

## TGB1N-63(A) Series, 6(4.5)KA Miniature Circuit Breaker

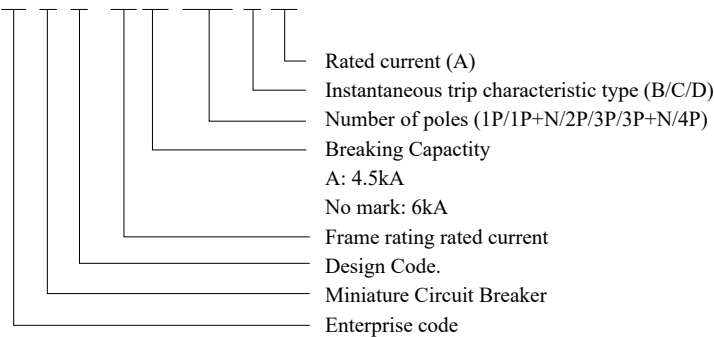


### 1 Overview

TGB1N-63(A) miniature circuit breakers (hereinafter referred to as circuit breakers) are mainly used in the AC 50/60Hz power line facilities and electrical equipment in households and similar places with rated voltage 230V/400V, and rated current up to 63A for overload and short-circuit protection, and suitable for infrequent breaking and making operation, especially suitable for industrial and commercial lighting distribution systems.

### 2 Type Designation

**TG B 1N - 63 (A) 1P+N C 63**



### 3 Technical Parameters

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

Table 1

Product name	TGB1N-63A	TGB1N-63
Standard	IEC/EN60898-1	IEC/EN60898-1
Certificate	CE CB TUV	CE CB TUV
Electrical characteristics		
Number of poles	1P, 1P+N, 2P, 3P, 3P+N, 4P (N pole can be opened and closed)	1P, 1P+N, 2P, 3P, 3P+N, 4P (N pole can be opened and closed)
Rated frequency (Hz)	50/60	50/60
Frame current (A) $I_{nm}$	63	63
Rated current (A) $I_e$	1, 2, 3, 4, 5, 6, 10, 16, 20, 25, 32, 40, 50, 63	1, 2, 3, 4, 5, 6, 10, 16, 20, 25, 32, 40, 50, 63
Rated voltage (V) $U_e$	AC230/400(1P) AC230(1P+N) AC400(2P, 3P, 3P+N, 4P)	AC230/400(1P) AC230(1P+N) AC400(2P, 3P, 3P+N, 4P)
Rated insulation voltage (V) $U_i$	690	690
Rated impulse withstand voltage (kV) $U_{imp}$	4	4
Rated short-circuit breaking capacity (kA) $I_{cs}$	4.5	6
Rated short-circuit breaking capacity (kA) $I_{cn}$	4.5	6
Instantaneous trip characteristics	B(3In ~ 5In) C(5In ~ 10In) D(10In ~ 14In)	B(3In ~ 5In) C(5In ~ 10In) D(10In ~ 14In)
Trip form	Thermal magnetic trip	Thermal magnetic trip
Pollution degree	2	2
Electrical and mechanical accessories	MX: Shunt release OF: Auxiliary contact SD: Alarm contact MX+OF: Shunt release + auxiliary contact MV: Overvoltage release MN: Undervoltage release MV+MN: Overvoltage and undervoltage release MNS: No-voltage release	
Mechanical properties		

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**Table 1, Continued**

Product name	TGB1N-63A	TGB1N-63
Electrical life	10,000 times	10,000 times
Mechanical life	20,000 times	20,000 times
Protection grade	IP20	IP20
Normal operation conditions and installation characteristics		
Ambient temperature	-35 C +70 C	-35 C +70 C
Installation site altitude	≤ 2,000 meters	≤ 2,000 meters
Terminals	Fixed with screw	Fixed with screw
Maximum wiring capacity (mm <sup>2</sup> )	25	25
Maximum limit torque (Nm)	2.5	2.5
Installation category	Class II, III	Class II, III
Installation method	TH35-7.5 standard rail	TH35-7.5 standard rail
Incoming method	Top inlet and bottom inlet	Top inlet and bottom inlet

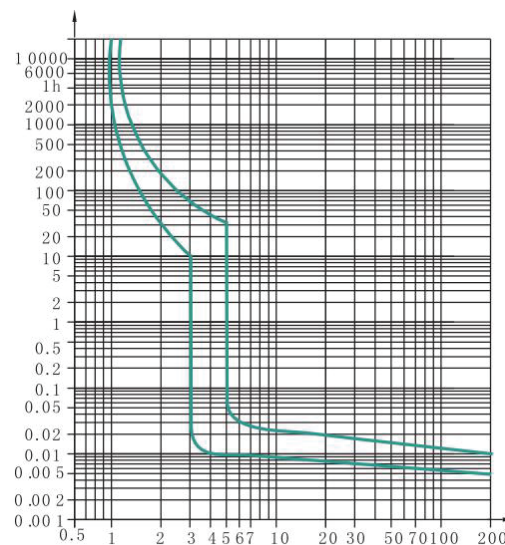
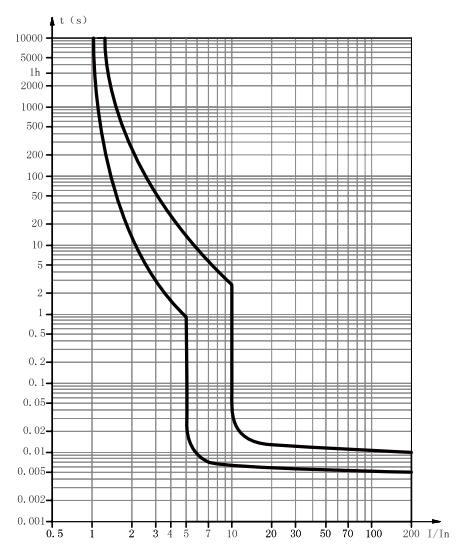
### 3.2 Action characteristics of circuit breaker overcurrent release (see Table 2)

**Table 2**

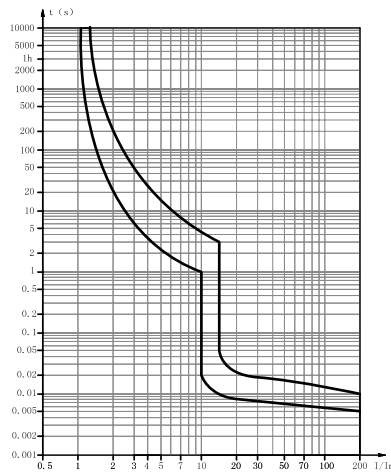
No.	Test current (A)	Start state	Specified time	Expected results	Remarks
a	1.13I <sub>n</sub>	Cold state	t ≤ 1h	Not trip	The current rises to the specified value within 5s
	1.45I <sub>n</sub>	Followed by 1.1.3I <sub>n</sub> test	t < 1h	trip	
	2.55I <sub>n</sub>	Cold state	1s < t < 60s (对 I <sub>n</sub> ≤ 32A) 1s < t < 120s (对 I <sub>n</sub> > 32A)	trip	
b	3I <sub>n</sub>	Cold state	t ≤ 0.1s	Not trip	Turn on the auxiliary switch for making current
	5I <sub>n</sub>	Cold state	t < 0.1s	trip	
c	5I <sub>n</sub>	Cold state	t ≤ 0.1s	Not trip	Turn on the auxiliary switch for making current
	10I <sub>n</sub>	Cold state	t < 0.1s	trip	
d	10I <sub>n</sub>	Cold state	t ≤ 0.1s	Not trip	Turn on the auxiliary switch for making current
	14I <sub>n</sub>	Cold state	t < 0.1s	trip	

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

### 3.3 Protection characteristic curve of circuit breaker


**B Type protection characteristic curve**

**C type protection characteristic curve**

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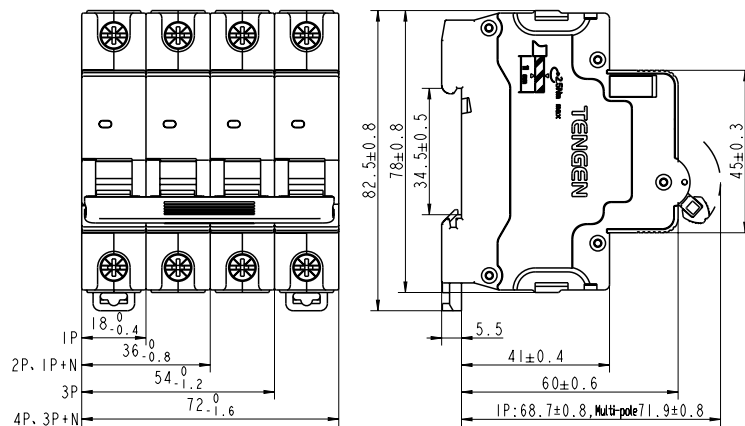
D type protection characteristic curve

**3.4 Wiring:** Suitable for wire connection of 25mm<sup>2</sup> 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 <sup>2</sup> )
1 ~ 6	1
10	1.5
16 ~ 20	2.5
25	4
32	6
40 ~ 50	10
63	16

### 4 Outline and Installation Dimensions



### 5 Ordering Notice

- Please specify the product model, specification, rated current, number of poles, and order quantity when ordering.
- Order example: TGB1N-63 miniature circuit breaker, C-type instantaneous release, rated current 32A, two-pole, 1,000 units.  
Specified as: TGB1N-63 2P C32 1,000 units