

Type YSF4 II —□/□

Series of pressure relief device for transformers

User's Manual

一. Application

- The products that coupled with electrical alarm signal realize remote control.
- The products are apt for electrical equipments such as gas or liquid insulate transformer, instrument transformers, on-load-tap channel switch, high voltage switch etc.
- Once there's something wrong in such electrical equipments, valve open and relieve the pressure to avoid oil basin from metamorphose and blowout.
- With the pressure reduced the valve automatically closed to prevent water and impurity got in from outside.

二. Working conditions and install mode 三. Model Specification

Environment temperature

- 30℃ ~ 40℃.

Installation site

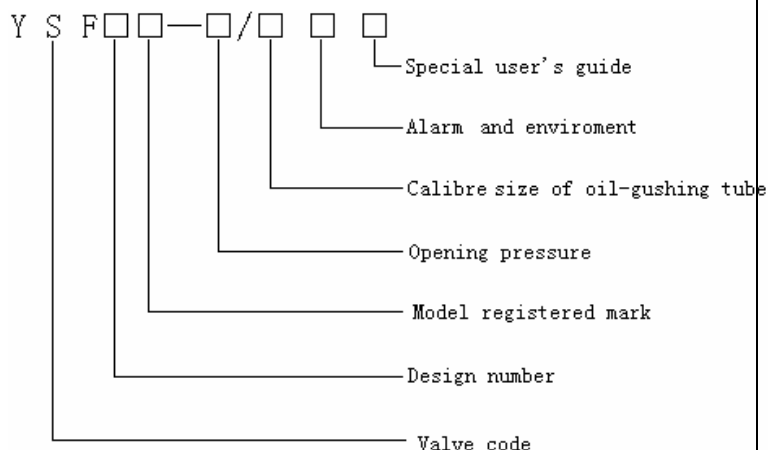
Install in the oil basin to cover

Install in the oil basin to

sidepiece upside

Install in lift pedestal

Alarm and Enviroment



What the letter mean:

J: Machinery alarm signal

B: With locking devices

TH: Humid Tropics ;

TA: Dry Tropics ;

T: Humid and Dry Tropics

K: Electrical alarm signal

For example: YSF4 II -55/130KJBTH

Namely, fuel injection caliber Φ130 mm, opening pressure of 55 kPa, with machinery, electrical alarm signal, humid tropics applicable, with locking devices, 4th design , model II registered mark of the pressure release valve.

四. The product specification and basic parameter

Unit:

Effective caliber of oil-gushing (mm)	Opening pressure (kPa)	Tolerance of Opening pressure (kPa)	Closing Pressure (kPa)	Sealed Pressure (kPa)
Φ25	15	±5	8	9
Φ50	25		13.5	15
Φ80	35		19	21
Φ130	55		29.5	33
	70		37.5	42

	85		45.5	51
	135		72	80

五. Selection of pressure relief device selection of effective caliber

Total weight of oil (t)	∠1.5	1.5~4.5	4.5~11.5	11.5~23
Effective caliber of oil-gushing valve (mm)	Φ25	Φ50	Φ80	Φ130

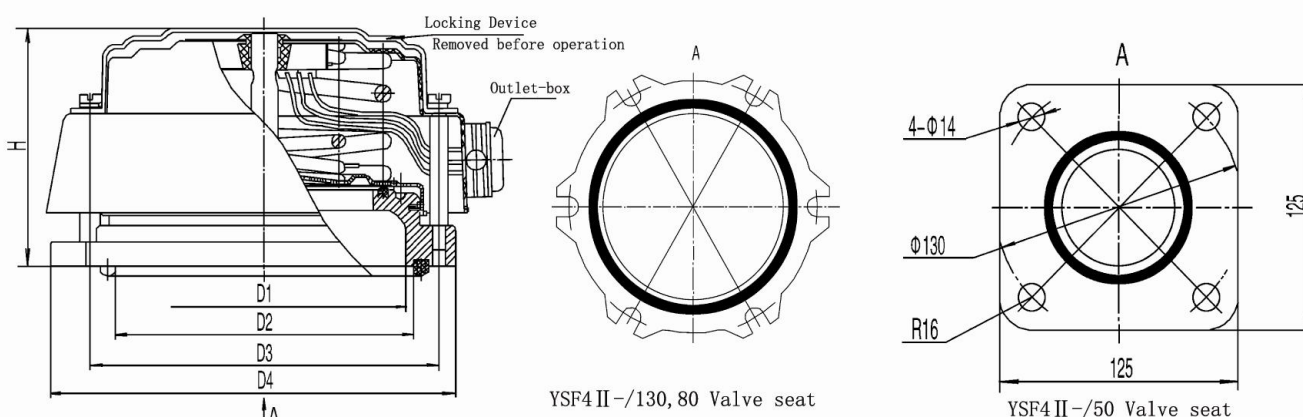
Attention: When total oil weight more than 23 tons, The quantity of release valve that chooses should be: Total oil weight(tons) /23=Φ130 calibers of pressure release valve quantity(decimal fraction up to integer)

selection of opening pressure

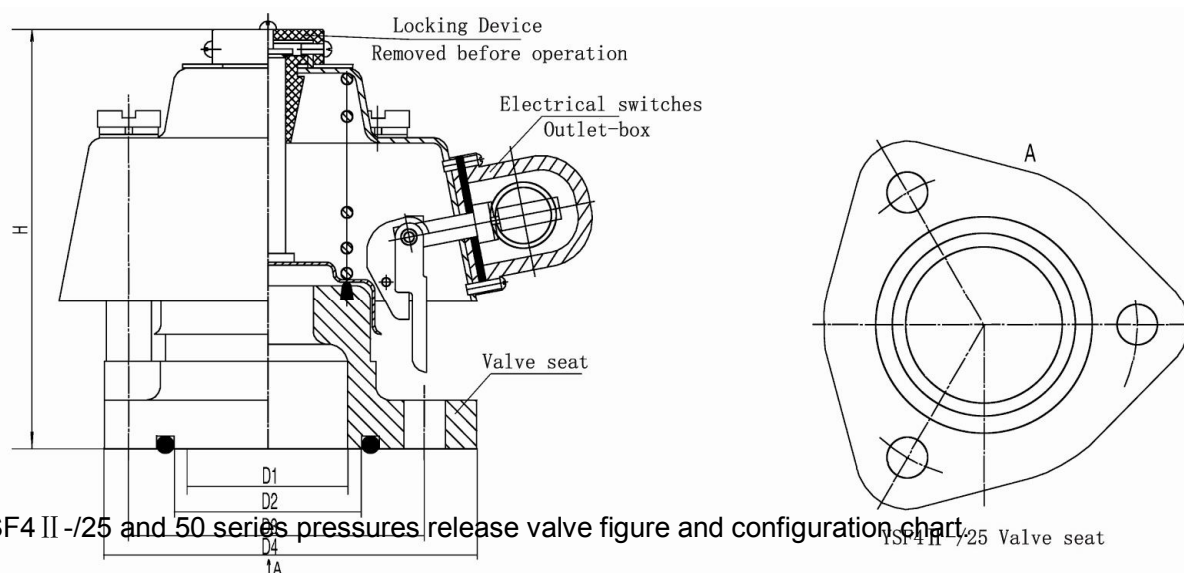
The opening pressure of pressure release valve should be equal to or slightly less than 0.6~0.7 safe pressure in oil tank;

Use product specification and basic parameter to assure the opening pressure.

六. Configuration and installation dimensions



YSF4 II -/50、80 and 130 series pressures release valve figure and configuration chart.



• YSF4 II -/25 and 50 series pressures release valve figure and configuration chart.

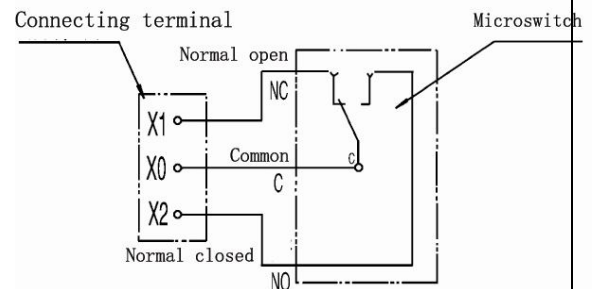
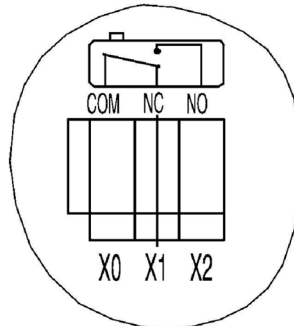
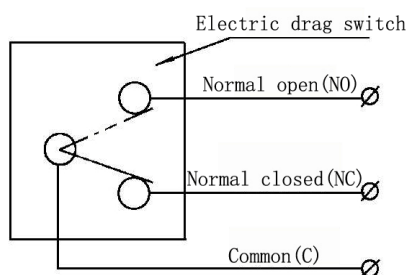
七. Shape and installation dimensions

unit: mm

Caliber of oil-gushing	D1	D2	D3	D4	h1	H	Valve pedestal install bolt Diameter × quantity
φ25	φ46	φ54	φ90	φ120	50	114	M10×3
φ50	φ74	φ83.5	φ130	125×125	50	114	M12×4
φ80	φ122	φ133	φ170	φ200	50	128	M12×6

φ130	φ172	φ181	φ235	φ260	50	128	M16×6
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八. The conjunction and basic parameter of the electric switch



- Electric switch hooku
- Outletbox terminal fig
- basic fig of electric switch
- basic parameter of electric switch

Electrical source sort	Working voltage	Working current	
		Resistance	Reactance (A)
Alternating current (AC)	220(V)	5 (A)	3 (cosΦ=0.4)
Direct current (DC)		0.3 (A)	0.05 (T=7ms)

九. Install 、 Using、 Debugging

Install: Pressure releasing valve and tank connect with the stud bolt

Attention: 1) The bottom of pressure releasing valve assemble to seal well; 2) When connect the pressure releasing valve and tank, tighten the bolts equality, avoid that valve pedestal rupture.

Using: With latching that must be removed before equipment circulate; insure the normal work of the pressure releases valve.

Debugging: Electric alarm switch, should manual debug deferent signal of switch whether exactitude、 sensitive, before the equipments circulate .

Method :

1) Measure export signal of switch when pressure releasing valve action less by multimeter to see whether in accordance with the signal mark of the switch.

Viz.: (a) “Common” towards “Normal open” normal open.

(b) “Common” towards “Normal closed” normal closed.

2) Experiment of simulate releasing valve’s action, checkout whether inching switch accurate export behavioral signal.

Method: Raise the small red hat of the pressure releasing valve, then releasing valve turn on, check whether the switch measure of the electric signal change.

Viz.:

(a) “Common” of switch towards “Normal open”: “Normal open” should turn to “Normal closed”;

(b) “Common” of switch towards “Normal closed”: “Normal closed” should turn to “Normal open”;

(c) Examine the signal switch and control circuit connect whether right and good.

Attention: The small red hat must be replacement after test over, insure that the pressure releasing valve normal working and warning.

十.Product malfunction analysis

malfunction phenomena	Reason	Solution method
(1) Valve oil leak	a) The pressure of oil basin between the pressurize -pressure and open-pressure of valve a long time, then leaking , but this instance is very rarely.	Check badness phenomena of transformers, eliminate hidden trouble.
	b) Valve working time long, sealing member aging and invalidation.	Make use of the power-off time maintain、change sealing member.
	c) Eyewinker stay at the sealing plane of the sealing member.	Make use of the power-off time eliminate eyewinker.
	d) Accessory、 parts metamorphose or wear off.	Make use of the power-off time maintain、change.
(2) The signal switch export behavioral signal naught	a) Control circuitry connect abnormity or contact badness and circuit interruption.	1、 According to the hookup of signal switch accurately connect; 2、 Use multimeter measure circuitry joints contact good or not.
	b) The signal switch be block 、stop up.	Pull the small red hat of valve, checking switch whether operate sensitive, at the same time measure switch whether out-put signal.
(3) valve no working	a) Latching of valve dose not be backout.	Backout latching.
	b) The pressure in oil basin is smaller than the open-pressure.	Use manometer check that whether the pressure in oil basin reaches the open-pressure of the valve.
	c) Oil basin and valve have leaky place.	Check oil basin and valve whether pressurize good.

十一.Crucial hint

Latching should operate strictly according to caution requirement; insure that the pressure releasing valve normal working.

When install, accessory、 parts of the pressure releasing valve shouldn't be arbitrium teardown.

When equipment run, as if releasing valve turn on result in the instruction pole up, replace the instruction pole by hand before find out reason, unchain warning alarm.

十二. Maintenance and Inspection

Make use of the power-off time during maintenance of the pressure releasing valve:

If turn on action sensitive? If there is block or stop up should eliminate.

If the sealing gaskets are aged or deformed or damaged?

If accessory、 parts whether metamorphose or wear off?

If the signal switch whether operate sensitive?

十三.How to Make Order

The customer should be appropriate prepare several pressure releasing valve to switchover during maintenance.

Product's every exam and repairing, after teardown should change new sealing element, the sealing after teardown do not suitable continue to use.

Please specify the model, opening pressure, caliber of oil-gushing, mode of signal, using environment, quantity and switch down-lead length(If no indication, then no down-lead.)

Spare parts and maintenance are available, also special designs asked and manufacture.