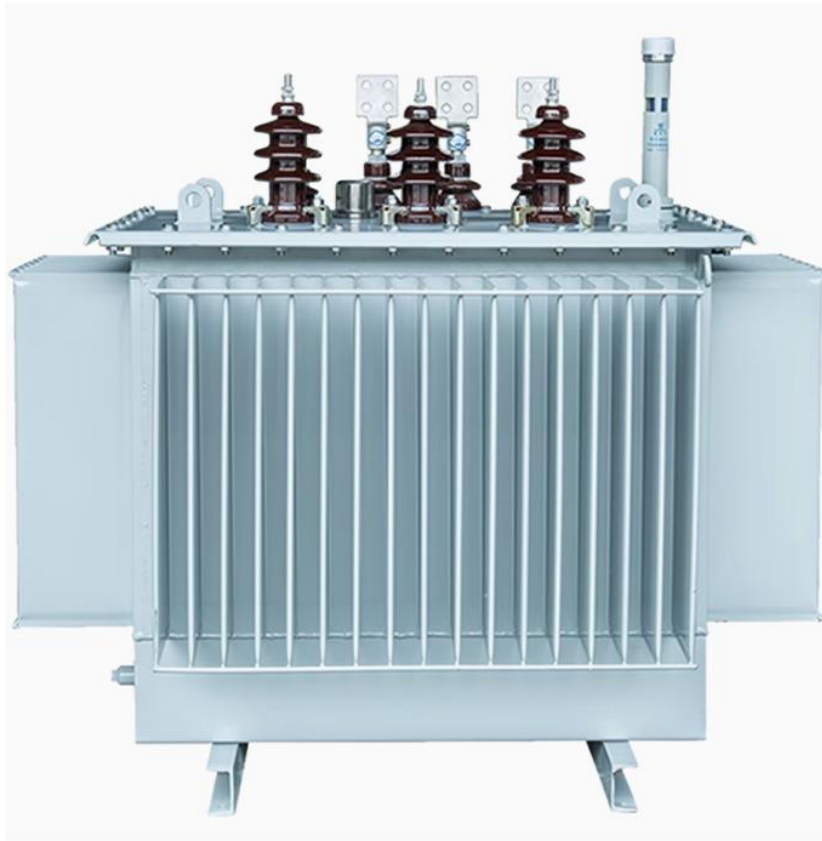


Installation instructions

Oil-immersion type Transformer



catalogue

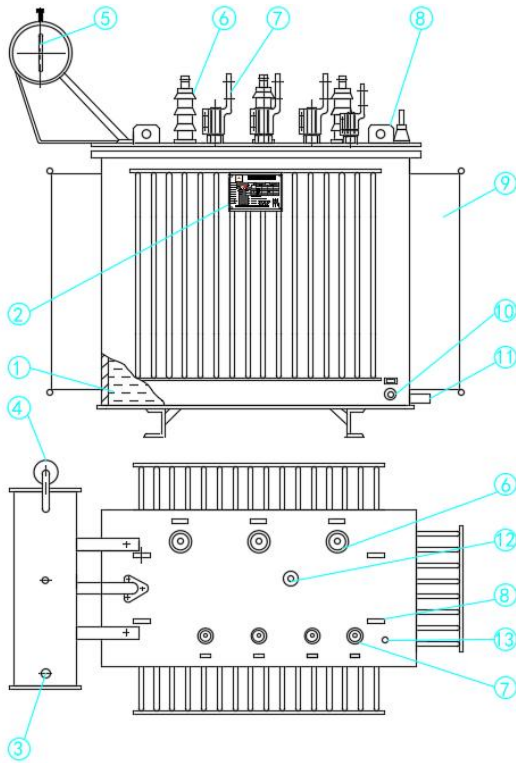
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1.1 See Figure 1 and Figure 2 of typical transformer with oil pillow

1.2 See Figure 3 and Figure 4 for typical full sealed transformer shape drawings an

d random accessories

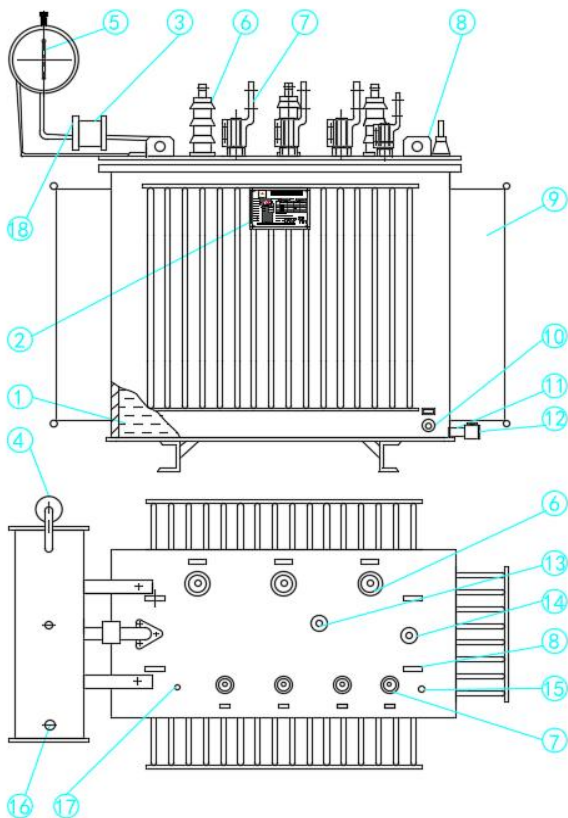
Figure 1 (commonly used for transformers with 630KVA and below)



a row number	transformer capacity	Accessories name	quantity
1	At 200KVA and below	A 0.2 Kg moisture absorber	1
	250~630KVA	A 0.5 Kg moisture absorber	1

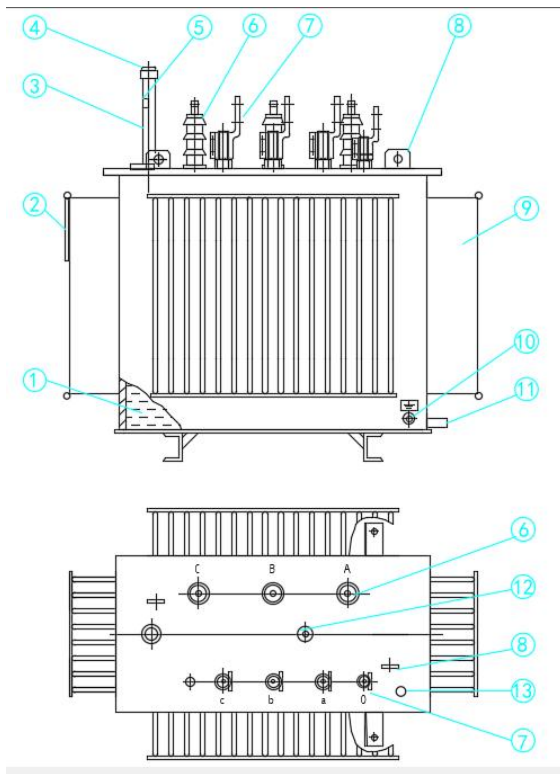
order number	The name of the corresponding accessory
1	electric insulating oil
2	data plate
3	oil filler hole
4	moisture absorber
5	Oil level observation window (blue-oil) (red-oil)
6	bushing
7	Low pressure casing
8	hanger plate
9	Wire heat sink
10	Ground nut
11	Oil sample valve
12	tap switch
13	Mercury thermometer seat

Figure 2 (commonly used for transformers with 800KVA and below)



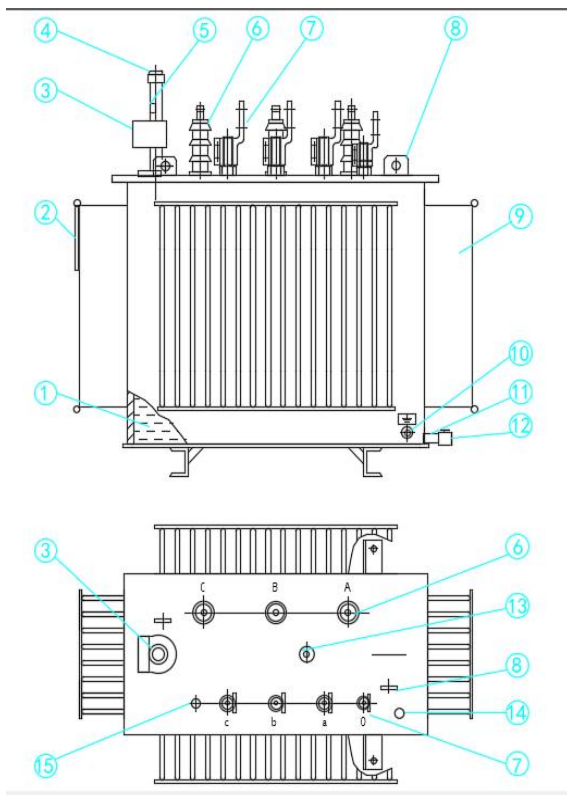
a row number	transformer capacity	Accessories name	quantity
1	800~1000KVA	A 0.5 Kg moisture absorber	1
	1250~2500KVA	A 1.0 Kg moisture absorber	1
2	800~2500KVA	Signal thermometer	1

order number	The name of the corresponding accessory
1	electric insulating oil
2	data plate
3	gas detector relay
4	moisture absorber
5	Oil level observation window (blue-oil) (red-oil)
6	bushing
7	Low pressure casing
8	hanger plate
9	Wire heat sink
10	Ground nut
11	Oil sample valve
12	fuel outlet valve
13	tap switch
14	Pressure release valve
15	Mercury thermometer seat
16	oil filler hole
17	Signal thermometer seat
18	flygate



a row number	transformer capacity	Accessories name	quantity
1	630KVA and below	action bars	1
order number	The name of the corresponding accessory		
1	electric insulating oil		
2	data plate		
3	oil level indicator		
4	Pressure release valve		
5	Oil level observation window (blue-oil) (red-oil)		
6	bushing		
7	Low pressure casing		
8	hanger plate		
9	Wire heat sink		
10	Ground nut		
11	Oil sample valve		
12	tap switch		
13	Mercury thermometer seat		

Figure 4 (commonly used for transformers of 800~2000KVA and below)



a row number	transformer capacity	Accessories name	quantity
1	800~2000KVA	Signal thermometer	1
order number	The name of the corresponding accessory		
1	electric insulating oil		
2	data plate		
3	gas detector relay		
4	Pressure release valve		
5	Oil level observation window (blue-oil) (red-oil)		
6	bushing		
7	Low pressure casing		
8	hanger plate		
9	Wire heat sink		
10	Ground nut		
11	Oil sample valve		
12	fuel outlet valve		
13	tap switch		
14	Mercury thermometer seat		
15	Signal thermometer seat		

1、Transformer shape diagram and random accessories

1.1 See Figure 1 and Figure 2 of typical transformer with oil pillow

1.2 See Figure 3 and Figure 4 for the typical full sealed transformer shape drawing and random accessories

2. General provisions and scope of application

All kinds of oil-immersed power transformers produced in us meet the national standards of GB1094.1~2-2013, GB1094.3-2017, GB1094.5~2008, GB / T6451-2015.

2.1 Transformer with applicable capacity of 30 ~ 2500 kVA or greater than 2500 kVA can also be used with reference to this specification.

2.2 Normal use conditions of the product

2.2.1 The altitude shall not exceed 1,000 meters;

2.2.2 Ambient temperature and cooling medium temperature;

Maximum air temperature: + 40°C;

Maximum monthly average temperature: + 30°C;

Maximum annual average temperature: + 20°C;

Minimum temperature: No.10 oil-10°C, No.25 oil-25°C;

2.2.3 The waveform of the power supply voltage is similar to the sine wave;

2.2.4 Symmetrical voltage of the three-phase power supply;

2.2.5 No obvious pollution in the installation environment;

2.2.6 Normal temperature rise limit value of continuous rated capacity;

2.2.6.1 Top oil temperature rise: 55K with oil pillow transformer, 60K with fully sealed transformer;

2.2.6.2 Winding average temperature rise: 65K.

3. Transportation, loading and unloading

3.1 Transformer may be transported to the installation site by road or railway transportation. Such transformers shall be filled with oil for transportation, and the attached parts, accessories, factory technical documents, etc. shall be packed and shipped together with the transformer.

3.2 The loading and unloading equipment adopts crane, truck crane, forklift truck and other lifting equipment.

3.3 When lifting the transformer, use the four trays on the edge of the box, and the angle between the rope and the vertical line shall not be more than 30°C; if the corrugated tank, lift the ring on the box lid and the hook on the box wall is only for the empty box, which cannot bear the total weight of the transformer.

3.4 During transportation, the inclination of the transformer shall not be more than 15°.

4. Inspection and acceptance

After receiving the transformer, the delivery unit shall immediately conduct the following inspection:

4.1 Check whether the nameplate data of the product is consistent with the order contract, such as the product model, rated capacity, rated voltage, connection group standard number, short-circuit impedance, etc.

4.2 Check whether the factory documents are complete.

4.3 Check whether the accessories are complete.

4.4 Visual inspection.

4.4.1 There is no oil leakage and oil leakage in the transformer.

4.4.2 Products and parts are damaged.

4.4.3 Vulnerable parts, such as moisture absorbent, oil standard pipe, signal thermometer, casing, gas relay, etc. are damaged.

5. Storage and storage

When the transformer is stored, the oil surface should be kept above the tank cover, and the storage situation should be checked regularly. The storage site should be kept clean and dry, and active chemicals and corrosive items should not be stored simultaneously, and all products should not be stacked.

6. Check the core

6.1 After the normal transportation of this series transformer, it can be assembled without the lifting core inspection, and it can be put into operation after passing the inspection and test.

6.2 When it is found to damage the structure during transportation or transport under abnormal conditions, the device shall be lifted for inspection.

6.3 When the surrounding temperature is lower than or equal to the temperature measured at the iron yoke, the body can be lifted out of the oil tank. If the body temperature is lower than the surrounding temperature, the body should raise the temperature equal to the surrounding temperature, so as to avoid the moisture in the air condensation on the body.

6.4 Suspension core inspection shall be carried out in dry and clean rooms as far as possible. If it is necessary to check outdoors, effective measures shall be taken to prevent dust and raindrops from falling on the device.

6.5 Hanging core inspection should not be carried out in rainy, snow and fog days. If it is necessary, it should be carried out in the room where the temperature is 10°C higher than the outdoor temperature, or the body is heated to 10°C higher than the outdoor temperature.

6.6 The room temperature of the lifting core inspection should be above 10°C.

If it must be conducted at the room temperature below 10°C, the transformer should be heated for 12h so that the core temperature measured at the yoke is not lower than 20°C.

6.7 The time when the body stays in the air to make contact with the external air (i. e., from the beginning of the oil release) shall not exceed the following provisions:

Air relative humidity does not exceed 65% in dry weather-16h

Air relative humidity not exceeding 75% in wet weather-12h

6.8 Behind the crane, if there is any sediment in the tank, clean up the tank and remove the sediment, and then rinse with clean oil.

6.9 When lifting out of the device, check the tightness of the winding, the support and holding of the lead, the locking of the bolts and nuts around the body, and the wiring and contact release of the tap switch. If loose, deflection and collision damage are found, they should be carefully locked, riveted or repaired.

6.10 The insulation resistance between the core and the iron shall be measured during the core detector.

7. Transformer body placement and accessories installation

7.1 Install the transformer to the designated position with lifting equipment or drum. If the transformer is equipped with a gas relay. After installed on the foundation, one end of the gas relay should be 10~15mm high to make the transformer slightly inclined to increase the sensitivity of gas and electrical action.

7.2 After the transformer is in place, the transformer that is not disassembled and transported can be an experimental project before it is put into operation. For the transformer that is disassembled and transported, the oil storage tank, pressure release valve and other accessories must be installed first.

7.3 Fill the thermometer seat with the transformer oil while installing the mercury thermometer and the signal thermometer.

7.4 While installing the moisture absorber, fill the transformer oil (the lifting type moisture absorber). See the operating manual for the dehumidifier.

7.5 Assemble the other parts well.

7.6 Open the disc valve of the radiator and gas relay, inject the qualified transformer oil to the normal oil surface height of the oil storage tank (according to the ambient temperature), all the vent plug must be opened during the oil injection, and reseal the oil burst.

7.7 After injecting the transformer oil, seal the discharge plug of the gas relay and casing, and check all the sealing surfaces. After parking for 24h, check whether

r there is oil leakage, and release the gas of the gas relay again. When filling transformer oil, attention should be paid to the model of filling transformer oil. Different types of transformer oil should generally not be mixed, and it can be used after passing the test.

7.8 Take the transformer oil sample and do the tests for laboratory analysis.

8. Transformer sealing test

For the transformer with possible leakage points after the lifting core inspection or the assembled parts, the sealing test shall be conducted after the oil injection. The test method is as follows:

8.1 Air Pressure test:

Apply 40kPa of dry and clean compressed air to the tubular tank or radiator type tank, and for 315 kVA and below, use the corrugated tank of 20kPa, 400 kVA and above with 15kPa of clean and dry compressed air to maintain no permeability for 3h.

8.2 Test Notes:

8.2.1 For the transformer equipped with the pressure release valve, press the signal rod of the pressure release valve with auxiliary tools so that it cannot operate.

8.2.2 Fill the bushing with transformer oil.

8.2.3 Bleed gas relay.

9. Inspection and test before the transformer is put into operation

9.1 After the transformer installation, the following tests shall be done before putting into operation:

9.1.1 Measure the insulation resistance.

9.1.2 Measure the DC resistance.

9.1.3 The test voltage is 85% of the factory test standard (see the record on the product certificate), lasting 1min.

9.1.4 For no-load test, the measured results shall be significantly different from the factory test results (see the product certificate for the factory test results).

The above tests shall be conducted after at least 10h of oil injection of the transformer, and the sequence of test items shall be maintained.

9.2 After the transformer passes the tests listed in item 9.1, it shall be inspected as follows:

9.2.1 Setting and test protection device: the action of transformer protection devices such as over-current relay, differential relay and gas relay.

9.2.2 Check the oil surface of the oil storage tank, and the connecting pipe valve

ve of the oil storage tank and the transformer must be opened.

9.2.3 Check whether the plate of the pressure release valve is removed.

9.2.4 Check the reading of the thermometer.

9.2.5 Check for other irrelevant things throughout the transformer.

9.2.6 Whether the oil tank is well grounded.

9.3 When the transformer equipped with the gas relay is put into operation, first the signal contact of the gas relay will be connected to the trip loop of the transformer, and the over current protection time is set to instantaneous action, and then the transformer is connected to the rated voltage for 30min. Listen to the transformer sound, if possible the transformer access voltage from zero for early detection.

9.4 During testing, the transformer shall be connected to the power supply side, because the protection device of the transformer is mostly installed on this side. The power supply can be cut off in case of abnormal conditions.

After 9.5 test, cut off the power supply, adjust the over-current protection setting value, connect the signal contact of the gas relay to the alarm loop and connect the trip contact to the relay protection trip loop, and close the transformer for 3~5 times at rated voltage to test the action of the relay protection device under the action of exciting magnetic current impact.

9.6 If the test result of the transformer access voltage is good, it can access the load and put it into operation.

10. Operation precautions

10.1 In operation, should often check the temperature indication, oil surface indication and other devices and protection devices (such as gas relay) to ensure its reliable operation, and often check whether there is oil leakage at each seal.

10.2 The transformer can operate according to the nameplate specification under the specified cooling conditions.

10.3 The allowable oil temperature of the transformer in operation can be checked according to the upper layer temperature. The allowable value of the upper layer oil temperature should comply with the regulations of the manufacturer, but the maximum oil temperature should not exceed 95°C. In order to avoid the rapid insulation aging of the transformer, the oil temperature of the upper layer should not often exceed 85°C.

10.4 The transformer can operate continuously when the maximum voltage does not exceed 5% of the corresponding tap voltage.

10.5 Permissible overload

10.5.1 The transformer can operate under normal overload and accident overloads. Normal overload can be used frequently, and its allowable value is determined

according to the load curve of the transformer, the temperature of the cooling medium, and the load brought by the transformer before the overload. Accident overload is only allowed to be used in accident cases. For example, one of several transformers in operation is damaged and there is no standby transformer, then the other transformers are allowed to run according to the accident overload.

10.5.2 The allowable value of transformer accident overload is specified in the following table:

Ratio of the accident overload to the rated load	1/30	1/45	1/60	1/75	2/00
Allowed duration of overload (min.)	1/20	8/0	4/5	2/0	1/0

10.5.3 Allowable short-circuit current and unbalanced current:

The short-circuit current of the transformer shall not exceed 25 times of the rated current, and the passing time t of the short-circuit current shall not exceed the value listed in the following table:

K-Multiple of stable short circuit current to rated current.

K	$T(s)$
More than 20	2
20-15	3
Below 15 and ~10	4

10.6 For transformer oil in operation, the voltage test shall be conducted at least once a year. If the water in the oil is constantly increasing or the content is large and has impurities and precipitation, the voltage test shall be conducted and filtered. If the insulation performance of the oil is reduced too much, it is necessary to check the transformer failure. If the transformer oil temperature increases sharply under normal load, the cause must be checked. If the fault cannot be eliminated, the transformer should stop the fault.

10.7 If the transformer emits abnormal sound, the oil surface suddenly high and low, the pressure release valve action, the oil storage tank or oil leakage seriously causes the oil surface falls below the limit of the oil surface line, it should immediately stop the operation, thorough inspection.

10.8 If the transformer is often overloaded or short circuit, the crane should be checked once a year.

10.9 Other maintenance matters related to the transformer shall be carried out in accordance with the Transformer Operation Regulations formulated by the Ministry of Power.

Instructions for the use of the thermometer house

1. Use and structure

The thermometer seat is placed on the box lid of the transformer, near the low-voltage side casing. To measure the top oil temperature, first unscrew the cap on the thermometer seat, and then put the mercury thermometer gently in.

The scale of the mercury thermometer ranges from -20 to 110°C (refers to the visible scale after the mercury thermometer is placed in the thermometer seat), and the transformer oil should be placed in the pipe of the thermometer seat (the depth is 80mm). When there is a gap between the thermometer and the thermometer seat, clean cloth or paper can be wrapped tightly.

The measured temperature is the top oil temperature of the transformer, and the temperature of the top oil minus the ambient temperature is the oil temperature rise. In general, the temperature appreciation should not exceed the maximum limit specified in the technical conditions.

2. Use and maintain

1. When observing the temperature, the observer should be kept away from the conductive rod and lead of the high voltage side to avoid high voltage electric shock accidents.

2. When the oil temperature rise exceeds the maximum limit of technical conditions, it should immediately find out whether there is any abnormal situation in the operation, whether the load exceeds the limit, and report to the responsible person on duty respectively according to the seriousness of the case, and take necessary measures.

off circuit tap changer

1. Use

The box lid of the non-excitation voltage regulating transformer is equipped with a non-load tap switch as the high voltage side tap of the transformer transformer (changing the working voltage of the high voltage side).

2. Use

2.1 The operation of the tap switch must be cut off the high and low voltage side lines of the transformer, and confirmed that the transformer is without power.

2.2 The digital position of the tap switch indicator plate and its corresponding voltage should be confirmed from the transformer nameplate.

2.3 When changing the tap, remove the wind and rain cover first, remove the handle from the positioning slot, and rotate the handle to the required tap position, and make the handle positioning nail can be normally placed into the positioning

slot of the indicator plate, and cover the tap cover before the transformer can be put into operation.

3. Maintenance 3.1 The tap switch shall be maintained once a year:

(1) Remove the wind and rain cover, check whether each part has rust, and wipe clean, apply an appropriate amount of grease.

(2) Turn the tap switch handle left and right back rotation 10~15 times each.

3.2 If there is oil seepage at the connection with the box cover or the rotating shaft, tighten the mounting nut or the pressing nut slightly.

Hygroscopic device (glass type)

1. Use

The moisture absorber is used to remove and dry the debris and moisture in the air entering the transformer oil storage tank due to the change of the transformer oil temperature to maintain the insulation strength of the transformer oil.

2. Structure and working principle

2.1 The structure of the dehumidifier is of the lifting type (see Figure 5). The main body of the humidifier is a glass tube, which contains cobalt oxide impregnated silica gel (discoloration silica gel) as a moisture absorption agent, and the cover is equipped with transformer oil as a debris filter agent.

2.2 When the volume of the transformer oil expands and shrinks due to the change of load or ambient temperature, then the gas in the oil storage tank is forced to breathe through the moisture absorber, so as to remove the debris and moisture in the air and maintain the insulation strength of the transformer oil in the transformer.

2.3 Discolored silica gel is blue in the dry state and pink after absorbing moisture. At this time, it means that the silica gel has lost its hygroscopic efficiency and must be dried or replaced.

3. Use and maintenance

3.1 Before use, it is necessary to check whether the silica gel in the glass tube becomes pink, and screw off the cover, and remove the sealing washer for storage and transportation seal. Unscrew the cover after injecting transformer oil into the cover. Finally, the seal should be checked as tight to prevent air leakage.

3.2 When replacing the silicone, remove the humidifier from the transformer, and pour out the outlet from the flange or load the silicone (the size of the silicone is 2~7mm).

3.3 The wet silica gel baked at 140°C for about 8h (or about 2h at 300°C) can be completely changed to blue, otherwise, the baking time should be extended until it is completely changed to blue and used in the oil storage tank.

3.4 In the process of use, we should often monitor whether the silicone gel of

the moisture absorbent is discolored, whether the transformer oil is too dirty or the oil surface is lower than the oil surface caused by evaporation. When the silicone gel is red, or the oil surface is low, or the oil quality is too dirty, the silica gel shall be dried or replaced according to the method described in item 3.3 of this manual, or add or replace the transformer oil according to item 3.1.

4. Method of silicone impregnation cobalt oxide

When there is no discolored silica gel, primary silica gel can be impregnated with cobalt chloride in the following steps:

(1) Take cobalt chloride which accounts for 3% of the weight of silica gel dissolved in water, and the water should ensure that silica gel can be fully absorbed.

Figure 5 Dehumidifier

(2) Immerse the 2-7 mm silica gel in the cobalt chloride solution and make it fully absorb until the silica gel becomes pink.

(3) The silica gel impregnated with cobalt chloride solution and colored pink is dried at 115°C until the silica gel is completely changed to blue.

The QJ 1-50 type gas relay

1. Use

QJ 1-50 gas relay (hereinafter referred to as relay) is a protection device of oil-immersed transformer with oil storage tank, which is installed in the connecting line between the transformer oil tank and the oil storage tank.

2. Principle of action

The core structure of the relay is shown in Figure 6. When the transformer is working normally, the relay is generally filled with transformer oil. If not necessary, the gas generated by the container forces the oil surface down and the opening cup E. When E drops to a defined position, the magnet D closes the dry spring contact R, connects the signal loop and signals the oil surface of the relay. If a serious fault occurs inside the transformer, oil surge, then the oil flow is formed in the connection pipe against the relay baffle L; When L moves to a limited position, the magnet M will close the dry spring contact P, close the trip circuit, cut off all the power sources connected to the transformer, and thus play the role in protecting the transformer.

3. Conditions of use

3.1 Allowable working temperature: -30°C to + 95°C.

3.2 Installation method: the diameter axis of the relay shall be parallel to the transformer box cover, and shall be connected to the oil storage tank, but the inclination between the axis and the horizontal plane shall not exceed 4%.

3.3 Rated voltage: DC or AC: 220V.

3.4 Pipe diameter: 50mm.

4. Performance parameters

4.1 Technical data of the relay:

(1) Gas volume of signal contact action: 250~300m³.

(2) Oil flow speed of the trip contact action: 0.6~1.0m / s, and the factory setting is 0.8m / s.

(3) Contact capacity: DC 220V0.3A inductive load (S 5x10-3s); AC 220V0.3A.

(4) Permanent magnet performance: remaining magnetic induction strength 0.35~0.38T; coercive force 1432~1989A / m.

(5) Insulation strength:

test item	Between the individual junction terminals	There is terminal to ground	Between the signal and the two sets of trip contact terminals
Apply processing	1750V	2000V	2000V
Frequency voltage	1min.	1min.	1min.

(6) Seal performance: the relay is filled with kerosene, pressurized for 147kPa at room temperature, lasting for 24 hours without leakage.

(7) Seismic capacity: when the vibration frequency is 4~20Hz and the acceleration is 4g, the relay does not stray (g is gravity acceleration).

(8) Weight: about 10kg.

4.2 Relay outer box and installation dimensions

4.3 When installation, first remove the core, remove the binding belt, check whether all the fastening screws are loose, whether the movement of the opening cup and baffle is flexible, whether the contact is opened and closed, and whether the lead falls off.

4.4 Gas volume setting: a test of the open cup is equipped with a heavy hammer

4.5 Oil speed setting:

When the relay leaves the factory, the oil speed has been adjusted according to item 4.1, item (2). If the field use needs to be adjusted separately, you can first loosen and adjust the screw Q, change the length of the spring K, and the oil flow speed of the trip contact action can be adjusted.

4.6 Screw N is used to adjust the distance between the magnet M and the dry spring contact P (this distance is generally 0.5~1.0mm). After the screw is tightened, do not transfer at will.

4.7 After inspection and adjustment, the core must be washed into the relay shell with transformer oil, and then the relay must be installed in the connecting line between the transformer oil tank and the oil storage tank. When installing, pay s

pecial attention to pointing the arrow on the relay to the side of the reservoir.

4.8 After the installation, open the oil valve on the connecting pipe. Fill the relay with oil, then open the cap at the nozzle T, and then slowly loosen the thimble B (see Figure 1) to drain the air until the oil comes out continuously at the vent T.

4.9 Open the air from T to check the reliability of the signal contact action.

4.10 Unscrew the cover A, press the bellows, and check the reliability of the trip contact action through the probe G.

5. Precautions

5.1 When replacing or adding magnets and parts near the dry spring contact, these parts should be made of non-conductive magnetic materials.

5.2 The magnet can not be violently shaken, nor can it be placed in the external magnetic field or in environments over 100°C and -40°C and below, so as to avoid demagnetization.

5.3 Do not casually remove the dry spring contact, especially the root lead shall not be arbitrarily bent, so as to avoid damage.

The YSF series pressure release brake

1. Use and characteristics

1.1 Use: Pressure release valve (hereinafter referred to as release valve or valve), suitable for large, medium, small transformers with transformer oil as cooling medium, to protect the oil tank.

1.2 Features

① Valve action pressure value, quantitative accurate, accuracy is safe far from the airway.

② The valve can be reused, and automatically close the part of the fuel tank connected with the atmosphere.

③ Move quickly, and the opening time is not more than 2ms.

2. Structure and working principle

2.1 Product structure, as shown in Figure Figure 8.

2.2 Working Principle:

When the transformer operates normally, the valve ensures that the transformer oil is isolated from the atmosphere. Once the electrical failure of the transformer occurs, the transformer oil instantly decomposes or vaporizes, and the pressure in the oil tank increases suddenly. At this time, the transformer is completely protected by the release valve. When the pressure in the tank reaches the opening pressure of the valve, the valve can be open quickly in 2ms, releasing high pressure gas, thus preventing mechanical damage to the tank. When the pressure in the tank drops to the closing pressure, the valve automatically closes, preventing the contact oxidation of the transformer oil and air.

When the release valve moves, bounce the mechanical signal marker lever (if the valve

belt signal switch will output the electrical signal at the same time), and stay in the position after the action to remind the staff that the valve is open. After the transformer enters normal operation, manual reset.

3. Model parameters

Specifications and parameters

Cannula tube
structure

1. The high voltage side adopts the cable piercing sleeve, the porcelain sleeve is pressed on the lid with the pressure foot, the lower part of the sleeve is connected with the coil lead, the upper part of the terminal is welded, and the terminal is fastened on the sleeve with the nut sleeve. The low voltage side adopts the composite sleeve, the composite sleeve of the composite sleeve and the composite sleeve.

2. Maintenance

2.1 In the perennial use, the surface of the porcelain umbrella should be scrubbed frequently according to the filth to prevent discharge along the surface.

2.2 If the porcelain sleeve needs to be replaced, it is not necessary to lift the box cover for the cable and rod piercing sleeves. The procedures are as follows:

2.2.1 Place the transformer oil below the box cover.

2.2.2 Wiring nuts and fastening nuts on the down-winding posts.

2.2.3 Unscrew the foot nut and remove the foot.

2.2.4 Slowly remove the porcelain sleeve. When the lower edge of the porcelain sleeve is exposed to the box cover, hold the lead cable (or conductive rod) with your fingers, and then remove the porcelain sleeve from the lead terminal. If the lower porcelain sleeve of the composite sleeve is damaged, the lifting box cover must be replaced.



Registration and opinion feedback form

Name of the product unit		
Product opinion feedback contact person		Contact number:
Product use parameters	See the nameplate and the product qualification certificate	
Product model number, product code number Factory serial number, factory date and month		

Feedback on accessories use:
Feedback on product ontology usage opinions:
Feedback to pre-sale and during-sale & after-sale service personnel:
The construction of the product: