RDM5 Series Molded Case Circuit Breaker

product description

RRDM5 series plastic case circuit breaker is mainly used in the power distribution network with AC 50Hz, rated insulation voltage 1kV, rated working voltage 690V and below, and rated current below 800A, to distribute electric energy and protect lines and power supply equipment from overload, Damage to faults such as short circuit and undervoltage. Among them, circuit breakers with a rated current of 630A and below can also be used to protect motors. Under normal circumstances, circuit breakers can be used for infrequent switching of lines and infrequent starting of motors.

The circuit breaker has an isolation function, which is represented by the symbol "—⁄ ⌧ —".

The product complies with: GB/T 14048.2, IEC 60947-2 standard.

Selection Guide

RDM5	250	L	P	4	3	00	2	X	A	200A	R
product code	Frame grade	Segmentation ability	Operation method	number of poles	Release mode	Attachment code	Use code	Function	N pole type	rated current	Wiring
Molded case circuit breaker	63 125 160 250 400 630 800	S: basic breaking L: standard breaking M: higher breaking H: high	No code: handle operation Z: manual operation P: electric operation	2: 2 poles 3: 3 poles 4: 4 poles	2: Instantaneous release 3: Duplex release	See Table 2	No code: Distribution Protection 2: Motor Protect	X: overload alarm No trip (M type only)	Three poles without code Four poles product code see table 1	10A ... 800A	Front panel wiring (no code) Wiring behind the board plug-in front plug-in panel

注：Note: 1. RDM5-125\160\250\630 can be used as S-type breaking; 2.250 frame and below and L/M breaking has 2-pole products; 3. RDM5-125S, RDM5-160S, RDM5-250S products cannot be installed Accessories, L/M/H breaking type can be selected for accessories; 4. When the product needs zero arcing, special instructions are required when placing an order; 5. RDM5-63L/M and RDM5-125L only provide fixed front-panel wiring.

Four-stage circuit breaker "N" pole type Table 1

code name	illustrate
Type A	The N pole is not equipped with an over current release element, and the N pole is always connected, and does not close and open with other three poles
Type B	The N pole is not equipped with an over current release element, and the N pole is closed and opened together with the other three poles (the N pole is closed first and then opened)

Attachment Code Table 2

□alarm switch ■auxiliary switch ●Shunt release ○Undervoltage release →Lead direction

handle

Install on the left right side installation

code name	accessory name	RDM5-63L、M RDM5-125L	RDM5-125M、H RDM5-160L、M	RDM5-250L、M、H	RDM5-400L、M、H RDM5-630S RDM5-630L、M、H RDM5-800L、M、H
		2P、3P、4P	2P、3P、4P		3P、4P
00	no internal accessories				
08	alarm switch	←□	□→	□→	←□
10	Shunt release	●→	←●	←●	←●
20	Auxiliary switch (1N01NC)	←■	←■	←■	
	Auxiliary switch (2N02NC)				←■
02	Auxiliary switch (2N02NC)		←■	←■	
30	Undervoltage release	←○	←○	←○	←○
40	Shunt release + auxiliary switch	←■●	←●■→	←●■→	
	Shunt release + auxiliary switch				←●■→
12	Shunt release + auxiliary switch		←●■→	←●■→	
50	Shunt release + undervoltage	←○●→	←○●→	←○●→	←○●→
60	Two sets of auxiliary switches (2N02NC)		←■■→	←■■→	
	Two sets of auxiliary switches (4N04NC)				←■■→
22	Two sets of auxiliary switches (3N03NC)		←■■→	←■■→	
23	Two sets of auxiliary switches (4N04NC)		←■■→	←■■→	
70	Undervoltage release + auxiliary switch (1N01NC)	←○■→	←○■→	←○■→	
	Undervoltage release + auxiliary switch (2N02NC)				←○■→
18	Shunt release + alarm switch	←□●→	←●□→	←●□→	←□●→
28	Auxiliary switch (1N01NC) + alarm switch	←▞	←▞	←▞	←▞
38	Undervoltage release + alarm switch	←○□→	←○□→	←○□→	←○□→
48	Shunt release + auxiliary switch (1N01NC) + alarm switch		←▞●→	←▞●→	←▞●→
68	Two sets of auxiliary switch (2N02NC) alarm switch		←▞■→	←▞■→	
	Two sets of auxiliary switch (3N03NC) alarm switch				←▞■→
05	Two sets of auxiliary switch (3N03NC) alarm switch		←▞■→	←▞■→	
78	Undervoltage release + auxiliary switch (1N01NC) + alarm switch	←○▞→	←○▞→	←○▞→	
	Undervoltage release + auxiliary switch (2N02NC) + alarm switch				←○▞→

Note: (All internal accessories except undervoltage release and DC24V shunt release are terminal outlets, and other accessories are lead wires, with a length of 500mm)

1. RDM5-63, RDM5-125, RDM5-160, RDM5-250 two-pole products only provide: 08, 10, 20, 02, 30, 28, and the installation position can only be installed on the right.
2. RDM5-125S, RDM5-160S, RDM5-250S products cannot install accessories
3. If the installation position and lead wire direction of accessory codes 08, 10, and 20 are changed, please specify when ordering.

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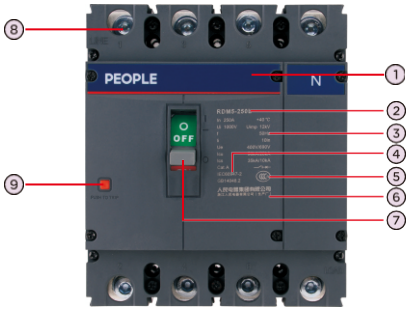
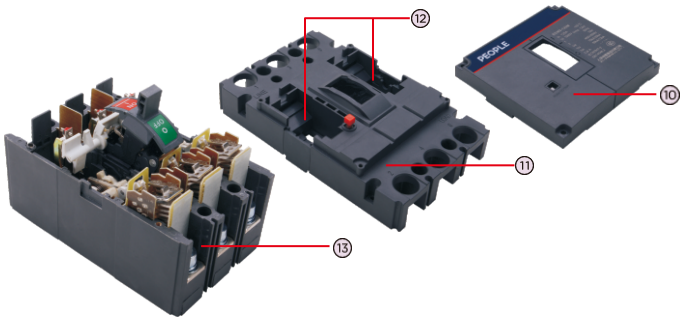
product structure

panel definition	
①	trademark
②	Product number
③	Technical
④	The product meets the standard
⑤	CCC certification mark
⑥	Company Name
⑦	handle
⑧	Terminal screw
⑨	trip button
⑩	Cover
⑪	Middle cover
⑫	Accessory
⑬	base





Installation Environment

- ☐ Pollution level: Level 3
- ☐ Ambient temperature for use: the ambient air temperature is -5°C to +40°C, and the average value of 24 hours does not exceed +35°C;
- ☐ Relative humidity of the air: no more than 50% when the ambient air temperature is +40°C; higher relative humidity is possible at lower temperatures; for example, the average maximum relative humidity of the wettest month is 90%, while the The average minimum temperature is +20°C, and treatment measures should be taken for the occasional condensation due to temperature changes.
- ☐ Altitude: no more than 2000m;
- ☐ Main circuit installation category: Ⅲ
- ☐ Electromagnetic environment: A

installation conditions

☐ Installation of the circuit breaker: place the circuit breaker in the power distribution cabinet, and use four M3 (RDM5-125L), M4 (RDM5-125M/H and 250 frame) or M6 (400A and above frame) bolts and washers Fasten. The circuit breaker should be installed stably without additional mechanical stress, so as to avoid damage to the circuit breaker or poor contact of the main busbar;

- ☐ The circuit breaker should be installed in a place where there is no danger of explosion, no conductive dust, no corrosion of metal and no damage to insulation;
- ☐ The inclination of the circuit breaker installation face to the vertical plane does not exceed ±22.5°C;
- ☐ The circuit breaker should be installed in a place where there is no danger of explosion, no conductive dust, no corrosion of metal and no damage to insulation;
- ☐ The place where the circuit breaker is installed has no explosive gas, no rain or snow.

Storage and Transport Conditions

The lower limit of temperature should not be lower than -25°C, and the upper limit should not exceed +60°C; the relative humidity (+25°C) should not exceed 95%;

- ☐ The product should be handled with care during transportation and should not be turned upside down to avoid violent collisions.

The main technical parameters

The main technical	63A		125				160			250				400			630				800		
Rated current In(A)	10、16、20、25、32、40、50、63		10、16、20、25、32、40、50、63、80、100、125				63、80、100、125、160			100、125、160、180、200、225、250				200、225、250、315、350、400			400、500、630				630、700、800		
Number of poles	2、3、4		3、4	2、3、4		3、4	3、4			2、3、4		3、4	2、3、4	3、4			3、4						
Rated frequency (Hz)	50																						
Rated insulation voltage Ui(V)	AC1000																						
Rated impulse withstand voltage Uimp(V)	12000																						
Rated working voltage Ue (V)a	400V		AC400/AC690																				
Arcing distance(mm)	≤50		≤50				≤50			≤50				≤100			≤100				≤100		
Short circuit breaking capacity level	L	M	S	L	M	H	S	L	M	S	L	M	H	L	M	H	S	L	M	H	L	M	H
Rated limit/Rated operating breaking capacity Icu/Ics(AC400V)	25 /15	35 /25	25 /18	50 /35	70 /50	100 /70	25 /18	35 /23	50 /35	25 /18	50 /35	70 /50	100 /70	50 /50	70 /70	100 /75	50 /35	50 /50	70 /70	100 /75	65 /65	75 /75	100 /75
Rated limit/Rated operating breaking capacity Icu/Ics(AC690V)	/	/	/	20 /10	20 /12	30 /15	/	10 /5	15 /8	/	20 /10	20 /12	30 /15	20 /10	25 /15	35 /18	/	20 /10	25 /15	35 /18	20 /10	25 /15	35 /20
use category	A																						
Standards compliant	IEC60947-2 GB/T14048.2																						
Applicable working environment temperature	-5℃ ~+40℃																						
Electrical life (times)	8000													7500									
Mechanical life (times)	20000		20000				20000			20000				10000			10000				10000		
Shunt release	■		■				■			■				■			■				■		
Undervoltage release	■		■				■			■				■			■				■		
Alarm contact	■		■				■			■				■			■				■		
Auxiliary contact	■		■				■			■				■			■				■		

Remarks: 1. The working voltage of 2-pole products with RDM5-63, 125, 160, and 250 frames is less than or equal to 400V and below; 2. When the product needs zero arcing, special instructions are required when placing an order

Derating factor for ambient temperature changes

环境温度 / coefficient / model	+40°C	+45°C	+50°C	+55°C	+60°C	+65°C	+70°C
	Derating factor	Derating factor	Derating factor	Derating factor	Derating factor	Derating factor	Derating factor
RDM5-63	1In	0.959In	0.918In	0.877In	0.835In	0.794In	0.752In
RDM5-125							
RDM5-160							
RDM5-250	1In	0.985In	0.968In	0.952In	0.935In	0.919In	0.887In
RDM5-400	1In	0.978In	0.957In	0.936In	0.915In	0.894In	0.873In
RDM5-630	1In	0.978In	0.957In	0.936In	0.915In	0.894In	0.873In
RDM5-800	1In	0.978In	0.957In	0.936In	0.915In	0.894In	0.873In

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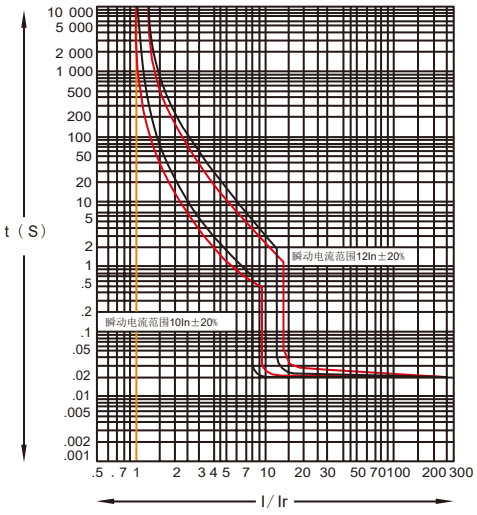
Product Disconnect Characteristics

The thermal release of the product has inverse time-lag characteristics, and the electromagnetic release has instantaneous action characteristics. The action characteristics are shown in the table below

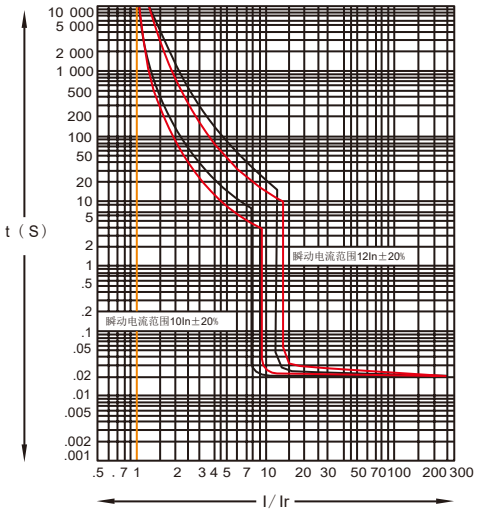
Circuit breakers for power distribution				Circuit breakers for motor protection			
In（A）	Thermal release		Operating current of electromagnetic release (A)	Rated current In(A)	Thermal release		Operating current of electromagnetic release (A)
	1.05In agreed no-trip time (h) (cold state)	1.30In agreed tripping time (h) (hot state)			1.0In agreed no-trip time (h) (cold state)	1.2In agreed tripping time (h) (cold state)	
10≤In≤ 63	1	1	10In±20%	10≤In≤ 630	2	2	12In±20%
63<In≤ 125	2	2	5In±20% 10In±20%				
125<In≤ 800	2	2					

Remarks: In the RDM5-125L model specification, the operating current of In≤40A electromagnetic release is 500A±20%

Time-current characteristic curve

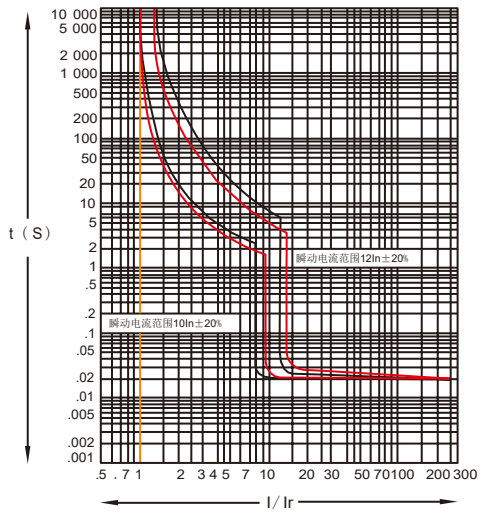


RDM5-63, 125, 160 40A~125A Power distribution protection (black line), motor protection (red line) Note: The instantaneous operating current of 10-32A in RDM5-125L is 320A±20%

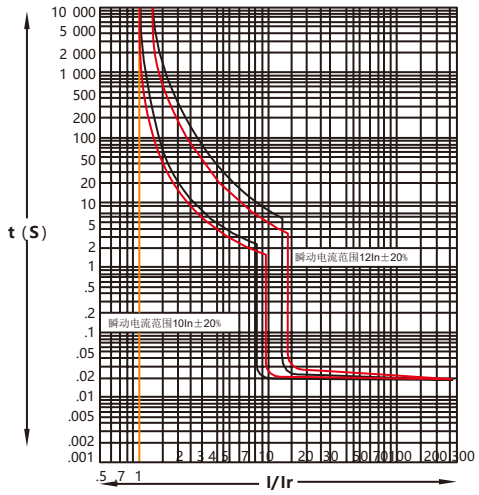


RDM5-250 power distribution protection (black line), motor protection (red line)

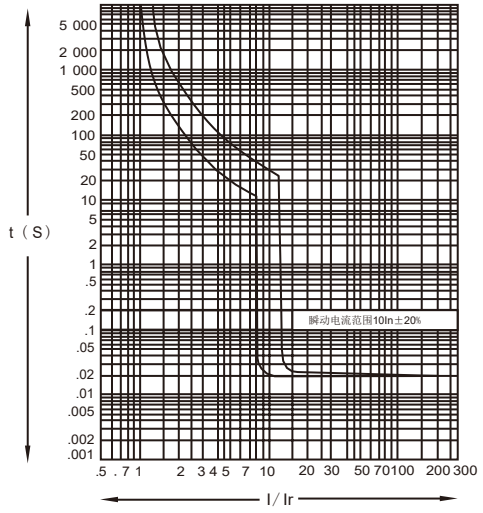
Time-current characteristic curve



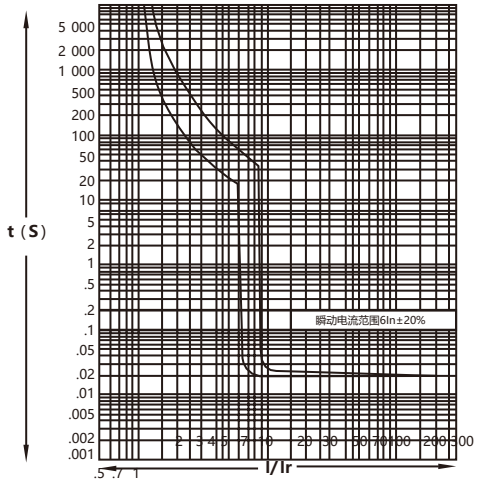
RDM5-400 power distribution protection (black line), motor protection (red line)



RDM5-630 power distribution protection (black line), motor protection (red line)

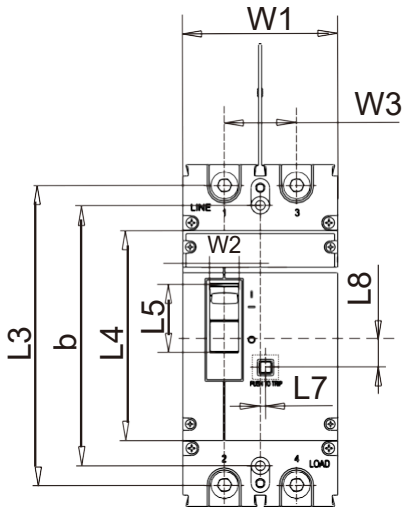


RDM5-800 630A power distribution

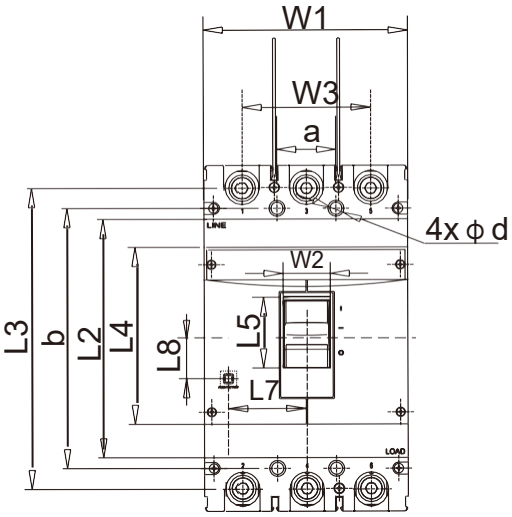


RDM5-800 700A 800A

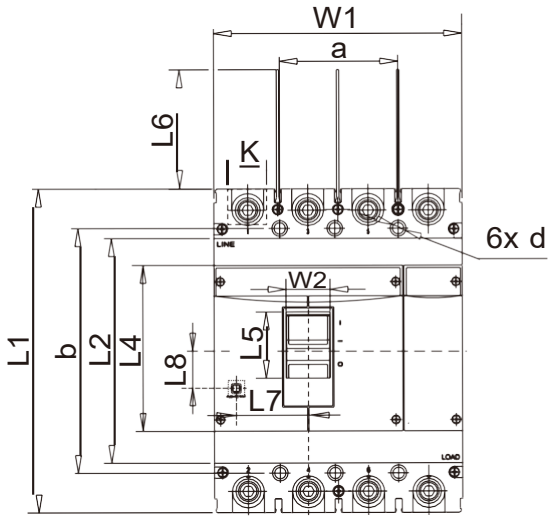
Shape and installation dimensions



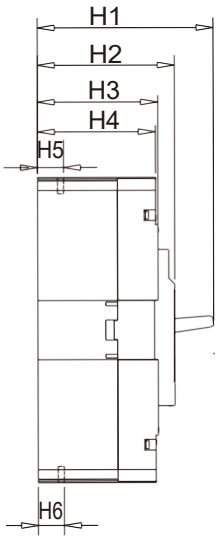
One pole



Two poles



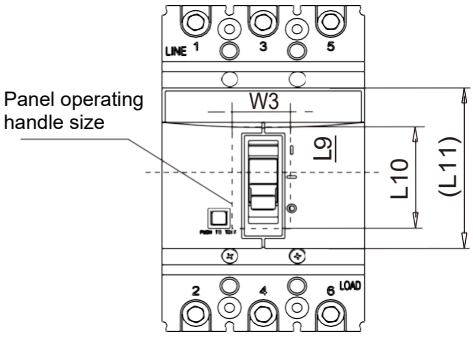
Three poles



side

Shape and installation dimensions

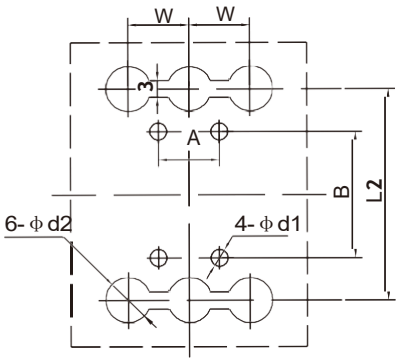
Product number	number of poles	Front panel wiring																installation size		button position		
		L1	L2	L3	L4	L5	L6	W1	W2	W3	H1	H2	H3	H4	H5	H6	K	a	b	d	L7	L8
RDM5-63L/M	2	130	-	116.5	85	-	49.5	50	11	25	83	71	-	57	24.5	24.5	18.5	-	111	3.5	17	20
	3	130	-	116.5	85	-	49.5	75	11	50	83	71	-	57	24.5	24.5	18.5	25	111	3.5	16.5	20
	4	130	-	116.5	85	-	49.5	100	11	75	83	71	-	57	24.5	24.5	18.5	50	111	3.5	16.5	20
RDM5-125M/H	2	152	-	132	88	31	52	62	14.5	30	109.5	96	-	82	28.5	28.5	18	-	129	4.5	1	6.5
	3	152	-	132	88	31	52	92	14.5	60	110	96	-	82	28.5	28.5	18	30	129	4.5	22	15.5
	4	152	-	132	88	31	65	122	14.5	90	110	96	-	82	28.5	28.5	18	60	129	4.5	22	16.5
RDM5-160S/L/M	2	150	-	133	88	31	52	62	14.5	30	93	79	-	65	23.5	23.5	22	-	129	3.5	1	16.5
	3	150	-	133	88	31	52	92	14.5	60	93	79	-	65	23.5	23.5	22	30	129	3.5	22	15.5
	4	150	-	133	88	31	52	122	14.5	90	93	79	-	65	23.5	23.5	22	60	129	3.5	22	16.5
RDM5-250S/L	2	165	-	145.5	102	33	53	75	14	35	96	76	-	67	23	23	25	-	126	4.5	2.5	15.5
	3	165	-	145.5	102	33	53	107	14	70	96	76	-	67	23	23	25	35	126	4.5	42.5	15.5
	4	165	-	145.5	102	33	53	142	14	105	96	76	-	67	23	23	25	70	126	4.5	43	15.5
RDM5-250M/H	2	165	-	145	102	33	53	75	14	35	112.5	94	-	85	22	22	24	-	126	4.5	2.5	15.5
	3	165	-	145	102	33	53	107	14	70	115	94	-	85	23	23	23	35	126	4.5	42.5	15.5
	4	165	-	145	102	33	53	142	14	105	115	94	-	85	23	23	23	70	126	4.5	43	15
RDM5-400L/M/H RDM5-630S	3	258	178	224	132	53	100	150	35	96	152	115	101	99	38	38	31	44	194	7	57.5	30
	4	258	179	224	132	53	100	198	35	144	152	115	101	99	38	38	31	94	194	7	57.5	30
RDM5-630L/M/H	3	270	185	235.5	146	52.5	100	182	35.5	116	158	119	106	103	45	43	41	58	200	7	58	32
	4	270	185	235.5	146	52.5	100	240	35.5	174	158	119	106	103	45	43	41	116	200	7	58	31.5
RDM5-800L/M/H	3	280	205	243	148	52	100	210	35	140	159	122	109	105	40.5	42.5	45	70	243	7	53	24.5
	4	280	205	243	148	52	100	280	35	210	159	122	109	105	40.5	42.5	45	140	243	7	53	24.5



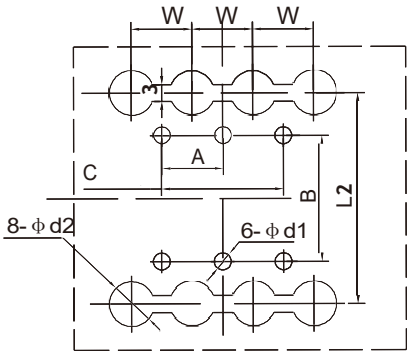
	Size code			
	(L11)	W3	L9	L10
RDM5-63L M RDM5-125S、L	64	19	14	43
RDM5-125M H RDM5-160S、L M	–	23	24	40
RDM5-250S、L、M、H	–	23	30	44
RDM5-400L、M、H RDM5-630S	–	47	39	66
RDM5-630L、M、H	–	47	39	66
RDM5-800L、M、H	–	47	42	66

RDM5 Series Molded Case Circuit Breaker

RDM5 series rear panel wiring installation panel opening size

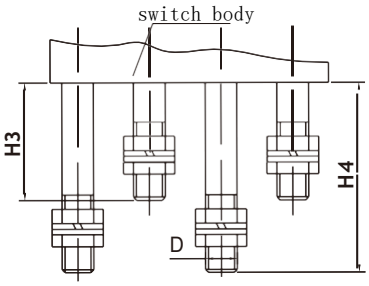


Three poles

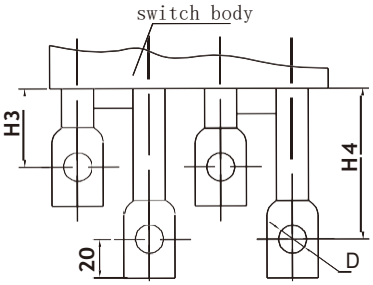


four poles

RDM5 series rear panel wiring appearance and installation dimensions



RDM5-125M/H 160、250

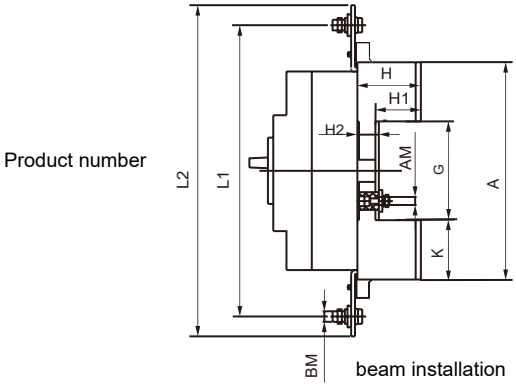


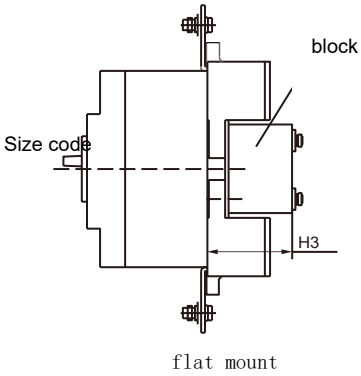
RDM5-400 630 800

RDM5-125～800 rear wiring appearance and installation board opening size

Product model	Size code									
	H3	H4	D	W	L2	d2	A	B	C	d1
RDM5-125M H RDM5-160L、M	64	100	M8	30	132	24	30	108	60	5.5
RDM5-250L、M、H	70	100	M10	35	145	15	35	126	70	5.5
RDM5-400L、M、H RDM5-630S	71	105.5		48	2242	32	44	194	94	7
RDM5-630L、M、H	46	105		58	2346	37	58	200	116	7
RDM5-800L、M、H	105	105		70	2436	48	70	243	70	7.5

RDM5 series plug-in front panel dimensions





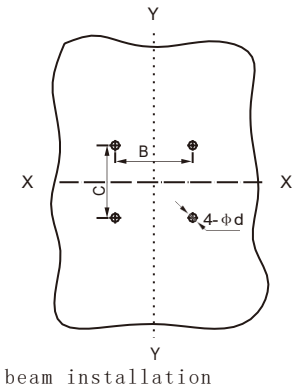
Outline dimensions of RDM5-125～800 plug-in front panel circuit breaker

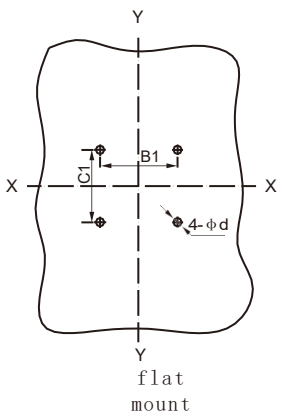
	A	G	K	H	H_1	H_2	H_3	L1	L2	AM	BM
RDM5-125M H RDM5-160L、M	172	95	38.5	50.5	35	16.5	61	185	217	M6	M8
RDM5-250L、M、H	183	95	44	52	35	18	65	230	259	M6	M10
RDM5-400L、M、H RDM5-630S	276	170	53	79.5	67	18	-	322	352	M6	M10
RDM5-630L、M、H	299	163.5	67.5	84.5	65.5	20	-	368	397	M8	M12
RDM5-800L、M、H	303	179	62	87.5	60.5	28	118	375	405	M10	M12

Hole size of plug-in front wiring mounting plate (X-X, Y-Y are the center of the circuit breaker).

Number of poles

Mounting plate opening size



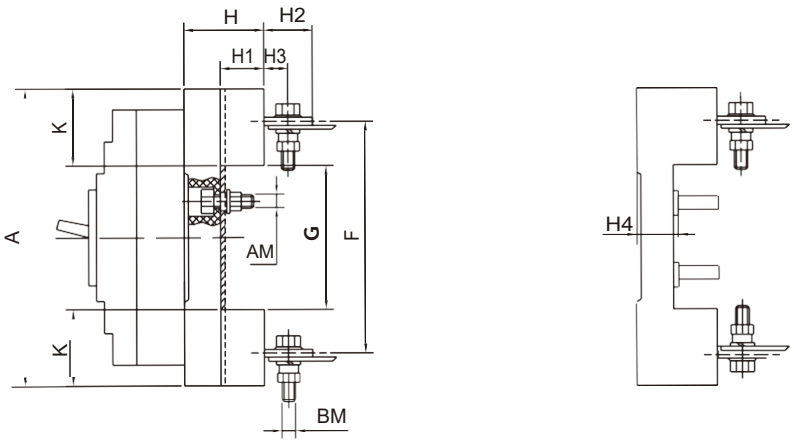


RDM5-125～800 plug-in front wiring mounting plate opening size

model		RDM5-125M、H RDM5-160L、M	RDM5-250L、M、H	RDM5-400L、M、H RDM5-630S	RDM5-630L、M、H	RDM5-800L、M、H
		3	3	3	3	3
	B	66	70	115	90.5	90.5
	B1	50	60	—	—	65
	C	60	64	135	144.5	144.5
	C1	35	35	—	—	80
	d	6.5	6.5	6.5	8.5	11

RDM5 Series Molded Case Circuit Breaker

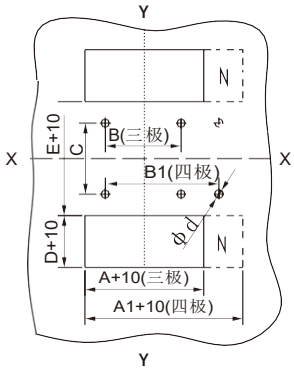
RDM5 series plug-in panel rear dimensions and mounting panel opening dimensions



Outline dimensions of RDM5-125～800 plug-in rear panel circuit breakers

产品型号	尺 寸 代 号										
	A	F	G	K	H	H1	H2	H3	H4	AM	BM
RDM5-125M H RDM5-160L M	168	133	92	38	48	32.5	32.5	18	17	M6	M8
RDM5-250L、M、H	186	144	95	45.5	49.5	33.5	34	15	17	M6	M8
RDM5-400L、M、H RDM5-630S	280	224	171	54.5	59.5	40	44	23. 5	20	M8	M12
RDM5-630L、M、H	300	234	170	65	59	40	50	30	20	M8	M12
RDM5-800L、M、H	305	243	181	62	87	60	—	—	28	M10	M14

Hole size of plug-in rear wiring installation panel (X-X, Y-Y are the center of the circuit breaker)

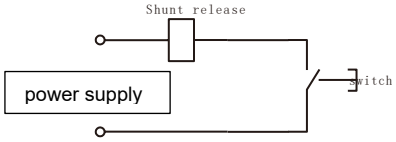


RDM5-125～800 plug-in wiring installation panel opening size

model		RDM5-125M、H RDM5-160L、M		RDM5-250L、M、H		RDM5-400L、M、H RDM5-630S		RDM5-630L、M、H		RDM5-800L、M、H	
Number of poles		3	4	3	4	3	4	3	4	3	4
Mounting plate opening size	A	91	—	107	—	149	—	182	—	210	—
	A1	—	129	—	145	—	200	—	242	—	290
	B	60	—	70	—	60	—	100	—	90	—
	B1	—	90	—	105	—	108	—	158	—	162
	C	56		54		129		123		146	
	D	38		45.5		54.5		65		62	
	E	92		95		171		170		181	
	d	6.5		6.5		8.5		8.5		11	

Shunt release

The shunt release is an accessory for remote control of product opening. When the power supply voltage is equal to any voltage between 85% and 110% of the rated control power supply voltage, the shunt release can operate reliably



Simple circuit control mode

electrical characteristics

Product number	Shunt coil power consumption (W)		
	AC400V	AC230V	DC24V
RDM5-63、125、160	96.8	73	91.2
RDM5-250	112	68.6	85.3
RDM5-400 630 800	68	58.2	100

Action characteristics

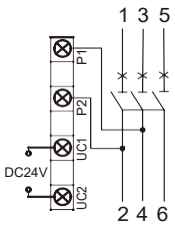
Reliable operating voltage		70%~110%×Us
Power on time (pulse type)	minimum value	10ms
	maximum value	1s
Response time		30ms
Operations		1000

wiring diagram

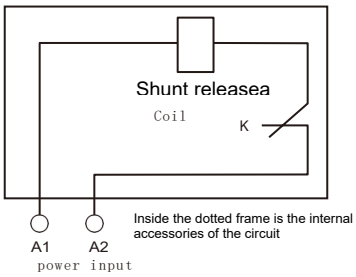
K: The micro switch connected in series with the coil inside the shunt release is a normally closed contact. After the circuit breaker is opened, the contact is automatically disconnected and closed when the circuit breaker is closed.

When using a shunt release with a rated control power supply voltage of DC24V, the maximum length of the copper wire (the length of each of the two wires) must meet the requirements of the following table:

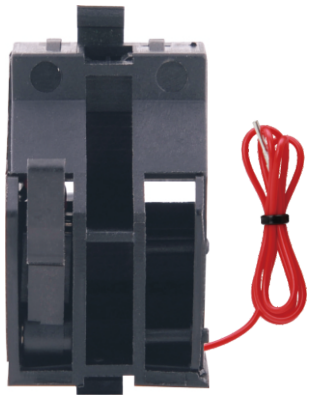
Wire area / DC24V	1.5mm²	2.5mm²
100%Ue	150m	250m
80%Ue	100m	1600m



DC24Vwiring diagram



AC50Hz 230V、400V

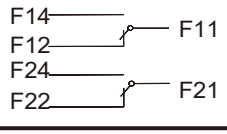
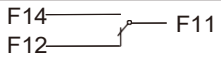


Auxiliary contact

Function

When the circuit breaker is in the state of opening or free tripping, F12 and F11 are connected, and F14 and F11 are disconnected; when the circuit breaker is in the state of closing, F12 and F11 are disconnected, and F14 and F11 are connected.

The auxiliary contacts of the circuit breaker are divided into two groups, and each group of auxiliary contacts is not separated electrically. The auxiliary contact parameters are shown in the

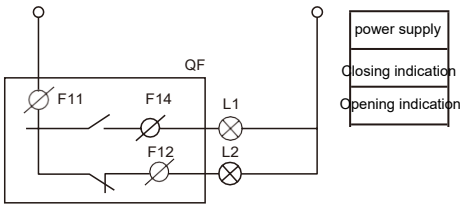
When the circuit breaker is in the "minute" position		Frame level current 400A and above circuit breakers
		Frame level current 250A and below circuit breakers
The position of the circuit breaker when it is "closed"	The contact in the state of being connected at "minute" turns into an off state, the contact in the off state turns to the on state at the time of "minute"	

electrical characteristics

Working voltage (V)		AC				DC		
		24	48	110	240/415	24	48	110/220
Working current (A)a	AC-15		6	5	2	-	-	-
	DC-13	6	-	-	-	2	1.2	0.25

wiring diagram

The auxiliary contact can form a control circuit with the indicator light, through the indicator light, the operator can know the opening and closing position of the circuit breaker without opening the power distribution cabinet.

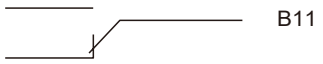


Alarm contact

The alarm contact is mainly used to provide a signal when the load of the circuit breaker is overloaded, short-circuited or under-voltage or free tripping. When the circuit breaker is in the opening or closing state, B12 and B11 are connected, and B14 and B11 are disconnected; When the circuit breaker is tripped, B12 and B11 are disconnected, and B14 and B11 are connected.

Function

- ☐ There is an overload or short circuit fault
- ☐ Artificial test button tripping
- ☐ Shunt release action
- ☐ In case of line fault, the action of the undervoltage release indicates the opening and closing status of the circuit breaker：

Breaking or free release OFF&ON	
Closing TRIP	

Electrical characteristics

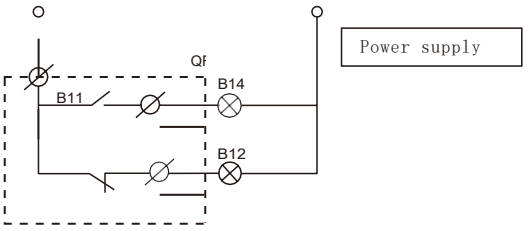
K：The micro switch connected in series with the coil inside the shunt release is a normally closed contact. After the circuit breaker is opened, the contact is automatically disconnected and closed when the circuit breaker is closed.

When using a shunt release with a rated control power supply voltage of DC24V, the maximum length of the copper wire (the length of each of the two wires) must meet the requirements in the table below：

Rated voltage		AC				DC		
		24	48	110	240/415	24	48	110/220
Rated current	AC15	6	6	5	2	-	-	-
	DC13	-	-	-	-	2	1.2	0.25

Wiring diagram

The alarm contact can be connected with an indicator light, a buzzer, etc., and the operator can be notified in time when the circuit breaker trips.



RDM5 Series Molded Case Circuit Breaker

Undervoltage release

Achieving the undervoltage protection function of the circuit breaker, disconnect the circuit breaker when the power supply voltage is too low, and protect the electrical equipment. When its power supply voltage drops to a specified range, it can make the circuit breaker realize no delay disconnection.

When the voltage drops to 70%~35% of the rated control power supply voltage, the undervoltage release should act; when it is lower than 35% of the rated voltage of the release, the undervoltage release should be able to prevent the circuit breaker from closing; Within 85% to 110% of the rated control power supply voltage, the undervoltage release should be able to ensure the reliable closing of the circuit breaker.

The undervoltage release rated：AC50Hz、230V、400V。

Notes：For a circuit breaker equipped with an undervoltage release, the circuit breaker can be re-triggered and closed only when the release is supplied with a rated voltage.

Applicable voltage and power consumption

Rated control power supply voltage（Us）	AC 220~240V
	AC 380~415V
Power Consumption（keep same）	5W

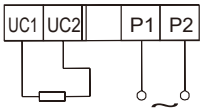
Electrical characteristics

Model	Undervoltage coil power consumption (W)	
	AC400V	AC230V
RDM5-63、125、160	4	3.1
RDM5-250	4.5	3.3
RDM5-400 630	3.6	2.5
RDM5-800	2	1.6

Action characteristics

Action condition		
reliable disconnection A		35%~70%
prevent closure		≤35%
reliable closure A		≥85%
Response time	1s	
Operations	1000	

Wiring diagram



power input

Wiring diagram of undervoltage release

RDM5 Series Molded Case Circuit Breaker

Motor Operating Mechanism (MOD)

Protective grade：IP40

Function

- ☐ Push button control circuit breaker opening and closing；
- ☐ Motor closing and opening or manual operation and manual opening and closing, both can be freely selected；
- ☐ With opening, closing indication and free tripping indication；

operate

Select operation type by manual/automatic rotary switch：

- ☐ Automatic operation
  Turn the "manual/automatic switch" to the "automatic" position, and remotely give the "closing or opening" signal to realize the connection and disconnection of the circuit breaker.
- ☐ Manual operation
  Turn the "manual/automatic switch" to the "manual" position and turn the operating handle to turn the circuit breaker on and off.

Application

- ☐ Local electric operation, centralised operation, automatic control；
- ☐ Normal/backup power conversion, or switching to backup power to optimize energy costs, etc.；
- ☐ Suitable for remote electric closing, opening and reclosing of circuit breakers and automatic control occasions；
- ☐ Rated voltage of electric operating mechanism：AC 400V、AC230V、DC220V；
- ☐ Electric operating mechanism rated voltage range：85%~110%Ue。

Electric Operating Mechanism Type

☐ CD2AC and DC electric operating mechanism
CD2Electric operating mechanism voltage allowable range：

- ☐ CD2：125A~250A The operating frequency is not more than 180 times per hour, and the action time≤0.7S；
- ☐ CD2：400A~800A The operation frequency is not more than 60 times per hour, and the action time≤1S；
- ☐ Rated control power supply voltage：230VAC/220VDC，allowable voltage range：184~253VAC/187~242VDC；
- ☐ Rated control power supply voltage：400VAC，The allowable voltage range ：320~440VAC；
- ☐ According to the difference in the operating force of the circuit breaker, the electric operating mechanism of the switch with relatively small force can operate normally.

Structural form of electric operating mechanism

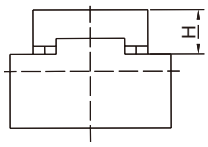
Model / category	RDM5-63、125、250、400、630、800
structure type	electric motor
voltage specification	50HZ、230V、400V

After the circuit breaker with electric operating mechanism trips and trips, the electric operating mechanism must make the circuit breaker buckle again before closing.

RDM5 Series Molded Case Circuit Breaker

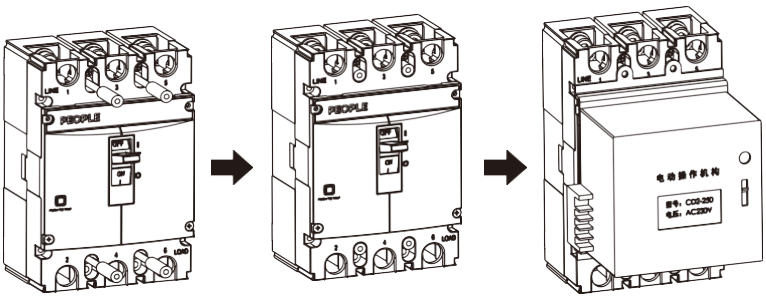
Motor Operating Mechanism (MOD)

Height of motor operating mechanism of RDM5 series circuit breaker

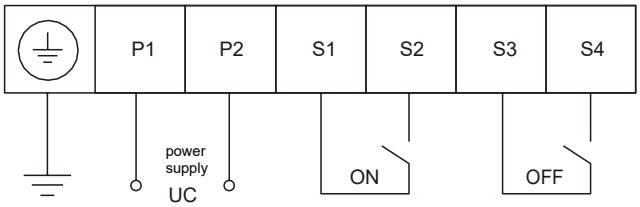


Product number	RDM5-63L、M RDM5-125L	RDM5-125M、RDM5-160L、M	RDM5-250 L、M、H	RDM5-400LMH RDM5-630S	RDM5-630 L、M、H	RDM5-800 L、M、H
Height H		94	90	145	145	147

Schematic diagram of CD2 motor installation and operation:

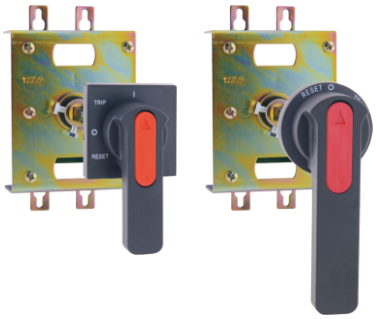


⚠ After the circuit breaker with electric operating mechanism trips and trips, the electric operating mechanism must be opened before closing the wiring diagram



Rotary handle operating mechanism

According to human body mechanics, the rotating handle adopts unique design and transmission structure, and realizes closing, opening and reclosing of the molded case circuit breaker by rotating the handle. The operation is flexible and stable, the operation force is small, and the installation is convenient.The position of the rotary handle accurately indicates the position of the circuit breaker contacts: open, closed or trip free.



Classification of rotary handles

- ☐ Direct rotary handle (RHD)
- ☐ Extended rotary handle (ERH)

Features of the rotary handle

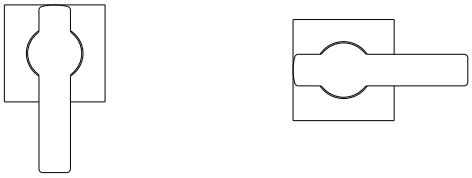
- ☐ When the circuit breaker is in the closed state, the cabinet door cannot be opened under the action of the rotating handle;
- ☐ If you need to open the cabinet door urgently, you can open the cabinet door through the emergency unlocking device on the operating handle;
- ☐ Corresponding to circuit breakers of different specifications, the matching extended hand handle has the same door opening size;

Low operating force and high reliability.

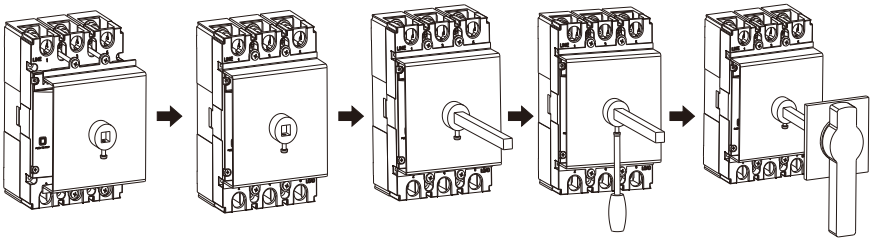
Extended swinghandle(ERH)

OperatingInstructions

ON/OFFoperation



Installation schematic

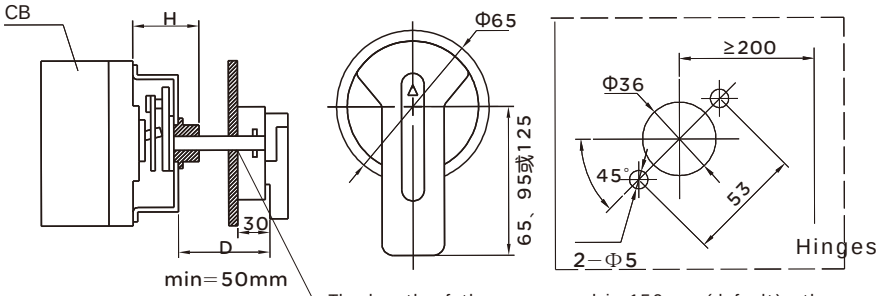


1、Align the installation direction of the hand operation 2、Tighten the installation screws 3、Install the extension screw 4、Fix the screw 5、Install the extension handle

Note: Screw length factory default standard for 150mm, if you need other special customization, please contact the factory (to 50mm as a unit increase or decrease)

Turning hand operation mechanism

When installing the hand-operated mechanism, first make a hole according to the size shown in the drawing, and fix the handle on the switchgear door plate when the "OFF" indication is in the horizontal position. Then try to operate the handle, the rotation should be flexible and free , and the breaker should be divided when the handle is in horizontal position, and the breaker should be closed when the handle is in vertical position.

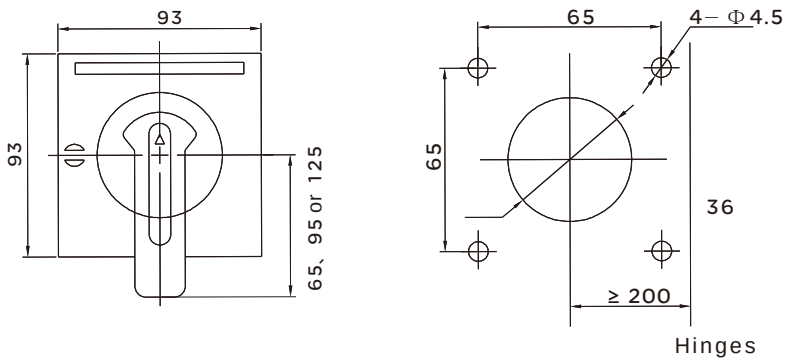


Dimensional drawing of manual operation mechanism

The length of the square rod is 150mm (default), the rest of the dimensions are special order (interval 50mm).

Round extension swinghandle opening size chart

Turning hand operation mechanism

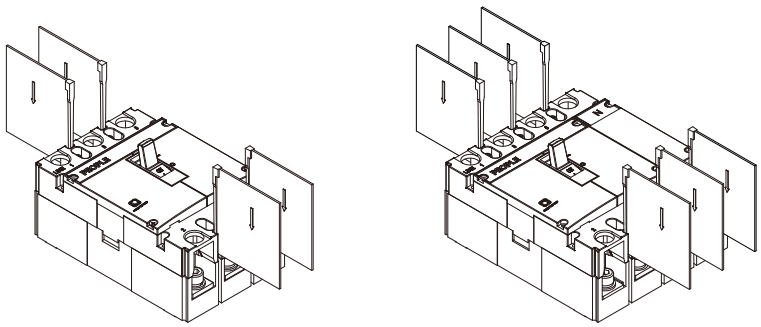


Square extension swinghandle opening size drawing

Model No.	RDM5-63L、M RDM5-125L	RDM5-125M、H RDM5-160L、M	RDM5-250 L、M、H	RDM5-400L、M、H RDM5-630S	RDM5-630 L、M、H	RDM5-800 L、M、H
Installation size H	51	61	57	88	88	87
Operation handle relative to breaker center Y value	0	0	0	0	0	0

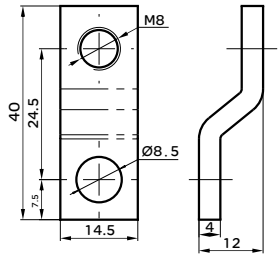
Interphase dividers

The phase-to-phase spacers enhance the insulation of the phase-to-phase conductors and can be installed from the front slot even after the switch has been installed. Phase spacers come factory standard with 4 (3P) or 6 (4P) pieces for one circuit breaker.

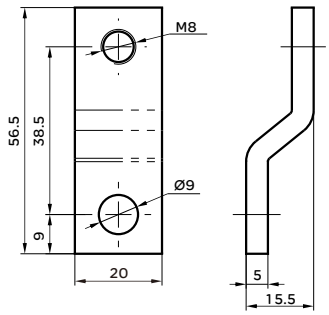


Expansion Terminals

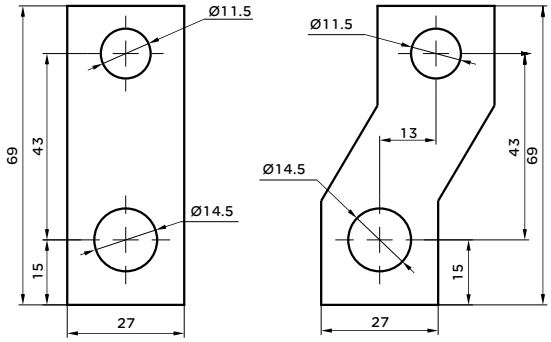
Expansion terminals are connected to the standard terminals of the circuit breaker, thus prov
iding multiple wiring solutions in a small space.



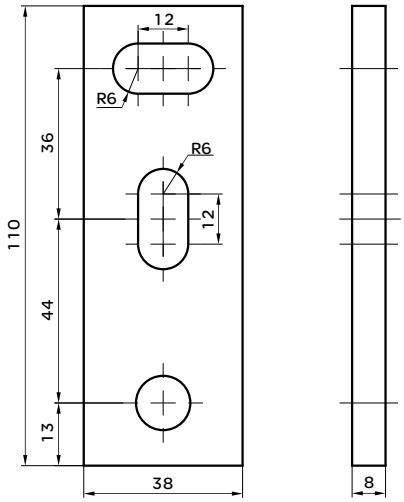
RDM5-63、125 Shell rack attachment row



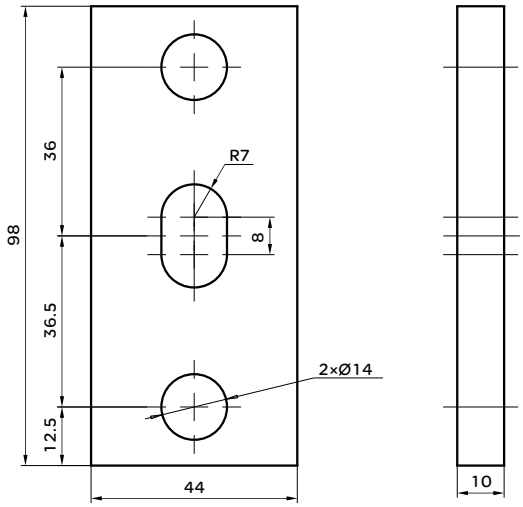
RDM5-160 250



RDM5-400 Shell holder attachment row (thickness 8)



RDM5-630



RDM5-800

RDM5 Series Molded Case

order specification

unit contact person contact number Order amount (tower) order time

Model Specifications	:Distribution type RDM5- ___ _____/ _____, rated current In=_____A , ☐ Short circuit protection setting current 10In (default) ☐ 5In (100A≤In≤800A)				
	motor protection type:RDM5- ___ _____/ ____2 , rated current In=_____A ,				
Wiring	Fixed front panel wiring ☐ Fixed rear panel wiring ☐ Plug-in front-panel wiring ☐ Plug-in rear panel wiring ☐ Note: RDM5-63L/M and RDM5-125L only provide fixed front-panel wiring for the time being				
number of poles	2 poles ☐ 3 poles ☐ 4 pole ☐ 250 frame and below and L/M break can be used as 2 poles				
Breaking capacity	63	L ☐	M ☐		
	125	S ☐	L ☐	M ☐	H ☐
	160	S ☐	L ☐	M ☐	
	250	S ☐	L ☐	M ☐	H ☐
	400	L ☐	M ☐	H ☐	
	630	S ☐	L ☐	M ☐	H ☐
	800	L ☐	M ☐	H ☐	
Attachment requirements	Shunt release	AC400V ☐	AC230V ☐	DC24V ☐	
	Undervoltage release	AC400V ☐	AC230V ☐		
	Lead method	Lead wire (default 50cm) ☐	100cm ☐	150cm ☐	
	Electric operating mechanism	CD2 electric operating mechanism AC110V～230V or DC110V～220V			
	Manual operating mechanism	Type A (default round) ☐	F type (square) ☐		
		Square rod length 150mm (default ☐	200mm ☐	250mm ☐	300mm ☐
4 pole product code	A	The N pole is not equipped with an overcurrent release, and the N pole is always connected, and does not close and open with other three poles. ☐			
	B	The N pole is not equipped with an overcurrent release, and the N pole is closed and opened together with the other three poles (the N pole is closed first and then opened) ☐			
other request					