

Shanghai Liangxin Electrical Co., Ltd.

NDZ3T-40~300 DC Contactor

Product Specification

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

Prepared	赵岚	Date	2021-09-22
Reviewed	罗雨	Date	2021-09-22
Countersign	谢强强	Date	2021-09-22
Approved	吴佩峰	Date	2021-09-22

Revision information					
Version	Revised contents and reasons	Date	Prepared	Reviewed	Approved
0	New addition	2018-11-7	Xie Qiangqian g	Yu Yipeng	Wu Peifeng
1	Update	2019-5-10	Xie Qiangqian g	Yu Yipeng	Wu Peifeng
2	Update	2020-4-2	zhaoLan	Xie Qiangqiang	ZhuHua
3	Correct errors the installation dimension of coil connector	2020-9-18	zhaoLan	Xie Qiangqiang	ZhuHua
4	Add NDZ3T-300 product models	2021-9-18	zhaoLan	Luo Lu	Wu Peifeng

1.Application Scope and Purpose

The NDZ3T-40~300 series of DC contactors apply to the DC system with the working voltage of DC750V and working current of 40~300A, which are mainly used in electric vehicles, charging piles, charging stations and other fields.

2. Picture of the Product



NDZ3T-40



NDZ3T-100



NDZ3T-100P



NDZ3T-150



NDZ3T-150P



NDZ3T-200



NDZ3T-200P



NDZ3T-300P

3. Specification and Model Description

ND Z 3 T - / 750V
1 2 3 4 5 6 7 8

SN	SN name	NDZ3T
1	Enterprise code	ND "Nader" brand low-voltage electrical device
2	Product code	Z DC contactor
3	Design SN	3
4	Package type	T: Ceramic package
5	Basic specification code	Rated current value
6	Load outlet form	P: Busbar; none: Without a busbar
7	Load working voltage	DC 750V
8	Coil voltage	DC12V, DC24V, DC48V

Note: 40A without a busbar;

4. Main Technical Parameters

Parameter name	Description of the specific parameters				
Shell frame current level	40A	100A	150A	200A	300A
Load polarity	Without polarity	With polarity	With polarity	With polarity	With polarity
Coil polarity	Without polarity	Without polarity	Without polarity	With polarity	With polarity
Number of poles	Single pole				
Rated current (A)	40	100	150	200	300
Rated voltage DC(V)	750				
Insulation voltage Ui	1000V				
Type of circuit	DC				
Rated control voltage Us	DC12/24V/48V Operate Voltage: $\leq 9V(DC12V)$ 、 $\leq 18V(DC24V)$ 、 $\leq 36V(DC48V)$ Discharge voltage: $\geq 1.2V(DC12V)$ 、 $\geq 2.4V(DC24V)$ 、 $\geq 4.8V(DC48V)$				
Mechanical life	200,000 times, frequency: 3,600 times/h				
Forward electrical life (on 0.6s off 5.4s) resistive load	750VDC 40A 1,000 times	750VDC 100A 1,000 times	750VDC 150A 1,000 times	750VDC 200A 1,000 times	750VDC 300A 1,000 times
	500VDC 40A 20,000 times	500VDC 100A 3,000 times	500VDC 150A 3,000 times	500VDC 200A 3,000 times	500VDC 300A 3,000 times
Reverse electrical life (on 0.5s off 4.5s) resistive load	-500VDC 40A 20,000 times	-500VDC 100A 1,000 times	-500VDC 150A 1,000 times	-500VDC 200A 1,000 times	-500VDC 300A 1,000 times
Maximum breaking current:	DC300V 400A more than once	DC600V 1000A more than once	DC300V 1500A more than once	DC750V 2000A more than once	DC600V 2500A more than once
Short-time withstand current:	10Ie 600ms				
Contact Resistance	$\leq 4m\Omega$	$\leq 1.5m\Omega$	$\leq 1.5m\Omega$	$\leq 0.2m\Omega$	$\leq 0.2m\Omega$
Insulation resistance:	$\geq 1000M\Omega$, 1000VDC				
Withstand voltage:	3000VAC 60s				
Coil power consumption (20°C):	$\leq 3.3W$	$\leq 4.5W$	$\leq 6W$	Starting $\leq 35W$ Retention $\leq 4.5W$	Starting $\leq 45W$ Retention $\leq 4.5W$
Pull-in/discharge time (rated voltage 20°C):	Pull-in: $\leq 30ms$ Discharge: $\leq 10ms$	Pull-in: $\leq 30ms$ Discharge: $\leq 10ms$	Pull-in: $\leq 30ms$ Discharge: $\leq 10ms$	Pull-in: $\leq 30ms$ Discharge: $\leq 10ms$	Pull-in: $\leq 30ms$ Discharge: $\leq 10ms$
Impact strength	Stability: (sinusoidal half-wave pulse: 11ms, detection time 10 μs) ON:20g;OFF:10g Destructiveness: 50g (sinusoidal half-wave pulse: 6ms)				
Vibration strength	10~500Hz 5g				
Product weight	160g	400g with a busbar; 365g without a busbar	410g with a busbar; 377g without a busbar	609g with a busbar; 527g without a busbar	800g with a busbar; 710g without a busbar

5. Normal Working Environment

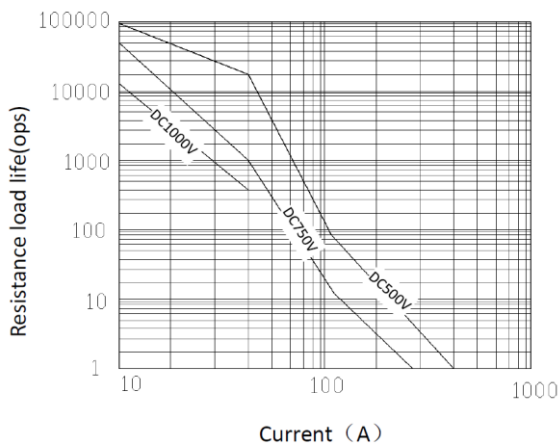
5.1: Operating ambient environment: $-40\sim 85^{\circ}\text{C}$

5.2: Operating humidity: 5%~95%

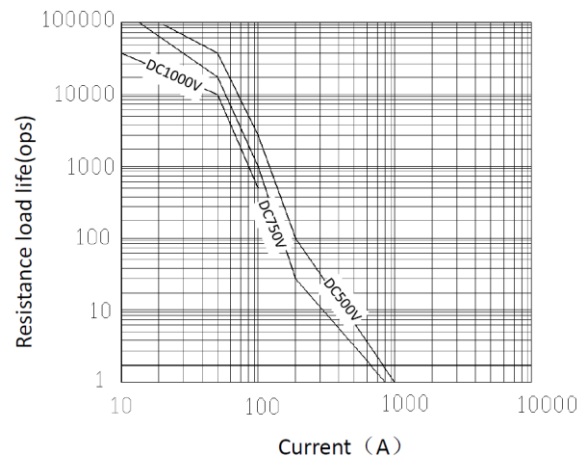
5.3: Pollution level: 3

5.4: Installation direction: Vertical installation, horizontal installation.

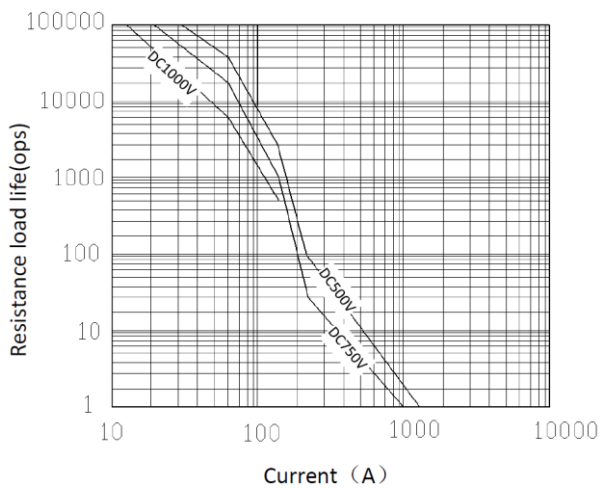
6. Electrical Endurance



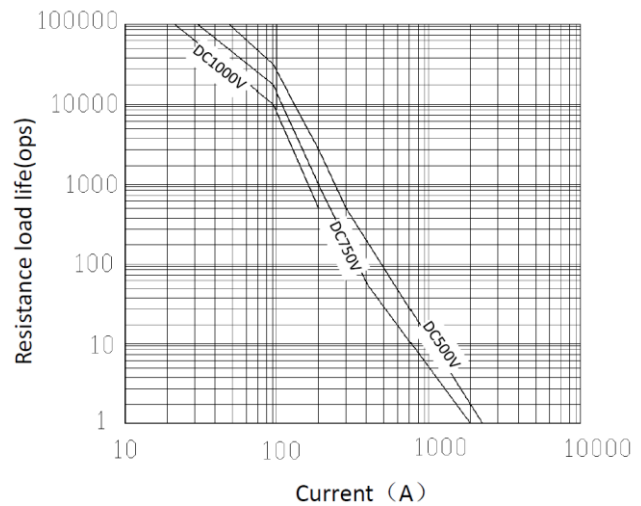
NDZ3T-40



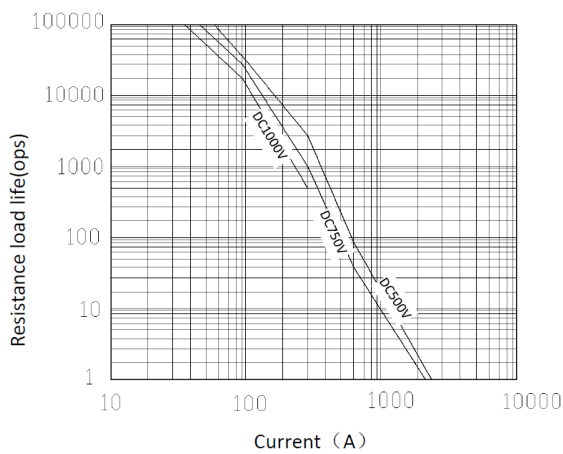
NDZ3T-100



NDZ3T-150

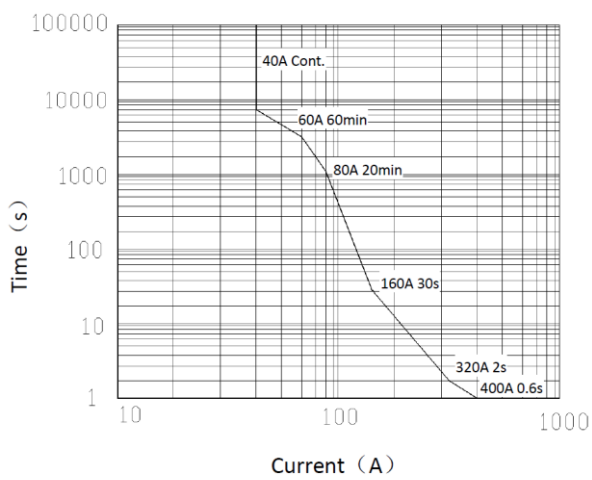


NDZ3T-200

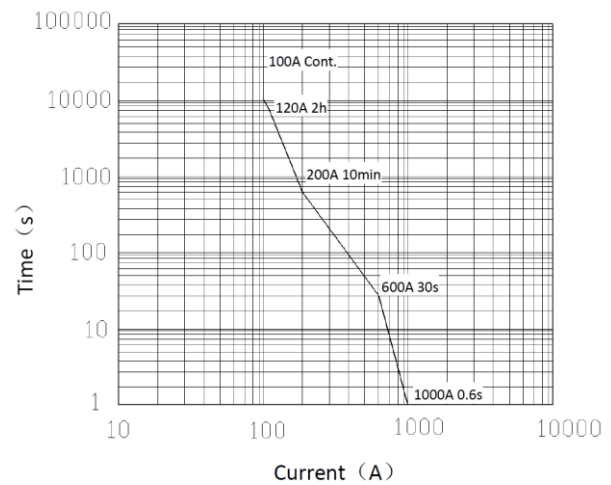


NDZ3T-300

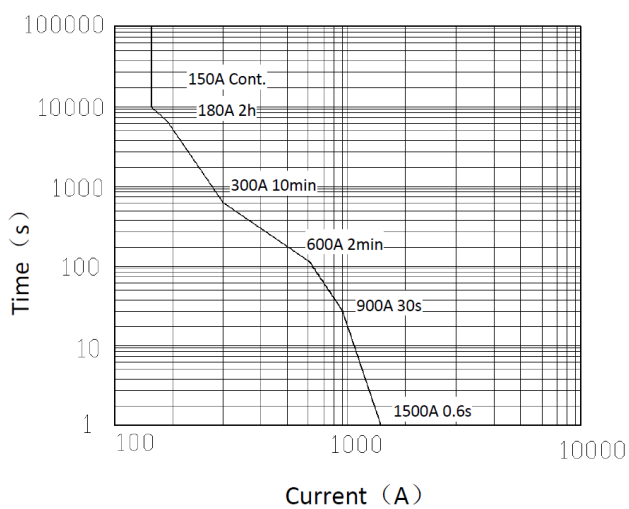
7.Current Endurance



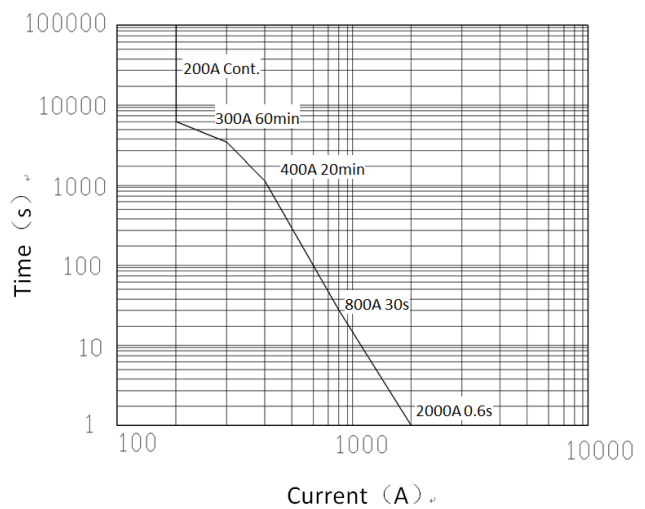
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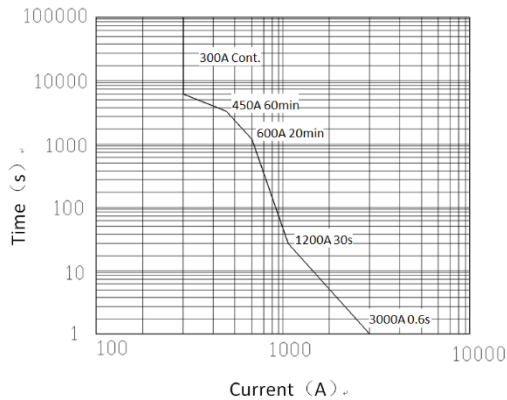
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NDZ3T-150

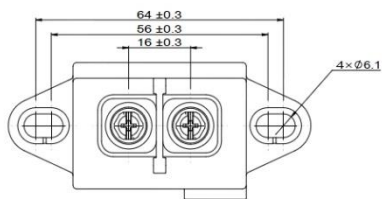
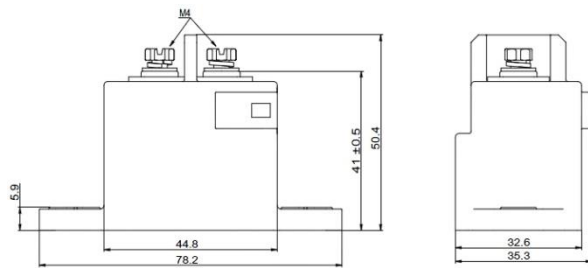


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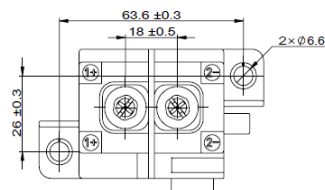
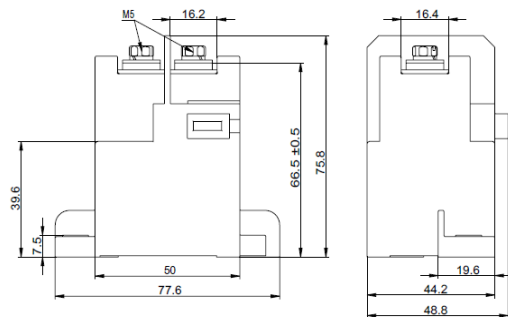


NDZ3T-300

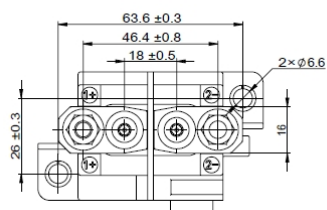
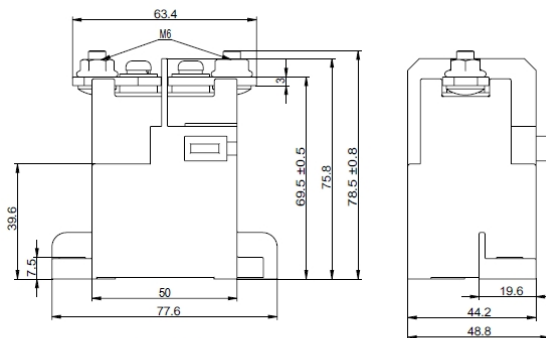
8.External Dimensions and Installation Dimensions (mm)



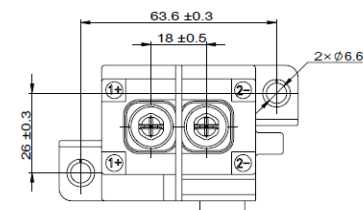
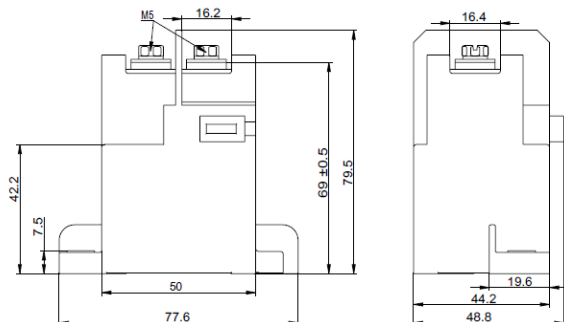
NDZ3T-40



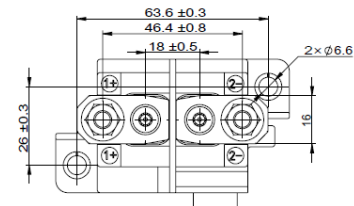
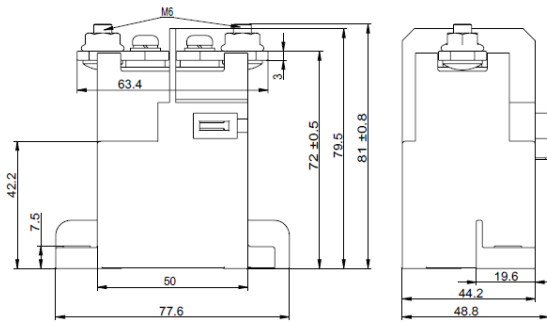
NDZ3T-100



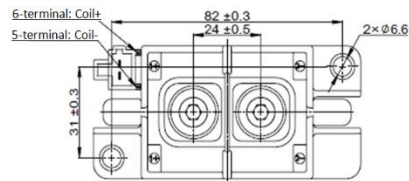
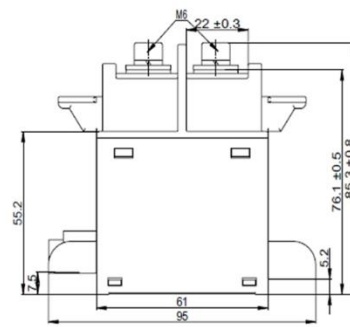
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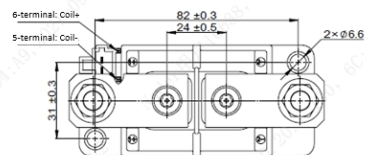
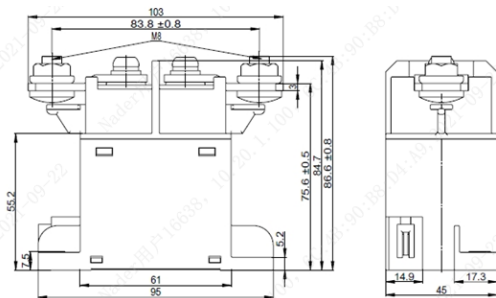
NDZ3T-150



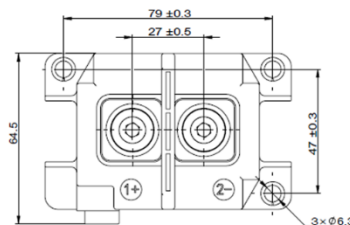
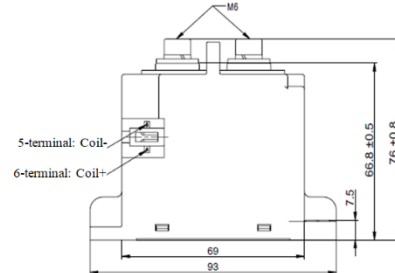
NDZ3T-150P



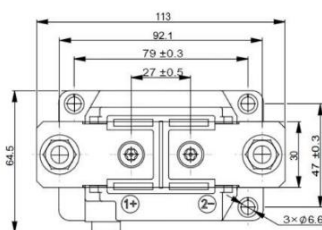
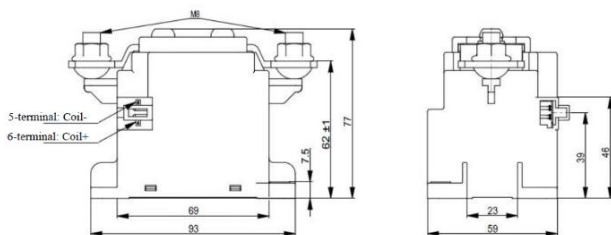
NDZ3T-200



NDZ3T-200P



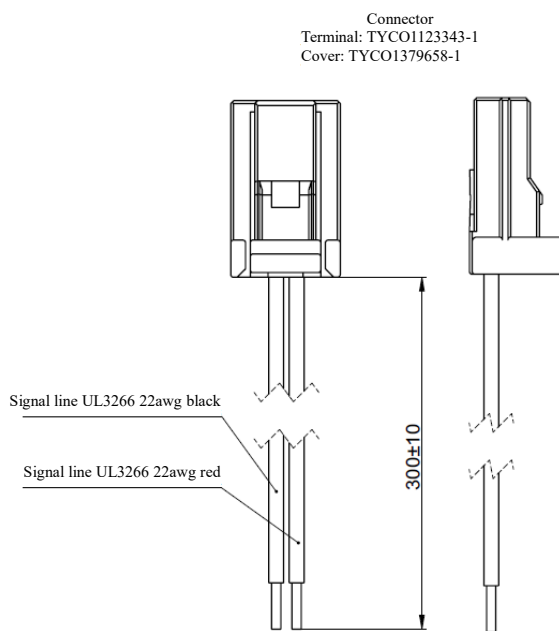
NDZ3T-300



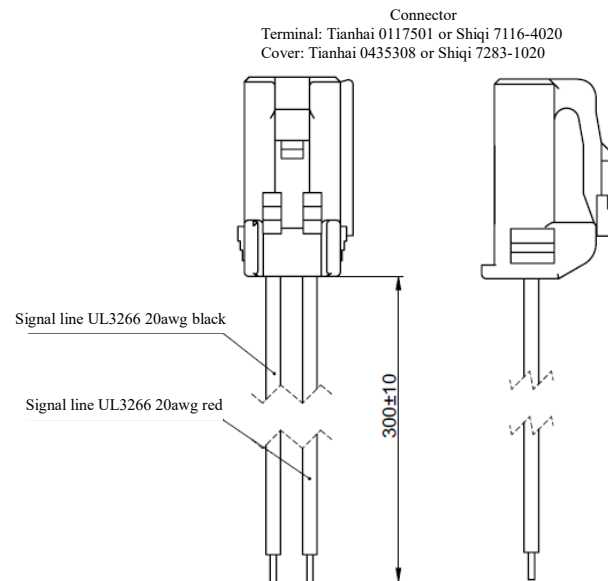
NDZ3T-300P

9. Coil connector

(mm)



NDZ3T-40



NDZ3T-100/100P/150/150P/200/200P/300/300P

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, NDZ3T-200/200P/300/300P will perform coil switching after driven for 0.2s. Do not repeat starting within $<0.2s$.
- NDZ3T-200/200P/300/300P can't be driven by the slowly rising voltage, ; otherwise, the product will not act. It will be directly driven with the pulse voltage.

e. Wiring terminal torque

NDZ3T-40 (M4 screw)	2~3N.m
NDZ3T-100 /150 (M5 screw)	3~4N.m
NDZ3T-100P /150P (M6 screw)	6~8N.m
NDZ3T-200 /300(M6 screw)	6~8N.m
NDZ3T-200P/300P (M8 screw)	9~11N.m

Installation position torque

M5 screw 3~4N.m

- 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;

Add: No.2000, South Shen Jiang Rd. Pudong District, Shanghai, 201315, PRC Tel:(021)68586699 Fax:(021)23025796

NDZ3T-40: Wire cross-section area \geq 10mm²;

NDZ3T-100/100P: Wire cross-section area \geq 40mm²;

NDZ3T-150/150P: Wire cross-section area \geq 50mm²;

NDZ3T-200/200P: Wire cross-section area \geq 60mm²;

NDZ3T-300/300P: Wire cross-section area \geq 100mm²;