



## 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

### 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:  $3 \times 10^6$  operations
- b. Other model:  $2 \times 10^6$  operations

(a) $3 \times 10^6$	NJLC-FF, NJLS-FF
(b) $2 \times 10^6$	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 (N·m)
	Number of piece	Cable Cross section (mm <sup>2</sup> )	Cu busbar Cross section (mm <sup>2</sup> )		
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 (×10 <sup>6</sup> operations) AC-3			1.2	1.2	1	1
Mechanical life (×10 <sup>6</sup> 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 (×10 <sup>6</sup> operations) AC-3			1.2	1.2	1	1
Mechanical life (×10 <sup>6</sup> 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
					800	630
170	235	303	353	462	486	462
132	160	200	250	335	450	
160	220	280	335	450	475	
100	125	150	200	250	350	
150	150	200	250	350	600	
150	200	250	350	400	600	
150	200	300	350	500	650	
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)	660	966	
			Sealed (VA)	60	75	
		DC:	In-rush (W)	1500	1800	
			Sealed (W)	5	6	
	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/4		FG XXX/4	
Coil voltage			AC(50Hz,60Hz,50/60Hz):110,127,220,230,380,400 DC:48,110,220			
F4 auxiliary contact						
F5 auxiliary contact						

Items		NC2-115~150	NC2-185~225	NC2-265	
Mute coil	Coil power	In-rush(VA)	1500	1800	1500
		Sealed(VA)	5	6	10
	Operation range	Operatio voltage	(85%-110%)Us		
		Drop-out voltage	(10%-75%)Us		
	Coil code(XXX=coil voltage)	3P/4P	FF XXX JZ	FG XXX JZ	FH XXX JZ
Coil voltage(AC)		110V,220V(230V)			




NC2-265(Z)	NC2-330(Z)	NC2-400(Z)	NC2-500	NC2-630	NC2-800
840	1,500	1,500	1,500	1,700	1,700
100	10	20	25	25	34.2
1500	1500	1700			
8	8	10			

(85%~110%) Us

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

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

AC: 110,127,220,230,380,400  
DC: 110,220(NC2-265Z/330Z/400Z)

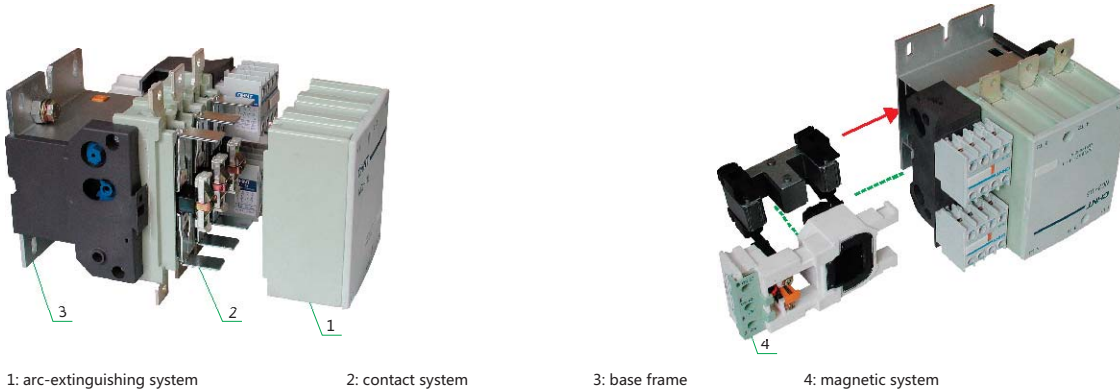
Picture	Model	Configuration of contacts	
		Number of NO contact	Number of NC contact
	F4-20	2	0
	F4-11	1	1
	F4-02	0	2
	F4-40	4	0
	F4-31	3	1
	F4-22	2	2
	F4-13	1	3
	F4-04	0	4
Picture	Model	Time-delay range	Configuration of time-delay contacts
	F5-T0	0.1s~3s	N/O+N/C
	F5-T2	0.1s~30s	N/O+N/C
	F5-T4	10s~180s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

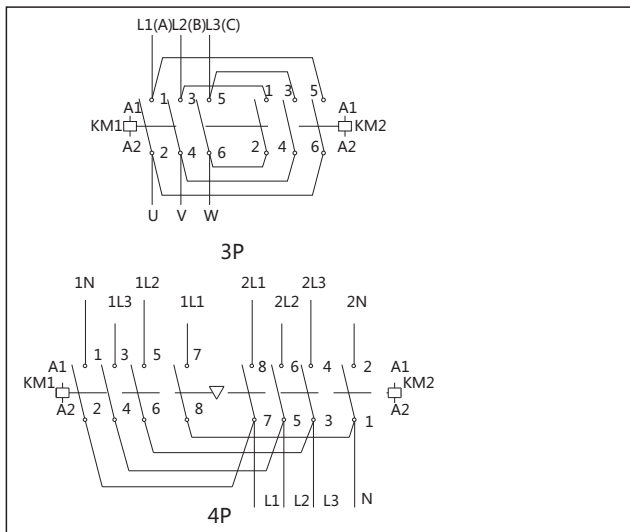


NC2 series contactor is of short arcing distance. For example, the arcing distance of NC2-115~330 contactor is only 10mm (200~500V), which is about one sixth that of the previous contactor of the same capacity. It is an excellent complementary element used for an electric control device and it occupies 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.

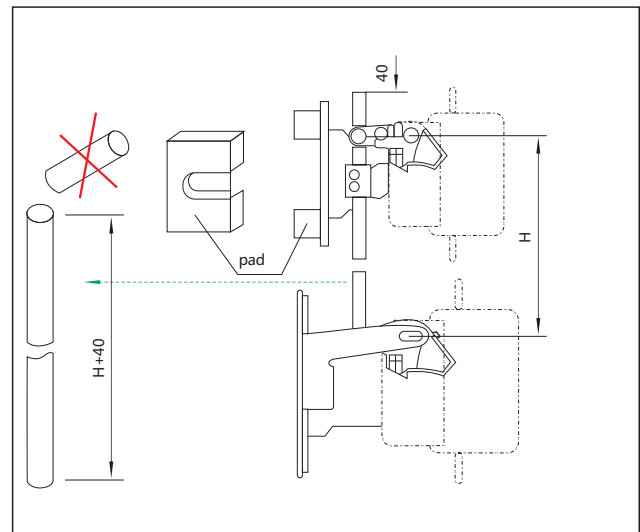
6.2 Refer to fig below for connection mode of connection plate, the interlocked contactors could be mounted horizontally or vertically. For vertical mounting, contactors with lower current mounted at the upper position.

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

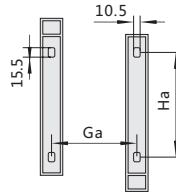
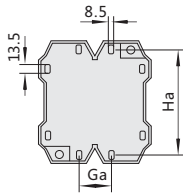
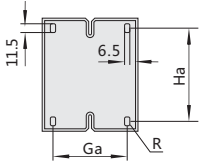
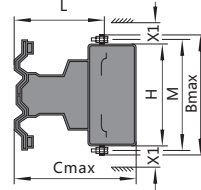
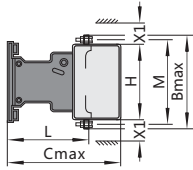
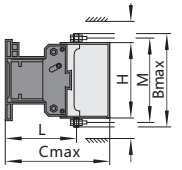
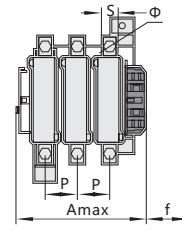
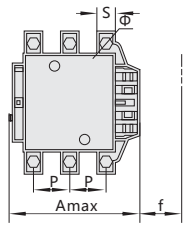
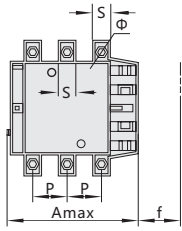


**7. Overall and mounting dimensions (mm)**

NC2-115~330

NC2-400~500

NC2-630~800



Model	NC2-115		NC2-150		NC2-185		NC2-225	
	3P	4P	3P	4P	3P	4P	3P	4P
A	168	204	168	204	171	211	171	211
B	163	163	171	171	175	175	198	198
C	172	172	172	172	183	183	183	183
P	37	37	40	40	40	40	48	48
S	20	20	20	20	20	20	25	25
Φ	M6	M6	M8	M8	M8	M8	M10	M10
f	131	131	131	131	131	131	131	131
M	147	147	150	150	154	154	172	172
H	124	124	124	124	127	127	127	127
L	107	107	107	107	113.5	113.5	113.5	113.5
X1 200~500V	10		10		10		10	
X1 660~1000V	15		15		15		15	
Ga	80		80		80		80	
Ha	110~120		110~120		110~120		110~120	

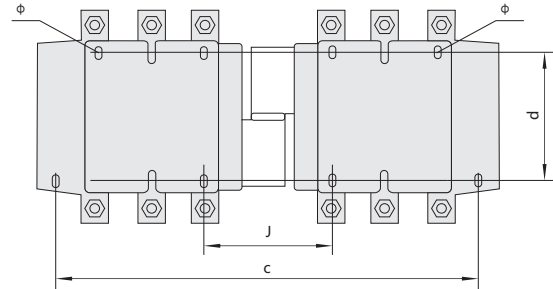
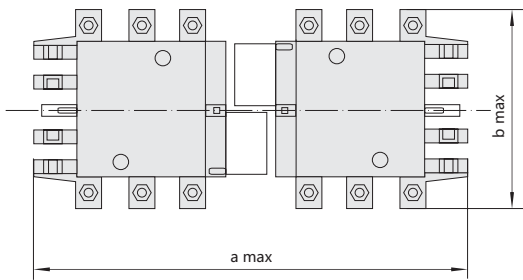
Note: a. f is the min distance needed to mount and dismount the coil.

b. X1: arcing distance is identified by operating voltage and breaking capacity.



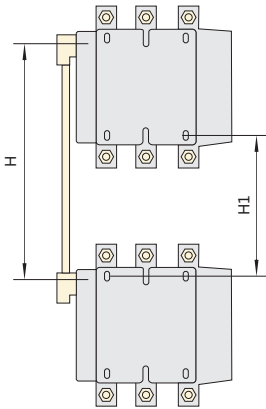
NC2-265		NC2-330		NC2-400		NC2-500	NC2-630		NC2-800
3P	4P	3P	4P	3P	4P	3P	3P	4P	3P
202	247	215	261	215	261	235	312	389	312
204	204	208	208	208	208	238	305	305	305
215	215	220	220	220	220	233	256	256	256
48	48	48	48	48	48	55	80	80	80
25	25	25	25	25	25	30	40	40	40
M10	M10	M10	M10	M10	M10	M10	M12	M12	M12
147	147	147	147	147	147	150	181	181	181
178	178	181	181	181	181	208	264	264	264
147	147	158	158	158	158	172	202	202	202
141	141	145	145	145	145	146	155	155	155
10		10		15		15	20		20
15		15		20		20	30		30
96		96		80		80	180	240	180
110~120		110~120		170~180		170~180	180~190		180~190



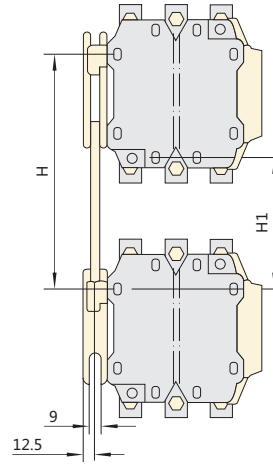


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Modle	pole	A max	b max	c	d	J
NC2-115Ns	3	350	163	330	110~120	71
	4	425	208	370		108
NC2-150Ns	3	350	171	330		71
	4	425	211	370		111
NC2-185Ns	3	350	174	330		78
	4	430	223	370		118
NC2-225Ns	3	350	197	330		78
	4	430	243	370		118
NC2-265Ns	3	450	203	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	3	650	304	625	180~190	139
	4	810	364	785		139
NC2-800Ns	3	650	304	625	139	



a. NC2-115Nc~225Nc





b. NC2-265Nc~800Nc

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

## 8. Assembly with overload relay

### 8.1 Assembly with thermal overload relay

Model of contactor	Assembled thermal ocerload relay			
	Model	Rated 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