

Shanghai Liangxin Electrical Co., Ltd.
(NDZ3X-20D DC Contactor)

Product Specification
(IPD-ENG-DEV-T22 A1 2016-09-23)

Prepared	罗雨	Date	2024.09.20
Reviewed	谢强强	Date	2024.09.20
Countersign	刘晓鹏	Date	2024.09.20
Approved	向洪岗	Date	2024.09.20

Revision information					
Version	Revised contents and reasons	Date	Prepared	Reviewed	Approved
0	New addition	2024-9-20			

1.Application Scope and Purpose

NDZ3X-20D DC contactor apply to the DC system with the working voltage of DC750V and working current of 20A, which are mainly used in electric vehicles, charging piles, charging stations and other fields to meet the application demands of pre-charging, AC, discharge circuit, etc.

2. Picture of the Product



3. Specification Description

ND Z 3 -
 1 2 3 4 5 6 7

SN	SN name	NDZ3 series
1	Enterprise code	ND: "Nader" brand low-voltage apparatus
2	Product code	Z: DC contactor
3	Design SN	3
4	Derived code of the series	X: High-performance product
5	Basic specification code	Rated current value: 20A
6	Outline dimension code	D
7	Coil voltage	DC12V, DC24V

4. Main Technical Parameters

Parameter name	Description of the specific parameters
Shell frame current level	NDZ3X-20D
Load polarity	With polarity
Coil polarity	Without polarity
Number of poles	Single pole
Rated current (A)	20

Rated voltage DC (V)	750
Insulation Voltage U_i	1000V
Contact resistance	$\leq 5m\Omega$
Type of circuit	DC
Rated control voltage U_s	DC12V、DC24V Pull-in voltage: $\leq 9V$ (DC12V)、 $\leq 18V$ (DC24V) Discharge voltage: $\geq 1.0V$ (DC12V)、 $\geq 2.0V$ (DC24V)
Mechanical life	200,000 times, frequency: 3,600 times/h
Forward electrical life (on 0.6s off 5.4s) resistive load	Switching: DC450V 10A 10,000 times; DC450V 20A 3,000 times; Connecting: DC450V 20A 100,000 times; DC750V 6A 75,000 times
Maximum breaking current:	DC450V 30A 5 times
Short-time withstand current:	200A 600ms
Insulation resistance:	$\geq 1000M\Omega$, 500VDC
Withstand voltage:	Main circuit: 2500VAC 60s Main circuit and coil: 3000VAC 60s
Coil power consumption (20℃):	3W
Pull-in/discharge time (rated voltage 20℃):	Pull-in: $\leq 30ms$ Discharge: $\leq 10ms$
Impact strength	Stability: (sinusoidal half-wave pulse: 11ms, detection time 10 μs) 20g Destructiveness: 50g (sinusoidal half-wave pulse: 6ms)
Vibration strength	10~500Hz 5g
Product weight	52g

5. Normal Working Environment

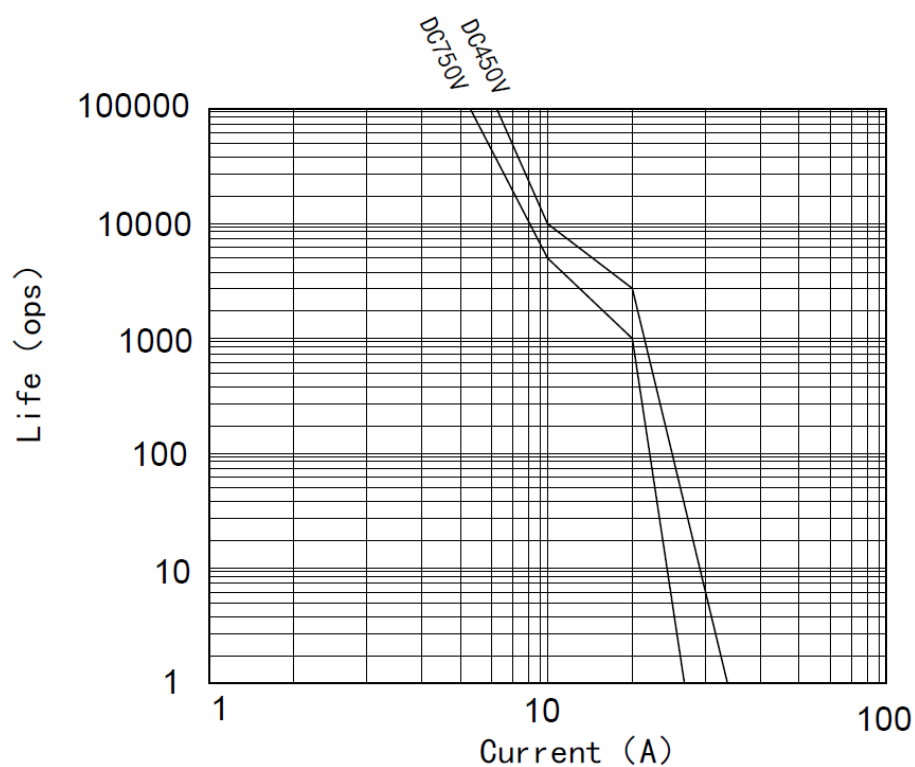
5.1: Operating ambient environment: -40~85℃

5.2: Operating humidity: 5%~85%

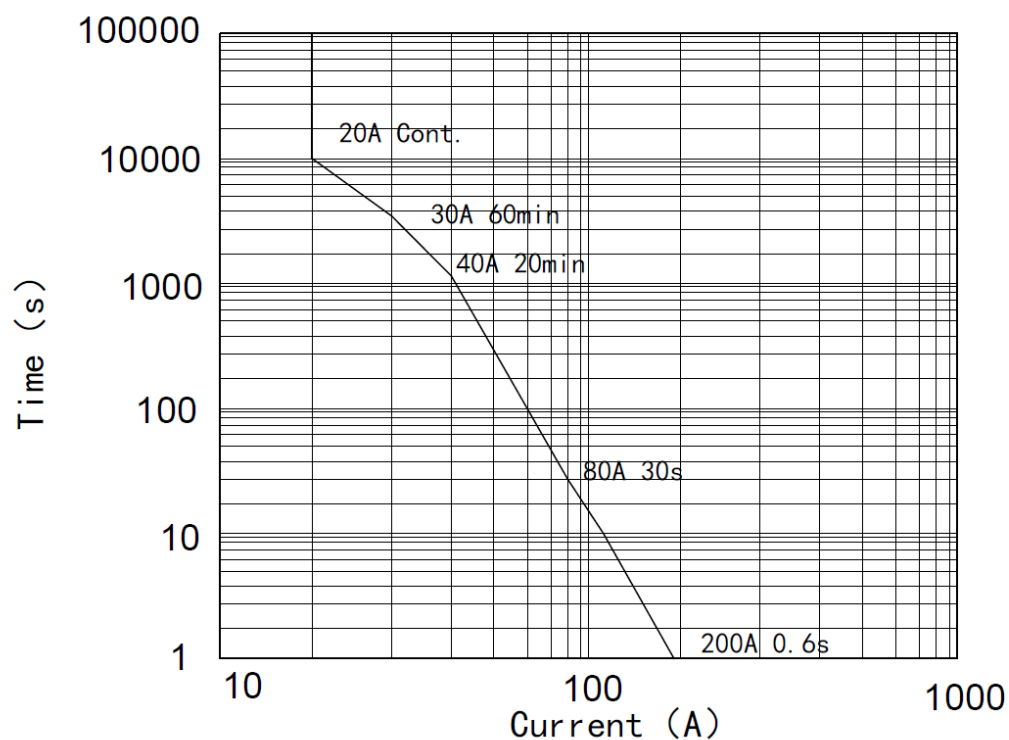
5.3: Pollution level: 3

5.4: Installation direction: Vertical installation, horizontal installation.

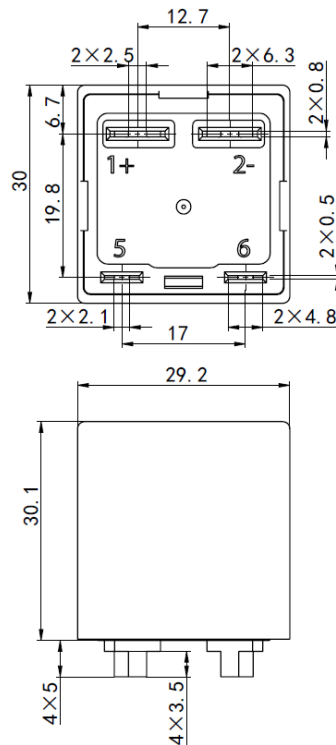
6. Electrical Endurance



7. Current Endurance



8. External Dimensions and Installation Dimensions (mm)



9. Environmental Compliance

Comply with the ROHS2.0 directives

10. Precautions

10.1 The drive circuit power of the contactor coil must be greater than the coil's starting power;

11.2 It is strictly forbidden to use the product in places with strong magnetic fields or in proximity to thermal radiation;

11.3 Avoid adhering grease and other foreign matters on the wiring terminal and use the connecting conductor with the following specifications, which may otherwise lead to the abnormal heating of the wiring part;

NDZ3X-20: Wire cross-section area $\geq 4\text{mm}^2$.

11.4 PCB welding parameters: manual welding $(380 \pm 20)^\circ\text{C}$, time (3-5) s, wave soldering $(260 \pm 5)^\circ\text{C}$, time (3-5) s;