TGB1N-63(A)P Series, 4.5(3)KA MCB

1 Overview

TGB1N-63(A)P miniature circuit breaker (hereinafter referred to as circuit breaker) is primarily used in the AC 50/60Hz power line facilities and electrical equipment with the rated voltage 230V/400V and with the rated current up to 63A in households and similar places for overload and short circuit protection, and is also used as for infrequent on-off operations. It is particularly suitable for lighting and distribution systems in industry and commerce.

2 Type Designation

TG B 1N – 63 AP 1P+N C 63

- 63 — Rated current (A)
- C — Instantaneous trip type (B/C/D)
- 1P+N — Number of poles(1P/1P+N/2P/3P/3P+N/4P)
- AP — Breaking capacity: AP means 4.5kA; P means 3kA
- 63 — Frame rated current (A): 63
- 1N — Design code
- B — Miniature circuit breakers
- TG — Enterprise code

3 Product Parameters

3.1 Main technical parameters of the product (see Table 1)

Table 1

Product name		TGB1N-63AP	TGB1N-63P
Standard		IEC60898-1	
Product certification		CE, TUV, CB	
Electrical characteristics			
Number of poles		1P, 1P+N, 2P, 3P, 3P+N, 4P (N pole can be opened and closed)	
Rated frequency (Hz)		50/60	
Frame current (A)	Inm	63	
Rated current (A)	In	1, 2, 3, 4, 5, 6, 10, 16, 20, 25, 32, 40, 50, 63	
Rated voltage (V)	Ue	AC230/400(1P) AC230(1P+N) AC400(2P, 3P, 3P+N, 4P)	
Rated insulation voltage (V)	Ui	690	
Rated impulse withstand voltage (kV) Uimp		4	
Rated short circuit breaking capacity (kA) Icn		4.5	3
Instantaneous trip characteristics		B(3In ～ 5In) C(5In ～ 10In） D(10In ～ 14In）	
Trip form		Thermal magnetic trip	
Pollution degree		2	

Table 1, continued

Product name	TGB1N-63AP	TGB1N-63P
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: Over-undervoltage release MNS: Voltage loss release LMI: Interlocking accessory	
Mechanical characteristics		
Electrical life (times)	10000	
Mechanical life (times)	20000	
Protection grade	IP20	
Normal working conditions and installation characteristics		
Ambient temperature	-35℃~ +70℃	
Installation altitude	Not exceed 2000m	
Wiring terminal	Pressed by screw	
Max. wiring capacity (mm^2)	25	
Max. ultimate torque (Nm)	2.5	
Installation category	Class II, III	
Installation method	TH35-7.5 standard rail	
Inlet method	Top and botom inlets	

3.2 Operating 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	Non-trip	
	1.45In	1.13In test followed	t < 1h	Trip	Current rises to the specified value stably within 5s
	2.55In	Cold state	1s < t < 60s (For In ≤ 32A) 1s < t < 120s (For In > 32A)	Trip	
b	3In	Cold state	t≤0.1s	Non-trip	Turn on aux. switch to power on the current
	5In	Cold state	t < 0.1s	Trip	
c	5In	Cold state	t≤0.1s	Non-trip	Turn on aux. switch to power on the current
	10In	Cold state	t < 0.1s	Trip	
d	10In	Cold state	t≤0.1s	Non-trip	Turn on aux. switch to power on the current
	14In	Cold state	t < 0.1s	Trip	

Note: Cold state refers to no load at the 30℃ temperature before test.

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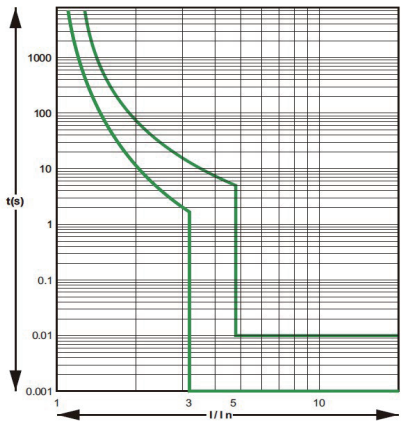
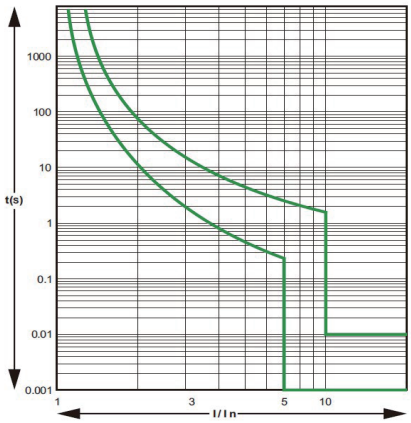
3.3 Circuit breaker protection characteristic curve

B type (3-5) In



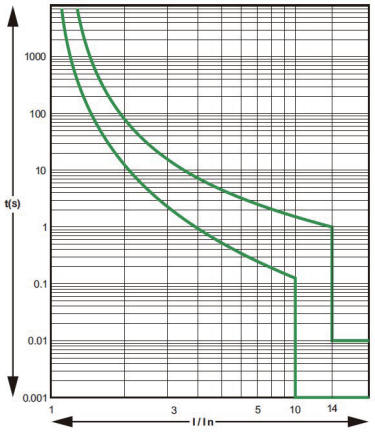
B Type protection characteristic curve

C type (5-10) In



C type protection characteristic curve

D type (10-14) In



D type protection characteristic curve

3.4 Wiring: Suitable for 25mm^2 and below wire connection (see Table 3), the wiring is connected through screws and the tightening torque is 2.5N.m.

Table 3

Rated current (A)	Sectional area of wire (mm^2)
1 ~ 6	1
10	1.5
16 ~ 20	2.5
25	4
32	6
40 ~ 50	10
63	16

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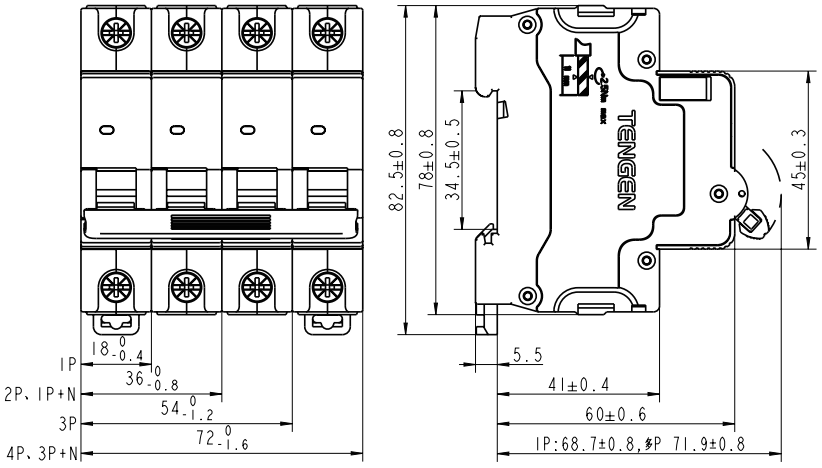
4 Installation Dimensions



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-63AP miniature circuit breaker, C-type instantaneous release, rated current 32A, 1000 two-pole units

Please specify: TGB1N-63AP 2P C32 1000 units