⚠ 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 Application Range

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

2 Key Technical Parameters and Performance

Table 1 Environmental Conditions

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

Table 2 Key technical parameters and performance index

Model			NC8 -06M	NC8 -09M	NC8 -12M	NC8 -09	NC8 -12	NC8 -18	NC8 -25
Rated operating current Ie A	380V/400V	AC-3	6	9	12	9	12	18	25
		AC-4			9				
	660V/690V	AC-3	3.8	4.9	4.9	6.7	9	10.6	17.3
		AC-4							14
Conventional free air thermal current Ith A			20			25		32	40
Rated insulation voltage Ui V			690						
Power of controllable 3-phase motor	380V/400V		2.2	4	5.5	4	5.5	7.5	11
	660V/690V		3	4	4	5.5	7.5	9	15

Table 2 (continue)

Model			NC8 -06M	NC8 -09M	NC8 -12M	NC8 -09	NC8 -12	NC8 -18	NC8 -25
Electrical life 10^4 times 415V	AC-3		130			150			160
	AC-4		5	4	3.5	5	3.5	3	5
Mechanical life 10^4 times			1000						
Rated current of RT16(36)-00 fuse			20			20	25	32	50
Coil power	50Hz (3P)	Pick-up VA	25~40			50~70			
		Hold VA	2~7			6~9.5			6~15
		Thermal loss(W)	1~4			2~4			
Operating range			Pick-up voltage (thermal state): 85%~110%Us, Release voltage (normal temperature): AC 20%~75%Us DC 10%~70%Us						

Table 2 (continue)

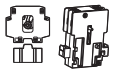
Model			NC8 -32	NC8 -38	NC8 -40	NC8 -50	NC8 -65	NC8 -80	NC8 -100
Rated operating current Ie A	380V/400V	AC-3	32	38	40	50	65	80	100
		AC-4		32					
	660V/690V	AC-3	21.9	21.9	34	39	42	49	49
		AC-4	17.3	17.3					
Conventional free air thermal current Ith (A)			50		60	80		125	
Rated insulation voltage V			690						
Power of controllable 3-phase motor	380V/400V		15	18.5	18.5	22	30	37	45
	660V/690V		18.5	18.5	30	33	37	45	45
Electrical life 10^4 times 400V	AC-3		160			150			130
	AC-4		3.5	3	3	3	3	3	2
Mechanical life 10^4 times			1000		800				
Rated current of RT16(36)-00 fuse			63			80		100	125

Table 2 (continue)

Model			NC8 -32	NC8 -38	NC8 -40	NC8 -50	NC8 -65	NC8 -80	NC8 -100
Coil power	50Hz (3P)	Pick-up VA	50~70		160~210			190~250	
		Hold VA	6~15		13~25			17~30	
		Thermal loss(W)	2~4		4~7			5~8	
Operating range			Pick-up voltage (thermal state): 85%~110%Us, Release voltage (normal temperature): AC 20%~75%Us DC 10%~70%Us						

Table 3 Key parameters of auxiliary contacts and accessories

Model		F4	F8	NCF8-11	F5
Conventional free air thermal current Ith (A)		10			
Rated operating voltage and current	AC-15	Ue:380V Ie:0.95A			
	DC-13	Ue:220V Ie:0.15A			
Product example		Product name		Product parameters	Product models
 F4 F8 For NC8-09~100 For NC8-06M-12M		Top mounting auxiliary contact assembly		4NO	F4-40, F8-40
				3NO+1NC	F4-31, F8-31
				2NO+2NC	F4-22, F8-22
				1NO+3NC	F4-13, F8-13
				4NC	F4-04, F8-04
				2NO	F4-20, F8-20
				1NO+1NC	F4-11, F8-11
				2NC	F4-02, F8-02
 F5 1NC+1NO Air delay head (NC) (NO)		Power-on delay assembly		0.1s~3s	F5-T0
				0.1s~30s	F5-T2
				10s~180s	F5-T4
		Power-offdelay assembly		0.1s~3s	F5-D0
				0.1s~30s	F5-D2
				10s~180s	F5-D4

Model	F4	F8	NCF8-11	F5
 NCF8-11	Side mounting auxiliary contact assembly	1NO+1NC		NCF8-11
 SR8-A SR8-B SR8-C	Surge suppressor	----------		SR8-A (For NC8-06M~12M)
				SR8-B (For NC8-09~38)
		----------		SR8-C (For NC8-40~100)
 NCL8-A NCL8-B	Mechanical interlock mechanism	----------		NCL8-A (For NC8-09~38)
				NCL8-B (For NC8-40~100)

3 Installation

3.1 See Figure 1 and Table 4 for outline and installation dimensions of NC8-06M~12M series AC contactors.

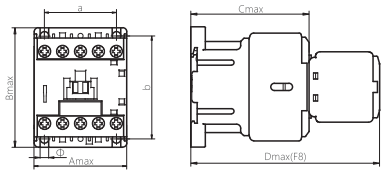


Figure 1 Outline and installation dimensions of NC8-06M~12M series AC contactors

Table 4 Outline and installation dimensions of Unit: mm

Model	Outline dimensions				Installation dimensions		
	Amax	Bmax	Cmax	Dmax	a	b	Φ
NC8-06M~12M	45	59	58	94	35±0.28	50±0.32	4.2
NC8-06M/4~12M/4	45	59	58	94	35±0.28	50±0.32	4.2
NC8-06M/22~12M/22	45	59	58	94	35±0.28	50±0.32	4.2
NC8-06M/Z~12M/Z	45	59	70	106	35±0.28	50±0.32	4.2
NC8-06M/4/Z~12M/4/Z	45	59	70	106	35±0.28	50±0.32	4.2
NC8-06M/22/Z~12M/22/Z	45	59	70	106	35±0.28	50±0.32	4.2

3.2 See Figure 2 and Table 5 for outline and installation dimensions and wiring capacity of NC8-06M/N~12M/N series directional AC contactors.

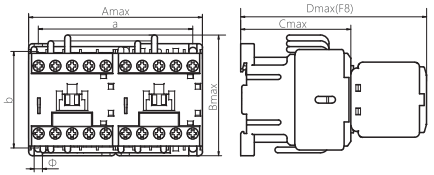


Figure 2 Outline and installation dimensions of NC8-06M/N~12M/N series directional AC contactors

Table 5 Outline and installation dimensions and wiring capacity Unit: mm

Model	Outline dimensions				Installation dimensions		
	Amax	Bmax	Cmax	Dmax	a	b	Φ
NC8-06M/N~12M/N	91	64	58	94	80±0.7	50±0.32	4.2
NC8-06M/4/N~12M/4/N	91	64	58	94	80±0.7	50±0.32	4.2
NC8-06M/Z/N~12M/Z/N	91	64	70	106	80±0.7	50±0.32	4.2
NC8-06M/4/Z/ N~12M/4/Z/N	91	64	70	106	80±0.7	50±0.32	4.2

Main circuit	Control circuit	M3 0.8 N·m	Philips type	mm²	mm²	mm²	mm²	mm²	mm²
				1~2.5	1~1.5	1~2.5	1~1.5	----	----

3.3 See Figure 3 and Table 6 for outline and installation dimensions of NC8-09~38 series AC contactors.

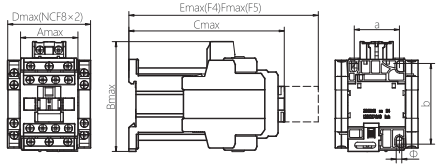


Figure 3 Outline and installation dimensions of NC8-09~38 series AC contactors

Table 6 Outline and installation dimensions Unit: mm

Model	Outline dimensions						Installation dimensions		
	Amax	Bmax	Cmax	Dmax	Emax	Fmax	a	b	Φ
NC8-09~18	45	87	87	65	120	142	35±0.28	55~63	4.4
NC8-09/Z~18/Z	45	87	123	65	156	178	35±0.28	55~63	4.4
NC8-09/4~18/4	45	87	82	65	115	136	35±0.28	55~63	4.4
NC8-09/4/Z~18/4/Z	45	87	118	65	151	172	35±0.28	55~63	4.4
NC8-09/22~18/22	45	87	82	65	115	136	35±0.28	55~63	4.4
NC8-09/22/Z~18/22/Z	45	87	118	65	151	172	35±0.28	55~63	4.4
NC8-25~38	45	97	106	65	139	160	35±0.28	55~63	4.4
NC8-25/Z~38/Z	45	97	141	65	174	195	35±0.28	55~63	4.4
NC8-25/4~38/4	57	97	90	77	122.5	144	46±0.28	60~70	4.4
NC8-25/4/Z~38/4/Z	57	97	125	77	158	180	46±0.28	60~70	4.4
NC8-25/22~38/22	57	97	90	77	122.5	144	46±0.28	60~70	4.4
NC8-25/22/Z~38/22/Z	57	97	125	77	158	180	46±0.28	60~70	4.4

3.4 See Figure 4 and Table 7 for outline and installation dimensions and wiring capacity of NC8-09/N~38/N series AC contactors.

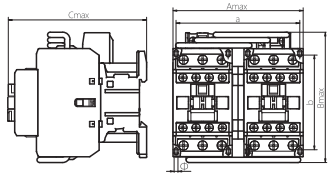
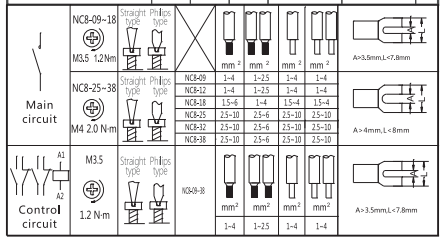


Figure 4 Outline and installation dimensions of NC8-09/N~38/N series AC contactors

Table 7 Outline and installation dimensions and wiring capacity

Unit: mm

Model	Outline dimensions			Installation dimensions		
	Amax	Bmax	Cmax	a	b	Φ
NC8-09/N~18/N	100	92	87	89±0.7	55~63	4.4
NC8-09/4/N~18/4/N	100	92	82	89±0.7	55~63	4.4
NC8-09/Z/N~18/Z/N	100	92	123	89±0.7	55~63	4.4
NC8-09/4/Z/N~18/4/Z/N	100	92	118	89±0.7	55~63	4.4
NC8-25/N~38/N	100	102	106	89±0.7	60~70	4.4
NC8-25/4/N~38/4/N	122	102	90	89±0.7	60~70	4.4
NC8-25/Z/N~38/Z/N	122	102	90	111±0.7	60~70	4.4
NC8-25/4/Z/N~38/4/Z/N	122	102	125	111±0.7	60~70	4.4



3.5 See Figure 5 and Table 8 for outline and installation dimensions of NC8-40~100 series AC contactors.

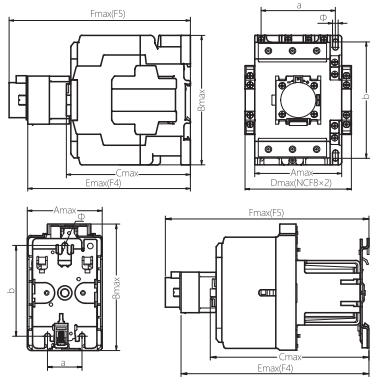


Figure 5 Outline and installation dimensions of NC8-40(/Z)~100(/Z) series AC contactors

Table 8 Outline and installation dimensions

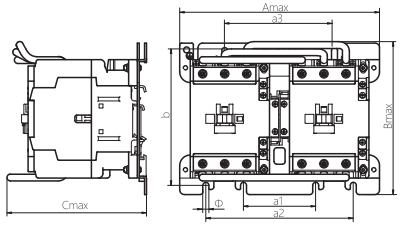
Unit: mm

Model	Outline dimensions						Installation dimensions		
	Amax	Bmax	Cmax	Dmax	Emax	Fmax	a	b	Φ
NC8-40~65	77	122.5	118	97	150	172	64±0.37	100~110	6.0
NC8-40/Z~65/Z	77	142	179	/	212	233	40±0.5	105±0.7	6.5
NC8-40/4~65/4	84	122.5	118	104	150	172	71±0.37	100~110.5	6.0
NC8-40/4/Z~65/4/Z	84	142	179	/	212	233	40±0.5	105±0.7	6.5

Table 8 (continue)

Model	Outline dimensions						Installation dimensions		
	Amax	Bmax	Cmax	Dmax	Emax	Fmax	a	b	Φ
NC8-80~100	87	130	127	107	159	180	74±0.37	105~116	5.5
NC8-80/Z~100/Z	87	147	184	/	217	238	40±0.5	105±0.7	6.5
NC8-80/4~100/4	99	130	127	119	159	180	86±0.5	105~118.5	5.5
NC8-80/4/Z~100/4/Z	99	147	184	/	217	238	40±0.5	105±0.7	6.5

3.6 See Figure 6 and Table 9 for outline and installation dimensions and wiring capacity of NC8-40/N~100/N series AC contactors.



Fiure 6 Outline and installation dimensions of NC8-40/N~100/N series AC contactors

Table 9 Outline and installation dimensions and wiring capacity

Unit: mm

Model	Amax	Bmax	Cmax	a1	a2	a3	b	Φ
NC8-40/N~65/N	187.6	157.5	139	63.6±0.18	145±0.32	104±0.24	139.3±0.4	6.5
NC8-40/4/N~65/4/N	187.6	157.5	139	63.6±0.18	145±0.32	104±0.24	139.3±0.4	6.5

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NC8-06M~100
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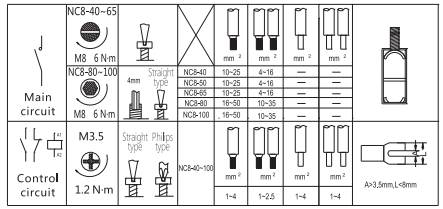
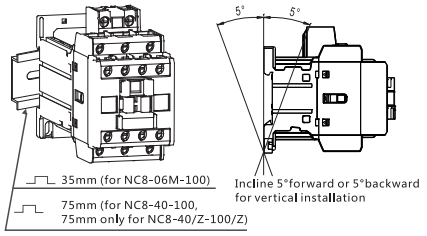
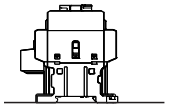
Table 9 (continue)

Model	Amax	Bmax	Cmax	a1	a2	a3	b	Φ
NC8-80/N~100/N	217.6	165	152	78.6±0.18	160±0.42	119.6±0.36	146.8±0.4	6.5
NC8-80/4/N~100/4/N	217.6	165	152	78.6±0.18	160±0.42	119.6±0.36	146.8±0.4	6.5



3.7 See Figure 7 for installation angles and methods of NC8-06M~100 series AC contactors.





Horizontal installation

Figure 7 Product installation drawing

4 Maintenance

Check if the contactor can operate reliably every month. Method: Check if the contact incline 5° forward upon pick-up and incline 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 6 Analysis and Troubleshooting of Faults

Symptoms	Cause analysis	Troubleshooting method
The product does not operate 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 supply 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

NC8-06M~100
AC Contactor
IEC/EN 60947-4-1

Check 07

Test date: Please see the packing

ZHEJIANG CHINT ELECTRICS CO.,LTD.

NO:2020.04

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NC8-06M~100
AC Contactor
User Instruction

Standard: IEC/EN 60947-4-1