IEP POWERPRODUCTS

YEM3Z SERIES

ELECTRONIC MCCB

Electronic Molded Case Circuit Breaker Manual

400 A | 3 POLE



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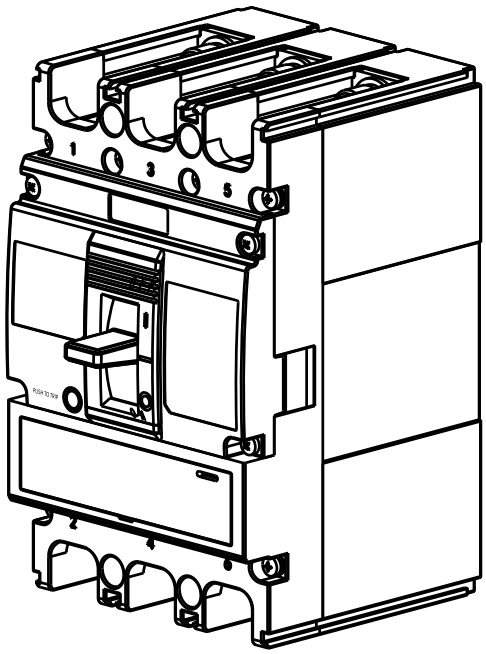
80 De Beer Street

Tel: 010 534 9368 | Cell: 078 494 9739

makwena@acgenerators.co.za | www.acgenerators.com

"When installing and using, pay attention to personal safety, and please read the instructions carefully"

Electronic Molded Case Circuit Breakers Manual



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Thank you very much for using our circuit breaker.Please read this manual thoroughly before installation,circuit connection (wiring),operation,maintenance and inspection to ensure correct use.You must also be familiar with the relevant safety and precautions during use.

1. Installation attention

⚠ Warning

- Please operate in accordance with relevant provisions to avoid possible major safety accidents.

⚠ Attention

- Please comply with the provisions of the operation,to avoid possible safety accidents or material damage.

1.1 Installation

⚠ Warning

- Please installon metal and other flame retardant.
- Do not install in an environment containing explosive gas,or there is a risk of explosion.
- Do not installin aparticularly humid place.

⚠ Attention

- Do not install the outside magnetic field is greater than five times the Earth's magnetic field.Otherwise,the circuit breaker cannot work properly.
- Do not install in areas where gaseous media can corrode metal and destroy insulation.
- Turn the handle operation mechanism,must place an order with our company to ensure quality.If the user buys by himself,please choose the quality reliable manufacturer,otherwise the company will not be responsible for all the adverse consequences after assembly.

1.2 Wiring

⚠ Warning

- Wiring must be performed by qualified personnel and ensure that the input power supply is completely disconnected.
- The main body must be installed before wiring.
- The circuit breaker must be routed in and out.That is,terminals1,3,and 5 are connected to the power source line,and terminals 2,4,and 6 are connected to the load line.No back-up line is allowed.

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1.3 Related operation

⚠ Warning

- Do not operate the circuit breaker with wet hands; otherwise,an electric shock may occur.

⚠ Attention

- Do not operate the circuit breaker frequently; otherwise,the life time of the circuit breaker will be shortened.
- If the circuit breaker has an under voltage trip device,the trip device should be energized before the circuit breaker can be switched on and off.Other wise,the circuit breaker will be damaged.
- After a circuit breaker trip with an electric operating mechanism trips,the electric operating mechanism must make the circuit breaker buckle again before closing.

1.4 Maintenance check and parts replacement

⚠ Warning

- Only professional technicians are responsible for the maintenance check.
- If users need to choose internal and external accessories,according to the model of the company to ensure quality,if users choose or modify,the company is not responsible for.

2.Matters need attention before use

2.1 Precautions for opening inspection

After receiving the circuit breaker you ordered, please unpack and check the following items:

- Check the appearance for any damage that occurred during transportation, such as broken shell,etc.
- In addition to circuit breakers,operating instructions and product certificates, screws and related accessories should be installed and used in the packaging box.

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2.2 Product appearance and names of parts

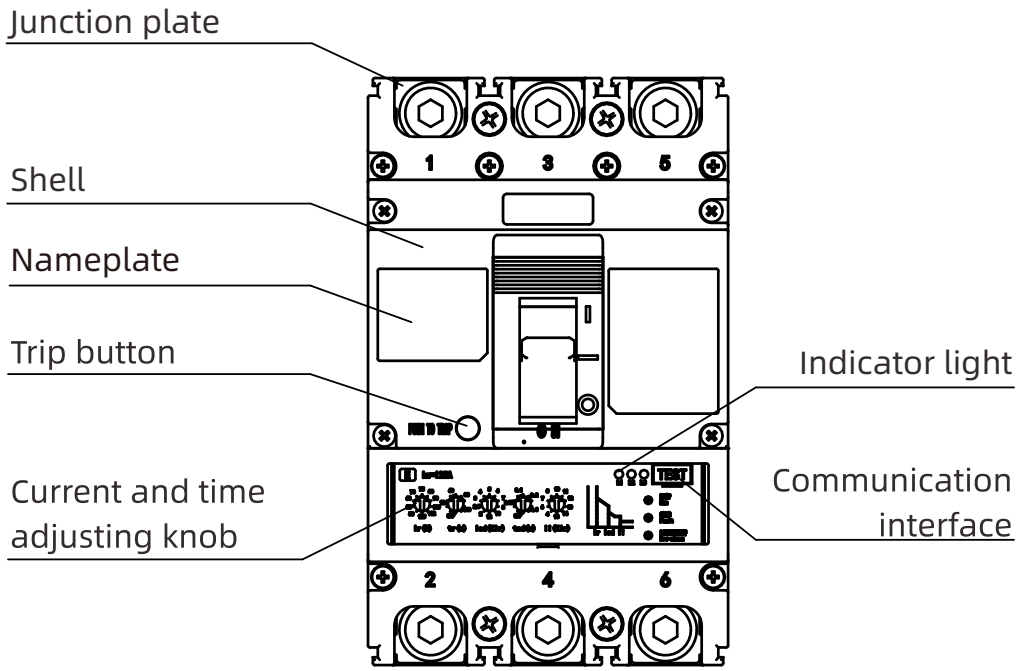


Fig ure 1 Knob type

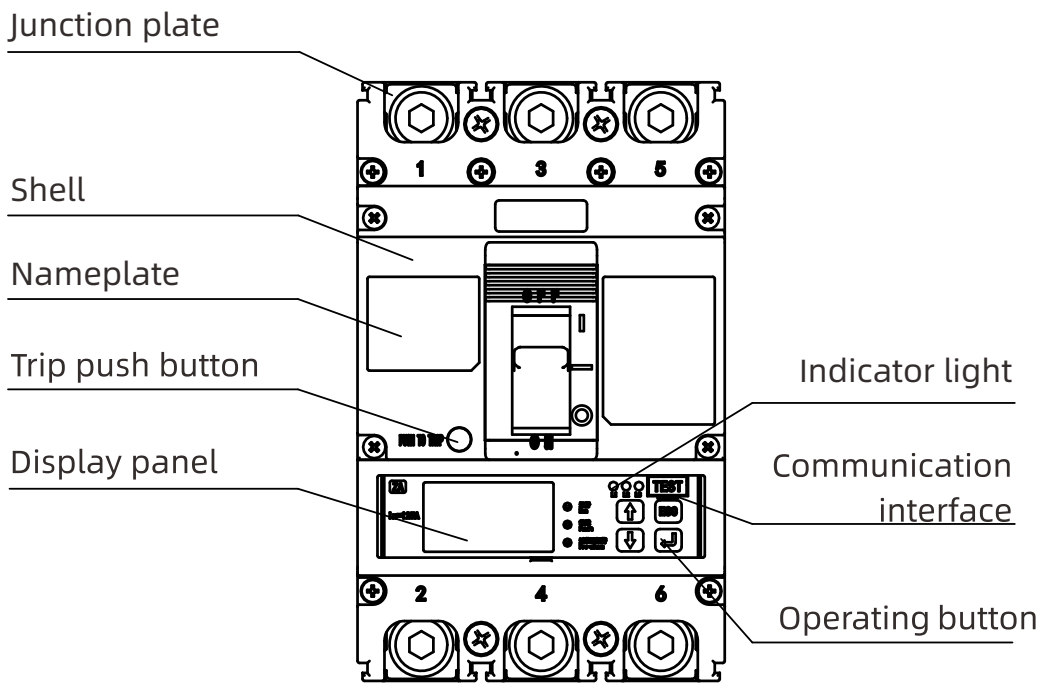


Figure 2 Liquid crystal type

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2.3 The environmental conditions for storage are shown in Table 1

Table1

Project	Specification
Ambient temperature	-25℃~+55℃
Relative humidity	(Ambient temperature25℃)≤95%

3. Installation

3.1 Insulation test

The circuit breaker has been insulation tested according to the standard before leaving the factory.Since the circuit breaker has an electronic circuit board,the following steps must be followed if the circuit breaker is retested before installation:

a. Use a 1000VDC megohm meter.

b.When the circuit breaker is in the off state,the inlet and outlet connecting plates 1-2,3-4,5-6,and connecting plates 1,3,5 (the three connecting plates are connected by wire) and the shell (the shell is covered with metal foil) respectively.

c.Connect to the under voltage trip device of the main circuit between the incoming cable and the circuit breaker housing.

d.The insulation resistance should be no less than 20MΩ.

If the user does not have a 1000VDC meghm meter,the power frequency voltage tester can be used as an alternative test.The measuring position shall refer to the insulation test method,and the voltage shall be applied for 2200V1min.

3.2 Operating environment

a.Do not installinan environment containing explosivegas,or there is a risk of explosion.

b.Do not install it in a place where rain or snow strikes.

c.Do not install it in a place where the vibration acceleration is greater than 0.7g.

d.Do not install in places where gas medium can corrode metal and destroy insulation.

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Circuit breaker installation place environmental requirements

Table 2

Ambient air temp erature	-5℃~+40℃, and 24h average value does not exceed + 35 ℃
Relative humidity	The average minimum humidity of the wettest month shall not exceed +25℃, and the average maximum relative temperature of the month shall not exceed 90%, taking into account the condensation occurring on the surface of the product due to temperature changes
Altitude	Not exceeding 2000m
class of pollution	Level 3

3.3 Installation method

●Please install on metal and other flame retardant.

3.3.1 Install safety clearance for circuit breaker

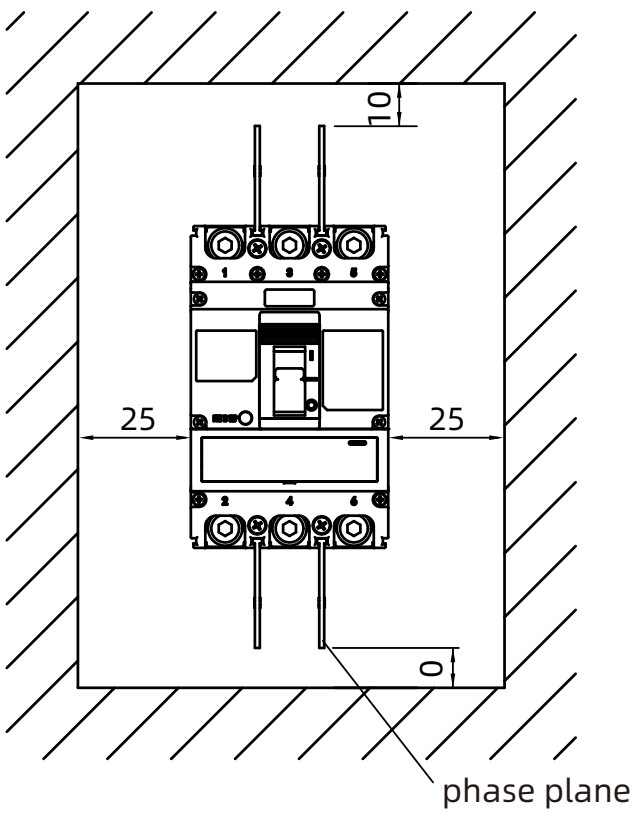


Image 3

Note: The M3Z circuit breaker must be installed with an interphase separator. The figure shows the minimum safety clearance size (in mm).

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3.3.2 Circuit breakers can be installed vertically or horizontally

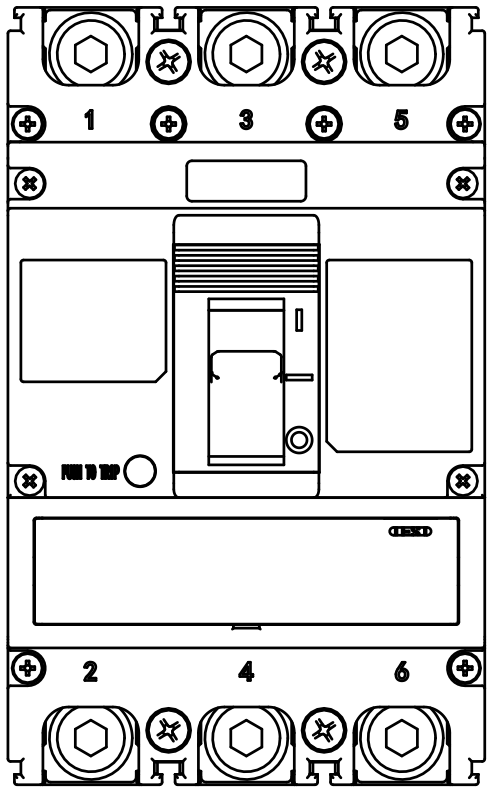


Image 4 Vertical installation

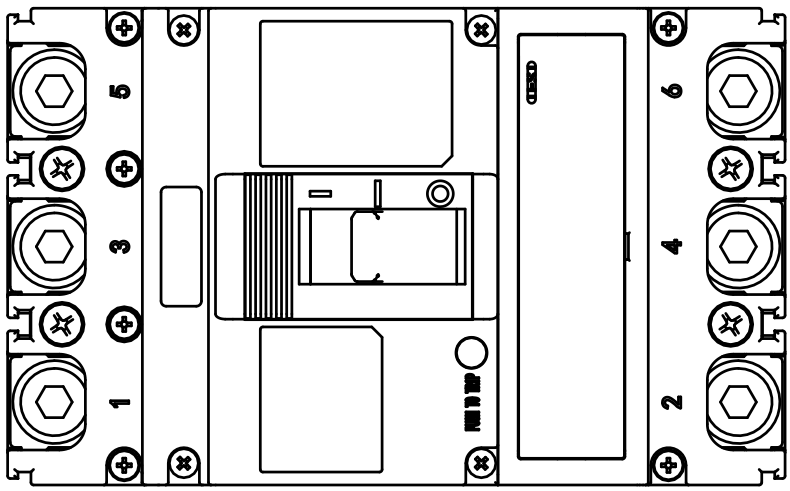
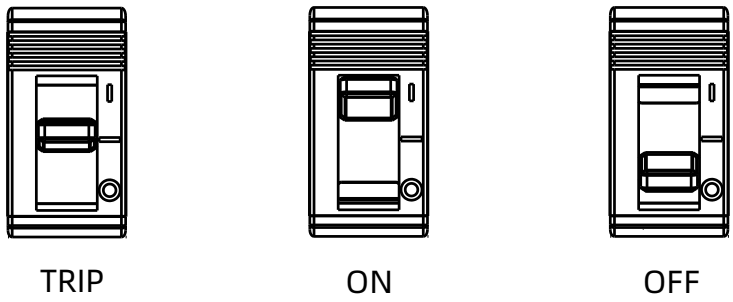
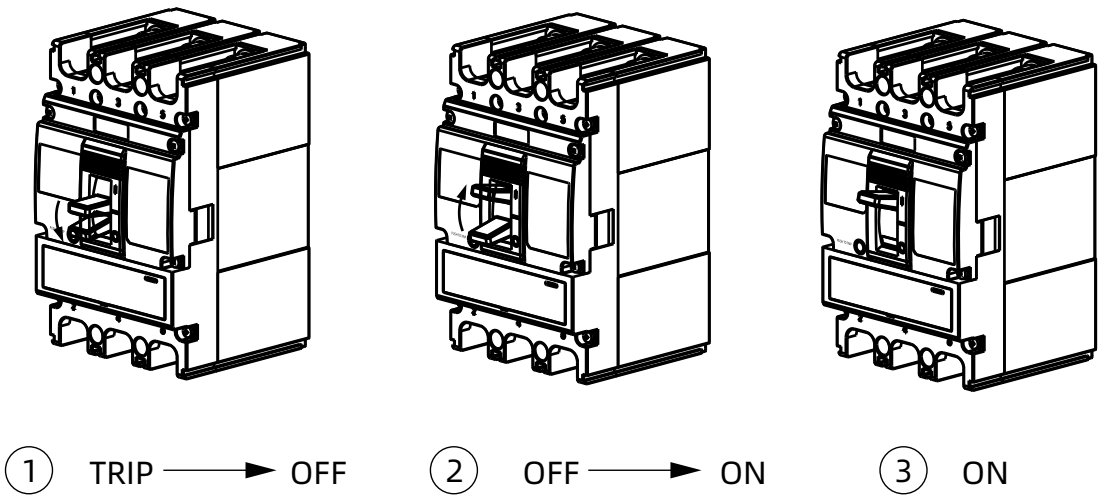


Image 5 Horizontal installation

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3.3.3 Operational testing





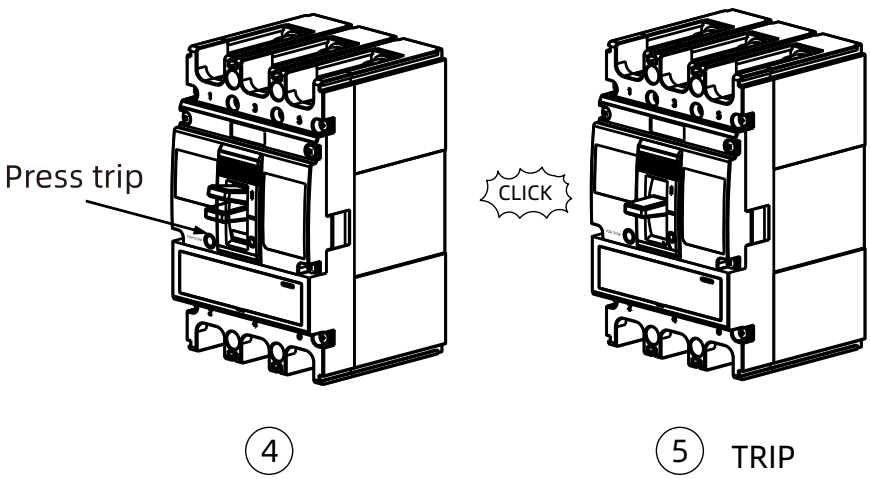


Image 6

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3.3.4 Internal accessories and installati

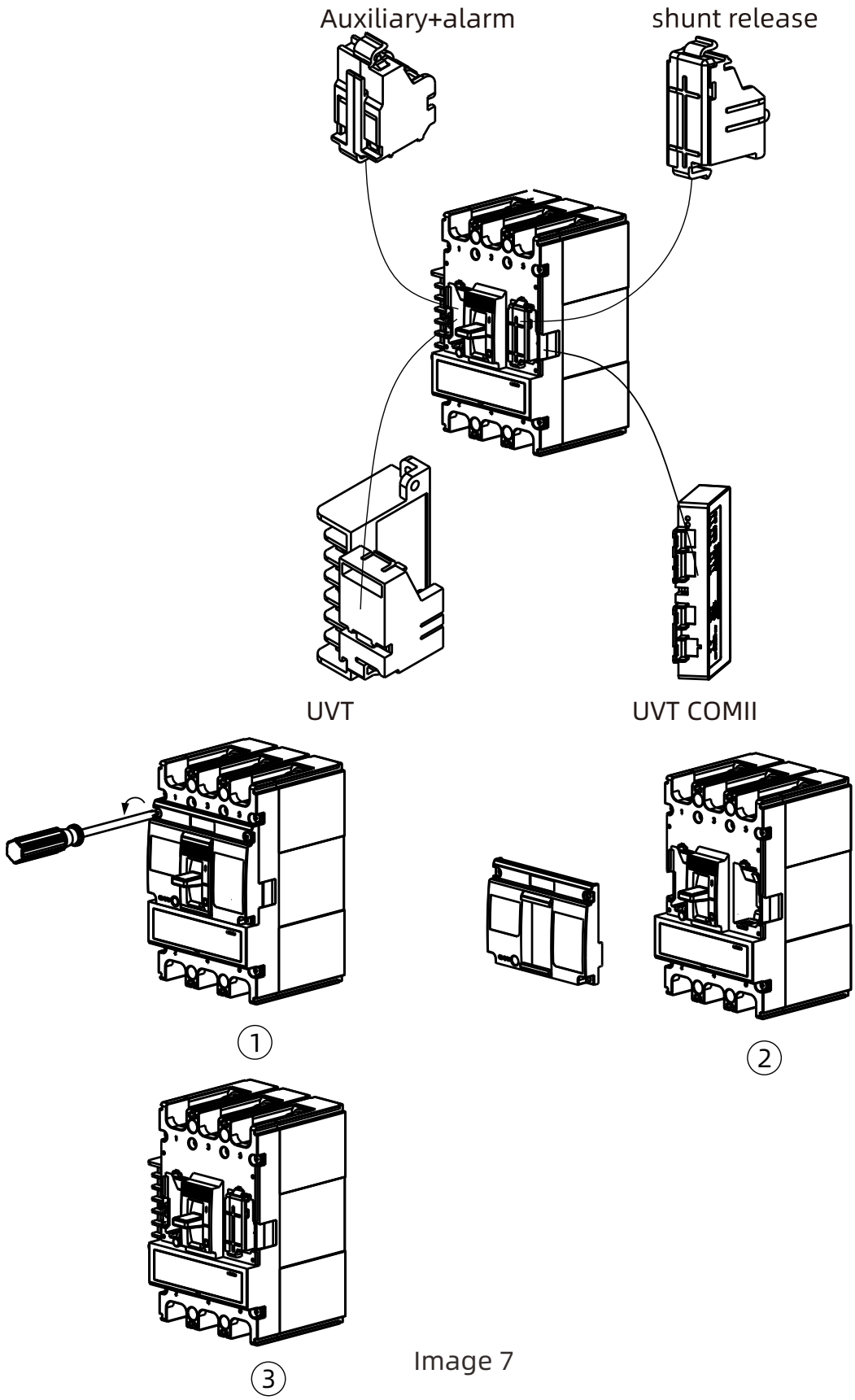


Image 7

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Table 3

Accessory	Installation position			
	M3Z-125/250/400/630		M3Z-800	
	3P	4P	3P	4P
Auxiliary contact	Left/right	Left/right1/right2	Left/right	Left/right1/right2
Alarm Contact	Left/right	Left/right1	Left	Left
Auxiliary + alarm	Left/right	Left/right1	Left	Left
shunt release	Right	Right1	Right	right1
Left	Right	Left	Left/right	Left/right1
COMII	Right	Right	Left	Left

Note:

① If the undervoltage trip device is loaded, the trip device should be energized before the circuit breaker can be switched on and off.

② 4P 1 on the right is the slot near the handle, and 2 on the right is the slot far away from the handle.

③ The communication module is hung on the far right and does not occupy the accessory slot. However, the communication module conflicts with the undervoltage release device and cannot be on the same side as the undervoltage release device.

④ M3Z-125/250 shunt trip can also be installed in the left attachment slot.

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3.3.5 Outline Dimension(mm)

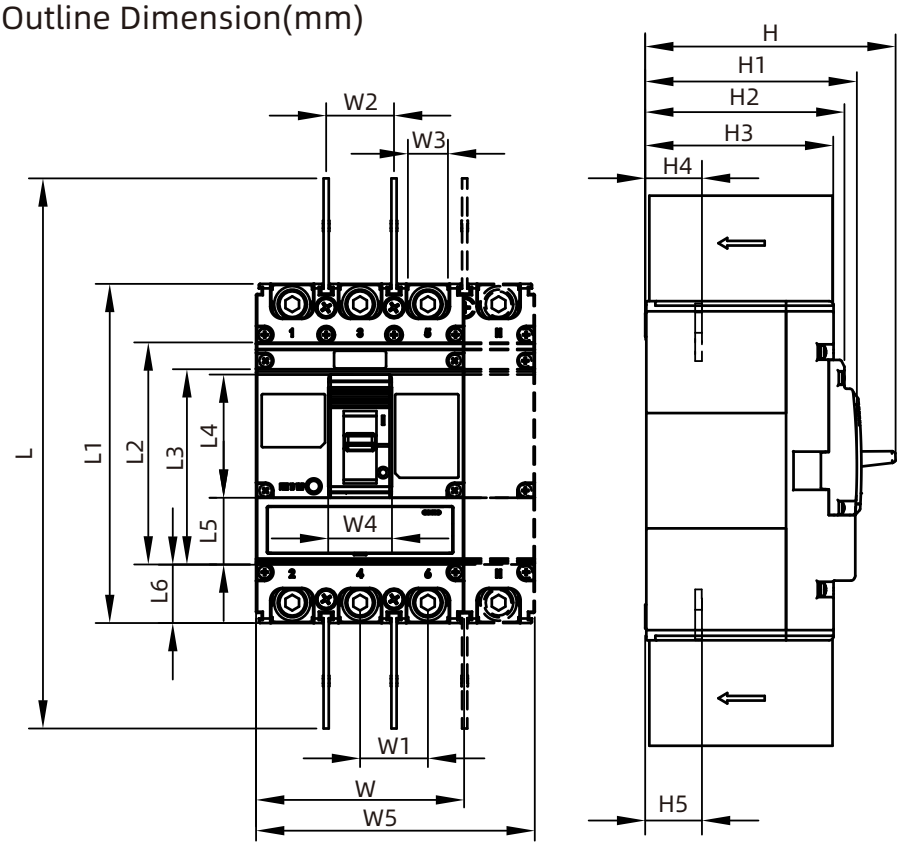


Image 8

Table 4

Code	M3Z-125	M3Z-250	M3Z-400	M3Z-630	M3Z-800
L	245	258	481	481	502
L1	150	165	259	259	281
L2	98	102	170	170	186
L3	85	91	139	139	152
L4	55	61	96	96	109
L5	29	28	42	42	42.5
L6	26.5	31.8	44. 5	44. 5	43.8
W	92	107	140	150	210
W1	30	35	44	48	70
W2	30	35	44	48	70
W3	18.5	23.5	31	33.5	44.5
W4	28	28	51	51	51
W5	122	142	184	198	281
H	110	118	155	155	161
H1	94	94	115	115	118
H2	89	89	105	105	111
H3	84	85	97	97	103
H4	26	24	37	37	41
H5	26	24	37	37	43

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3.3.6 Installation and connection

3.3.6.1Mounting plate holes

(1) Plate front wiring

X-X、Y-Y is 3P MCCB center

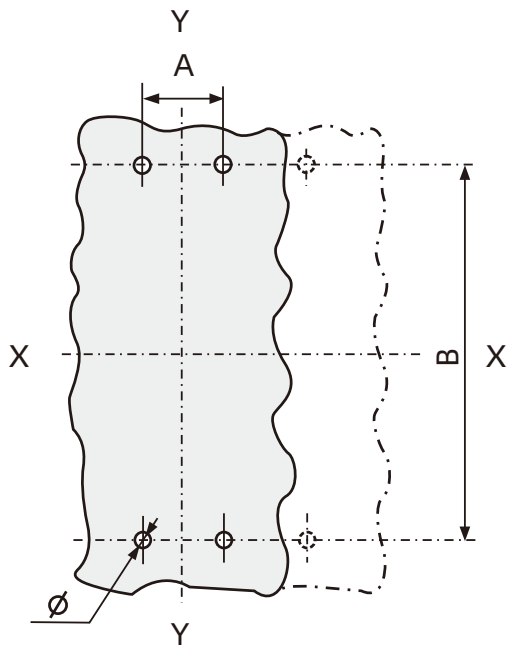


Image 9

Table 5

Type		M3Z-125		M3Z-250		M3Z-400		M3Z-630		M3Z-800	
Pole		3	4	3	4	3	4	3	4	3	4
Mounting plate hole size (mm)	A	30		35		44		48		70	
	B	129		126		215		225		244	
	ϕ	4.5		4.5		6.2		6.2		7	

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(2) back-panel wiring

X-X、Y-Y is 3P MCCB center

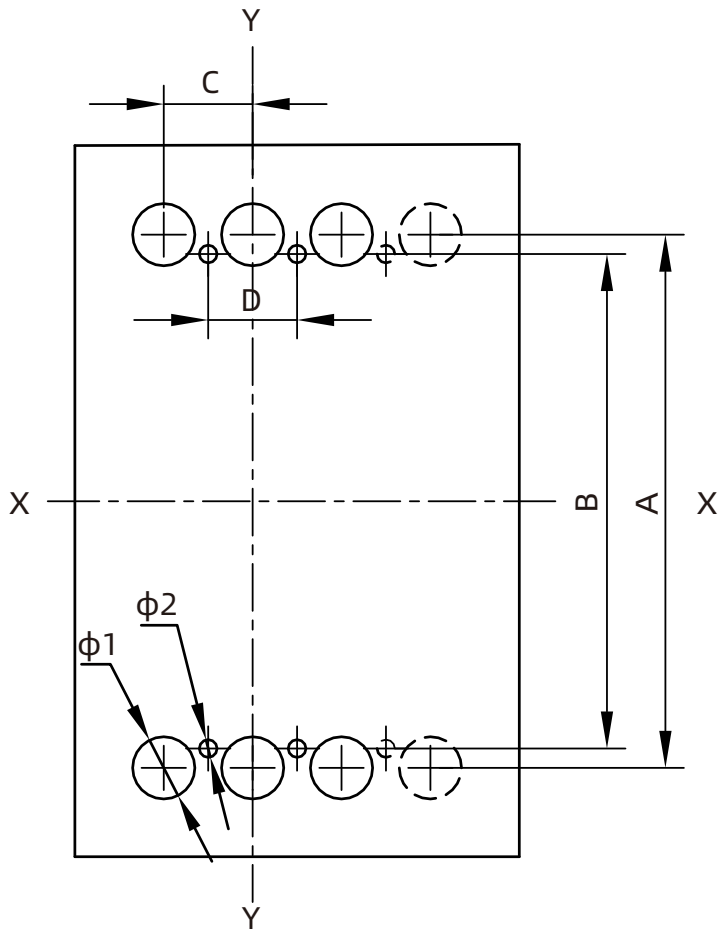


Image 10

Table 6

Type		M3Z-125		M3Z-250		M3Z-400		M3Z-630		M3Z-800	
Pole		3	4	3	4	3	4	3	4	3	4
Mounting plate hole size (mm)	A	132		144		225		225		243	
	B	129		126		215		225		244	
	C	30		35		44		48		70	
	D	30		35		44		48		70	
	ϕ1	22		24		32		40		48	
	ϕ2	4.5		4.5		6.2		6.2		7	

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(3) Plug-inconnection

X-X、Y-Y is 3P MCCB center

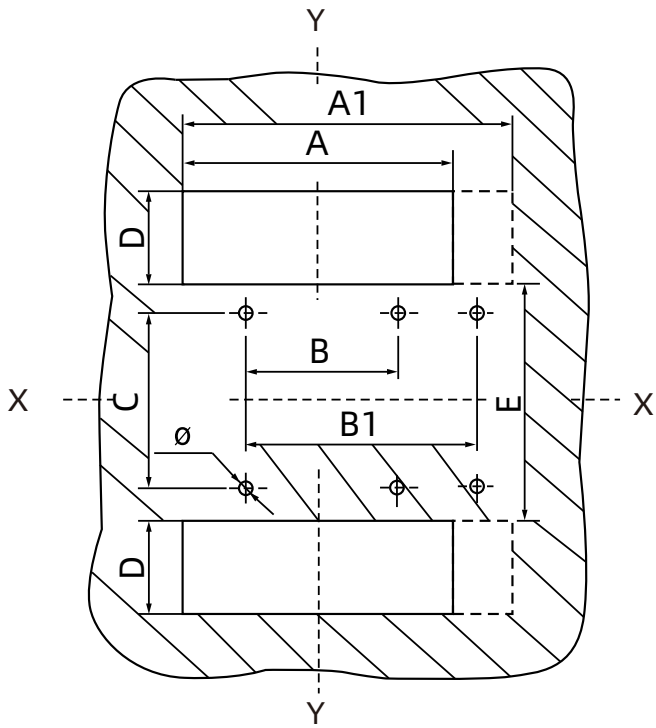


Image 11

Table 7

Type		M3Z-125		M3Z-250		M3Z-400		M3Z-630		M3Z-800	
Pole		3	4	3	4	3	4	3	4	3	4
Mounting plate hole size (mm)	A	101		117		154		161		220	
	A1		135		155		198		209		290
	B	60		70		88		60		90	
	B1		90		105		132		108		162
	C	56		54		144		126		146	
	D	48		56		60		61		72	
	E	82		84		170		164		171	
	ϕ	6.5		6. 5		10		8. 5		11	

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3.3.6.2 The circuit breaker body, bottom plate (for connecting to the rear of the board) and base (for connecting to the plug-in type) are fixed on the mounting plate.

3.3.6.3 Connect to the main circuit

1. Wiring must be performed by qualified personnel.
2. Before performing cable distribution, ensure that the input power supply is completely disconnected.
3. Must install the body before wiring.
4. The circuit breaker is wired up-in and down-out, that is, the terminal of 1, 3 and 5 is connected to the wire, and the terminal of 2, 4 and 6 is connected to the load line.

a. Choose connecting wire

Connecting wire use section surface and appropriate rated current see table 8&9:

Table 8

Rated current (A)	10	16 20	25	32	40 50	63	80	100	125 140	160	180 200 225	250	315	400
Wiring SD(mm^2)	1.5	3	4	6	10	16	25	35	50	70	95	120	185	240

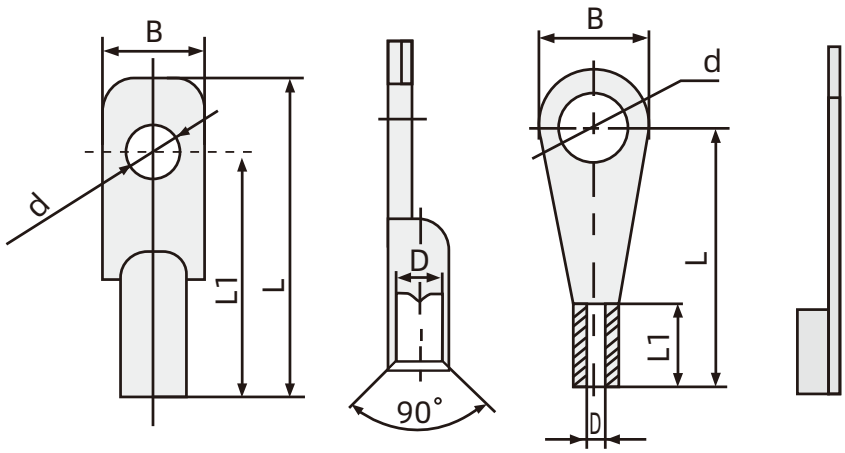
Table 9

Rated current (A)	Cable		Copper bar	
	Quantity	section surface(mm^2)	Quantity	Size(mm)
500	2	150	2	30X5
630	2	185	2	40X5
700/800	2	240	2	50X5

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b. Select connection terminal

JGC or JBC are used as wiring terminals for circuit breakers (available according to user's order). The specifications and models are shown in the figure and table



JGC Type JBCType

Image 12

Table 10

Frame size	Current (A)	Wire section surface (mm^2)	Terminal No.	B	L	L1	D	d
125	12.5 20	2.5	JBC2.5-8	15	24.5	8.5	Φ2.6	Φ8.2
	25	4	JBC4-8	13.4	20.4	9.2	Φ2.8	Φ8.2
	32	6	JBC6-8	15	24.5	10	Φ3.5	Φ8.2
	40/50	10	JBC10-8	15	24.5	11	Φ4.5	Φ8.2
	63	16	JGC16-8	12.5	41	33.5	Φ6	Φ8.2
	80	25	JGC25-8	14	46	38.5	Φ7	Φ8.2
	100	35	JGC35-8	15.5	52	44.5	Φ8	Φ8.2
	125	50	JGC50-8	17	54	45	Φ10	Φ8.2
250	100	35	JGC35-8	15.5	52	44.5	Φ8	Φ8.2
	125 140	50	JGC50-8	17	54	45	Φ10	Φ8.2
	160	70	JGC70-8	21.6	61	52	Φ11	Φ8.2
	180 200 225	95	JGC95-8	22	66	57	Φ13	Φ8.2

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c. When connecting cables to the rear of the board, insulation sleeves must be installed on the terminals.

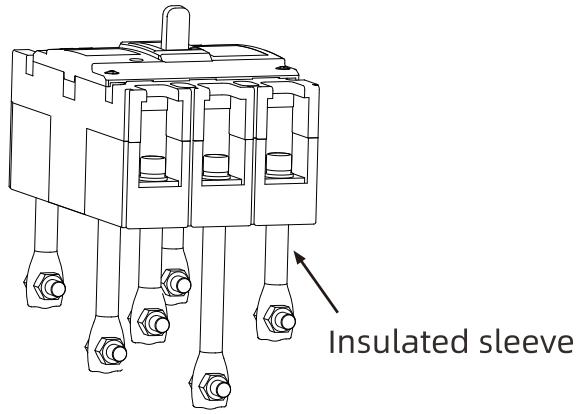


Image 13

d. Connect the crimped wire to the wiring end of the circuit breaker with a bolt (the bolt must be covered with a flat washer and a spring washer), and tighten the bolt with a torque plate. See the table for the applied torque.

Table 11

Type	Inch	(N.m)
125	M8	6.0
250	M8	6.0
400	M10	10
630	M12	14
800	M12	14

3.3.6.4 Install interphase dividers between circuit breakers.

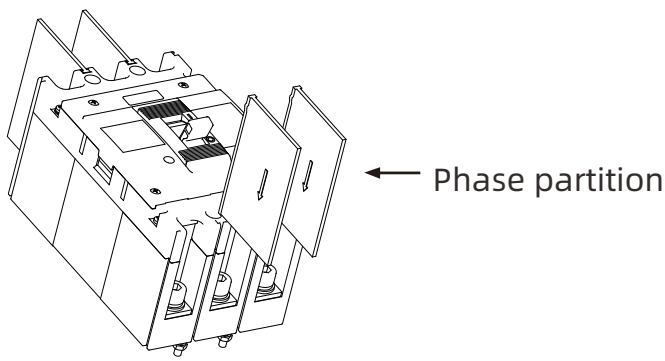


Image 14

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3.3.6.5 Electrical wiring of internal accessories of circuit breaker

a. UVR

Connect to the power supply according to the wiring terminal number on the external under voltage module.

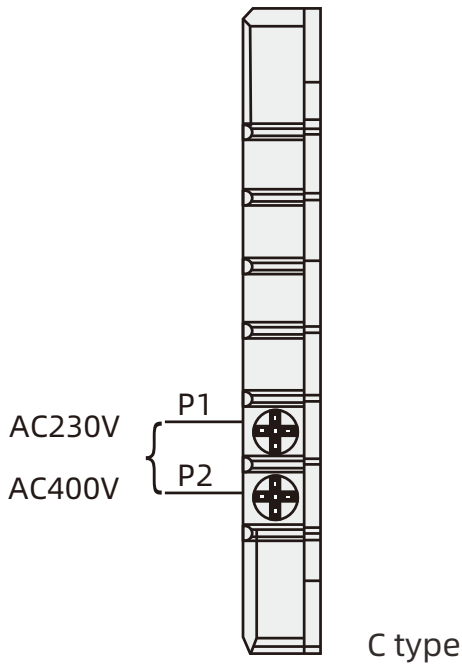


Image 15

b. Shunt release

Connect to the power supply according to the number of the leading wire.

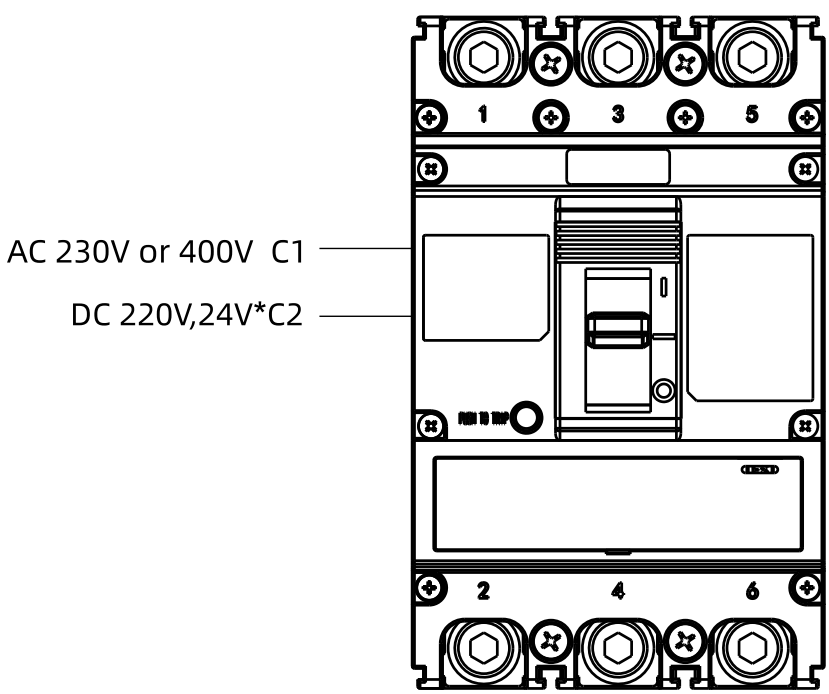


Image 16

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Note: When the user adopts DC24V shunt trip device, the maximum length of the copper conductor (length of each of the two conductors) shall meet the requirements in the following table:

Table 12

Rated control supply voltage Us(DC24V)	Input power	Length of copper conductor	
		1.5mm^2	2.5mm^2
100%Us	50W	150m	250m
85%Us	50W	100m	160m

c.Auxiliary contact, alarm contact

Access the corresponding peripheral control circuit according to the lead wire number.

Note: F11 、F12 、F14 is auxiliary contact terminal.

B11、B12 、B14 is alarm contact terminal.

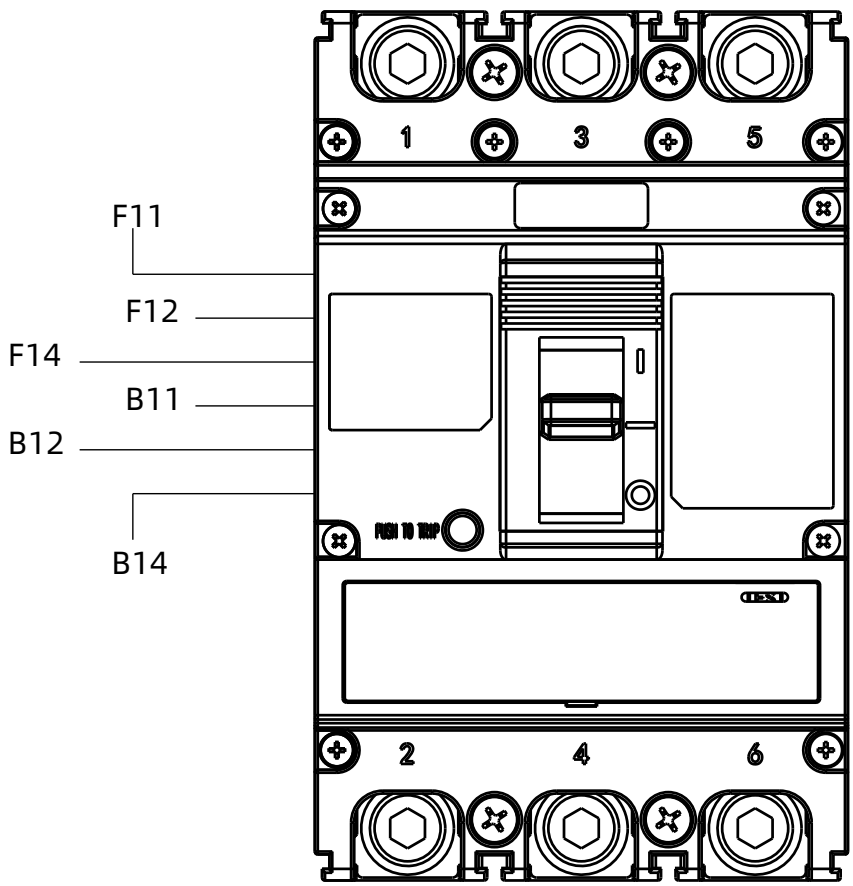


Image 17

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3.3.6.6 Turning handle operating mechanism installed

a.Before installation,the relative position of the opening of the handle of the operating mechanism on the door panel of the switch cabinet should be determined according to the form of the selected circuit breaker operating mechanism (the distance between the opening center and the axis line of the hinge is not less than 100mm).

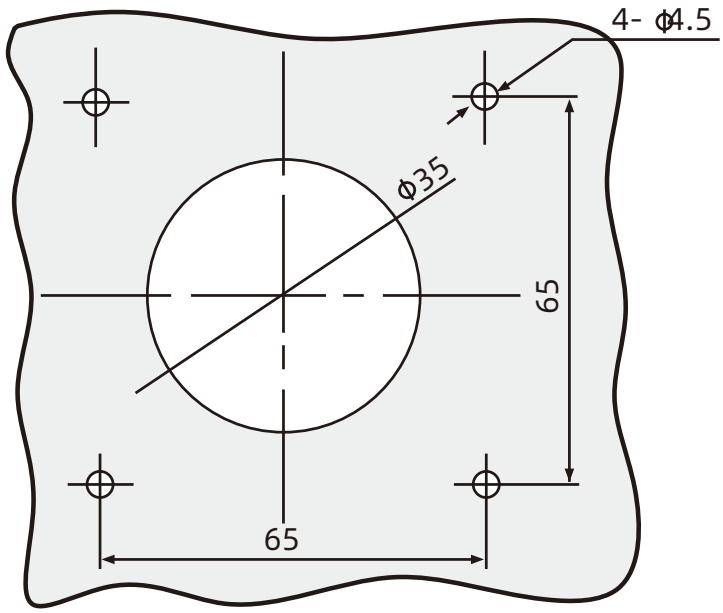


Image 18 Size of opening for door panel with A-handle (to be customized)

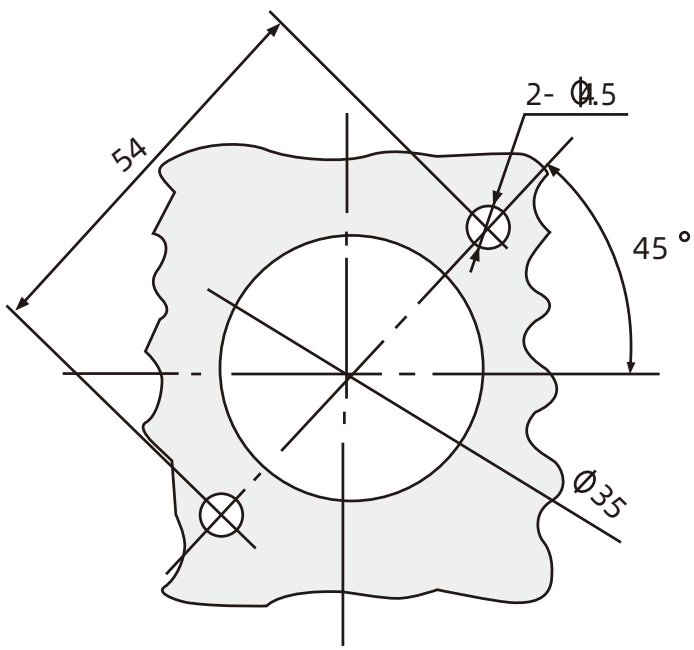
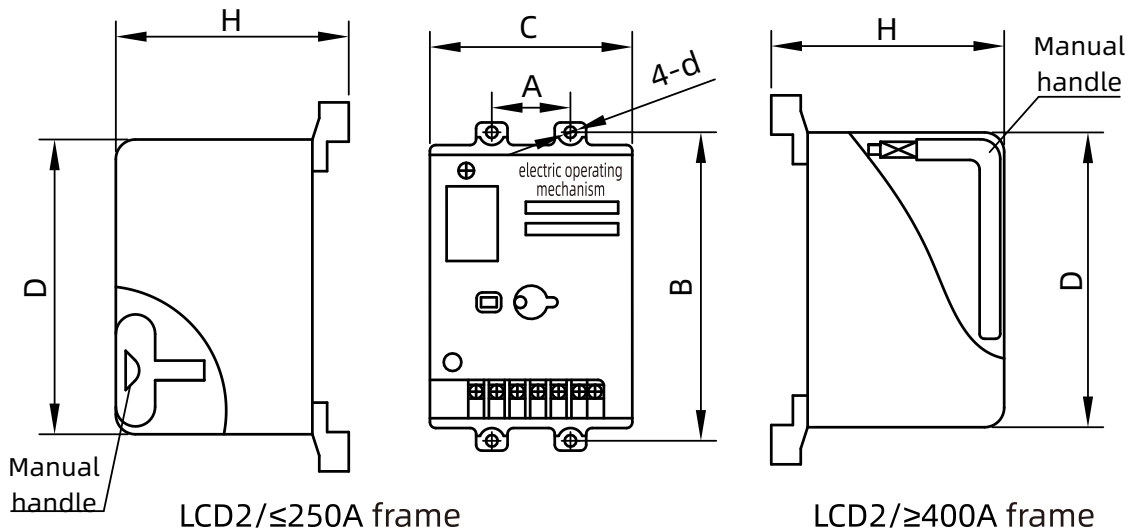


Image 19 Install B handle door panel opening dimensions

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b. Install the circuit breaker with the operating mechanism secured on the mounting plate.
c. Fix the square shaft of the joystick in the square hole of the operating mechanism.
d. Adjust its relative position so that the center of the square shaft is consistent with the center of the handle hole and is fixed.
e. Close the door panel of the switch cabinet installed with the rotating handle, and try to operate the handle. The rotation should be flexible and free, and the circuit breaker should be opened when the handle is in the horizontal position, and the circuit breaker should be closed when the handle is in the vertical position.

3.3.6.7 Installation of electric operating mechanism



LCD2/≤250A frame

LCD2/≥400A frame

Image 20

Table 13

Type	Outline size					
	A	B	C	D	H	d
M3Z-125	30	129	90	116	94	4.5
M3Z-250	35	143	90	116	95	4.5
M3Z-400	44	215	130	176	150	6.5
M3Z-630	48	225	130	176	150	6.5
M3Z-800	70	243	130	176	147	6.5

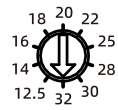
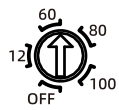
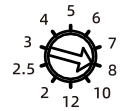
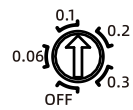
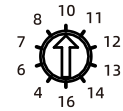
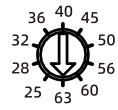
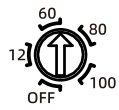
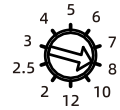
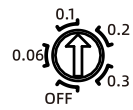
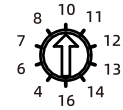
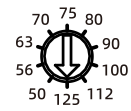
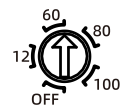
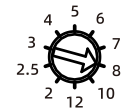
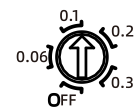
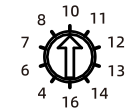
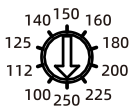
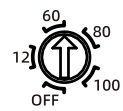
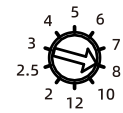
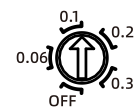
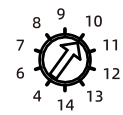
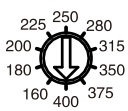
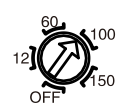
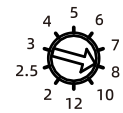
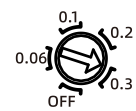
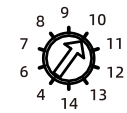
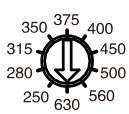
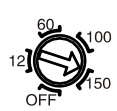
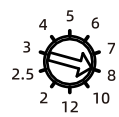
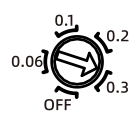
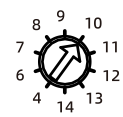
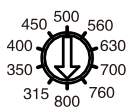
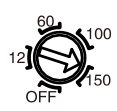
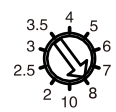
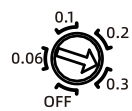
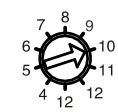
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4. Parameter adjustment

4.1 Adjust the button

The M3Z series is equipped with a current sensor that samples according to effective values. The tuning knobs of overload trip device Ir, corresponding trip time tr of overload trip device, short-circuit short-circuit action current Isd, short-circuit short-circuit action trip time tsd and rated instantaneous short-circuit current setting value Ii are as follows:

Table 14

Type	Rated current	Current and time parameters				
		Ir(A)	tr(s)	Isd(XIr)	tsd(s)	Ii(XIr)
M3Z-125	In=32A					
	In=63A					
	In=125A					
M3Z-250	In=250A					
M3Z-400	In=400A					
M3Z-630	In=630A					
M3Z-800	In=800A					

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4.2 LCD control

M3Z series LCD through the main control board control, specific operations are as follows:

4.2.1 Main surface operation

When the product is running, the real-time current value and working state are displayed, as shown in iamge 21.

Normal operation		Overload trip		Short-time trip		Instant trip	
Ia:0A	Ib:0A	Ia:0A	Ib:0A	Ia:0A	Ib:0A	Ia:0A	Ib:0A
Ic:0A	In:0A	Ic:0A	In:0A	Ic:0A	In:0A	Ic:0A	In:0A

Image 21

4.2.2 MENU interface

When the product is running,press "↵" to enter the main menu,select menu items by"↑"and"↓",press"↵"again to enter the corresponding menu item,and press"ESC"to return to the main interface,as shown in table22.

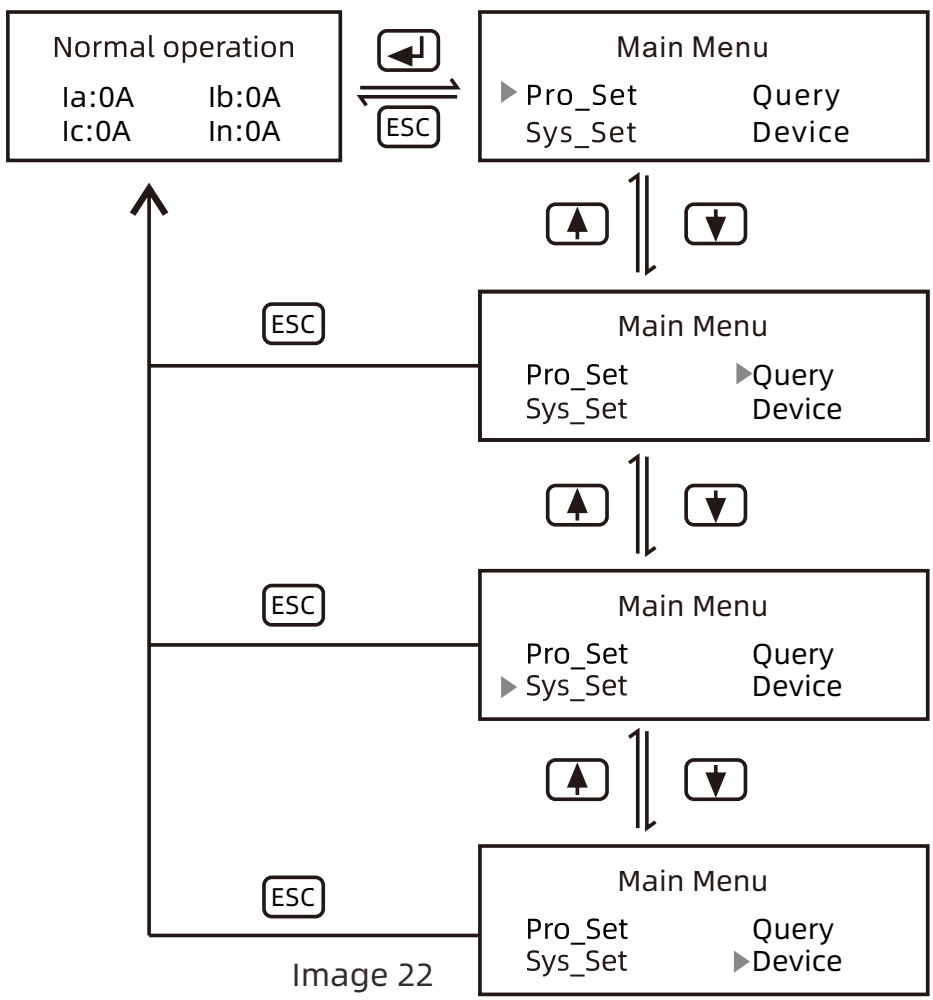


Image 22

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4.2.3 Pro_Set interface

On the “Main Menu” screen,select the menu item of "Pro_Set"and press "↵".The password input screen is displayed.Enter the password using "↑"and"↓",and press"↵"after entering the correct pass word to enter the"Pro_Set"screen,as shown in table 23.



Image 23

4.2.4 Parameter set interface

On the “Pro_Set" screen, press"↵"to enter the"I-Protect" screen.Press"↑" or"↓"to select a menu item and press"↵"again to enter the parameter modification screen.In this case,the corresponding parameter content will be unselected.Press"↵"to confirm the parameter modification, and press"ESC"to cancel the parameter modification,as shown in Figure 24.

Parameter set description:

1) Overload: You can set this parameter to Open，Alm，Close. The default value is"Open" state;
2) Ir: According to different shell frame current, the setting value is different, the default is Inm,the corresponding current value;
3) Tr: according to different shell frame current, the setting value is different, 125-250 shell frame default is 60s, 400 shell frame default is 100s, 630-800 shell frame default is 150s;
4) Short Delay: You can set Open，Alm，Close. The default value is Open.
5) Isd: according to different shell frame current, the setting value is different, the default is 8Ir;
6) Tsd: 0.06s, 0.1s, 0.2s, 0.3s can be set. According to different current of shell frame, the setting value is different. 125-250 shell frame is 0.1s by default,400-800 shell frame is 0.3s by default;
7) Ii: According to different shell and frame current, the setting value is different, the default is 10Ir.

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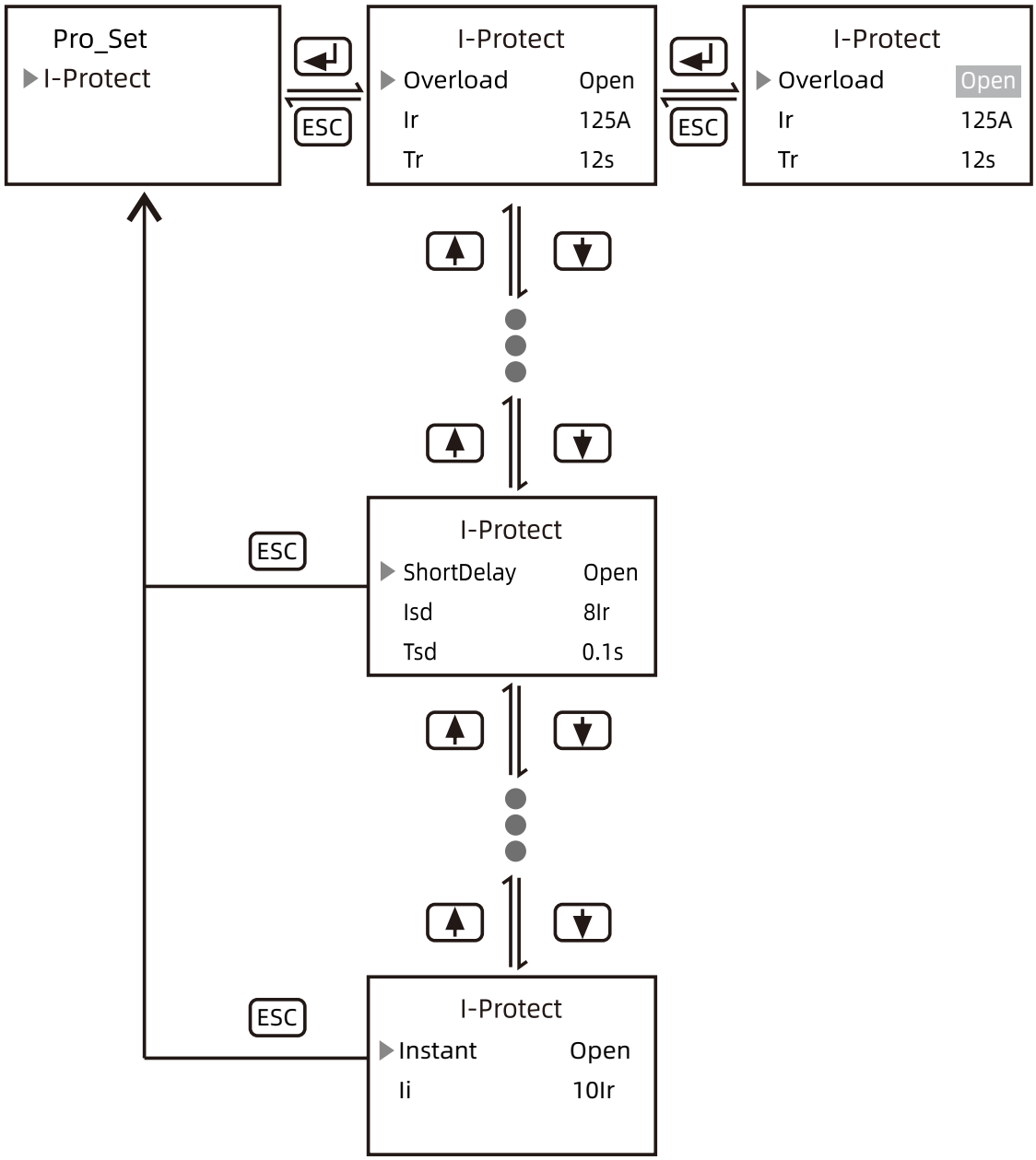


Image 24

4.2.5 Query interface

On the"Main Menu"interface,select the menu item"Query"and press"↵" to enter the"Fault Message"interface.Select the record item to be queried by using the"▲""▼"key,press " "to view the specificfault information,and press"▼" "▲"to switch the content,as shown in image 25.

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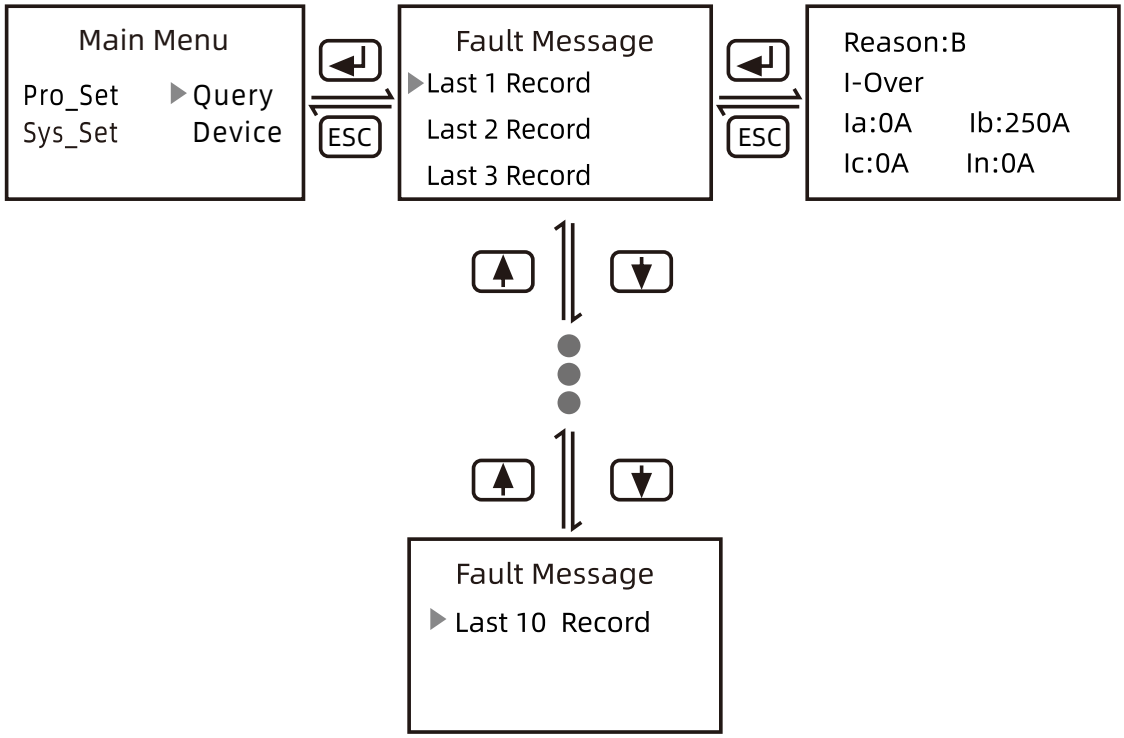


Image 25

4.2.6 Sys_Set interface

In the "Main menu" interface,select the menu item of"Sys_Set" and press"↵"key to pop up the password input interface.Enter thepass word through"▲""▼"key,and press"↵"key after entering the key code correctly to enter the"Sys_Set" interface,as shownin image 26.

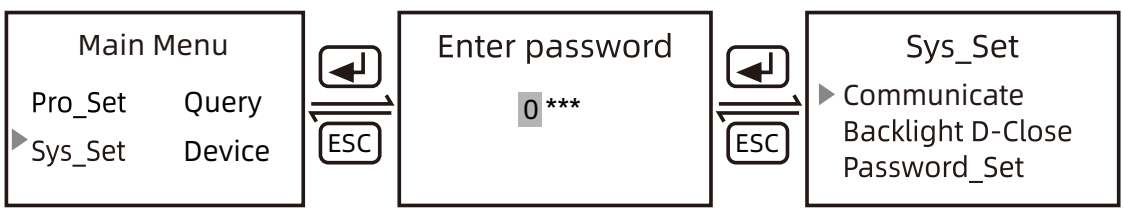


Image 26

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4.2.7 Communicate interface

In the "Sys_Set"Interface,select the menu item of"Communicate"and press "↵"to enter the"Communicate"interface.Press"▲""▼"to select the menu item and press"↵"again to enter the parameter modification interface. At this time,the corresponding parameter content will be selected.Press "ESC "to cancel parameter modification,as shown in image 27.

Parameter set description:

1) Address setting: modbus device address. The value ranges from 0 to 255. 0 is the broadcast address and the default value is 1.
2) Communication BPS:settable600bps,1200bps,2400bps,4800bps, 9600bps,14400bps,19200bps,38400bps,57600bps,115200bps,defaulted 115200bps.

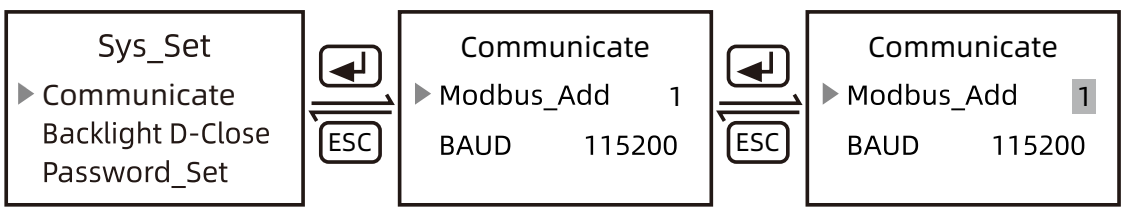


Image 27

4.2.8 Password_Set interface

In the"Sys_Set" interface,select the menu item"Password_Set",and the password input interface will appear.Enter the password by"▲" "▼" press"↵"after entering the correct password,and enter the "Pass word Setting"interface.Select the menu item by"▲""▼"and press "↵"again to enter the Password_Set interface.Press"▲""▼"to adjust parameters,press"↵"to confirm modifying 1-bit parameters,and press"ESC"until all 4-bit parameters have been modified Delete modifying parameters,as shown in image 28.Note:lower passwords cannot be modified for Advanced passwords.

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Parameter set description:

1) The “Pro_Set" screen is displayed for First level, Second level, and Third level passwords.
2) The “Sys_Set" page is displayed for Second level and Third level passwords.
3) The Third level password allows you to enter the interface of "Measurement and Calibration" and "Factory Settings" (the menu is hidden,you need to select the menu item of "Device" and hold down the" ▲ " " ▼ “key for 3s to display the menu item);
4) The super password is 9731. if the password is forgotten after changed you can use the super password to log in.

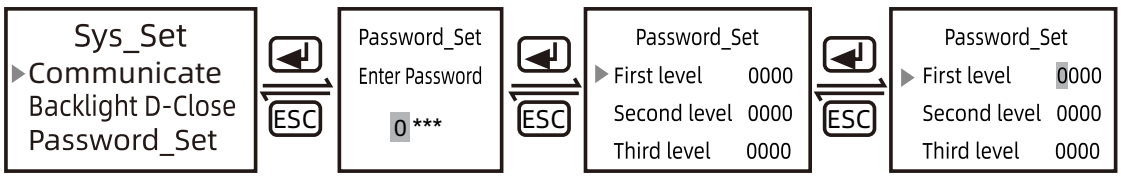


Image 28

4.2.9 Device interface

In the "Main menu" interface, select the "Device" menu item and press "↵" to enter the" Device "interface, and you can view the current software version and rated shell current, as shown in Image 29.

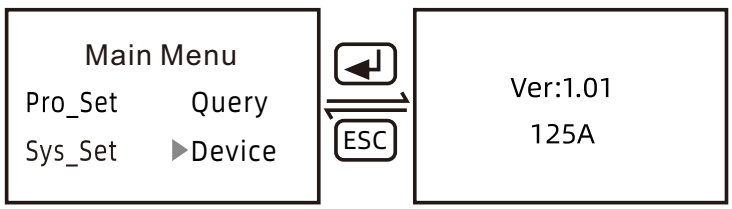


Image 29

4.3 “TEST” socket

The"TEST" jack on the controller can be activated by12V voltage.After activation,you can view the actual current parameters,set parameters, and fault current through the connected soft ware.The liquidcrystal"TEST" jack is energized to activate the controller and adjust the controller parameters when the circuit breaker is off.

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5. Operation

5.1 Check the following items before operation

Check the following items before operation

(1) Check if the wiring is correct.
In particular, input terminals (1, 3, and 5) of the circuit breaker should be connected to power cables,Input terminals (2, 4, 6) should be connected to the load line.

(2) Ensure that there is no short circuit or ground short circuit between terminals or exposed live parts.

(3) Ensure that the terminal connections and fixing screws are secured.

(4) If the circuit breaker has an undervoltage trip device, the trip device should be energized before the circuit breaker is allowed to close.

5.2 Trial operate

After all items are confirmed to be normal, trial operation can be carried out.

(1) The user should adjust on the controller as required Ir,tr,Isd,tsd,Ii.

(2) Turn the handle on and power in (Section 5.1 (4) must be met).

(3) When the main circuit of the circuit breaker is energized, press the trip button. The circuit breaker trips and the operating handle is in the trip position.

5.3 Operation

If 5.2 (2) and (3) can be met, it can be put into operation

6.maintain

Before performing maintenance operations, complete the following operations:

(1) Turn off the circuit breaker.

(2) Disconnect the power supply from the circuit breaker (including the main circuit and auxiliary circuit).

(3) Remove the circuit breaker from the installation position (generally used for plug-in type).

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The circuit breaker is maintained once a year under normal operating conditions and once every six months under abnormal conditions.The following is the main tenance content:

(1) When the circuit breaker is closed,the red emergency trip button is used to pull the circuit breaker out,and the circuit breaker is operated 5 times.Thecircuit breaker can reliably re-buckle,close,split and trip.

(2) Remove dust from circuit breaker surfaces and joints (using clean, dry rags).

(3) Clean the interphase partition and replace it if necessary.

(4) Insulation test (see 3.1).

(5) Check all connections,remove oxides with an emery cloth,clean sur faces with dissolvable agent,and tighten bolts and nuts.

(6) Setting valueTEST:Connect the device to the test interface (TEST) on the circuit breaker to test each set parameter of the circuit breaker. The parameters set detected on the device software should be consis tent with those indicated by the circuit breaker controller(knobor LCD screen).

(7) If the circuit breaker is equipped with amanual operation mecha nism, the circuit breaker is opened and closed three times by hand opera tion(if the circuit breaker is also equipped with anunder voltage trip de vice,the under voltage trip device should be energized before operation), and the lever or handle can move freely.

(8) If the circuit breaker is installed with an electric operating mecha nism, the circuit breaker is opened and closed three times by electrical op era tion(if the circuit breaker is also installed with an under voltage trip de vice,the under voltage trip device should be energized before oper ation),and the electrical operation control function should be normal.

(9) If the circuit breaker is equipped with shunt trip,the circuit breaker should be in the closing state,and then the shunt trip to the rated voltage, the circuit breaker should be reliable trip.

(10) If the circuit breaker is installed with an unde rvoltage trip device, the under voltage trip device first through the rated voltage,close the circuit breaker,so that the circuit breaker is in the closing state,and then the under voltage trip device loses power,the circuit breaker should be reliably tripping,so that the circuit breaker is in the tripping state, and the circuit breaker can not be closed at this time.

(11) If the circuit breaker is equipped with auxiliary and alarm contacts, the auxiliary and alarm switches shall be connected in the test circuit, and the switch signals of auxiliary and alarm shall be normal.

(12) If the circuit breaker is installed with a plug-indevice,the circuit ac tuator should be removed 3 to 5 times,and the function and coasting of its plug-in parts should be normal without jamming resistance.

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7. Common faults and solutions

Table15

NO	Fault description	Possible causes	fault handle
1	Thecircuitbreaker isusedtoprotect themotorinthe processofstarting trip,startfailure.	①If the motor starts directly,the starting current is at least 8 time sof the normal running current,or even moret han10 times. If the setting multiple of the instantaneous protection current is not appropriate,it will trip in the starting process and can not complete the start.	1.Check whether the load is directly started by the motor. What is the starting current? 2. Reasonably determine the setting operating current and operating current multi ple ofthecircuitbreaker.
		②If the power distribution cabinet is faraway from the equipment and the line voltage dropislarge,the starting current of the motor terminal voltage islower than the voltage value re flected in the table on the cabine t willincrease,causing tripping.	1.What is the terminal voltage of the mtor?(P=IUcosϕ)2. Reasonably determine the setting current and multiple of the circuit breaker.
		③If the motor start swith mechanical load,it should check whether the loadis normal and reliable.If the mechanical part runs with gridlock,noise andother phenomena,its poor operationwill cause difficulty in starting,suddenin crease of current value,too long starting time,causing tripping.In addition,if the pump,conveyor belt and other equip ment starts with load,the starting cur rent will increase and trip.	1.Checktheoperationofthe mechanicalpartofthemo tor(load).2.Reasonablyde terminethesettingcurrent andmultipleofthecircuit breaker.
2	During operation,the circuit breaker has trip happened.	①Threephaseloadimbalance, resultedinoverloadtrip.	Isthethree-phasecurrent balanced?
		Field equipmentis of ten over-loaded for a short time,resulting in energy accumulation after acer-tain time trip.	Ensure that the circuit breaker is rated range,and increase the circuit value appropriately.
3	Short-circuit tripping oc curs during operation of thecircuit breaker.There may be the following two type sof cases: ①plastic-case circuit breaker does not trip,uni versal circuit breaker trip. ②Low voltage circuit breaker (including plastic case circuitbreaker and uni versal circuitbreaker) does not trip,high voltage side protection electrical trip	Generally, the protection characteris-tics of the series circuit breaker are improperly matched and selected,and there is no appropriate safety time.The analysis should understand thelinecon ditions, including the length and sec tion of the connecting cable, short-circuit current estimation, the main cir cuit of the breaker through thecurrent estimation, short-circuit fault occur rence time,etc.	1.Check the circuit breakersta tus site.If no rejectionoccurs, the product shall be judged as normal. 2.Test features to determine whether the breaker is quali fied. 3.Select circuit breakers properly.

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8. About warranty period and after-sales service

This product is manufactured under a sound quality management system. In case of failure, the warranty period and after-sales service are described as follows:

8.1 Warranty period

Under the user's compliance with the storage and use conditions,the Company shall be responsible for free repairor replacement if the circuit breaker seal is in good condition and the product is damaged or can not be used normally due to manufacturing quality problem swith in 18 months from the dateof delivery.

However,if the fault is caused by the following reasons,paid repair or replacement will be made even with in the warranty period.

① Due to the wrong use,self-modification and inappropriate maintenance.

② Use in excess of the requirements of standards pecifications.

③ Due to fall and damage in the installation process after purchase.

④ Earthquake,fire,lightning strike,abnormal voltage,other natural disasters and secondary disasters.

8.2 After-sales Service

① In case of failure,please contact the supplier or the company's after-sales service department.

② Repair or replacement with in the warranty period:fault caused by the company's manufacturing problems,for free repair,even replacement.

③ Repair or replacement after the warranty period:in the case of maintaining the function after repair,do Paid repair;After repair can not work properly,paid replacement.

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9. Product Factory Accessories List

Table 16

Type	Manual (includingqualification certificate)	Mounting screw	Phase partition
M3Z-125 3P	X1	X4(SPEC: M4X50)	X4
M3Z-125 4P	X1	X4(SPEC: M4X50)	X6
M3Z-250 3P	X1	X4(SPEC: M4X70)	X4
M3Z-250 4P	X1	X4(SPEC: M4X70)	X6
M3Z-400 3P	X1	X4(SPEC: M5X70)	X4
M3Z-400 4P	X1	X4(SPEC: M5X70)	X6
M3Z-630 3P	X1	X4(SPEC: M5X70)	X4
M3Z-630 4P	X1	X4(SPEC: M5X70)	X6
M3Z-800 3P	X1	X4(SPEC: M6X90)	X4
M3Z-800 4P	X1	X4(SPEC: M6X90)	X6

Note: When the circuit breaker is equipped with internal and external accessories, the parts list may be different from the above table.

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