

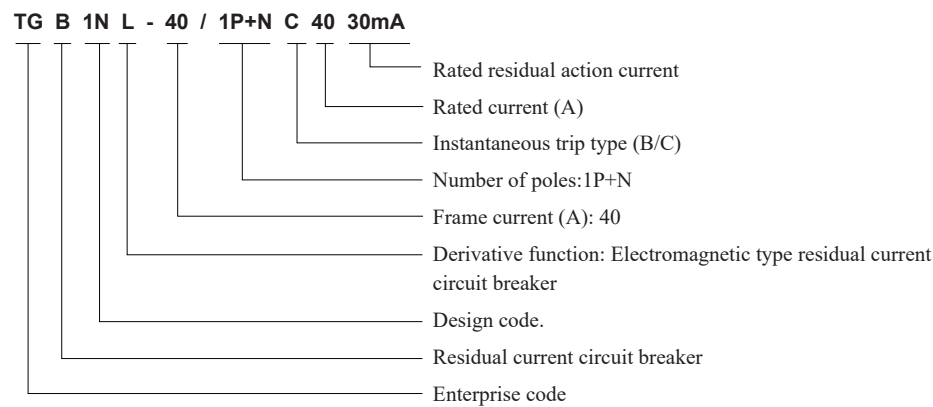
TGB1NL-40 Series RCBO, Electromagnetic A/AC Type



1 Overview

TGB1NL-40 series residual current operated circuit breaker is used in AC 50/60Hz circuits with a rated voltage 230V/240V and with a rated current up to 40A. In the event of personal electric shock or the grid leakage current out of the specified range, the residual current operated circuit breaker can quickly work to cut off the power supply in a very short time to ensure the safety of personnel and power equipment, and it can be used for infrequent conversion of the lines in the case of overload or short circuit and under normal circumstances. The product is especially suitable for lighting distribution systems used in buildings, industries, and businesses.

2 Type Designation



3 Technical Parameters

3.1 Basic parameters

Table 1

Product name	TGB1NL-40
Standard	IEC/EN 61009-1 ROHS2.0
Certificate	TUV, CB, CE
Electrical characteristics	
Rated voltage (Ue)	AC230V/240V
Rated frequency (Hz)	50/60Hz
Rated current (In)	6, 10, 16, 20, 25, 32, 40A
Rated residual operating current IΔn	30mA, 100mA, 300mA
Rated operating current type	Type AC, Type A
Residual operating current time (t)	≤0.1S;
Rated residual making and breaking capacity IΔm	500A
Number of poles	1P+N
Rated insulation voltage (Ui)	500V
Rated impulse withstand voltage (Uimp)	4KV
Rated ultimate short circuit breaking capacity (Icn)	6KV
Rated run short circuit breaking capacity (Ics)	6KV
Instantaneous release type	Type B/C
Leakage release type	Electromagnetic type
Pollution degree	2

TGB1NL-40 Series RCBO, Electromagnetic A/C Type

Table 1, continued

Product name	TGB1NL-40
Mechanical properties	
Electrical life	2,000 times
Mechanical life	4,000 times
Protection grade	IP20
Normal operation conditions and installation characteristics	
Ambient temperature	-25°C ~ +70°C
Installation site altitude	≤ 2,000 meters
Terminals	Fixed with screws
Maximum wiring capacity	16mm ²
Maximum limit torque	2.5N•m
Installation category	Class II, Class III
Installation method	TH35-7.5 standard rail
Incoming method	top inlet and bottom inlet

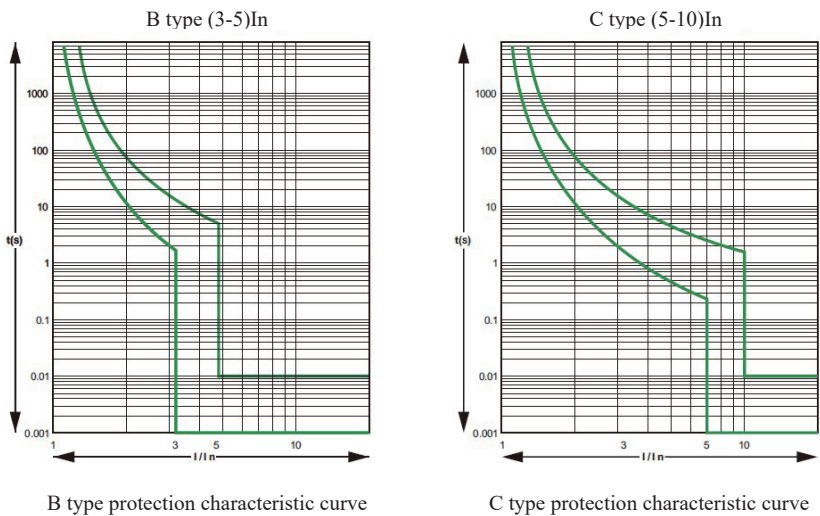
3.2 Action characteristics of circuit breaker overcurrent release (see Table 2)

Table 2

Instantaneous trip type	Test current	Start state	Tripping or non-tripping limit time	Expected results	Remarks
B, C	1.13In	Cold state	t≤1h	Non-tripping	The current steadily rises to the specified value
	1.45In	Followed by 1.13In test	t<1h	Tripping	
	2.55In	Cold state	1s<t<60s (for In≤32A)	Tripping	
1s<t<120s (for In>32A)					
B	3In	Cold state	t≤0.1s	Non-tripping	Turn on the current by closing the auxiliary switch
	5In		t<0.1s	Tripping	
C	5In	Cold state	t≤0.1s	Non-tripping	
	10In		t<0.1s	Tripping	
Note: "cold state" refers to no load before the test at the reference temperature +30°C					

TGB1NL-40 Series RCBO, Electromagnetic A/AC Type

3.3 Protection characteristic curve of circuit breaker



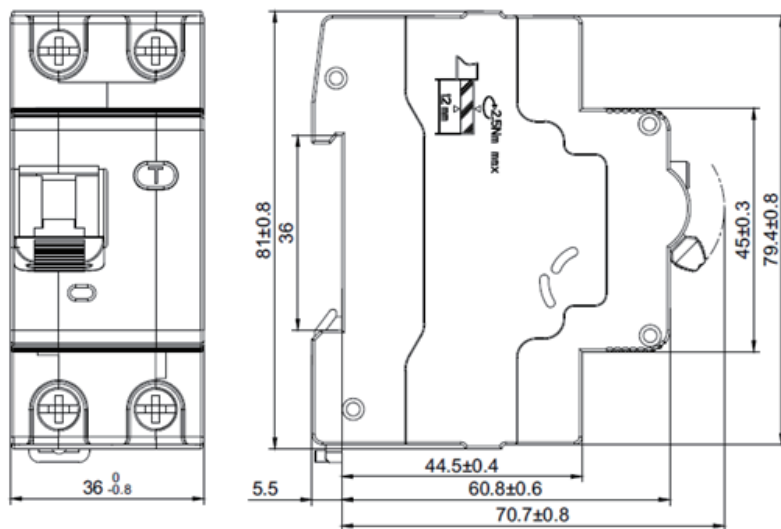
3.4 Wiring: Suitable for wire connection of 16mm² and below (see Table 3). The wiring method is that the wire is fixed with screws according to the tightening torque 2.5N·m.

Table 3

Rated current (A)	Wire cross area (mm ²)
6	1
10	1.5
16 ~ 20	2.5
25	4
32	6
40	10

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4 Outline and Installation Dimensions



5 Ordering Notice

- 5.1 Product name, such as TGB1NL-40 residual current operated circuit breaker;
- 5.2 Number of product poles, such as 1P+N;
- 5.3 Instantaneous trip type of product, such as Type C;
- 5.4 Rated current of product, such as 40A;
- 5.5 Rated residual operating current of product, such as 30mA;
- 5.6 Product breaking capacity, such as 6kA;
- 5.7 Working type of residual operating current of product, such as AC type;
- 5.8 Qty., such as 100 units;
- 5.9 Order example: TGB1NL-40 1P+N C40 6kA 30mA AC type, 100 pcs.