

TGB1NLE-63Y Series Residual Current Circuit Breaker with Overcurrent Protection, Electronic A/AC Type

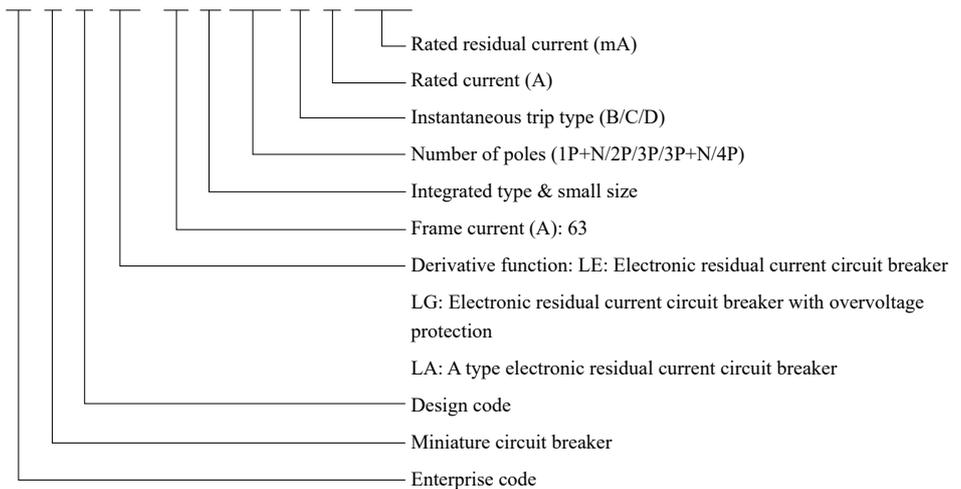


1 Overview

TGB1NLE-63Y Series Residual Current Circuit Breaker with Overcurrent Protection, Electronic A/AC Type with overcurrent protection (hereinafter referred to residual current circuit breaker) is primarily used in AC 50Hz line with rated operating voltage 230V/400V and with rated current up to 63A. In the event of electric shock or when the leakage current from the power grid exceeds the specified value, the residual current circuit breaker can cut off the power quickly in a very short time for safety protection of people and electrical equipment. It can also be used for infrequent conversion of line in case of overload, short circuit, overload, and during operation, especially for lighting distribution system in industries and commerce.

2 Type Designation

TG B 1N LE - 63 Y 1P+N C 16 30mA



Modular Devices

3 Technical Parameters

3.1 Main technical parameters (see Table 1)

Table 1

Product name	TGB1NLE-63Y
Standard	IEC61009-1
Certificate	TUV, CE(1P+N/2P)
Electrical characteristics	
Number of poles	1P+N, 2P (one protective pole, N pole can be closed) 2P, 3P, 3P+N, 4P (three protective poles, N pole can be closed) 4P (N pole is always on)
Rated frequency (Hz)	50
Frame current (A) Inm	63
Rated current (A) Ie	6, 10, 16, 20, 25, 32, 40, 50, 63
Rated voltage (V) Ue	AC230 (1P+N, 2P)
	AC400 (3P, 3P+N, 4P)
Rated insulation voltage (V) Ui	690
Rated impulse withstand voltage (kV) Uimp	4

TGB1NLE-63Y Series Residual Current Circuit Breaker with Overcurrent Protection, Electronic A/AC Type

Table 1, continued

Product name	TGB1NLE-63Y
Rated operating short-circuit breaking capacity (kA) Ics	6
Rated ultimate short-circuit breaking capacity (kA) Icn	6
Instantaneous trip characteristics	B (3In-5In) C (5In-10In) D (10In-14In)
Trip form	Thermomagnetic trip
Pollution degree	2
Electrical and mechanical accessories	MX: Shunt release OF: Aux. contact SD: Alarm contact MX + OF: Shunt + Aux. release MV: Overvoltage release MN: Undervoltage release MV+MN: Overvoltage and undervoltage release
Residual current operation type	Type AC, type A
Rated residual current (mA) I Δ n	15, 30, 50, 75, 100, 300
Overvoltage protection U _{vo} =280V±5%	√
Mechanical properties	
Electrical life	10,000 times
Mechanical life	20,000 times
Protection grade	IP20
Normal working conditions and installation conditions	
Ambinet temperature	-35°C~+70°C
Installation site altitude	Not exceed 2,000 meters
Wiring terminal	Wired with screw
Maximum wiring capacity (mm ²)	25
Maximum ultimate torque (N.m)	2.5
Installation category	Class II, III
Installation method	TH35-7.5 standard rail
Incoming method	Top inlet

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

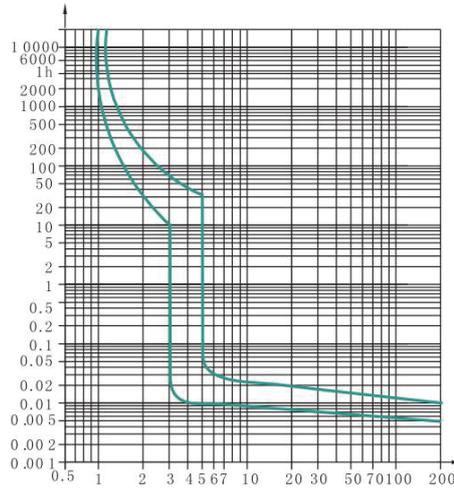
Table 2

No.	Test current (A)	Starting state	Specified time	Expected results	Remarks
a	1.3In	Cold state	$t \leq 1h$	Non trip	Current rises to the specified value smoothly within 5s
	1.45In	Followed by 1.3In	$t < 1h$	Trip	
	2.55In	Cold state	$1s < t < 60s$ (for $In \leq 32A$) $1s < t < 120s$ (for $In \leq 32A$)	Trip	
b	5In	Cold state	$t \leq 0.1s$	Non trip	Turn on the auxiliary switch for making current
	10In	Cold state	$t < 0.1s$	Trip	
c	10In	Cold state	$t \leq 0.1s$	Non trip	Turn on the auxiliary switch for making current
	14In	Cold state	$t < 0.1s$	Trip	

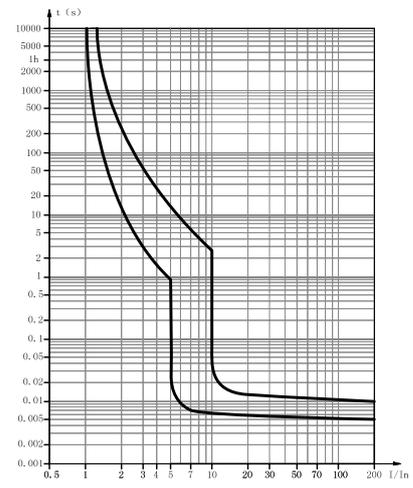
Note: the cold state refers to temperature 30°C without load before test.

TGB1NLE-63Y Series Residual Current Circuit Breaker with Overcurrent Protection, Electronic A/AC Type

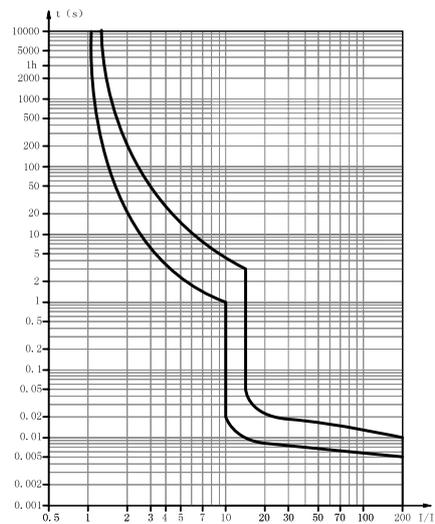
3.3 Circuit breaker protection characteristic curve



B type protection characteristic curve



C type protection characteristic curve



D type protection characteristic curve

3.4 Wiring: Suitable for wire connection of 25mm² and below (see Table 3)

The wiring method is that the wire is fixed with screws according to the torque 2.5N.m.

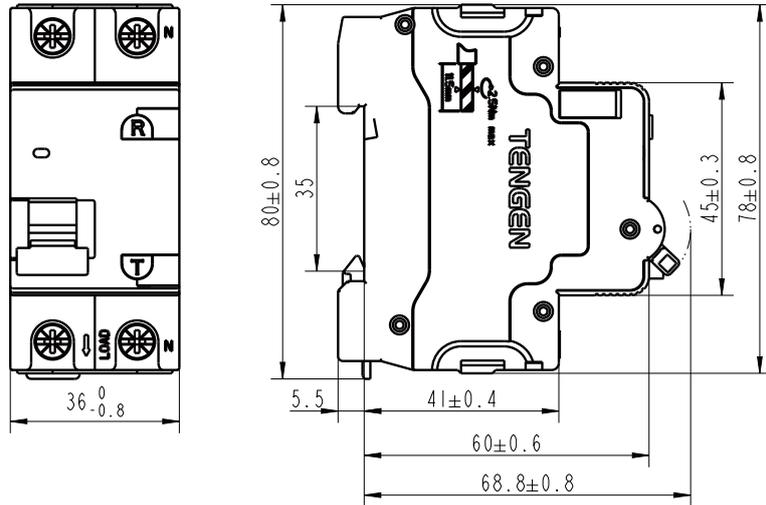
Table 3

Rated current (A)	Wire cross area (mm ²)
6	1
10	1.5
16-20	2.5
25	4
32	6
40-50	10
63	16

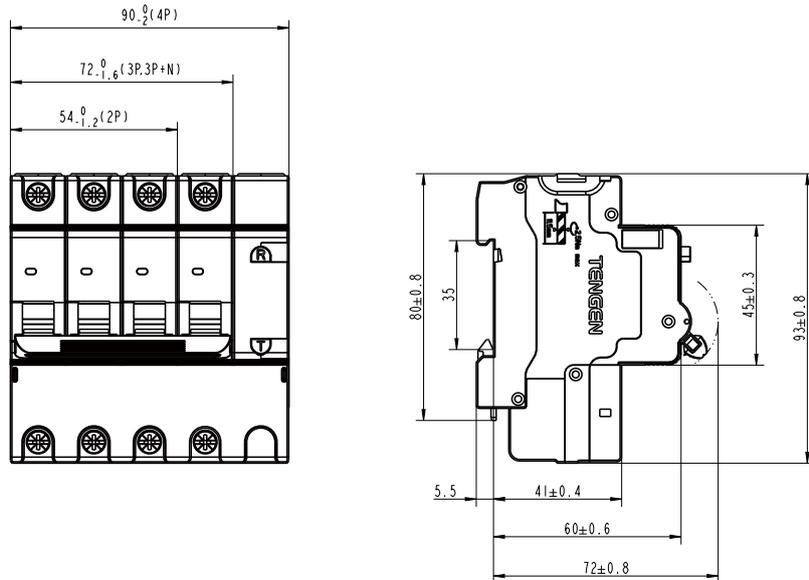
TGB1NLE-63Y Series Residual Current Circuit Breaker with Overcurrent Protection, Electronic A/AC Type

4 Outline and Installation Dimensions

4.1 Dimensional drawing of TGB1NLE-63Y 1P+N, 2P (1 protective pole)



4.2 Dimensional drawing of TGB1NLE-63Y multi-pole model



TGB1NLE-63Y Series Residual Current Circuit Breaker with Overcurrent Protection, Electronic A/AC Type

5 Order Notice

- 5.1 Product model and name: such as TGB1NLE-63Y Residual Current Circuit Breaker with Overcurrent Protection
- 5.2 Trip type: such as: C type
- 5.3 Number of poles: such as: 2P
- 5.4 Rated current, such as: 10A
- 5.5 Rated residual operation current: such as: 30mA
- 5.6 Order quantity: such as: 50 pcs
- 5.7 Order example: TGB1NLE-63Y 2P C10 30mA, 50 pcs