TENGEN

TGB1N-40 Series, 4.5KA DPN MCB

1 Overview

TGB1N-40 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, and rated current up to 40A 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 - 40 1P+N C 16

- 16 — Rated current (A)
- C — Instantaneous trip characteristic type (C/D)
- 1P+N — Number of poles (1P+N, pole N can be opened and closed)
- 40 — Frame current (A): 40
- 1N — Design code.
- B — Miniature Circuit Breaker
- TG — Enterprise code

3 Technical Parameters

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

Table 1

Product name		TGB1N-40
Standard		IEC/EN60898-1
Certificate		TUV, CE, CB
Electrical characteristics		
Number of poles		1P+N (N pole can be opened and closed)
Rated frequency (Hz)		50/60
Frame current (A)	Inm	40
Rated current (A)	In	6, 10, 16, 20, 25, 32, 40
Rated voltage (V)	Ue	AC230
Rated insulation voltage (V)	Ui	500
Rated impulse withstand voltage (kV)	Uimp	4
Rated short-circuit breaking capacity (kA)	Ics	4.5
Rated short-circuit breaking capacity (kA)	Icn	4.5
Instantaneous trip characteristics		C(5In ～ 10In） D(10In ～ 14In)
Trip form		Thermal magnetic trip
Pollution degree		2
Electrical and mechanical accessories		-
Mechanical properties		
Storage Temperature		4,000
Mechanical life		10,000 times
Protection grade		IP20
Normal operation conditions and installation features		
Ambient temperature		-35℃ ～ +70℃
Installation site altitude		≤ 2,000 meters
Terminals		Fixed with screw
Maximum wiring capacity (mm^2)		10
Maximum limit torque (Nm)		1.5
Installation category		Class II, III
Installation method		TH35-7.5 standard rail
Incoming method		Top inlet and bottom inlet

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

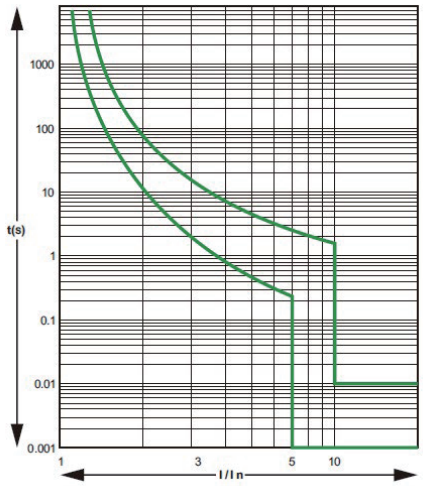
Table 2

Instantaneous trip type	Test current (A)	Start state	Specified time	Expected results	Remarks
a	1.13In	Cold state	t≤1h	Not trip	
	1.45In	Followed by 1.13In test	t < 1h	trip	The current rises to the specified value within 5s
	2.55In	Cold state	1s < t < 60s (In≤32A)	trip	
			1s < t < 120s (In > 32A)		
b	5In	Cold state	t≤0.1s	Not trip	Turn on the auxiliary switch
	10In	Cold state	t < 0.1s	trip	
c	10In	Cold state	t≤0.1s	Not trip	Turn on the auxiliary switch
	14In	Cold state	t < 0.1s	trip	

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

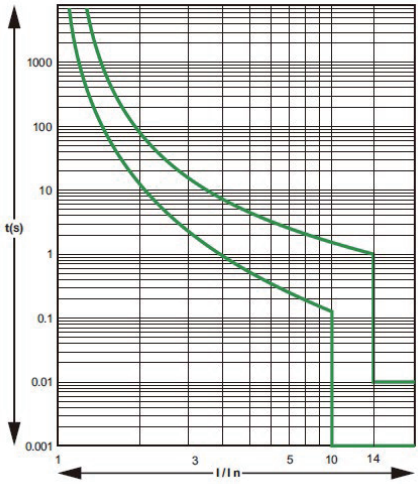
3.3 Protection characteristic curve of circuit breaker

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 wire connection of 10mm^2 and below (see Table 3). The wiring method is that the wire is fixed with screws according to the tightening torque 1.5N·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	10

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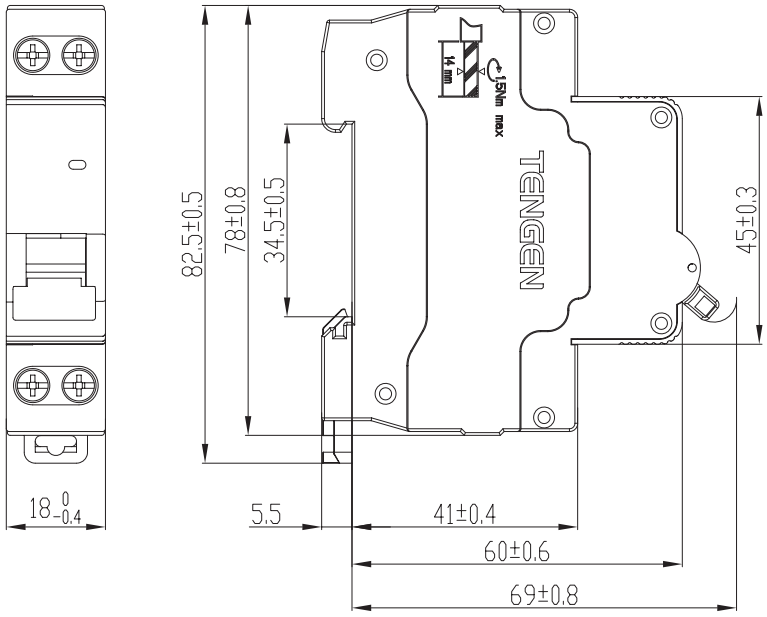
4 Outline and Installation Dimensions



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-40 miniature circuit breaker, C-type instantaneous release, rated current 32A, 1,000 units.
Specified as: TGB1N-40 1P+N C32 1,000 units