

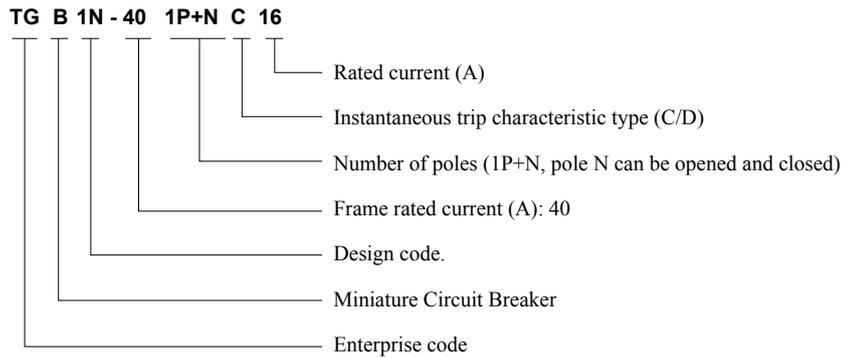


TGB1N-40 Series Miniature Circuit Breaker

1 Product 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



3 Product parameters

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

Table 1

Product name	TGB1N-40
Standards	IEC60898-1
Certificate	CE
Electrical characteristics	
Number of poles	1P+N (N pole can be opened and closed)
Rated frequency (Hz)	50/60
Frame rated current (A) I_{nm}	40
Rated current (A) I_e	6、10、16、20、25、32、40
Rated voltage (V) U_e	AC230
Rated insulation voltage (V) U_i	500
Rated impulse withstand voltage (kV) U_{imp}	4
Rated short-circuit breaking capacity (kA) I_{cs}	4.5
Rated short-circuit breaking capacity (kA) I_{cn}	4.5
Instantaneous trip characteristics	C(5I _n ~ 10I _n) D(10I _n ~ 14I _n)
Trip form	Thermal magnetic trip
Pollution level	2
Electrical and mechanical accessories	-
Mechanical properties	
Electrical life	10000
Mechanical life	20000
Protection grade	IP20
Normal operation conditions and installation features	
Ambient temperature	-35℃ ~ +70℃
Installation site altitude	≤ 2000m
Terminals	Fixed with screw
Maximum wiring capacity (mm ²)	10
Maximum limit torque (Nm)	1.5
Installation category	Class II, III
Installation method	35mm standard rail
Incoming method	Upper and lower

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

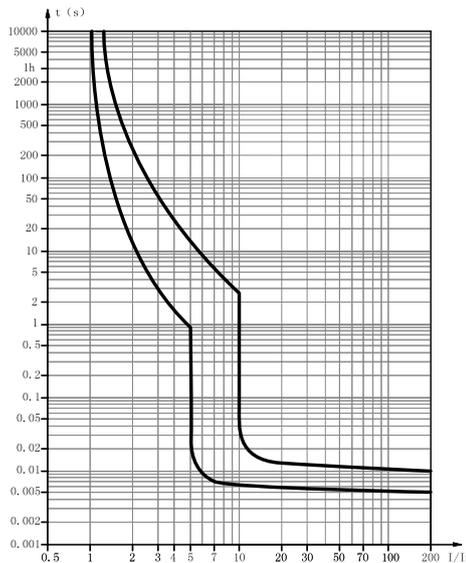
Table 2

No.	Test current (A)	Start state	Specified time	Expected results	Remarks
a	1.13In	Cold state	$t \leq 1h$	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	$1s < t < 60s$ ($In \leq 32A$) $1s < t < 120s$ ($In > 32A$)	trip	
b	5In	Cold state	$t \leq 0.1s$	Not trip	Turn on the auxiliary switch for making current
	10In	Cold state	$t < 0.1s$	trip	
c	10In	Cold state	$t \leq 0.1s$	Not trip	Turn on the auxiliary switch for making current
	14In	Cold state	$t < 0.1s$	trip	

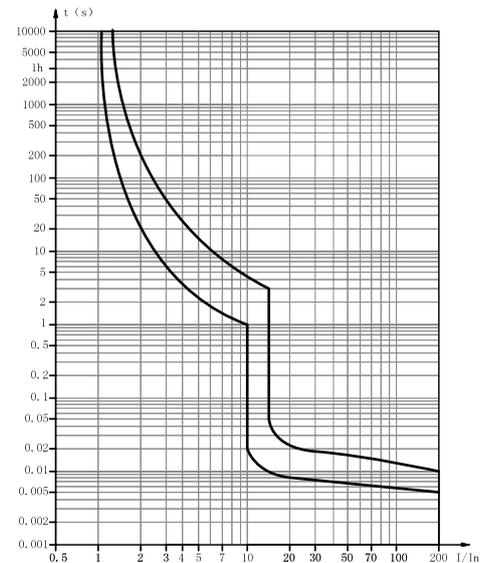
Note: The cold state refers to the temperature 30°C without load before the test.

Modular Devices

3.3 Protection characteristic curve of circuit breaker



C type protection characteristic curve



D type protection characteristic curve

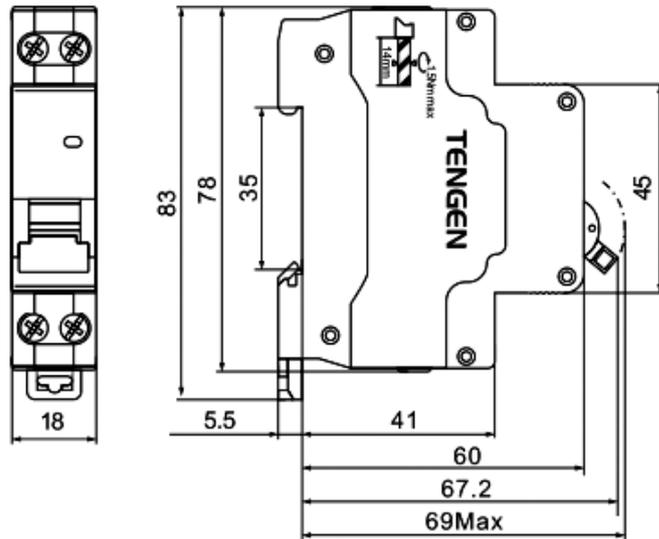
3.4 Wiring: Suitable for wire connection of 10mm² and below (see Table 3). The wiring method is that the wire is fixed with screws according to the tightening torque 1.5N·m.

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 Installation dimensions



5 Order information

- 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, 1000 units.
Specified as: TGB1N-40 1P+N C32 1000 units