NB4LE-AFD

Arc fault detection circuit-breaker
with residual current operated function

NB4LE-AFD

1. General

1.1 Function

NB4LE-AFD arc fault detection circuit-breaker with residual current operated function applies to circuits with frequency of 50Hz, rated voltage AC 230/240V, and rated current up to 32A. It provides overload, short circuit, leakage protection and arc fault detection, and can also be used for infrequent switching of the circuit under normal circumstances.

1.2 Selection

RCD type

Type A - Tripping is ensured for sinusoidal, alternating residualcurrents as well as for pulsed DC residual currents, whether they be quickly applied or slowly increase.

Tripping curve

B curve (I1=1.13In; I2=1.45In; I4=3In; I5=5In) protection and control of the circuits against overloads and short-circuits; protection for people and big length cables in TN and IT systems.

C curve (I1=1.13In; I2=1.45In; I4=5In; I5=10In) protection and control of the circuits against overloads and short-circuits; protection for resistive and inductive loads with low inrush current.

BK curve (I1=1.05In; I2=1.3In; I4=3In; I5=5In) protection and control of the circuits against overloads and short-circuits; protection for people and big length cables in TN and IT systems.

CK curve (I1=1.05In; I2=1.3In; I4=5In; I5=10In)protection and control of the circuit against overloads and short-circuits; protection for resistive and inductive loads with low inrush current.

1.3 On-off indication

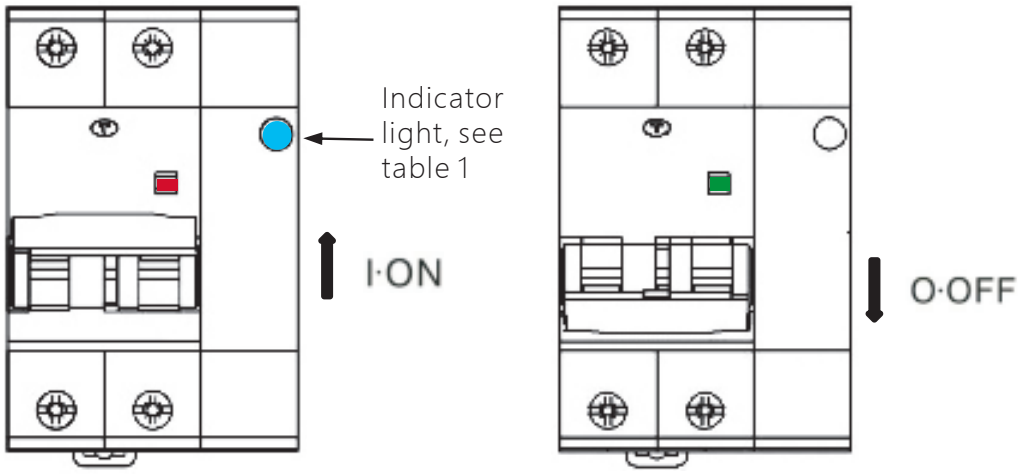


Table 1 Indicator light status display

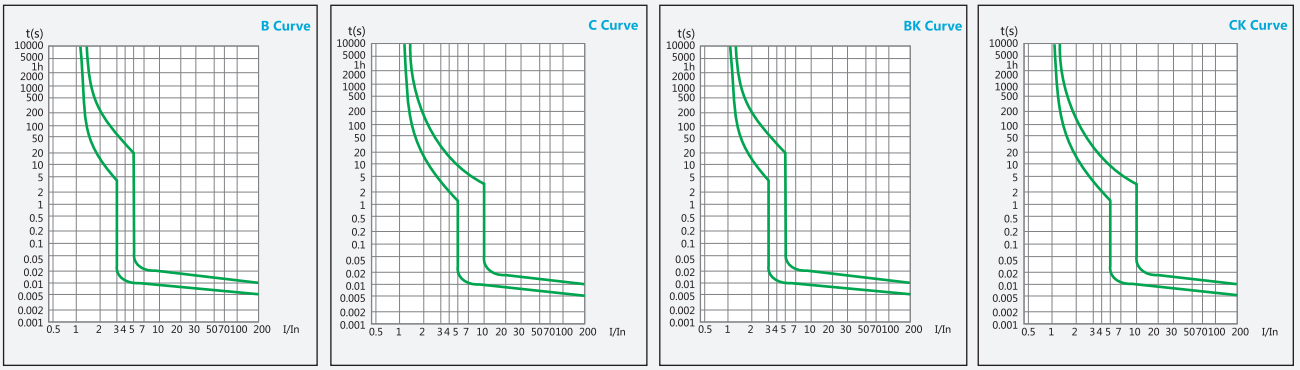
Breaker status	Indicator light color	Instruction
'On' position	Blue always bright	Normal working
'On' after tripping	Red flashing 10s	Residual current fault
	Red and blue flashing alternately 10s	Arc fault

1.4 Certificates

CE, CB

2. Technical data

2.1 Curve



2.2

	Standard		IEC/EN61009-1,IEC/EN62606	
Electrical features	Type (wave form of the earth leakage sensed)		A	
	Thermo-magnetic release characteristic		B, C	BK, CK
	Rated current In	A	6, 10, 13, 16, 20, 25, 32	10,13,15,20,25
	Poles		2P	
	Rated voltage Ue	V	230/240	
	Rated sensitivity I▵n	A	0.03	
	Rated residual making and breaking capacity I▵m	A	3,000	
	Rated short-circuit capacity Icn	A	6,000	
	Break time under I▵n	s	≤0.1	
	Rated frequency	Hz	50/60	
	Rated impulse withstand voltage (1.2/50)Uimp	kV	4	
	Dielectric TEST voltage at ind. Freq. for 1min	kV	2	
	Insulation voltage Ui	V	500	
	Pollution degree		2	
Mechanical features	Electrical life		4,000	
	Mechanical life		10,000	
	Fault indicator light		Yes	
	Protection degree		IP20	
	Ambient temperature (with daily average≤35℃)	℃	-25...+40	
	Storage temperature	℃	-25...+70	
Installation	Terminal connection type		Cable/ U-type/Pin-type busbar	
	Terminal size top/bottom for cable	mm^2	25	
		AWG	18-3	
	Terminal size top/bottom for busbar	mm^2	10	
		AWG	18-8	
	Tightening torque	N·m	2	
		In-lbs.	18	
	Mounting		On DIN rail EN 60715 (35mm) by means of fast clip device	
	Connection		Bottom electrical feeding	

2.3 Temperature derating

The maximum permissible current in a circuit breaker depends on the ambient temperature where the circuit breaker is placed. Ambient temperature is the temperature inside the enclosure or switchboard in which the circuit breakers are installed.

Table 1 Indicator light status display

Temperature	-25℃	-20℃	-10℃	0℃	10℃	20℃	30℃	40℃	50℃	60℃	70℃
Temperature compensation coefficient of rated current	1.27	1.25	1.20	1.15	1.10	1.05	1.00	0.95	0.90	0.85	0.80

3. Overall and mounting dimensions (mm)