



NCX1 Series Anti-dust contactor

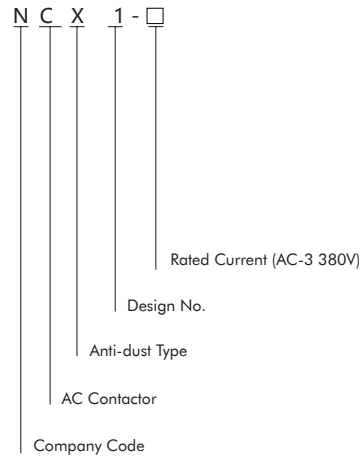
1. General

NCX1 series anti-dust AC contactor is mainly used for AC 50Hz, rated insulation voltage of 690V, rated for AC-3 service category. Used in power systems with voltage 380V and rated working current up to 95A for remote switching on and off circuits, and suitable for control the start, stop and reverse of the AC motor, it can also be combined with the appropriate thermal relay to form an electromagnetic starter to protect the circuit that may be overloaded.

In addition to the application of traditional fields, it is also suitable for building materials processing machinery, metal processing machinery, metallurgical machinery, textile machinery, construction machinery, petroleum, machine tools, cement, chemical industry, photovoltaic, wind power and other dust environment.

Standards: IEC 60947-1, IEC 60947-4-1

2. Type Designation



3. Technical data

- 3.1 Rated working current : 9A to 95A
- 3.2 Rated working voltage : 220V, 380V, 660V
- 3.3 Rated insulation voltage: 690V
- 3.4 Pole: 3P
- 3.5 Coil Type: AC
- 3.6 Installation Method: Guide rail/Screw installation

4. Working conditions and installation conditions

- 4.1 Installation Category: III
- 4.2 Pollution level: Level 4
- 4.3 Shell protection class: IP50
- 4.4 Ambient air temperature: Limit operating temperature -35 °C ~+70 °C ; Normal operating temperature -5°C ~+40°C, the average within 24 hours not exceeding +35°C ; Under the limit temperature, the rated operating voltage remains unchanged, and the correction factor for the rated working current is as follows:

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

Note: At +55°C ~+70°C, the AC contactor pick-Up voltage range is (85%~110%) Us at normal temperature (-5°C ~+ 40°C).

The range of pick-Up voltage is (75% ~ 120%) in cold state

- 4.5 Altitude: no more than 2000m; When the altitude is not less than 2000m and the rated operating voltage remains unchanged, the correction factors for the rated impulse withstand voltage and rated operating current are as follows:

Altitude (m)	2000	3000	4000
Rated impulse withstand voltage correction factors	1	0.88	0.78
Rated operating current correction factors	1	0.92	0.90

Note: At +55°C ~+70°C, the AC contactor pick-Up voltage range is (85%~110%) Us at normal temperature (-5°C ~+ 40°C).

The range of pick-Up voltage is (75% ~ 120%) in cold state





- 4.6 Atmospheric conditions: When the maximum temperature is +40 °C , the relative humidity not exceed 50%; and lower temperature can be allowed at higher relative humidity . Special measures should be taken for occasional condensation due to temperature changes.

- 4.7 Installation conditions: The inclination between the mounting surface and the vertical plane shall not be greater than ±5°.

- 4.8 Shock vibration: The product shall be installed and used where there is no significant shaking, shock, or vibration.



5. Main parameters and technical performance

Model		NCX1-9	NCX1-12	NCX1-18	NCX1-22	NCX1-25	NCX1-32	NCX1-38	NCX1-40	NCX1-50	NCX1-65	NCX1-80	NCX1-95	
Product Appearance														
Frame		9~18 A			22~38 A				40~65 A			80~95 A		
Appointed free air heat generation current Ith (A)		25			50				70	80	125			
Rated insulation voltage Ui (V)		690			690				690			690		
Rated impulse withstand voltage Uimp (kV)		8			8				8			8		
Rated limited short circuit current (kA)		10			50				50			50		
Impedance of pole (Ω)		≤ 5.0 × 10 ⁻³												
Rated making capacity		Making current: 10 × Ie (AC-3) or 12 × Ie (AC-4)												
Rated breaking capacity		Making/breaking current: 8 × Ie (AC-3) or 10 × Ie (AC-4)												
Rated operational current (A)	220V	AC-3	9	12	18	22	25	32	38	40	50	65	80	95
		AC-4	9	12	18	22	25	32	38	40	50	65	80	95
	380V	AC-3	9	12	18	22	25	32	38	40	50	65	80	95
		AC-4	9	12	18	22	25	32	38	40	50	65	80	95
	660V	AC-3	6.6	8.9	12	14	18	22	22	34	39	42	49	49
		AC-4	6.6	8.9	12	14	18	22	22	34	39	42	49	49
Controllable three-phase squirrel-cage motor power	AC-3 (kW)	220V	2.2	3	4	5.5	6.1	7.5	9	11	15	18.5	22	25
		380V	4	5.5	7.5	11	11	15	18.5	18.5	22	30	37	45
		660V	5.5	7.5	10	11	15	18.5	18.5	30	37	37	45	45
Electrical life (ten thousand times)	AC-3	120			120				100			100		
	AC-4	See Appendix I			See Appendix I				See Appendix I			See Appendix I		
Mechanical life (ten thousand times)		1200			1200				1200			1200		
Frequency operation (times/h)		1200			1200				300			300		
Type of the fuse adapted (SCPD)	Model	RT-36-00 32			RT-36-00 63				RT-36-00 80			RT-36-00 100		
Type of the thermal relay adapted	Model	NR2-25/ NXR-25	NR2-25/ NXR-25	NR2-25/ NXR-25	NR2-25/ NXR-25	NR2-25/ NXR-25	NR2-38/ NXR-38	NR2-38/ NXR-38	NR2-93/ NXR-100	NR2-93/ NXR-100	NR2-93/ NXR-100	NR2-93/ NXR-100	NR2-93/ NXR-100	
Number of auxiliary contact in body		1NO + 1NC												
Auxiliary contact appointed free air heat generation current Ith (A)		10A												
Auxiliary contact rated insulation voltage Ui (V)		690V												
Auxiliary contact rated operational current (A)	AC-15 220V/380V	0.95												
	DC-13 110V/220V	0.15												
Flashover distance (mm)		0			0				≤ 10			≤ 10		

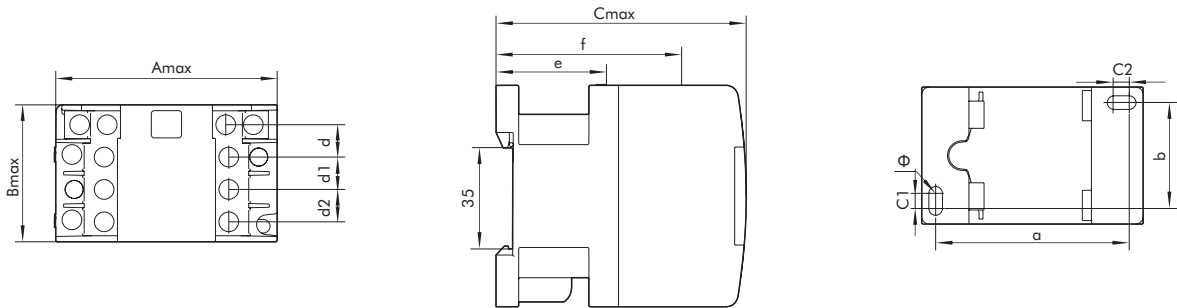
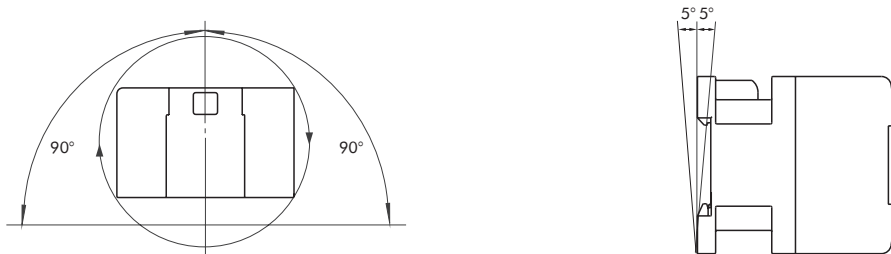
Wiring capability													
Main circuit	Cable connection (mm ²)	Preinstall flexible wire	1 piece	1.0~4.0	1.5~10	10~25	10~50						
			2 piece										
		Hard wire	1 piece										
			2 piece										
Fastening screw size				M3.5	M4	M8	M10						
Tightening torque (N.m)				0.8	1.2	6	14						
Control circuit	Cable connection (mm ²)	Preinstall flexible wire	1 piece	0.75~1.5									
			2 piece										
		Hard wire	1 piece										
			2 piece										
		Fastening screw size						M3.5					
		Tightening torque (N.m)						0.8					

Electromagnetic system capability														
Coil control Voltage (V)	AC 50Hz	24、36、110、127、220、380												
Actuation range	Pick-up	Cold state: (75%~120%) Us; Working state: (85%~110%) Us												
	Release	(20%~75%) Us												
Coil average power consumption (VA)	Pick-up	60			80				185			250		
	Holding	9.0	9.0	9.5	9.5	14.0	14.0	11.4	19.0	34.2	36.6	36.6	36.6	
Energy Efficiency Grade	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 2	Level 3	Level 2	Level 2	Level 2	Level 2	Level 2	

Note: Contactors of the same frame is the same external size and internal structure, but the rated working current is different. For example, NCX1-9 and NCX1-12 are contactors with the same frame (9~18).

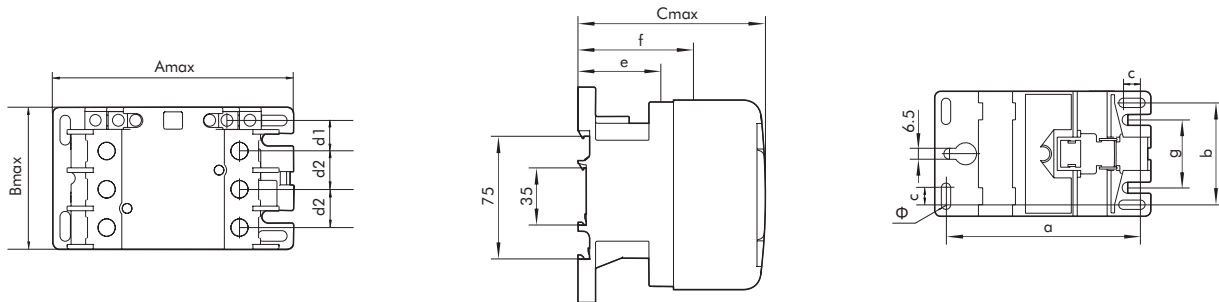
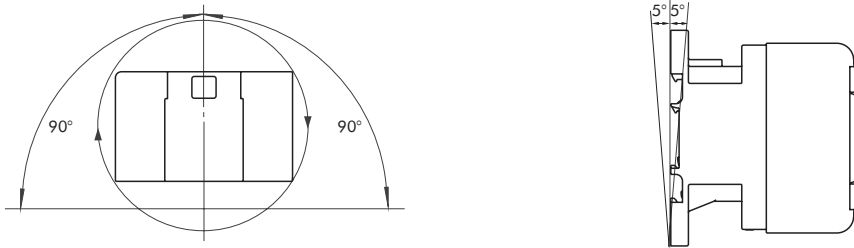
6. Overall and installation dimension

NCX1-9~38



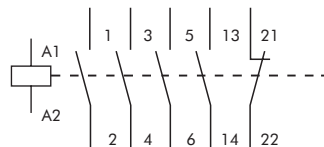
Model	Amax	Bmax	Cmax	a	b	C1	C2	d1	d2	e	f	Φ
NCX1-9,12,18	75	47	85	64±0.28	35±0.21	5	5	10.7	10.7	38.9	60.1	4.5 ^{+0.18} ₀
NCX1-22,25,32,38	84	57	94	70±0.32	43±0.24	5	8	12.7	13.9	44.8	71.7	4.5 ^{+0.18} ₀





Model	Amax	Bmax	Cmax	a	b	c	d1	d2	e	f	g	Φ
NCX1-40,50,65	128	75	112	114.5±0.41	60±0.28	10	15.9	19.9	50.6	76.2	40±0.24	5.5 ^{+0.18} ₀
NCX1-80,95	128	86	118	112±0.41	70±0.32	6	17.7	23.1	51	83.2	40±0.24	6.0 ^{+0.18} ₀

7. Wiring Diagram



8. Ordering instructions

When an order is placed, please point out:

- 8.1 Complete name and model of the contactor;
- 8.2 Rated operational voltage and frequency or specification code of coil;
- 8.3 Amount on order.

Example of order: NXC1-9 Anti-dust AC contactor Coil voltage 380V 50Hz 10 sets.

	Weight(kg/unit)	Qty Of Package	Gross weight (kg/box)
NCX1-9	0.325	60	21.1620
NCX1-12	0.3251	60	21.1680
NCX1-18	0.3256	60	21.1980
NCX1-22	0.436	50	23.5850
NCX1-25	0.4361	50	23.5900
NCX1-32	0.4368	50	23.6250
NCX1-38	0.4372	50	23.6450
NCX1-40	0.8796	24	22.6504
NCX1-50	0.8872	24	22.8328
NCX1-65	0.9079	24	23.3296
NCX1-80	1.215	20	25.7320
NCX1-95	1.2172	20	25.7760

