

NXCC Series Capacitor Contactor

1. Application

- NXCC series capacitor contactors are mainly used in power system with rated working voltage up to 690V, to input low-voltage reactive power compensation equipment or cut off low-voltage parallel capacitors.
- Standard :IEC/EN 60947-4-1

2. Type designation

N	X	CC	□	□
Company code	Next series	Capacitor contactor	Basic specification code	Number of auxiliary contact
			25,32,43,63, 95,115,150,170	21 stands for 2NO+1NC, 12 stands for 1NO+2NC (NXCC-25~115) ; 32 stands for 3NO+2NC, 23 stands for 2NO+3NC (NXCC-150~170)

3. Normal working conditions

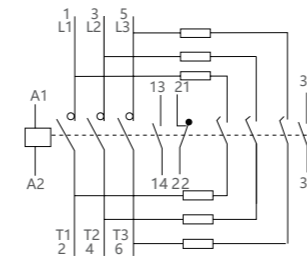
- Environmental temperature: Extreme working temperature -35 °C ~ +70 °C , normal working temperature -5 °C ~ +40 °C , with an average value not exceeding +35 °C within 24 hours
- Altitude: not exceeding 2000m
- Humidity: When the maximum temperature is +70 °C , the relative humidity does not exceed 50%; Higher relative humidity can be allowed at lower temperatures, such as up to 90% at 20 °C
- Pollution level: Level 3.
- Installation category: Class III.
- Installation and conditions: The inclination between the installation surface and the vertical surface shall not exceed ± 5 °.
- Impact and vibration: The product should be installed and used in a place without significant shaking, impact and vibration.

4. Main parameters

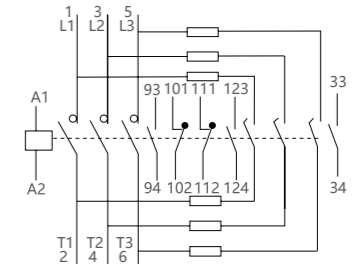
Technical parameter	NXCC-25	NXCC-32	NXCC-43	NXCC-63	NXCC-95	NXCC-115	NXCC-150	NXCC-170
Ith(A)	25	32	43	63	95	115	150	170
Ie(AC-6b) (A)	19	30.4	39.4	52.5	91.9	105	121.6	136.8
Controlled Capacitor capacity(kvar)	220/230V	7.2	11.5	15	20	35	46.3	52.1
	380/400V	12.5	20	25.9	34.5	60.4	80	90
	660/690V	21.7	34.7	45	60	105	139	156.3
Ui (V)	690							
Suppress surge current	20Ie							
Coil working voltage	Pick up : (85%~110%)Us; Release: (20%~75%)Us							
Coil capacity(VA)	Start/ keep	70/9.5	70/11.4	70/11.4	210/36.6	300/36.6	1000/91.2	1000/91.2
Auxiliary contact capacity	AC-15: Ue/Ie: AC220V/230V/2.7A, AC380V/400V/1.5A; DC-13: Ue/Ie: DC220V/0.3A; Ith:10A							
Uimp	6kV							
Protection degree	IP20(front side)			IP10				
Coil voltage Us(50Hz)	110V, 127V, 220V, 380V, 415V							

5. Wiring diagram

Example: NXCC-2521~11521 wiring diagram

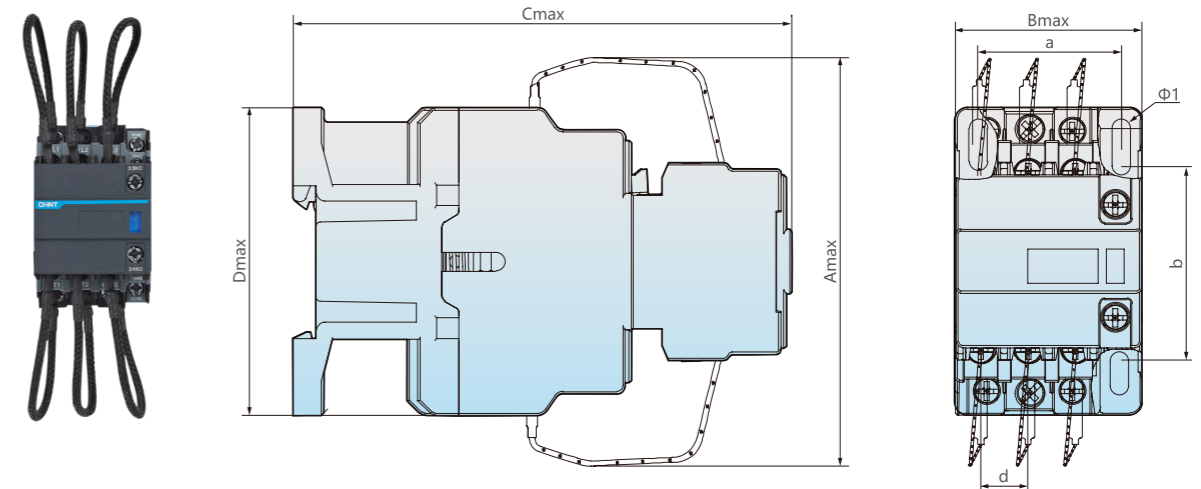


Example: NXCC-15032~17032 wiring diagram

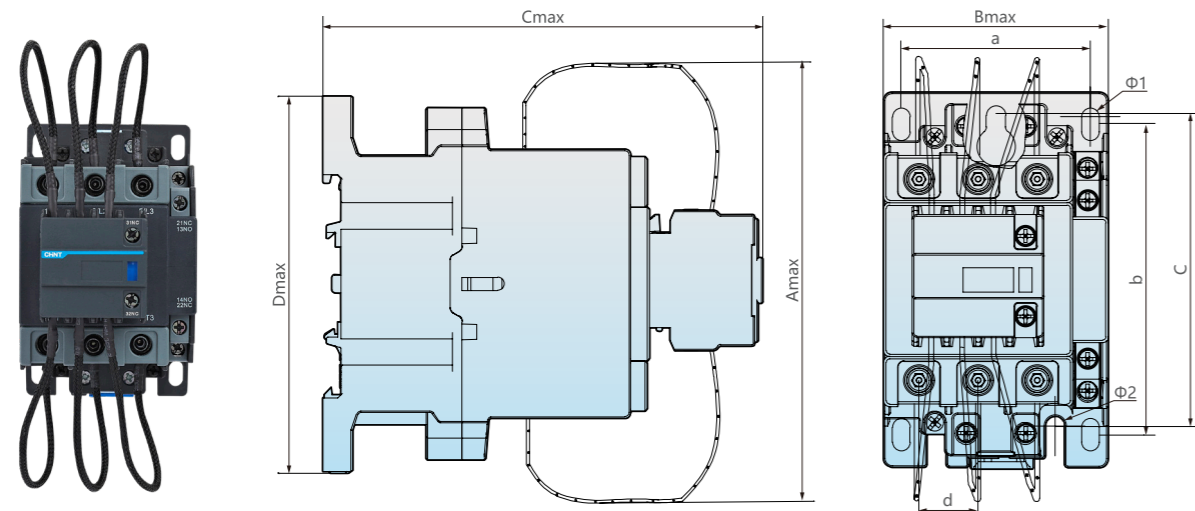


6. Overall dimensions

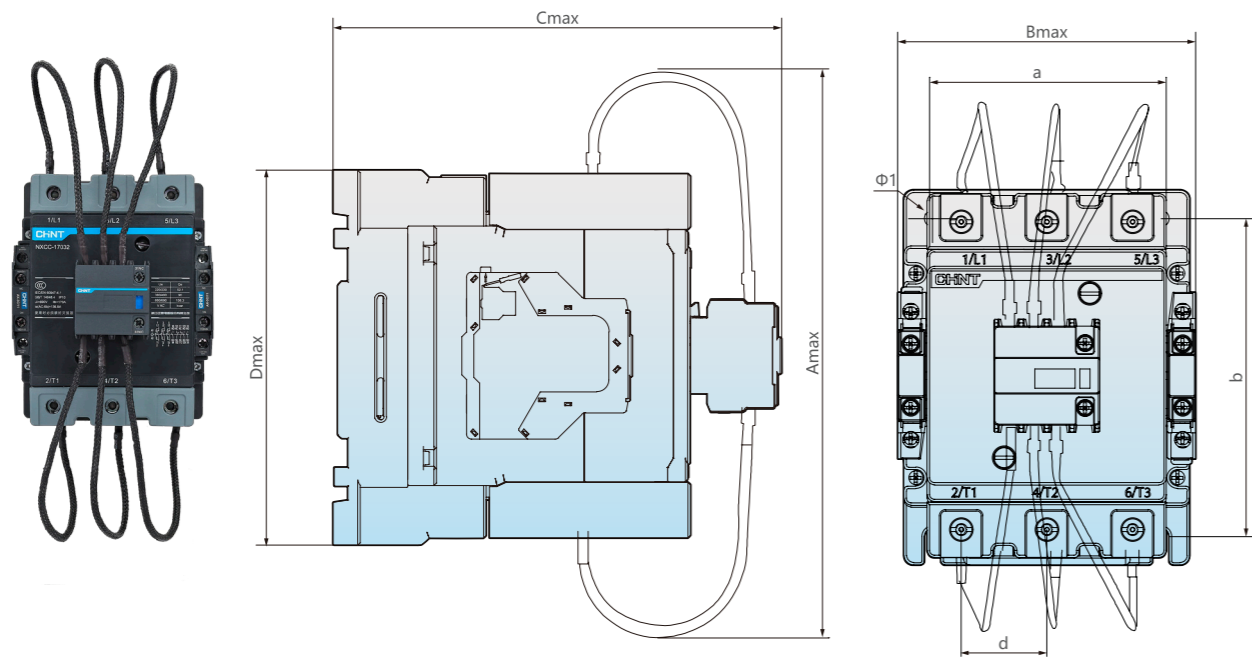
NXCC-25~43 appearance and installation dimensions



NXCC-63~115 appearance and installation dimensions



NXCC-150~170 appearance and installation dimensions



Model type	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	-	Installation by screws or by 35mm din rail
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	Installation by screws or by 35mm/75mm din rail
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	-	Screw mounting

7. Instructions for ordering

7.1 When ordering, the following information must be indicated.

7.1.1 Complete product reference of the contactor.

7.1.2 Rated control voltage and frequency of the coil.

7.1.3 Order quantity.

7.2 Ordering example: NXCC-4321 capacitor contactor, coil voltage 220V 50Hz, 10 pcs.

Appendix: Instructions for use in abnormal environments

The use of correction factors at high altitudes indicates that

- When altitude ≤ 2000m, there is no significant impact on product performance.
- When altitude >2000m, it is necessary to consider the air cooling effect and the rated shock withstand voltage drop and other conditions, so it is necessary to design or use in consultation between the manufacturer and the user.
- The following table gives the correction factors for the rated impulse withstand voltage and rated operating current at altitudes >2000m, with no change in the rated operating voltage.

Altitude (m)	2000	3000	4000
Correction factor for rated impulse withstand voltage	1	0.88	0.78
Correction factor for rated operating current	1	0.92	0.9

Instructions for use in non-normal temperature environments

- In the normal working temperature range, the use of the product performance has no significant impact.
- When the working environment temperature is higher than +40 °C, must take into account the permissible limit temperature rise of the product to be reduced, must reduce the rated operating current, reduce the number of standard components installed in the contactor, otherwise it may be damaged, shorten the life of the product and reduce the reliability of the work, but also affects the range of action of the product; when the working environment temperature is lower than -5 °, should be taken into account the insulation and lubrication grease in the low ambient temperature will freeze, resulting in product failure, so the need for manufacturers to consult with the design or use of user. When the ambient temperature is below -5°, it should be considered that the grease for insulation and lubrication will freeze in too low an ambient temperature, which will lead to malfunctioning of the product, and therefore it is necessary for the manufacturer to consult with the user on the design or use.
- The following table shows the correction factors for the rated operating current at ambient temperatures above +55°C with the rated operating voltage unchanged.

Ambient temperature (°C)	55	60	65	70
Correction factor	1	0.93	0.875	0.75

- +55°C ~ +70°C, contactor suction voltage range is (90%~110%) Us.
- Corrosive environment use of the reduced capacity instructions
- On metal parts
Chlorine Cl₂, Nitrogen Dioxide NO₂, Hydrogen Sulfide H₂S, Sulfur Dioxide SO₂
Copper: The thickness of the copper sulfide coating will be twice as thick under chlorine as under normal conditions, and essentially the same in the presence of nitrogen dioxide.
Silver: When silver contacts or silver-coated contacts are used in SO₂ and H₂S environments, the surface of the contacts will darken, resulting in the formation of a silver sulfide coating, which increases the contact temperature rise and can lead to contact damage. In humid environments, when both Cl₂ and H₂S are present, the thickness of the coating increases by a factor of seven. In the presence of both H₂S and NO₂, the thickness of the silver sulfide coating increases 20 times.

• Selection should take into account that

In the oil refining, steel, paper, synthetic fiber (nylon) industries, or in industries that use sulfur in general, the equipment used is subject to the phenomenon of sulfurization, which is also known as "oxidation" in the industrial industry. Installation of equipment in the machine room does not guarantee that it will not be oxidized, in order to ensure that the air pressure in the machine room is slightly higher than atmospheric pressure, the air inlet is generally shorter, which does reduce the external pollution to a certain extent, but after five to six years of operation, the equipment inevitably produces corrosion, oxidation. For this reason, in the working environment of corrosive gases, the equipment needs to be used at a reduced capacity, with a reduction factor of 0.6 (maximum 0.8) multiplied by the rated value, which reduces the accelerated rate of oxidization due to the increase in temperature.