YJ 型油流继电器

YJ Type Oil Flow Relay

安　装　使　用　说　明　书

Manual of Installation and Operation

0HY.463.010

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1. 用途

油流继电器适用于强迫油循环的各式冷却器，主要用于现场指示变压器油的流动情况，并在油流量低于返回流量时发出报警信号。将信号接点引入控制回路中，即可实现远距离监控。

1. Application

The Oil Flow Relay for transformer cooler is suitable for various kinds of coolers with forced oil circulation, it is mainly used for indication of flow status of transformer oil and sends warning signal when the oil flow is lower than return flow. To introduce the signal contact into the control circuit to achieve the remote monitoring.

2. 结构和工作原理

2．Structure and principle

2.1 产品结构

其由传动部分、磁耦合器、指示部分和电气部分等组成，见图 1。

2.1 Structure of product

It is consist of driving part, magnetic coupler, indicator and electric part, see fig.1

2.2 工作原理

当启动油泵油流通过联管时，挡板受力转动，并通过磁偶合器带动指针转动，当流量达到动作油流量时，指针指示在流动位置，同时使设置在指示器表头内部的微动开关动作，发出正常工作信号；当由于故障，油流量减少到返回油流量时，挡板借助发条弹簧的回复力返回，指针指示在停止位置，同时使微动开关复位，发出故障报警信号。

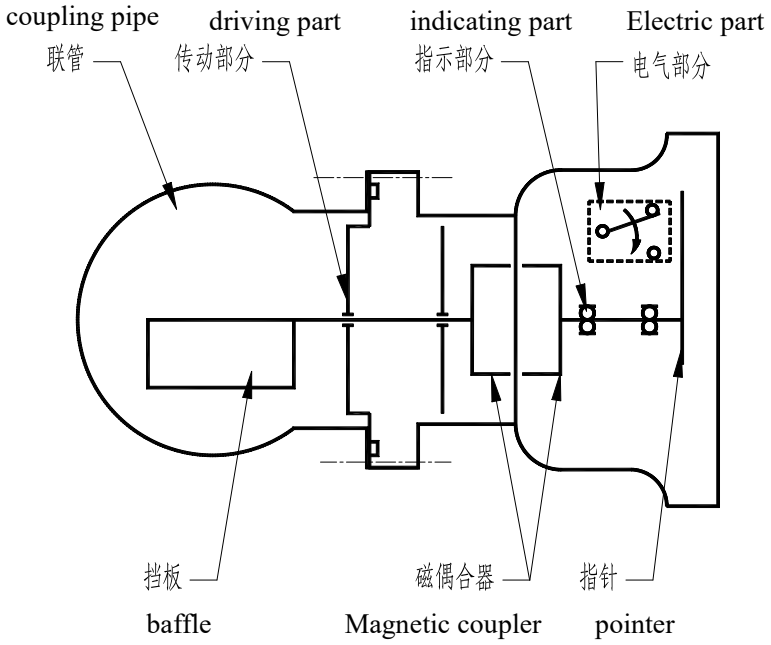


图 1. 结构示意图

Fig.1. Structural Diagram

2.2 Principle

When oil pump is started and oil flows through the coupling pipe, baffle is forced to rotate and drive the pointer turning through magnetic coupler. When flow reaches to acting flow, the pointer will indicate at flow position, and simultaneously activate the microswitch built in the indicator gauge head to send out normal operation signal. When oil flow is reduced to return back oil flow due to fault, the baffle will be returned by means of clockwork spring force, pointer indicates at stop position, meantime, to make the microswitch reset to give out warning signal.

3. 工作环境和条件

3. Operational environment and conditions

3.1 周围环境温度：-30℃~+55℃；

3.2 相对湿度：当空气温度为+25℃时，相对湿度不大于 90%；

3.3 油温不高于 90℃；

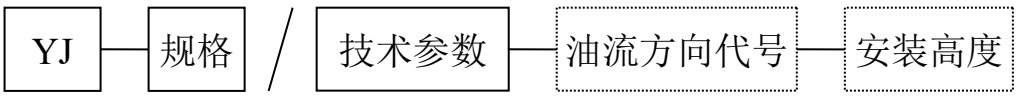
3.4 周围无剧烈振动和颠簸的场所。

3.1 Surrounding ambient temperature: -30℃ ~ + 55℃.

3.2 Relative humidity: max of 90% at ambient air temperature of +25℃;

3.3 Oil temperature is not higher than 90℃.
3.4 No severe vibration and bump site is around it.

4. 型号和标记代号



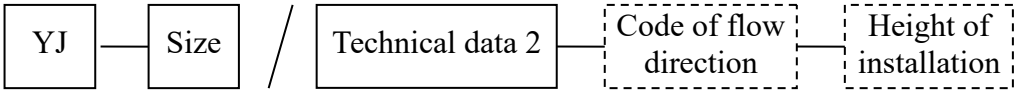
4.1 YJ 代表油流继电器。
4.2 规格代表联管的公称直径，共有四种规格，分别为 50，80，100，150（mm）。
4.3 技术参数代表额定工作流量或动作油流量，见表 1。

表 1　技术参数
Table 1 Technical Data

型　　号 Model	规格 Size	额定工作油流量 m^3/h Working Oil Flow	动作油流量 m^3/h Acting Oil Flow	返回油流量 m^3/h Returning Oil Flow
YJ—50/25	50	25	15±5%	11±5%
YJ—80/50	80	50	30±5%	22±5%
YJ—100/90	100	90	68±5%	50±5%
YJ—125/100	125	100	70±5%	50±5%
YJ—150/80	150	80	60±5%	45±5%
YJ—150/135	150	135	100±5%	75±5%

4.4 油流方向代号由一位汉语拼音字母组成，油流方向的定位基准为：面向表盘，接线盒在左手边。
　　从右向左用 Y 表示；从下向上用 X 表示；
　　从左向右用 Z 表示；从上向下用 S 表示。
4.5 安装高度即为联管中心到安装继电器的法兰面的高度，用实际尺寸表示，见图 2 中尺寸 h。
※ 油流方向代号和安装高度不标注在表盘上，请定购继电器时注明。

4. Model and code of marks



4.1 YJ represents a flow relay used for transformer cooler first time design.
4.2 Size indicates the nominal diameter of the coupling pipe, total 4 kinds of sizes, they are 50, 80, 100 and 150 (mm).
4.3 Technical data shows max working flow, i.e. or acting oil flow, i.e. see table 1.
4.4 Code of flow direction is consist of 1 Chinese Pinyin letters, the positioning benchmark of the flow direction is: facing to gauge dial, the terminal block is at left hand.
　　Y indicates horizontal to left;　　X indicates vertical upward;
　　Z indicates horizontal to right;　　S indicates vertical downward;
4.5 Height of installation: The height from the center of the coupling pipe to flange face installed with relay, indicate with actual dimension(mm), see the dimension h in fig.2.
※ Code of oil flow direction and height of installation are not shown on the gauge dial,

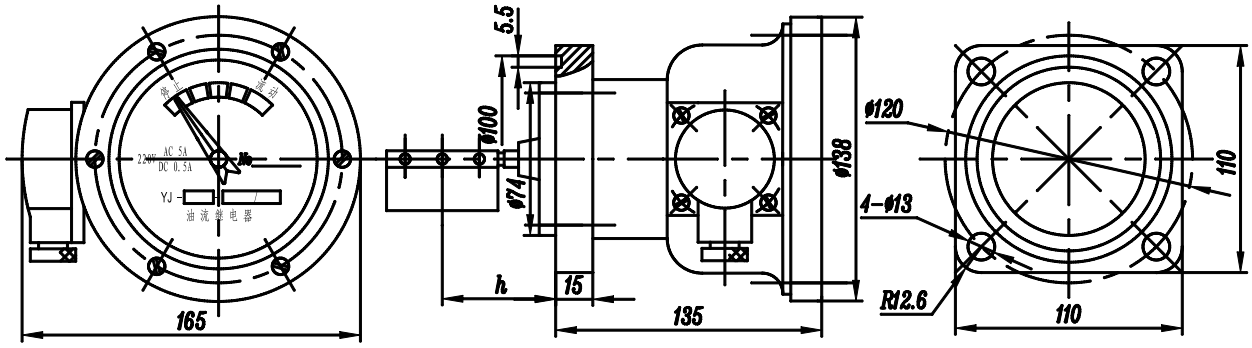
please indicate when ordering the relay.

5 安装使用

5 installation and use

5.1 继电器的安装尺寸见图 2。

5.1 Installation dimension of the relay, see fig.2.



联管标称直径 φD	50	80			100	150			
h	40	54	70	100	54	87	95	105	150

图 2 继电器安装尺寸图

Fig. 2 Installation dimensions diagram of relay

5.2 继电器提供一个动合与动断转换接点，接线引出端的形式见图 3, K 为微动开关，J 为接线端子。

5.2 Relay are provided with a switching contact with acting to ON and acting to OFF, See fig.3.

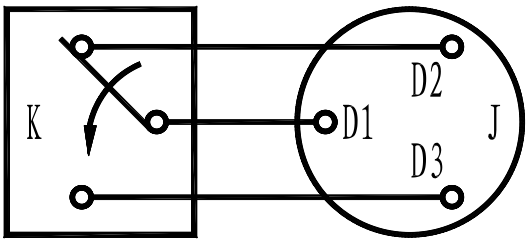


图 3(Fig. 3)

5.3 接点容量见下表

5.3 Contact capacity, see table below

电压种类 Kind of voltage	额定电压（V） Rated voltage	额定电流（A） Rated current	分断电流（A） Breaking current
交　流 AC	380	3	0.2
	220	5	0.3
直　流 DC	220	0.5	—
	110	1	—

6 搬运和存放

6 Transportation and storage

6.1 搬运油流继电器时应轻抬轻放，避免磕碰而损伤内部零件。

6.2 油流继电器应存放在清洁干燥、无腐蚀性气体的场合。

6.1 When transport the flow relay, should be careful, avoid impacting to damage the interior components.

6.2 Flow relay should be stored in a dry place without corrosive gas.

7 保修期限

7 Guarantee

7.1 在用户遵守使用说明书的规定进行保管和使用的情况下，从本厂发货日起两年内，油流继电器出现故障时，本厂负责免费修理、更换。

7.2 如果因用户不良使用造成油流继电器损坏，或已经超过保修期限，用户可将产品寄回我厂，我厂可为用户有偿维修。

7.1 In the case of customer following the stipulations for storage and use specified in the manual, within 2 years from the date of shipping from our factory, if the flow relay can not be utilized due to poor manufacture, our factory will be responsible for repair and replace free charge.

7.2 If the damage of the flow relay is caused by customer's poor operation, or exceeded the guaranteed time , customer can return the product to our factory, we shall provide charge reparation for customer.

8 订货须知

8. Ordering information

定购油流继电器时，应注明型号、规格、技术参数、油流方向代号和安装高度。

When ordering flow relay, Indicate the model, size, technical data, code of oil flow direction and Installation height.

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