

常规产品 Conventional product

[S13(11), SH15 LOW LOSS OIL IMMERSED TRANSFORMER]

01 Product introduction

Low-loss fully sealed oil-immersed power transformer is a new type of energy-saving transformer designed and produced by our company. S13(11) series products are all designed and manufactured with high permeability magnetic orientation silicon steel sheet and laminated iron core technology (SH15 adopts amorphous alloy iron core), high and low voltage windings can be selected according to user needs to use copper or copper aluminum combined technology design and production, and the use of fully sealed corrugated sheet fuel tank structure, with maintenance-free, easy maintenance, stable operation characteristics, good economic benefits.



S13 MAIN TECHNICAL INNOVATIONS :

- (1) The product has the characteristics of high efficiency and low loss;
- (2) Good internal heat dissipation and stronger short-circuit current resistance;
- (3) Empty, low load loss;
- (4) Fully sealed structure to enhance operational reliability.



S15 MAIN TECHNICAL INNOVATIONS :

- (1) High efficiency and energy saving: with high energy conversion efficiency, it can effectively improve the efficiency of power grid transmission and distribution;
- (2) With high permeability and saturation magnetic induction strength, small size, light weight;
- (3) The use of high quality materials, strong corrosion resistance;

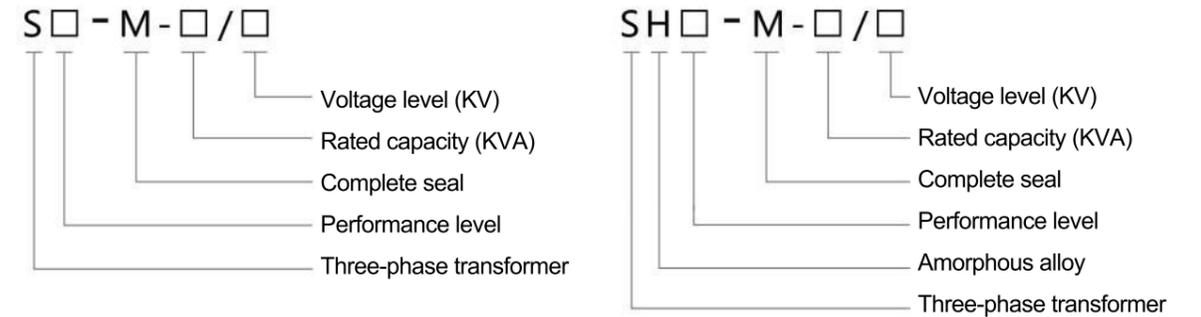


02 Execution marker

- ◆ IEC60076-1:1993 《电力变压器》 ◆ GB1094.1-1996 《电力变压器》
- ◆ GB6451-2008 《油浸式电力变压器技术参数和要求》 ◆ JB/T10088-2004 《6kV~500kV级电力变压器声级》
- ◆ GB20052-2020 《电力变压器》 ◆ GB/T25446-2010 《油浸式非晶合金铁芯配电变压器技术参数》



03 Type description



04 Technical parameter

10kV class S11/13 series and SH15 series oil immersed transformer technical parameters

| Rated capacity (KVA) | High voltage (KV) | | | Join group label | S13/11(Electrical Steel strip) | | | | S15(Amorphous alloy) | | Short-circuit impedance (%) | |
|----------------------|-------------------|-----------------------------|------------------|--------------------|--------------------------------|------|---------------|-------|----------------------|---------------|-----------------------------|-----|
| | High voltage (KV) | High pressure tap range (%) | Low voltage (KV) | | No-load loss (w) | | Load loss (w) | | No-load loss (w) | Load loss (w) | | |
| | | | | | S13 | S11 | S13 | S11 | | | | |
| 30 | 6 | ±5 | 0.4 | Dyn11 或 Yyn0 | 80 | 100 | 600 | 630 | 33 | 600 | 4 | |
| 50 | | | | | 100 | 130 | 870 | 910 | 43 | 870 | 4 | |
| 80 | | | | | 130 | 180 | 1250 | 1310 | 60 | 1250 | 4 | |
| 100 | | | | | 150 | 200 | 1500 | 1580 | 75 | 1500 | 4 | |
| 125 | | | | | 170 | 240 | 1800 | 1890 | 85 | 1800 | 4 | |
| 160 | | | | | 200 | 280 | 2200 | 2310 | 100 | 2200 | 4 | |
| 200 | 6.3 | ±5 | 0.4 | Dyn11 或 Yyn0 | 240 | 340 | 2600 | 2730 | 120 | 2600 | 4 | |
| 250 | 10 | | | | 290 | 400 | 3050 | 3200 | 140 | 3050 | 4 | |
| 315 | 10.5 | | | | ±2×2.5 | 340 | 480 | 3650 | 3830 | 170 | 3650 | 4 |
| 400 | | | | | | 410 | 570 | 4300 | 4520 | 200 | 4300 | 4 |
| 500 | | | | | | 480 | 680 | 5150 | 5410 | 240 | 5150 | 4 |
| 630 | | | | | | 570 | 810 | 6200 | 6200 | 320 | 6200 | 4.5 |
| 800 | 11 | ±2×2.5 | 0.4 | Dyn11 或 Yyn0 | 700 | 980 | 7500 | 7500 | 380 | 7500 | 4.5 | |
| 1000 | | | | | 830 | 1150 | 10300 | 10300 | 450 | 10300 | 4.5 | |
| 1250 | | | | | 970 | 1360 | 12000 | 12800 | 530 | 12000 | 4.5 | |

* Note: Due to the continuous development and upgrading of the product, the data provided in this table is for reference only; For more product information, please call for details.



新能效产品 High efficiency power voltage complete sets of products

S20/22-M SERIES OIL-IMMERSED THREE-PHASE ELECTRICAL STEEL STRIP POWER TRANSFORMER

01 Product introduction

State Grid new energy efficiency S20(22) series oil-immersed transformer in the production process of new energy-saving transformers, the use of high-orientation silicon steel sheet as the core material, high-conductivity oxygen-free copper as the coil material, no-load loss can be reduced by more than 30%, load loss can be reduced by more than 20%, the total product loss can be reduced by 25%(specific loss data in kind).

It has a series of advantages such as high efficiency, low loss, low noise, etc., suitable for power and lighting electricity in rural power grids and remote mountainous areas, suitable for urban power grid transformation and energy-saving power supply mode for high-voltage users. The transformer can be mounted directly on the platform or suspended from the pole. In the operation of power grid, it has a very significant energy-saving effect, which can expand the economic benefit.



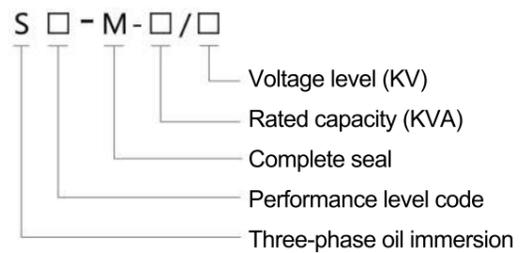
PRODUCT CHARACTERISTICS :

- (1) Reduce no-load loss: the use of excellent performance of the five-grade silicon steel sheet joint, improve the core structure and process, reduce the process coefficient;
- (2) Reduce the load loss: appropriately reduce the current density, improve the insulation structure, reduce the insulation volume, improve the winding filling factor, reduce the winding size, reduce the load loss;
- (3) Reduce the loss of other components: improve the core structure and improve the loss of impurities in structural parts. Waveform oil tank and seat radiator are used to improve heat dissipation efficiency.

02 Enforce standards

- ◆ GB20052-2020《电力变压器能效限定值及能效等级》
- ◆ GB1094《电力变压器》
- ◆ GB/T6451《油浸式电力变压器技术参数和要求》

03 Type description



04 Technical parameter

10 kV oil-immersed three-phase double-winding unexcited voltage regulation distribution transformer (electrical steel strip) technical parameters table

| Rated capacity (KVA) | Voltage combination | | | Join group label | Level 1 Energy efficiency S22 | | | Secondary energy efficiency S20 | | | Short-circuit impedance (%) | | | | |
|----------------------|---------------------|-----------------------------|------------------|--------------------|-------------------------------|---------------|------|---------------------------------|---------------|------|-----------------------------|-----|------|------|---|
| | High voltage (KV) | High pressure tap range (%) | Low voltage (KV) | | No-load loss (w) | Load loss (w) | | No-load loss (w) | Load loss (w) | | | | | | |
| | | | | | | Dyn11 | Yyn0 | | Dyn11 | Yyn0 | | | | | |
| 30 | 6 | ±5 | 0.4 | Dyn11 或 Yyn0 | 65 | 455 | 430 | 70 | 505 | 480 | 4 | | | | |
| 50 | | | | | 80 | 655 | 625 | 90 | 730 | 695 | 4 | | | | |
| 80 | | | | | 105 | 945 | 900 | 115 | 1050 | 1000 | 4 | | | | |
| 100 | | | | | 120 | 1140 | 1080 | 135 | 1265 | 1200 | 4 | | | | |
| 125 | | | | | 135 | 1360 | 1295 | 150 | 1510 | 1440 | 4 | | | | |
| 160 | | | | | 160 | 1665 | 1585 | 180 | 1850 | 1760 | 4 | | | | |
| 200 | | | | | 6.3 | ±2×2.5 | 0.4 | Dyn11 或 Yyn0 | 190 | 1970 | 1870 | 215 | 2185 | 2080 | 4 |
| 250 | | | | | 10 | | | | 230 | 2300 | 2195 | 260 | 2560 | 2440 | 4 |
| 315 | | | | | 10.5 | | | | 270 | 2760 | 2630 | 305 | 3065 | 2920 | 4 |
| 400 | | | | | | | | | 330 | 3250 | 3095 | 370 | 3615 | 3440 | 4 |
| 500 | | | | | | | | | 385 | 3900 | 3710 | 430 | 4330 | 4120 | 4 |
| 630 | | | | | | | | | 11 | 460 | 4460 | 510 | 4960 | 4.5 | |
| 800 | 560 | 5400 | 630 | 6000 | | | | | 4.5 | | | | | | |
| 1000 | 665 | 7415 | 745 | 8240 | | | | | 4.5 | | | | | | |
| 1250 | 780 | 8640 | 870 | 9600 | | | | | 4.5 | | | | | | |

* Note: Due to the continuous development and upgrading of the product, the data provided in this table is for reference only; For more product information, please call for details.

05 Scene application

