

Shanghai Liangxin Electrical Co., Ltd.

(NDZ3AT-25010H~50010H DC Contactor)

Product Specification

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

Prepared	LanZhao	Date	2021-12-16
Reviewed	QiangQiangXie	Date	2021-12-17
Countersign	SimingGuo	Date	2021-12-22

Approved	MiaoxiaoLu	Date	2021-12-23
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Revision information					
Version	Revised contents and reasons	Date	Prepared	Reviewed	Approved
1	Outer Structure Adjustment	2022.03.20	LanZhao	Qiangqiang Xie	Xiaomiao Lu

1、Application Scope and Purpose

The NDZ3AT-25010H~50010H series of DC contactors apply to the DC system with the working voltage of DC1500V and working current of 500A, 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 -□ □ H / 1500V □

1 2 3 4 5 6 7 8 9

SN	SN NAME	NDZ3AT
1	Enterprise code	ND:NADER brand lowvoltage electrical device
2	Product code	Z: DC Contactor
3	Design SN	3A
4	Package Type	T: Ceramic package
5	Basic Specification code	Rate current value
6	Auxiliary contact	10: With a set of NO auxiliary contacts
7	Series subdivision code	H
8	Load working voltage	DC 1500V
9	Coil Voltage	DC12V、DC24V

4、Main Technical Parameter

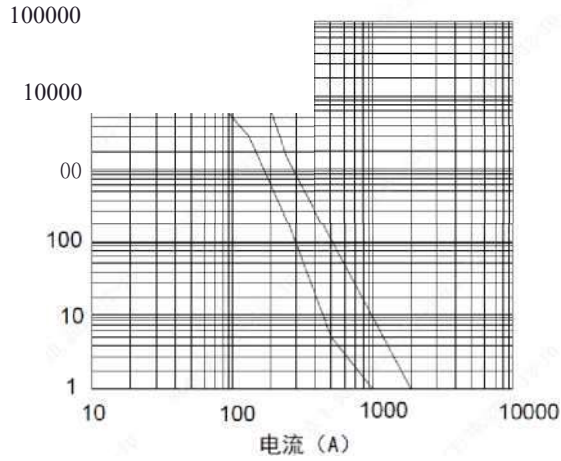
Parameter name		Description of the specific parameters			
		NDZ3AT-25010H	NDZ3AT-35010H	NDZ3AT-40010H	NDZ3AT-50010H
Rated current (A)		250A	350A	400A	500A
Load polarity		Without polarity			
Rated voltage DC(V)		DC12~DC1500V			
Control Coil	Coil polarity	With polarity			
	Rated Control Voltage Us	DC12V DC24V			
	Operate voltage	<9V (DC12V)、<18V (DC24V)			
	Discharge voltag	21.2V (DC12V)、22.4V (DC24V)			

	Pull-in/discharge time(rated voltage 20℃):	<50ms			
	Discharge: (20C)	W15ms			
	Bounce (20C)	W5ms			
	Coil power consumption (20C)	Start: <55W; keep: <5.5W			
Auxiliary contact	auxiliary contact	one set of normal open			
	nominal road	24Vd.c			
Mechanical life		20,000 times, frequency: 3,600 times/h			
Electrical life(on 0.6s, off 5.4s)		DC1500V 250A 200 times	DC1500V 350A 200 times	DC1500V 400A 200 times	DC1500V 500A 10 times
		DC1000V 250A 1500 times	DC1000V 350A 1500 times	DC1000V 400A 1500 times	DC1000V 500A 500 times
Maximum breaking current		DC1000V 2000A 1 times;			
		DC1500V 1000A 1 times			
Short time withstand current		2000A 1s	2000A 1s	2000A 2s	2000A 2s
		500A 1min	600A 90s	800A 2min	900A 2min
		320A 10min	400A 10min	750A 8min	750A 15min
Contact rating (20C)		W0.3mQ ((at350A)			
Insulation resistance:		Before test: 1500VDC 1000MQ, After test: 1500V 50MQ			
Withstand voltage:		Before test: 4000 Vac. (50/60 Hz 1 min), After test: 3000 Vac. (50/60 Hz 1 min), (Leak current: <1mA)			
Impact streng		Stability:			
		10g (sinusoidal half-wave pulse:11ms, detection time 10us) , 6times, on and off status X Y Z each direction 6 times, total 36times			
		Strength:			
		50g (sinusoidal half-wave pulse:6ms) , 300times, on and off status X Y Z each direction 50 times, total 300 time, no change happened of Appearance, structure and performance			
Vibration strength		Sinusoidal wave 10Hz~55Hz, Double amplitude 1.5mm			

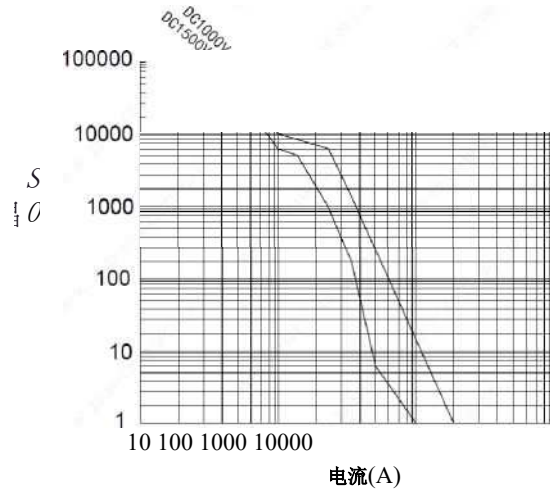
5、Normal Working Environment

- 5.1: Operating ambient environment: -40~85℃
- 5.2: Operating humidity: 5%~95%
- 5.3: Pollution level: 3
- 5.4: Installation direction: Vertical installation, horizontal installation.

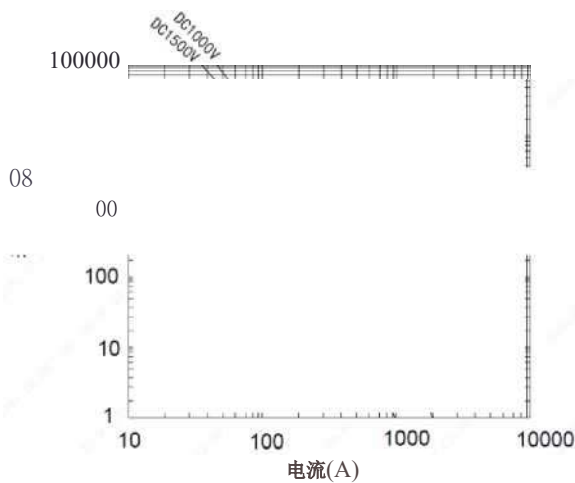
6、Electrical Endurance



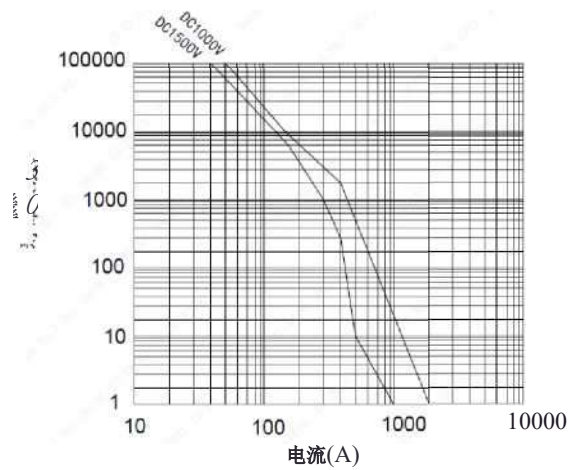
NDZ3AT-25010H



NDZ3AT-35010H

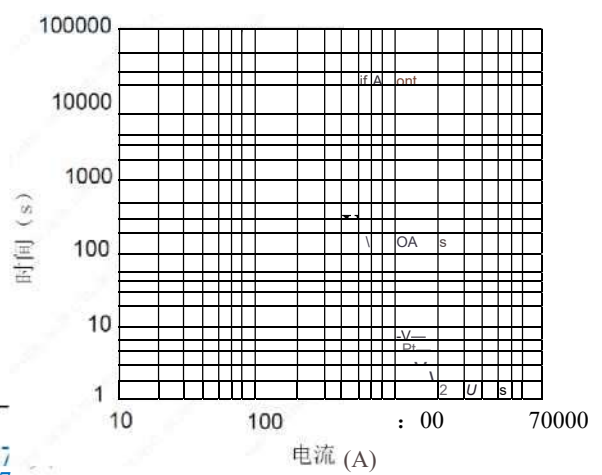
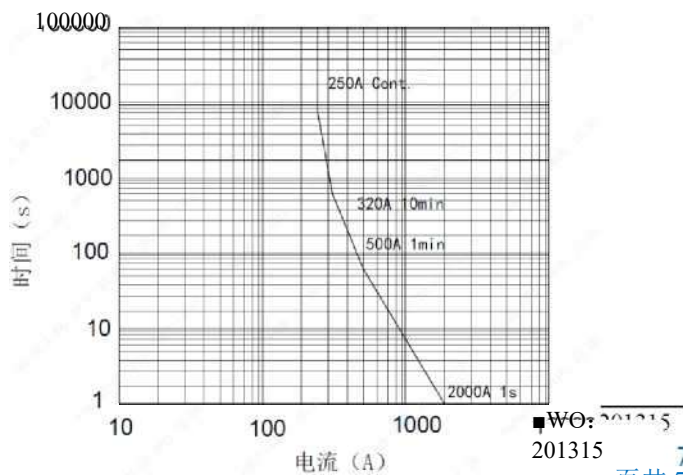


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40010H

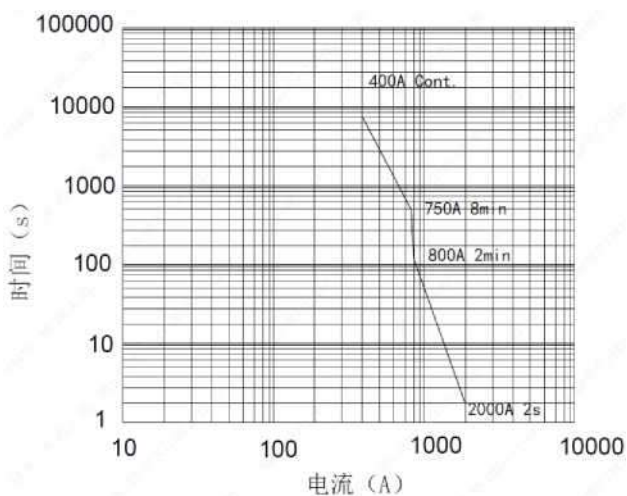


NDZ3AT—
50010H

7、Current Endurance

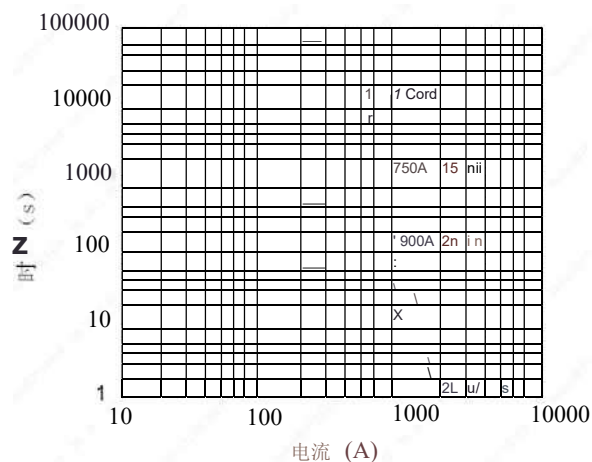


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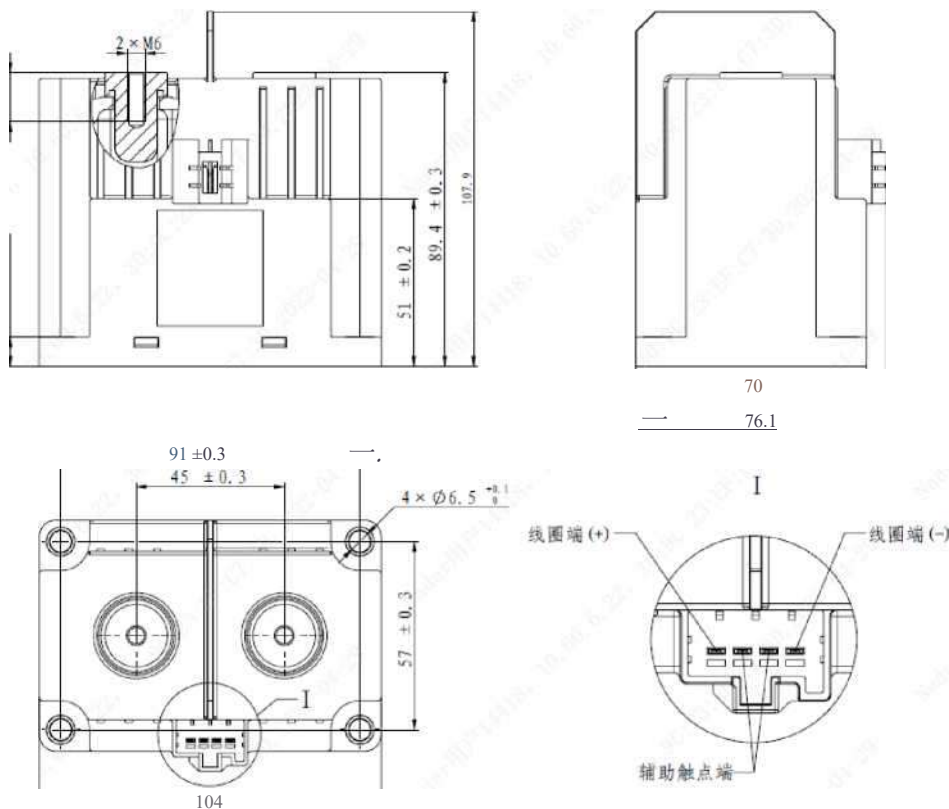
NDZ3AT-40010H

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NDZ3AT-50010H

8、External Dimensions and Installation Dimensions (mm)

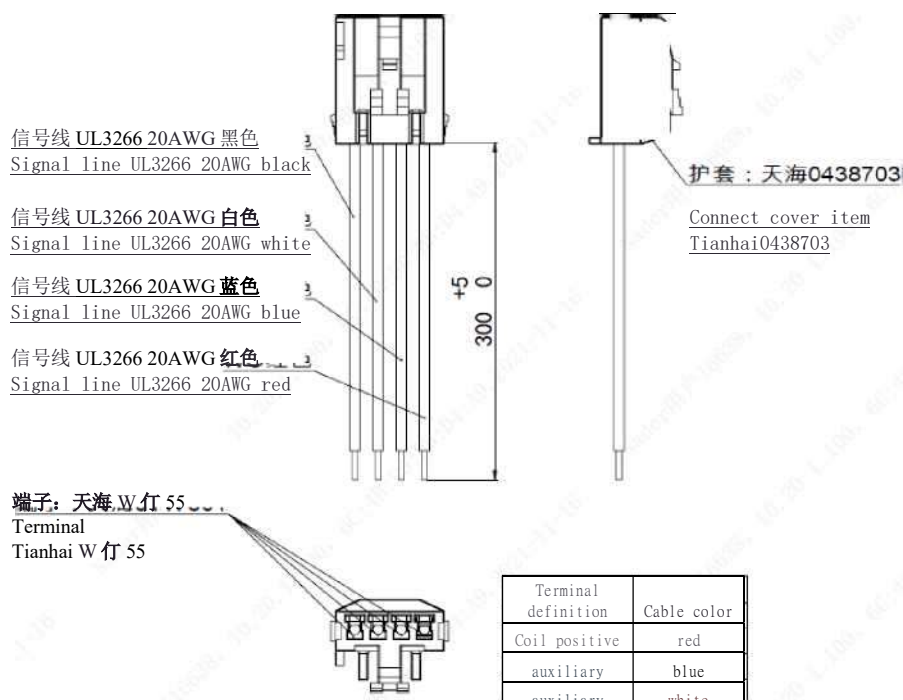


NDZ3AT-25010H~50010H

Note: All unspecified tolerance according to following table.

Outline dimensions hadn't specified tolerance	
Outline Dimensions	Tolerance
$\leq 10\text{mm}$	$\pm 0.3 \text{ mm}$
$10 \sim 50 \text{ mm}$	$\pm 0.5 \text{ mm}$
$> 50\text{mm}$	$\pm 0.8 \text{ mm}$

9、Coil connector (mm)



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 starting power of the product;
- It is strictly forbidden to use the product in places with strong magnetic fields or in proximity to thermal radiation;
- The product is equipped with an energy saving board, and the coil will be switched after 0.2s of driving. Please do not start it repeatedly within less than 0.2s;
- Do not use the method of slowly rising voltage to drive, otherwise the product will not

act, and will directly use pulse voltage to drive;

e、Wiring terminal torque;

Type	Wiring Terminal torque	Installation position torque
NDZ3AT-500	M6 screw: 6-8 N • m	M5 screw: 3-4 N • 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;

Type	Wire cross-section area
NDZ3AT-500	185mm ²