Shanghai Liangxin Electrical Co., Ltd.

NDG3V-32(C) Switch-disconnectors

Product Specification

（IPD-ENG-DEV-T22 A1 2016-09-23）

Prepared	张文力	Date	2023-03-23
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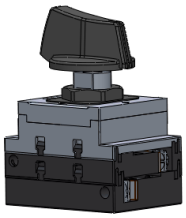
Countersign	郭小明	Date	2023-03-23
Approved	胡琪	Date	2023-03-23

Revision information					
Version	Revised contents and reasons	Date	Prepared	Reviewed	Approved
0	New file	20190318	Zhou Wenguang	Shi Jian	Shi Wei
1	Add PV2 parameter	20200521	Zheng Lei	Jiang Zhaoyong	Wang Jili
2	Change 600V parameter，delete 8/9 layers	20211207	Chen Zhenzhen	Zheng Lei	Wang Jili
3	Increase the recommended number of torque revolutions, change the size of the fixing nut to 6.5mm, and add the nut thickness dimension diagram	20230331	Zhang Wenli	Liu donghui	Hu qi

1、Application

The NDG3V-32(C) series switch-disconnectors are applicable to electric systems with a rated voltage up to DC 1500V or AC 415V and a rated current up to 32A. It can be used for infrequent close and open, it provides isolation and breaking off circuit, it also provides safety isolation for any low voltage circuit of photovoltaic applications.

2、Product Pictures



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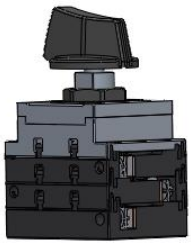

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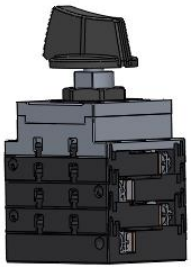

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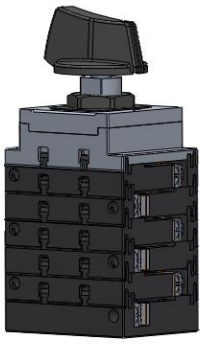

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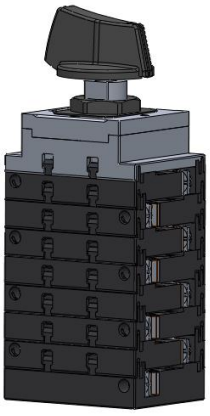


8P

Note: the picture is for reference only, and the appearance of the product is subject to the real object.

3、Model and implication

Model and Description		
ND G 3V— 32 C / □ / □ / □ / □ / □ / □ 1 2 3 4 5 6 7 8 9 10 11		
SN	Name	Code
1	Enterprise code	ND-"Nader" brand
2	Product code	G-switch-disconnectors
3	Design code	3V
4	Frame current	32-32A
5	Customer code	C-Customer code Nothing-Connetional products
6	Rated current	7.5-7.5A 10-10A 12.5-12.5A 13-13A 16-16A 20-20A 25-25A 30-30A 32-32A
7	Mechanical layer	2, 3, 4, 6, 8
8	Wiring mode	1: Serial cabling across two layers 2: Serial cabling across three layers 3: Serial cabling across four layers 4: AC connection 5: Two positive share one negative
9	Short connected method	02: Without short busbar
10	Installation mode	M: on cabinet door
11	Rated voltage	240-AC 220/230/240V 415-AC 380/400/415V 600-DC 600V 800-DC 800V 1000-DC 1000V 1100-DC 1100V 1200-DC 1200V 1500-DC 1500V

4、Main technical parameters

Parameter name	Category/unit			Description of the specific parameters				
Frame current	A			32				
Isolation voltage	V			DC 1500/AC1000				
Rated impulse withstand voltage	kV			8				
Rated current (A)	AC Voltage(V)			220/230/240		380/400/415		
	AC-22B	AC connection	2 Layers	32				
			2/3/4 Layers			32		
	DC Voltage(V)			600	800	1000	1100	1500
	DC-21B DC-PV1	Serial cabling across two layers	2/4/6/8 Layers	30/32	16/32	20	20	
		Serial cabling across two layers	3/6 Layers			25/32		20
		Serial cabling across two layers	4/8 Layers					16/25
		Two positive share one negative	3/6 Layers	30/32		13	13	
	DC Voltage(V)			600	800	1000	1100	1200
	DC-PV2	Serial cabling across two layers	2/4/6/8 Layers	30/32	20	12.5	10	7.5
		Two positive share one negative	3/6 Layers	30/32	20	12.5		7.5
Rated short-time withstand current Icw	kA•1s			0.7				
Rated short circuit making capacity Icm	kA			1.4				
Mechanical life	Times			9700				
Electrical life	Times			300				
Operating torque	N.m			1.5~2.2				
Fixed moment of the complete appliance	N.m			2.0~2.5(Recommended electric gun revolution ⩽ 500 r/min)				
Connection moment	N.m			1.5~1.7(Applicable to the specification of distribution head PH2)				
Fixed moment of handle	N.m			0.6~0.75				
Connection area (recommended)	mm2			To be implemented according to Table 9 of GB/T 14048.1				
Installation mode	On cabinet door							
Protection class	Complete appliance: IP20;Handle: IP66							

- Applicable standards :GB/T 14048.1; GB/T 14048.3; IEC 60947-1; IEC 60947-3
- Exchange product frequency: 50 / 60Hz
- Certificated: CCC、CE、TUV

5、Working conditions

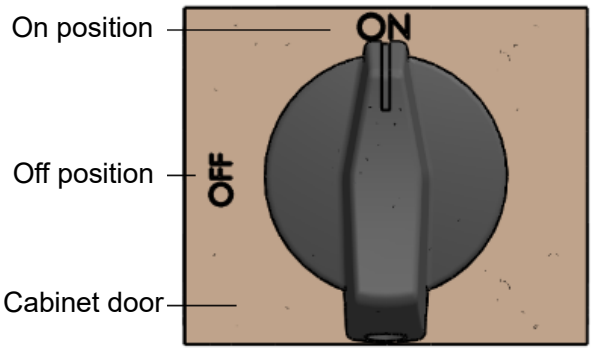
1) The ambient air temperature for normal operation ranges in -40℃~+75℃; when the ambient air temperature is above +75℃, or below -40℃, the user should negotiate with the manufacturer.
2) Normal installation altitude shall not exceed 3000m, Refer to the following table for capacity reduction when using higher than 3000m:

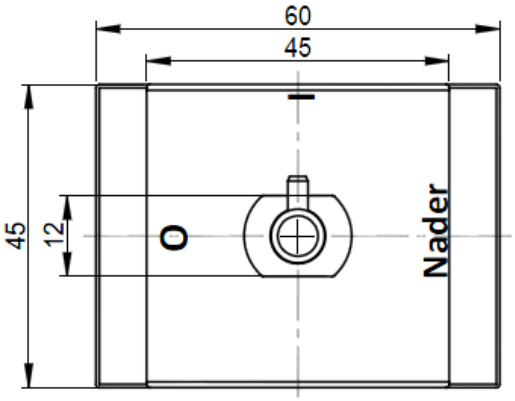
Altitude derating coefficient				
Altitude /m	3000	3500	4000	4500
Correction factor of working current	1	0.95	0.93	0.9
Correction factor of working voltage	1	0.9	0.83	0.8

3) The relative humidity at an ambient temperature of +40℃ should not exceed 50%. A higher relative humidity is allowed at a lower temperature. For example, it can be 90% at 20℃. Special measures should be taken to address occasional condensing due to temperature fluctuation.
4) 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 avoided from snow and rain.
5) The product is applicable in an environment with pollution class III.
6) The installation types III and IV are applicable to the product.

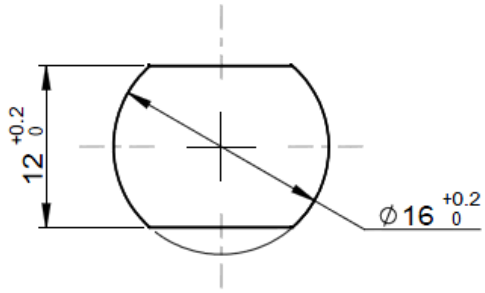
6、Installation Method

6.1 Installation method: Install it on the cabinet door by using the handle.



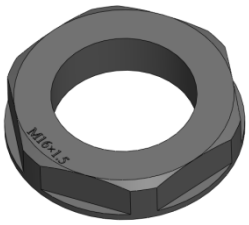


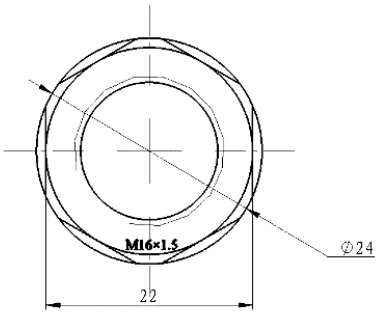
Installation Dimension

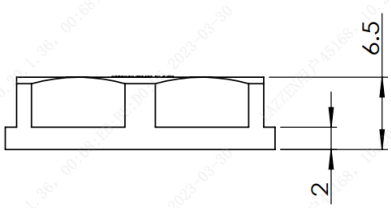


6.2 Positions: The product has two switch positions, which are the I/ON position and O/OFF position as shown in the above figure.

6.3Fixing nut:

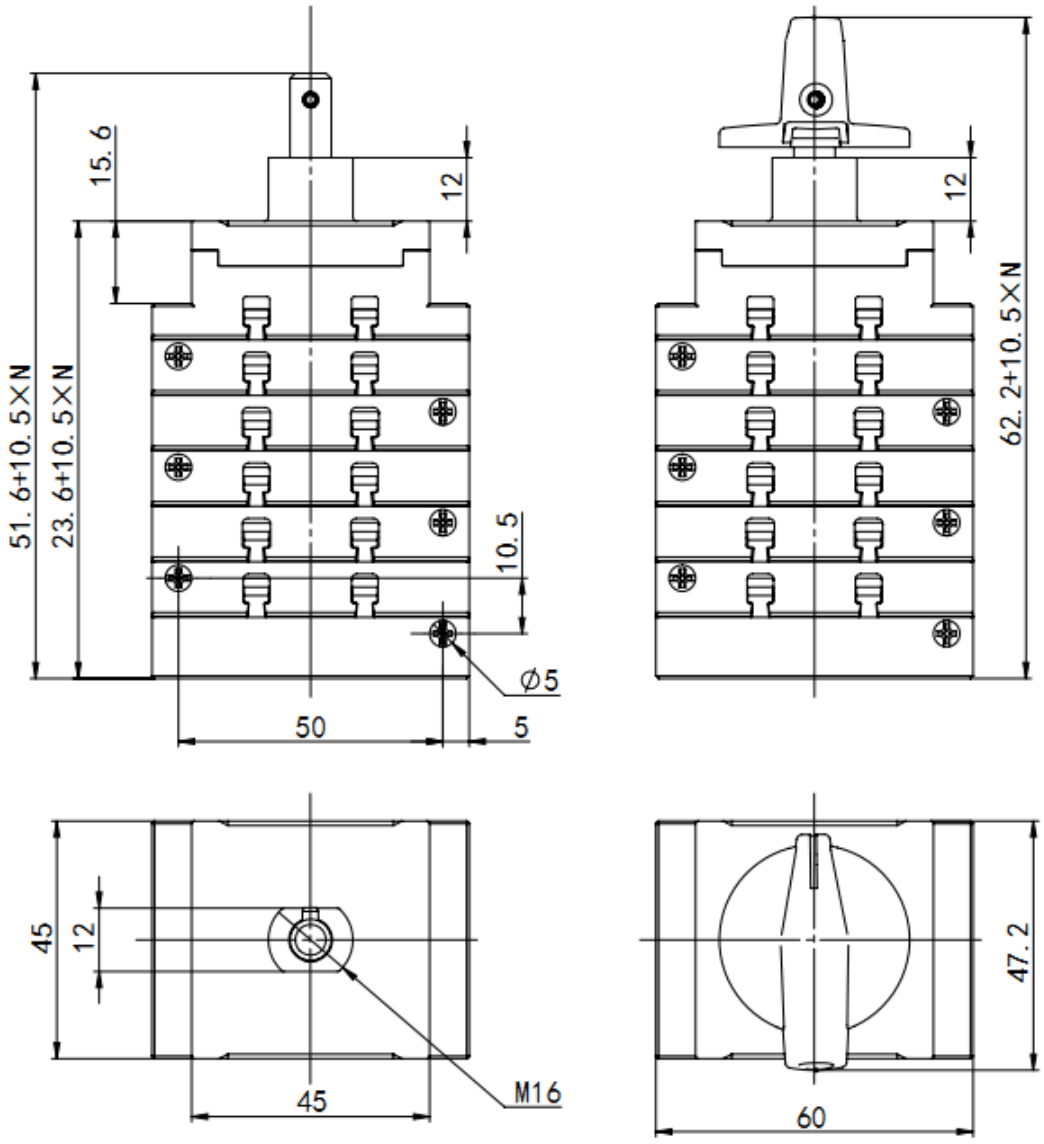






Overall thickness 6.5mm

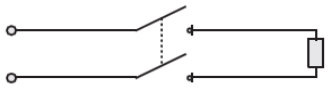
7、Outline and installation dimensions



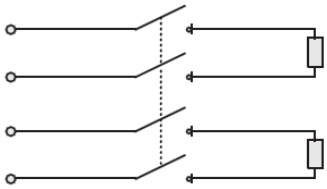
Note: H indicates the number of poles of the product.

8、Wiring Mode (Wiring Diagrams)

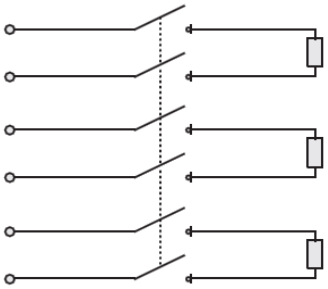
8.1 Series Connection Diagram Cabling Across for Two Layers of the Product with a DC Power Supply



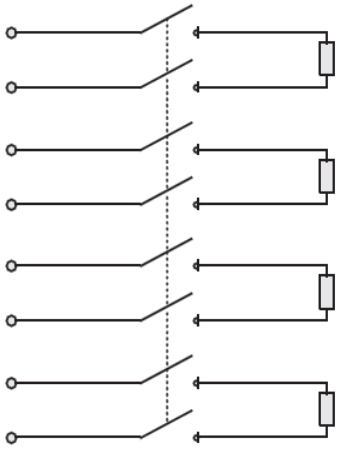
Cabling across two layers



Cabling across four layers

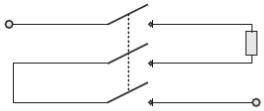


Cabling across six layers

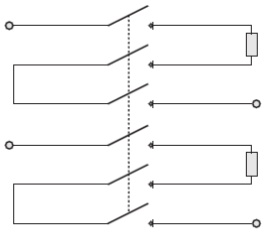


Cabling across eight layers

8.2 Series Connection Diagram Cabling Across for Three Layers of the Product with a DC Power Supply

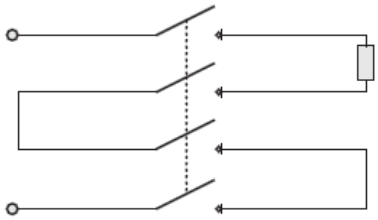


Cabling across three layers

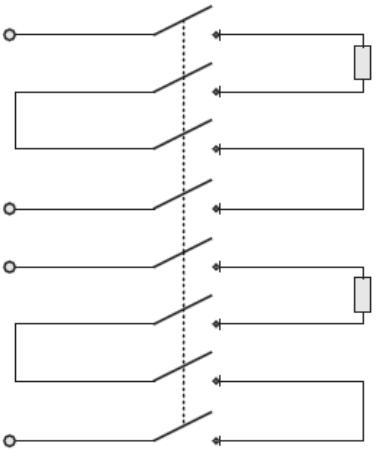


Cabling across six layers

8.3 Series Connection Diagram Cabling Across for Four Layers of the Product with a DC Power Supply

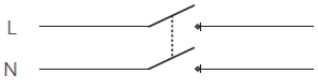


Cabling across four layers

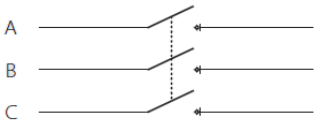


Cabling across eight layers

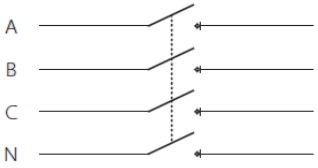
8.4 Cabling for the AC Power Supply



Cabling across two layers

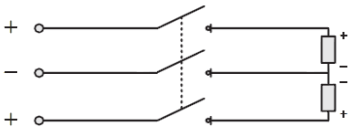


Cabling across three layers

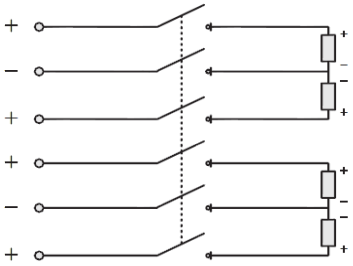


Cabling across four layers

8.5 Series Connection Diagram Cabling Across for Two positive share one negative of the Product with a DC Power Supply



Cabling across three layers



Cabling across six layers

9、Packaging and storage

9.1 Switch product packaging

SN	Model	Layers	Pcs
1	NDG3V-32(C)	2/3/4	60pcs/box
2		6	30pcs/box
3		8	25pcs/box

9.2 Storage

The product should be transited and deposited free from rain and snow. The product should be stored in the warehouse where there is ventilation. The relative humidity there should not exceed 80%, and the ambient temperature there is between -40℃ and +85℃. In addition, there should not be acidic, alkaline and corrosive gas in the air. The product should not be deposited more than 3 years in the above mentioned conditions since the producing date.

10、Environment

Environmental protection requirements comply with RoHS2.0 directive.

11、Notices

1) Any quality problem due to disassembly without permission will be the liability of the user;
2) Do not touch the non-insulated exposed parts of the disconnecting switch when it is connected to a power supply;
3) Reliable cabling is required to prevent the terminals from being burnt out due to abnormal heat at the terminals.