

NC8-115~500
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 Range of Application

NC8 series AC contactor is mainly used in AC 50Hz (or 60Hz) circuits with rated operating voltage up to 690V. It can be used to frequently start and control motor or remotely connect and disconnect circuit under 400V(380V)AC-3 application category. It can also be used with proper thermal overload relay to act as electromagnetic starter.

2 Main Technical Parameters and Performance

Table 1 Environmental conditions

Environmental conditions	
Ambient temp. (°C)	-5°C~+40°C, average temperature should not exceed +35°C within 24h
Hot and humid atmospheric conditions	Relative humidity should not exceed 50% at +40°C; up to 90% at +20°C;
Altitude	No influence below 2000m,
Pollution class/ installation category	Class 3/III

Table 2 Main technical parameters and performance

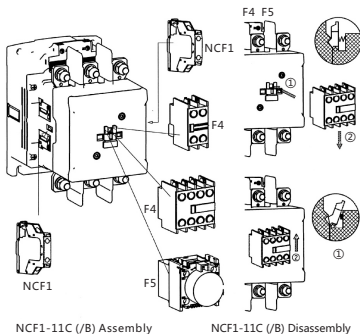
Model			NC8-115	NC8-150	NC8-170	NC8-205	NC8-265	NC8-300	NC8-400	NC8-500
Rated operating current I _e (A)	380V/400V	AC-3	115	150	170	205	265	300	400	500
		AC-4			150					
	660V/690V	AC-3	86	107	118	137	185	235	303	354
		AC-4			107					
Conventional thermal current I _{th} (A)			200		275	300	330	380	450	630
Rated insulation voltage U _i (V)			690			1000				
Rated impulse withstand voltage U _{imp} (kV)			8							

Table 2 (continued)

Model		NC8-115	NC8-150	NC8-170	NC8-205	NC8-265	NC8-300	NC8-400	NC8-500
Controllable 3-phase motor power AC-3 (kW)	380V/ 400V	55	75	90	110	132	160	200	250
	660V/ 690V	80	100	110	132	160	200	300	355
Electrical life 400V (10 ⁴ times)	AC-3	120			100			80	
	AC-4	2		1	1.5		1	1	
Mechanical life (10 ⁴ times)		600							
Rated current of matching fuse (A)		224	224	315	120			80	
Coil power	Pick-up (VA)	600~700 (NC8-115/ W~170/W:≤300)			300~600			500~800	
	Hold (VA)	6~10(NC8-115/ W~170/W:≤10)			6~11			7~12	
	Thermal loss (W)	5~9			5~10			6~11	
Operation range		Pick-up voltage (thermal state): (85%~110%)Us Release voltage (normal temperature): (10%~75%)Us							
Auxiliary contacts	Basic parameters	AC-15: 360VA; DC-13: 33W; Ith: 10A							
	Top mount combinations	F4-20, F4-11, F4-02, F4-40, F4-31, F4-22, F4-13, F4-04							
	Side mount combinations	NCF1-11C			NCF1-11C/B				

3 Installation

See the figure below for accessory installation and contactor operating principle.



NCF1-11C (/B) Assembly

NCF1-11C (/B) Disassembly

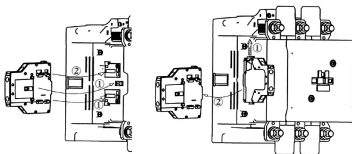
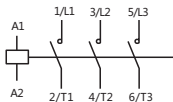
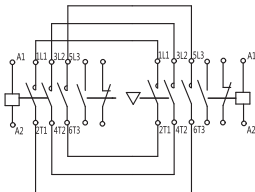


Figure 1 Accessory installation



NC8-115~500

Figure 2 Contactor operating principle



NC8-115/N~500/N

Figure 3 Contactor operating principle

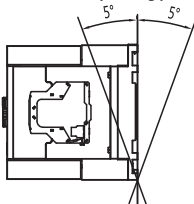


Figure 4 Product installation drawing

See Table 3 for overall and installation dimensions of the contactor

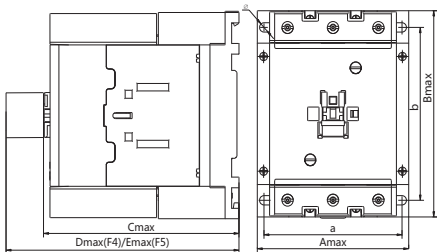


Figure 5 NC8-115~170 Dimensions

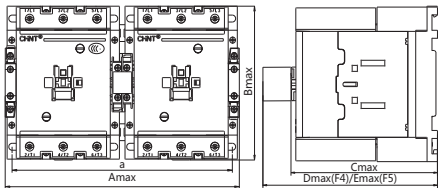


Figure 6 NC8-115/N~170/N Dimensions

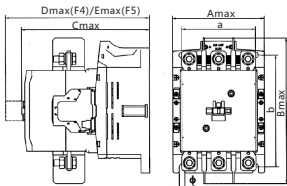


Figure 7 NC8-205~500 Dimensions

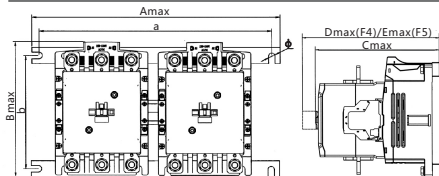


Figure 8 NC8-205/N~500/N Dimensions

Table 3 Overall and installation dimensions






























































































Unit: mm

Contactor model	Amax	Bmax	Cmax	Dmax	Emax	a	b	φ
NC8-115~170	120	156	155	190.5	210.5	96~110	130±0.8	7
NC8-205~300	150	235	207	239	260	120	180	9
NC8-400~500	165	248	225	258	280	130	180	9
NC8-115/N~170/N	255	156	155	190.5	210.5	235.4±1.2	130±0.8	7
NC8-205/N~300/N	400	215	220	252	273	375±0.5	180±0.5	8.5
NC8-400/N~500/N	480	220	238	270	293	455±0.5	180±0.5	8.5

4 Maintenance

See Table 4 for wiring capacity of terminals.

Table 4 Wiring capacity of terminals

	NC3-115-170  M10 10N.m	4mm Slot type 		 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	
	NC3-115-170  M10 10N.m	4mm Slot type 	NC3-115-170	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	
	M3.5  0.8 N.m	Slot type Philips 	NC3-115-170	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 A > 3.5mm, L < 8mm
	M3.5  0.8 N.m	Slot type Philips 	NC3-115-170	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 A > 3.5mm, L < 8mm
	NC3-205-500  M10 14N.m	Wrench 		 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 50~240 50~240
	NC3-205-500  M10 14N.m	Wrench 	NC3-205-500	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 50~240 50~240
	M3.5  1.2 N.m	Slot type Philips 	NC3-115-170	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 A > 3.5mm, L < 8mm
	M3.5  1.2 N.m	Slot type Philips 	NC3-115-170	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 mm ²	 A > 3.5mm, L < 8mm

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 5 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.

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.

CHINT

QC PASS

NC8-115~500
AC Contactor
IEC/EN 60947-4-1

Check 07

Test date: Please see the packing

ZHEJIANG CHINT ELECTRICS CO., LTD.

CHINT

CHINT ELECTRICS

NC8-115~500
AC Contactor
User Instruction

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