

NC8 Series

Current range: 6~170A

(6A, 9A, 12A, 18A, 25A, 32A, 38A, 40A, 50A, 65A, 80A, 100A, 115A, 150A, 170A)

Poles: 3P, 4P

3-pole contactor



Frame size (A)

6, 9, 12

Mini type

9, 12, 18

Normal type

25, 32, 38

Power (kW,400V)

2.2, 4, 5.5

4, 5.5, 7.5

11, 15, 18.5

4-pole contactor





40, 50, 65

18.5, 22, 30



80, 100

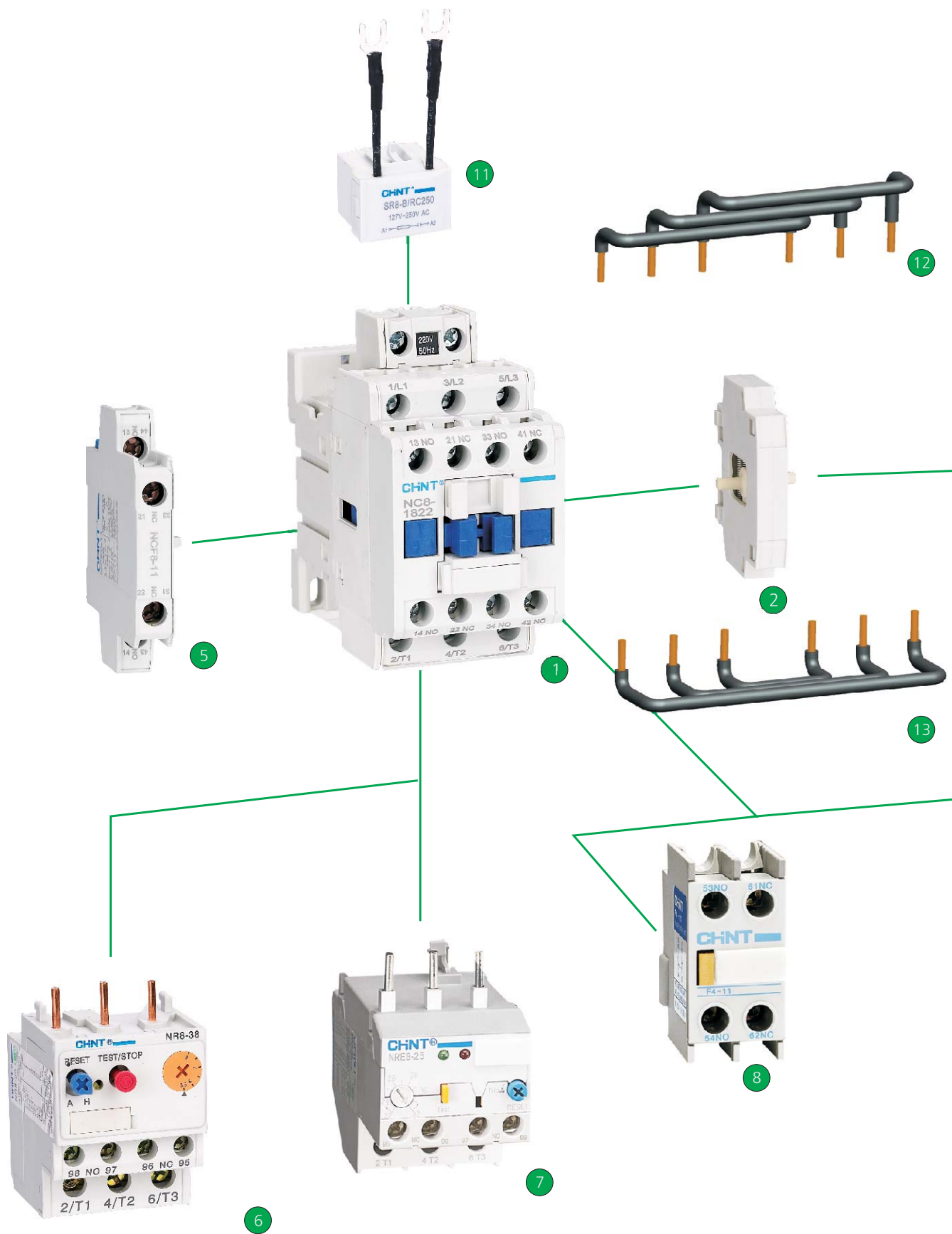
37, 45



115, 150, 170



D





NC8 and Accessories

- 1 contactor
- 2 Mechanical interlock block
- 3 contactor
- 4 side mount aux
- 5 side mount aux
- 6 thermal relay
- 7 electronic relay
- 8 front mount aux
- 9 front mount aux
- 10 Pneumatic timers
- 11 surge arrester block
- 12 Bus bar
- 13 Bus bar

D



NC8 Series AC Contactor

1. General

NC8 series AC contactor is applied to circuits with AC current frequency of 50 Hz or 60 Hz, rated operational voltage up to 690 V and rated operational current up to 170 A. It is used for remote making & breaking circuits, and can also be used with proper thermal overload relay together as an electromagnetic starter to protect circuits from overload.

This product conforms to standards IEC/EN 60947-4-1.

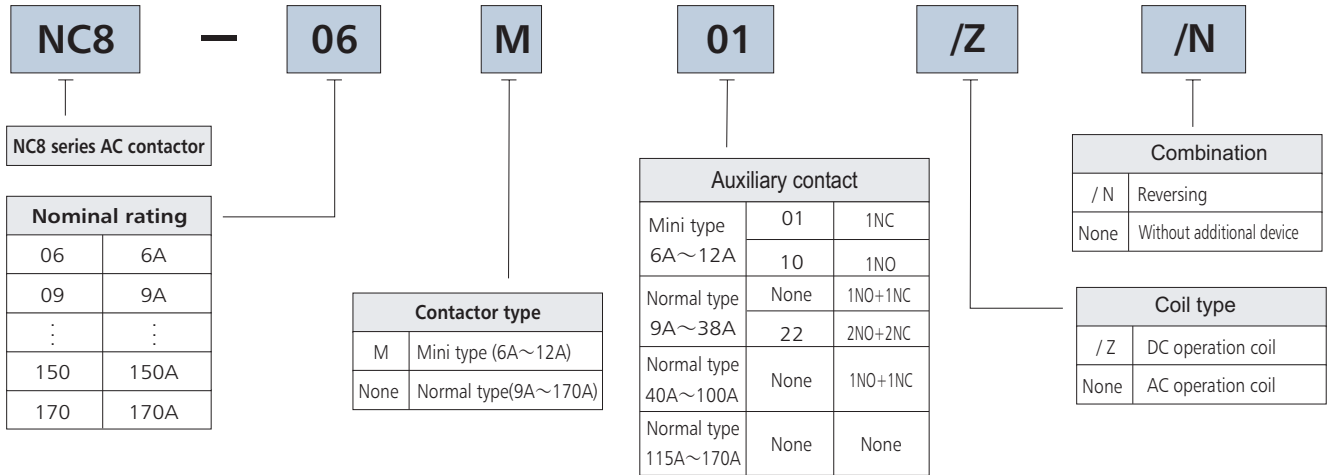
2. Operating conditions

- 2.1 Certificates: CE,UL,KEMA;
- 2.2 Electric ratings: AC 50/60Hz, up to 690V, up to 170A;
- 2.3 Application: remotely makes and breaks circuit; protect circuit from overload assembling with proper thermal relay;
- 2.4 Utilization category: AC-1, AC-3, AC-4;
- 2.5 Mounting conditions: inclination between mounting plane and vertical plane not exceed $\pm 5^\circ$

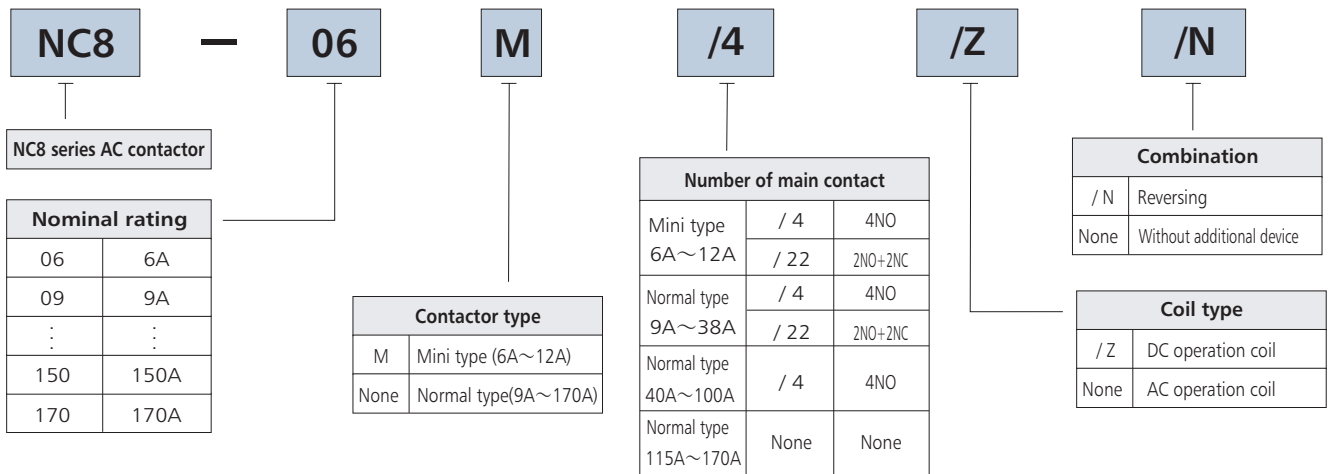


3. Type Designation

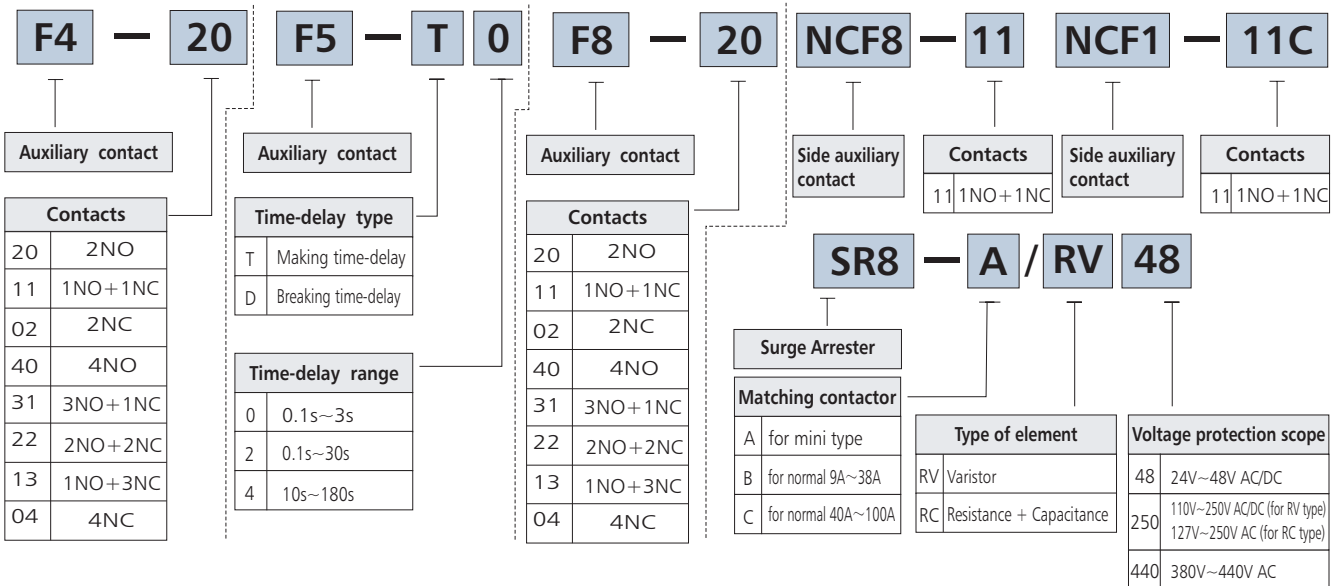
3-pole contactor



4-pole contactors



Accessories



Quick selection table

Frame size	9A	12A	18A	25A	32A	38A
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3-pole contactors



Auxiliary contacts	1NO+1NC	NC8-09	NC8-12	NC8-18	NC8-25	NC8-32	NC8-38
	2NO+2NC	NC8-0922	NC8-1222	NC8-1822	NC8-2522	NC8-3222	NC8-3822

Ratings/IEC/EN 60947-4-1		kW	A	kW	A	kW	A	kW	A	kW	A	kW	A
AC-1			25		25		32		40		50		50
	220V/230V/240V	2.2	9	3	12	4	18	5.5	25	7.5	32	9	38
AC-3	380V/400V	4	9	5.5	12	7.5	18	11	25	15	32	18.5	38
	415V	4	9	5.5	12	9	18	11	25	15	32	18.5	38
	660V/690V	5.5	6.7	7.5	9	9	10.6	15	17.3	18.5	21.9	18.5	21.9

Ratings/UL508		hp	A	hp	A	hp	A	hp	A	hp	A	hp	A
Continuous current (FLA)			25		25		32		40		50		50
Single phase	110V/120V	0.5		0.75		1		1.5		2		2	
	230V/240V	1		2		3		3		5		5	
Three phases	200V/208V	3		3		5		7.5		10		10	
	230V/240V	3		3		5		7.5		10		10	
	460V/480V	5		7.5		10		15		20		20	
	575V/600V	7.5		10		15		20		25		25	

Accessories



See page 07 for more details

NCF8-11

F4

F5

SR8-B/RC250

Frame size	40A	50A	65A	80A	100A	115A	150A	170A
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3-pole contactors



Auxiliary contacts	1NO+1NC	NC8-40	NC8-50	NC8-65	NC8-80	NC8-100	NC8-115	NC8-150	NC8-170
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Ratings/IEC/EN 60947-4-1		kW	A	kW	A	kW	A	kW	A	kW	A	kW	A	kW	A	kW	A
AC-1			60		80		80		125		125		200		200		275
	220V/230V/240V	11	40	15	50	18.5	65	22	80	25	100	37	115	45	150	55	170
AC-3	380V/400V	18.5	40	22	50	30	65	37	80	45	100	55	115	75	150	90	170
	415V	22	40	25	50	37	65	45	80	45	100	59	115	80	150	100	170
	660V/690V	30	34	33	39	37	42	45	49	45	49	80	86	100	107	110	118

Ratings/UL508		hp	A	hp	A	hp	A	hp	A	hp	A	hp	A	hp	A	hp	A
Continuous current (FLA)			60		80		80		125		125		200		200		275
Single phase	110V/120V	3		5		5		7.5		10		10		15		15	
	230V/240V	5		7.5		10		20		20		25		30		30	
Three phases	200V/208V	10		15		20		30		30		40		50		60	
	230V/240V	10		15		20		30		30		40		60		60	
	460V/480V	30		40		50		60		60		100		125		150	
	575V/600V	30		40		50		60		60		100		125		150	

Accessories

See page 08 for more details



NCF8-11 NCF1-11C F4 F5 SR8-C/RC440

Frame size	9A	12A	18A	25A	32A	38A
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4-pole Contactors



Main contacts	4NO	NC8-09/4	NC8-12/4	NC8-18/4	NC8-25/4	NC8-32/4	NC8-38/4
	2NO+2NC	NC8-09/22	NC8-12/22	NC8-18/22	NC8-25/22	NC8-32/22	NC8-38/22

Ratings/IEC/EN 60947-4-1		kW	A	kW	A	kW	A	kW	A	kW	A	kW	A
AC-1			25		25		32		40		50		50
	220V/230V/240V	2.2	9	3	12	4	18	5.5	25	7.5	32	9	38
AC-3	380V/400V	4	9	5.5	12	7.5	18	11	25	15	32	18.5	38
	415V	4	9	5.5	12	9	18	11	25	15	32	18.5	38
	660V/690V	5.5	6.7	7.5	9	9	10.6	15	17.3	18.5	21.9	18.5	21.9

Ratings/UL508		hp	A	hp	A	hp	A	hp	A	hp	A	hp	A
Continuous current (FLA)			25		25		32		40		50		50
Single phase	110V/120V	0.5		0.75		1		1.5		2		2	
	230V/240V	1		2		3		3		5		5	
Three phases	200V/208V	3		3		5		7.5		10		10	
	230V/240V	3		3		5		7.5		10		10	
	460V/480V	5		7.5		10		15		20		20	
	575V/600V	7.5		10		15		20		25		25	

Accessories

See page 07 for more details



NCF8-11



F4



F5



SR8-B/RC250

Frame size	40A	50A	65A	80A	100A
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4-pole Contactors



Main contacts	4NO	NC8-40/4	NC8-50/4	NC8-65/4	NC8-80/4	NC8-100/4
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Ratings/IEC/EN 60947-4-1		kW	A	kW	A	kW	A	kW	A	kW	A
AC-1			60		80		80		125		125
AC-3	220V/230V/240V	11	40	15	50	18.5	65	22	80	25	100
	380V/400V	18.5	40	22	50	30	65	37	80	45	100
	415V	22	40	25	50	37	65	45	80	45	100
	660V/690V	30	34	33	39	37	42	45	49	45	49

Ratings/UL508		hp	A	hp	A	hp	A	hp	A	hp	A
Continuous current (FLA)			60		80		80		125		125
Single phase	110V/120V	3		5		5		7.5		10	
	230V/240V	5		7.5		10		20		20	
Three phases	200V/208V	10		15		20		30		30	
	230V/240V	10		15		20		30		30	
	460V/480V	30		40		50		60		60	
	575V/600V	30		40		50		60		60	

Accessories

See page 08 for more details



NCF8-11












F4



F5










SR8-C/RC440

Frame size	9A	12A	18A	25A	32A	38A
Contactors						
	3-pole	4-pole	3-pole	4-pole		
Auxiliary contact block	 F4 4-pole Front mount		 F4 2-pole Front mount		Contacts aux	
					4NO	F4-40
					3NO+1NC	F4-31
					2NO+2NC	F4-22
					1NO+3NC	F4-13
					4NC	F4-04
					2NO	F4-20
					1NO+1NC	F4-11
					2NC	F4-02
					0.1~3	F5-T0
					0.1~30	F5-T2
					10~180	F5-T4
					0.1~3	F5-D0
					0.1~30	F5-D2
					10~180	F5-D4
	 NCF8 2-pole Side mount		Contacts aux		1NO+1NC	NCF8-11
Surge arrester	 SR8-B/RC250 Surge arrester		Voltage protection scope		48	24V~48V AC/DC
					250	110V~250V AC/DC (for RV type) 127V~250V AC (for RC type)
					440	380V~440V AC
Overload relays	 NR8-38 Bimetallic style Overload relay		NR8-38 Rated current (A)			
					0.1~0.16	4~6
					0.16~0.25	5.5~8
					0.25~0.4	7~10
					0.4~0.63	9~13
					0.63~1	12~18
					1~1.6	16~24
					1.6~2.5	23~32
					2.5~4	30~38

Frame size	40A	50A	65A	80A	100A	115A	150A	170A
Contactors								
	3-pole	4-pole	3-pole	4-pole	3-pole	4-pole	3-pole	
Auxiliary contact block		F4 4-pole Front mount		Contacts aux	4NO	F4-40		
		F4 2-pole Front mount			3NO+1NC	F4-31		
					2NO+2NC	F4-22		
					1NO+3NC	F4-13		
					4NC	F4-04		
					2NO	F4-20		
					1NO+1NC	F4-11		
					2NC	F4-02		
		F5 1N/O+1N/C Pneumatic timer		Making time-delay range (s)	0.1~3	F5-T0		
					0.1~30	F5-T2		
					10~180	F5-T4		
				Breaking time-delay range (s)	0.1~3	F5-D0		
					0.1~30	F5-D2		
					10~180	F5-D4		
		NCF8 2-pole Side mount		Contacts aux	1NO+1NC	NCF8-11		1NO+1NC NCF1-11C
Surge arrester		SR8-C/RC440 Surge arrester		Voltage protection scope	48	24V~48V AC/DC		
					250	110V~250V AC/DC (for RV type) 127V~250V AC (for RC type)		
					440	380V~440V AC		



Frame size	40A	50A	65A	80A	100A	115A	150A	170A
Contactors								
	3-pole	4-pole	3-pole	4-pole	3-pole			
Overload relays	 <p>NR2-93 Bimetallic style Overload relay</p>					<p>NR2-200</p> <p>Rated current (A)</p> <p>100~160</p> <p>125~200</p>		
	 <p>NRE8-100 Electronic style Overload relay</p>					<p>NRE8-100</p> <p>Rated current (A)</p> <p>65</p> <p>100</p>		

Frame size	6A	9A	12A	6A	9A	12A
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Contactors

AC coil



DC coil



3-pole	Auxiliary contacts	1NO	NC8-06M10	NC8-09M10	NC8-12M10	NC8-06M10/Z	NC8-09M10/Z	NC8-12M10/Z
		1NC	NC8-06M01	NC8-09M01	NC8-12M01	NC8-06M01/Z	NC8-09M01/Z	NC8-12M01/Z
4-pole	Main contacts	4NO	NC8-06M/4	NC8-09M/4	NC8-12M/4	NC8-06M/4/Z	NC8-09M/4/Z	NC8-12M/4/Z
		2NO+2NC	NC8-06M/22	NC8-09M/22	NC8-12M/22	NC8-06M/22/Z	NC8-09M/22/Z	NC8-12M/22/Z

Ratings/IEC/EN 60947-4-1		kW	A	kW	A	kW	A	kW	A	kW	A	kW	A
AC-1			20		20		20		20		20		20
AC-3	220V/230V/240V	1.5	6	2.2	9	3	12	1.5	6	2.2	9	3	12
	380V/400V	2.2	6	4	9	5.5	12	2.2	6	4	9	5.5	12
	415V	2.2	6	4	9	5.5	12	2.2	6	4	9	5.5	12
	660V/690V	3	3.8	4	4.9	4	4.9	3	3.8	4	4.9	4	4.9

Ratings/UL508		hp	A	hp	A	hp	A	hp	A	hp	A	hp	A
Continuous current			20		20		20		20		20		20
Single phase	110V/120V	0.3		0.5		0.75		0.3		0.5		0.75	
	230V/240V	0.75		1.5		2		0.75		1.5		2	
Three phases	200V/208V	1.5		3		3		1.5		3		3	
	230V/240V	1.5		3		3		1.5		3		3	
	460V/480V	3		5		7.5		3		5		7.5	
	575V/600V	3		5		10		3		5		10	

Accessories

See page 11 for more details

F8



SR8-A



NR8-11.5



Frame size	6A	9A	12A	6A	9A	12A
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Contactors

AC coil



DC coil



Auxiliary contact block



F8
Front mount

contacts number

4NO	F8-40
3NO+1NC	F8-31
2NO+2NC	F8-22
1NO+3NC	F8-13
4NC	F8-04
2NO	F8-20
1NO+1NC	F8-11
2NC	F8-02

Surge arrester



SR8-A
Surge arrester

Voltage protection scope

48	24V~48V AC/DC
250	110V~250V AC/DC (for RV type) 127V~250V AC (for RC type)
440	380V~440V AC

Overload relays



NR8-11.5
Bimetallic style
Overload relay

NR8-11.5

Rated current (A)

0.1~0.16	1.6~2.5
0.16~0.25	2.5~4
0.25~0.4	4~6
0.4~0.63	5.5~8
0.63~1	7~10
1~1.6	9~13

4. Technical data

4.1 Working environment and technical index

Overvoltage category	III		
Pollution degree	3		
Standard	IEC/EN 60947-4-1		
Certificate	CE, UL, KEMA		
Protection degree	IP20(NC8-06M~65)	IP10(NC8-80~170)	
Ambient air temperature	being working	-5°C ~ +40°C, the average temperature during 24 hours should not exceed +35°C. More information refer to table 1	
	transportation or storage	-25°C ~ +55°C, or can up to +70°C for a short time (in 24 hours)	
Altitude(m)	no exceeding 2000m, more information refer to table 2		
Atmosphere conditions	At mounting side, relative humidity no exceeding 50%, at the max temperature of +40°C. Higher relative humidity is allowable under lower temperature. For example, RH could be +20°C, special measure should be taken to occurrence of dews.		
Installation conditions	the inclination between installation plane and vertical plane is within $\pm 5^\circ$		
Impact and shake	the product should be used in the places where there are no obvious impact and shake		

Table 1

Altitude(m)	2000	3000	4000
Rated impulse withstand voltage	1	0.88	0.78
Correction coefficient	1	0.92	0.9

Table 2

environment temperature(°C)	40	50	60	70
correction coefficient	1	0.875	0.75	0.625

4.2 Main circuit parameter and technic capability

Frame size		6A	9A	12A	9A	12A	18A		
		Mini type			Normal type				
Rated conventional heating current(A)		20	20	20	25	25	32		
Rated insulation voltage(V)		690							
Rated impulse withstand voltage(kV)		6							
Rated making capability		making current: 10xle(AC-3) or 12xle(AC-4)							
Rated breaking capability		making-breaking current: 8xle(AC-3) or 10xle(AC-4)							
Short-time withstand current(A)	10s	48	72	96	72	96	144		
Rated operational current (A)	220V/230V/240V	AC-3	6	9	12	9	12	18	
		AC-4	6	9	12	9	12	18	
	380V/400V	AC-3	6	9	12	9	12	18	
		AC-4	6	9	9	9	12	18	
	415V	AC-3	6	9	12	9	12	18	
		AC-4	6	9	9	9	12	18	
	660V/690V	AC-3	3.8	4.9	4.9	6.7	9	10.6	
		AC-4	3.8	4.9	4.9	6.7	9	9	
Rated control power	AC-3(kW)	220V/230V/240V	1.5	2.2	3	2.2	3	4	
		380V/400V	2.2	4	5.5	4	5.5	7.5	
		415V	2.2	4	5.5	4	5.5	9	
		660V/690V	3	4	4	5.5	7.5	9	
	1PH(HP)	110V/120V	0.3	0.5	0.75	0.5	0.75	1	
		230V/240V	0.75	1.5	2	1	2	3	
	3PH(HP)	200V/208V	1.5	3	3	3	3	5	
		230V/240V	1.5	3	3	3	3	5	
		460V/480V	3	5	7.5	5	7.5	10	
		575V/600V	3	5	10	7.5	10	15	
Operating frequency(415V)	AC-3	1,200 operations/h							
	AC-4	300 operations/h							
Electrical life(415V)	AC-3	1,200,000 Operations							
	AC-4	to see Electrical life curves, page 23							
Mechanical life		10,000,000 Operations							
Configuration of main contacts		3-pole:3NO; 4-pole:4NO or 2NO+2NC							
Matched fuse type		RT16-20	RT16-20	RT16-20	RT16-20	RT16-25	RT16-32		
Matched thermal over-load relay	Modle	NR8-11.5			NR8-38				
	current range	0.1~0.16	0.63~1	2.5~4	9~13	0.1~0.16	0.63~1	2.5~4	9~13 30~38
		0.16~0.25	1~1.6	4~6		0.16~0.25	1~1.6	4~6	12~18
		0.25~0.4	1.6~2.5	5.5~8		0.25~0.4	1.6~2.5	5.5~8	16~24
		0.4~0.63		7~10		0.4~0.63		7~10	23~32

25A	32A	38A	40A	50A	65A	80A	100A	115A	150A	170A
Normal type										
40	50	50	60	80	80	125	125	200	200	275
690										
6		8								
making current:10xIe(AC-3) or 12xIe(AC-4)										
making-breaking current:8xIe(AC-3) or 10xIe(AC-4)										
200	256	304	320	400	520	640	800	920	1200	1360
25	32	38	40	50	65	80	100	115	150	170
25	32	38	40	50	65	80	100	115	150	170
		32								150
25	32	38	40	50	65	80	100	115	150	170
		32								150
17.3	21.9	21.9	34	39	42	49	49	115	150	118
14	17.3	17.3	34	39	42	49	49	86	107	107
5.5	7.5	9	11	15	18.5	22	25	37	45	55
11	15	18.5	18.5	22	30	37	45	55	75	90
11	15	18.5	22	25	37	45	45	59	80	100
15	18.5	18.5	30	33	37	45	45	80	100	110
1.5	2	2	3	5	5	7.5	10	10	15	15
3	5	5	5	7.5	10	20	20	25	30	30
7.5	10	10	10	15	20	30	30	40	50	60
7.5	10	0	10	15	20	30	30	40	60	60
15	20	20	30	40	50	60	60	100	125	150
20	25	25	30	40	50	60	60	100	125	150
1,200 operations/h										
300 operations/h					120 operations/h					
1,200,000 Operations										
to see Electrical life curves, page 23										
10,000,000 Operations								6,000,000 Operations		
				3-pole: 3NO; 4-pole: 4NO				3-pole: 3NO		
RT16-50	RT16-63	RT16-63	RT16-63	RT16-80	RT16-80	RT16-100	RT16-125	NT2-224	NT2-224	NT3-315
NR8-38			NR2-93		NRE8-100			NR2-200		
0.1~0.16	0.63~1	2.5~4	9~13	23~32	55~70	65		100~160		
0.16~0.25	1~1.6	4~6	12~18	30~40	63~80	100		125~200		
0.25~0.4	1.6~2.5	5.5~8	16~24	37~50	80~93					
0.4~0.63		7~10	23~32	48~65						
			30~38							



4.3 The connection capability of main control circuit

Connection circuit	frame size		6A	9A	12A	9A	12A	18A	25A	32A	38A	40A	50A	65A	80A	100A	115A	150A	170A			
			Mini type						Normal type													
Main circuit connection	cable connection (mm ²)	flexible cable (with cold-press terminal)	single cable	1~2.5	1~4	1.5~6	2.5~10	10~25	16~50	10~95												
			duad cable	1~1.5	1~2.5	1~4	2.5~6	4~16	10~35	10~50												
		stiff cable	single cable	1~2.5	1~4	1.5~4	2.5~10	-	-	10~95												
			duad cable	1~2.5	1~4	1.5~4	2.5~10	-	-	10~50												
	screw size			M3	M3.5	M4	M8	M10														
	tightening torque		(N.m)	0.8	1.2	2	6	10														
		(lb.in.)	7	7	10	45																
Control circuit connection	cable connection (mm ²)	flexible cable (with cold-press terminal)	single cable	1~2.5			1~4													1~4		
			duad cable	1~1.5			1~2.5														1~2.5	
		stiff cable	single cable	1~2.5			1~4															1~4
			duad cable	1~2.5			1~4															1~4
	screw size			M3	M3.5																M3.5	
	tightening torque		(N.m)	0.8			1.2														0.8	
		(lb.in.)	7			7														7		

4.4 The characteristic of AC control circuit

Connection circuit	frame size	6A	9A	12A	9A	12A	18A	25A	32A	38A	40A	50A	65A	80A	100A	115A	150A	170A
		Mini type				Normal type												
Coil voltage(V)	50Hz AC 50Hz/60Hz 60Hz	24, 36, 48, 110, 127, 220, 230, 240, 380, 400, 415														AC/DC 110,127,220,380		
	DC	12, 24, 48, 110, 125, 220, 250																
Acting range	attraction(hot)	(85%~110%)Us; +40°C																
	release(cold)	AC: (20%~75%)Us, DC: (10%~75%)Us; -5°C															(10%~75%)Us; -5°C	
The average power of AC coil(VA)	start	25~40	50~70					160~210			190~250		600~700					
	holding	2~7	6~10					13~25			17~30		3~5					
Heat wastage(W)	AC	1~4	2~4					4~7			5~8		2~4					
	DC												2~4					
Main contact action time(ms)	close	10~18	12~25					15~25			15~30		15~30					
	disconnection	4~16	5~20					6~15			8~17		40~50					

4.5 Main technical data of accessories

F4, front mount	matched contactor	model of accessories		F4-20	F4-11	F4-02	F4-40	F4-31	F4-22	F4-13	F4-04	
	NC8-09~170	contacts	N/O		2	1	0	4	3	2	1	0
N/C				0	1	2	0	1	2	3	4	
F8, front mount	matched contactor	model of accessories		F8-20	F8-11	F8-02	F8-40	F8-31	F8-22	F8-13	F8-04	
	NC8-06M~12M	contacts	N/O		2	1	0	4	3	2	1	0
N/C				0	1	2	0	1	2	3	4	
NCF8, side mount	matched contactor	model of accessories		NCF8-11								
	NC8-09~100	contacts	N/O		1							
N/C				1								
NCF1, side mount	matched contactor	model of accessories		NCF1-11C								
	NC8-115~170	contacts	N/O		1							
N/C				1								
F5, Pneumatic timer	matched contactor	model of accessories		F5-T0	F5-T2	F5-T4	F5-D0	F5-D2	F5-D4			
	NC8-09~170	contacts	N/O		1	1	1	1	1	1		
			N/C		1	1	1	1	1	1		
		time-delay range(s)		0.1~3	0.1~30	10~180	0.1~3	0.1~30	10~180			
SR8, surge arrester	NC8-06M~12M	SR8-A										
	NC8-09~38	SR8-B										
	NC8-40~100	SR8-C										
Rated operational voltage(V)				up to 690								
Rated insulation voltage(V)				690								
Rated conventional current(A)				10								
Rated making capability				making current 10×Ie(AC-15) or 1×Ie(DC-13)								
Short-circuit protection				gG fuse: 10A								
Control capacity		AC-15		360VA								
		AC-13		69W								
Standard				IEC/EN 60947-5-1								
Certificate				CE, UL, KEMA								
Protection degree				IP20								
Cable connection (mm ²)	flexible cable (without cold-press terminal)	single cable		1~4								
		duad cable		1~4								
	flexible cable (with cold-press terminal)	single cable		1~4								
		duad cable		1~2.5								
	inflexible cable	single cable		1~4								
		duad cable		1~4								
screw size				M3.5								
tightening torque		(N.m)		1.2								
		(lb.in.)		7								

Note: the requirement to the environment of accessories is same with that of the contactors'.
 You can order the product that you need or recognize your existing product according to the above-mentioned number and the letter of alphabet code.

5. Derived products

5.1 3-pole Reversing contactor



D=87 H=92
W=100

Frame size	Aux. contacts	
	1NO+1NC	2NO+2NC
9A	NC8-09/N	NC8-0922/N
12A	NC8-12/N	NC8-1222/N
18A	NC8-18/N	NC8-1822/N



D=106 H=102
W=100

Frame size	Aux. contacts	
	1NO+1NC	2NO+2NC
25A	NC8-25/N	NC8-2522/N
32A	NC8-32/N	NC8-3222/N
38A	NC8-38/N	NC8-3822/N



D=139 H=157.5
W=187.6

Frame size	Aux. contacts
	1NO+1NC
40A	NC8-40/N
50A	NC8-50/N
65A	NC8-65/N



D=152 H=165
W=217.6

Frame size	Aux. contacts
	1NO+1NC
80A	NC8-80/N
100A	NC8-100/N



D=156 H=155
W=255

Frame size	Aux. contacts
	1NO+1NC
115A	NC8-115/N
150A	NC8-150/N
170A	NC8-170/N

5.2 4-pole Reversing contactor



D=82 H=92
 W=100

Frame size	Main contacts
	4NO
9A	NC8-09/4/N
12A	NC8-12/4/N
18A	NC8-18/4/N



D=90 H=102
 W=122

Frame size	Main contacts
	4NO
25A	NC8-25/4/N
32A	NC8-32/4/N
38A	NC8-38/4/N



D=139 H=157.5
 W=187.6

Frame size	Main contacts
	4NO
40A	NC8-40/4/N
50A	NC8-50/4/N
65A	NC8-65/4/N



D=152 H=165
 W=217.6

Frame size	Main contacts
	4NO
80A	NC8-80/4/N
100A	NC8-100/4/N



5.3 Mini type Reversing contactors/AC coil



D=58 H=64
 W=91

3-pole		
Frame size	Aux. contacts	
	1NO	1NC
6A	NC8-06M10/N	NC8-06M01/N
9A	NC8-09M10/N	NC8-09M01/N
12A	NC8-12M10/N	NC8-12M01/N



D=58 H=64
 W=91

4-pole	
Frame size	Main contacts
	4NO
6A	NC8-06M/4/N
9A	NC8-09M/4/N
12A	NC8-12M/4/N

5.4 Mini type Reversing contactors/DC coil



D=70 H=64
 W=91

3-pole		
Frame size	Aux. contacts	
	1NO	1NC
6A	NC8-06M10/Z/N	NC8-06M01/Z/N
9A	NC8-09M10/Z/N	NC8-09M01/Z/N
12A	NC8-12M10/Z/N	NC8-12M01/Z/N

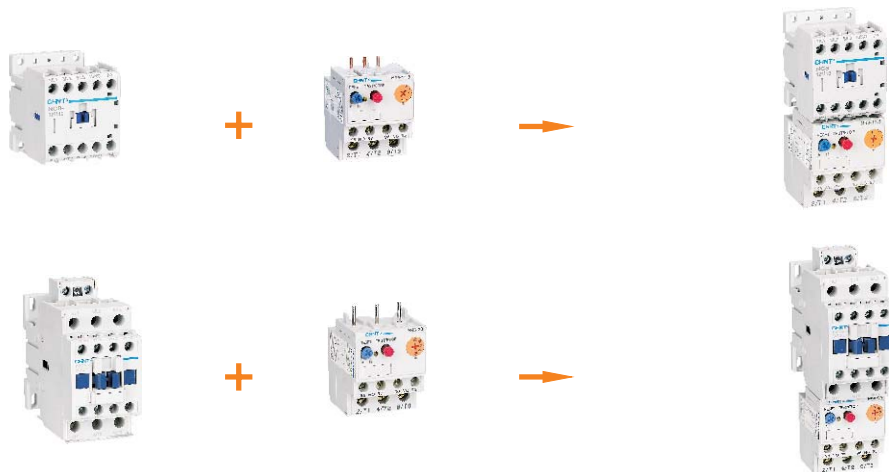


D=70 H=64
 W=91

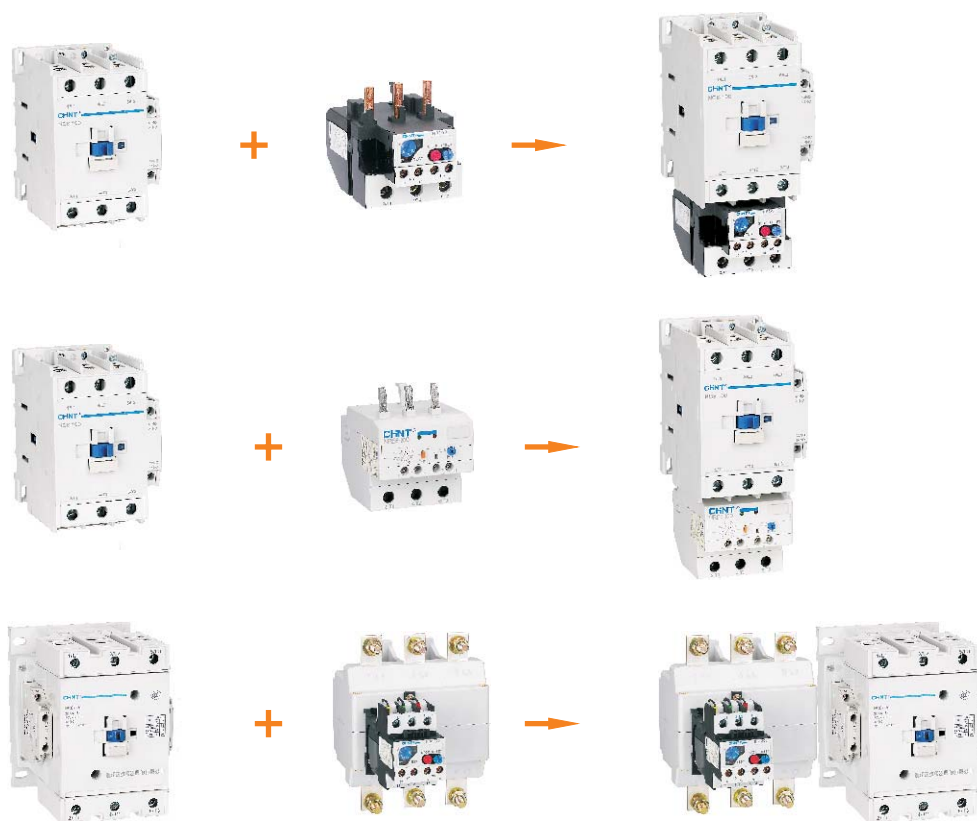
4-pole	
Frame size	Main contacts
	4NO
6A	NC8-06M/4/Z/N
9A	NC8-09M/4/Z/N
12A	NC8-12M/4/Z/N

5.5 Magnetic starter

Mini type frame size from 6A to 12A



Normal type frame size from 40A to 170A



5.6 Star-delta starter



D

6. Overall and mounting dimensions(mm)

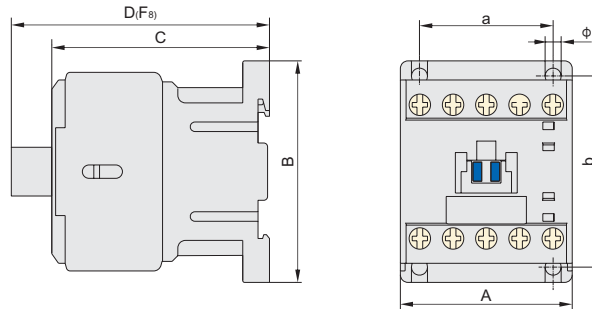


NC8-06M~12M
 NC8-06M/4~12M/4
 NC8-06M/22~12M/22

Model	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



NC8-06M/Z~12M/Z
 NC8-06M/4/Z~12M/4/Z
 NC8-06M/22/Z~12M/22/Z

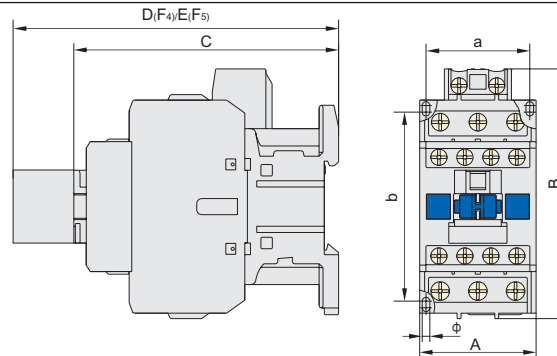


NC8-09~18
 NC8-0922~1822

Model	Amax	Bmax	Cmax	Dmax	Emax	a	b	φ
NC8-09~18	45	87	87	120	142	35±0.28	55~63	4.4
NC8-0922~1822	45	87	87	120	142	35±0.28	55~63	4.4
NC8-25~38	45	97	106	139	160	35±0.28	60~70	4.4
NC8-2522~3822	45	97	106	139	160	35±0.28	60~70	4.4



NC8-25~38
 NC8-2522~3822

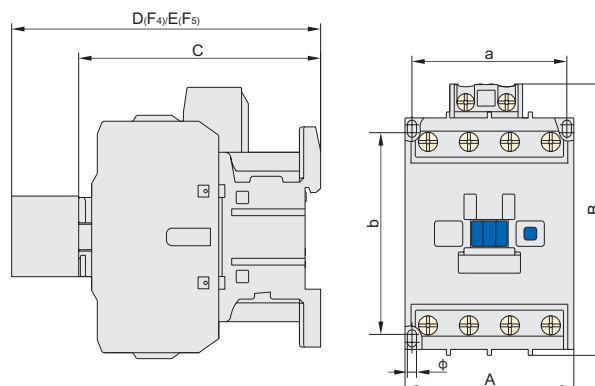


NC8-09/4~18/4
 NC8-09/22~18/22

Model	Amax	Bmax	Cmax	Dmax	Emax	a	b	φ
NC8-09/4~18/4	45	87	82	115	136	35±0.28	55~63	4.4
NC8-09/22~18/22	45	87	82	115	136	35±0.28	55~63	4.4
NC8-25/4~38/4	57	97	90	122.5	144	35±0.28	60~70	4.4
NC8-25/22~38/22	57	97	90	122.5	144	35±0.28	60~70	4.4



NC8-25/4~38/4
 NC8-25/22~38/22



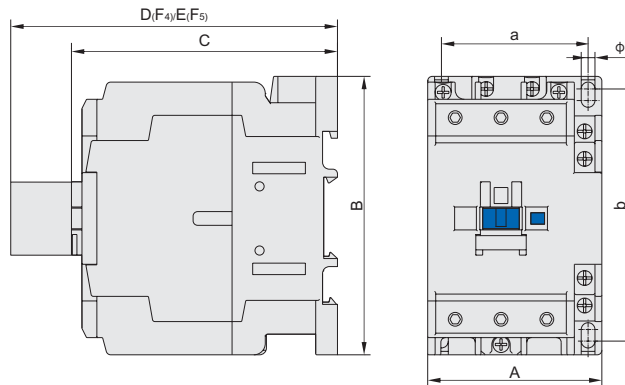


NC8-40~65



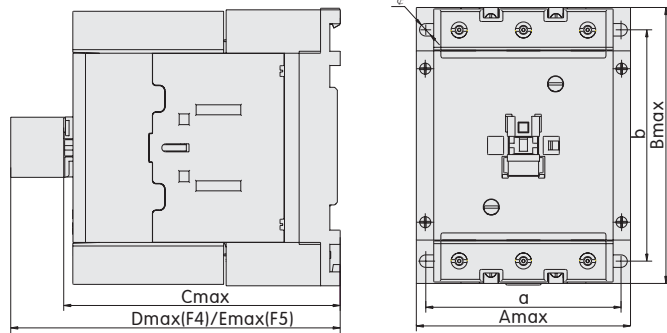
NC8-80~100

Model	Amax	Bmax	Cmax	Dmax	Emax	a	b	φ
NC8-40~65	77	122.5	118	150	172	64±0.37	100~110	6.0
NC8-80~100	87	130	127	159	180	74±0.37	105~116	5.5



NC8-115~170

Model	Amax	Bmax	Cmax	Dmax	Emax	a	b	φ
NC8-115~170	120	156	155	190.5	210.5	96~110	130±0.8	7.0

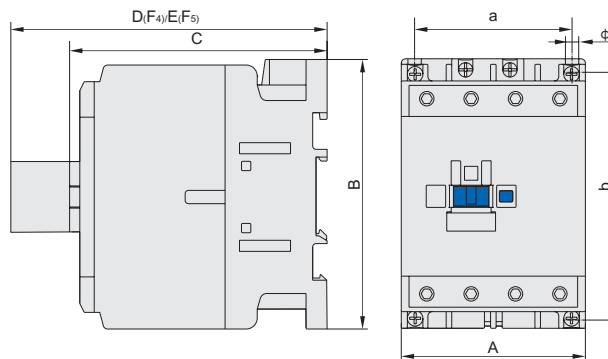


NC8-40/4~65/4



NC8-80/4~100/4

Model	Amax	Bmax	Cmax	Dmax	Emax	a	b	φ
NC8-40/4~65/4	84	122.5	118	150	172	71±0.37	100~110.5	6.0
NC8-80/4~100/4	99	130	127	158	180	86±0.5	105~118.5	5.5

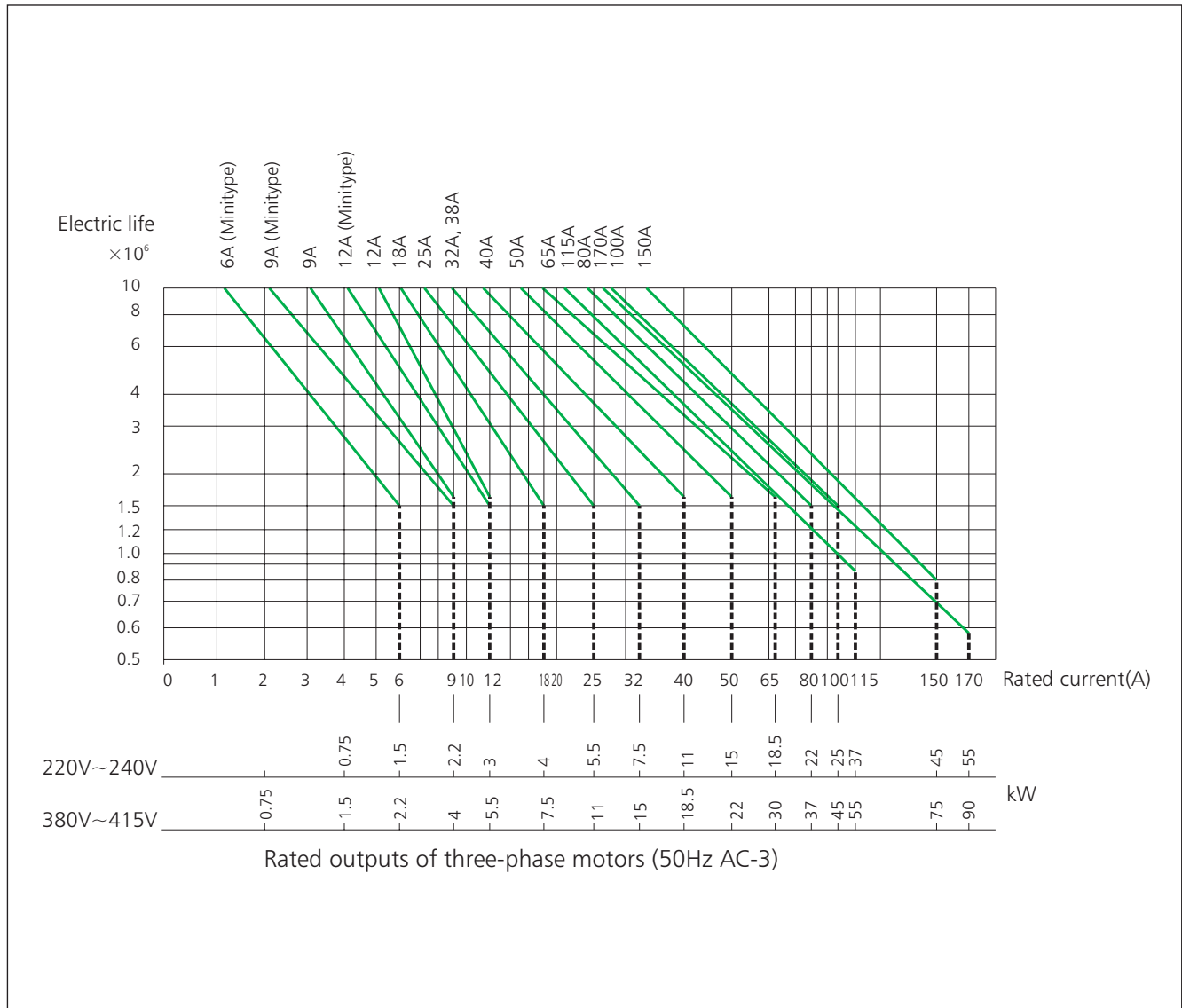


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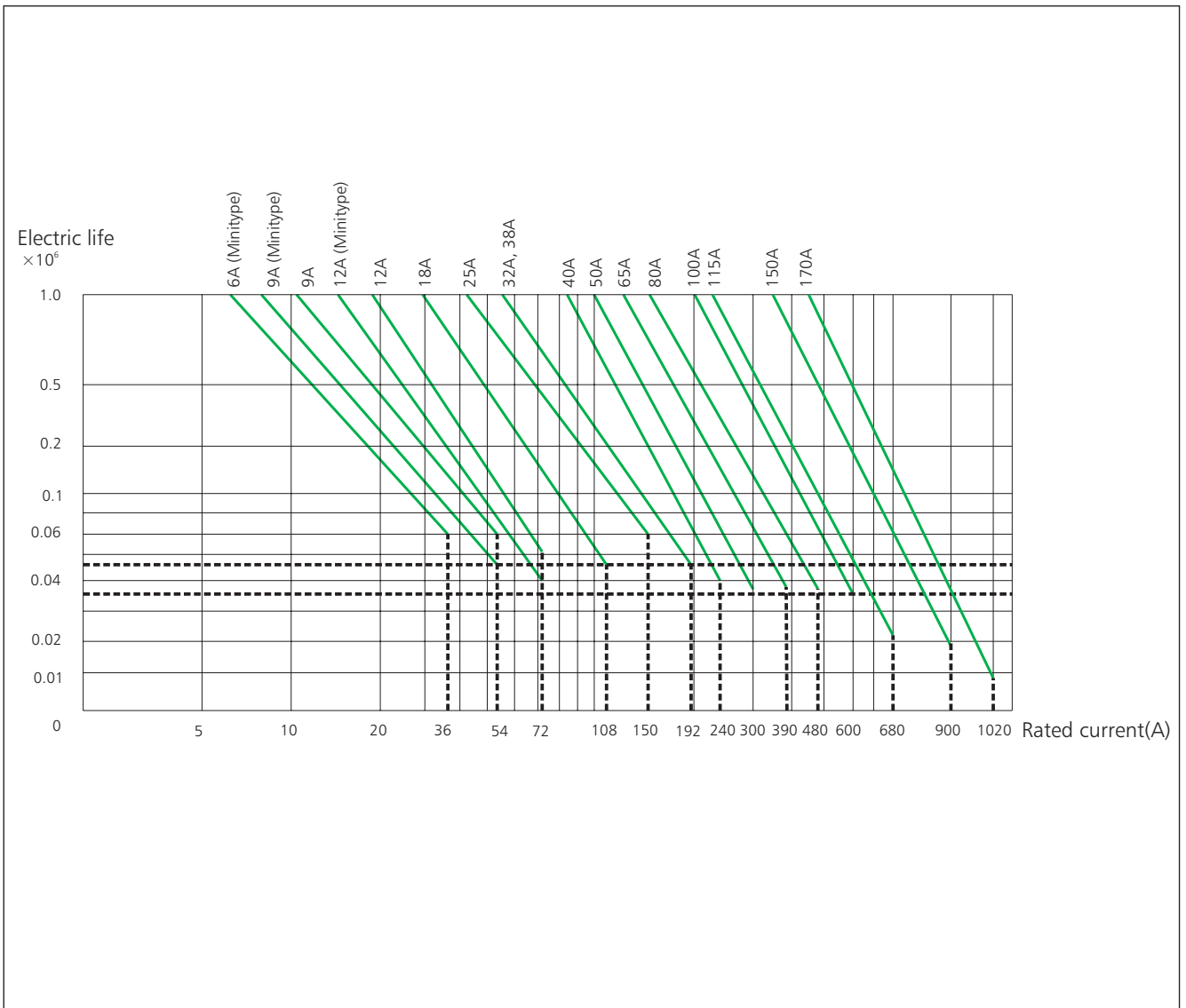
7. Excursus

7.1 Electric life Curves

Electric life curves (AC-3)



Electric life curves (AC-2, AC-4 U_e=400V/415V)



Example:
 Request to control the start of three-phase motors
 main technical parameter of three-phase motors: P=11kW, U_e=380V, I_e=22.6A
 usage category: AC-3, The electric life span of request: 1,000,000 operations
 the contactor should be NC8-25 according to the curves above

7.2 The application in illumination circuit

Model of contactor			06M, 09M, 12M	09, 12	18	25	32, 38	40	50, 65	80, 100
lamp technical data (220V/240V)			maximum permissible number of lamps per phase							
W	A	μ F								
Incandescent lamp										
60	0.27	-	35	59	77	92	129	163	207	296
75	0.34	-	28	47	61	73	103	129	164	235
100	0.45	-	21	35	46	55	77	97	124	177
150	0.68	-	14	23	30	36	51	64	82	117
200	0.91	-	10	17	23	27	38	48	62	88
300	1.40	-	6	11	15	18	25	31	40	57
500	2.30	-	4	7	8	11	15	19	24	34
750	3.40	-	2	4	6	7	10	13	16	23
1000	4.60	-	2	3	4	5	7	9	12	17
Single fluorescent lamp (with starter, without compensation)										
20	0.39	-	24	41	53	66	89	112	143	205
40	0.45	-	21	35	46	57	77	97	124	177
65	0.70	-	12	22	30	37	50	62	80	114
80	0.80	-	12	20	26	32	43	55	70	100
110	1.15	-	8	12	15	20	26	35	46	66
Single fluorescent lamp (with starter, with parallel compensation)										
20	0.18	5	83	94	105	155	215	233	335	530
40	0.26	5	58	65	75	107	150	160	230	365
65	0.42	7	35	40	45	66	92	100	142	225
80	0.52	7	28	32	36	53	74	80	115	180
100	0.60	16	23	26	29	43	59	64	92	145
110	0.70	18	21	24	27	40	55	59	85	135
Fluorescent lamps in dual mounting (with starter, without compensation)										
2×20	2×0.22	-	21	36	46	58	78	100	126	180
2×40	2×0.41	-	11	18	24	30	42	52	68	96
2×65	2×0.67	-	7	10	14	18	26	32	40	58
2×80	2×0.82	-	5	8	12	14	20	26	34	48
2×110	2×1.10	-	4	6	8	10	14	18	24	36

..... to be continued

Model of contactor	06M, 09M, 12M	09, 12	18	25	32, 38	40	50, 65	80, 100		
lamp technical data (220V/240V)										
			maximum permissible number of lamps per phase							
W	A	μ F								
Fluorescent lamps in dual mounting (with starter, with compensation in series)										
2×20	2×0.13	-	36	60	80	100	134	168	214	306
2×40	2×0.24	-	20	32	42	54	72	90	116	166
2×65	2×0.39	-	12	20	26	32	44	56	70	102
2×80	2×0.48	-	10	16	20	26	36	44	58	82
2×110	2×0.65	-	7	12	16	20	26	32	42	60
Single fluorescent lamp (without starter, without compensation)										
20	0.43	-	22	37	48	60	97	102	130	186
40	0.55	-	17	29	38	47	63	80	101	145
65	0.80	-	12	20	26	32	43	55	70	100
80	0.95	-	10	16	22	27	36	46	58	84
110	0.40	-	6	11	15	18	25	31	40	57
Single fluorescent lamp (with starter, with parallel compensation)										
20	0.19	5	50	84	110	136	184	231	294	421
40	0.29	5	33	55	72	89	101	151	193	275
65	0.46	7	20	34	45	56	76	95	121	173
80	0.57	7	16	28	36	45	61	77	98	140
110	0.79	16	-	20	26	32	44	55	70	101
Fluorescent lamps (without starter, without compensation)										
2×20	2×0.25	-	19	32	42	52	70	88	112	160
2×40	2×0.47	-	10	16	22	26	36	46	158	84
2×65	2×0.76	-	6	10	12	16	22	28	36	52
2×80	2×0.93	-	5	8	10	12	18	22	30	42
2×110	2×1.30	-	3	6	8	10	12	16	20	30
Fluorescent lamps in dual mounting (without starter, with compensation in series)										
2×20	2×0.15	-	34	56	74	92	124	156	200	234
2×40	2×0.26	-	18	30	40	50	66	84	106	152
2×65	2×0.43	-	11	18	24	30	40	50	64	92
2×80	2×0.53	-	9	14	18	24	32	40	32	74
2×110	2×0.72	-	6	10	14	18	24	30	38	54
Low press sodium vapour lamps (with parallel compensation)										
35	0.3	17	-	40	50	63	86	110	140	200
55	0.4	17	-	30	37	47	65	82	105	150
90	0.6	25	-	-	25	31	43	55	70	100
135	0.9	36	-	-	-	21	28	36	46	66
150	1.0	36	-	-	-	19	26	33	42	60
180	1.2	36	-	-	-	15	21	27	35	50
200	1.3	36	-	-	-	14	20	25	32	46



Model of contactor	06M, 09M, 12M			09, 12	18	25	32, 38	40	50, 65	80, 100
lamp technical data (220V/240V)										
			maximum permissible number of lamps per phase							
W	A	μ F								
High press sodium vapour lamps (without compensation)										
150	1.9	-	4	6	7	10	13	17	22	31
250	3.2	-	2	3	4	5	8	10	13	18
400	5.0	-	1	2	3	3	5	6	8	12
700	8.8	-	-	-	2	2	2	3	4	6
1000	12.4	-	-	-	1	1	2	2	3	4
High press sodium vapour lamps (with parallel compensation)										
150	0.84	20	-	-	17	22	30	39	50	71
250	1.4	32	-	-	-	13	18	23	30	42
400	2.2	48	-	-	-	8	11	15	19	27
700	3.6	96	-	-	-	-	6	8	10	15
1000	5.5	120	-	-	-	-	-	6	7	10
High press hydrargyrum lamps (without compensation)										
50	0.54	-	14	22	27	35	48	64	77	111
80	0.81	-	9	14	18	23	32	40	51	74
125	1.20	-	6	9	12	15	21	27	34	49
250	2.30	-	3	5	6	8	11	14	17	26
400	4.10	-	1	2	3	4	6	8	10	14
700	6.80	-	-	1	2	2	3	4	6	8
1000	9.90	-	-	1	1	1	2	3	4	6
High press hydrargyrum lamps (with parallel compensation)										
50	0.30	10	-	40	50	63	86	110	140	120
80	0.45	10	-	26	33	42	57	73	93	133
125	0.67	10	-	17	22	28	38	49	62	89
250	1.3	18	-	9	11	14	20	25	32	46
400	2.3	25	-	-	6	8	11	14	18	26
700	3.8	40	-	-	-	5	6	8	11	15
1000	5.5	60	-	-	-	3	4	8	7	10

8. Ordering information

8.1 The following items should be illustrated when ordering:

8.1.1 The full name and model of contactor;

8.1.2 Rated operational voltage and frequency of coil;

8.1.3 Ordering total pcs;

8.2 Ordering example:NC8-1822 AC contactor,coil voltage 220V,50Hz 10 pcs;