Application

RDM10 series Moulded case circuit breaker, mainly applied to the circuit of AC 50Hz, rated insulation voltage 690V(control loop circuit voltage 400V), rated operational voltage up to 400V, for power distribution and overload, short-circuit and undervoltage protection.

And circuit breaker that frame size rated current below 400A can used to infrequently start and stop squirrel cage motor and protect motor overload, short-circuit and undervoltage.

This production conforms the standard of IEC60947-2 and GB14048.2-2008.

Model No.

RD M 6 □—□ / □ □ □ □

- Use code: Non for power distribution, 2 for motor protection
- Operational code: P for motor -operation, Non for handle operation, Z for external rotation handle operation
- Release type and accessory code see Table 1
- Poles
- Frame size rated current
- Short-circuit breaking capacity: N for regular type, H for high capacity type
- Design code
- Moulded case circuit breaker
- Company code

Normal operational conditions and installation conditions

3.1 Temperature: no higher than +40ºC , and no lower than -5ºC, and the average temperture no higher than +35ºC.

3.2 Installation location no more than 2000m.

3.3 The relative humidity: no more than 50%, when Temperature is +40ºC. The product can withstand the higher humidity under lower temperature, for instance, when temperature at +20ºC, the product can withstand 90% relative humidity.

The condensation that happened because of temperature changes should be taken care in special measurements

Installation location should have no exploresion danger, and no gas and conductive dust which can cause corrosion and insulation damage.

3.4 Class of pollution : 3 Class; Accessories in the circuit breaker pollution class: 2 class.

3.5 Main circuit breaker installation type : Ill Class;

3.6 Installation basic condition: Vertical installation

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Table 1

Accessory code / Name / Tripping type:	Non	Alarm contact	Shunt contact	Shunt + Alarm	One set of Auxiliary contact	Auxiliary + Alarm	Under voltage release	Under voltage + Alarm	Auxiliary + Shunt	Auxiliary + Alarm + Shunt	Two sets of Auxiliary contact	Under voltage + Auxiliary	one Auxiliary Under voltage + Alarm
Only Instantanous release(electromagnetic release)	200	208	210	218	220	228	230	238	240	248	260	270	278
Thermal release + electromagnetic release	300	308	310	318	320	328	330	338	340	348	360	370	378

Note: 2 auxiliary contact + alarm is only for Inm above 630A.

3.2 Circuit breaker type

3.2.1 Using type: power-distribution protection type, motor-protection type

3.2.2 Installation type: Fixed type, plug type, drawout type

3.2.3 Operation type: handle operation, external rotating handle operation, motor operation

Main technical parameter

4.1 circuit breaker main technical parameter see Table 2

Table2

Frame size rated current Inm A	Conventional thermal current Ith A	Breaking capacity	Short-circuit breaking capacity(effective value) kA Icu/cos ϕ 400V	Ics/cos ϕ 400V	Rated current In A	Arc distance mm
125	125	N	25/0.25	16/0.30	12.5、16、20、25、32、40、50、63、80、100、125	≤30
		H	50/0.25	25/0.25		≤50
160	160	N	35/0.25	18/0.30	16、20、25、32、40、50、63、80、100、125、160	≤30
		H	50/0.25	25/025		≤50

4.2 Overload and short-circuit protection feature

4.2.1 Inverse time limit breaking feature of power-distribution circuit breaker, see Table 3.

4.2.2 Motor-protection circuit breaker inverse time limit breaking characteristic,see Table 4.

Table3

Test current name	Setting current	Conventional time h In≤63	63<In≤250	250<In	Initial state
Conventioanl untripping current	1.05	≥1	≥2		cold state
Conventioanl tripping current	1.30	<1	<2		heat state
Return characteristic current	3.0	reture time			cold state
		5s	8s	12s	

Note: 1.return characteristic test is only made in the type experiment.
2.Heating state means state of under conventional untripping current to setting conventional time

Table3

Test current name	Setting current	Conventional time h 100<In≤400	Initial state
Conventioanl untripping current	1.0	≥2h	cold state
Conventioanl tripping current	1.2	<2h	heat state
	1.5	≤4min	cold state
	7.2	4s<T≤10s	heat state

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4.2.3 short-circuit protection current setting value, see Table 5.

Table 5

Model No.	Rated current In A	Short-circuit protection setting current IR A(±20%)		Note
		Power-distribution protection	Motor-protection	
RDM6□-125	12.5、16、20、25、32、40、50、63、80、100、125	500A	500A	
		10In	12In	
RDM6□-160	16、20、25、32、40、50、63、80、100、125、160	500A	500A	
		10In	12In	

4.3 Internal accessories and External accessories

4.3.1 Control circuit rated voltage, see Table6

Table 6

Type		Rated working voltage V		
		AC 50Hz		DC
Release type	shunt release	Us	230、400	100、220、24
	Under-voltage release	Ue	230、400	
	Motor mechanism	Us	230、400	110、220

4.3.1.1 Shunt release can break the circuit reliably under the 70% to 110% of control power voltage(if DC24V is chosen, the secondary circuit design should consider and ensure the consumption of shunt releasae, the working Top current is 5A)

4.3.1.2 If power voltage decreases to the range of 70% to 35% of under-voltage release rated operational voltage, under-voltage release can prevent the circuit making. If power-voltage is higher than 85% of under-voltage release rated operational voltage, under-voltage release can ensure circuit breaking making.

4.3.2 circuit breaker auxiliary(alarm) contact rated current see Table 7.

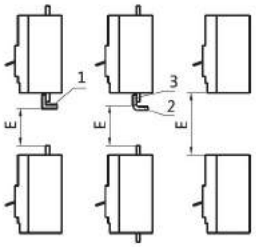
Table 7

Conventional thermal current Ith A	Rated insulation voltage Ui V	Rated operational current Ie A			suitable circuit breaker frame sizerated current Inm
		AC 400	AC 230	DC 220	
1	400	0.3	0.5	0.15	For Alarm contact
3	400	0.4	0.7	0.15	250A and below
6	400	1.0	1.7	0.20	400A and below

4.4 Vertical install safe distance,see Fig1,safe distance of circuit breaeker and insulation wall, see Fig2 and Table8.

Table 8

Dimension mm / Model No.	A min	B	C	E
RDM6□-125	30	20	20	60
RDM6□-160	30	20	20	90



Note:1 for non insualtion connection,2 for insulation wire, 3 for cable connection terminal.

Fig 1 Mininum Safe distance of Vertical installation

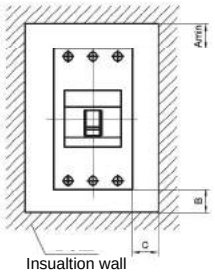


Fig 2 Safe distance of circuit breaker and insulation wall

Insert type and drawout type device of circuit breaket

5.1 Insert type device

Circuit breaker of Frame size rated current from 125A to 400A can take Insert type device. The device mainly consists of two parts, one is the connector of circuit breaker and interlock mechanism, another is the insulation base with lower connector, connection mode: 1.front connection 2.back connection

5.2 Insert type device using

a) install and connect the insert type base(board front or board back)

b) This device hase interlock mechanism against the electric damage for rapairment.

c) Using of device of Frame size rated current 125A, 160A: circuit breaker with interlock mechanism and upper-connector is always at "off" position. Only the circuit breaker inserted into th base and fixed by Screw rod, the circuit breaker can make.

5.3 Fixed type or Insert type circuit breaker cabinet Install hole(see Fig3)

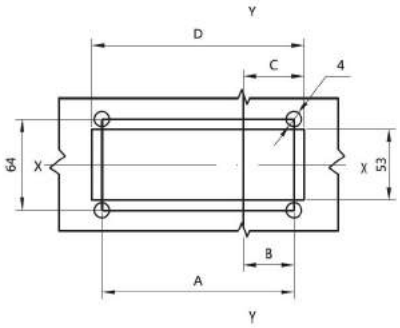


Fig3

Model No.	Poles	A	B	C	D
RDM6□-125	3 Poles	83.5	42	43	86
	4 Poles	108.5	42	43	111
RDM6□-160	3 Poles	95.5	48	49	98
	4 Poles	125.5	48	49	128

Shape and install dimension

6.1 RDM6□-125、160

6.1.1 Outfit and install dimension of Fixed install circuit breaker of board front-connect, See Fig 4.

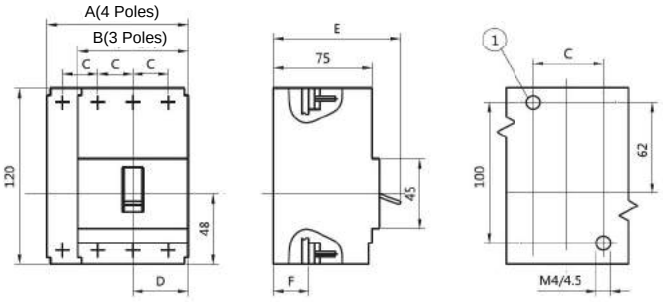


Fig 4

Model No.	A	B	C	D	E	F
RDM6-125	103	78	25	39	91	25.5
RDM6-160	120	90	30	45	93	27.5

Note: a) 1 for Install board hole b) install Mounting screw is 2-M4x75

6.1.2 Fixed type installation board back connecting circuit breaker shape and installation dimension see Table5.

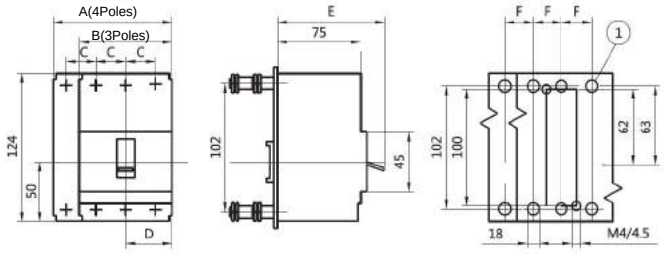


Fig5

Note: a) 1 for Install hole b) Terminal behind Bolt see Figure 8 and table 9
c) Install screw is 2-M4x75

Model No.	A	B	C	D	E	F
RDM6-125	103	78	25	39	91	25.5
RDM6-160	120	90	30	45	93	30

6.1.3 Insert type board front connecting circuit breaker shape and install dimension see Fig6

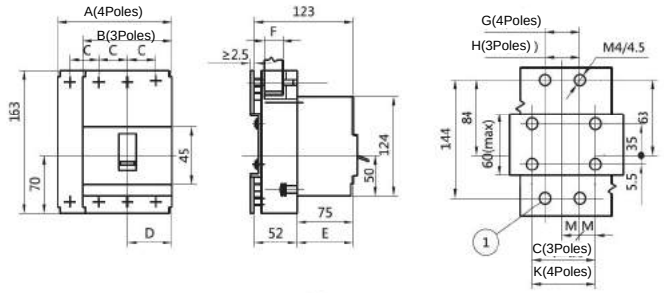


Fig6

Model No.	A	B	C	D	E	F	G	H	K	M
RDM6-125	103	78	25	39	91	25.5	75	50	50	12.5
RDM6-160	120	90	30	45	93	30	90	60	60	15

Note: a) 1 for hole of the install fixed part on the board or din rail
b) Install bolt is 2-M4x75

6.1.4 Insert type install board back connect circuit breaker shape and install dimension see Fig7.

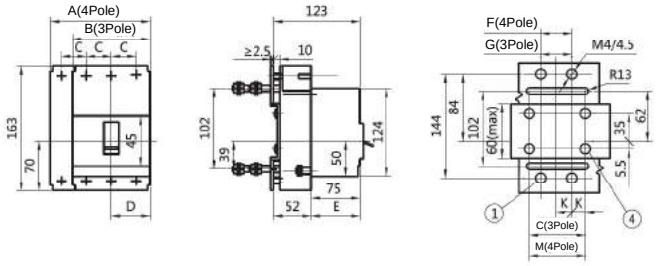


Fig7

Model No.	A	B	C	D	E	F	G	M	K
RDM6-125	103	78	25	39	91	75	50	50	12.5
RDM6-160	120	90	30	45	93	90	60	60	15

Note: a. 1 for Install hole b. 4 for Din rail install hole

c. Terminals behind bolt see Fig8 and Table9

d. Bolt is 2-M4x60

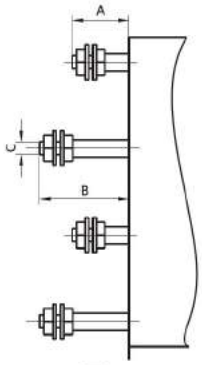


Fig8

Table9

Model No.	Install type	Dimension		
		A	B	C
RDM6□-125	Fixed type	42	75	M8
RDM6□-160		42	75	M8
RDM6□-125	Drawout type	40	76	M8
RDM6□-160		40	76	M8

Order Notice

a. Model No.

b. Rated current

c. Short-circuit protection setting current

d. Installation and connection mode

e. If special requirements is in the order, it should be consulted with manufacture.