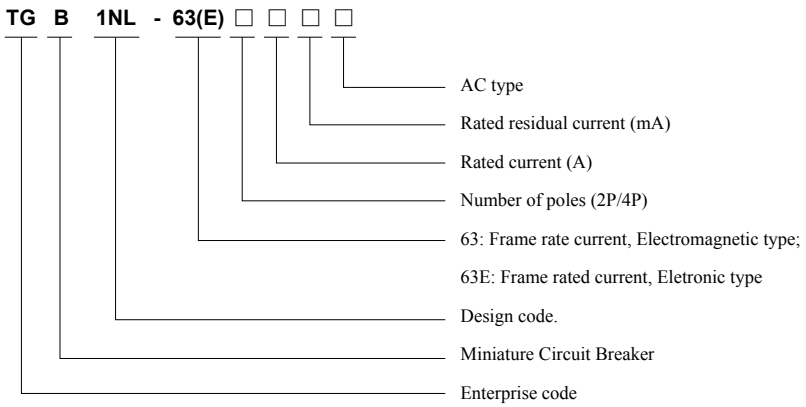
TGB1NL-63(E) Residual Current Circuit Breaker

1 Product overview

TGB1NL-63(E) residual current circuit breaker (hereinafter referred to as the circuit breaker) is mainly used in AC 50Hz circuit with rated voltage 415V and rated current up to 63A. In case of personal electric shock or when the grid leakage exceeds the specified value, the residual current circuit breaker can quickly cut off the power supply in a very short time for protection of the safety of people and electrical equipment and also for infrequent changeover of line and infrequent start of motor. This product is suitable for various places such as industry, business, and high-rise residential buildings.

2 Type designation



3 Product parameters

3.1 The main technical parameters of the product (see Table 1)

Table 1

Product name	TGB1NL-63(E)
Standards	IEC61008-1
Certificate	CE
Electrical characteristics	
Number of poles	2P、4P
Rated frequency (Hz)	50
Frame rated current (A) Inm	63
Rated current (A) In	16、20、25、32、40、50、63
Rated voltage (V) Ue	AC240V(2P) AC415V(4P)
Rated insulation voltage (V) Ui	500
Rated impulse withstand voltage (kV) Uimp	4
Rated short-circuit breaking capacity (kA) Ics	6
Rated short-circuit capacity (kA) Icn	6
Rated residual making and breaking capacity (A) (I △ m)	2000
Maximum breaking time at rated residual current	0.1s
Pollution level	2
Electrical and mechanical accessories	-
Rated residual operating current (mA) (I △ n)	30mA、100mA、300mA
Mechanical properties	
Electrical life	6000
Mechanical life	10000
Protection grade	IP20
Indicator window	-

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Table 1, continued

Normal operation conditions and installation characteristics	
Ambient temperature	-35℃ +70℃
Installation site altitude	≤ 2000m
Terminals	Fixed with screws
Maximum wiring capacity	16mm²
Maximum limit torque	2.5N•m
Installation category	III
Installation method	35mm standard rail
Incoming method	Upper and lower

3.2 Rated residual current action breaking time

3.2.1 The breaking time of A and AC type AC residual current (effective value) is shown in Table 2

Table 2

In(A)	I △ n(A)	Breaking time when the residual current is the value below (s)			
16、20、25、32、40、50、63	0.03、0.1、0.3	I △ n	2I △ n	5I △ n	5A、10A、20A、50A、100A、200A、500A
		0.3	0.15	0.04	0.04
a For RCCB with I △ n ≤ 0.03A, 0.25A can be used instead of 5I △ n					

3.2.2 The breaking time of A-type half-wave residual current (effective value) is shown in Table 3

Table 3

In(A)	I △ n(A)	Breaking time when the residual current is the value below (s)						
16、20、25、32、40、50、63	0.03、0.1、0.3	1.4I △ n	2I △ n	2.8I △ n	4I △ n	7I △ n	0.35A	0.5A	350A
		0.3	0.3	0.15	0.15	0.4	0.4	0.4	0.4

3.3 Wiring: Suitable for wire connection of 16mm2 and below (see Table 4). The wiring method is that the wire is fixed with screws according to the tightening torque 2.5N·m.

Table 4

Rated current (A)	10 ～ 20	20 ～ 25	25 ～ 32	32 ～ 50	50 ～ 63
Cross section of wire (mm^2)	2.5	4	6	10	16

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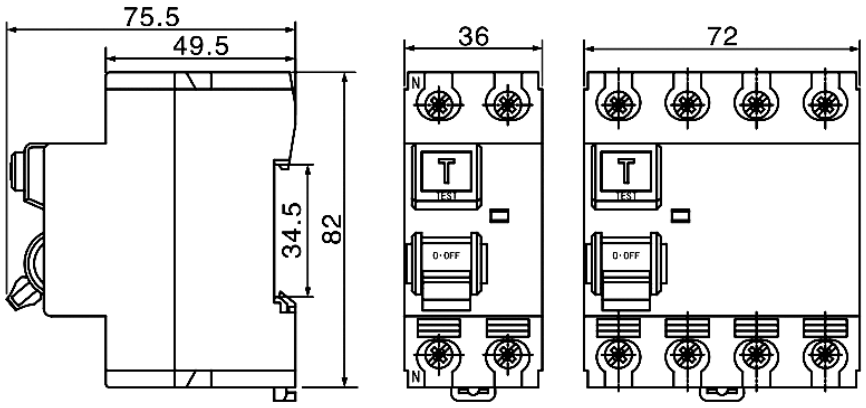
4 Outline and installation dimensions



5 Order Information

Please specify the following items when ordering:

5.1 Product name, such as TGB1NL-63(E) residual current operated circuit breaker;

5.2 The number of poles of the product, such as 4P;

5.3 The rated current of the product, such as 32A;

5.4 The rated residual operating current of the product, such as 30mA;

5.5 Working status of DC component, AC type;

5.6 The number of products, such as 100 units;

5.7 Order example: TGB1NL-63(E) 2P 32A 30mA AC, 100 units.