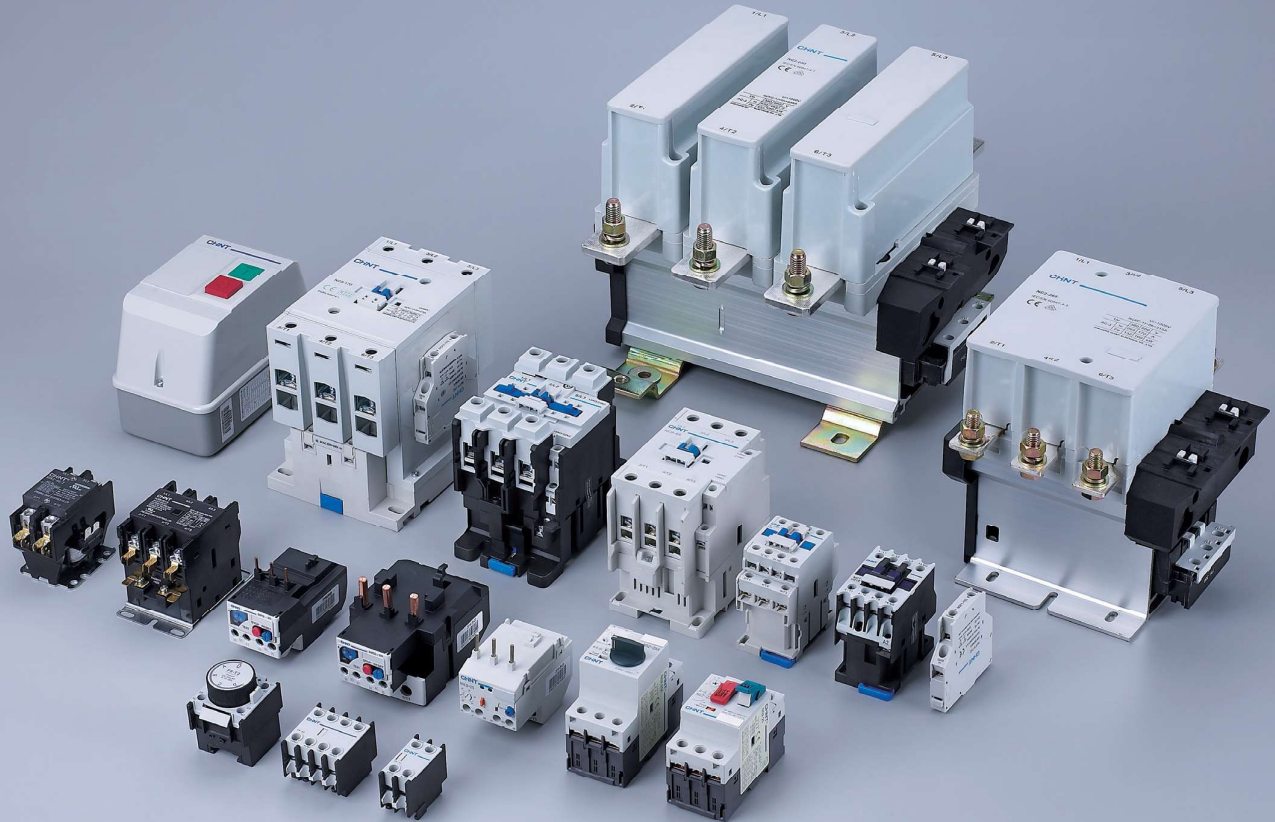


CHNT

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Motor Control and Protection
various for choice, same for reliability



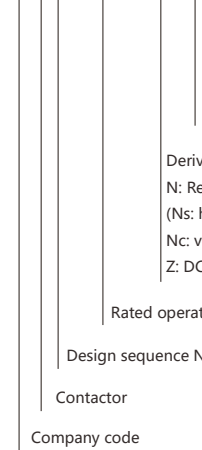
NC2 AC Contactor, 115~800A

1. General

- 1.1 Certificates: NC2-115~800
CE, VDE, UKrSEPRO, EAC, RCC, UL;
- 1.2 Electric ratings: AC50/60Hz, up to 690V, up to 800A;
- 1.3 Application: remote making & breaking circuits;
protect circuit from overload when assembling
with thermal over-load relay;
- 1.4 Ambient temperature: -5°C ~ +40°C ;
- 1.5 Altitude: ≤ 2000m;
- 1.6 Mounting category: III
- 1.7 Mounting conditions: inclination between the mounting plane
and the vertical plane not exceed ±5°
- 1.8 Standard: IEC/EN 60947-4-1
- 1.9 IP00(IP20 front face with shrouds SHD)

2.Type designation

N C 2- □ □ □ □ / □



Number of poles: 4P; Blank:3P

Derivation code:

N: Reversing/chang-over type contactor

(Ns: horizontal mounting;

Nc: vertical mounting)

Z: DC control

Rated operational current (A), AC-3 380/400V

Design sequence No.

Contactor

Company code

3. Technical data

3.1 Clearance between active and static contacts

Models	Distance between contacts
NC2-115N/150N	≥5mm
NC2-185N/225N	≥5mm
NC2-265N/330N	≥6mm
NC2-400N/500N	≥6.5mm
NC2-630N	≥7mm
NC2-800N	≥7mm

3.2 Mechanical life

a. NJLC-FF and NJLS-FF: 3×10⁶ operations

b. Other model: 2×10⁶ operations

(a) 3×10 ⁶	NJLc-FF, NJLs-FF
(b) 2×10 ⁶	NJLs-FF, NJLs-GG, NJLs-HH, NJLs-KK, NJLs-LL, NJLc-FF, NJLc-FG, NJLc-FH, NJLc-FK, NJLc-FL, NJLc-GG, NJLc-GH, NJLc-GK, NJLc-GL, NJLc-HH, NJLc-HK, NJLc-HL, NJLc-KK, NJLc-KL, NJLc-LL

3.3 Terminal connection

Model	The connection capability			Screw size	Tightening torque (Nm)
	Number of piece	Cable Cross section(mm ²)	Cu busbar Cross section (mm ²)		
NC2-115	1	70~95	-	M6	3
NC2-150	1	70~95	-	M8	6
NC2-185	1	95~150	-	M8	6
NC2-225	1	95~150	-	M10	10
NC2-265	1	120~185	-	M10	10
NC2-330	1	185~240	-	M10	10
NC2-400	1(2)	240(150)	30×5	M10	10
NC2-500	2	150~185	40×5	M10	10
NC2-630	2	185~240	50×5	M12	14
NC2-800	2	185~240	50×5	M12	14



4. Technical data

★ 3P contactors AC coil operation

Model			NC2-115(Z)	NC2-150(Z)	NC2-185(Z)	NC2-225(Z)
Frame			Frame 1		Frame 2	
Rated Conventional heating current (A) AC-1			200	200	275	275
Rated operational current (A)	AC-3	380/400V AC	115	150	185	225
	AC-4	660/690V AC	86	108	118	137
Power of controlled 3-phase cage motor (AC-3)	kW	380/400V AC	55	75	90	110
		660/690V AC	80	100	110	129
	hp	240V AC	40	50	60	75
		415V AC	60	75	100	125
		480V AC	75	100	100	125
600V AC	75	100	100	125		
Operating cycles (operations /h) AC-3			1,200	1,200	600	600
Electrical life ($\times 10^6$ operations) AC-3			1.2	1.2	1	1
Mechanical life ($\times 10^6$ operations)			10	10	6	6
Matched fuse type	Model		RT36-1	RT36-1	RT36-2	RT36-2
	Rated current A		250	250	315	315

★ 4P contactors AC coil operation

Model			NC2-115/4	NC2-150/4	NC2-185/4	NC2-225/4
Frame			Frame 1		Frame 2	
Conventional heating current (A) AC-1			200	200	275	275
Rated operational current (A)	AC-3	380/400V AC	115	150	185	225
	AC-4	660/690V AC	86	108	118	137
Power of controlled 3-phase cage motor (AC-3)	kW	380/400V AC	55	75	90	110
		660/690V AC	80	100	110	129
	hp	240V AC	40	50	60	75
		415V AC	60	75	100	125
		480V AC	75	100	100	125
600V AC	75	100	100	125		
Operating cycles (operations /h) AC-3			1,200	1,200	600	600
Electrical life ($\times 10^6$ operations) AC-3			1.2	1.2	1	1
Mechanical life ($\times 10^6$ operations)			10	10	6	6
Matched fuse type	Model		RT36-1	RT36-1	RT36-2	RT36-2
	Rated current (A)		250	250	315	315

NC2-265(Z)	NC2-330(Z)	NC2-400(Z)	NC2-500	NC2-630	NC2-800	
Frame 3	Frame 4	Frame 5	Frame 6		Frame 7	
315	380	450	630	800	800	
265	330	400	500	630	AC-3	AC-4
170	235	303	353	462	800	630
					486	462
132	160	150	200	250	350	
160	220	200	250	350	600	
100	125	250	350	400	600	
150	150	300	350	500	650	
150	200	200	250	335	450	
150	200	280	335	450	475	
600	600	600	600	600	600	
0.8	0.8	0.8	0.8	0.8	0.6	
6	6	6	6	6	3	
RT36-3	RT36-3	RT36-3	RT36-4	RT36-4	RT36-4	
355	500	630	800	1000	1000	



NC2-265/4	NC2-330/4	NC2-400/4	NC2-630/4
Frame 3	Frame 4	Frame 5	Frame 6
315	380	450	800
265	330	400	630
170	235	303	462
132	160	200	335
160	220	280	450
100	125	150	250
150	150	200	350
150	200	250	400
150	200	300	500
600	600	600	600
0.8	0.8	0.8	0.8
6	6	6	6
RT36-3	RT36-3	RT16-3	RT36-4
355	500	630	1000

5. Accessories

Items		Model	NC2-115(Z)	NC2-150(Z)	NC2-185(Z)	NC2-225(Z)
AC coil	Coil power	AC:	In-rush (VA)	1500	1800	
			Sealed (VA)	20	20	
		DC:	In-rush (W)	1500	1800	
			Sealed (W)	20	20	
	Operation range	Operation voltage	(85%~110%) Us			
	Drop-out voltage	Common products; 20%~75%; electricity-saving products: 10%~75%Us				
	Coil code (XXX=coil voltage)	3P	FF XXX (DC)		FG XXX (DC)	
		4P	FF XXX		FG XXX	
Coil voltage			AC: 110-127, 220-240, 380-415 DC: 48, 110, 220			
F4 auxiliary contact						
F5 auxiliary contact						




NC2-265(Z)	NC2-330(Z)	NC2-400(Z)	NC2-500	NC2-630	NC2-800
1,500	1,500	1,500	1,500	1,700	1,700
10	20	20	25	25	34.2
1500	1500	1700			
20	20	20			

(85%~110%) Us

Common products; 20%~75%; electricity-saving products: 10%~75%Us

FI XXX (DC)	FI XXX (DC)	FJ XXX (DC)	FK XXX	FL XXX	FM XXX
FI XXX	FI XXX	FJ XXX	-	FL XXX/4	-

AC: 110,127,220,230,380,400(NC2-265-630);110-127,220-240,380-415(NC2-800)
 DC: 110,220(NC2-265Z/330Z/400Z) AC/DC: 110-127, 220-240, 380-415

Picture	Model	Configuration of contacts	
		Number of NO contact	Number of NC contact
	F4-20	2	0
	F4-11	1	1
	F4-02	0	2
	F4-40	4	0
	F4-31	3	1
	F4-22	2	2
	F4-13	1	3
	F4-04	0	4
Picture	Model	Time-delay range	Configuration of time-delay contacts
	F5-T0	0.1s~3s	N/O+N/C
	F5-T2	0.1s~30s	N/O+N/C
	F5-T4	10s~180s	N/O+N/C
	F5-D0	0.1s~3s	N/O+N/C
	F5-D2	0.1s~30s	N/O+N/C
	F5-D4	10s~180s	N/O+N/C



Model of mechanical interlock	Applicable assembly with contactors
NJLs-FF NJLs-GG NJLs-HH (Horizontal) NJLs-KK NJLs-LL	NC2-115+NC2-115; NC2-150+NC2-150; NC2-115+NC2-150
	NC2-185+NC2-185; NC2-225+NC2-225; NC2-185+NC2-225
	NC2-265+NC2-265; NC2-330+NC2-330; NC2-265+NC2-330
	NC2-400+NC2-400; NC2-500+NC2-500; NC2-400+NC2-500
	NC2-630+NC2-630; NC2-800+NC2-800
NJLc-FF NJLc-FG NJLc-FH NJLc-FK NJLc-FL NJLc-GG NJLc-GH NJLc-GK (Vertical) NJLc-GL NJLc-HH NJLc-HK NJLc-HL NJLc-KK NJLc-KL NJLc-LL NJLc-MM	NC2-115+NC2-115; NC2-150+NC2-150; NC2-115+NC2-150
	NC2-115+NC2-185; NC2-150+NC2-185; NC2-115+NC2-225; NC2-150+NC2-225
	NC2-115+NC2-265; NC2-115+NC2-330; NC2-150+NC2-265; NC2-150+NC2-330
	NC2-115+NC2-400; NC2-115+NC2-500; NC2-150+NC2-400; NC2-150+NC2-500
	NC2-115+NC2-800; NC2-115+NC2-630; NC2-150+NC2-630; NC2-150+NC2-800
	NC2-185+NC2-185; NC2-225+NC2-225; NC2-185+NC2-225
	NC2-185+NC2-265; NC2-185+NC2-330; NC2-225+NC2-265; NC2-225+NC2-330
	NC2-185+NC2-400; NC2-225+NC2-500; NC2-225+NC2-400; NC2-225+NC2-500
	NC2-185+NC2-800; NC2-185+NC2-630; NC2-225+NC2-630; NC2-225+NC2-800
	NC2-265+NC2-265; NC2-330+NC2-330; NC2-265+NC2-330
	NC2-265+NC2-400; NC2-330+NC2-400; NC2-265+NC2-500; NC2-330+NC2-500
	NC2-265+NC2-265; NC2-265+NC2-630; NC2-330+NC2-630; NC2-330+NC2-800
	NC2-400+NC2-400; NC2-500+NC2-500; NC2-400+NC2-500; NC2-400+NC2-800
	NC2-400+NC2-630; NC2-500+NC2-630; NC2-500+NC2-800
	NC2-630+NC2-630; NC2-630+NC2-800
NC2-800+NC2-800	

6. Structure features

6.1 The contactor is composed of arc-extinguishing system, contact system, base frame and magnetic system (including iron core, coil)

The contact system of the contactor is of direct action type and double-breaking points allocation.

The lower base-frame of the contactor is made of shaped aluminum alloy and the coil is of plastic enclosed structure.

The coil is assembled with the amature to be an integrated one. They can be directly taken out from or inserted into the contactor.

It is convenient for user's service and maintenance.

Scheme of NC2-115~265 structure

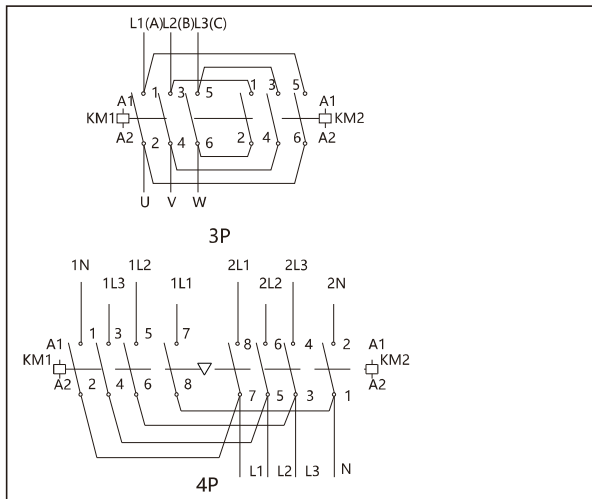


NC2 series contactor is of short arcing distance. For example, the arcing distance of NC2-115~330 contactor is only 10mm (200~500V), which is about one sixth that of the previous contactor of the same capacity. It is an excellent complementary element used for an electric control device and it occupies smaller space in a complete set of equipment. The mechanical interlock can be added to the contactor in both horizontal direction and vertical direction. Three sets of contactor can be interlocked in the vertical direction.

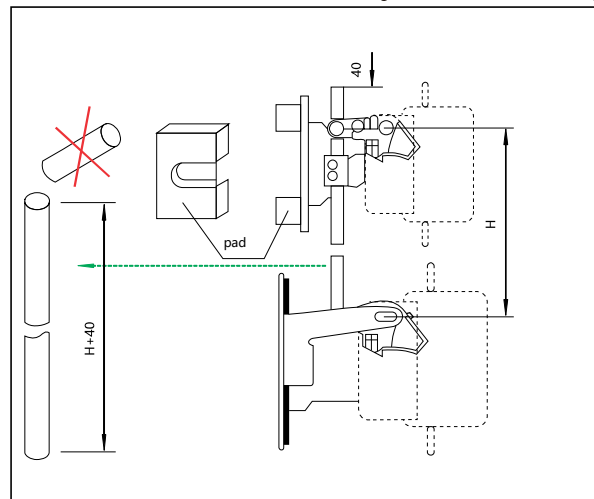
6.2 Refer to fig below for connection mode of connection plate, the interlocked contactors could be mounted horizontally or vertically. For vertical mounting, contactors with lower current mounted at the upper position.

6.3 For reversing type contactors assembled with NC2-115~225 and NC2-265~630, which will be mounted vertically, a padding plate should be added at the bottom of NC2-115~225.

Connection of connection plate

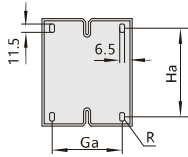
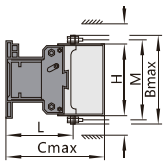
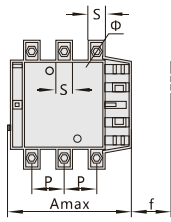


Reversing contactor mounted vertically

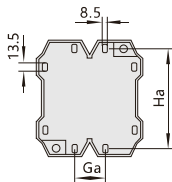
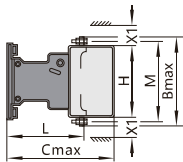
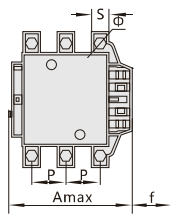


7. Overall and mounting dimensions (mm)

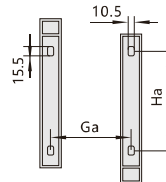
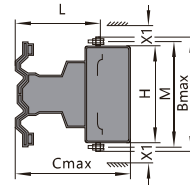
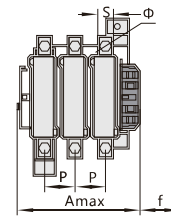
NC2-115~330



NC2-400~500



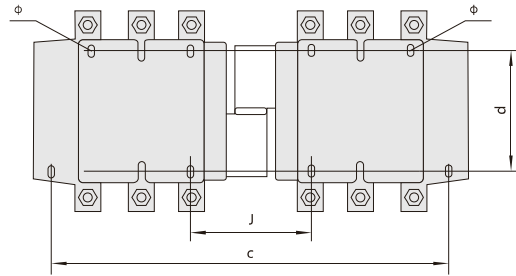
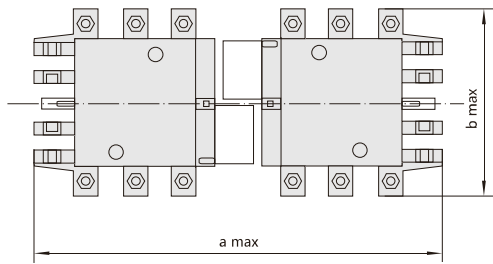
NC2-630~800



Model		A	B	CP		S	Φ	f	MH		L	X1 200~500V	X1 660~1000V	Ga	Ha
NC2-115	3P	1681	63	1723	7	20	M6	1311	47	124	107	10	15	80	110~120
	4P	204	163	1723	7	20	M6	1311	47	1241	07				
NC2-150	3P	168	1711	72	40	20	M8	1311	50	124	107	10	15	80	110~120
	4P	2041	71	1724	02	0M	81	31	1501	24	107				
NC2-185	3P	1711	75	1834	02	0M	81	31	1541	27	113.5	10	15	80	110~120
	4P	2111	75	1834	02	0M	81	31	1541	27	113.5				
NC2-225	3P	171	198	183	48	25	M10	1311	72	127	113.5	10	15	80	110~120
	4P	2111	98	1834	82	5M	10	1311	72	127	113.5				
NC2-265	3P	2022	04	2154	82	5M	10	1471	78	1471	41	10	15	96	110~120
	4P	2472	04	2154	82	5M	10	1471	78	1471	41				
NC2-330	3P	2152	08	2204	82	5M	10	1471	81	1581	45	10	15	96	110~120
	4P	2612	08	2204	82	5M	10	1471	81	1581	45				
NC2-400	3P	2152	08	2204	82	5M	10	1471	81	1581	45	15	20	80	170~180
	4P	2612	08	2204	82	5M	10	1471	81	1581	45				
NC2-500	3P	2352	38	2335	53	0M	10	1502	08	1721	46	15	20	80	170~180
NC2-630	3P	3123	05			40	M121	81	2642	02	1551	20	30	80	180~190
	4P	3893	05	2568	04	0M	12	1812	64	2021	55			240	
NC2-800	3P	3122	3052	56	80	40	M121	81	64	2021	55	20	30	180	180~190

Note: a. f is the min distance needed to mount and dismount the coil.
 b. X1: arcing distance is identified by operating voltage and breaking capacity.

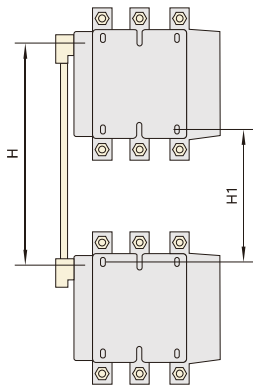
NC2-115Ns~630Ns (Horizontal mounting)



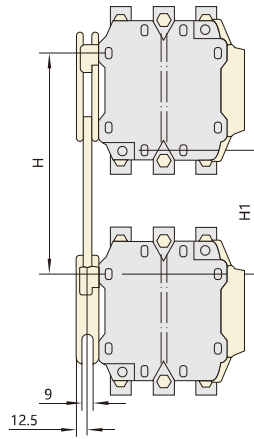
Model	pole	A max	b max	c	d	J
NC2-115Ns	3	350	163	330	110~120	71
	4	425	208	370		108
NC2-150Ns	3	350	171	330		71
	4	425	211	370		111
NC2-185Ns	3	350	174	330		78
	4	430	223	370		118
NC2-225Ns	3	350	197	330		78
	4	430	243	370		118
NC2-265Ns	3	450	203	428		109
	4	546	249	485		157
NC2-330Ns	3	450	206	428		124
	4	546	251	485		172
NC2-400Ns	3	485	206	460	170~180	157
	4	595	251	485		157
NC2-500Ns	3	485	238	460	156	
NC2-630Ns	4	650	304	625	180~190	139
	3	810	364	785		139
NC2-800Ns	4	650	304	625	139	

mm

D



a. NC2-115Nc~225Nc





b. NC2-265Nc~800Nc

Model	H		H1	
	Min	MaxM	Min	ax
NC2-115 Nc, NC2-150Nc	200	310	80	190
NC2-185 Nc, NC2-225Nc	220	310	100	190
NC2-265 Nc	250	380	130	260
NC2-330 Nc	260	380	60	200
NC2-400 Nc	280	380	100	200
NC2-500 Nc	300	380	120	200
NC2-630 Nc	380	380	200	200
NC2-800 Nc	380	380	200	200

8.Assembly with overload relay

8.1 Assembly with thermal overload relay

Model of contactor	Assembled thermal ocerload relay			
	ModelR	ated current (A)	Recommended fuse type	
			aM	gG
NC2-115 NC2-150 NC2-185 NC2-225	 NR2-200	80~125	125	200
		100~160	160	250
		125~200	200	315
NC2-185 NC2-225 NC2-265 NC2-330 NC2-400 NC2-500 NC2-630 ~ 800	 NR2-630	160~250	250	400
		200~315	315	500
		250~400	400	630
		315~500	500	800
		400~630	630	800