



NXC-120~630
AC Contactor

User Instruction



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.

1 Use Purpose and Application Range

NXC series AC contactor is mainly used for frequent start and control of motor in AC 50Hz (or 60Hz) circuits with rated operating voltage up to 690V under 400 (380V) AC-3 application category. It is used to connect and disconnect circuits remotely, and can be used with proper thermal overload relay to act as electromagnetic starter.

2 Key Technical Parameters and Performance

Table 1 Environmental Conditions

| | | |
|--|--------------------------------------|---|
| Installation and operation conditions | Ambient temp (°C) | The limiting working temperature is - 35 °C ~ + 70 °C, the normal working temperature is - 5 ~ + 70 °C, and the average temperature within 24 hours is not more than + 35 °C. If it is not in the normal operating temperature range, the capacity reduction shall be considered. |
| | Hot and humid atmospheric conditions | Relative humidity should not exceed 50% at temperature up to +70°C, higher relative humidity is allowed under lower temperature, for example up to 90% at +20°C. User should take special measures against condensation due to temperature change. |
| | Altitude | Not higher than 2000m |
| | Pollution class | Class 3 |
| | Installation category | III |
| | Installation conditions | The angle between the installation surface and the vertical surface should not be greater than ±5°. |
| | Impact vibration | The product should be installed and used at places free from significant shaking, impact and vibration. |

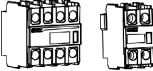





Table 2 Key technical parameters and performance index

| Model | | | NXC-120 | NXC-160 | NXC-185 | NXC-225 | NXC-265 |
|---|-----------|-----------------|--------------------------|---------|---------|---------|--------------------------|
| Rated operating current I _e (A) | 220V/230V | AC-3 | 120 | 160 | 185 | 225 | 265 |
| | | AC-4 | | | 160 | 185 | |
| | 380V/400V | AC-3 | 120 | 160 | 185 | 225 | 265 |
| | | AC-4 | | | 160 | 185 | |
| | 660V/690V | AC-3 | 86 | 107 | 107 | 118 | 170 |
| | | AC-4 | | | | 107 | 137 |
| Conventional free air thermal current I _{th} (A) | | | 200 | | 275 | | 315 |
| Rated insulation voltage U _i (V) | | | 1000 | | | | |
| Rated impulse withstand voltage U _{imp} (kV) | | | 12 | | | | |
| Coordination type | | | Type “2” coordination | | | | |
| Rated limited short-circuit current I _q (kA) | | | 50 | | | | |
| Power of controllable 3-phase motor (kW) | 220V/230V | | 37 | 45 | 55 | 63 | 75 |
| | 380V/400V | | 55 | 75 | 90 | 110 | 132 |
| | 660V/690V | | 80 | 100 | 100 | 110 | 160 |
| Electrical life (x10 ⁴ times)(400V) | AC-3 | | 120 | | | | 80 |
| | AC-4 | | 1.5 | | | 1 | 1.2 |
| Mechanical life (x10 ⁴ times) | | | 600 | | | | |
| Rated current of fuse | | | gG224 | | gG315 | | gG400 |
| Model of thermal overload relay | | | NXR-200 | | | NXR-630 | |
| Coil power | 50HZ | Pick-up (VA) | 500 | | | | 600 |
| | | Hold (VA) | 50 | | | | 11 |
| Operating range | | Pick-up voltage | (85%-110%)U _s | | | | (85%-110%)U _s |
| | | Release voltage | (20%-75%)U _s | | | | (10%-75%)U _s |

Table 2 (continue)

| Model | | | NXC-330 | NXC-400 | NXC-500 | NXC-630 |
|--|-----------|-----------------|-----------------------|---------|---------|---------|
| Rated operating current Ie (A) | 220V/230V | AC-3 | 330 | 400 | 500 | 630 |
| | | AC-4 | | 330 | | 500 |
| | 380V/400V | AC-3 | 330 | 400 | 500 | 630 |
| | | AC-4 | | 330 | | 500 |
| | 660V/690V | AC-3 | 235 | 303 | 353 | 400 |
| | | AC-4 | 170 | 235 | 303 | 353 |
| Conventional free air thermal current Ith (A) | | | 380 | 450 | 630 | 700 |
| Rated insulation voltage Ui (V) | | | 1000 | | | |
| Rated impulse withstand voltageUimp (kV) | | | 12 | | | |
| Coordination type | | | Type "2" coordination | | | |
| Rated limited short-circuit current Iq(kA) | | | 50 | | | |
| Power of controllable 3-phase motor (kW) | 220V/230V | | 90 | 132 | 160 | 200 |
| | 380V/400V | | 160 | 200 | 250 | 335 |
| | 660V/690V | | 200 | 300 | 335 | 350 |
| Electrical life (x10 ⁴ times)(400V) | AC-3 | | 80 | | | |
| | AC-4 | | 1.2 | 1 | 0.6 | |
| Mechanical life (x10 ⁴ times) | | | 600 | | | |
| Rated current of fuse | | | gG425 | gG500 | gG800 | gG950 |
| Model of thermal overload relay | | | NXR630 | | | |
| Coil power | 50HZ | Pick-up (VA) | 600 | | 800 | |
| | | Hold (VA) | 11 | | 11 | |
| Operating range | | Pick-up voltage | (85%-110%)Us | | | |
| | | Release voltage | (10%-75%)Us | | | |

Table 3 Key parameters of auxiliary contacts and accessories

| Key parameters | AC-15: 600VA DC-13: 66W Ith: 10A | | |
|---|--|--------------------|--------------------------------|
| Product example | Product name | Product parameters | Product models |
|  AX-3X | Top mounting auxiliary contact assembly | 4NO | AX-3X/40 |
| | | 3NO+1NC | AX-3X/31 |
| | | 2NO+2NC | AX-3X/22 |
| | | 1NO+3NC | AX-3X/13 |
| | | 4NC | AX-3X/04 |
| | | 2NO | AX-3X/20 |
| | | 1NO+1NC | AX-3X/11 |
| | | 2NC | AX-3X/02 |
|  F5 1NC+1NO Air delay head | Power-on delay assembly | 0.1s~3s | F5-T0 |
| | | 0.1s~30s | F5-T2 |
| | | 10s~180s | F5-T4 |
| | Power-off delay assembly | 0.1s~3s | F5-D0 |
| | | 0.1s~30s | F5-D2 |
| | | 10s~180s | F5-D4 |
|  AX-3C | Side mounting auxiliary contact assembly | 1NO+1NC | AX-3C/11 (for NXC-120~225) |
| | | | AX-3C/11B (for NXC-265~630) |
|  MI-9 | Mechanical interlock mechanism | 2NO | For NXC-120~225 |
|  NCL8-C | | ----- | For NXC-265~630 |
|  AXC-1 | Dust cover | ----- | For NXC-120~630 |

3 Installation

See below for outline and installation dimensions of contactor

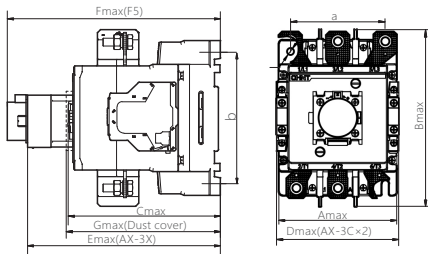
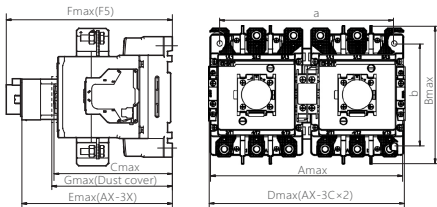


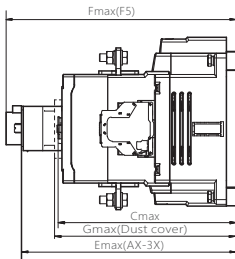
Table 4 Outline and installation dimensions

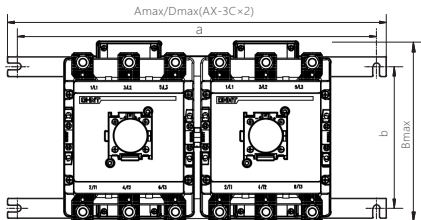
Unit: mm

| Model | Amax | Bmax | Cmax | Dmax | Emax | Fmax | Gmax | a | b | Φ |
|-------------|------|------|------|------|-------|-------|------|---------|-----------|---|
| NXC-120~225 | 121 | 182 | 156 | 127 | 196.5 | 216.5 | 158 | 96±0.5 | 133.6±0.8 | 7 |
| NXC-265~400 | 150 | 236 | 207 | 150 | 245.5 | 265.5 | 209 | 120±0.5 | 180±0.8 | 9 |
| NXC-500~630 | 165 | 248 | 225 | 165 | 263.5 | 283.5 | 227 | 130±0.5 | 180±0.8 | 9 |



**Figure 1 Outline and installation dimensions of
NXE-120/N~225/N AC contactors**





**Figure 2 Outline and installation dimensions of
NXC-265/N~630/N AC contactors**

Table 5 Outline and installation dimensions

Unit: mm

| Model | Amax | Bmax | Cmax | Dmax | Emax | Fmax | Gmax | a | b | Φ |
|-----------------|------|------|------|------|-------|-------|------|---------|-----------|-----|
| NXC-120/N~225/N | 249 | 182 | 156 | 255 | 196.5 | 216.5 | 158 | 222±0.8 | 133.6±0.8 | 7 |
| NXC-265/N~400/N | 400 | 216 | 220 | 400 | 258.5 | 278.5 | 222 | 375±0.5 | 180±0.8 | 8.5 |
| NXC-500/N~630/N | 481 | 229 | 238 | 481 | 276.5 | 296.5 | 240 | 455±1 | 180±0.8 | 8.5 |

Accessory installation drawing

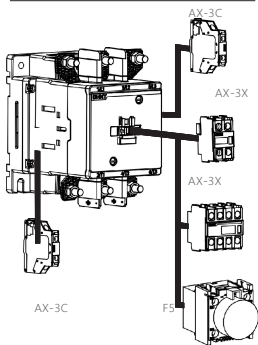


Figure 3-1 Installation of auxiliary contactors

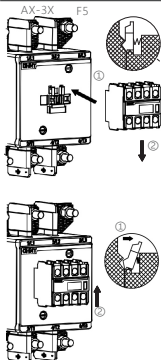


Figure 3-2 Installation of AX-3X and F5

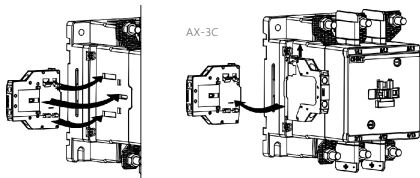


Figure 3-3 Installation of AX-3C

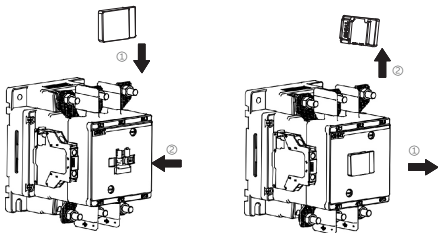


Figure 4 Installation of dust cover

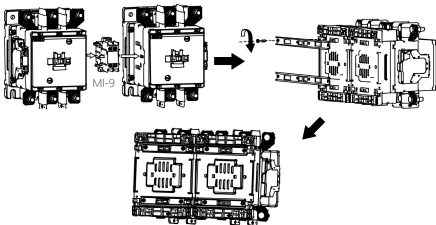


Figure 5 Installation of NXC-120/N~225/N mechanical interlock

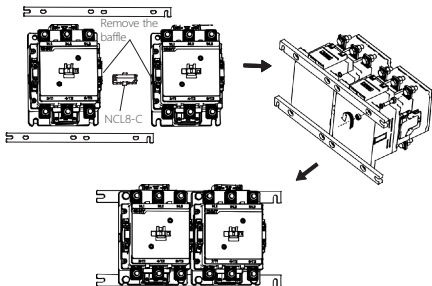


Figure 6 Installation of NXC-265/N~630/N mechanical interlock

| Model | Safety distance (F) (mm) | |
|-------------|--------------------------|-----------|
| | 380V/400V | 660V/690V |
| NXC-120~330 | 15 | 35 |
| NXC-400~630 | 20 | 40 |

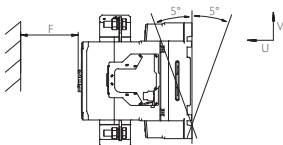























Figure 7 Product installation drawing

4 Maintenance

See Table 4 for the wiring capacity of terminals.

Table 6 Wiring capacity of terminals

| | | | | S(mm ²) | | | | | | |
|-----------------|---|-------------------|-----------------|---|---|---|---|---|---|--|
| | | | | | | | | | | |
| Main circuit |  | Wrench | NXC-120 ~225 |  |  |  |  | 10~150 |  |  with prefabricated terminal |
| |  | Wrench | NXC-265 ~630 |  |  |  |  | 50~240 |  | |
| Control circuit | M3.5  | Slot type Philips | NXC-120 ~630 |  |  |  |  |  |  |  A > 3.5mm, L < 8mm |
| | 0.8 N·m | | | 1~4 | 1~4 | 1~4 | 1~2.5 | 1~4 | 1~4 | |

Check if the contactor can operate reliably every month. Method: Check if the contact incline 5° forward upon pick-up and incline 5° backward upon release.

Conduct maintenance every month.

Note: Do not disassemble, assemble and repair the product at will. Replace the product if it is found to be damaged.

Table 7 Analysis and Troubleshooting of Faults

| Symptoms | Cause analysis | Troubleshooting method |
|---|---|--|
| The product does not operate or does not operate reliably | Inconsistency between control power voltage and coil voltage. | Use control power supply that complies with coil voltage. |
| | Insufficient operation circuit power capacity or disconnection or wrong connection exists in the circuit. | Check the circuit to ensure correct connection. |
| | Coil burnt; mechanical movable parts jammed. | Replace the coil, remove foreign objects or replace the product. |
| Noise | There are foreign objects on the polar face of magnet yoke or armature. | Clean the polar face of the iron core. |
| | The voltage of control power supply is too low. | Use control power supply that complies with coil voltage. |
| The product does not release or release slowly | Contact welding | Replace the product. |
| | There is oil or dust on the polar face of the iron core. | Clean the polar face of the iron core. |

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.

The CHINT logo is displayed in white text on a blue rectangular background. The letter 'i' in 'CHINT' has a small red dot above it.

QC PASS

NXC-120~630
AC Contactor
IEC/EN 60947-4-1

Check 01

Test date: Please see the packing

ZHEJIANG CHINT ELECTRICS CO.,LTD.



NXC-120~630
AC Contactor
User Instruction

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