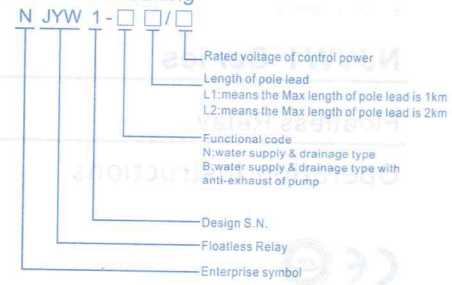


1 Purpose & Application Scope

NJYW1 series Floatless Relay(hereafter referred to "relay")is applicable for control circuit with up to AC380V, 50Hz(or 60Hz)as the liquid level control element in many occasions such as civil water tower,overhead water tank and underground water cistern,etc,which may realize automatic control on water supply or drainage in accordance with the connection requirement of users. The product does not apply for the liquid level control of some liquids with poor conductivity such as oil,purified water,flammable and explosive chemical liquid and sewage with higher density.

The product meets with the standard of IEC 60947-5-1.

2 Model & Meaning



1

3 Normal Working & Installation Condition

3.1 Normal working condition

3.1.1 Ambient air temperature

- Upper limit no more than +40°C and average within 24 hours no more than +35°C.
- Lower limit no less than -5°C.

3.1.2 Altitude

The altitude of installation place shall be no more than 2000m.

3.1.3 Atmosphere condition

3.1.3.1 Humidity

When the highest temperature is +40°C, the relative humidity shall be no more than 50%. Higher relative humidity is allowed under lower temperature. Special measure shall be taken for accidentally appeared condensed dew due to temperature change.

3.1.3.2 Pollution grade: Grade 3.

3.2 Installation Condition

3.2.1 Installation Type: Type II

3.2.2 Installation place

- In the places without obvious vibration and impact.
- In the media without explosive risk, and no gases that may be corrosive to metal and damage insulation and no electric dusts remain in the media.
- In the places with device against rain and snow.

4 Main Technical Parameters

4.1 Rated voltage for control power is shown in Table 1.

Table 1 Rated Voltage for Control Power

| Model | Voltage |
|----------------------|--|
| NJYW1-NL1, NJYW1-NL2 | AC50Hz(or 60Hz)36V, 110V/220V, 220V/380V |
| NJYW1-BL1, NJYW1-BL2 | AC50Hz(or 60Hz)36V, 110V, 220V, 380V |

4.2 Acceptable fluctuant range for relay voltage is 85%~110% of rated value.

4.3 Basic parameters of auxiliary circuit are shown in Table 2.

Table 2 Basic Parameters of Auxiliary Circuit

| Contact Number | Agreed thermal current Ith,A | Use Classification | Rated working voltage Ue, V | Rated working current Ie, A |
|-----------------------------|------------------------------|--------------------|-----------------------------|-----------------------------|
| One unit transition contact | 5 | AC-15 | 220 | 0.75 |
| | | | 380 | 0.47 |

4.4 Basic Parameters for liquid detection pole and relay action are shown in Table 3.

Table 3 Basic Parameters for Liquid Detection Pole & Relay Action

| Model | NJYW1-NL1, NJYW1-BL1 | NJYW1-NL2, NJYW1-BL2 |
|--|-----------------------------------|----------------------|
| Length of pole lead | Max. 1km | Max. 2km |
| AC voltage output by liquid level detection pole | 24V | |
| Action resistance | < 25kΩ | |
| Release resistance | > 2kΩ | |
| Reaction time | Action:Max.80ms,Release:Max.160ms | |

3

4.5 Anti-interference withstand capability is shown in Table 4

Table 4 Anti-interference Withstand Capability

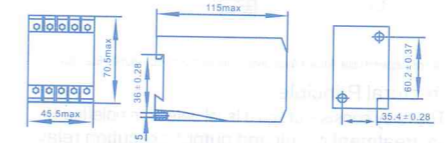
| Item | Serious Grade |
|---|---|
| Static discharge withstand capability | Air discharge:±8x(1±10%)kV |
| Radiated electromagnetic field withstand capability | Intensity of testing field: 10x(1±10%)(V/m) |
| Rapid transient withstand capability | 2kV for power wire,lasting time:1 min |
| Surge(impact) withstand capability | Open testing voltage:2x(1±10%) kV |

4.6 Protection grade of relay housing :IP20.

4.7 Mechanical duration of relay:no less than 1 million times.

4.8 Electrical duration of relay:no less than 100,000 times.

4.9 Profile and installation dimensions are shown in Fig 1.



a) Profile Dimension b) Installation Dimension

Fig 1 Profile & Installation Dimensions of NJYW1 Series Floatless Relay

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4.10 Wiring principle of relay is shown in Fig 2~Fig 9.

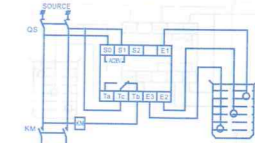


Fig 2 Wiring Diagram of Water Supply Method for NJYW1-NL1, NJYW1-NL2

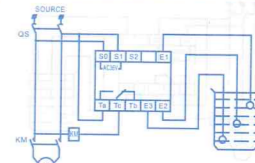


Fig 3 Wiring Diagram of Drainage for NJYW1-NL1, NJYW1-NL2

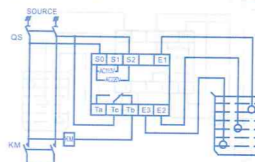


Fig 4 Wiring Diagram of Water Supply for NJYW1-NL1, NJYW1-NL2

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