



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，当液面将浮子升起或降到发讯位置时，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



(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。

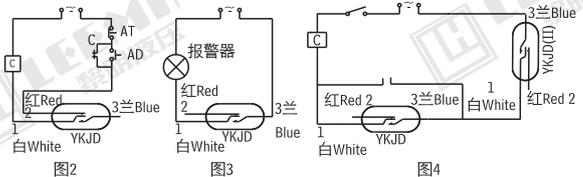
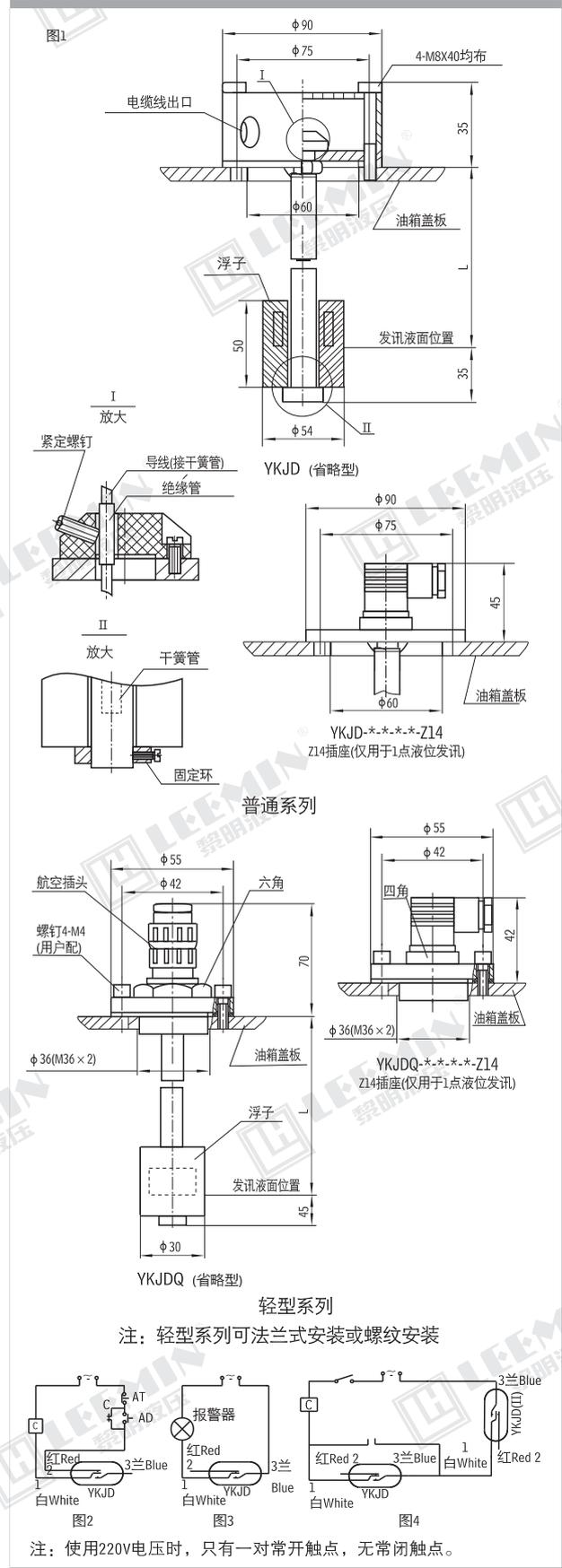
3、图4 是应用在蓄水箱或某些自动控制油箱上实现自动供水或油。图5图6 是安装简图，原理如下，当液面低于a1 时，液位控制继电器YKJD <I> 动作（此时YKJD <II> 处于工作状态即1 与3 通），1 与3 接通，中间继电器C 线圈有电流通过（C 的常开触点闭合）供水或供油电机工作；当液位超 a1 时，继电器 YKJD <I> 动作：1 与 3 断开，电流通过常开触点C（此时仍处在闭合状态）使供水或油电机继续工作；当液面超过 a2 时，继电器 YKJD <II> 动作：1 与 3 断开，供水或油电机停止工作，以后随液面下降，YKJD <II> 动作：1 与 3 接通，但 YKJD <I>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

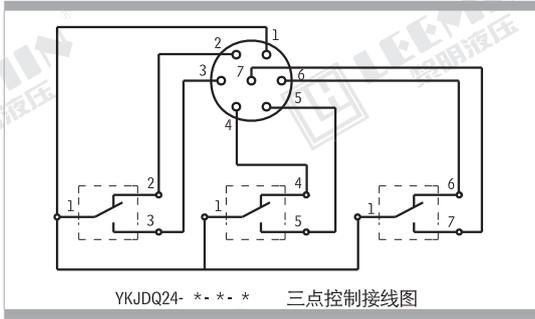
APPLICATION EXAMPLES

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; 1 and 2 are cut off, C coil of intermediate relay's power supply is cut off, then the motor of oil pump stops working.

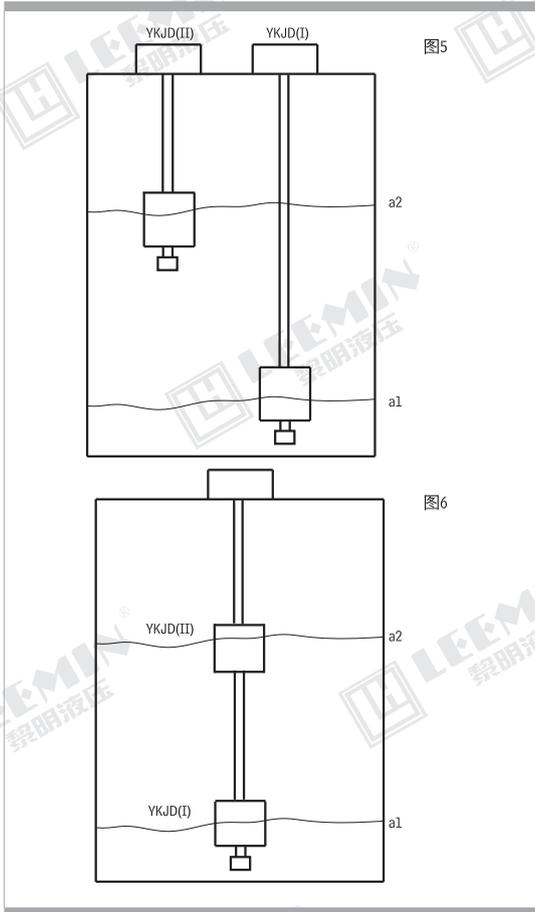
2. The figure 3 is used as liquid level control alarm device on the oil tank for hydraulic station. When the liquid level is lower than the position required, the liquid level control relay acts; 1 and 3 are put through, then the alarm works.

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 relay YKJD(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 through 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 3 are 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 below a1.





用多个单点液位控制器所需的液位



注：所需要长度参考图7，b为油箱盖板顶部，a₁、a₂、a₃、……为液面发讯位置，用户可根据使用情况来任选b到a₁、a₂、a₃、……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点液位的距离为500mm，第3点液位的距离为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 signal-transmitting 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 YKJD24-1000-500-350. If more control points are necessary, the model can be on the analogy of this.

(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)

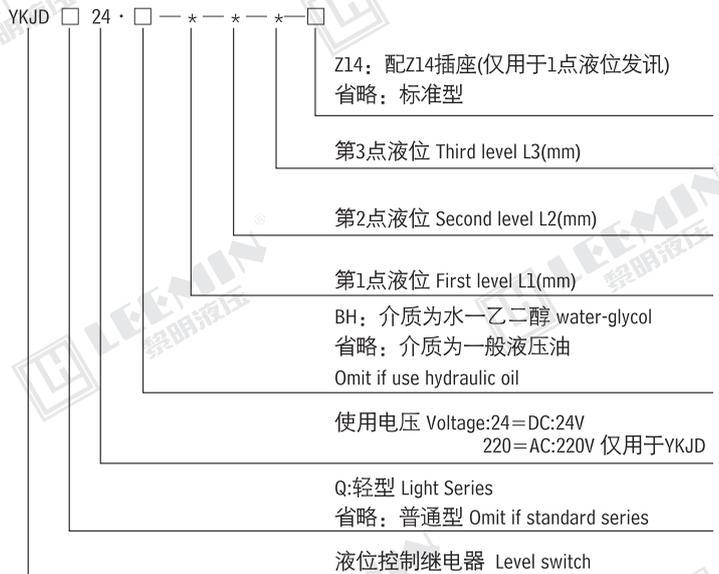
(1)先松开要调节的浮子下面的固定环，把浮子调到要发讯的位置，锁紧固定环。

(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。

(三)主要性能参数 TECHNICAL DATA

- 1、使用环境温度 Temperature range(°C): -20 ~ +80
- 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)10⁶

(四)型号说明 MODEL CODE



注：各点之间最小间距为90mm

