

Shanghai Liangxin Electrical Co., Ltd.

Product Specification of NDB2-40

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

Product Name: Miniature Circuit Breaker

Product type: NDB2-40

Date: 20190710

Prepared	<u>XuRong</u>	Date	<u>2019/7/10</u>
Reviewed	<u>HuoZhiqiang</u>	Date	<u>2019/7/10</u>
Approved	<u>DuanHui</u>	Date	<u>2019/7/10</u>

Revision information					
Version	Revised contents and reasons	Date	Prepared	Reviewed	Approved
2	Parameter and format update	2019/7/10	XuRong	HuoZhiqiang	DuanHui

1、Applicable scope and purpose

- Short -circuit protection
- Over-load protection
- Control
- Isolation

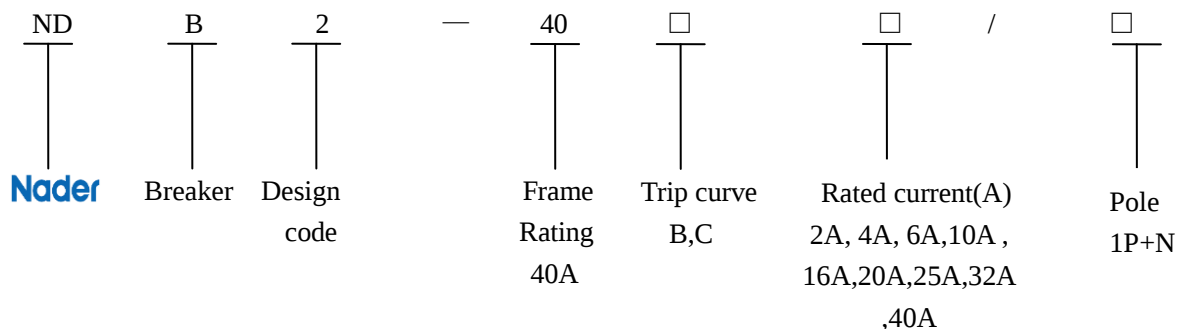
NDB2-40 dedicated to the low voltage power distribution system of industrial, buildings, energy communications and infrastructure.

2、Picture:



1P+N

3、Model and implication:



4、Main technical specification

●Electrical parameters

Pole		1P+N	certificate
Rating current		2A, 4A, 6A, 10A , 16A,20A,25A,32A,40A	
Item		Icn (SC)	
Voltage	AC230/240V	6kA	CCC/CE/TUV
	AC120V	6kA, U1	UL1077

○Impulse withstand test voltages: 4kV

○electrical endurance: 10000 times; Mechanical endurance: 10000 times

● Product certification and implementation standard.:

○Product certificate: CCC/CE/TUV/UL1077;

- Product certification standard: GB/T 10963.1, IEC60898-1,UL1077;
- Environmental requirements: RoHS
- Isolation function
 - Practical breaking instructions
 - View window within the green identification said contact in the off position
- Tripping characteristic
 - B type curve
 - Protection of short circuit current small load
 - tripping characteristic: The instantaneous tripping range $3I_n \sim 5I_n$
 - C type curve
 - Protect normal load and distribution wire cable
 - tripping characteristic: The instantaneous tripping range $5I_n \sim 10I_n$

5、Normal working environment

- Ambient temperature: $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- Air relative humidity: $\leq 95\%$
- Altitude: $\leq 2000\text{m}$
- pollution degree: 2
- Service place without significant vibration and impact
- Lower capacity coefficient table above 2000 meters above sealevel

Height above sea level (km)	Rated current	Rated voltage	Rated frequency voltage tolerance	Breaking Capacity	Breaking Capacity and Electrical life	Remarks
2	I_n	U_e	1.00	1.00	1.00	
3	$0.99 I_n$	U_e	0.89	0.89	0.83	
4	$0.96 I_n$	U_e	0.80	0.80	0.71	
5	$0.94 I_n$	U_e	0.73	0.73	0.63	

- Side-by-side volume reduction coefficient table

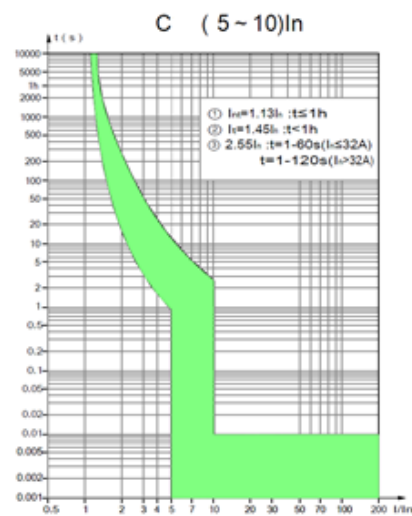
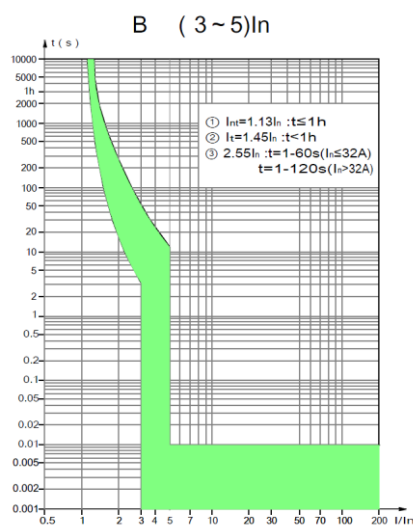
Number of products placed side by side	1	2~3	4~5	6~9	10
Current derated coefficient	1	0.9	0.8	0.7	0.6

●Temperature Derating Parameter Table:

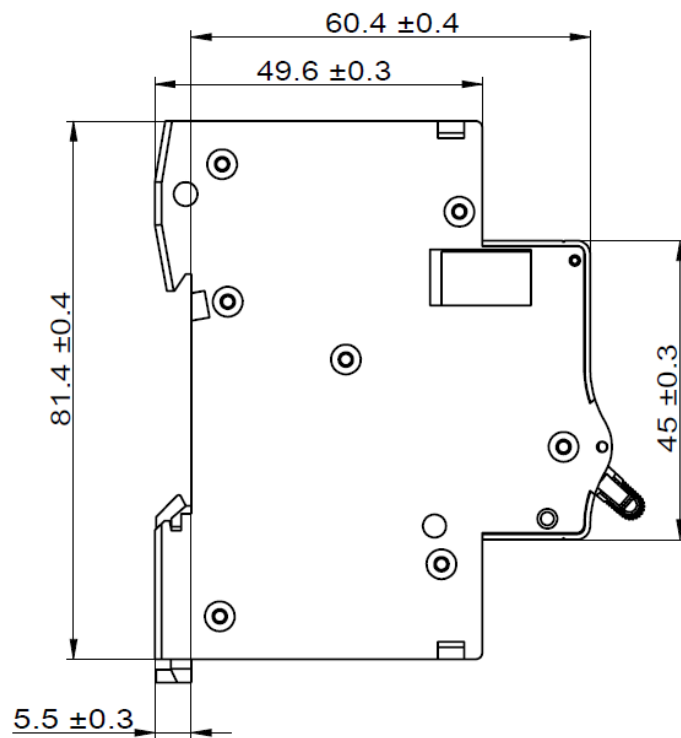
环境温度 (°C) 修正电流 (A) 额定电流 (A)	20	25	30	35	40	45	50	55	60	65	70
6	6.27	6.14	6.00	5.84	5.68	5.52	5.36	5.19	5.01	4.83	4.64
10	10.67	10.34	10.00	9.63	9.24	8.85	8.45	8.01	7.55	7.06	6.55
16	16.80	16.40	16.00	15.55	15.11	14.66	14.20	13.71	13.21	12.70	12.75
20	20.96	20.47	20.00	19.47	18.95	18.42	17.87	17.30	16.71	16.10	15.47
25	26.22	25.61	25.00	24.33	23.67	23.00	22.28	21.56	20.80	20.02	19.21
32	33.54	32.77	32.00	31.17	30.34	29.48	28.60	27.69	26.75	25.78	24.77
40	41.98	40.99	40.00	38.93	37.85	36.75	35.61	34.43	33.21	31.95	30.63

环境温度 (°C) 修正电流 (A) 额定电流 (A)	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15
6	7.96	7.70	7.58	7.46	7.34	7.21	7.09	6.96	6.83	6.70	6.56	6.42
10	14.15	13.89	13.62	13.35	13.07	12.81	12.53	12.23	11.93	11.63	11.33	11.01
16	21.10	20.78	20.43	20.08	19.75	19.40	19.05	18.70	18.33	17.96	17.58	17.20
20	26.04	25.67	25.28	24.88	24.47	24.06	23.64	23.22	22.78	22.34	21.89	21.43
25	32.91	32.21	31.72	31.22	30.70	30.18	29.65	29.10	28.55	27.98	27.41	26.82
32	41.67	41.04	40.46	39.82	39.17	38.51	37.84	37.15	36.47	35.75	35.03	34.30
40	52.43	51.63	50.86	50.04	49.21	48.37	47.51	46.63	45.74	44.83	43.90	42.95

6. Tripping characteristic



7、Outline dimensions



1P+N

8、Mounting

Modular construction, can be installed in EN60715 TH 35mm x 7.5mm standard guide rail.

9、Connect line requirements

- Standard cross-sections of round copper conductors: 1~16mm²
- Terminal screw: M4 ,Rated torque :1.2N.m

10、Packing storage

Quantity (1P+N product: 12 PCS/box) , Packing boxes of products should be stored in the air circulation and relative humidity is not more than 80% and the temperature is not higher than + 80 °C , Not less than - 40 °C in the air around without acid, alkali or other corrosive gases stored in the warehouse. In the above conditions, the storage period since the production date not more than three years.

11、Accessories list and mounting

- OF2 auxiliary contacts Installed on the left hand of the NDB2 - 40circuit breaker left, indication circuit breaker on-off state ;
- SD2 indicator contacts Installed on the left hand of NDB2 - 40 circuit breaker , indication failure tripping status of breaker;
- MX+OF2 shunt trip release Installed on the left hand of NDB2 - 40 circuit breaker, remote control of the circuit breaker's tripping;

12、 Notice

- 1、 Customers who disassemble the product without approval shall undertake relevant quality problems by themselves;
- 2、 Do not touch the naked part of conductive components when the product is power on;
- 3、 Don't test characteristics of the breaker optionally, the manufacturer is irresponsible for such quality problems;
- 4、 Keep wiring correct to prevent malfunction or damage of wiring terminals.
- 5、 Please open the cover when installing the accessory. Please refer to OF2, SD2, MX+OF2 Instruction for details.