



## NB310L Residual Current Operated Circuit Breaker with over-current protection (Magnetic)

### 1. General

#### 1.1 Function

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

#### 1.2 Selection

##### Rated residual operating current

$I_{\Delta n} = 30$  mA: additional protection in the case of direct contact.

#### Tripping class

##### A class

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

#### Tripping curve

B curve (3-5  $I_n$ ) 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 (5-10  $I_n$ ) protection and control of the circuits against overloads and short-circuits; protection for resistive and inductive loads with low inrush current.

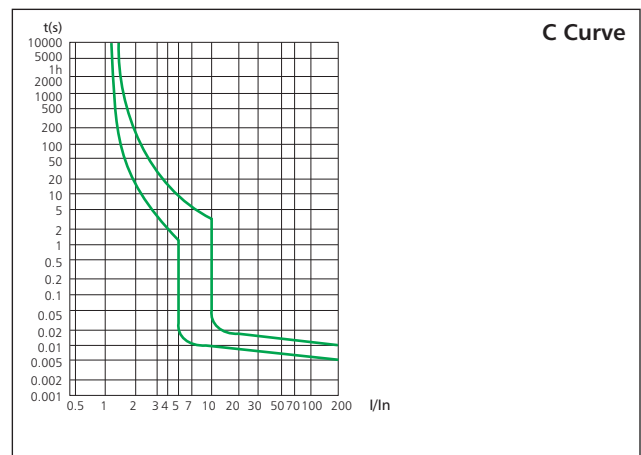
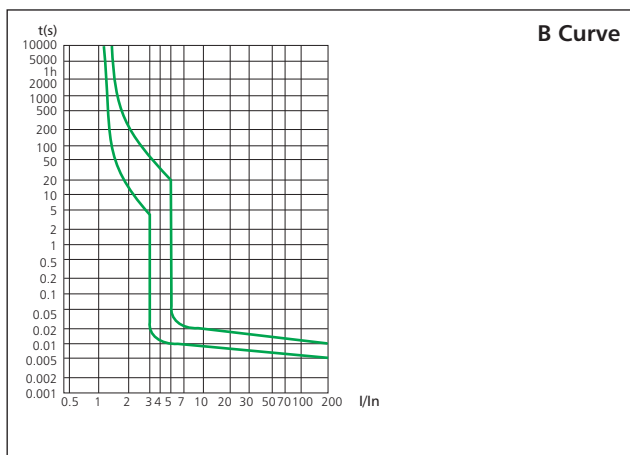
#### 1.3 Approvals and certificates

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)		A
	Thermo-magnetic release characteristic		B, C
	Rated current I <sub>n</sub>	A	6, 10, 13, 16, 20, 25, 32
	Poles		2P
	Rated voltage U <sub>e</sub>	V	230/240
	Rated sensitivity I <sub>Δn</sub>	A	0.03
	Rated residual making and breaking capacity I <sub>Δm</sub>	A	3000
	Rated short-circuit capacity I <sub>cn</sub>	A	6,000
	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	6,000
	Dielectric TEST voltage at ind. Freq. for 1 min	kV	2
	Insulation voltage U <sub>i</sub>		500
	Pollution degree		2
Mechanical features	Electrical life		2,000
	Mechanical life		2,000
	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/U-type busbar/Pin-type busbar
	Terminal size top/bottom for cable	mm <sup>2</sup>	25
		AWG	18-3
	Terminal size top/bottom for busbar	mm <sup>2</sup>	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		From top and bottom	

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 of rated current	1.20	1.15	1.10	1.05	1.00	0.95	0.90	0.85

3. Overall and mounting dimensions (mm)

