

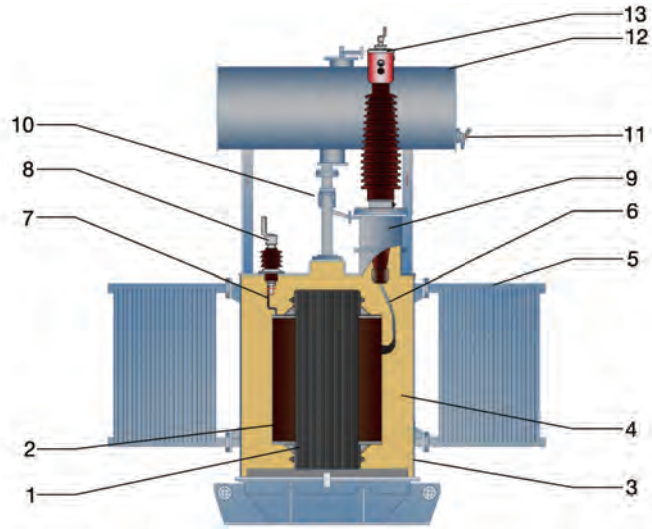
▶ Type description 型号说明



▶ Features 特点

- + The body adopts a new type of insulation structure to improve the ability to withstand short-circuits;  
器身采用了新型绝缘结构，提高了抗短路能力；
- + Spiral coil with longitudinal oil passage has a better internal heat dissipation;  
带纵向油道的螺旋式线圈，内部散热更好；
- + With high efficiency and low loss, it can save a lot of power and operating costs;  
高效率、低损耗，可节省大量的电耗和运行费用；
- + The surface of the corrugated oil tank is coated with conformal coating after oil removal, rust removal, and phosphating. It is suitable to use in metallurgy, petrochemical, and mining environments.  
波纹油箱表面经去油、去锈、磷化处理后用三防漆涂装，适合在冶金、石化、矿山等环境下使用。

▶ Configuration 外形结构



- 1 Iron core  
铁芯
- 2 Winding  
绕组
- 3 Oil tank  
油箱

- 4 Transformer oil  
变压器油
- 5 Heat sink  
散热片
- 6 Hv down-lead  
高压引线

- 7 LV down-lead  
低压引线
- 8 LV bushing  
低压套管
- 9 Elevating seat  
升高座

- 10 Gas relay  
气体继电器
- 11 Oil level gauge  
油位计
- 12 Oil conservator  
油枕
- 13 HV bushing  
高压套管





## Single phase transformer 单相变压器

### ► Overview 概述

The single phase transformers are specifically designed for the decentralization distribution network of servicing residential overhead distribution loads of town and countryside.

单相配电变压器专为服务城镇和农村住宅架空配电负荷的分散配电网路而设计。

They are also suitable for light and diversified power applications. These transformers are designed for the application conditions normally encountered in electric utility power distribution systems.

它们也适用于轻型和多样化的电源应用。这些变压器专为电力公司配电系统中通常遇到的应用条件而设计。

We offer two kinds of metal core types for 2 basic transformer types: conventional type and complete self protect type.

提供两种基本变压器类型的两种金属芯类型：常规型和完全自保护型。

Two types of materials are available: CRGO iron core and amorphous Iron core.

有两种材料可供选择：CRGO 铁芯和非晶合金铁芯。

### ► Implementation standards 执行标准

JB/T 10317-2014: Technical parameters and requirements of single phase oil immersed distribution transformers

JB/T 10317-2014

《单相油浸式配电变压器技术参数和要求》



## Features 特点

- + Meet or exceed ANSL standard, IEC standard, GB standard and SANS standard;  
达到或超过 ANSL 标准、IEC 标准、GB 标准、SANS 标准;
- + Safe running, installation and operation;  
安全运行、安装和操作;
- + Excellent modern appearance;  
优美的现代外观;
- + High security and reliability in operation;  
在运行中有高安全性和可靠性;
- + High capacity of overload and high efficiency;  
高容量的过载和效率;
- + Higher system reliability;  
更高的系统可靠性;
- + Fully- sealed;  
全密封;
- + Reasonable structure;  
结构合理;
- + Robust construction, excellent short circuit resistance and high temperature resistance;  
坚固的结构, 具有出色的短路和耐热能力;

▶ Technical parameters 技术参数

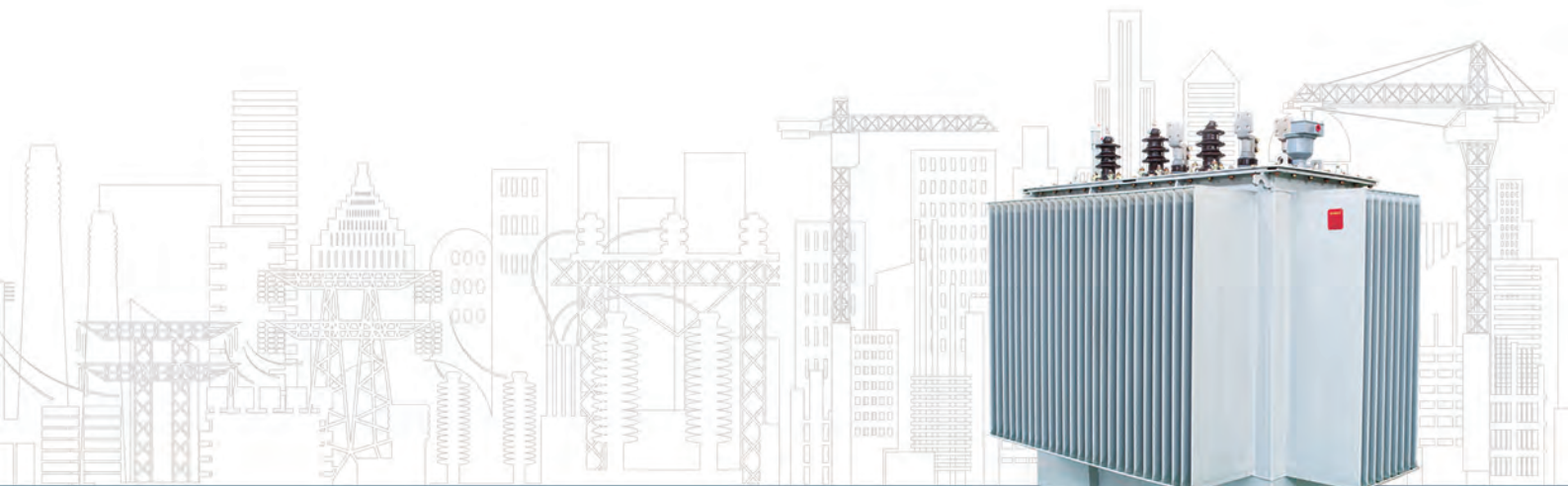
D10 series 11kV single phase transformer

D10 系列 11kV 单相变压器

| Rated capacity (kVA)<br>额定容量 | Voltage group<br>电压组合 |               | Vector group<br>联接组别 | Impedance voltage (%)<br>阻抗电压 | Loss (W)<br>损耗       |                   | No-load current (%)<br>空载电流 | Weight (kg)<br>重量   |                  |                    | Boundary dimension (L×W×H, mm)<br>外形尺寸 | Gauge vertical / Horizontal<br>测量 / 垂直水平 |              |              |
|------------------------------|-----------------------|---------------|----------------------|-------------------------------|----------------------|-------------------|-----------------------------|---------------------|------------------|--------------------|--|--|--------------|--------------|
|                              | HV (kV)<br>高压         | LV (kV)<br>低压 |                      |                               | No-load loss<br>空载损耗 | Load loss<br>负载损耗 |                             | Body weight<br>器身重量 | Oil weight<br>油重 | Gross weight<br>毛重 |  |  |              |              |
| 5                            | 11                    | 0.22          | Li0                  | 3.5                           | 35                   | 145               | 4                           | 50                  | 40               | 130                | 530*450*850                            | 400/250                                  |              |              |
| 10                           |                       |               |                      |                               | 35                   | 260               | 3.5                         | 65                  | 40               | 150                | 560*450*870                            | 400/300                                  |              |              |
| 16                           |                       |               |                      |                               | 65                   | 365               | 3.2                         | 80                  | 40               | 180                | 600*450*920                            | 400/300                                  |              |              |
| 20                           |                       |               |                      |                               | 80                   | 430               | 3.0                         | 100                 | 50               | 205                | 620*450*940                            | 400/300                                  |              |              |
| 30                           |                       |               |                      |                               | 100                  | 625               | 2.5                         | 115                 | 50               | 225                | 700*450*980                            | 400/300                                  |              |              |
| 40                           |                       |               |                      |                               | 10.5                 | 0.24              | Li6                         | 125                 | 775              | 2.5                | 150                                    | 55                                       | 270          | 700*480*1040 |
| 50                           |                       |               | 10                   |                               | 150                  |                   |                             | 950                 | 2.3              | 175                | 70                                     | 310                                      | 650*510*1100 | 400/300      |
| 63                           |                       |               | 6.3                  |                               | 180                  |                   |                             | 1135                | 2.1              | 190                | 80                                     | 340                                      | 660*520*1100 | 400/300      |
| 80                           |                       |               | 6                    |                               | 200                  |                   |                             | 1400                | 2.0              | 240                | 100                                    | 420                                      | 770*530*1120 | 400/300      |
| 100                          |                       |               |                      |                               | 240                  |                   |                             | 1650                | 1.9              | 295                | 100                                    | 490                                      | 840*600*1150 | 400/300      |
| 125                          |                       |               |                      |                               | 285                  |                   |                             | 1950                | 1.8              | 370                | 110                                    | 560                                      | 890*740*1160 | 500/400      |
| 160                          |                       |               |                      |                               | 365                  | 2365              | 1.7                         | 430                 | 130              | 650                | 950*790*1170                           | 500/400                                  |              |              |

Note: Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements.

备注：因产品不断改进，本样本提供的尺寸仅供参考，如有需要，我公司可按用户要求进行设计和生产，请及时与本公司联系。



## S11-M-30~6300/10

series of oil immersed transformer

S11-M-30~6300/10 系列油浸式变压器

### ► Features 特点

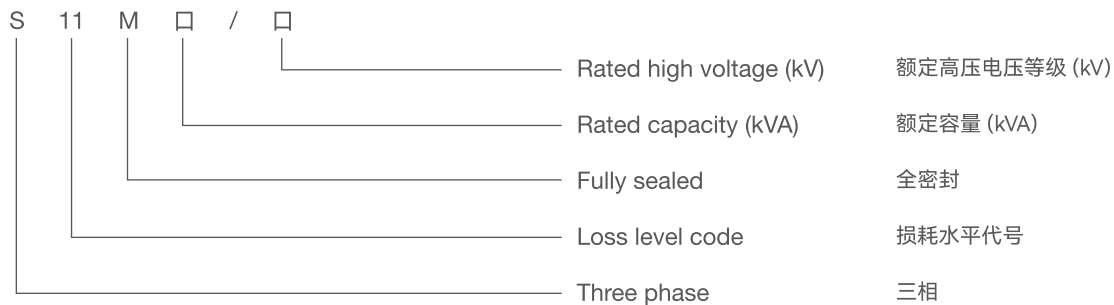
- + The three-phase oil immersed transformer produced by our company uses a new insulating structure to improve the ability to withstand short-circuits. The iron core is made of high-quality cold-rolled silicon steel sheet, and the winding is made of multilayer cylinder or foil structure. All fasteners adopt special anti-loose treatment;  
公司生产的三相油浸式变压器，器身采用了新型绝缘结构，提高了抗短路能力；铁芯由高质量冷轧硅钢片制成；绕组采用多层圆筒式或箔式结构；所有紧固件均采用特殊防松处理；
- + The product has the characteristics of high efficiency and low loss. It can greatly save power consumption and operating costs, bringing significant social benefits. It is the national high-tech product.  
产品具有高效率，低损耗的特点，可节省大量的电耗和运行费用，社会效益显著，是国家推广的高新技术产品。

### ► Implementation standards 执行标准

|  |  |
|--|--|
| GBT6451-2015: Oil immersed power transformer technical parameters and requirements               | GBT6451-2015 《油浸式电力变压器技术参数和要求》           |
| GB 1094.1-2013: Power transformers Part 1: General rules   | GB 1094.1-2013 《电力变压器》第1部分：总则            |
| GB 1094.2-2013: Power transformers Part 2: Temperature rise of liquid immersed transformers      | GB 1094.2-2013 《电力变压器》第2部分：液浸式变压器的温升     |
| GB 1094.5-2008: Power transformers Part 5: Capability to withstand short circuit                 | GB 1094.5-2008 《电力变压器》第5部分：承受短路的能力       |
| GBT 1094.7-2008: Power transformers Part 7: Load guidelines for oil immersed power transformers. | GBT 1094.7-2008 《电力变压器》第7部分：油浸式电力变压器负载导则 |



▶ Type description 型号说明



▶ Regular service conditions 正常使用条件

- a** The Elevation (m.a.s.l.) is below 1000m;  
海拔高度在 1000m 以下;
- b** Ambient temperature;  
环境温度;
- c** Highest ambient temperature +40°C ;  
最高气温 + 40°C ;
- d** Highest daily average air temperature +20°C ;  
最高日平均气温 + 20°C ;
- e** Lowest outdoor ambient temperature -25°C ;  
室外最低气温 -25°C ;

 Technical parameters 技术参数

| Rated capacity<br>(kVA)<br>额定容量 | Voltage group<br>电压组合 |               | Vector group<br>联接组别 | Loss (W)<br>损耗           |                       | No-load current (%)<br>空载电流 | Impedance voltage (%)<br>阻抗电压 | Boundary dimension<br>(L×W×H, mm)<br>外形尺寸 | Weight (kg)<br>重量 |     |               |      |
|---------------------------------|-----------------------|---------------|----------------------|--------------------------|-----------------------|-----------------------------|-------------------------------|---|-------------------|-----|---------------|------|
|                                 | HV (kV)<br>高压         | LV (kV)<br>低压 |                      | No-load loss (W)<br>空载损耗 | Load loss (W)<br>负载损耗 |                             |                               |   |                   |     |               |      |
| 30                              | 11                    | 0.4           | Dyn11<br>or<br>Yyn0  | 100                      | 630/600               | 1.5                         | 4                             | 670×310×615                               | 346               |     |               |      |
| 50                              |                       |               |                      | 130                      | 910/870               | 1.3                         |                               | 700×325×630                               | 417               |     |               |      |
| 80                              |                       |               |                      | 180                      | 1310/1250             | 1.2                         |                               | 755×355×690                               | 556               |     |               |      |
| 100                             |                       |               |                      | 200                      | 1580/1500             | 1.1                         |                               | 785×360×685                               | 619               |     |               |      |
| 125                             |                       |               |                      | 240                      | 1890/1800             | 1.1                         |                               | 805×370×720                               | 703               |     |               |      |
| 160                             |                       |               |                      | 280                      | 2310/2200             | 1.0                         |                               | 850×385×735                               | 794               |     |               |      |
| 200                             |                       |               |                      | 340                      | 2730/2600             | 1.0                         |                               | 865×405×805                               | 935               |     |               |      |
| 250                             |                       |               |                      | 400                      | 3200/3050             | 0.9                         | 905×415×935                   | 1086                                      |                   |     |               |      |
| 315                             |                       |               |                      | 10.5                     | 0.4                   | Dyn11<br>or<br>Yyn0         | 480                           | 3830/3650                                 | 0.9               | 4.5 | 925×440×915   | 1226 |
| 400                             |                       |               |                      | 10                       |                       |                             | 570                           | 4520/4300                                 | 0.8               |     | 970×465×960   | 1468 |
| 500                             |                       |               |                      | 6                        |                       |                             | 680                           | 5410/5150                                 | 0.8               |     | 1035×500×1010 | 1758 |
| 630                             |                       |               |                      | 810                      |                       |                             | 6200                          | 0.6                                       | 1110×525×1075     |     | 2074          |      |
| 800                             |                       |               |                      | 980                      |                       |                             | 7500                          | 0.6                                       | 1190×580×1155     |     | 2840          |      |
| 1000                            |                       |               |                      | 1150                     |                       |                             | 10300                         | 0.6                                       | 1205×560×1195     |     | 2842          |      |
| 1250                            |                       |               |                      | 1360                     |                       |                             | 12000                         | 0.5                                       | 1185×590×1205     |     | 3168          |      |
| 1600                            |                       |               |                      | 1640                     |                       |                             | 14500                         | 0.5                                       | 1225×565×1345     |     | 3800          |      |
| 2000                            |                       |               |                      | 1940                     |                       |                             | 18300                         | 0.4                                       | 5.0               |     | 1310×615×1435 | 4633 |
| 2500                            | 2290                  | 21200         | 0.4                  | 1390×660×1510            |                       |                             | 5329                          |   |                   |     |               |      |

Note: 1. The load loss above the diagonal line in the table applies to the Dyn11 vector group. The load loss below the diagonal line applies to the Yyn0 vector group.

2. Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements. Please contact the company in time.

备注：1. 表中对角线上方的负载损耗适用于 Dyn11 连接模式。对角线下方的负载损耗适用于 Yyn0 连接模式。

2. 由于产品不断改进，本样本中提供的尺寸仅供参考。如有需要，我公司可根据用户要求设计生产。请及时与公司联系。



## S11-M-30~8000/20

series of oil immersed transformer  
S11-M-30~8000/20 系列油浸式变压器

### ► Features 特点

The fully sealed transformer adopts a fully oil-filled sealed type. The shell of the corrugated oil tank adapts to the expansion of the oil with its own elasticity and it is a sealed oil tank, which has been widely used in various power distribution equipment.

全密封变压器采用全充油的密封型。波纹油箱壳体以自身弹性适应油的膨胀是一种密封性的油箱，已被广泛地应用在各配电设备中。

- + The iron core is made of high-quality cold-rolled oriented silicon steel sheet, which is manufactured by the automatic cross-cutting process and the the step-lap process, which improves the distribution of magnetic flux density inside the iron core, reduces the vibration energy of the iron core, and effectively reduces the noise and loss;  
铁芯选用优质冷轧取向硅钢片，利用自动横剪工艺和应用阶梯接缝（Step-Lap）工艺制造，改善了磁通密度在铁心内部的分布状况，减少铁心的振动能量，有效地降低了噪声，降低了损耗；
- + The coil is wound with high-strength enameled wire (or paper-covered wire), cylindrical (or cake) structure with uniform ampere-turn distribution, reasonable insulation structure, and strong short-circuit resistance;  
线圈选用高强度漆包线（或纸包线）卷绕，圆筒式（或饼式）结构，安匝分布均匀，绝缘结构合理，具有很强的抗短路能力；
- + The transformer body is fastened with an anti-loosening structure, the fastening part is equipped with locknut, and the non-hanging core structure is adopted to ensure that it will not come loose after long-distance transportation;  
变压器器身紧固采用防松结构，紧固部分带自锁防松螺母，采用了不吊芯结构，能保证长途运输后运行时不松脱；
- + The corrugated sheet of the corrugated oil tank replaces the oil conservator. The corrugated sheet can expand and shrink with the change of the transformer oil volume, isolate the transformer from the atmosphere, prevent and slow down the deterioration of the oil and insulation being affected with damp, enhance the reliability of operation, and keep the transformer operate normally without maintenance;  
波纹油箱的波纹片取代了储油柜，波纹片可以随变压器油体积的变化而涨缩，使变压器与大气隔绝，防止和减缓油的劣化和绝缘受潮，增强运行可靠性，正常运行免维护；

- + Equipped with "remote monitoring" signal thermometer and pressure release valve, which enhances the reliability of transformer operation.

配有 "遥测" 信号温度计和压力释放阀, 增强了变压器运行的可靠性。

### ▶ Technical parameters 技术参数

| Rated capacity (kVA)<br>额定容量 | Voltage group<br>电压组合 |               | Vector group<br>联接组别 | Loss (W)<br>损耗           |                       | No-load current (%)<br>空载电流 | Impedance voltage (%)<br>阻抗电压 | Boundary dimension (L×W×H, mm)<br>外形尺寸 | Weight (kg)<br>重量 |     |               |      |
|------------------------------|-----------------------|---------------|----------------------|--------------------------|-----------------------|-----------------------------|-------------------------------|--|-------------------|-----|---------------|------|
|                              | HV (kV)<br>高压         | LV (kV)<br>低压 |                      | No-load loss (W)<br>空载损耗 | Load loss (W)<br>负载损耗 |                             |                               |  |                   |     |               |      |
| 30                           | 20                    | 0.4           | Dyn11<br>or<br>Yyn0  | 100                      | 690/660               | 2.1                         | 5.5                           | 670×310×615                            | 346               |     |               |      |
| 50                           |                       |               |                      | 130                      | 1010/960              | 2.0                         |                               | 700×325×630                            | 417               |     |               |      |
| 80                           |                       |               |                      | 180                      | 1440/1370             | 1.8                         |                               | 755×355×690                            | 556               |     |               |      |
| 100                          |                       |               |                      | 200                      | 1730/1650             | 1.6                         |                               | 785×360×685                            | 619               |     |               |      |
| 125                          |                       |               |                      | 240                      | 2080/1980             | 1.5                         |                               | 805×370×720                            | 703               |     |               |      |
| 160                          |                       |               |                      | 290                      | 2540/2420             | 1.4                         |                               | 850×385×735                            | 794               |     |               |      |
| 200                          |                       |               |                      | 340                      | 3000/2860             | 1.3                         |                               | 865×405×805                            | 935               |     |               |      |
| 250                          |                       |               |                      | 400                      | 3520/3350             | 1.2                         |                               | 905×415×935                            | 1086              |     |               |      |
| 315                          |                       |               |                      | 480                      | 4210/4010             | 1.1                         |                               | 925×440×915                            | 1226              |     |               |      |
| 400                          |                       |               |                      | 570                      | 4970/4730             | 1.0                         | 970×465×960                   | 1468                                   |                   |     |               |      |
| 500                          |                       |               |                      | 680                      | 5940/5660             | 1.0                         | 1035×500×1010                 | 1758                                   |                   |     |               |      |
| 630                          |                       |               |                      | 24                       | 0.4                   | Dyn11<br>or<br>Yyn0         | 810                           | 6820                                   | 0.9               | 6.0 | 1110×525×1075 | 2074 |
| 800                          |                       |               |                      |                          |                       |                             | 980                           | 8250                                   | 0.8               |     | 1190×580×1155 | 2840 |
| 1000                         |                       |               |                      |                          |                       |                             | 1150                          | 11330                                  | 0.7               |     | 1205×560×1195 | 2842 |
| 1250                         |                       |               |                      |                          |                       |                             | 1380                          | 13200                                  | 0.7               |     | 1185×590×1205 | 3168 |
| 1600                         |                       |               |                      |                          |                       |                             | 1660                          | 15950                                  | 0.6               |     | 1225×565×1345 | 3800 |
| 2000                         |                       |               |                      |                          |                       |                             | 1950                          | 19140                                  | 0.6               |     | 1310×615×1435 | 4633 |
| 2500                         |                       |               |                      |                          |                       |                             | 2340                          | 22220                                  | 0.5               |     | 1390×660×1510 | 5329 |

Note: 1. The load loss above the diagonal line in the table applies to the Dyn11 vector group. The load loss below the diagonal line applies to the Yyn0 vector group.

2. Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements. Please contact the company in time.

备注: 1. 表中对角线上方的负载损耗适用于 Dyn11 连接模式。对角线下方的负载损耗适用于 Yyn0 连接模式。

2. 由于产品不断改进, 本样本中提供的尺寸仅供参考。如有需要, 我公司可根据用户要求设计生产。请及时与公司联系。



## S13-M-30~6300/10

series of 3D oil immersed transformer

S13-M-30~6300/10 系列立体卷铁心油浸式变压器

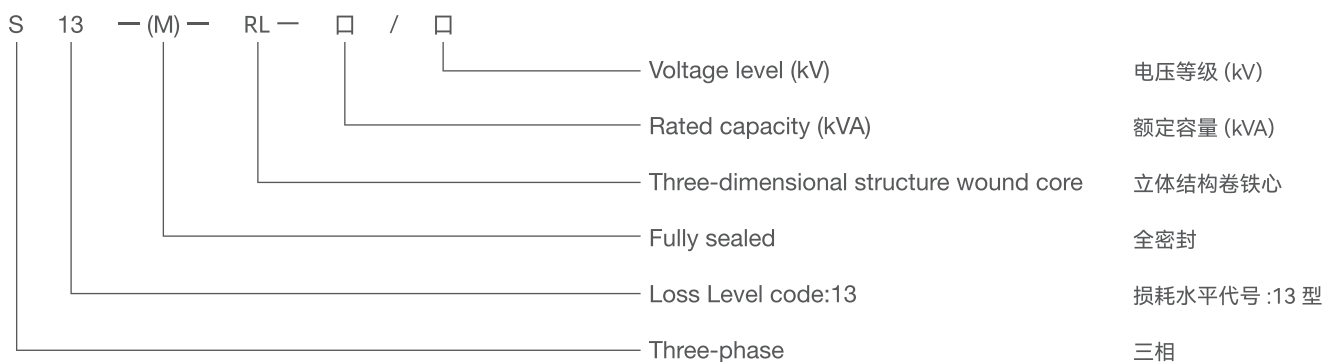
### ► Features 特点

- +

The series of oil immersed transformers breaks through the traditional planar structure and adopts a three-phase symmetrical three-dimensional structure. The magnetic circuit of the three phase iron core is completely symmetrical, the magnetic resistance is greatly reduced, and the excitation current and no-load loss are significantly reduced. It is an energy-efficient transformer that uses traditional materials but has lower noise and compact structure. Its outstanding performance in energy conservation and environmental protection is completely in compliance with China's energy conservation policy.

该系列油浸式变压器突破了传统的平面式结构，采用三相对称立体式结构，产品三相铁芯磁路完全对称，磁阻大大减少，励磁电流、空载损耗显著降低，是一种使用传统材料，但行噪音更低，结构更为紧凑的高效节能型变压器。其在节能降耗，省材环保上的出色表现，完全符合我国的节能方针。

### ► Type description 型号说明



▶ Technical parameters 技术参数

| Rated capacity<br>(kVA)<br>额定容量 | Voltage group<br>电压组合 |               | Vector group<br>联接组别 | Loss (W)<br>损耗           |                       | No-load current (%)<br>空载电流 | Impedance voltage (%)<br>阻抗电压 | Boundary dimension<br>(L×W×H, mm)<br>外形尺寸 | Weight (kg)<br>重量 |      |
|---------------------------------|-----------------------|---------------|----------------------|--------------------------|-----------------------|-----------------------------|-------------------------------|---|-------------------|------|
|                                 | HV (kV)<br>高压         | LV (kV)<br>低压 |                      | No-load loss (W)<br>空载损耗 | Load loss (W)<br>负载损耗 |                             |                               |   |                   |      |
| 30                              | 11                    | 0.4           | Dyn11<br>or<br>Yyn0  | 80                       | 630/600               | 0.3                         | 4                             | 800×620×1100                              | 300               |      |
| 50                              |                       |               |                      | 100                      | 910/870               | 0.24                        |                               | 840×640×1150                              | 380               |      |
| 80                              |                       |               |                      | 130                      | 1090/1040             | 0.22                        |                               | 980×670×1210                              | 480               |      |
| 100                             |                       |               |                      | 150                      | 1310/1250             | 0.21                        |                               | 1040×700×1230                             | 540               |      |
| 125                             |                       |               |                      | 170                      | 1580/1500             | 0.20                        |                               | 910×800×1260                              | 590               |      |
| 160                             |                       |               |                      | 200                      | 1890/1800             | 0.19                        |                               | 1110×970×1290                             | 720               |      |
| 200                             |                       |               |                      | 240                      | 2310/2200             | 0.18                        |                               | 1180×1020×1310                            | 860               |      |
| 250                             |                       |               |                      | 10.5                     | 290                   | 2730/2600                   |                               | 0.17                                      | 1190×1030×1300    | 970  |
| 315                             |                       |               |                      | 10                       | 340                   | 3200/3050                   |                               | 0.16                                      | 1290×1120×1360    | 1170 |
| 400                             |                       |               |                      | 6                        | 410                   | 3830/3650                   |                               | 0.16                                      | 1280×1110×1410    | 1320 |
| 500                             |                       |               |                      | 480                      | 4520/4300             | 0.16                        |                               | 1400×1210×1420                            | 1490              |      |
| 630                             |                       |               |                      | 570                      | 6200                  | 0.15                        |                               | 4.5                                       | 1440×1250×1490    | 1910 |
| 800                             |                       |               |                      | 700                      | 7500                  | 0.15                        |                               |   | 1540×1340×1520    | 2160 |
| 1000                            |                       |               |                      | 830                      | 10300                 | 0.14                        |                               |   | 1600×1420×1630    | 2550 |
| 1250                            |                       |               |                      | 970                      | 12000                 | 0.13                        |                               |   | 1680×1460×1730    | 3160 |
| 1600                            |                       |               |                      | 1170                     | 14500                 | 0.12                        |                               |   | 1780×1540×1810    | 3850 |

Note: 1. The load loss above the diagonal line in the table applies to the Dyn11 vector group. The load loss below the diagonal line applies to the Yyn0 vector group.

2. Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements. Please contact the company in time.

备注：1. 表中对角线上方的负载损耗适用于 Dyn11 连接模式。对角线下方的负载损耗适用于 Yyn0 连接模式。

2. 由于产品不断改进，本样本中提供的尺寸仅供参考。如有需要，我公司可根据用户要求设计生产。请及时与公司联系。



## S(B)H15-M-30~1600/10

series of amorphous oil type transformer

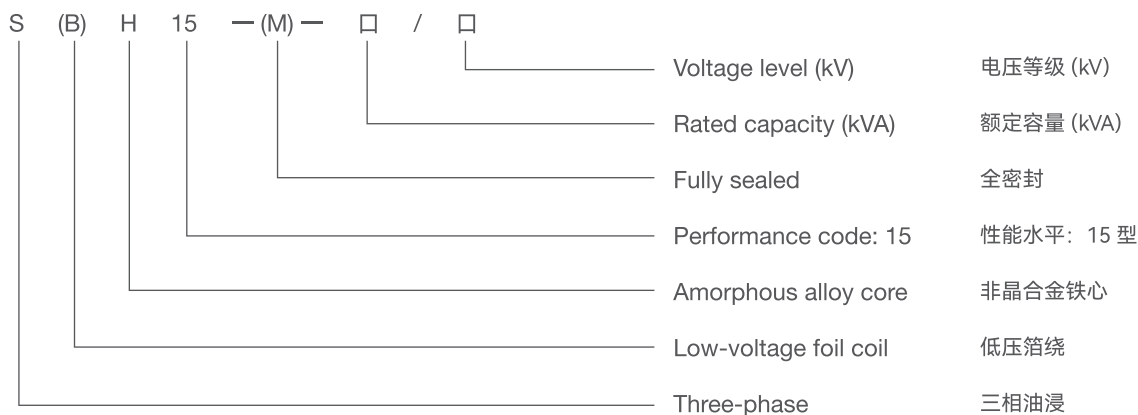
S(B)H15-M-30~1600/10 系列非晶合金油浸式变压器

### ► Features 特点

- + Amorphous alloy is a new type energy-saving material. Its metal atoms are disorderly amorphous, and its crystal structure is completely different from that of silicon steel, which is more conducive to magnetization and demagnetization. The iron core sheet is extremely thin, only 0.025mm, even thinner than one-tenth of the thickness of ordinary silicon steel sheet. This new material is used for transformer cores, with the features of high saturation magnetic induction, low loss, low excitation current, and good temperature stability. Amorphous alloy transformer has the advantages of low no-load loss, strong anti-short-circuit capability, advanced structure, energy saving, and obvious environmental protection, and is an ideal option for energy saving currently.

非晶合金是一种新型节能材料，其金属原子呈无序非晶体排列，它与硅钢的晶体结构完全不同，更利于被磁化和去磁。其铁心片厚度极薄，仅 0.025mm，不到普通硅钢片的 1/10。这种新材料用于变压器铁芯，具有高饱和磁感应强度、低损耗、低激磁电流、良好的温度稳定性等特点。非晶合金变压器空载损耗低、抗短路能力强、结构先进、节能、环保优势明显，是目前节能效果比较理想的配电变压器。

### ► Type description 型号说明



▶ Technical parameters 技术参数

| Rated capacity (kVA)<br>额定容量 | Voltage group<br>电压组合 |               | Vector group<br>联接组别 | Loss (W)<br>损耗           |                       | No-load current (%)<br>空载电流 | Impedance voltage (%)<br>阻抗电压 | Boundary dimension (L×W×H, mm)<br>外形尺寸 | Weight (kg)<br>重量 |                |      |
|------------------------------|-----------------------|---------------|----------------------|--------------------------|-----------------------|-----------------------------|-------------------------------|--|-------------------|----------------|------|
|                              | HV (kV)<br>高压         | LV (kV)<br>低压 |                      | No-load loss (W)<br>空载损耗 | Load loss (W)<br>负载损耗 |                             |                               |  |                   |                |      |
| 30                           | 11                    | 10.5          | 0.4                  | Dyn11<br>or<br>Yyn0      | 33                    | 600                         | 1.5                           | 4                                      | 920×850×830       | 410            |      |
| 50                           |                       |               |                      |                          | 43                    | 870                         | 1.2                           |  | 1040×780×870      | 520            |      |
| 63                           |                       |               |                      |                          | 50                    | 1040                        | 1.1                           |  | 1010×810×880      | 570            |      |
| 80                           |                       |               |                      |                          | 60                    | 1250                        | 1.0                           |  | 1060×830×910      | 640            |      |
| 100                          |                       |               |                      |                          | 75                    | 1500                        | 0.9                           |  | 1140×830×860      | 750            |      |
| 125                          |                       |               |                      |                          | 85                    | 1800                        | 0.8                           |  | 1110×880×950      | 830            |      |
| 160                          |                       |               |                      |                          | 100                   | 2200                        | 0.6                           |  | 1130×880×1000     | 940            |      |
| 200                          |                       |               |                      |                          | 120                   | 2600                        | 0.6                           |  | 1240×900×1020     | 1090           |      |
| 250                          |                       |               |                      |                          | 140                   | 3050                        | 0.6                           |  | 1290×900×1070     | 1250           |      |
| 315                          |                       |               |                      |                          | 170                   | 3650                        | 0.5                           |  | 1380×840×1110     | 1470           |      |
| 400                          |                       |               |                      |                          | 200                   | 4300                        | 0.5                           |  | 1420×920×1250     | 1710           |      |
| 500                          |                       |               |                      |                          | 240                   | 5150                        | 0.5                           |  | 4.5               | 1360×1040×1180 | 1990 |
| 630                          |                       |               |                      |                          | 320                   | 6200                        | 0.3                           |  |                   | 1530×1120×1310 | 2390 |
| 800                          |                       |               |                      |                          | 380                   | 7500                        | 0.3                           |  |                   | 1880×1210×1360 | 2760 |
| 1000                         |                       |               |                      |                          | 450                   | 10300                       | 0.3                           |  |                   | 2040×1520×1360 | 3240 |
| 1250                         |                       |               |                      |                          | 530                   | 12000                       | 0.2                           |  |                   | 2140×1520×1430 | 3820 |
| 1600                         | 630                   | 14500         | 0.2                  | 2260×1540×1500           | 4620                  |                             |                               |  |                   |                |      |

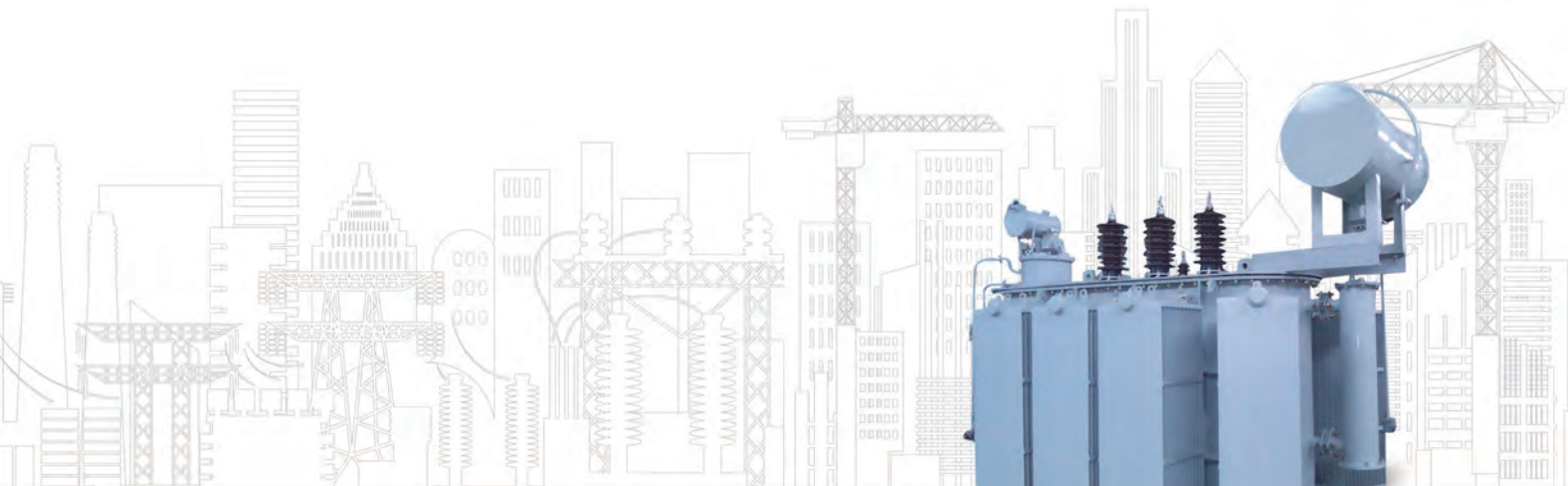
Note: 1. The load loss above the diagonal line in the table applies to the Dyn11 vector group. The load loss below the diagonal line applies to the Yyn0 vector group.

2. Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements. Please contact the company in time.

备注：1. 表中对角线上方的负载损耗适用于 Dyn11 连接模式。对角线下方的负载损耗适用于 Yyn0 连接模式。

2. 由于产品不断改进，本样本中提供的尺寸仅供参考。如有需要，我公司可根据用户要求设计生产。请及时与公司联系。





## S(Z)11-630~31500/35

series of on-load tap changing oil immersed transformer

S(Z)11-630~31500/35 系列 (有载调压) 油浸式电力变压器

### ▶ Technical parameters 技术参数

SZ11- □ /35 on-load regulating oil immersed power transformer

SZ-11- □ /35kV 有载调压油浸式变压器

| Rated capacity (kVA)<br>额定容量 | Voltage group<br>电压组合 |                          | Vector group<br>联接组别 | Loss (W)<br>损耗           |                       | No-load current (%)<br>空载电流 | Impedance voltage (%)<br>阻抗电压 | Boundary dimension (L×W×H, mm)<br>外形尺寸 | Weight (kg)<br>重量 |
|------------------------------|-----------------------|--------------------------|----------------------|--------------------------|-----------------------|-----------------------------|-------------------------------|--|-------------------|
|                              | HV (kV)<br>高压         | LV (kV)<br>低压            |                      | No-load loss (W)<br>空载损耗 | Load loss (W)<br>负载损耗 |                             |                               |  |                   |
| 2000                         | 35-38.5               | 6.3                      | Yd11                 | 2300                     | 19200                 | 0.50                        | 6.5                           | 2460×2050×2500                         | 2610              |
| 2500                         |                       | 10.5                     |                      | 2720                     | 20600                 | 0.50                        |                               | 2340×2300×2930                         | 3310              |
| 3150                         | 35-38.5               | 6.3<br>10.5              |                      | 3230                     | 24700                 | 0.50                        | 7.0                           | 2350×2350×2990                         | 3580              |
| 4000                         |                       |                          |                      | 3870                     | 29100                 | 0.50                        |                               | 2400×2410×3050                         | 3990              |
| 5000                         |                       |                          |                      | 4640                     | 34200                 | 0.50                        |                               | 2440×2450×3100                         | 4740              |
| 6300                         |                       |                          |                      | 5630                     | 36700                 | 0.50                        |                               | 2470×2510×3170                         | 5120              |
| 8000                         | 35-38.5               | 6.3<br>6.6<br>10.5<br>11 | YNd11                | 7870                     | 40600                 | 0.40                        | 8.0                           | 2500×2590×3230                         | 5880              |
| 10000                        |                       |                          |                      | 9280                     | 48000                 | 0.40                        |                               | 2550×2610×3250                         | 7770              |
| 12500                        |                       |                          |                      | 10940                    | 56800                 | 0.35                        | 8.0                           | 2780×2660×3300                         | 8750              |
| 16000                        |                       |                          |                      | 13160                    | 70300                 | 0.35                        |                               | 3020×2710×3370                         | 9930              |
| 20000                        |                       |                          |                      | 15560                    | 82700                 | 0.30                        |                               | 3250×2760×3410                         | 12760             |

Note: Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements. Please contact the company in time.

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 Technical parameters 技术参数

S11-35kv power transformer

S11- □ /35kv 无励磁调压电力变压器

| Rated capacity (kVA)<br>额定容量 | Voltage group<br>电压组合 |   | Vector group<br>联接组别 | Loss (W)<br>损耗           |                       | No-load current (%)<br>空载电流 | Impedance voltage (%)<br>阻抗电压 | Boundary dimension (L×W×H, mm)<br>外形尺寸 | Weight (kg)<br>重量 |
|------------------------------|-----------------------|---|----------------------|--------------------------|-----------------------|-----------------------------|-------------------------------|--|-------------------|
|                              | HV (kV)<br>高压         | LV (kV)<br>低压                           |                      | No-load loss (W)<br>空载损耗 | Load loss (W)<br>负载损耗 |                             |                               |  |                   |
| 630                          | 35-38.5               | 3.15<br>6.3<br>10.5                     | Yd11                 | 830                      | 7860                  | 0.65                        | 6.5                           | 2300×1100×2000                         | 2610              |
| 800                          |                       |   |                      | 980                      | 9400                  | 0.65                        |                               | 2390×1130×2070                         | 3310              |
| 1000                         |                       |   |                      | 1150                     | 11500                 | 0.65                        |                               | 2420×1200×2110                         | 3580              |
| 1250                         |                       |   |                      | 1400                     | 13900                 | 0.55                        |                               | 2500×1270×2130                         | 3990              |
| 1600                         |                       |   |                      | 1690                     | 16600                 | 0.45                        |                               | 2510×1290×2340                         | 4740              |
| 2000                         |                       |   |                      | 2170                     | 18300                 | 0.45                        |                               | 2420×2070×2390                         | 5120              |
| 2500                         |                       |   |                      | 2560                     | 19600                 | 0.45                        |                               | 2520×2210×2470                         | 5880              |
| 3150                         | 35-38.5               | 3.15<br>6.3<br>10.5                     | Yd11                 | 3040                     | 23000                 | 0.45                        | 7.0                           | 2630×2280×2510                         | 7770              |
| 4000                         |                       |   |                      | 3610                     | 27300                 | 0.45                        |                               | 2720×2430×2570                         | 8750              |
| 5000                         |                       |   |                      | 4320                     | 31300                 | 0.45                        |                               | 2870×2470×2750                         | 9930              |
| 6300                         |                       |   |                      | 5250                     | 35000                 | 0.45                        |                               | 3100×2580×2950                         | 12760             |
| 8000                         | 35-38.5               | 3.15<br>3.3<br>6.3<br>6.6<br>10.5<br>11 | YNd11                | 7200                     | 38400                 | 0.35                        | 8.0                           | 3250×2680×3150                         | 14500             |
| 10000                        |                       |   |                      | 8700                     | 45300                 | 0.35                        |                               | 3320×2720×3230                         | 16900             |
| 12500                        |                       |   |                      | 10000                    | 53800                 | 0.30                        |                               | 3410×2950×3410                         | 19980             |
| 16000                        |                       |   |                      | 12100                    | 65800                 | 0.30                        |                               | 3600×3220×3630                         | 24200             |
| 20000                        |                       |   |                      | 14400                    | 79500                 | 0.30                        |                               | 3810×3640×4040                         | 31200             |
| 25000                        |                       |   |                      | 17000                    | 94000                 | 0.25                        |                               | 4180×4170×4260                         | 36100             |
| 31500                        |                       |   |                      | 20200                    | 112000                | 0.25                        |                               | 4820×4630×4440                         | 42600             |

Note: Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements. Please contact the company in time.

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## GB20025 High efficiency transformer 新国标变压器

### ► Overview 概述

In response to the national strategic objectives of energy conservation and emission reduction , combined with the product's own characteristics, our company has designed and produced transformer products with different energy efficiency levels that meet the requirements of the national standard in accordance with the requirements of energy efficiency grades of energy-saving products in GB20025-2020 standard. It is ideal for urban and rural distribution network centers.

为响应国家节能减排的战略目标，结合自身产品特点，我公司按照 GB20025-2020 标准节能型产品能效等级的要求，经过不断研发改进，设计生产出符合国标要求的不同能效等级的变压器产品，为城市和农村配电网中心的理想之选。



## Energy Efficiency Class I Oil immersed Transformer

## 能效一级油浸式变压器

## Overview 概述

Through the research and application of new materials and new processes and continuous independent innovation, our company has achieved the purpose of reducing loss and noise through optimized design and continuous improvement of iron core and winding, meeting the requirements of the national standard GB20025-2020, and the noise level decreases by 20% by comparing with the current national standard JB/T10088-2016, and the product performance has reached the domestic advanced level. Compared with the energy efficiency level 2, the energy efficiency level 1 product has lower losses.

我公司通过新材料、新工艺的研究运用及不断的自主创新，通过对铁芯以及绕组的优化设计和不断改良，达到了降低损耗和噪音的目的，满足国标 GB20025-2020 的要求，且噪音水平与现行国标 JB/T10088-2016 相比下降了 20%，产品性能达到了国内先进水平。相较于能效二级，能效一级产品损耗更低。

## Implementation standards 执行标准

|   |                      |
|---|----------------------|
| GB/T 1094.1: Power transformers - Part 1: General   | 电力变压器 第 1 部分: 总则     |
| GB/T 2900.95: Electrical terms transformers, voltage regulators and reactors  | 电工术语 变压器、调压器和电抗器     |
| GB/T 6451: Oil immersed power transformer technical parameters and requirements                                     | 油浸式电力变压器技术参数和要求      |
| GB/T 25438: Three-phase oil immersed three-dimensional wound core transformer technical parameters and requirements | 三相油浸式立体卷铁心变压器技术参数和要求 |
| GB/T 25446: Technical parameters and requirements of oil immersed amorphous alloy iron core transformers            | 油浸式非晶合金铁心变压器技术参数和要求  |

## Type description 型号说明

|   |   |     |   |   |   |   |   |     |                         |            |
|---|---|-----|---|---|---|---|---|-----|-------------------------|------------|
| S | — | (M) | — | □ | / | □ | — | NX1 | Energy efficiency grade | 能效等级       |
|   |   |     |   |   |   |   |   |     | Voltage level (kV)      | 电压等级 (kV)  |
|   |   |     |   |   |   |   |   |     | Rated capacity (kVA)    | 额定容量 (kVA) |
|   |   |     |   |   |   |   |   |     | Fully sealed            | 全密封        |
|   |   |     |   |   |   |   |   |     | Three-phase             | 三相         |

▶ Technical parameters 技术参数

| Rated capacity<br>(kVA)<br>额定容量 | Electrical steel strip<br>电工钢带 |                       |      | Amorphous alloy<br>非晶合金  |                       |      |
|---------------------------------|--------------------------------|-----------------------|------|--------------------------|-----------------------|------|
|                                 | No-load loss (W)<br>空载损耗       | Load loss (W)<br>负载损耗 |      | No-load loss (W)<br>空载损耗 | Load loss (W)<br>负载损耗 |      |
|                                 |                                | Dyn11 / Yzn11         | Yyn0 |                          | Dyn11 / Yzn11         | Yyn0 |
| 30                              | 65                             | 455                   | 430  | 25                       | 510                   | 480  |
| 50                              | 80                             | 655                   | 625  | 35                       | 735                   | 700  |
| 63                              | 90                             | 785                   | 745  | 40                       | 880                   | 840  |
| 80                              | 105                            | 945                   | 900  | 50                       | 1060                  | 1010 |
| 100                             | 120                            | 1140                  | 1080 | 60                       | 1270                  | 1215 |
| 125                             | 135                            | 1360                  | 1295 | 70                       | 1530                  | 1450 |
| 160                             | 160                            | 1665                  | 1585 | 80                       | 1870                  | 1780 |
| 200                             | 190                            | 1970                  | 1870 | 95                       | 2210                  | 2100 |
| 250                             | 230                            | 2300                  | 2195 | 110                      | 2590                  | 2470 |
| 315                             | 270                            | 2760                  | 2630 | 135                      | 3100                  | 2950 |
| 400                             | 330                            | 3250                  | 3095 | 160                      | 3660                  | 3480 |
| 500                             | 385                            | 3900                  | 3710 | 190                      | 4380                  | 4170 |
| 630                             | 460                            | 4460                  |      | 250                      | 5020                  |      |
| 800                             | 560                            | 5400                  |      | 300                      | 6075                  |      |
| 1000                            | 665                            | 7415                  |      | 360                      | 8340                  |      |
| 1250                            | 780                            | 8640                  |      | 425                      | 9720                  |      |
| 1600                            | 940                            | 10440                 |      | 500                      | 11745                 |      |
| 2000                            | 1085                           | 13180                 |      | 550                      | 14000                 |      |
| 2500                            | 1280                           | 13360                 |      | 670                      | 15450                 |      |

Note: Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements. Please contact the company in time.

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## Energy Efficiency Class II Oil immersed Transformer

## 能效二级油浸式变压器

## Overview 概述

Through the research and application of new materials and new processes and continuous independent innovation, our company has achieved the purpose of reducing loss and noise through optimized design and continuous improvement of iron core and winding, meeting the requirements of the national standard GB20025-2020, and the noise level decreases by 20% by comparing with current national standard JB/T10088-2016 and the product performance has reached the domestic advanced level.

我公司通过新材料、新工艺的研究运用及不断的自主创新，通过对铁芯以及绕组的优化设计和不断改良，达到了降低损耗和噪音的目的，满足国标 GB20025-2020 的要求，且噪音水平与现行国标 JB/T10088-2016 相比下降了 20%，产品性能达到了国内先进水平。

## Implementation standards 执行标准

|   |                      |
|---|----------------------|
| GB/T 1094.1: Power transformers - Part 1: General   | 电力变压器 第 1 部分：总则      |
| GB/T 2900.95: Electrical terms transformers, voltage regulators and reactors  | 电工术语 变压器、调压器和电抗器     |
| GB/T 6451: Oil immersed power transformer technical parameters and requirements                                     | 油浸式电力变压器技术参数和要求      |
| GB/T 25438: Three-phase oil immersed three-dimensional wound core transformer technical parameters and requirements | 三相油浸式立体卷铁心变压器技术参数和要求 |
| GB/T 25446: Technical parameters and requirements of oil immersed amorphous alloy iron core transformers            | 油浸式非晶合金铁心变压器技术参数和要求  |

## Type description 型号说明

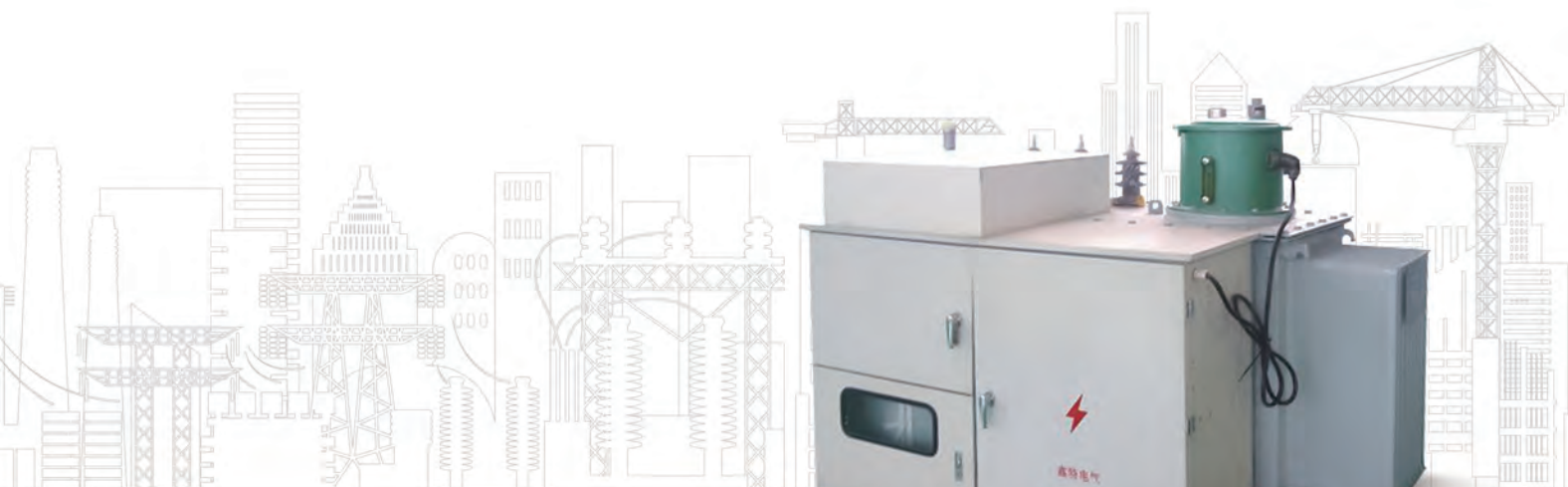
|   |   |     |   |   |   |   |   |     |                         |            |
|---|---|-----|---|---|---|---|---|-----|-------------------------|------------|
| S | — | (M) | — | □ | / | □ | — | NX2 | Energy efficiency grade | 能效等级       |
|   |   |     |   |   |   |   |   |     | Voltage level (kV)      | 电压等级 (kV)  |
|   |   |     |   |   |   |   |   |     | Rated capacity (kVA)    | 额定容量 (kVA) |
|   |   |     |   |   |   |   |   |     | Fully sealed            | 全密封        |
|   |   |     |   |   |   |   |   |     | Three-phase             | 三相         |

▶ Technical parameters 技术参数

| Rated capacity<br>(kVA)<br>额定容量 | Electrical steel strip<br>电工钢带 |                       |      | Amorphous alloy<br>非晶合金  |                       |      |
|---------------------------------|--------------------------------|-----------------------|------|--------------------------|-----------------------|------|
|                                 | No-load loss (W)<br>空载损耗       | Load loss (W)<br>负载损耗 |      | No-load loss (W)<br>空载损耗 | Load loss (W)<br>负载损耗 |      |
|                                 |                                | Dyn11 / Yzn11         | Yyn0 |                          | Dyn11 / Yzn11         | Yyn0 |
| 30                              | 70                             | 505                   | 480  | 33                       | 535                   | 510  |
| 50                              | 90                             | 730                   | 695  | 43                       | 780                   | 745  |
| 63                              | 100                            | 870                   | 830  | 50                       | 930                   | 890  |
| 80                              | 115                            | 1050                  | 1000 | 60                       | 1120                  | 1070 |
| 100                             | 135                            | 1265                  | 1200 | 75                       | 1350                  | 1285 |
| 125                             | 150                            | 1510                  | 1440 | 85                       | 1615                  | 1540 |
| 160                             | 180                            | 1850                  | 1760 | 100                      | 1975                  | 1880 |
| 200                             | 215                            | 2185                  | 2080 | 120                      | 2330                  | 2225 |
| 250                             | 260                            | 2560                  | 2440 | 140                      | 2735                  | 2610 |
| 315                             | 305                            | 3065                  | 2920 | 170                      | 3275                  | 3120 |
| 400                             | 370                            | 3615                  | 3440 | 200                      | 3865                  | 3675 |
| 500                             | 430                            | 4330                  | 4120 | 240                      | 4625                  | 4400 |
| 630                             | 510                            | 4960                  |      | 320                      | 5300                  |      |
| 800                             | 630                            | 6000                  |      | 380                      | 6415                  |      |
| 1000                            | 745                            | 8240                  |      | 450                      | 8800                  |      |
| 1250                            | 870                            | 9600                  |      | 530                      | 10260                 |      |
| 1600                            | 1050                           | 11600                 |      | 630                      | 12400                 |      |
| 2000                            | 1225                           | 14640                 |      | 710                      | 14800                 |      |
| 2500                            | 1440                           | 14840                 |      | 860                      | 16300                 |      |

Note: Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements. Please contact the company in time.

备注：因产品不断改进，本样本提供的尺寸仅供参考；如有需要，我公司可按用户要求进行设计和生产，请及时与本公司联系。



## Intelligence on-load capacity-regulating and voltage-regulating combined transformer

智能型有载调容调压组合式变压器

### ▶ Overview 概述

Intelligence on-load capacity-regulating and voltage-regulating combined transformer is a new technology and energy-saving distribution transformer. This equipment is composed of three parts: the main body of the transformer, intelligent control unit and remote control loop.

智能型有载调容调压组合式变压器是一种新技术节能型配电变压器，该设备由变压器本体、智能控制单元及远程控制回路三部分组成。

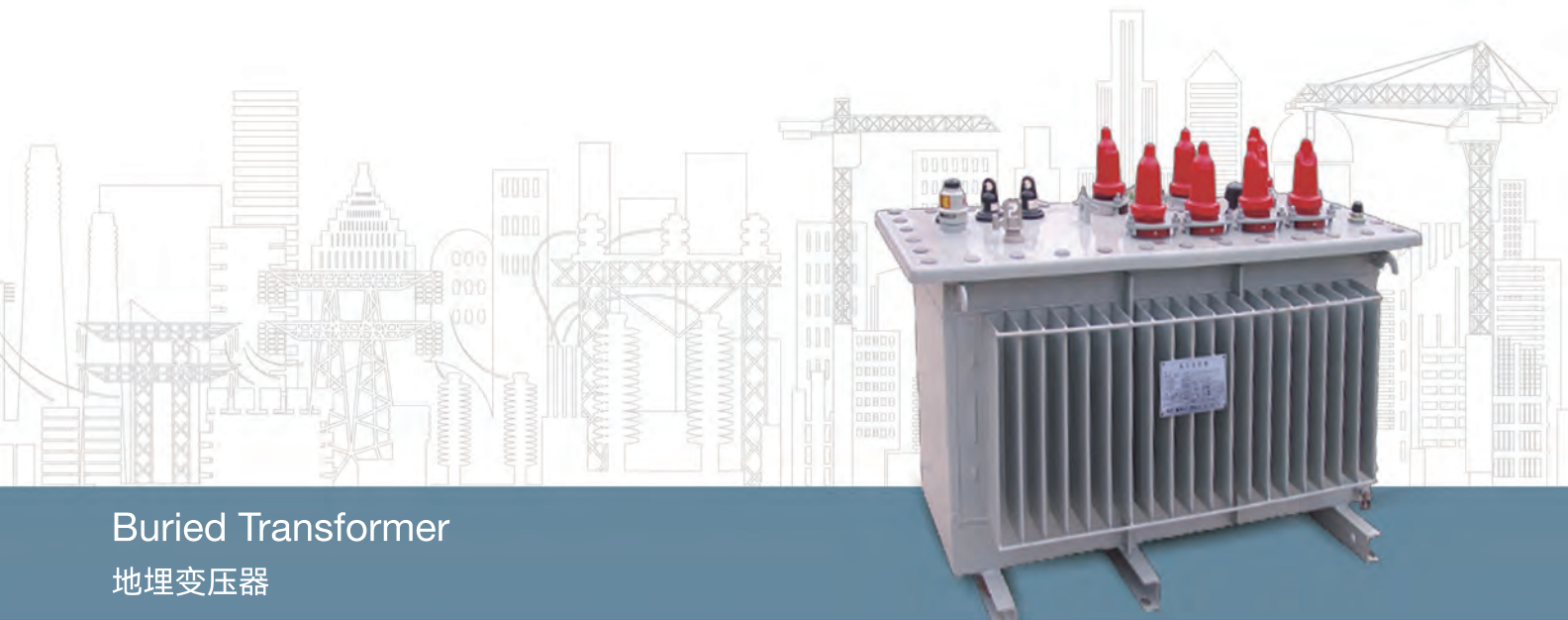
The transformer body is equipped with a special new type of switch that integrates on-load capacity regulation and voltage regulation. It has two rated capacities, large and small, and the two rated capacity operation modes can be automatically converted according to the size of the load, and the voltage can be automatically adjusted according to the power consumption of the output terminal. It solves the problem of large transformer loss caused by the large seasonal and periodic load changes in the power distribution station area, and overcomes the problem of operation and maintenance caused by manual operation of no-load capacity regulating and voltage regulating transformers.

变压器本体内部装有有载调容调压为一体的专用新型开关，具有大小两种额定容量且两种额定容量运行方式可以根据负荷大小自动转换，并根据输出端用电情况自动调节电压。它解决了电网配电台区季节性、时段性负荷变化幅度很大而造成变压器损耗大的问题，克服了无载调容调压变压器断电手动操作导致的运行维护难题。

The intelligent control unit is equipped with a low-voltage power distribution terminal management part, a low-voltage power distribution metering part and a reactive power compensation part, which can automatically detect and compensate the transformer on-site, effectively improve the power factor and solve the three-phase grid unbalance problem through the common compensation and sub-compensation of capacitors. Configuration of remote management terminal through GPS wireless network can monitor and collect data on voltage, current, active and reactive power, other power consumption parameters, transformer oil, gas, temperature, etc. And achieve "remote control, telemetry, remote adjustment, remote signaling" functions.

智能控制单元设置有低压配电终端管理部分、低压配电计量部分及无功补偿部分，自动检测并对变压器进行就地补偿，有效提高功率因数并通过电容器的共补、分补解决电网三相不平衡问题，配置远程管理终端通过 GPS 无线网络，可对配电台区电压、电流有功无功其它用电参数及变压器油、气、温度等运行状态进行监控和数据采集，实现远距离“遥控、遥测、遥调、遥信”功能。





## Buried Transformer

### 地理变压器

#### ► Overview 概述

The buried transformer, also known as the buried box transformer, adopts a split combined structure and consists of a buried transformer, a prefabricated pit, and a low-voltage power distribution cabinet with a light box structure. The high-voltage and transformer units are buried below the ground and do not occupy the surface area, which greatly reduces high-voltage danger and electromagnetic radiation. Above the surface is the media advertising light box. The low-voltage distribution box is hidden in the light box, which has become a highlight to beautify the city. Its occupied area is only 1/5 of the traditional European box transformer.

地理式变压器，又叫地理式箱变，采用分体组合式结构，由地理变压器、预制地坑、灯箱结构的低压配电柜组成，把高压及变压器单元埋在地表以下，不占用地表面积，大大减少高压危险和电磁辐射，地表以上是媒体广告灯箱，把低压配电箱隐藏在灯箱里，成为美化城市的一大亮点，其地表占地面积仅为传统欧式箱变的 1/5。

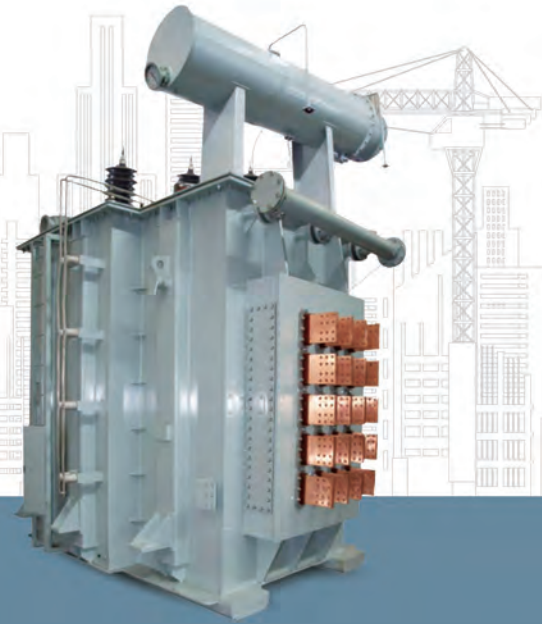
In addition, some media advertising light boxes use energy-saving and long-lasting LED light sources, which are 80% more energy-efficient than traditional light sources, so they are suitable for street lighting, airports, commercial centers, tourist attractions, municipal squares and other places. It is an energy-saving and environmentally friendly way of distribution network. It is very consistent with the "energy-saving society" currently advocated around the world.

另外，有媒体广告灯箱采用节能长寿的 LED 发光源，比传统光源节能 80%，所以适用于路灯照明、机场、商业中心、旅游景区、市政广场等场所，是一种节能环保的配网方式，与目前全球都在倡导的“节能型社会”非常吻合。

Our company can produce buried transformers with high voltage up to 35kV and capacity up to 2000kVA. This product can be customized and produced according to the specific requirements of customers.

我公司可生产 35kV 以下，容量为 2000kVA 以下的地理变压器，该产品属于定制化产品，可根据客户具体要求制作。

## Electric furnace transformer 电炉变压器



### ► Overview 概述

Electric furnace transformers are mainly used in resistance furnaces and salt bath furnaces for heat treatment of mechanical parts, powder metallurgy sintering, non-ferrous metal smelting, etc., and can also be used as power transformers for steel making electric arc furnaces. The capacity of electric furnace transformers is configured according to the size of the electric arc furnace and the smelting process. It meets the requirements of the smelting process by means of voltage regulation. 电炉变压器主要用于机械零件的热处理、粉末冶金烧结、有色金属熔炼等的电阻炉和盐浴炉，也可作为炼钢电弧炉的电源变压器，电炉变压器容量根据电弧炉大小及冶炼工艺配置。它通过调压方式满足冶炼工艺的要求。

There are two types of voltage regulation: on-load voltage regulation and non-excitation voltage regulation. Large-scale electric furnace transformers with on-load voltage regulation do not have series reactors, and small and medium-sized electric furnace transformers without excitation voltage regulation can be divided into two types with series reactors and those without reactors. The former relies on the input and removal of the series reactor to change the impedance. The latter changes the winding impedance by changing the connection method of the high-voltage winding of the furnace transformer itself.

调压方式分为有载调压和无励磁调压两种。有载调压的大型电炉变压器不带串联电抗器，无励磁调压的中小型电炉变压器其结构形式可分为带串联电抗器的和不带电抗器的两种。前者靠串联电抗器的投入和切除来改变阻抗。而后者则靠改变电炉变压器自身高压绕组的联结方式来改变绕组阻抗。

▶ Type description 型号说明

|   |   |    |   |     |   |   |   |   |             |
|---|---|----|---|-----|---|---|---|---|-------------|
| H | S | SP | Z | (K) | □ | / | □ |   |             |
|   |   |    |   |     |   |   |   | Voltage level (kV)                              | 电压等级 (kV)   |
|   |   |    |   |     |   |   |   | Rated capacity (kVA)                            | 额定容量 (kVA)  |
|   |   |    |   |     |   |   |   | Built-in reactor                                | 内附电抗器       |
|   |   |    |   |     |   |   |   | On-load voltage regulation                      | 有载调压        |
|   |   |    |   |     |   |   |   | SP Forced oil circulating water cooling         | SP 强迫油循环水冷却 |
|   |   |    |   |     |   |   |   | FP Forced oil circulating air cooling           | FP 强迫油循环风冷却 |
|   |   |    |   |     |   |   |   | S Three-phase, D Single-phase                   | S 三相, D 单相  |
|   |   |    |   |     |   |   |   | H Steel making electric arc furnace transformer | H 炼钢电弧炉变压器  |
|   |   |    |   |     |   |   |   | HJ Ladle refining furnace transformer           | HJ 钢包精炼炉变压器 |
|   |   |    |   |     |   |   |   | HZ Electroslag furnace transformer              | HZ 电渣炉变压器   |
|   |   |    |   |     |   |   |   | HG Power frequency furnace transformer          | HG 工频炉变压器   |

## Order Information / 订货须知



### Normal use conditions for the product 产品正常使用条件

- a** Environment temperature: highest temperature 40°C , lowest -30°C .  
环境温度：最高气温 40°C，最低温度 -30°C
- b** Elevation: no more than 1000m.  
海拔：不超过 1000m
- c** Relative humidity: daily average≤95%, monthly average≤90%.  
相对湿度：日平均≤ 95%，月平均≤ 90%
- d** Maximum wind speed (outdoor): 35m/s (10m above the ground and average value over 10 min).  
最大风速（户外）： 35m/s（距地面 10m 高 10min 平均值）
- e** Anti-earthquake performance (with stand): 8.  
抗地震能力（带机座）：按 8 级



### Order Information 订货须知

In order to provide you with better service, the following data are required when ordering.  
为了给您提供更好地服务，订货时需提供以下数据：

- |                                   |                            |
|-----------------------------------|----------------------------|
| + Specification and type<br>规格及型号 | + Tapping range<br>调压范围    |
| + High voltage<br>高压电压            | + Rated frequency<br>额定频率  |
| Low voltage<br>低压电压               | Vector group<br>联结组别       |
| + Coil material<br>线圈材质           | + Insulation grade<br>绝缘等级 |
| Phases<br>相数                      | Noise<br>噪音                |
| +                                 | +                          |

Note: Please specify your requirements for special products.  
注：特殊产品请注明特殊要求。