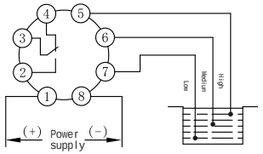
I.Overview

The HHY2 series liquid level relays (hereinafter referred to as "relays") are used as automatic liquid level control components in AC 50Hz control circuits with a rated operating voltage of 380V or below, to connect or disconnect circuits as required.
This series of relays features small size, light weight, low power consumption, and stable and reliable performance, so it can be widely applied in industrial and agricultural production.
This series complies with the relevant requirements of GB/T 14048.5.

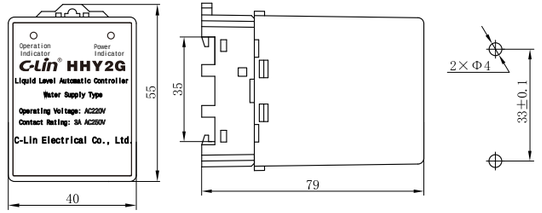
II.Main Technical Data

1.Operating Power Supply (Control Supply Voltage): AC 380V, 220V, 110V, 36V, 24V, 50Hz. The allowable voltage fluctuation range is (85%～110%) of the rated voltage (U_e)
2.Contact Rating: 3A AC 250V (resistive load) (usage category: AC-15).
3.Ambient Temperature: -10℃～40℃.
4.Altitude: ≤ 2000m.
5.Humidity: When the maximum temperature at the installation site is 40℃, the relative humidity of air shall be ≤ 50%. Higher relative humidity is allowed at lower temperatures (e.g., up to 90% at 20℃). Special measures shall be taken for condensation occasionally caused by temperature changes.
6.Pollution Degree: Class 3.
7.Mounting Method: Panel - mounted or 35mm DIN rail - mounted.
8.Conventional Heating Current (I_{th}): 3A .
9.Rated Insulation Voltage (U_i): 380V.
10.Rated Impulse Withstand Voltage (U_{imp}): 4kV.

III.Wiring Diagram



IV.Outline and Mounting Hole Dimensions Diagram



V.Instructions for Use

1.HHY2G (Water Supply Type):
(1)“High” represents the upper - limit liquid level control point of the water tank. When the water level rises to the high - level mark and water makes contact with the probe (electrode), the relay will automatically shut off the pump and stop water supply.
(2)“Medium” represents the lower - limit liquid level control point of the water tank. When the water level drops below the medium - level mark and water loses contact with the probe (electrode), the relay will automatically start the pump and supply water to the tank.
(3)“Low” is the bottom limit of the water tank, placed at the lowest point of the tank, slightly higher than the tank bottom.

2.HHY2P (Water Drainage Type):
(1)“High” represents the upper - limit liquid level control point of the water tank. When the water level rises to the high - level mark and water makes contact with the probe (electrode), the relay will automatically start the pump and begin draining.
(2)“Medium” represents the lower - limit liquid level control point of the water tank.When the water level drops below the medium - level mark and water loses contact with the probe (electrode), the relay will automatically shut off the pump and stop draining.
(3)“Low” is the bottom limit of the water tank, placed at the lowest point of the tank, slightly higher than the tank bottom.

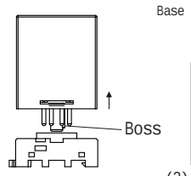
VI.Precautions

1.Each probe (electrode) shall be fixed on the inner wall of the water tank. If the inner wall of the water tank is metal, the three probes (electrodes) must be insulated from the water tank. Probes (electrodes) can be configured separately.
2.To ensure the normal operation of the relay, after installation, re - check the input and output wiring and whether the probe connection wires are positioned correctly. Additionally, move the probes up and down to make them contact or separate from the water surface, simulating tests to verify if the water level controller functions properly.
3.It is recommended to fix each probe on the inner wall of the water tank to prevent probe position shift and subsequent controller malfunction. (This is not advisable if the water tank wall is metal.)
4.To avoid malfunction, do not install the product in a humid, corrosive environment or one with gas of high metal content. The leads of the probes (electrodes) should not share the same conduit as power lines. If the probe (electrode) leads are long, they should be twisted during routing.

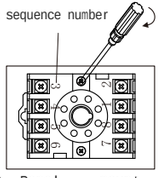
VII.Installation Methods

Note: Before installation or disassembly, the main circuit power supply must be cut off.

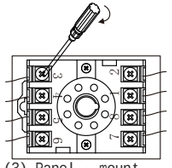
1.Panel - mount installation sequence: (1) → (2) → (3) → (4)
2.Panel - mount disassembly sequence: (5) → (6)
3.DIN rail - mount installation sequence: (1) → (7) → (8) → (9)
4.DIN rail - mount disassembly sequence: (10) → (11) → (12)



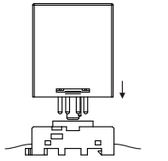
(1) Pull out the relay.



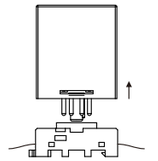
(2) Panel - mount installation: Tighten the mounting screws.



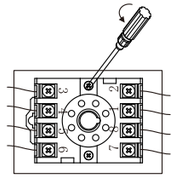
(3) Panel - mount installation: Connect the wires according to the base sequence numbers and tighten the terminal screws.



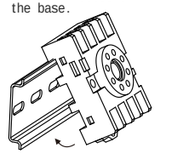
(4) Panel - mount Installation: Mount the relay, ensuring the boss on the upper insertion aligns with the recess of the base.



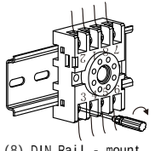
(5) Panel - mount Disassembly: Pull the relay outward to remove it.



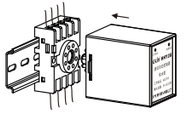
(6) Panel - mount Disassembly: Loosen the mounting screws and terminal screws, then detach the connected wires.



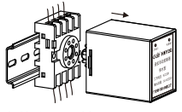
(7) DIN Rail - mount Installation: Snap the base onto the DIN rail until it locks in place.



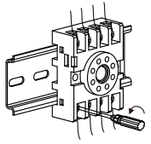
(8) DIN Rail - mount Installation: Connect wires according to the base's numbering, then tighten the terminal screws.



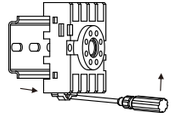
(9) DIN Rail - mount Installation: Mount the relay on the base, aligning the relay's boss with the base's recess.



(10) DIN Rail - disassembly: Pull the relay directly upward to remove it.



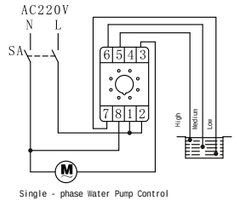
(11) DIN Rail - disassembly: Loosen the terminal screws to disconnect the wires, then remove the wires.



(11) DIN Rail - disassembly: Loosen the terminal screws to disconnect the wires, then remove the wires.

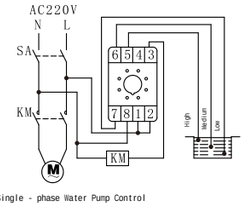
VIII.Examples of Application Circuits

Example 1:



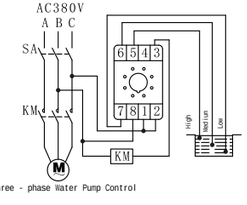
Single - phase Water Pump Control

Example 2:



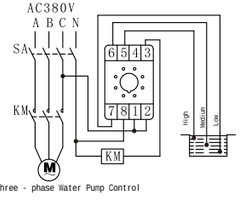
Single - phase Water Pump Control

Example 3:



Three - phase Water Pump Control

Example 4:



Three - phase Water Pump Control

1.For single - phase water pumps: If the power is ≤ 200W, the relay controls the pump directly. Refer to Example 1 for wiring. If the power exceeds 200W, the relay controls the pump via an AC contactor for current expansion. Refer to Example 2 for wiring.For three - phase water pumps:When the AC contactor and the relay are powered by AC 380V, refer to Example 3 for wiring.When the AC contactor and the relay are powered by AC 220V, refer to Example 4 for wiring.

2.Function of the relay in the examples (taking the water - supply type as an example):When power is applied, if the water level in the tank is lower than the medium level, the relay connects the pump's power supply (directly or via an AC contactor), starting water supply to the tank. When the water level rises above the high level, the relay disconnects the pump's power supply (directly or via an AC contactor), stopping the water supply.

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

Note 2: KM is the coil of the AC contactor. Terminals A1 and A2 can be wired with reference to Example 2, Example 3, and Example 4.

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

IX.Ordering Information

When placing an order, the product model, voltage rating, and quantity need to be specified. If there are special requirements, they should be additionally noted.

For example: HHY2G AC220V, 100 pieces.

产品合格证

产品合格证

符合标准: GB/T 14048.5

检 验 员: 检01

出厂日期: 见产品或包装

本产品经检验合格, 准予出厂。

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使用说明书

Products Instructions

HHY2 Series

Liquid Level Relays

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

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