

Shanghai Liangxin Electrical Co., Ltd.

NDC1 (Z) -40 ~ 95

AC Contactor

Product Specification

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

| | | | |
|-------------|--------------|------|------------|
| Prepared | Baiyaya | Date | 2020-09-08 |
| Reviewed | Wangtingting | Date | 2020-09-08 |
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| Approved | Yuyipeng | Date | 2020-09-08 |

[illegible]

1、Application

NDC1(Z)-40~95 AC contactor (hereafter called contactor) is used in AC 50Hz(or 60Hz),with rated working voltage of up to 1000V, rated working voltage of 415 and rated working current of 95A in AC-3 type .It is used to control dual power and motors with reversible movement and braking .It can also be used as electro-magnetic starter when matched with thermal relay to protect the circuit against possible overload.

2、Product Pictures (just for reference)



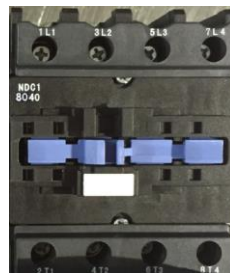
NDC1(Z)-09~1240



NDC1(Z)-2540



NDC1(Z)-40~6540



NDC1(Z)-80~9540

3、Specification and Model Description

ND C 1 — □ □ □ □ □ □
1 2 3 4 5 6 7 8 9

| Serial | Name | NDC1(Z) |
|--------|-----------------------|--|
| 1 | Enterprises code | ND: “Nader” Nader Electrical |
| 2 | Product code | C: AC contactor |
| 3 | Design SN | 1 |
| 4 | Derived code | Code-free: AC operation Z: DC operation |
| 5 | Basic specification | Represents the current an the AC-3 load and voltage of 415V (Note: See table 4) |
| 6 | Contact number | Code for auxiliary contacts of 3-P contacts. the tens digit is the number of NO contacts and the next is the numbe of NC contacts .The main contacts of 4P contactor : “40” ropresents 4 main NO contacts,and “08” ropresents 2 NO contacts and 2 NC contacts. |
| 7 | Coil type | AC coil DC coil |
| 8 | Voltage specification | See for details (Note: See table 1) |
| 9 | Annex | See for details (Note: See 4.1) |

Example: NDC1Z-0940 DC220V, Indicates that themain circuit is 9A 4 pole AC contactor,control voltage is DC220V.

4、Technical parameter

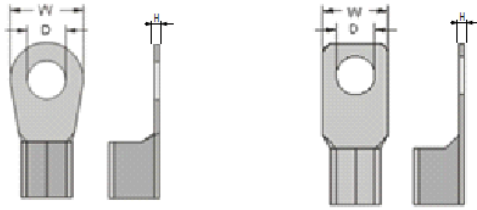
| Type | | | NDC1 (Z) -40 | NDC1 (Z) -50 | NDC1 (Z) -65 | NDC1 (Z) -80 | NDC1 (Z) -95 |
|---|---|----------------|-----------------------------------|--|---------------------|--------------------|--------------------|
| Rated working current (A) | AC-3 | 415V | 40 | 50 | 65 | 80 | 95 |
| | | 690V | 34 | 39 | 42 | 49 | 49 |
| | AC-4 | 415V | 18.5 | 24 | 28 | 37 | 44 |
| | | 690V | 9 | 12 | 14 | 17.3 | 21.3 |
| Set heating current Ith A (θ ≤60℃) | | | 60 | 80 | 80 | 125 | 125 |
| Rated shock withstand voltage Uimp(kV) | | | 8 | | | | |
| Rated insulation voltage V | | | 1000 | | | | |
| Rated working voltage V | | | 380/415 660/690 | | | | |
| AC-3 (6Ie、Ie) | Mechanical life | | 80×10 ⁴ | 60×10 ⁴ | 60×10 ⁴ | 60×10 ⁴ | 60×10 ⁴ |
| | Max operating frequency h ⁻¹ | | 600 | 600 | 600 | 600 | 600 |
| AC-4 (6Ie、6Ie) | Mechanical life | | 15×10 ⁴ | 15×10 ⁴ | 15×10 ⁴ | 10×10 ⁴ | 10×10 ⁴ |
| | Max operating frequency h ⁻¹ | | 300 | | | | |
| Auxiliary contact | Set heating current Ith A | | 10 | | | | |
| | Mechanical life | AC-15 (360VA) | 80×10 ⁴ | 60×10 ⁴ | | | |
| | | DC-13 (33W) | | | | | |
| | Min load connected | | 17V 5mA | | | | |
| Coil | Rated control voltage Uc V | | See table (tables 1) | | | | |
| | Absorption voltage V | AC 50/60Hz 40℃ | 75%Uc~110%Uc | | | | |
| | | DC | 85%Uc~110%Uc | | | | |
| | Discharge voltage V | | 20%Uc~60%Uc (AC)、10%Uc~75%Uc (DC) | | | | |
| | 50/60Hz | Pick-up | 200 | 200 | 200 | 200 | 200 |
| | AC coil power VA | Maintain | 20 | 20 | 20 | 20 | 20 |
| | DC Coil power W | Pick-up | 13 | 22 | 22 | 22 | 22 |
| Maintain | | | | | | | |
| Mechanical life | | | 800×10 ⁴ | | 600×10 ⁴ | | |
| Terminal capacity mm ² (min/max) | Non-prepared terminal soft cable | 1 Root | 2.5/25 | | | 4/50 | |
| | | 2 Root | 2.5/16 | | | 4/25 | |
| | prepared terminal soft cable | 1 Root | 2.5/25 | | | 4/50 | |
| | | 2 Root | 2.5/10 | | | 4/16 | |
| | Non-prepared terminal hard cable | 1 Root | 2.5/25 | | | 4/50 | |
| | | 2 Root | 2.5/16 | | | 4/25 | |
| | 0-type terminal | | | Applies only to NDC1 (Z) -80~95(A) AC contactor. Connectable capacity 25、35mm ² , Can.0-type type terminal head size specification (tables 2) | | | |

Tables 1:

| 产品型号 | 可选额定控制电源电压 Us /V | | |
|---------------------|---|---------|------------------|
| | 电源电压 AC | 频率 | 电源电压 DC |
| NDC1-0940、1240 | 24、36、48、110、127、200、220/230/240、380/400/415、440; | 50/60Hz | 24、48、80、110、220 |
| NDC1-2540 | 24、32、36、48、110、200、220/230/240、380/400/415、440; | | 24、48、80、110、220 |
| NDC1-4040、5040、6540 | 24、36、48、110、127、200、220/230/240、380/400/415、440、480; | | 24、48、110、220 |
| NDC1-8040、9540 | 24、36、48、110、220/230/240、380/400/415、440、480; | | 24、48、110、220 |

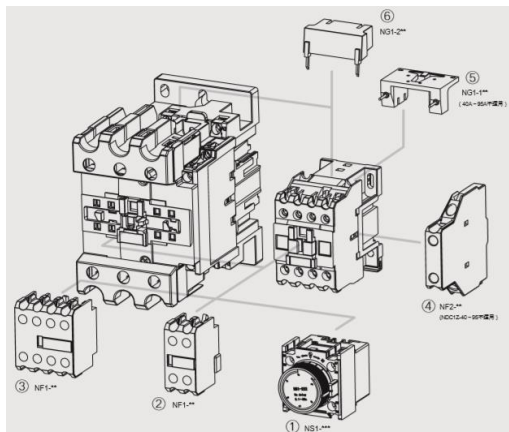
Tables 2

“0” 0-type terminal, KSS For example:



| Model type | Screw hole D/mm | Max width W/mm | Thickness H/mm | Conductor specification max |
|------------|-----------------|----------------|----------------|-----------------------------|
| **6S | 6.4 | 13.0 | ≥1.8 | 25mm ² |
| **6 | 6.5 | 13.1 | | |
| **8S | 8.4 | 13.0 | | |
| **8 | 8.4 | 16.4 | | |
| **6S | 6.4 | 15.0 | | 35mm ² |
| **6ST | 6.4 | 15.3 | | |
| **8S | 8.4 | 15.0 | | |
| **8St | 8.4 | 15.3 | | |

4.1 Annex



5、Working condition

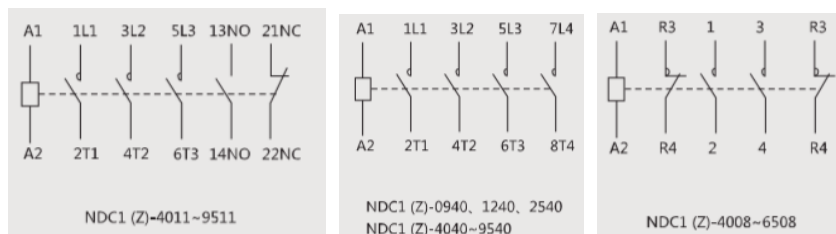
- 1) Storage: -60 °C ~ +80 °C; Operation: the standard operating temperature is -25°C ~ +60 °C,
- 2) Altitude: ≤3000m. Less than 5000m for plateau type product.
- 3) The relative humidity can't be more than 50% at the temperature of +40°C. Higher relative humidity may be permitted at lower temperature, such as 90% humidity at 20°C. Special measures are necessary in case of occasional condensation due to variations in temperature
- 4) Elevation and higg temperature drop:

High temperature or high altitude environment capacity reduction, according to the following data reference

| Temperature drop capacity coefficie (Elevation≤3000m) | | | Elevation drop capacity coefficient (temperature≤ | |
|---|------------------------------|------------------------------|---|--------------------------|
| Temperature/°C | Current capacity coefficient | Voltage capacity coefficient | Elevation(meter) | Current drop volume rate |

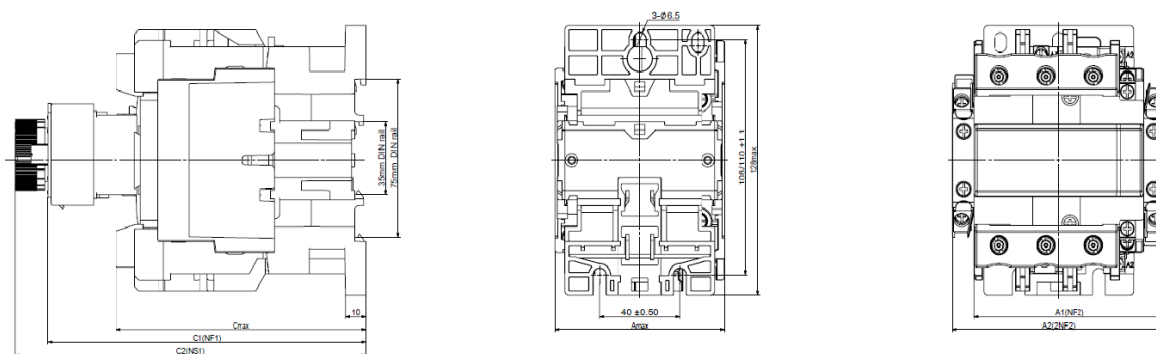
| | | | | |
|----|------|---|----------------------|--|
| 55 | 1 | 1 | $3000 < H \leq 3500$ | 0.92I _e 或 0.92I _{th} |
| 60 | 0.95 | 1 | $3500 < H \leq 4000$ | 0.88I _e 或 0.88I _{th} |
| 70 | 0.85 | 1 | $4000 < H \leq 5000$ | 0.86I _e 或 0.86I _{th} |

6、Wiring diagram



7、Outline and installing dimensions

NDC1-40、50、65、80、95



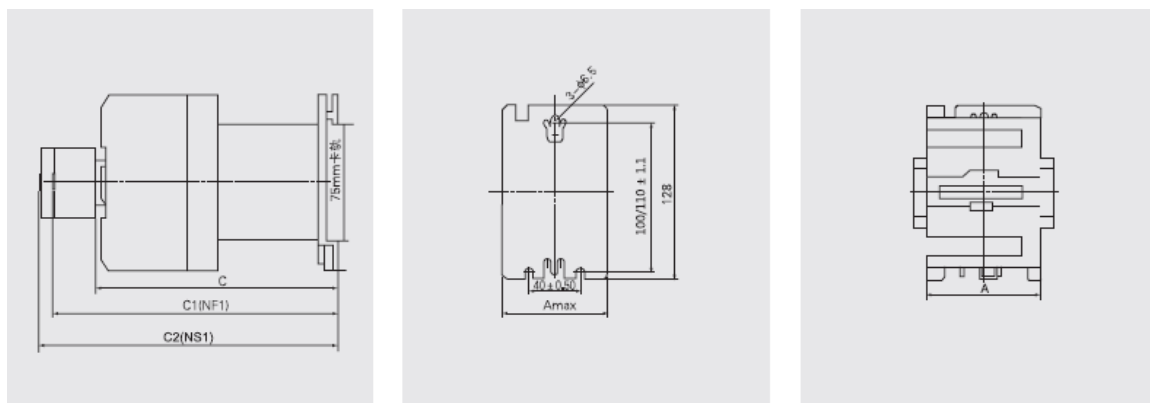
Unit:mm

| 接触器型号 | Amax | A1 | A2 | Cmax | C1 | C2 |
|---------------------|------|-----|-----|------|-----|-----|
| NDC1-4011、5011、6511 | 75 | 90 | 102 | 117 | 149 | 169 |
| NDC1-4040、5040、6540 | 85 | 99 | 110 | 112 | 149 | 169 |
| NDC1-4008、5008、6508 | 85 | 99 | 110 | 127 | 149 | 169 |
| NDC1-8011、9511 | 85 | 100 | 110 | 122 | 157 | 177 |
| NDC1-8040、9540 | 96 | 110 | 122 | | | |

Note: 1、C1: NDC1+NF1; C2: NDC1+NS1; A1: NDC1+NF2; A2: NDC1+2NF2;

2、Error tolerance ±1mm。

NDC1Z-40、50、65、80、95



Unit:mm

| type | A | A1 | A2 | C | C1 | C2 |
|----------------------|----|----|----|-----|-----|-----|
| NDC1Z-4011、5011、6511 | 75 | — | — | 175 | 204 | 224 |
| NDC1Z-4040、5040、6540 | 85 | — | — | | | |
| NDC1Z-4008、5008、6508 | 85 | — | — | 182 | 204 | 224 |
| NDC1Z-8011、9511 | 85 | — | — | 183 | 213 | 233 |
| NDC1Z-8040、9540 | 96 | — | — | | | |

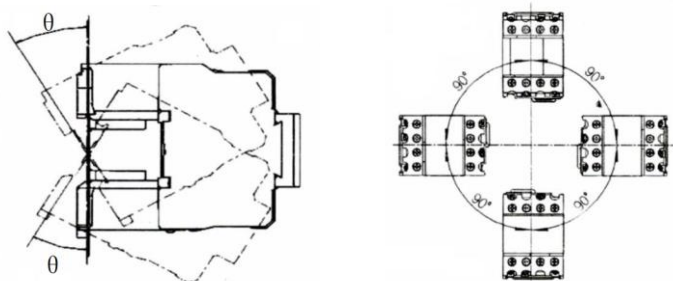
Note: 1、C1: NDC1Z+NF1; C2: NDC1Z+NS1.

2、Error tolerance $\pm 1\text{mm}$.

8、Mounting

NDC1-40~95:Screw mounting or 35、75mm standard rail track;

NDC1Z-40~95: Screw mounting or 75mm standard rail track;

Installation angle: θ criteria $\pm 5^\circ$, limit $\pm 30^\circ$ 。

9、Packaging and storage

Each product is packed separately and put into the carton box. The products should be stored at temperature no higher than $+80^\circ\text{C}$, no lower than -60°C . No acidity, alkaline or other corrosive gas.

10、Accessories list

Operation instruction, certificate of quality^(note: manual scanning code acquisition).

11、Notice

- 1) The product shall be installed at place without obvious.
- 2) Vertical installation. The angle between installing surface and vertical surface should be less than $\pm 5^\circ$.
- 3) Wiring must be reliable, see table 3.

Table 3: torque distance

Unit: N.m

| type | NDC1 (Z) -40~65 | NDC1 (Z) -80~95 | NDC1 (Z) -80~95 (A) |
|--------------------|-----------------|-----------------|---------------------|
| Main circuit N.m | 5 | 9 | 2.5~5 |
| Auxiliary、coil N.m | 1.2 | 1.2 | 1.2 |