

TGB1N-63(A) Series, 6(4.5)KA MCB



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

T	Rated current (A)
B	Instantaneous trip characteristic type (B/C/D)
1	Number of poles (1P/1P+N/2P/3P/3P+N/4P)
N	Breaking Capacity
-	A: 4.5kA
6	No mark: 6kA
3	Frame rating rated current
1	Design Code.
N	Miniature Circuit Breaker
T	Enterprise code

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_n	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(3 $I_n \sim 5I_n$) C(5 $I_n \sim 10I_n$) D(10 $I_n \sim 14I_n$)	B(3 $I_n \sim 5I_n$) C(5 $I_n \sim 10I_n$) D(10 $I_n \sim 14I_n$)
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 LMI: Interlocking accessory	

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Table 1, Continued

Product name	TGB1N-63A	TGB1N-63
Mechanical properties		
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 (mm²)	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
Rated ambient air temperature	50°C	

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

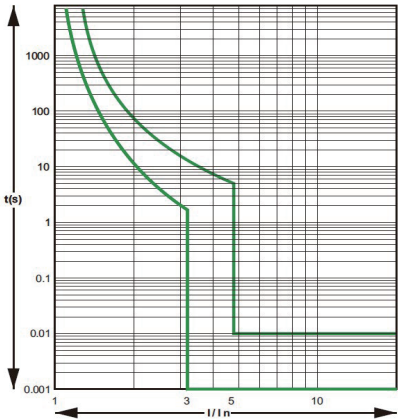
Table 2

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

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

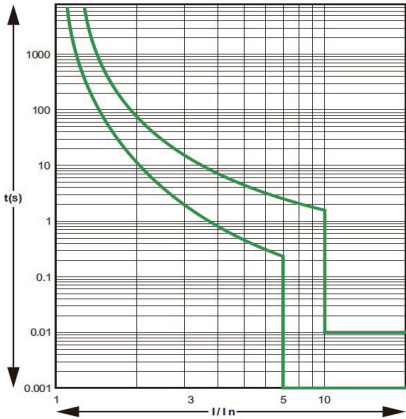
3.3 Protection characteristic curve of circuit breaker

B type (3-5) In



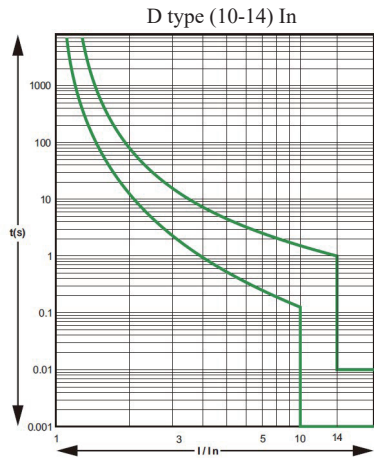
B Type protection characteristic curve

C type (5-10) In



C type protection characteristic curve

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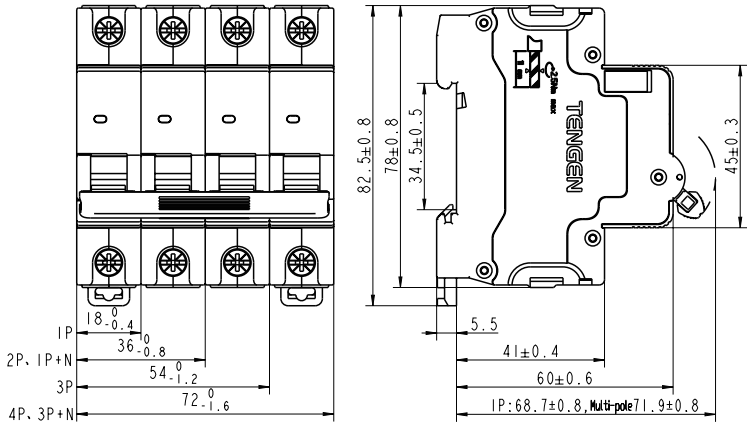


3.4 Wiring: Suitable for wire connection of 25mm² and below (see Table 3). The wiring method is that the wire is fixed with screws according to the tightening torque 2.5N·m.

Table 3

Rated current (A)	Wire cross area (mm ²)
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

- 5.1 Please specify the product model, specification, rated current, number of poles, and order quantity when ordering.
- 5.2 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