Shanghai Liangxin Electrical Co., Ltd. (Nader)

NDQ2A-63 Series Automatic Transfer Switch Product Specification

（IPD-ENG-DEV-T20 A1 2022-09-14）

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Approved by	Wang Jili	date	September 26, 2022

Revision History					
Version	Revision Reason/Content	Implementation Date	Prepared by	Reviewed by	Approved by
7	Parameter correction	2022-09-14	Cao Xuehu	Zhao Zhenxing	Wang Jili

1. Applicable Scope and Purpose

The NDQ2A-63 series of CB-grade ATSE are applicable for sites with the AC voltage below 400 V and the rated frequency of 50 Hz. This product complies with the GB14048.1 and GB/T14048.11 standards in accordance with

This product mainly applies to the compulsory level I load, which is widely used in important places that require the continuous power supply, such as fire protection, telecommunications, hospitals, hotels, urban rail transits, high-rise buildings, industrial assembly lines and TV stations.

2. Product Picture of Circuit Breaker (The picture is for reference only, subject to the actual product)

3. Specification and Model Description

ND Q 2A – 63 / □ / □ □ □ □ □

1 2 3 4 5 6 7 8 9 10

Table 1 Specification and Model Description

SN	SN Description	NDQ2A series
1	Enterprise code	ND “Nader” low-voltage apparatus
2	Product code	Q ATSE
3	Design SN	2A (A for the derived code)
4	Shell frame level	63 ND Q 2A -63 10A/2P CB R B
5	Rated current	10、16、20、25、32、40、50、63
6	Number of poles	2P、3P、4P
7	Electrical equipment level	CB
8	Control mode	R - automatic switching and automatic recovery S - automatic switching and non automatic recovery (only type B can select type S)
9	Controller type	No code - standard type B - Type B
10	Tripping Curve	C Tripping Curve D Tripping Curve

Note: If there is no special identification, the circuit breaker adopts Type C instantaneous tripping features for the product; if Type D circuit breaker is used, “(D)” shall be added behind the product model. For example: NDQ2A-63/40/4CB (Type D)/(Curve D).

4. Main Technical Parameters

Electrical characteristics:

- ▲ Rated working voltage Ue: AC 230 V 2P, AC 400 V 3P 4P
- ▲ Rated frequency of controller Hz: 50 Hz
- ▲ Rated current of frame Inm: 63 A
- ▲ ● Rated short-circuit breaking capacity Icn: 6 kA
- ▲ Rated short circuit making capacity Icm: 9.18 kA
- ▲ Contact switching time max (s): ≤ 1.6 S
- ▲ Switching action time max (s): ≤ 3 S

Operating performance:

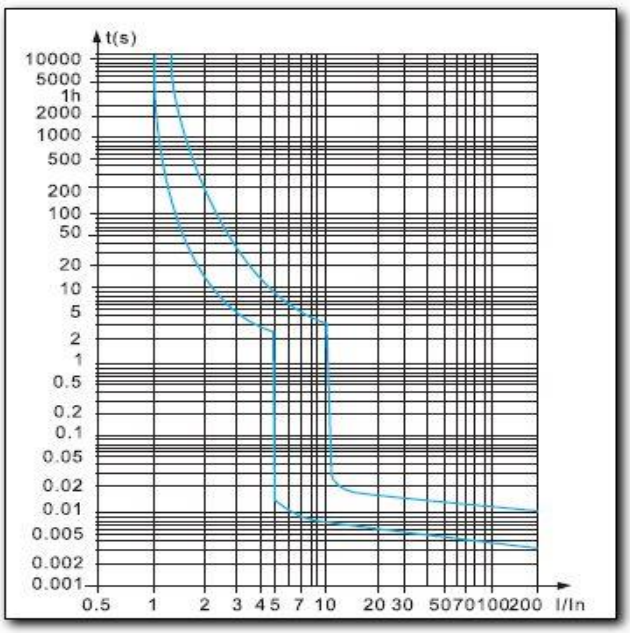
- ▲ With electricity: 6,000 times
- ▲ Without electricity: 10,000 times

Utilization category: AC-33iB

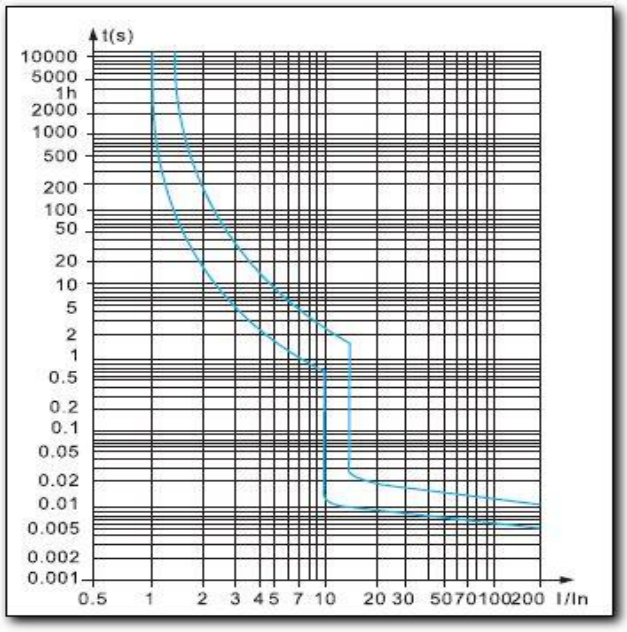
5. Normal Working Environment

- ▲ Altitude: ≤2000m.
- ▲ Ambient temperature: - 25 ℃+70 ℃.
- ▲ Storage temperature: - 55 ℃ ＋ 85 ℃
- ▲ Protection class: IP20.
- ▲ The product can withstand the effects of wet air, salt mist and oil mist.
- ▲ The maximum gradient is 22.5 °.
- ▲ The product can be disposed in places that are free from explosive media, media corrosive to metal, insulation damaging gas, and conductive dust.
- ▲ The product should be installed free from snow and rain.

6. Tripping Characteristics



Characteristic Curve of Type C Circuit Breaker



Characteristic Curve of Type D Circuit Breaker

7. Product Wiring Diagram

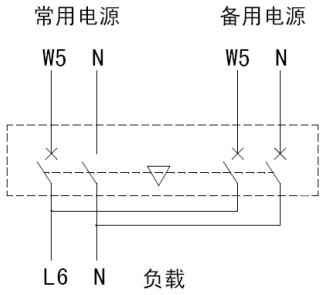


Figure 2 Schematic Diagram of Two-pole Product Wiring

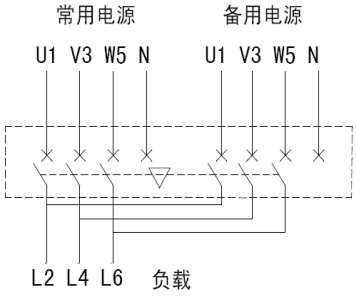


Figure 3 Schematic Diagram of Three-pole Product Wiring

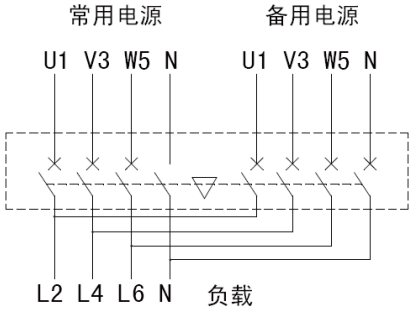


Figure 4 Schematic Diagram of Four-pole Product Wiring

8. Controller function

Function		Standard type	Type B
Sampling	Voltage sampling	3+1	3+3
Protection function	Overvoltage protection	-	√
	Undervoltage protection	-	√
	Open-phase protection	√	√
	Phase angle detection	-	√
Node input/output	Fire signal Input	√	√
	Fire signal feedback	-	√
	Remote control	-	√
	Common closing output	√	√
	Standby closing output	√	√
	Generator starting output	√	√
	Communication port	-	√
Display	Common power supply	√	√

	Standby power supply	√	√
	Common closing	√	√
	Standby closing	√	√
	Automatic	√	√
	Firefighting	√	√
Operation mode Select	Auto switch and auto recover	√	√
	Auto switch and non-auto recover	-	√
Voltage protection Threshold value	Undervoltage value	-	165±5V
	Overpressure value	-	270±5V
Keys	Automatic/manual	√	√

"√" means the function is available; "-" means no such function

9. Wiring terminal diagram

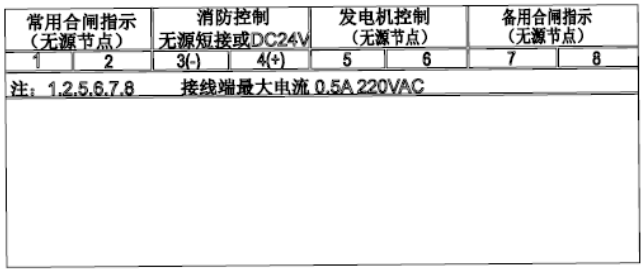


Fig. 5 (Standard Controller) Secondary Terminal Wiring Diagram

Standard type: 1-2 Common closing indication nodes; 3-4 Fire control nodes (**short circuit or DC 24 V enables fire protection double opening function**)
5-6 Generator control nodes; 7-8 Standby closing indication nodes (passive node)

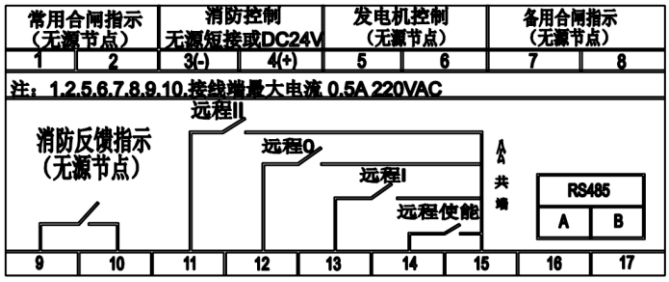


Fig. 6 (Type B controller) Secondary terminal wiring diagram

Type B: 1-2 Common closing indication nodes; 3-4 Fire control nodes (**short circuit or DC 24 V enables the fire protection double opening function**)
5-6 Generator control nodes; 7-8 Standby closing indication nodes; 9-10 Fire control feedback signal (passive nodes)
11-15 Remote standby closing position operation
12-15 Remote double position operation
13-15 Remote common closing position operation
14-15 Remote enabling (can only be used after short circuit)
16-17 Communication port (See the communication protocol for the use method of 485 communication port (it is bound in additional volume. Dial up our 400 hotline number for request)).

Warning: For manual operation, the controller must be set in the manual state.

8. Outline and Installation Dimensions

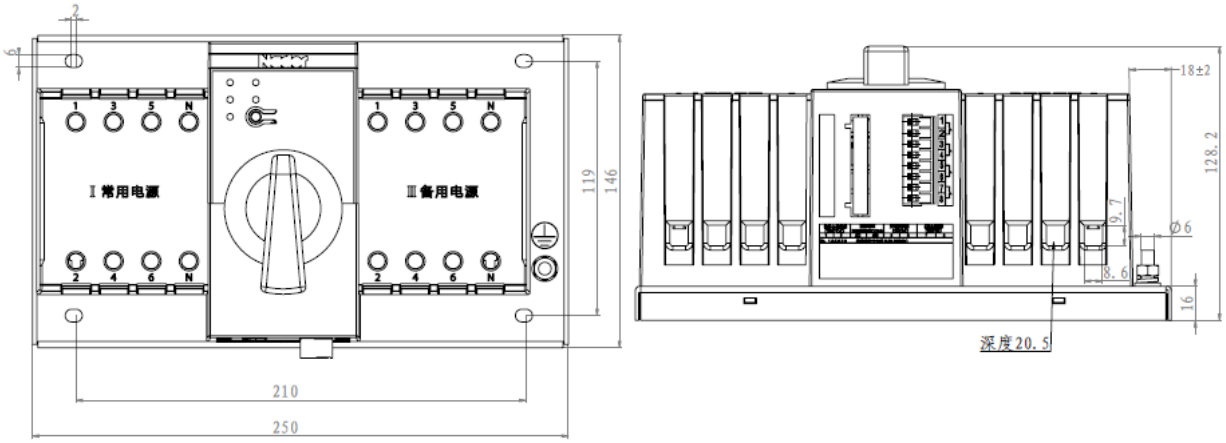


Fig. 7 NDQ2A-63 (Standard type)

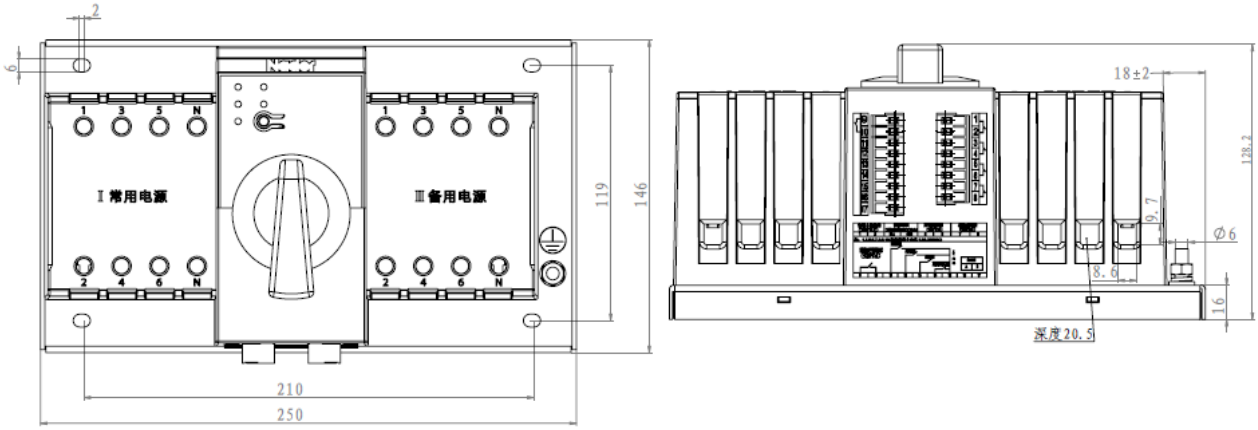


Fig. 8 NDQ2A-63 (Type B)

Model & specifications	Overall dimensions (mm)			Installation Dimensions (mm)		
	Length	Width	Height	Length	Width	Mounting hole
NDQ2A-63	250	146	128	210	119	φ6

Note: 1. The limit deviation not indicated with the tolerance dimensions is as per GB/T 1804-v.

2. The external and installation dimensions of NDQ2A-63 2P and 3P are the same as 4P.

9. Installation Mode

To be installed horizontally or vertically

10. Packaging and Storage

Packaging quantity: 1 piece/box. The packaged products should be stored in a warehouse with the ambient temperature of -55℃~+85℃ and the corresponding relative humidity below 80% without acidic, alkali or other corrosive gas in the surrounding air. Under the conditions above, the storage period shall be no more than 18 months since the manufacturing date.

11. List of Accessories and Installation

SN	Name	Specification	Quantity
1	Hexagon screw	M5×30	4
2.	Plain washer	M5	8
3	Spring washer	M5	8
4	Hexagon nut	M5	4

12. Precautions

★ During installation and wiring of the product, strictly distinguish the incoming, outgoing line end and N-pole,and do not share the neutral line.

★ It is prohibited to use this product beyond the normal working conditions, such as the continuous water vapor or condensation without corresponding precautions, flammable or corrosive dust without SCPD cooperation or expected short-circuit current beyond the scope, ultra-high or ultra-low voltage, current beyond the rated value and ultra-high attitude.

★ For disconnection of the protective apparatus due to the line or load fault, first carry out troubleshooting and then energize the load.

★ During the product use, perform regularly (such as operation every three months) general inspection and switch the power supply once manually or automatically to check whether the product is normal.

★ This product has been subject to the insulation test before the factory delivery, and wrong dielectric test will damage the control system. Dielectric test is prohibited with ATS.

★ In the wiring of main circuit, the screwdriver torque is ≤2.5 N, and excessive torque will result in the screw stripping of the wiring frame for the product.