1 Switch body
2 Flame extinguishing chamber (selected and purchased by customer)
3 Plug-in type (selected and purchased by customer)
4 Arc isolating sheet (standard)
5 Zero flashover hood (selected and purchased by customer)
6 Undervoltage release (selected and purchased by customer)
7 Shunt release (selected and purchased by customer)
8 Alarm contacts (selected and purchased by customer)
9 Aux. contacts (selected and purchased by customer)
10 Leakage alarm module (selected and purchased by customer)
11 Front-panel transition plate (selected and purchased by customer)
12 Motor mechanism (selected and purchased by customer)
13 Rotary handle operating mechanism (selected and purchased by customer)

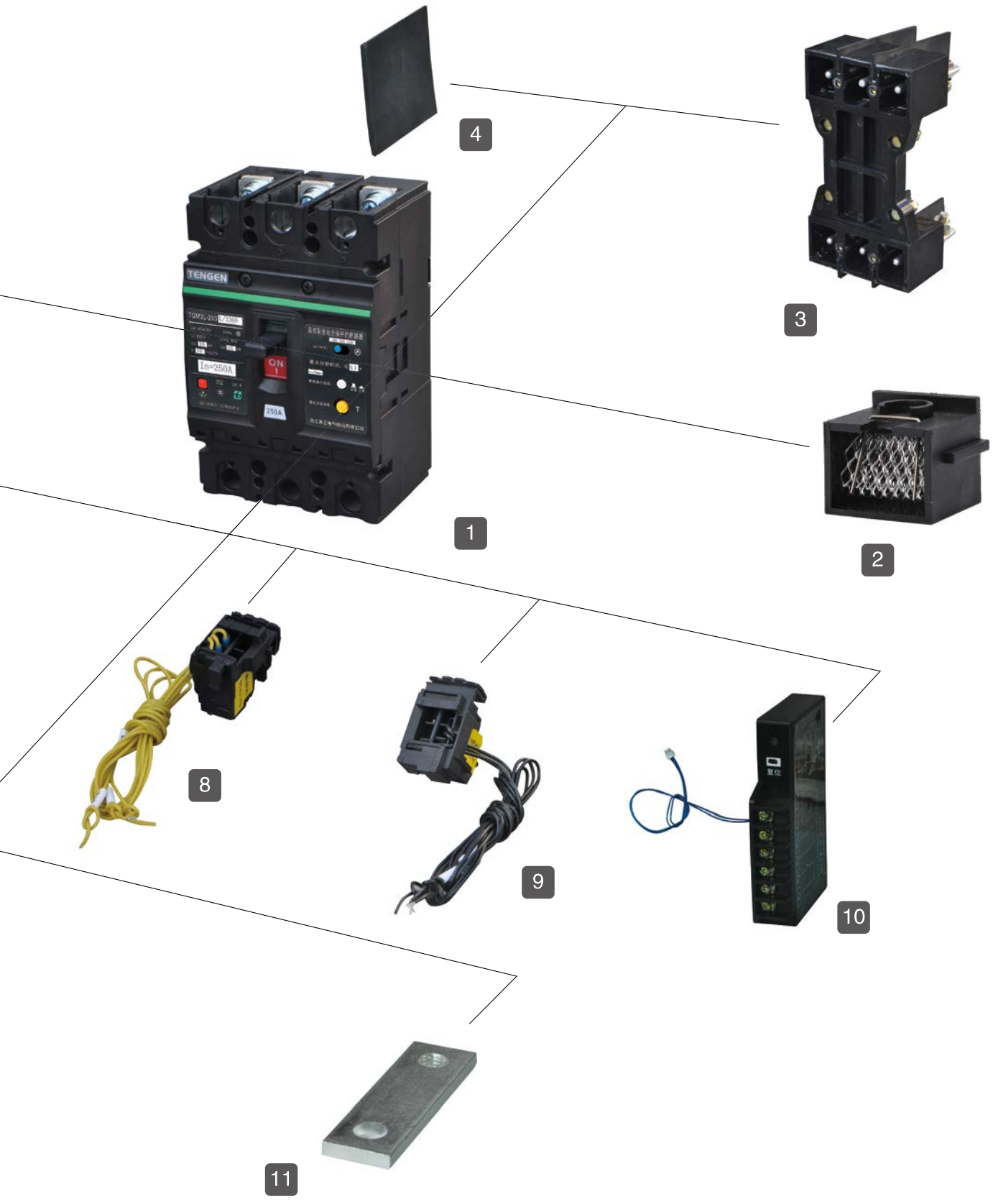
5

6

7

13

12


4
3
TENGEN
ON
250A
1
2
8
9
10
11

TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

1 Overview

TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type (hereinafter referred to as circuit breaker) is one of the new circuit breakers researched and developed by our company using international advanced technology. It has the characteristics of zero flashover, high breaking capacity, box type accessory, small size and compact structure, and green environmental protection.

Circuit breaker is divided into L type (standard type), M type (middle breaking type), and H type (high breaking type) according to their rated ultimate short-circuit breaking capacity (ICU), and is an ideal product for power distribution and motor protection. With the rated insulation voltage 800V, it is used in the AC 50Hz circuit with the rated operating voltage 400V and below and with the rated current from 16A to 800A to provide indirect personal contact protection and prevent a fire risk caused by the earthing fault current due to the damaged equipment insulation; the product can be used to distribute electrical energy and protect lines and power equipment to prevent overload and short circuit damage, and also be used for infrequent conversion of lines and infrequent startup of motor.

This series of circuit breakers can be installed vertically (that is longitudinally installed) or horizontally (that is laterally installed).

This circuit breaker can work normally under the conditions that any phase of three-phase power supply is open.

With isolation function, the corresponding symbol is:  .

Circuit breakers comply with the following standards:

IEC 60947-1 "Low-voltage switchgear and controlgear - Part 1: General rules".

IEC 60947-2 "Low-voltage switchgear and controlgear - Part 2: Circuit breakers".

Certificates: CE CB

2 Type Designation

TG M 3 L –□ □□□/□□□□□□□□□□□□□□□

- Special requirements
- Application code: No code: conventional type
- Purpose code (no code - with flashover distance, W- zero flashover)
- Installation method code: No code: Fixed type front-panel; B-Fixed type back-panel; C-Plug-in type
- Accessory voltage
- Breaking time
- Residual operating current
- Rated current
- Alarm module: Leakage alarm and trip: I; Leakage alarm and non-trip: II
- Additional information: F-Prepaid
- Four-pole product code (see Table 1); no code: Three-pole product
- Use code: No code: Power distribution; 2: Motor protection
- Release type and accessory code (see Table 2)
- Number of poles: 3-three poles; 3N-three-pole four-wire; 4-Four poles
- Operation method code: No code: Operation directly via handle; P: Operation via motor Z: Operation via rotary handle (for switchgear)
- Breaking capacity: L:low breaking(standard) M:medium breaking H:high breaking
- Frame rated current
- Residual current operation type: No code: AC type; A – A type
- With residual current protection (Derived code)
- Design code
- Moulded case circuit breaker
- Enterprise characteristic code: TG

Table 1

Code	Description	Example
A type	N pole is not equipped with an overcurrent trip element, and the N pole is always closed and is open and closed not together with other three poles	3N300A
B type	N pole is not equipped with an overcurrent trip element, and the N pole is open and closed together with other three poles (N pole is first closed and then open)	4300B
C type	N pole is equipped with an overcurrent trip element, and the N pole is open and closed together with other three poles (N pole is first closed and then open)	4300C
D type	N pole is equipped with an overcurrent trip element, and the N pole is always closed and is open and closed not together with other three poles	3N300D

TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

Four-pole product code views

A type: N pole is not equipped with an overcurrent trip element, and the N pole is always closed and is open and closed not together with other three poles.

Without overcurrent release

B type: N pole is not equipped with an overcurrent trip element, and the N pole is open and closed together with other three poles (N pole is first closed and then open)

Without overcurrent release

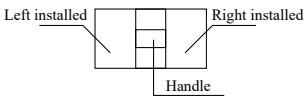
C type: N pole is equipped with an overcurrent trip element, and the N pole is open and closed together with other three poles (N pole is first closed and then open)

With overcurrent release

D type: N pole is equipped with an overcurrent trip element, and the N pole is always closed, and is open and closed not together with other three poles.

With overcurrent release

Release and Accessory Code



Alarm contact ●　Aux. contact ○

Shunt release ■　Undervoltage release ▲

Table 2

Accessory name	Accessory code		Accessory installation and lead-out mode					
	Electrom-agnetic release	Complex release	TGM3L-125		TGM3L-250		TGM3L-400 TGM3L-630 TGM3L-800	
			3P	4P	3P	4P	3P	4P
No accessory	200	300						
Alarm contact	208	308						
Shunt release	210	310						
Aux. contact	220	320						
Undervoltage release	230	330						
Shunt release Aux. contact	240	340						
Shunt release Undervoltage release	250	350						
Two sets of aux. contacts	260	360						
Aux. contact Undervoltage release	270	370						
Shunt release Alarm contact	218	318						
Aux. contact Alarm contact	228	328						
Undervoltage release Alarm contact	238	338						
Shunt release Aux. contact Alarm contact	248	348						
Two sets of aux. contacts Alarm contact	268	368						
Undervoltage release Aux. contact Alarm contact	278	378						

*Notes:

1. 200 (electromagnetic release), refer to the circuit breaker body only with an electromagnetic release; that is, there is only a short circuit protection and no overload protection characteristic;
2. 300 (complex release), refer to the circuit breaker body with a thermodynamic + electromagnetic release; that is: with overload and short circuit protection characteristic;
3. One set of below 400 auxiliary contacts include one normally open and one normally closed contact, and one set of 400 and above auxiliary contacts include two normally open and two normally closed contacts.

TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

3 Technical Parameters

3.1 Technical parameters see Table 3

Table 3

Basic parameters																
Frame rated current		125			250			400			630			800		
Number of poles		3P、3P+N、4P			3P、3P+N、4P			3P、3P+N、4P			3P、3P+N、4P			3P、3P+N、4P		
Frequency (Hz)		50			50			50			50			50		
Rated operating voltage Ue (V)		400			400			400			400			400		
Rated insulation voltage Ui (V)		800			800			1000			1000			1000		
Rated impulse withstand voltage Uimp (kV)		8			8			12			12			12		
Rated current In (A)		16A、20A、25A 32A、40A、50A 63A、80A、100A 125A			100A、125A 140A、160A 180A、200A 225A、250A			225A、250A 315A、350A 400A			400A、500A 600A、630A			400A、500A 600A、630A 700A、800A		
Breaking capacity		L	M	H	L	M	H	L	M	H	L	M	H	L	M	H
Rated ultimate short circuit breaking capacity Icu (kA)	AC400V	35	50	65	35	50	65	50	65	85	50	65	85	50	65	85
Rated Operating short circuit breaking capacity Ics (kA)	AC400V	26	50	50	26	50	50	35	65	65	35	65	65	35	65	65
Isolation function		Yes(3P、4P)			Yes(3P、4P)			Yes(3P、4P)			Yes(3P、4P)			Yes(3P、4P)		
Usage category		Class A			Class A			Class A			Class A			Class A		
Flashover distance (mm)	With flashover distance	≤50			≤50			≤100			≤100			≤100		
	Zero flashover	0			0			0			0			0		
Mechanical life (times)	With With maintenance	20000			20000			10000			10000			8000		
	Without maintenance	40000			40000			20000			20000			10000		
Electrical life (times)		10000			10000			8000			8000			7500		
Rated residual operating current value IΔn (mA)	Non-delay type	30/50/75/100 /150/200/300 /400/500			30/50/75/100 /150/200/300 /400/500			50/75/100/150 /200/300/400 /500/600/800/1000			50/75/100/150 /200/300/400/500 /600/800/1000			50/75/100/150 /200/300/400/500 /600/800/1000		
	Delay type	50/75/100/150 /200/300/400 /500			50/75/100/150 /200/300/400 /500			50/75/100/150 /200/300/400 /500/600/800/1000			50/75/100/150 /200/300/400/500 /600/800/1000			50/75/100/150/ 200/300/400/500/ 600/800/1000		
Accessory information																
Operation directly via handle		■(Standard)			■(Standard)			■(Standard)			■(Standard)			■(Standard)		
Extended rotary handle		□(Optional)			□(Optional)			□(Optional)			□(Optional)			□(Optional)		
Motor mechanism		□(Optional)			□(Optional)			□(Optional)			□(Optional)			□(Optional)		
Shunt release		□(Optional)			□(Optional)			□(Optional)			□(Optional)			□(Optional)		
Undervoltage release		□(Optional)			□(Optional)			□(Optional)			□(Optional)			□(Optional)		
Aux. contact		□(Optional)			□(Optional)			□(Optional)			□(Optional)			□(Optional)		
Alarm contact		□(Optional)			□(Optional)			□(Optional)			□(Optional)			□(Optional)		
Fixed type front-panel		■(Standard)			■(Standard)			■(Standard)			■(Standard)			■(Standard)		
Fixed type back-panel		□(Optional)			□(Optional)			□(Optional)			□(Optional)			□(Optional)		
Plug-in type front-panel (optional not for 4P product)		□(Optional)			□(Optional)			□(Optional)			□(Optional)			□(Optional)		
Plug-in type back-panel		□(Optional)			□(Optional)			□(Optional)			□(Optional)			□(Optional)		
Transition busbar		□(Optional)			□(Optional)			□(Optional)			□(Optional)			□(Optional)		
Phase partition		■(Standard)			■(Standard)			■(Standard)			■(Standard)			■(Standard)		
Handle lock		□(Optional)			□(Optional)			□(Optional)			□(Optional)			□(Optional)		
Zero flashover hood		□(Optional)			□(Optional)			□(Optional)			□(Optional)			□(Optional)		

Note: The optional zero flashover accessory is installed to realize zero flashover.

TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

3.2 Inverse time limit characteristics of circuit breaker used for power distribution see Table 4

Table 4

Test current name	Setting current multiple	Appointed time		Starting state
		In≤63A	In>63A	
Conventional non-trip current	1.05 In	≥1h	≥2h	Cold state
Conventional trip current	1.30 In	<1h	<2h	Hot state

Note: Hot state usually refers to the state that the conventional non-trip current is sustained until the appointed time expires.

3.3 Inverse time limit characteristics of circuit breaker used for motor protection see Table 5

Table 5

Test current name	Setting current multiple	Appointed time	Starting state
Conventional non-trip current	1.0 In	≥2h	Cold state
Conventional trip current	1.2 In	<2h	Hot state

Note: Hot state usually refers to the state that the conventional non-trip current is sustained until the appointed time expires.

3.4 Short circuit protection characteristics of circuit breakers

The set value of the instantaneous action characteristics of circuit breakers used for power distribution is 10In±20%.
The set value of the instantaneous action characteristics of circuit breakers used for motor protection is 12In±20%.

3.5 The residual current protection action time of general (non-delay) products is shown in Table 6

Table 6

Residual current		IΔn	2IΔn	5IΔn(a)	10IΔn(b)
Non-delay type	Max. breaking time (s)	0.2	0.15	0.04	0.04
Notes: (a) For residual current protection circuit breaker with IΔn ≤30mA, 5IΔn can be replaced by 0.25A; (b) If replaced by 0.25A in Item (a), 10IΔn is 0.5A.					

3.6 The residual current protection action time of the delay type products is shown in Table 7

Table 7

Delay time (s) (Selected by user)	Max. breaking time at IΔn (s)	At 2IΔn		Max. breaking time at 5IΔn (s)	Max. breaking time at 10IΔn (s)
		Ultimate non-drive time (s)	Max. breaking time (s)		
0.1	0.3	0.1	0.3	0.25	0.25
0.2	0.4	0.2	0.4	0.35	0.35
0.3	0.5	0.3	0.5	0.45	0.45
0.4	0.6	0.4	0.6	0.55	0.55
0.5	0.7	0.5	0.7	0.65	0.65
0.6	0.8	0.6	0.8	0.75	0.75
0.7	0.9	0.7	0.9	0.85	0.85
0.8	1	0.8	1	0.95	0.95

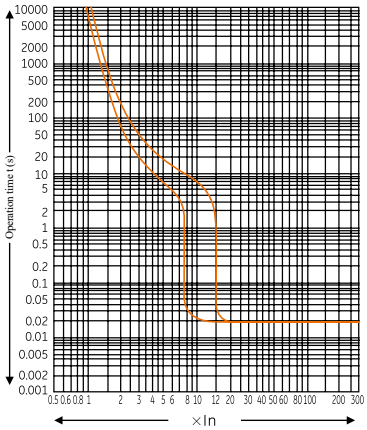
4 Operating Conditions

4.1 Temperature
4.1.1 The ambient air temperature does not exceed +40°C, the lower limit is -5°C, and the mean temperature within 24h does not exceed +35°C.
4.1.2 Used in special environment: The lower limit of the temperature is not below -25°C, and the upper limit does not exceed +55°C.
4.1.3 When the ambient temperature is greater than +40°C or below -5°C, the derating is required according to the temperature compensation coefficient or contact us.
4.2 Altitude
4.2.1 The altitude at the installation site where the product works normally does not exceed 2000m.
4.2.2 If the altitude exceeds 2000m, the derating is required according to the altitude coefficient or contact us.
4.3 Humidity
4.3.1 The relative humidity of atmosphere does not exceed 50% at the maximum ambient temperature +40°C, and higher relative humidity can be allowed at lower temperatures
4.3.2 The maximum mean relative humidity does not exceed 90% in the wettest month, and the monthly mean minimum temperature in that month does not exceed +25°C.
4.3.3 The influence of the condensation occurred on the product surface due to temperature changes on the product performance shall be considered.
4.4 Pollution degree: 3.
4.5 Installation category: III.
4.6 Installation condition: The vertical inclination of the installed circuit breaker does not exceed 5°.
4.7 External magnetic field: The magnetic field near the circuit breaker installation site shall not exceed 5 times earth's magnetic field in any direction.

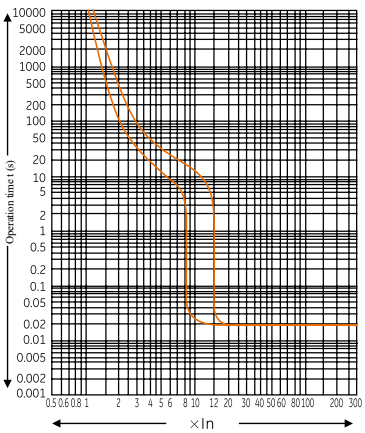
TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

5 Circuit Breaker Protection Characteristic Curve

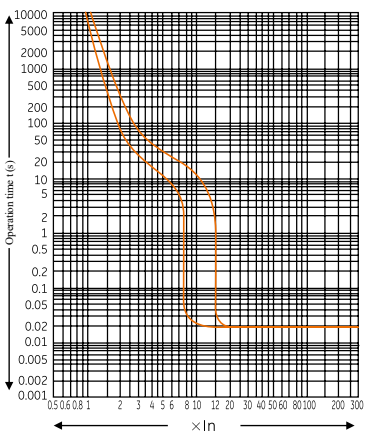
TGM3L-125(L/M/H) time / current characteristic curve



TGM3L-250(L/M/H) time / current characteristic curve

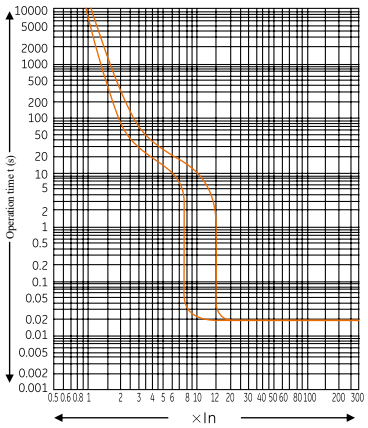


TGM3L-400(L/M/H) time / current characteristic curve

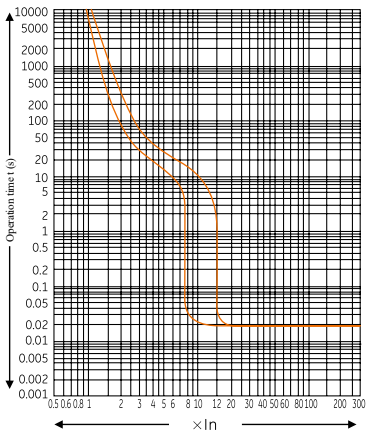


TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

TGM3L-630(L/M/H) time / current characteristic curve



TGM3L-800(L/M/H) time / current characteristic curve



6 Correction Coefficient of Circuit Breaker in Special Environment

6.1 Derating coefficient due to ambient temperature changes sees Table 8

Table 8

Ambient temp. / Coefficient / Model	+40℃	+45℃	+50℃	+55℃	+60℃
	Derating coefficient	Derating coefficient	Derating coefficient	Derating coefficient	Derating coefficient
TGM3L-125	1In	0.95In	0.89In	0.84In	0.76In
TGM3L-250	1In	0.95In	0.90In	0.87In	0.82In
TGM3L-400	1In	0.94In	0.87In	0.81In	0.73In
TGM3L-630	1In	0.93In	0.88In	0.83In	0.76In
TGM3L-800	1In	0.92In	0.86In	0.81In	0.75In

6.2 The influence of the altitude changes on the characteristics of circuit breaker sees Table 9
When the altitude exceeds 2000m, the electrical performance of circuit breaker can be corrected according to the table below.

Table 9

Altitude	2000m	3000m	4000m	5000m
Power frequency withstand voltage	3000V	2500V	2000V	1800V
Operating current correction coefficient	1	0.94	0.88	0.83

TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

7 Structure and Working Principle

7.1 Structure

This series circuit breaker is an electronic type current operated type leakage protector, and its main parts include main switch (including overcurrent release), zero sequence current transformer, electronic amplifier parts, leakage release, and test device. All parts are installed in a moulded case.

7.2 Working Principle

In the event of an electric leakage or an electric shock in the protected circuit, a signal is output from the zero sequence current transformer. When this signal output reaches a certain value, the silicon controlled rectifier will be triggered and conducted to activate the leakage release, thereby driving the traction rod to disconnect the operating mechanism in a very short time to cut off power supply, so that the leakage protection is realized. (Working principle sees Fig. 1).

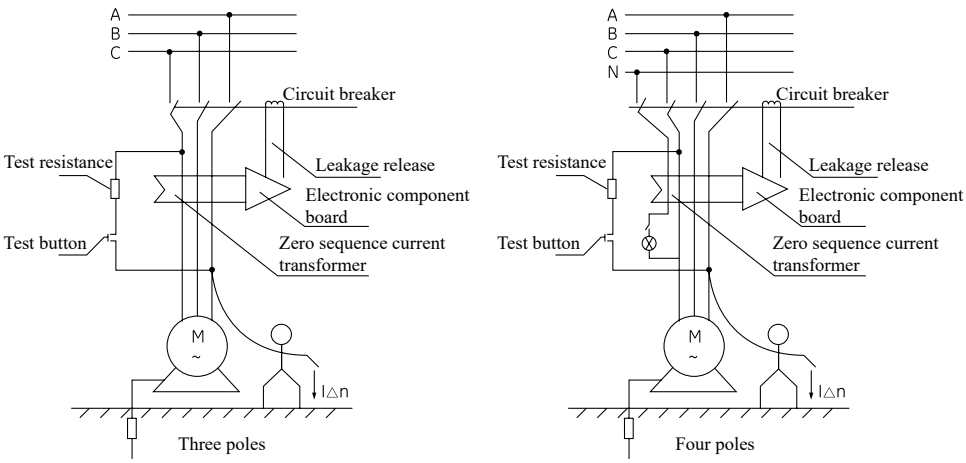


Fig. 1 Working principle

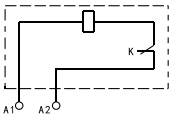
8 Product Accessories

8.1 Product Internal Accessories

According to the user's needs, the circuit breaker accessory can be directly led out (the length of the wire lead is 50cm, and any special requirements shall be specified when ordering), or a terminal block is added (if the wiring terminal block is required, please specify this when ordering).

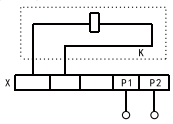
TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

● Shunt release (with left installed and left installed)

Rated control supply voltage (Us)	AC: AC220/230V, AC380/400V DC: DC24V, DC110V, DC220V
Operating voltage	(0.7~1.1)Us
Wiring diagram:  Power input	Note: K - The micro switch connected to the coil in series in the shunt release is a normally-closed contact; when the circuit breaker is OFF, this contact will open automatically, and is closed when in ON state.

When the rated control power supply voltage is DC24V, the shunt release can be used directly, but the maximum length of 1.5mm2 copper wire (each of the two wires) should be 150m, and of the 2.5mm^2 copper wire is 250m; the power supply power at the release terminal must the minimum 50W requirements, or the DC24V intermediate relay is used to control AC230V or AC400V shunt release; the contact capacity of the intermediate relay is not less than 1A.

● Undervoltage release (left installed and right installed)

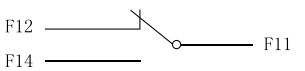
Rated operating voltage (Ue)	AC: AC220/230V, AC380/400V
Operation characteristics	Trip reliably at 35%~70% rated operating voltage; closed when 85%~110%; prevent being closed when below 35%.
Wiring diagram:  Power input	Description: X-Wiring terminal block Note: The wiring diagram of the internal accessories of circuit is marked in the dashed box.

Warning: The undervoltage release must be energized and then the circuit breaker can re-trip and is closed, otherwise this may cause damage to the circuit breaker.

● Aux. contact (left installed and right installed)

Frame rated current	Inm≤250A		Inm≥400A	
Resistive current Ith	3A		6A	
Usage category	AC-15	DC-13	AC-15	DC-13
Operating voltage	AC380V/400V	DC220V/230V	AC380V/400V	DC220V/230V
Rated operating current	0.3A	0.15A	1A	0.15A

Wiring diagram:



State of circuit breaker in "OFF" position

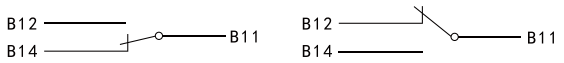
State of circuit breaker in "ON" position

TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

● Alarm contact (left installed and right installed)

Resistive current Ith	3A
Rated operating current Ie	Same as aux. contact

Wiring diagram:



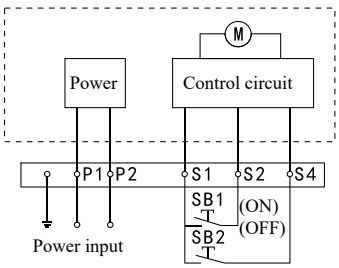
State of circuit breaker in "Trip" (Alarm) position

State of circuit breaker in "OFF" or "ON" position

8.2 Product External Accessories

● Motor mechanism:

This accessory is installed on the panel of circuit breaker to electrically control the ON, OFF, and re-trip operations of circuit breaker remotely, suitable for automation control application. The outline dimensions of motor mechanism see Table 10.

Input voltage	AC220V/230V, AC380V/400V
Wiring diagram	

Description:
P1 and P2 are external power inputs
SB1 and SB2 are operation buttons (provided by user)

Note: The wiring diagram of the internal accessory of motor mechanism is marked in the dashed box.

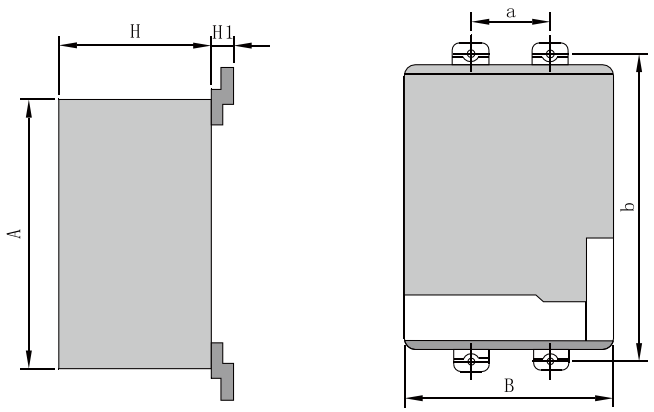


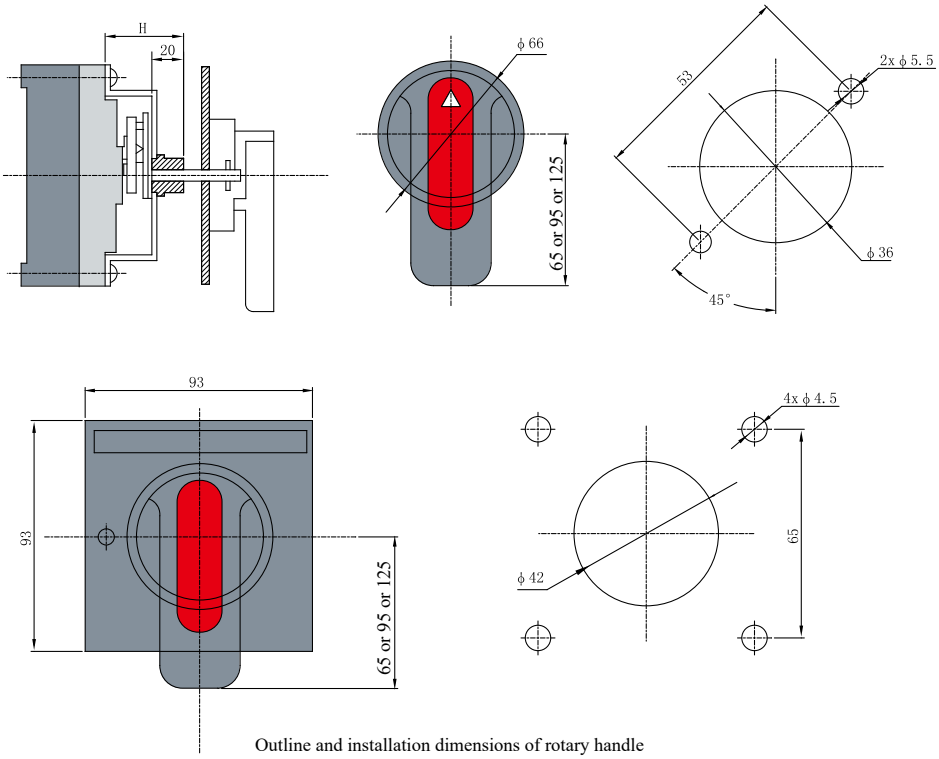
Table 10

Model	A	B	H	H1	a	b
TGM3L-125	116	90	77	22	30	129
TGM3L-250	116	90	77	17	35	126
TGM3L-400	176	130	115	24	44	194
TGM3L-630/800	176	130	115	27	70	243

TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

● Manual mechanism

The outline and installation dimensions of rotary handle see Table 11

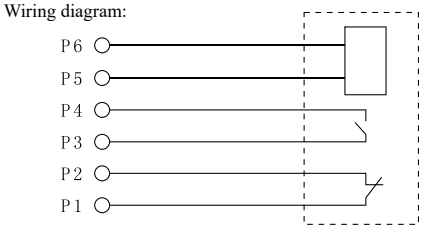


Outline and installation dimensions of rotary handle

Table 11

Model & Spec.	TGM3L-125	TGM3L-250	TGM3L-400	TGM3L-630/800
Installation dimensions (H)	61	59	87	97

● Leakage alarm module:

Input voltage	AC220/230V、AC380/400V、DC24V
	Wiring diagram:  Description: P5-P6: Input power; P1-P2, P3-P4: Contact capacity AC230V, 5A. Note: The wiring diagram of the internal accessory of leakge alarm module is marked in the dashed box.

TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

9 Outline and Installation Dimensions

9.1 The outline and installation dimensions of the product see Table 12 and Fig. 1

Table 12

Model	Number of poles	Outline dimensions (mm)											
		L	L1		L2	L4	L5	W	W1	W2	H	H1	H2	H3
			Non-zero flashover	Zero flashover										
TGM3L-125L	3	151.5	253	268	132	8	164	93	30	18	99	65	25	3
	4							123						
TGM3L-125M	3							93			116	82	28	
	4							123						
TGM3L-125H	3							93						
	4							123						
TGM3L-250L	3	165	300	315	146	12	180	107	35	23.5	100	69	25	4
	4							142						
TGM3L-250M	3							107			116	85	23	
	4							142						
TGM3L-250H	3							107						
	4							142						
TGM3L-400L	3	257	465	493	224	13	285	150	48	33	150	99	39	5
	4							198						
TGM3L-400M	3							150						
	4							198						
TGM3-400H	3							150						
	4							198						
TGM3L-630L	3	281	496	518	243	15	303	212	70	45	155	103	40	6
	4							282						
TGM3L-630M	3							212						
	4							282						
TGM3L-630H	3							212						
	4							282						
TGM3L-800L	3	281	496	518	243	15	303	212	70	45	155	103	40	6
	4							282						
TGM3L-800M	3							212						
	4							282						
TGM3L-800H	3							212						
	4							282						

TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

Table 12, continued

Model	Number of poles	Outline dimensions (mm)											Installation dimensions (mm)		
		H4	H5	H6	H7	A	B	C	D	E	F	G	L3	W3	φd
TGM3L-125L	3	25	3	/	78	96	66	33	32	28	16	30	129	30	Φ4.5
	4													60	
TGM3L-125M	3	28			97									30	
	4													60	
TGM3L-125H	3													30	
	4													60	
TGM3L-250L	3	25	4	4	79	97	67	31	37	33	14	35	125	35	Φ5
	4													70	
TGM3L-250M	3	23			95									35	
	4													70	
TGM3L-250H	3													35	
	4													70	
TGM3L-400L	3	38	2.5	5	114	155	109	46	46	58	20	44	194	44	Φ8
	4											94		94	
TGM3L-400M	3											44		44	
	4											94		94	
TGM3-400H	3											44		44	
	4											94		94	
TGM3L-630L	3	41	5	6	121	175	115	66	72	66	33	70	243	70	Φ7
	4													140	
TGM3L-630M	3													70	
	4													140	
TGM3L-630H	3													70	
	4													140	
TGM3L-800L	3	41	5	6	121	175	115	66	72	66	33	70	243	70	Φ7
	4													140	
TGM3L-800M	3													70	
	4													140	
TGM3L-800H	3													70	
	4													140	

TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

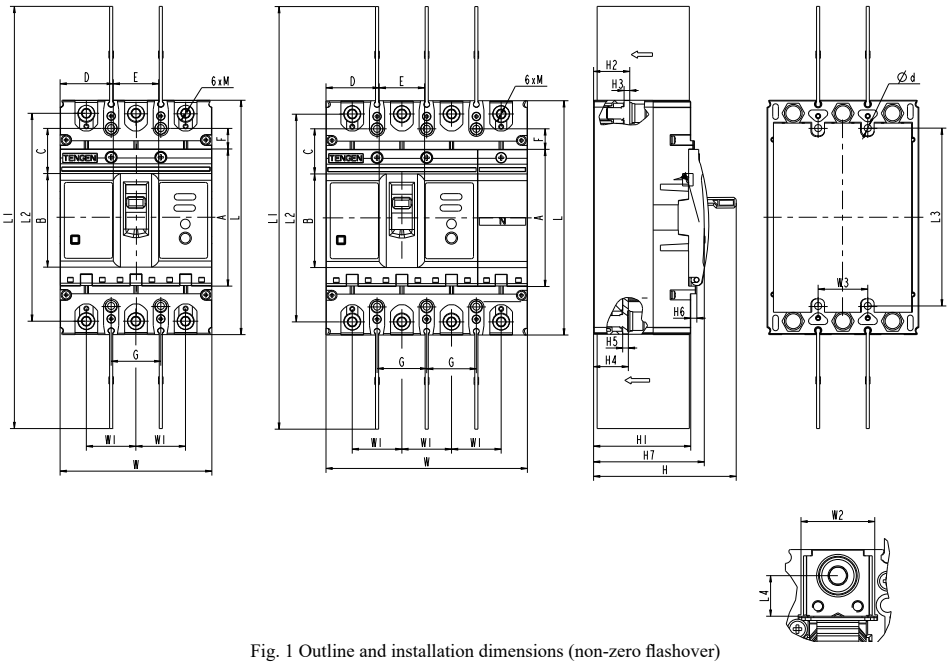


Fig. 1 Outline and installation dimensions (non-zero flashover)

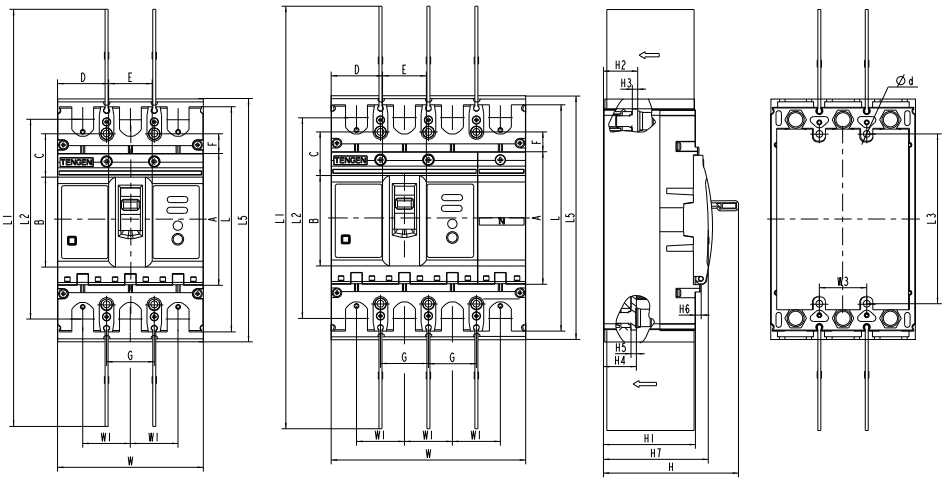


Fig. 2 Outline and installation dimensions (zero flashover)

TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

9.2 The outline and installation dimensions of the front-panel plug-in type see Fig. 3 and Table 13:

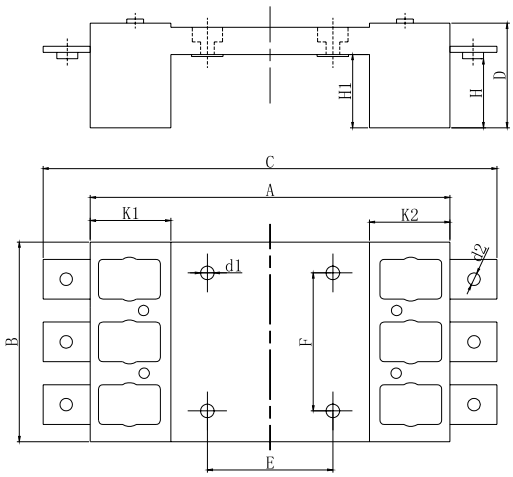
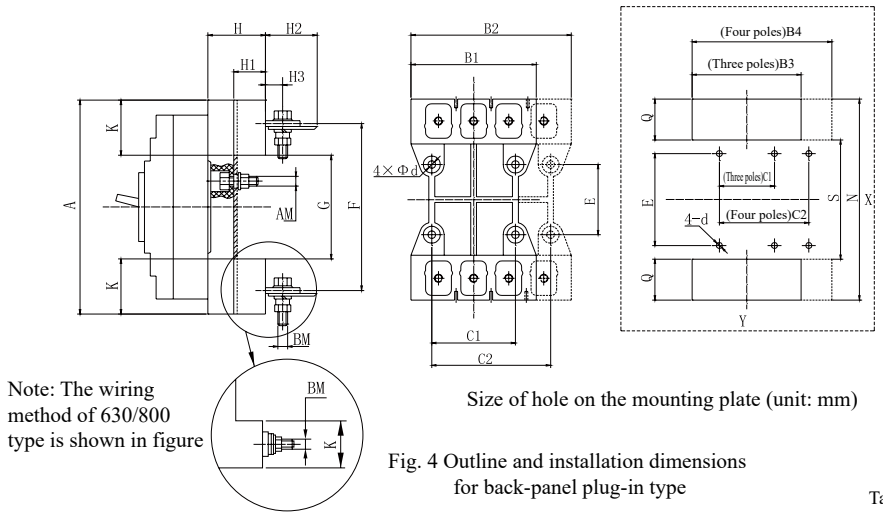


Fig. 3 Front-panel plug-in type outline and installation dimensions

Table 13

Model & Spec.	Installation dimensions											
	A	B	C	D	E	F	H	H1	K1	K2	d1	d2
TGM3L-125	172	96	217	50	60	66	13	35	38	38	7	Φ8
TGM3L-250	183	110	261	51.5	64	70	42.5	35	44	44	7	Φ8
TGM3L-400	276	150	352	80	135	115	31	Flat	Flat	Flat	8.5	Φ11
TGM3L-630/800	305	210	409	87	144	90	16	61	62	62	11	Φ13

9.3 The outline and installation dimensions of the back-panel plug-in type see Fig. 4 and Table 14:



Note: The wiring method of 630/800 type is shown in figure

Size of hole on the mounting plate (unit: mm)

Fig. 4 Outline and installation dimensions for back-panel plug-in type

Table 14

Model & Spec.	Outline and installation dimensions (mm)																			
	A	B1	B2	C1	C2	E	F	G	K	H	H1	H2	N	S	Q	B3	B4	AM	BM	4-d
TGM3L-125	168	91	125	60	90	56	132	92	38	50	33	28	178	82	48	101	135	M6	M8	Φ6.5
TGM3L-250	186	107	145	70	105	54	145	94	46	50	33	37	196	84	56	117	155	M6	M8	Φ6.5
TGM3L-400	280	149	200	60	108	129	224	170	55	60	38	46	290	160	65	159	210	M8	M12	Φ8.5
TGM3L-630/800	305	210	280	90	162	146	242	181	62	87	60	22	315	171	72	220	290	M10	M14	Φ11

TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

10 Ordering Notice

Please specify the following information when ordering:

a) The model, name, and number of poles of the circuit breaker.

b) The rated current of the circuit breaker.

c) Rated residual operating current and breaking time.

d) The accessory name, specification, and combination code of the circuit breaker; When the undervoltage release and shunt release are used, the operating voltage (or control power supply voltage) shall be specified.

e) Purpose: For power distribution (default: power distribution), motor protection (indicated by 2).

f) Quantity.

For example: To order TGM3L-125, three-pole four-wire, circuit breaker with A type, L type breaking capacity for power distribution protection, complex release, rated current 100A, rated residual operating current 100mA/300mA/500mA, non-delay 0.2s, 200 units, please specify TGM3L-125L/3N300A 100A 100mA/300mA/500mA 0.2s 200 units.

For special requirements for circuit breakers, please contact the manufacturer.

11 Quick Selection Example

TGM3L-125L/3N300A 125A 50/200/300mA 0.2s:

To order a TGM3L series 125A frame, 35kA (standard type), rated current 125A three-pole four-wire (that is 3P+N) zero line without protection, circuit breaker for thermal magnetic power distribution protection, residual operating current 50/200/300mA three-gear adjustable, non-delay action type ≤ 0.2s circuit breaker.

TGM3L-125M/33002 125A 300mA Non-adjustable 0.2s:

To order a TGM3L series 125A frame, 50kA (middle breaking type), rated current 125A three-pole, circuit breaker for thermal magnetic motor protection, the residual operating current 300mA non-adjustable, non-delay type operation time ≤ 0.2s circuit breaker.

TGM3L–125L/3N300A 125A 100/200/300mA 0.3/0.7/0.9s:

Order a TGM3L series 125A frame, 35kA (standard type), rated current 125A three-pole four-wire (that is 3P+N), zero line without protection, circuit breaker for thermal magnetic power distribution protection, residual operating current 100/200/300mA three-gear adjustable, delay type maximum operating time 0.3/0.7/0.9s three-gear adjustable circuit breaker.

Note: If special customized products are required, please contact our company.

TGM3L Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magentic A/AC Type

12 TGM3L Quick Selection Table

TGM3L	–	A	125	L	Z	/	4	3	10	2	A	F	I	125A	100/300/500mA	0.4s	AC230V	B	W	Plateau	Other
Product model		Residual current operation type	Frame rated current	Breaking capacity	Operation method		Number of poles	Release type	Internal accessory	Purpose	N pole code	Additional information	Alarm module	Rated current	Residual operating current	Purpose	N pole code	Additional information	Alarm module	Rated current	Residual operating current
TGM3L Moulded Case Circuit Breaker with Earth Leakage Protection		Default: AC type Code A: A type	125: 125A	L: Standard type	Default: Operation directly		3-Three poles	2: Short circuit protection	00: No accessory 10: Shunt release 20: Aux. contact 30: Undervoltage release 40: Shunt + Aux.	Default: Power distribution protection	A: Three protective poles, the zero line is disconnected not together with other poles	F: Prepaid	I: Leakage alarm and trip	16A 800A	30mA/50mA/75mA/100mA/200mA/300 mA/ 400mA/500mA/600 mA/ 800mA/1000mA	Non-delay: 0.2S 0.1S	AC380/400V AC220/230V DC220V DC110V DC24V	Default: Fixed type front-panel	No code-with flashover distance	Default: Conventional application	Handle lock
			250: 250A	M: Middle type	Z: Operation via rotary handle		3N: 3P+N	3: Overload + Short circuit	50: Shunt + Undervoltage 60: Two sets of aux. contacts 70: Undervoltage + Aux. 98: Alarm contact	Prod2: Motor protectionuet	B: Three protective poles, the zero line is disconnected together with other poles		III: Leakage alarm and non-trip		30mA only for 125A and 250A frames; No 30mA product for the delay type switch	Delay type: 0.3/0.4/ 0.5/0.6/ 0.7/0.8/ 0.9/1S	Multiple accessory voltages are described seperately if any (for example: shunt AC230V, undervoltage AC400V)	B: Fixed type back-panel	W-zero flashover	Plateau Damp and heat Environmental protection Salt spray Low temperature	
			400: 400A	H: High breaking type	P: Operation via motor		4: 4 poles		18: Shunt + Alarm 28: Aux. + Alarm 38: Undervoltage + Alarm 48: Shunt + Alarm + Aux.		C: Four protective poles, the zero line is disconnected together with other poles		No code: No this accessory		Three gears adjustable can be selected or any fixed gear is selected	Any adjustable three gears are selected or one fixed gear		C: Plug-in type back-panel			
			630: 630A						68: Two sets of aux.+ alarm 78: Undervoltage + Aux. + Alarm		D: Four protective poles, the zero line is disconnected not together with other poles							F: Plug-in type front-panel			
			800: 800A																		