

CCC, CQC, CB, CE, TUV Contactor

NDZ3-50/100/150/200/250 series



1. Application Scope and Purpose

The NDZ3 series of DC contactors apply to the DC system with the working voltage of DC1000 V and working current of 50~ 250A, which are mainly used in electric vehicles, charging piles, charging stations, photovoltaic and other fields.

2. Picture of the Product



NDZ3-50/100



NDZ3-150



NDZ3-200/250

3. Specification and Model Description

ND Z 3 -
 1 2 3 4 5 6

| | | |
|----|--------------------------|---|
| No | SN name | NDZ3 |
| 1 | Enterprise code | ND "Nader" brand low-voltage electrical device |
| 2 | Product code | Z DC contactor |
| 3 | Design SN | 3 |
| 4 | Basic specification code | Rated current |
| 5 | Auxiliary contact code | Blank: Without auxiliary contacts, 10: With a group of NO auxiliary contacts, 01: With a group of NC auxiliary contacts, 11: With a group of NO and NC auxiliary contacts |
| 6 | Coil voltage | DC12V, DC24V, DC48V, DC12~36V |

Note: The NDZ3-50~150 coil voltage is available with DC12V, DC24V and DC48V;
 the NDZ3-200/250 coil voltage is DC12~36



4. Main Technical Parameters

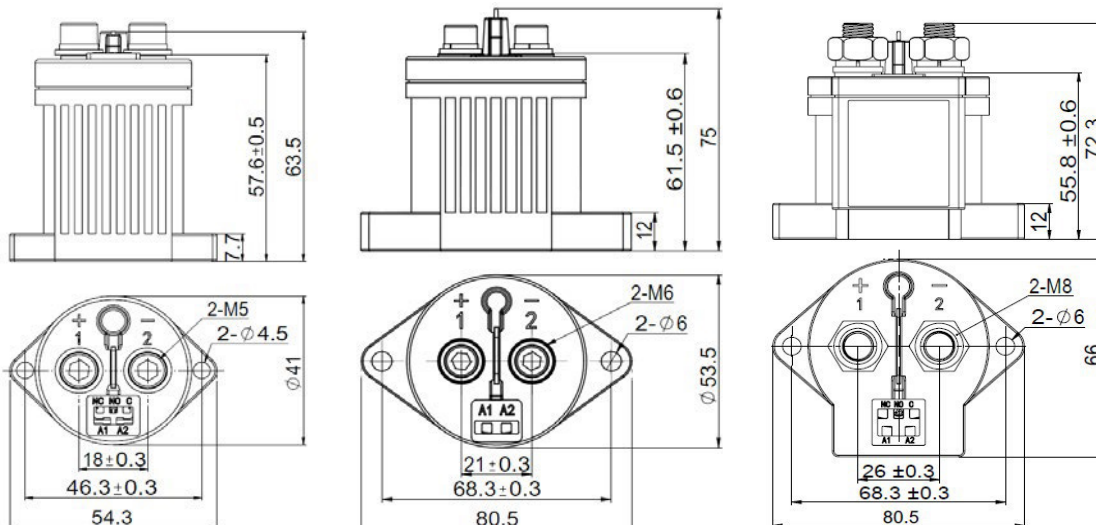
| Parameter name | Description of the specific parameters | | | | |
|---|---|--|--|--|--|
| Shell frame current level | 50A | 100A | 150A | 200A | 250A |
| Number of poles | | | | | |
| Rated current (A) | 50 | 100 | 150 | 200 | 250 |
| Agreed thermal current of the free air Ith(A) | 150 | | 300 | 500 | |
| Rated voltage (V) | 500V | | | | |
| Insulation voltage Ui | 1000V | | | | |
| Type of circuit | DC | | | | |
| Rated control voltage Us | DC12/24V/48V Pull-in voltage: 75%~110%Us Discharge voltage: 10%~60%Us | | | DC 12V~36V Pull-in voltage: 75%~100%Us Discharge voltage: 10%~60%Us | |
| Mechanical life | 1 million times, frequency 1200 times/h | | | | |
| Electrical life (DC, 120 times/h) | 40VDC 50A 35000 /times 500VDC 50A 6000 /times 900VDC 10A 6000 /times | 40VDC 100A 35000 /times 500VDC 100A 6000 /times 900VDC 10A 6000 /times | 40VDC 150A 35000 /times 500VDC 150A 6000 /times 900VDC 15A 6000 /times | 40VDC 200A 35000 /times 500VDC 200A 6000 /times 900VDC 15A 6000 /times | 40VDC 250A 35000 /times 500VDC 250A 6000 /times 900VDC 15A 6000 /times |
| Maximum breaking current: | DC320V 1000A / more than once | | DC320V 2000A /more than once | | |
| Short-circuit withstand current | 15le 30ms | | | | |
| Insulation resistance: | ≥100MΩ, 500VDC | | | | |
| Withstand voltage: | 2500VAC 60s | | 3500VAC 60s | | |
| Retention power consumption: | ≤6W | | ≤6W | ≤ 3.5W | |

| | |
|---|---|
| Pull-in/discharge time (rated voltage): | ≤35ms/15ms |
| Auxiliary contact type: | 1NO+1NC, 1NO, 1NC or without the auxiliary contact; |
| Auxiliary contact current: | 2A 30VDC/3A 125VAC |
| Minimum capacity of the auxiliary contact connecting: | 8V 100mA |

5. Normal Working Environment

- 5.1: Operating environment: -40~85°C
- 5.2: Operating humidity: 5%~95%
- 5.4: Pollution level: 3
- 5.5: Protection class: IP67 (Except the connecting terminals)
- 5.6: Installation direction: Vertical installation or horizontal installation

6. External Dimensions and Installation Dimensions



NDZ3-50/100

NDZ3-150

NDZ3-200/250



7. Installation Mode

Screw mounting

8. Environmental Compliance

Comply with the RoHS directives

9. Precautions

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

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

c. Terminal torque (NDZ3-200/250:M8 screw): 7~8N.m, mounting screw torque

(NDZ3-150:M6 screw) 4~5N.m: mounting screw torque (NDZ3-50/100:M5 screw): 3.5~4.5N.m;

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

NDZ3-50: Wire cross-section area $\geq 10\text{mm}^2$;

NDZ3-100: Wire cross-section area $\geq 35\text{mm}^2$;

NDZ3-150: Wire cross-section area $\geq 50\text{mm}^2$;

NDZ3-200: Wire cross-section area $\geq 95\text{mm}^2$;

NDZ3-250: Wire cross-section area $\geq 120\text{mm}^2$;