YKJD系列液位控制继电器

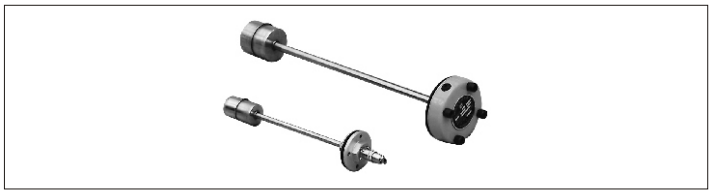
YKJD LEVEL SWITCH SERIES

(一)简介及工作原理

YKJD 型液位控制继电器是一种新型液面高度电发讯控制装置，主要用于箱内液体位置与液体源电机的自动控制或报警，具有结构紧凑，控制灵敏，安装简单等特点。图 1 是该装置的剖面图及安装尺寸,工作时浮子随液面升高或降低，当液面将浮子升上或降到发讯位置时，继电器动作常闭触点闭合，常开触点断开或常闭触点断开，常开触点闭合，以实现自动停机或报警。

INTRODUCTION AND WORK PRINCIPLE

This level switch is a new type fluid level indicator. It can be used for auto controlling or alarming of fluid level in a tank or electric motor.During operation, the float will rise or fall down with to the level of fluid in a tank. As the float rises or falls down to the level point preset for alarming or stopping the motor, the level switch will act, the normally open close.



(二)应用举例

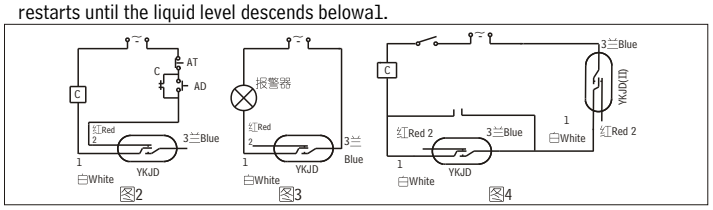
1、图 2 是在油箱上应用的情况，当液面低于要求位置时，液位控制继电器YKJD动作：1与2断开，中间继电器C线圈断电，油泵电机停止工作。

2、图 3 是用在液压站油箱上作液面控制报警发讯装置，当液面低于要求时，液位控制继电器动作：1与3接通，报警器工作。

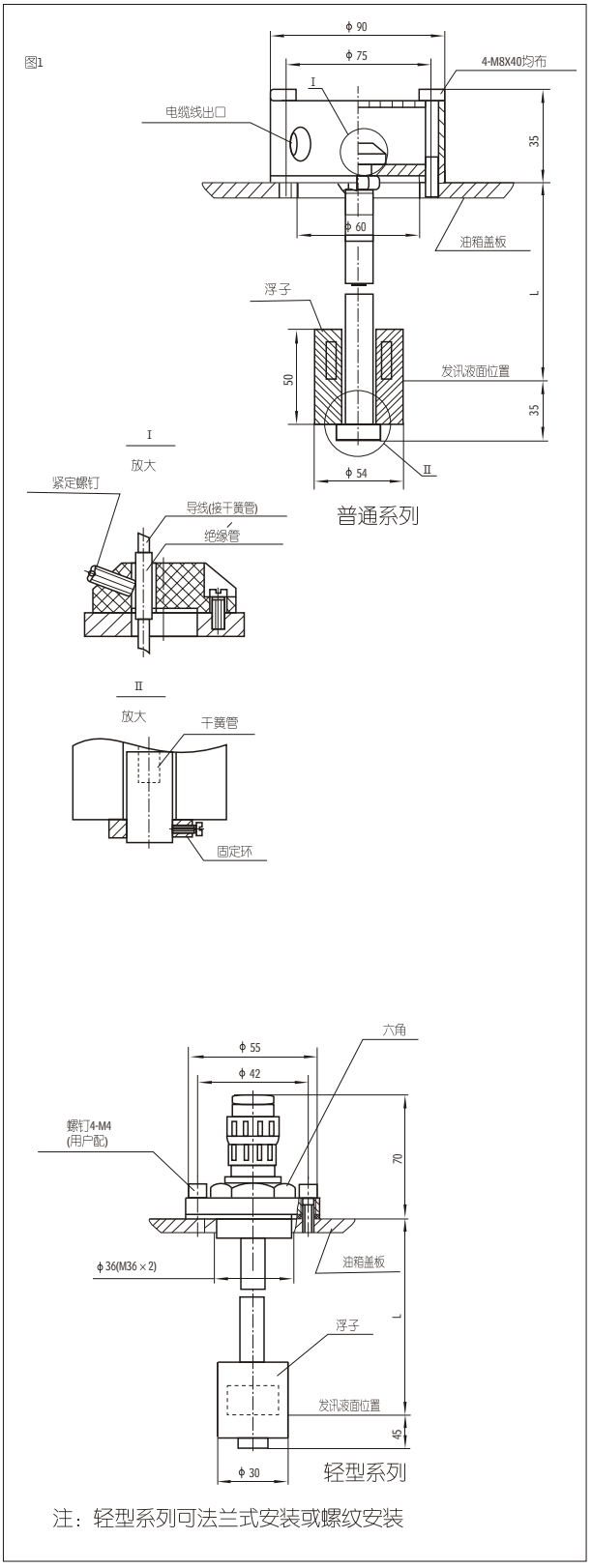
3、图4是应用在蓄水箱或某些自动控制油箱上实现自动供水或油。图5图6是安装简图，原理如下，当液面低于a1时，液位控制继电器 YKJD <I> 动作 (此时YKJD<II>处于工作状态即1与3通)，1与3接通，中间继电器C线圈有电流通过 (C的常开触点闭合) 供水或供油电机工作；当液位超 a1 时，继电器 YKJD<1>动作：1 与 3 断开，电流通过常开触点C(此时仍处在闭合状态)使供水或油电机继续工作；当液面超过a2时，继电器YKJD <II> 动作: 1 与 3断开，供水或油电机停止工作，以后随液面下降，YKJD <II> 动作: 1 与 3接通，但 YKJD<I> 的1与3仍处在断开状态，所以供液电机仍不工作，直到液面降到a1以下时，供液电机重新启动。

APPLICATION EXAMPLES:

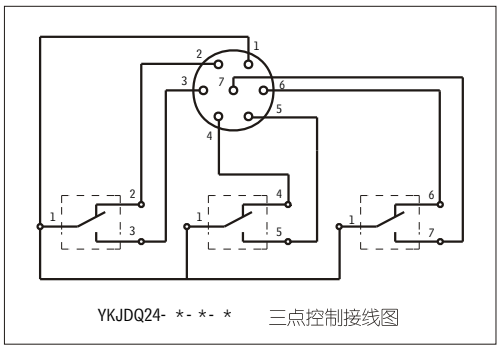
1. The figure 2 shows the application on oil tank. When the liquid level is lower than the position required, the liquid level control relay YKJD acts; 1and 2are cut off, C coil of the inter mediate relay's power supply is cut off, then the motor of oil pump stops working.
2. The figure 3 is used as liquid level control alarm device on the oil tank for hydraulic station. When the liquid level is lower than the position required, the liquid level control relay acts; 1and3 are put through, then the alarm works.
3. The figure 4 is applied on water accumulator or some auto. control oil tanks to realize auto. Water or oil supplies. The figure 5 and 6 are installation diagrams with the following principle: When the liquid level is lower than a1, the liquid level control relayYKJD(I) acts(at this time, YKJD(II) is under work condition, that means 1 and 3 are put through), 1 and 3 are put through, the current passes the C coil of intermediate relay (normally open contact of C is closed) to make water or oil supply motor work; When the liquid level exceeds a1, the relay YKJD(I) acts; 1 and 3 are cut off, the current passes though the normally open contact C (at this time, it is still under closed state) to make water or oil supply motor continuously work; When the liquid level exceeds a2, the relay YKJD(II)acts; 1 and 3 are cut off, water or oil supply motor stops working, then it descends with the liquid level, YKJD(II) acts; 1 and 3are put through, but 1 and 3 of YKJD (I)are still under the cut-off state, so liquid supply motor does not work yet, the liquid supply motor restarts until the liquid level descends belowa1.



注：使用220V电压时，只有一对常开触点，无常闭触点。



注：轻型系列可法兰式安装或螺纹安装



YKJDQ24- *- *- *　　三点控制接线图

用多个单点液位控制器所需的液位

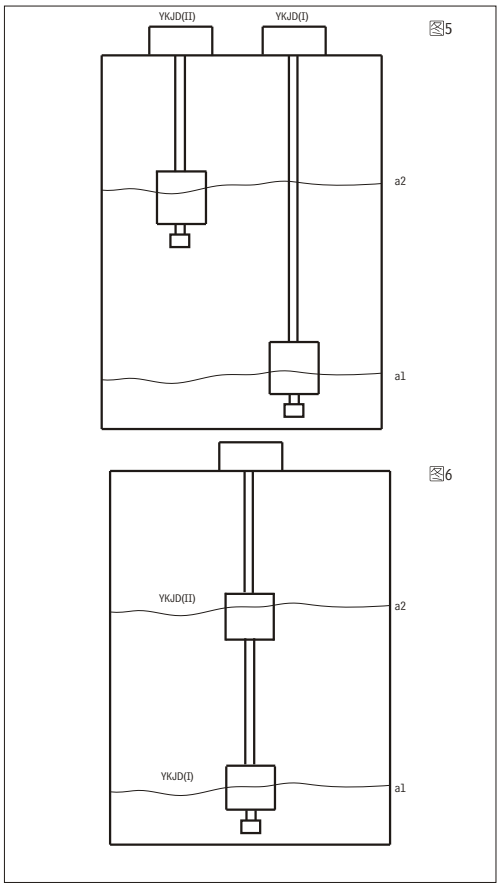


图5

图6

注：所需要长度参考图7，b为油箱盖板顶部，a_1, a_2, a_3, ……为液面发讯位置，用户可据使用情况来任选b到a_1, a_2, a_3, ……等长度。

例：<1>用单点液位控制继电器控制液位：油箱盖板b到所需的液位发讯位置a的距离，长度为800mm时，订货型号为YKJD24-800。

<2>用多点液位控制继电器控制液位：油箱盖板b到所需的液位第 1 点 a 的距离为1000mm，第2点液位a的距离为500mm，第3点a的距离350mm时，订货型号为YKJD24-1000-500-350，若需更多的控制点，则型号以此类推。

Note: The length desired refers to the figure 7,B is the cover plate top of oil tank, a1, a2, a3……are liquid level sign-altrans-mitting positions, the user can select the length from b to a1, a2, a3 according to the use condition.

Example: (1)use one-point liquid level control relay to control the liquid level: When the distance from the cover plate b of oil tank to the liquid level signal-transmitting desired position is 800mm, the order model is YKJD24-800.

(2)use multi-point liquid level control relay to control the liquid level: When the distance from the cover plate b of oil tank to the first point a of desired liquid level is 1000mm, to the second point a is 500mm and to the third point a is 350mm, the order model is YKJK24-1000-500-350. If more control points are necessary, the model can be on the analogy of this.

(三)主要性能参数 TECHNCAL DATA

1、使用环境温度 Temperature range(℃): -20 ~ +100
2、动作时间 Time of motion(ms): 1.7
3、接触电阻 Contact resistance(Ω): 0.1
4、触点容量 Contact capacity:DC24(V) × 0.2(A)
AC220(V) × 0.02(A)
5、寿命 Life: (次)10^7

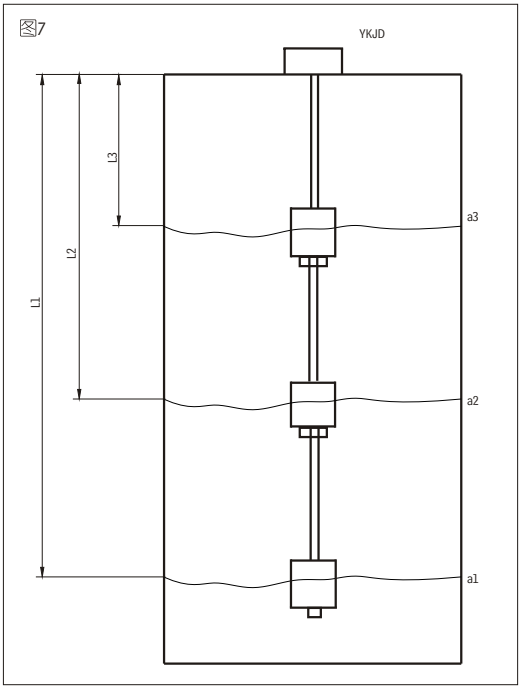
(四)型号说明 MODEL CODE

YKJD □ 24 · □ — * — * — *

第3点液位 Third level L3(mm)
第2点液位 Second level L2(mm)
第1点液位 First level L1(mm)
BH：介质为水—乙二醇 water-glycol
省略：介质为一般液压油 Omit if use hydraulic oil
使用电压 Voltage:24＝DC:24V
220＝AC:220V 仅用于YKJD
Q:轻型 Light Series
省略：普通型 Omit if standard series
液位控制继电器 Level switch

注：各点之间最小间距为90mm

图7



(五)发讯点可调整(仅对于YKJD型)

例：图7中用户要调节L3或L2的发讯点位置时(各点之间最小距为90mm)

(1)先松开要调节的浮子下面的固定环，把浮子调到要发讯的位置，锁紧固定环。

(2)打开接线盒，松开刚才调节过的浮子对应的干簧管的紧定螺钉，移动干簧管，并用万用表测量，等发讯可靠后，锁紧紧定螺钉盖好接线盒。