

I.Overview

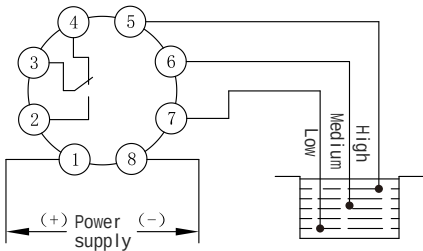
The HHY1 and HHY7 (JYB) series liquid level relays (hereinafter referred to as "the relay") are suitable for AC 50Hz control circuits with an operating voltage of 380V or below. They serve as automatic liquid - level control components to connect or disconnect circuits as required. This series of relays features small size, light weight, low power consumption, and stable and reliable performance, and is widely applied in industrial and agricultural production.This series of relays features small size, light weight, low power consumption, and stable and reliable performance, and is widely applied in industrial and agricultural production. The relays comply with the relevant requirements of GB/T 14048.5.

II.Main Technical Data

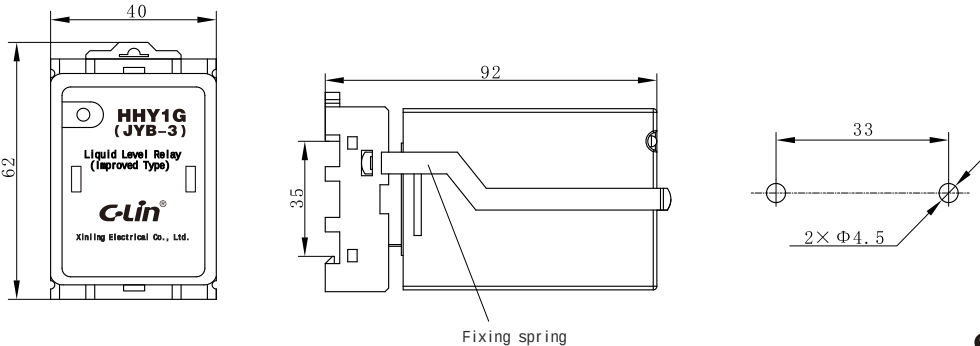
Model	HHY1G (JYB-3)	HHY1P (JYB-2)	HHY7G (JYB-714)	HHY7P (JYB-714)
Operating Power Supply (Control Power Supply Voltage)	AC 380V, 220V, 110V, 36V, 24V, 50Hz. Allowable voltage fluctuation range: 85%~110% of Ue			
Operating Mode	Water Supply	Water Drainage	Water Supply	Water Drainage
Contact Quantity	1 set of NO (Normally Open)/NC (Normally Closed) transfer contacts			
Contact Rating	3A AC 250V (resistive load), Usage Category AC-15			
Ambient Temperature	-5°C to 40°C			
Altitude	≤2000m			
Humidity	When the maximum temperature at the installation site is 40°C, the relative humidity of air ≤50%. Higher relative humidity is allowed at lower temperatures (e.g., up to 90% at 20°C). Special measures shall be taken for occasional condensation caused by temperature changes.			
Pollution Degree	Degree 3			
Mounting Method	Panel - mount or 35mm DIN rail - mount			
Conventional Enclosed Thermal Current (Ith)	3A			
Rated Insulation Voltage(Ui)	380V			
Rated Impulse Withstand Voltage (Uimp)	4KV			

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III.Wiring Diagram



IV.Outline and Mounting Hole Dimensions



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V.Operation Instructions

1.Water Supply Mode

- (1) “High” is the upper - level control point of the tank. When the water level rises to the high level and contacts the probe (electrode), the relay automatically turns off the pump, stopping water supply.
- (2) “Medium” is the lower - level control point of the tank. When the water level drops below the medium level and loses contact with the probe (electrode), the relay automatically turns on the pump, adding water to the tank.
- (3) “Low” is the bottom reference of the tank. It should be placed at the lowest point of the tank, slightly higher than the tank bottom.

2.Water Drainage Mode

- (1) “High” is the upper - level control point of the tank. When the water level rises to the high level and contacts the probe (electrode), the relay automatically turns on the pump, starting drainage.
- (2) “Medium” is the lower - level control point of the tank. When the water level drops below the medium level and loses contact with the probe (electrode), the relay automatically turns off the pump , stopping drainage.
- (3) “Low” is the bottom reference of the tank. It should be placed at the lowest point of the tank, slightly higher than the tank bottom.

VI.Precautions

- 1.Probe Fixing: All probes (electrodes) must be fixed on the inner wall of the tank. If the tank inner wall is metal, the three probes (electrodes) must be insulated from the tank. Probes (electrodes) can be purchased separately.
- 2.Wiring and Function Check:To ensure the relay operates normally:After installation, re - check the input and output wiring, and the position of probe connection wires.Manually move the probes up or down to simulate water level changes (contacting or leaving the water surface) and verify if the controller works properly.
- 3.It is recommended to fix each probe to the inner wall of the water tank to prevent positional displacement and false relay operation (not advisable if the tank wall is metallic).

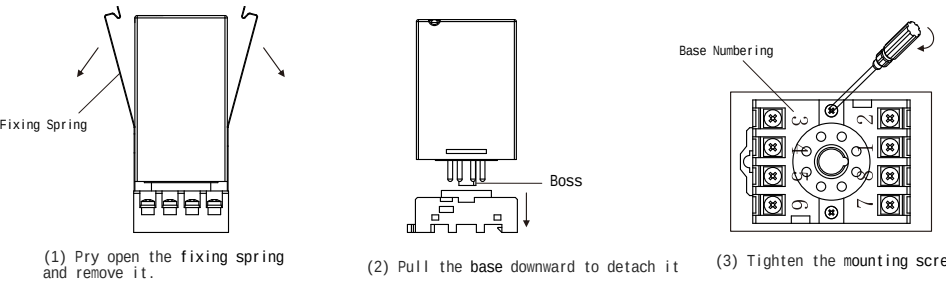
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- 4.To avoid false operations, do not install the product in humid, corrosive, or gas environments with high metal content. The leads of the probes (electrodes) should not be routed in the same conduit as power lines. If the probe (electrode) leads are long, they should be twisted together during routing.

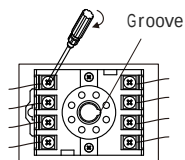
VII.Installation Methods

Caution: The main circuit power must be disconnected before installation or disassembly.

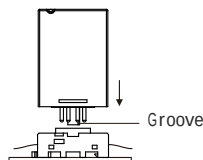
- 1.Panel - mount installation: Follow the sequence (1) → (2) → (3) → (4) → (5) → (6).
- 2.DIN rail - mount installation: Follow the sequence (1) → (2) → (7) → (8) → (9) → (10).



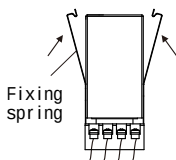
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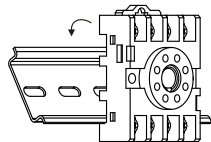
(4) Connect wires according to the base numbering and tighten the terminal screws.



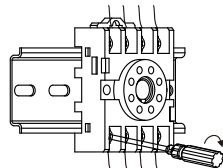
(5) Mount the relay, ensuring the boss on the relay aligns with the groove in the base.



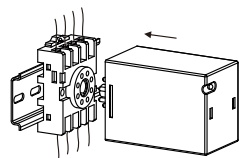
(6) Attach the fixing spring and snap it firmly into place.



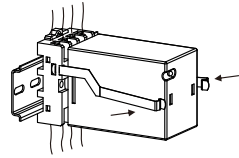
(7) Snap the base onto the DIN rail until it locks.



(8) Connect wires according to the base numbering and tighten the terminal screws.



(9) Mount the relay, ensuring the boss on the relay aligns with the recess in the base.



(10) Attach the fixing spring and snap it firmly into place.

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1. For a single - phase water pump: If the power is $\leq 200W$, the relay controls it directly, and refer to Example 1 for wiring; if the power is $> 200W$, the relay expands the capacity through an AC contactor, and refer to Example 2 for wiring. For a three - phase water pump: When the power supply of the AC contactor and the relay is AC380V, refer to Example 3 for wiring; when the power supply of the AC contactor and the relay is AC220V, refer to Example 4 for wiring.

2. The function of the example relay (taking the water - supply type as an example): When the power is connected, if the water level in the pool is lower than the medium - water - level probe, the relay connects the power supply of the water pump directly or through the AC contactor to start supplying water to the pool. When the water level is higher than the high - water - level probe, the relay disconnects the power supply of the water pump directly or through the AC contactor to stop the water supply.

Note 1: To avoid frequent switching of the relay, the medium - water - level probe is best placed in the middle, not too close to the low - water - level or high - water - level probe.

Note 2: KM is the coil of the AC contactor, and both ends of A1 and A2 can be connected as per Examples 2, 3, and 4.

Note 3: The working power supply of the relay and KM in Example 3 is both AC380V. Pay attention to the voltage level of the selected product.

IX. Ordering Instructions

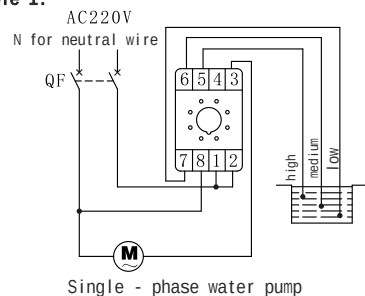
It is necessary to specify the product model, voltage level, and quantity. If there are special requirements, they should be specified additionally.

Example: HHY7G AC220V, 100 units.

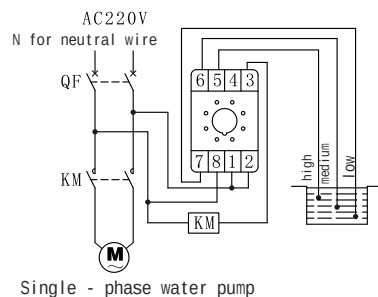
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VIII. Examples of Application Circuits

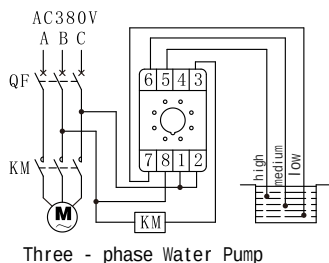
Example 1:



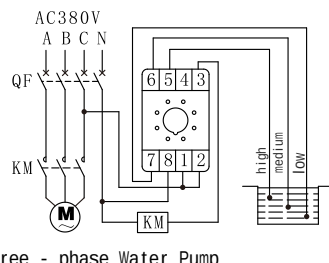
Example 2:



Example 3:



Example 4:



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国家高新技术企业 浙江省著名商标

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使用说明书
Products Instructions

HHY1, HHY7 (JYB) Series
Liquid Level Relays

Thank you very much for using C-Lin brand liquid level relays. Please read the instruction manual before using the product!

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