NO:2021.11

CHINT ELECTRICS

NJB1-X1
Voltage Protection Relay

User Instruction

Standard: IEC/EN 60947-5-1

⚠ Safety Warning

1. Only professional technicians are allowed for installation and maintenance.
2. Installation in any damp, condensed-phase environment with inflammable and explosive gas is forbidden.
3. When the product is being installed or maintained, the power must be switched off.
4. You are prohibited from touching the conductive part when the product is operating.
5. The product shall be stored, installed and used in accordance with the rated control power supply voltage and specified conditions indicated in the user instructions.
6. The products shall be properly wired in strict accordance with the wiring diagram.

1 Use Purpose

Used as the phase sequence and phase loss protection component to connect or disconnect the circuit, NJB1-X1 voltage protection relay (hereinafter referred to as the relay) is applicable to the control circuit with AC voltage of 200V~500V and frequency of 50Hz/60Hz. It cannot monitor the phase loss of the motor load.

2 Key Technical Parameters

Table 1 Ambient Conditions

Normal use conditions	Ambient temp.: -5℃~+40℃; average value within 24h not exceeding +35℃; altitude not exceeding 2,000m.
Atmospheric conditions	RH shall not exceed 50% when maximum temperature is +40℃; in case of lower temperature, higher RH is allowed. Measures should be taken against occasional condensation due to temperature change.
Installation category	Ⅱ
Transport and storage conditions	-25℃~+55℃

Table 2 Product Specifications and Main Technical Parameters

Model	NJB1-X1
Installation method	Rail mounting, Equipment type
Protection function	Phase loss, phase sequence
Motion time	Phase loss, phase sequence ≤0.1s
Number of contacts	1 group of change-over

Table 3 Main Circuit and Auxiliary Circuit Technical Parameters

No.	Product Model	NJB1-X1	
1	Rated control supply voltage Us (V), frequency (Hz)	AC200V~AC500V,50Hz/60Hz	
2	Agreed free air heating current Ith (A)	3	
3	Rated operating voltage Ue(V)	AC240V	AC415V
4	Use type under rated operating voltage and rated operating current Ie(A)	AC-15	AC-15
		0.75A	0.47A

Table 3 (continued)

No.	Product Model	NJB1-X1
5	Rated insulation voltage Ui (V)	AC500V
6	Rated impulse withstand voltage Uimp (kV)	4
7	Enclosure protection class (if applicable)	IP20
8	Pollution class	Class 3
9	Type and maximum value of short circuit protection	RT36-00/4A
10	Size of terminal tightening screw (or nut)	M3
11	Torque of terminal tightening screw (N·m)	0.5
12	Electrical life / mechanical life (10,000 times)	10/100

Table 4 Immunity to Interference

No.	Test type	Test level
1	Electrostatic discharge immunity test	8kV (air discharge)
2	RF electromagnetic field immunity test	10V/m
3	Electrical fast transient/burst immunity test	2kV/5kHz on the power supply side
4	Surge immunity test	1kV (wire to wire)

3 Installation

3.1 Outline and installation size: see Figure 1, unit: mm.

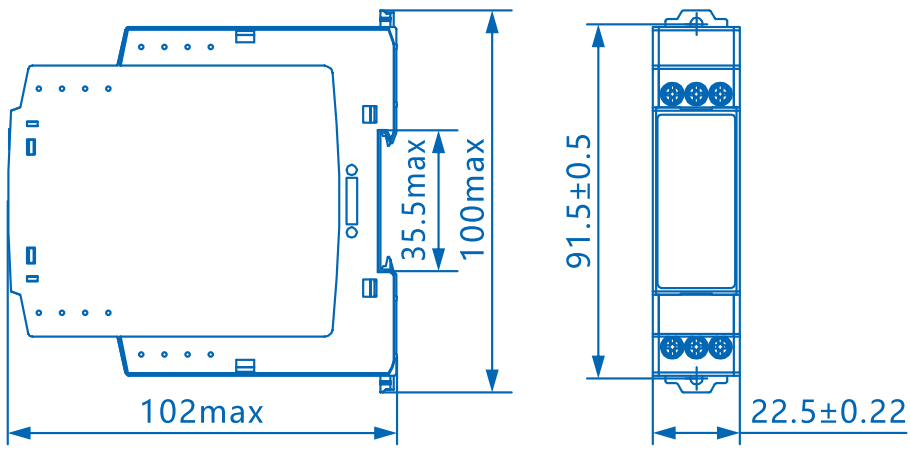

Figure 1 Outline and Installation Size

3.2 Wiring diagram: see Figure 2; working sequence diagram: see Figure 3; panel diagram: see Figure 4.

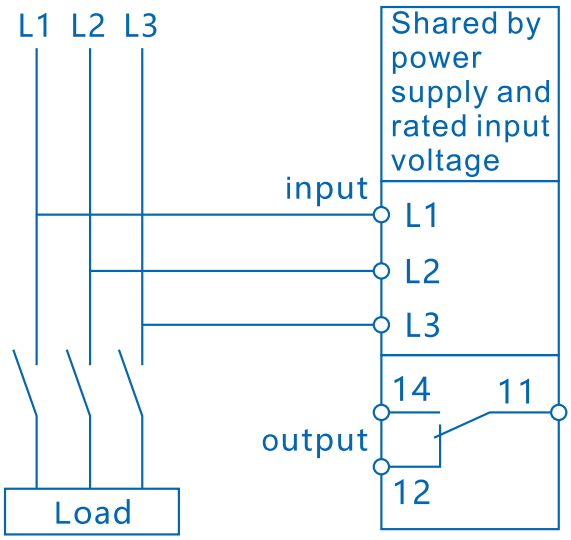

Figure 2 Wiring Diagram

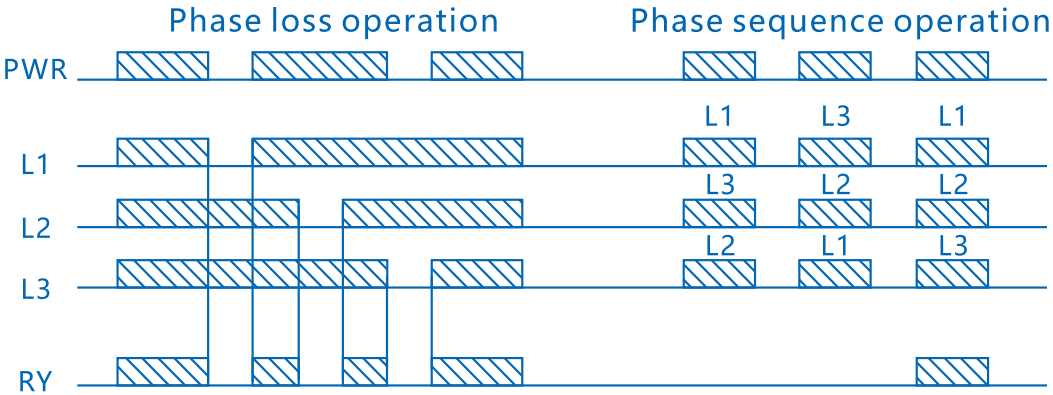

Figure 3 Working Sequence Diagram

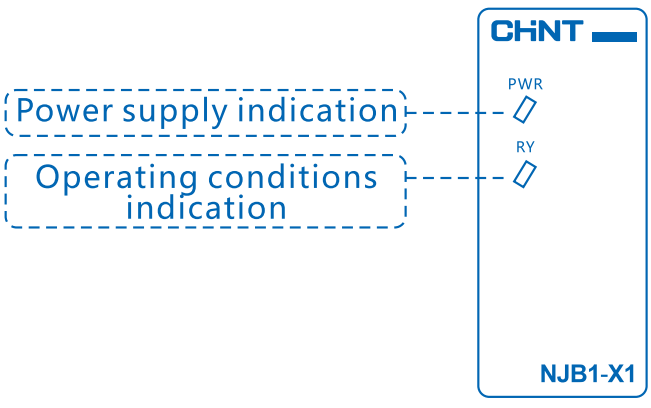

Figure 4 Panel Diagram

Notes: When the relay works normally, the normally open contact of the relay is closed and the motion indicator is on; the power supply input line should not be in the same pipe or twisted with other wires with strong current. If necessary, please use shielded wire which should be as short as possible to avoid interference and affecting the normal operation of the relay.

4 Maintenance

4.1 The terminal of the relay should be tightened on a regular basis.
4.2 Avoid squeezing the product; the product should be stored in a well-ventilated place.
4.3 For equipment that may cause material economic losses or personal safety, safety measures such as secondary circuit protection should be taken.

Table 5 Fault Analysis and Troubleshooting

Symptoms	Cause analysis	Troubleshooting method
The power indicator light is not on after power on	The power supply pin is not wired and the wiring is incorrect or disconnected. The product is not electrified or the control power supply voltage does not match the rated control power supply voltage of the product.	Select the power supply voltage that matches the rated control power supply voltage of the product and connect wires reliably according to the user instructions.
Abnormal operation after power on	The control wiring of the relay is incorrect or disconnected, or the input voltage is too low.	Select the power supply voltage that matches the rated control power supply voltage of the product and connect wires reliably according to the user instructions.

5 ⚠ Environmental Protection

In order to protect the environment, the product or product parts should be disposed of according to the industrial waste treatment process, or be sent to the recycling station for assortment, dismantling and recycling according to local regulations.

CHINT

QC PASS

NJB1-X1

Voltage Protection Relay

IEC/EN 60947-5-1

JDQ Check 10

Test date: Please see the packing

ZHEJIANG CHINT ELECTRICS CO., LTD.

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