

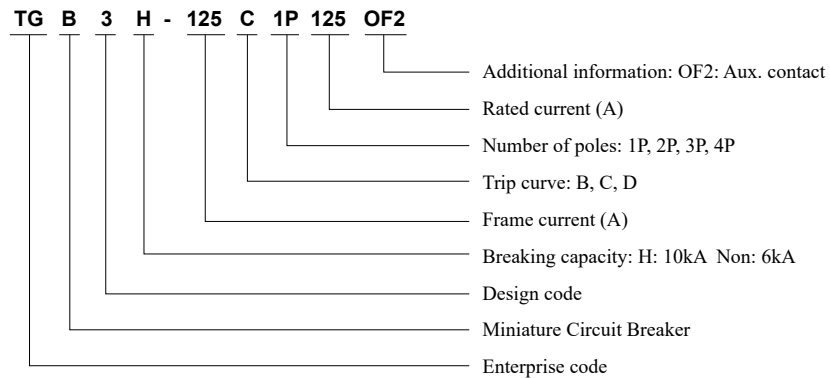
## TGB3(H)-125 Series, 6(10)KA Miniature Circuit Breaker



### 1. Overview

TGB3H-125 miniature case circuit breaker (hereinafter referred to circuit breaker) is used in AC 50/60 line with rated voltage 230V (for 1P) or 400V (for 2P/3P/4P) and rated current up to 125A for overload and short-circuit protection. It can also be used for infrequent ON/OFF switching of the line under the normal operation. The circuit breaker is characterized by artistic shape, small size, light weight, excellent and reliable performance, high breaking capacity, quick tripping, and rail-mounted installation.

### 2 Type Designation



### 3 Technical Parameters

#### 3.1 Main technical parameters (see Table 1)

Table 1

Product name	TGB3-125	TGB3H-125
Standard	IEC60947-2	IEC60947-2
Certificate	CE	CE
Electrical specification		
Number of poles	1P, 2P, 3P, 4P	1P, 2P, 3P, 4P
Rated frequency (Hz)	50/60	50/60
Frame current (A) $I_{nm}$	125	125
Rated current (A) $I_e$	63, 80, 100, 125	63, 80, 100, 125
Rated voltage (V) $U_e$	AC230(1P), AC400(2P, 3P, 4P) DC80(1P), DC125(2P)	AC230(1P), AC400(2P, 3P, 4P) DC80(1P), DC125(2P)
Rated insulation voltage (V) $U_i$	1000	1000
Rated impulse withstand voltage (kV) $U_{imp}$	6	6
Rated run short circuit breaking capacity (kA) $I_{cs}$	6	7.5
Rated limit short circuit breaking capacity (kA) $I_{cu}$	6	10
Instantaneous trip characteristics	B: $i_i=5I_n(AC)$ , $i_i=7I_n(DC)$ C: $i_i=8I_n(AC)$ , $i_i=12I_n(DC)$ D: $i_i=12I_n(AC)$ , $i_i=17I_n(DC)$	B: $i_i=5I_n(AC)$ , $i_i=7I_n(DC)$ C: $i_i=8I_n(AC)$ , $i_i=12I_n(DC)$ D: $i_i=12I_n(AC)$ , $i_i=17I_n(DC)$
Trip form	Thermomagnetic trip	Thermomagnetic trip
Pollution degree	3	3
Electrical and mechanical accessories	OF	OF
Mechanical properties		
Electrical life (times)	1,500( $I_n \leq 100A$ ), 1,000( $I_n > 100A$ )	1,500( $I_n \leq 100A$ ), 1,000( $I_n > 100A$ )

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Table 1, continued

Product name	TGB3-125	TGB3H-125
Mechanical life ( times )	8,500(In≤100A), 7,000(In>100A)	8,500(In≤100A), 7,000(In>100A)
Protection grade	IP20	IP20
Indication window	Contact status indication	Contact status indication
Operating conditions		
Ambinet temperature	-35°C- +70°C	-35°C- +70°C
Installation site altitude	Not exceed 2,000 meters	Not exceed 2,000 meters
Wiring terminal	Wired with screws	Wired with screws
Maximum wiring capacity	50 mm <sup>2</sup>	50 mm <sup>2</sup>
Maximum ultimate torque Nm	6	6
Installation category	Class III	Class III
Insallation method	TH35-7.5 steel mounting rail	TH35-7.5 steel mounting rail
Incoming method	Top and bottom	Top and bottom

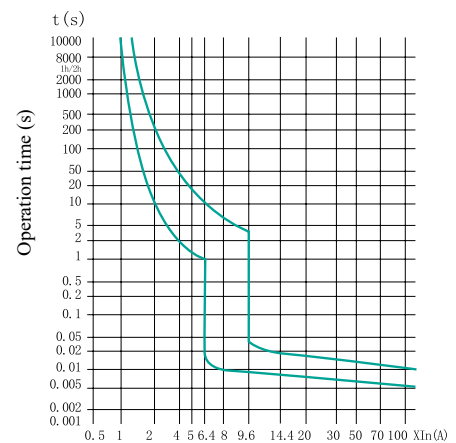
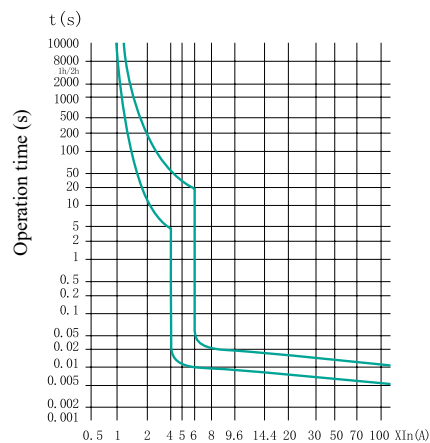
### 3.2 Operation properties of overcurrent release of circuit breaker (see Table 2)

Table 2

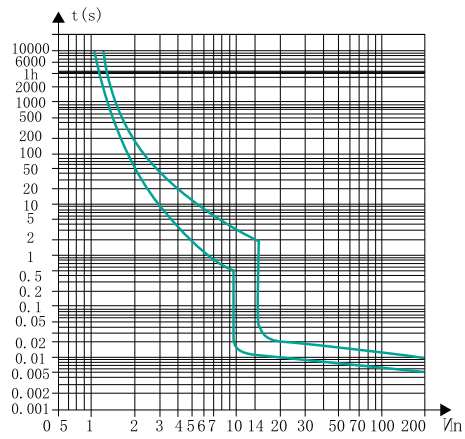
No.	Trip type	Test current		Characteristic requirement		Start state	Ambient temp.
		AC	DC	In ≤ 63A	In > 63A		
a	B, C, D types	1.05In		Non-trip when ≥1h	Non-trip when ≥2h	Cold state	+30±2°C
b		1.3In		Trip when <1h	Trip when <2h	a item test followed	
c	B type	4.0In	5.6In	≥0.2s Non trip		Cold state	Any appropriate temperature
		6.0In	8.4In	< 0.2s trip			
	C type	6.4In	9.6In	≥0.2s Non trip		Cold state	
		9.6In	14.4In	< 0.2s trip			
	D type	9.6In	13.6In	≥0.2s Non trip		Cold state	
		14.4In	20.4In	< 0.2s trip			

Note: Cold state refers to 30°C temperature, and without load before test.

### 3.3 Circuit breaker protection characteristic curve



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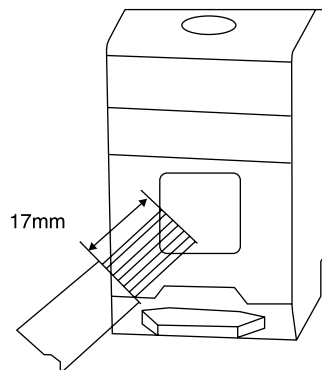
D(Ii=12In) type: Thermal / Electromagnetic  
characteristics protection curve

3.4 Wiring: Suitable for multistrand copper wire of 50 mm<sup>2</sup> and below (see Table 3), the wiring terminal tightening torque is 3.5 N.m.

Table 3

Rated current (A)	Nominal section area of copper wire (mm <sup>2</sup> )
63	16
80	25
100	35
125	50

3.5 Wiring method: Wiring frame fixed with screws



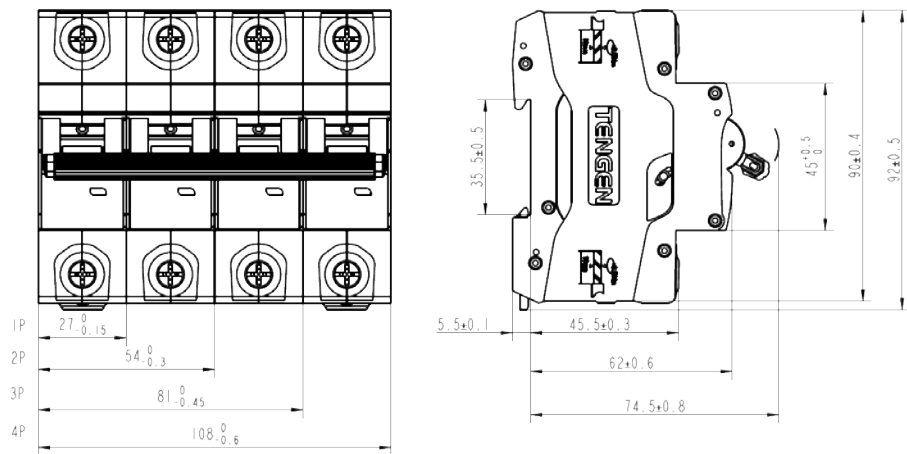
## TGB3(H)-125 Series, 6(10)KA Miniature Circuit Breaker

3.6 Corrected currents under the different ambient temperature (see Table 4)

Table 4

Rated current (A)	Corrected current value A											
	-35°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
63	92	89	85	81	77	73	68	63	58	52	46	41
80	116	114	108	102	96	92	86.4	80	74	68	61	54
100	147	143	136	129	122	115	108	100	92.5	84.5	75.5	66
125	184	180	171	162	153	144	135	125	117	107	97	84

### 4 Outline and Installation Dimensions



### 5 Ordering Notice

- 5.1 Product model and name: such as TGB3H-125 Moulded Case Circuit Breaker
- 5.2 Trip type: such as: C type
- 5.3 Number of poles: such as: 3P
- 5.4 Rated current, such as: 80A
- 5.6 Order quantity: such as: 60 pcs
- 5.7 Order example: TGB3H-125C 3P 80A, 60 pcs