NDB1L Series RCBO

2016 Edition

Nader

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1. Product Overview

	
Model	**NDB1L-32**
Rated Voltage	AC230/240V
Rated Current	6A，10A，16A，20A，25A，32A
Rated Residual Operation Current	10mA、30mA
Certificate	CCC，UL

2. Product Features

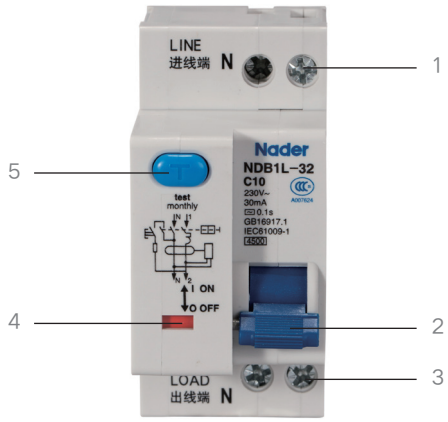
Application Scope

NDB1L-32 RCBO is used in low-voltage terminal distribution for industry, civil building, energy, telecommunication and construction to do protection from short circuit, overload, leakage and over-voltage.

Design Features

Visual window's design: Make the product's switching-closing status more clearly to see.

Structure Features



1：Line
2：Operation Handle
3：Load
4：Status Indicated Window
5：Test Button

Standards

- GB 16917.1Residual current operated circuit-breakers with integral over-current protection for household and similar uses(RCBOs)-Part 1： General rules
- IEC 61009-1 Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses(RCBOs)-Part 1： General rules
- UL1053 Ground-Fault Sensing and Relaying Equipment

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3. Working Condition

Applicable Condition

◆ Ambient Usage Temperature and Storage Temperature

Ambient Usage Temperature: -25℃~+55℃, Standard Temperature: +30℃, correction factor of different ambient usage temperature refer to sheet 1

Storage Temperature: -30℃~+70℃.

◆ Altitude

The altitude of the mounting site≤2000m

◆ Relative Usage Humidity and Relative Storage Humidity

The relative humidity shouldn't exceed 50% when the ambient air temperature is +40 degrees, higher humidity can be allowed in lower temperature. For example, the humidity can be 90% when the ambient temperature is +20 degrees. Necessary measures should be acted for the condensation produced by the changed temperature.

Pollution Degree

2

Protection Level

Level of Product Protection: IP20

Mounting Types

Ⅱ (For Load Level)and Ⅲ (For distribution and control Level)

Mounting Method

Mounted on TH35mm x 7.5 Standard Rail.

Mounting Direction

◆ Vertical Mounting: The inclination between mounting plane and vertical plane should ≤ ± 5 degrees

◆ Horizontal Mounting

Environmental Requirement

Comply with RoHS

4. Product Technical Characteristic

4.1 Model and Implication

ND	B	1	L	□	-	32	/	□	□	□
1	2	3	4	5		6		7	8	9

No.	Implication	Instruction
1	Brand Code	ND Nader
2	Model	B：MCB
3	Design Code	1
4	Electric Leakage	L Leakage Functional Code
5	Over-Voltage Functional Code	G: Over-Voltage Protective Function. There is no Over-Voltage Protective Function if there is no "G"
6	Frame Rating	32A
7	Instantaneous Tripping Characteristic	C: Instantaneous Tripping Range 5In ~ 10In
8	Rated Current	6A，10A，16A，20A，25A，32A
9	Number of Poles	1PN

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4.2 Technical Parameters

	NDB1L-32
Rated Voltage (Ue)	AC230/240V(1PN)
Rated Current (Ie)	6A、10A、16A、20A、25A、32A
Tripping Characteristics of Residual Current	AC, ELE
Rated Residual Operation Current (I△n)	10mA、30mA
Rated Insulated Voltage (Ui)	AC500V
Rated Impulse Withstand Voltage (Uimp)	4kV
Rated Ultimated Short-Circuit Breaking Current (Icu)	4.5kA； 6kA (UL1053)
Rated Short-Circuit Operation Breaking Current (Ics)	4.5kA； 6kA (UL1053)
Rated Residual Connecting and Breaking Current (I△m)	500A
Rated Working Frequency	50/60Hz
Over-Voltage Operation Value and Time (Uover)	280V ± 12V /0.1s
Mechanical and Electric Life	10000次
Connecting and Wiring Capacity	◆ Tunnel Connecting Terminal ◆ Terminal Connecting Area: 1~10 mm^2 cable is applicable ◆ Connecting Screw is M4, Torque is 1.2N.m

● Temperature Correction Factor Sheet (1)

Ambient Temperature (℃) / Correction Current (A) / Rated Current (A)	-35	-30	-25	-20	-15	-10	-5	-0	5	10	15
6	7.70	7.58	7.46	7.34	7.21	7.09	6.96	6.83	6.70	6.56	6.42
10	13.89	13.62	13.35	13.07	12.81	12.53	12.23	11.93	11.63	11.33	11.01
16	20.78	20.43	20.08	19.75	19.40	19.05	18.70	18.33	17.96	17.58	17.20
20	25.67	25.28	24.88	24.47	24.06	23.64	23.22	22.78	22.34	21.89	21.43
25	32.21	31.72	31.22	30.70	30.18	29.65	29.10	28.55	27.98	27.41	26.82
32	41.04	40.46	39.82	39.17	38.51	37.84	37.15	36.47	35.75	35.03	34.30

Ambient Temperature (℃) / Correction Current (A) / Rated Current (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

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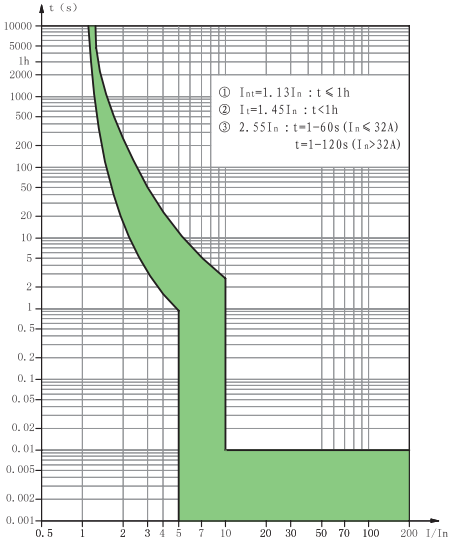
4.3 Tripping Curve

C Curve

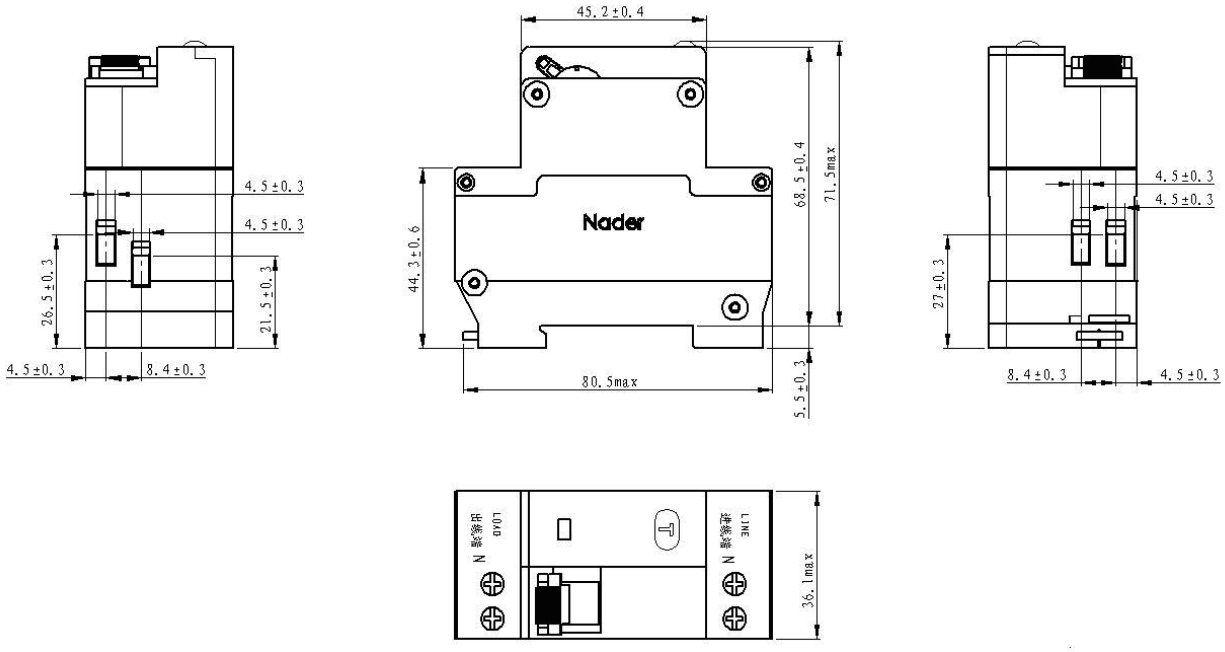
★ Protect nominal load and distribution cables

★ Rated Current: 6A-32A

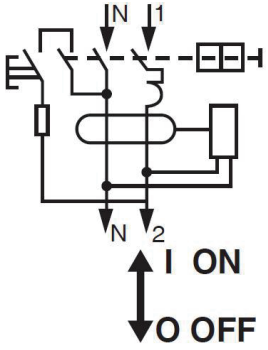
★ Tripping Characteristics: Instantaneous tripping range 5In~10In



5. Outline and Mounting Dimension



6. Wiring Diagram



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7. Ordering Types and Specifications (Tick √ in □)

Customer		Ordering Quantity:	Ordering Date:
Frame Rating	□NDB1L-32		
Number of Poles	□1PN		
Rated Working Voltage(V)	□AC230/240 □Other (Depend on Customer)		
Rated Working Current(A)	6、10、16、20、25、32		
Rated Residual Operation Current(IΔn)(mA)	□10 □30 □Other (Depend on Customer)		
Over-Voltage Function	□G □Without Over-Voltage Protective Function		
Instantaneous Tripping Characteristic	□C Instantaneous Tripping Range: 5In～10In； Protect Nominal Load and Distribution Cables		
Connecting	□Upper Wiring □Lower Wiring		