OMICRON

OMICRON

COMPANY PROFILE

Is one of the national new high-tech enterprises integrated of researching, producing and selling water-proof electric, low-voltage electric and new energy electric products.

Established in 1992,OMICRON now is gradually becoming the influential electric manufacturer in the World after many years well development.With a great brand effect,OMICRON has the completed sales and service network with its products been exported to all over the world like Europe. Australia. American. Africa. Oceania. South east of Asia, and district of HongKong, Macaw,Turkey and Taiwan. OMICRON is awarded the title of Famous Export Brand.

OMICRON now has the factory area 60000 m2 and workers more than 600, including over 10 senior engineers, 30 professional technicists and 30 senior executives. Products pass the certification of CE, CB, UL, VDE, TUV, KEMA, SAA, SEMKO, ROHS, and China CCC as well as quality management system such as ISO9001,ISO14001,ISO45001,ISO5001.

Cooperated with domestic and foreign R&D institutions,OMICRON, successively developed more than 100 independent intellectual properties; some of them were successfully awarded the national patent for invention and utility models as its well performance.OMICRON now has been selected as provincial technical research and development center and patent demonstration enterprise by government.

OMICRON always adheres to the enterprise principle of "Scientific management, independent Innovation, Coordinating Collaboration and Cultural Brand", keep faith of "moral first" and fulfill the core value of "double-win cooperation with customers, creating profit for company owners, getting rich together with workers, building harmony for society" and fight for the mission of"make the dream of world famous electrical brand come true".

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OM1

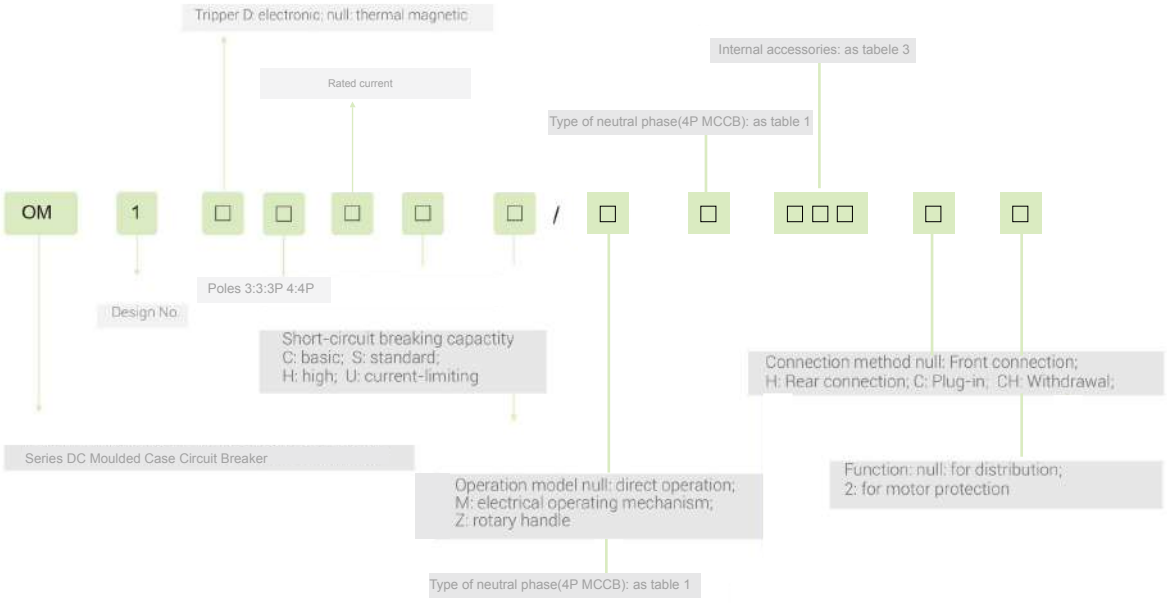
Series Moulded Case Circuit Breaker

OM1 Series Moulded Case Circuit Breaker

OM1 series moulded case circuit breaker(circuit breaker for short) is high-tech products in 21st century with advanced design, high performance, pleasant appearance and delicate dimension. Meanwhile, partial ones are intelligent controlled and developed with microelectronic technology.

It is complied with GB/T 1408.2<low-voltage switch device and controlling device low-voltage circuit breaker> and IEC60947-2 section 2<low voltage switch device and control device part II: low- voltage circuit breaker> and etc.

Product model & definition



Usage & Appliance

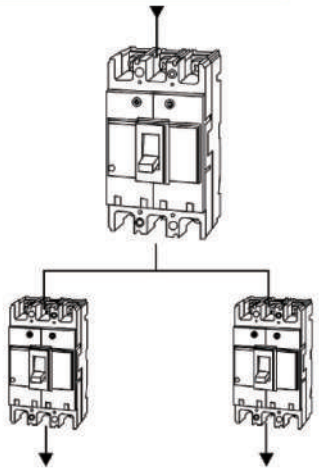
The circuit breaker is used in the electrical system of AC 50Hz, related voltage of up to 690V, rated current of up to 1600A to prevent the system from overload, short-circuit and under-voltage and to control the infrequent operation of motor.

Normal operation condition

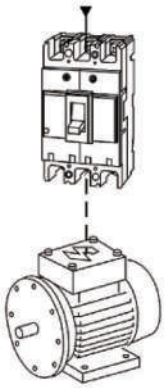
The circuit breaker could be used in the following working conditions:
1. Ambient air temperature not higher than +40℃ and not lower than -5℃.
2. Altitude no more than 2000m
3. The relative air humidity is not more than 50% in the max. at the temperature. The lowest monthly average temperature not higher than 25℃ in the most moist month and the max. relaative humidity should be no more than 90%.
4.Pollution degree: Grade 3. There is no explosion factor, corrosive metal and the gas destroying the insulation and the electric dust.
5. Installation type: III
6. The terminals of 1,3,5,N1 should be connected with the power supply and the terminals of 2,4,6,N2 should be connected with the load. Reverse wiring is forbidden.

OM1 Series Moulded Case Circuit Breaker

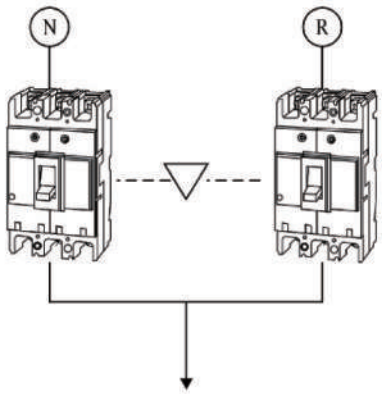
Low–voltage power distribution network



Control and protection of motor



Dual power changeover system



(table)1

Code	Type	Specification
A	A	N phase without overcurrent trip unit is normal open and do not make and break along with other 3 poles
B	B	N phase without overcurrent trip unit make and break along with other 3 poles

(table)2

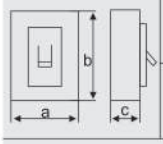
Code	Title	Description
1	Delay trip	The protection of overcurrent reverse time.
2	Instantaneous trip	Electromagnetic release of overcurrent instantaneous protection
3	Multiple trip	With the above two performances

(table)3

Inm (A)	Ⅰ		Ⅱ		Ⅲ		Note
	Code	Description	Code	Description	Code	Description	
63 100 250	0	Null	0~2	Pairs of auxiliary contacts	0~2	Pairs of alarm contacts	
	1	Shunt trip	0~1		0~1		
	2	Under–voltage trip	0~1		0~1		
400	0	Null	0~5		0~2		Ⅱ + Ⅲ ≤5
	1	Shunt trip	0~3		0~2		Ⅱ + Ⅲ ≤3
	2	Under–voltage trip	0~3		0~2		Ⅱ + Ⅲ ≤3
	3	Shunt trip & Under–voltage trip	0~1		0~1		Ⅱ + Ⅲ ≤1
630 800 1250 1600	0	Null	0~8		0~3		Ⅱ + Ⅲ ≤8
	1	Shunt trip	0~5		0~3		Ⅱ + Ⅲ ≤5
	2	Under–voltage trip	0~5		0~3		Ⅱ + Ⅲ ≤5
	3	Shunt trip & Under–voltage trip	0~3		0~2		Ⅱ + Ⅲ ≤3

OM1 Series Moulded Case Circuit Breaker

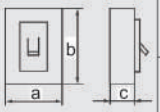
Main technical parameter

Inm(A)		63	100						250						
Model		OM13P0063S	OM13P0100C		OM13P0100S		OM13P0100H	OM13P0100U	OM13P0250C		OM13P0250S		OM13P0250H		OM13P0250U
Photo															
Rated current(A)		10,16,20,32,40,50,63 (75,100)	16,25,32,40,50,63,75,100 (125,160)						100,125,150,175,200,225,250						
Poles		3	3	4	3	4	3	4	3	3	4	3	4	3	4	3
Rated Insulation Voltage Ui(V)		AC600	AC690						AC690						
Arcing distance		≤50(0*)	≤50(0*)						≤50(0*)						
Rated ultimate/ service short-circuit breaking capacity(Ka)	AC690V	–	–		5/3		10/5	10/5	–		10/7		10/5		10/5
	AC400V	10/5	30/15		50/35		85/85	125/125	30/15		50/35		85/85		125/125
	AC230V	25/13	50/25		100/50		125/125	200/200	50/25		70/50		125/125		200/200
Operational performance (times)	ON	6000	6000						2000						
	OFF	8500	8500						7000						
Dimension(mm)	a	75	90	120	90	120	90	90	105	140	105	140	105		105
	b	130	155				216		165				240		
	c	68	68						68						
Weight (Kg)		0.75	1.0	1.3	1.1	1.4	1.8	1.8	1.5	1.9	1.5	1.9	2.6		2.6
Rated Operation Frequency(per hour)		120	120						120						

0 arcing distance: please specify when ordering if you require.

OM1 Series Moulded Case Circuit Breaker

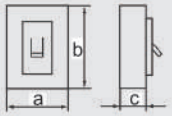
Main technical parameter

Inm(A)		400						630					
Model		OM13P0400C OM1D3P0400C		OM13P0400S OM1D3P0400S		OM13P0400H OM1D3P0400H	OM13P0400U OM1D3P0400U	OM13P0630C OM1D3P0630C		OM13P0630S OM1D3P0630S		OM13P0630H OM1D3P0630H	OM13P0630U OM1D3P0630U
Photo													
Rated current(A)		250,300,350,400						400,500,630					
Poles		3	4	3	4	3	3	3	4	3	4	3	3
Rated insulation voltage Ui(V)		AC690						AC690					
Arcing distance		≤100(0*)						≤100(0*)					
Rated ultimate/ service short-circuit breaking capacity (Ka)	AC690V	10/5		10/10		15/10	35/35	10/5		15/15		20/15	35/35
	AC400V	40/20		70/70		100/100	125/125	40/20		70/70		100/100	125/125
	AC230V	50/25		100/100		150/100	200/200	50/25		100/100		150/100	200/200
Operational performance (times)	ON	1000						500					
	OFF	4000						2500					
Dimension(mm)	a	140	185	140	185	140	140	210	280	210	280	210	210
	b	257				297		275				322	
	c	103				200		103				200	
Weight (Kg)		5.5	7.3	5.7	7.5	16.7	16.7	9.4	12.5	10.9	14.2	26.7	26.7
Rated Operation Frequency(per hour)		60						20					

*0" arcing distance: please specify when ordering if you require.

OM1 Series Moulded Case Circuit Breaker

Main technical parameter

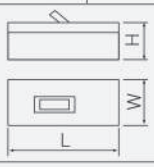
Inm(A)		800					
Model		OM13P0800C OM1D3P0800C		OM13P0800S OM1D3P0800S		OM13P0800H OM1D3P0800H	OM13P0800U OM1D3P0800U
Photo							
Rated current(A)		630,700,800					
Poles		3	4	3	4	3	3
Rated insulation voltage Ui(V)		AC690					
Arcing distance		≤100(0*)					
Rated ultimate/ service short-circuit breaking capacity(Ka)	AC690V	10/5		15/15		20/15	35/35
	AC400V	40/20		70/70		100/100	125/125
	AC230V	50/25		100/100		150/100	200/200
Operational performance (times)	ON	500					
	OFF	2500					
Dimension(mm) 	a	210	280	210	280	210	210
	b	275				322	
	c	103				200	
Weight (Kg)		9.9	13	11.4	15.7	27.3	27.3
Rated operation frequency(per hour)		20					

1. The protection current Ii of the OM1D3P0630/0800 magnetic trip (short circuit protection) can be adjusted by the user through an external knob, with four adjustable levels of 500%/800%/1100%/1400%, and is set to the 1100% In position at the factory.
2. There is no over-current release for neutral phase of 4P MCCB and thether-mal current is the same with other three phases

"0" arcing distance: please specify when ordering if you require.

OM1 Series Moulded Case Circuit Breaker

Main technical parameter

Inm(A)			1250	1600	
Model			OM13P1250	OM13P1600	
Photo					
Rated current			630, 700, 800, 1000, 1250	800, 1000, 1250, 1400, 1600	
Poles			3 / 4	3 / 4	
Rated working voltage			AC400,690	AC400,690	
Rated insulation voltage			AC1000	AC1000	
Rated ultimate/ breaking capacity Icu/kA	AC690V		25	30	
	AC400V		80	80	
Rated service/ breaking capacity Ics/kA	AC690V		20	20	
	AC400V		40	40	
Dimension		W	210 / 280	210 / 280	
		L	275	275	
		H	103	103	
Connection method	Front connection		☆	☆	
	Rear connection		☆	☆	
	Withdrawal connection		☆	☆	
Accessories	Internal	Undervoltage trip	☆	☆	
		Shunt trip	☆	☆	
		Auxiliary contact	☆	☆	
		Alarm contact	☆	☆	
	External	Electrical operating mechanism	☆	☆	
		Rotary handle	☆	☆	
Arcing distance mm			≤100	≤100	
Weight(Kg)			16 / 21	19.5 / 26	

OM1 Series Moulded Case Circuit Breaker

Theovercurrentprotectioncharacteristicsofcircuitbreakersforpowerdistribution-areshownin Table1 Theovercurrentprotectioncharacteristicsofcircuitbreakersfor-motorprotectionareshownin Table1 OM1 overcurrentprotectioncharacteristiccur-veisshowninfigurebelow
a-Thermaloverloadprotectioncharacteristicincoldstate
b-Thermaloverloadprotectioncharacteristicinthermalstate
c-Electromagneticreleaseprotectioncharacteristics

Overcurrent protection characteristics of circuit breakers for power distribution

(table)1

Rated current In(A)	Thermal tripper (ambient temperature +40℃)		The operating current of electromagnetic tripper(A)
	1.05 In non-operating time(h)(starting state: cold)	1.30 In non-operating time(h)(starting state: hot)	
≤63	> 1	≤1	(10±2)In
> 63	> 2	≤2	

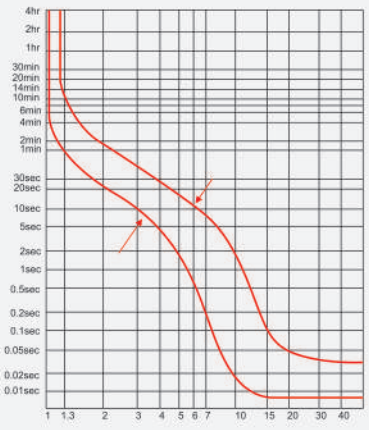
Motor Circuit Breaker Overcurrent Protection Characteristic

(table)2

Rated current In(A)	Thermal tripper (ambient temperature +40℃)				The operating current of electromagnetic tripper(A)
	1.0 In non-operating time(h) (starting state: cold)	1.2 In operating time(h) (starting state: hot)	1.5 In operating time(h) (starting state: hot)	7.2 In operating time(h) (starting state: cold)	
≤63	> 2	≤2	≤2	2<Tp≤10	(12±2.4)In
63<In≤250			≤4	4<Tp≤10	
250<In≤800			≤8	6<Tp≤20	

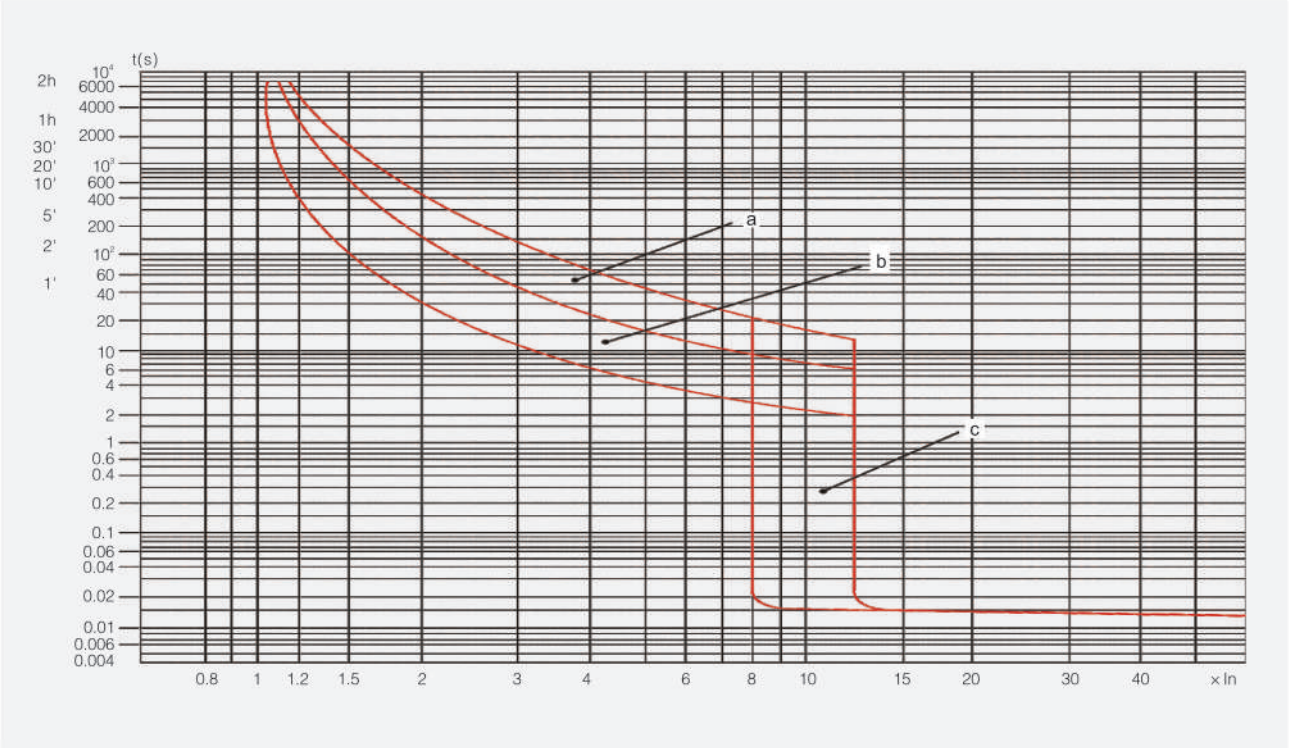
Note: The operation current of electromagnetic tripper for OM13P0630-OM13P0800 is adjustable(5In-14In)

OM13P0063 Overcurrent Protection

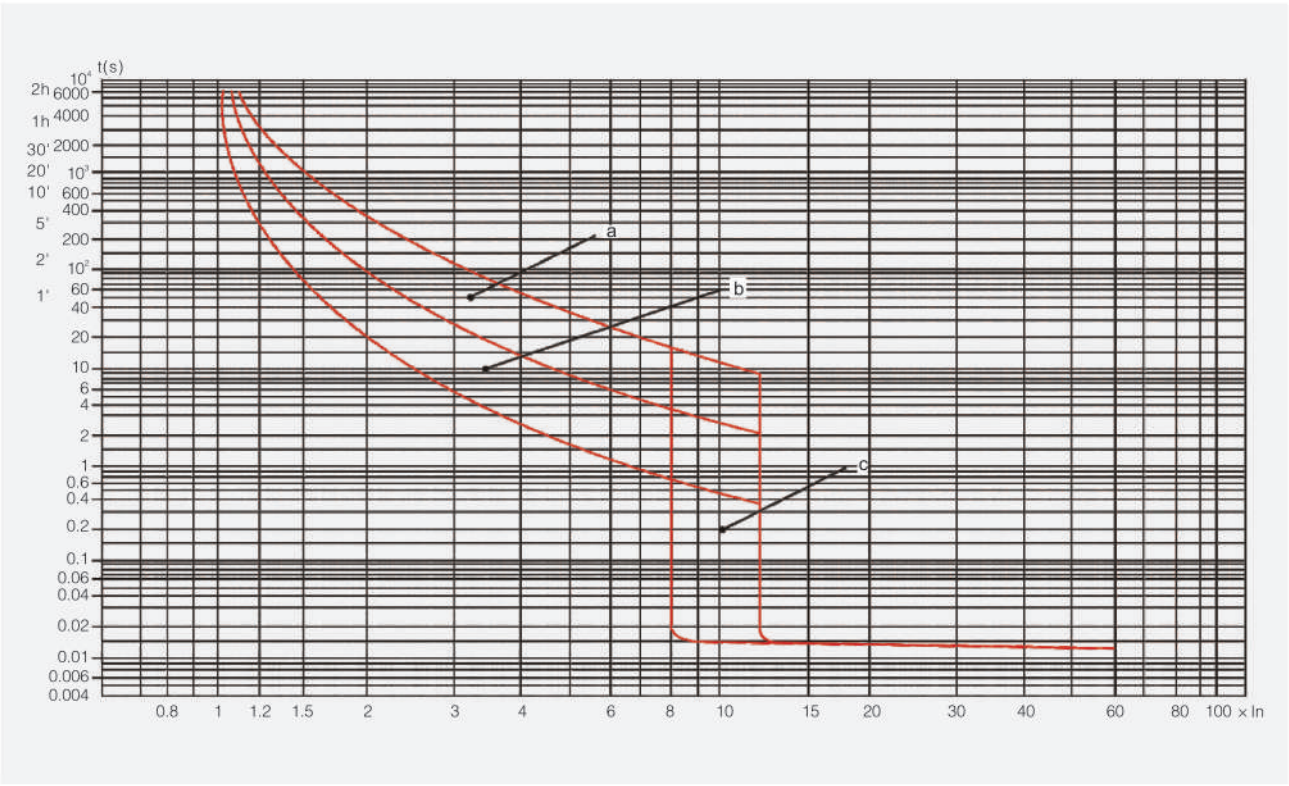


100% Rated current

OM13P0250 Overcurrent Protection Characteristic Curve

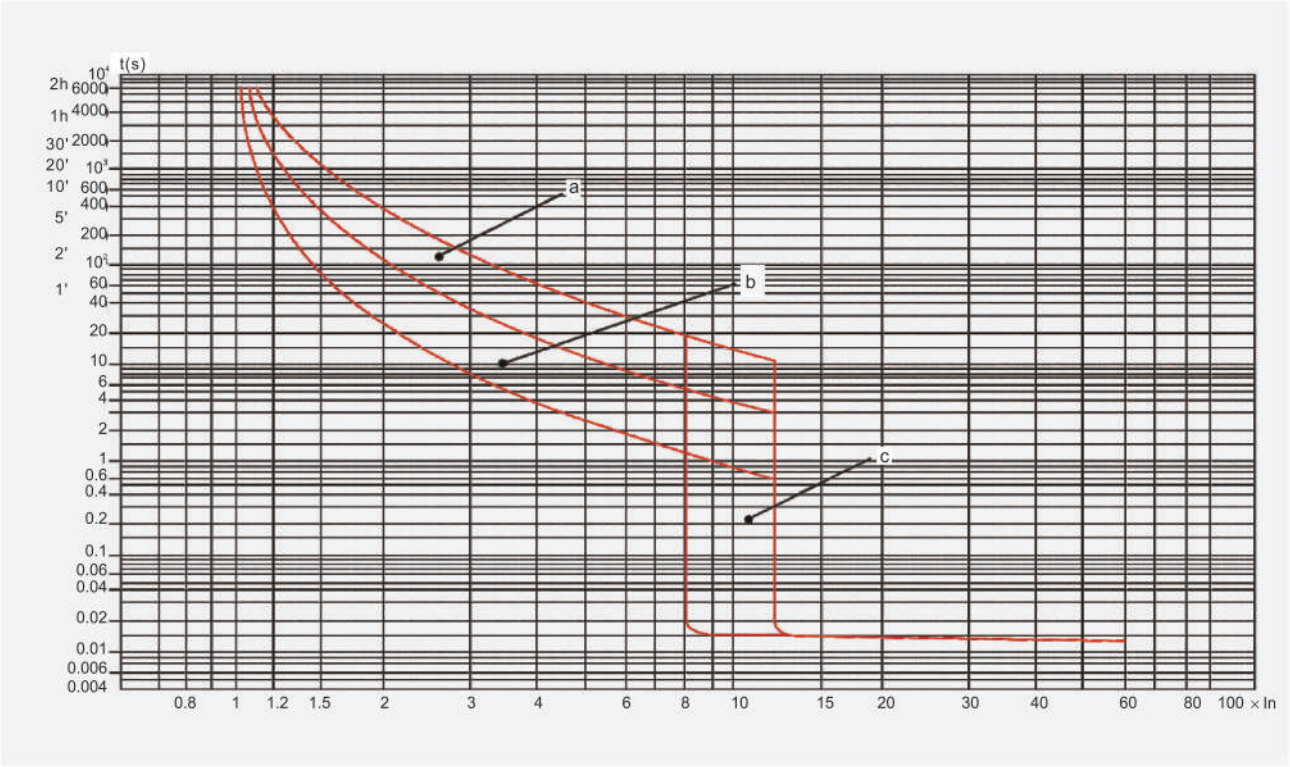


OM13P0250 Overcurrent Protection Characteristic Curve

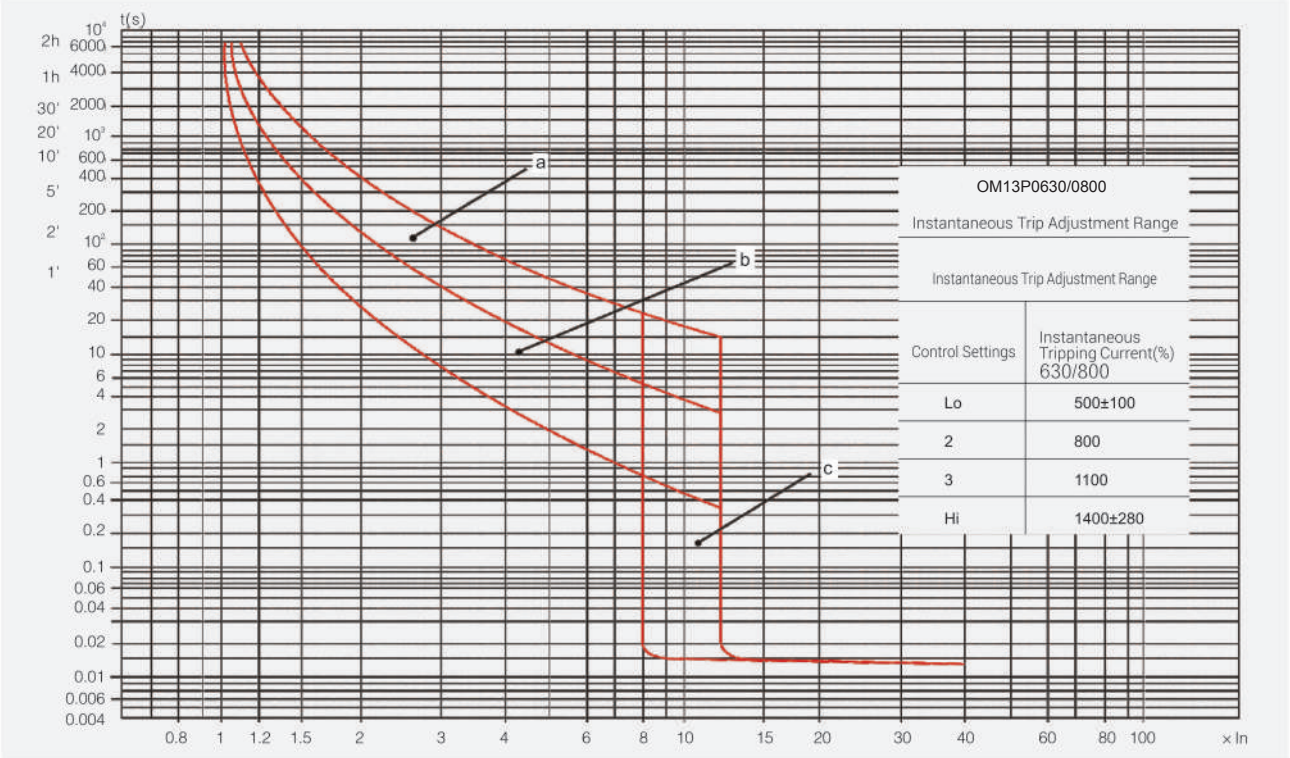


OM1 Series Moulded Case Circuit Breaker

OM13P0400 Overcurrent Protection Characteristic Curve



OM13P0630-0800 Overcurrent Protection Characteristic Curve

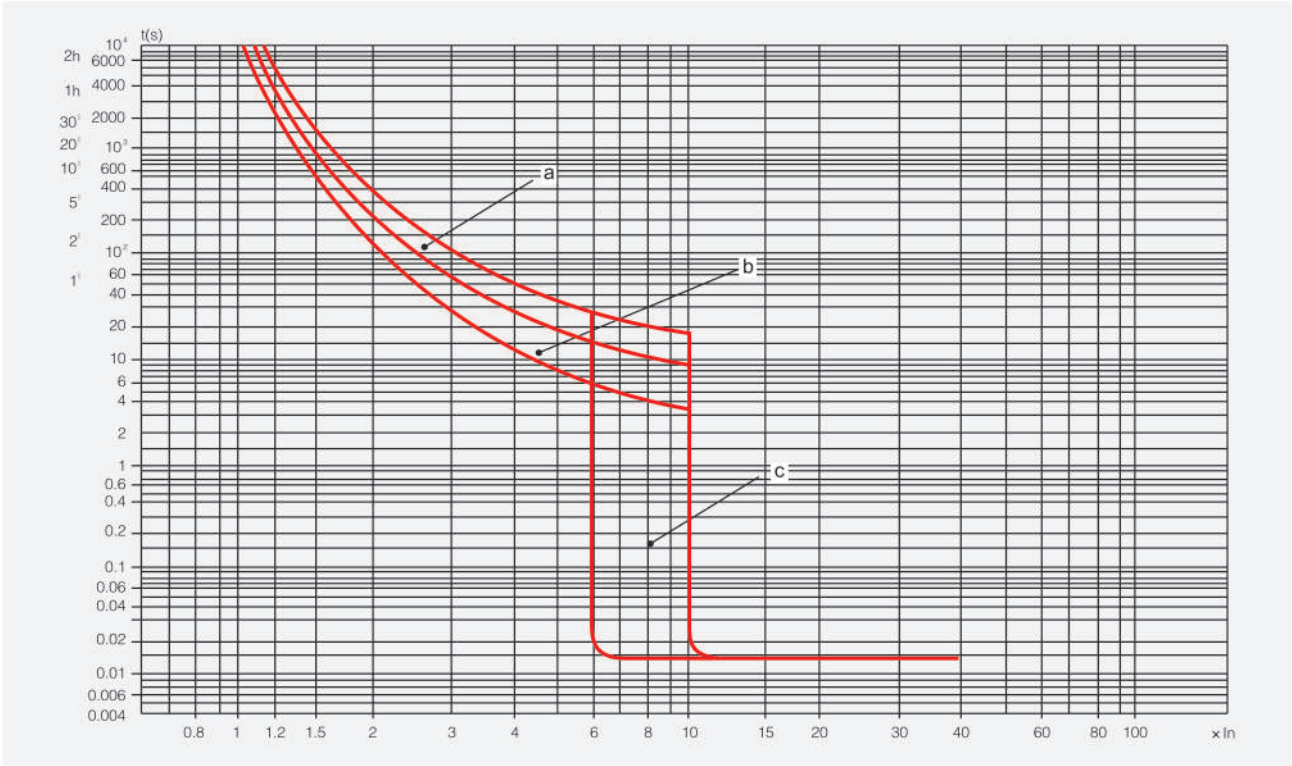


OM13P0630/0800

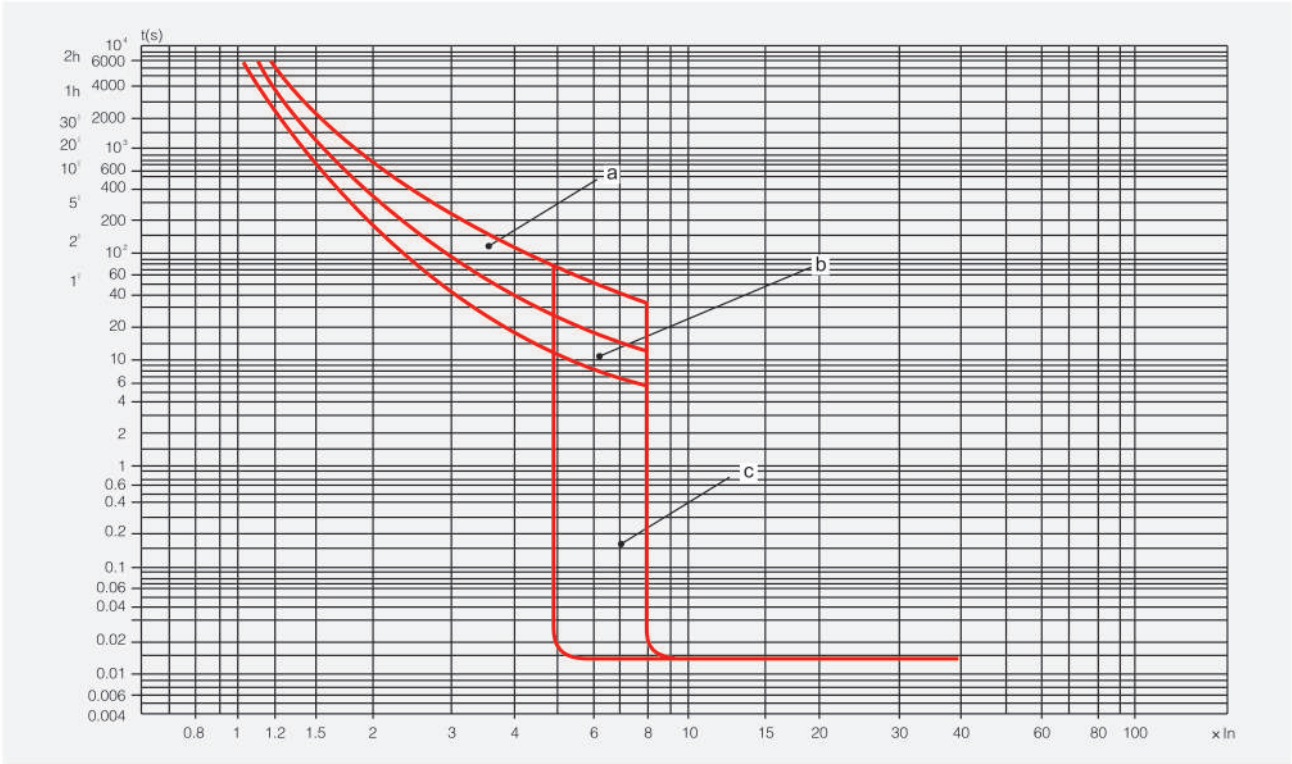
Instantaneous Trip Adjustment Range

Instantaneous Trip Adjustment Range	
Control Settings	Instantaneous Tripping Current(%) 630/800
Lo	500±100
2	800
3	1100
Hi	1400±280

OM13P1250 Overcurrent Protection Characteristic Curve

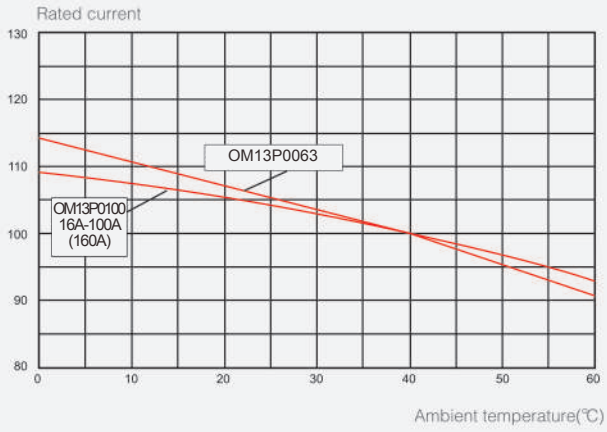


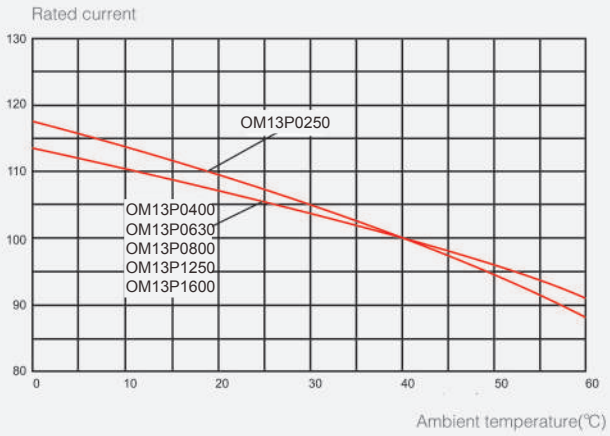
OM13P1600 Overcurrent Protection Characteristic Curve



OM1 Series Moulded Case Circuit Breaker

OM1 Series Thermal-Trip Curve





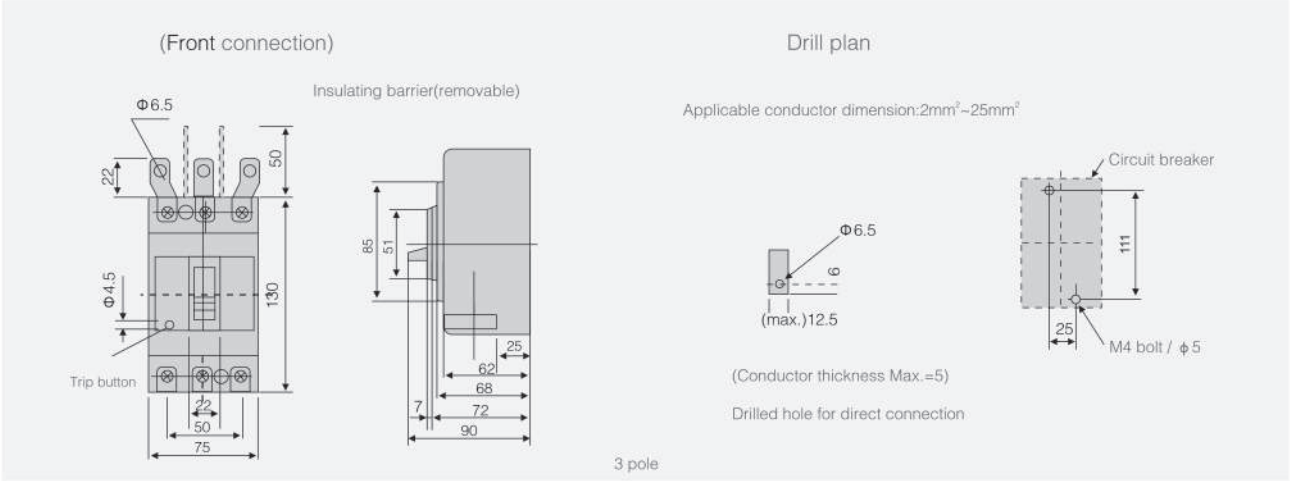
Power Losses of MCCB

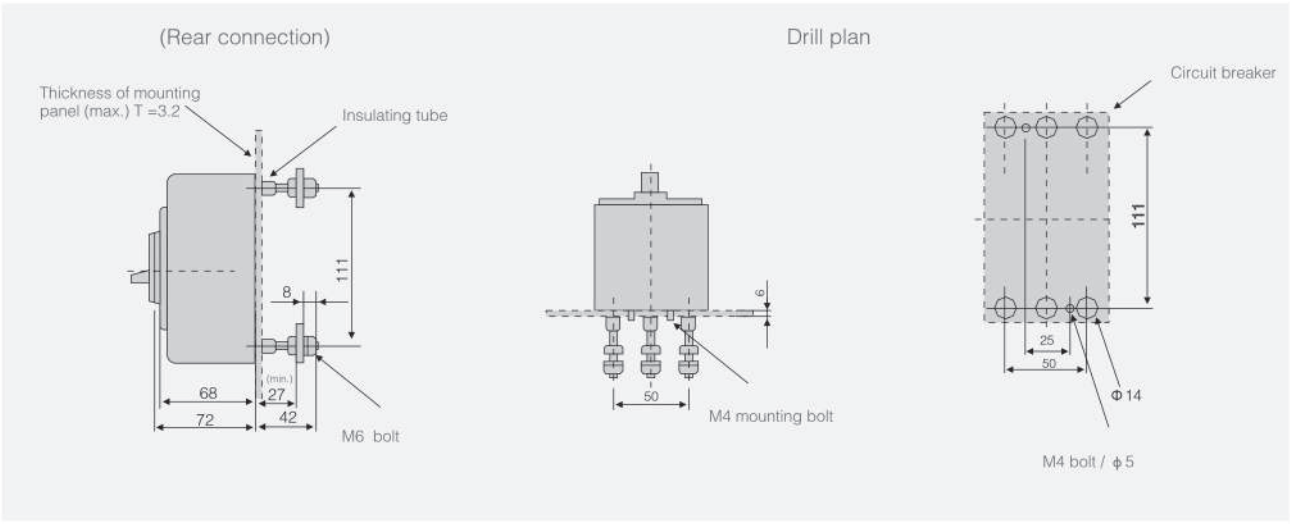
Inm(A)	Rated current In(A)	Resistance of each pole	Gross power consumption of three-pole	
			Fixed	Plug-in / Withdrawal
100	100	0.83	25	30
250	250	0.32	60	75
400	400	0.18	85	105
630	630	0.14	170	195
800	800	0.11	210	260
1250	1250	0.04	150	
1600	1600	0.05	240	

Note: The operation current of electromagnetic tripper for OM13P0630 - OM13P0800 is adjusttable (5in-14in)

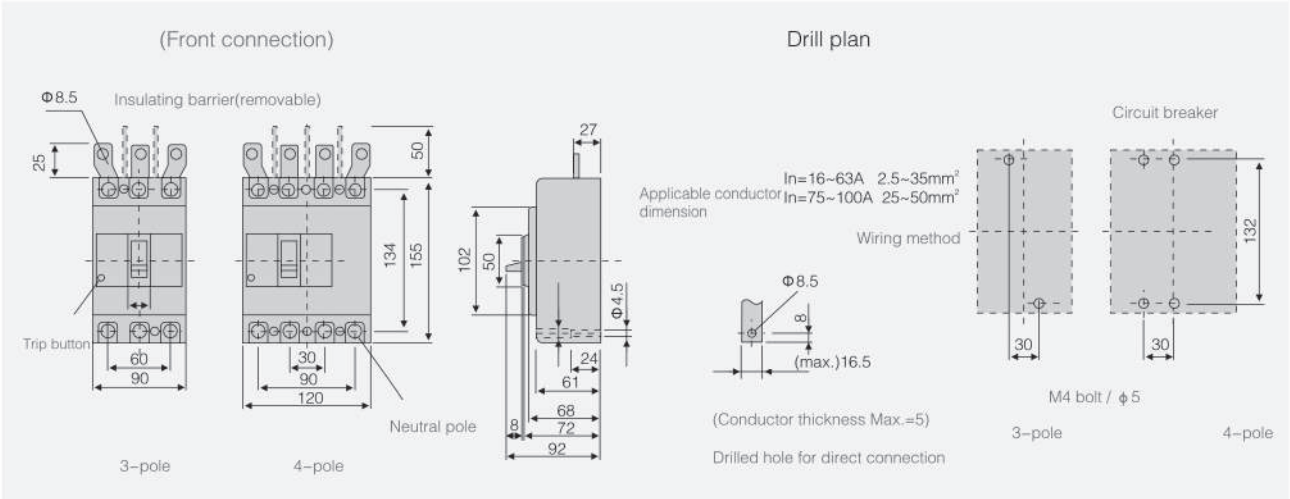
OM1 Series Moulded Case Circuit Breaker

OM13P0063S Outline & Mounting Dimension

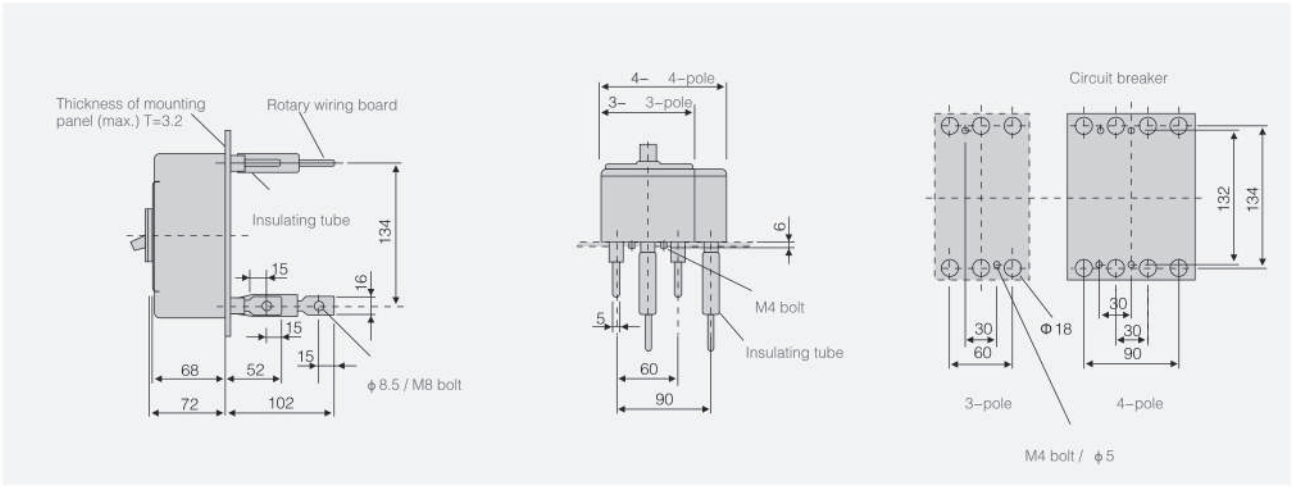


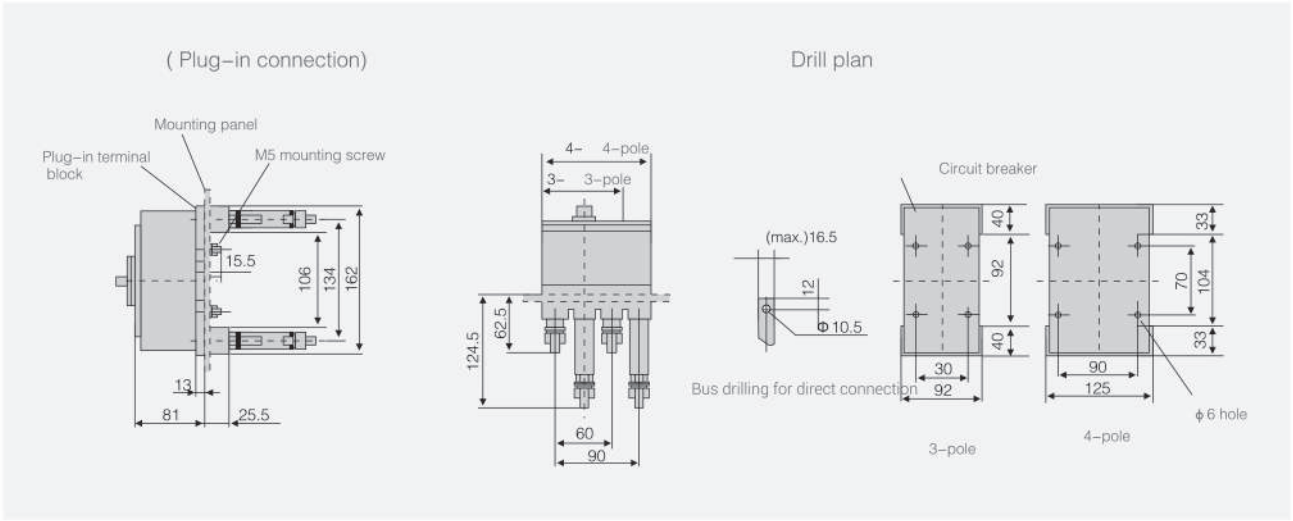


OM13P0100 Outline & Mounting Dimension

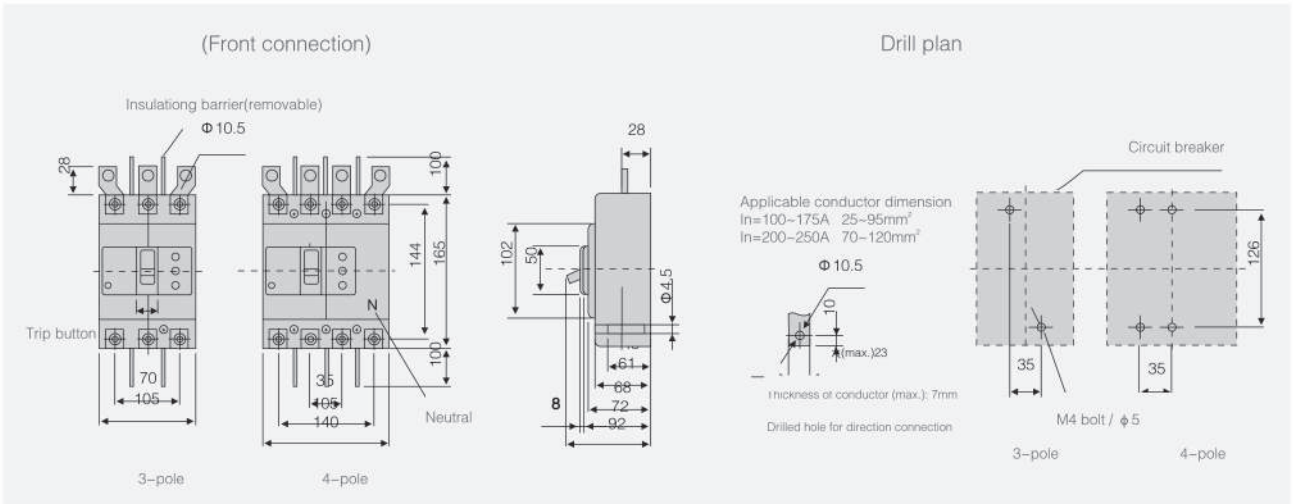


OM1 Series Moulded Case Circuit Breaker

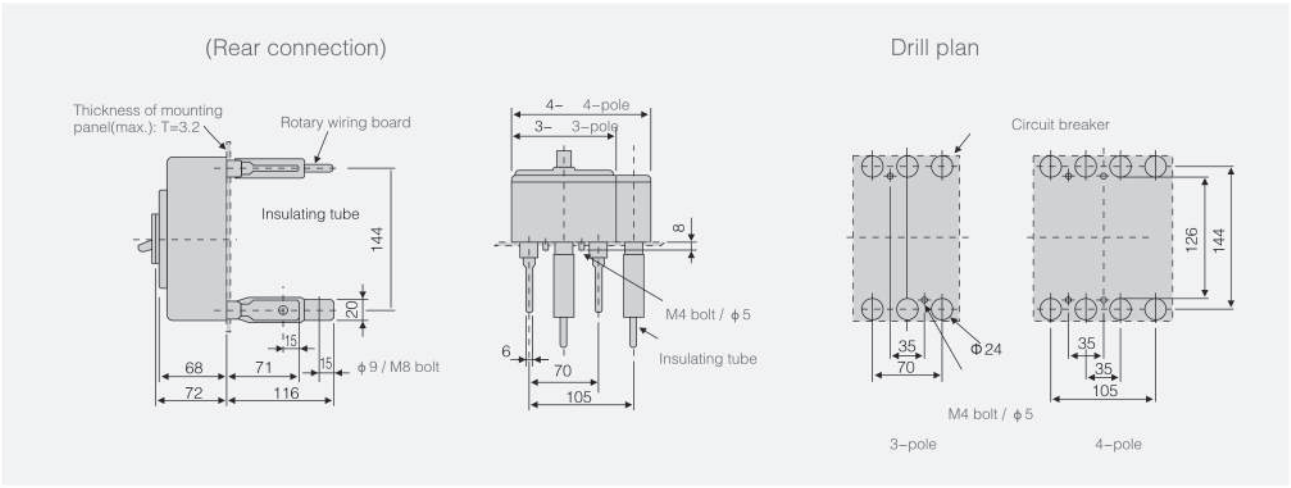


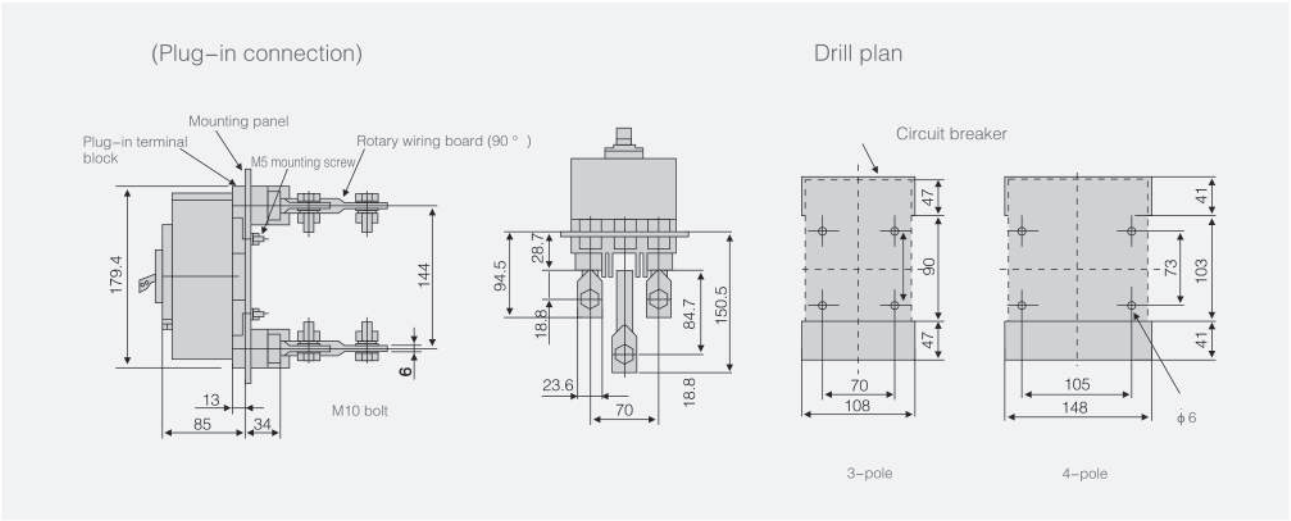


OM13P0250 Outline & Mounting Dimension

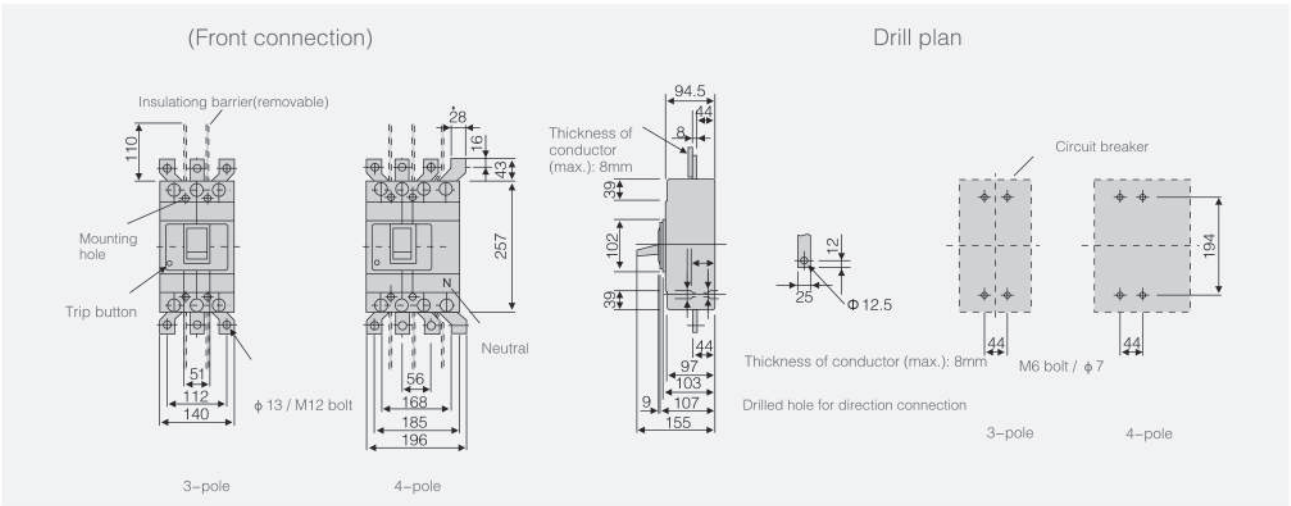


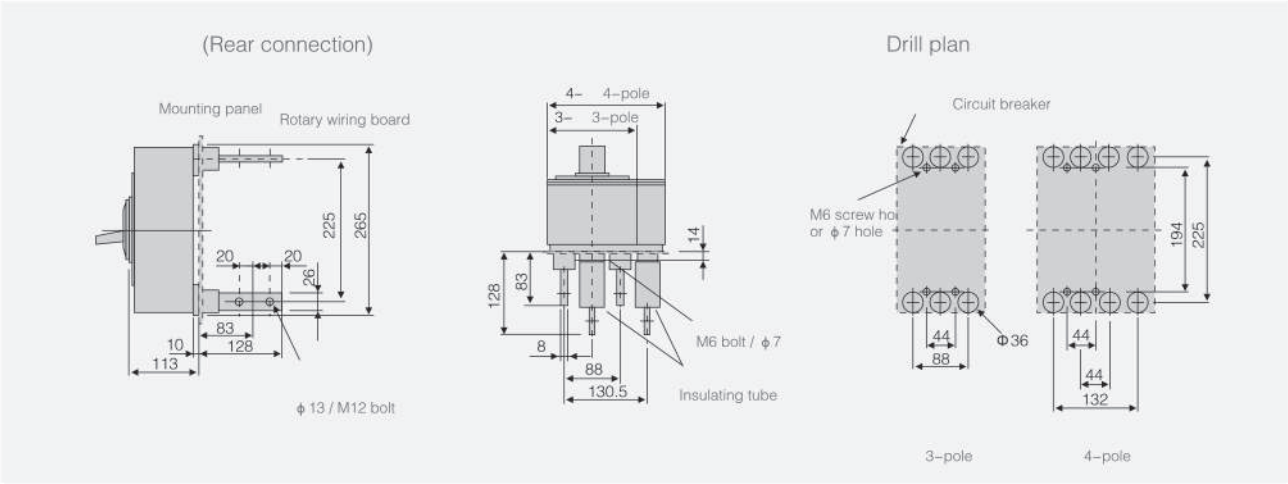
OM1 Series Moulded Case Circuit Breaker

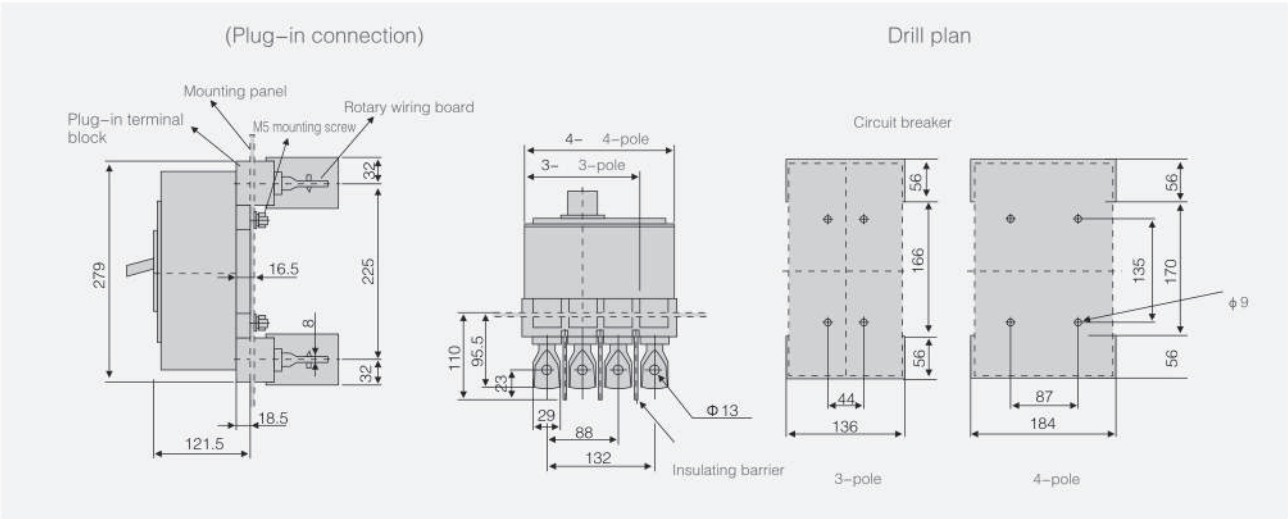




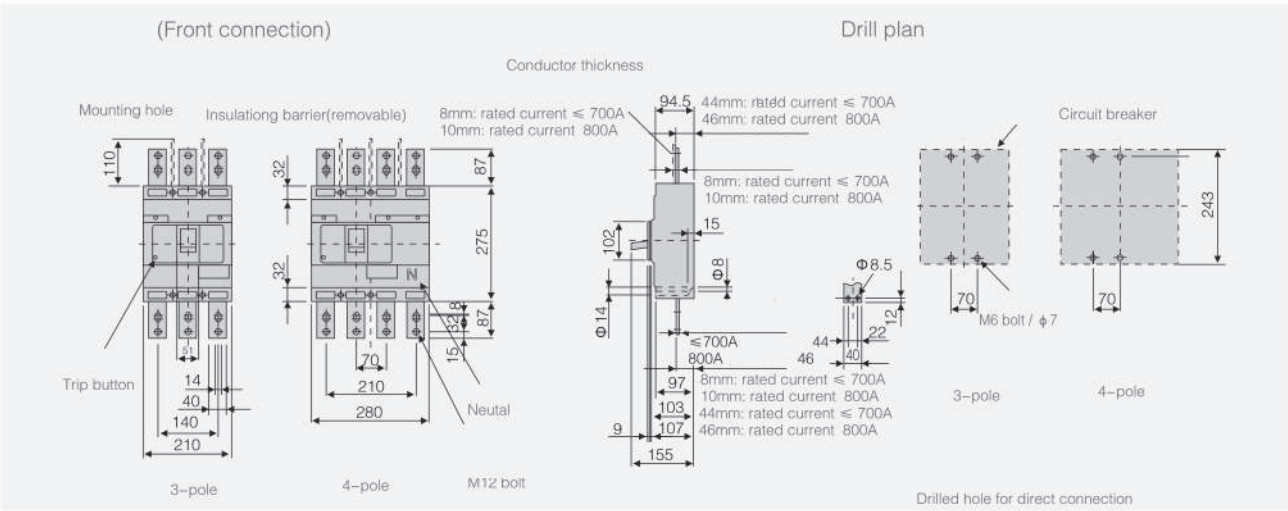
OM13P0400 Outline & Mounting Dimension



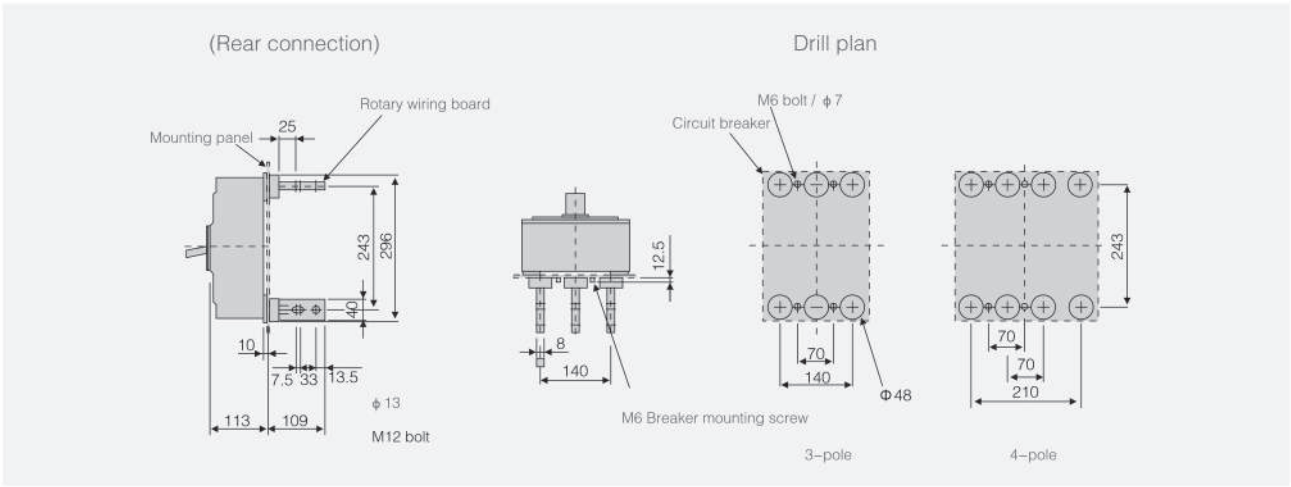


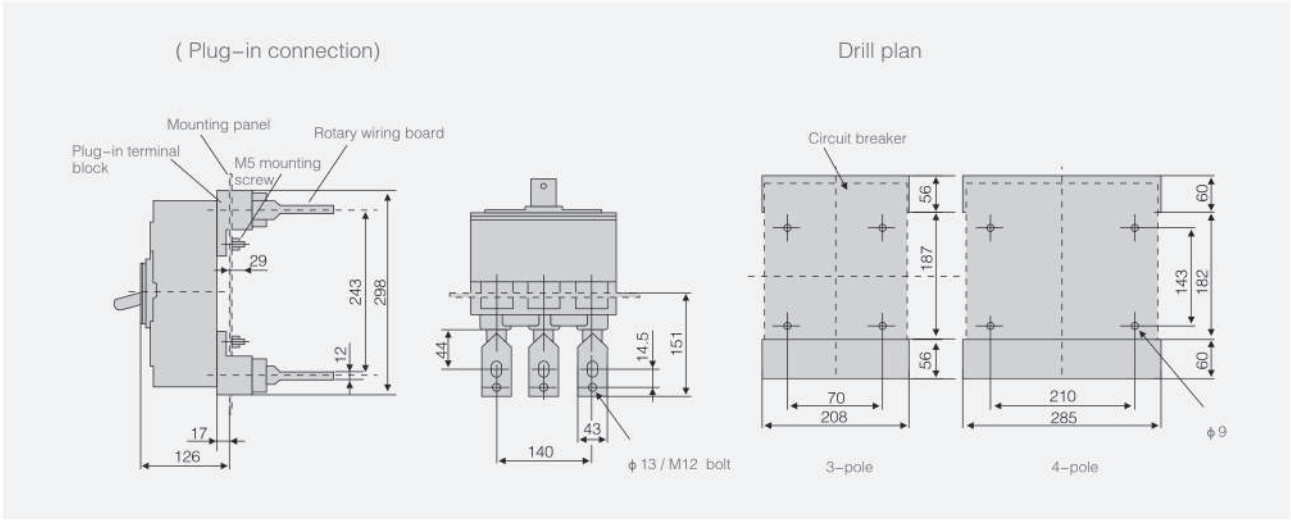


OM13P0630,0800 Outline & Mounting Dimension

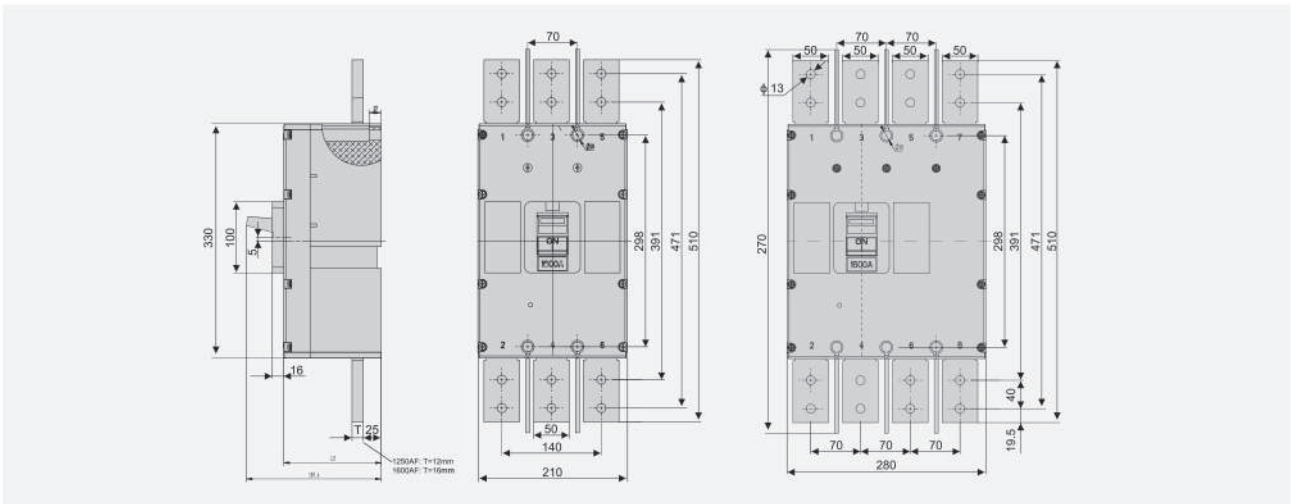


OM1 Series Moulded Case Circuit Breaker





OM13P1250,1600 Outline & Mounting Dimension



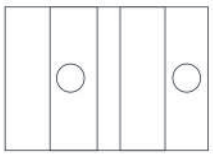
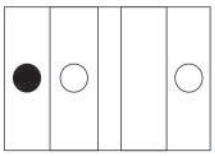
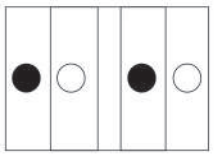
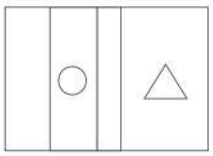
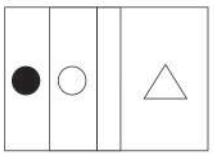
OM1 Series Moulded Case Circuit Breaker

Accessories of Circuit breaker

General table

Inm(A)		63	100	250	400	630,800
Internal accessories	Alarm contact	B1	B2	B3	B4	
	Auxiliary contact	F1	F2	F3	F4	
	Shunt trip	FL1	FL2	FL3	FL4	
	Under-voltage trip	QY1	QY2	QY3	QY4	
Connection terminal block as internal accessories						
External accessories	Rotary operating handle	RH10063	RH10100	RH10250	RH10400	RH10630,0800
	Electrical operating mechanism	–	MO1	MO2	-	-
	Electrical operating mechanism	–	MOX1	MOX2	MOX3	MOX4

Code & Installation

Inm(A)	63A,100A,250A		
Code	0 (0~2) 0	0 (0~2) 1	0 (0~2) 2
Position			
Code	1 (0~1) 0	1 (0~1) 1	
Position			
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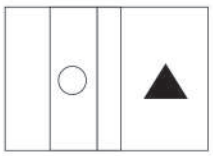
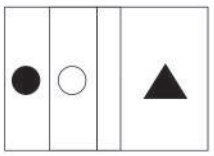
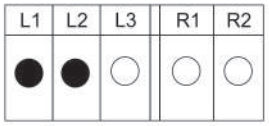
Position			

OM1 Series Moulded Case Circuit Breaker

Inm(A)	400A		
Code	0 (0~5) (0~2)		
Position	 Note: the sum of last two digits : ≤5		
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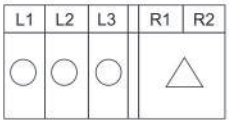
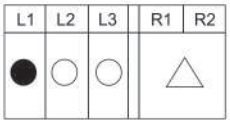
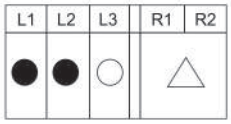
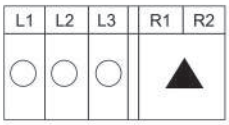
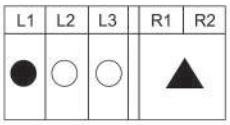
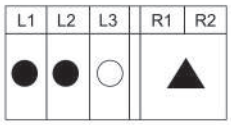
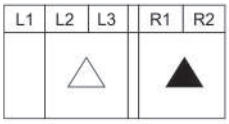
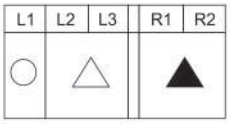
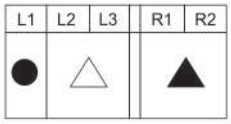
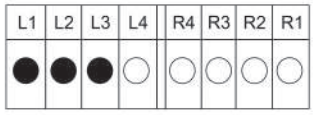
Position			
Code	2 (0~3) 0	2 (0~2) 1	2 (0~1) 2
Position			
Code	300	310	301
Position			

Inm(A)	630A ~ 800A		
Code	0 (0~8) (0~3)		
Position	 Note: the sum of last two figures: ≤5		
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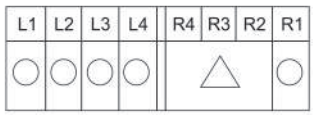
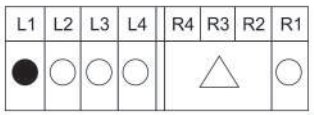
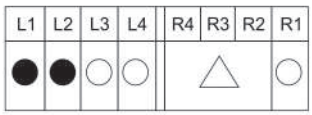
Position			
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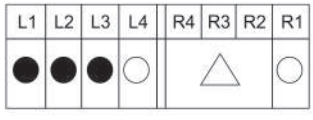
Position			

OM1 Series Moulded Case Circuit Breaker

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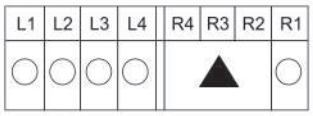
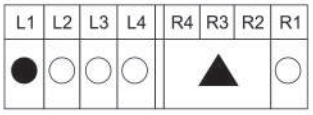
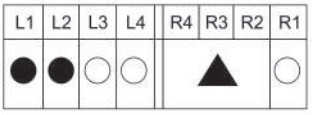
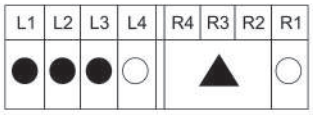
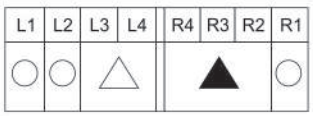
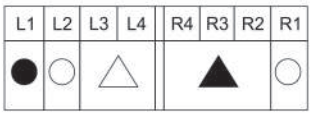
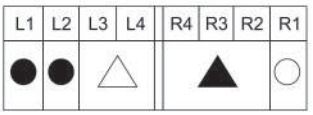
Position			
Code	2 (0~2) 3		
Position			
Code	3 (0~3) 0	3 (0~2) 1	3 (0~1) 2
Position			

Parameter of auxiliary & alarm contact

The circuit drawings of auxiliary contact & alarm contact in different working status

Working status of circuit breaker	Auxiliary contact	Alarm contact
Colse		
Open		
Tripping		

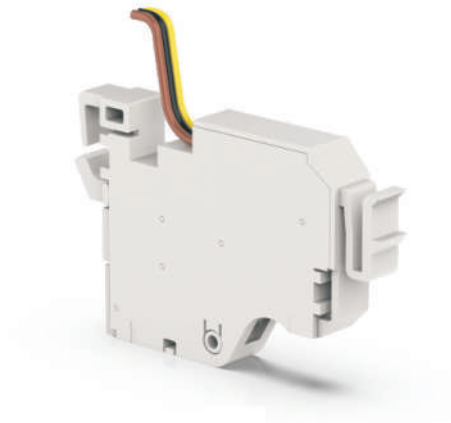
Main technical parameter

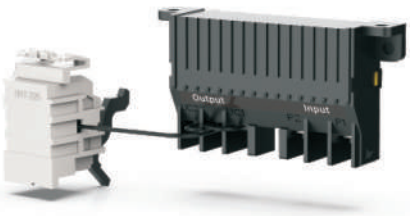
Rated insulation voltage Ui=400V,AC
Rated thermal current Ith=6A
Rated operation voltage(Ue) & rated operation current (Ie)
current Ie AC400V, 1A; AC230V, 3A
DC220V, 0.15A

Electrical life & making and breaking capacity

Using categories		Making			Breaking			Cycle time	Operating frequency (time/min)	Time of making
AC		I/Ie	U/Ue	cos ϕ	I/Ie	U/Ue	cos ϕ			
AC-15	Electrical life	10	1	0.3	1	1	0.3	6050	6	≥0.05
	Making & breaking capacity	10	1.1	0.3	10	1.1	0.3	10	6	≥0.05
DC		I/Ie	U/Ue	T0.95	I/Ie	U/Ue	T0.95			
DC-13	Electrical life	1	1	300ms	1	1	300ms	6050	6	≥0.3
	Making & breaking capacity	1.1	1.1	300ms	1.1	1.1	300ms	10	6	≥0.3

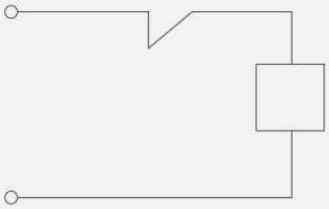
OM1 Series Moulded Case Circuit Breaker





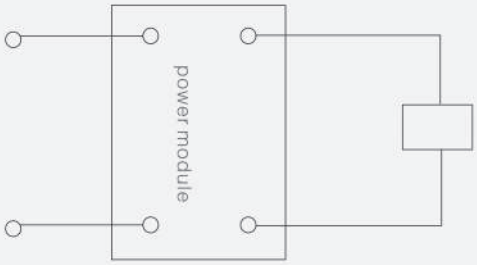
The parameter of shunt trip

Circuit figure of shunt trip



(Rated voltage)
Us:110V,230V,400V
DC: 24V,48V,110V,
(Input capability)
AC: 180VA DC:60W

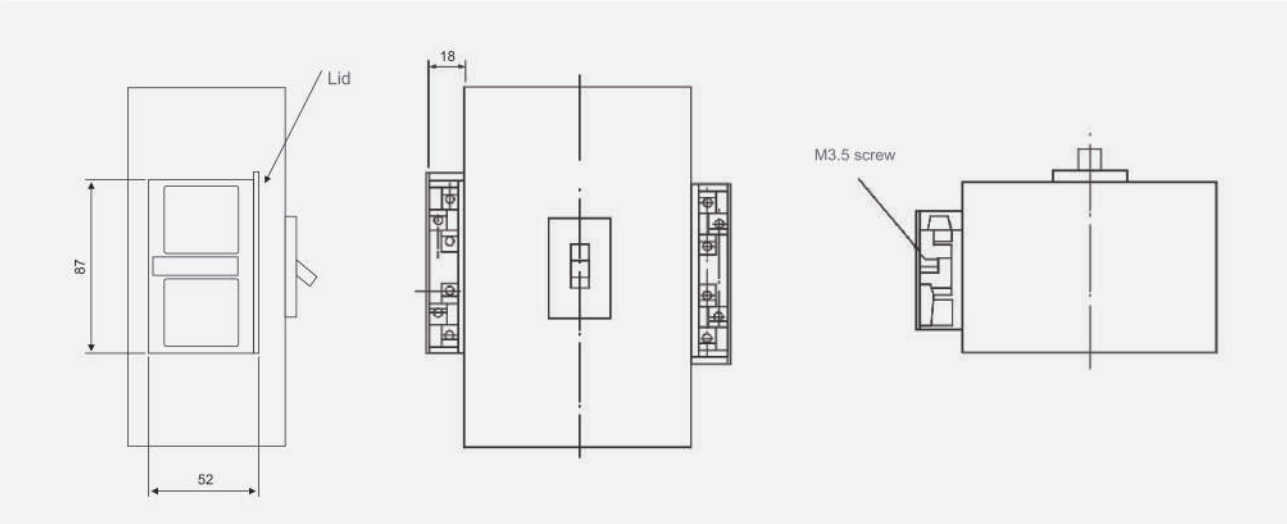
The parmeter of Under-voltage trip



Power module
1.power module can be fitted at the side of the circuit breaker, and the independant installation available
2.rated voltage Ue:AC:110V、230V、400V；DC:24V、48V、110V;
3.input capbility AC: 5VA; DC:2W;
4.operating voltage: U=(70%~35%) Ue; circuit breaker tripping & breaking
5. operating time: (10~30)ms ;
U≥85% Ue, circuit breaker could be closed
U≤35% Ue, circuit breaker can not be closed

TX series wiring terminal block-internal accessories

The wiring terminal block is hanged at the side of circuit breaker

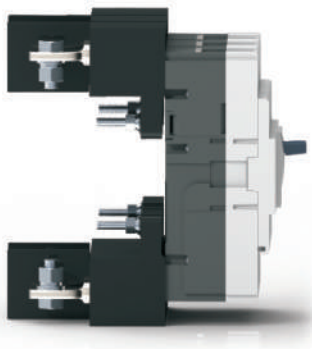


Model RH1 rotary handle

It is mounted on the circuit breaker and can be locked by padlock to prevent the making / breaking of circuit breaker

MOX series electrical operating mechanism

For circuit breaker: Model(AF) 100A–800A



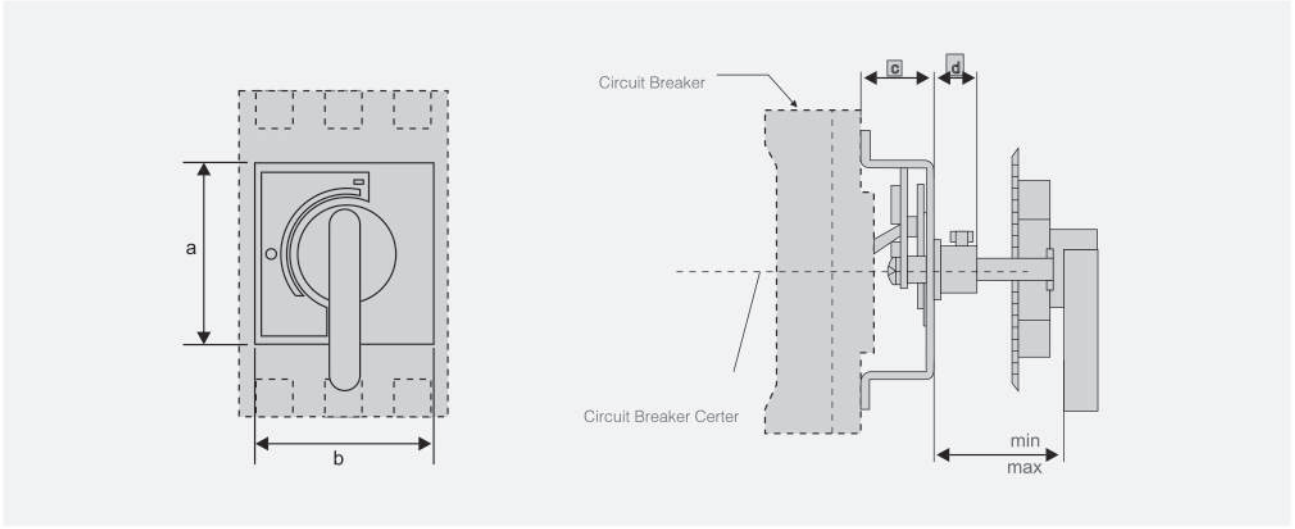
OM1 Series Moulded Case Circuit Breaker

RH1 series rotary operating mechanism

The operating mechanism adopts gear-rack mechanism to drive the circuit breaker handle, with features of small friction, easy operation and long life. It can be locked by padlock to prevent making & breaking of circuit breaker.

Model	Inm(A)	a	b	c	d	F min	F max
RH10063	63	90	70	42	13.5	50	400
RH10100	100	110	80	44	13.5	50	400
RH10250	250	110	90	46	13.5	50	400
RH10400	400	185	140	80	20	50	350
RH10630,0800	630,800	226	210	80	20	50	350
RH11250,1600	1250,1600	210	150	100	20	50	350

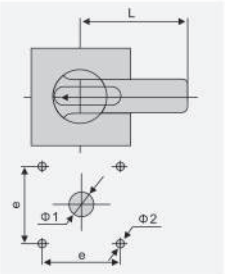
The general length of square shaft: f=150mm Other requirements, please specify when ordering.



The distance between the handle center and hinge should not be less than 200mm

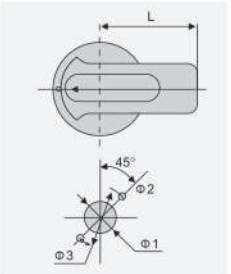
Mounting size of A type handle

Model (AF)	63~250	400~800	1250~1600
ϕ1	ϕ42	ϕ63	ϕ63
ϕ2	ϕ4.5	ϕ5.5	ϕ7.5
e	65	88	125*198
L	60	140	210



Mounting size of B type handle

Model (AF)	63~250	400~800	1250~1600
ϕ1	ϕ33	ϕ33	ϕ50
ϕ2	ϕ4.5	ϕ4.5	ϕ7.5
ϕ3	ϕ53	ϕ53	ϕ53
L	65	125	155



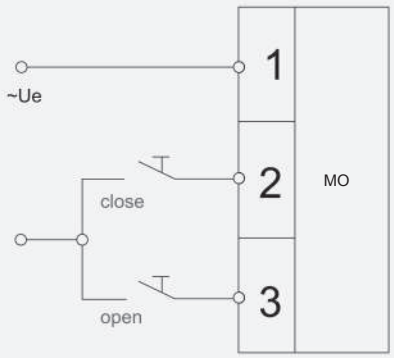
OM1 Series Moulded Case Circuit Breaker

Electric operating mechanism

The MO series electrical operating mechanism is to make the electromagnet to drive the operating handle of the circuit breaker which is to close and open the circuit breaker. The MOX series electrical operating mechanism by motor, gear and can turns the revolving morement of the motor into the beeline morement to close and open the circuit breaker.

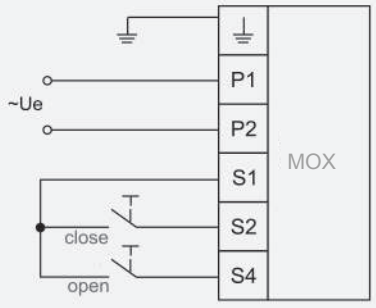
Main technology parameter of MO series electrical operating mechanism

Inm(A)	100		250		Wiring figureing of MO electrical operating mechanism
Model	MO1		MO2		
AC rated working voltage Ue(V)	AC400V	AC230V	AC400V	AC230V	
Starting current (A)	4.4	7.5	5.5	9.5	
Operating time (S)	≤0.2				
Rated operating frequency (time/n)	120				
Mechanical life	15000		9000		



Main technology parameter of MOX series electrical operating mechanism

Inm(A)	63	100	250	400	630 800	1250 1600	Wiring figureing of MOX electrical operating mechanism
Model	MOX0	MOX1	MOX2	MOX3	MOX4	MOX5	
AC rated working voltage Ue(V)	AC110~230V 50Hz DC110~220V						
Starting current (A)	≤0.5			≤2		≤3	
Operating time (S)	≤0.8						
Rated operating frequency (time/h)	180			120		100	
Mechanical life	15000	15000	9000	5000	3000	2000	



OM1E

Series Moulded Case Circuit Breaker

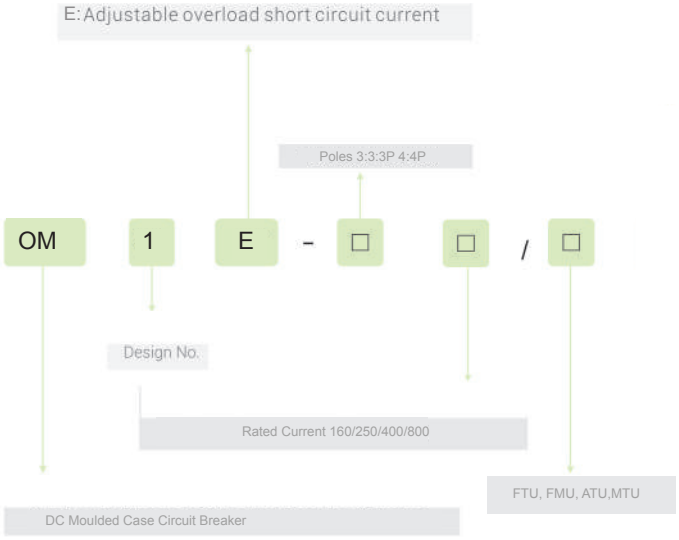
OM1E Series Moulded Case Circuit Breaker

Outline

OM1E series moulded case circuit breakers (circuit breakers for short) are advanced in design and performance, with high indicators, beautiful appearance, and exquisite volume, with overload current setting value that can adjustable or non- adjustable instantaneous short-circuit current setting value with multiple choices of adjustable or non-adjustable, Functional design greatly meets the needs of users for more independent choices.

It is complied with GB/T 1408.2<low-voltage switch device and controlling device low-voltage circuit breaker> and IEC60947-2 section 2<low voltage switch device and control device part II: low- voltage circuit breaker> and etc.

Product model & definition



Usage & Appliance

The circuit breaker is used in the electrical system of AC 50Hz, related voltage of up to 690V, rated current of up to 1600A to prevent the system from overload, short-circuit and under-voltage and to control the infrequent operation of motor.

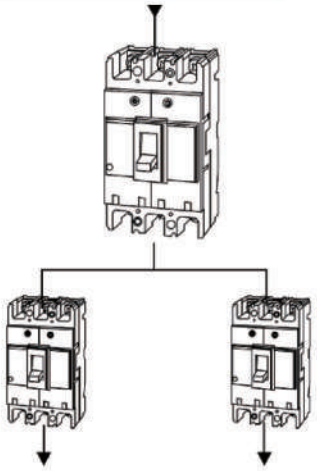
Normal operation condition

The circuit breaker could be used in the following working conditions:

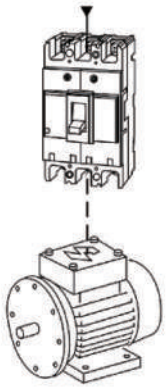
1. Ambient air temperature not higher than +40℃ and not lower than -5℃.
2. Altitude no more than 2000m
3. The relative air humidity is not more than 50% in the max. at the temperature. The lowest monthly average temperature not higher than 25℃ in the most moist month and the max. relaative humidity should be no more than 90%.
4. Pollution degree: Grade 3. There is no explosion factor, corrosive metal and the gas destroying the insulation and the electric dust.
5. Installation type: III
6. The terminals of 1,3,5,N1 should be connected with the power supply and the terminals of 2,4,6,N2 should be connected with the load. Reverse wiring is forbidden.

OM1E Series Moulded Case Circuit Breaker

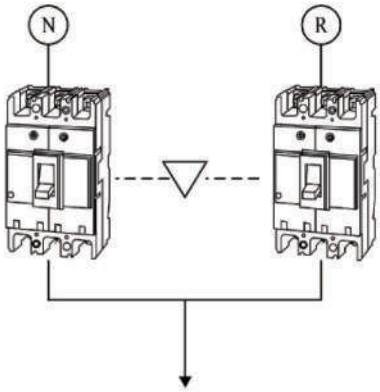
Low–voltage power distribution network



Control and protection of motor



Dual power changeover system



(table)1

Code	Type	Specification
A	A	N phase without overcurrent trip unit is normal open and do not make and break along with other 3 poles
B	B	N phase without overcurrent trip unit make and break along with other 3 poles

(table)2

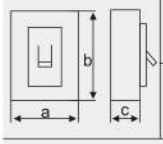
Code	Title	Description
1	Delay trip	The protection of overcurrent reverse time.
2	Instantaneous trip	Electromagnetic release of overcurrent instantaneous protection
3	Multiple trip	With the above two performances

(table)3

Inm (A)	Ⅰ			Ⅱ	Ⅲ		Note
	Code	Description	Code	Description	Code	Description	
63 100 250	0	Null	0~2	Pairs of auxiliary contacts	0~2	Pairs of alarm contacts	
	1	Shunt trip	0~1		0~1		
	2	Under–voltage trip	0~1		0~1		
400	0	Null	0~5		0~2		Ⅱ + Ⅲ ≤5
	1	Shunt trip	0~3		0~2		Ⅱ + Ⅲ ≤3
	2	Under–voltage trip	0~3		0~2		Ⅱ + Ⅲ ≤3
	3	Shunt trip & Under–voltage trip	0~1		0~1		Ⅱ + Ⅲ ≤1
630 800 1250 1600	0	Null	0~8		0~3		Ⅱ + Ⅲ ≤8
	1	Shunt trip	0~5		0~3		Ⅱ + Ⅲ ≤5
	2	Under–voltage trip	0~5		0~3		Ⅱ + Ⅲ ≤5
	3	Shunt trip & Under–voltage trip	0~3		0~2		Ⅱ + Ⅲ ≤3

OM1E Series Moulded Case Circuit Breaker

Main technical parameter

Inm(A)		160		250		630(800)	
Model		OM1E3P0160		OM1E3P0250		OM1E3P0800	
Photo							
Rated current(A)		63/75/100/125/160		125/160/160/175/200/250		500/630/700/800	
Poles		3	4	3	4	3	4
Ii		Inx(5~10)		Inx(5~10)		Inx(5~10)	
Ir		Inx(0.7~1.0)		Inx(0.7~1.0)		Inx(0.7~1.0)	
Rated Insulation Voltage Ui(V)		AC690		AC690		AC690	
Arcing distance		≤50(0*)		≤50(0*)		≤50(0*)	
Rated ultimate/ service short-circuit breaking capacity(Ka)	AC690V	5/3		5/3		10/7	
	AC400V	35/22		35/22		70/50	
	AC230V	50/30		50/30		100/70	
Operational performance (times)	ON	2500		2500		1000	
	OFF	8500		8500		4000	
Dimension(mm)	a	90	120	105	140	212	282
	b	155		165		275	
	c	68		68		103	
Weight (Kg)		1.15	1.53	1.5	1.8	9	11.5
Rated Operation Frequency(per hour)		120		120		20	

*0" arcing distance: please specify when ordering if you require.

OM1E Series Moulded Case Circuit Breaker

The overcurrent protection characteristics of circuit breakers for power distribution are shown in Table1.

The overcurrent protection characteristics of circuit breakers for motor protection are shown in Table12.

Over current protection characteristic curveis shown in figure below.

a-Thermal overload protection characteristic in cold state.

b-Thermal overload protection characteristic in thermal state.

c-Electro magnetic release protection characteristics.

Overcurrent protection characteristics of circuit breakers for power distribution

(table)1

Rated current In(A)	Thermal tripper (ambient temperature +40℃)		The operating current of electromagnetic tripper(A)
	1.05 In (h) 1.05 In non-operating time(h)(starting state: cold)	1.30 In (h) 1.30 In non-operating time(h)(starting state: hot)	
≤63	> 1	≤1	(10±2)In (注)
> 63	> 2	≤2	

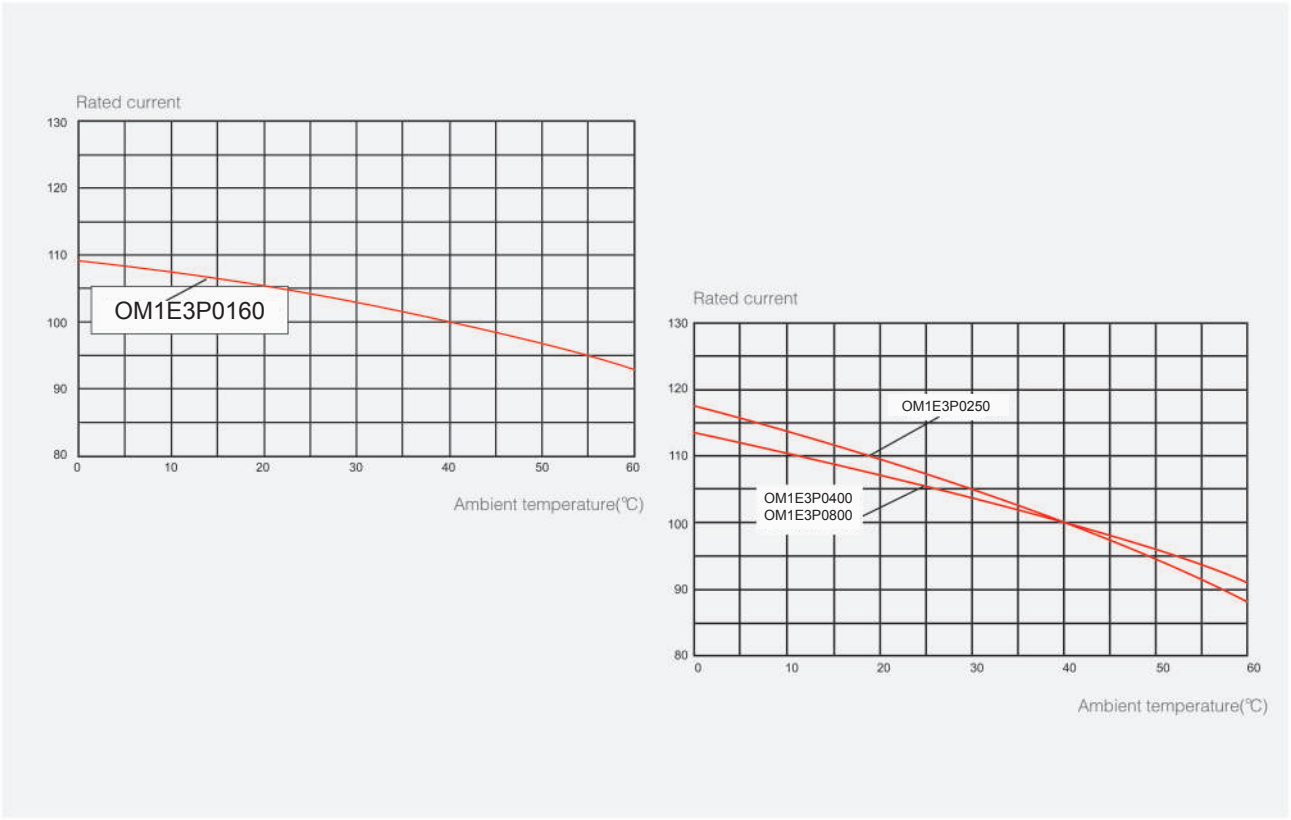
Motor Circuit Breaker Overcurrent Protection Characteristic

(table)2

Rated current In(A)		Thermal tripper (ambient temperature +40℃)			The operating current of electromagnetic tripper(A)
	1.0 In non-operating time(h) (starting state: cold)	1.2 In operating time(h) (starting state: hot)	1.5 In operating time(h) (starting state: hot)	7.2 In operating time(h) (starting state: cold)	
≤63	> 2	≤2	≤2	2<Tp≤10	(12±2.4)In
63<In≤250			≤4	4<Tp≤10	
250<In≤800			≤8	6<Tp≤20	

OM1E Series Moulded Case Circuit Breaker

OM1E Series Thermal-Trip Curve



Power Losses of MCCB

Inm(A)	Rated current In(A)	Resistance of each pole	Gross power consumption of three-pole	
			Fixed	Plug-in / Withdrawal
160	160	0.55	42	38
250	250	0.32	60	75
800	800	0.11	210	260

OM1E Series Moulded Case Circuit Breaker

OM1E3P0160 ATU/160A/3300

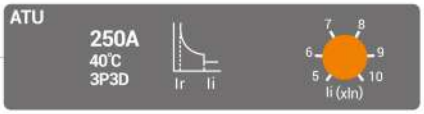
Release type

FTU Fixed-thermal, fixed-magnetic

FMU Adjustable-termal, fixed-magnetic

ATU Adjustable-termal, adjustable-magnetic

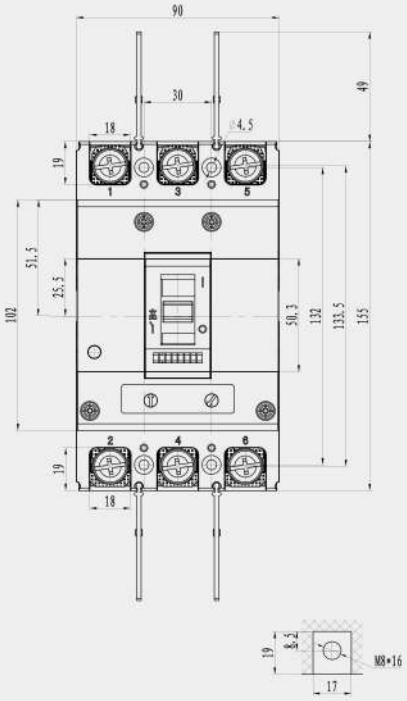
MTU Magnetic only



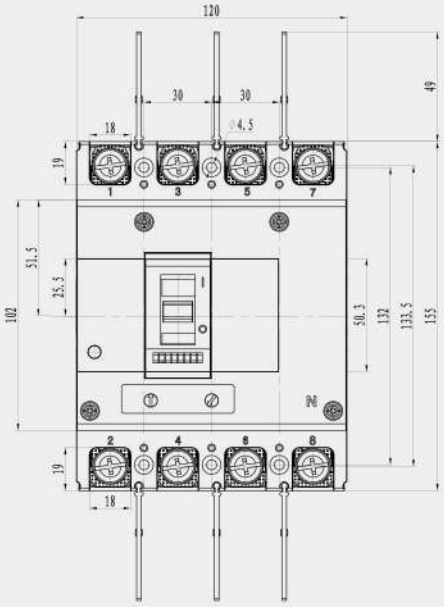
OM1E Series Moulded Case Circuit Breaker

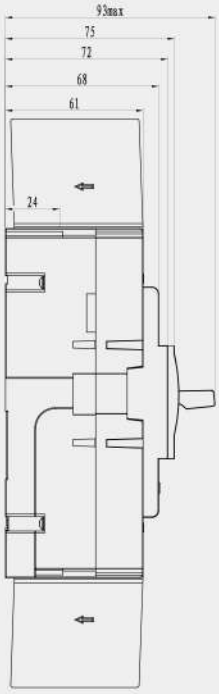
Outline & Mounting Dimension

OM1E3P0160



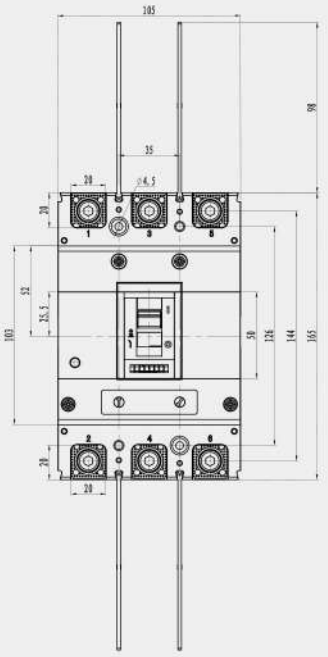
OM1E4P0160



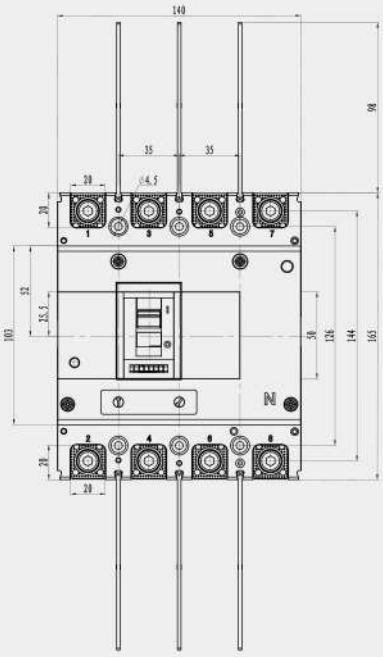


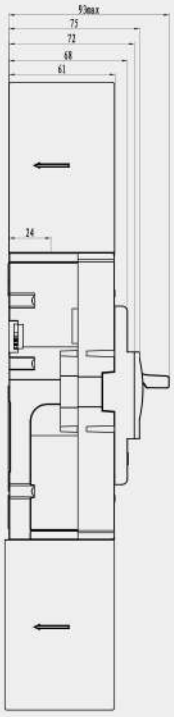
Outline & Mounting Dimension

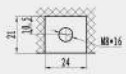
OM1E3P0250



OM1E4P0250



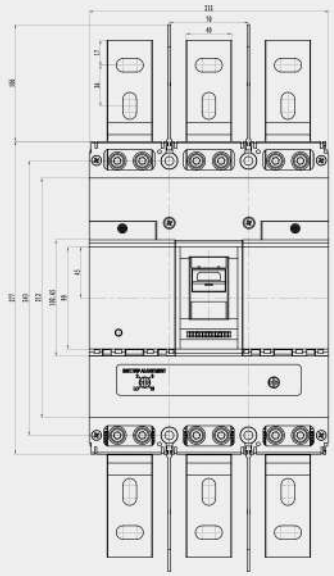




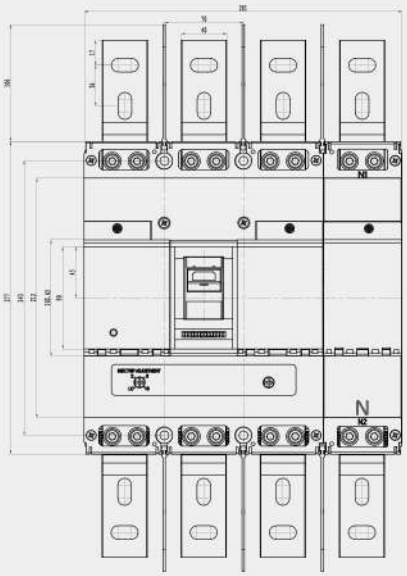
OM1E Series Moulded Case Circuit Breaker

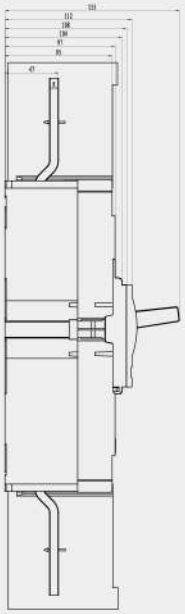
Outline & Mounting Dimension

OM1E3P0800



OM1E4P0800



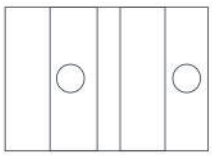
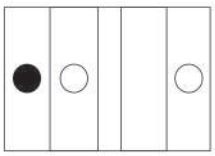
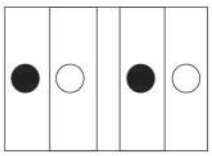
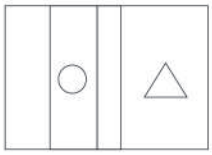
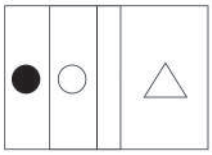
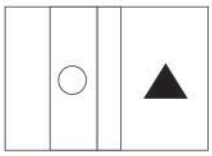
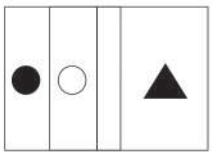


Accessories of Circuit breaker

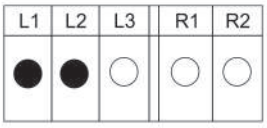
General table

Inm(A)			160	250	630,800
Internal accessories	Alarm contact		B2	B3	B4
	Auxiliary contact		F2	F3	F4
	Shunt trip		FL2	FL3	FL4
	Under-voltage trip		QY2	QY3	QY4
Connection terminal block as internal accessories					
External accessories	Rotary operating handle		RH10100	RH10250	RH10630,0800
	Electrical operating mechanism		MO1	MO1	
	Electrical operating mechanism		MOX1	MOX2	MOX4

Code & Installation

Inm(A)	160A,250A		
Code	0 (0~2) 0	0 (0~2) 1	0 (0~2) 2
Position			
Code	1 (0~1) 0	1 (0~1) 1	
Position			
Code	2 (0~1) 0	2 (0~1) 1	
Position			

OM1E Series Moulded Case Circuit Breaker

Inm(A)	400A		
Code	0 (0~5) (0~2)		
Position	 Note: the sum of last two digits : ≤5		
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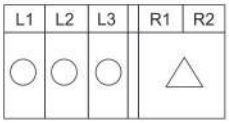
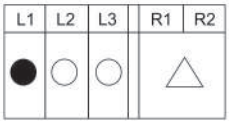
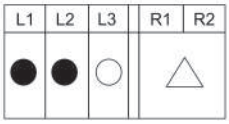
Position			
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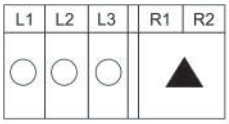
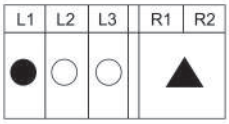
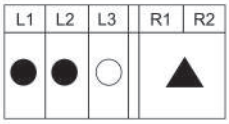
Position			
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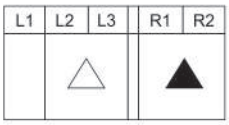
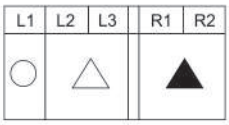
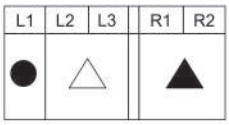
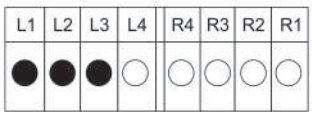
Position			

Inm(A)	630A ~ 800A		
Code	0 (0~8) (0~3)		
Position	 Note: the sum of last two figures: ≤5		
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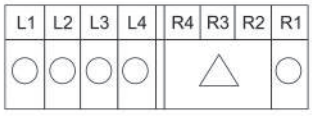
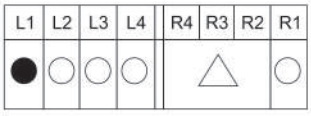
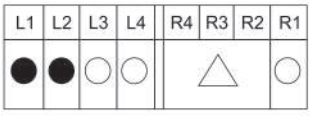
Position			
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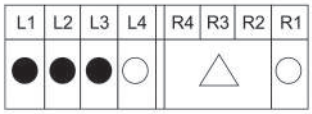
Position			

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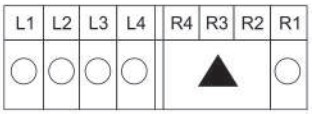
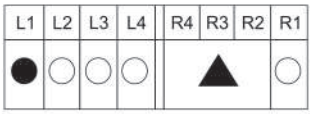
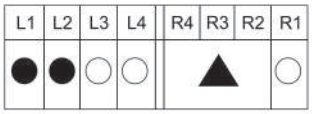
Position			
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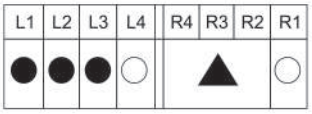
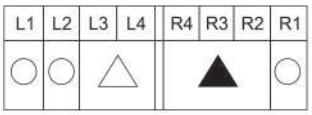
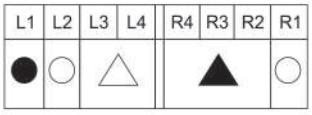
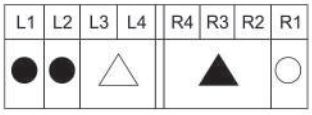
Position			
Code	3 (0~3) 0	3 (0~2) 1	3 (0~1) 2
Position			

Parameter of auxiliary & alarm contact

The circuit drawings of auxiliary contact & alarm contact in different working status

Working status of circuit breaker	Auxiliary contact	Alarm contact
Colse		
Open		
Tripping		

OM1E Series Moulded Case Circuit Breaker

Main technical parameter

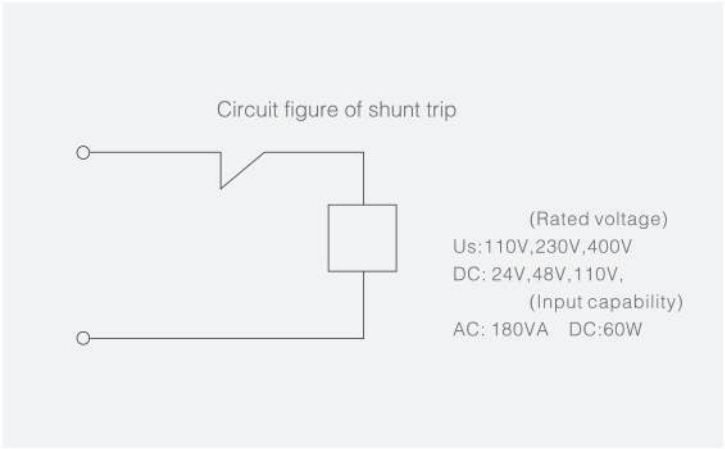
Rated insulation voltage Ui=400V,AC
Rated thermal current Ith=6A
Rated operation voltage(Ue) & rated operation current (Ie)
current Ie AC400V, 1A; AC230V, 3A
DC220V, 0.15A

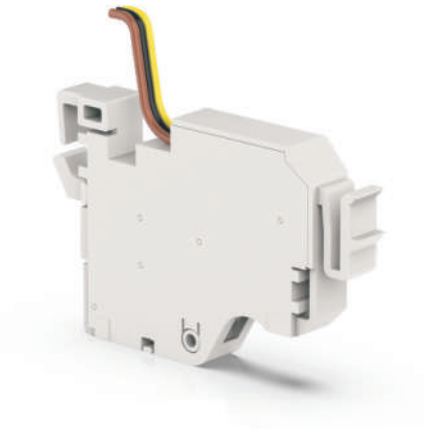
Electrical life & making and breaking capacity

Using categories		Making			Breaking			Cycle time	Operating frequency (time/min)	Time of making
AC		I/Ie	U/Ue	cos ϕ	I/Ie	U/Ue	cos ϕ			
AC-15	Electrical life	10	1	0.3	1	1	0.3	6050	6	≥0.05
	Making & breaking capacity	10	1.1	0.3	10	1.1	0.3	10	6	≥0.05
DC		I/Ie	U/Ue	T0.95	I/Ie	U/Ue	T0.95			
DC-13	Electrical life	1	1	300ms	1	1	300ms	6050	6	≥0.3
	Making & breaking capacity	1.1	1.1	300ms	1.1	1.1	300ms	10	6	≥0.3

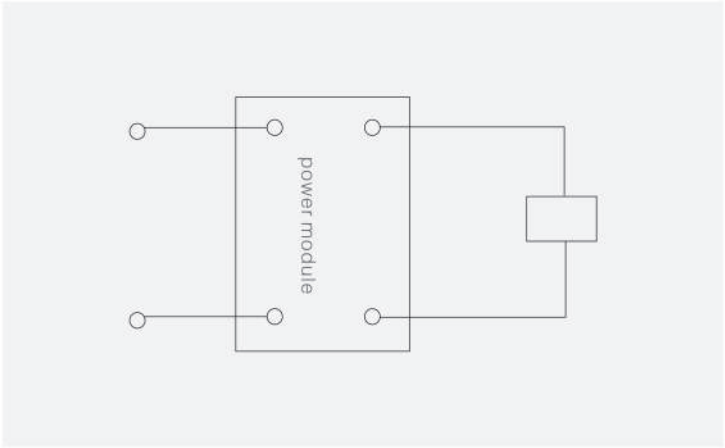
OM1E Series Moulded Case Circuit Breaker

The parameter of shunt trip





The parmeter of Under-voltage trip



Power module

1.power module can be fitted at the side of the circuit breaker, and the independant installation available

2.rated voltage Ue:AC:110V、230V、400V；DC:24V、48V、110V;

3.input capbility AC: 5VA; DC:2W;

4.operating voltage: U=(70%~35%) Ue; circuit breaker tripping & breaking

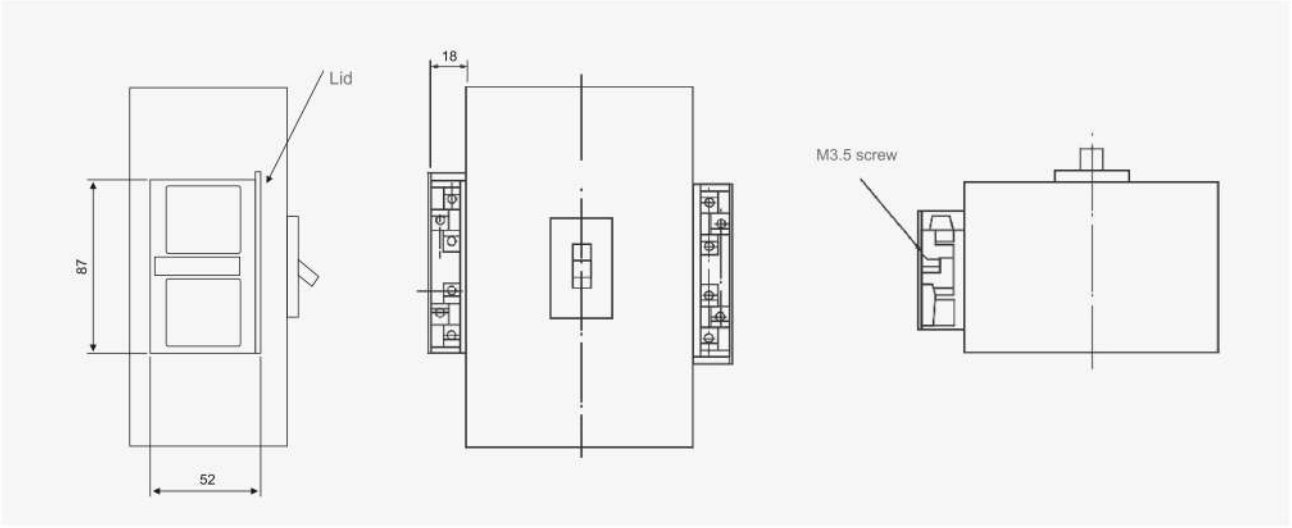
5. operating time: (10~30)ms ;

U≥85% Ue, circuit breaker could be closed

U≤35% Ue, circuit breaker can not be closed

TX series wiring terminal block-internal accessories

The wiring terminal block is hanged at the side of circuit breaker

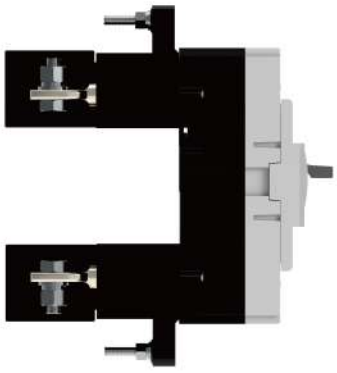


Model RH1 rotary handle

MOX series electrical operating mechanism

It is mounted on the circuit breaker and can be locked by padlock to prevent the making / breaking of circuit breaker

For circuit breaker: Model(AF) 100A–800A

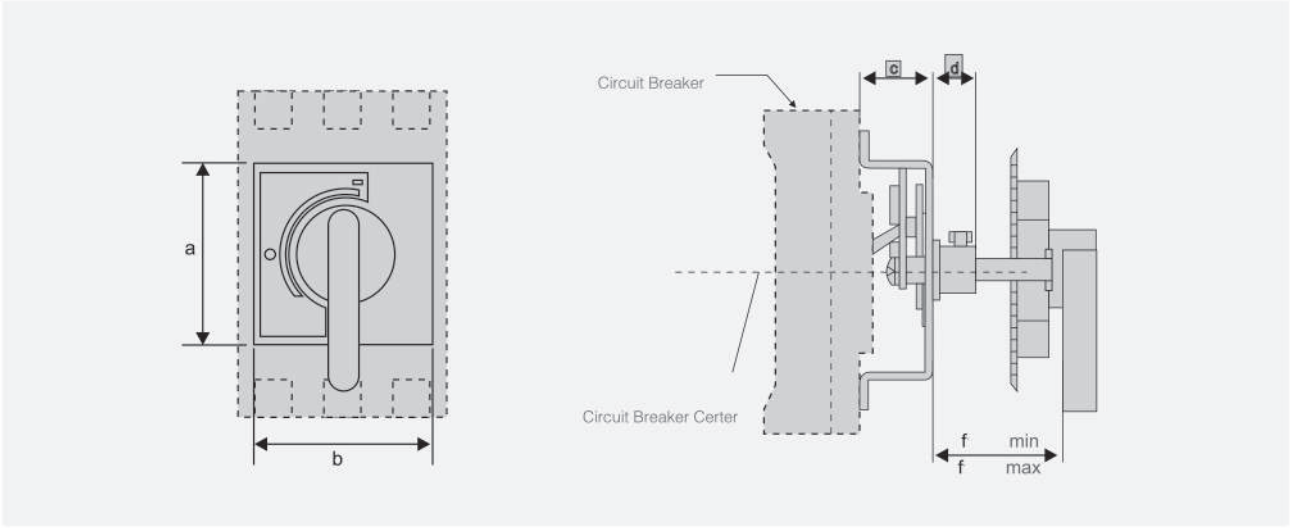


RH1 series rotary operating mechanism

The operating mechanism adopts gear-rack mechanism to drive the circuit breaker handle, with features of small friction, easy operation and long life. It can be locked by padlock to prevent making & breaking of circuit breaker.

Model	Inm(A)	a	b	c	d	F min	F max
RH10100	160	110	80	44	13.5	50	400
RH10250	250	110	90	46	13.5	50	400
RH10400	400	185	140	80	20	50	350
RH10630,0800	630,800	226	210	80	20	50	350

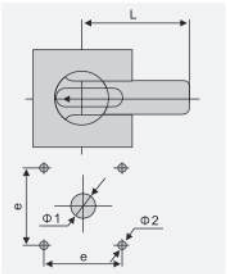
The general length of square shaft: f=150mm Other requirements, please specify when ordering.



The distance between the handle center and hinge should not be less than 200mm

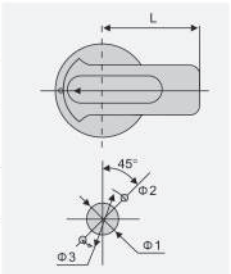
A
Mounting size of A type handle

Model (AF)	160~250	400~800
ϕ1	ϕ42	ϕ63
ϕ2	ϕ4.5	ϕ5.5
e	65	88
L	60	140



B
Mounting size of B type handle

Model (AF)	160~250	400~800
ϕ1	ϕ33	ϕ33
ϕ2	ϕ4.5	ϕ4.5
ϕ3	ϕ53	ϕ53
L	65	125



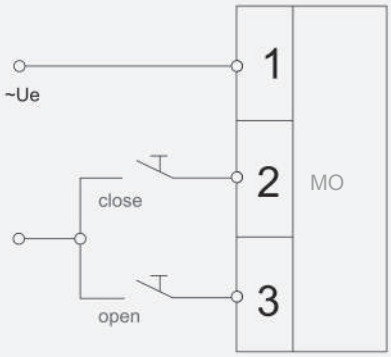
OM1E Series Moulded Case Circuit Breaker

Electric operating mechanism

The MO series electrical operating mechanism is to make the electro-magnet to drive the operating handle of the circuit breaker which is to close and open the circuit breaker. The MOX series electrical operat-ing mechanism by motor, gear and can turns the revolving morement of the motor into the beeline morement to close and open the circuit breaker.

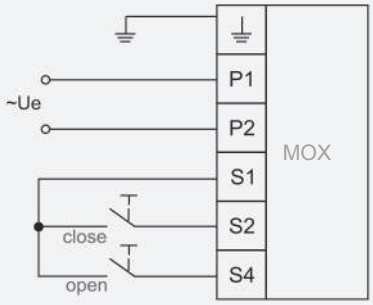
Main technology parameter of MO series electrical operating mechanism

Inm(A)	160		250		Wiring figureing of MO electrical operating mechanism
Model	MO1		MO2		
AC rated working voltage Ue(V)	AC400V	AC230V	AC400V	AC230V	
Starting current (A)	4.4	7.5	5.5	9.5	
Operating time (S)	≤0.2				
Rated operating frequency (time/n)	120				
Mechanical life	15000		9000		



Main technology parameter of MOX series electrical operating mechanism

Inm(A)	160	250	600-800	Wiring figureing of MOX electrical operating mechanism
Model	MOX	MOX	MOX	
AC rated working voltage Ue(V)	AC110~230V 50Hz DC110~220V			
Starting current (A)	≤0.5		≤2	
Operating time (S)	≤0.8			
Rated operating frequency (time/h)	180		120	
Mechanical life	15000	9000	3000	



OM1L

Series Earth Leakage Circuit Breaker

OM1L Series Earth Leakage Circuit Breaker

Outline

OM1L series leakage circuit breaker (hereinafter referred to as circuit breaker) is a new product successfully developed by our company using international advanced technology in the 1990s. The product has perfect protection function, reliable performance, high technical index, beautiful appearance and small size; OM1L and our OM1L series molded case circuit breakers have the same appearance and installation size, which is an ideal product for the replacement of old products.

Comply with IEC60947-2, GB/T 14048.2 “Low-voltage circuit breakers for low-voltage switchgear and control equipment” and its appendix B “circuit breakers with residual current protection”; IEC755, GB6829 “General requirements for residual current operating protectors”.

Usage & Appliance

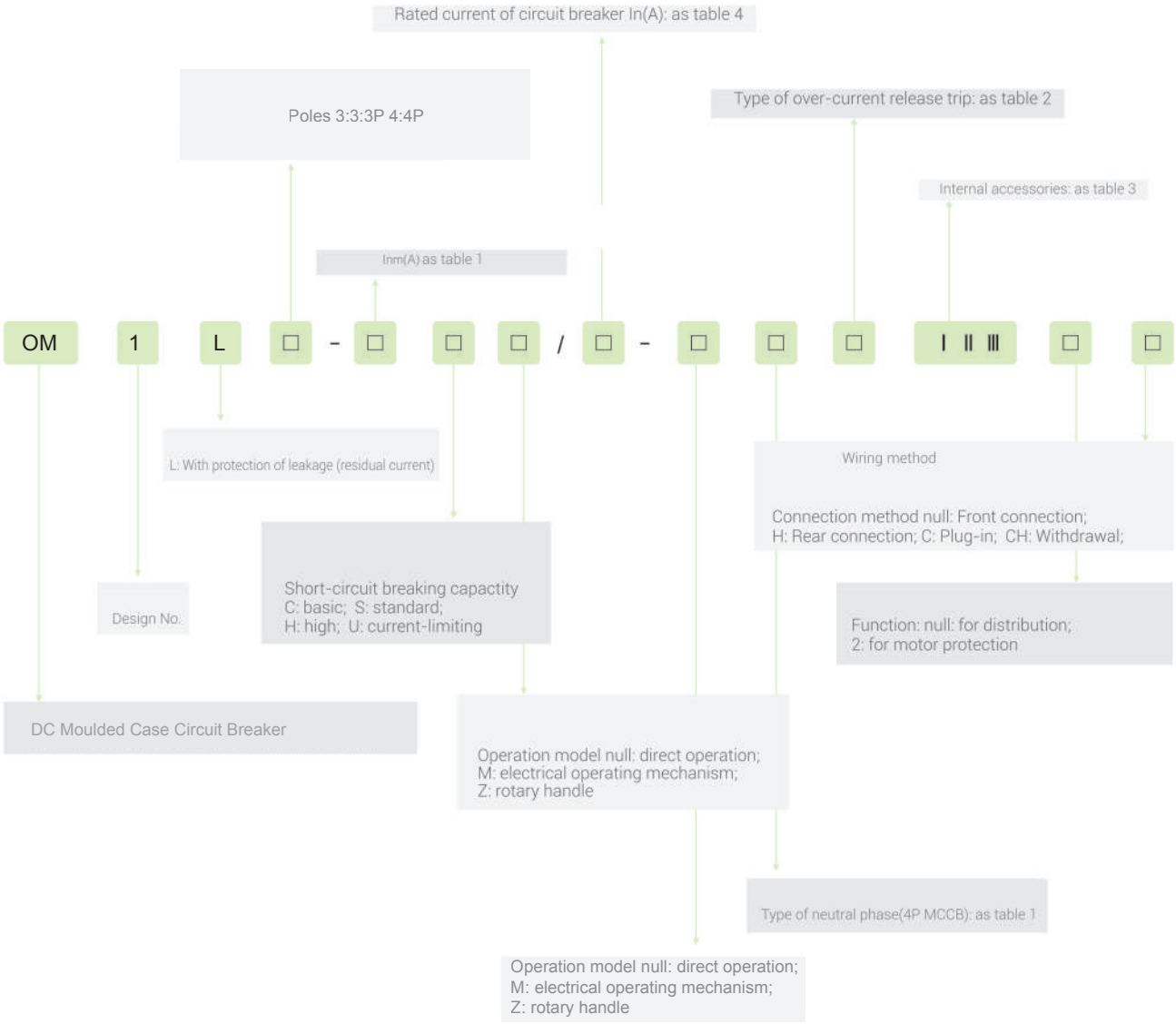
The circuit breaker is used in the electrical system of AC 50Hz, related voltage of up to 400V, rated current of up to 400A to prevent the system from overload, short-circuit and current leakage and to control the infrequent operation of motor.
For the function of protection against leakage(residual current), this breaker can indirectly protect people against the fatal danger of getting electric shock. It can also prevent from fire disaster due to permanently existing ground fault but not being detected by overcurrent protection device.
The rated value of residual action current and leakage protection actuation time are both adjustable. There fore , the breaker can be used in the power distribution system serving as optional protection when leakage occurs. The breaker can also serve as protection unit against direct contact when rated residual current is set at 30mA and the relevant protection unit doesn't work.

Normal operation condition

The circuit breaker could be used in the following working conditions:
1. Ambient air temperature not higher than +40℃ and not lower than -5℃.
2. Altitude no more than 2000m
3. The relative air humidity is not more than 50% in the max. at the temperature. The lowest monthly average temperature not higher than 25℃ in the most moist month and the max. relaative humidity should be no more than 90%.
4.Pollution degree: Grade 3. There is no explosion factor, corrosive metal and the gas destroying the insulation and the electric dust.
5. Installation type: III
6. The terminals of 1,3,5,7 should be connected with the power supply and the terminals of 2,4,6,8 should be connected with the load. Reverse wiring is forbidden.

OM1L Series Earth Leakage Circuit Breaker

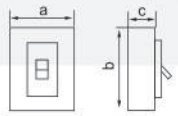
Product model & definition



OM1L Series Earth Leakage Circuit Breaker

Main technical parameter

(table)1

Inm(A)		125			250			400		
Model		OM1L3P0125S	OM1L3P0125H	OM1L3P0125U	OM1L3P0250S	OM1L3P0250H	OM1L3P0250U	OM1L3P0400S	OM1L3P0400H	OM1L3P0400U
Photo										
Rated current		32, 40, 50, 63, 75, 100,125			100, 125, 150, 175, 200, 225, 250			250, 300, 350, 400		
Poles		3	4		3	4		3	4	
Rated insulation voltage		AC690.50HZ			AC690.50HZ			AC690.50HZ		
Rated working voltage		AC400.50HZ			AC400.50HZ			AC400.50HZ		
Arcing distance mm		≤50(0*)			≤50(0*)			≤100(0*)		
Rated ultimate/service breaking capacity Icu/Ics(kA)		30/15	30/15	125/125	30/15	30/15	125/125	70/50	85/85	125/125
Rated residual operation current In (mA)	Non delay type	30,100,300 30,100,300 Three gears adiustable 100,300,500 100,300,500 Three gears adjustable			30,100,300 30,100,300 Three gears adiustable 100,300,500 100,300,500 Three gears adjustable			30,100,300 30,100,300 Three gears adiustable 100,300,500 100,300,500 Three gears adjustable		
	Delay type	30,100,300 30,100,300 Three gears adiustable 100,300,500 100,300,500 Three gears adjustable			30,100,300 30,100,300 Three gears adiustable 100,300,500 100,300,500 Three gears adjustable			30,100,300 30,100,300 Three gears adiustable 100,300,500 100,300,500 Three gears adjustable		
Rated residual non-operation current In (mA)		1/2I△n			1/2I△n			1/2I△n		
Rated residual short-circuit making & breaking capacity I△n (kA)		1/4Icu			1/4Icu			1/4Icu		
Operation charateristic(times)	ON	1500			1000			500		
	OFF	8500			7000			4000		
Dimensions (mm) 	a	90	120	90	90	105	140	105	105	140	185	140
	b	155		216	155		240	257		297
	c	68			68			103		200

(table)2

Code	Type	Description
A	A	N phase without overcurrent trip is normal open and do not make and break along with other 3 poles
B	B	N phase without overcurrent trip make and break along with other 3 poles

(table)3

Code	Title	Description
1	Delay trip	Over current reverse time protection
2	Instantaneous trip	Electromagnetic release: with the protection of overcurrent instantaneous operation
3	Multiple trip	With the above two performances

0 arcing distance: please specify when ordering if you require.

(table)4

Inm(A)	I		II		III		Note
	Code	Description	Code	Description	Code	Description	
125 250	0	Null	0~1	Paris of auxiliary contacts	0~1	Paris of auxiliary contacts	
400	0	Null	0~3		0~2		II +III≤3
	1	Shunt trip	0~1		0~1		II +III≤1
	1	Under-voltage trop	0~1		0~1		II +III≤1

Operation–time of leakage protection as table 5&6

Operation–time of non–delay residual current protection

t(s) / Inm(A) / IΔn(mA) / IΔ	125~400		
	30	100(300)	300(500)
IΔn		≤ 0.3	
2IΔn		≤0.15	
5IΔn		≤0.04	
10IΔn		≤0.04	

Operation–time of delay residual current protection

t(s) / Inm(A) / tn(s) / IΔ	125~400		
	0.2	0.2	0.6
IΔn	< 0.2	< 0.4	< 0.6
2IΔn	< 0.1	< 0.2	< 0.3
5IΔn	< 0.05	< 0.1	< 0.15

tn in the table: delay setting vatlue
Operation time under 21Δ n: limit no-driving time

The breaker can reliably break power supply when the voltage of three phase line to neutral line falls to70%and residual current IΔ is equal to IΔn

Thermal electromagnetic over-current release

There is no over-current release of neutral phase of 4P MCCB and the conventional thermal current is not lower than In/2 and 63A.

Over-current protection of MCCB(for power distribution) as table 7
characteristic curve of OM1L3P0125 over-current protection is shown in Figure 2-1 The characteristic curve of OM1L3P0125 over-current protection is shown in Figure 2-2 The characteristic curve of OM1L3P0125 over-current protection is shown in Figure 2-3
a-Protection character of thermal overload in cold state
b-Protection character of thermal overload in hot state
c-Protection charater of electromagntic trip

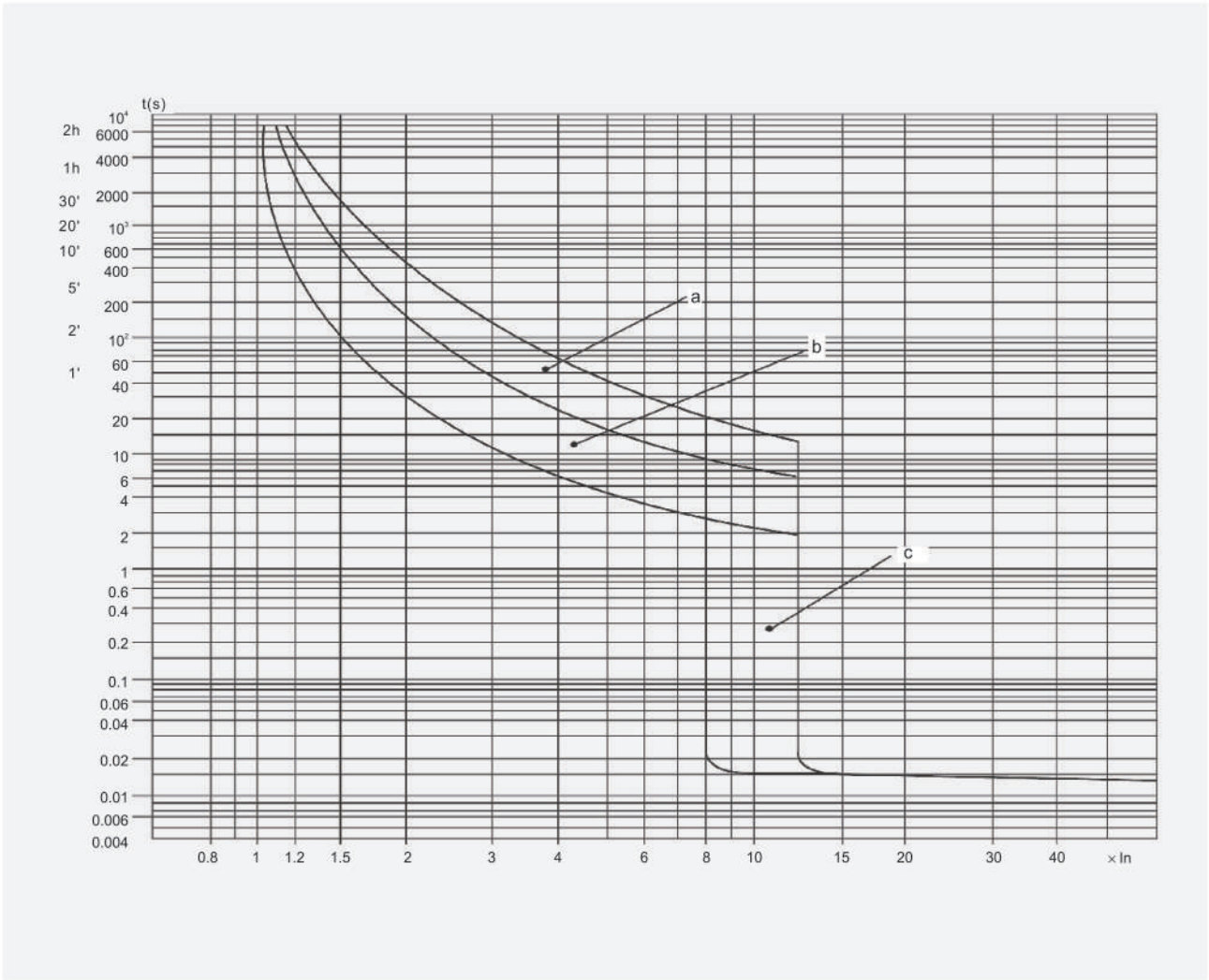
OM1L Series Earth Leakage Circuit Breaker

(table)7

Rated current In(A)	Thermal tripper (ambient temperature +40℃)		The operating current of electromagnetic tripper(A)
	1.05In non-operating time(h) (starting state: cold)	1.30In operating time(h) (starting state: hot)	
≤63	> 1	≤1	(10 ± 2)In
> 63	> 2	≤2	

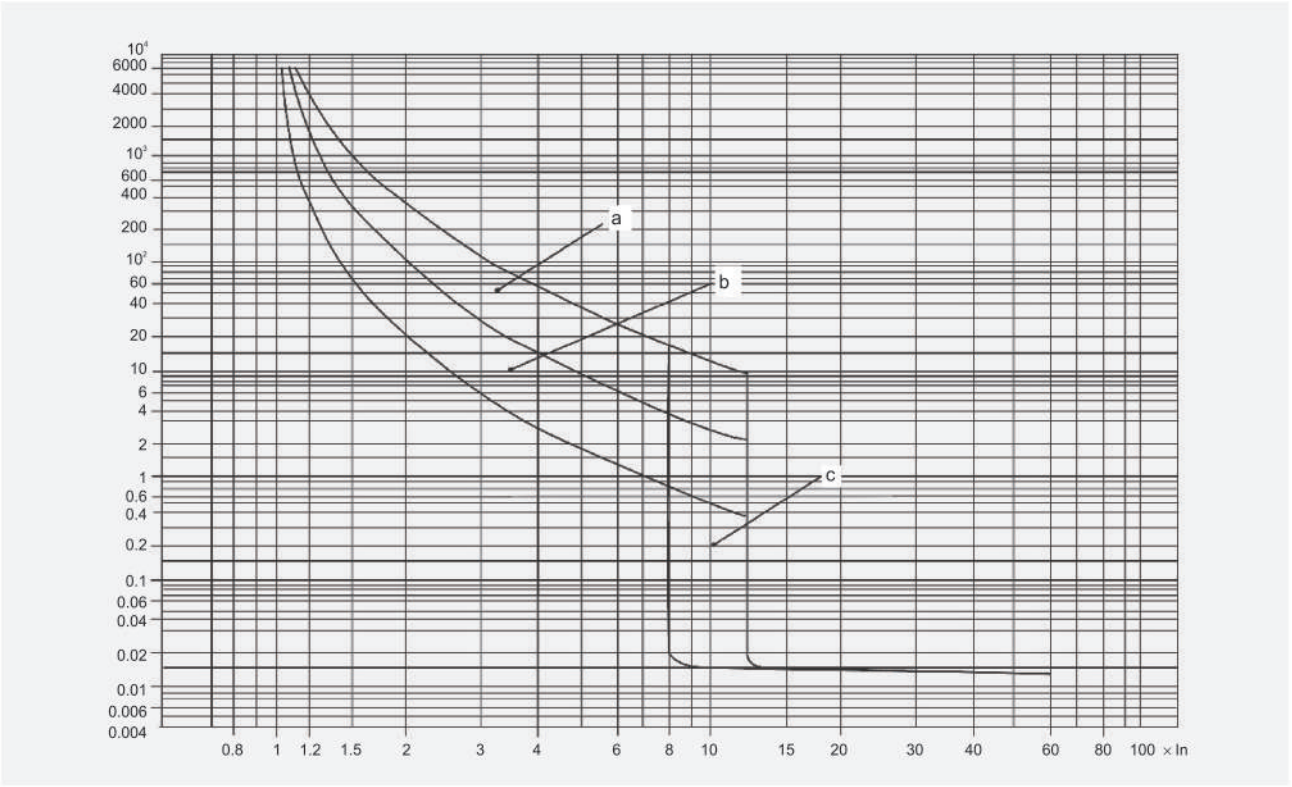
OM1L3P0125 Overcurrent Protection Characteristic Curve

(figure) 2-1



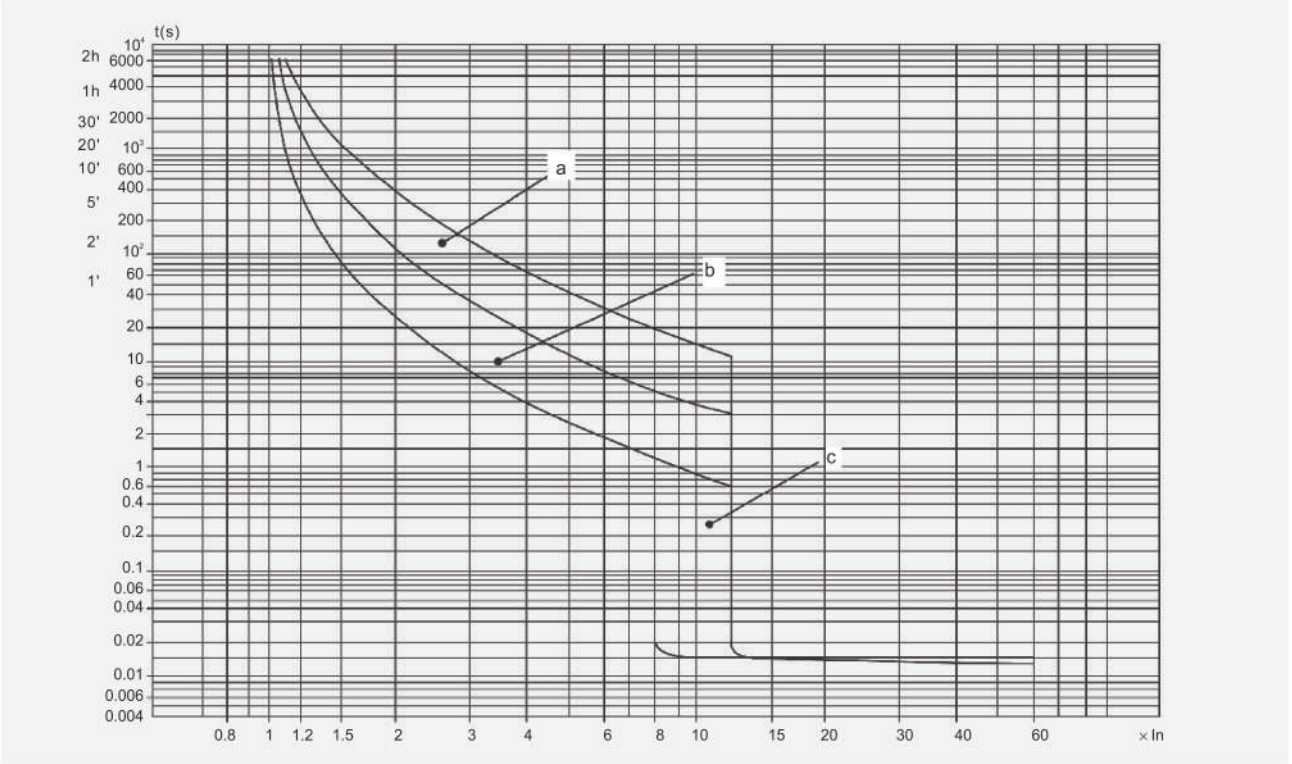
OM1L3P0250 Overcurrent Protection Characteristic Curve

(figure) 2-2



OM1L3P0400 Overcurrent Protection Characteristic Curve

(figure) 2-3

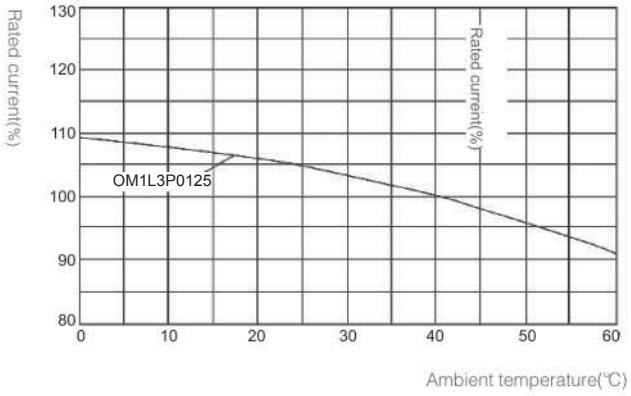


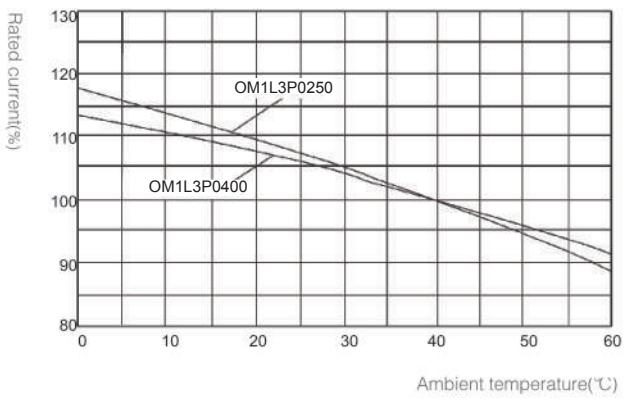
OM1L Series Earth Leakage Circuit Breaker

Overcurrent protection of MCCB (Motor protection)

Rated current In(A)	Thermal tripper (ambient temperature +40℃)				The operating current of electromagnetic tripper(A)
	1.01In non-operating time(h) (starting state: cold)	1.21In operating time(h) (starting state: hot)	1.51In operating time(h) (starting state: hot)	7.2In non-operating time(h) (starting state: cold)	
In≤63	>2	≤2	≤2	2<Tp≤10	(12±2.4) In
63<In≤250			≤4	4<Tp≤10	
250<In≤400			≤8	6<Tp≤20	

Temperature compensating curve

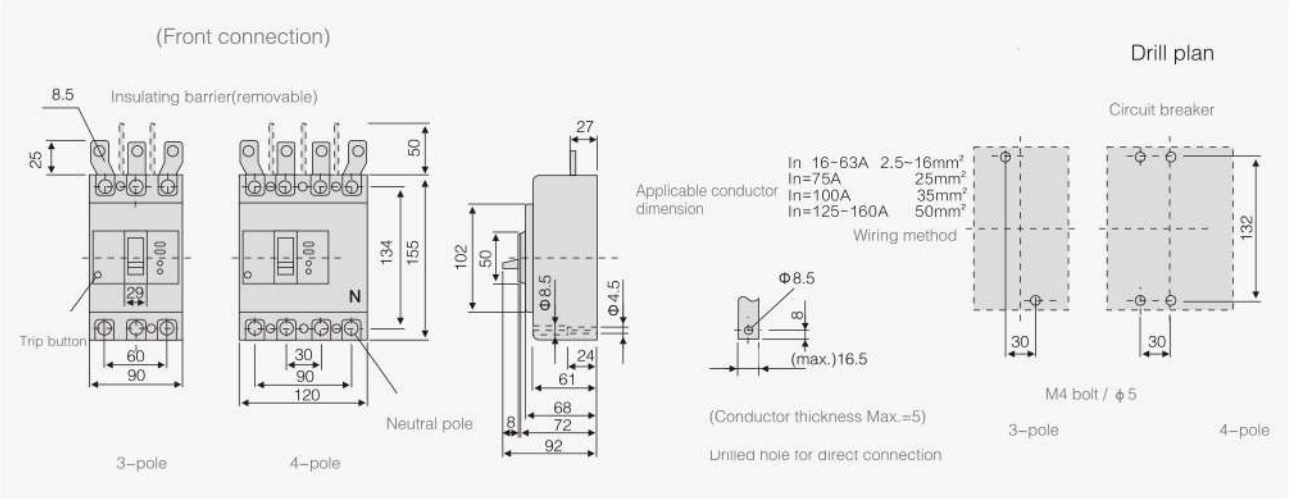


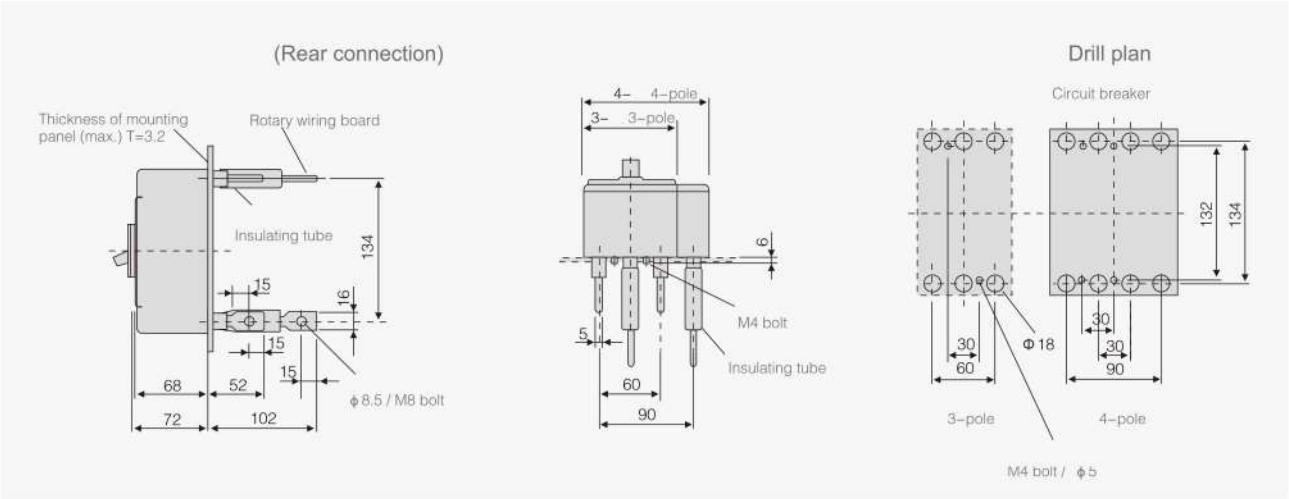


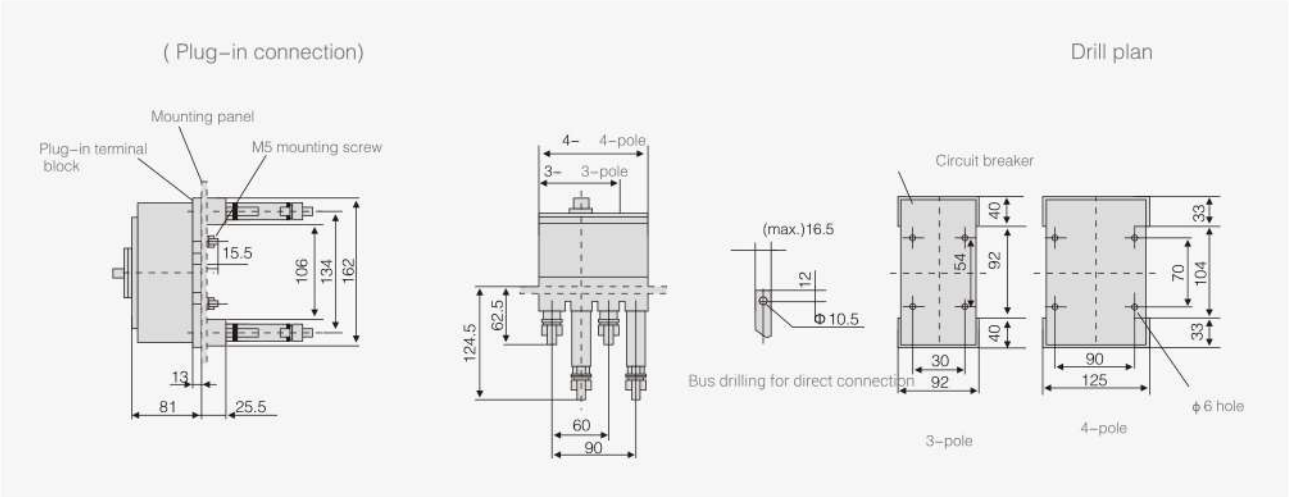
Power losses of MCCB

Model (AF) Inm(A)	Rated current In(A)	Resistance of each pole	Gross power consumption of three-pole	
			Fixed	Plug-in
125	125	0.83	25	30
250	250	0.32	60	75
400	400	0.18	85	105

OM1L3P0125 Overcurrent Protection Characteristic Curve

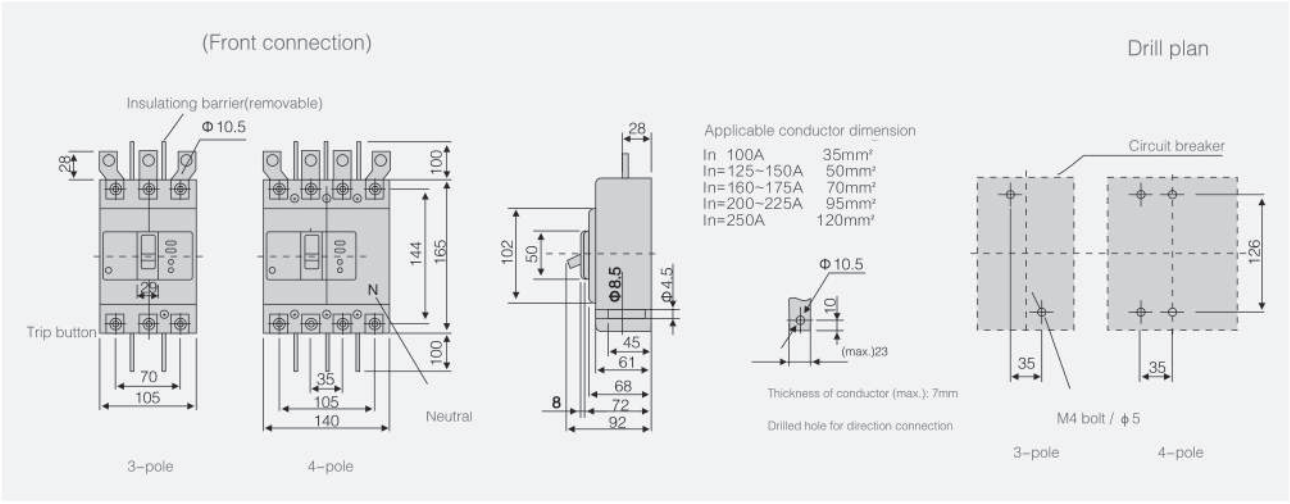


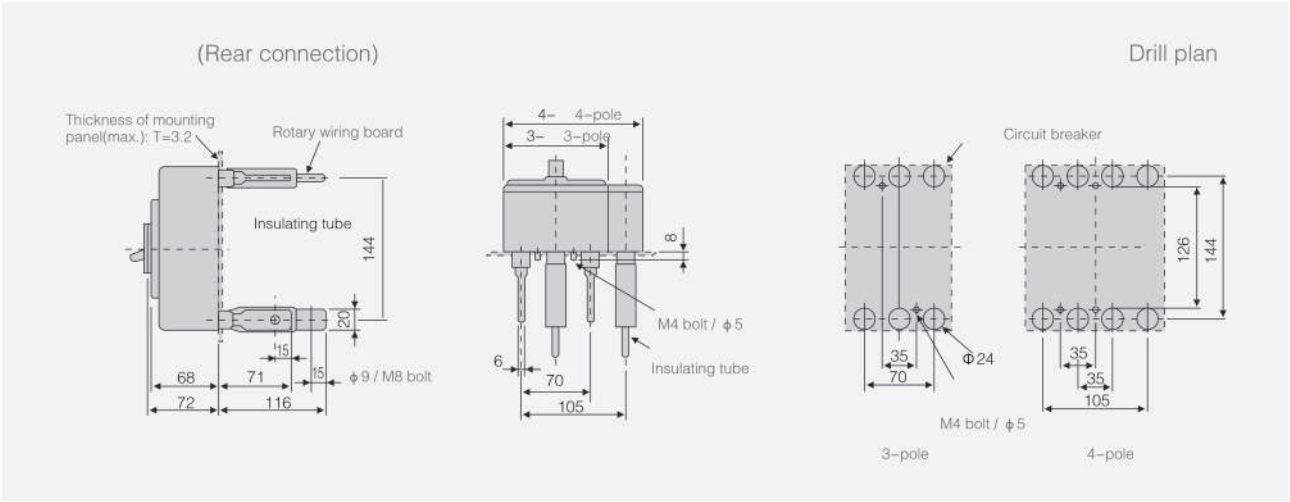


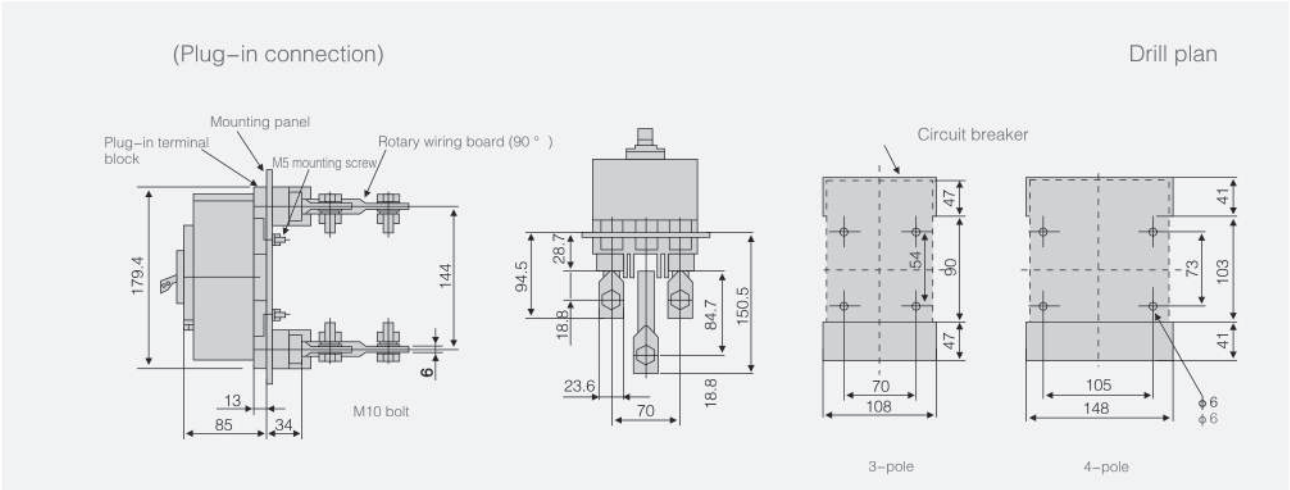


OM1L Series Earth Leakage Circuit Breaker

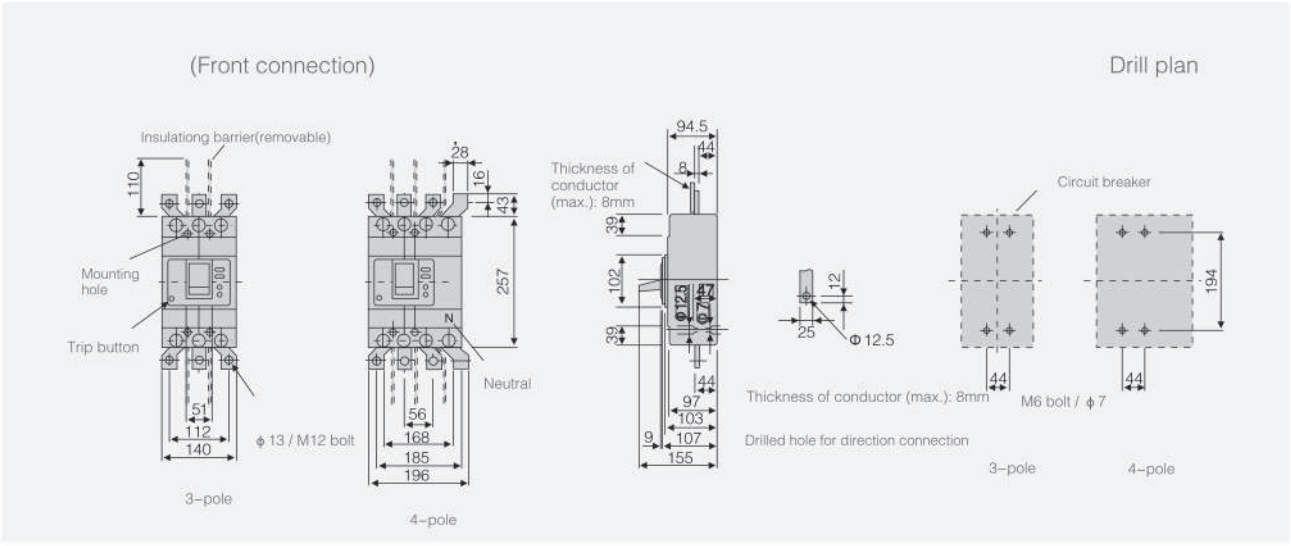
OM1L3P0250 Outline & Mounting Dimension

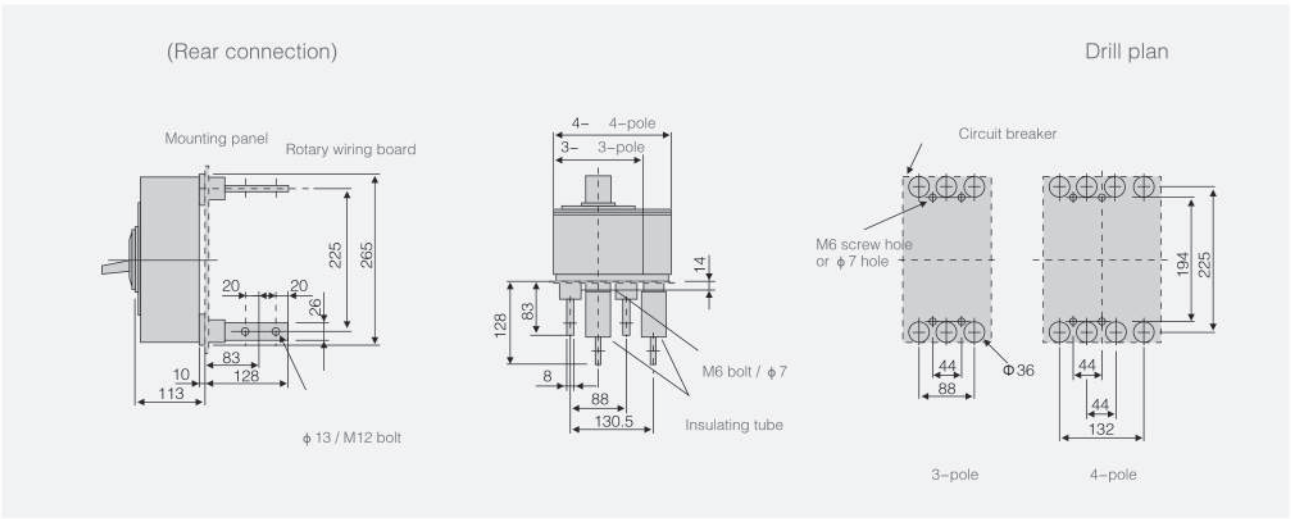


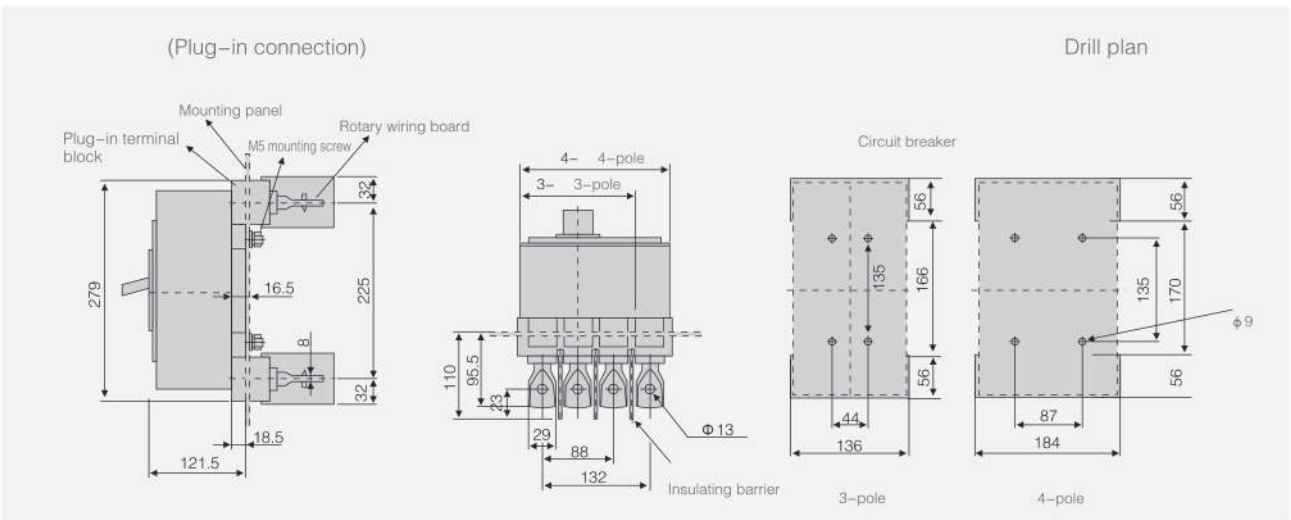




OM1L3P0400 Outline & Mounting Dimension







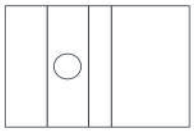
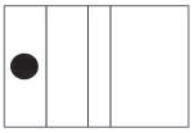
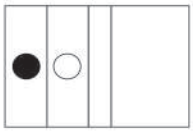
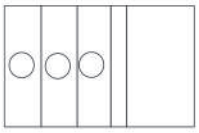
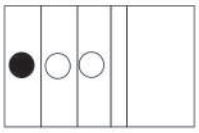
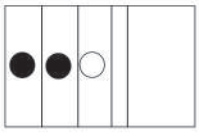
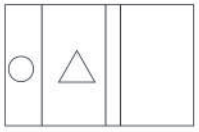
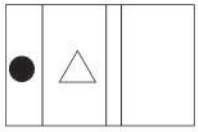
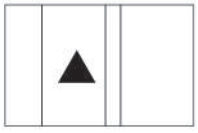
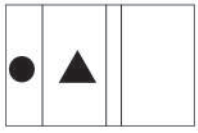
OM1L Series Earth Leakage Circuit Breaker

Accessories of circuit breaker

General table

Inm(A)		125	250	400
Internal accessories	Alarm contact	B2	B3	B4
	Auxiliary contact	F2	F3	F4
	Shunt trip	–	–	FL4
	Under–voltage trip	–	–	QY4
	Connection terminal block as internal accessories	TX		
External accessories	Rotary operating handle	RH10100	RH10250	RH10400
	Electrical operating mechanism	MO1	MO2	-
	Electrical operating mechanism	MOX1	MOX2	MOX3

Code & Installation

Inm(A)	100A,250A		
Code	010	001	011
Position			
Model (AF) Inm(A)	400A		
Code	0(0~3)0	0(0~2)1	012
Position			
Code	100	110	101
Position			
Code	200	210	201
Position			

Parameter of auxiliary & alarm contact

The circuit drawings of auxiliary contact & alarm contact in different working status

Working status of circuit breaker	Auxiliary contact	Alarm contact
Colse		
Open		
Tripping		

Main technology parameter

Rated insulation voltage Ui=400V, AC

Rated thermal current Ith = 6A

Rated operation voltage (Ue) & rated operation current (Ie)

current Ie AC400, 1A; AC230V, 3A

DC220V, 0.15A

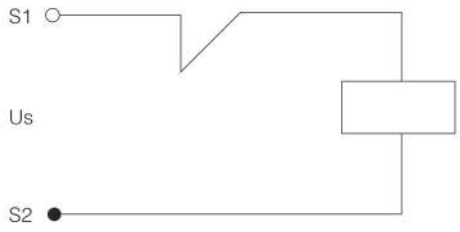
Electrical life & making and breaking capacity

Using categories		Making			Breaking			Cycle time	Operating frequency (time/min)	Time of making
AC		I/Ie	U/Ue	COSΦ	I/Ie	U/Ue	COS			
AC-15	Electrical life	10	1	0.3	1	1	0.3	6050	6	≥0.05
	Making & breaking capacity	10	1.1	0.3	10	1.1	0.3	10	6	≥0.05
DC		I/Ie	U/Ue	T0.95	I/Ie	U/Ue	T0.95			
DC-13	Electrical life	1	1	300ms	1	1	300ms	6050	6	≥0.3
	making and breaking capability	1.1	1.1	300ms	1.1	1.1	300ms	10	6	≥0.3

OM1L Series Earth Leakage Circuit Breaker

The parameter of shunt trip

Circuit figure of shunt trip

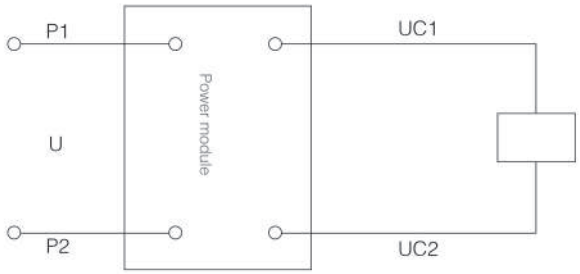


rated voltage Us:
AC:110V,230V,400V;
DC:24V,48V,110V

Input capbility:
AC:180VA;DC:60W

The parameter of under-voltage trip

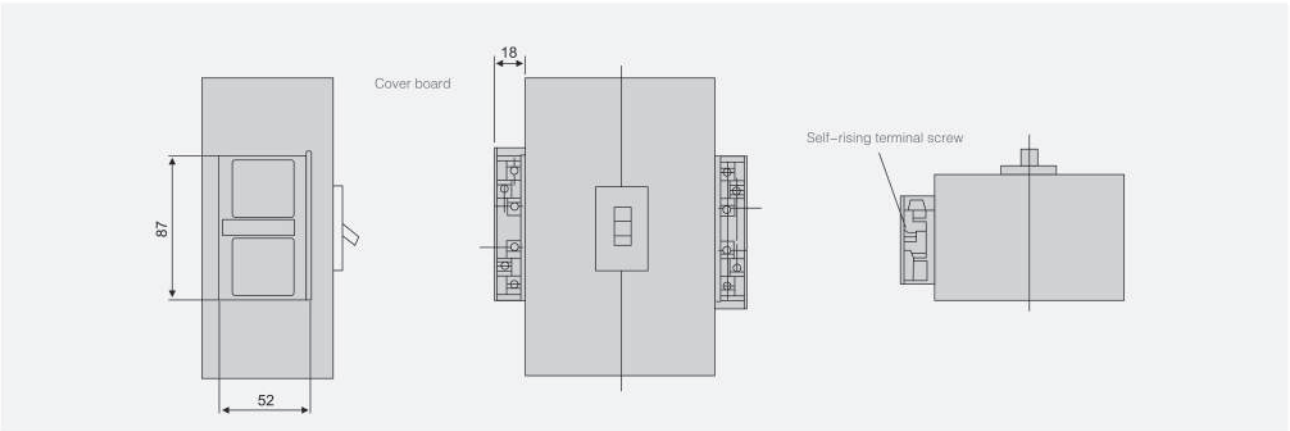
figureing



Power module
1. Power module can be fitted at the side of the circuit breaker, and the independant installation available
2. Rated voltage Ue: AC: 110V, 230V, 400V; DC: 24V, 48V, 110;
3. Input capbility AC: 5VA; DC: 2W;
4. Operating voltage: U=(70%-35%) Ue; Circuit breaker tripping & breaking
5. Operating time: (10-30)ms;
U≤85% Ue, circuit breaker could be closed
U<35% Ue, circuit breaker can not be closed

TX series wiring terminal block-internal accessories

The wiring terminal block is hanged at the side of circuit breaker



RH1 Series rotary operating mechanism

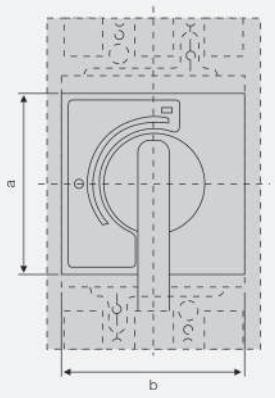
The operating mechanism adopts gear-rack mechanism to drive the circuit breaker handle, which features small friction, easy operation and long life. tlt can be locked by padlock by padlock to prevent making & breaking of circuit breaker.

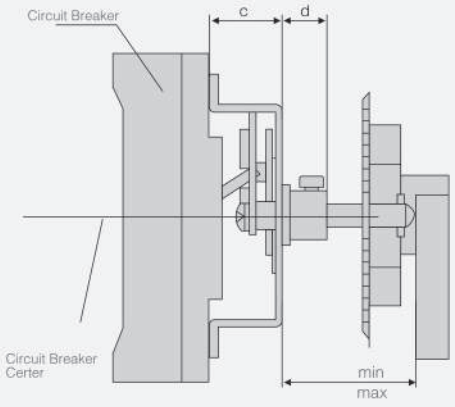
OM1L Series Earth Leakage Circuit Breaker

RH1 Series rotary operating mechanism

Model	Inm(A)	a	b	c	d	(min)	(max)
RH10100	125	110	80	44	13.5	50	400
RH10250	250	110	90	46	13.5	50	400
RH10400	400	185	140	80	20	50	350

The general length of square shaft: f=150mm Other requirements, please specify when ordering.

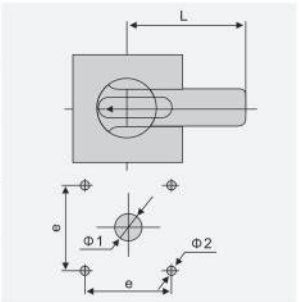




The distance between the handle center and hinge should not be less than 200mm

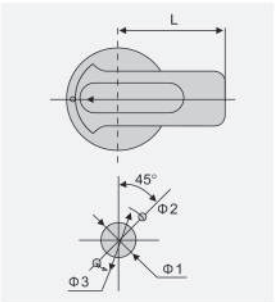
Mounting size of A type handle

Model (AF)	A1	A2
Φ1	Φ42	Φ63
Φ2	Φ4.5	Φ5.5
e	65	88
L	60	140



Mounting size of B type handle

Model (AF)	B1	B2	B3
Φ1	Φ33	Φ33	Φ33
Φ2	Φ4.5	Φ4.5	Φ4.5
Φ3	Φ53	Φ53	Φ53
L	65	125	95



Electric operating mechanism

The model MO electrical operating mechanism is to make the electro-magnet to drive the operating handle of the circuit breaker which is to close and open the circuit breaker. The model MOX electrical operat-ing mechanism by motor, gear and can turns the revolving morement of the motor into the beeline morement to close and open the circuit breaker.

OM2

Series Moulded Case Circuit Breaker

OM2 Series Moulded Case Circuit Breaker

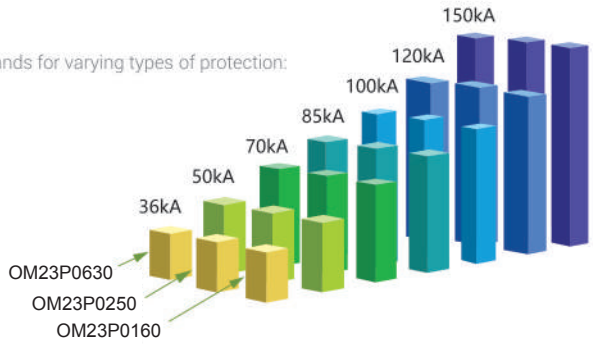
Product Overview

The OM2 series breakers are used for making, breaking, and the protection of low-voltage distribution systems and motors.

For protection of power distribution:	OM23P0160	OM23P0250	OM23P0630	OM23P1250
For motor protection	OM23P0160M	OM23P0250M	OM23P0630M	
Disconnector:	OM23P0160NA	OM23P0250NA	OM23P0630NA	

Several breaking capacities exist for each model of circuit breaker, meeting the demands for varying types of protection:

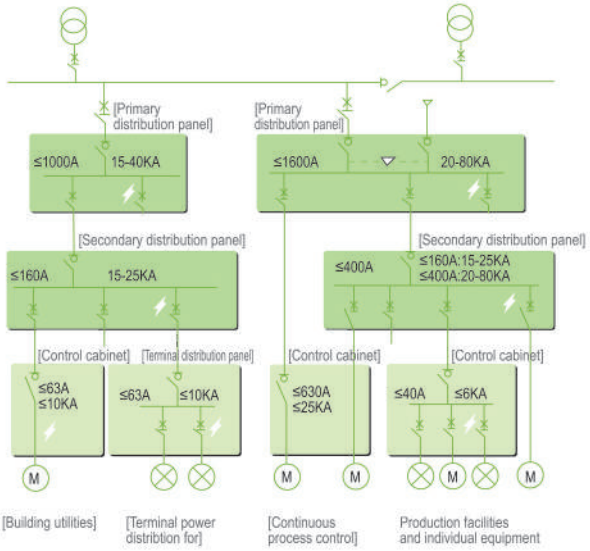
- Standard type-N
- High-breaking capacity type-H
- Current limiting type-L



For each OM2D circuit breaker, several tated current levels are available.

Type	Rated current (A)										
OM23P0160	16	20	25	32	40	50	63	80	100	125	160
OM23P0250	40	50	63	80	100	125	160	200	250	–	–
OM23P0630	300	400	500	630	–	–	–	–	–	–	–
OM23P1250	800	1000	1250	–	–	–	–	–	–	–	–

Note:
OM23P0160 is adjustable for thermal protecion, range: Ir=(0.8-1.0)In
OM23P0250 is adjustable for thermal and magnetic protection, range: Ir=(0.8-1.0)In, Ii=(5-10)In
OM23P0630 is equal to OM23P0250 Electronic Type: Ir(0.4-1.0)ir, Isd=(2-10)Ir
OM23P1250 Range Ir=(0.4-1.0)ir, Isd=(1.5-10)Ir



A product equal to the size of the circuit breaker, commonly used in the connection and isolation between the power consumers and different busbars.

Cannot cut off the short-circuit cuttent, has no protective functions, and may be used in conjunction with the fuse.

OM2 Series Moulded Case Circuit Breaker

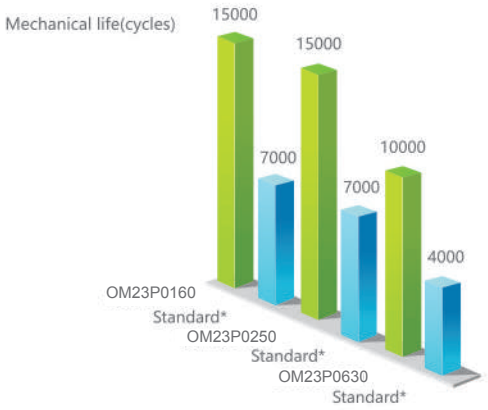
Product Features

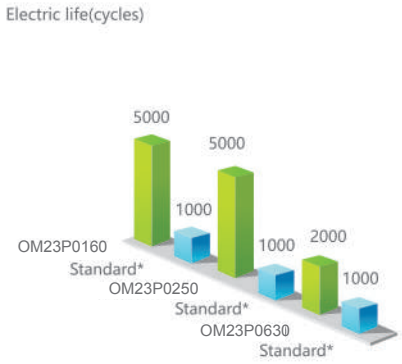
Rotating shaft with bearing

The innovative rotating shaft with bearing allows the circuit breaker to:

Have a smaller main tension spring force and mechanism friction force
Have lower mechanism abrasion
Contain a more quick and flexible mechanism action

A kind of durable, high-performance circuit breaker, the user will be able to reduce frequency and cost of changing the circuit breaker due to its longer life span.



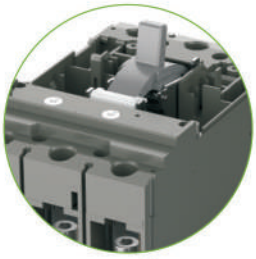


Snap Action

The breaking speed of the circuit breaker is accelerated (breaking time within 2 ms), and its breaking capacity and current capacity are improved by utilizing a gas- flusing principle.

There are several different breaking capacities for each model of the OM2 circuit breaker. There fore, users may choose the most optimal bteaker as per theri actual demands.

The maximum breaking capacity of each model of OM2 circuit breaker is up to 150 kA.



Gas-Flushing principle

When the circuit breaker breaks the short circuit current, large quantities of high-temperature and high-pressure gas will be generated.

A special gas flow path is designed for the OM2 breaker, which will lead gas being generated to the fast-actuating mechanism. The auxiliary mechanism is activated by the gas pressure, and the entire breaking time may be controlled within 2 ms. Consequently, the damages caused by the short circuit current to other electric components and the busbar

OM2 Series Moulded Case Circuit Breaker

Cruuent-limiting Capacity

Current limiting means the limiting increase of the short circuit current in a circuit. In a circuit protected by the OM2 product series, both the peak value and energy2t of the short circuit current generated are far less than expected.

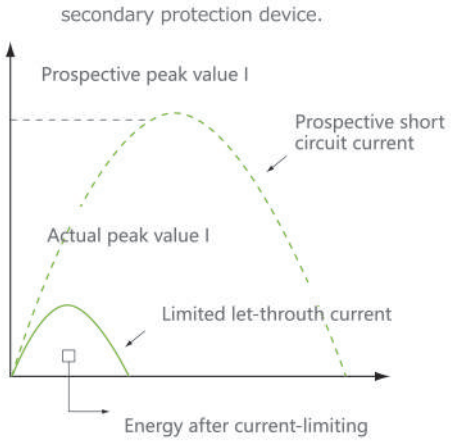
U-Type fixed contact design

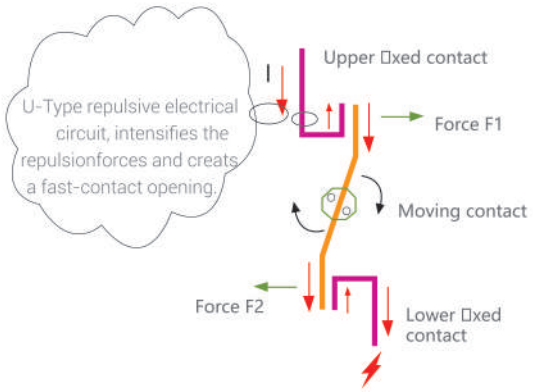
The pre-breaking technique may be realised by means of a unique U-Type fixed contact. The pre-breaking technique refers to that of the electrodynamic force generated throuth the U-Type fixed contact and that wnich occurs on moving contact system. The higher the short circuit current, the bigger the repulsive electrodynamic forces they generate simultaneously. Prior to releasing, the electrodynamic repulsive forces may separate the moving contact from the fixed contact, and the equivalent resistance between these two contacts is increased by streching the electrical arc.

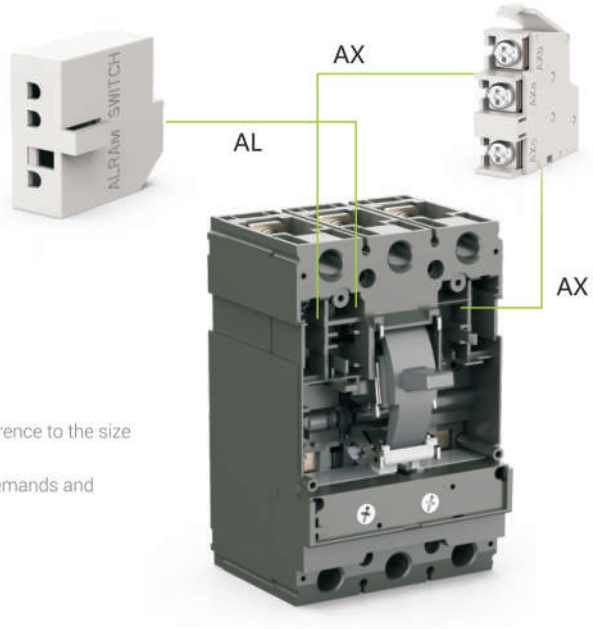
Double break design

The current-limiting function of the pre-breaking technique is enhanced because of increase in instantaneous arc resistance and arc voltage and a fast drop in the current increase rate.

Reduces the damage and loss of equipment and the power lines caused by a short circuit current, improves the safety, and cuts down on the cost of a secondary proteciton device.





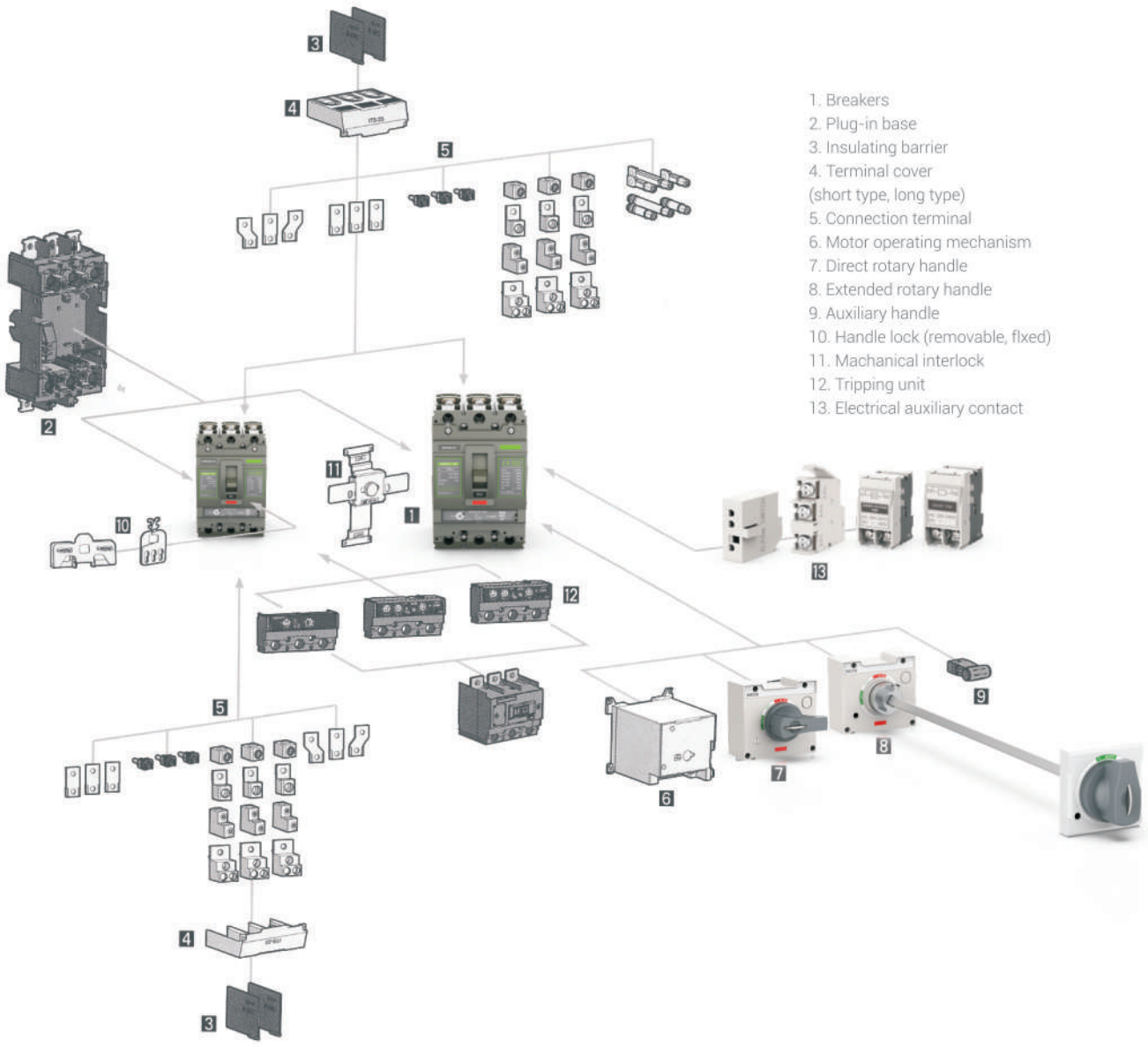


Modularized Design

Circuit breakers: For circuit breakers within the same frame, withort reference to the size of the breaking capacity and rated current, the dimension is the same.

Accessories: The users may select accessories randomly as per their demands and expand the functions of the circuit breakers.

OM2 Series Moulded Case Circuit Breaker



Advanced Magnetic Field Analysis

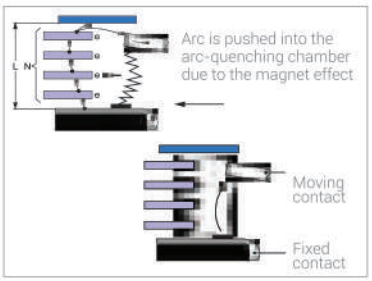
For a circuit breaker, the distrbution of the magnetic field in its contact system has a direct impact on its performance, but the magnetic field is not visible. The OM2 is designed by combining the overall simulationtechnique with several tests, which enables a rational a circuit breaker with excellent performance capabilities.

OM2 Series Moulded Case Circuit Breaker

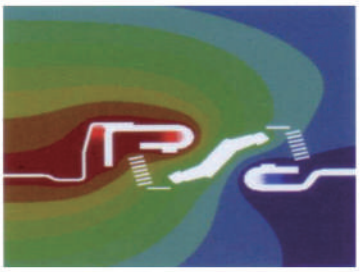
Ensuring that a strong electrodynamic repulsion force will be generated as soon as a short-circuit occures;

Ensuring that the electrical arc can be blown into the arcing chamber instantly;

Ensuring that there will be sufficient pressures between the moving contact and the fixed one when the circuit breaker functions normally and the contact resistance between the two contacts is sufficiently low.



Magnetic-blow quenching principle



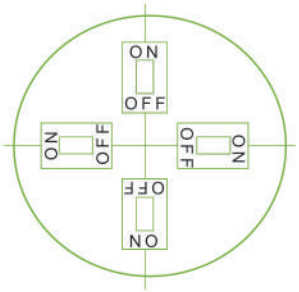
Distribution of magnetic field between contacts

Optimized Dimensions

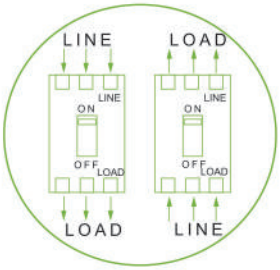
For easier intallation and more space-saving capabilitles, the volume of the OM2 circuit breaker is designed and manufactured in a compact size and light weight, while its excellent performance is maintained.

Additionally, the required mounting space is further reduced effectively due to its innovative zero flashover design.

Several ways for mounting and the introduction of incoming lines allow for better mounting by adapting to different installation practices.



Mounting direction



Power supply from the top or botton

OM2 Series Moulded Case Circuit Breaker

Environmentally-friendly

Design/Manufacturing

The OM2 does not contain any noxious or hazardours substances, and its manufacturing and processing processes are performed in accordance with the requitements of the ISO14001.

Operation

Low temperature rise, low power consumption, and minor influences to the surrounding environment during operation.

Distribution

Environmentally-protective materials are used in the course of distribution.

Recyling

Over 80% of its commponent materials can be recycled and reused at the end of its service life.

Standards and Certifications

International standards		Chinese standards
Product standards		
IEC 60947-1	(General provsions)	GB/T 14048.1
IEC 60947-2	(Circuit breakers)	GB/T 14048.2
IEC 60947-3	(Switches, isolation)	GB/T 14048.3
IEC 60947-4-1	(Motor starters)	GB/T 14048.4
Extreme environmental test standards		
IEC 60068-2-1	(Low temperature)	GB/T 2423.1
IEC 60068-2-2	(Dry heat)	GB/T 2423.2
IEC 60068-2-11	(Salty mist test)	GB/T 2423.17
IEC 60068-2-30	(Moist heat)	GB/T 2423.4

Operating conditions

Temperature

May be used in temperatures from -20 C-75℃;
If the necessary working temperature is below -5℃ or above +40℃, use it according to those specified in the table of temperature compensation coeffcient or please contact for additional information.

Altitude

Normally, the altitude above sea level at its installation site must not exceed 2,000m;
If having to install at an altitude above 2,000m use it according to those specified in the table of altitude-derating factors or please contact us if you have any questions and / or concerns.

Humidity

The following conditions must be met during normal operation;
If the ambient air temperature is +40oC, the atmospheric relative humidity can not exceed 50%. If the temperature is lower, use it under the conditions for a higer degree of humidity.
The monthly mean relative humidity needs to be below 90% in the dampest month.
The effects of condensation on the product surface impacts its performance and needs to be taken into consideration.

Every product been tested by strictly following the requirements given by IEC60068-2-30/GB2423.4

Pollution Level

Level III

OM2 Series Moulded Case Circuit Breaker

Technology Specification

OM2E series thermal magnetic type for general power distribution protection

MCCBs for power distrbution			160			250			630			1250
												
Inm(A)			160			250			630			1250
Rated curent, In			16,20,25,32,40,50 63,80,100,125,160			40,50,63,80 100,125,160,200,250			300,400,500,630			800,1000,1250
No. of poles			2*,3,4			2*,3,4			2*,3,4			3,4
Rated operational voltage (V) Ue		AC	690			690			690			600
		DC	500			500			500			500
Rated impulse withstand voltage (kV), Uimp			8			8			8			8
Rated insulation voltage, Ui			750			750			750			750
Rated ultimate short-circuit breaking capacity(V), Icu			N	H	L	N	H	L	N	H	L	N
AC 50/60Hz(kA)		220/240V	85	100	200	100	120	200	100	120	200	85
		380/415V	50	85	150	50	85	150	65	85	150	50
		440/460V	50	70	130	50	70	130	65	85	130	50
		480/500V	30	50	65	42	65	85	42	65	85	40
		660/690V	5	8	10	10	15	20	10	20	35	
		250V	42	65	100	50	85	100	50	85	100	20
DC(2 poles in series)		500V	42	65	100	50	85	100	50	85	100	
Rated service breaking capacity(%Icu), Ics			100%	100%	100%	100%	100%	100%	100%	100%	100%	75%
Rated short-circuit making capacity(kA), Icm AC 50/60Hz		220/240V	187	220	440	220	264	440	220	264	440	63
		380/415V	105	187	330	105	187	330	143	187	330	37.5
		440/460V	105	154	286	105	154	286	143	187	286	37.5
		480/500V	63	105	143	88	143	187	88	143	187	30
		660/690V	8	14	17	17	30	40	17	40	74	22.5
Use category				A			A			A		A
Isolation				●			●			●		●
Implementation of standards				IEC60947-2			IEC60947-2			IEC60947-2		IEC60947-2
Trip unit(release)												
Thermal-Magnetic												
FTU	Thermal-Magnetic fixed			●			●			●		
FMU	Heat adjustable magnetic fixed			●			●			●		
ATU	Thermal magnetic adjustable			–			●			●		
MTU**	Magnetic tripping type			●			●			●		
Electronic												
LSI	LSI	ETS**		–			●			●		●
LSI	LSI	ETM**		–			●			●		
Connection	Fixed	Pre-wiring board		●			●			●		●
		Rear cpmmection		●			●			●		
	Plug-in	Pre-wiring board		●			●			●		
		Rear connection		●			●			●		
Mechanical life(Number of operations)				25000			25000			20000		10000
415VAC Electrical life in 415VAC				10000			10000			6000		5000
(mm) Basic dimensions(mm) W x H x D		3– 3P		90 x 140 x 86			105 x 160 x 86			142 x 260 x 110		327 x 199 x 235
kg) (Front connection)		4– 4P		120 x140 x 86			140 x160 x 86			188 x 260 x 110		327 x 199 x 235
kg) Weight (pre-wiring board)		3– 3P		1.5			2			5.4		12
		4– 4P		1.8			2.6			7.2		15.6

Suitable for with FTU, FMU, the ATU MCCB 2-pole MCCB and 3-pole housing the same size For 3-pole molded case circuit breaker

OM2 Series Moulded Case Circuit Breaker

Technology Specification

OM2E series thermal magnetic type for motor protection

Moulded case circuit breaker for motor protection			160			250			630		
											
Inm(A)			160			250			630		
Rated curent, In			16,20,25,32,40,50 63,80,100,125,160			40,50,63,80 100,125,160,200,250			300,400,500,630		
No. of poles			3			3			3		
Rated operational voltage (V) Ue		AC	690			690			690		
		DC	500			500			500		
Rated impulse withstand voltage (kV), Uimp			8			8			8		
Rated insulation voltage, Ui			750			750			750		
Rated ultimate short-circuit breaking capacity(V), Icu			N	H	L	N	H	L	N	H	L
AC 50/60Hz(kA)		220/240V	85	100	200	100	120	200	100	120	200
		380/415V	50	85	150	50	85	150	65	85	150
		440/460V	50	70	130	50	70	130	65	85	130
		480/500V	30	50	65	42	65	85	42	65	85
		660/690V	5	8	10	10	15	20	10	20	35
Rated service breaking capacity(%Icu), Ics			100%	100%	100%	100%	100%	100%	100%	100%	100%
Rated short-circuit making capacity(kA), Icm											
AC 50/60Hz		220/240V	187	220	440	220	264	440	220	264	440
		380/415V	105	187	330	105	187	330	143	187	330
		440/460V	105	154	286	105	154	286	143	187	286
		480/500V	63	105	143	88	143	187	88	143	187
		660/690V	8	14	17	17	30	40	17	40	74
Use category				A			A			A	
Isolation				●			●			●	
Implementation of standards				IEC60947-2			IEC60947-2			IEC60947-2	
Trip unit(release)											
MTU Only magnetic trip				●			●			●	
Thermal-Magnetic											
FTU	Thermal-Magnetic fixed			●			●			●	
FMU	Heat adjustable magnetic fixed			●			●			●	
ATU	Thermal magnetic adjustable			–			●			●	
MTU**	Magnetic tripping type			●			●			●	
Electronic											
LSI	LSI	ETM		–			●			●	
Connection	Fixed	Pre-wiring board		●			●			●	
		Rear cpmmection		●			●			●	
	Plug-in	Pre-wiring board		●			●			●	
		Rear connection		●			●			●	
Mechanical life(Number of operations)				25000			25000			20000	
415VAC Electrical life in 415VAC				10000			10000			6000	
(mm) Basic dimensions(mm) W x H x D	3– 3P			90 x 140 x 86			105 x 160 x 86			142 x 260 x 110	
kg) Weight (pre-wiring board)	3– 3P			1.5			2			5.4	

OM2 Series Moulded Case Circuit Breaker

Technology Specification

OM2D for protection of power distribution

MCCBs for power distrbution			250ETS	630ETS	1250ETS
					
Inm(A)			250	630	1250
Rated curent, In			40,100,160,250	300,400,500,630	800,1000,1250
No. of poles			3,4	3,4	3,4
Rated operational voltage (V) Ue			750	750	750
Rated impulse withstand voltage (kV), Uimp			8	8	8
Rated insulation voltage, Ui			750	750	750
Rated ultimate short-circuit breaking capacity(V), Icu			N	N	N
AC 50/60Hz(kA)		220/240V	100	100	85
		380/415V	50	65	50
		440/460V	50	65	50
		480/500V	42	42	40
		660/690V	10	10	30
Rated service breaking capacity(%Icu), Ics			100%	100%	75%
AC 50/60Hz Rated short-circuit making capacity(kA), Icm		220/240V	220	220	63
		380/415V	105	143	37.5
		440/460V	105	143	37.5
		480/500V	88	88	30
		660/690V	17	17	22.5
Use category			A	A	B
Isolation			●	●	●
Implementation of standards			IEC60947-2	IEC60947-2	IEC60947-2
Trip unit(release)					
Electronic					
● LSI	● LSI	ETS**	●	●	●
● LSI	● LSI	ETSM	●	●	
Connection	Fixed	Pre-wiring board	●	●	●
		Rear cpmmection	●	●	
	Plug-in	Pre-wiring board	●	●	
		Rear connection	●	●	
Mechanical life(Number of operations)			25000	20000	
Electrical life in 415VAC			10000	6000	
Basic dimensions(mm) W x H x D		3- 3P	105 x 160 x 86	142 x260 x 86	327 x 199 x 235
Pre-wiring board(mm)		4- 4P	140 x 160 x 86	188 x 160 x 86	327 x 265 x 235
Weight (pre-wiring board)		3- 3P	2	5.4	12
		4- 4P	2.6	7.2	15.6

OM2 Series Moulded Case Circuit Breaker

Technology Specification

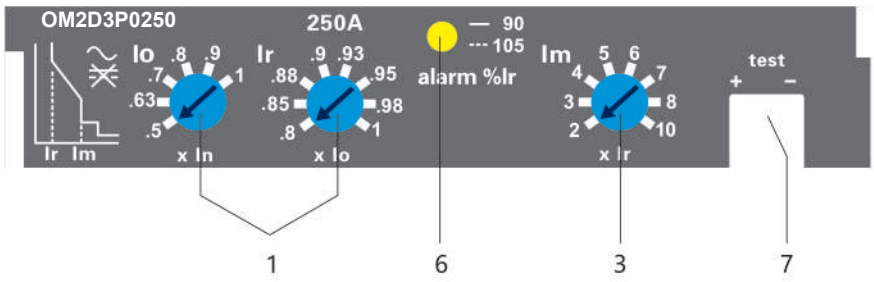
OM2 Disconnector

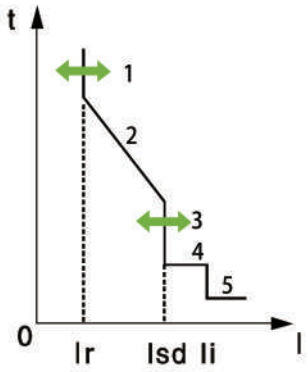
MCCBs for power distrbution			160NA	250NA	630NA
					
Inm(A)			160	250	630
(A) Ith Conventional free air thermal current			160	250	630
No. of poles			3,4	3,4	3,4
Rated operational voltage (V) Ue		AC	690	690	690
		DC	500	500	500
Rated operational current,Ie			160	250	630
Rated impulse withstand voltage (kV), Uimp			8	8	8
Rated insulation voltage(V),Ui			750	750	750
Rated short-circuit making capacity(KV peak), Icm			3.1	4.98	8.5
Rated short-circuit withstand current(A rms), Icw		1s	2200	3500	6300
		3s	2200	3500	6300
		20s	960	1350	2320
Isolation behavior			●	●	●
Trip unit(release)			●	●	●
Disconnector unit(DSU)					
Connection	Fixed	Front-connection	●	●	●
		Rear-connection	●	●	●
	Plug-in	Front-connection	●	●	●
		Rear-connection	●	●	●
Mechanical life (Number of operations)			25000	25000	20000
Electrical life in 415VAC (Number of operations)			10000	1000	6000
Basic dimensions WxHxD (mm)	3-	3P	90 x 140 x 86	105 x 160 x 86	140 x 260 x 110
Front connection	4-	4P	120 x140 x 86	140 x160 x 86	186.5 x 260 x 110
Weight (kg)	3-	3P	1.5	2	5.4
Front connection	4-	4P	1.8	2.6	7.2
Reference standard			IEC60947-3	IEC60947-3	IEC60947-3

The switch-disconnectors are different from the circuit-breakers in the abasence of the conventional protection unit. They keep the overall dimensions, connection systems and accessories unchanged from the corresponding circuit-breakers. Installation standards requie upstream protection. However, than OM2 to their high-set magnetic release, OM23P0160NA, OM23P0630NA DSU are self protected.

OM2D3P0250 Circuit Breaker Can Be Equipped With Electronic Release STK23SE

STK22SEElectronicReleaseCharacteristics





1.Long delay protection setting value
2.Long delay protection delay time
3.Short circuit short delay protection setting value
4.Short circuit short delay protection delay time
5.Short circuit instantaneous protection
6.Warning indicator
7.Test light
8.Running indicator

Protect

LT overload protection (long delay) r adjustable (1)

ST short-circuit short-time delay current protection

Isd action value adjustable

With a defined short delay time (4)

INST short-circuit instantaneous current protection action value (5) fixed

Indication

Overload indication (6)

When the working current is greater than 90%Ir, the indicator light is on

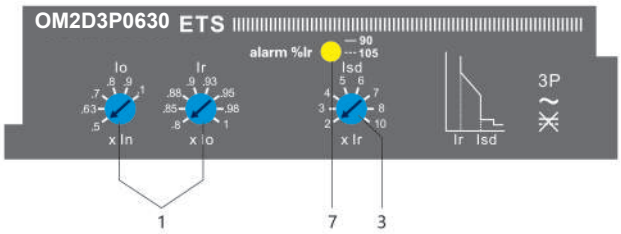
When the working current is greater than 105%Ir, the indicator light flashes

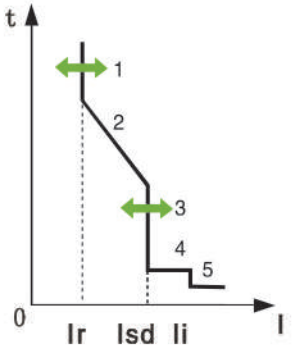
Test

The test hole (7) can be connected to 16-20V DC power supply to check whether the circuit breaker trips normally.

OM2D3P0400-630 Circuit Breaker Can Be Equipped With Electronic Release STK23SE

STK22SEElectronicReleaseCharacteristics





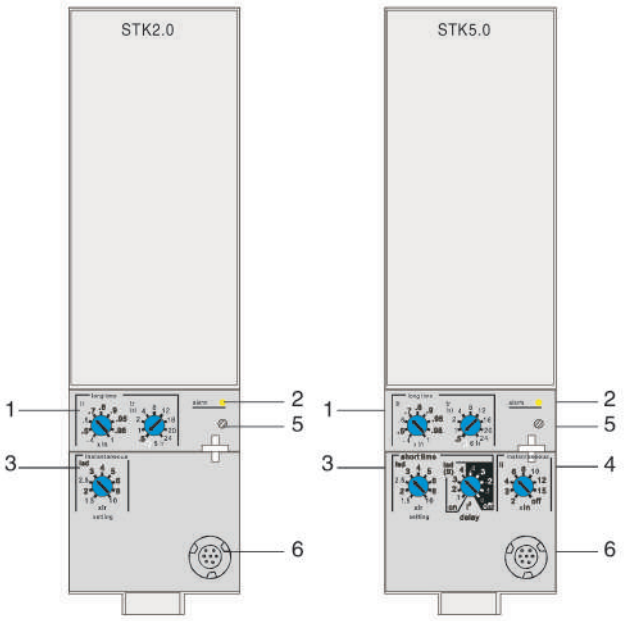
Overload protection
The threshold value of overload long-delay protection is adjustable,
and the tripping delay time is fixed:
Coarse adjustment (0.5-1, 6 points adjustable)
Fine tuning (0.8-1, 8 points adjustable)

Short circuit protection
The current setting value of short-circuit short-time delay is adjustable,
and the tripping delay time is fixed
Short-circuit instantaneous protection current setting value is fixed

4 pole protection
Standard 4-pole circuit breaker, neutral protection is set by 3 gears,
of which 4P3d (without neutral protection)
4P3d+N/2 (the action value of neutral line protection is 0.5Ir),
4P4d (the action value of neutral line protection is Ir)

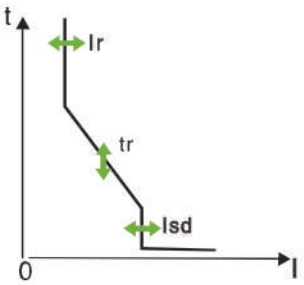
Indication
Overload indication (7)
When more than 90%Ir, the LED light is on
When greater than 105%Ir, the LED flashes

OM23P1250ET STK2.0/5.0 release

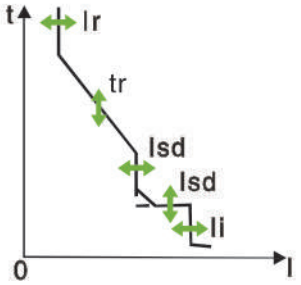


1.Overload protection (long delay) current setting and trip delay time setting
2.Overload signal (LED)
3. Short circuit short delay current setting and short delay time setting
4.Short-circuit instantaneous current setting
5.Long-time delay setting module fixing screws
6.Test light

STK2.0 and 5.0 control unit protection power circuit
STK5.0 provides time selectivity of short circuit and short delay



STK2.0 Electronic release



STK5.0 Electronic release

Note: The STK2.0 electronic release has short-circuit short-time delay, and the delay time is fixed and cannot be adjusted.

Protection

The protection threshold and delay time are all set with the adjustment knob

Standard long delay tuning module available

Overload protection

Thermal memory: thermal accumulation before and after tripping

Indication

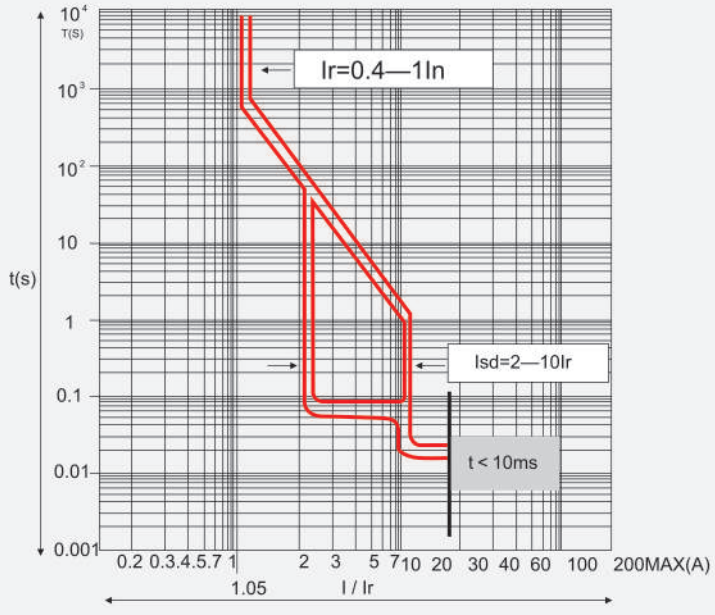
Overload indication is achieved through the alarm LED on the panel.

LED lights up when the current exceeds the long-time setting threshold

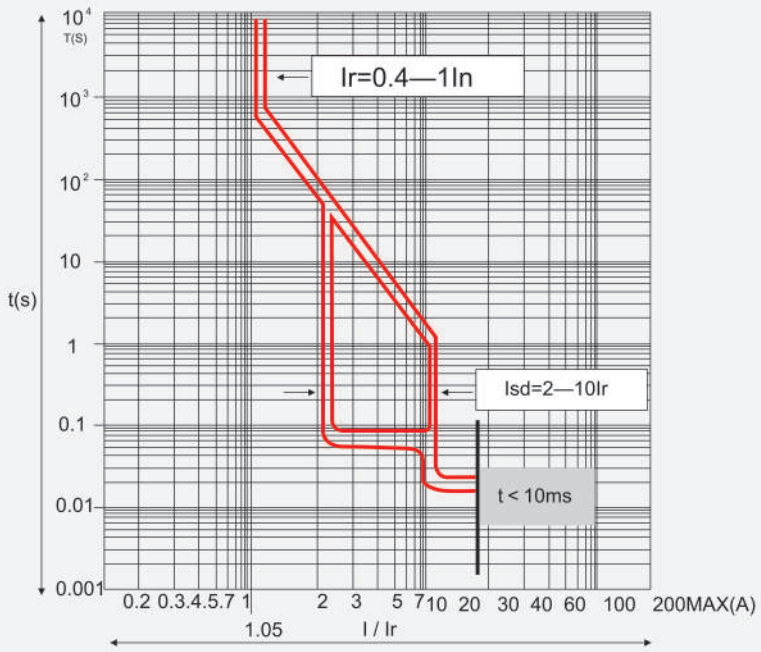
OM2 Series Moulded Case Circuit Breaker

Trip mechanism	STK22SE			
Rating (A) In	40	100	160	250
Breaker OM2D3P0250	■	■	■	■
Normal operation indication	–	–	–	–
Overload protection (long delay)				
Ir=Inx... Trip current setting value (A)	0.4…1 Adjustable (48 points)			
Tripping time (S) (min...max) at1.5xIr	90…180			
at6xIr	5…7.5			
at7.2xIr	3.2…5.0			
Short circuit current protection (short time delay)				
Isd=Irx... Trip current setting value (A)	2…10			
Accuracy ±15%	Adjustable (8 points)			
Delay time (ms)	Fixed			
Maximum overcurrent trip time	≤60			
Total break time	≤100			
Short-circuit current protection (instantaneous)				
Tripping current value (A) Ii is not adjustable	11In			
Neutral protection				
4P 3d Neutral is unprotected	Unprotected			

OM2D3P0630 ETS Overcurrent Protection Characteristic Curve



OM2D3P0630 ETS Overcurrent Protection Characteristic Curve



OM2 Series Moulded Case Circuit Breaker

Thermal magnetic trip unit

Trip unit identi□cation

OM2E3P0250 □ FMU

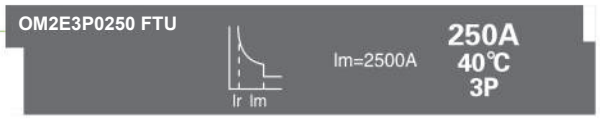
MCCB frame type

For protection of power distribution

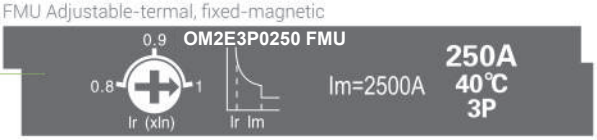
For motor protection

Disconnector

FTU Fixed-thermal, fixed-magnetic

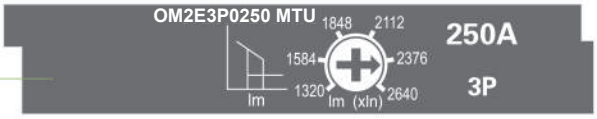


FMU Adjustable-termal, fixed-magnetic

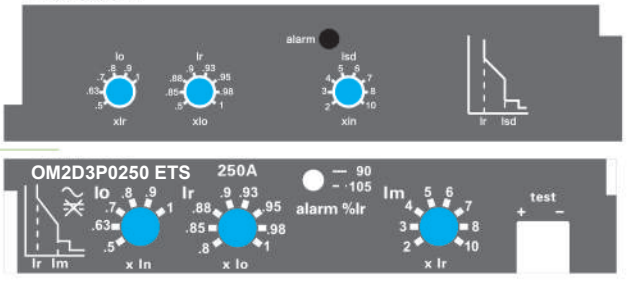


ATU Adjustable-termal, adjustable-magnetic

MTU Magnetic only



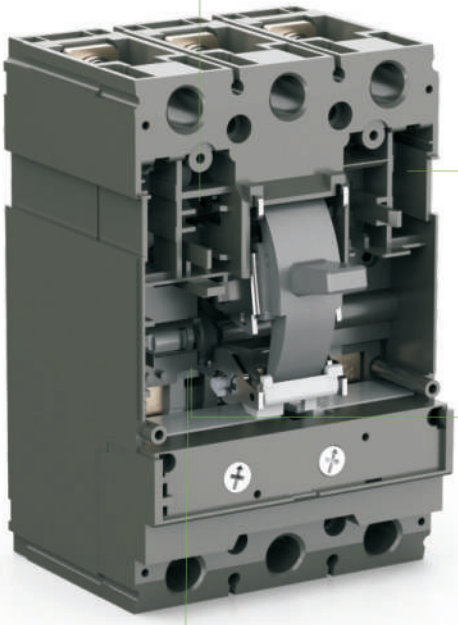
ETS slectronic



FTU ATU MTU ETS

OM2 Series Moulded Case Circuit Breaker

Internal Accessories



Auxiliary contact(AX)

Function	Type
Indication for the state of a circuitbreaker (e.g opening, closing)	One NO. one NC Two NO. twoNCs

Alarm contact(AL)

Function	Type
To send an alarm signal when the circuit breaker is released	One NO. one NC

Shunt release(SHT)

Function	Type of power supply
To control releasing of a circuit breaker remotely	AC400V DC220V AC230V DC110V AC110V DC48V AC48V DC24V

Under-voltage release(UVT)

Function	Type of power supply
Under-voltage protection	AC400V AC230V

External Accessories

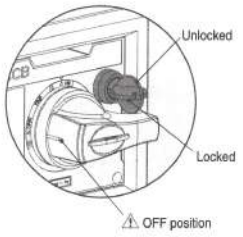
Rotary handles

The rotary handle operating mechanism is available in either the direct version or in the exteded version on the compartment door.
It is always fitted with a compartment door lock and on a request it can be supplied with a key lock in the open position.

Degree of protections

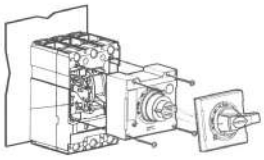
Type	Degree of protection	Protection
Circuit breaker with cover frame and rotary direct handle	The access probe of 1.0mm diameter shall not penetrate	IP40
Circuit breaker with cover frame and rotary extended handle	Totally protected against ingress of dust and water jets from any direction	IP65

OM2 Series Moulded Case Circuit Breaker



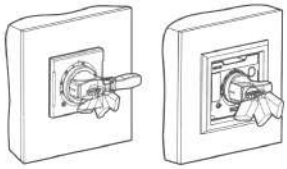
MCCB	Rotary handle
OM23P0160	DH1
OM23P0250	DH2
OM23P0630	DH3

Direct rotary handles with a key lock



MCCB	Rotary handle	Lock function
OM23P0160	DHK1	Lock in On or off position
OM23P0250	DHK2	
OM23P0630	DHK3	

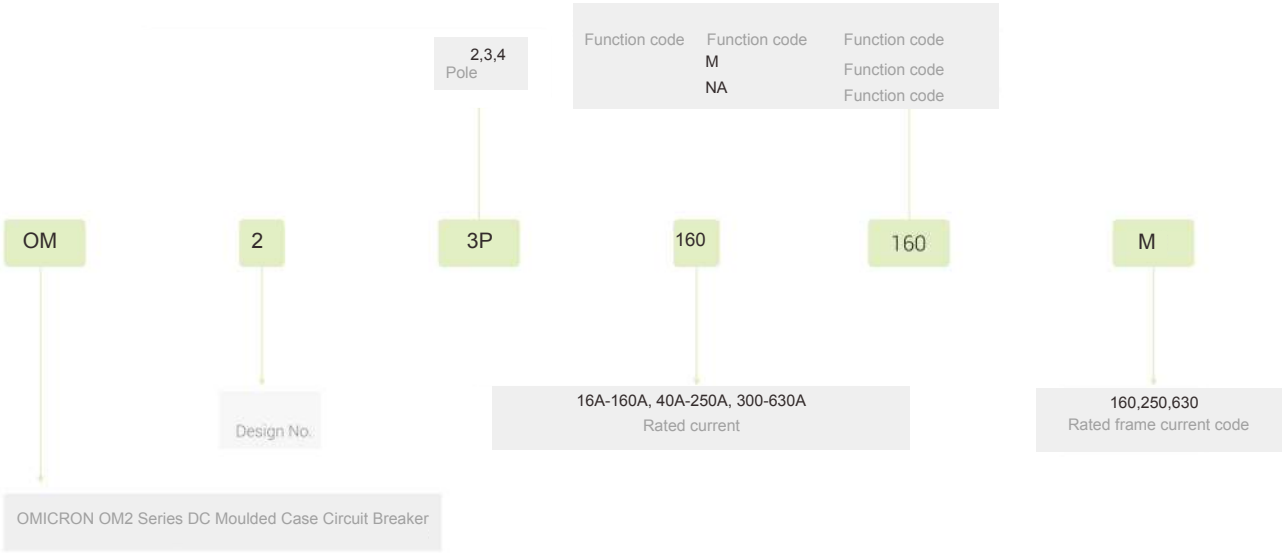
Extended rotary handles



MCCB	Padlockable device
OM23P0160	EH1
OM23P0250	EH2
OM23P0630	EH3

Padloc OM2 -can be used to lock the breaker in the ON or OFF position

Type and Meaning



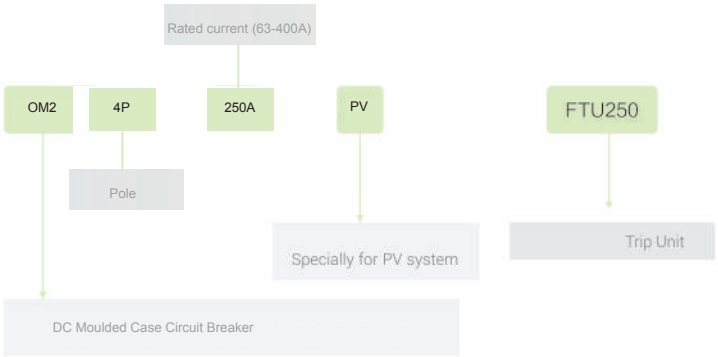
OM2 PV Series Moulded Case Circuit Breaker for PV System

Outline

OM23P0250PV/0400PV Molded Case Circuit Breaker:It is suitable for photovoltaic power generation and distribution lines with rated current below 250/400A and DC rated voltage up to DC1500V. The circuit breaker has the functions of overload long-time delay and short-circuit instantaneous protection, so that photovoltaic power distribution and lines and electrical equipment are protected from overload, short-circuit and other faults:

The rated breaking capacity of OM23P0250PV/0400PV molded case circuit breaker for photovoltaics is divided into N type 20kA, H type 50kA, and the use category is A, which can be widely used in combiner boxes, DC panels, inverters, energy storage systems and other equipment middle.

Definition of Model



Note: 1. The extended connection in pictures are "L" connection bus-bar (external accessories)
2. Please specify, if you need the items in line with the UL4998.

OM2 PV Series Moulded Case Circuit Breaker for PV System

Main technical parameter

Model		OM23P0250PV	OM24P0250PV
Photo			
Inm(A)		250	
Rated current		63,80,100,125,160,200,250	
Poles		3P	4P
Rated working voltage Ue VDC		DC750V	DC1000V
Rated insulation voltage Ui(V)		DC1000V	DC1000V
Rated impulse withstand voltage		8kV	
Rated operating breaking capacity(Ics)		100Icu	
Rated ultimate breaking capacity(Icu)		20kA	
Mechanical life	total	10000	
Electrical life	total	2000	1000
Protective function	Trip Method	Thermomagnetic	
	Overcurrent	0.8–1xIn(Fixed)	
	Instantaneous trip	6In(5–10)	
Isolation (Y/N)		Y	
Standard		IEC 60947–2、GB/T 14048.2	
Utilization category		A	
Optional Internal Accessories		UVT SHT AX AL	
Optional External Accessories		Rotary Operating Handle	
Dimension	L×W×H	105x160x86	140x160x86
Mounting		Fixed, withdrawal	

"0" arcing distance: please specify when ordering if you require.

OM2 PV Series Moulded Case Circuit Breaker for PV System

Main technical parameter

Model		OM23P0400PV	OM24P0400PV
Photo			
Inm(A)		400	
Rated current		300,350,400	
Poles		3P	4P
Rated working voltage Ue VDC		DC750V	DC1000V
Rated insulation voltage Ui(V)		DC1000V	DC1000V
Rated impulse withstand voltage		12kV	
Rated operating breaking capacity(Ics)		100Icu	
Rated ultimate breaking capacity(Icu)		20kA	
Mechanical life	total	10000	
Electrical life	total	2000	1000
Protective function	Trip Method	Thermomagnetic	
	Overcurrent	0.8–1xIn(Fixed)	
	Instantaneous trip	6In(5–10)	
Isolation (Y/N)		Y	
Standard		IEC 60947–2、GB/T 14048.2	
Utilization category		A	
Optional Internal Accessories		UVT SHT AX AL	
Optional External Accessories		Rotary Operating Handle	
Dimension	L×W×H	142x260x110	188x260x110
Mounting		Fixed, withdrawal	

"0" arcing distance: please specify when ordering if you require.

OM2 PV Series Moulded Case Circuit Breaker for PV System

Working Environment

Rotary handle

Ambient temperature	Operation	-40℃~+70℃
	Storage	-40℃~+70℃
Temperature derating	When the ambient temperature is higher than +40℃degrees, the overload protection characteristics will be affected by temperature changes, and the circuit breaker needs to be derated.	
Altitude derating	When the altitude is higher than 2000m, derating is required	
Ambient temperature	When the ambient air temperature is +40 degrees, the relative humidity of the atmosphere cannot exceed 50%,If the temperature is lower, it can be used under higher humidity conditions. The monthly average relative humidity in the wettest month is 90%; the influence of condensation on the product surface on the product performance needs to be considered;	

Temperature Derating Parameters

Rated current A			Rated current A compensated according to ambient temperature										Connection copper bar
			+40℃		+45℃		+50℃		+60℃		+70℃		
63	63	100%	63	100%	62	98%	60	95%	56	89%	52	83%	250 Busbar 5T
80	80	100%	80	100%	78	98%	76	95%	71	89%	66	83%	
100	100	100%	100	100%	98	98%	84	95%	89	89%	83	83%	
125	125	100%	125	100%	122	98%	119	95%	111	89%	104	83%	
160	160	100%	160	100%	155	97%	150	94%	141	88%	131	82%	
200	200	100%	200	100%	196	98%	190	95%	178	89%	166	83%	
250	200	80%	200	80%	196	77%	185	74%	173	69%	160	64%	Custom Busbar 4T 250 Busbar 5T
	250	100%	250	100%	243	97%	235	94%	220	88%	205	82%	
300	300	100%	300	100%	291	97%	281	94%	264	88%	246	82%	400 Lower + Upper Busbar 6T
350	350	100%	350	100%	339	97%	328	94%	308	88%	287	82%	
400	400	100%	400	100%	388	97%	375	94%	355	88%	328	82%	

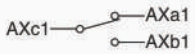
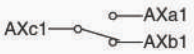
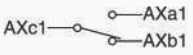
Note: The connecting copper busbar is the experimental benchmark and is not an optional accessory.
When the terminal cover is used on the load side, the derating current is 90%.

Altitude derating parameters

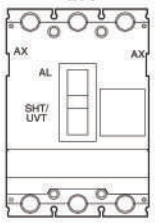
Altitude	250			400		
	Ue(Vdc)		In(A)	Ue(Vdc)		In(A)
	Voltage	Coefficient		Voltage	Coefficient	
2000m	1000V	1.00	100%	1000V	1.00	100%
3000m	870V	0.87	98%	870V	0.87	98%
4000m	770V	0.77	93%	770V	0.77	93%
5000m	670V	0.67	90%	670V	0.67	90%

Internal Accessories And Installation Positions

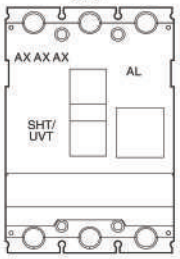
Shunt release (SHT): Applying a voltage signal externally makes the circuit breaker open, and automatically cuts off the external signal after the circuit breaker trips.
Undervoltage release (UVT): When the voltage drops to 35%-70% of the voltage rating, the undervoltage release will trip the circuit breaker.
The undervoltage trip is instantaneous, and the circuit breaker cannot be closed until the voltage returns to 85%.
Auxiliary contact (AX): for remote "ON" and "OFF" indication, one normally contact, one normally closed contact.
Auxiliary alarm contact (AL): When the circuit breaker trips due to overload, short circuit, undervoltage, external excitation signal, etc., it controls the external photoelectric alarm system to work.

Breaker	Closure	Disconnect	Trip
Auxiliary contact AX position			
Alarm AL			

250



400



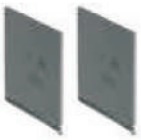
Installation location	Accessories	250	400
Left mounted (R phase)(2P, 4P)	Auxiliary contact (AX)	1	3
	Auxiliary alarm contact (AL)	1	–
	Shunt SHT, undervoltage UVT	1	1
Right mount (T phase)(4P)	Auxiliary contact (AX)	1	–
	Auxiliary alarm contact (AL)	–	1

If accessories are needed, they must be ordered at the same time as ordering the body; SHT/UVT cannot be used at the same time;

Internal Accessories

MOX
Electric Operation MOX

Insulation barrier (standard)

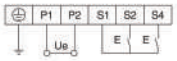


Terminal cover (non-standard)

Electric operating mechanism: It can be operated remotely to control the opening and closing of the circuit breaker.

Compatible model with MCCB	Electric operation model	Control voltage	Drive current	Response time		Power consumption	Mechanical life
				Closure	Disconnect		
400	MOX3	@DC24V @AC100–110V @DC110V @AC230V @DC220V	≤5A(DC) ≤2A(DC)	500 ms	350 ms	35W	20000

Electrical wiring diagram

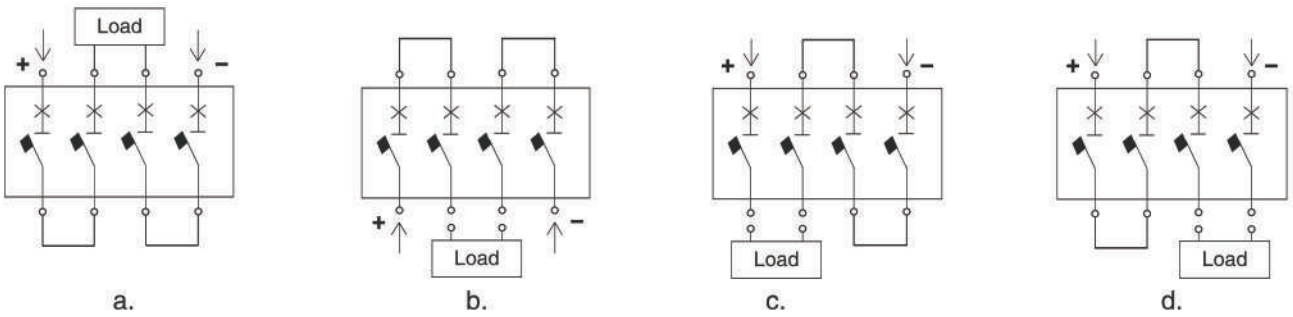


power supply: P1 is connected to the positive pole, P2 is connected to the negative pole

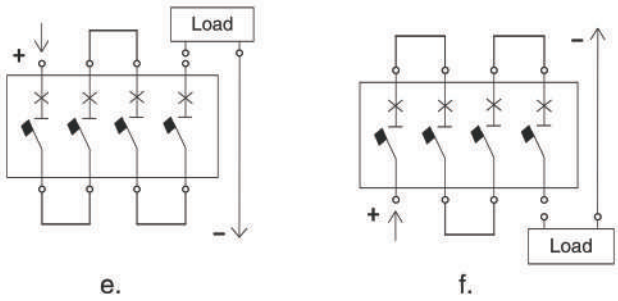
OM2 PV Series Moulded Case Circuit Breaker for PV System

Wiring

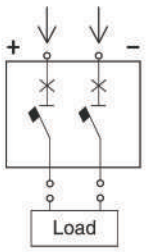
Ungrounded system(4P)



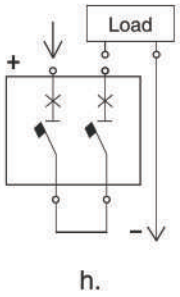
Grounding system(4P)



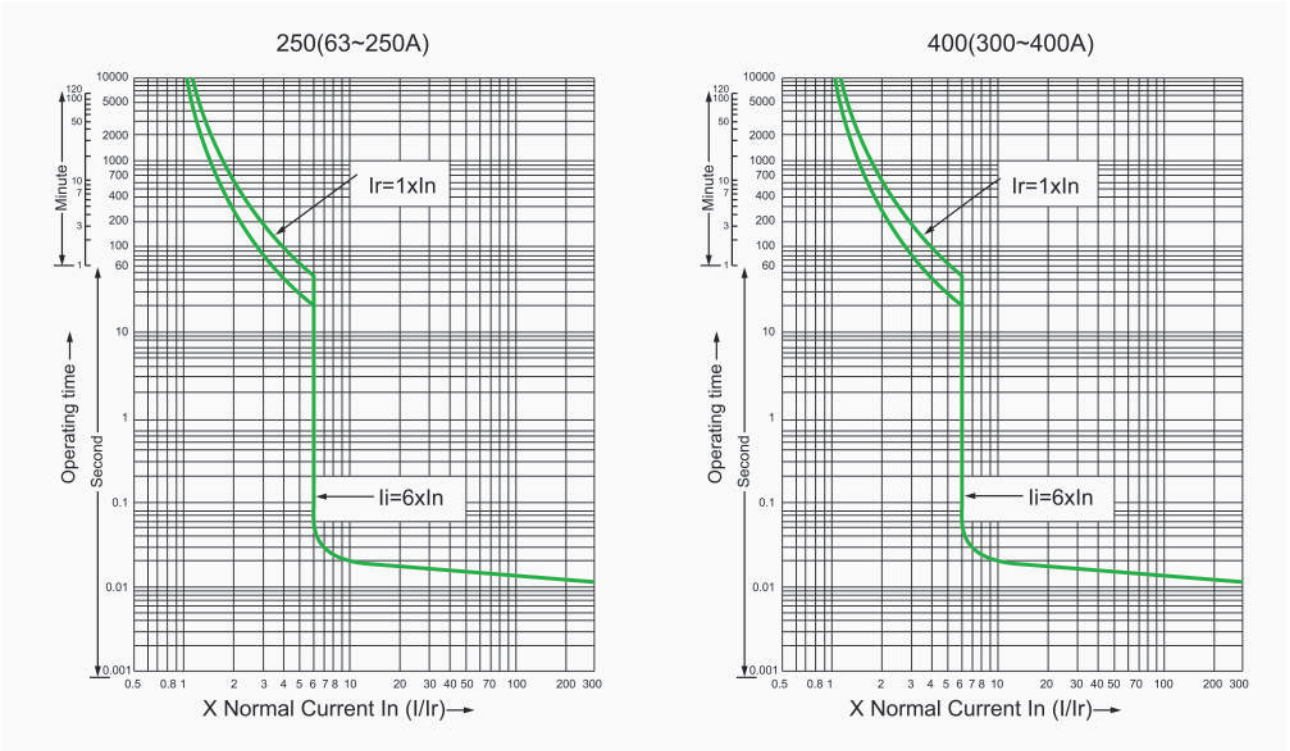
Ungrounded system(2P)



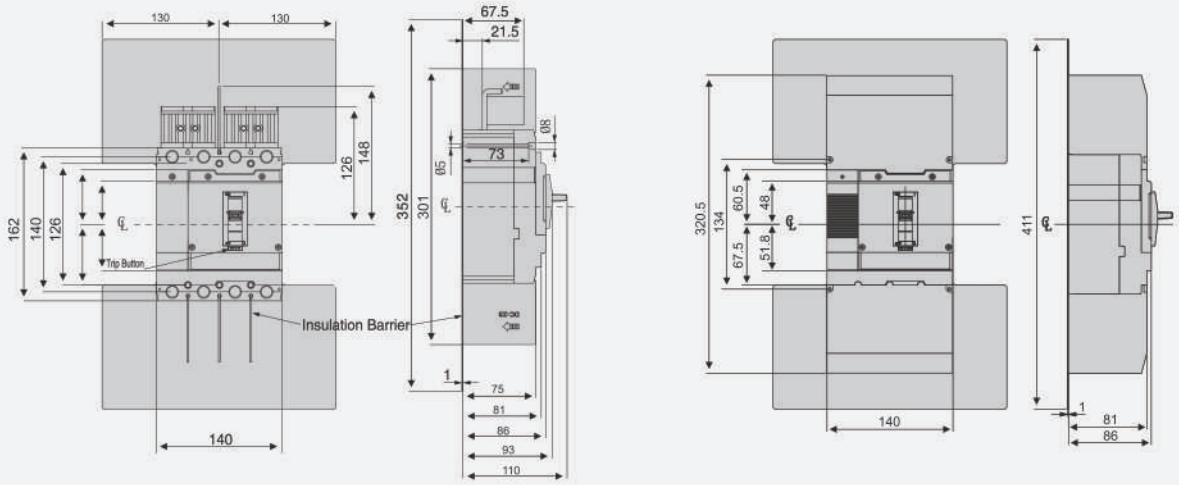
Grounding system(2P)



Characteristic Curve



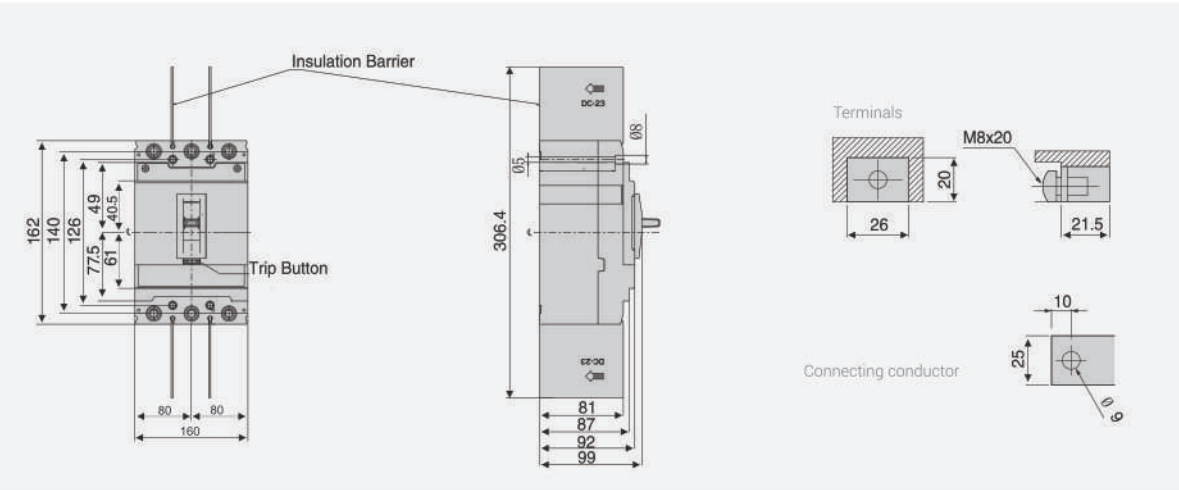
OM24P0400PV Outline & Mounting Dimension



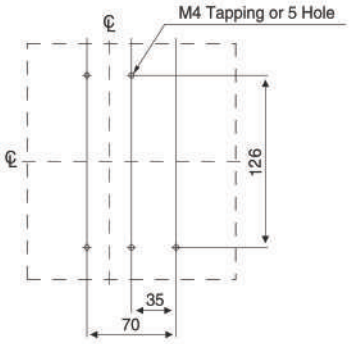
Note: Including the size of short-circuit copper bars, heat sinks, bottom partitions, and insulating partitions

Note: Including increased terminal cover size

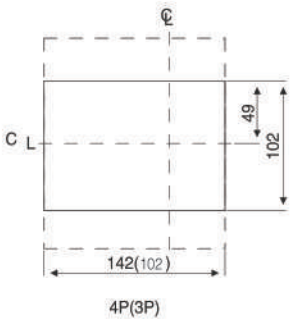
OM23P0400PV Outline & Mounting Dimension



Mounting hole size



Panel cutout size



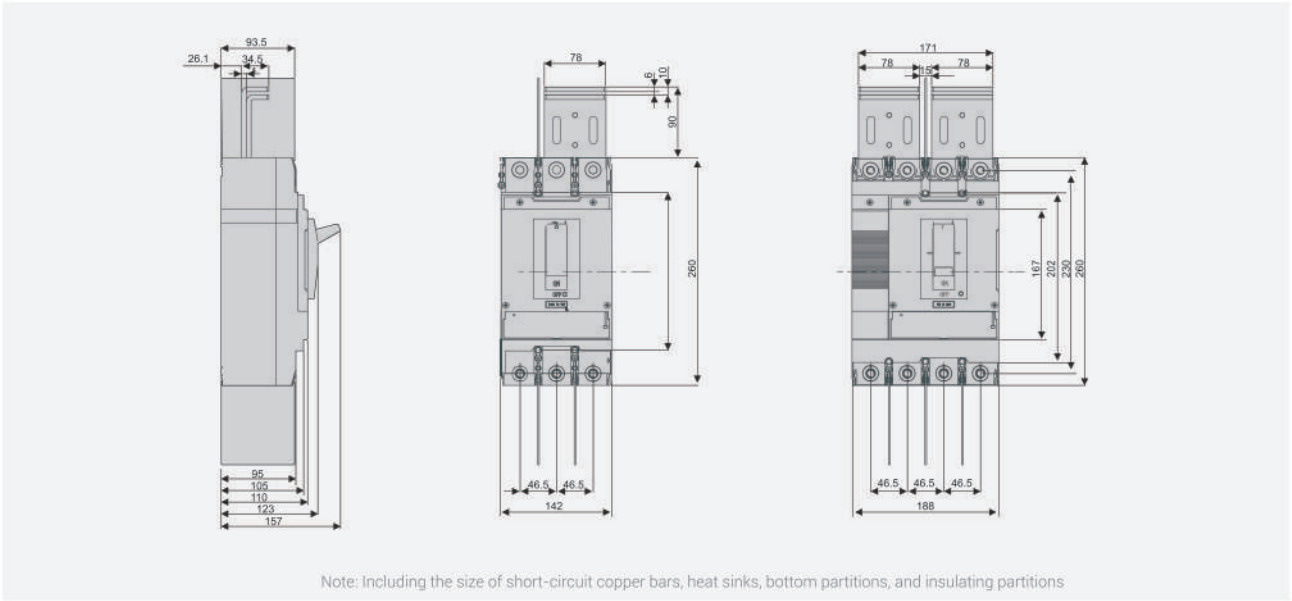
4P(3P)

Busbar 5T

(size)：65(W)X60(D)X22(H)

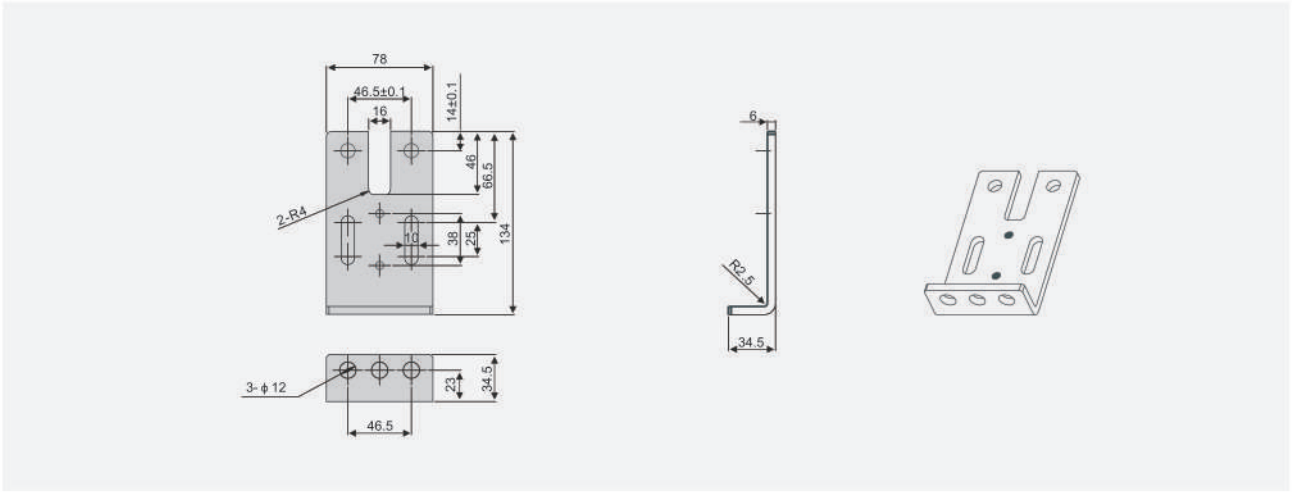
OM2 PV Series Moulded Case Circuit Breaker for PV System

OM23P0400PV Outline & Mounting Dimension

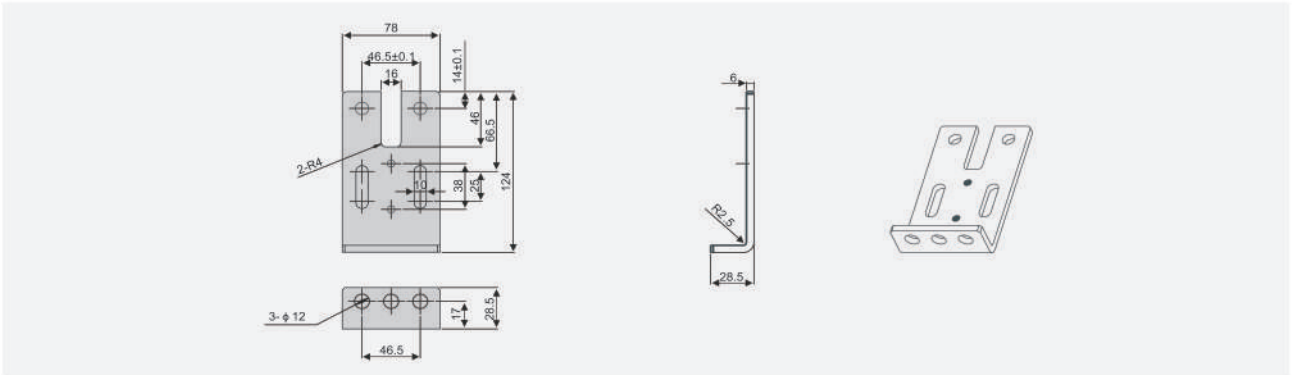


Note: Including the size of short-circuit copper bars, heat sinks, bottom partitions, and insulating partitions

Lower Recommended Size Of Shorting Copper Bar

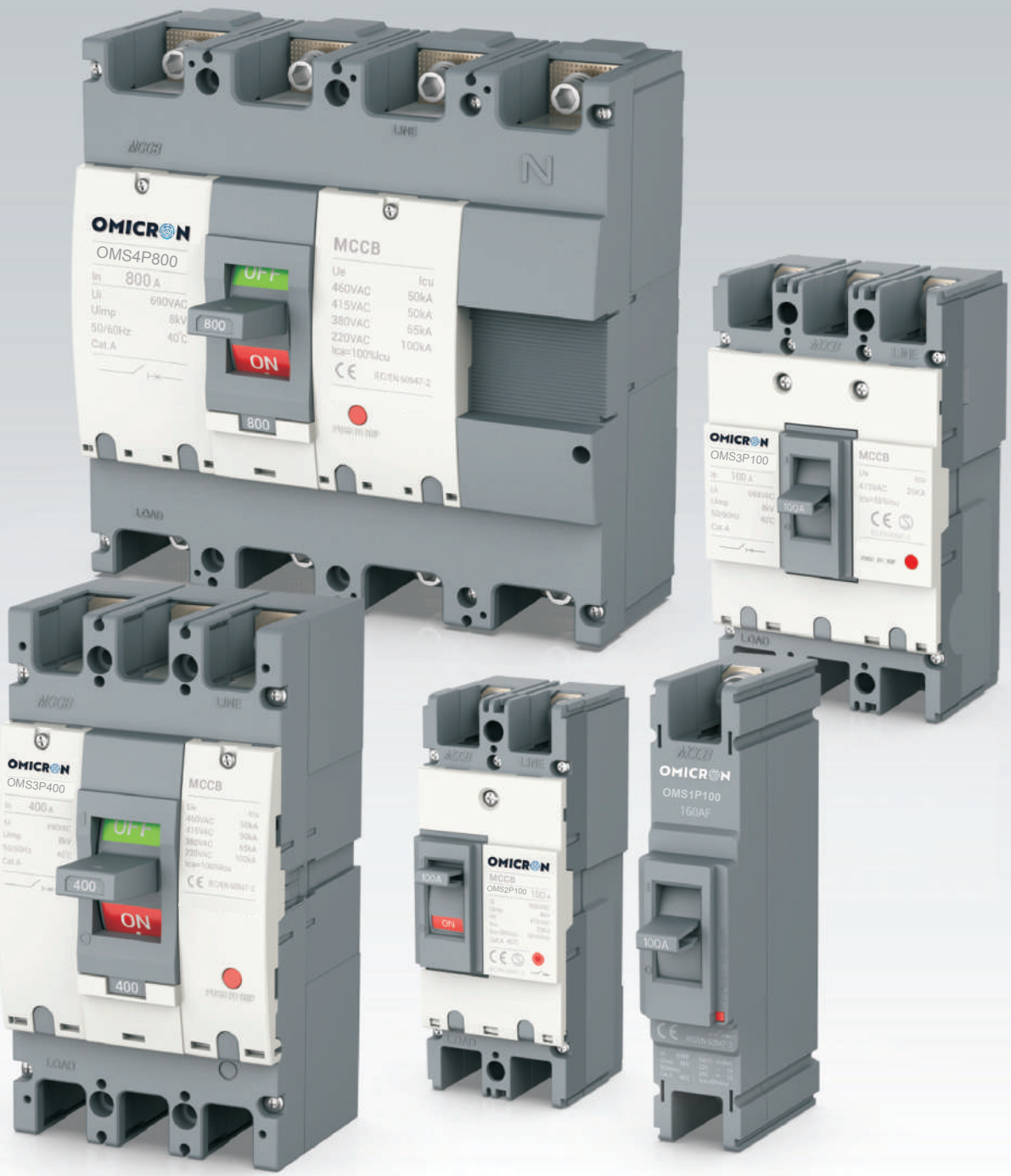


Upper Recommended Size Of Shorting Copper Bar



OME / OMS

Series Moulded Case Circuit Breaker



OME Series Moulded Case Circuit Breaker

Guide

Model			OME2P050				OME3P100				OME3P250			
														
Rated current In(A)40℃ Standard ambient temperature 40℃			10,15,20,30,40,50				10,15,20,30,40,50 60,75,100,125				100,125,150,175 200,225,250			
Poles			1	2	3	4	1	2	3	4	1	2*	3	4
Rated insulation voltage Ui(50/60Hz)(V)			690				690				690			
Max rated service voltage Ui(V)		AC	600				600				600			
Rated impulse withstand voltage (Uimp)(kV)			6				6				6			
Ultimate breaking capacity	AC50/60HZ	600V	2.5				5				7.5			
		480V/500V	2.5				7.5				10			
		440V/460V	5				10				18			
		415V	5				10				18			
		380V	7.5				14				18			
		220V/240V	10				25				35			
(%Icu)			50				50				50			
Connection method			Pressed terminal											
Non-standard fittings	Alarm contact (AL)		–				–				–			
	Auxiliary contact (AX)		–				–				–			
	Shunt trip (SHT)		–				–				o			
	Under-voltage trip (UVT)		–				–				–			
	Plaform for accessory lead wire terminal (LT)		o				o				o			
	External operation handle		–				–				o			
	Terminal cover		–				–				–			
Automctic tripping device			Completed electromagnetic type				Completed electromagnetic type				Thermal electromagnetic type			
Trip button			Yes											

OME Series Moulded Case Circuit Breaker

Model			OME3P400		OME3P600		OME3P800	
								
Rated current In(A)40℃ Standard ambient temperature 40℃			250, 300, 350, 400		400, 500, 600		700, 800	
Poles			3	4	3	4	3	4
Rated insulation voltage Ui(50/60Hz)			690		690		690	
Max rated service voltage Ui(V)		AC	600		600		600	
Rated impulse withstand voltage (Uimp)(kV)			6		6		6	
Ultimate breaking capacity	AC50/60HZ	600V	18		22		22	
		480V/500V	18		25		25	
		440V/460V	25		35		35	
		415V	25		35		35	
		380V	30		42		42	
		220V/240V	35		50		50	
Ics (%Icu)			100		100		100	
Connection method			Pressed terminal					
Non-standard fittings	Alarm contact (AL)		o		o		o	
	Auxiliary contact (AX)		o		o		o	
	Shunt trip (SHT)		o		o		o	
	Under-voltage trip (UVT)		o		o		o	
	Plaform for accessory lead wire terminal (LT)		o		o		o	
	External operation handle		o		o		o	
	Terminal cover		–		–		–	
Automctic tripping device			Thermal electromagnetic type		Thermal electromagnetic type		Thermal electromagnetic type	
Trip button			Yes					

OMS Series Moulded Case Circuit Breaker

Model			OME3P400				OMS3P100				OMS3P250			
														
Rated current In(A)40℃ Standard ambient temperature 40℃			10,15,20,30,40,50				10,15,20,30,40,50 60,75,100,125,160				100,125,150,175 200,225,250			
Poles			1	2	3	4	1	2	3	4	1	2*	3	4
Rated insulation voltage Ui(50/60Hz)			690				690				690			
Max rated service voltage Ui(V)		AC	600				600				600			
Rated impulse withstand voltage (Uimp)(kV)			6				6				6			
Ultimate breaking capacity	AC50/60HZ	600V	5				10				10			
		480V/500V	7.5				14				14			
		440V/460V	10				25				25			
		415V	10				25				25			
		380V	14				25				25			
		220V/240V	25				50				50			
Ics (%Icu)			50				50				50			
Connection method			Pressed terminal											
Non-standard fittings	Alarm contact (AL)		–				–				–			
	Auxiliary contact (AX)		–				–				–			
	Shunt trip (SHT)		–				o				o			
	Under-voltage trip (UVT)		–				–				–			
	Plaform for accessory lead wire terminal (LT)		o				o				o			
	External operation handle		–				–				o			
	Terminal cover		–				–				–			
Automctic tripping device			Completed electromagnetic type				Thermal electromagnetic type				Thermal electromagnetic type			
Trip button			Yes											

* 2P Customed From 3P Specially

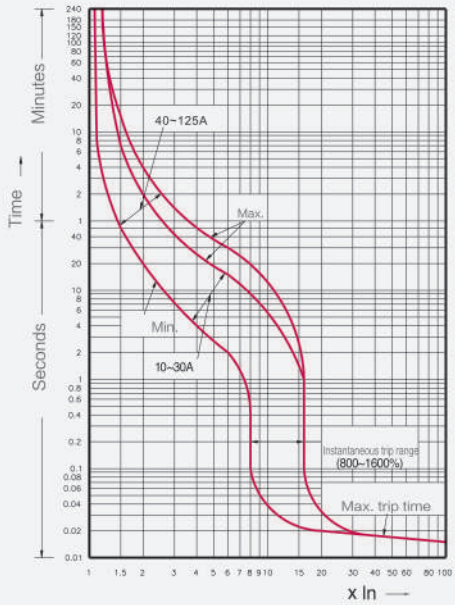
OMS Series Moulded Case Circuit Breaker

Model			OMS3P400		OMS3P600		OMS3P800	
								
Rated current In(A)40℃ Standard ambient temperature 40℃			250,300,350,400		500,600		700,800	
Poles			3	4	3	4	3	4
Rated insulation voltage Ui(50/60Hz)			690		690		690	
Max rated service voltage Ui(V)		AC	600		600		600	
Rated impulse withstand voltage (Uimp)(kV)			6		6		6	
Ultimate breaking capacity	AC50/60HZ	600V	22		25		25	
		480V/500V	25		35		45	
		440V/460V	35		50		50	
		415V	35		50		50	
		380V	42		65		65	
		220V/240V	50		85		100	
Ics (%Icu)			100		100		50	
Connection method			Pressed terminal					
Non-standard fittings	Alarm contact (AL)		o		o		o	
	Auxiliary contact (AX)		o		o		o	
	Shunt trip (SHT)		o		o		o	
	Under-voltage trip (UVT)		o		o		o	
	Plaform for accessory lead wire terminal (LT)		o		o		o	
	External operation handle		o		o		o	
	Terminal cover		–		–		–	
Automctic tripping device			Thermal electromagnetic type					
Trip button			Yes					

Spec. Table.

OME3P50AF,OME3P100AF,OMS3P50AF

Spec.



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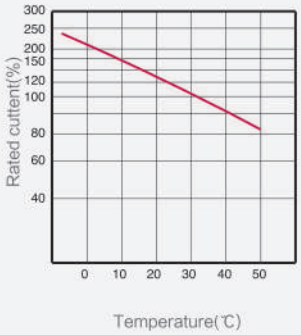
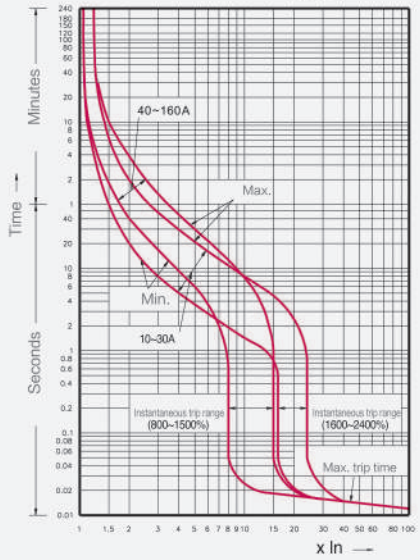
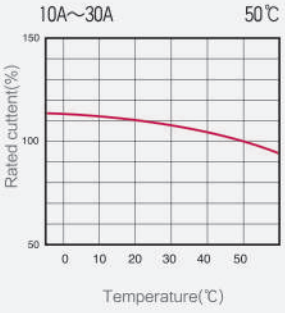


OMS3P100AF

Spec.



10A~30A 50℃



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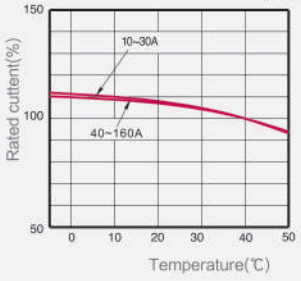
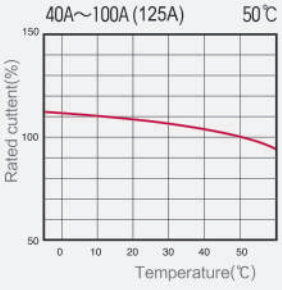
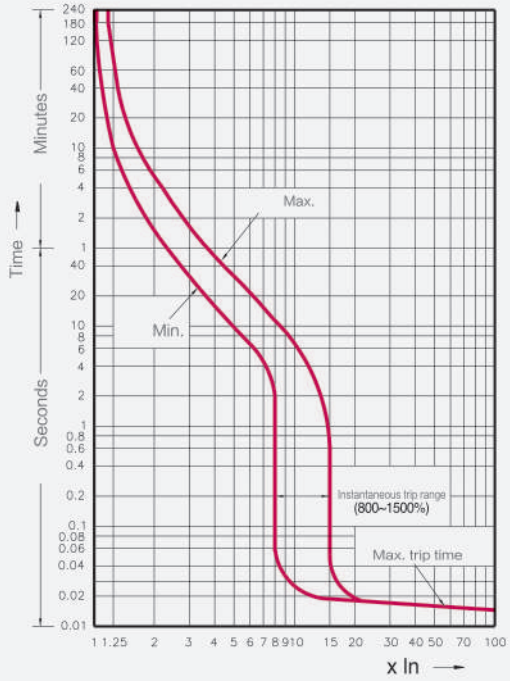


40A~100A (125A) 50℃



OME3P250AF,OMS3P250AF

Spec.



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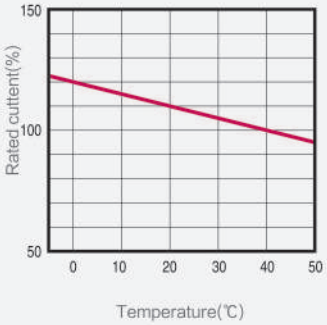
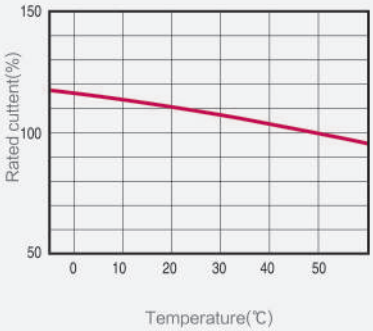
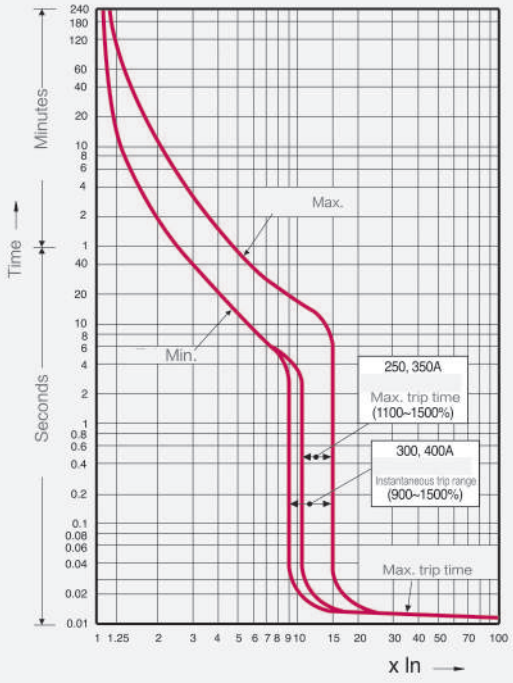


200AF at 50℃



OME3P400AF,OMS3P400AF

Spec.



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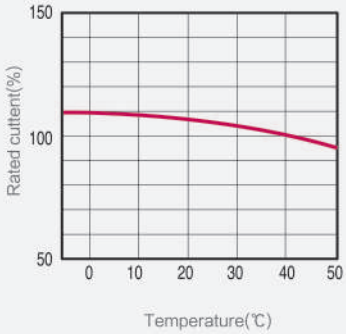
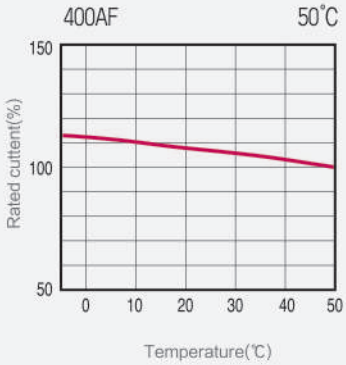


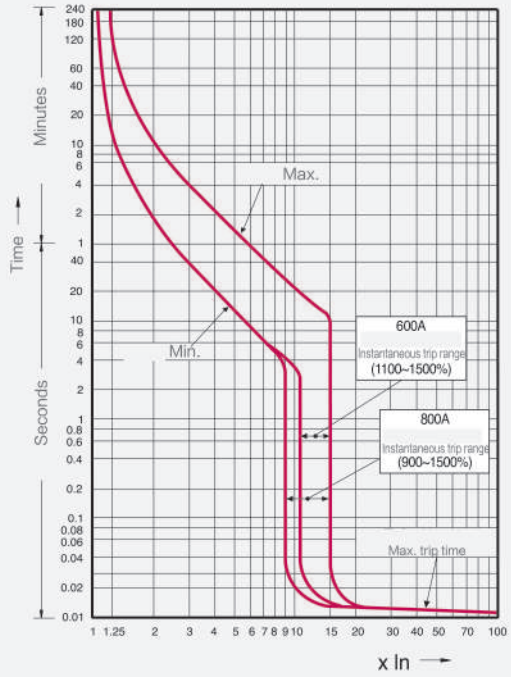
400AF 50℃



OMS Series Moulded Case Circuit Breaker

OME3P600AF,OMS3P250AF,OME3P800AF, OMS3P800AF

Spec.



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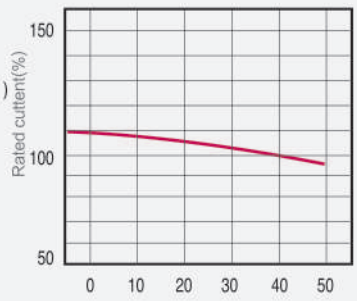
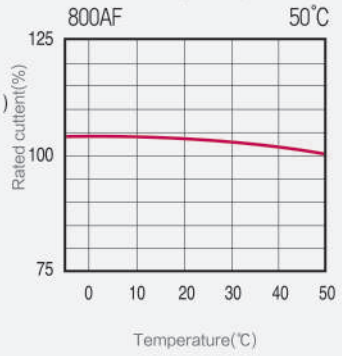
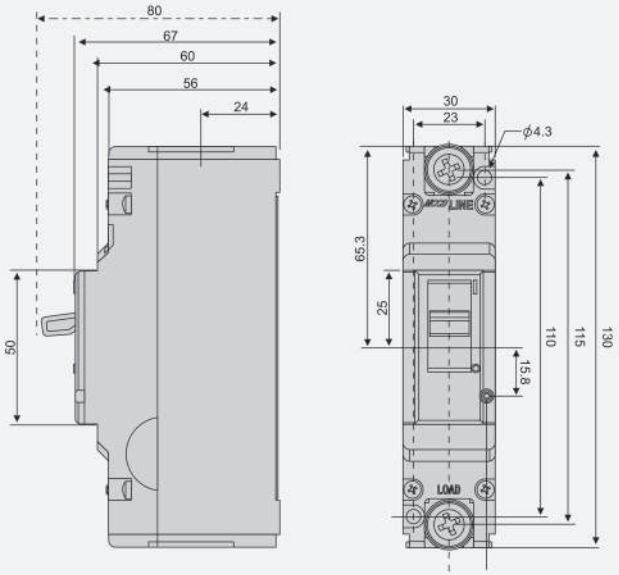
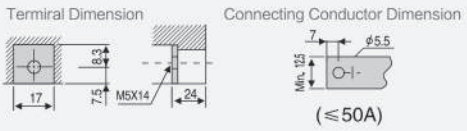




OME1P50/OME2P50/OME3P50/OME4P50, OME1P100/OME2P100/OME3P100/OME4P100, OMS1P50/OMS2P50,OMS3P50,OMS4P50

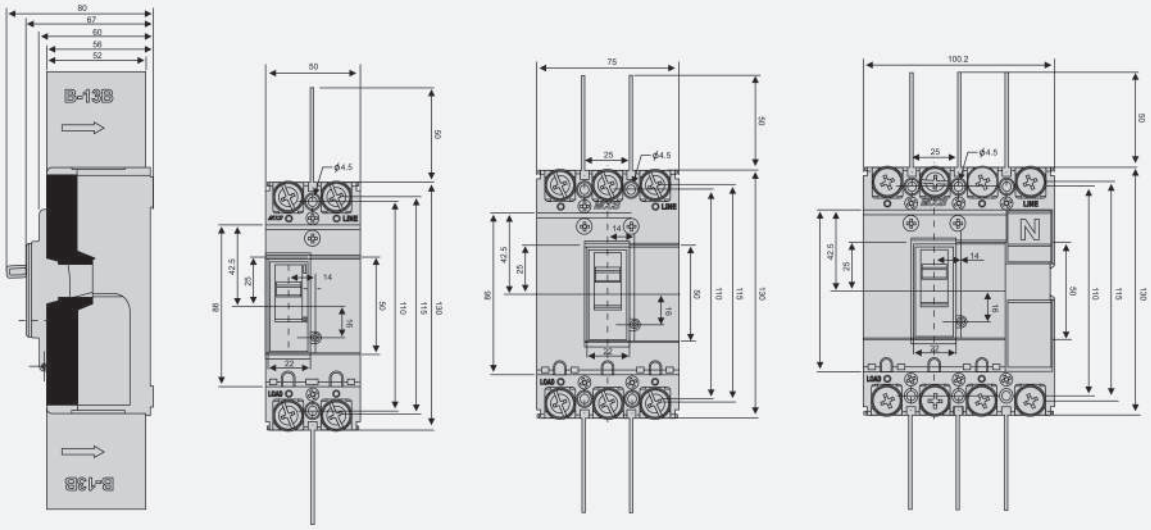




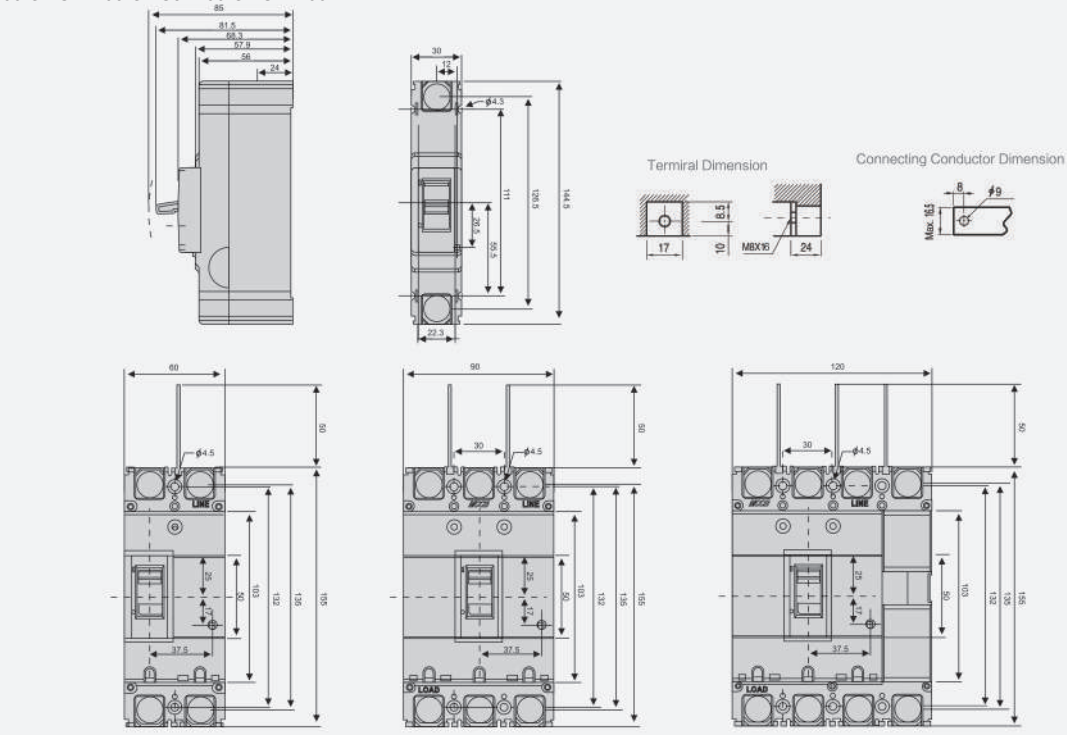
OMS Series Moulded Case Circuit Breaker

OME2P50/OME3P50/OME4P50/OME1P100/OME2P100/OME3P100/OME4P100

OMS2P50/OMS3P50/OMS4P50

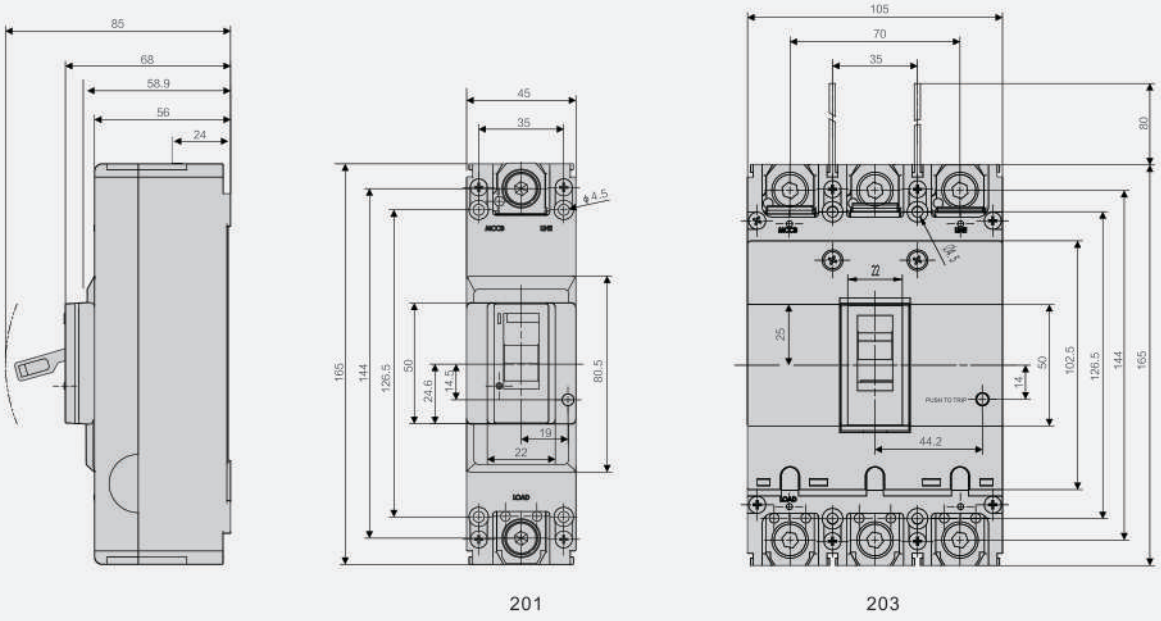


OMS1P100/OMS2P100/OMS3P100/OMS4P100

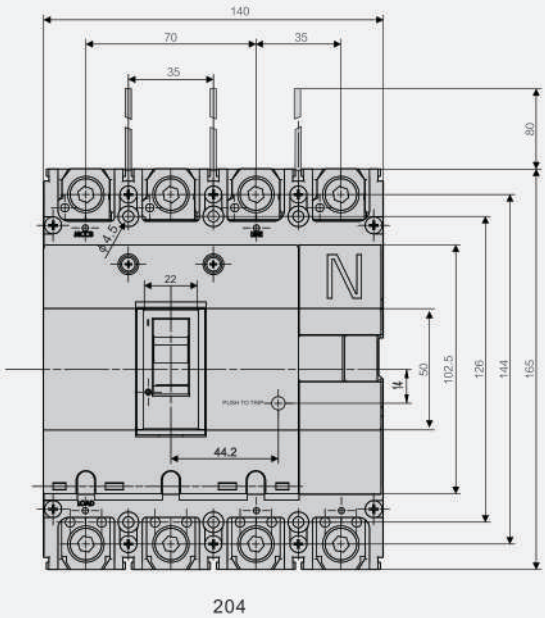


OMS Series Moulded Case Circuit Breaker

OME1P200/OME3P200/OME4P200, OMS1P200/OMS3P200/OMS4P200

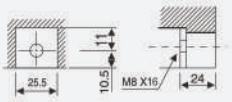


201 203

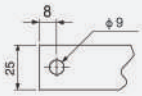


204

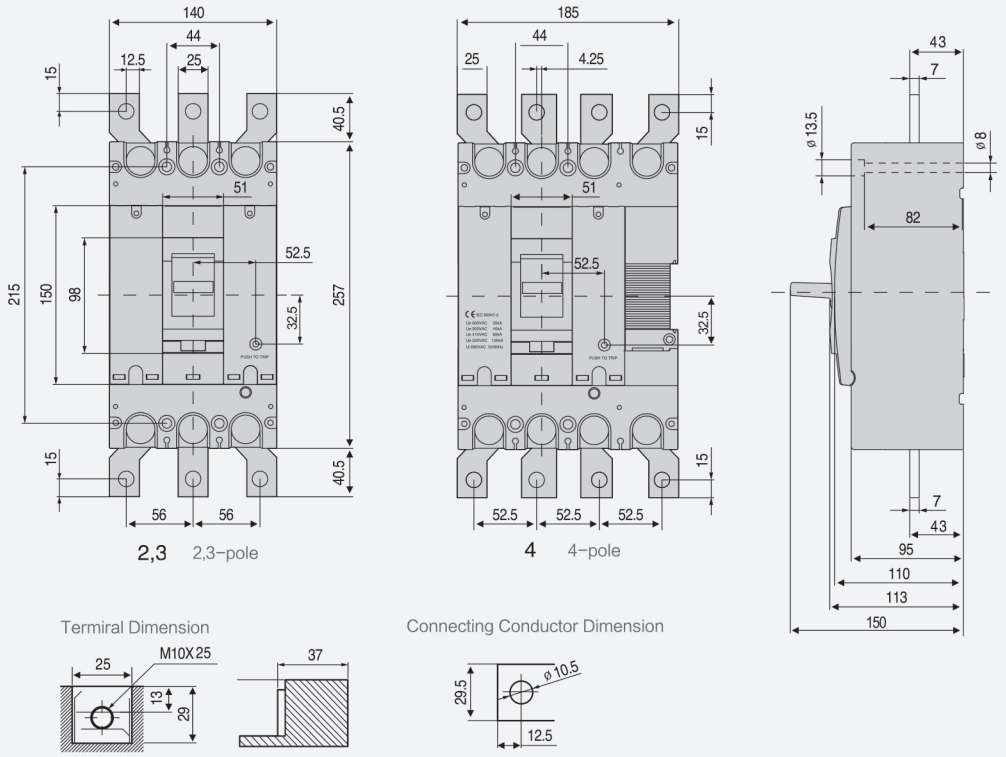
Terminal Dimension



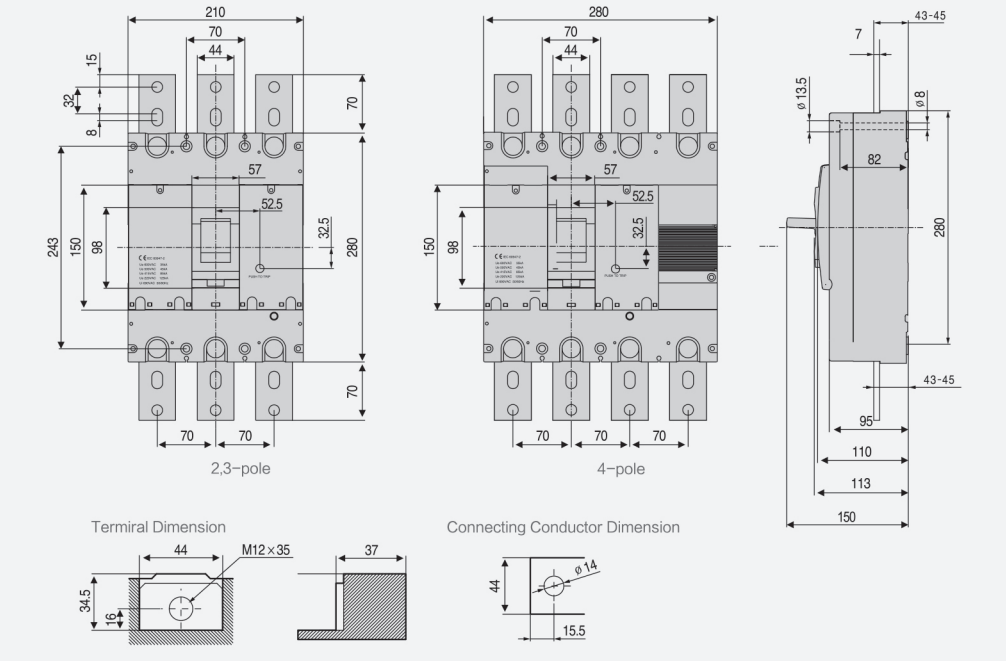
Connecting Conductor Dimension



OME3P400/OME4P400 , OMS3P400/OMS4P400



OME3P600,OME4P600,OME3P800,OME4P800
OMS3P600,OMS4P600,OMS3P800,OMS4P800



OM3

Series Moulded Case Circuit Breaker

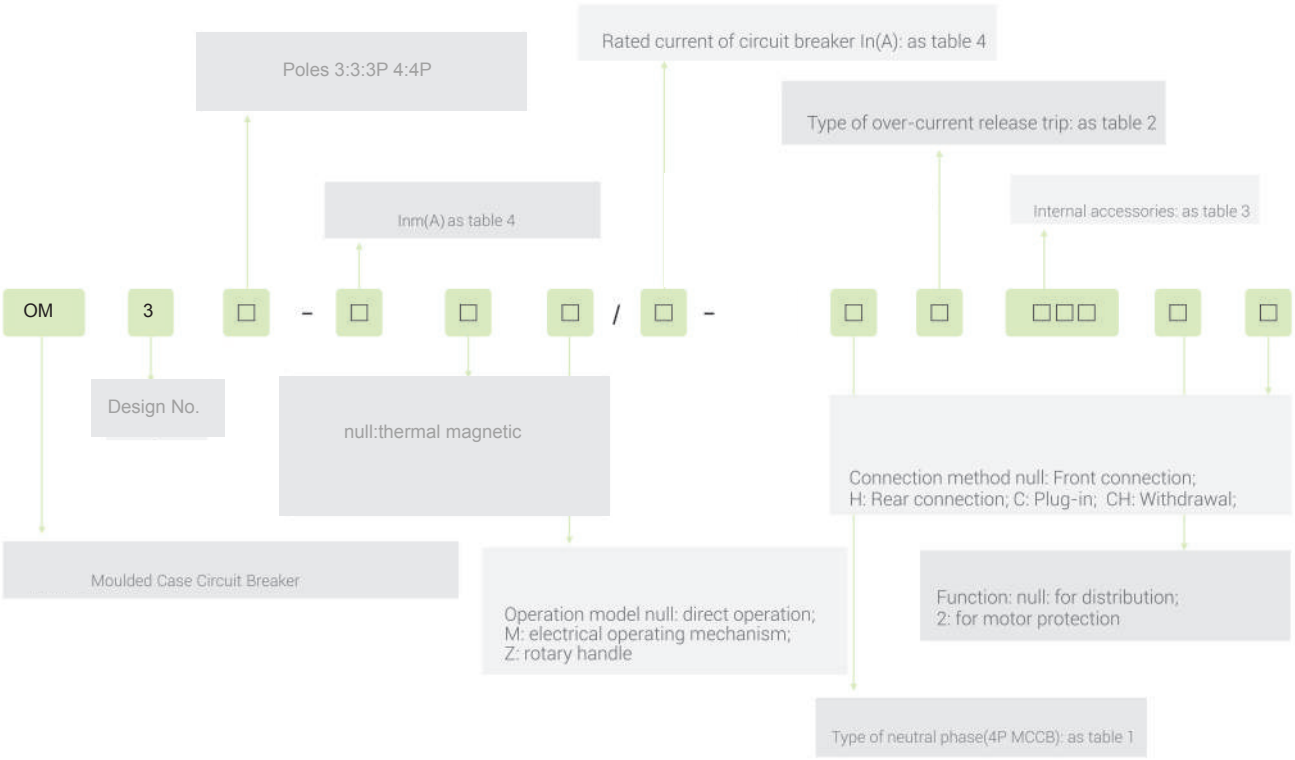
OM3 Series Moulded Case Circuit Breaker

Outline

OM3 series moulded case circuit breaker(circuit breaker for short) is high-tech products in 21st century with advanced design, high performance, pleasant appearance and delicate dimension. Meanwhile.

It is complied with GB/T 1408.2<low-voltage switch device and controlling device low-voltage circuit breaker> and IEC60947-2 section 2<low voltage switch device and control device part II: low- voltage circuit breaker> and etc.

Product model & definition



Usage & Appliance

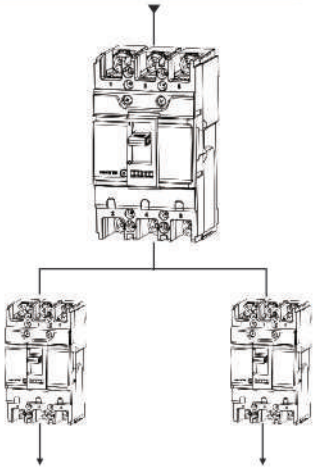
The circuit breaker is used in the electrical system of AC 50Hz, related voltage of up to 690V, rated current of up to 1600A to prevent the system from overload, short-circuit and under-voltage and to control the infrequent operation of motor.

Normal operation condition

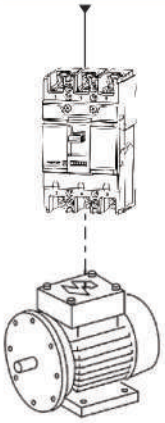
The circuit breaker could be used in the following working conditions:
1. Ambient air temperature not higher than +40℃ and not lower than -5℃.
2. Altitude no more than 2000m
3. The relative air humidity is not more than 50% in the max. at the temperature. The lowest monthly average temperature not higher than 25℃ in the most moist month and the max. relaative humidity should be no more than 90%.
4.Pollution degree: Grade 3. There is no explosion factor, corrosive metal and the gas destroying the insulation and the electric dust.
5. Installation type: III
6. The terminals of 1,3,5,7,N1 should be connected with the power supply and the terminals of 2,4,6,8N2 should be connected with the load. Reverse wiring is forbidden.

OM3 Series Moulded Case Circuit Breaker

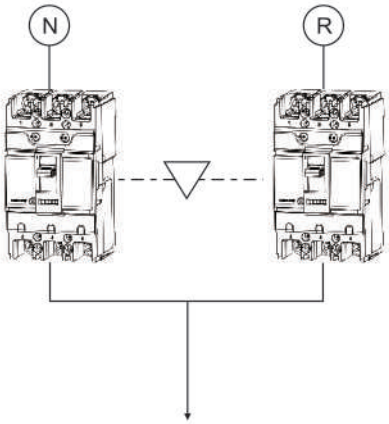
Low–voltage power distribution network



Control and protection of motor



Dual power changeover system



(table)1

Code	Type	Specification
A	A	N phase without overcurrent trip unit is normal open and do not make and break along with other 3 poles
B	B	N phase without overcurrent trip unit make and break along with other 3 poles

(table)2

Code	Title	Description
1	Delay trip	The protection of overcurrent reverse time.
2	Instantaneous trip	Electromagnetic release of overcurrent instantaneous protection
3	Multiple trip	With the above two performances

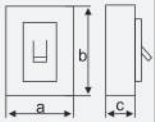
(table)3

Inm (A)	Ⅰ		Ⅱ		Ⅲ		Note
	Code	Description	Code	Description	Code	Description	
63 100 250	0	Null	0~2	Pairs of auxiliary contacts	0~2	Pairs of alarm contacts	
	1	Shunt trip	0~1		0~1		
	2	Under–voltage trip	0~1		0~1		
400	0	Null	0~5		0~2		Ⅱ + Ⅲ ≤5
	1	Shunt trip	0~3		0~2		Ⅱ + Ⅲ ≤3
	2	Under–voltage trip	0~3		0~2		Ⅱ + Ⅲ ≤3
	3	Shunt trip & Under–voltage trip	0~1		0~1		Ⅱ + Ⅲ ≤1
630 800	0	Null	0~8		0~3		Ⅱ + Ⅲ ≤8
	1	Shunt trip	0~5		0~3		Ⅱ + Ⅲ ≤5
	2	Under–voltage trip	0~5		0~3		Ⅱ + Ⅲ ≤5
	3	Shunt trip & Under–voltage trip	0~3		0~2		Ⅱ + Ⅲ ≤3

OM3 Series Moulded Case Circuit Breaker

Main technical parameter

(table)4

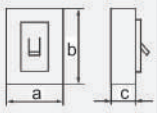
Inm(A)		63		100				250			
Model		OM33P0063C		OM33P0100C	OM33P0100S	OM33P0100H	OM33P0100U	OM33P0250C	OM33P0250S	OM33P0250H	OM33P0250U
Photo											
Rated current(A)		10,16,20,32,40,50 63,75,100,125		16,25,32,40,50,63 75,100, (125,160)				100,125,150,175,200,225,250			
Poles		3	4	3		4		3		4	
Rated Insulation Voltage Ui(V)		AC600		AC690				AC690			
(mm) Arcing distance		≤50(0*)		≤50(0*)				≤50(0*)			
Rated ultimate/ service short-circuit breaking capacity(Ka)	AC690V	–		–	5/3	10/5	10/5	–	10/5	10/5	10/5
	AC400V	10/5		30/15	50/35	85/85	125/125	30/15	50/35	85/85	125/125
	AC230V	25/13		50/25	100/50	125/125	200/200	50/25	100/50	125/125	200/200
Operational performance (times)	ON	6000		6000				2000			
	OFF	8500		8500				7000			
Dimension(mm) 	a	75	100	90	120	90	120	90	90	105	140	105	140	105	105
	b	130	130	155				216		165				240	
	c	56		68				68							
Weight (Kg)		0.75		1.0	1.3	1.1	1.4	1.8	1.8	1.5	1.9	1.5	1.9	2.6	2.6
Rated Operation Frequency(per hour)		120		120				120			

*0" arcing distance: please specify when ordering if you require.

OM3 Series Moulded Case Circuit Breaker

Main technical parameter

(table)4

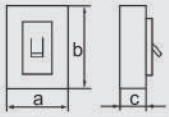
Inm(A)		400 / 630			
Model		OM33P0400C OM33P0630C	OM33P0400S OM33P0630S	OM33P0400H OM33P0630H	OM33P0400U OM33P0630U
Photo					
Rated current(A)		250,300,350,400,500,630			
Poles		3		4	
Rated insulation voltage Ui(V)		AC690			
(mm) Arcing distance		⩽50(0*)			
Rated ultimate/ service short-circuit breaking capacity (Ka)	AC690V	10/10	10/10	15/10	35/35
	AC400V	45/45	70/70	100/100	125/125
	AC230V	85/85	100/100	150/100	200/200
Operational performance (times)	ON	1000			
	OFF	4000			
Dimension(mm) 	a	150 / 198	150 / 198	150	150
	b	257		297	
	c	103		200	
Weight (Kg)		5.5 / 7.3	5.7 / 7.5	16.7	16.7
Rated Operation Frequency(per hour)		60			

*0" arcing distance: please specify when ordering if you require.

OM3 Series Moulded Case Circuit Breaker

Main technical parameter

(table)4

Inm(A)		800			
Model		OM33P0800C	OM33P0800S	OM33P0800H	OM33P0800U
Photo					
Rated current(A)		630,700,800			
Poles		3		4	
Rated insulation voltage Ui(V)		AC690			
Arcing distance		≤50 (0*)			
Rated ultimate/ service short-circuit breaking capacity(Ka)	AC690V	10/10	15/15	20/15	35/35
	AC400V	45/45	70/70	100/100	125/125
	AC230V	85/85	100/100	150/100	200/200
Operational performance (times)	ON	500			
	OFF	2500			
Dimension(mm) 	a	210	280	210	280	210	210
	b	275		322	
	c	103		200	
Weight (Kg)		9.9	13	11.4	15.7	27.3	27.3
Rated operation frequency(per hour)		20			

Thermal electromagnetic over-current release

Long time delay tripping current Ir1

In: rated current of circuit breaker(as table 4)

There is no over-current release for neutral phase of 4P MCCB and the thermal current is the same with other three phases.

"0" arcing distance: please specify when ordering if you require.

OM3 Series Moulded Case Circuit Breaker

Main technical parameter

Inm(A)		1250			2000	
Rated Current		800A~1250A			1000A~2000A	
Poles		3P、4P				
Rated Insulation Voltage(V)		1000V				
Rated Impulse Withstand Voltage		8kV				
Rated Operational Voltage Ue		230V;400V;690V				
Model		S	M	H	M	H
Rated ultimate/service short-circuit breaking capacity(Ka)	AC230V:	40	65	70	-	-
	AC400V:	35	50	65	50	85
	AC690V:	10	15	20	20	25
Icu(kA):	AC230V:	65	80	85	-	-
	AC400V:	50	65	85	50	100
	AC690V:	20	25	25	20	20
Operational Performance (times)	OFF	2500			2500	
	ON	500			500	
(mm) a–b–c–ca 	Pole	3P	4P		3P	4P
	a	210	280		210	280
	b	275.5			340	
	(S/H)	103			141	
	c	152			244	

The overcurrent protection characteristics of circuit breakers for power distribution are shown in Table1 2 The overcurrent protection characteristics of circuit breakers for motor protection are shown in Table1 OM3 overcurrent protection characteristic curveis shown in figure below
a-Thermal overload protection characteristic in cold state
b-Thermal overload protection characteristic in thermal state
c-Electromagnetic release protection characteristics
eristics of circuit breakers for power distribution

Overcurrent protection characteristics of circuit breakers for power distribution

(table)1

Rated current In(A)	Thermal tripper (ambient temperature +40℃)		The operating current of electromagnetic tripper(A)
	1.05 In non-operating time(h)(starting state: cold)	1.30 In non-operating time(h)(starting state: hot)	
≤63	> 1	≤1	(10±2)In
> 63	> 2	≤2	

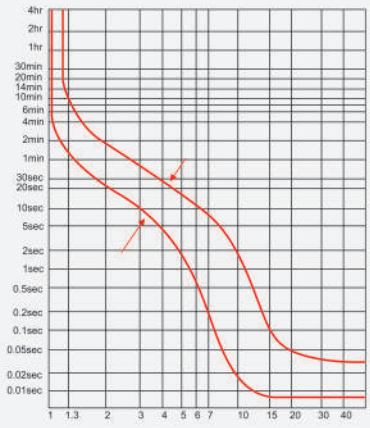
Motor Circuit Breaker Overcurrent Protection Characteristic

(table)2

Rated current In(A)		Thermal tripper (ambient temperature +40℃)			The operating current of electromagnetic tripper(A)
	1.0 In non-operating time(h) (starting state: cold)	1.2 In operating time(h) (starting state: hot)	1.5 In operating time(h) (starting state: hot)	7.2 In operating time(h) (starting state: cold)	
≤63	> 2	≤2	≤2	2<Tp≤10	(12±2.4)In
63<In≤250			≤4	4<Tp≤10	
250<In≤800			≤8	6<Tp≤20	

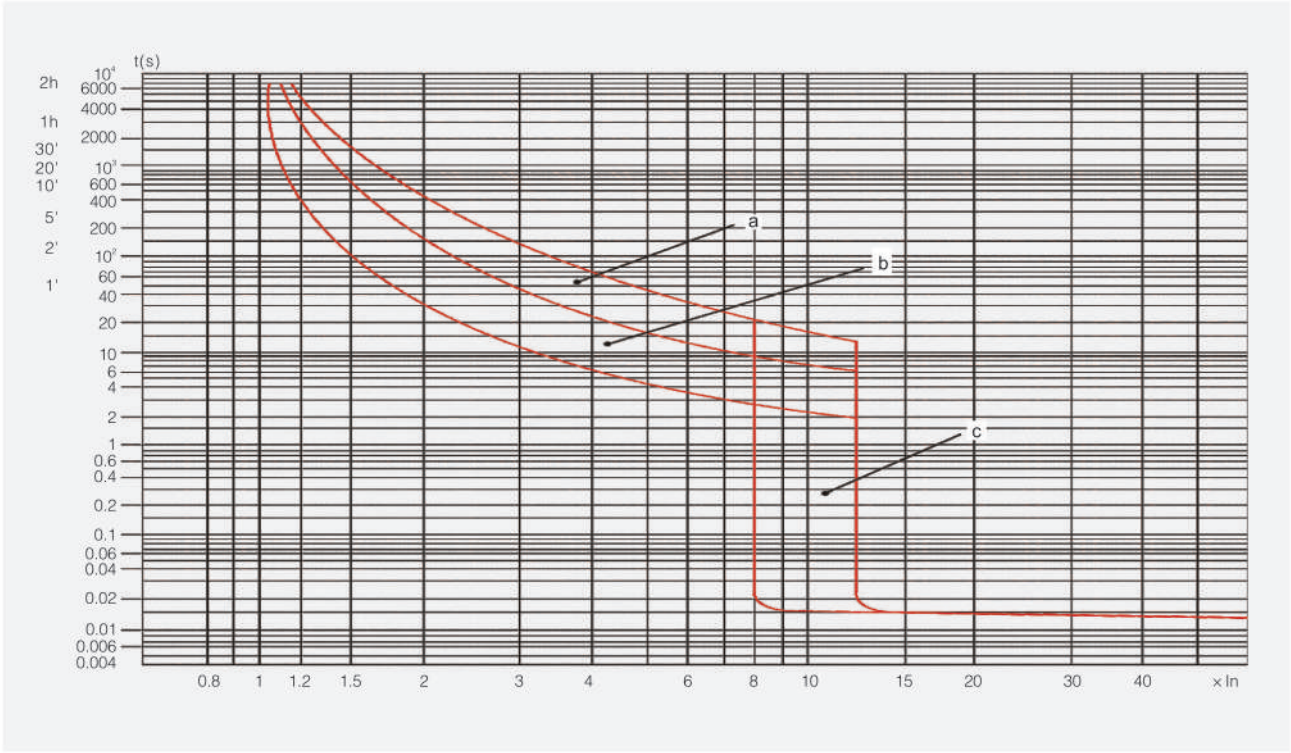
Note:The operation current of electromagnetic tripper for OM33P0630/OM33P800 is adjustable(5in-14in)

OM33P0063 Overcurrent Protection Characteristic Curve

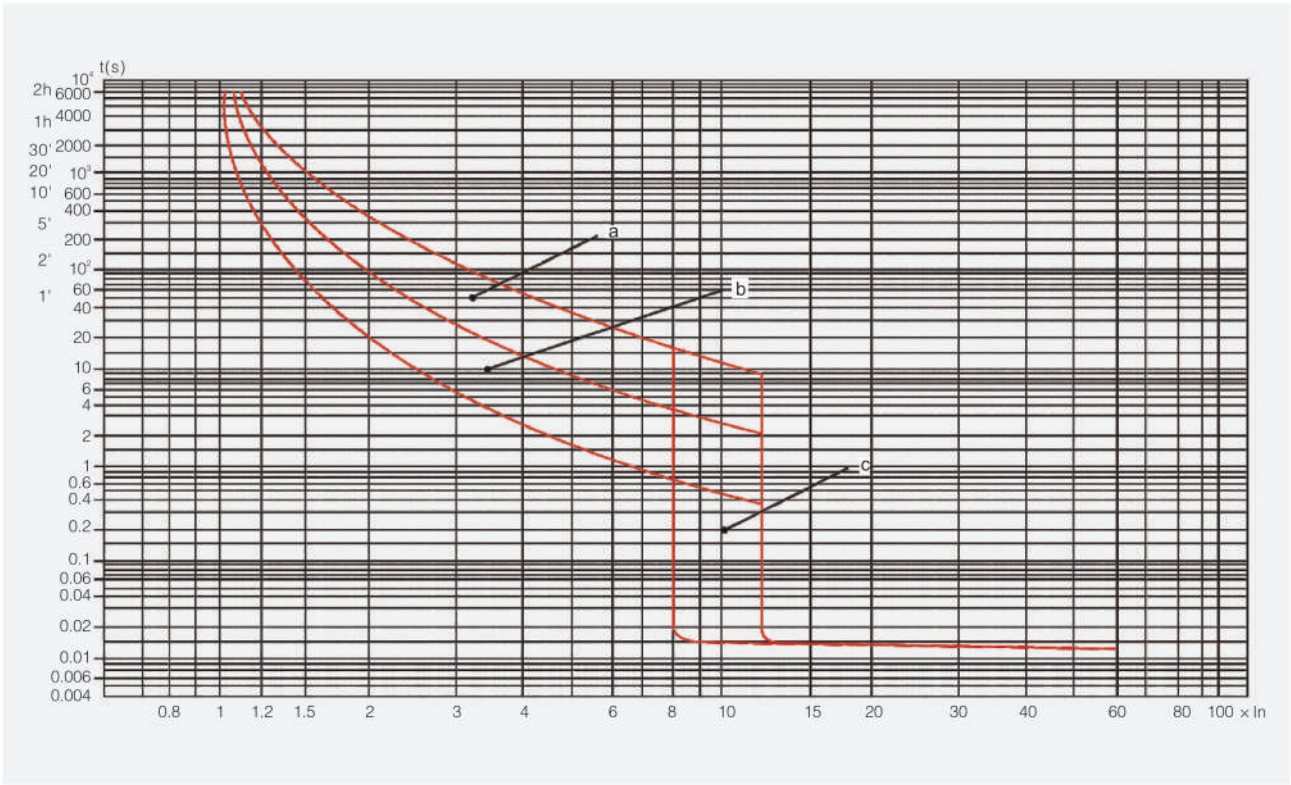


100% Rated current

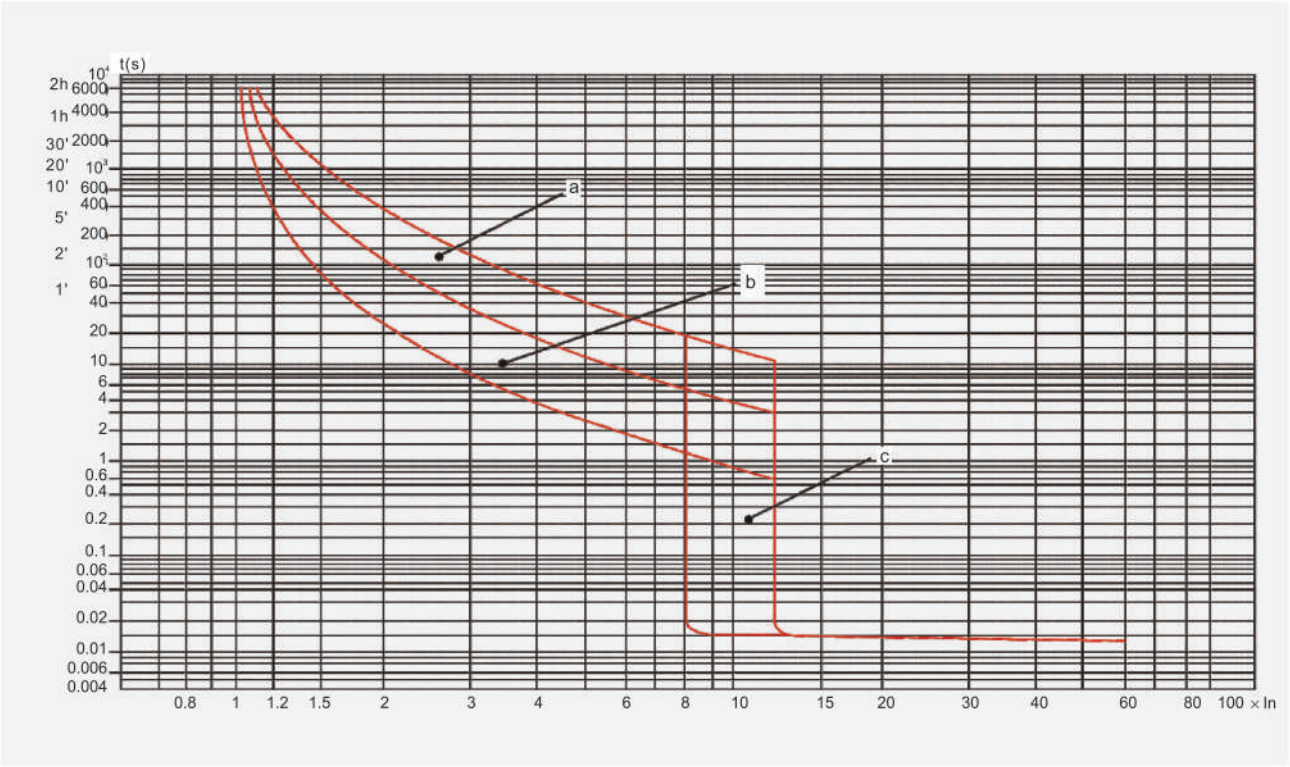
OM33P0100 Overcurrent Protection Characteristic Curve



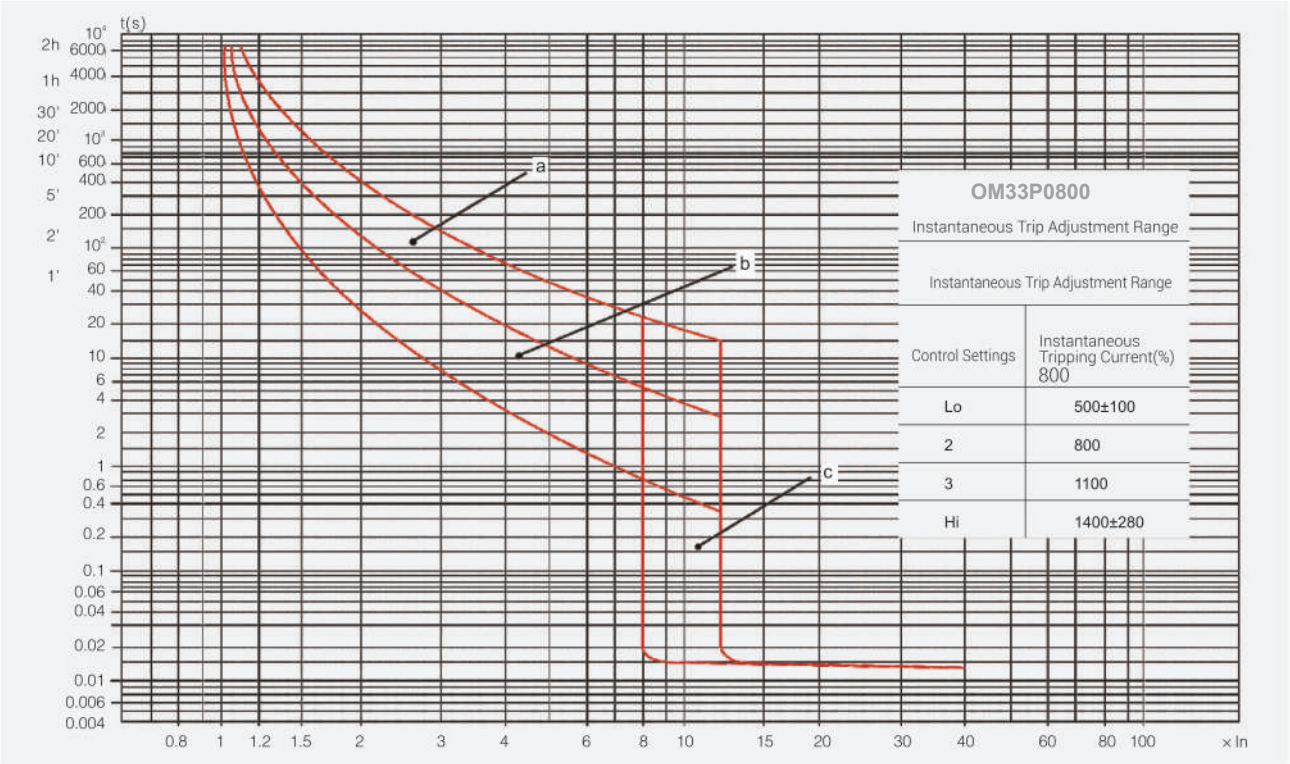
OM33P0100 Overcurrent Protection Characteristic Curve



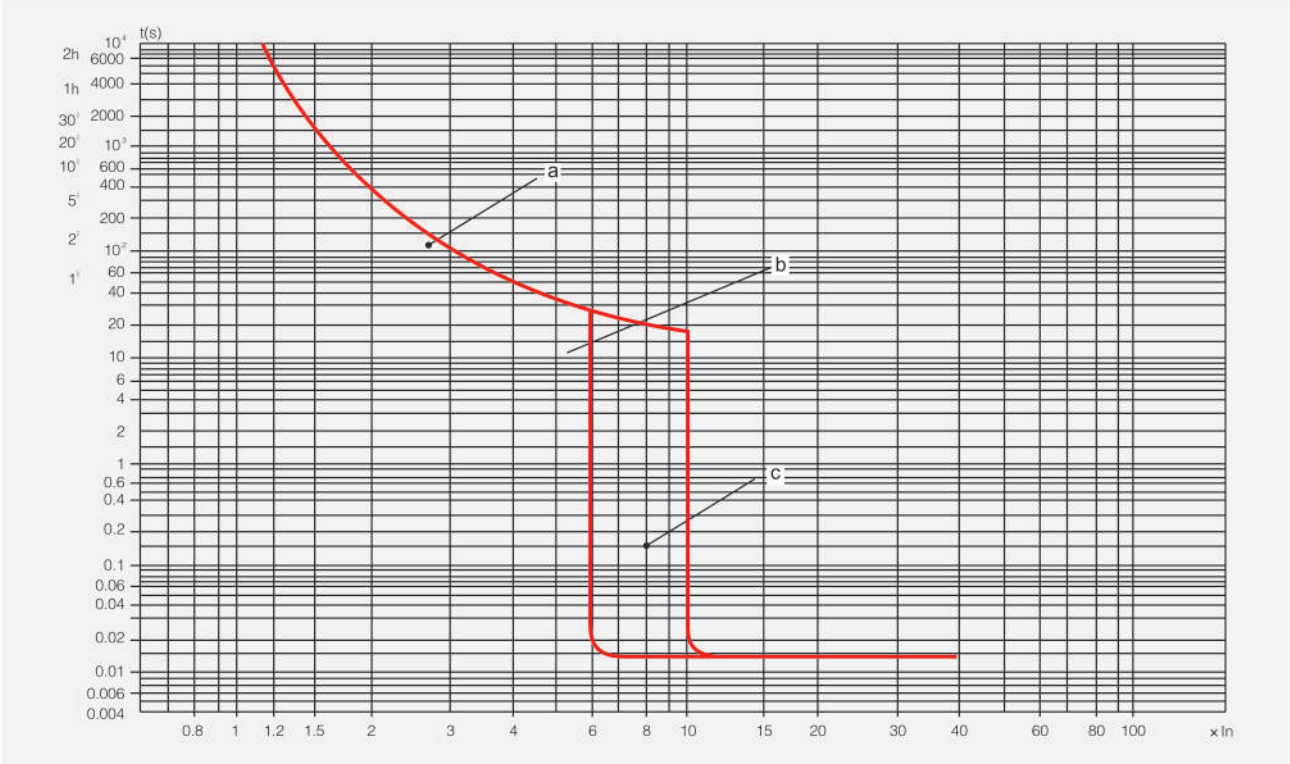
OM33P0400-0630 Overcurrent Protection Characteristic Curve



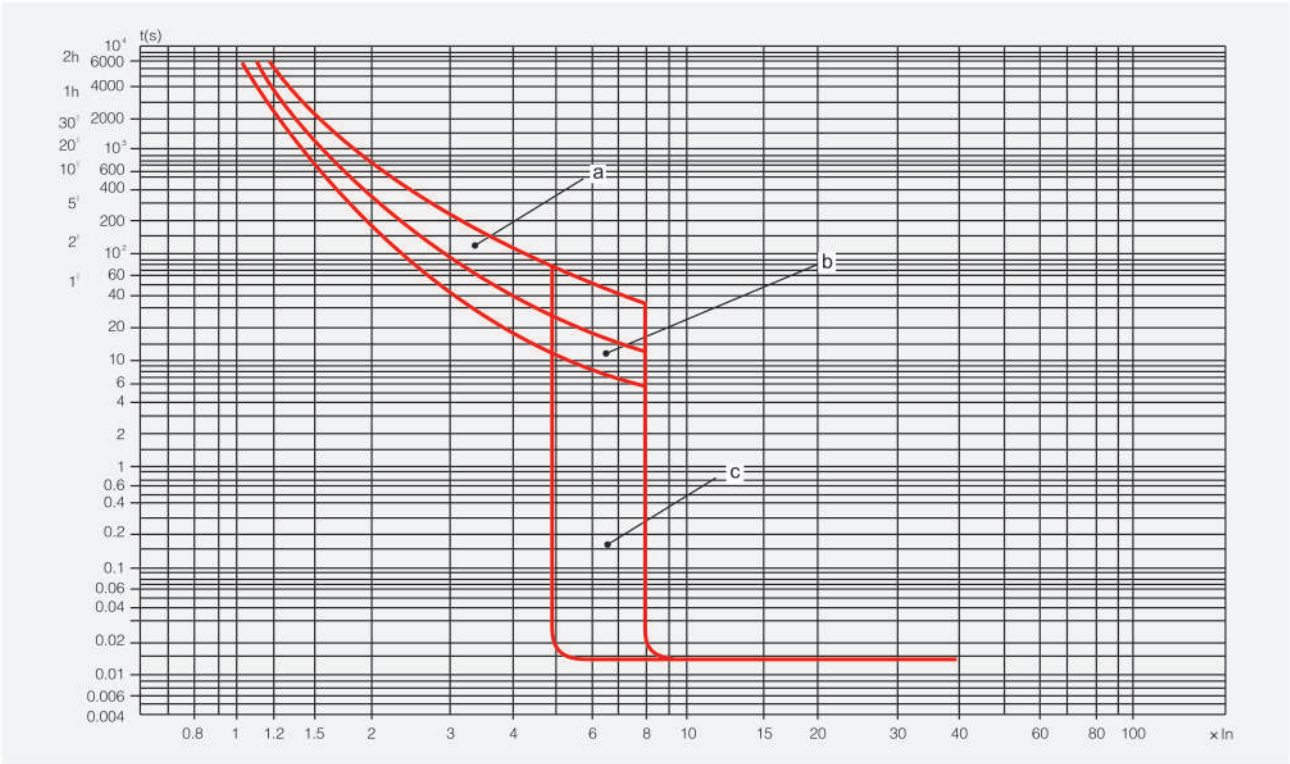
OM33P0800 Overcurrent Protection Characteristic Curve



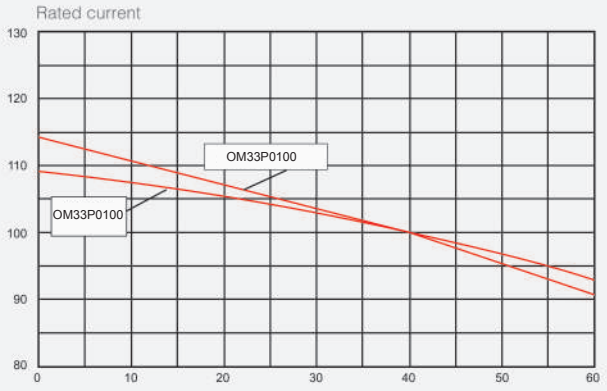
OM33P1250 Overcurrent Protection Characteristic Curve

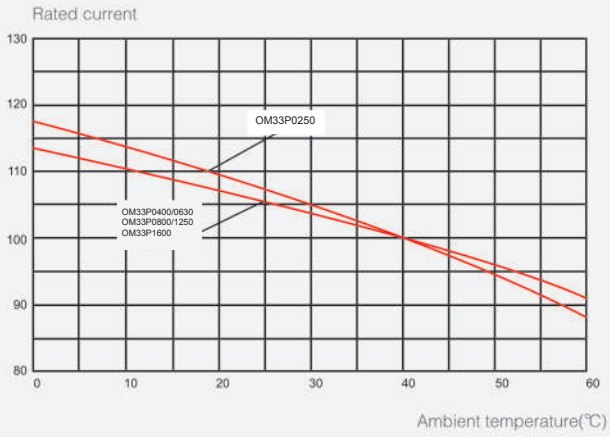


OM33P1600 Overcurrent Protection Characteristic Curve



OM3 Series Thermal-Trip Curve





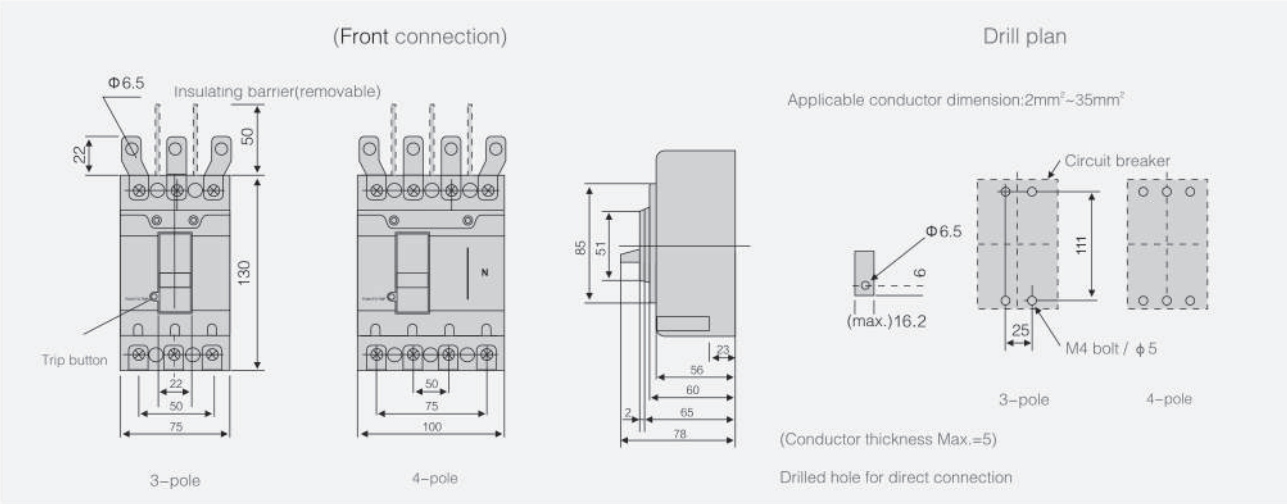
Power Losses of MCCB

Inm(A)	Rated current In(A)	Resistance of each pole	Gross power consumption of three-pole	
			Fixed	Plug-in / Withdrawal
100	100	2.1	25	
250	250	1.2	36	36
400	400	0.32	60	47
630	630	0.2	96	115
800	800	0.11	210	270
1250	1250	0.05	234	
1600	1600	0.035	270	

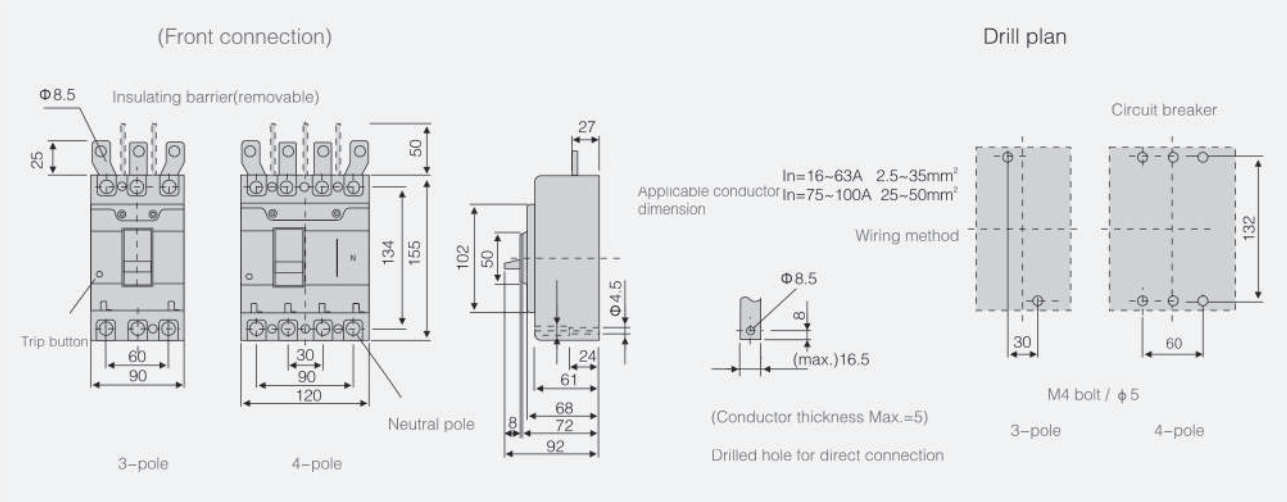
Note: The operation current of electromagnetic tripper for OM33P0800 AF is adjustable(5In-14In)

OM3 Series Moulded Case Circuit Breaker

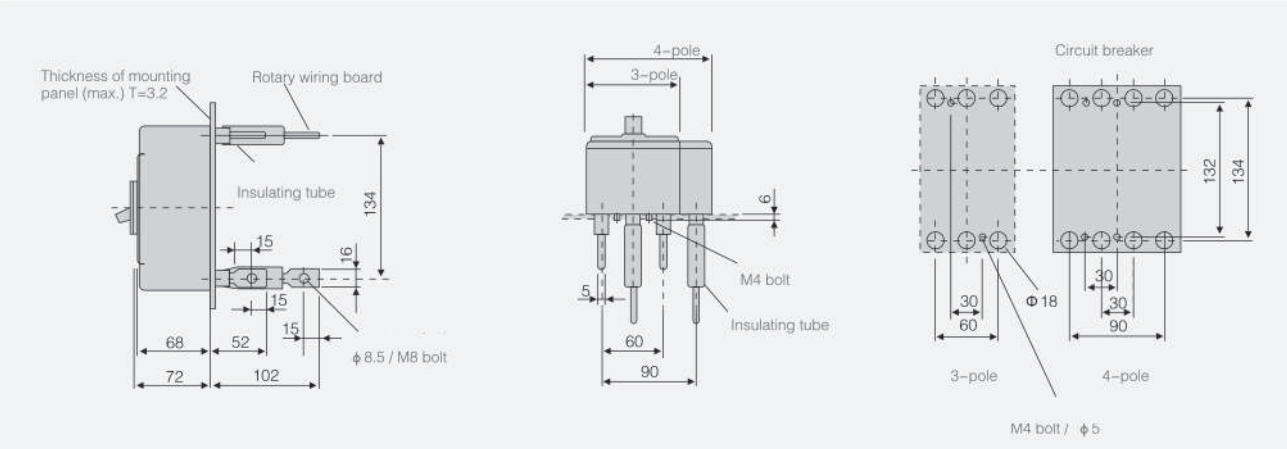
OM33P0063 Outline & Mounting Dimension

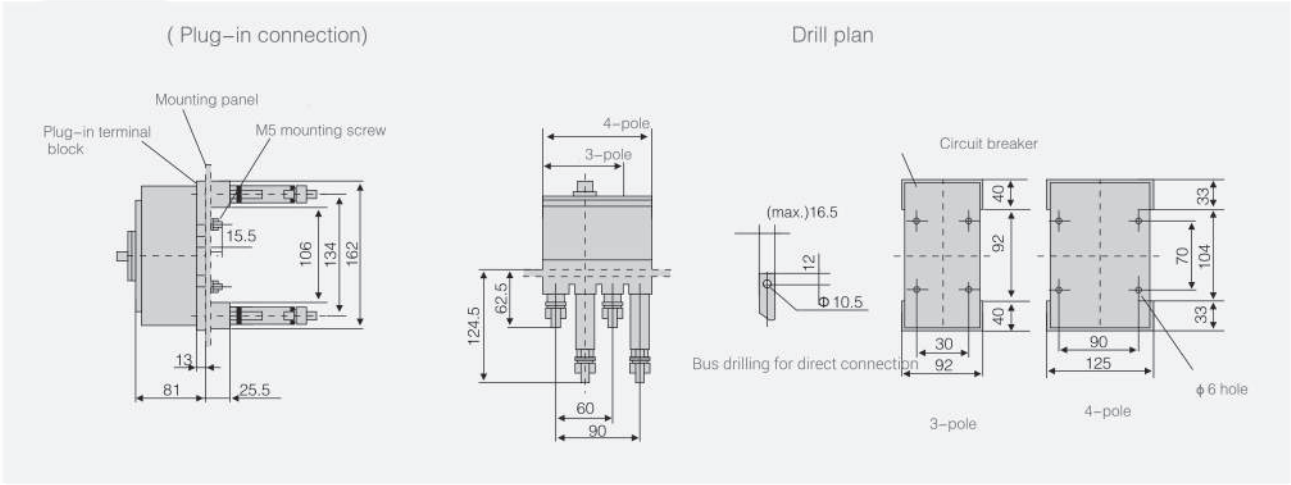


OM33P0100 Outline & Mounting Dimension

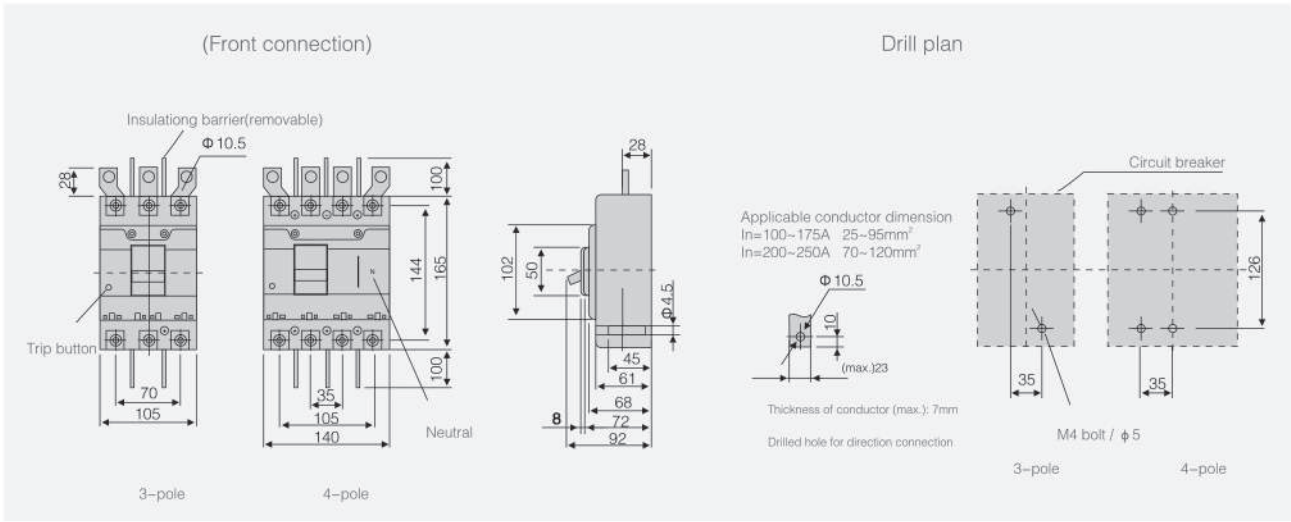


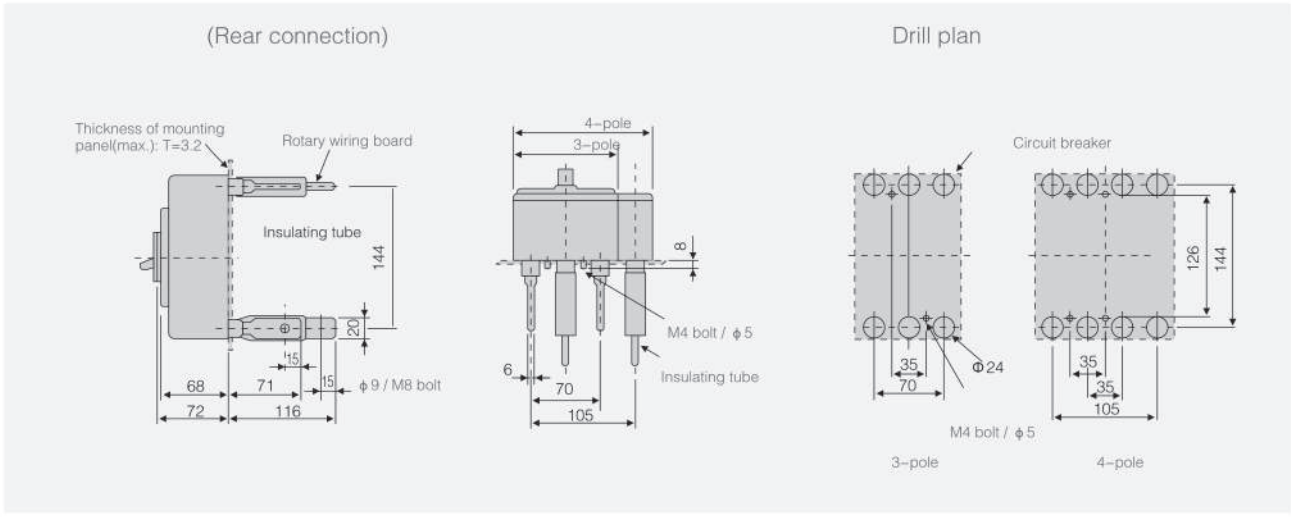
(Rear connection)

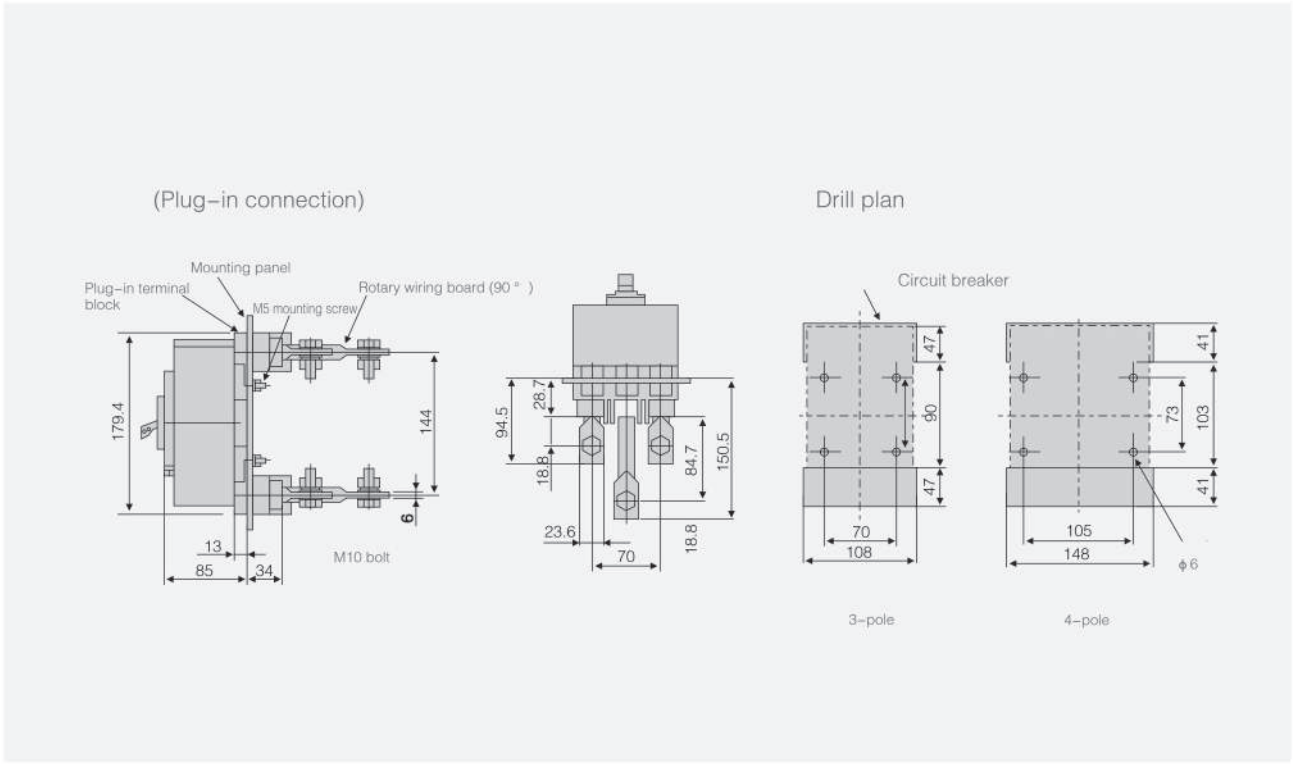




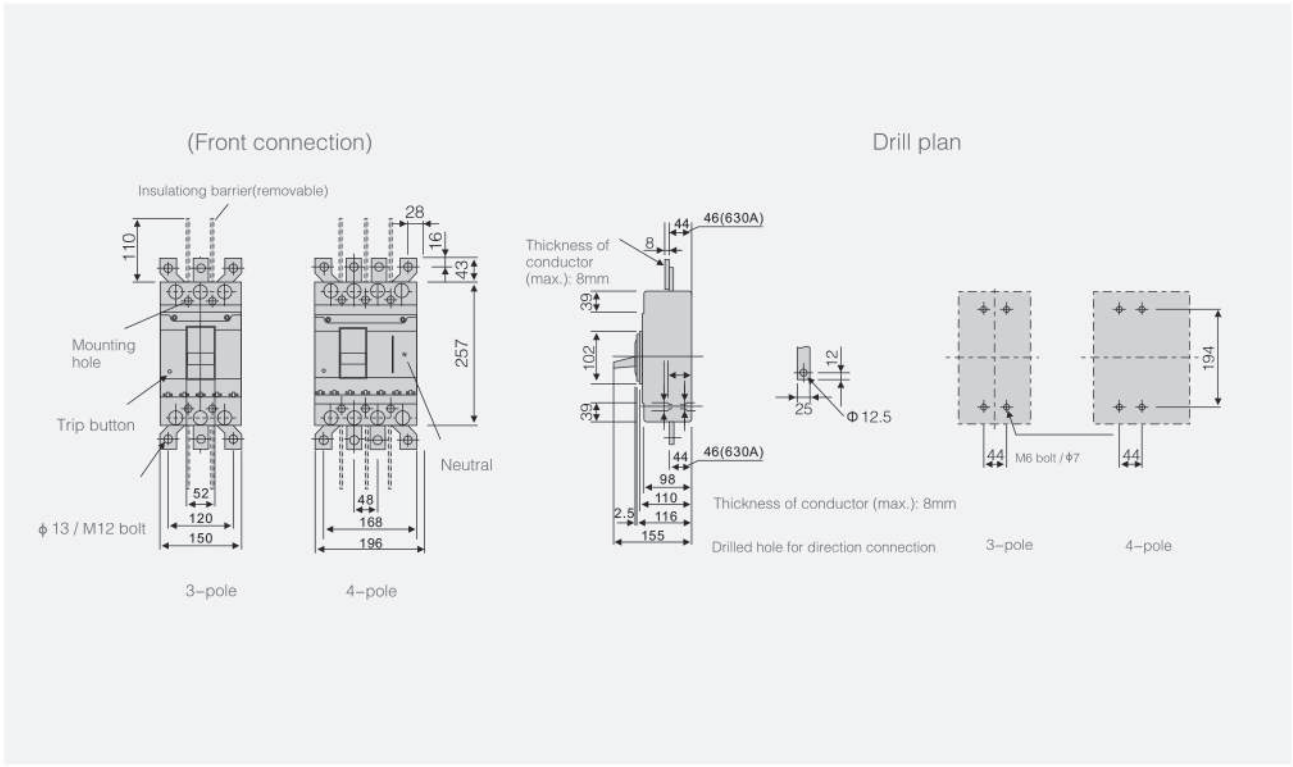
OM33P0250 Outline & Mounting Dimension

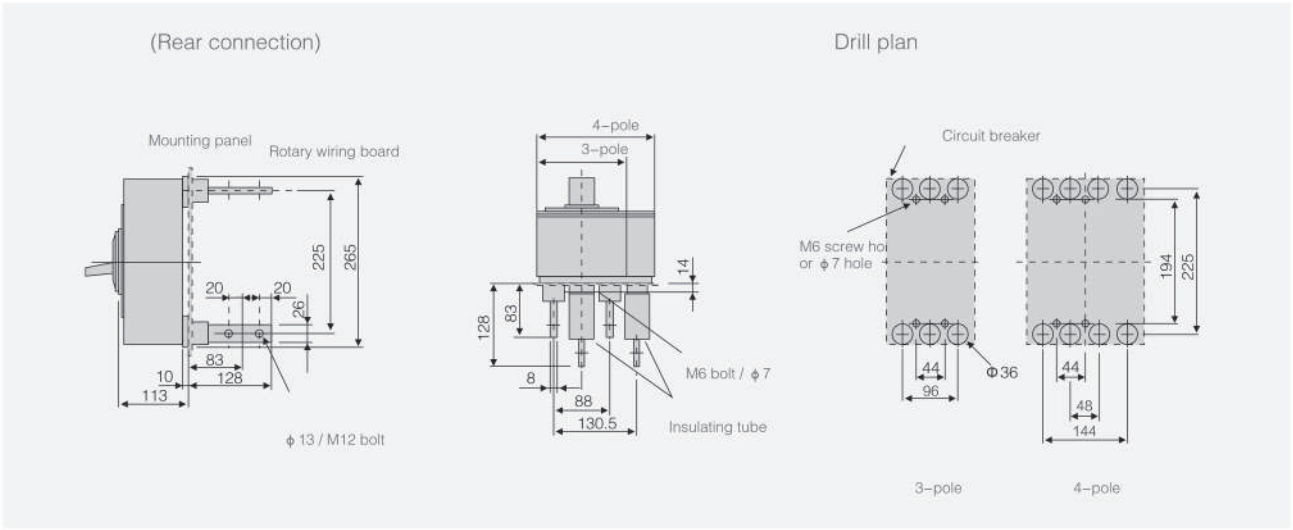


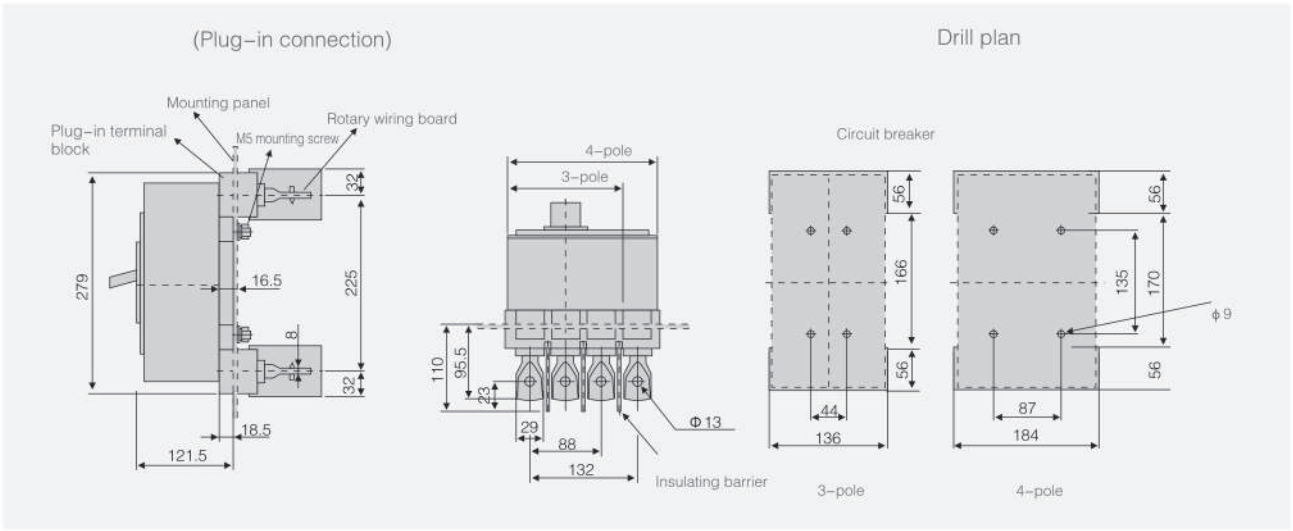




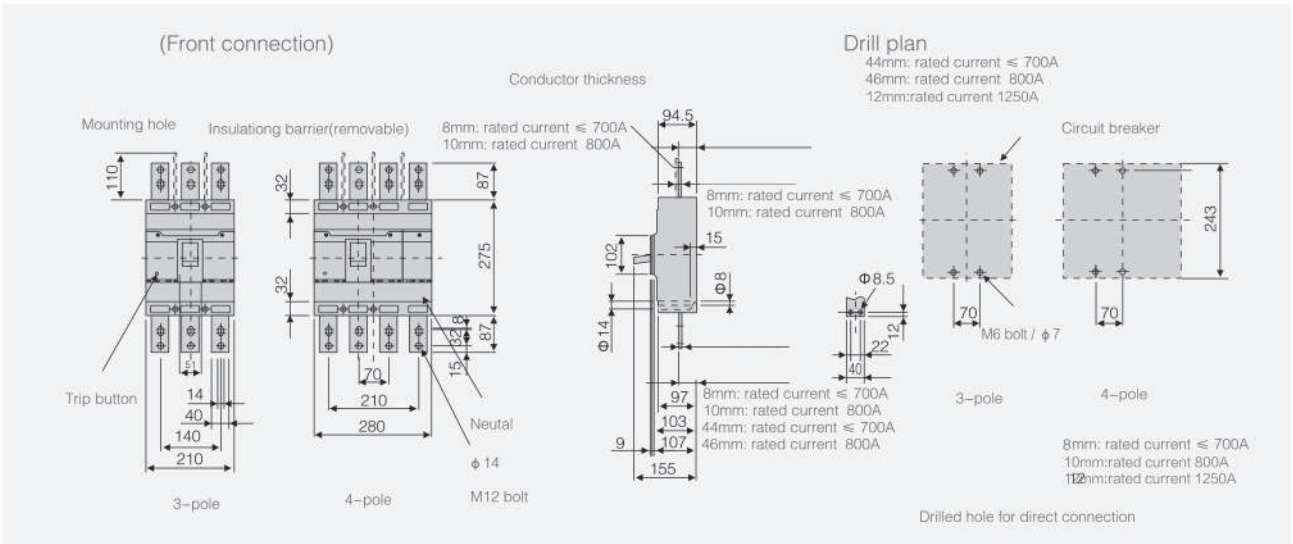
OM33P0400/0630 Outline & Mounting Dimension



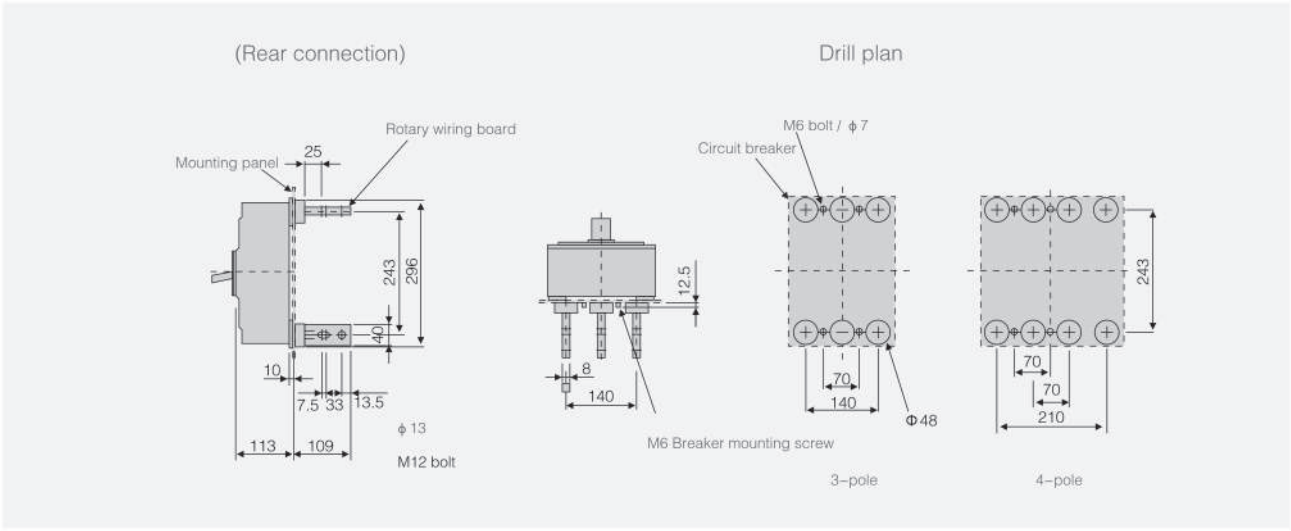


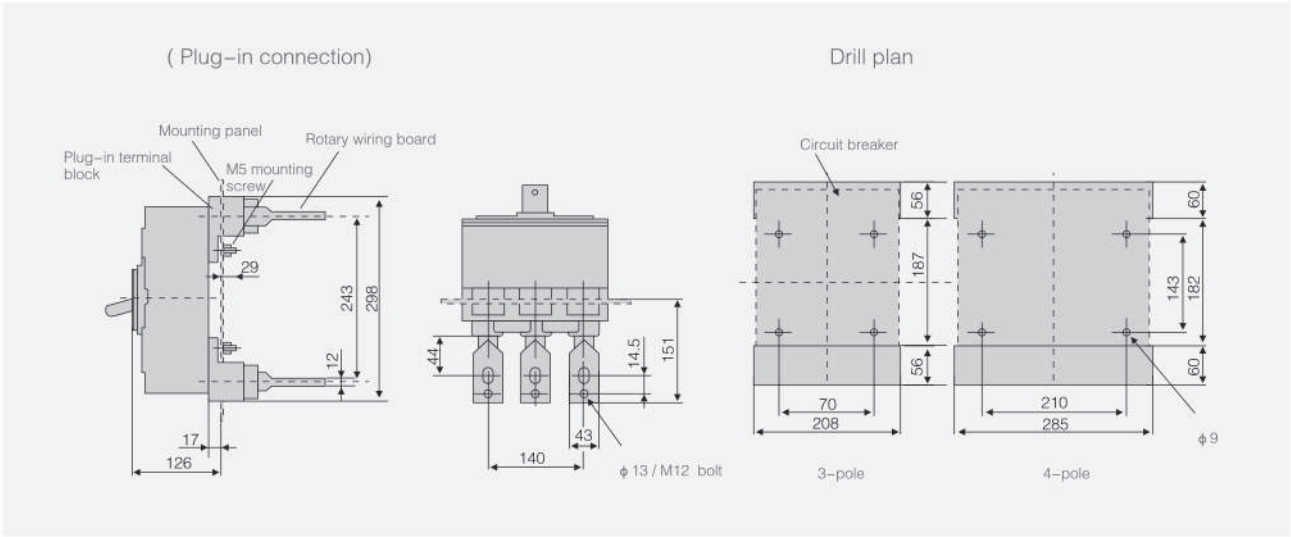


OM33P0800/1250 Outline & Mounting Dimension

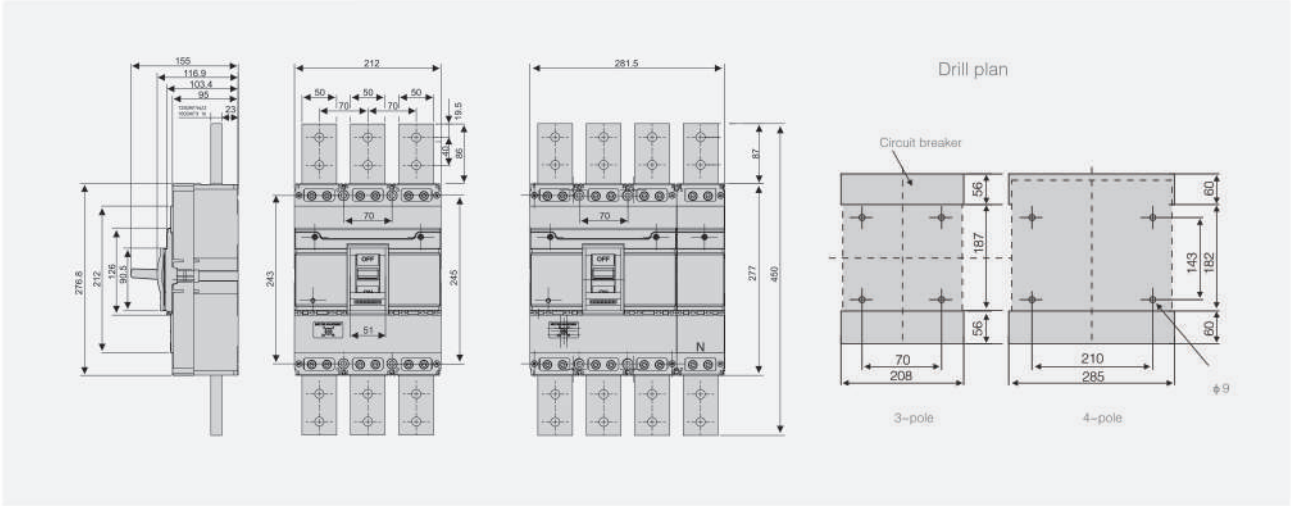


OM3 Series Moulded Case Circuit Breaker





OM33P1600 Outline & Mounting Dimension

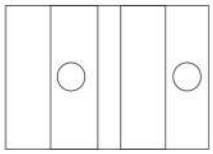
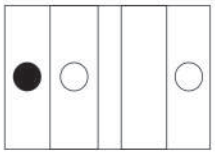
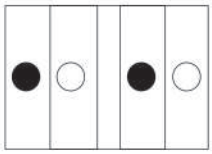
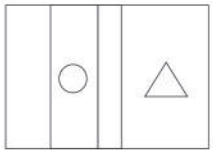
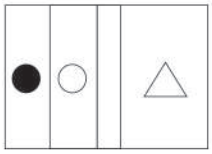


Accessories of Circuit breaker

General table

Inm(A)		63	100	250	400	630,800	1250,1600
Internal accessories	Alarm contact	B1	B2	B3	B4		B4
	Auxiliary contact	F1	F2	F3	F4		F4
	Shunt trip	FL1	FL2	FL3	FL4		FL4
	Under-voltage trip	QY1	QY2	QY3	QY4		QY4
Connection terminal block as internal accessories							
External accessories	Rotary operating handle	RH10063	RH10100	RH10250	RH10400	RH10630/0800	RH11250/1600
	Electrical operating mechanism	–	MO1	MO2	-	-	
	Electrical operating mechanism	–	MOX1	MOX2	MOX3	MOX4	MOX4

Code & Installation

Inm(A)	63A,100A,250A		
Code	0 (0~2) 0	0 (0~2) 1	0 (0~2) 2
Position			
Code	1 (0~1) 0	1 (0~1) 1	
Position			
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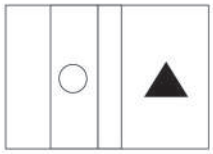
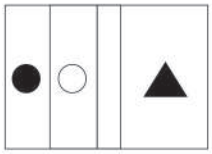
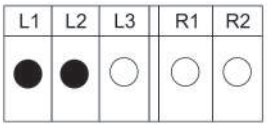
Position			

M1–400

Inm(A)	400A(M1-400)		
Code	0 (0~5) (0~2)		
Position	 Note: the sum of last two digits : ≤5		
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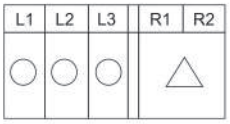
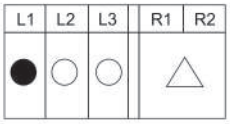
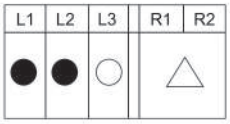
Position			
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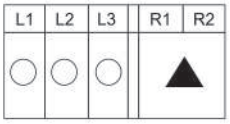
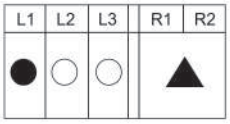
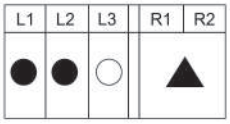
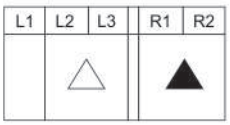
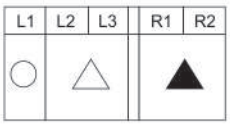
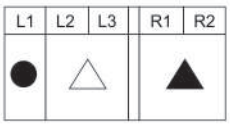
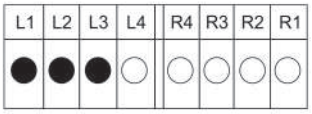
Position			
Code	300	310	301
Position			

Inm(A)	630A,800A,1250A,1600A		
Code	0 (0~8) (0~3)		
Position	 Note: the sum of last two figures: ≤5		
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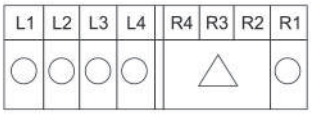
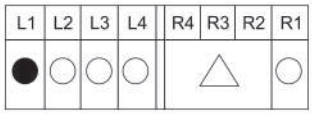
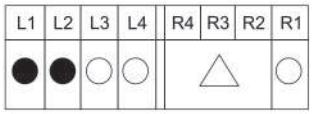
Position			
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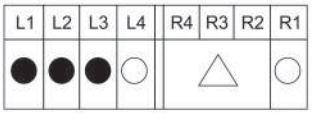
Position			

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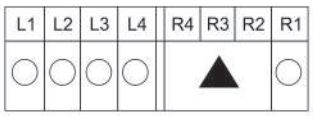
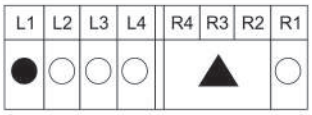
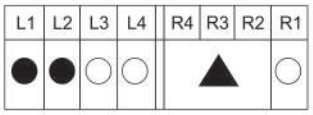
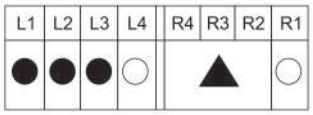
Position			
Code	2 (0~2) 3		
Position			
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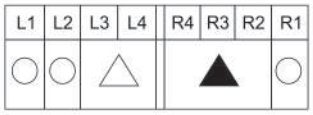
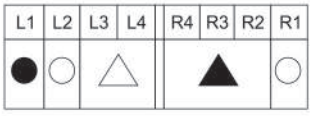
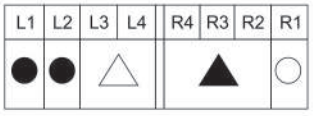
Position			

Parameter of auxiliary & alarm contact

The circuit drawings of auxiliary contact & alarm contact in different working status

Working status of circuit breaker	Auxiliary contact	Alarm contact
Colse		
Open		
Tripping		

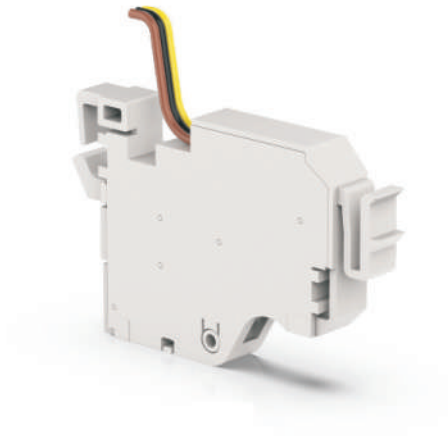
Main technical parameter

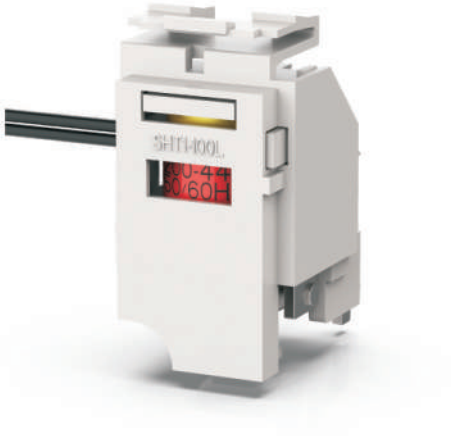
Rated insulation voltage Ui=400V,AC
Rated thermal current Ith=6A
Rated operation voltage(Ue) & rated operation current (Ie)
current Ie AC400V, 1A; AC230V, 3A
DC220V, 0.15A

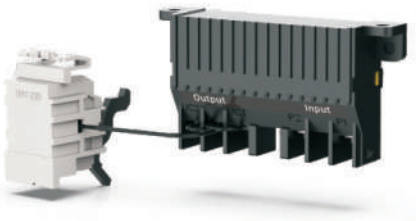
Electrical life & making and breaking capacity

Using categories		Making			Breaking			Cycle time	Operating frequency (time/min)	Time of making
AC		I/Ie	U/Ue	cos ϕ	I/Ie	U/Ue	cos ϕ			
AC-15	Electrical life	10	1	0.3	1	1	0.3	6050	6	≥0.05
	Making & breaking capacity	10	1.1	0.3	10	1.1	0.3	10	6	≥0.05
DC		I/Ie	U/Ue	T0.95	I/Ie	U/Ue	T0.95			
DC-13	Electrical life	1	1	300ms	1	1	300ms	6050	6	≥0.3
	Making & breaking capacity	1.1	1.1	300ms	1.1	1.1	300ms	10	6	≥0.3

OM3 Series Moulded Case Circuit Breaker





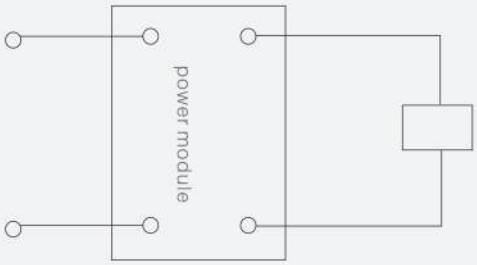


The parameter of shunt trip

Circuit figure of shunt trip

(Rated voltage)
Us:110V,230V,400V
DC: 24V,48V,110V,
(Input capability)
AC: 180VA DC:60W

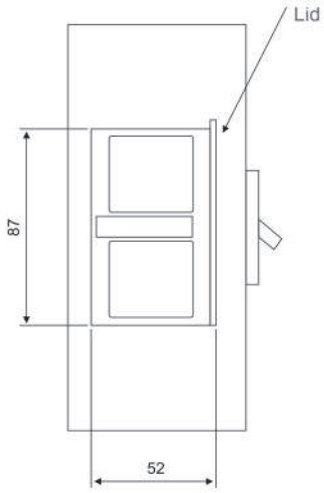
The parmeter of Under-voltage trip

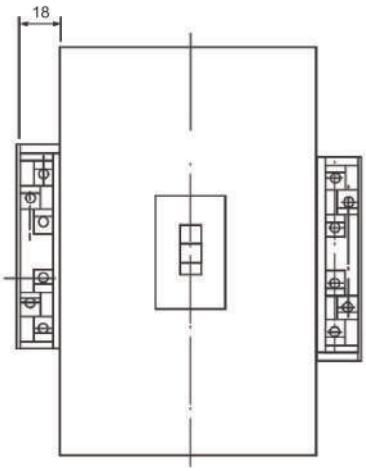


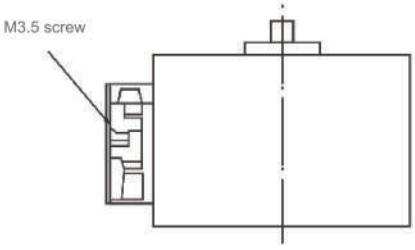
Power module
1.power module can be fitted at the side of the circuit breaker, and the independant installation available
2.rated voltage Ue:AC:110V、230V、400V；DC:24V、48V、110V;
3.input capbility AC: 5VA; DC:2W;
4.operating voltage: U=(70%~35%) Ue; circuit breaker tripping & breaking
5. operating time: (10~30)ms ;
U≥85% Ue, circuit breaker could be closed
U≤35% Ue, circuit breaker can not be closed

TX series wiring terminal block-internal accessories

The wiring terminal block is hanged at the side of circuit breaker







Model RH1 rotary handle

It is mounted on the circuit breaker and can be locked by padlock to prevent the making / breaking of circuit breaker

MOX series electrical operating mechanism

For circuit breaker: Model(AF) 100A–800A

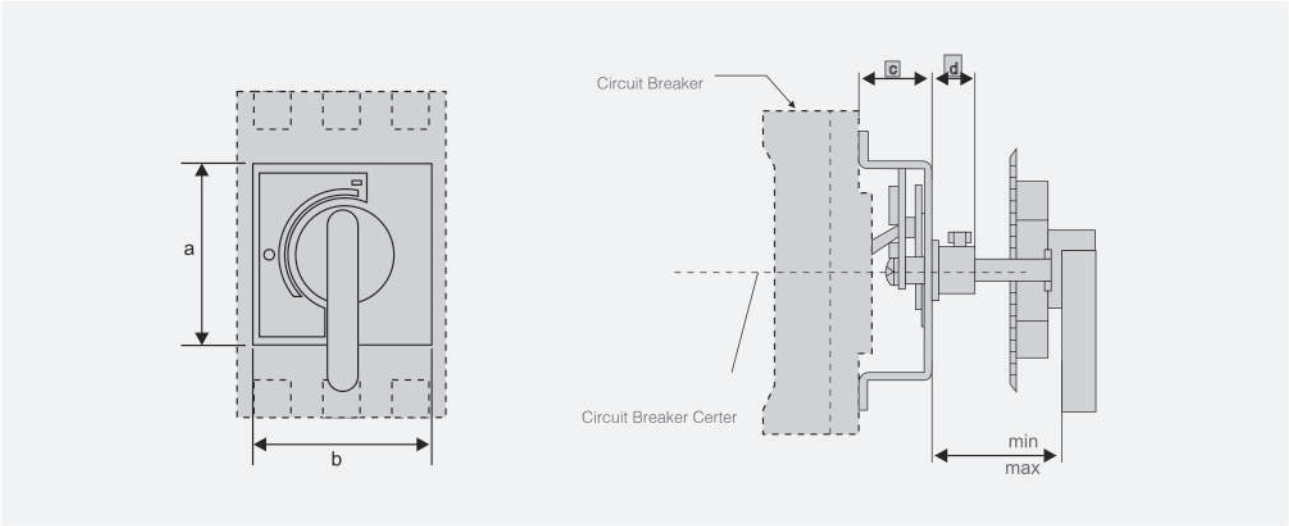
OM3 Series Moulded Case Circuit Breaker

RH1 series rotary operating mechanism

The operating mechanism adopts gear-rack mechanism to drive the circuit breaker handle, with features of small friction, easy operation and long life. It can be locked by padlock to prevent making & breaking of circuit breaker.

Model	Inm(A)	a	b	c	d	F min	F max
RH10063	63	90	70	42	13.5	50	400
RH10100	100	110	80	44	13.5	50	400
RH10250	250	110	90	46	13.5	50	400
RH10400	400/630	185	140	80	20	50	350
RH10630,0800	800/1250/1600	226	210	80	20	50	350

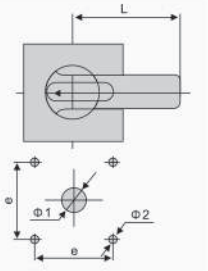
The general length of square shaft: f=150mm Other requirements, please specify when ordering.



The distance between the handle center and hinge should not be less than 200mm

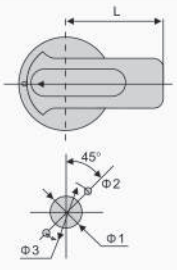
Mounting size of A type handle

Model (AF)	63~250	400~630	800~1600
ϕ1	ϕ42	ϕ42	ϕ63
ϕ2	ϕ4.5	ϕ4.5	ϕ5.5
e	65	65	88
L	60	125	140



Mounting size of B type handle

Model (AF)	63~250	400~630	800~1600
ϕ1	ϕ33	ϕ33	ϕ33
ϕ2	ϕ4.5	ϕ4.5	ϕ4.5
ϕ3	ϕ53	ϕ53	ϕ53
L	65	200	125

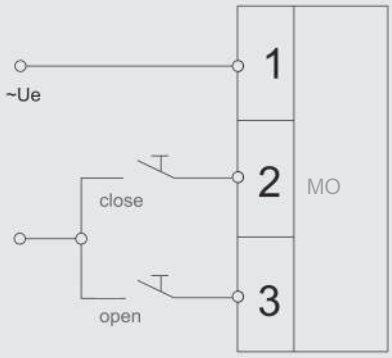


Electric operating mechanism

The MO series electrical operating mechanism is to make the electro-magnet to drive the operating handle of the circuit breaker which is to close and open the circuit breaker. The MOX series electrical operating mechanism by motor, gear and can turns the revolving morement of the motor into the beeline morement to close and open the circuit breaker.

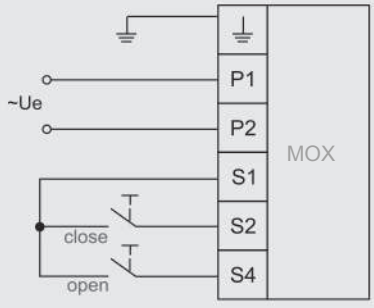
Main technology parameter of MO series electrical operating

Inm(A)	100		250		Wiring figureing of MO electrical operating mechanism
Model	MO1		MO2		
AC rated working voltage Ue(V)	AC400V	AC230V	AC400V	AC230V	
Starting current (A)	4.4	7.5	5.5	9.5	
Operating time (S)	≤0.2				
Rated operating frequency (time/n)	120				
Mechanical life	15000		9000		



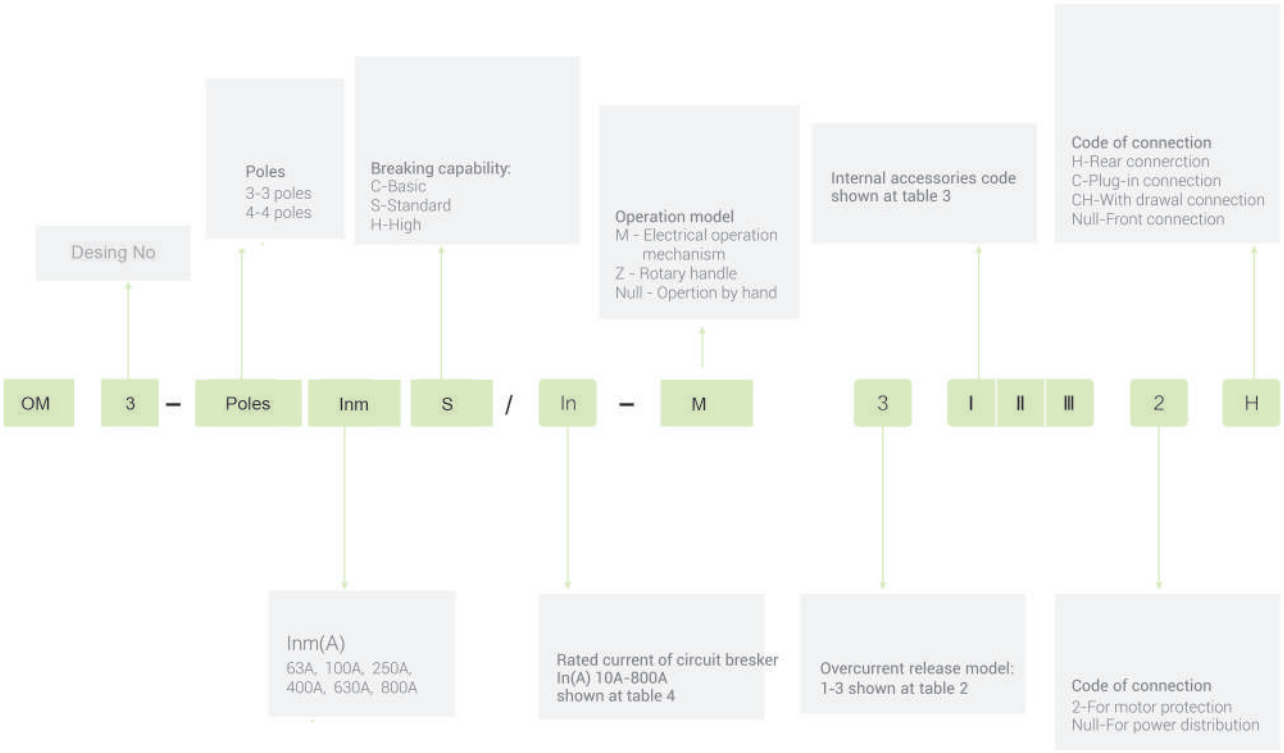
Main technology parameter of MOX series electrical operating mechanism

Inm(A)	100	250	400	630 800	1250,1600	Wiring figureing of MO electrical operating mechanism
Model	MOX1	MOX2	MOX3	MOX4		
AC rated working voltage Ue(V)	AC110~230V 50Hz DC110~220V		AC110, 230V 50Hz DC110, 220V			
Starting current (A)	≤0.5		≤2			
Operating time (S)	≤0.8					
Rated operating frequency (time/h)	180		120			
Mechanical life	15000	9000	5000	3000		



OM3 Series Moulded Case Circuit Breaker

Definition of model



Ordering notes

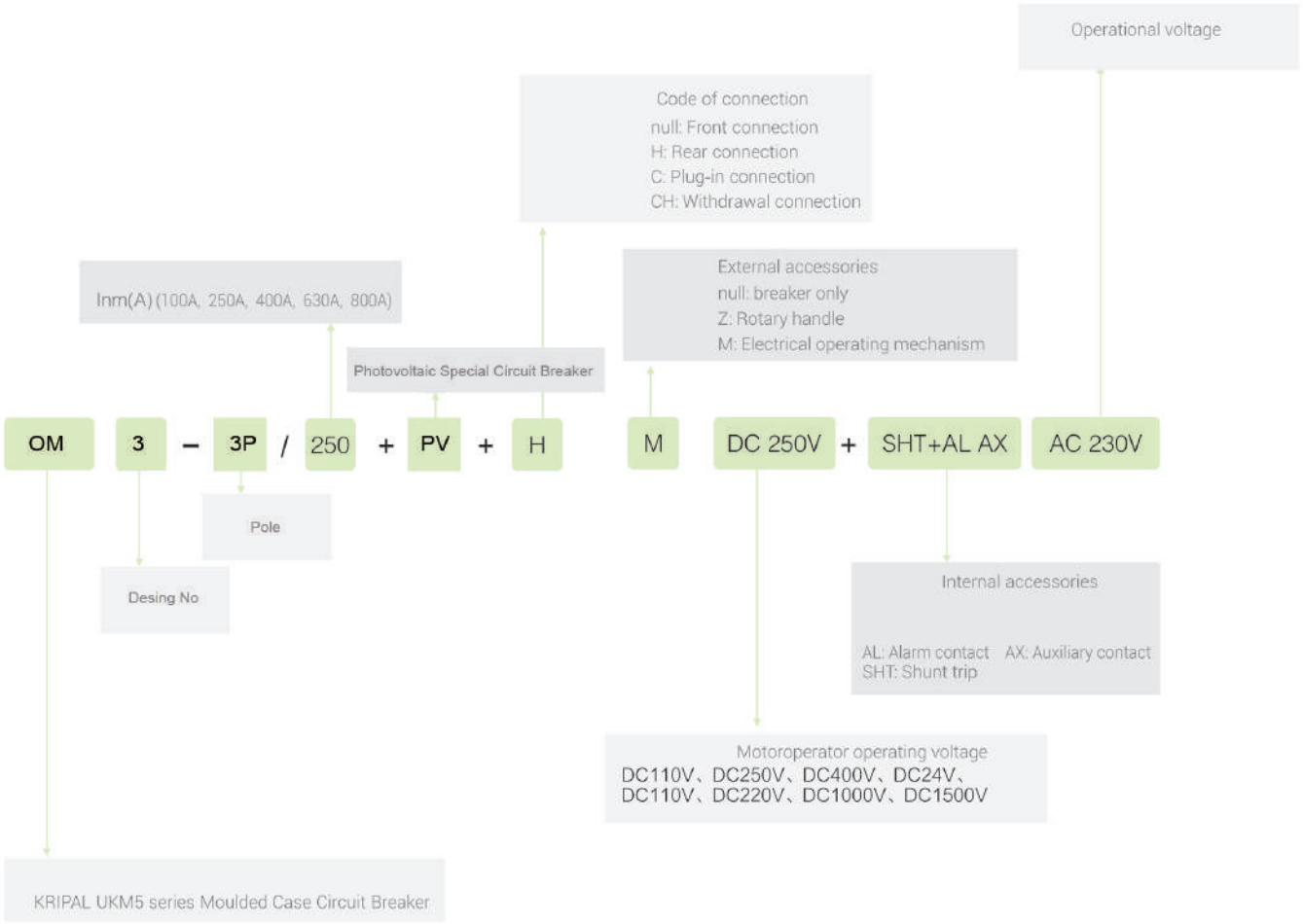
1. Model
OM3 □-□□□/□ – □□□□□□□□
With drawal connection or circuit breaker; when ordering, please specify it is front connection or rear connection;
2. Please indicate the rated voltage of shunt trip & Under-voltage trip.
3. External accessories
Please let us know the type of rotary handle A or B; the length of square shaft;
Model of electrical operating mechanism and its voltage & quantity;

OM3 PV

Series Moulded Case Circuit Breaker For PV System

OM3 PV Series Moulded Case Circuit Breaker for PV System

Definition of Model



Note: 1. The extended connection in pictures are "L" connection bus-bar (external accessories)
2. Please specify, if you need the items in line with the UL4998.

OM3 PV Series Moulded Case Circuit Breaker for PV System

Main technical parameter

Model		OM33P0250PV	
Photo			
Inm(A)		250	
Poles		3	4
Rated current		100,125,150,175,200,225,250	
Wiring		input:2 lines; output:2 lines;	
Rated working voltage Ue VDC		1000	1500
Rated insulation voltage Ui(V)DC		1500	1500
Rated impulse withstand voltage		8	
Testing voltage in one minute (V)		3820	3820
Ultimate short-circuit breaking capacity (kA) Icu		15	15
Mechanical life	total	7000	
Electrical life	total	2000	
Total time of breaking (ms)		20	
Mounting place		any	
Isolation (Y/N)		Y	
Standard		IEC 60947-2、GB/T 14048.2 UL489B IEC 60947 2 GB/T 14048.2 UL489B	
Ambient temperature / ℃		-45~+70	
Protection class		IP20	
Accessories		Auxiliary contact,Alarm contact, Shunt trip,	
Arcing distance		≤50	
Instantaneous trip		7 In	
Dimension	L×W×H	180x80x105	180x105x105
Mounting		Fixed	

Load 90%

OM3 PV Series Moulded Case Circuit Breaker for PV System

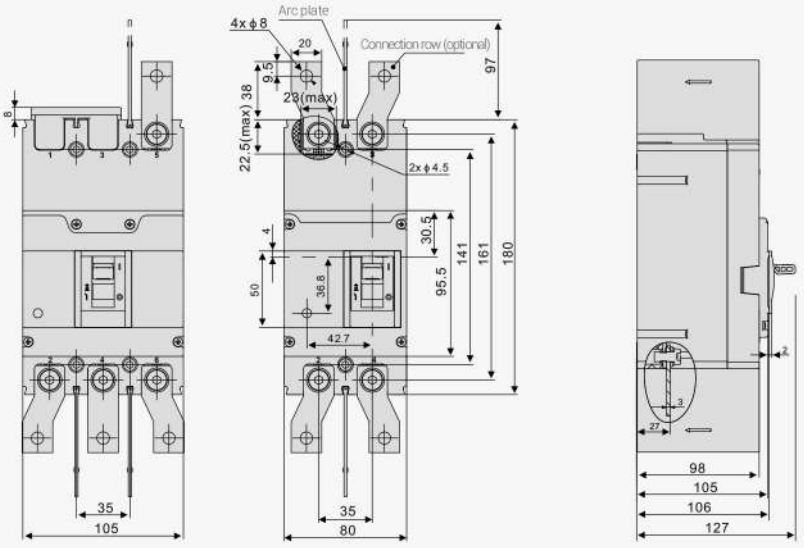
Main technical parameter

Model		OM3(3-4)P0400PV/0630PV	
Photo		  (Y1D) Wiring (Y2B) Wiring	
Inm(A)		400/630	
Poles		3	4
Rated current		250,300,350,400 (500,600)	
Wiring		input:2 lines; output:2 lines;	
Rated working voltage Ue VDC		1000	1500
Rated insulation voltage Ui(V)DC		1500	1500
Rated impulse withstand voltage		8	
Testing voltage in one minute (V)		3820	3820
Ultimate short-circuit breaking capacity (kA) Icu		20	20
Mechanical life	total	4000	
Electrical life	total	1000	
Total time of breaking (ms)		20	
Mounting place		any	
Isolation (Y/N)		Y	
Standard		IEC 60947-2、GB/T 14048.2 UL489B IEC 60947 2 GB/T 14048.2 UL489B	
Ambient temperature / ℃		-45~+70	
Protection class		IP20	
Accessories		Under-voltage trip, Auxiliary contact,Alarm contact, Shunt trip, Electrical operating mechanism, Rotary handle	
Arcing distance		≤100	
Instantaneous trip		7In	
Dimension	L×W×H	257x150x103	257x198x103
Mounting		Fixed	

Load 90%

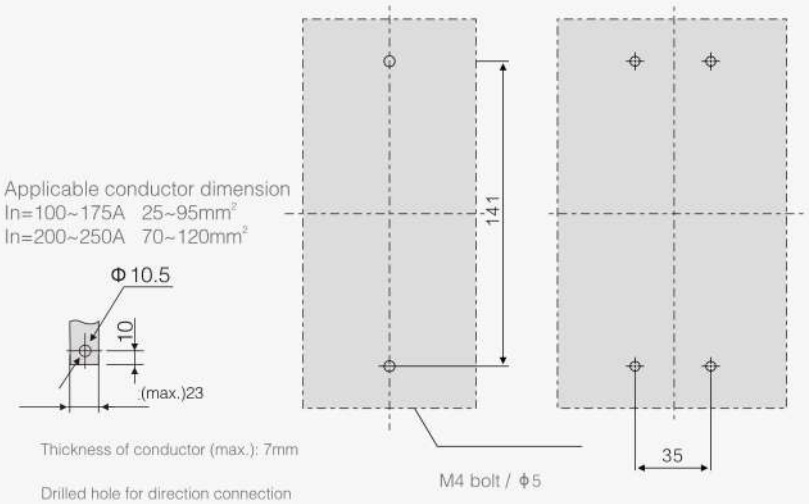
OM33P0250PV Outline & Mounting Dimension

(Front connection)



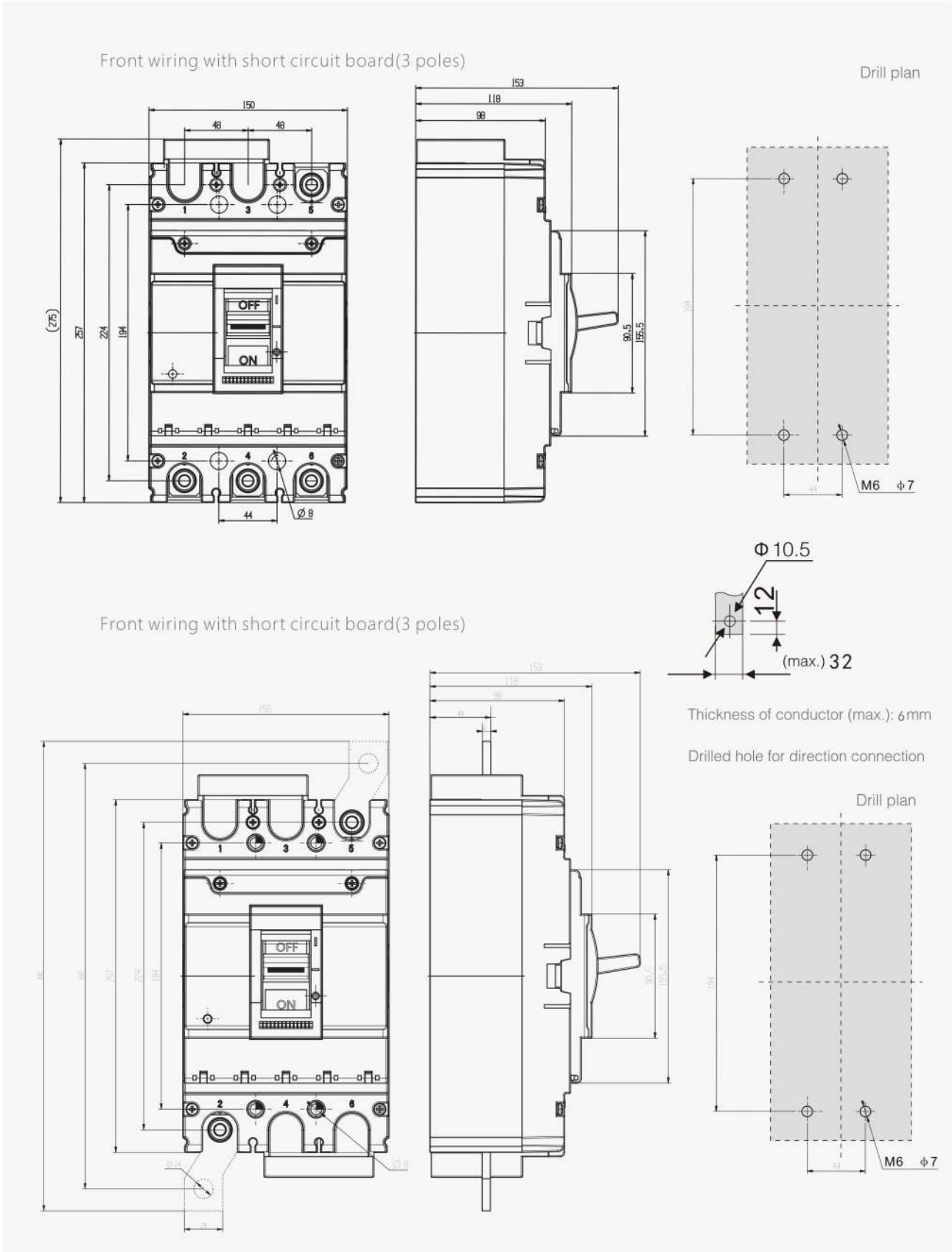
3–pole 2–pole

Drill plan



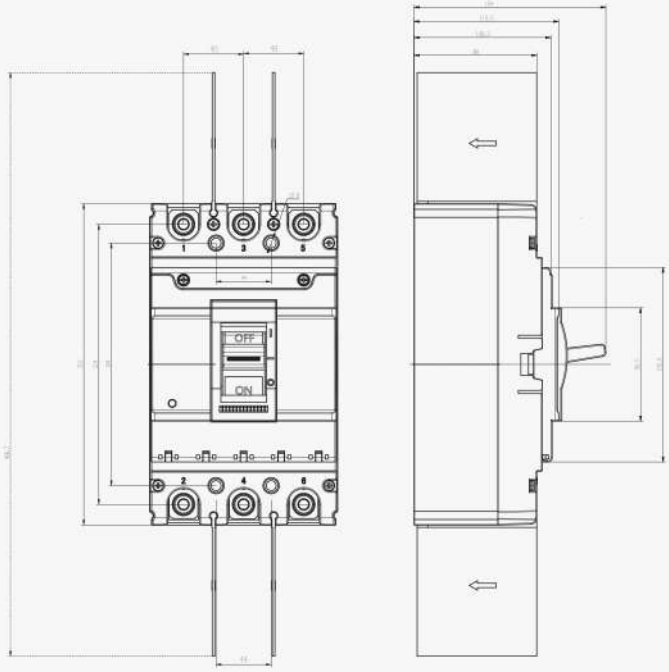
OM3 PV Series Moulded Case Circuit Breaker for PV System

OM33P0400PV/0630PV Outline & Mounting Dimension

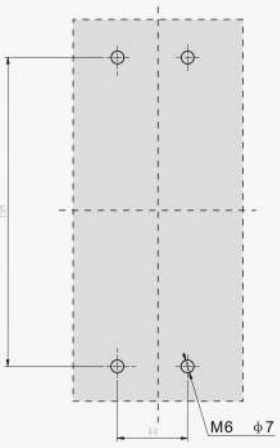


OM33P0400PV/0630PV Outline & Mounting Dimension

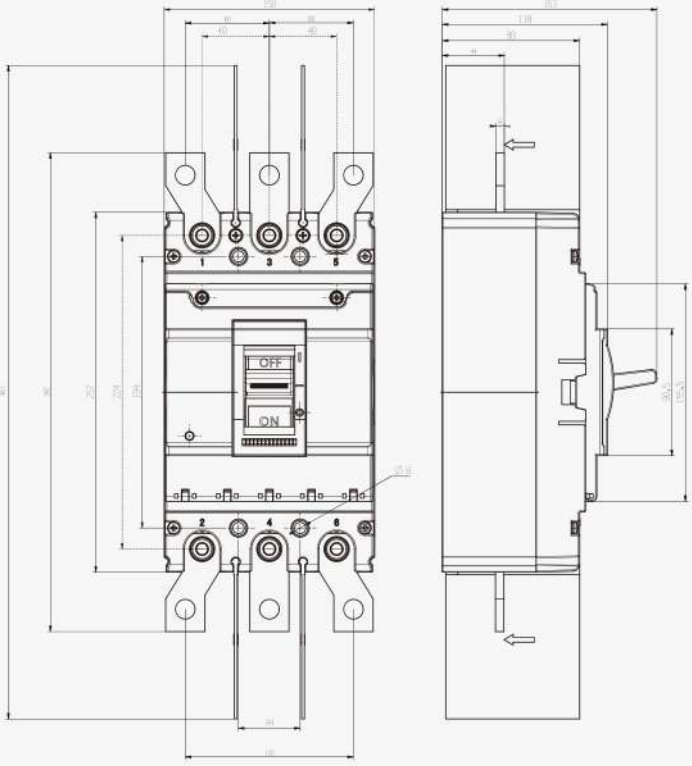
(Front connecting)

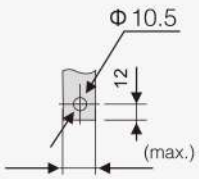


Drill plan



Front wiring with external wiring board(3 poles)

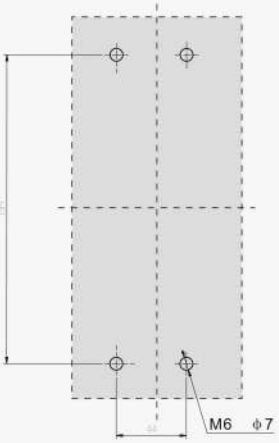




Thickness of conductor (max.): 6mm

Drilled hole for direction connection

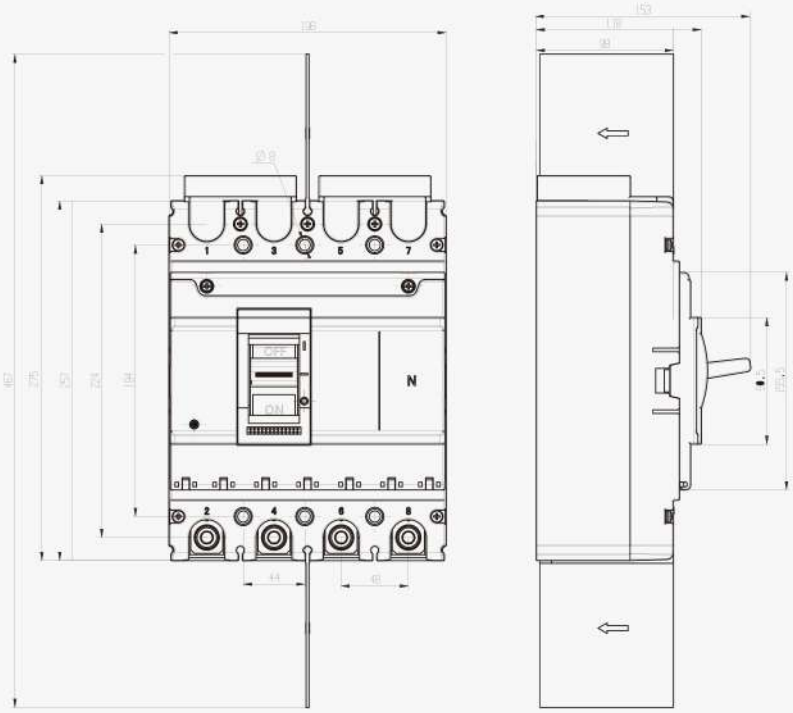
Drill plan



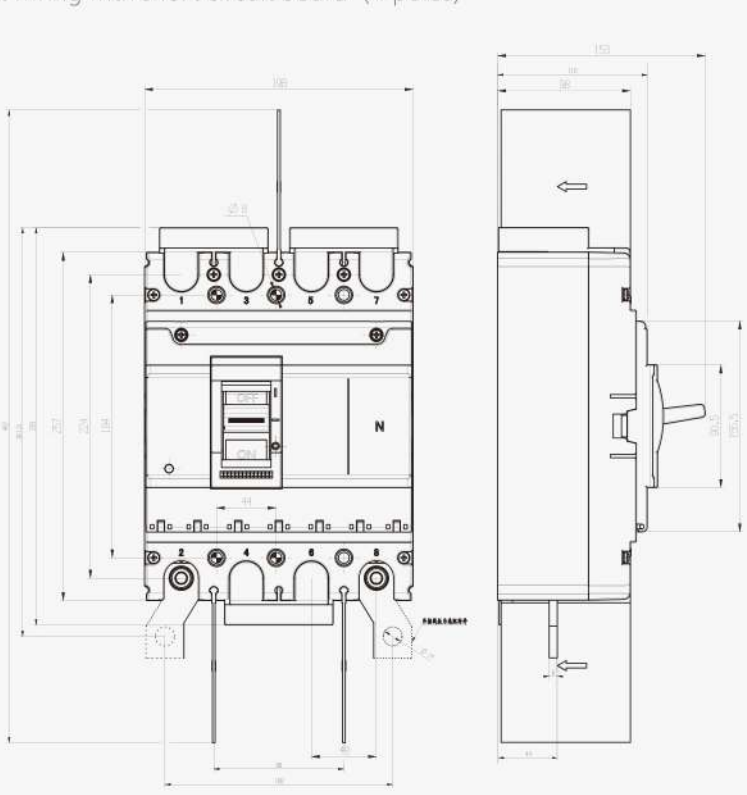
OM3 PV Series Moulded Case Circuit Breaker for PV System

OM34P0400PV/0630PV Outline & Mounting Dimension

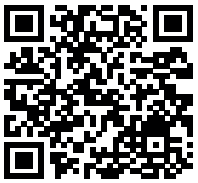
Front wiring with short circuit board (4 poles)



Front wiring with short circuit board (4 poles)



OMICRON



Safety instructions

- For your safety,please read manual thoroughly before operating.
- Contact the nearest authorized service facility for check, maintainance or adjustment.
- Please contact a qualified technician when you need maintenance.
- Any maintenance and inspection shall be performed by competent person.