NBH8LE Residual Current Operated Circuit Breaker with over-current protection (Electronic)

1. General

1.1 Function

Personnel and fire protection
Cable and line protection against overload and short-circuits.

1.2 Selection

IΔn = 30 mA: additional protection in the case of direct contact.
C curve (5-10 In) protection and control of the circuits against overloads and short-circuits; protection for resistive and inductive loads with low inrush current.
AC class – Tripping is ensured for sinusoidal, alternating currents, whether they be quickly applied or slowly increase.

1.3 Approvals and certificates

Detailed information, please refer to Certificates Table on the last page.

2. Ordering information

2.1 Technical parameters

Curve C

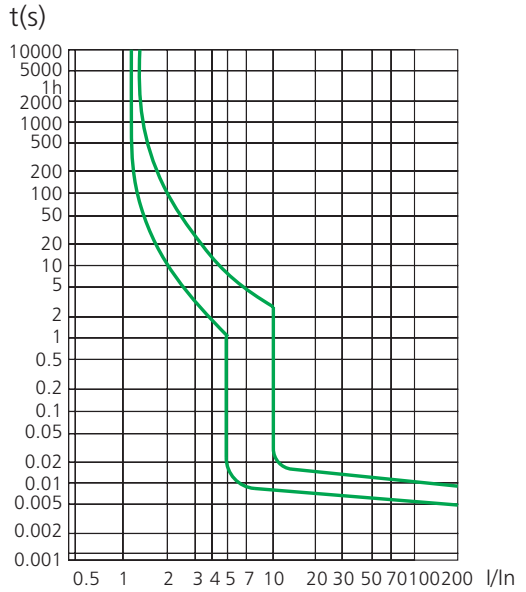
★ NBH8LE, 1P+N

In (A)	I△n (mA)	CTN	Order Code	
			Standard	RoHS
1	30	90	143111	970962
2	30	90	143112	970963
3	30	90	143113	970964
4	30	90	143114	970965
6	30	90	143115	970966
10	30	90	143116	970967
16	30	90	143117	970968
20	30	90	143118	970969
25	30	90	143119	970970
32	30	90	143120	970971
40	30	90	143121	970972

3. Technical data

3.1 Curves

C Curve



3.2

	Standard		IEC/EN 61009-1
Electrical features	Type (wave form of the earth leakage sensed)		AC
	Thermo-magnetic release characteristic		C
	Rated current In	A	1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40
	Poles		1P+N
	Rated voltage Ue	V	230
	Rated sensitivity I△n	A	0.03
	Rated residual making and breaking capacity I△m	A	500
	Rated short-circuit capacity Icn	A	4,500
	Break time under I△n	s	≤0.1
	Rated frequency	Hz	50/60
	Rated impulse withstand voltage (1.2/50)Uimp	V	4,000
	Dielectric TEST voltage at ind. Freq. for 1min	kV	2
	Insulation voltage Ui	V	300
	Pollution degree		2
Mechanical features	Electrical life		4,000
	Mechanical life		20,000
	Contact position indicator		Yes
	Protection degree		IP20
	Ambient temperature (with daily average≤35℃)	℃	-5...+40 (Special application please refer to P64 for temperature compensation correction)
	Storage temperature	℃	-25...+70
Installation	Terminal connection type		Cable/Pin-type busbar
	Terminal size top/bottom for cable	mm^2	16
		AWG	18-5
	Terminal size top/bottom for busbar	mm^2	10
		AWG	18-8
	Tightening torque	N*m	2
		In-lbs.	11
	Mounting		On DIN rail EN 60715 (35mm) by means of fast clip device
	Connection		From top

3.3 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.

The reference temperature is 30℃

Temperature	-10℃	0℃	10℃	20℃	30℃	40℃	50℃	60℃
Temperature compensation coefficient	1.20	1.15	1.10	1.05	1.00	0.95	0.90	0.85

4. Overall and mounting dimensions (mm)