

## SYJ 系列速动油压继电器

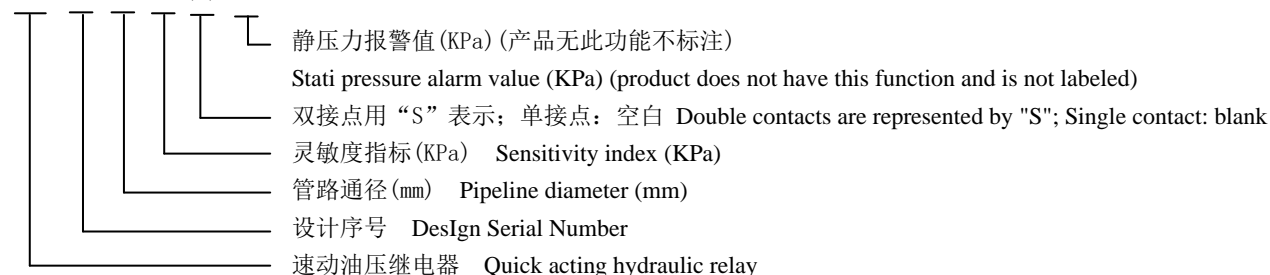
### SYJ series quick acting hydraulic relay

#### 一、产品简介与型号说明 Product Introduction and Model Description

SYJ 速动油压继电器是沈阳德广电气科技有限公司新研制的以油箱内部压力变化速度作为电气报警信号的一种保护继电器，它用于保护变压器、电力电容器、电抗器等设备的油箱安全。

SYJ quick action hydraulic relay is a newly developed protective relay by Shenyang Deguang Electric Technology Co., Ltd., which uses the speed of pressure changes inside the oil tank as an electrical alarm signal. It is used to protect the oil tank safety of equipment such as transformers, power capacitors, and reactors.

SYJ-□-□-□(S)-□



**标注实例：**SYJ9-50-25 (S) 表示第 9 次设计的管路通径为  $\Phi 50\text{mm}$ ，灵敏度为 25KPa/20KPa，双路电信号的速动油压继电器。

**Example annotation:** SYJ9-50-25 (S) represents a fast acting hydraulic relay with a pipeline diameter of  $\Phi 50\text{mm}$ , sensitivity of 25KPa/20KPa, and dual electrical signals for the 9th design.

**使用范围：**(a). 适用于油浸式变压器、电力电容器、电抗器及其它密闭的油浸式电器油箱；(b). 环境温度： $-30^{\circ}\text{C}\sim+70^{\circ}\text{C}$ （可根据用户需求定制最高可支持  $-45^{\circ}\text{C}\sim+70^{\circ}\text{C}$ ），工作环境要求： $-30^{\circ}\text{C}\sim+115^{\circ}\text{C}$ （可根据用户需求定制最高可支持  $-45^{\circ}\text{C}\sim+115^{\circ}\text{C}$ ）；(c). 相对湿度： $+20^{\circ}\text{C}$ 时，不大于 95%；(d). 防护等级：IP55（可根据用户需求定制）。适用范围：海拔 0~4000m；(e).工频耐压：2000V，1min；(f).绝缘性能：2500V，1000M $\Omega$ 。

**Scope of use:** (a) Suitable for oil immersed transformers, power capacitors, reactors, and other sealed oil immersed electrical oil tanks; (b) Environmental requirements:  $-30^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ (can be customized according to user needs to support up to  $-45^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ ); Work environment requirements:  $-30^{\circ}\text{C}\sim+115^{\circ}\text{C}$ (customizable according to user needs, can support up to  $-45^{\circ}\text{C}\sim+115^{\circ}\text{C}$ ); (c) Relative humidity: not exceeding 95% at  $+20^{\circ}\text{C}$ ; (d) Protection level: IP55(Customizable according to user requirements). Scope of application: Altitude 0~4000m.; (e) Power frequency withstand voltage: 2000V, 1min; (f) Insulation performance: 2500V, 1000M $\Omega$ .

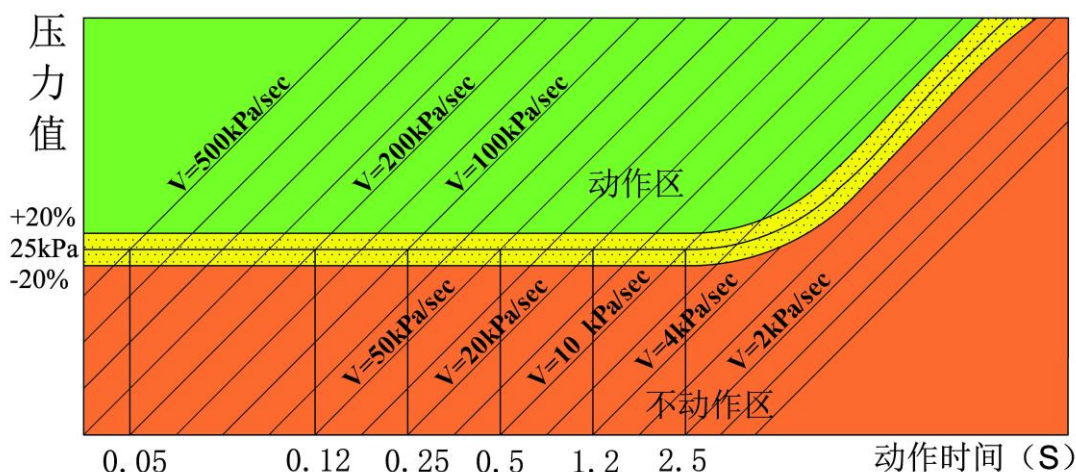
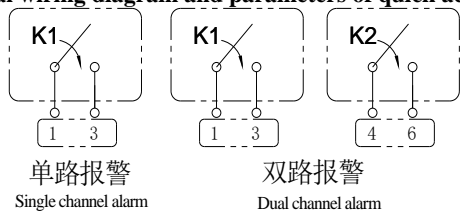


图 1 SYJ9 速动油压继电器动作特征曲线

Figure 1: Action characteristic curve of SYJ9 quick acting hydraulic relay

二、速动油压继电器电气接线图及电气参数 (见图 2、表 1)

Electrical wiring diagram and parameters of quick acting hydraulic relay (see Figure 2 and Table 1)

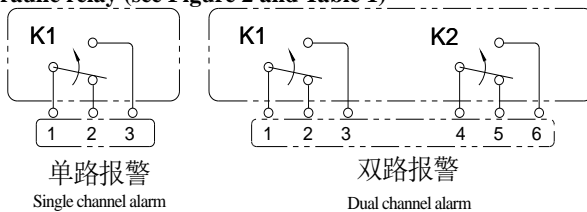


单路报警  
Single channel alarm

双路报警  
Dual channel alarm

图 2.1 单常开、双常开报警的电气接线

Figure 2.1 Electrical wiring for single normally open and double normally open alarms



单路报警  
Single channel alarm

双路报警  
Dual channel alarm

图 2.2 单常开常闭、双常开常闭报警的电气接线

Figure 2.2 Electrical wiring for single normally open and normally closed, double normally open and normally closed alarms

表 1 电气参数 Table 1 Electrical Parameters

电源种类 Type of power supply	电压(V) Voltage	电流 A Electric current	
AC	220V、110V	3	功率因素 Power factor $\cos \phi \geq 0.6$
DC		0.25、0.5	时间常数 Time constant $T \leq 0.005s$

三、外型尺寸 (参见图 3、图 4) External dimensions (see Figures 3 and 4)

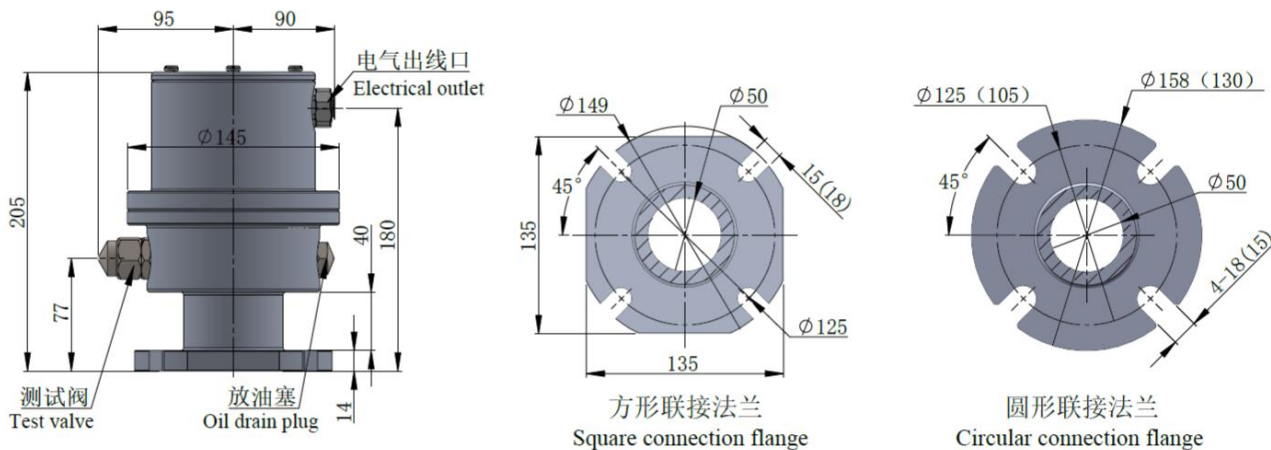


图 3 SYJ9-50 口径速动油压继电器

Figure 3 SYJ9-50 caliber quick action hydraulic relay

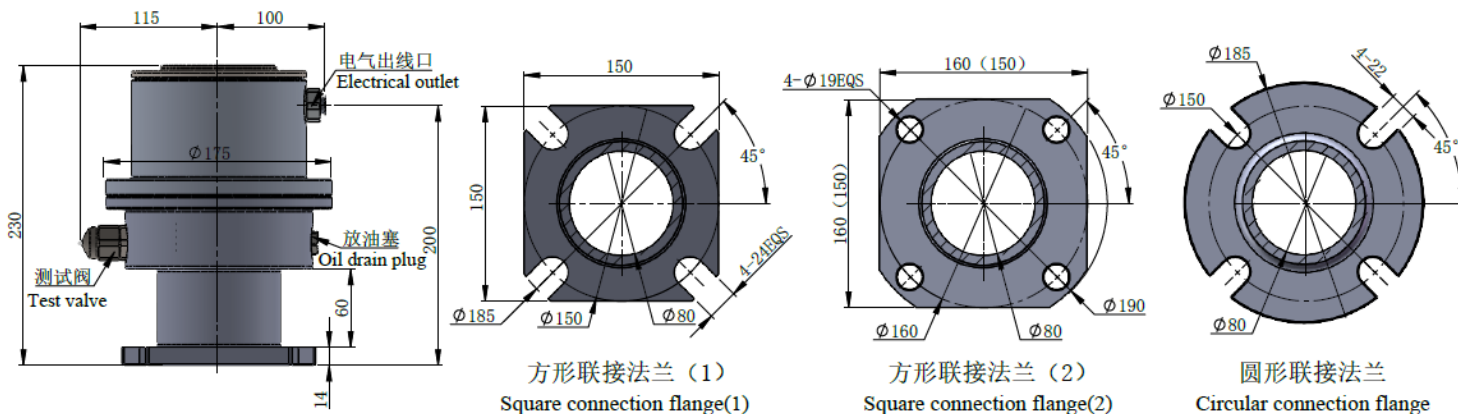


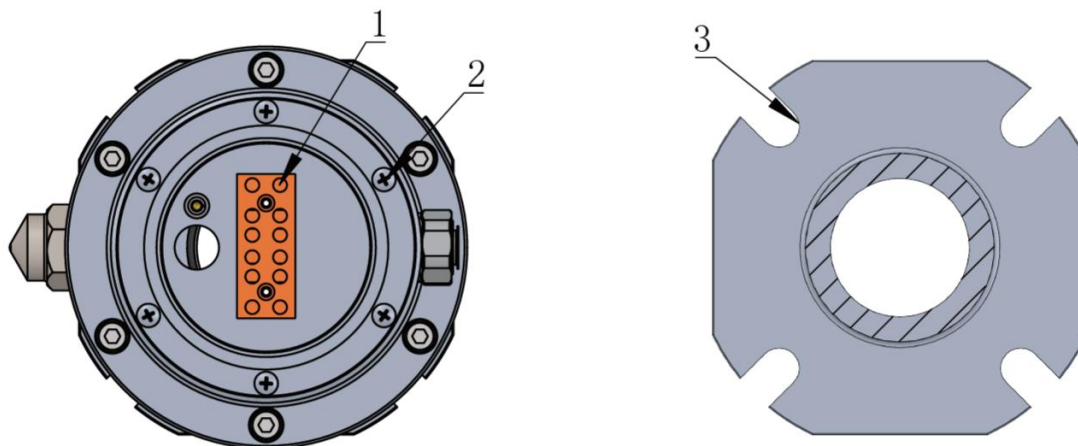
图 4 SYJ9-80 口径速动油压继电器

Figure 4 SYJ9-80 caliber quick action hydraulic relay






本产品提供多种颜色选择，具体描述如下：

The product provides a variety of color options, specifically described as follows:

色卡编号 Color card No	颜色 Color	可选性 Optionality of choice
RAL7038	玛瑙灰 Agate grey	默认 (Default)
RAL7042	交通灰 A Traffic grey A	可选 (Optional)
RAL7035	浅灰色 Light grey	可选 (Optional)



扭矩参考表  
Torque Reference Table

序号 Number	装配位置 Assembly position	螺纹规格 Thread specification	推荐扭矩 Recommended torque	装配工具规格 Assembly tool specifications		备注 Notes
1	接线端子 Connecting terminal	M3	0.5~1Nm		PH2	建议手动安装 Suggest manual installation
2	接线盒盖 Terminal box cover	M5	4~5Nm		PH2	建议手动安装 Suggest manual installation
3	法兰安装孔 Flange installation hole	SYJ-50	M12 螺栓 Bolt	35~40Nm		19mm
		SYJ-80	M16 螺栓 Bolt	65~75Nm		24mm
		SYJ-80	M20 螺栓 Bolt	120~135 Nm		30mm

四、安装与测试 (参见图 5、图 6) Installation and testing (see Figures 5 and 6)

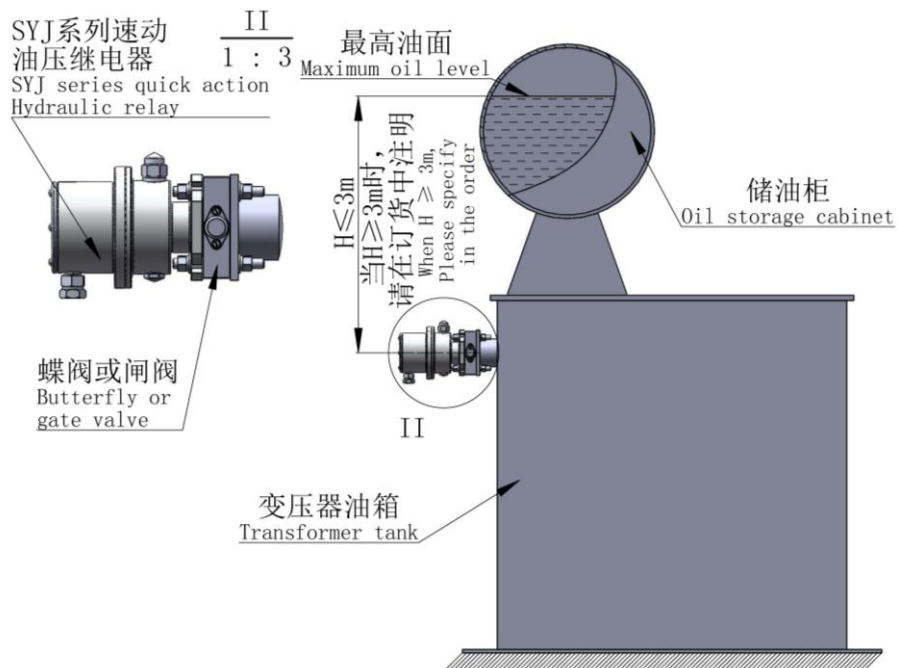


图 5 SYJ 系列速动油压继电器现场安装示意图

Figure 5 Schematic diagram of on-site installation of SYJ series quick acting hydraulic relay

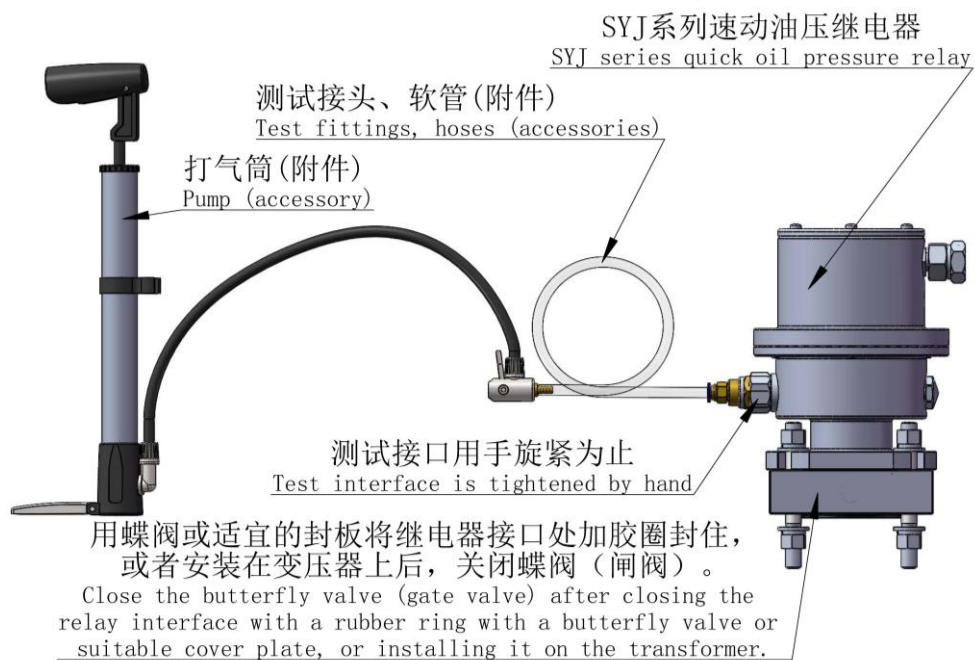


图 6 SYJ 系列速动油压继电器测试示意图

Figure 6 Schematic diagram of SYJ series quick acting hydraulic relay testing