

TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type



- 1 Switch body
- 2 Shunt release (selected and purchased by client)
- 3 Undervoltage release (selected and purchased by client)
- 4 Alarm contact (selected and purchased by client)
- 5 Aux. contact (selected and purchased by client)
- 6 Operation via rotary handle (selected and purchased by client)
- 7 Mechanical interlock of mechanism (selected and purchased by client)
- 8 Motor mechanism (selected and purchased by client)
- 9 Plug-in type (selected and purchased by client)
- 10 Phase partition (standard)
- 11 Front-panel wiring transition plate (selected and purchased by client)
- 12 Back-panel wiring (selected and purchased by client)
- 13 Leakage alarm module (selected and purchased by client)



TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type

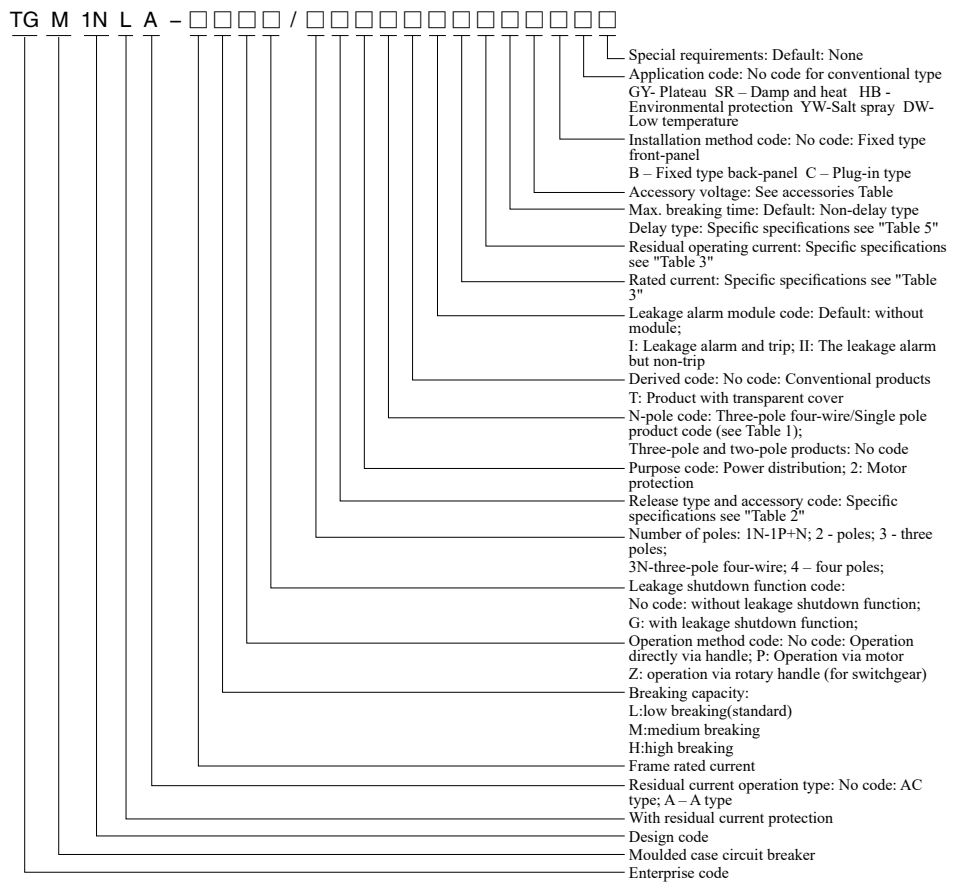
1 Overview

TGM1NLA series moulded case circuit breaker is a new circuit breaker developed using the international advanced technology platform, and the product is used in the AC 50/60Hz circuit with the rated operating voltage 690V and below for power distribution protection, and can also be used as infrequent conversion of the line and infrequent start of the motor. The product has advantages of exquisite appearance, compact size, convenient With maintenance, and superior performance. With its excellent performance and ultra-high cost performance, it can fully replace the M1 series products on the market.

Certification: CB, CE
Standard: IEC 60947-1, IEC 60947-2



2 Type Designation



Note: For product with transparent cover, the 3P+N/4P product of 125/250/400A frame is only provided

Table 1

Code	Description
A	N pole is not equipped with an overcurrent trip element, and the N pole is always closed.
B	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)
C	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)
D	N pole is equipped with an overcurrent trip element, and the N pole is always closed.

TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type

3 Working and Operating Conditions

Ambient temperature	Normal working temperature -5°C~+40°C, ultimate working temperature -35°C ~ +70°C; if the temperature is below -5°C or higher than +40°C, derating is required according to the catalog requirements
Installation category	Main circuit: III; other aux. circuits: II
Pollution degree	3
Altitude	2000m • Derating is required according to the catalog requirements when more than 2000m
Atmospheric conditions	The relative humidity does not exceed 50% at the ambient temperature of +40°C, and higher relative humidity can be allowed at lower temperatures • For example, 90% at 20°C; special measures should be taken for condensation produced due to temperature changes
Shock vibration	The circuit breaker passes the test specified in GB/T2423.10 and can bear mechanical vibration with the tolerable frequency 2Hz~13.2Hz, the displacement ±1mm, the frequency 13.2Hz~100Hz, and the acceleration ±0.7g
Protection grade	IP20 (direct operation) IP40 (with motor mechanism) IP50 (with rotary handle)



Accessory name	Accessory code		Accessory installation and lead mode					
	Single magnetic release	Thermal magnetic release	TGM1NL-125/160		TGM1NL-250/320		TGM1NL-400/630/800	
			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. 1P+N/2P product cannot be equipped with the internal accessories.

TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type

Basic parameters

Frame rated current (A)	125		160		250		320		400		630		800			
Number of poles	1P+N、2P、3P、3P+N、4P		1P+N、2P、3P、3P+N、4P		1P+N、2P、3P、3P+N、4P		1P+N、2P、3P、3P+N、4P		3P、3P+N、4P		3P、3P+N、4P		3P、3P+N、4P			
Frequency (Hz)	50/60															
Rated operating voltage U _e (V)	1P+N、2P		220/230/240		220/230/240		220/230/240		220/230/240		380/400/415		380/400/415		380/400/415	
	3P、3P+N、4P		380/400/415		380/400/415		380/400/415		380/400/415							
Rated insulation voltage U _i (V)	1P+N、2P		690		690		690		690		800		800		800	
	3P、3P+N、4P		800		800		800		800							
Rated impulse withstand voltage U _{imp} (kV)	8															
Rated operating current I _n (A)	16、20、25、30、32、40、50、60、63、65、70、75、80、90、100、110、125		16、20、25、30、32、40、50、60、63、70、75、80、100、125、140、150、160		100、125、140、150、160、170、180、200、225、250		100、125、140、150、160、170、180、200、225、250、270、280、300、315、320		200、225、250、280、300、315、320、350、380、400		200、225、250、280、300、315、320、350、380、400、450、500、550、600、630		400、450、500、550、630、700、800			
Breaking capacity	L	M	L	M	L	M	L	M	L	M	L	M	L	M		
Rated ultimate short circuit breaking capacity I _{cs} (kA)	35	50	35	50	35	50	35	50	50	75	50	75	50	75		
Rated run short circuit breaking capacity I _{rs} (kA)	26	36	26	36	26	36	26	36	36	50	36	50	36	50		
Isolation function	Yes (2P, 3P, 4P)		Yes (2P, 3P, 4P)		Yes (2P, 3P, 4P)		Yes (2P, 3P, 4P)		Yes (3P, 4P)		Yes (3P, 4P)		Yes (3P, 4P)			
Use category	Class A															
Flashover distance (mm)	≤50		≤50		≤50		≤50		≤100		≤100		≤100			
Mechanical life	With maintenance		40000		40000		40000		40000		20000		20000		10000	
	Without maintenance		20000		20000		20000		20000		10000		10000		8000	
Electrical life	AC415V In		10000		10000		10000		10000		8000		8000		7500	
Rated residual operating current value I _{Δn} (mA)	Non-delay type		30/50/75/100/150/200/300/400/500/600/800/1000		30/50/75/100/150/200/300/400/500/600/800/1000		30/50/75/100/150/200/300/400/500/600/800/1000		30/50/75/100/150/200/300/400/500/600/800/1000		30/50/75/100/150/200/300/400/500/600/800/1000		30/50/75/100/150/200/300/400/500/600/800/1000		50/75/100/150/200/300/400/500/600/800/1000	
	Delay type		50/75/100/150/200/300/400/500/600/800/1000		50/75/100/150/200/300/400/500/600/800/1000		50/75/100/150/200/300/400/500/600/800/1000		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		50/75/100/150/200/300/400/500/600/800/1000	

Accessory information

Direct operation via handle	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Extended rotary handle	□	□	□	□	□	□	□	□	□	□	□	□	□	□
Motor mechanism	□	□	□	□	□	□	□	□	□	□	□	□	□	□
Shunt release	□	□	□	□	□	□	□	□	□	□	□	□	□	□
Undervoltage release	□	□	□	□	□	□	□	□	□	□	□	□	□	□
Aux. contact	□	□	□	□	□	□	□	□	□	□	□	□	□	□
Alarm contact	□	□	□	□	□	□	□	□	□	□	□	□	□	□
Fixed type front-panel	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Fixed type back-panel	□	□	□	□	□	□	□	□	□	□	□	□	□	□
Plug-in type front-panel (optional not for 4P product)	□	□	□	□	□	□	□	□	□	□	□	□	□	□
Plug-in type back-panel	□	□	□	□	□	□	□	□	□	□	□	□	□	□
Transition busbar	□	□	□	□	□	□	□	□	□	□	□	□	□	□
Phase partition	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Note: There is TGM1NL-630 large-volume frame product, and its outline dimensions are same as those of TGM1NL-800 frame.
 For more information, please contact the local sales personnel.

□ Optional ■ Standard

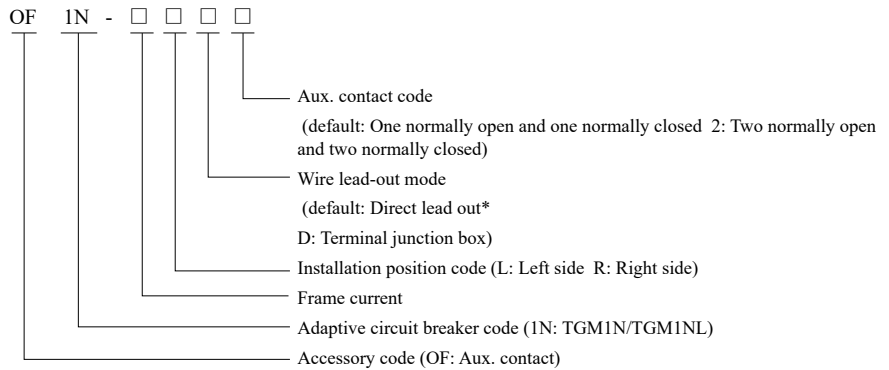
TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type

Internal accessory code						
OF	1N	-	125	L	D	A2
Accessory code	Adaptive circuit breaker code		Frame current code	Installation position	Wire lead-out mode	Voltage grade
OF: Aux. contact SD: Alarm contact MN: Undervoltage release MX: Shunt release	1N:TGM1N /TGM1NL		63, 125, 160, 250, 320, 400, 630, 800, 1250	L: Left R: Right	Default: Direct lead out D: Terminal junction box	Default: No A1: AC220/230/240V A2: AC380/400/415V D1: DC24V D2: DC110V D3: DC220V

3.1 Aux. contact OF



- It is an accessory connected to the auxiliary circuit of circuit breaker to remotely indicate the ON or OFF / Trip state of the circuit breaker.



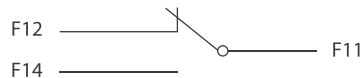
*Notes: 160 frame accessory shall be selected for TGM1NL-125 frame;

The default value of the direct wire lead-out length is 50cm; if other lengths are required, please specify it when ordering.

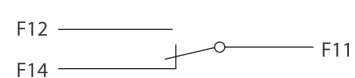
Example: The code of TGM1N series 250 frame right aux. (1ON1OFF) with a terminal box is as follows: OF1N-250RD2.

It is an accessory connected to the auxiliary circuit of circuit breaker to remotely indicate the ON or OFF state of the circuit breaker.

• Wiring diagram



State of the circuit breaker in the "OFF" position



State of the circuit breaker in the "ON" position

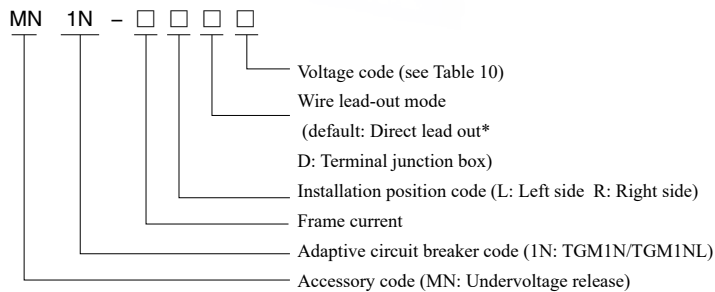
• Electrical characteristics

Table 13

Frame rated current	Inm<320A		Inm≥400A	
Conventional current Ith	3A		6A	
Usage category	AC-15	DC-13	AC-15	DC-13
Rated operating current	0.3A	0.15A	1A	0.15A

TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type

3.2 Undervoltage release MN



*Notes: 160 frame accessory shall be selected for TGM1NL-125 frame;

The default value of the direct wire lead-out length is 50cm; if other lengths are required, please specify it when ordering.

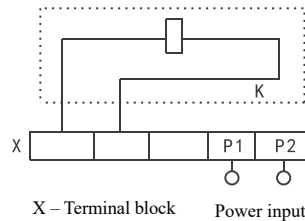
Example: The code of left undervoltage AC220V of TGM1N series 250 frame (direct wire lead-out) is as follows: MN1N-250LA1.

It is used to realize the undervoltage protection function of circuit breaker, to disconnect the circuit breaker when the power voltage is too low for protection of electric equipment

- When 35%-70% rated operating voltage, the undervoltage release can trip the circuit breaker reliably;
- When 85%-1100% rated operating voltage, the undervoltage release can ensure that the circuit breaker is closed;
- When the rated operating voltage is below 35%, the undervoltage release can prevent the circuit breaker from being closed.

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

• Wiring diagram



*Note:

The wiring diagram of internal accessory of circuit breaker is marked in the dashed box.

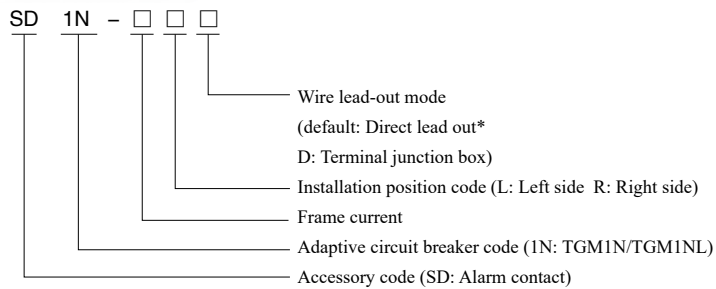
• Electrical characteristics

Table 14

Product model	Starting current value (mA)		Power consumption (W)	
	AC400V	AC230V	AC400V	AC230V
TGM1N-63/125	9.88	15.25	4.22	3.65
TGM1N-160 TGM1NL-125/160	9.95	15.55	4.55	3.82
TGM1N-250/320 TGM1NL-250/320	10.88	15.83	4.89	3.92
TGM1N-400/630 TGM1NL-400/630	9.5	11.2	3.8	2.83
TGM1N-800 TGM1NL-800	5.4	7.75	2.7	1.85
TGM1N-1250	5.4	7.75	2.7	1.85

TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type

3.3 Alarm contact SD



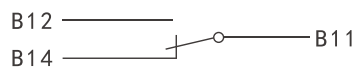
*Notes: 160 frame accessory shall be selected for TGM1NL-125 frame;

The default value of the direct wire lead-out length is 50cm; if other lengths are required, please specify it when ordering.

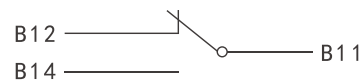
Example: The code of left alarm of TGM1N series 250 frame (direct wire lead-out) is as follows: SD1N-250L.

It is connected to the auxiliary circuit of circuit breaker to indicate that the circuit breaker is in the "OFF", "ON" or Trip state.

• Wiring diagram



State of circuit breaker in the trip (alarm) position



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

• Electrical characteristics

Table 15

Frame rated current	$I_{nm} \leq 320A$		$I_{nm} \geq 400A$	
Resistive current I_{th}	3A		6A	
Usage category	AC-15	DC-13	AC-15	DC-13
Rated operating current	0.3A	0.15A	1A	0.15A

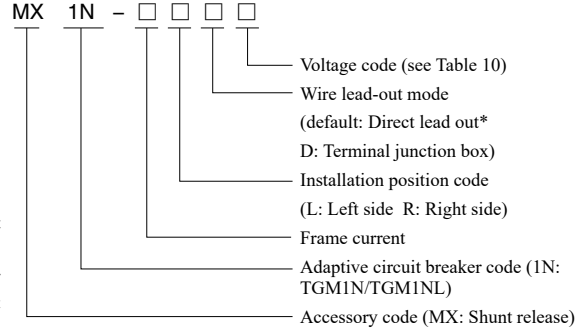
TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type

3.4 Shunt release MX



It is used to remotely disconnect the circuit breaker

- At 70%-110% of the rated control power voltage, the shunt release shall trip the circuit breaker reliably.

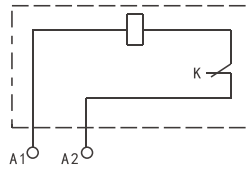


*Notes: 160 frame accessory shall be selected for TGM1NL-125 frame;

The default value of the direct wire lead-out length is 50cm; if other lengths are required, please specify it when ordering.

Example: The code of left shunt DC220V of TGM1N series 250 frame (direct wire lead-out) is as follows: MX1N-250LD3.

Wiring diagram



Power input

*Note:

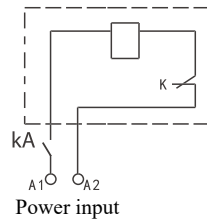
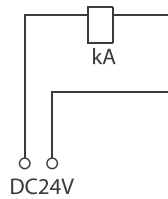
K – The micro switch connected to the coil in series in the shunt release is a normally-closed contact; when the circuit breaker is OFF, this contact will open automatically, and is closed when in ON state.

When the control voltage is DC24V, the maximum length of copper wire shall meet the following requirements:

Table 16

Rated control power voltage U_c (DC24V)	Sectional area of wire	
	1.5mm ²	2.5mm ²
100% U_c	150m	250m
85% U_c	100m	160m

If failed to meet the requirements of the above table, the figure below is recommended in the design of the shunt release control circuit:



Note: kA is a DC24V intermediate relay, and the contact current capacity is 1A.

Electrical characteristics

Table 17

Product model	Starting current value (mA)				Power consumption (W)			
	AC400V	AC230V	DC220V	DC24V	AC400V	AC230V	DC220V	DC24V
TGM1N-63/125	0.32	0.42	0.34	4.22	93.8	70	85.5	86.2
TGM1N-160 TGM1NL-125/160	0.35	0.45	0.37	4.52	95.8	73	90.7	91.2
TGM1N-250/320 TGM1NL-250/320	0.42	0.48	0.39	4.51	112	68.8	90.7	85.3
TGM1N-400/630 TGM1NL-400/630	0.48	0.51	0.41	4.51	132	78.3	94.4	110
TGM1N-800 TGM1NL-800	0.54	0.85	1.21	5.51	163	153	158	120
TGM1N-1250	0.85	1.31	1.72	5.82	185	173	166	130

TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type

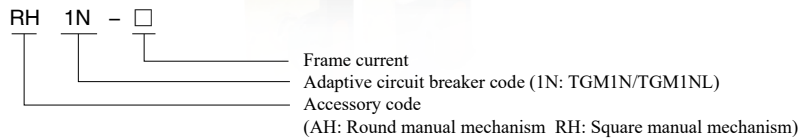
3.5 External accessory code

Table 18

CD2	1N	-	125	A2	
Accessory code	Adaptive circuit breaker code		Frame current code	Voltage grade	Number of poles code
RH: Round manual mechanism	1N: TGM1N /TGM1NL		63, 125, 160, 250, 320, 400, 630, 800, 1250	A1: AC220/230/240V A2: AC380/400/415V D1: DC24V D2: DC110V D3: DC220V	Two poles: 2P Three poles: 3P Four poles: 4P
AH: Square manual mechanism					
CD2: AC and DC universal motor mechanism					
GP: Front-panel wiring transition plate					
GB: Phase partition					
BH: Back-panel wiring					
LS: Mechanical interlock					

3.6 External accessories

3.6.1 Manual mechanism RN/AH



*Note: 160 frame accessory shall be selected for TGM1NL-125 frame.

Example: The code of the round manual mechanism of TGM1N series 250 frame is as follows: AH1N-250.

The circuit breaker is operated by rotating the handle, and the rotary handle that comply with the ergonomic design is used to make more flexible operation of circuit breaker

There are two types of manual mechanism for TGM1N series circuit breaker:

- Direct rotary handle (round manual mechanism, square manual mechanism)
- Extended rotary handle (round extended manual mechanism, square extended manual mechanism)

Outline dimensions of manual mechanism

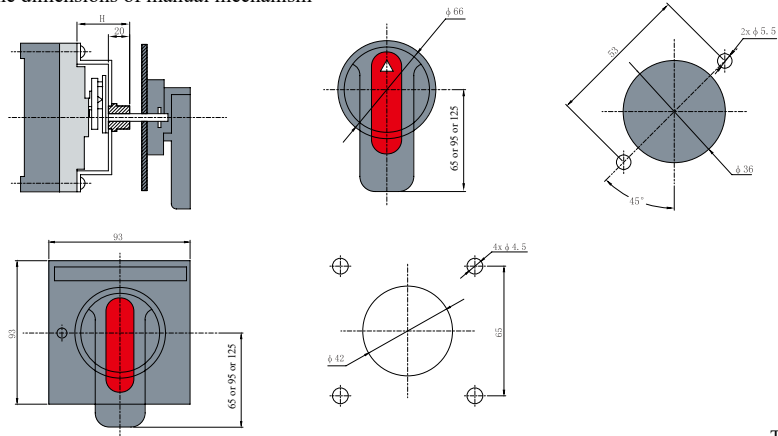


Table 19

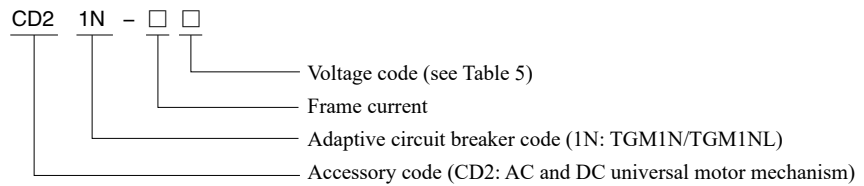
Model & Spec.	TGM1N-63/125	TGM1N-160	TGM1N-250/320	TGM1N-400/630	TGM1N-800
Installation dimension (H)	58	61	57	87	87

TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type

3.6.2 Motor mechanism CD2



It is used for remote electric power-on, power-off and retip, and automation control application of circuit breaker

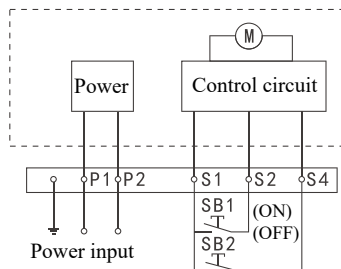


*Note: 160 frame accessory shall be selected for TGM1NL-125 frame.

The default lead-out length of the direct wire is 50cm, and other length shall be specified when ordering.

Example: The code of the motor mechanism AC380V of TGM1N series 250 frame is as follows: CD21N-250A2.

• Electrical Characteristics and Wiring Diagram



*Note:

The wiring diagram of internal accessories of the motor mechanism is marked in the dashed box.

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

P1 and P2 are external power inputs

SB1 and SB2 are operation buttons (provided by user)

• Outline and Installation Dimensions

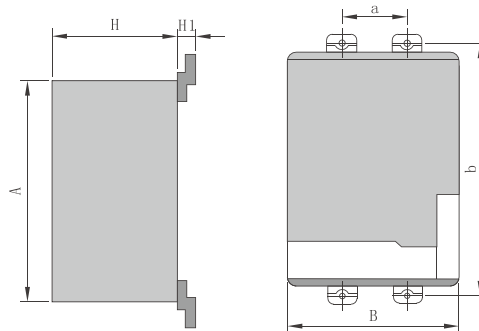
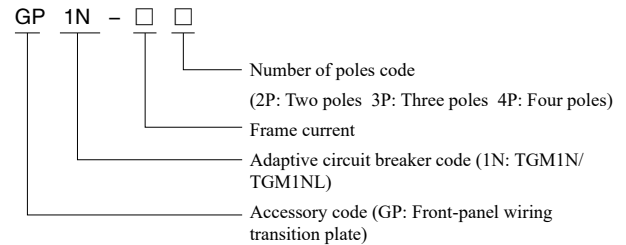


Table 20

Model	A	B	H	H1	a	b
TGM1N-63/125	102	74	79	15	25	110
TGM1N-160 TGM1NL-125/160	116	90	77	22	30	129
TGM1N-250/320 TGM1NL-250/320	116	90	77	17	35	126
TGM1N-400/630 TGM1NL-400/630	176	130	115	24	44	194
TGM1N-800 TGM1NL-800	176	130	115	27	70	243

TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type

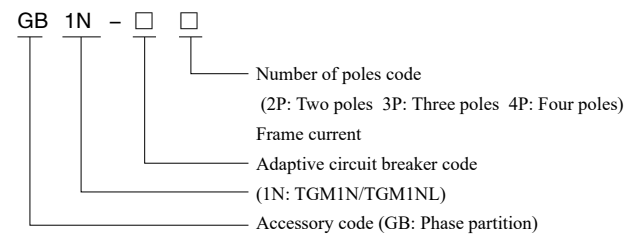
3.6.3 Front-panel wiring transition plate GP



It is used to ensure more flexible wiring mode of the circuit breaker. With this accessory added, the phase spacing is increased, and the safety between the lines is improved.

*Note: 160 frame accessory shall be selected for TGM1NL-125 frame.
Example: The code of the 3P transition plate of TGM1N series 250 frame is as follows: GP1N-2503P.

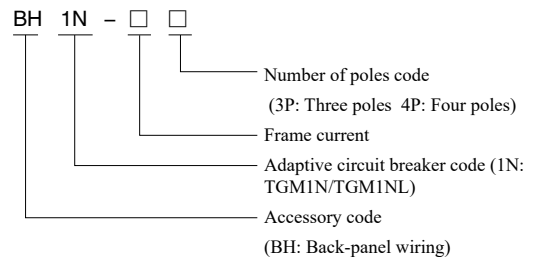
3.6.4 Phase partition GB



It can be used to enhance the insulation performance of the interphase conductor, and can be installed in the slot on the front side even when the switch is installed

*Note: 160 frame accessory shall be selected for TGM1NL-125 frame.
The phase partition is provided as standard configuration; for one circuit breaker, (two pieces for two-pole, four pieces for three-pole, and six pieces for four-pole).
Example: The code of the 3P phase partition of TGM1N series 250 frame is as follows: GP1N-2503P.

3.6.5 Back-panel wiring BH

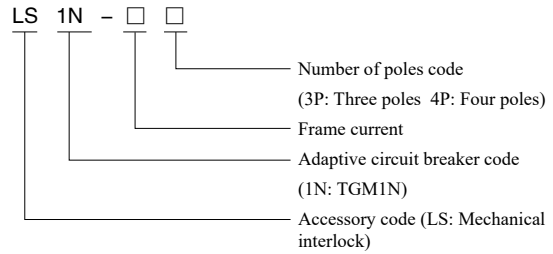


It is used to ensure more flexible wiring mode of circuit breaker; with this accessory added, the back-panel wiring connection can be realized

*Note: 160 frame accessory shall be selected for TGM1NL-125 frame.
Example: The code of the 3P back-panel of TGM1N series 250 frame is as follows: BH1N-2503P.

TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type

3.6.6 Mechanical interlock LS



It is used to realize the interlock of two circuit breakers and to prevent them from closing simultaneously

*Note: 160 frame accessory shall be selected for TGM1NL-125 frame.

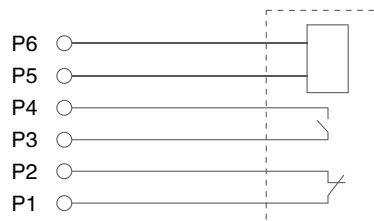
Example: The code of the 3P mechanical interlock of TGM1N series 250 frame is as follows: LS1N-2503P.

3.7 Leakage alarm module



The leakage alarm module is used to indicate an alarm through the light-emitting diode. When the light-emitting diode emits red light, this indicates that the system leakage exceeds the set value, at this time the normally open contact is converted into a normally closed state, and the normally closed contact is converted into a normally open state

- Input voltage: AC220/230V, AC380/400V, DC24V



Description: P5-P6: input power;
P1 and P2 are the common terminals, and P2 is a normally closed contact, P4 is a normally open contact; the contact capacity is 0.5A/AC250V.

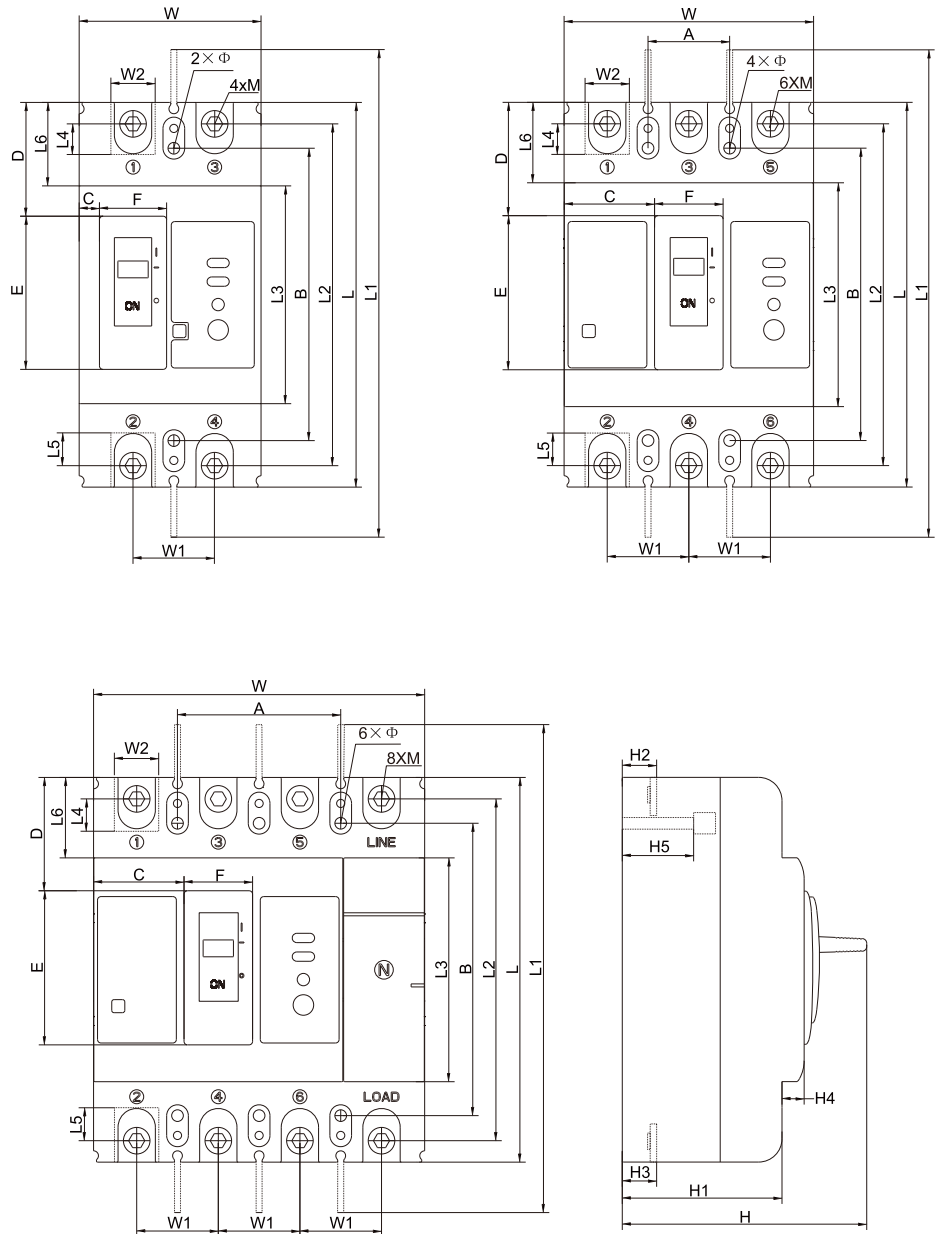
Note: The wiring diagram of the internal accessory of leakage alarm module is marked in the dashed box.

It is primarily used in some special applications to ensure the power supply can work continuously in the event of an emergency such as electric leakage; after receiving the leakage alarm signal, users can find out the reason of leakage fault appropriately according to the needs for troubleshooting.

TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type

4 Product Outline Dimensions

4.1 Product Outline and Installation Dimensions



TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type

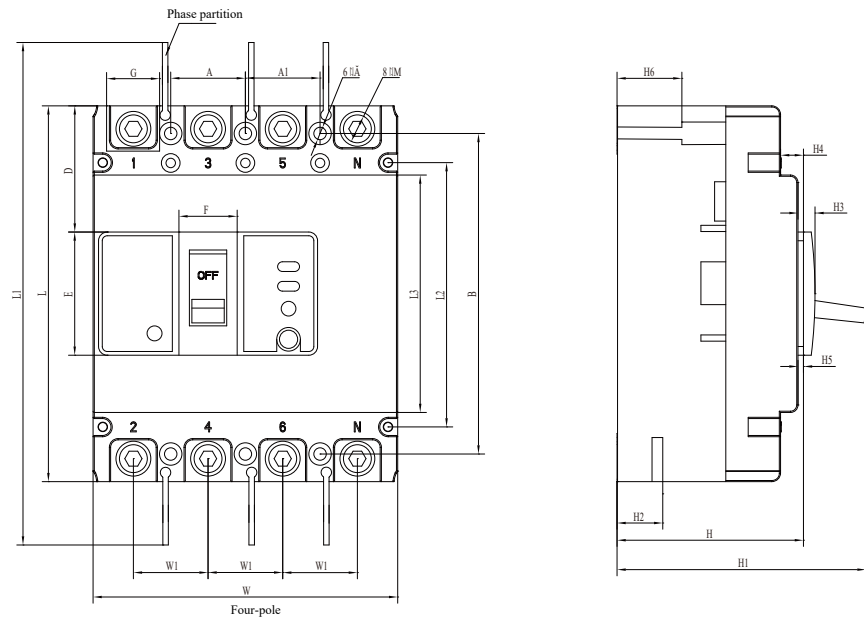
4.2 Size of hole on product handle and panel

Product spec.	Model	Number of poles	Outline dimensions (mm)					Size of hole on panel (mm)						
			W	L	L1	H	H1	C	D	E	F	L3	L6	H4
TGM1NL-125 /160	L	2P	62	151	265	103	64	3	41	69	26	97	27.5	12
		3P	93	151	265	103	64	33	41	69	26	97	27.5	12
		4P	123	151	265	103	64	33	41	69	26	97	27.5	12
TGM1NL-125 /160	M	2P	62	151	265	118	82	3	41	69	26	97	27.5	12
		3P	93	151	265	118	82	33	41	69	26	97	27.5	12
		4P	123	151	265	118	82	33	41	69	26	97	27.5	12
TGM1NL-250 /320	L	2P	78	165	302	103	69	9	49	66	29	97	35	10
		3P	107	165	302	103	69	39	49	66	29	97	35	10
		4P	142	165	302	103	69	39	49	66	29	97	35	10
TGM1NL-250 /320	M	2P	78	165	302	119	85	9	49	66	29	97	35	10
		3P	107	165	302	119	85	39	49	66	29	97	35	10
		4P	142	165	302	119	85	39	49	66	29	97	35	10
TGM1NL-400 /630	L, M	3P	150	257	469	154	98	46	71	110	59	155	51	15
		4P	198	257	469	154	98	46	71	110	59	155	51	15
TGM1NL-800	L, M	3P	210	280	497	160	103	75	83	105	60	176	52	15
		4P	280	280	497	160	103	75	83	105	60	176	52	15

Product spec.	Model	Number of poles	Wiring dimensions (mm)							Size of hole on panel (mm)				
			H2	H3	W1	W2	L2	L4	L5	M	A	B	Φ	H5
TGM1NL-125 /160	L	2P	25	25	30	18	133	8.5	8.5	M8	/	129	5	28
		3P	25	25	30	18	133	8.5	8.5	M8	30	129	5	28
		4P	25	25	30	18	133	8.5	8.5	M8	60	129	5	28
TGM1NL-125 /160	M	2P	29	29	30	18	133	8.5	8.5	M8	/	129	5	28
		3P	29	29	30	18	133	8.5	8.5	M8	30	129	5	28
		4P	29	29	30	18	133	8.5	8.5	M8	60	129	5	28
TGM1NL-250 /320	L	2P	25.5	24.5	35	26	147	13.8	13.8	M8	/	125.4	5	44
		3P	25.5	24.5	35	26	147	13.8	13.8	M8	35	125.4	5	44
		4P	25.5	24.5	35	26	147	13.8	13.8	M8	70	125.4	5	44
TGM1NL-250 /320	M	2P	21.5	21.5	35	26	147	13.8	13.8	M8	/	125.4	5	60
		3P	21.5	21.5	35	26	147	13.8	13.8	M8	35	125.4	5	60
		4P	21.5	21.5	35	26	147	13.8	13.8	M8	70	125.4	5	60
TGM1NL-400	L	3P	38.5	38	48	33	224	14.5	14.5	M10	44	194	8	67
		4P	38.5	38	48	33	224	14.5	14.5	M10	94	194	8	67
TGM1NL-400	M	3P	39.5	38	48	33	224	14.5	14.5	M10	44	194	8	67
		4P	39.5	38	48	33	224	14.5	14.5	M10	94	194	8	67
TGM1NL-630	L, M	3P	40.5	39.5	48	33	224	14.5	14.5	M10	44	194	8	67
		4P	40.5	39.5	48	33	224	14.5	14.5	M10	94	194	8	67
TGM1NL-800	L, M	3P	41	41	70	45	243	15.5	14.7	M12	70	243	7	70
		4P	41	41	70	45	243	15.5	14.7	M12	140	243	7	70

TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type

4.3 Outline and Installation Dimensions of TGM1NL Transparent Cover Products



	Front-panel wiring																						
	Number of poles	Outline dimensions (mm)																		Installation dimensions			
		W	L	H	W1	L1	L2	L3	H1	H2	H3	H4	H5	H6	E	F	D	G	M	A	A1	B	Φ
TGM1NL-125L	4P	122	151	75	31	256	106	96	95	27	7	10	3	30	50	23	50	18	M8	30	30	129	4.5
TGM1NL-125M	4P	122	151	92	30	256	106	96	111	29	7	10	3	25	50	23	50	18	M8	30	30	129	4.5
TGM1NL-250L	4P	142	165	75	35	300	110	96	95	26	7	6	3	44	50	23	52	23	M8	35	35	126	4.5
TGM1NL-250M	4P	142	165	90	35	300	110	96	110	23	7	6	3	60	50	23	52	23	M8	35	35	126	4.5
TGM1NL-400L、M	4P	198	257	107	48	470	193	175	152	39	8	10	3	47	91	56	82	32	M10	44	50	194	7

TGM1NLA Series Moulded Case Circuit Breakers with Earth Leakage Protection-Thermal Magnetic A Type

5 Ordering Notice

- Please fill in the relevant information in turn according to the product model table when ordering products.
 Example: To order TGM1NL circuit breaker, frame current 250A, breaking capacity 50kA, 4-pole B type, with shunt AC220V, rated current 200A non-delay type product, 200 units, please specify TGM1NL-250M/4310B 200A AC220V 200 units
- Product accessories can also be ordered separately, and can be selected according to the internal/external accessories model table
 Example: To order 250 frame, accessory voltage AC380V, left undervoltage release, 100 sets, please specify MN1N-250LA2 100 sets

6 Frame and rated current comparison table

Rated current (A) \ Frame current (A)	16	20	25	30	32	40	50	60	63	65	70	75	80	90	100	110	125	140	150	
125	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
160	•	•	•	•	•	•	•	•	•		•	•	•		•		•	•	•	
250															•		•	•	•	
320															•		•	•	•	
400																				
630																				
800																				

Rated current (A) \ Frame current (A)	16	20	25	30	32	40	50	60	63	65	70	75	80	90	100	110	125	140	150	
125	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
160	•	•	•	•	•	•	•	•	•		•	•	•		•		•	•	•	
250															•		•	•	•	
320															•		•	•	•	
400																				
630																				
800																				