


XJ3-D

Protection relay

OPERATION INSTRUCTION

CNC

Deliver
Power For Better Life

-  Before installing and using this product, please read this manual carefully and pay more attention to safety.

XJ3-D Protection Relay

General

1). XJ3-D Overvoltage / Undervoltage / Phase failure / Phase sequence Protection Relay (hereinafter 'Protection Relay) , connected with the switching electrical device (like AC contactor etc.) as the protective circuit to do efficient protection for the breakdown which probably occurred over voltage, under voltage, phase failure, phase sequence in the irreversible 3-phase AC electromotor and transmission equipment(for example water pump, draught fan, conveyer belt, air compressor, feeder line).

2). Protection Relay are widely used in the low voltage power distribution system of using 3-phase 50Hz, AC380V in the industry, agriculture and service.

3). Protection Relay can disconnect the power supply of the main circuit to reaching the purpose of protecting the equipment and human safety under the conditions as below: when the phase sequence of Protection Relay is confirmed, wrong connected with the pre-confirmed phase sequence due to change or maintain, occurred phase failure in the supply circuit, occurred over voltage or under voltage in the supply power grid.

4). Protection Relay adopts the advanced technique of voltage test and excellent IC as its main parts. Its feature are reliable operation, accurate failure indication, strong anti-interference, small volume, simple installation and use , furthermore it cannot be influenced by the big or small power of been protected equipment.

Operating conditions

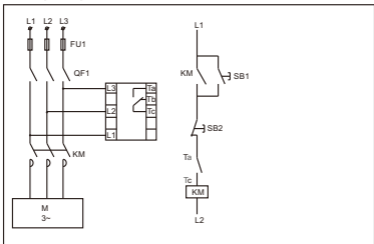
- 1). Ambient temperature: $\leq +40^{\circ}\text{C}$ and $\geq -5^{\circ}\text{C}$
- 2). The heights of installation place is not over 2000m.
- 3). Air condition:
 - a. Humidity : when the temperature is at $+40^{\circ}\text{C}$, the air relative humidity is not exceed 50%. The higher relative humidity is acceptable in the lower temperature, for example the humidity can reach up to 90% when 20°C .please adopt the special method for the condensation due to the temperature fluctuation.
 - b. Pollution Grade: Pollution grade 3 of Protection Relay (electric conduction pollution or owing to the condensation make the dry un-electric conduction to be polluted to become electric conduction).
- 4). Installation
 - a. Installation : 1) screw mounting 2) 35mm standard DIN rail mounting.
 - b. For safe operation, Protection Relay should be installed uprightly relative to the ground.

Technical data

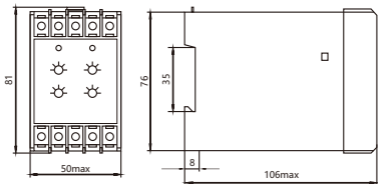
Type	XJ3-D
Protection function	Overvoltage Undervoltage Phase-failure Phase-sequence error
Overvoltage protection(AC)	380V~460V 1.5s~4s (adjustable)
Undervoltage protection(AC)	300V~380V 2s~9s (adjustable)
Operating voltage	AC 380v 50/60Hz
Contact number	1 group changeover
Contact capacity	Ue/Ie:AC-15 380V/0.47A: Ith:3A
Phase-failure and phase- sequence protection	Reacting times \leq 2s
Electrical life	1 \times 10 ⁵
Mechanical life	1 \times 10 ⁶
Ambient temperature	-5°C~40°C
Installation mode	35mm Track installation or soleplate mounting

Note: in the example diagram for application circuit, protective relay can provide protection only under the condition of phase-failure occurring at terminal 1, 2, 3 and among three phase of power supply A, B, C.

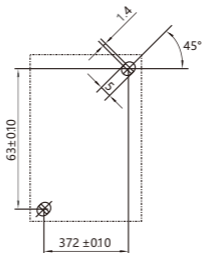
Wiring Diagram



Overall and mounting dimensions(mm)



Overall and mounting dimensions(mm)



Instruction

a. Phase sequence and phase failure protection
According to the wiring diagram (picture 2), the protection relay is connected into the circuit as protector. When normal operation, 3 indicator of the protection relay don't light. If the 3-phase is in slightly, the indicator of phase failure' light slightly, this condition is normal. If after connecting the protection relay into the circuit, electromotor cannot start up and the indicator of ' phase failure' lighted, at that time you should change the position of every 2- phase of which A, B, C 3-phase input the protection relay, then repress the start button, the phase of normally start up the protection relay are confirmed, when the

phase changed, the protection relay can immediately complete protection function. If the electromotor still cannot start up, should inspect if there is phase failure in 3-phase circuit.

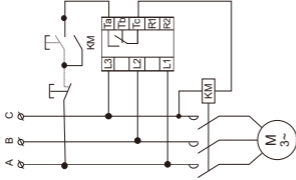
2). Over voltage, under voltage and time delay setting

The value of the panel of protection relay is the measure scale, if the user want to accurately setting, please adjust knob before using, and Subject to the actual measured values.

3). Please setting the knob of 'over voltage value' slight lower than the maximum value of the operation voltage of equipment which has been protected by the protection relay, 'over voltage time delay' is the active time of protection relay from the operation voltage over setting over voltage value.

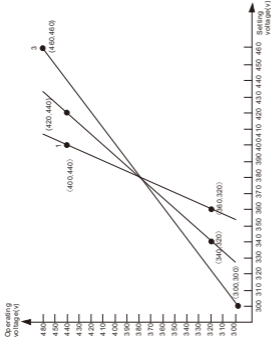
4). The knob of 'under voltage value' can be set slightly higher than the lowest value of the operation voltage of equipment which has been protected by the protection relay. 'under voltage time delay' is the active time of protection relay from operation voltage lower than the setting under voltage value.

5). The over voltage 、 under voltage active characteristic diagram of the protection relay are as below(picture 3) , curve 1: single-phase over voltage and under voltage, curve2: 2-phase over voltage and under voltage, curve 3: 3-phase over voltage and under voltage



picture2

picture3



Note: For picture 2: when normal operation, Ta, Tc are in the state of connection.

Notice

Terminal L1, L2, L3 of protection relay connect with 3-phase live wire, terminal Ta, Tb, Tc are the output contact of protection relay, terminal Tb, Tc are normal closed, terminal Ta, Tc are normal open. when power on and after that, terminal Tb, Tc convert to normal open, terminal Ta, Tc convert to normal closed. When the protection relay does the protective operation, terminal Ta, Tc convert to normal open again.



CERTIFICATE

Product Model: XJ3-D

Inspector : **CNC003**

Production date: Printed on the product
or package.

This product is qualified according
to the delivery inspection

CNC

XJ3-D

CNC ELECTRIC

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