

Shanghai Liangxin Electrical Co., Ltd.

Product Specification of NDB2T-63(UL489)

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

Product Name: Moulded Case Circuit Breaker

Product type: NDB2T-63(UL489)

Date: 20241219

Prepared	<u>HuangJingkai</u>	Date	<u>2024-12-19</u>
Reviewed	<u>LiuXiangqian</u>	Date	<u>2024-12-19</u>
Approved	<u>HuoZhiqiang</u>	Date	<u>2024-12-19</u>

Revision information					
Version	Revised contents and reasons	Date	Prepared	Reviewed	Approved
4	Parameter update	20190404	XuRong	HuoZhiqiang	DuanHui
5	Parameter update	20201130	XuRong	ZhangJingyang	ZhangYang
6	Add CE Certification	20230413	XuRong	LiuXiangqian	HuoZhiqiang
7	Side by side volume reduction coefficient table Update Add Temperature Derating	20240207	HuangJingkai	LiuXiangqian	HuoZhiqiang
8	Add installation categories	20240903	HuangJingkai	LiuXiangqian	HuoZhiqiang
9	The picture has been updated, the appearance size has been updated, and the 1P 240V certification has been added	20241112	HuangJingkai	LiuXiangqian	HuoZhiqiang
10	Header trademark update	20241219	HuangJingkai	LiuXiangqian	HuoZhiqiang

1、Applicable scope and purpose

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

NDB2T-63(UL489)dedicated to the low voltage power distribution system of industrial, buildings, energy communications and infrastructure.

2、Picture:



1P



2P



3P

3、Model and implication:

ND	B	2	T	—	63	□	□	/	□	L
Nader	Breaker	Design code	GB/T14048.2 IEC60947-2		Frame Rating 63A	Trip curve B,C,D	Rated current(A) 1A,1.2A,1.5A,1.6A, 2A,3A,4A,5A ,6A, 7A,8A,10A,12A,13 A,15A,16A,20A,25 A,30A,32A,40A,50 A,60A,63A		Pole 1P 2P 3P	U L 4 8 9

4、Main technical specification

●Electrical parameters

○Rated working voltage and relevant breaking capacity:

Pole		1P	2P	3P	1P	2P	3P	Certification
Rating current		1~32A			35~63A			
Item		Icu						
Voltage	AC 120V	10kA	—	—	10kA	—	—	UL489
	AC 240V	10kA	10kA	10kA	—	10kA	10kA	
	AC 277V	10kA	—	—	—	—	—	

	AC 480Y/277V	—	10kA	10kA	—	—	—	
	DC60V	10kA	10kA	—	10kA	10kA	—	
	DC125V	—	10kA	—	—	10kA	—	
	AC230/240V	10kA	/	/	10kA	/	/	
	AC400V/415V	/	10kA		/	10kA		
	DC60/80V	10kA	/	/	10kA	/	/	
	DC80V/DC125V	/	10kA	/	/	10kA	/	CE

○Impulse withstand test voltages: 4kV

○electrical endurance: 10000 times; Mechanical endurance: 20000 times

● Product certification and implementation standard.:

○Product certificate: UL489,IEC60947-2;

○Product certification standard: UL489,CE;

● Environmental requirements: RoHS

● Protection Degree: IP20

● Installation categories: II and III

● 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

○ rated current: 1A~63A

○ tripping characteristic: The instantaneous tripping range $4I_n (1 \pm 20\%)$

C type curve

○ Protect normal load and distribution wire cable

○ rated current: 1A~63A

○ tripping characteristic: The instantaneous tripping range $8I_n (1 \pm 20\%)$

D type curve

○ Protect starting current big impact load (Such as motor, transformer)

○ rated current: 1A~63A

○ tripping characteristic: The instantaneous tripping rang $12I_n (1 \pm 20\%)$

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: 3
- 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
2	I_n	U_e	1	1	1
3	$0.97I_n$	U_e	0.89	0.89	0.83
4	$0.94I_n$	U_e	0.8	0.8	0.71
5	$0.90I_n$	U_e	0.73	0.73	0.63

- Temperature Derating

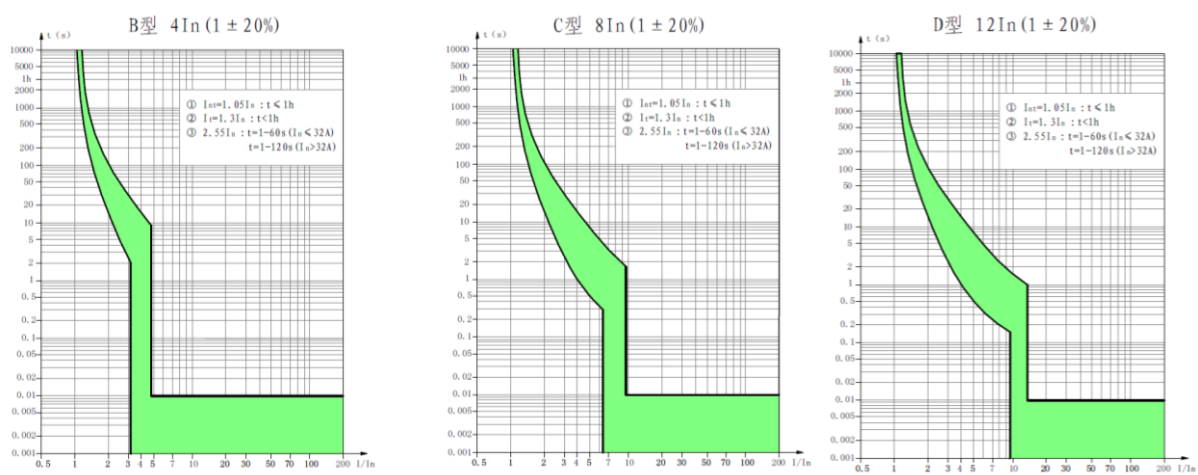
Temperature Derating

Ambient temperature (°C) Correcting current(A) Rated current(A)	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70
1	1.29	1.27	1.25	1.23	1.21	1.19	1.17	1.15	1.13	1.10	1.08	1.06	1.05	1.02	1	0.97	0.94	0.91	0.89	0.86	0.83	0.80	0.77
3	3.97	3.89	3.83	3.76	3.70	3.64	3.57	3.50	3.44	3.37	3.30	3.22	3.14	3.06	3	2.92	2.84	2.76	2.67	2.58	2.49	2.38	2.27
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	6.27	6.14	6	5.84	5.68	5.52	5.36	5.19	5.01	4.83	4.64
10	14.2	13.9	13.6	13.3	13.1	12.8	12.5	12.2	11.9	11.6	11.3	11.0	10.7	10.3	10	9.6	9.2	8.8	8.4	8.0	7.5	7.1	6.6
16	21.1	20.8	20.4	20.1	19.8	19.4	19.1	18.7	18.3	18.0	17.6	17.2	16.8	16.4	16	15.6	15.1	14.7	14.2	13.7	13.2	12.7	12.2
20	26.4	26	25.6	25.2	24.8	24.4	23.9	23.4	23	22.5	22	21.5	21	20.5	20	19.5	18.9	18.3	17.7	17.1	16.5	15.8	15.2
25	33.1	32.4	31.8	31.5	30.9	30.4	29.9	29.3	28.8	28.2	27.7	27.1	26.5	25.8	25	24.2	23.4	22.6	21.8	21	20.2	19.4	18.6
32	42.9	42.2	41.5	40.8	40.1	39.4	38.6	37.9	37.1	36.3	35.5	34.7	33.8	32.9	32	31.1	30.1	29.1	28.1	27.1	26	24.8	23.6
40	54.8	53.9	53	52	51	50	49	48	46.9	45.8	44.7	43.6	42.4	41.2	40	38.7	37.4	36.1	34.6	33.2	31.6	30	28.3
50	66.7	65.7	64.6	63.5	62.4	61.3	60.1	59	57.8	56.6	55.3	54.1	52.7	51.4	50	48.6	47.1	45.6	44.1	42.5	40.8	39.1	37.3
63	80.6	79.5	78.4	77.2	76	74.8	73.6	72.4	71.1	69.8	68.5	67.2	65.8	64.4	63	61.6	60.1	58.5	57	55.4	53.7	52	50.3

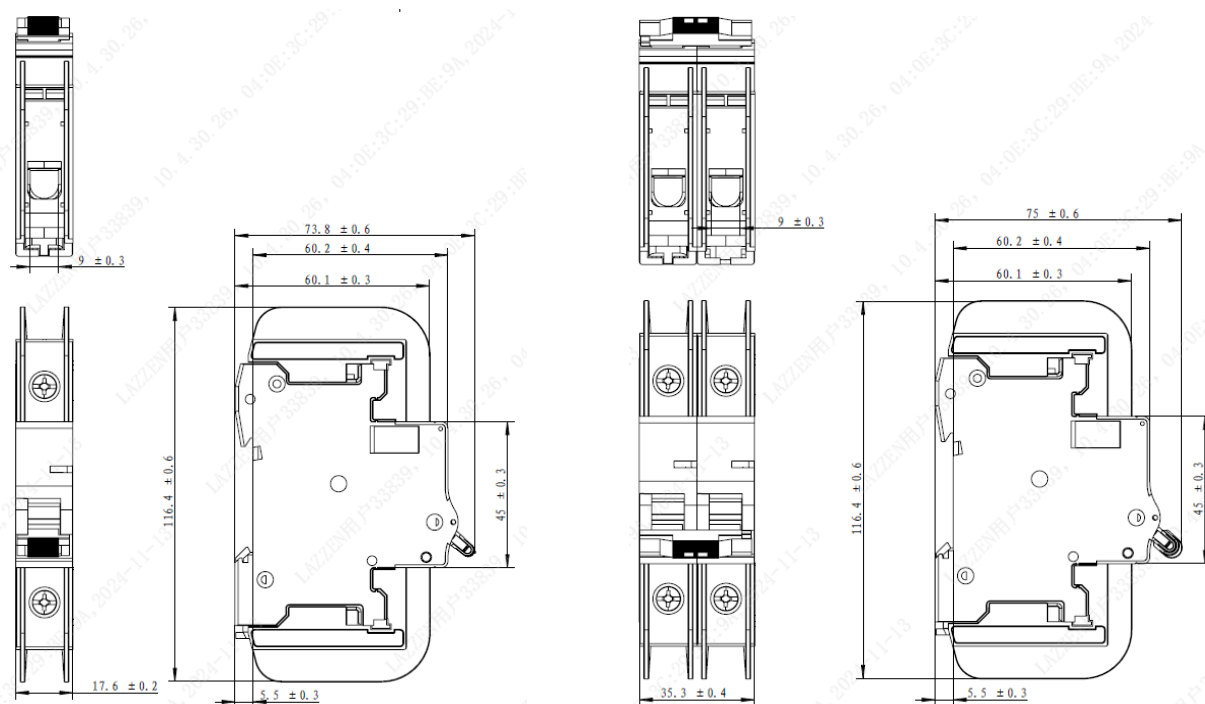
- Side-by-side volume reduction coefficient table

Number of products placed side by side	1	2~3	4~5	6~9	10
Current derated coefficient	1	0.9	0.8	0.75	0.75

6. Tripping characteristic

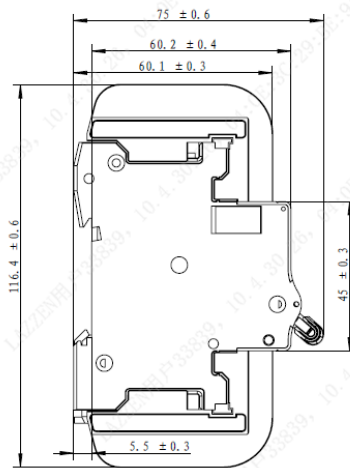
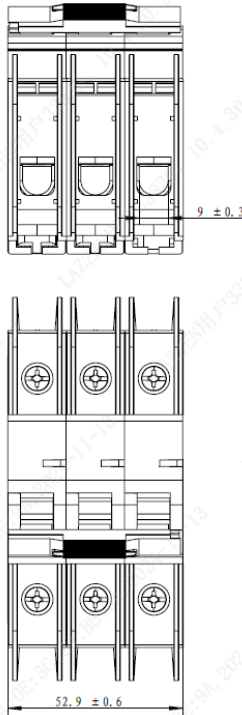


7. Outline dimensions



1P

2P



3P

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: 1~35mm²
- Terminal screw: M5 ,Rated torque : 2.0N.m

10、Packing storage

Quantity (1P product : 12 PCS/box , 2P product : 6PCS/box, 3P product : 4 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、 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.