

Shanghai Liangxin Electrical Co., Ltd.

NDC3-25/32/38 AC Contactor

Product Specification

(IPD-ENG-DEV-T20 A1 2016-09-23)

Prepared	Caoyanyang	Date	2023-03-06
Reviewed	Xiachanghui	Date	2023-03-06
Countersign	Xiachanghui	Date	2023-03-06
Approved	Cuixiaoming	Date	2023-03-06

Revision information					
Version	Revised contents and reasons	Date	Prepared	Reviewed	Approved
0	New issue	2023/03/06	Caoyanyan	Xiachanghui	Cuixiaoming

1、Application

NDC3(ZE)-25/32/38 AC contactor is used in AC 50Hz(or 60Hz), rated insulation voltage is up to 690V, For frequent start and control of AC motors in AC circuits with rated voltage of 400V and rated current of 25A~38A under the AC-3 service category, A suitable thermal overload relay can be added to form an electromagnetic starter to protect the circuit from possible overload.

2、Product Pictures



NDC3-25/32/38 (No auxiliary contact)



NDC3-25/32/38

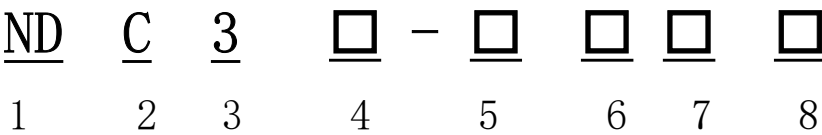


NDC3-25/32/38A



NDC3ZE-25/32/38

3、Model and implication



No	Description	NDC3
1	Company Code	ND  Brand
2	Product Code	C AC Contactor
3	Designing Code	3
4	Derived Code	Z: DC Operation; No code: AC Operation
5	Basic model Code	Shown by the amperage of Ie when used in AC-3 at 400V

6	Auxiliary contacts Code	The ten digit is the number of NO contacts and the next is the number of NC contacts; No code: No auxiliary contacts.
7	Coil connection mode Code	No code: Normal; A: Coil top wiring
8	Customer Code	Use letters or numbers

4、Main technical parameters

4.1 Main technical parameters

Model		NDC3-25	NDC3-32	NDC3-38
Rated current	AC-3 Ue 380/415V	25A	32A	38A
Set thermal current of the free air lth (AC-1)	$\theta \leq 60^{\circ}\text{C}$	40A	50A	50A
Rated insulation voltage Ui		690V		
Number of Poles		3	3	3
Max. Power of controlled motor AC-3 kW	220/240V	5.5	7.5	9
	380/400V	11	15	18.5
	415V	11	15	18.5
	440V	11	15	18.5
	500V	15	18.5	18.5
	660/690V	15	18.5	18.5
ULthe rated power of the three-phase motor (horsepower)	220~240V AC	7-1/2 hp	10 hp	10 hp
	380~415V AC	15 hp	20 hp	20 hp
	440~480V AC	15 hp	20 hp	20 hp
	550~600V AC	20 hp	25 hp	25 hp
AC-3 (6le,le)	Rated operating current (380/415V)	25A	32A	38A
	Electrical life 10^4	160	160	140
	Frequency of Operation(h^{-1})	1200	600	600
AC-4 (6le,6le)	Rated working current (380/415V)	20.9A	26.7A	26.7A
	Max. Power of controlled motor KW (380/415V)	7.5	11	11
	Electrical life 10^4	5	4.5	4.5
	Frequency of Operation(h^{-1})	150		
20×10^4 Electrical life AC-4	The control power kW (380/415V)	5.5	7.5	7.5
	Frequency of Operation(h^{-1})	300		
Mechanical Life (10^4)		1500		
Main Terminal Capacity mm2 (min...max)	Non-prepared terminal soft	1 wire	1.5...10	2.5...10
		2 wire	1.5...6	2.5...10

	cable			
	Prepared terminal soft cable	1 wire	1...6	1...10
		2 wire	1...4	1.5...6
	Non-prepared terminal hard cable	1 wire	1.5...6	1.5...10
		2 wire	1.5...6	2.5...10
Tightening Torque			2.5N.m	2.5N.m

4.2 Main Circuit Characteristics

Model		NDC3-25	NDC3-32	NDC3-38
Set thermal current of the free air Ith A		40	50	50
Resistance of each pole (mΩ)		2	2	2
Power consumption of each pole W	AC-3	1.25	2	3
	AC-1	3.2	5	5
Short-time withstand current, starting from the cold state , environmental temperature ≤ 40℃ , no current 15 minutes before	1s	380	430	430
	10s	240	260	310
	1min	120	138	150
	10min	50	60	60

4.3 Control Circuit Characteristics

Characteristics of AC control circuit	Rated control voltage Uc V	50/60Hz	AC:24V/36V/48V/110V/220V/230V/240V/380V/400V/415V/440V (AC control products, 50/60Hz) ;	
	Pick-up Voltage		85%~110%Uc	
	Drop-out Voltage		20%~60%Uc	
	Coil Power Uc	Inrush	70VA	
		Sealed	8VA	
	Operating time	Pick-up	12~22ms	
		Drop-out	4~25 ms	
	Mechanical Life _{10⁴}		1500	
	Frequency of Operation (h ⁻¹)		3600	
Characteristics of DC control circuit	Rated control voltage Uc V		DC: 24V/36V/48V/110V/220V (DC control products)	
	Pick-up Voltage		85%~110%Uc	
	Drop-out Voltage		10%~60%Uc	
	Coil Power Uc	Inrush	66W	
		Sealed	3.5W	
	Operating time ms	Pick-up	9~35	
		Drop-out	9~35	
	Mechanical Life _{10⁴}		1500	

	Frequency of Operation h-1	3600
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4.4 Auxiliary Circuit Characteristics

Number of auxiliary contacts			1NO+1NC or 2NO or 2NC
Rated insulation voltage Ui V			690V
Set thermal current of the free air Ith A	environmental temperature ≤60°C		10
Min. load connected	Umin/Imin		17V/5mA
Max. short-time withstand current A	1s		100
	500ms		120
	100ms		140
Non overlapping time ms			1.5
Rated current A	AC-15	AC400V	2.4
	DC-13	DC250V	0.3
UL rated power(horsepower)	AC400V	2.4A	1/3 hp
	DC250V	0.3A	1/3 hp
Electrical life 10 ⁴			100
Auxiliary Terminal Capacity mm2 (min...max)	Non-prepared terminal soft cable	1 wire	1...4
		2 wire	1...4
	Prepared terminal soft cable	1 wire	1...4
		2 wire	1...2.5
	Non-prepared terminal hard cable	1 wire	1...4
		2 wire	1...4
Tightening Torque			1.7 N.m

5、Working conditions

5.1 Ambient temperature: Standard working temperature: $-5^{\circ}\text{C}\sim+60^{\circ}\text{C}$. Max. working temperature: $-25^{\circ}\text{C}\sim+60^{\circ}\text{C}$. Storage temperature: $-60^{\circ}\text{C}\sim+80^{\circ}\text{C}$.

5.2 Altitude: $\leq 3000\text{m}$, Less than 5000m for plateau type product.

3000~5000m Derating factor

	3500m	4000m	4500m	5000m
Insulation voltage derating factor	0.9	0.8	0.7	0.6
Current derating factor	0.92	0.9	0.88	0.86

5.3 Pollution degree: III 5.4 Protection degree: IP20

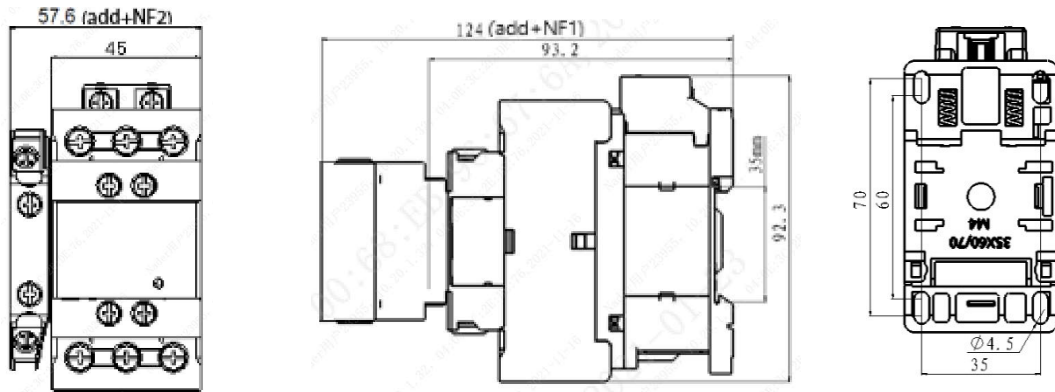
5.5 Installation category : III

5.6 Seismic Resistance: seismic resistance 5...300 Hz OFF state: 2gn, ON state: 4gn

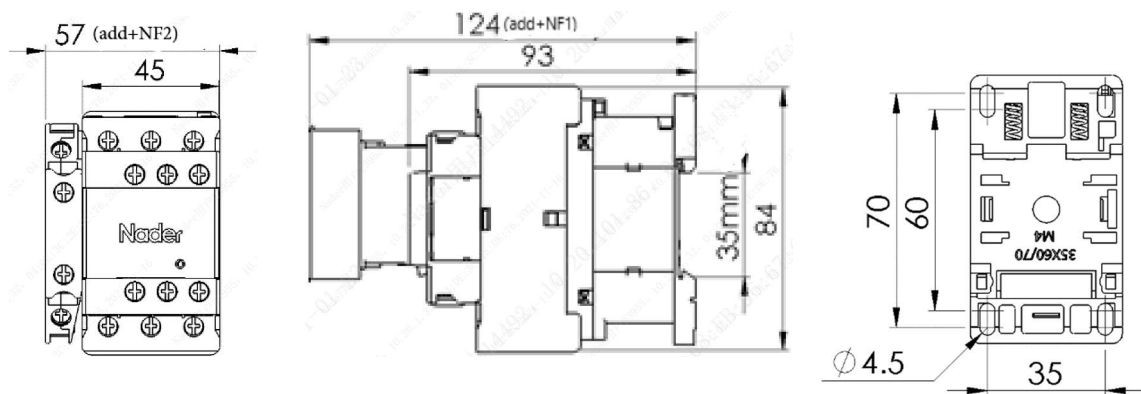
5.7 Shock Resistance: shock resistance 1/2 sin wave = 11ms, OFF state: 8gn, ON state :15gn.

6、Outline and installing dimensions

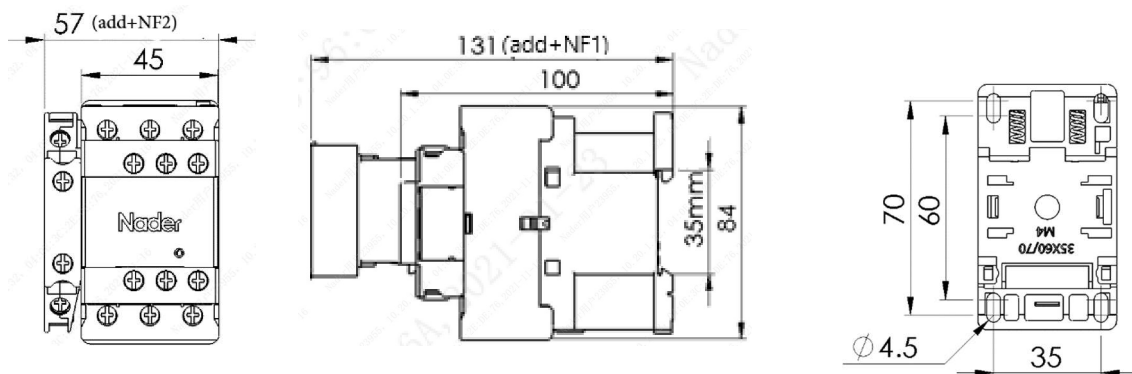
1) NDC3-25/32/38 with auxiliary contacts (AC control) (mm)



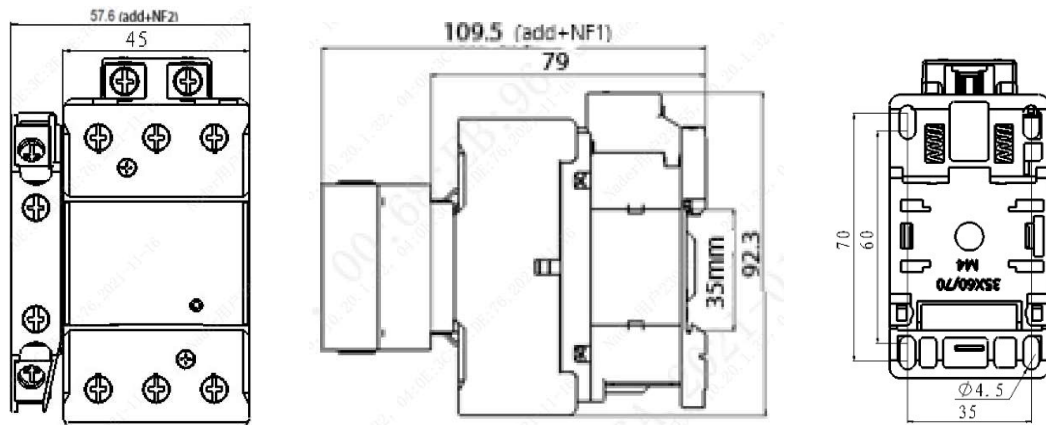
2) NDC3-25/32/38 A with auxiliary contacts (AC control) (mm)



3) NDC3ZE-25/32/38 with auxiliary contacts (DC control) (mm)



4) NDC3-25/32/38 without auxiliary contacts (AC control) (mm)



7、Mounting

Vertical installation. The angle between installing surface and vertical surface should be less than $\pm 30^\circ$. In addition to screw mounting, it can be installed on 35mm DIN rail.

8、Environmental conformance

Comply to RoHS

9、Accessory list

NF1 and NF2 series auxiliary contact group, NS1 series pneumatic timer, NCG1 coil surge suppression module

10、Notice

- 1) The product shall be installed at place without obvious swinging or vibration.
- 2) Vertical installation.