

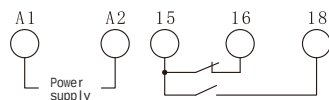
I. Overview

The HHY11PG liquid - level relay (hereinafter referred to as the relay) is designed in combination with the characteristics of hierarchical water - level lifting for upper and lower water tanks (water towers) in high - rise buildings. It has functions such as automatic water supply and drainage control through the combined control of upper and lower water tanks. It can effectively prevent the overflow of water due to excessive water level in the tank and the damage of the water pump caused by idle running. It is a product for automatic control of water levels in water towers and wells in industrial and mining enterprises, schools, and households. This relay complies with the relevant requirements of GB/T 14048.5.

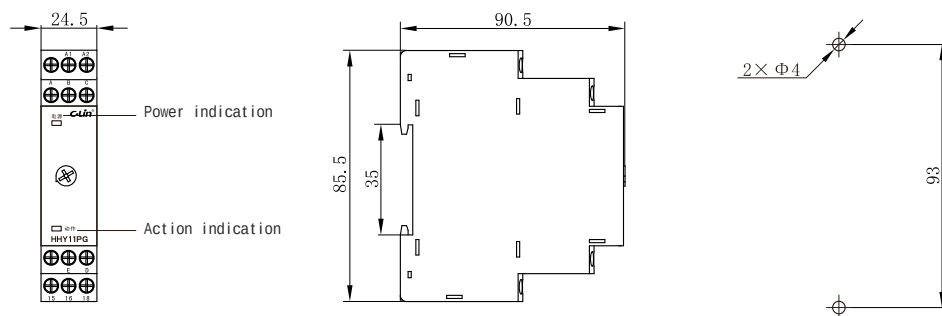
II. Main Technical Data

1. Operating Power Supply (Control Power Supply Voltage): AC/DC100V - 240V, with an allowable voltage fluctuation range of (85% - 110%)U_e.
2. Power Consumption: ≤2W.
3. Contact Capacity: 1A AC240V (resistive) (usage category AC - 15).
4. Length of Control Probe Lead: ≤500m.
5. Ambient Temperature: - 5 °C - 40 °C.
6. Humidity: When the maximum temperature at the installation site is 40 °C, the relative humidity of the air is ≤50%. At lower temperatures, a higher relative humidity is allowed, for example, 90% at 20 °C. Special measures should be taken for occasional condensation caused by temperature changes.
7. Altitude: ≤2000m.
8. Pollution Degree: 3.
9. Mounting Method: Panel - mounting or 35mm DIN - rail mounting.
10. Conventional Heating Current (I_{th}): 3A.
11. Rated Insulation Voltage (U_i): 380V.
12. Rated Impulse Withstand Voltage (U_{imp}): 4KV.

III. Wiring Diagram



IV. Outline and Cutout Dimensions (mm)



V. Installation Instructions for Liquid - level Probes

(1) Installation Instructions for Water - supply Type Probes (Electrodes)

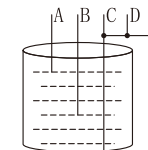
1.A is the upper - limit liquid - level control point of the water tank. When the water level rises to point A, the water contacts the probe (electrode), and the relay automatically shuts off the pump to stop filling the water tank.

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2.B is the lower - limit liquid - level control point of the water tank. When the water level drops below point B, the water disengages from the probe (electrode), and the relay automatically starts the pump to fill the water tank.

3.C is the bottom line of the water tank. Place it at the lowest point of the water tank to make contact with the bottom of the water tank.

4.D and E are connected to C.

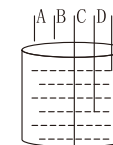


(2) Installation Instructions for Drainage - type Probes (Electrodes)

1.E is the upper - limit liquid - level control point of the water tank. When the water level rises to point E, the water contacts the probe, and the relay automatically starts the pump to drain the water from the tank. If drainage is not required, point E is left unconnected.

2.D is the lower - limit liquid - level control point of the water tank. When the water level drops to point D, the water disengages from the probe, and the relay automatically shuts off the pump to stop draining the water from the tank.

3.C is the bottom line of the water tank. Place it at the lowest point of the water tank to make contact with the bottom of the water tank. Points A and B are left unconnected.



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(3) Installation Instructions for Water - supply and Drainage - type Probes (Electrodes)

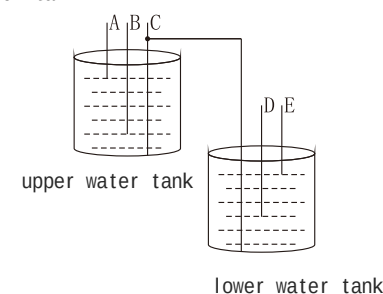
1.A is the upper - limit liquid - level control point of the upper water tank. When the water level rises to point A, the water contacts the probe, and the relay automatically shuts off the pump to stop filling the upper water tank.

2.B is the lower - limit liquid - level control point of the upper water tank. When the water level drops below point B, the water disengages from the probe, and the relay automatically starts the pump to fill the upper water tank.

3.C is the common bottom line for the upper and lower water tanks. Place it at the lowest point of both the upper and lower water tanks to make contact with the bottom of the water tanks.

4.D is the lower - limit liquid - level control point of the lower water tank. When the water level drops to point D, the water disengages from the probe, and the relay automatically shuts off the pump to stop draining the lower water tank.

5.E is the upper - limit liquid - level control point of the lower water tank. When the water level rises to point E, the water contacts the probe, and the relay automatically starts the pump to drain the lower water tank.

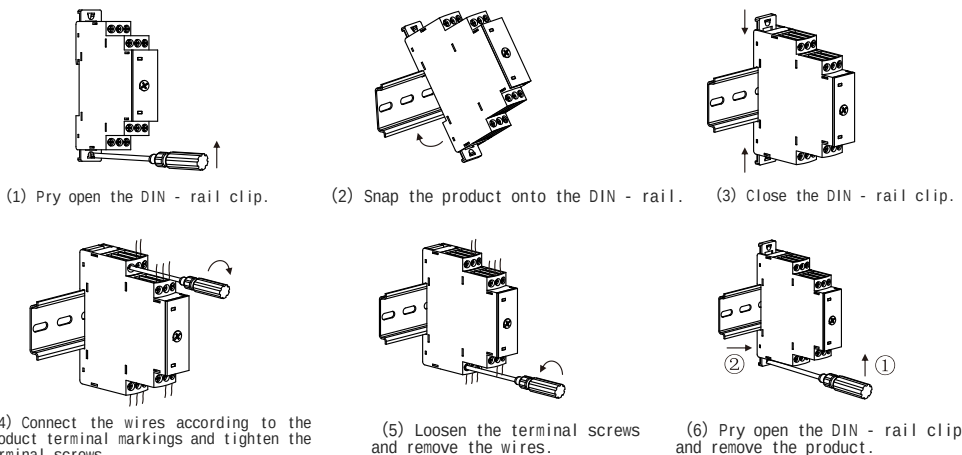


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VI. Installation Methods

Caution: The main circuit power supply must be cut off before installation or removal.

- 1.DIN - rail Installation: (1) → (2) → (3) → (4)
- 2.DIN - rail Removal: (5) → (6)
- 3.Panel - mounting Installation: (1) → (7) → (8)
- 4.Panel - mounting Removal: (9) → (10)



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- 1.For single - phase water pumps, the relay is extended through an AC contactor. Refer to Example 1 for wiring. For three - phase water pumps with an AC contactor rated at AC220V, refer to Example 2 for wiring.
- 2.The function of the relay in the examples is as follows: When the power supply is connected, based on the water - level status in the water tank, the relay connects the power supply of the water pump through the AC contactor to start supplying water to or draining water from the tank. Refer to the fifth section on probe installation instructions.
- Note 1: To prevent the relay from switching frequently, the mid - level water probe is preferably placed in the middle and not too close to the low - level or high - level probes.
- Note 2: KM is the coil of the AC contactor. The two terminals A1 and A2 can be wired according to Example 1 and Example 2.
- Note 3: The operating power supply of KM in Example 2 is AC220V. Pay attention to the voltage rating of the selected product.

VIII. Precautions

- 1.To ensure the normal operation of the relay, after installation, re - check the input and output wiring. Check whether the position of the probe connection is correctly placed. Move the probe up and down to make it contact or disengage from the water surface to simulate and test whether the liquid - level relay is operating properly.
- 2.It is recommended to fix each probe on the inner wall of the water tank to prevent the probe position from shifting and causing the relay to malfunction (this is not advisable if the water - tank wall is made of metal).
- 3.To avoid malfunctions, do not install the product in humid, corrosive environments or environments with high metal - content gases. The probe (electrode) leads should not be routed in the same conduit as power lines. If the probe (electrode) leads are long, they should be twisted - pair wired.

IX. Ordering Information

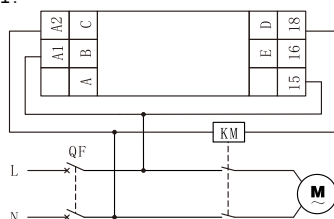
The product model, voltage rating, and quantity must be specified. Special requirements should be clearly noted.

For example: HHY11PG AC220V, 100 pieces.

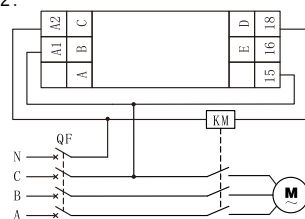
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VII. Examples of Application Circuits

Example 1:



Example 2:



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国家高新技术企业 浙江省知名商号

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使用说明书
Products Instructions

HHY11PG
Liquid - level Relay

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

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