XUCKY

Catalogue

WENZHOU XUCKY ELECTRIC CO.,LTD

www.xucky.com

Electronic circuit breaker (ECB)

Directory

Version management

Date	Version	Compilation	Revision	Audit	Change content
2020.5.21	V1.0				First edition preparation
May 24, 2020.5	V1.1				Add ECB operation content
May 27, 2020	V1.2				Add product specification description, etc.
June 2, 2020	V1.3				Add specification description of sinking support, etc.
July 1, 2020	V1.5				Increase the standard requirements for fastener operation results, etc.
July 23, 2020	V1.6				The description of nut mounting torque was revised, and the signal name was changed to C NC

1. Preparation before installation

1.1. Preparatory work

1.1.1. According to the requirements of work tasks, confirm the work contents. Organize the staff to study the work instruction, so that all the staff are familiar with the work content, progress requirements, operation standards and safety precautions.

1.1.2. Understand the field working environment conditions, analyze the possible problems, and put forward effective preventive measures.

1.1.3. The tools and materials carried can meet the requirements of installation operations.

1.2. Personnel requirements

1.2.1. On-site operators should be in good health and mental state.

1.2.2. The person in charge of field operation must have relevant working experience and be familiar with electrical equipment safety knowledge.

1.2.3. Construction personnel shall not be less than 2.

1.2.4. Staff must have the necessary electrical professional (or basic electrical) knowledge and master the professional operation skills.

1.3. Main instruments and tools

1	Insulating glove	2	Insulated shoes
3	Electrician knife, electrician pliers	4	Safety helmet
5	Electrotest pen	6	Multimeter
7	Marker pen	8	One-line screwdriver (with torsion meter)
9	Cross screwdriver (with torsion meter)	10	4 #, 8 #, 10 # hexagon wrench (with torsion meter)
11	External hexagon wrench (adjustable with torsion meter)	12	660 # Universal Key
13	Closing operating handle (circuit breaker matching)	14	Hydraulic terminal clamp

Note: The tools used must meet the requirements in the above table.

1.4. Safety measures

1.4.1. When entering the work site, the staff must wear safety helmets and overalls, and use labor protection articles correctly.

1.4.2. Check whether the actual wiring is consistent with the site, requirements and drawings, and whether the actual installation position is consistent with the dispatching contents. If any inconsistency is found, it should be reported and corrected in time, and the installation operation can be started only after it is confirmed to be correct.

1.4.3. Before the power outage installation operation, the electricity must be checked with a test pen, and it should be determined that there is no electricity at the incoming end of the circuit breaker, and the superior control switch (or circuit breaker) is in the opening position, which is safe and reliable.

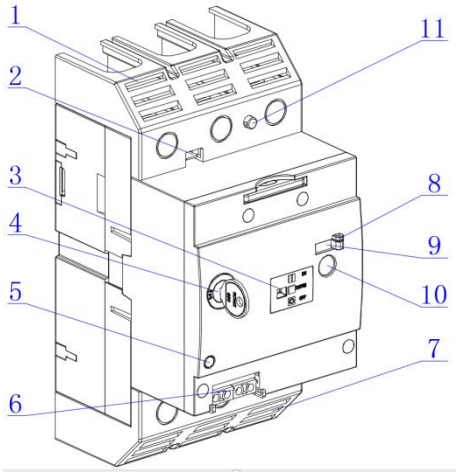
1.4.4. Use insulating tools and take safety protection measures.

1.4.5. It is strictly forbidden to close manually without eliminating the fault after the fault trips; It is strictly forbidden for users to close manually when they are in arrears

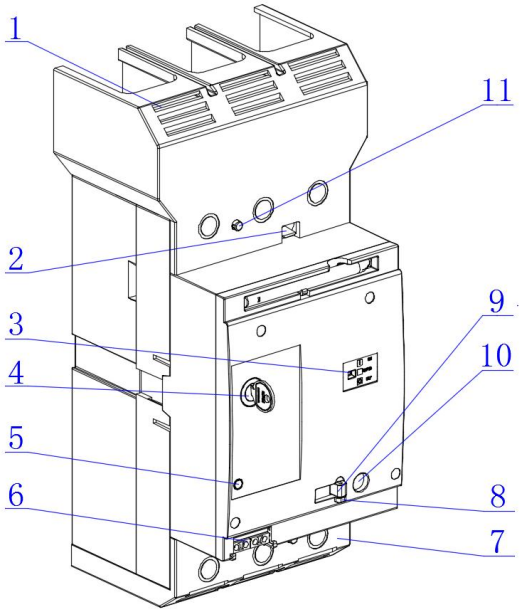
1.4.6. After the installation operation, the staff should check the voltage of the installation equipment and the connection of the control loop and clean up the site.

2. Introduction of External Circuit Breaker

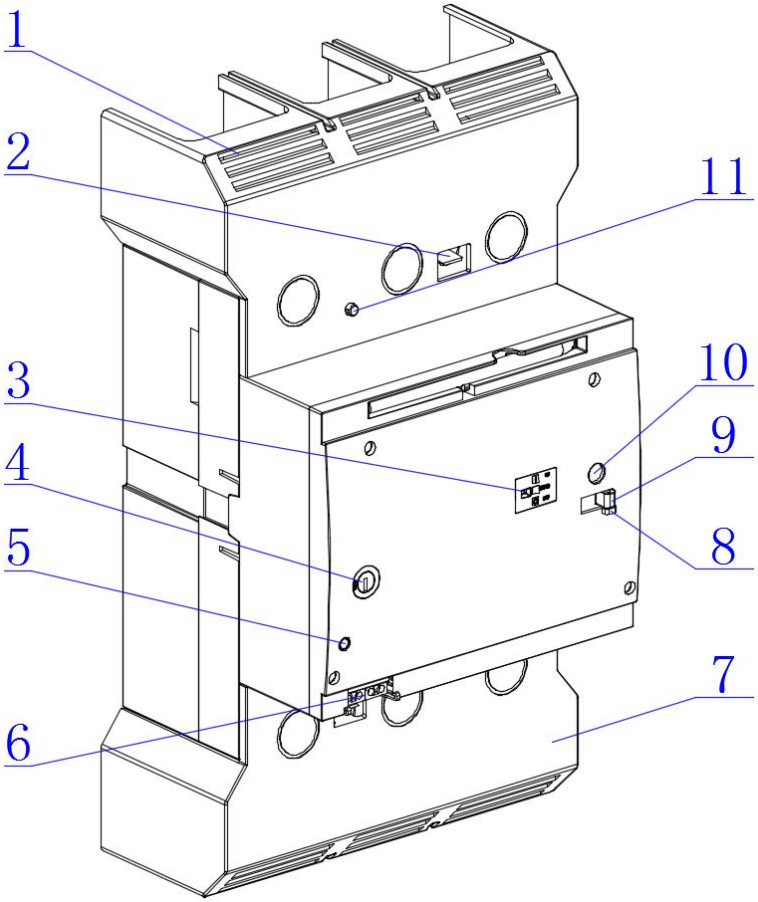
2.1. Part name description



250 frame (160A, 200A, 250A)



400 frame (300A, 400A)

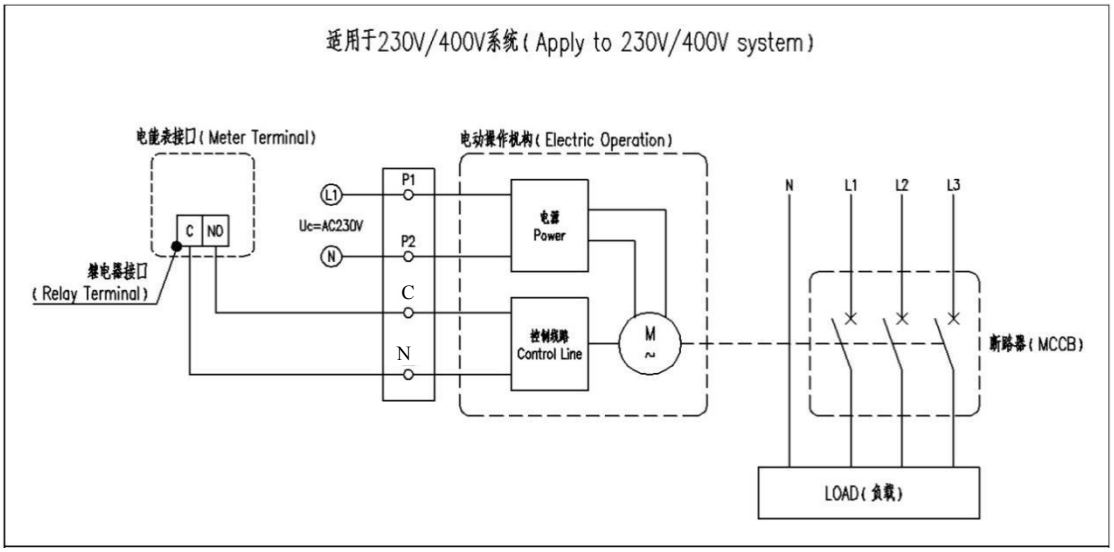


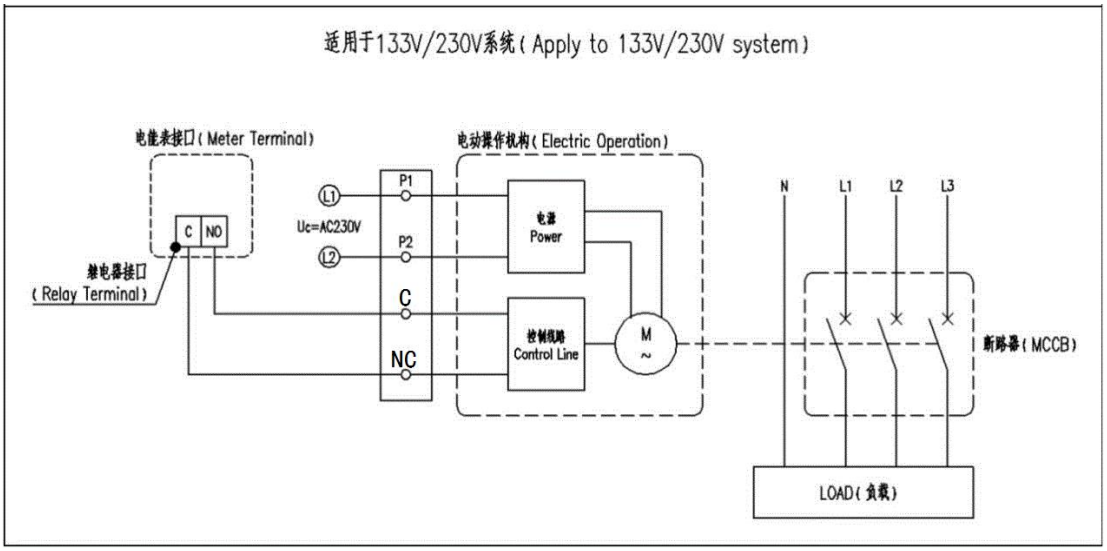
1000 frame (500A, 600A, 800A, 1000A)

1	Upper terminal cover	7	Lower terminal cover
2	Terminal cover locking device	8	Hand automatic cover plate lead seal
3	Close/break/trip indication	9	Manual/automatic switching cover plate
4	Mechanism lock	10	Manually operated knob
5	Trip test button	11	Lead sealing column of terminal cover

6	Electric operation terminal		

2.2. Wiring mode of electric operating mechanism

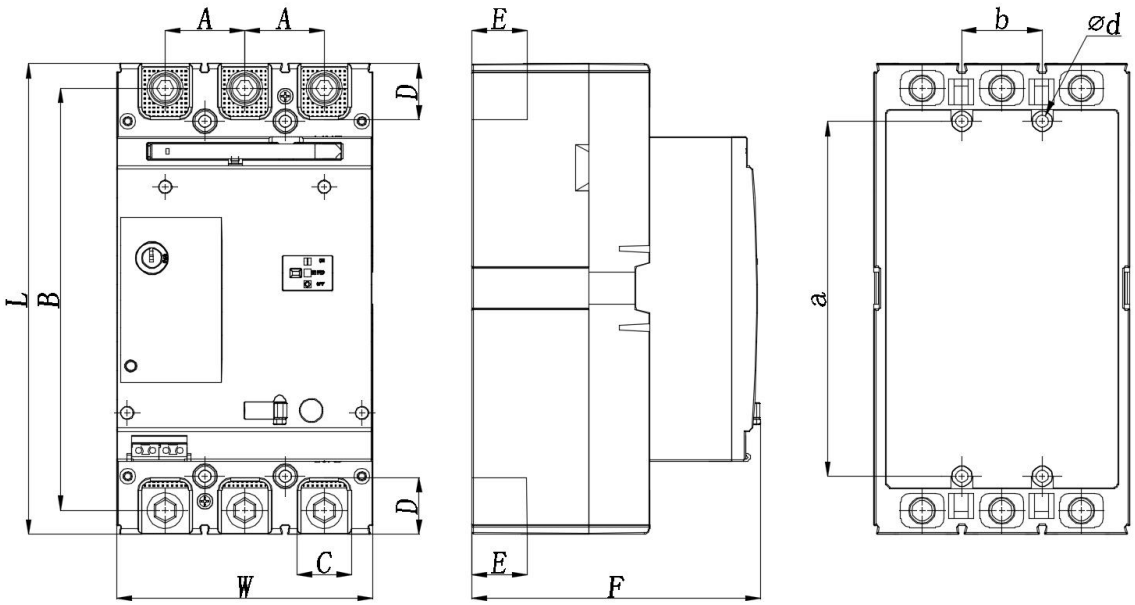




Terminal name	Describe
P1, P2	Electric operating mechanism control power supply AC230V
C, NC	Electric operating mechanism closing and opening control terminal After C-NC is turned on, the circuit breaker is in the allowed closing state or closing operation After C-NC is disconnected, the circuit breaker is opened

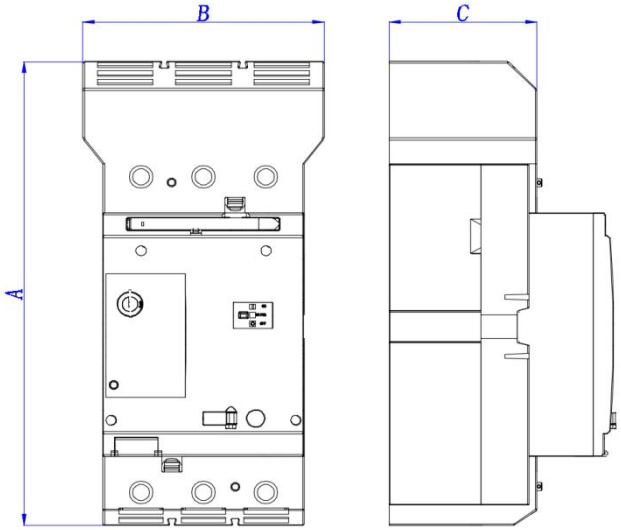
2.3. Product Dimension Drawing (Unit: mm)

2.3.1. Overall dimensions of body



Dimensions Model	ECB-250P 3P (160A)	ECB-250P 3P (200A)	ECB-250P 3P (250A)	ECB-400P 3P (300A)	ECB-400P 3P (400A)
L	165	165	165	257	257
W	105	105	105	140	140
A	35	35	35	43.5	43.5
B	144	144	144	230	230
C	24	24	24	31	31
D	21	21	21	29	29
E	22.5	22.5	22.5	30	30
F	118	118	118	160	160
A	126	126	126	194	194
B	35	35	35	44	44
φ d	4 × φ 4.5	4 × φ 4.5	4 × φ 4.5	4 × φ 7	4 × φ 7
Dimensions Model	ECB-800P 3P (500A)	ECB-800P 3P (600A)	ECB-800P 3P (800A)	ECB-800P 3P (1000A)	
L	275.5	275.5	275.5	275.5	
W	210	210	210	210	
A	70	70	70	70	
B	243.5	243.5	243.5	243.5	
C	45	45	45	45	
D	30	30	30	30	
E	24	24	26	28	
F	175	175	175	175	
A	243	243	243	243	
B	70	70	70	70	
φ d	4 × φ 8	4 × φ 8	4 × φ 8	4 × φ 8	

2.3.2. External dimensions of external protective cover



Dimensions Model	ECB-250P 3P (160A)	ECB-250P 3P (200A)	ECB-250P 3P (250A)	ECB-400P 3P (300A)	ECB-400P 3P (400A)
A	208	208	208	397	397
B	105	105	105	168	168
C	67.5	67.5	67.5	103	103
Dimensions Model	ECB-800P 3P (500A)	ECB-800P 3P (600A)	ECB-800P 3P (800A)	ECB-800P 3P (1000A)	
A	418	418	418	418	
B	238	238	238	238	
C	103	103	103	103	

2.4. Product parameter performance

Rated current	Operating voltage	Rated limit short circuit breaking capacity (Icu)	Rated operating short circuit breaking capacity Ics (% Icu)
160A	230/133 V	25kA	100%
	400/230 V	20kA	
200A	230/133 V	25kA	
	400/230 V	20kA	
250A	230/133 V	25kA	
	400/230 V	20kA	
300A	230/133 V	25kA	
	400/230 V	20kA	
400A	230/133 V	25kA	
	400/230 V	20kA	
500A	230/133 V	65kA	
	400/230 V	40kA	
600A	230/133 V	65kA	
	400/230 V	40kA	
800A	230/133 V	65kA	
	400/230 V	40kA	
1000A	230/133 V	65kA	
	400/230 V	40kA	

3. Installation process of circuit breaker products

3.1. Installation considerations

1) Before installing the circuit breaker, disconnect the external power supply, and live operation is strictly prohibited.

2) The circuit breaker should be installed in the meter box to prevent rain.

3) When installing the circuit breaker, try to avoid installing it in direct sunlight.

4) From the front of the circuit breaker, it is forbidden to install upside down or horizontally. Circuit breaker wiring can go in and out, or go in and out.

5) The dimensions of the input terminals are suitable for the following different ratings:

A for 160A, 200A, 250A circuit breakers, the input terminals are suitable for copper conductors below 120mm2, and no cable tabs are used.

B. For circuit breakers with rated currents of 300A, 400A, 500A, 600A, 800A and 1000A, the terminals are suitable for copper/aluminum conductors below 300mm2, with the use of cable terminals.

C. For circuit breakers with rated currents of 300A, 400A, 500A, 600A, 800A and 1000A, the terminals are suitable to use extended terminals to increase the pole distance, and prepare for the connection between the two cables on these terminals and the cable joints.

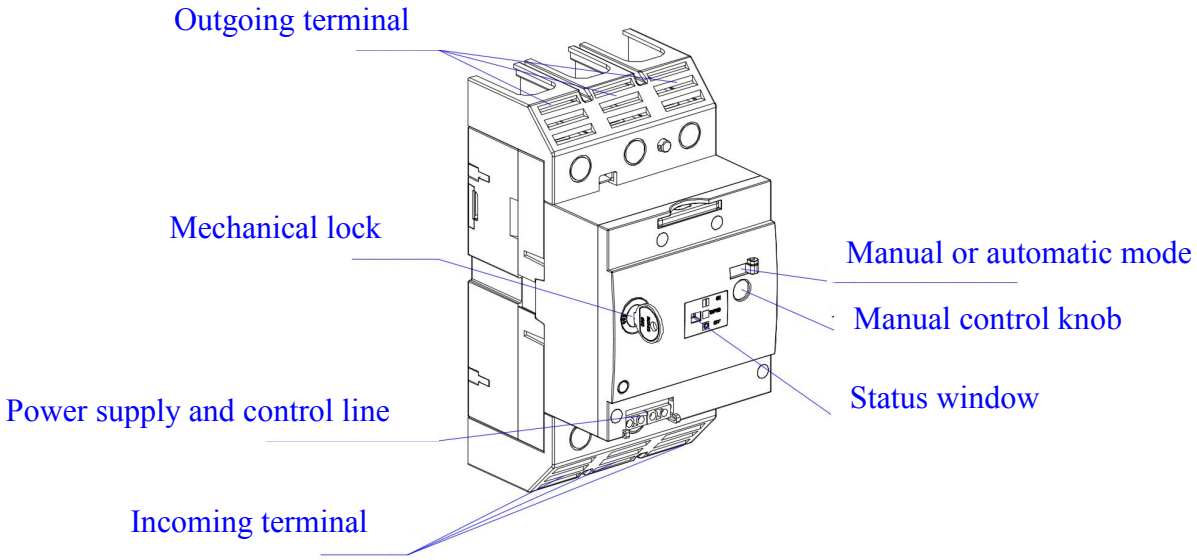
6) Output terminal dimensions are suitable for the following different ratings:

A. For circuit breakers with rated current of 160A, 200A and 250A, the output terminals are directly connected in box type without cable tab, and are suitable for copper wires below 120mm2.

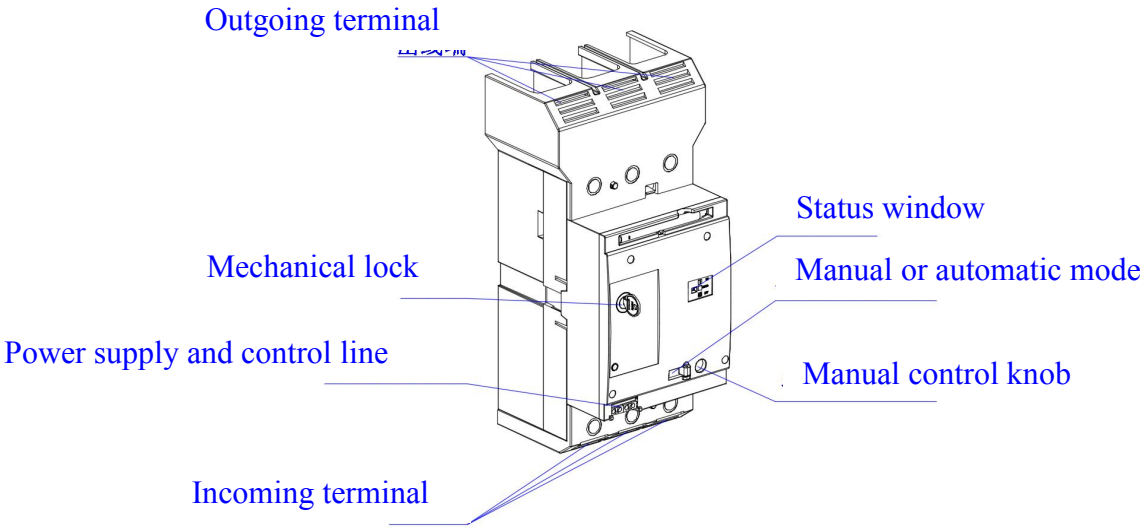
B. For circuit breakers with rated current of 300A and 400A, the output terminals are directly connected in box type, and no cable tabs are used. It is suitable for copper wires below 185mm2 and 240mm2.

C. For circuit breakers with rated currents of 500A, 600A, 800A and 1000A, the output terminals are suitable for direct connection to tinned copper bus bars through bolts and nuts.

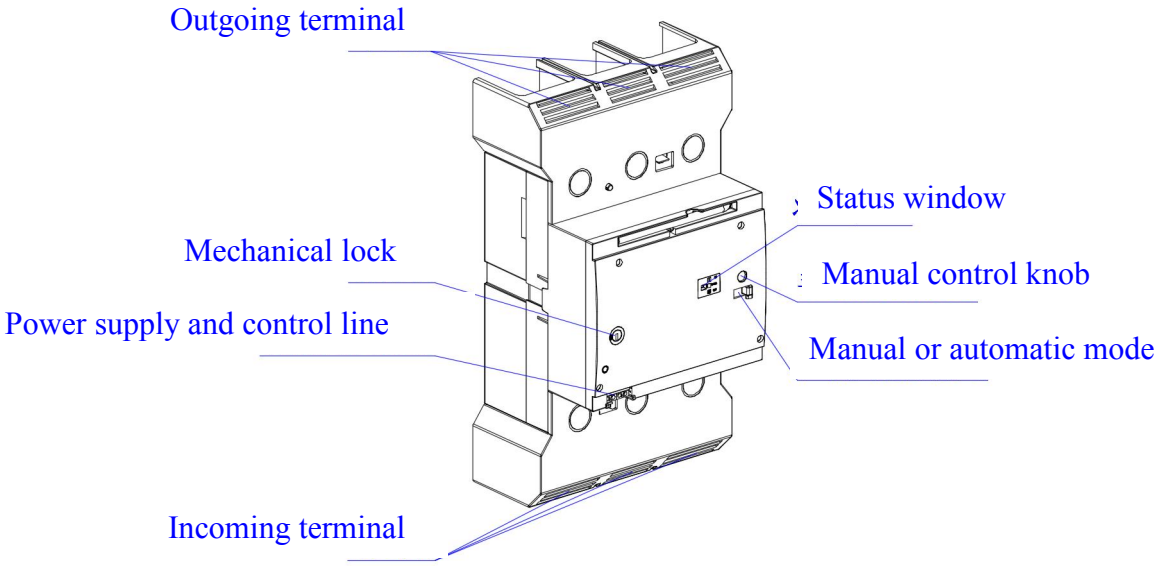
3.2. Product appearance description



(250 shell frame)

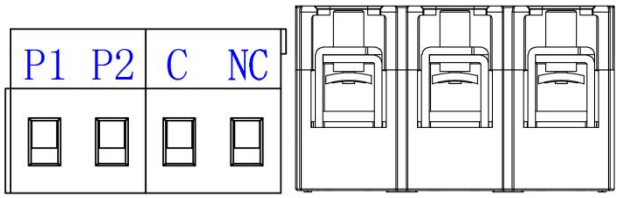


(400 shell frame)

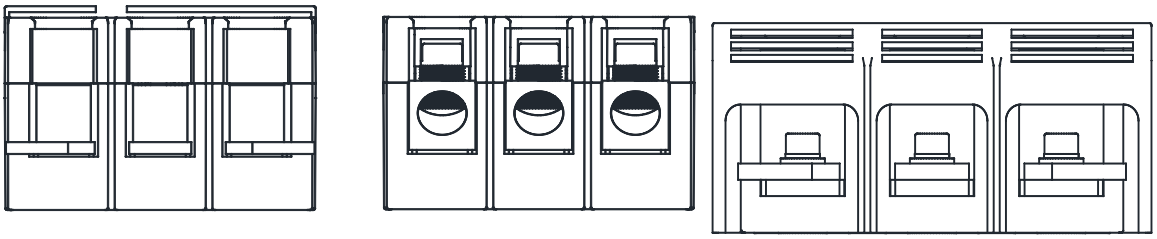


(1000 shell frame)

3.3. Terminal diagram



Electric operating mechanism terminal 250 shell rack inlet and outlet terminals

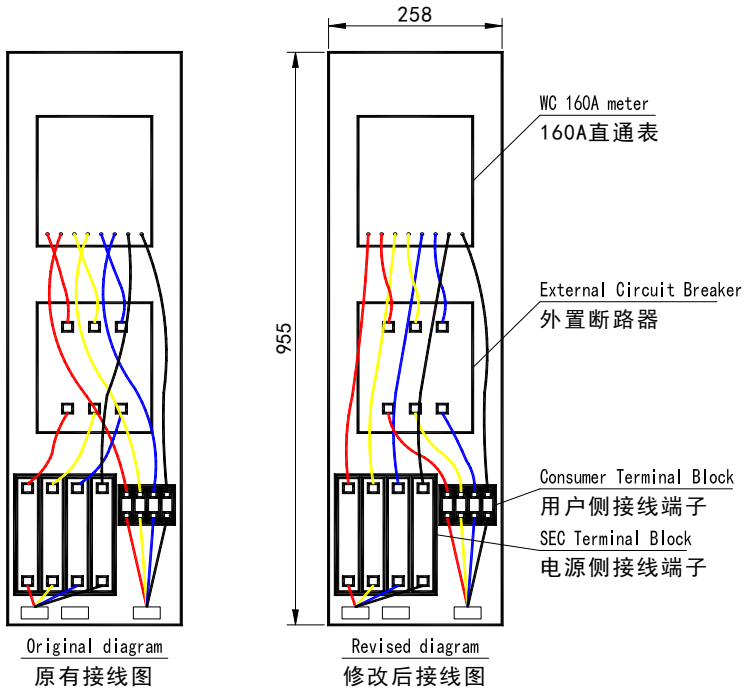


400 shell rack incoming terminal 400 shell rack outgoing terminal 1000 shell rack incoming and outgoing terminal

3.4. Circuit breaker and meter wiring change diagram

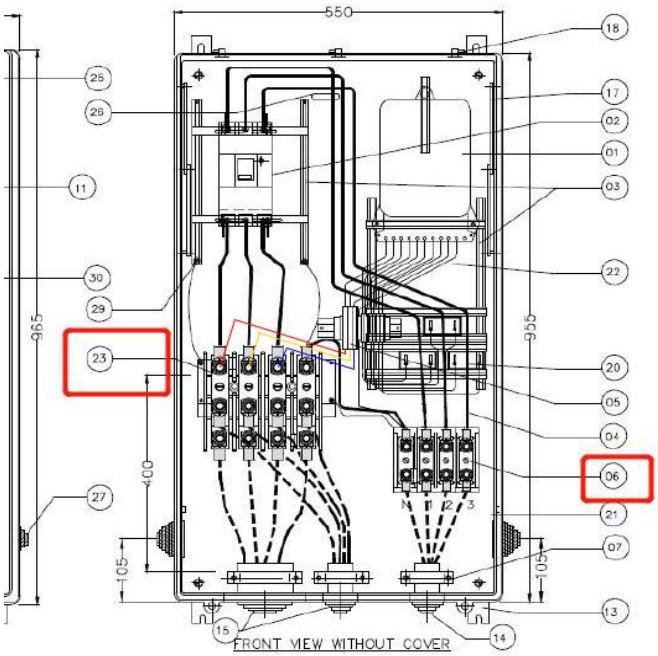
3.4.1. 160A straight-through electric meter

For 160A straight-through ammeter, nine wires in the main circuit should be reformed when installing circuit breaker. Three voltage lines on the terminal of power supply side were originally directly connected to circuit breaker, but now they need to be reformed into three voltage lines on power supply side directly connected to the incoming terminal of ammeter; Originally, the three voltage lines on the terminal of the user side were connected from the electric meter, but now it is necessary to transform the outgoing line of the circuit breaker directly to the terminal of the user side; The three voltage lines originally connected to the incoming line of the meter need to be changed to the outgoing line of the meter as shown in the schematic diagram.



3.4.2. Mutual inductance connected (CT) ammeter

For CT meter, it is necessary to transform the three voltage lines of CT meter when installing circuit breaker. The original three voltage lines of CT meter are directly connected to the terminal on the user side, but now it is necessary to transform the three voltage lines of CT meter into the terminal on the power side.



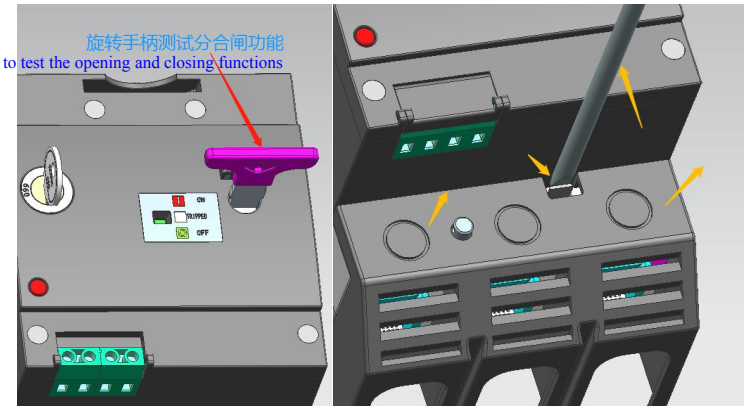
3.5. Detailed on-site specific installation steps

3.5.1. Installation of circuit breakers with rated currents of 160A, 200A and 250A for systems with voltage of 230V/400V

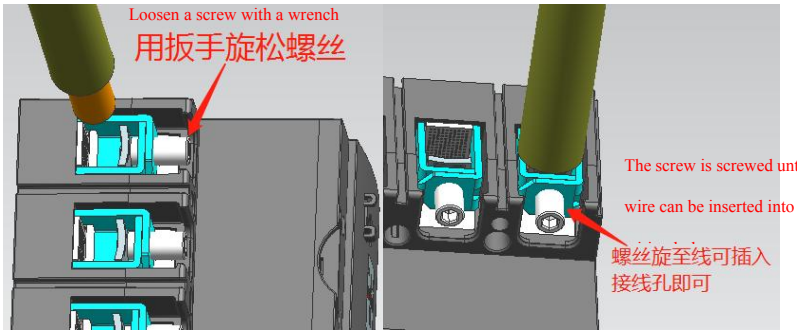
a) On-site power failure, power inspection and grounding wire hanging.

b) Remove the original MCCB.

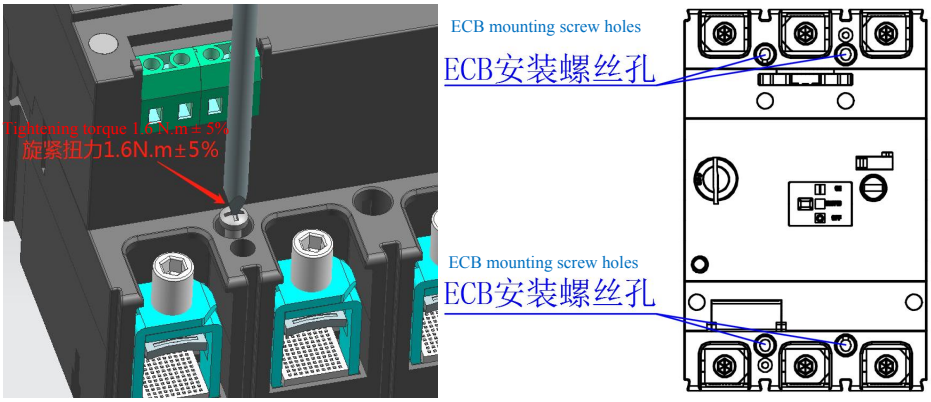
c) Open the new ECB package, remove the manual/automatic switching cover plate, take out the manual operating handle, operate the ECB opening and closing according to the direction indicated by the panel. After testing the opening and closing, use a straight screwdriver to resist the terminal cover locking device and remove the terminal cover



Loosen all mounting cage connection screws with a hexagon wrench to insert the stripped power line into the mounting cage frame (as shown in the following figure).

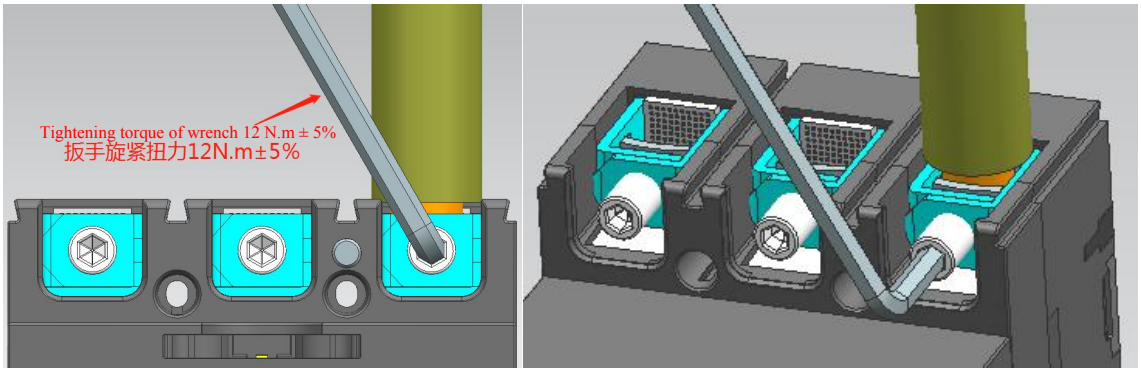


d) Determine the suspension position of the circuit breaker. If the meter box has an opening, it can be directly suspended; If there is no opening, find a firm opening to hang the circuit breaker, and make sure there is no wire below before opening. After opening the hole, screw in the mounting screw, put on the nut and tighten it (torque requirement is 1.6 N. m ± 5%) so that the circuit breaker can be firmly installed in the meter box.



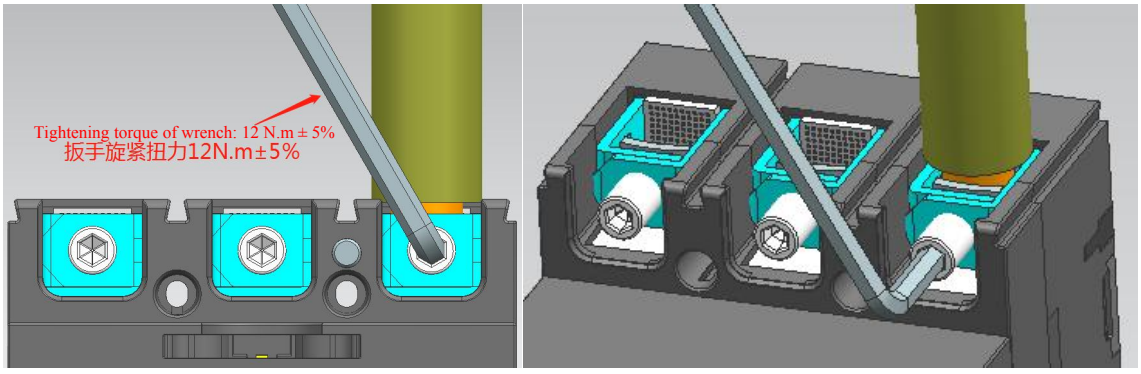
e) Configure ECB incoming and outgoing cables according to circuit breaker and meter wiring change diagram.

f) Connect the incoming wires of A, B and C three-phase power supply to the terminals of circuit breaker (incoming terminal) respectively, and fasten the screws with a hexagon wrench (torque requirement is 12N. m 5%) to ensure good and firm contact. Virtual connection of screws is strictly prohibited.



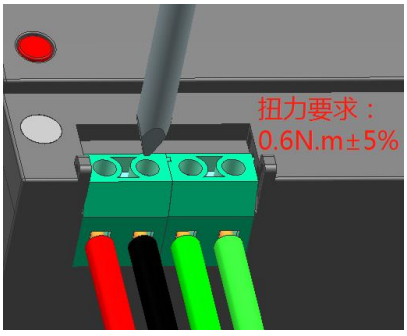
g) Connect the outgoing lines of A, B and C three-phase power supply to the terminal of

circuit breaker (outgoing line end) respectively, and fasten the screws with hexagon wrench (torque requirement is 12N. m 5%) to ensure good and firm contact. Virtual connection of screws is strictly prohibited.



h) Install the removed terminal cover back to its original position, and ensure that the terminal cover is completely covered to the bottom.

i) Open the terminal cover of the control port, loosen the screws, connect P1 and P2 to 230V AC voltage (phase A voltage, that is, phase A of the incoming line terminal and phase N of the zero line row) through the power line, connect C and NC to the control terminal corresponding to the charge control function of the ammeter through the signal line, and tighten the screws (torque requirement is 0.6 N.m5%) to ensure good and firm contact, and cover the terminal cover back to its original position.



Torque requirement:

0.6 N.m ± 5%

j) Remove the grounding wire connected before installation, send power on site, open the manual/automatic switching cover plate after normal power inspection, operate the circuit breaker to close with the operating handle, and the status window display changes from OFF to ON, and then close the manual/automatic switching cover plate to make the circuit breaker enter the automatic control state.

k) It can simulate the function of arrears and payment through the charge control operation of the circuit breaker by the electric meter. When the circuit breaker is in arrears, it can automatically open and close, and after payment, it can automatically close.

l) After confirming the normal function of the circuit breaker, power is cut off on site, lead

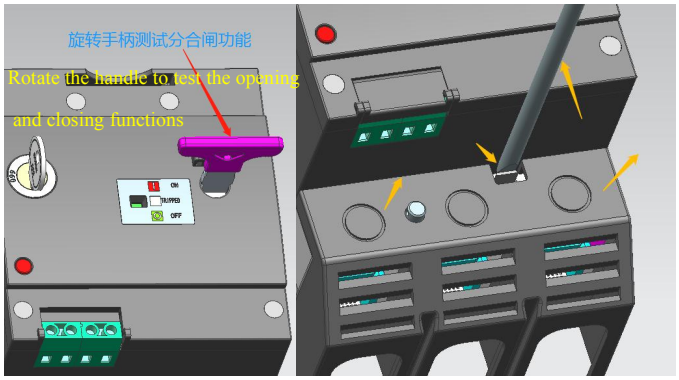
seal is installed on the circuit breaker, and power is sent again to enter the running state.

3.5.2. Installation of circuit breakers with rated currents of 160A, 200A and 250A for 133V/230V systems

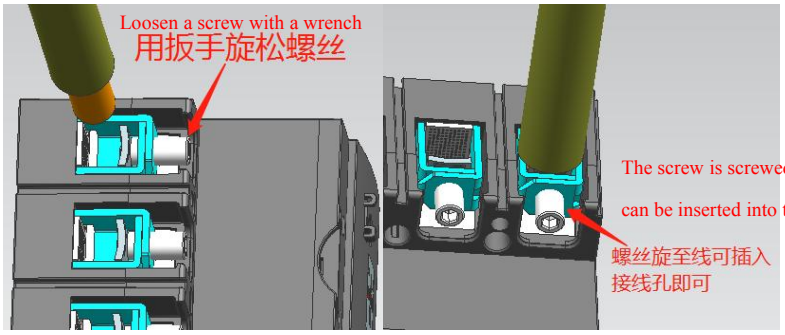
a) On-site power failure, power inspection and grounding wire hanging.

b) Remove the original MCCB.

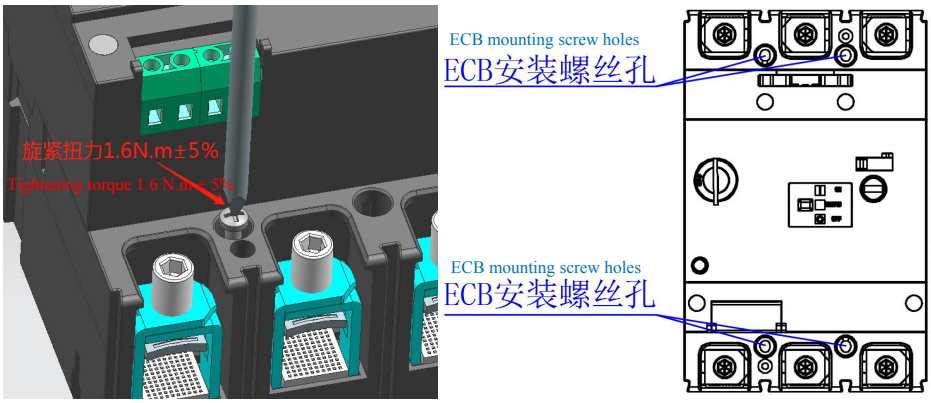
c) Open the new ECB package, remove the manual/automatic switching cover plate, take out the manual operating handle, operate the ECB opening and closing according to the direction indicated by the panel. After testing the opening and closing, use a straight screwdriver to resist the terminal cover locking device and remove the terminal cover



Loosen all mounting cage connection screws with a hexagon wrench to insert the stripped power line into the mounting cage frame (as shown in the following figure).

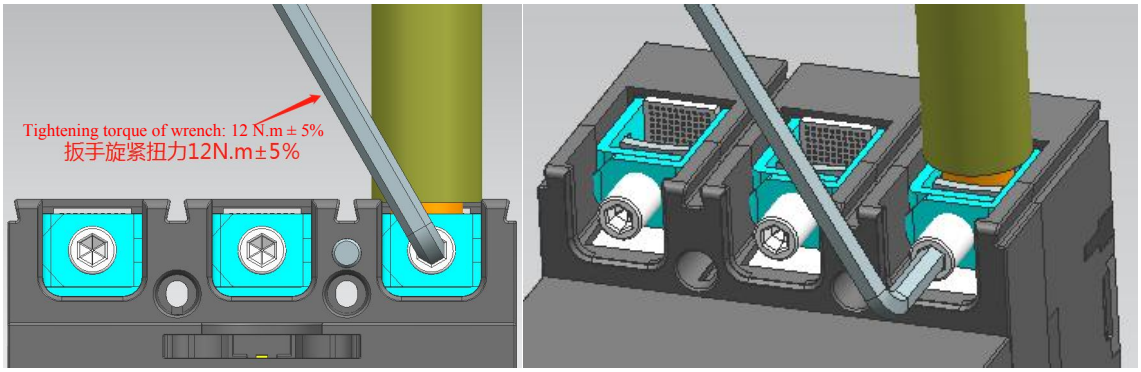


d) Determine the suspension position of the circuit breaker. If the meter box has an opening, it can be directly suspended; If there is no opening, find a firm opening to hang the circuit breaker, and make sure there is no wire below before opening. After opening the hole, screw in the mounting screw, put on the nut and tighten it (torque requirement is 1.6 N. m ± 5%) so that the circuit breaker can be firmly installed in the meter box.

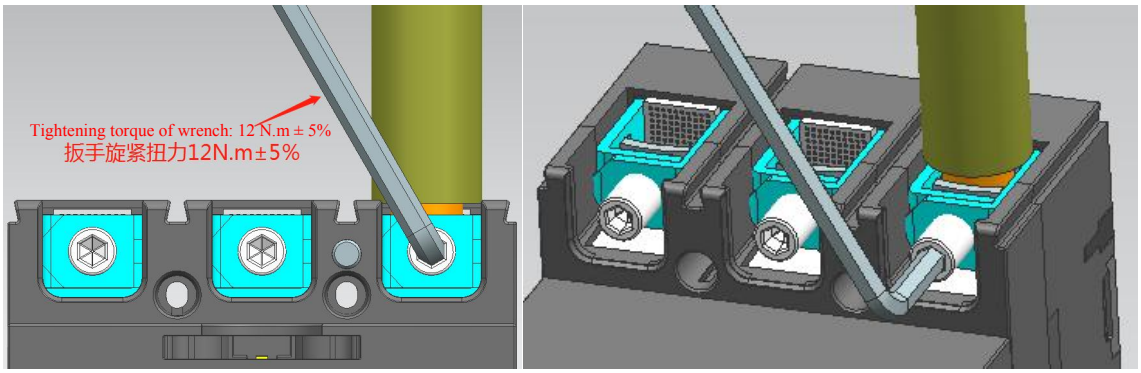


e) Configure ECB incoming and outgoing cables according to circuit breaker and meter wiring change diagram.

f) Connect the incoming wires of A, B and C three-phase power supply to the terminals of circuit breaker (incoming terminal) respectively, and fasten the screws with a hexagon wrench (torque requirement is 12N. m 5%) to ensure good and firm contact. Virtual connection of screws is strictly prohibited.



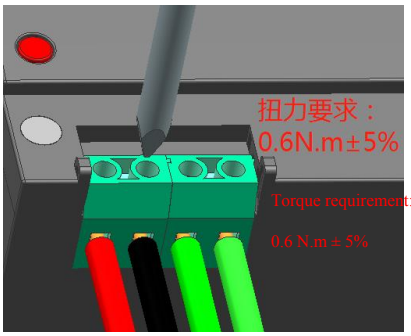
g) Connect the outgoing lines of A, B and C three-phase power supply to the terminal of circuit breaker (outgoing line end) respectively, and fasten the screws with hexagon wrench (torque requirement is 12N. m 5%) to ensure good and firm contact. Virtual connection of screws is strictly prohibited.



h) Install the removed terminal cover back to its original position, and ensure that the terminal cover is completely covered to the bottom.

i) Open the terminal cover of the control port, loosen the screws, connect P1 and P2 to

230V AC voltage through the power line (line voltage between A and B, i.e. phase A and phase C of the incoming line), connect C and NC to the control terminal corresponding to the charge control function of the ammeter through the signal line, and tighten the screws (torque requirement is 0.6 N.m5%) to ensure good and firm contact, and cover the terminal cover back to its original position.



j) Remove the grounding wire connected before installation, send power on site, open the manual/automatic switching cover plate after normal power inspection, operate the circuit breaker to close with the operating handle, and the status window display changes from OFF to ON, and then close the manual/automatic switching cover plate to make the circuit breaker enter the automatic control state.

k) It can simulate the function of arrears and payment through the charge control operation of the circuit breaker by the electric meter. When the circuit breaker is in arrears, it can automatically open and close, and after payment, it can automatically close.

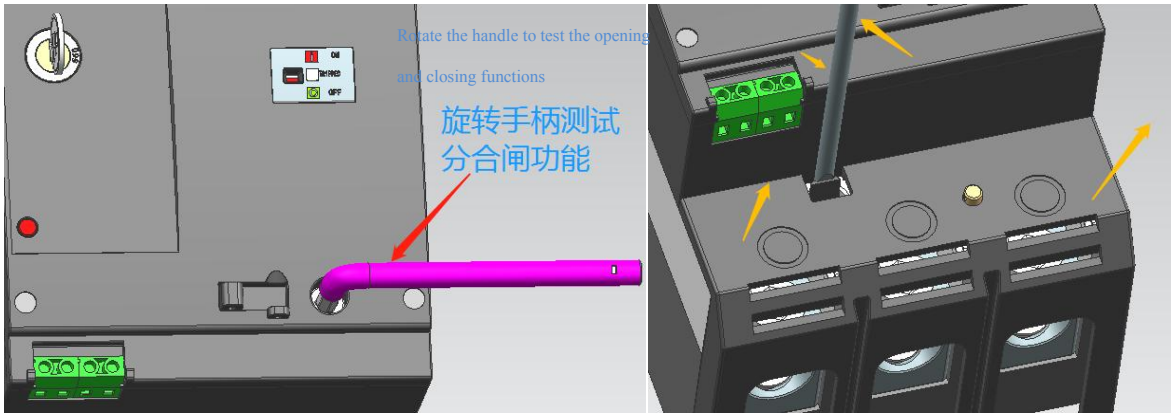
l) After confirming the normal function of the circuit breaker, power is cut off on site, lead seal is installed on the circuit breaker, and power is sent again to enter the running state.

3.5.3. Installation of circuit breakers with rated current of 300A and 400A for systems with voltage of 230V/400V

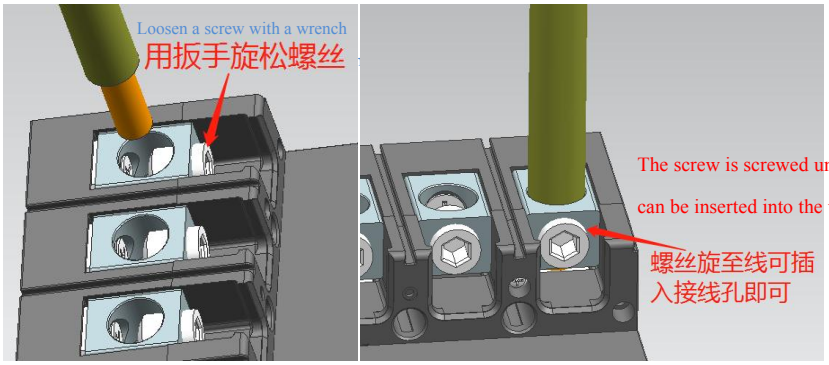
a) On-site power failure, power inspection and grounding wire hanging.

b) Remove the original MCCB.

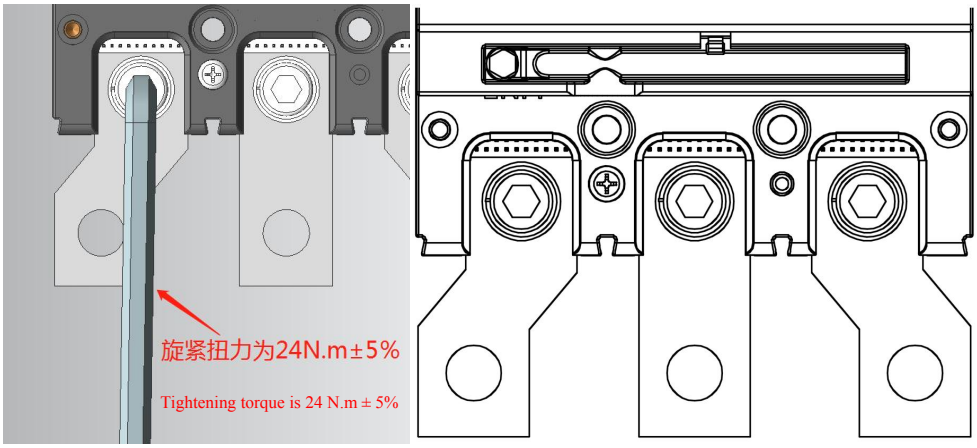
c) Open the new ECB package, remove the manual/automatic switching cover plate, take out the manual operating handle, operate the ECB opening and closing according to the direction indicated by the panel. After testing the opening and closing, use a straight screwdriver to resist the terminal cover locking device and remove the terminal cover



Loosen the connection screws with a hexagon wrench to insert the power line after stripping the wire into the mounting copper column frame.

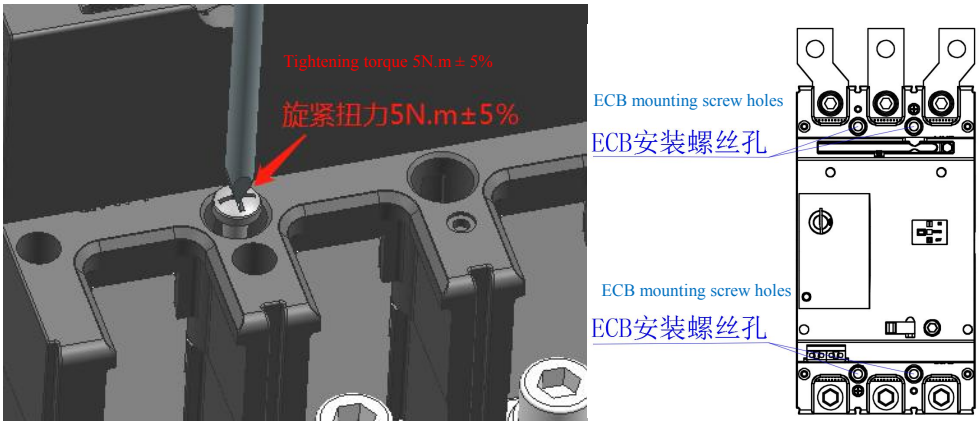


d) Connect the A, B and C three-phase incoming wire rows to the incoming wire terminals below the circuit breaker with a hexagon wrench (as shown below), and fasten the screws (torque requirement is 24N. m 5%) to ensure good and firm contact. Virtual connection of screws is strictly prohibited.



e) Verify the actual installation depth of the circuit breaker. If the meter box is closed normally, the circuit breaker can be hung directly. If it is not satisfied, remove the original bracket and install the circuit breaker after installing the sinking bracket; If there is no opening, find a firm opening to hang the circuit breaker, and make sure there is no wire below before opening. After opening the hole, screw in the mounting screw, put on the nut and tighten it (torque requirement is 5N. m ± 5%) so that the circuit breaker can be

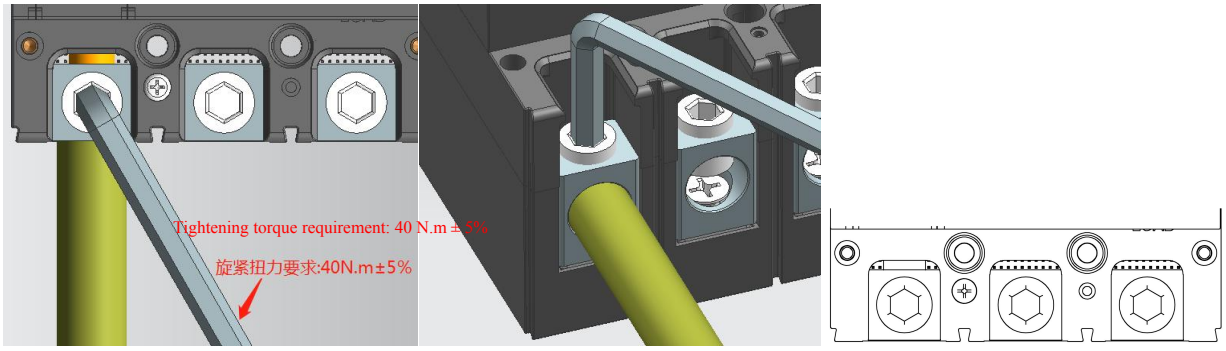
firmly installed in the meter box.



f) Configure ECB incoming and outgoing cables according to circuit breaker and meter wiring change diagram.

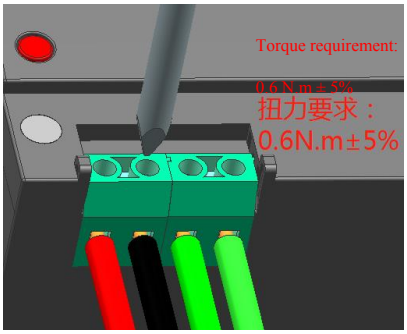
g) Connect the incoming lines of A, B and C three-phase power supply to the wiring row below the circuit breaker (incoming end) respectively, and fasten the screws to ensure good and firm contact. It is strictly forbidden to connect the screws in virtual connection.

h) Connect the outgoing lines of A, B and C three-phase power supply to the terminal above the circuit breaker (outgoing line end) respectively, and fasten the screws with a hexagon wrench (torque requirement is 40N. m 5%) to ensure good and firm contact. Virtual connection of screws is strictly prohibited.



i) Cover the removed terminal cover back to its original position to ensure that the terminal cover is completely covered to the bottom.

j) Open the terminal cover of the control port, loosen the screws, connect P1 and P2 to 230V AC voltage (phase A voltage, that is, phase A of the incoming line terminal and phase N of the zero line row) through the power line, connect C and NC to the control terminal corresponding to the charge control function of the ammeter through the signal line, and tighten the screws (torque requirement is 0.6 N.m5%) to ensure good and firm contact, and cover the terminal cover back to its original position.



k) Remove the grounding wire connected before installation, send power on site, open the manual/automatic switching cover plate after normal power inspection, operate the circuit breaker to close with the operating handle, and the status window display changes from OFF to ON, and then close the manual/automatic switching cover plate to make the circuit breaker enter the automatic control state.

l) It can simulate the function of arrears and payment through the charge control operation of the circuit breaker by the electric meter. When the circuit breaker is in arrears, it can automatically open and close, and after payment, it can automatically close.

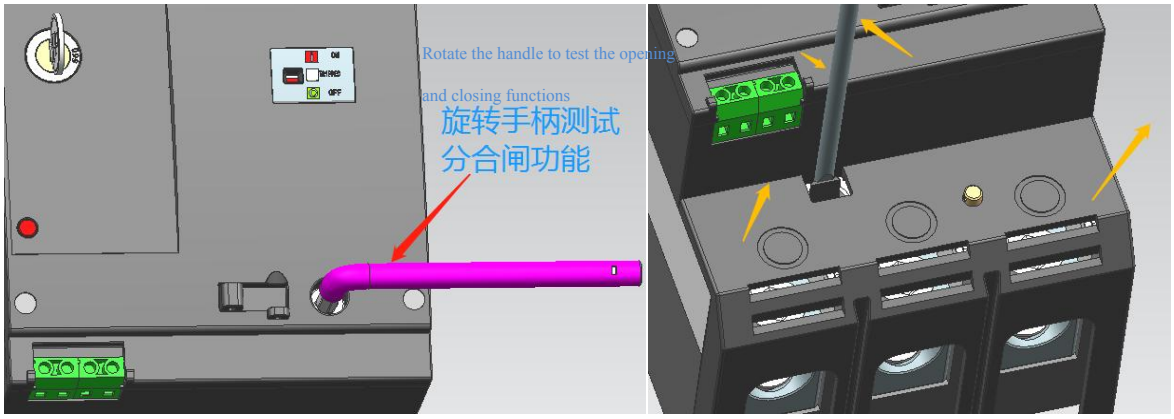
m) After confirming the normal function of the circuit breaker, power is cut off on site, lead seal is installed on the circuit breaker, and power is sent again to enter the running state.

3.5.4. Installation of circuit breakers with rated currents of 300A and 400A for 133V/230V systems

a) On-site power failure, power inspection and grounding wire hanging.

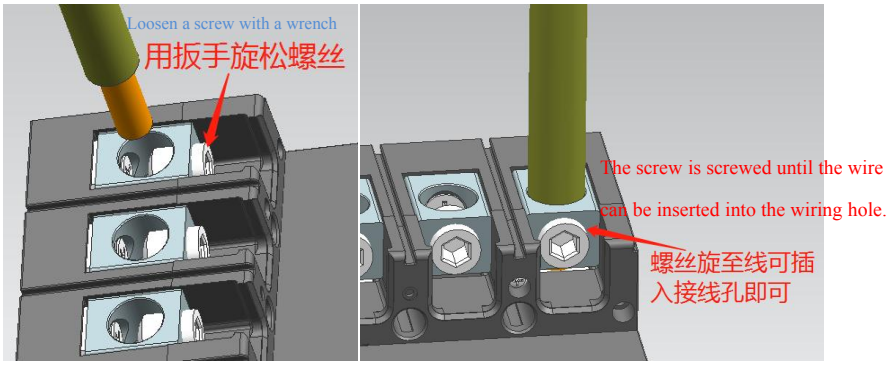
b) Remove the original MCCB.

c) Open the new ECB package, remove the manual/automatic switching cover plate, take out the manual operating handle, operate the ECB opening and closing according to the direction indicated by the panel. After testing the opening and closing, use a straight screwdriver to resist the terminal cover locking device and remove the terminal cover

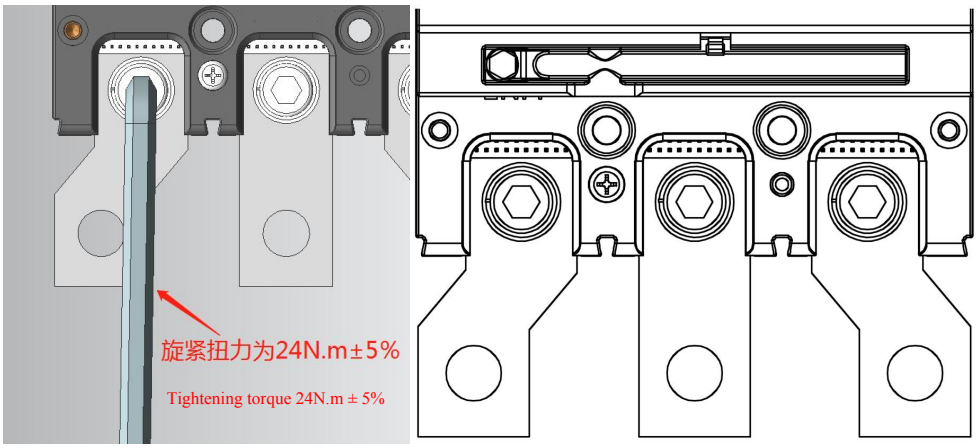


Loosen the connection screws with a hexagon wrench to insert the power line after stripping

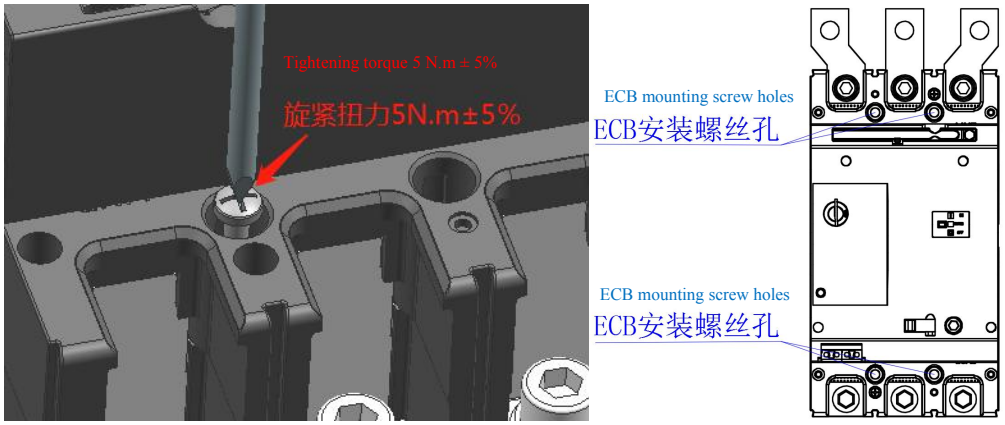
the wire into the mounting copper column frame.



d) Connect the A, B and C three-phase incoming wire rows to the incoming wire terminals below the circuit breaker with a hexagon wrench (as shown below), and fasten the screws (torque requirement is 24N. m 5%) to ensure good and firm contact. Virtual connection of screws is strictly prohibited.



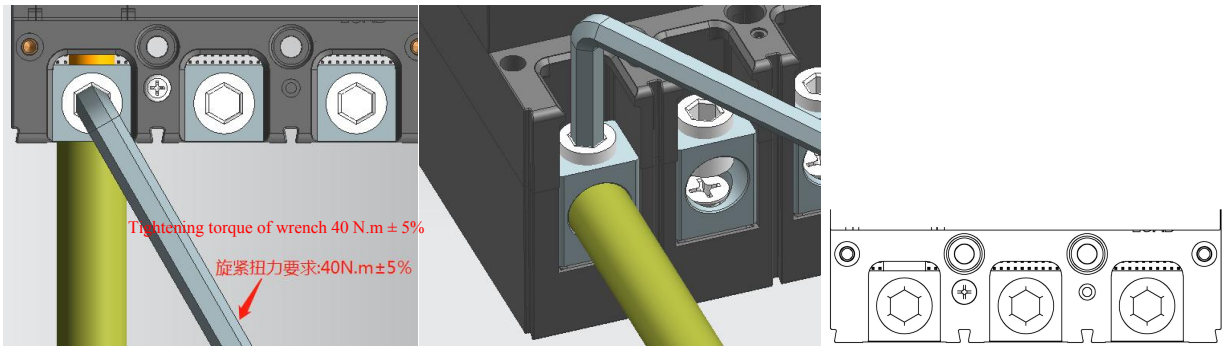
e) Verify the actual installation depth of the circuit breaker. If the meter box is closed normally, the circuit breaker can be hung directly. If it is not satisfied, remove the original bracket and install the circuit breaker after installing the sinking bracket; If there is no opening, find a firm opening to hang the circuit breaker, and make sure there is no wire below before opening. After opening the hole, screw in the mounting screw, put on the nut and tighten it (torque requirement is 5N. m ± 5%) so that the circuit breaker can be firmly installed in the meter box.



f) Configure ECB incoming and outgoing cables according to circuit breaker and meter wiring change diagram.

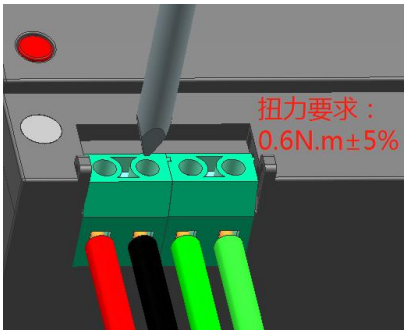
g) Connect the incoming lines of A, B and C three-phase power supply to the wiring row below the circuit breaker (incoming end) respectively, and fasten the screws to ensure good and firm contact. It is strictly forbidden to connect the screws in virtual connection.

h) Connect the outgoing lines of A, B and C three-phase power supply to the terminal above the circuit breaker (outgoing line end) respectively, and fasten the screws with a hexagon wrench (torque requirement is 40N. m 5%) to ensure good and firm contact. Virtual connection of screws is strictly prohibited.



i) Cover the removed terminal cover back to its original position to ensure that the terminal cover is completely covered to the bottom.

j) Open the terminal cover of the control port, loosen the screws, connect P1 and P2 to 230V AC voltage (line voltage between A and B, that is, phase A and phase C of the incoming line) through the power line, connect C and NC to the control terminal corresponding to the charge control function of the ammeter through the signal line, and tighten the screws (torque requirement is 0.6 N.m5%) to ensure good and firm contact, and cover the terminal cover back to its original position.



Torque requirement:
0.6 N.m ± 5%

k) Remove the grounding wire connected before installation, send power on site, open the manual/automatic switching cover plate after normal power inspection, operate the circuit breaker to close with the operating handle, and the status window display changes from

OFF to ON, and then close the manual/automatic switching cover plate to make the circuit breaker enter the automatic control state.

l) It can simulate the function of arrears and payment through the charge control operation of the circuit breaker by the electric meter. When the circuit breaker is in arrears, it can automatically open and close, and after payment, it can automatically close.

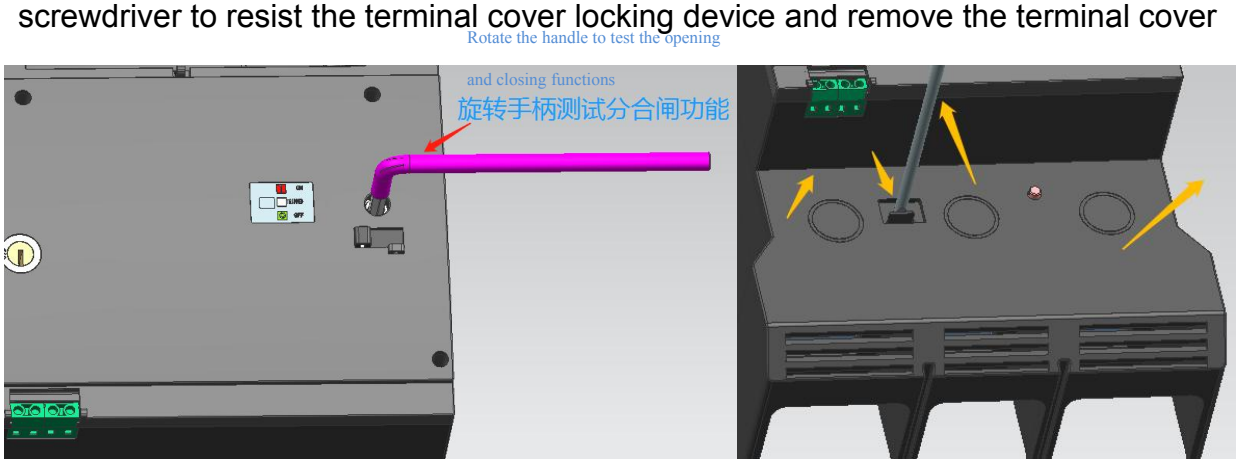
m) After confirming the normal function of the circuit breaker, power is cut off on site, lead seal is installed on the circuit breaker, and power is sent again to enter the running state.

3.5.5. Installation of circuit breakers with 500A, 600A, 800A and 1000A housing currents for systems with voltage of 230V/400V

a) On-site power failure, power inspection and grounding wire hanging.

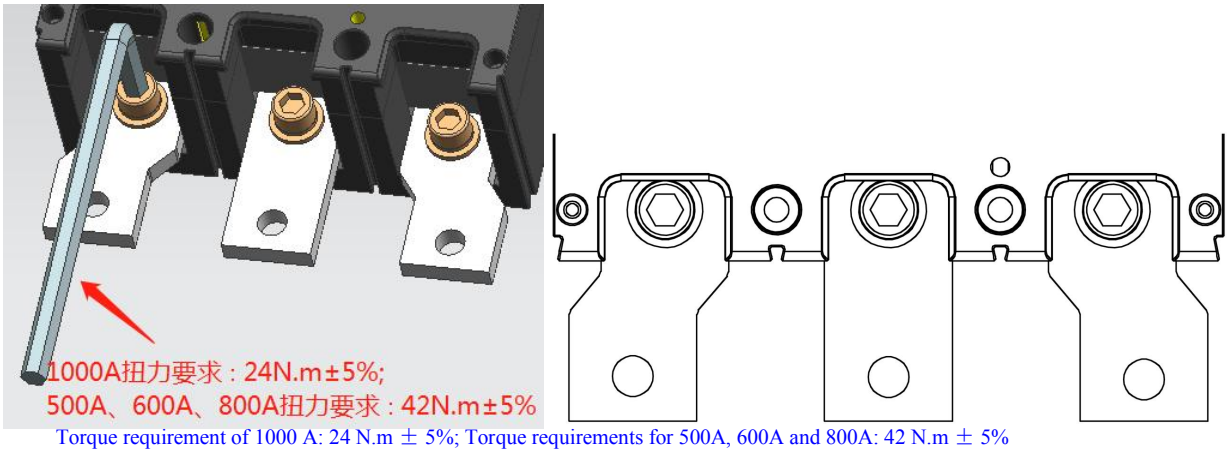
b) Remove the original MCCB.

c) Open the new ECB package, remove the manual/automatic switching cover plate, take out the manual operating handle, operate the ECB opening and closing according to the direction indicated by the panel. After testing the opening and closing, use a straight screwdriver to resist the terminal cover locking device and remove the terminal cover



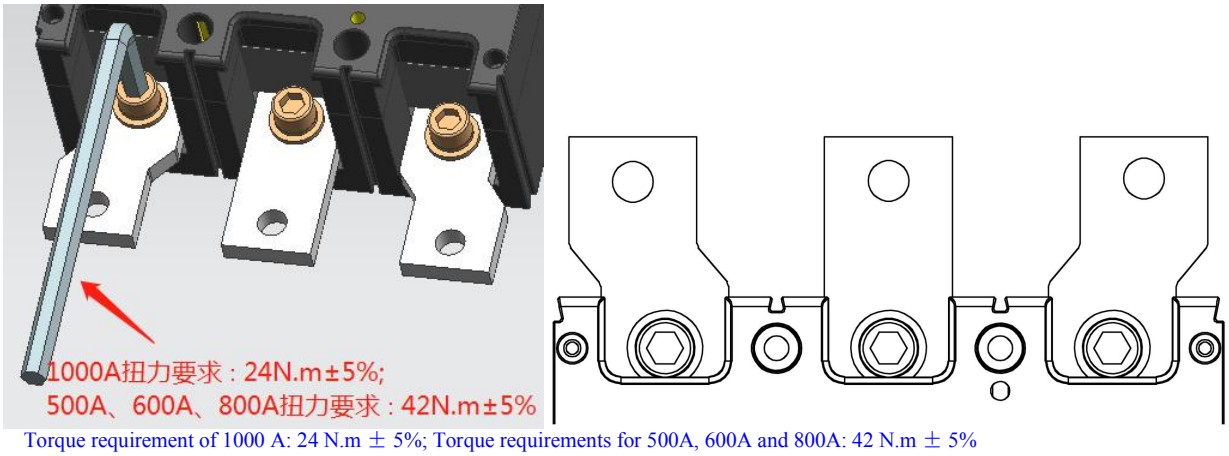
Loosen and remove the mounting screws of the terminal with a hexagon wrench.

d) Connect the A, B and C three-phase incoming wire rows to the incoming wire terminals below the circuit breaker with a hexagon wrench (as shown below), and fasten the screws (the torque of locking screws for 1000A circuit breakers is 24N. m 5%, and the torque of locking screws for 500A, 600A and 800A circuit breakers is 42N. m 5%) to ensure good and firm contact. Virtual connection of screws is strictly prohibited.



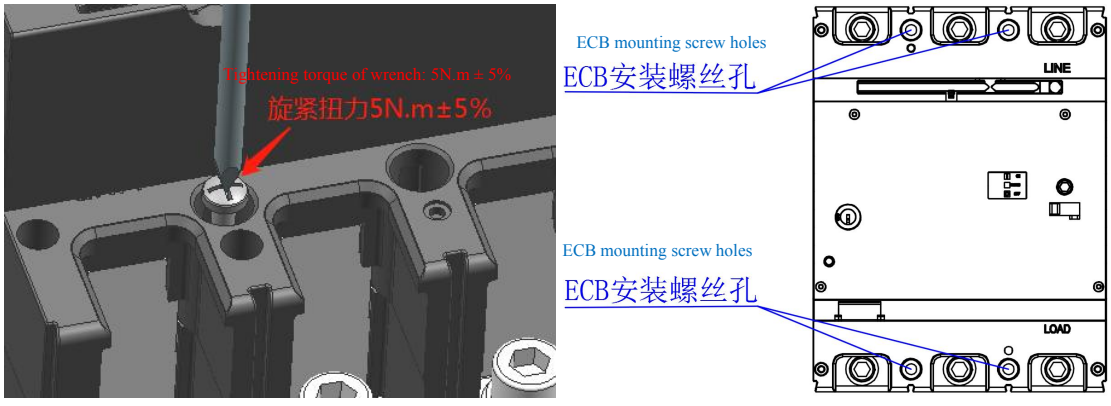
Torque requirement of 1000 A: 24 N.m ± 5%; Torque requirements for 500A, 600A and 800A: 42 N.m ± 5%

e) Connect the A, B and C three-phase outgoing lines to the outgoing terminals above the circuit breaker with a hexagon wrench (as shown below), and fasten the screws (the torque of locking screws for 1000A circuit breakers is 24N. m 5%, and the torque of locking screws for 500A, 600A and 800A circuit breakers is 42N. m 5%) to ensure good and firm contact. Virtual connection of screws is strictly prohibited.



Torque requirement of 1000 A: 24 N.m ± 5%; Torque requirements for 500A, 600A and 800A: 42 N.m ± 5%

f) Determine the suspension position of the circuit breaker. If the meter box has an opening, it can be directly suspended; If there is no opening, find a firm opening to hang the circuit breaker, and make sure there is no wire below before opening. After opening the hole, screw in the mounting screw, put on the nut and tighten it (torque requirement is 5N. m ± 5%) so that the circuit breaker can be firmly installed in the meter box.



g) Configure ECB incoming and outgoing cables according to circuit breaker and meter

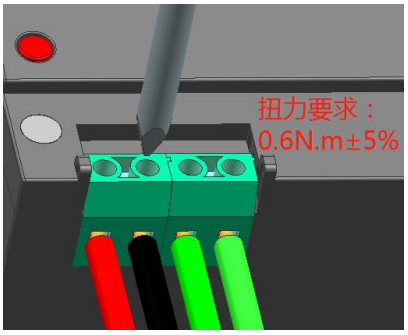
wiring change diagram.

h) Connect the incoming lines of A, B and C three-phase power supply to the wiring row below the circuit breaker (incoming end) respectively, and fasten the screws to ensure good and firm contact. It is strictly forbidden to connect the screws in virtual connection.

i) Connect the outgoing lines of A, B and C three-phase power supply to the wiring row above the circuit breaker (outgoing line end) respectively, and fasten the screws to ensure good and firm contact. Virtual connection of screws is strictly prohibited.

j) Cover the removed terminal cover back to its original position to ensure that the terminal cover is completely covered to the bottom.

k) Open the terminal cover of the control port, loosen the screws, connect P1 and P2 to 230V AC voltage (phase A voltage, that is, phase A of the incoming line terminal and phase N of the zero line row) through the power line, connect C and NC to the control terminal corresponding to the charge control function of the ammeter through the signal line, and tighten the screws (torque requirement is 0.6 N.m5%) to ensure good and firm contact, and cover the terminal cover back to its original position.



Torque requirement:
0.6 N.m ± 5%

l) Remove the grounding wire connected before installation, send power on site, open the manual/automatic switching cover plate after normal power inspection, operate the circuit breaker to close with the operating handle, and the status window display changes from OFF to ON, and then close the manual/automatic switching cover plate to make the circuit breaker enter the automatic control state.

m) It can simulate the function of arrears and payment through the charge control operation of the circuit breaker by the electric meter. When the circuit breaker is in arrears, it can automatically open and close, and after payment, it can automatically close.

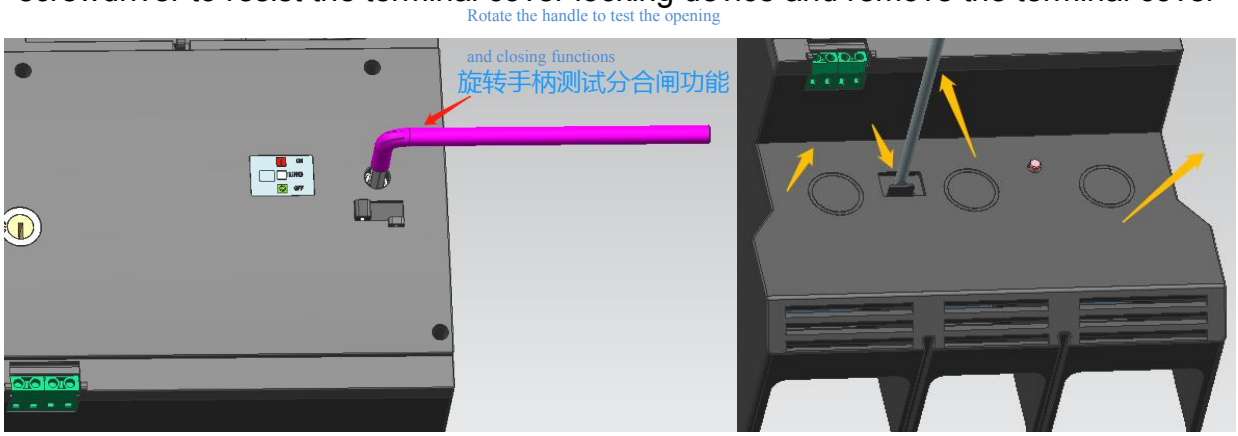
n) After confirming the normal function of the circuit breaker, power is cut off on site, lead seal is installed on the circuit breaker, and power is sent again to enter the running state.

3.5.6. Installation of Circuit Breaker with Voltage 133V/230V System and Shell Frame Current 500A, 600A, 800A and 1000A

a) On-site power failure, power inspection and grounding wire hanging.

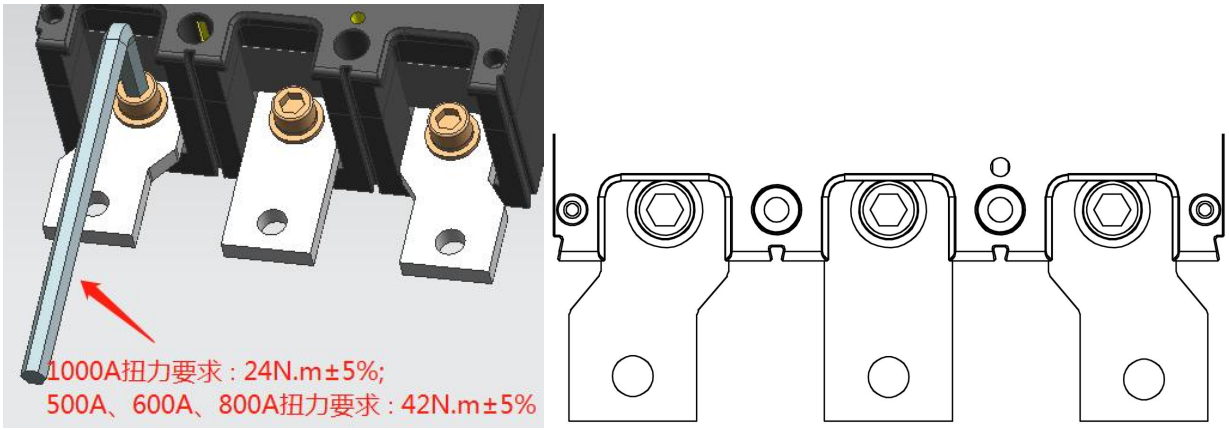
b) Remove the original MCCB.

c) Open the new ECB package, remove the manual/automatic switching cover plate, take out the manual operating handle, operate the ECB opening and closing according to the direction indicated by the panel. After testing the opening and closing, use a straight screwdriver to resist the terminal cover locking device and remove the terminal cover



Loosen the mounting terminal with a hexagon wrench.

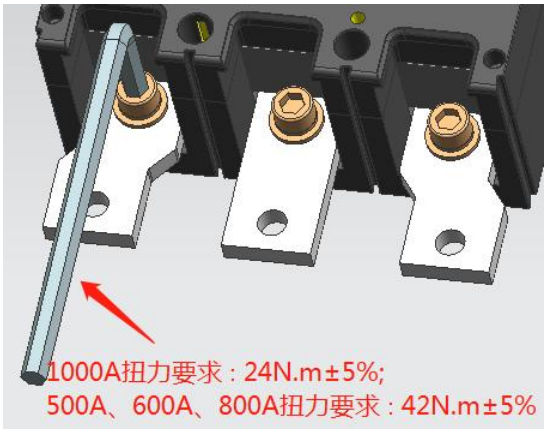
d) Connect the A, B and C three-phase incoming wire rows to the incoming wire terminals below the circuit breaker with a hexagon wrench (as shown below), and fasten the screws (the torque of locking screws for 1000A circuit breakers is 24N. m 5%, and the torque of locking screws for 500A, 600A and 800A circuit breakers is 42N. m 5%) to ensure good and firm contact. Virtual connection of screws is strictly prohibited.

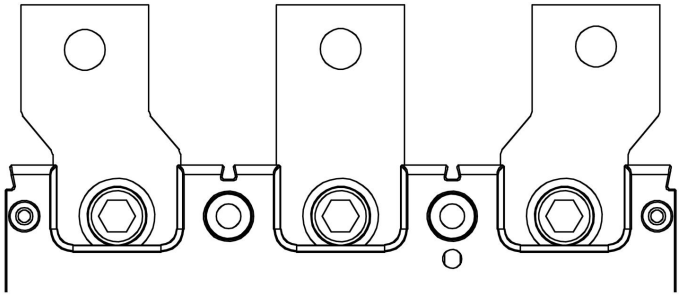


Torque requirement of 1000 A: 24 N.m ± 5%; Torque requirements for 500A, 600A and 800A: 42 N.m ± 5%

e) Connect the A, B and C three-phase outgoing lines to the outgoing terminals above the

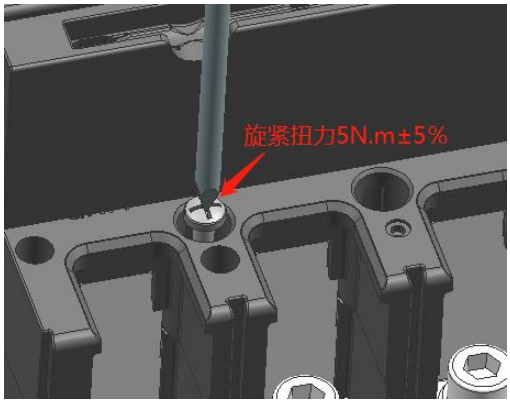
circuit breaker with a hexagon wrench (as shown below), and fasten the screws (the torque of locking screws for 1000A circuit breakers is 24N. m 5%, and the torque of locking screws for 500A, 600A and 800A circuit breakers is 42N. m 5%) to ensure good and firm contact. Virtual connection of screws is strictly prohibited.

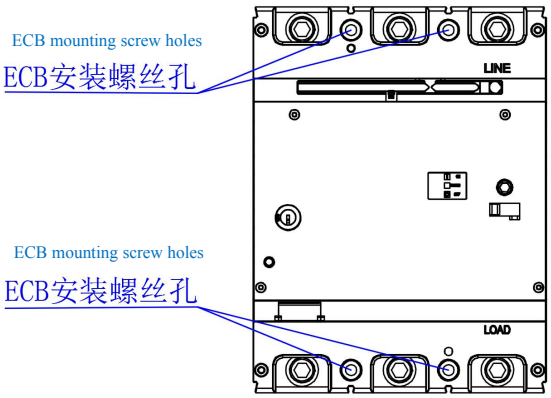




Torque requirement of 1000 A: 24 N.m ± 5%; Torque requirements for 500A, 600A and 800A: 42 N.m ± 5%

f) Determine the suspension position of the circuit breaker. If the meter box has an opening, it can be directly suspended; If there is no opening, find a firm opening to hang the circuit breaker, and make sure there is no wire below before opening. After opening the hole, screw in the mounting screw, put on the nut and tighten it (torque requirement is 5N. m ± 5%) so that the circuit breaker can be firmly installed in the meter box.





g) Configure ECB incoming and outgoing cables according to circuit breaker and meter wiring change diagram.

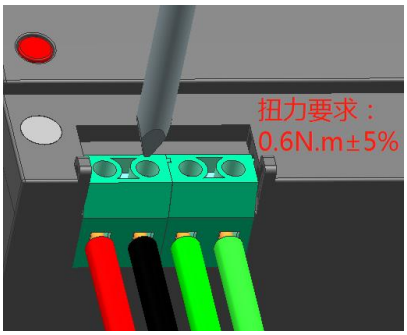
h) Connect the incoming lines of A, B and C three-phase power supply to the wiring row below the circuit breaker (incoming end) respectively, and fasten the screws to ensure good and firm contact. It is strictly forbidden to connect the screws in virtual connection.

i) Connect the outgoing lines of A, B and C three-phase power supply to the wiring row above the circuit breaker (outgoing line end) respectively, and fasten the screws to ensure good and firm contact. Virtual connection of screws is strictly prohibited.

j) Cover the removed terminal cover back to its original position to ensure that the terminal

cover is completely covered to the bottom.

k) Open the terminal cover of the control port, loosen the screws, connect P1 and P2 to 230V AC voltage (line voltage between A and B, that is, phase A and phase C of the incoming line) through the power line, connect C and NC to the control terminal corresponding to the charge control function of the ammeter through the signal line, and tighten the screws (torque requirement is 0.6 N.m5%) to ensure good and firm contact, and cover the terminal cover back to its original position.



Torque requirement:
0.6 N.m ± 5%

l) Remove the grounding wire connected before installation, send power on site, open the manual/automatic switching cover plate after normal power inspection, operate the circuit breaker to close with the operating handle, and the status window display changes from OFF to ON, and then close the manual/automatic switching cover plate to make the circuit breaker enter the automatic control state.

m) It can simulate the function of arrears and payment through the charge control operation of the circuit breaker by the electric meter. When the circuit breaker is in arrears, it can automatically open and close, and after payment, it can automatically close.

n) After confirming the normal function of the circuit breaker, power is cut off on site, lead seal is installed on the circuit breaker, and power is sent again to enter the running state.

4. Field operation of circuit breaker products

4.1. Normal operation

Locked state: When the locking device on the circuit breaker is rotated to the LOCK position with the key, the ECB enters the locked state, at this time, the ECB is in TRIP state, and locked in TRIP state, which cannot be opened and closed manually or remotely. When the locking device is rotated to the UNLOCK position with the key again, the ECB enters the unlocked state.

Manual mode: When ECB is unlocked, open the manual/automatic switching cover plate, and use the attached operating handle to rotate the manual operation knob clockwise to operate ECB opening and closing. In particular, ECB will not be closed manually in the state of arrears.

Daily automatic mode: When ECB is unlocked, close the manual automatic cover plate, ECB enters the daily automatic mode, and automatically opens the gate for arrears and closes the gate for payment. Special attention should be paid to the fact that when the ECB has tripped or is installed for the first time, it is necessary to manually close the manual automatic cover plate after closing the ECB before entering the daily automatic mode.

Remote mode: Remote operation of the meter, so that the meter is in arrears or payment status, and remote operation of ECB opening and closing.

4.2. Fault trip

Fault trip: When there is overload or short circuit at the load terminal, the ECB will automatically trip and remain in TRIP state within the corresponding time.

Failure recovery: When the ECB trips, after the maintenance personnel arrive at the site, they should first use the key to operate the ECB to enter the locked state, and then repair the line; After troubleshooting the line, it is necessary to operate the ECB with the key to enter the unlocking state, then open the lead seal, open the manual automatic cover plate, manually close the ECB with the operating handle, close the manual automatic cover plate and reinstall the lead seal. ECB reverts to automatic mode.

5. Technical service support

24-hour technical support telephone:+8615372830518
WENZHOU XUCKY ELECTRIC CO.,LTD