# YCQR series(PC class)

Automatic transfer switch

## OPERATION INSTRUCTION

Standard:IEC 60947-6

CNC Deliver Power For Better Life

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

**YCQR-63 series**
**Automatic transfer switch**

## 1. General

YCQR-63 automatic transfer switch is a PC class infrequent change-over switch, with two-station design (commonly used for I and standby for II), suitable for ACsystems with AC 50-60hz and rated current 6A-63A. The main function of the automatic transfer switch is when the main power (common power supply I) fails, the ATS will automatically switch to the backup power (Backup power supply II) to continue working (switching speed <50 milliseconds), which can effectively solve the troubles caused by power outages.

## 2.Working Conditions

- ☐ The temperature range of the operating environment is -5°C~+40°C, and the average temperature within 24 hours shall be lower than +35°C, and the temperature range of the storage environment is -25°C~+55°C, which can be reached +70°C in a short time (within 24 hours)
- ☐ The altitude of the installation site should be lower than 2000m.
- ☐ The relative temperature at the installation site shall not exceed 50% whenthe ambient air temperature is +40°C.Higher relative humidity is possible at lower temperatures.For example: when the average minimum

temperature of the wettest month is +20°C,the monthly average maximum relative humidity of that month canreach90% . Appropriate measures should be taken to prevent condensation due to temperature changes.

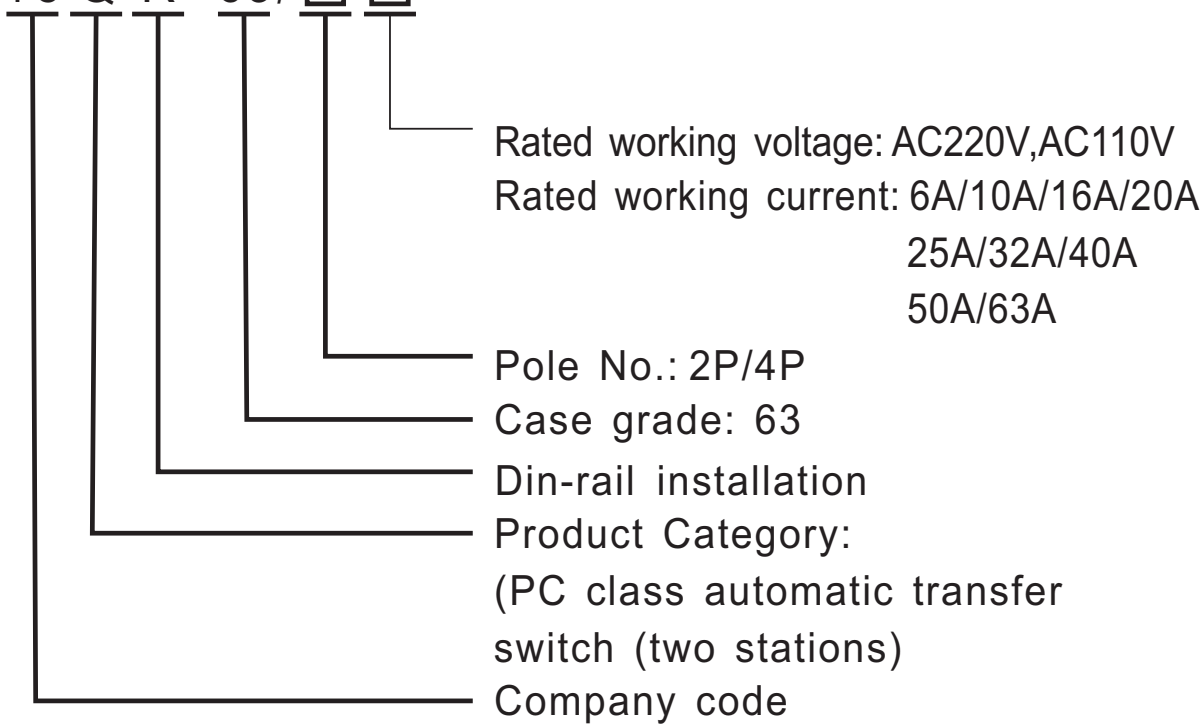
□ Pollution level 3 (conductive pollution, or dry non-conductive pollution becomes conductive due to condensation). ATS can be installed vertically or horizontally in the cabinet, if there are special installation requirements, contact us. The protection grade of ATS case is Ip30.

□ Overvoltage category

Main circuit category III; control and auxiliary circuit category II.

## 3. Selection

YC Q R -63/ □ □

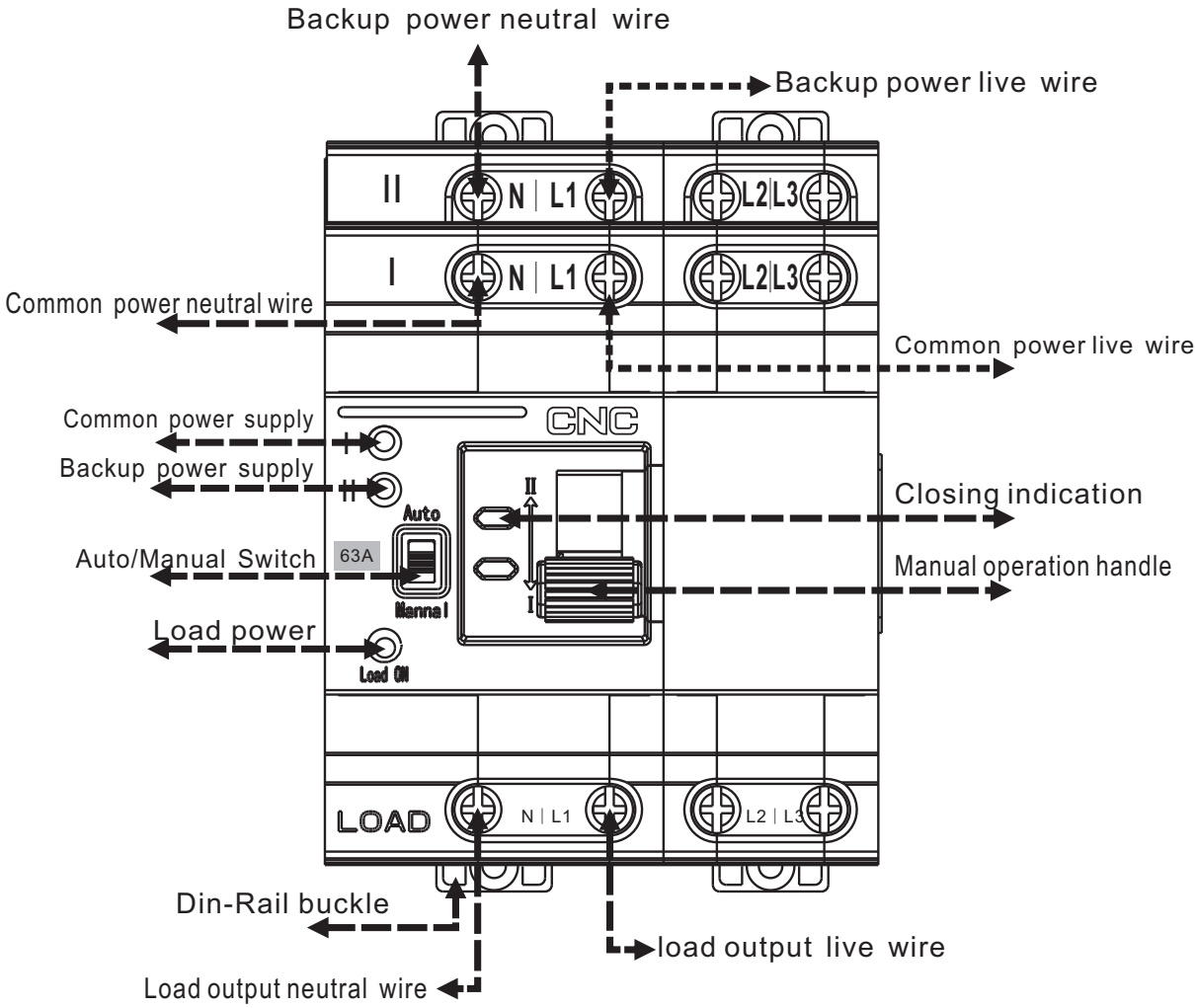


# 4. Technical data

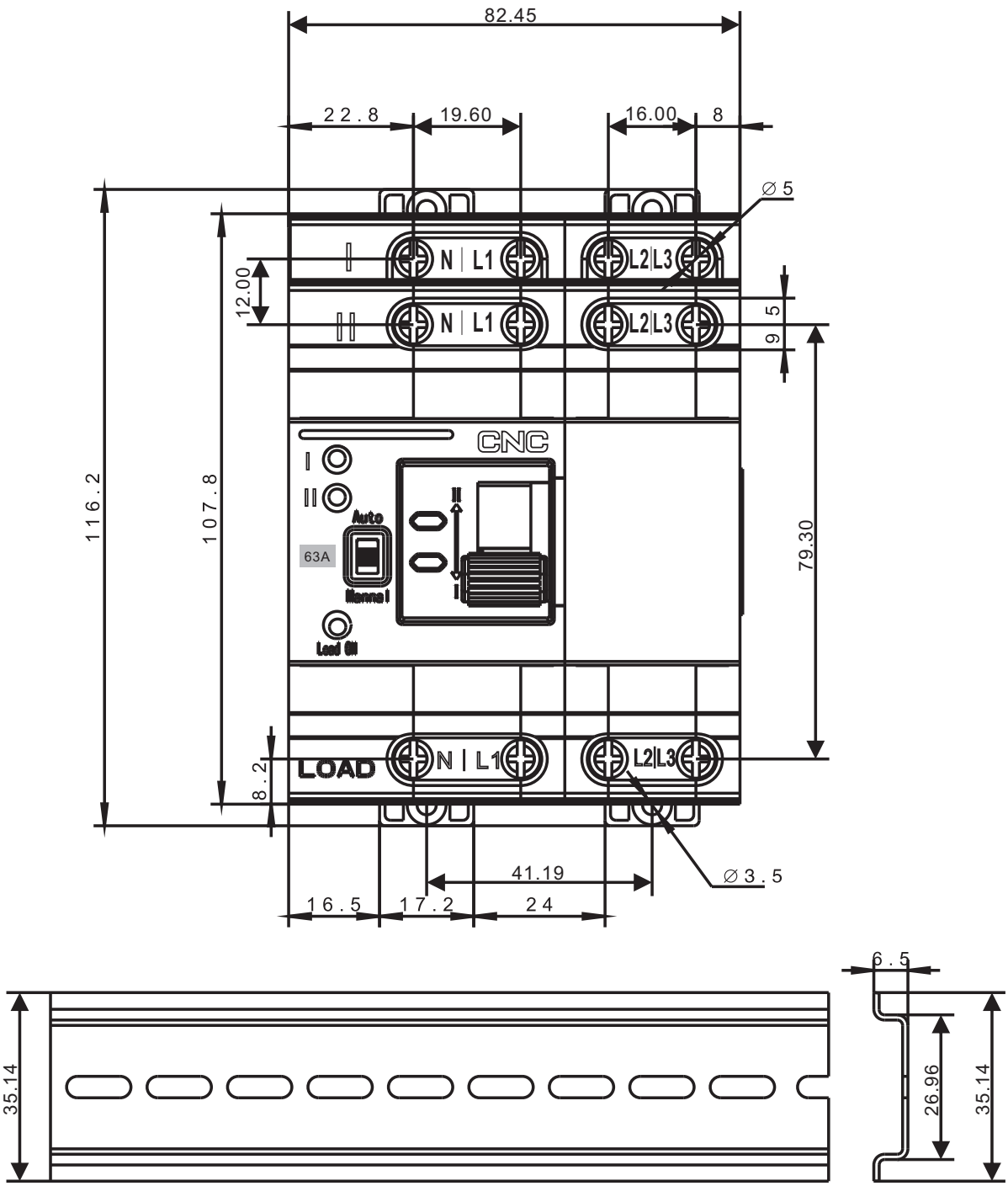
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Case grade | 63 | | | | | | | | |
| Rated operating current Ie(A) | 6A | 10A | 16A | 20A | 25A | 32A | 40A | 50A | 63A |
| Rated insulation voltage UI | 690V | | | | | | | | |
| Rated impulse withstand voltage Uimp | 8kV | | | | | | | | |
| Rated working voltage Ue | AC220V/AC110V | | | | | | | | |
| Rated frequency | 50/60Hz | | | | | | | | |
| Class | PC class: can be switched on and loaded without generating short-circuit current | | | | | | | | |
| Pole number | 2P | | | | 4P | | | | |
| Weight (kg) | | | | | | | | | |
| Rated short-circuit current Iq | 50kA | | | | | | | | |
| Short circuit protection device (fuse) | RT16-00-63A | | | | | | | | |
| Rated impulse withstand voltage | 8kV | | | | | | | | |
| Control circuit | Rated control voltage Us: AC220V, 50Hz Normal working conditions: 85%Us-110%Us | | | | | | | | |
| Auxiliary circuit | AC220V/110V 50Hz Ie=5A | | | | | | | | |
| Contactor change-over time | ＜50ms | | | | | | | | |
| Operation change-over time | ＜50ms | | | | | | | | |
| Return change-over time | ＜50ms | | | | | | | | |
| Power off time | ＜50ms | | | | | | | | |
| Change-over operation time | ＜50ms | | | | | | | | |
| Mechanical life | ≥5000次 | | | | | | | | |
| Electrical life | ⩾1500times | | | | | | | | |
| Usage category | AC-31B | | | | | | | | |

Note：if the rated working voltage is AC110V, the product needs to be customized

# 5. Wiring instructions

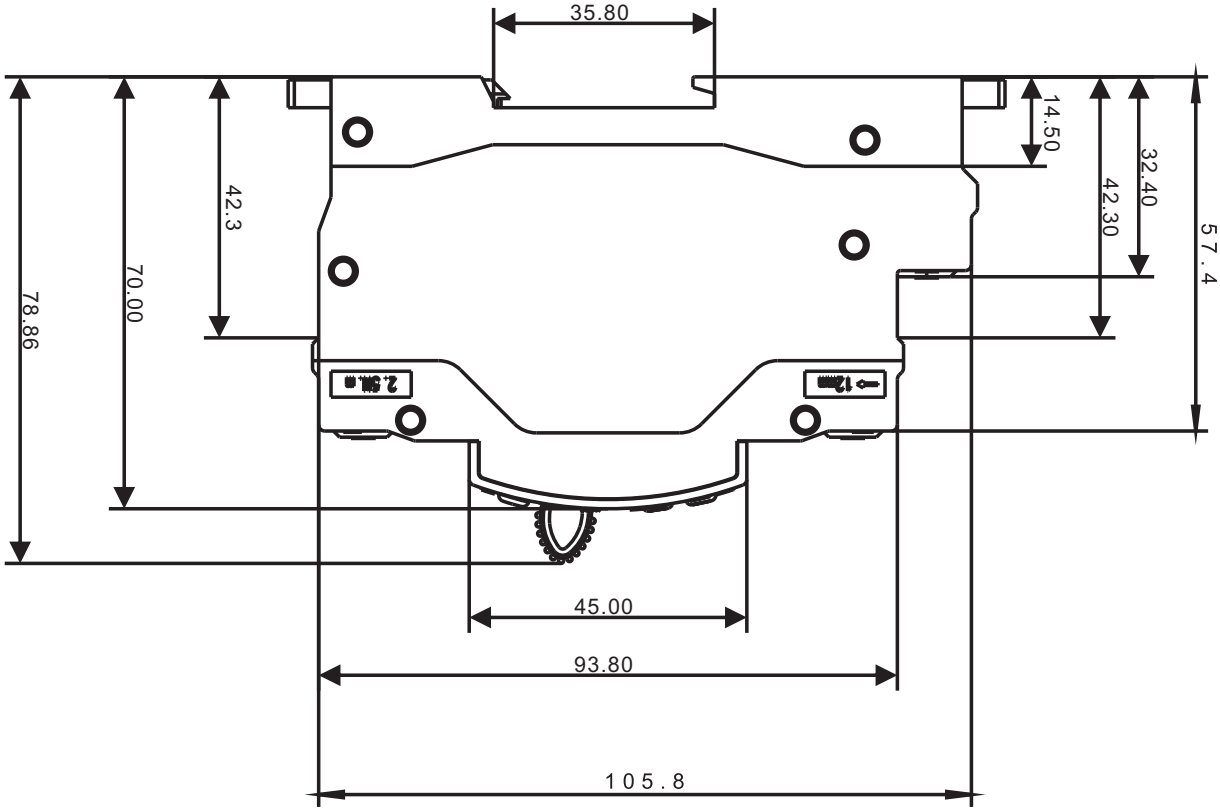


# 6.Dimensions




Note: □Terminal wiring area: fit for (1~25)mm².

□ Wire connection screw is M5, torque: 2.5N.m.




## 7. Installation

7.1 Before installation and wiring, please ensure that professionals have read this manual.

7.2 Before installation, please check the integrity of ATS. Then turn on the ATS with the operating handle,check the flexibility of the operating mechanism, andcheck the opening and closing status of each phase and normal power and backuppower loads.

7.3 Please equip the ATS with a suitable circuit breakers according to theinstallation requirements of the power distribution system to ensure that personnel and equipment safety.

## 8. Notes

8.1 When manual operation the mode selection switch must be in"manual" position

8.2 Manual/automatic operation can ensure the opening and closing performance of electrical operation, but in manual operation , there is no guarantee due to the different opening/closing speeds of the operators. In manual operation, there's possible for excessive silver alloy loss . Therefore, the selector switch shouldonly be pulled to the manual position after all power has been cut off for inspection and maintenance of the operating system and contact information. Normally,pull the selector switch to the electric position. When manual operationis required, pull the selector switch to themanual position. After manual operation is complete, pull theselector switch from the manual position to the automatic position.

8.3 The control circuit TSE is immediately energized. After thechange over is completed, the internal switch will damage the coil in the control circuit, and the coil can work normally at 85%-110% of the rated operating voltage. Too low input voltage may cause the coil to overheat and burn out.

## 9. Maintenance

⚠ 9.1 Maintenance and inspection should be carried out by professionals.

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In order to ensure the good performance of the ATS, the first maintenance and inspection should be carried out within 6 months after use. Then do the maintenance and inspection at least once a year. In harsh installation conditions, the frequency of maintenance and inspection should be increased.

9.3 If the maintenance and inspection items fail, please remove the dust.

b: Please check whether the electrical contact parts are deformed and damaged, and clean the surface.

c: metal particles and burnt around it. Rust, acidification and dust on the contact surfaces can cause poorcontact, so do some manual work and measure the necessary contact resistance.

d: If the ATS is wet or left unused for a long time, please dry it before turning on the power. After removing the dust, use a 500V megohmmeter to measure the insulation resistance of the normal power supply and the AC power supply. The load side and two poles, including the insulation resistance, when using live parts and metal plates, the insulation resistance should not be less than 10MQ.

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# CERTIFICATE

Product Model: YCQR series(PC class)

Standard:IEC 60947-6

Inspector: CNC001

Production date: Printed on the product or package.

This product is qualified according to the delivery inspection



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