

NXCC Series
Contactors for Capacitor
Switching

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.



This is the general warning sign. It is used to alert the user to potential hazards. All safety messages that follow this sign shall be obeyed to avoid possible harm.

1 Use Purpose

NXCC series contactors for capacitor switching (hereinafter referred to as contactor) is mainly used in power systems with AC 50Hz or 60Hz, rated operating voltage up to 690V. It is used to connect and disconnect shunt capacitors with the aim to improve power factor.

2 Main Technical Parameters

Table 1 Installation and operation conditions

Model	NXCC-25	NXCC-32	NXCC-43	NXCC-63	NXCC-95	NXCC-115	NXCC-150	NXCC-170
Rated impulse withstand voltage U_{imp} (kV)	6							
Rated limited short-circuit current I_q (kA)	50(400V)							
Rated operating voltage U_e (V)	220/230, 380/400, 660/690							
Inrush current suppression capability	20Ie							
Operating frequency Time/hour	120							
Electrical life AC-6b ($\times 10^4$ times)	15							
Mechanical life ($\times 10^4$ times)	100							
On-load Factor	40%							
Pole impedance(Ω)	≤ 0.05							
Arcing distance (mm)	10				12		15	
Type of Coordination	Type "2" coordination							
Model of matching fuse	gG25	gG32	gG50	gG63	gG100	gG125	gG160	gG200
Rated current of Fuse(A)	25	32	50	63	100	125	160	200
Auxiliary Circuit Parameters	Model of matching fuse:gG10 ; Ith : 10A ; AC-15 : U_e/I_e : AC220V/230V/2.7A , AC380V/400V/1.5A ; DC-13 : U_e/I_e : DC220V/0.3A							
AC coil power	Pick-up(VA)	≤ 70		≤ 210	≤ 300		≤ 1000	
	Hold (VA)	≤ 9.5	≤ 11.4	≤ 36.6		≤ 91.2		
Rated duty system	8 hour duty system,uninterrupted duty system,intermittent duty system(Loag factor 40%),short term duty system							
Operation range	Pick-up voltage: 85%Us~110%Us				Release voltage:20%Us~75%Us			
Ambient temp($^{\circ}$ C)	The limiting working temperature is -35° C~ $+70^{\circ}$ C,the normal working temperature is -5° C~ $+40^{\circ}$ C,and the average temperature within 24 hours is not more than $+35^{\circ}$ C.If it is not in the normal operating temperature range,the capacity reduction shall be considered.							
Humidity	Relative humidity should not exceed 50% at temperature up to $+70^{\circ}$ C, higher relative humidity is allowed under lower temperature, for example up to 90% at $+20^{\circ}$ C. User should take special measures against condensation due to temperature change.							
Altitude	Not higher than 2000m							
Pollution class	Class 3							
Installation conditions	The angle between the installation surface and the vertical surface should not be greater than $\pm 5^{\circ}$.							
Transportation & Storage Conditions	The applicable temperature range for transportation and storage conditions is between -25° C and $+55^{\circ}$ C, which can reach $+70^{\circ}$ C within a short-time (24h). The storage place shall be ventilated and dry, and shall not be attacked by rain, snow and shall not be exposed to direct sunlight.							

3 Overall & Installation Dimensions and Weight

The overall and installation dimensions of the Contactor are shown in Fig. 1 to Fig. 3 and Table 2, and the wire connection capacity of the terminal is shown in Table 3 and Table 4. The model, specifications and weight are shown on the box label.

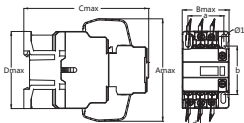


Fig. 1 Overall and Installation Dimensions of NXCC-25 ~ 43 Contactor

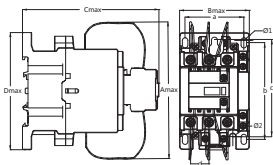


Fig.2 Overall and Installation Dimensions of NXCC-63 ~ 115 Contactor

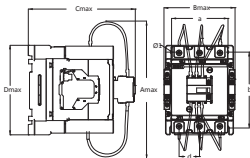


Fig.3 Overall and Installation Dimensions of NXCC-150 ~ 170 Contactor

Table2 Overall and installation dimensions of contactor

Unit : mm

Model	Amax	Bmax	Cmax	Dmax	a	b	c	d	Φ1	Φ2	Remarks
NXCC-25	80	45.5	122	75	35±0.31	48±0.31	/	11.4	4.5	/	In addition to installation with screw, the installation with 35mm DIN rail can also be used
NXCC-32~43	90	56.5	129	87	40±0.31	48±0.31	/	14.2	4.5	/	
NXCC-63	132	77	151	129	64±0.32	100~110	105±0.57	20	6	6.5	In addition to installation with screw, the installation with 35mm or 75mm DIN rail can also be used
NXCC-95~115	135	87	160	132	74±0.32	105~118.5	105±0.57	24	6.2	6.5	
NXCC-150~170	203	127	190	160	96±0.5	133.6±0.8	/	36	7	/	Installation with Screw

Table 3 Wiring Capacity of NXCC-25-115 Contactor

Main circuit	NXCC-25 M3.5 1.2N-m 	Slot type Phillips 								d	 A>35mm, L<7.8mm
				mm²	mm²	mm²	mm²	mm²	mm²	mm	
Main circuit	NXCC-32~43 M4 1.85N-m 	Slot type Phillips 	NXCC-25							d	 A>40mm, L<8.0mm
				mm²	mm²	mm²	mm²	mm²	mm²	mm	
Main circuit	NXCC-63~115 M6 5N-m (NXCC-63) M8 9N-m (NXCC-65~115) 	4mm 	NXCC-43							d	
				mm²	mm²	mm²	mm²	mm²	mm²	mm	
Main circuit	NXCC-95~115 M8 10N-m 	Slot type Phillips 	NXCC-43							d	
				mm²	mm²	mm²	mm²	mm²	mm²	mm	
Control circuit	M3.5 M3.5 1.2N-m 	Slot type Phillips 	NXCC-25~43							d	 A>35mm, L<8.0mm
				mm²	mm²	mm²	mm²	mm²	mm²	mm	

Table 4 Wiring Capacity of NXCC-150 ~ 170 Contactor

Main circuit	NXCC-150~170 M10 10N-m 	4mm 	Slot type 	NXCC-150~170							 20mm
					mm²	mm²	mm²	mm²	mm²	mm²	
Control circuit	M3.5 1.2 N-m 	Slot type Phillips 	NXCC-150~170								 A>35mm, L<8mm
					mm²	mm²	mm²	mm²	mm²	mm²	

4 Installation, Debugging, and Operation

- 4.1 Before installation, the registered trademark of our Company should be recognized: **CHNT**
- 4.2 Before installation, please check whether the technical data on the coil (such as rated voltage, frequency, etc.) matches the power supply. If the resistance between phases is close together, they must be separated.
- 4.3 The wiring screws should be tightened. After checking the correctness of the wiring, the sucking coil should be energized and opened several times without the main contact being charged. The test action should be reliable before it can be put into use.
- 4.4 When wiring, attention should be paid to the terminal markings:
The wiring terminals 1/L1, 3/L2 and 5/L3 of the Product are the main circuit incoming terminals; And the wiring terminals 2/T1, 4/T2 and 6/T3 are the main circuit outgoing terminals of the Product; The wiring terminals 21 & 22 and 31 & 32 are normally closed auxiliary terminals of the Product, which are mirror contacts; The wiring terminals 13 & 14 and 33 & 34 are normally open auxiliary terminals of the Product.
- 4.5 When the capacitor is closed, if the surge current exceeds the suppression capacity of this Contactor, the current limiting resistor may be burned out as a consumable. At this time, the current limiting resistor can be replaced firstly, then continued to be used.
- 4.6 The insulation voltage of the electrical appliance selected for the discharge device in the reactive power compensation equipment should be greater than U_e to avoid damage to the Contactor due to the failure of the discharge device.
- 4.7 Please note that this Contactor cannot be used for jog, otherwise the current limiting resistor will be burnt out.
- 4.8 To avoid repeated switching, it is recommended to set the power factor input threshold of the controller to not exceed 0.95, the cut-off threshold to 1, the switching delay between two capacitors to 60 seconds, and the switching delay after cutting off the same capacitor to 180 seconds.

5 Maintenance

- 5.1 Daily Maintenance
Please take appropriate measures to remove dust, moisture, conductive dust and and corrosive substances, verify whether the controllable capacitor capacity of the Product matches the actual capacitor capacity, and tighten the wiring terminals.
- 5.2 Maintenance during Operation Stage
 - 1) If any abnormal noise was found, it may be due to dirt on the iron core pole surface of the Contactor. Please wipe the pole surface clean.
 - 2) If the contact of the Contactor was blackening or other phenomena caused by electric arc, which does not affect its performance.

5.3 Maintenance Cycle

It is recommended to inspect and maintain the Product once a month.

TIP: The Product cannot be disassembled or repaired at will. After confirming damage, it should be replaced in a timely manner.

5.4 Long-term Shutdown and Storage Life

If long-term shutdown and storage life exceeding one month, before installation and use, please inspect according to the requirements of "4. Installation, Debugging, and Operation" clause.

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.

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QC PASS

NXCC Series
Contactors for Capacitor
Switching

IEC/EN 60947-4-1

Check 53

Test date: Please see the packing

ZHEJIANG CHINT ELECTRICS CO., LTD.

CHINT

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**NXCC Series
Contactors for Capacitor Switching
User Instruction**

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