

Shanghai Liangxin Electrical Co., Ltd.

NDZ3AT-60010H DC Contactor

Product Specification

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

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Approved	Xiang Honggang	Date	2022-10-14

Revision information					
Version	Revised contents and reasons	Date	Prepared	Reviewed	Approved
0	New addition	2022-10-28	Xie Qiangqiang	Luo Yu	Xiang Honggang
1		2023-2-12	Xie Qiangqiang	Luo Yu	Xiang Honggang

1、Application Scope and Purpose

The NDZ3AT-60010 series of DC contactors apply to the DC system with the working voltage of DC1500V and working current of 600A, which are mainly used in electric vehicles, charging piles, charging stations and other fields.

2、Picture of the Product



3、Specification and Model Description

ND	Z	3A	T - 600	10	H	/	☐	☐
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SN	SN name	NDZ3AT
1	Enterprise code	ND: "Nader" brand low-voltage electrical device
2	Product code	Z : DC contactor
3	Design SN	3A
4	Package type	T: Ceramic package
5	Basic specification code	Rated current: 600A
6	Auxiliary contact type	10: With a group of NO auxiliary contacts
7	Series subdivision code	H
8	Load working voltage	DC 1500V
9	Coil voltage	DC12V, DC24V

4、Main Technical Parameters

Parameter name		Description of the specific parameters
		NDZ3AT-60010H
Rated current(A)		600A
Contact polarity		Without polarity
Operating voltage range		DC12~DC1500V
Control coil	Coil polarity	With polarity
	Rated control voltage Us	DC12V DC24V
	Operate Voltage	$\leq 9V(DC12V)$ 、 $\leq 18V(DC24V)$
	Discharge voltage	$\geq 1.2V(DC12V)$ 、 $\geq 2.4V(DC24V)$
	Pull-in Bounce Time (rated voltage 20°C, At Rated Voltage)	$\leq 50ms$
	Discharge Time(20°C)	$\leq 15ms$
	Bounce Tim(20°C)	$\leq 5ms$
	Coil power consumption (20°C)	Starting: $\leq 55W$ Retention: $\leq 5.5W$
	Auxiliary contact type	With a group of NO auxiliary contacts
	The rated load	24Vd.c
Mechanical life		200,000 times
Electrical life (on 0.6s off 5.4s) resistive load		DC1500V 600A 5 times; DC1000V 600A 200 times; DC750V 600A 500 times
Maximum breaking current: (on 0.6s)		DC1000V/1500A 1 time; DC1500V/1000A 1 time
Short-time withstand current:		8000A 10ms; 3000A 4s; 1000A 5min; 800A 20min; 600A span
Contact Resistance (20°C)		$\leq 0.2m\Omega$ ((at350A)
Insulation resistance:		1000VDC 1000M Ω
Withstand voltage:		4000 Va.c. (50/60 Hz 1 min)
Impact strength		Stability: (sinusoidal half-wave pulse: 11ms, detection time 10 μs) 10g, 6 shocks, six ops in both directions of each of the three mutually perpendicular axes, totally 36 ops Destructiveness: (sinusoidal half-wave pulse: 6ms): 50g, 300 shocks, 50 shocks for each directions of three mutually perpendicular axes,total 300 shocks .There shall not be any abnormalities on relay appearance, construction and performance.
Vibration strength		Functional: 10Hz~55Hz, 1.5mm double amplitude.



5、Normal Working Environment

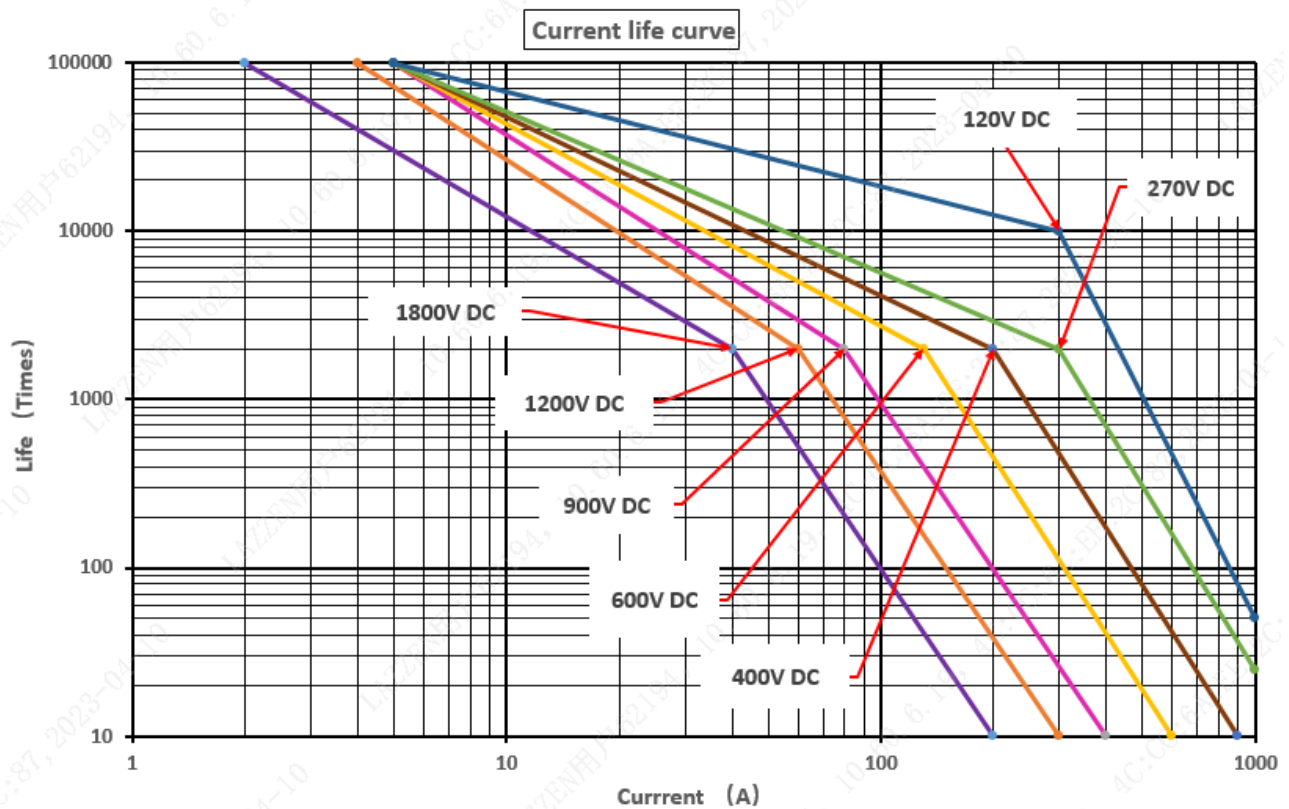
5.1: Operating ambient environment: -40~85°C

5.2: Operating humidity: 5%~95%

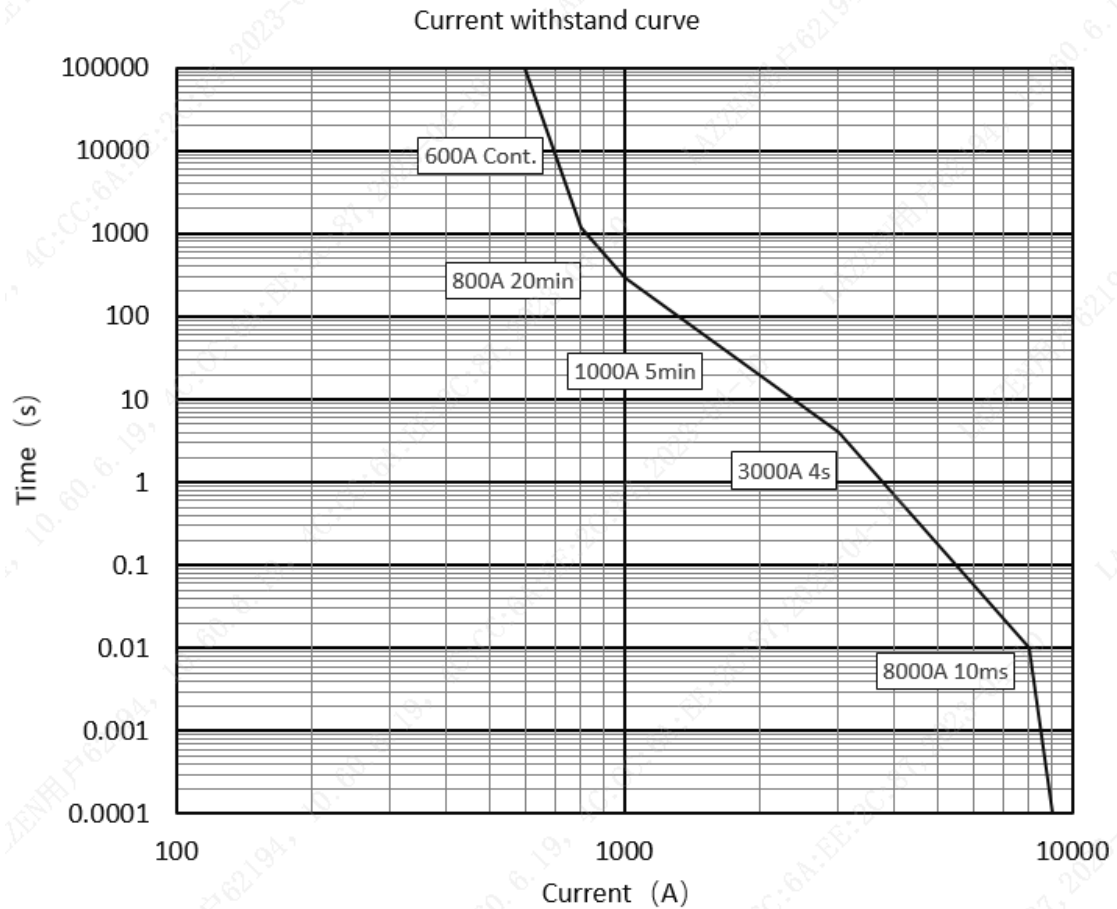
5.3: Pollution level: 3

5.4: Installation direction: Vertical installation, horizontal installation.

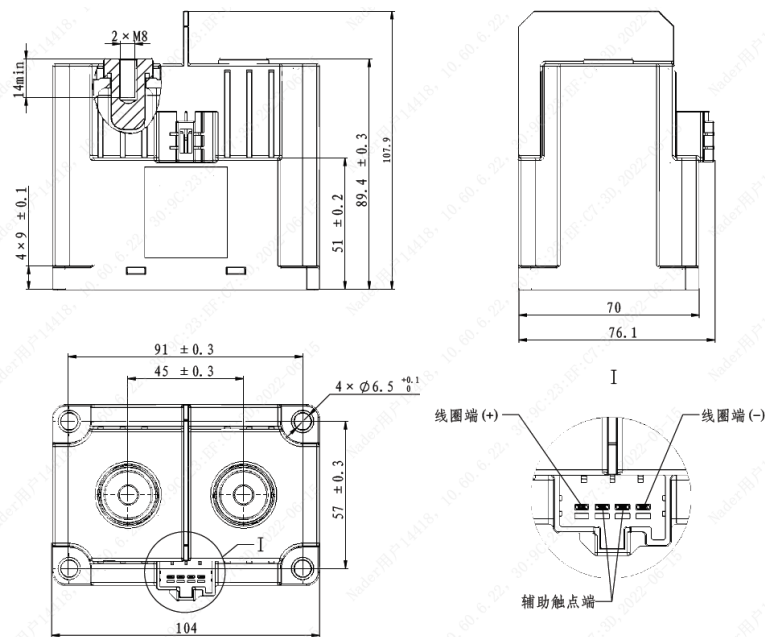
6. Electrical Endurance



7. Current Endurance



8. External Dimensions and Installation Dimensions (mm)

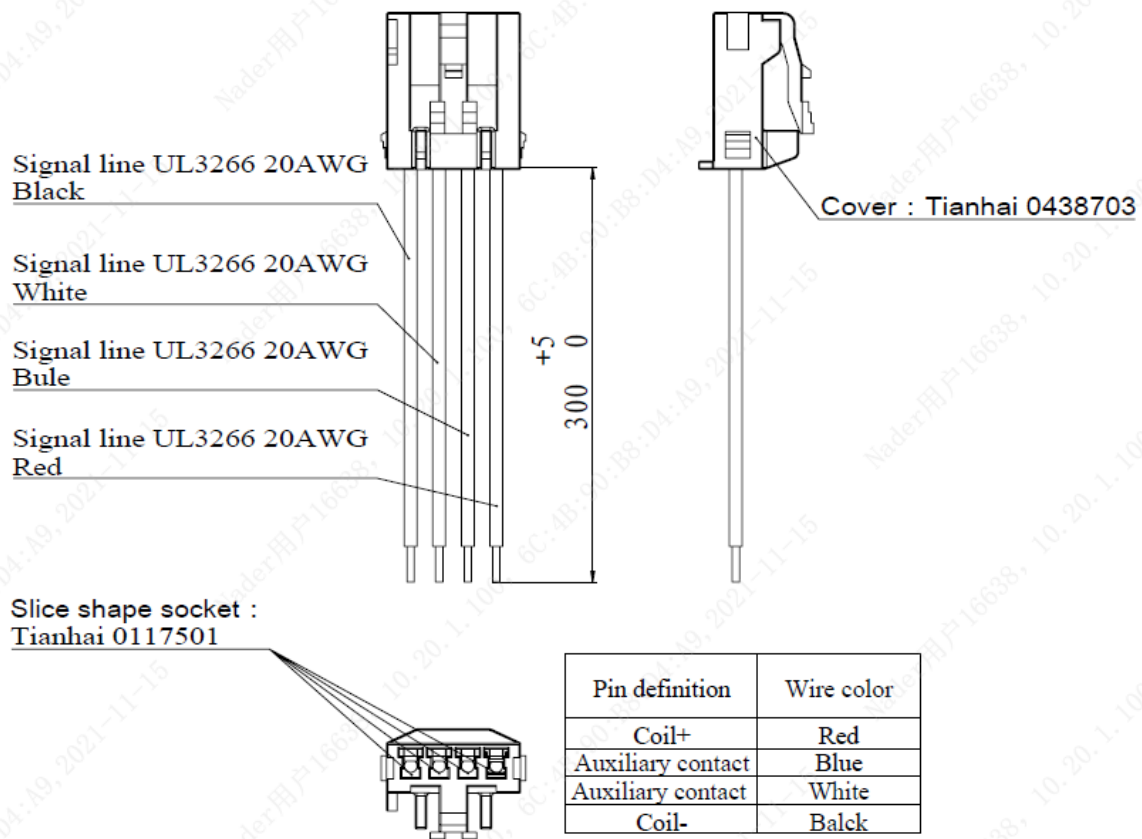


NDZ3AT-60010H

Note: All unspecified tolerance according to following table.

Outline dimensions hadn't specified tolerance	
Outline dimensions	Tolerance
≤10mm	±0.3mm
10~50mm	±0.5mm
>50mm	±0.8mm

9、Coil connector



10、Installation Mode

Screw mounting

11、Environmental Compliance

Comply with the RoHS directives

12、Precautions

- The drive circuit power of the contactor coil must be greater than the coil's starting power.
- It is strictly forbidden to use the product in places with strong magnetic fields or in proximity to thermal radiation.
- With the built-in energy-saving board, It will perform coil switching after driven for 0.2s. Do not repeat starting within <0.2s.
- It can't be driven by the slowly rising voltage; otherwise, the product will not act. It will be directly driven

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with the pulse voltage.

e. Wiring terminal torque

NDZ3AT-60010H (M8 screw) 9~10N.m

Installation position torque

M5 screw 3~4N.m

f. 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.