Overview

Applicable scope

The new NXC AC contactors feature a novel appearance and a compact structure. They are mainly used for frequent starts and control of AC motors as well as remote circuit making /breaking. They can also be combined with appropriate thermal overload relays to form electromagnetic starters.

Compliant standards: IEC/EN 60947-1, IEC/EN 60947-4-1, IEC/EN 60947-5-1.

Parameters

- Rated operation current Ie: 6A~630A
- Rated operation voltage Ue: 220V~690V
- Rated insulation voltage: 690V (NXC-06M~100), 1000V (NXC-120~630)
- Number of poles: 3P and 4P (only for NXC-06M~16M,NXC-09-12.25.40.)
- Coil control method: AC (NXC-06(M)~225), DC (NXC-06M~16M), AC/DC (NXC-265~630)
- Installation method: NXC-06M~100 rail and screw installation, NXC-120~630 screw installation

Operation and installation conditions

Type	Operation and installation conditions
Installation class	Ⅲ
Pollution degree	3
Compliant standards	IEC/EN 60947-1, IEC/EN 60947-4-1, IEC/EN 60947-5-1
Certification mark	CE
Enclosure protection degree	NXC-06M~12M:IP20;NXC06~38: front IP20;NXC-40~100: IP10; NXC-120~630: IP00
Ambient temperature	Operation temperature limits: -35℃ ~+70℃ . Normal operation temperature range: -5℃ ~+40℃ . The 24-hour average temperature should not exceed +35℃ . For use beyond the normal operation temperature range, see "Instructions for use in abnormal conditions" in the annex.
Altitude	Not exceeding 2000 m above sea level
Atmospheric conditions	The relative humidity should not exceed 50% at the upper temperature limit of +70℃ . A higher relative humidity is allowed at a lower temperature, e.g. 90% at +20℃ . Special precautions should be taken against occasional condensation due to humidity variations.
Installation conditions	The angle between the installation surface and the vertical surface should not exceed ±5°.
Shock and vibration	The product should be installed in places without significant shaking, shock, and vibration.

Description

NXC AC contactor

NXC	-	12	/N	230V	50Hz
Model		Rated current	Special function	Coil voltage	Frequency
		06, 09, 12, 16, 18, 22, 25, 32, 38, 40, 50, 65, 75, 85, 100, 120, 160, 185, 225, 265, 330, 400, 500, 630	/N: Reversible contactor None: Standard contactor	24V, 36V, 48V, 110V, 127V, 220V, 230V,240V, 380V, 415V, 440V, 480V, 660V (AC: 06A~225A; AC/DC: 265A~630A)	50Hz, 60Hz, 50/60Hz

Note: 06A-100A products contain one NO auxiliary contact and one NC auxiliary contact; 120A-630A products contain two NO auxiliary contacts and two NC auxiliary contacts

NXC miniature 3P AC contactor

NXC	-	06M	10	/Z	/N	230V	50Hz
Model		Rated current	Auxiliary contact	Coil form	Special function	Coil voltage	Frequency
		06M 09M 12M	10: NO 01: NC	/Z: DC control coil None: AC control coil	/N: Reversible contactor None: Standard contactor	AC: 24V, 36V, 48V, 110V, 127V, 220V, 230V, 240V 380V, 415V, 440V, 480V, 660V DC: 24V, 48V, 110V, 220V	50Hz, 60Hz, 50/60Hz

NXC miniature 4P AC contactor

NXC	-	06M	/22	/N	230V	50Hz
Model		Rated current	4P main contact combination	Special function	Coil voltage	Frequency
		06M 09M 12M 1Z	/22: 2 NO and 2 NC main contacts 40or/4: 4 NO main contacts	/N: Reversible contactor None: Standard contactor 4 NO main contacts	AC: 24V, 36V, 48V, 110V, 127V, 220V, 230V,240V, 380V, 415V, 440V, 480V, 660V	50Hz, 60Hz, 50/60Hz

Model example: NXC-12 240V 50Hz represents an AC contactor under AC-3 utilization category that provides a rated current of 12A at a main circuit voltage of . Each contactor body contains one NO auxiliary contact and one NC auxiliary contact. The coil control voltage and frequency are AC and 50Hz respectively

NXC 4P AC contactor

NXC	-	06M	/22	/N	230V	50Hz
Model		Rated current	4P main contact combination	Special function	Coil voltage	Frequency
		09M 12M 25M 1Z	/22: 2 NO and 2 NC main contacts 40or/4: 4 NO main contacts	/N: Reversible contactor None: Standard contactor 4 NO main contacts	AC: 24V, 36V, 48V, 110V, 127V, 220V, 230V,240V, 380V, 415V, 440V, 480V, 660V	50Hz, 60Hz, 50/60Hz

NXC AC contactor selection table

Motor power kW			Maximum operation current A	Number of contacts contained in the contactor body		Contactor model
220V/230V/240V	380V/400V	660V/690V	(AC-3 380V/400V)	NO	NC	
1.5	2.2	3	6	1	0	NXC-06M10
1.5	2.2	3	6	0	1	NXC-06M01
1.5	2.2	3	6	1	1	NXC-06
2.2	4	4	9	1	0	NXC-09M10
2.2	4	4	9	0	1	NXC-09M01
2.2	2	5.5	9	1	1	NXC-09
3	5.5	4	12	1	0	NXC-12M10
3	5.5	4	12	0	1	NXC-12M01
3	7.5	7.5	16	1	0	NXC-16M10
3	7.5	7.5	16	0	1	NXC-16M01
4	7.5	10	18	1	1	NXC-18
5.5	11	11	22	1	1	NXC-22
5.5	11	15	25	1	1	NXC-25
7.5	15	18.5	32	1	1	NXC-32
9	18.5	18.5	38	1	1	NXC-38
11	18.5	30	40	1	1	NXC-40
15	22	37	50	1	1	NXC-50
18.5	30	37	65	1	1	NXC-65
22	37	37	75	1	1	NXC-75
22	37	45	85	1	1	NXC-85
25	45	45	100	1	1	NXC-100
37	55	80	120	2	2	NXC-120
45	75	100	160	2	2	NXC-160
55	90	100	185	2	2	NXC-185
63	110	110	225	2	2	NXC-225
75	132	160	265	2	2	NXC-265
90	160	200	330	2	2	NXC-330
132	200	300	400	2	2	NXC-400
160	250	335	500	2	2	NXC-500
200	335	350	630	2	2	NXC-630

Coil voltage specification table

NXC-06M~16M										
AC (V) 50Hz	24	36	48	110	127	220	230	240	380	415
AC (V) 60Hz	24	36	48	110	127	220	-	-	380	415
DC (V	24	--	48	110	-	220	-	-	-	

NXC-06~100										
AC (V) 50Hz	24	36	48	110	127	220	230	240	380	415
AC (V) 60Hz	24	36	48	110	127	220	-	-	380	415

NXC-120~225										
AC (V) 50Hz	-	-	-	110	127	220	230	240	380	-
AC (V) 60Hz	-	-	-	110	127	220	-	-	380	-

NXC-265~630										
AC/DC (V)	-	-	-	-	110~127		220~240		380~415	-

Parameters

Main circuit parameters and technical performance

Contactor model				NXC-06M	NXC-09M	NXC-12M	NXC-16M	NXC-06	NXC-09	NXC-12	NXC-16	NXC-18	NXC-22
													
Rated impulse withstand voltage Uimp (kV)				20	20	20	22	20	20	25	25	32	32
Rated insulation voltage Ui (V)				690									
Conventional thermal current Ith (A)				6				8					
Rated making capacity				Making current: 10×Ie (AC-3) or 12×Ie (AC-4)									
Rated breaking capacity				Breaking current: 8×Ie (AC-3) or 10×Ie (AC-4)									
Rated operation current Ie (A)	220V/230V/240V		AC-1	20	20	20	22	20	20	25	25	32	32
			AC-3	6	9	12	16	6	9	12	16	18	22
			AC-4	6	9	12	16	6	9	12	16	18	22
	380V/400V/415V		AC-3	6	9	12	16	6	9	12	16	18	22
			AC-4	6	9	9	12	6	9	12	12	18	18
	660V/690V		AC-3	3.8	4.9	4.9	6.7	3.8	6.6	8.9	8.9	12	14
			AC-4	3.8	4.9	4.9	4.9	3.8	6.6	8.9	8.9	12	12
Rated control power	AC-3 (kW)	220V/230V/240V		1.5	2.2	3	3	1.5	2.2	3	3	4	5.5
		380V/400V/415V		2.2	4	5.5	7.5	2.2	4	5.5	7.5	7.5	11
		660V/690V		3	4	4	7.5	3	5.5	7.5	7.5	10	11
Electrical life (cycles)			AC-3	1.2×10^6									
Mechanical life (cycles)				1.2×10^7									
Main contact				3 NO, 4 NO, 2 NO+2 NC				3 NO					
Fuse supplied for SCPD				NT00-20	NT00-20	NT00-25	NT00-25	NT00-20	NT00-20	NT00-25	NT00-25	NT00-32	NT00-32
Matching thermal overload relay			Model	NXR-12				NXR-25					
Built-in auxiliary contact			3P	1 NO or 1 NC				1 NO+1 NC					
			4P	-									

Control circuit		Contactor model		NXC-06M	NXC-09M	NXC-12M	NXC-16M	NXC-06	NXC-09	NXC-12	NXC-16	NXC-18	NXC-22
Main circuit connection	Cable connection (mm^2)	Prefabricated flexible wire	1	1~2.5				1~4				1.5~6	
			2	1~1.5				1~2.5				1.5~4	
		Hard wire	1	1~2.5				1~4				1.5~6	
			2	1~2.5				1~4				1.5~6	
	Size of fastening screw			M3				M3.5				M3.5	
	Tightening torque (N·m)			0.8				1				1.2	
Control circuit connection	Cable connection (mm^2)	Prefabricated flexible wire	1	1~2.5				1~4					
			2	1~1.5				1~2.5					
		Hard wire	1	1~2.5				1~4					
			2	1~2.5				1~4					
	Size of fastening screw			M3				M3.5					
	Tightening torque (N·m)			0.8				1					

Contactor model		NXC-06M	NXC-09M	NXC-12M	NXC-16M	NXC-06	NXC-09	NXC-12	NXC-16	NXC-18	NXC-22
Coil control power supply	AC 50Hz	24, 36, 48, 110, 127, 220, 230, 240, 380, 415				24, 36, 48, 110, 127, 220, 230, 240, 380, 415					
	DC	24, 48, 110, 220				-					
Control voltage	Pull-in	(75%~120%) Us				(70% ~ 120%) Us					
	Release	AC: (20%~70%) Us; DC: (10%~70%) Us				(20% ~ 70%) Us					
Coil average power (VA)	Start	≤40				≤40				≤40	
	Hold	≤9				9.5				9.5	
Heat dissipation (W)	AC	1~3				1~3				1~3	
	DC	-				-				-	

Contactor model				NXC-25	NXC-32	NXC-38	NXC-40	NXC-50	NXC-65	NXC-75	NXC-85	NXC-100
												
Conventional thermal current Ith (A)				40	50	50	60	80	80	90	100	125
Rated insulation voltage Ui (V)				690								
Rated impulse withstand voltage Uimp (kV)				8								
Rated making capacity				Making current: 10×Ie (AC-3) or 12×Ie (AC-4)								
Rated breaking capacity				Breaking current: 8×Ie (AC-3) or 10×Ie (AC-4)								
Rated operation current Ie (A)	220V/230V/240	AC-1		40	50	50	60	80	80	90	100	125
		AC-3		25	32	38	40	50	65	75	85	100
		AC-4		25	32	38	40	50	65	75	85	100
	380V/400V/415V	AC-3		25	32	38	40	50	65	75	85	100
		AC-4		25	32	32	40	50	65	75	85	100
	660V/690V	AC-3		18	22	22	34	39	42	42	49	49
		AC-4		18	22	22	34	39	42	42	49	49
Rated control power	AC-3 (kW)	220V/230V/240V		5.5	7.5	9	11	15	18.5	22	22	25
		380V/400V/415V		11	15	18.5	18.5	22	30	37	37	45
		660V/690V		15	18.5	18.5	30	37	37	37	45	45
Electrical life (cycles)			AC-3	1.2×10^6			1×10^6			0.8×10^6		
Mechanical life (cycles)				1×10^7			0.9×10^7			0.65×10^7		
Main contact				3 NO								
Fuse supplied for SCPD				gG40	gG50	gG50	gG63	gG80	gG80	gG100	gG100	gG125
Matching thermal overload relay			Model	NXR-25	NXR-38		NXR-100					
Built-in auxiliary contact			3P	1 NO+1 NC								
			4P									

Control circuit		Contactor model		NXC-25	NXC-32	NXC-38	NXC-40	NXC-50	NXC-65	NXC-75	NXC-85	NXC-100
Main circuit connection	Cabling (mm^2)	Prefabricated flexible wire	1	1.5~10			6~25			10~50		
			2	1.5~6			4~10			6~25		
		Hard wire	1	1.5~6			6~25			10~50		
			2	1.5~6			4~10			6~25		
	Size of fastening screw			M4			M8			M8		
	Tightening torque (N·m)			1.85			6					
Control circuit connection	Cabling (mm^2)	Prefabricated flexible wire	1	1~1.5								
			2	1~1.5								
		Hard wire	1	1~1.5								
			2	1~1.5								
	Size of fastening screw			M3.5								
	Tightening torque (N·m)			1.2								

Contactor model		NXC-25	NXC-32	NXC-38	NXC-40	NXC-50	NXC-65	NXC-75	NXC-85	NXC-100
Coil control power supply	AC 50Hz	24, 36, 48, 110, 127, 220, 230, 240, 380, 415			24, 36,42, 48, 110, 127, 220, 230, 240, 277,380,400,440,480,600					
Control voltage	Pull-in	(75%~120%) Us								
	Release	(20%~70%) Us								
Coil average power (VA)	Start	50~70			160~210			250~300		
	Hold	11.4			36.6			36.6		
Heat dissipation (W)	AC	1~3			4~8			6~10		
	DC									

Contactor model			NXC-120	NXC-160	NXC-185	NXC-225	NXC-265	NXC -330	NXC -400	NXC-500	NXC-630
											
Conventional thermal current Ith (A)			200	200	275	275	315	380	450	630	700
Rated insulation voltage Ui (V)			1000								
Rated impulse withstand voltage Uimp (kV)			12								
Rated making capacity			Making current: 10×Ie (AC-3) or 12×Ie (AC-4)								
Rated breaking capacity			Breaking current: 8×Ie (AC-3) or 10×Ie (AC-4)								
Rated operation current Ie (A)	220V/230V/240V	AC-3	120	160	185	225	265	330	400	500	630
		AC-4	120	160	160	185	265	330	330	500	500
	380V/400V/415V	AC-3	120	160	185	225	265	330	400	500	630
		AC-4	120	160	160	185	265	330	330	500	500
	660V/690V	AC-3	86	107	107	118	170	235	303	353	400
		AC-4	86	107	107	107	137	170	235	303	353
Rated control power	AC-3 (kW)	220V/230V/240V	37	45	55	63	75	90	132	160	200
		380V/400V/415V	55	75	90	110	132	160	200	250	335
		660V/690V	80	100	100	110	160	200	300	335	350
Electrical life (cycles)		AC-3	1.2×10^6				0.8×10^6				
		AC-4	See electrical life curve								
Mechanical life (cycles)			0.6×10^7								
Main contact			3 NO								
Fuse supplied for SCPD			gG224	gG224	gG315	gG315	gG400	gG425	gG500	gG800	gG950
Matching thermal overload relay		Model	NXR-200			NXR-630					
Built-in auxiliary contact		3P	2 NO+2 NC								
		4P									

Control circuit		Contactor model		NXC-120	NXC-160	NXC-185	NXC-225	NXC-265	NXC-330	NXC-400	NXC-500	NXC-630
Main circuit connection	Cable connection (mm^2)	Prefabricated flexible wire	1	10~150								
			2	10~75								
		Hard wire	1	10~150			50~240					
			2	10~75			50~240					
	Size of fastening screw			M6	M8		M10					
	Tightening torque (N·m)			10			14					
Control circuit connection	Cable connection (mm^2)	Prefabricated flexible wire	1	1~4								
			2	1~2.5								
		Hard wire	1	1~4								
			2	1~4								
	Size of fastening screw			M3.5								
	Tightening torque (N·m)			0.8								

Contactor model		NXC-120	NXC-160	NXC-185	NXC-225	NXC-265	NXC-330	NXC-400	NXC-500	NXC-630
Coil control power supply	AC 50Hz	110, 127, 220, 230, 240, 380,400,415,440				Common for AC and DC: 110V-127V, 220V-240V, 380V-415V				
	DC	-								
Control voltage	Pull-in	(75%~120%)Us				(75%~120%)Us				
	Release	(20%~70%)Us				(10%~70%)Us				
Coil average power (VA)	Start	500				600			800	
	Hold	50				11			11	
Heat dissipation (W)	AC	30~50				3~6			3~7	
	DC	-				3~6			3~7	