



NXC-06M~100
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

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

2 Main Technical Parameters

2.1 See Table 1 for installation and operation conditions of the contactor.

2.2 See Table 2-1 and Table 2-2 for the key technical parameters and performance of the contactor.

Table 1 Installation and operation 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 2-1 Main technical parameters

Model			NXC-06M	NXC-09M	NXC-12M	NXC-16M	NXC-06(CS)	NXC-09(CS)	NXC-12(CS)	NXC-16(CS)	NXC-18(CS)	NXC-22(CS)
Rated operating current Ie(A)	220V/ 230V/ 240V	AC-3	6	9	12	16	6	9	12	16	18	22
		AC-4										
	380V/ 400V/ 415V	AC-3	6	9	12	16	6	9	12	16	18	22
		AC-4				9			12			12
	660V/ 690V	AC-3	3.8	4.9	4.9	6.7	3.8	6.6	8.9	8.9	12	14
		AC-4				4.9						
Conventional thermal current Ith(A)			20			22	20		25		32	
Rated insulation voltage Ui(V)			690									
Rated impulse withstand voltage Uimp(kV)			6				8					
Rated duty system			8 hour duty sy stem, uninterrupted duty system, intermittent duty sy stem, (Loag factor 40%),short term duty sy stem									
Rated limited short-circuit current Iq(kA)			50(415V)									
Power of controllable 3-phase motor (AC-3)kW	220V/230V/240V		1.5	2.2	3	4	1.5	2.2	3	3	4	5.5
	380V/400V/415V		2.2	4	5.5	7.5	2.2	4	5.5	7.5	7.5	11
	660V/690V		3	4	4	7.5	3	5.5	7.5	7.5	10	11
Arcing distance (mm)			3				10					
Electrical life (×10 ⁴ times) 400V	AC-3		120									
	AC-4		See attachment "Electrical life curve"									
Mechanical life(×10 ⁴ times)			1200									
Operation frequency (times/h)	AC-3		600									
	AC-4		150									
Pole impedance(Ω)			≤0.05									
Enclosure protection class			IP20(Front Side)									
Model of matching fuse			gG20						gG25		gG32	

Continued Table 2

Model		NXC-06M	NXC-09M	NXC-12M	NXC-16M	NXC-06(CS)	NXC-09(CS)	NXC-12(CS)	NXC-16(CS)	NXC-18(CS)	NXC-22(CS)
Rated current of fuse of different model (A)		20						25		32	
Coordination type		Type "2" coordination									
Model of matching thermal overload relay		NXR-12				NXR-25					
Parameters of auxiliary circuit	AC-15	U _e /I _e : AC220V/230V/240V/2.7A, AC380V/400V/415V/1.5A I _{th} : 10A									
	DC-13	U _e /I _e : DC220V/0.3A									
Coil power	Pick-up (VA)	≤40				≤70					
	Hold (VA)	≤9.0				≤9.5					

Table 2-2 Main technical parameters

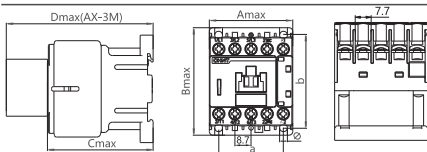
Model			NXC-25(CS)	NXC-32(CS)	NXC-38(CS)	NXC-40(CS)	NXC-50(CS)	NXC-65(CS)	NXC-75(CS)	NXC-85(CS)	NXC-100(CS)
Rated operating current I _e (A)	220V/230V/240V	AC-3	25	32	38	40	50	65	75	85	100
		AC-4									
	380V/400V/415V	AC-3	25	32	38	40	50	65	75	85	100
		AC-4			32						
	660V/690V	AC-3	18	22	22	34	39	42	42	49	49
		AC-4									
Conventional thermal current I _{th} (A)			40	50		60	80		90	100	125
Rated insulation voltage U _i (V)			690								
Rated impulse withstand voltage U _{imp} (kV)			8								
Rated duty system			8 hour duty sy stem, uninterrupted duty system, intermittent duty sy stem, (Loag factor 40%),short term duty sy stem								
Rated limited short-circuit current I _q (kA)			50(415V)								

Continued Table 2

Model		NXC-25(CS)	NXC-32(CS)	NXC-38(CS)	NXC-40(CS)	NXC-50(CS)	NXC-65(CS)	NXC-75(CS)	NXC-85(CS)	NXC-100(CS)
Power of controllable 3-phase motor (AC-3)kW	220V/230V/240V	5.5	7.5	9	11	15	18.5	22	22	25
	380V/400V/415V	11	15	18.5	18.5	22	30	37	37	45
	660V/690V	15	18.5	18.5	30	37	37	37	45	45
Arcing distance (mm)		10						12		
Electrical life (x10 ⁴ times) 400V	AC-3	120			100			80		
	AC-4	See attachment "Electrical life curve"								
Mechanical life(x10 ⁴ times)		1000			900			650		
Operation frequency (times/h)	AC-3	600								
	AC-4	150			120					
Pole impedance(Ω)		≤0.05								
Enclosure protection class		IP20(Front side)			IP10					
Model of matching fuse		gG40	gG50		gG63	gG80		gG100		gG125
Rated current of fuse of different model (A)		40	50		63	80		100		125
Coordination type		Type "2" coordination								
Model of matching thermal overload relay		NXR-25/ NXR-38			NXR-100					
Parameters of auxiliary circuit	AC-15	U _e /I _e : AC220V/230V/240V/2.7A, AC380V/400V/415V/1.5A I _{th} : 10A								
	DC-13	U _e /I _e : DC220V/0.3A								
Coil power	Pick-up (VA)	≤70			≤210			≤300		
	Hold (VA)	≤11.4			≤36.6			≤36.6		
*CS means the wiring terminal is plus screw, None is normal product.										

3 Installation

3.1 See Figure 1 and Table 3 for the installation and overall dimensions of NXC-06M~16M series AC contactors. See label on the box for model, specifications and weight.



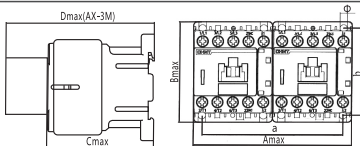
**Figure 1 Installation and overall dimensions of
NXC-06M~16M series AC contactor**

Table 3 Overall and installation dimensions

Unit: mm

Model	Overall dimensions				Installation dimensions		
	Amax	Bmax	Cmax	Dmax	a	b	Φ
NXC-06M~16M	45.5	59	58	94	35±0.35	50±0.48	4.2
NXC-06M/4~16M/4	45.5	59	58	94	35±0.35	50±0.48	4.2
NXC-06M/Z~16M/Z	45.5	59	70	106	35±0.35	50±0.48	4.2
NXC-06M/4/Z~16M/4/Z	45.5	59	70	106	35±0.35	50±0.48	4.2

3.2 See Figure 2 and Table 4 for the installation and overall dimensions of NXC-06M/N~16M/N series directional AC contactors. See label on the box for model, specifications and weight.



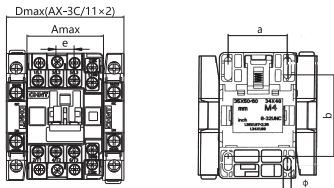
**Figure 2 Installation and overall dimensions of
NXC-06M/N~16M/N series directional AC contactors**

Table 4 Installation and overall dimensions and wiring capacity

Unit: mm

Model		Overall dimensions				Installation dimensions		
		Amax	Bmax	Cmax	Dmax	a	b	Φ
NXC-06M/N~16M/N		91	64	58	94	80±0.7	50±0.48	4.2
NXC-06M/4/N~16M/4/N		91	64	58	94	80±0.7	50±0.48	4.2
NXC-06M/Z/N~16M/Z/N		91	64	70	106	80±0.7	50±0.48	4.2
NXC-06M/4/Z/ N~16M/4/Z/N		91	64	70	106	80±0.7	50±0.48	4.2
								
Main circuit	Control circuit	0.8 N·M	Phillips	mm ²	mm ²	mm ²	mm ²	mm ²
				1~2.5	1~2.5	1~2.5	1~1.5	----

3.3 See Figure 3 and Table 5 for the installation and outline dimensions of NXC-06(CS)~38(CS) series AC contactors. See label on the box for model, specifications and weight.



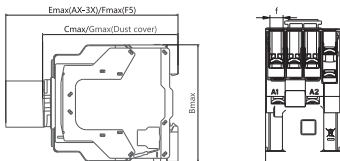


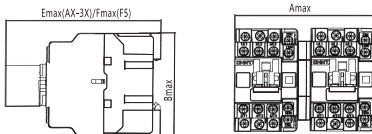
Figure 3 Installation and outline dimensions of NXC-06(CS)/N~38(CS)/N series AC contactors

Table 5 Installation and overall dimensions

Unit: mm

Model	Overall dimensions							Installation dimensions				
	Amax	Bmax	Cmax	Dmax	Emax	Fmax	Gmax	a	b	e	f	Φ
NXC-06~16	45.5	75	88	70	126.5	146.5	90	35±0.31	48±0.31	10.6	7.8	4.5
NXC-06CS~16CS	45.5	84	88	70	126.5	146.5	90	35±0.31	60±0.31	10.6	7.8	4.5
NXC-18~22	45.5	75	88	70	126.5	146.5	90	35±0.31	48±0.31	11.4	9.2	4.5
NXC-18CS~22CS	45.5	84	88	70	126.5	146.5	90	35±0.31	60±0.31	11.4	9.2	4.5
NXC-25(CS)~38(CS)	56.5	87	93	81	131.5	151.5	95	40±0.31	48±0.31	14.2	10.6	4.5

3.4 See Figure 4 and Table 6 for the installation and overall dimensions and wiring capacity of NXC-06(CS)/N~38(CS)/N series AC contactors. See label on the box for model, specifications and weight.



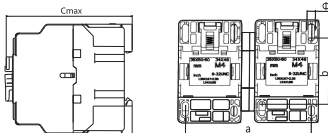


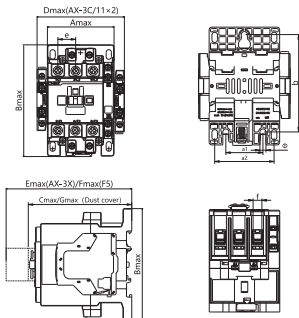
Figure 4 outline and installation diagram of
NXC-06(CS)/N~38(CS)/N series reversible AC contactor

Table 6 Installation and overall dimensions and wiring capacity

Unit: mm

Model		Overall dimensions					Installation dimensions				
		Amax	Bmax	Cmax	Emax	Fmax	a	b	Φ		
NXC-06/N~16/N		106	75	88	126.5	146.5	95±0.31	48±0.31	4.5		
NXC-18/N~22/N		106	75	88	126.5	146.5	95±0.31	48±0.31	4.5		
NXC-25/N~38/N		126	87	93	131.5	151.5	111±0.31	48±0.31	4.5		
 Main circuit	NXC-06(CS)~22(CS) M3.5 1.2N·m	Slot type Phillips 		 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	d mm	 A > 3.5mm, L < 7.8mm
	NXC-25(CS)~38(CS) M4 1.85N·m	Slot type Phillips 	NXC-06~16	1~2.5	1~2.5	1~2.5	1~2.5	1~2.5	1~2.5	8.2	 A > 4mm, L < 8mm
			NXC-18~22	1.5~4	1.5~4	1.5~4	1.5~4	1.5~4	1.5~4	8.2	
			NXC-25~38	1.5~6	1.5~6	1.5~6	1.5~6	1.5~4	1.5~4	10.6	
 Control circuit	A1 B1 M3.5 1.2N·m	Slot type Phillips 		 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	d mm	 A > 3.5mm, L < 8mm
			NXC-06~38	1~1.5	1~1.5	1~1.5	1~1.5	1~1.5	1~1.5	8.5	

3.5 See Figure 5 and Table 7 for the installation and overall dimensions of NXC-40(CS)~100(CS) series AC contactors. See label on the box for model, specifications and weight.



**Figure 5 outline and installation diagram of
NXC-40(CS) ~ 100(CS) series AC contactor**

Table 7 Installation and overall dimensions

Unit: mm

Model	Overall dimensions							Installation dimensions					
	Amax	Bmax	Cmax	Dmax	Emax	Fmax	Gmax	a1	a2	b	e	f	Φ
NXC-40(CS)~65(CS)	77	129	118	102	156.5	176.5	121	40±0.28	64±0.32	105±0.57	20	9.5	6.5
NXC-75(CS)~100(CS)	87	132	127	112	165.5	185.5	129	40±0.28	74±0.32	105±0.57	24	13	6.5

3.6 See Figure 6 and Table 8 for the installation and overall dimensions and wiring capacity of NXC-40/N~100/N series AC contactors. See label on the box for model, specifications and weight. NXC-40(CS)/N~100(CS)/N

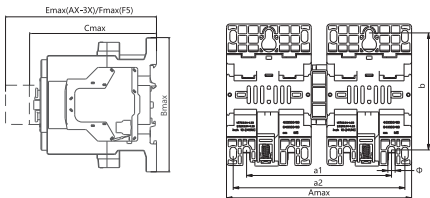


Figure 6 Installation and overall dimensions of NXC-40(CS)/N~100(CS)/N series AC contactors

Table 8 Installation and overall dimensions and wiring capacity

Unit: mm

Model	Amax	Bmax	Cmax	Emax	Fmax	a1	a2	b	Φ
NXC-40(CS)/N~65(CS)/N	169	129	118	156.5	176.5	131±0.72	155±0.8	105±0.57	6.5
NXC-75(CS)/N~100(CS)/N	189	132	127	165.5	185.5	141.5±0.72	175.5±0.8	105±0.57	6.5

 Main circuit	NXC-40~100  NXC-40CS~ 100CS  NXC-40-65 NB 6Um NXC-40CS-65CS NB 6Um NXC-75CS(100CS) NB 9Um	NXC-40~100 4mm  NXC-40CS~ 100CS Phillips 		 mm²	 mm²	 mm²	 mm²	 mm²	 mm²	d mm	NXC-40~ 100  NXC-40CS-65CS A/Φ>6mm L<17mm Φ<15mm NXC-75CS-100CS A/Φ>8mm L<21mm Φ<17mm
			NXC-40-65	6~25	4~10	6~25	4~10	6~25	4~10	14	
				NXC-75~100	10~50	6~25	10~50	6~25	10~50	6~25	15
 Control circuit	A1  A2  M3.5 12N·m	Slot type Phillips  		 mm²	 mm²	 mm²	 mm²	 mm²	 mm²	d mm	 A>35mm L<8mm
			NXC-40~100	1~1.5	1~1.5	1~1.5	1~1.5	1~1.5	1~1.5	1~1.5	8.5

4 Installation, debugging and operation

4.1 Suggestions on assembly of product accessories are shown in Fig.7-1~7-8; The installation diagram of the product is shown in Figure 8.

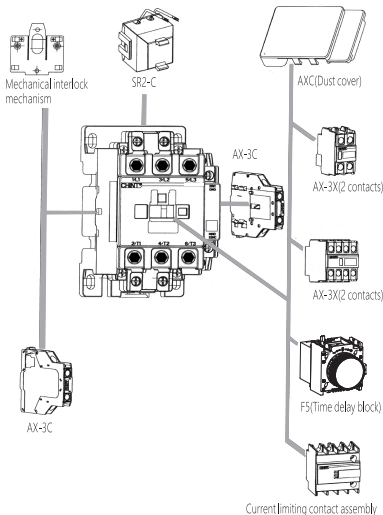


Figure 7-1 assembly diagram of product accessories

The installation of AX-3C

The removal of AX-3C

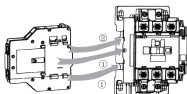


Figure 7-2 assembly diagram of product accessories

The installation of AX-3X/F5

The removal of AX-3X/F5

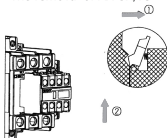
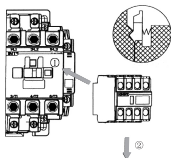


Figure 7-3 assembly diagram of product accessories

NXC-06(CS)~38(CS) AXC dust cover installation

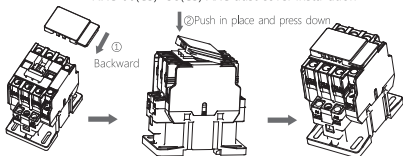


Figure 7-4 assembly diagram of product accessories

NXC-40(CS)~100(CS) AXC dust cover installation

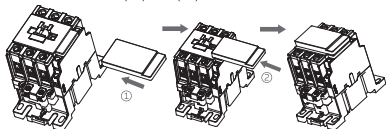


Figure 7-5 assembly diagram of product accessories

NXC-06M~16M mechanical linkage mechanism installation diagram

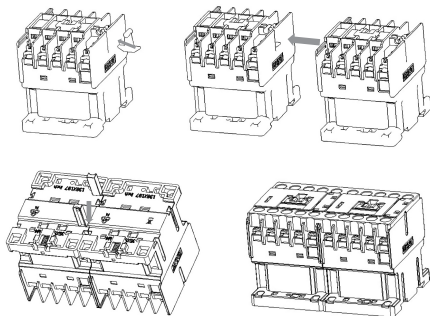


Figure 7-6 assembly diagram of product accessories

NXC-06(CS)~38(CS) mechanical linkage mechanism installation diagram

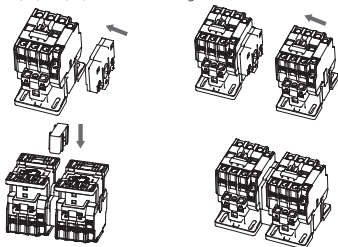


Figure 7-7 assembly diagram of product accessories

NXC-40(CS)~100(CS) mechanical linkage mechanism installation diagram

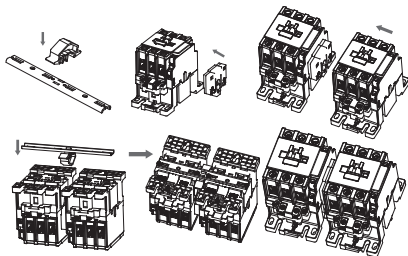


Figure 7-8 assembly diagram of product accessories

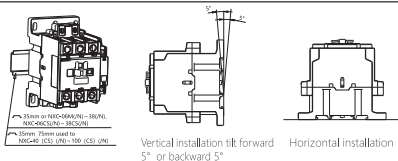


Fig.8 Product installation diagram

5 Maintenance

Check if the contactor can operate reliably every month. Method: Check if the contactor inclines 5° forward upon pick-up and inclines 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.**

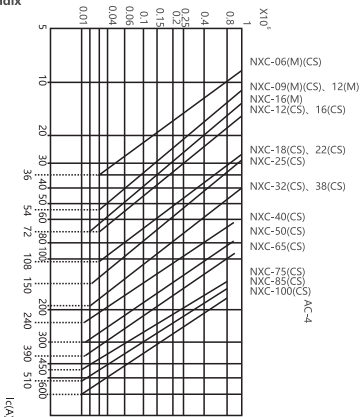
Table 9 Analysis and Troubleshooting of Faults

Symptoms	Cause analysis	Troubleshooting method
The product does not operation 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 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.

6 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.

Appendix



Example:

Asynchronous motor $P=5.5\text{kW}$, $U_e=400(380)\text{V}$, $I_e=11\text{A}$, $I_c=6 \times I_e=66\text{A}$, 200000 times of operation is required, so according to the curve, the rated value of AC contactor should be NXC-32.

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-06M~100
AC Contactor
IEC/EN 60947-4-1

Check 01

Test date: Please see the packing

ZHEJIANG CHINT ELECTRICS CO.,LTD.



NXC-06M~100
AC Contactor
User Instruction

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