

Protection Feature

Distribution protection –Only magnetic release

Only magnetic release	Frame size $I_{nm}(A)$	Rated current $I_n(A)$	Setting of short circuit protection current	Setting value of short circuit protection current $I_s(A)$ and allowance	Release time
Short circuit protection	63	10~63	Fixed	$10I_n, \pm 20\%$	Instantaneous action
	125	10~125	Fixed	$10I_n, \pm 20\%$	
	160	32~160	Fixed	$10I_n, \pm 20\%$	
	250	125~250	Fixed	$10I_n, \pm 20\%$	
	400	250~400	Fixed	$10I_n, \pm 20\%$	
	630	400~630	Fixed	$10I_n, \pm 20\%$	
	800	630~800	Fixed	$10I_n, \pm 20\%$	
	1000	800~1000	Fixed	$10I_n, \pm 20\%$	
	1250	1000~1250	Adjustable	$I_s : (7-8-9-10) I_n$	
1600	1000~1600	Adjustable	$I_s : (7-8-9-10) I_n$		

	Frame size $I_{nm}(A)$	Rated current $I_n(A)$	Setting of neutral pole protection current	Setting value of neutral pole short circuit protection current (A) and allowance	Release time
Neutral pole protection (code of N poles C/D)	63	10~63	Fixed	$I_s, \pm 20\%$	Instantaneous action
	125	10~125	Fixed	$I_s, \pm 20\%$	
	160	32~160	Fixed	$I_s, \pm 20\%$	
	250	125~250	Fixed	$I_s, \pm 20\%$	
	400	250~400	Fixed	$I_s, \pm 20\%$	
	630	400~630	Fixed	$I_s, \pm 20\%$	
	800	630~800	Fixed	$I_s, \pm 20\%$	
	1000	800~1000	Fixed	$I_s, \pm 20\%$	
	1250	1000~1250	Adjustable	$I_s : (7-8-9-10) I_n$	
1600	1000~1600	Adjustable	$I_s : (7-8-9-10) I_n$		

Distribution protection—Thermal magnetic release

Thermal magnetic release	Frame size I_{nm} (A)	Rated current I_n (A)	Setting of overcurrent protection	Release feature
Overload protection	63A~1000A	10A~1000A	Fixed	I^2t =constant 1.05 I_n (cold state), 2h non-trip($I_n > 63A$), 1h non-trip($I_n \leq 63A$) 1.30 I_n (heat state), 2h trip($I_n > 63A$), 1h trip($I_n \leq 63A$)
	1600	1000A~1600A	Adjustable	I_r adjustable range: (0.7-0.8-0.9-1) I_n

Thermal magnetic release	Frame size I_{nm} (A)	Rated current I_n (A)	Setting of short circuit protection current	Setting value of short circuit protection current I_s (A) and allowance	Release time
Short circuit protection	63	10~63	Fixed	$10I_n, \pm 20\%$	Instantaneous action
	125	10~125	Fixed	$10I_n, \pm 20\%$	
	160	32~160	Fixed	$10I_n, \pm 20\%$	
	250	125~250	Fixed	$10I_n, \pm 20\%$	
	400	250~400	Fixed	$10I_n, \pm 20\%$	
	630	400~630	Fixed	$10I_n, \pm 20\%$	
	800	630~800	Fixed	$10I_n, \pm 20\%$	
	1000	800~1000	Fixed	$10I_n, \pm 20\%$	
	1250	1000~1250	Adjustable	$I_s : (7-8-9-10) I_n$	
	1600	1000~1600	Adjustable	$I_s : (7-8-9-10) I_n$	

	Frame size I_{nm} (A)	Rated current I_n (A)	Setting of neutral pole protection current	Setting value of neutral pole overload protection current(A) setting value neutral pole short circuit protection current(A)
Neutral pole protection (code of N pole C/D)	63	10~63	Fixed	$I_r, I_s, \pm 20\%$
	125	10~125	Fixed	$I_r, I_s, \pm 20\%$
	160	32~160	Fixed	$I_r, I_s, \pm 20\%$
	250	125~250	Fixed	$I_r, I_s, \pm 20\%$
	400	250~400	Fixed	$I_r, I_s, \pm 20\%$
	630	400~630	Fixed	$I_r, I_s, \pm 20\%$
	800	630~800	Fixed	$I_r, I_s, \pm 20\%$
	1000	800~1000	Fixed	$I_r, I_s, \pm 20\%$
	1250	1000~1250	Adjustable	$I_s : (7-8-9-10) I_n$
	1600	1000~1600	Adjustable	$I_s : (7-8-9-10) I_n$



Protection Feature

Distribution protection—Electronic release

Electronic release	Frame size I_{nm} (A)	Rated current I_n (A)	Setting of overcurrent protection I_r (A)	Release feature/time
Overload long-time-delay protection	160	32	16-18-20-22-25-28-30-32	$I^2t = \text{constant}$ $1.05I_r$, no action within 2h $1.3I_r$, action with 1h $2I_r$, $t_r = (12-60-80-100)s$, $I_{nm} < 400A$ $2I_r$, $t_r = (12-60-100-150)s$, $I_{nm} \geq 400A$
		63	32-36-40-45-50-56-60-63	
		125	63-70-75-80-90-100-110-125	
		160	80-90-100-110-125-140-150-160	
	250	250	125-140-150-160-180-200-225-250	
	400	400	200-225-250-280-300-315-350-400	
	630	630	400-450-480-500-530-560-600-630	
		800	630-660-680-700-720-750-780-800	
	1000	1000	630-680-720-780-820-900-950-1000	
1250	1250	630-700-800-900-1000-1100-1200-1250		
1600	1600	800-900-1000-1100-1250-1400-1500-1600		
Action allowance				±10%
Short circuit short-time-delay protection	All series	32~1600	$I_{sd} = (1.5-2-3-4-5-6-8)I_r + \text{OFF}$	$t_{sd} = 0.3, \pm 0.06s$
Action allowance				
Instantaneous protection	160~1600	32~1600	$I_i = (2-3-4-6-8-10-12)I_r + \text{OFF}$	Instantaneous action
Action allowance				
Neutral pole protection (code of four pole C/D)	All series	32~1600	$I_{RN} = (0.5, 1)I_r + \text{OFF}$, Adjustable	
Indication of overload	All series	32~1600	$I_{R0} = 1.2I_r$	



Motor protection—Only magnetic release

Only magnetic release	Frame size $I_{nm}(A)$	Rated current $I_n(A)$	Setting of short circuit protection current	Setting value of short circuit protection current $I_i(A)$ and allowance	Release time
Short circuit protection	63	10~63	Fixed	$12I_{n,r} \pm 20\%$	Instantaneous action
	125	10~125	Fixed	$12I_{n,r} \pm 20\%$	
	160	32~160	Fixed	$12I_{n,r} \pm 20\%$	
	250	125~250	Fixed	$12I_{n,r} \pm 20\%$	
	400	250~400	Fixed	$12I_{n,r} \pm 20\%$	
	630	400~630	Fixed	$12I_{n,r} \pm 20\%$	
	800	630~800	Fixed	$12I_{n,r} \pm 20\%$	

	Frame size $I_{nm}(A)$	Rated current $I_n(A)$	Setting of neutral pole protection current	Setting value of neutral pole overload protection current(A) Setting value neutral pole short circuit protection current(A)
Neutral pole protection (code of N pole C/D)	63	10~63	Fixed	$I_{R,r} I_{i,r} \pm 20\%$
	125	10~125	Fixed	$I_{R,r} I_{i,r} \pm 20\%$
	160	125,160	Fixed	$I_{R,r} I_{i,r} \pm 20\%$
		125,160	Fixed	$I_{R,r} I_{i,r} \pm 20\%$
	250	160~250	Fixed	$I_{R,r} I_{i,r} \pm 20\%$
	400	315~400	Fixed	$I_{R,r} I_{i,r} \pm 20\%$
	630	400~630	Fixed	$I_{R,r} I_{i,r} \pm 20\%$
	800	630~800	Fixed	$I_{R,r} I_{i,r} \pm 20\%$

Protection Feature

Motor protection—Thermal magnetic release

Thermal magnetic release	Frame size $I_{nm}(A)$	Rated current $I_n(A)$	Setting of overcurrent protection	Release feature
Overload protection	125~800	25~630A	Fixed	$I^2t = \text{constant}$ 1.0In(cold state), > 2h non release 1.2In(hot state), ≤2h release 7.2In(hot state), 4s ≤ T ≤ 10s, 10A ≤ In ≤ 225A 6s ≤ T ≤ 20s, 225A < In ≤ 630A(including 800A frame 630A) Trip class: 10(≤160A), 20(160A < In ≤ 630A)

Thermal magnetic release	Frame size $I_{nm}(A)$	Rated current $I_n(A)$	Setting of short circuit protection current	Setting value of short circuit protection current $I_s(A)$ and allowance	Release time
Short circuit protection	63	10~63	Fixed	$12I_n, \pm 20\%$	Instantaneous action
	125	10~125	Fixed	$12I_n, \pm 20\%$	
	160	32~160	Fixed	$12I_n, \pm 20\%$	
	250	125~250	Fixed	$12I_n, \pm 20\%$	
	400	250~400	Fixed	$12I_n, \pm 20\%$	
	630	400~630	Fixed	$12I_n, \pm 20\%$	
	800	630~800	Fixed	$12I_n, \pm 20\%$	

	Frame size $I_{nm}(A)$	Rated current $I_n(A)$	Setting of neutral pole protection current	Setting value of neutral pole overload protection current(A) Setting value neutral pole short circuit protection current(A)
Neutral pole protection (code of N pole C/D)	63	10~63	Fixed	$I_n I_n, \pm 20\%$
	125	10~125	Fixed	$I_n I_n, \pm 20\%$
	160	125,160	Fixed	$I_n I_n, \pm 20\%$
		125,160	Fixed	$I_n I_n, \pm 20\%$
	250	160~250	Fixed	$I_n I_n, \pm 20\%$
	400	315~400	Fixed	$I_n I_n, \pm 20\%$
	630	400~630	Fixed	$I_n I_n, \pm 20\%$
800	630~800	Fixed	$I_n I_n, \pm 20\%$	



Motor protection—Electronic release

Electronic release	Frame size I_{nm} (A)	Rated current I_n (A)	Setting of overcurrent protection I_R (A)	Release feature/time																																			
Overload long-time-delay protection	160	32	16-18-20-22-25-28-30-32	$I^2t = \text{constant}$ <table border="1"> <tr> <td>$1.05I_R$</td> <td colspan="4">No actuation within 2h</td> </tr> <tr> <td>$1.2I_R$</td> <td colspan="4">Actuation within 1h</td> </tr> <tr> <td>Release class</td> <td>10A</td> <td>10</td> <td>20</td> <td>30</td> </tr> <tr> <td>$1.5I_R$</td> <td>53</td> <td>107</td> <td>178</td> <td>267</td> </tr> <tr> <td>$2I_R$</td> <td>30</td> <td>60</td> <td>100</td> <td>150</td> </tr> <tr> <td>$7.2I_R$</td> <td>2.3</td> <td>4.6</td> <td>7.7</td> <td>11.6</td> </tr> <tr> <td colspan="5">Delay time accuracy: $\pm 20\%$</td> </tr> </table>	$1.05I_R$	No actuation within 2h				$1.2I_R$	Actuation within 1h				Release class	10A	10	20	30	$1.5I_R$	53	107	178	267	$2I_R$	30	60	100	150	$7.2I_R$	2.3	4.6	7.7	11.6	Delay time accuracy: $\pm 20\%$				
		$1.05I_R$	No actuation within 2h																																				
		$1.2I_R$	Actuation within 1h																																				
		Release class	10A		10	20	30																																
		$1.5I_R$	53		107	178	267																																
	$2I_R$	30	60		100	150																																	
	$7.2I_R$	2.3	4.6		7.7	11.6																																	
Delay time accuracy: $\pm 20\%$																																							
63	32-36-40-45-50-56-60-63																																						
100	63-70-75-80-85-90-95-100																																						
125	63-70-75-80-90-100-110-125																																						
160	80-90-100-110-125-140-150-160																																						
200	100-125-140-150-160-170-180-200																																						
250	250	125-140-150-160-180-200-225-250																																					
400	400	200-225-250-280-300-315-350-400																																					
630	630	400-450-480-500-530-560-600-630																																					
Operation allowance				$\pm 20\%$																																			
Short circuit short-time-delay protection	160~630	32~630	$I_{sd} = (1.5-2-3-4-5-6-8)I_R + \text{OFF}$	$t_{sd} = 0.3, \pm 0.06s$																																			
Operation allowance			$\pm 15\%$																																				
Instantaneous protection	160~630	32~630	$I_I = (2-4-6-8-10-12-14)I_R + \text{OFF}$	Instantaneous action																																			
Operation allowance			$\pm 15\%$																																				
Neutral pole protection (N pole code C/D)	160~630	32~630	$I_{RN} = (0.5, 1)I_R + \text{OFF}$, adjustable																																				
Overload indication	160~630		$I_{R0} = 1.2I_R$																																				



AX-M3 auxiliary contact



Schematic diagram of assembly of auxiliary contact with the body

Inner Accessories

AX auxiliary contact

Function: Remote indication of "ON", "OFF" position of the breaker, connect to the control circuit of breaker.

Model description

AX-□□□□

Applicable product: general (omit), residual current type (LE)

Applicable product poles: 2P(2), general (omit)

Installation site code : left side installation (code L) and right side installation (code R)

Frame size code (see table1)

Name code of auxiliary contact

Table1 Frame size code

Frame size	63/125	160	250	400/630	800	1000	1250/1600
Code	M1	M2	M3	M4	M5	M6	M7

For example: 63/125 frame right auxiliary contact code: AX-M1R

To indicate the "ON" or "OFF" state of circuit breaker

AX	Opening or free trip OFF & TRIP	FX12 FX14		FX11
	Closing ON	FX12 FX14		FX11

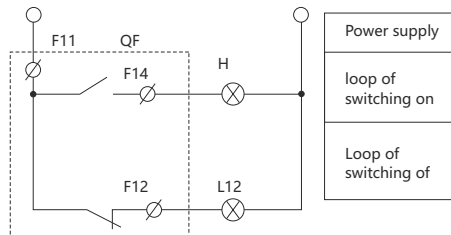
Electrical characteristics

Operational voltage (V)		AC-15		DC-13	
		AC380/400/415		DC110	DC220
Operational current (A)	63~320	0.26		0.14	0.14
	400~1000	0.4		0.2	0.2
	1600	0.47		0.27	0.27

Wiring diagram

Auxiliary contact can be wired with indicator light.

The operator can know the location of switch " ON " or " OFF " without open the power distribution cabinet via indicator light.





Inner Accessories

AL alarm contact

Function: It is mainly used to provide signal in case of failure of circuit breaker or free trip.
Reasons for alarm contact to send failure indication signal:

- Overload or short circuit trip
- Under voltage trip
- Residual current operated trip
- Manual free trip

Model description

AL-□□□□

- Applicable product: general (omit), residual current type (LE)
- Applicable product poles: 2P(2), general (omit)
- Installation site code : left side installation (code L) and right side installation (code R)
- Frame size code (see table1)
- Name code of alarm contact

For instance: the left alarm contact code of 63/125 frame is: AL-M1L

To indicate the "ON" or "OFF " state of circuit breaker

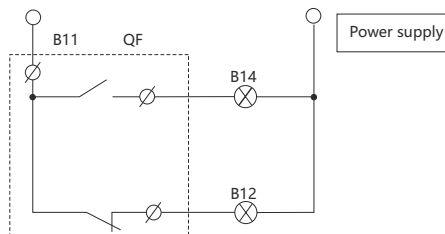
AL	Open or close OFF & ON	B12 B14		B11
	TRIP	B12 B14		B11

Electrical characteristics

Operational voltage (V)		AC-15		DC-13	
		AC380/400/415		DC110	DC220
Operational current (A)	63~320	0.26	0.14	0.14	
	400~1000	0.4	0.2	0.2	
	1600	0.47	0.27	0.27	

Wiring diagram

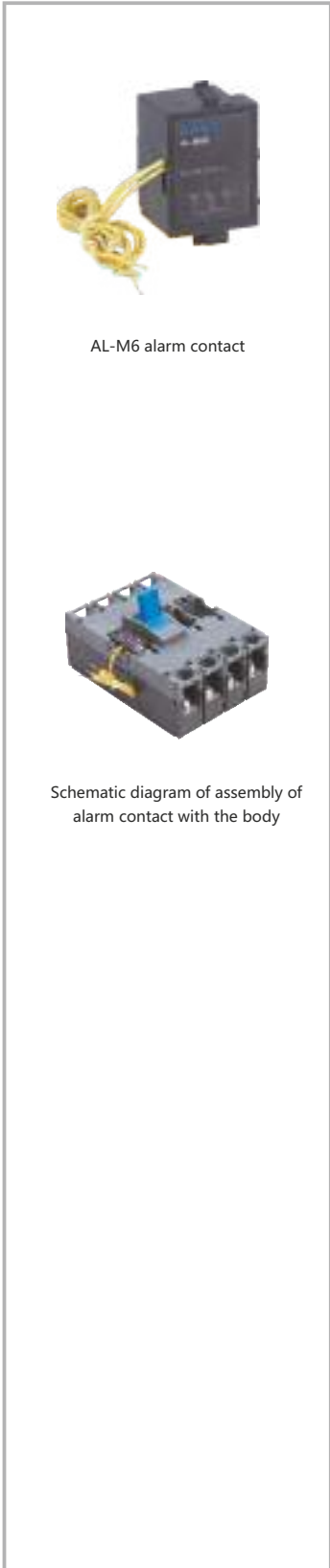
Alarm contact can be connected with indicator light, buzzer and the like, and thus the operator can be timely informed in case of release of circuit breaker.



AL-M6 alarm contact



Schematic diagram of assembly of alarm contact with the body





UV T-M4 under voltage release



Schematic diagram of assembly of under voltage release and non-release module with the body

Inner Accessories

UVT under voltage release

Function: To switch off the circuit breaker in case of under voltage of power supply so as to protect the electric equipment.

- The under voltage release shall switch off the circuit breaker reliably when the power supply voltage decreases (or even decrease slowly) to 70%-35% of rated control power supply voltage.
- It shall ensure the closing of breaker when the power supply voltage equals to or is more than 85% of rated control power supply voltage of under voltage release.
- The under voltage release shall be able to prevent closing of circuit breaker when the supply voltage is less than 35% of rated control supply voltage of under voltage release.

Model description

UVT- □□□□□

Applicable product: Thermal-magnetic (omit), residual current type(LE): Electronic(E)

Applicable product poles: 2P(2), general (omit)

Installation site code : left side installation (code L) and right side installation (code R)

Applicable voltage code (see table2, only A1, A2 are applicable)

Frame size code (see table1)

Name code of under voltage release

Table2 Applicable voltage code

Voltage	AC230V	AC400V	DC24V	DC110V	DC220V
Code	A1	A2	D1	D2	D3

For example: right under voltage release code of 63/125 frame 400V: UV T-M1A2

Electrical characteristics

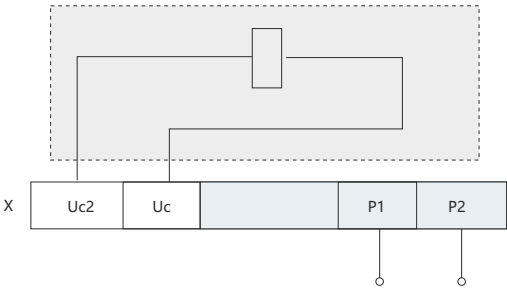
Frame size (A)	Under voltage release code (VA or W)	
	AC230V	AC400V
63/125	3.1	4
160	3.2	3.9
250/320	3.3	4.3
400/630	2.5	3.6
800	1.6	2
1000	1.6	2
1600	1.6	2

Operating characteristics

Operating conditions (XU _e)	Switching off reliably	35%~70%
	Preventing closing	≤35%
	Closing reliably	≥85%
Response time		1s
Operation times		1000



Wiring diagram





SHT-M2 shunt release



Schematic diagram of assembly of shunt release with the body

Inner Accessories

SHT shunt release

Function: Shunt release is an accessory for remote control. The shunt release shall be able to make circuit breaker operating reliably when the power voltage equals to any voltage within the range of 70%~110% of rated control power voltage.

Model description

SHT-□□□□

- Applicable product: general (omit), residual current type (LE)
- Applicable product poles: 2P(2), general (omit)
- Installation site code : left side installation (code L) and right side installation (code R)
- Applicable voltage code (see table2, only A1, A2 are applicable)
- Frame size code (see table1)
- Name code of shunt release

For example: left shunt release code of 63/125 housing 400V: SHT-M1A2L

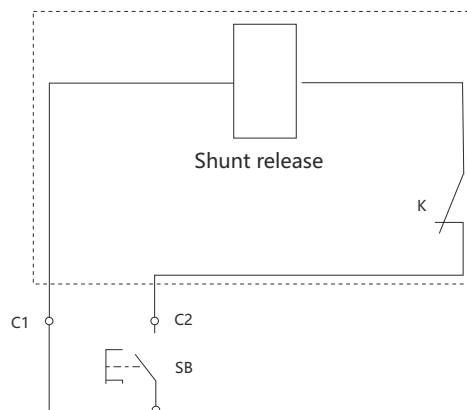
Electrical characteristics

Frame size(A)	Code of under voltage release (VA or W)				
	AC230V	AC400V	DC24V	DC110V	DC110V
63/125	76	91.5	91	80	136
160	73	96.5	91	52.8	71
250/320	68.5	112	85.3	58	66
400/630	62.5	68	100	105	56
800	153	168	120	105	56
1000	153	163	120	105	56
1250/1600	175	183	140	143	286

Operating characteristics

Reliable operating voltage		70%~110% XU_n
Conduction time (pulse mode)	minimum	10ms
	maximum	1s
Response time		30ms
Number of operations		1000

Wiring diagram





MD-M2 electric operational mechanism



Schematic diagram of assembly of motor-driven mechanism with the body

External Accessories

MD motor-driven mechanism

Function: it is applicable for switching circuit breaker on and off and retrip remotely, as well as automation application.

Model description

MD - □□□□

Applicable product: Thermal-magnetic (omit), Electronic type (E), residual current type (LE).

Product breaking capacity: General (omit), S,H.

Applicable voltage code (see table2, only A1, A2 are applicable)

Frame size code (see table1)

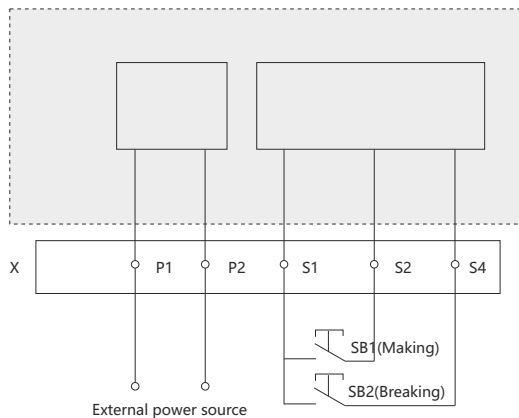
Name code of motor-driven mechanism

For example: motor driven code of 63/125 frame moulded case circuit breaker 400V: MD-M1A2

Electrical characteristics

Category	Model	63/125/250/320 frame	All series
Structural style		Electromagnet	DC-AC
Voltage specification		AC230V, 400V	AC110V, 230V, 400V, DC24V, 110V, 220V
Rated frequency		50Hz	50Hz

Wiring diagram

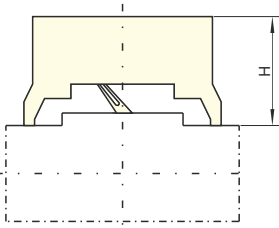


Description: SB1, SB2 is separately the on and off button;

P1, P2 are the external power line terminal. P1 will be connected to "+", and P2 will be connected to "-" if the external power source is DC.

Motor-driven mechanism

Installation sketch of electric operational mechanism



Frame size	63A	160A	250A	400A	800A	1000A	1250/1600A
	125A		320A	630A			
Installation size H(mm)	93	97	97.5	154	154	154.5	156.5



External Accessories

ERH manual operational mechanism

Function: It realizes switching on, off and restriping via rotary handle according to human body mechanics with unique design and transmission device.

Model description

ERH - □ □

- Category code of adaptive products: thermal magnetic type; electronic type (no code) residual current (code LE)
- Frame size (table 1)
- Name code of manual operational mechanism

For example: manual operational mechanism code of 63/125 frame residual current operating: ERH-M1LE

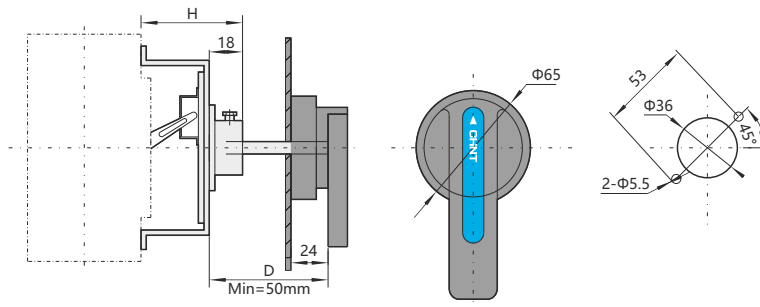
Installation diagram of manual operational mechanism



ERH-M6



Scheme diagram of assembly of manual operational mechanism with the body



Frame size	63A	160A	250A	400A	800A	1000A	1250/1600A
	125A		320A	630A			
Installation sizes(mm)	53.5	61.5	63.5	98	97	97	68.5

Note: Installation dimension of thermal magnetic type moulded circuit breaker is 98mm, and for residual current circuit breaker is 96mm.

PIA plug-in basement

Function: It is convenient to replace moulded case circuit breaker without disassembling inlet-outlet line.

Model description

PIA-□ □

- Applicable product poles: 3(3p),4(4p)
- Frame size code(see table1)
- Name code of plug-in basement

For example: plug-in basement code of 160 frame three-pole circuit breaker: PIA-M2 3



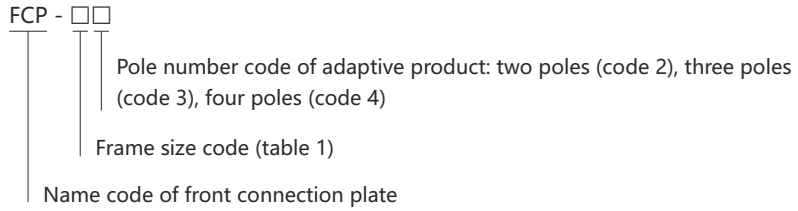
PIA-M2

External Accessories

FCP front connection plate

Function: It grants the breaker a flexible line connecting way. The phase spacing can increase via accessories so as to increase the electrical space between the adjacent phases of line terminal of input and output of breaker, and thus increase the safety among the lines.

Model description:



FCP-M4



Assembly scheme diagram of front connection plate and the body



RCP-M3

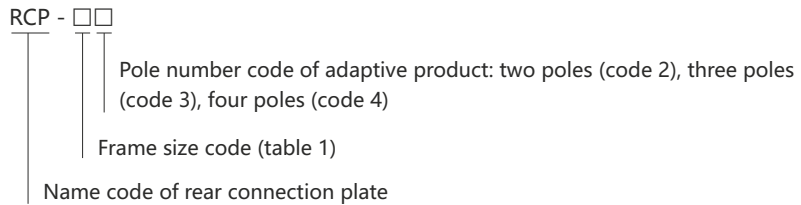


Assembly scheme diagram of rear connection plate and the body

RCP rear connection plate

Function: It grants the breaker with flexible line connecting way, which is used to match the switch board or other requirements so as to realize the line connecting on the back of the installation plate.

Model description



For example: 63/125 frame three-pole circuit breaker with rear connection plate code: RCP-M 13



External Accessories

Handheld test module (PTU-1)

Handheld test module is the extension of the circuit breaker function, it can connection circuit breaker through USB interface, also the information of circuit breaker can be displayed in the handheld test module. User can query and set the parameters of the circuit breaker as needed. Users can easily monitor and repair the circuit breaker.

- Features:
- Query the factory parameters, shell current, rated current, communication address and other informations of the circuit breaker;
- Query overload long delay, short delay, short circuit instantaneous, N phase protection, ground fault current value, operating time and other settings parameters;
- Query real-time phase current value of the circuit breaker ABCN phase, the last fault alarm current parameter value;
- Set the protection characteristic parameter of circuit breaker.(Not available for Dial-type electronic circuit breakers);
- Can set the display brightness, screensaver power, serial communication parameters and circuit breaker communication address;
- Circuit breaker analog signal trip test.

Power supply	Single 14500 lithium-ion battery
Battery capacity	≥800mAh
Operational Voltage	3.7 ~ 4.2V
Charging method	USB + 5V
Control mode	Pushbutton
LCD screen	3.2 inch TFT color, vertical screen display
Backlight brightness	1~100 level adjustment
Screensaver saving	30 to 120 seconds can be set, can be closed
Battery power monitoring	Yes
Continuous working hours	2h
Operating temperature	-20°C ~ 70°C
Wired communication	Protocol: Modbus-RTU Serial communication rate: 1200/2400/4800/9600/19200bps

- Operating:
- Use five navigation keys with three shortcuts and one power key, it can provide users with simple and quick operation experience;
- The five navigation keys default to up, down, left, right, and confirmation;
- The three shortcut keys are R, W, T, respectively, for the read parameters, set the parameters of the test test trip;
- Power key press two seconds to switch operation, and operating tips are on the bottom of each pages.



External Accessories

Modbus Communication module(COMA-3)

COMA-3 external Modbus communication module (Electronic type) is the extension of the circuit breaker function. Through the connection with the circuit breaker communication interface to achieve the physical layer of signal conversion. The interface of the RS485 communication module can be connected to the host computer and realize the remote function of the circuit breaker.

- Features:
- Built-in power supply module, can connect with an external power of 220V AC or 24V DC;
- Features:The communication module will supplies power to the circuit breaker electronic release;
- Features:Can convert the communication single between the circuit breaker and host computer;
- Features:Remote control of two relay output by receiving the instructions of the host computer;
- Features:Meet the users' need of the circuit breaker network construction.

- Characteristic:

Voltage	DC24V
Power consumption	≤2.8W
Communication rate	RS485 Communication baud rate: 1200/2400/4800/9600/19200 bps
Relay output capacity	5A, DC 30V
Operating temperature	-20°C ~ 70°C

- Installation
- Installation via DIN35-7.5 standard rail.



Complementary Data

Altitude reducing capacity and correction coefficient table

It has no impact on the breaker feature where the altitude equals to 2000 m or below. The breaker electrical feature shall be corrected according to the following table.

Altitude (m)	2000	3000	4000	5000
Correction coefficient of operating current	1In	0.94In	0.88In	0.85In
Maximum operational voltage (V)	690	600	500	440
Insulation voltage (V)	1000	800	700	600
Power frequency withstand voltage (V)	3000	2500	2000	1800

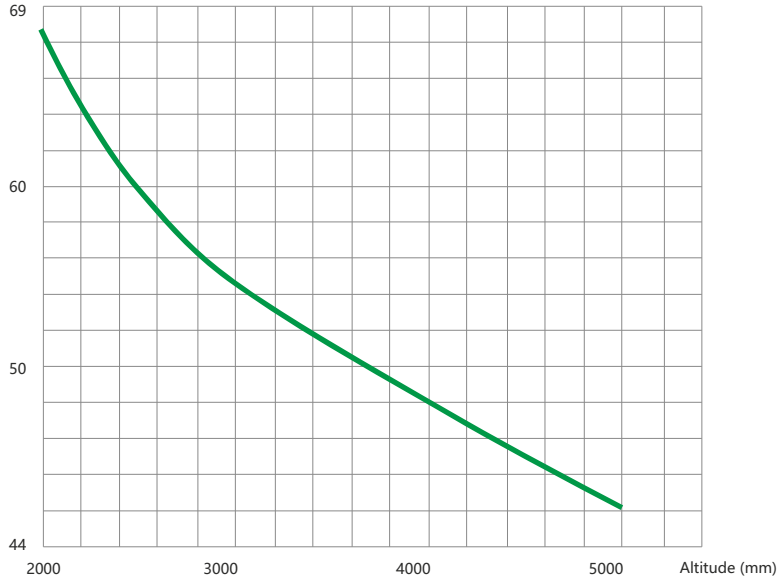
Plug-in and rear connection current derating table

Frame size	Rated current(A)	Plug-in derating current(A)	Note
630	500	450	
	630	520	
800	700	650	
	800	720	
1000	900	850	
	1000	920	

Note: There is no need of current derating as no specification in the table

Altitude derating curve

Maximum operation



Electronic type derating coefficient table

Frame size	Rated current	Long-time delay current setting	-25°C	-20°C	-15°C	-10°C	-5°C	-0°C	Rated current	40°C	45°C	50°C	55°C	60°C	65°C	70°C
NXMS-160	32A, 63A, 125A, 160A	I _R < 0.65I _n	1.2I _R	1.2I _R	1.1I _R	1.1I _R	1.05I _R	1.05I _R	32A, 63A, 125A	1.0I _n			0.9I _n	0.85I _n	0.8I _n	0.8I _n
		I _R > 0.65I _n	1.0I _R						160A	1.0I _n	0.9I _n	0.85I _n	0.8I _n	0.7I _n	0.7I _n	
NXMS-250	250A	I _R < 0.58I _n	1.15I _R	1.15I _R	1.15I _R	1.05I _R	1.05I _R	1.05I _R	250A	1.0I _n			0.9I _n	0.85I _n	0.8I _n	0.8I _n
		I _R > 0.58I _n	1.0I _R													
NXMS-630	400A, 630A	ALL	1.0I _R						400A	1.0I _n			0.9I _n	0.85I _n	0.8I _n	0.8I _n
									630A	1.0I _n	0.9I _n	0.85I _n	0.8I _n	0.7I _n	0.7I _n	
NXMS-1000	800A, 1000A	ALL	1.0I _R						800A	1.0I _n			0.9I _n	0.85I _n	0.8I _n	0.8I _n

Power loss table

Product model	Making current(A)	Single pole resistance (mΩ)	3/4pole total power loss		
			Front connection	Rear connection	Plug-in rear connection
NXM-63	63	0.75	24	27	28
NXM-125	125	0.72	28	31	32
NXM-160	160	0.4	60	87	89
NXM-250	250	0.2	63	90	90
NXM-400	400	0.15	68	72	100
NXM-630	630	0.14	180	190	200
NXM-800	800	0.08	200	230	290
NXM-1000	1000	0.06	250	280	300
NXM-1600	1600	0.027	280	-	-
NXMS-160	160	0.2	40	50	62
NXMS-250	250	0.18	50	75	86
NXMS-400	400	0.1	58	87	90
NXMS-630	630	0.08	110	120	130
NXMS-1000	1000	0.05	140	155	167
NXMS-1600	1600	0.02	250	-	-
NXMLE-160	160	0.73	60	87	89
NXMLE-250	250	0.27	63	90	90
NXMLE-400	400	0.11	68	72	100
NXMLE-630	630	0.09	180	190	200
NXHM-63	63	0.4	28	31	35
NXHM-125	125	0.6	60	87	87
NXHM-160	160	0.2	40	50	62
NXHM-250	250	0.18	50	75	86
NXHM-320	320	0.19	55	80	89
NXHM-400	400	0.1	58	87	90
NXHM-630	630	0.08	110	120	130
NXHM-800	800	0.05	200	230	290
NXHM-1000	1000	0.02	140	155	167

Parameter table of connecting cable/copper bar

The reference section of connecting cable/copper bar with different rated current is as follows.

Rated current (A)	Section of wire (mm ²)
10	1.5
16, 20	2.5
25	4.0
32	6.0
40, 50	10
63	16
70, 75, 80	25
100	35
125, 140, 150	50
160	70
180, 200, 225	95
250	120
280, 315, 320, 350	185
400	240

