



## 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

$I\Delta n = 10\text{mA}, 30\text{mA}$ : additional protection  
in the case of direct contact.

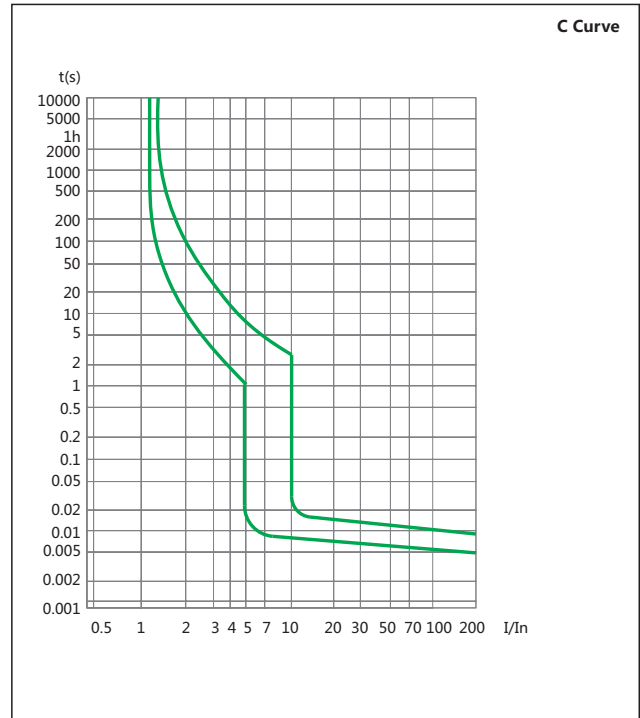
C curve (5-10 In) protection and control of the circuits  
against overloads and short-circuits; protection for  
resistive and inductive loads with low inrush current.  
AC class – Tripping is ensured for sinusoidal,  
alternating currents, whether they be quickly applied  
or slowly increase.

#### 1.3 Approvals and certificates

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

### 2. Technical data

#### 2.1 Curves



2.2

	Standard	IEC/EN 61009-1	
Electrical features	Type (wave form of the earth leakage sensed)	AC	
	Thermo-magnetic release characteristic	B, C	
	Rated current I <sub>n</sub>	A	1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40
	Poles		1P+N
	Rated voltage U <sub>e</sub>	V	230
	Rated sensitivity I <sub>Δn</sub>	A	0.01, 0.03
	Rated residual making and breaking capacity I <sub>Δm</sub>	A	500
	Rated short-circuit capacity I <sub>cn</sub>	A	4,500
	Break time under I <sub>Δn</sub>	S	≤0.1
	Rated frequency	Hz	50/60
	Rated impulse withstand voltage (1.2/50)U <sub>imp</sub>	V	4,000
	Dielectric TEST voltage at ind. Freq. for 1min	kV	2
	Insulation voltage U <sub>i</sub>	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°C)	°C	-5...+40
	Storage temperature	°C	-25...+70
Installation	Terminal connection type		Cable/Pin-type busbar
	Terminal size top/bottom for cable	mm <sup>2</sup>	16
		AWG	18-5
	Terminal size top/bottom for busbar	mm <sup>2</sup>	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	

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. **The reference temperature is 30°C**

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

3. Overall and mounting dimensions (mm)

