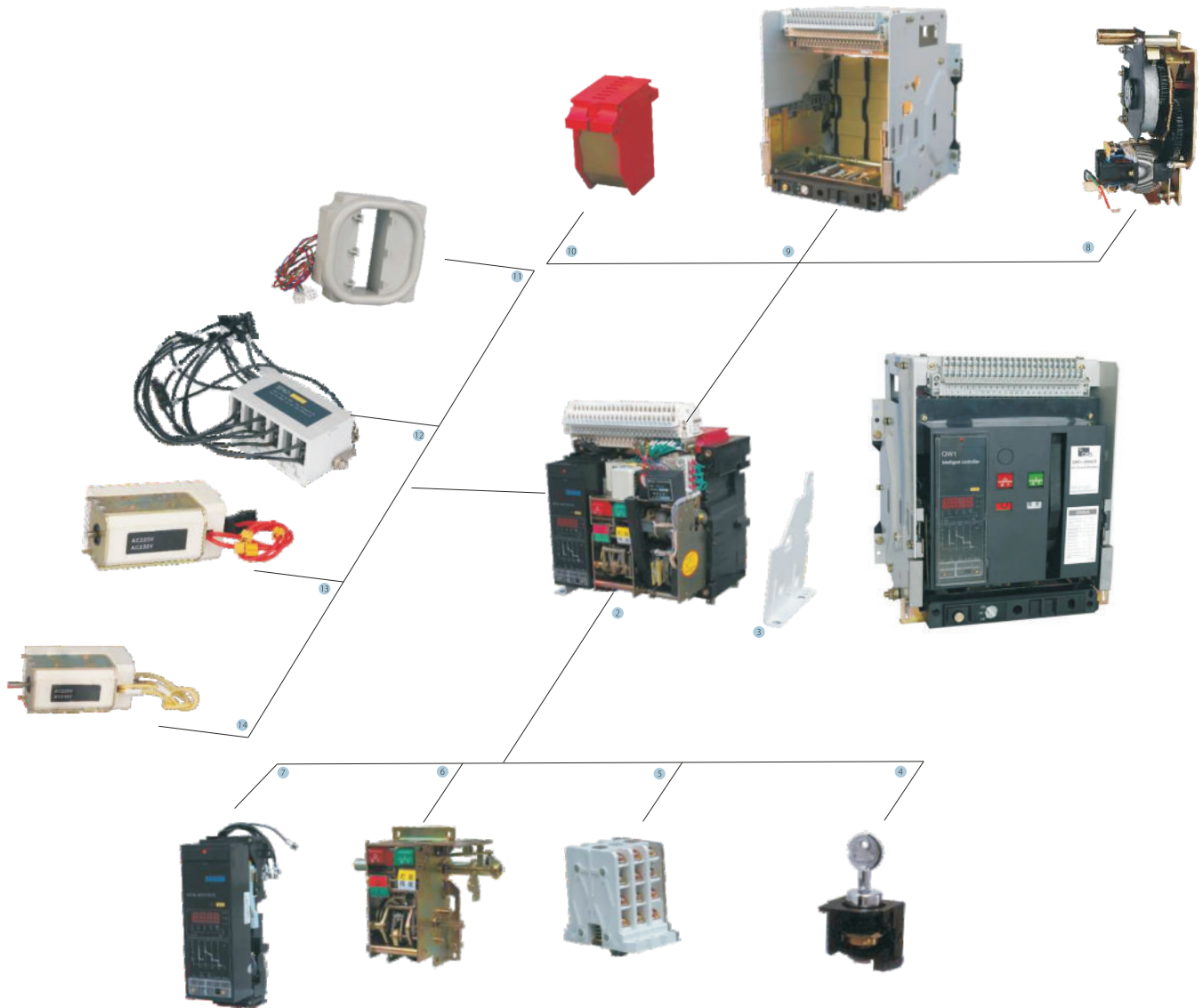


Overview

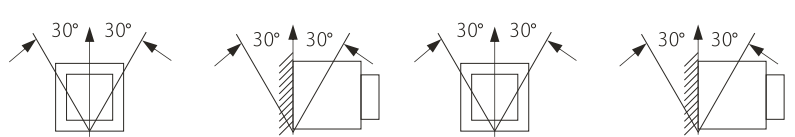


- | | | | |
|------------------------|--------------------------|---------------------|--------------------------|
| 1 Body 1 | 5 Auxiliary contact | 9 Drawer base | 13 Release |
| 2 Body 2 | 6 Operating mechanism | 10 Arcing chamber | 14 Under-voltage release |
| 3 Fixed plate | 7 Intelligent controller | 11 Transformers | |
| 4 lock breaking device | 8 Motor | 12 Auxiliary switch | |

Applications and functions

- Incoming-feeder and outgoing-feeder function in distribution systems
 - Switching and protecting large powers, motors, capacitors, generators, transformers, busbars and cables
 - Overload protection
 - Short-time delayed short-circuit protection
 - Instantaneous short-circuit protection
- Used in building, industry, energy and infrastructures

Technical specifications:

Type	Series QW1–2000	Series QW1–3200	Series QW1–6300
Standard	IEC60947-2	IEC60947-2	IEC60947-2
Approval	CE	CE	CE
Frame type	A	B	C
Rated frame current Inm (A)	2000	3200	6300
Number of poles	3,4	3,4(not for 4000A)	3,4
Rated current In (A)	400 630 800 1000 1250 1600,2000	2000, 2500 2900,3200 4000	4000 5000 6300
Rated frequency (Hz)	50/60	50/60	50/60
Rated voltage, Ue (V)	400,690	400,690	400,690
Rated insulating voltage Ui (V)	1000	1000	1000
Rated impulsive withstand voltage, Uimp (Kv)	12	12	12
N-pole rated current	100%In	100%In	100%In
Rated ultimate short-circuit breaking capacity, Icu (AC) 50-60 Hz 400V O-CO (kA)	80	100	120
(AC) 50-60 Hz 690V O-CO (kA)	50	65	75
Rated operating short-circuit breaking capacity, Ics (AC) 50-60 Hz 400V O-CO (kA)	50	80	100
(AC) 50-60 Hz 690V O-CO (kA)	40	50	65
Rated short-circuit making capacity (peak),Icm (AC) 50-60 Hz 400V (kA)	176	220	264
(AC) 50-60 Hz 690V (kA)	105	143	165
Rated short-time withstand current for 1s Icw (kA) (AC) 50-60 Hz 400V (kA/s)	50	80	100
(AC) 50-60 Hz 690V (kA/s)	40	50	65
Making time (mS)	25-30	25-30	25-30
Breaking time (mS)	70	70	70
Electrical life (times) in 400V in 690V	6000 3000	3000 1500	1000 800
Mechanical life (times) without maintenance with maintenance	15000 30000	10000 20000	4000 8000
Mounting position			
Installation type	Fixed /Drawer	Fixed(not for 4000A) /Drawer	Drawer
Dimension (mm)	HxWxD	HxWxD HxWxD	H x W x D H x W x D H x W x D
Fixed,3P	402x362x322	402x422x322	- - -
Fixed, 4P	402x362x322	402x537x322	- - -
Drawer, 3P	433x375x420	433x435x420	450x550x492 450x930x492 450x930x492
Drawer, 4P	433x375x420	433x550x420	- 450x390x492 450x930x492 450x930x492
Type of intelligent controller	Electronic type L, Standard type M, Communication type H		
Ambient temperature	-5 to +40°C, max. 95 % humidity		
Storage temperature	-40 to +75°C		
Altitude(Max)	2000		

Instruction of type

W1 A F 3 L H 400

Rated current

400, 630, 800, 1000, 1250, 1600, 2000 (Frame A)
 2000, 2500, 2900, 3200, 4000 (Frame B)
 4000, 5000, 6300 (Frame C)

Connection type

H: Horizontal terminal connection
 V: Vertical terminal connection

Intelligent controller model

L: L type
 M: M type
 H: H type

Poles: 3: 3P; 4: 4P

Installation type

F: Fix type
 D: Drawer type

Frame

A: QW1-2000
 B: QW1-3200
 C: QW1-6300

Series code



Intelligent controller characteristics

Function	Model	L	M	H
Basic protection	Overload protection	✓	✓	✓
	Short circuit short delay protection	✓	✓	✓
	Instantaneous short-circuit protection	✓	✓	✓
	Ground fault protection or neutral pole protection G / N	✓	✓	✓
Additional Function	MCR	○	○	○
	Thermal memory	✓	✓	✓
	Contact loss indication	○	✓	✓
	Self-diagnosis	○	✓	✓
	Fault memory	✓	✓	✓
	Test	✓	✓	✓
	Operation times	○	✓	✓
Parameterization and display	Fault trip display	✓	✓	✓
	Load monitor display	○	✓	✓
	Current display	✓	✓	✓
	Time display	—	✓	✓
Measurement	Current measurement	—	✓	✓
	Voltage measurement	—	○	○
	Frequency measurement	—	○	○
	Power measurement	—	○	○
	Power factor measurement	—	○	○
	Phase sequence detection	—	○	○
	Voltage unbalance measurement	—	○	○
	Electric power measurement	—	○	○
	Harmonic measurement	—	○	○
	Overvoltage protection	—	○	○
	Undervoltage protection	—	○	○
	Voltage unbalance protection	—	○	○
	Over frequency protection	—	○	○
	Under-frequency protection	—	○	○
	Phase sequence protection	—	○	○
Reverse power protection	—	○	○	
Communication	Communication Interface	—	—	○
	Achieve communication through the Modbus	—	—	○
	Achieve communication through the Profibus -DP	—	—	○
	Achieve communication through the Device Net	—	—	○

Note: Intelligent controller function: ✓ standard — unavailable ○ selectable

Communication function is optional, not for the M-type communication and for the H-type communication protocol can select Modbus, Profibus-DP, Device net.

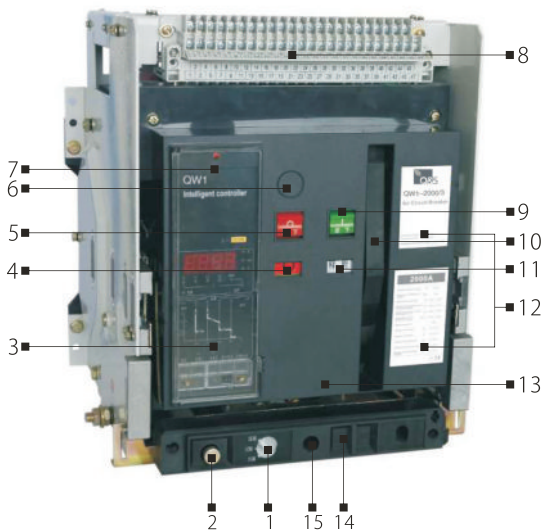
Normal Operation and Installation Conditions

- Ambient temperature: $-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$, and the average temperature is not exceeding $+35^{\circ}\text{C}$ within 24h;
- Altitude: Not higher than 2000m. The capacity should be decreased if the altitude is above 2000m
- Humidity: When the ambient air temperature is $+40^{\circ}\text{C}$, the relative humidity of the air shall not be higher than 50%, a higher relative humidity is allowed at a lower temperature. For example, the relative humidity should be 90% when temperature is 20°C . Special measures should be adopted for the condensation occasionally produced due to temperature change.
- Pollution degree: 3
- The circuit breaker can be used in electromagnetic environment A
- Installing category: IV for main circuit; III for other auxiliary and control circuits;
- The vertical gradient: no more than 5°
- Mounting Ambient: There must be no explosive medium, no gas which would corrode metal or any conducting dust which would destroy the insulation;
- The circuit breakers should be installed in the compartment of switchgear cabinet with doorframes fixed additionally. Protection grade is up to IP40.

Product structure

QW1 series ACB has fixed type and drawer type. Putting the fixed breaker into the drawer base becomes drawer type circuit breaker. The breaker is consist of contact system, arc extinction system, operation mechanism, intelligent controller, auxiliary switch, secondary circuit wiring terminal, under voltage release, shunt release, closed coil, etc.

Drawer type



1. Rocker hole
2. "Separation", "Test" and "Connection" three-position Indicator
3. Intelligent controller
4. ON-OFF switch button
5. Switch off button
6. Trip indicator and reset button
7. "opening" lock mechanism
8. Secondary circuit terminals
9. Switch on button
10. Manual charging handle
11. Energy charging and discharging Indicator
12. Nameplate
13. Mask
14. Safety padlock mechanism on "Separation" indicator
15. Rocker operating hole

Note:

"Separation" indicates that main circuit and secondary circuit are both in isolation.

"Test": indicates that main circuit is in isolation and secondary circuit is in connection.

"Connection": indicates that main circuit and secondary circuit are both in connection.

Installation

- Following items to be checked before installation
 - Check the label plate on the breaker panel to see if it conforms to the specifications of the ordered goods.
 - Rated current;
 - Under voltage release voltage and delay time;
 - Shunt release voltage;
 - Closing electromagnet voltage;
 - Motor voltage.
- Before installation, operation, maintenance and inspection, you shall read this manual, and consult the manufacturer for questions if any.
- Preparations before installation

Before the breaker is installed, check the insulation resistance of the breaker by using a 1000V megohmmeter according to regulations; when the surrounding media temperature is $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$ and the relative humidity is 5%70%, the insulation resistance shall not be less than 20 megohm.

The place with the insulation resistance to be tested includes: the place between various phases and between various phases and the frame when the breaker is closed; the place between in-and out-lines of various phases when the breaker is switched off.
- Installation of the fixed type breaker

Place the breaker into the distribution cabinet, and fasten it by using 4 pieces of M6(Inm=1600A) or M10(Inm=3200A or above) bolts and washers; the breaker shall be installed stably with no d=additional mechanical stress to avoid damage of the breaker or bad contact of the main bus bar and the secondary circuit. After the work is completed, mount the body into the draw-out socket.
- The specification of the wiring copper bars for the primary circuit of the breaker shall meet the copper bar specification used under the conditions of conventional heating in GB14048.2.
- The breaker shall be grounded substantially

Power loss

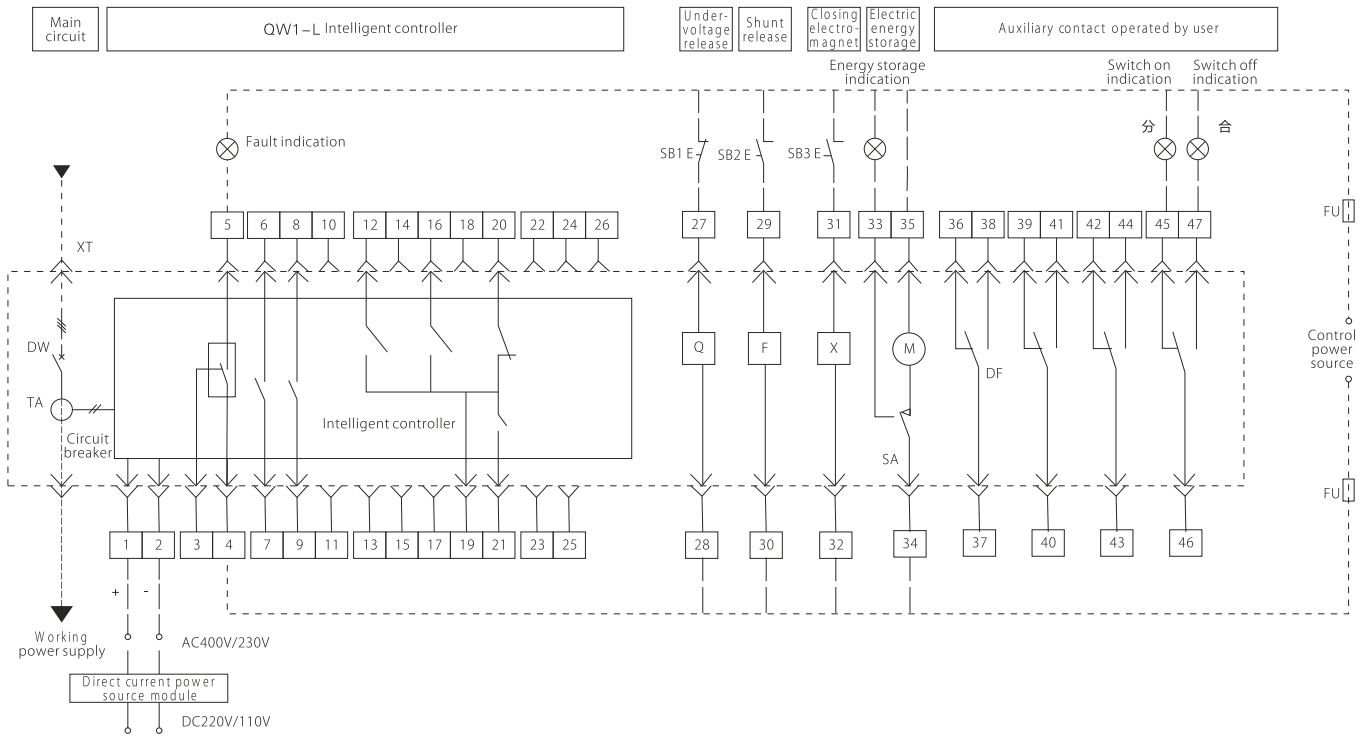
Power loss is the total loss measured when the breaker is charged with the rated current

Breaker type	Rated current(A)	Draw-out type(w)	Fixed type(w)
QW1-2000	630	24	15
	800	39	25
	1000	61	40
	1250	87	54
	1600	128	64
	2000	160	80
	2000	150	80
	2500	180	100
QW1-3200	2900	230	120
	3200	250	130
	4000/3P	270	-
QW1-6300	4000/4P	290	-
	5000	330	-
	6300	360	-

Note: The data and parameters in the above technical documentation result from tests and theoretical calculation, and can only be used as a general type selection guide. They cannot replace industrial practical experience or proof test.

Secondary circuit wiring diagram

- Secondary circuit wiring equipped with L type intelligent controller



Note:

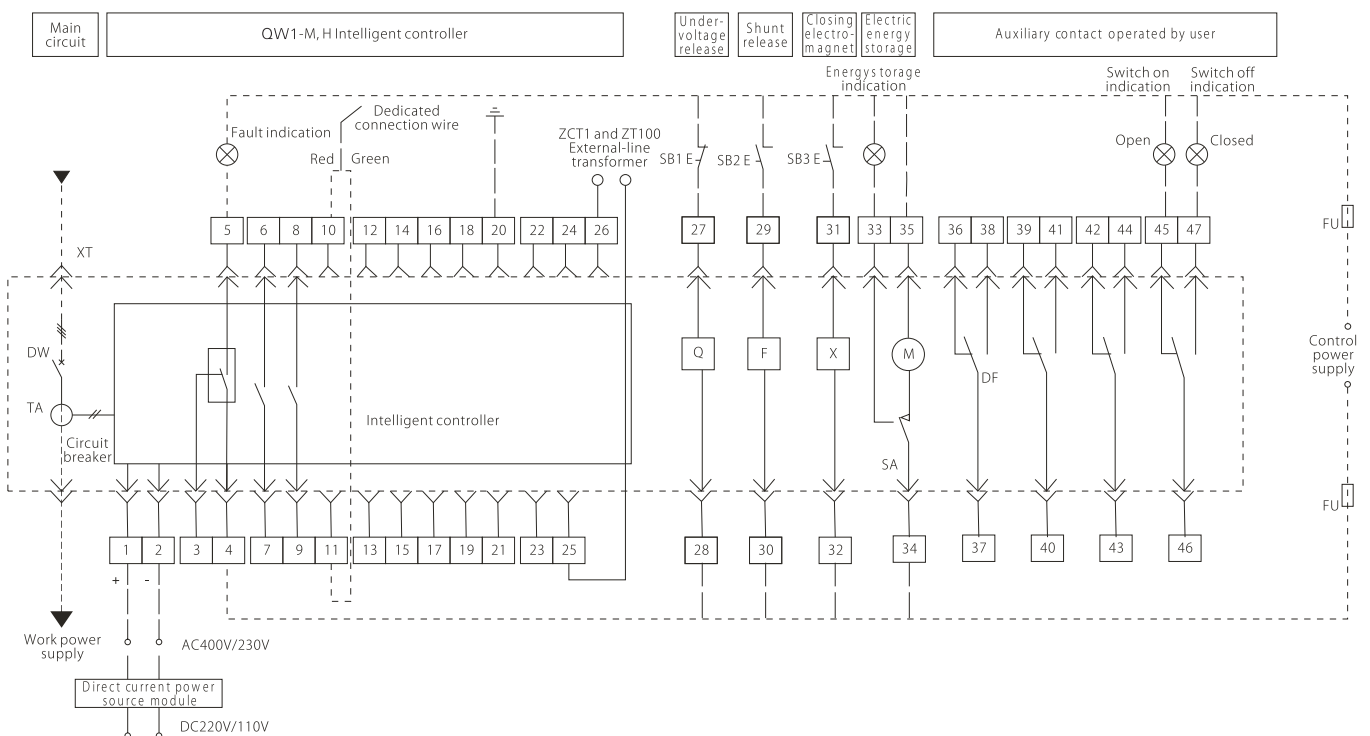
- 1) If the control voltage of F, X, M are different, they should connect different power source
- 2) Terminal 35# can connect the power source directly (automatic pre-energy storage), After series connecting with normally open button, it can connect the power source (manual pre-storage)
- 3) The #6 - #7 are normally closed terminal if user requires
- 4) Additional accessory should be self-provided by user

Abbreviation	Meaning	Abbreviation	Meaning
SB1	Under-voltage button (self-provided by user)	DF	Auxiliary contact
SB2	Shunt button (self-provided by user)	F	Shunt release
SB3	Switching on button	SA	Motor micro operation switch
X	Closing electromagnet	Q	Under-voltage release or under voltage time delay release
M	Energy storage motor	⊗	Signal light (self-provided by user)
XT	Terminal		

Pin function

- 1#, 2#: Auxiliary power source input terminal 1# is "+" if it is direct current
- 3#, 4#, 5#: Fault trip contact output (#4 is common terminal), contact capacity: AC250V/16A
- 6#, 7# & 8#, 9#: Two groups breaker status auxiliary contacts, contact capacity: AC250V/16A
- 12#, 19#: DO signal alarm output, function: normally open, overload pre-alarm, contact capacity AC 250V/5A
- 16#, 19#: DO signal alarm output, function: normally open, ground trip or alarm, contact capacity AC 250V/5A
- 20#, 19#: DO signal alarm output, function: normally open, self-diagnosis alarm, contact capacity AC 250V/5A
- 21#, 19#: DO signal alarm output, function: normally open, OCR fault trip, contact capacity AC 250V/5A
- 25#, 26#: External current transformer input terminal (only 3P+N is available)

- Secondary circuit wiring equipped with M, H type intelligent controller



Note:

- 1) If the control voltage of F, X, M are different, they should connect different power source
- 2) Terminal 35# can connect the power source directly (automatic pre-energy storage), After series connecting with normally open button, it can connect the power source (manual pre-storage)
- 3) The #6 - #7 are normally closed terminal if the client requires
- 4) Additional accessory should be self-provided by user

Abbreviation	Meaning	Abbreviation	Meaning
SB1	Under-voltage button (self-provided by user)	DF	Auxiliary contact
SB2	Shunt button (self-provided by user)	F	Shunt release
SB3	Switching on button	SA	Motor micro operation switch
X	Closing electromagnet	Q	Under-voltage release or under-voltage time delay release
M	Energy storage motor	⊗	Signal light (User prepares)
XT	Terminal		

Pin function

1#, 2#: Auxiliary power source input terminal 1# is "+" if it is direct current. Because the controller has several optional types of power source, please note the input power source is same with the working power source of the controller; otherwise the controller will be broken.

3#, 4#, 5#: Fault trip contact output (#4 is common terminal), contact capacity: AC250V/16A

6#, 7# & 8#, 9#: Two groups of breaker status auxiliary contacts, contact capacity: AC250V/16A

10#, 11#: Communication interface output, the three Communication protocol outputs are the same. 10#, 11# are empty if there is no communication (communication output).

12#, 19#: (DO:DC11V 0.5A, AC250V, 5A. DI: DC110V~13V or AC110V~AC250V)

When the signal unit type is S1: (4DO mode)

12#, 13#: Programmable output contact 1 (DO1)

14#, 15#: Programmable output contact 2 (DO2)

16#, 17#: Programmable output contact 3 (DO3)

18#, 19# : Programmable output contact 4 (DO4)

When the signal unit type is S2: (3DO+1DI mode)

12#, 13#: Programmable output contact 1 (DO1)

14#, 15#: Programmable output contact 2 (DO2)

16#, 17#: Programmable Discrete Output (DO3)

18#, 19#: Programmable Discrete Output (DI1)

When the signal unit type is S3: (2DO+2DI mode)

12#, 13#: Programmable output contact 1 (DO1)

14#, 15#: Programmable output contact 2 (DO2)

16#, 17#: Programmable Discrete Output 2 (DI3)

18#, 19#: Programmable Discrete Output 1 (DI1)

20# is the earth protection line of the controller

21#-24# pins are voltage signal input terminal, connecting with the input side of the power by correct order. The pin is empty if there is no added function

25#, 26# pin are used for input of external transformer

The pin is connected with the output terminal of external transformer ZT100 if the earth protection way is current returned type (T)

The pin is connected with the output terminal of external ZCT rectangle transformer if the ground mode is current leakage type.

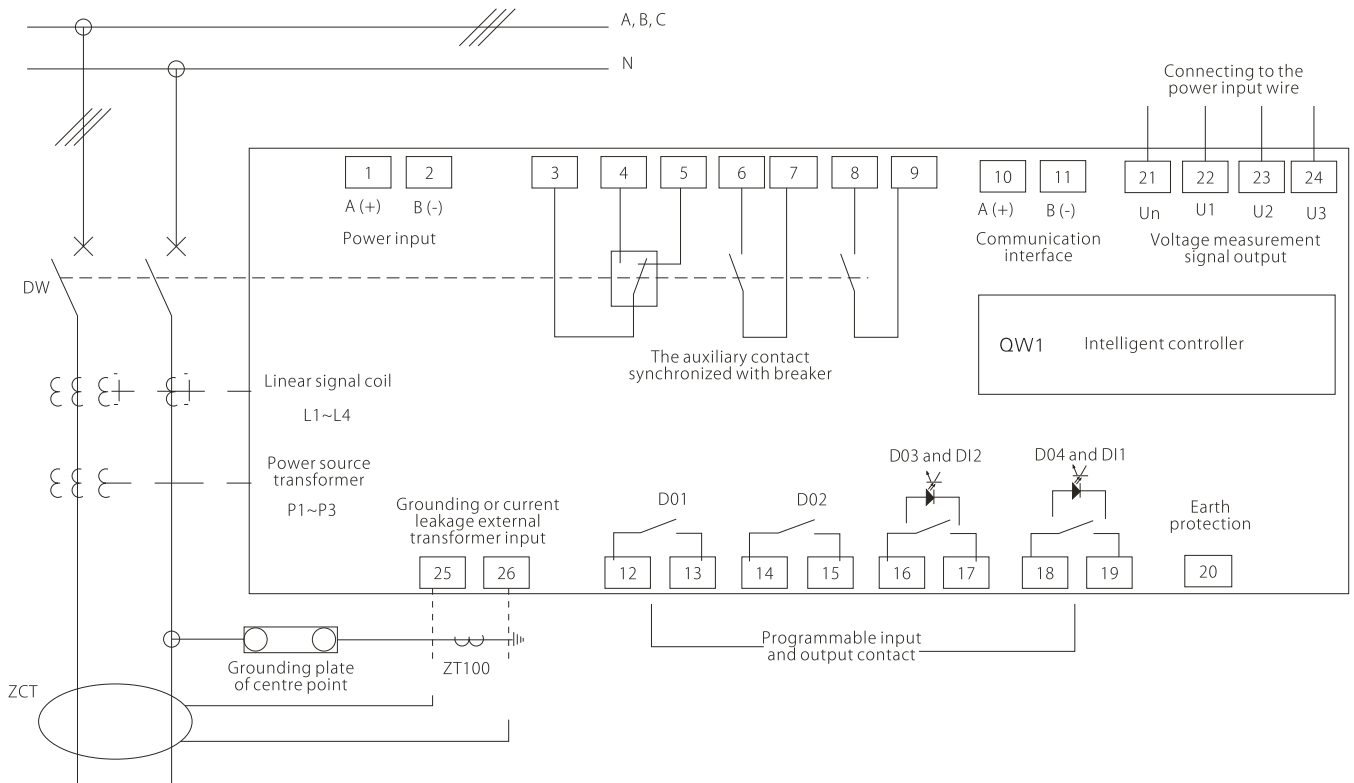
The pin is connected with external added N phase transformer is when the ground protection mode is 3P+N value difference type.

Air Circuit Breakers Series QW1

Quality & Service creates value



- QW1-M、H type intelligent controller connection interface



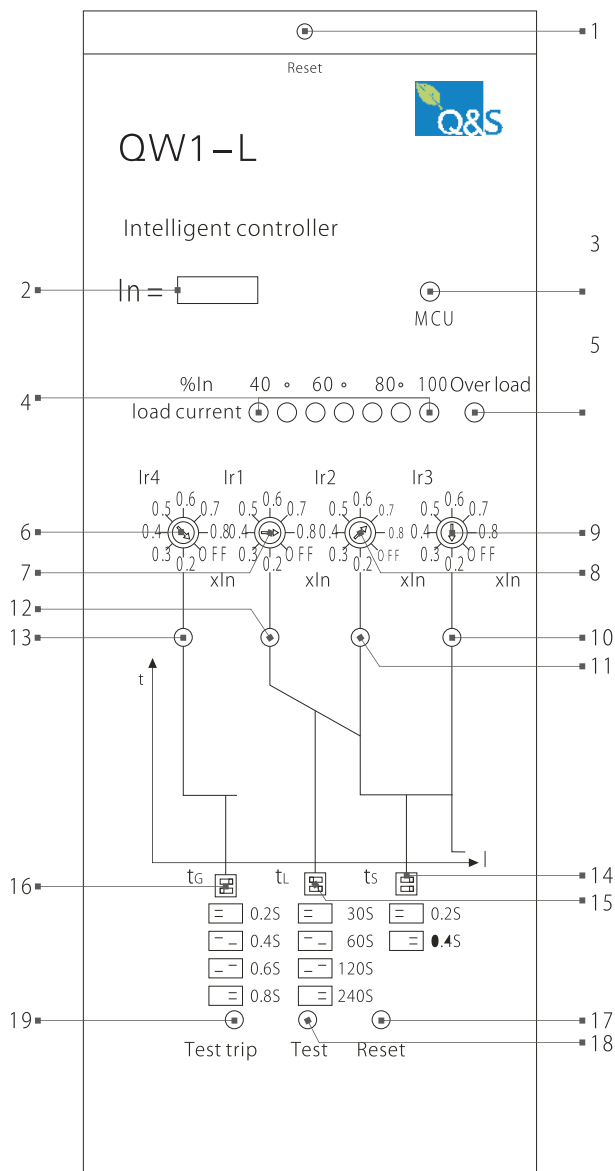
Intelligent controller selection

Three types of Intelligent controller :

- L type – Electronic type(Histogram display current, dial for adjustment)
- M type – Standard type (figures display current, button for adjustment)
- H type – Communication type (figures display current, button adjusting and for communication)

L type - controller panel structure instruction

L-type controller adopts code switch and pull switch, simply and easy to handle.



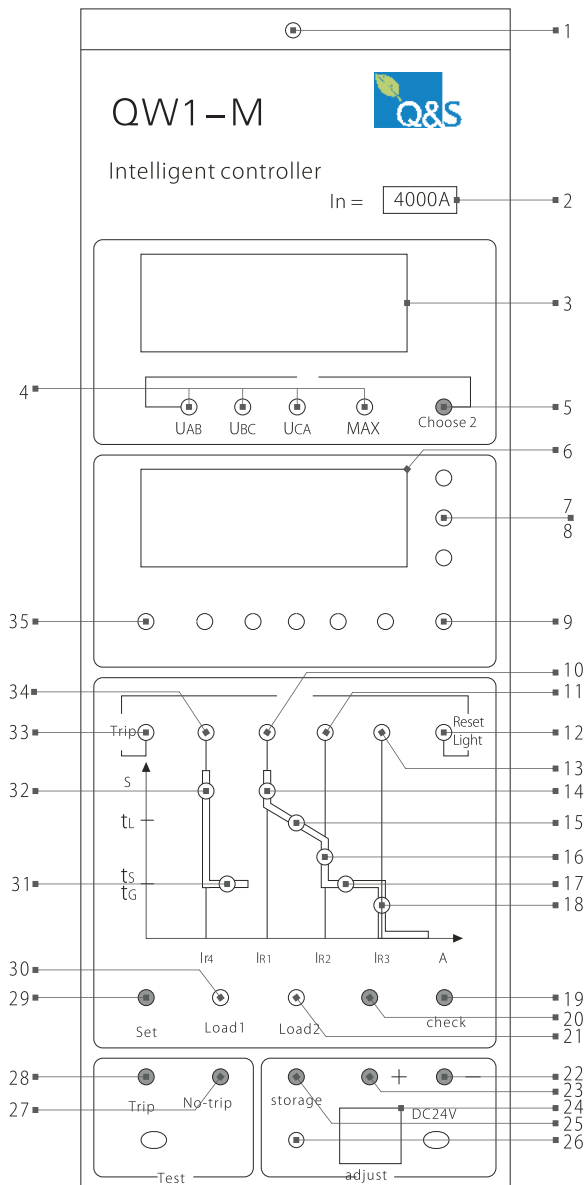
1. Reset button
2. Rated current labels
3. Operation indicator
4. 40% ~ 100% Ir1 current light beam indicator
5. Overload indicator
6. Code switch for ground fault protection
7. Code switch for long delayed overload current protection
8. Code switch for short time delayed overload current protection
9. Code switch for instantaneous short-circuit current protection
10. Fault indicator for instantaneous short-circuit protection
11. fault indicator short time delayed short circuit protection
12. Fault indicator for long time delayed overload protection
13. Fault Indicator for ground protection
14. Pull switch for short time delayed short-circuit protection
15. Pull switch for long time delayed overload protection
16. Pull switch for time setting of ground protection
17. Reset key
18. Test trip button
19. Fault-checking button

Note:

- (1) "OFF" function is available for every protection function, user can chose different protection functions as per actual requirement.
- (2) MCU light; blink in normal operation, constantly light in self-diagnostic fault.
- (3) 40% to 100% light: show the percentage of maximum phase current to IR1, the grade is 10%.
- (4) Overload light: when the current reaches 1.15IR the overload light lighting; when IR = OFF, current reaches 1.15IR the overload light lighting.
- (5) Fault reason indicator: check the reason why malfunction. When fault tripping occurs, the light indicator relevant fault reason, press the reset button to exit; if the power supply lost, press the check button to display the last fault trip reason when the power is on again.
- (6) Test trip button, check the status of release and circuit breakers.

M-type controller panel structure instruction

M-type controller, adopt button setting, digit and lights display mode, featured by large range of protection parameters which can be reorganize accordingly to different application requirement, suitable for most industrial applications.



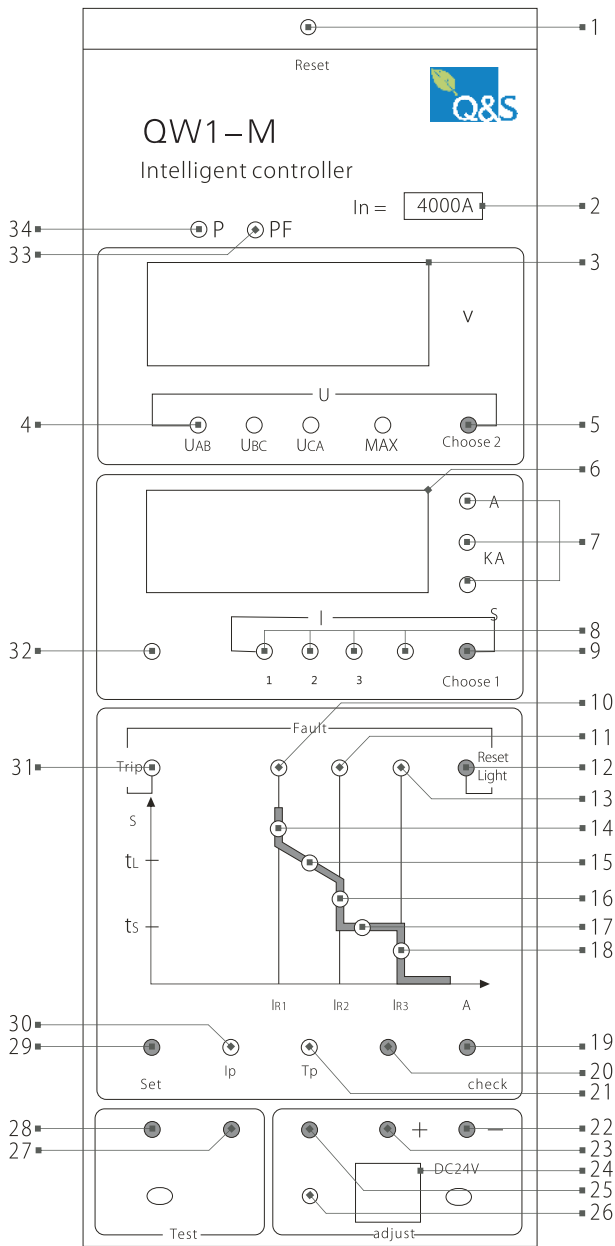
1. Reset button
2. Rated current labels
3. Voltage display
4. Three-phase line voltage and maximum voltage indicator
5. Voltage- checking button
6. Three-phase current display
7. Current and time indicator
8. Four-phase, ground and the maximum phase current indicator
9. Current- checking button
10. Long time delayed overload fault indicator
11. Short time delayed short circuit fault indicator
12. Light clear reset button
13. Instantaneous short-circuit fault indicator
14. Current setting for long time delayed overload protection and alarm indicator
15. Time setting indicator of long time delayed overload protection
16. Current setting for short time delayed short circuit protection and alarm indicator
17. Time setting indicator for short time delayed short circuit protection
18. Instantaneous short circuit current protection settings and alarm indicator
19. Fault checking button
20. Spare key
21. Load monitoring 2, current setting and alarm indicator
22. Decrease button
23. Increase button
24. Power supply socket
25. Save button
26. Extra Indicator
27. Non trip test button
28. Trip test button
29. Parameter setting button
30. Load monitoring 2, current setting and alarm indicator
31. Time setting indicator for ground protection
32. Ground protection current setting and alarm indicator
33. Fault trip indicator
34. Fault indicator for ground protection
35. Test status lights

Figure: QW1-M-type control panel introduction (Power distribution protection)

Note:

- (1) Fault current signal appears when the M type controller in the process of parameter setting, testing, fault checking, all the functional setting will be automatically turn off and enter the fault handling;
- (2) Cross-setting of protection parameters is forbidden and make sure $I_{r1} < I_{r2} < I_{r3}$
- (3) "Voltage display" is optional function, users should specify when place order.

M-type controller panel structure instruction



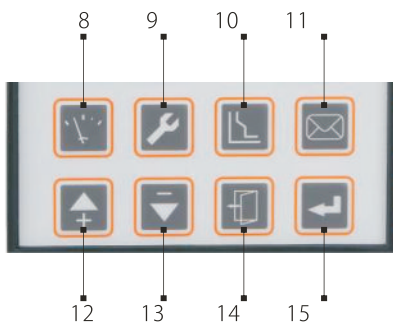
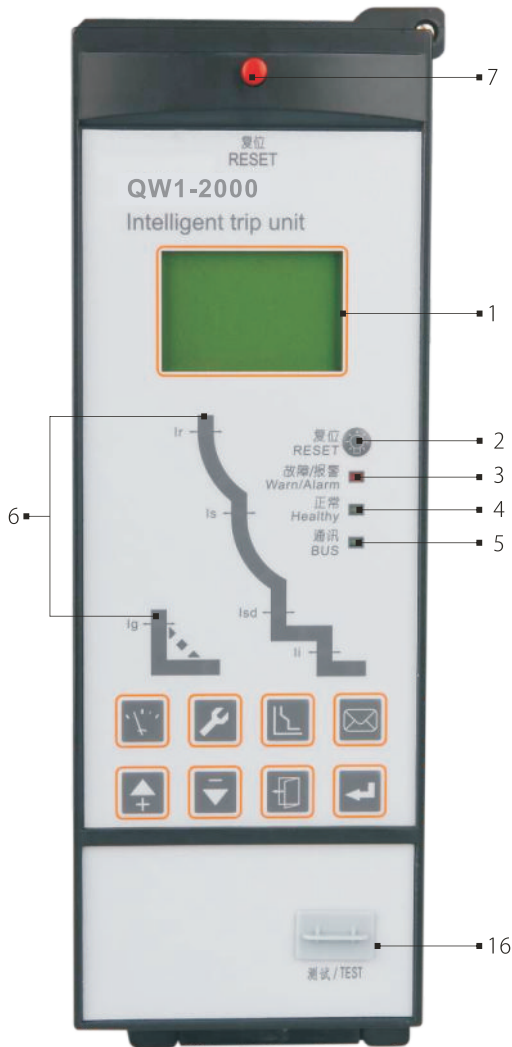
1. Reset button
2. Rated current labels
3. Voltage display
4. Three-phase line voltage and maximum voltage indicator
5. Voltage- checking button
6. Three-phase current display
7. Current and time indicator
8. Four-phase, ground and the maximum phase current in dicator
9. Current- checking button
10. Long time delayed overload fault indicator
11. Short time delayed short circuit fault indicator
12. Light clear reset button
13. Instantaneous short-circuit fault indicator
14. Current setting for long time delayed overload protection and alarm indicator
15. Long time delayed overload protection time setting indicator
16. Current settings for short time delayed short circuit protection and alarm indicator
17. Short time delayed short circuit protection time setting indicator
18. Instantaneous short circuit current protection settings and alarm indicator
19. Fault checking button
20. Spare key
21. Pre-alarm overload time setting indicator
22. Decrease button
23. Increase button
24. Power supply socket
25. Save button
26. Extra Indicator
27. Non trip test button
28. Trip test button
29. Parameter setting button
30. Pre-alarm overload current setting and alarm indicator
31. Fault trip indicator
32. Test status lights
33. Power factor measurement indicator
34. Active power measurement indicators

Figure : QW1-M-type control panel introduction (motor protection)

Note:

- (1) No ground fault protection for motor protection type.
- (2) "Voltage display" is optional function, users should specify when place order.

H-type controller panel structure instruction

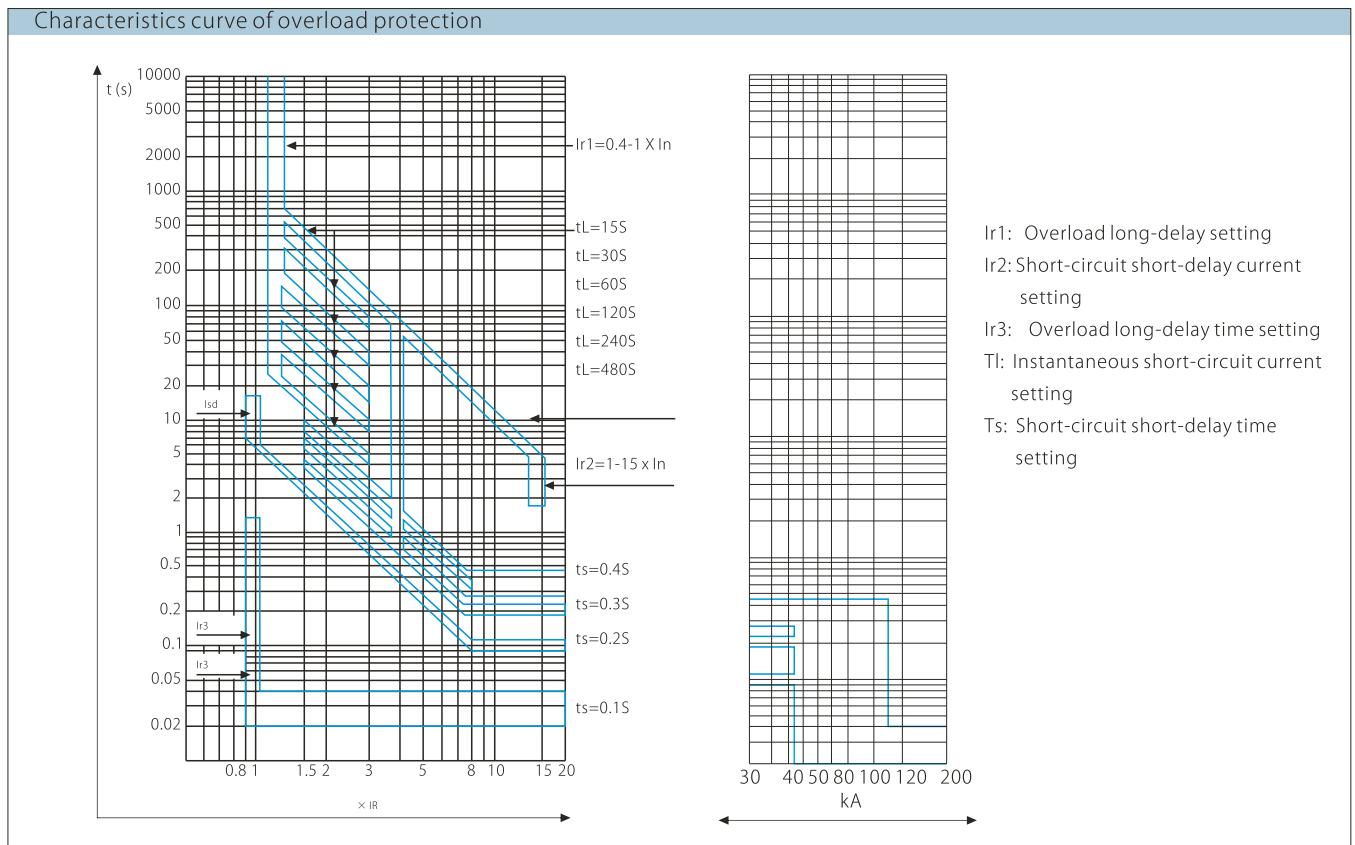
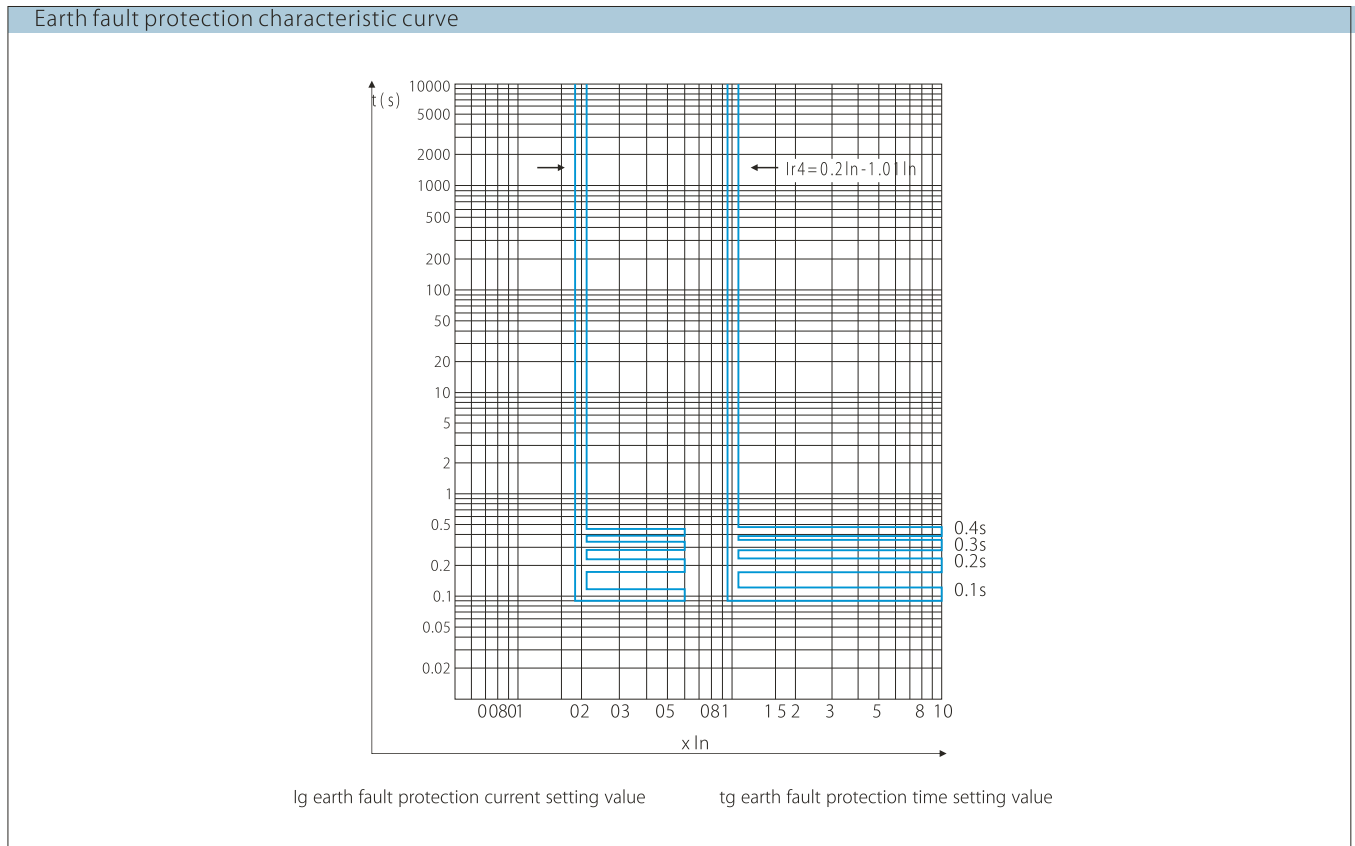


- Instruction
 1. LCD display
 2. Fault and alarm reset button
 3. "Fault and alarm"LED
LED indicator will not lighten when normal operation; LED flash quickly when maintenance; LED turned red when alarm.
 4. LED blinking green color on normal working condition
 5. Communication indicator
Communication status as follows
Light go out when no communication, keep lighting when in communication.
Light go out when no communication, keep flashing when in communication.
Flashing when no communication, keep lighting when in communication.
 6. Curve LED
The red LED hide inside curve. The corresponding LED flashes to indicate the type of fault when fault trip occurs. LED constantly lighten to indicating the current set projects when protection of parameter settings.
 7. Reset button:
Reset button pops up when tripping or test tripping. The circuit-breaker can't switch on if the button hasn't pressed down; press down the button and the fault indications will recovery.
- Keyboard
 8. Measurement function key 1, can be switched to the default theme menu. (Measurement function key is the "left" key in the password input interface).
 9. Setting function key 2: can be switched to the parameter setting menu. (Setting function key is the "right" key in the password input screen).
 10. Protection function key 3: switch to the parameter setting protection menu.
 11. Information function 4: switch to history record and menu maintenance.
 12. Up - move up or change the parameters.
 13. Down -move down or change the parameter.
 14. Exit - exit and enter the previous menu or cancel the current selected parameters.
 15. Choice -enter into the next menu or select the parameters and save the amendment.
 16. Test port
There is a 16-pin test plug at the bottom of the front panel, a portable power pack or detection unit can be insert able.

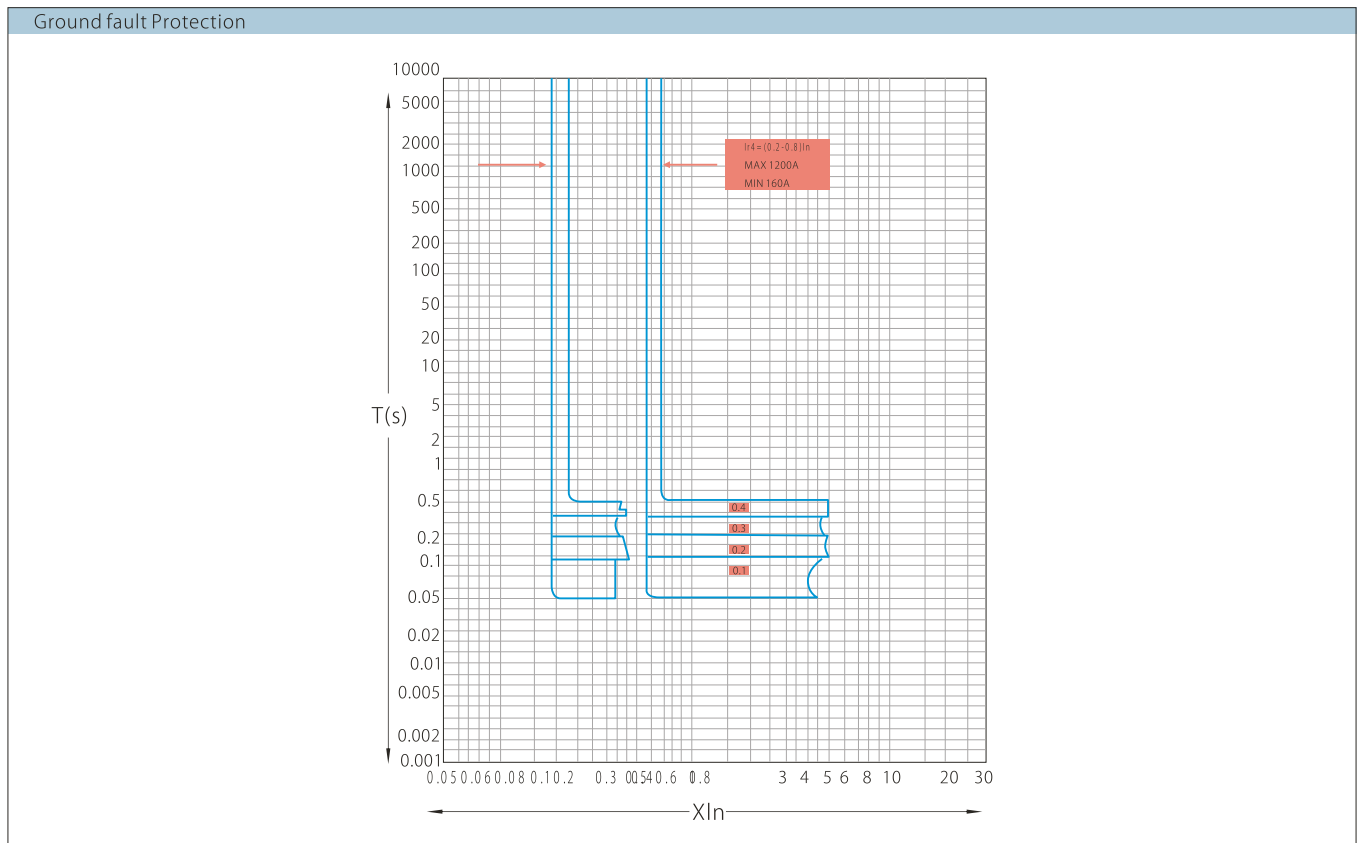
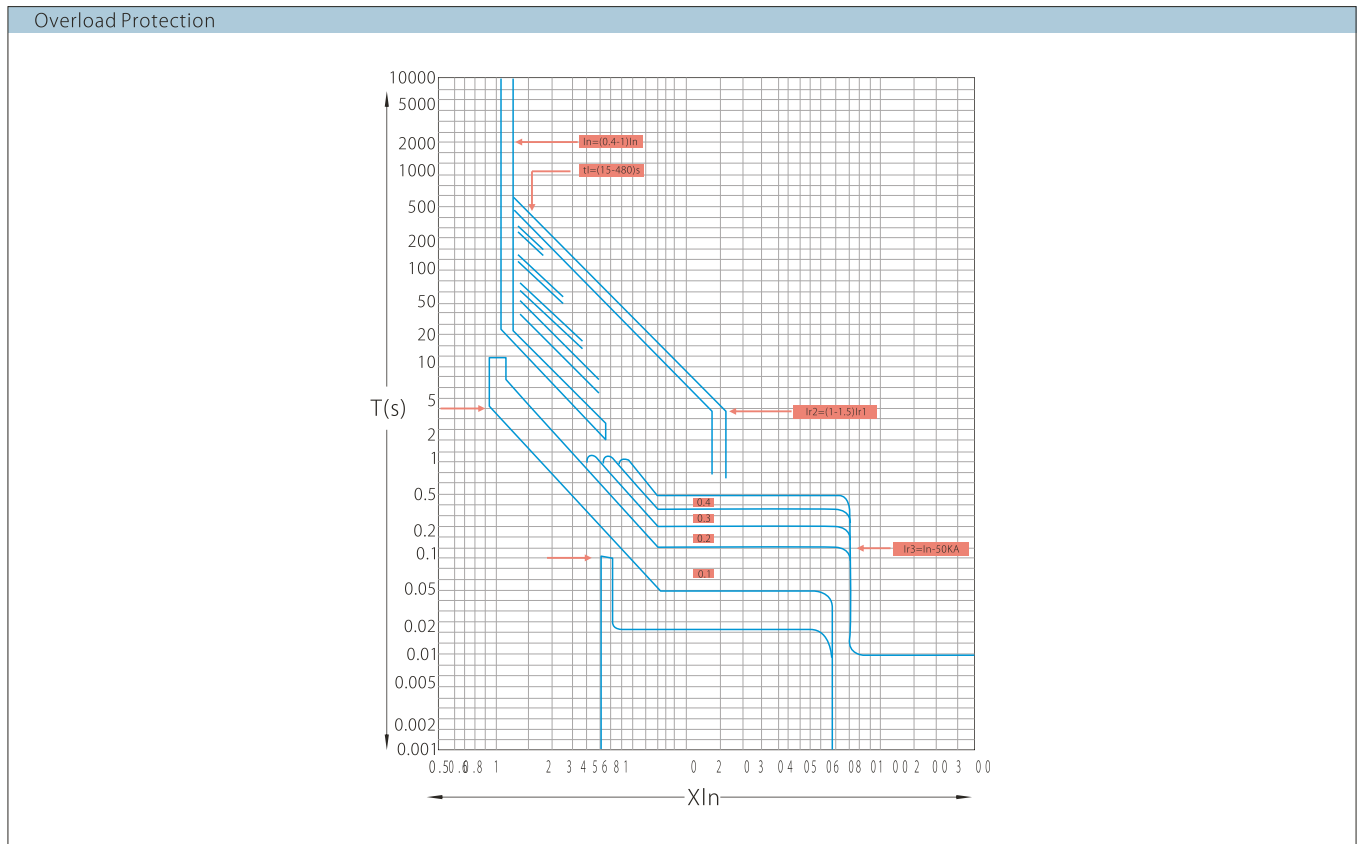
Intelligent controller protection characteristic of type M.H

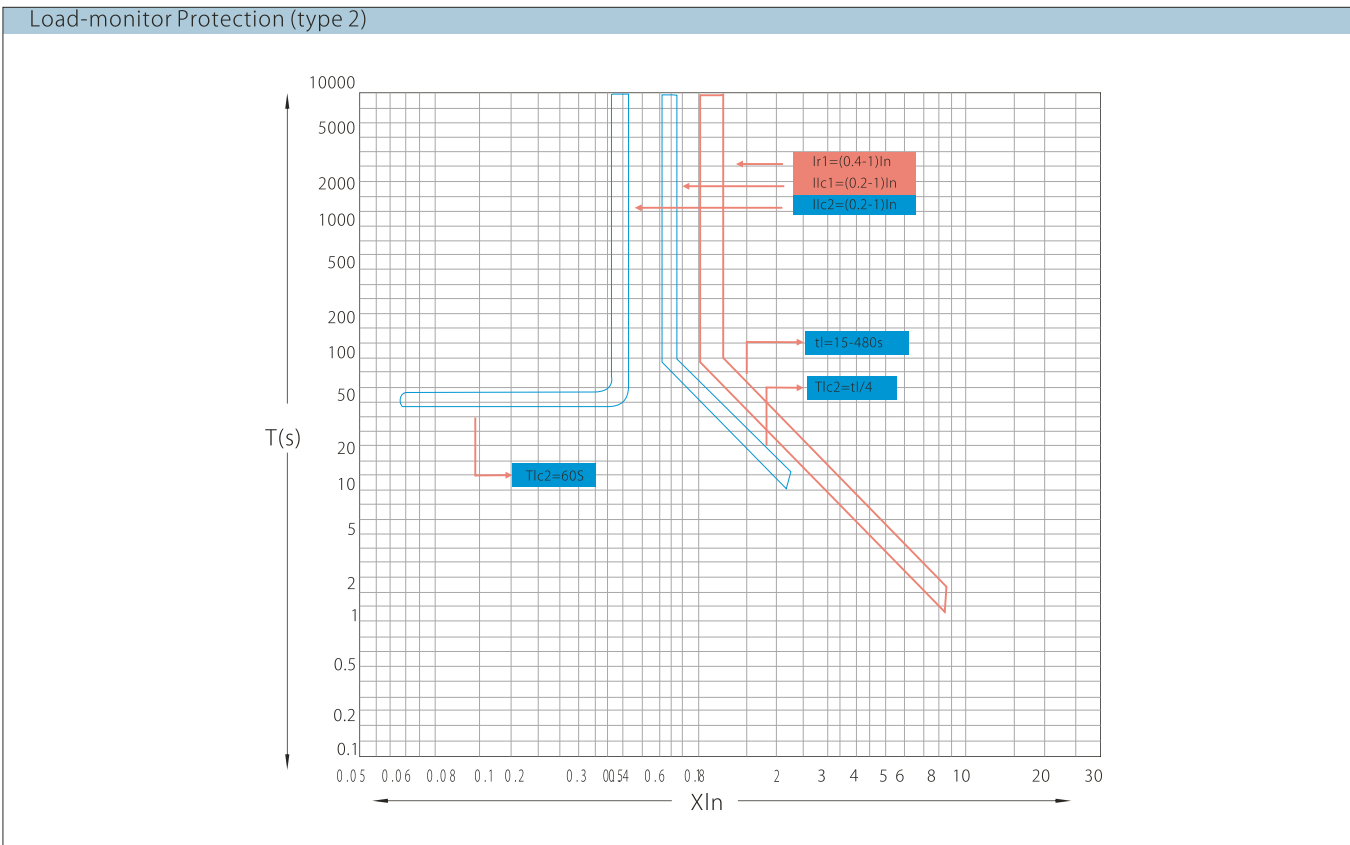
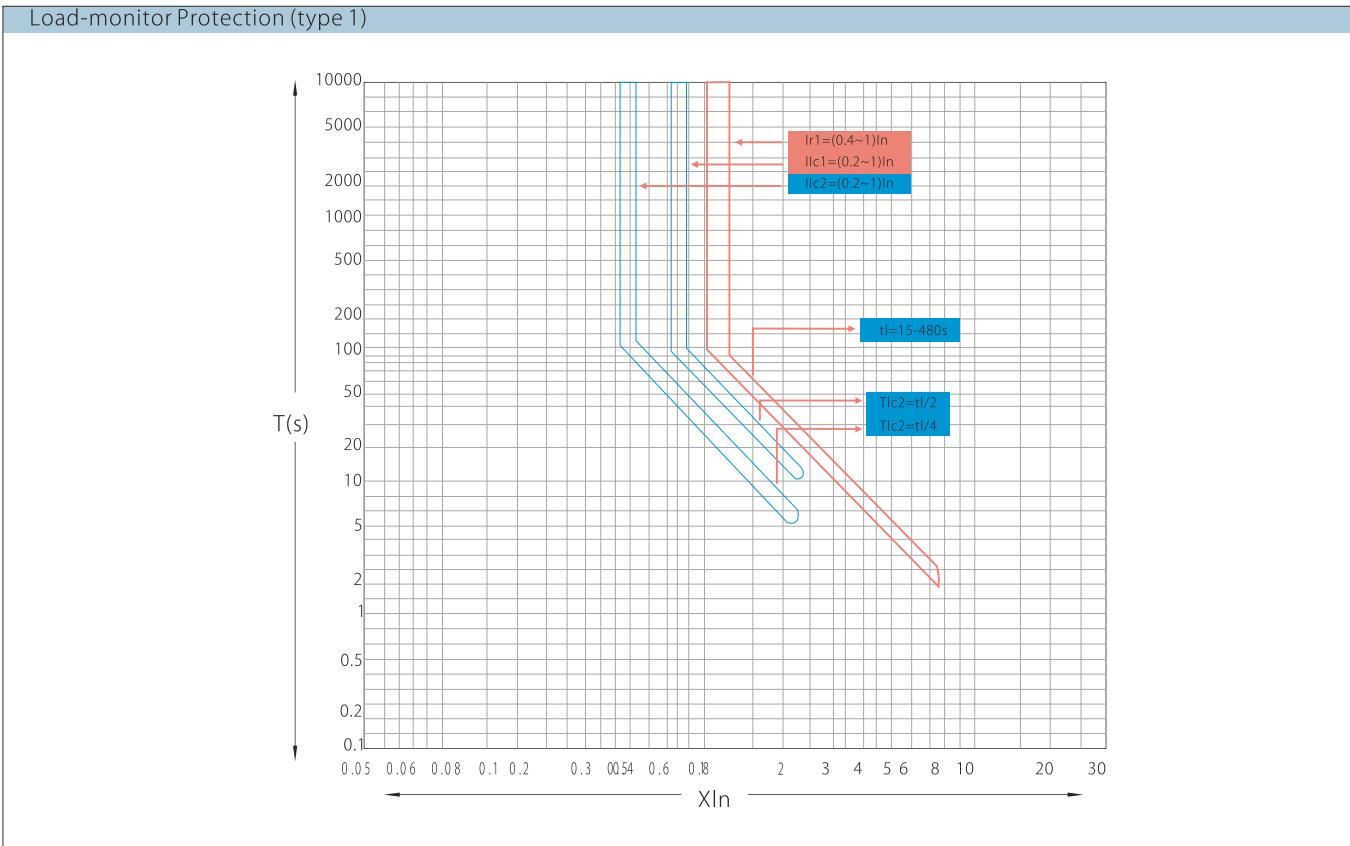
Overload thermal tripping L		ON/OFF selectable						
Setting current value adjustment range I _{r1}		(0.4~1.0)I _n no-pole adjustment						
Inverse time characteristic	1.05I _{r1}	2h no action						
Set by the user	1.30I _{r1}	≤2h action						
1.5I _r t _L (s)	1.50I _{r1}	15	30	60	120	240	480	
±10% accuracy	2.00I _{r1}	8.4	16.9	33.8	67.5	135	270	
	6.00I _{r1}	0.94	1.88	3.75	7.50	15.0	30.0	
	7.20I _{r1}	0.65	1.30	2.60	5.20	10.0	21.0	
Thermal memory (min)		≤30+off						
Short-circuit short delay (s)		ON/OFF Selectable						
Setting current value adjustment range I _{r2} ±10% accuracy		(1.0-15) I _{r1} no-pole adjustment						
Setting delay time t _s (s)	I>8I _{r1}	0.1	0.2	0.3	0.4			
±15% accuracy	Time to return	0.06	0.14	0.23	0.35			
	I≤8I _{r1}	With inverse time characteristic						
Thermal memory(min)		≤15						
Instantaneous short-circuit (I)		ON/OFF Selectable						
Short-circuit current value adjustment range I _{r3} ±15% accuracy		(1.0-20)I _n						
Ground fault		ON/OFF Selectable						
Setting current value adjustment range I _{r4} ±10% accuracy		(0.2-1.0) I _{r1} no-pole adjustment						
Ground fault delay time t _G (s)	s	0.1	0.2	0.3	0.4			
Time to return	ms	60	160	225	340			
Maximum breaking time	ms	140	240	345	460			
Load monitoring								
Two load limit	I _{c1} =I _n x... A tr1= I _{c2} =I _n x... A	0.2~1(≤2% differential, min160A) 0.5t ₁ , when 1.5I _{c1} , T=1.5I _{r1} xtr1/I ²						
One load limit and one reclose	tr2= I _{c1} =I _n x... A tr1= I _{c2} =I _n x... A tr2=	0.25t ₁ , when 1.5I _{c1} , T=1.5I _{r1} xtr1/I ² 0.2~1(≤2% differential, min160A) 0.25t ₁ , when 1.5I _{c1} , T=1.5I _{r1} xtr1/I ² 0.2~1(≤2% differential, min160A) Fixed 60s						
Accuracy		±10%						
Thermal memory(30min.clear power)		Standard+off						
Fault trip								
Fault trip indication	Machinery Electrical installations	Mechanical reset button (red) Remote indication contact						
Fault current time display	Fault trip display	Flash after fault trip						
Show loss of main contact	Fault trip display	Overload time-lapse; short-circuit short delay; short-circuit instantaneous; ground fault						
Overcurrent fault alarm Fault type display	Digital display, LCD display Digital display, LCD display	Current value of fault like o Display the current value						
Test	Trip button Non trip button	Test the current characteristic Test the current characteristic of electronic release tripping time						

Current protection characteristic curve for intelligent controller



Intelligent controller protection characteristic of type M, H





Selection and ordering data

Frame A

QW1-2000



L type controller						
Horizontal terminal connection						
Rated current In (A)	Number of poles	Fixed type		Drawer type		
		Type code	Order code	Type code	Order code	
400	3P	QW1AF3LH400	27997	QW1AD 3LH400	27977	
	4P	QW1AF4LH400	32444	QW1AD 4LH400	32430	
630	3P	QW1AF3LH630	28001	QW1AD 3LH630	27981	
	4P	QW1AF4LH630	32446	QW1AD 4LH630	32432	
800	3P	QW1AF3LH800	28003	QW1AD 3LH800	27985	
	4P	QW1AF4LH800	32448	QW1AD 4LH800	32434	
1000	3P	QW1AF3LH1000	28005	QW1AD 3LH1000	27987	
	4P	QW1AF4LH1000	32450	QW1AD 4LH1000	32436	
1250	3P	QW1AF3LH1250	28007	QW1AD 3LH1250	27989	
	4P	QW1AF4LH1250	32452	QW1AD 4LH1250	32438	
1600	3P	QW1AF3LH1600	32426	QW1AD 3LH1600	27991	
	4P	QW1AF4LH1600	32454	QW1AD 4LH1600	32440	
2000	3P	QW1AF3LH2000	32428	QW1AD 3LH2000	27993	
	4P	QW1AF4LH2000	32456	QW1AD 4LH2000	32442	
vertical terminal connection						
400	3P	QW1AF3LV400	27998	QW1AD 3LV400	27978	
	4P	QW1AF4LV400	32445	QW1AD 4LV400	32431	
630	3P	QW1AF3LV630	28002	QW1AD 3LV630	27982	
	4P	QW1AF4LV630	32447	QW1AD 4LV630	32433	
800	3P	QW1AF3LV800	28004	QW1AD 3LV800	27986	
	4P	QW1AF4LV800	32449	QW1AD 4LV800	32435	
1000	3P	QW1AF3LV1000	28006	QW1AD 3LV1000	27988	
	4P	QW1AF4LV1000	32451	QW1AD 4LV1000	32437	
1250	3P	QW1AF3LV1250	28008	QW1AD 3LV1250	27990	
	4P	QW1AF4LV1250	32453	QW1AD 4LV1250	32439	
1600	3P	QW1AF3LV1600	32427	QW1AD 3LV1600	27992	
	4P	QW1AF4LV1600	32455	QW1AD 4LV1600	32441	
2000	3P	QW1AF3LV2000	32429	QW1AD 3LV2000	27994	
	4P	QW1AF4LV2000	32457	QW1AD 4LV2000	32443	
M type controller						
Horizontal terminal connection						
400	3P	QW1AF3MH400	27815	QW1AD 3MH400	27801	
	4P	QW1AF4MH400	27843	QW1AD 4MH400	27829	
630	3P	QW1AF3MH630	27817	QW1AD 3MH630	27803	
	4P	QW1AF4MH630	27845	QW1AD 4MH630	27831	
800	3P	QW1AF3MH800	27819	QW1AD 3MH800	27805	
	4P	QW1AF4MH800	27847	QW1AD 4MH800	27833	
1000	3P	QW1AF3MH1000	27821	QW1AD 3MH1000	27807	
	4P	QW1AF4MH1000	27849	QW1AD 4MH1000	27835	
1250	3P	QW1AF3MH1250	27823	QW1AD 3MH1250	27809	
	4P	QW1AF4MH1250	27851	QW1AD 4MH1250	27837	
1600	3P	QW1AF3MH1600	27825	QW1AD 3MH1600	27811	
	4P	QW1AF4MH1600	27853	QW1AD 4MH1600	27839	
2000	3P	QW1AF3MH2000	27827	QW1AD 3MH2000	27813	
	4P	QW1AF4MH2000	27855	QW1AD 4MH2000	27841	

Frame A

M type controller

QW1-2000

Vertical terminal connection

Rated current In (A)	Number of poles	Fixed type		Drawer type	
		Type code	Order code	Type code	Order code
400	3P	QW1AF 3MV400	27816	QW1AD 3MV400	27802
	4P	QW1AF 4MV400	27844	QW1AD 4MV400	27830
630	3P	QW1AF 3MV630	27818	QW1AD 3MV630	27804
	4P	QW1AF 4MV630	27846	QW1AD 4MV630	27832
800	3P	QW1AF 3MV800	27820	QW1AD 3MV800	27806
	4P	QW1AF 4MV800	27848	QW1AD 4MV800	27834
1000	3P	QW1AF 3MV1000	27822	QW1AD 3MV1000	27808
	4P	QW1AF 4MV1000	27850	QW1AD 4MV1000	27836
1250	3P	QW1AF 3MV1250	27824	QW1AD 3MV1250	27810
	4P	QW1AF 4MV1250	27852	QW1AD 4MV1250	27838
1600	3P	QW1AF 3MV1600	27826	QW1AD 3MV1600	27812
	4P	QW1AF 4MV1600	27854	QW1AD 4MV1600	27840
2000	3P	QW1AF 3MV2000	27828	QW1AD 3MV2000	27814
	4P	QW1AF 4MV2000	27856	QW1AD 4MV2000	27842

H type controller

Horizontal terminal connection

400	3P	QW1AF 3HH400	27871	QW1AD HH400	27857
	4P	QW1AF 4HH400	27899	QW1AD HH400	27885
630	3P	QW1AF 3HH630	27873	QW1AD HH630	27859
	4P	QW1AF 4HH630	27901	QW1AD HH630	27887
800	3P	QW1AF 3HH800	27875	QW1AD HH800	27861
	4P	QW1AF 4HH800	27903	QW1AD HH800	27889
1000	3P	QW1AF 3HH1000	27877	QW1AD HH1000	27863
	4P	QW1AF 4HH1000	27905	QW1AD HH1000	27891
1250	3P	QW1AF 3HH1250	27879	QW1AD HH1250	27865
	4P	QW1AF 4HH1250	27907	QW1AD HH1250	27893
1600	3P	QW1AF 3HH1600	27881	QW1AD HH1600	27867
	4P	QW1AF 4HH1600	27909	QW1AD HH1600	27895
2000	3P	QW1AF 3HH2000	27883	QW1AD HH2000	27869
	4P	QW1AF 4HH2000	27911	QW1AD HH2000	27897

Vertical terminal connection

400	3P	QW1AF 3HV400	27872	QW1AD HV400	27858
	4P	QW1AF 4HV400	27900	QW1AD HV400	27886
630	3P	QW1AF 3HV630	27874	QW1AD HV630	27860
	4P	QW1AF 4HV630	27902	QW1AD HV630	27888
800	3P	QW1AF 3HV800	27876	QW1AD HV800	27862
	4P	QW1AF 4HV800	27904	QW1AD HV800	27890
1000	3P	QW1AF 3HV1000	27878	QW1AD HV1000	27864
	4P	QW1AF 4HV1000	27906	QW1AD HV1000	27892
1250	3P	QW1AF 3HV1250	27880	QW1AD HV1250	27866
	4P	QW1AF 4HV1250	27908	QW1AD HV1250	27894
1600	3P	QW1AF 3HV1600	27882	QW1AD HV1600	27868
	4P	QW1AF 4HV1600	27910	QW1AD HV1600	27896
2000	3P	QW1AF 3HV2000	27884	QW1AD HV2000	27870
	4P	QW1AF 4HV2000	27912	QW1AD HV2000	27898

Frame B

L type controller

QW1-3200

Horizontal terminal connection

Rated current In (A)	Number of poles	Fixed type		Drawer type	
		Type code	Order code	Type code	Order code
2000	3P	QW1BF 3LH2000	32466	QW1BD 3LH2000	32458
	4P	QW1BF 4LH2000	32482	QW1BD 4LH2000	32474
2500	3P	QW1BF 3LH2500	32468	QW1BD 3LH2500	32460
	4P	QW1BF 4LH2500	32484	QW1BD 4LH2500	32476
2900	3P	QW1BF 3LH2900	32470	QW1BD 3LH2900	32462
	4P	QW1BF 4LH2900	32486	QW1BD 4LH2900	32478
3200	3P	QW1BF 3LH3200	32472	QW1BD 3LH3200	32464
	4P	QW1BF 4LH3200	32488	QW1BD 4LH3200	32480
4000	3P	QW1BF 3LH4000	32516	QW1BD 3LH4000	32514
	4P	-	-	-	-

Vertical terminal connection

2000	3P	QW1BF 3LV2000	32467	QW1BD 3LV2000	32459
	4P	QW1BF 4LV2000	32483	QW1BD 4LV2000	32475
2500	3P	QW1BF 3LV2500	32469	QW1BD 3LV2500	32461
	4P	QW1BF 4LV2500	32485	QW1BD 4LV2500	32477
2900	3P	QW1BF 3LV2900	32471	QW1BD 3LV2900	32463
	4P	QW1BF 4LV2900	32487	QW1BD 4LV2900	32479
32200	3P	QW1BF 3LV3200	32473	QW1BD 3LV3200	32465
	4P	QW1BF 4LV3200	32489	QW1BD 4LV3200	32481
4000	3P	QW1BF 3LV4000	32517	QW1BD 3LV4000	32515
	4P	-	-	-	-

M type controller

Horizontal terminal connection

2000	3P	QW1BF 3MH2000	27921	QW1BD 3MH2000	27913
	4P	QW1BF 4MH2000	27937	QW1BD 4MH2000	27929
2500	3P	QW1BF 3MH2500	27923	QW1BD 3MH2500	27915
	4P	QW1BF 4MH2500	27939	QW1BD 4MH2500	27931
2900	3P	QW1BF 3MH2900	27925	QW1BD 3MH2900	27917
	4P	QW1BF 4MH2900	27941	QW1BD 4MH2900	27933
3200	3P	QW1BF 3MH3200	27927	QW1BD 3MH3200	27919
	4P	QW1BF 4MH3200	27943	QW1BD 4MH3200	27935
4000	3P	QW1BF 3MH4000	27983	QW1BD 3MH4000	27979
	4P	-	-	-	-

Vertical terminal connection

2000	3P	QW1BF 3MV2000	27922	QW1BD 3MV2000	27914
	4P	QW1BF 4MV2000	27938	QW1BD 4MV2000	27930
2500	3P	QW1BF 3MV2500	27924	QW1BD 3MV2500	27916
	4P	QW1BF 4MV2500	27940	QW1BD 4MV2500	27932
2900	3P	QW1BF 3MV2900	27926	QW1BD 3MV2900	27918
	4P	QW1BF 4MV2900	27942	QW1BD 4MV2900	27934
32200	3P	QW1BF 3MV3200	27928	QW1BD 3MV3200	27920
	4P	QW1BF 4MV3200	27944	QW1BD 4MV3200	27936
4000	3P	QW1BF 3MV4000	27984	QW1BD 3MV4000	27980
	4P	-	-	-	-

H type controller

Horizontal terminal connection

2000	3P	QW1BF 3HH2000	27953	QW1BD 3HH2000	27945
	4P	QW1BF 4HH2000	27969	QW1BD 4HH2000	27961
2500	3P	QW1BF 3HH2500	27955	QW1BD 3HH2500	27947
	4P	QW1BF 4HH2500	27971	QW1BD 4HH2500	27963
2900	3P	QW1BF 3HH2900	27957	QW1BD 3HH2900	27949
	4P	QW1BF 4HH2900	27973	QW1BD 4HH2900	27965
3200	3P	QW1BF 3HH3200	27959	QW1BD 3HH3200	27951
	4P	QW1BF 4HH3200	27975	QW1BD 4HH3200	27967
4000	3P	QW1BF 3HH4000	27999	QW1BD 3HH4000	27995
	4P	-	-	-	-

Frame B

QW1-3200

H type controller						
Vertical terminal connection						
Rated current In (A)	Number of poles	Fixed type		Drawer type		Order code
		Type code	Order code	Type code	Order code	
2000	3P	QW1BF 3HV2000	27954	QW1BD 3HV2000	27946	
	4P	QW1BF 4HV2000	27970	QW1BD 4HV2000	27962	
2500	3P	QW1BF 3HV2500	27956	QW1BD 3HV2500	27948	
	4P	QW1BF 4HV2500	27972	QW1BD 4HV2500	27964	
2900	3P	QW1BF 3HV2900	27958	QW1BD 3HV2900	27950	
	4P	QW1BF 4HV2900	27974	QW1BD 4HV2900	27966	
3200	3P	QW1BF 3HV3200	27960	QW1BD 3HV3200	27952	
	4P	QW1BF 4HV3200	27976	QW1BD 4HV3200	27968	
4000	3P	QW1BF 3HV4000	28000	QW1BD 3HV4000	27996	
	4P	-	-	-	-	

Frame C

QW1-6300

Ltype controller						
Horizontal terminal connection						
4000	3P	QW1CF 3LH4000	32496	QW1CD 3LH4000	32490	
	4P	QW1CF 4LH4000	32508	QW1CD 4LH4000	32502	
5000	3P	QW1CF 3LH5000	32498	QW1CD 3LH5000	32492	
	4P	QW1CF 4LH5000	32510	QW1CD 4LH5000	32504	
6300	3P	QW1CF 3LH6300	32500	QW1CD 3LH6300	32494	
	4P	QW1CF 4LH6300	32512	QW1CD 4LH6300	32506	
Vertical terminal connection						
4000	3P	QW1CF 3LV4000	32497	QW1CD 3LV4000	32491	
	4P	QW1CF 4LV4000	32509	QW1CD 4LV4000	32503	
5000	3P	QW1CF 3LV5000	32499	QW1CD 3LV5000	32493	
	4P	QW1CF 4LV5000	32511	QW1CD 4LV5000	32505	
6300	3P	QW1CF 3LV6300	32501	QW1CD 3LV6300	32495	
	4P	QW1CF 4LV6300	32513	QW1CD 4LV6300	32507	

M type controller						
Horizontal terminal connection						
4000	3P	QW1CF 3MH4000	28015	QW1CD 3MH4000	28009	
	4P	QW1CF 4MH4000	28027	QW1CD 4MH4000	28021	
5000	3P	QW1CF 3MH5000	28017	QW1CD 3MH5000	28011	
	4P	QW1CF 4MH5000	28029	QW1CD 4MH5000	28023	
6300	3P	QW1CF 3MH6300	28019	QW1CD 3MH6300	28013	
	4P	QW1CF 4MH6300	28031	QW1CD 4MH6300	28025	
Vertical terminal connection						
4000	3P	QW1CF 3MV4000	28016	QW1CD 3MV4000	28010	
	4P	QW1CF 4MV4000	28028	QW1CD 4MV4000	28022	
5000	3P	QW1CF 3MV5000	28018	QW1CD 3MV5000	28012	
	4P	QW1CF 4MV5000	28030	QW1CD 4MV5000	28024	
6300	3P	QW1CF 3MV6300	28020	QW1CD 3MV6300	28014	
	4P	QW1CF 4MV6300	28032	QW1CD 4MV6300	28026	

H type controller						
Horizontal terminal connection						
4000	3P	QW1CF 3HH4000	28039	QW1CD 3HH4000	28033	
	4P	QW1CF 4HH4000	28051	QW1CD 4HH4000	28045	
5000	3P	QW1CF 3HH5000	28041	QW1CD 3HH5000	28035	
	4P	QW1CF 4HH5000	28053	QW1CD 4HH5000	28047	
6300	3P	QW1CF 3HH6300	28043	QW1CD 3HH6300	28037	
	4P	QW1CF 4HH6300	28055	QW1CD 4HH6300	28049	
Vertical terminal connection						
4000	3P	QW1CF 3HV4000	28040	QW1CD 3HV4000	28034	
	4P	QW1CF 4HV4000	28052	QW1CD 4HV4000	28046	
5000	3P	QW1CF 3HV5000	28042	QW1CD 3HV5000	28036	
	4P	QW1CF 4HV5000	28054	QW1CD 4HV5000	28048	
6300	3P	QW1CF 3HV6300	28044	QW1CD 3HV6300	28038	
	4P	QW1CF 4HV6300	28056	QW1CD 4HV6300	28050	

Accessory



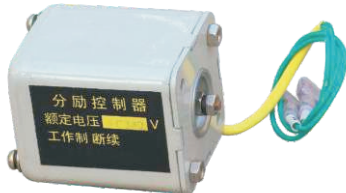
- Under-voltage release
When circuit breaker is power off, it requires automatic break, user should adopt under-voltage instantaneous release; when breaker is instantaneous power failure or under voltage, it does not require break, user adopt under-voltage delay release. Thus, it is not a necessary accessory, it is optional. It should always connect the power source if circuit breaker is equipped with such release.

Note:

In the thunderstorm-prone areas or in unstable voltage grids, it is recommended to use under voltage time-delayed release. It can prevent the breaker tripping caused by instantaneous voltage decrease. The delayed time are normally 0.5s, 1s, 2s, 3s, for user to choose.

Characteristics:

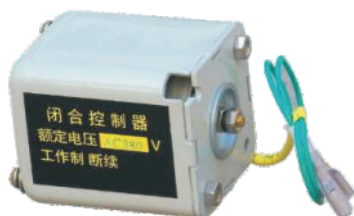
Rated working voltage U_e (v)	AC400, AC230
Tripping voltage (V)	$(0.35\sim0.7)U_e$
Reliable closing voltage (V)	$(0.85\sim1.1)U_e$
Reliable open voltage (V)	$\leq 0.35U_e$
Power consumption	12VA



- Shunt release
Shunt release can break circuit breaker through remote operation instead of on the spot, which can avoid contact with circuit breaker during circuit operation and make worker safer. Shunt release can't always be connected to power source, otherwise coil will be burned.

Characteristics:

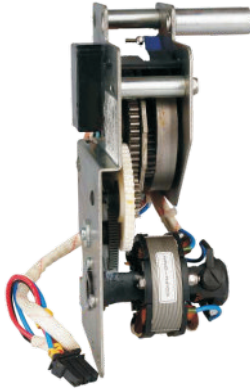
Rated control power source voltage U_s (v)	AC400 AC230, DC220DC110
Tripping voltage (V)	$(0.7\sim1.1)U_s$
Limit current	0.7, 1.3, 1.3, 2.4
Breaking time (ms)	≤ 30



- Closing electromagnet
Closing electromagnet can switch on circuit breaker through remote operation instead of on the spot, which can avoid contact with circuit breaker during circuit operation and make worker safer. Such release can't always be connected to power source, otherwise coil will be burned. After energy storage is finished, the closing electromagnet will make the energy storage spring of operation mechanism to release its energy instantly so that the circuit breaker is closed rapidly.

Characteristics:

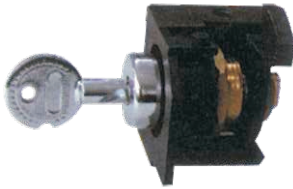
Rated control power source voltage U_e (v)	AC400 AC230, DC220DC110
Tripping voltage (V)	$(0.8\sim1.1)U_s$
Limit current (A)	0.7, 1.3, 1.3, 2.4
Closing time (ms)	≤ 70



- Electric operation mechanism
 - The breaker is of operation mechanism energy storage and re-storage function.
 - The breaker can store energy manually

Characteristics:

Rated control power source voltage U_s (v)	AC400 AC230, DC220DC110
Tripping voltage (V)	(0.85~1.1) U_s
Power consumption	192VA, 192W
Storage time (s)	≤ 5



- Disconnecting lock device
 - Disconnecting lock device can lock the switch off button at the off location, thus breaker can not be closed;
 - The factory will provide the key and lock after user selects breaker;
 - One circuit breaker is equipped with independent lock and key;
 - Two circuit breakers are equipped with two same locks and one key;
 - Three circuit breakers are equipped with three same locks and two keys.



- Partition plate of the draw-out type circuit breaker;
 - The partition strengthens the busbar insulation. It is optional.

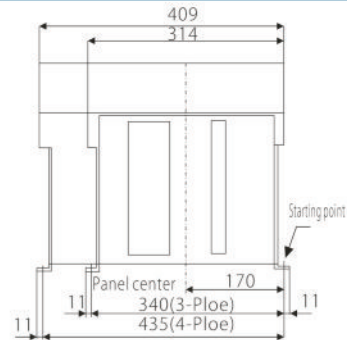
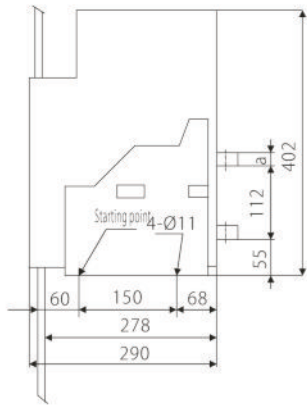


- Door frame
 - It is fixed on the door cabinet and used as seal. Protection grade is up to IP40;
 - Beautiful and practical;
 - The door frame has draw-out type (MK1) and fixed type.

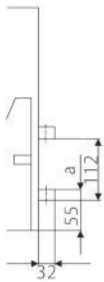
Outline and installation dimensions

QW1-400, 630, 800, 1000, 1250, 1600, 2000

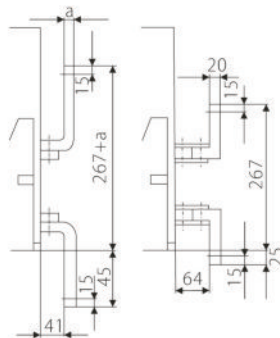
Fixed 3-pole 4-pole



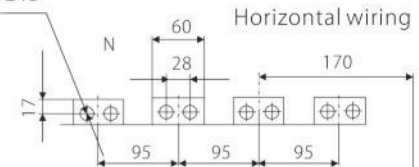
Horizontal wiring



L-type wiring

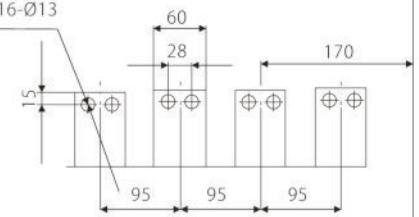


3-Pole 12-Ø13
4-Pole 16-Ø13

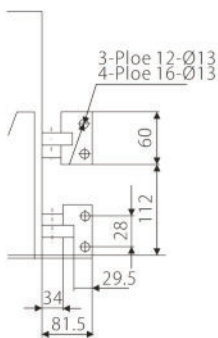


L-type wiring

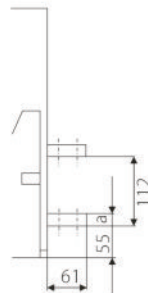
3-Pole 12-Ø13
4-Pole 16-Ø13



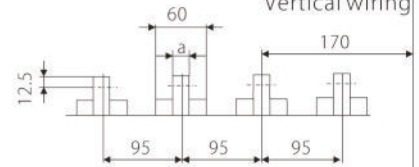
Vertical wiring



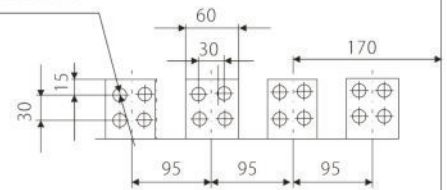
Extended horizontal wiring



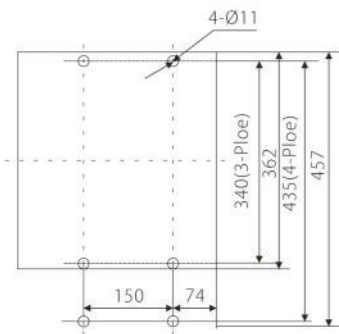
Vertical wiring



3-Pole 24-Ø13
4-Pole 32-Ø13



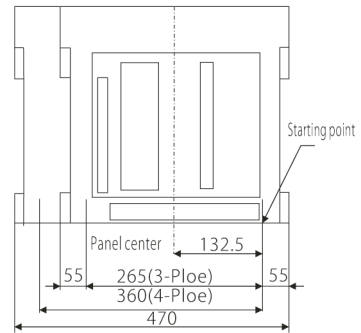
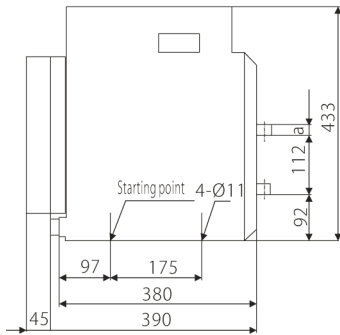
Starting point



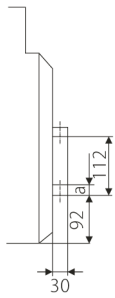
Darwer 3-pole 4-pole	
In A	a mm
400~800	10
1000~1600	15
2000	20

QW1-400,630,800,1000,1250,1600,2000

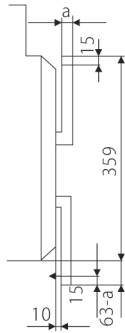
Drawer type 3-pole 4-pole



Horizontal wiring

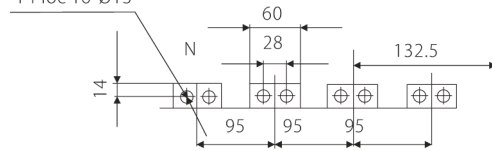


L-type wiring



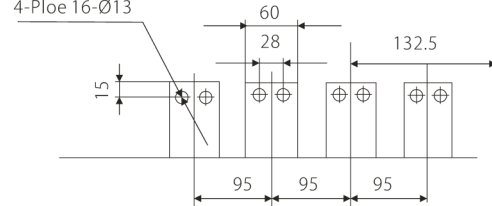
3-Pole 12-Ø13
4-Pole 16-Ø13

Horizontal wiring



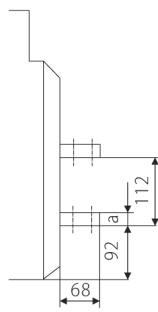
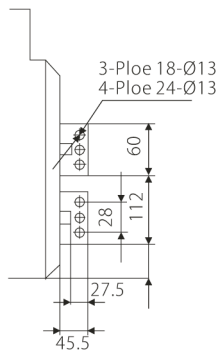
3-Pole 12-Ø13
4-Pole 16-Ø13

L-type wiring



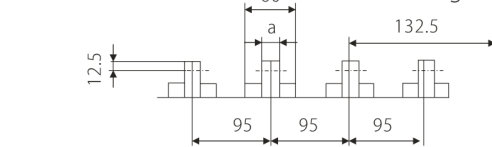
Vertical wiring

Extended horizontal wiring



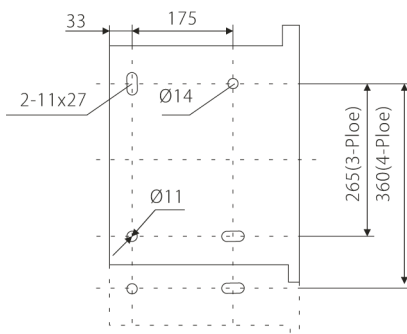
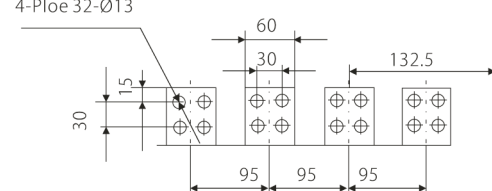
3-Pole 12-Ø13
4-Pole 16-Ø13

Vertical wiring



3-Pole 24-Ø13
4-Pole 32-Ø13

Extended horizontal wiring

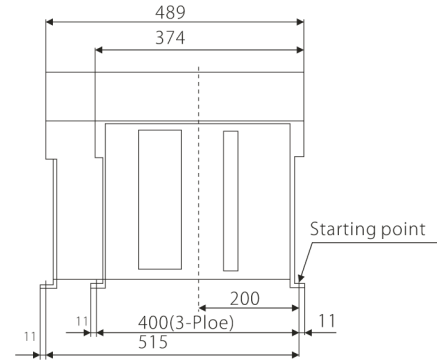
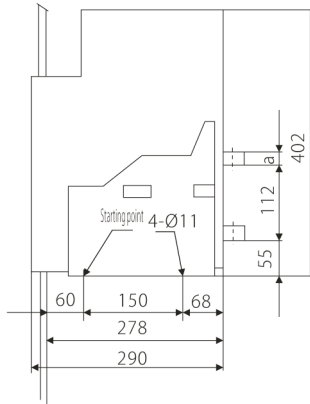


Starting point

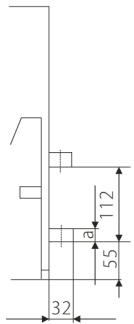
Drawer 3-pole 4-pole	
In A	a mm
400~800	10
1000~1600	15
2000	20

QW1-2000,2500,2900,3200

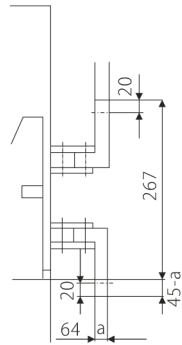
Fixed 3-pole 4-pole



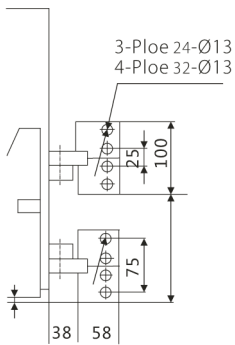
Horizontal wiring



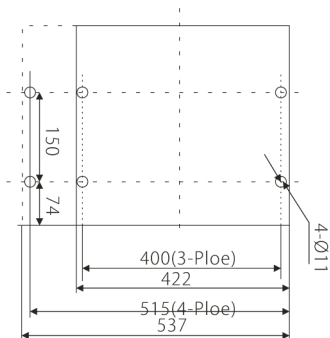
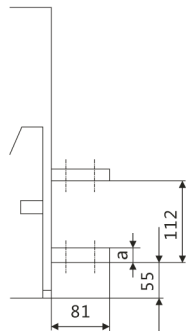
L-type wiring



Vertical wiring

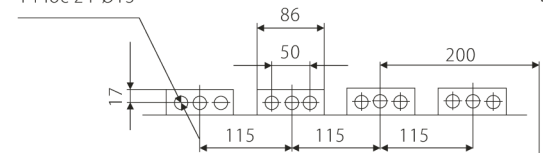


Extended horizontal wiring



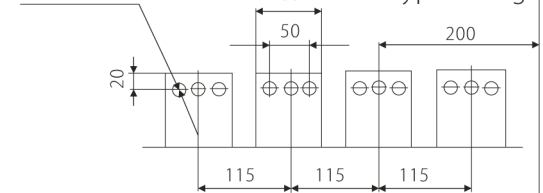
3-Pole 18-Ø13
4-Pole 24-Ø13

Horizontal wiring

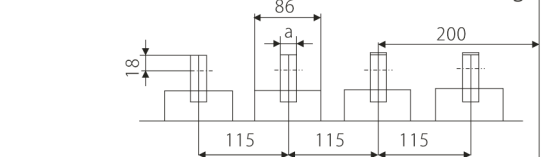


3-Pole 18-Ø13
4-Pole 24-Ø13

L-type wiring

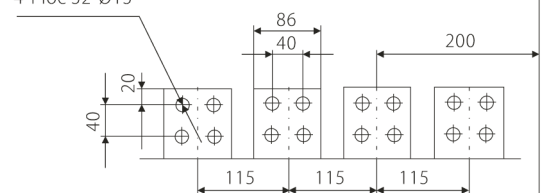


Vertical wiring



3-Pole 24-Ø13
4-Pole 32-Ø13

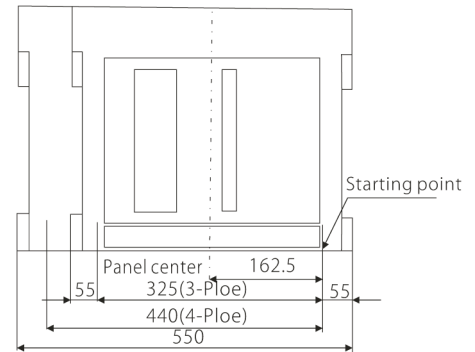
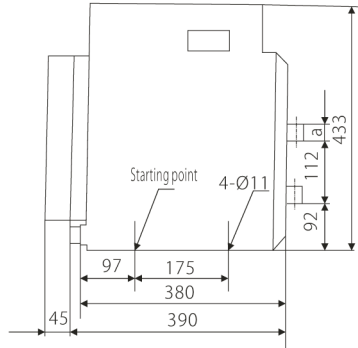
Extended horizontal wiring



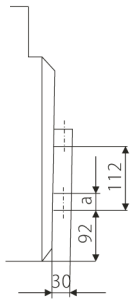
Darwer 3-pole 4-pole	
In A	a mm
2000~2500	20
2900~3200	30

QW1-2000,2500,2900,3200

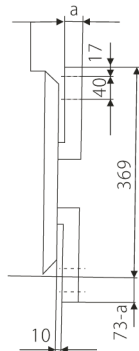
Drawer type 3-pole 4-pole



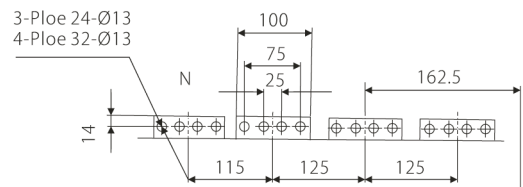
Horizontal wiring



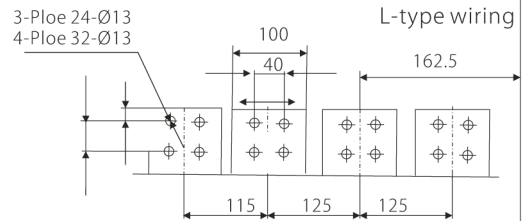
L-type wiring



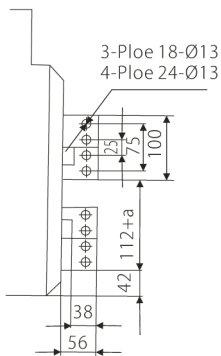
Horizontal wiring



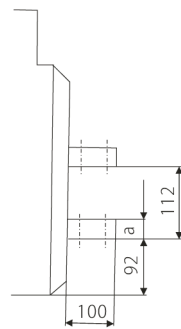
L-type wiring



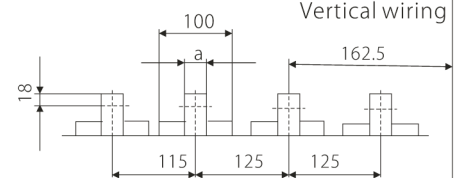
Vertical wiring



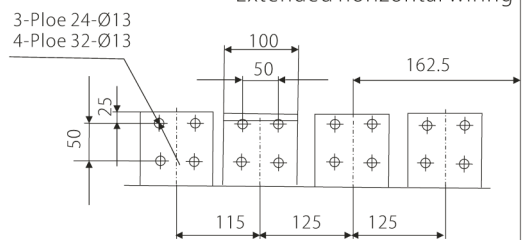
Extended horizontal wiring



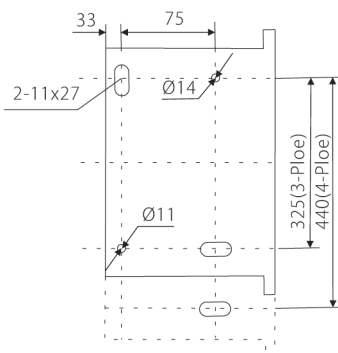
Vertical wiring



Extended horizontal wiring



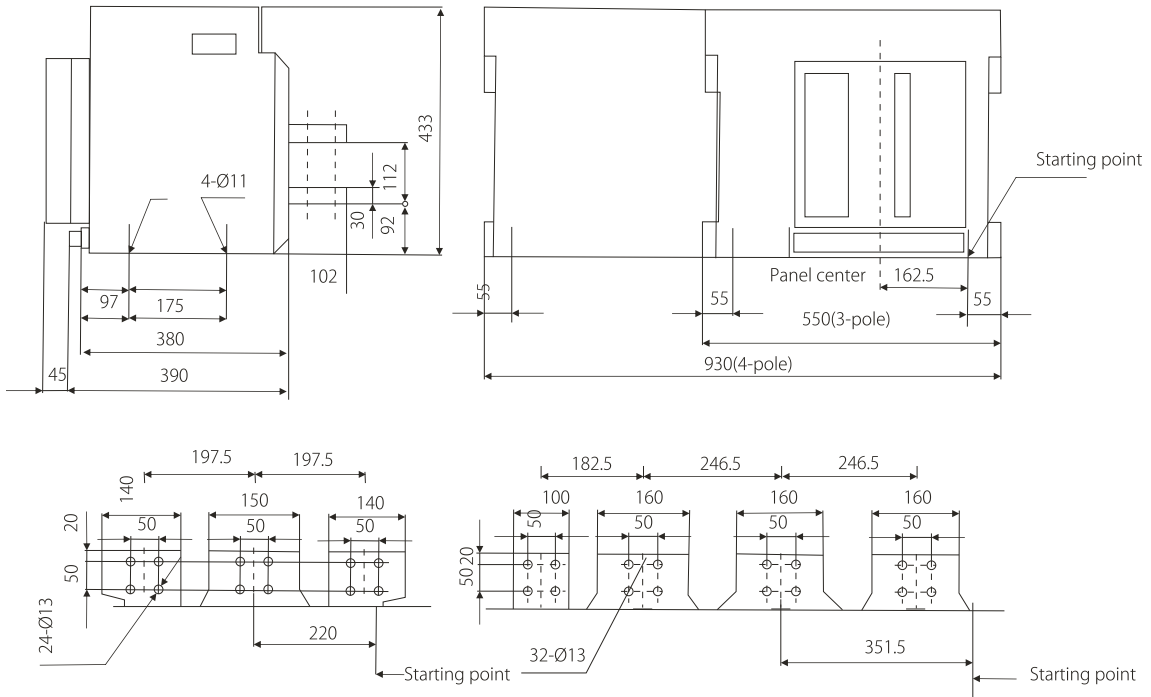
Starting point



Drawer 3-pole 4-pole	
In A	a mm
2000~2500	20
2900~3200	30

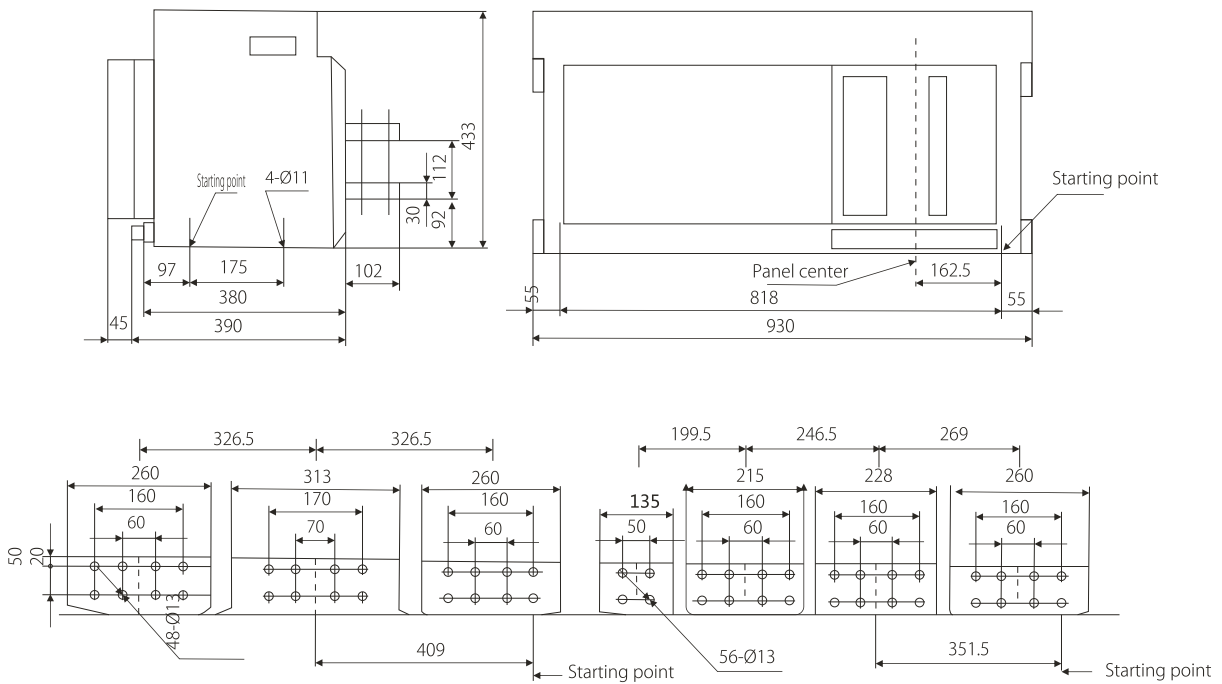
QW1-4000

Drawer 3-pole, 4-pole



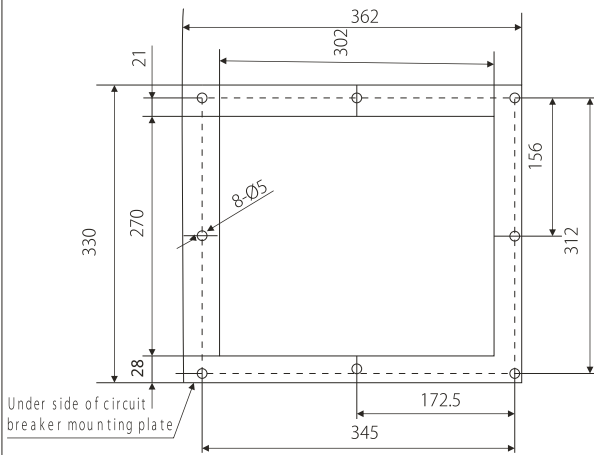
Outline and installation dimensions of breaker QW1-5000,6300

Drawer 3-pole, 4-pole

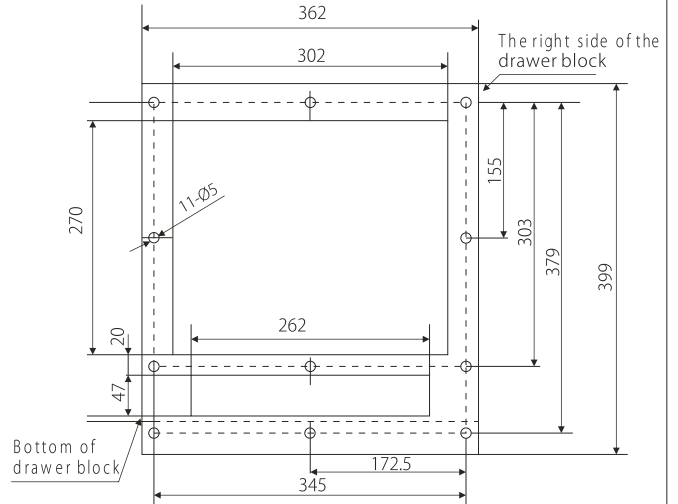


QW1-2000(3-pole,4-pole) Door installation size

Fixed

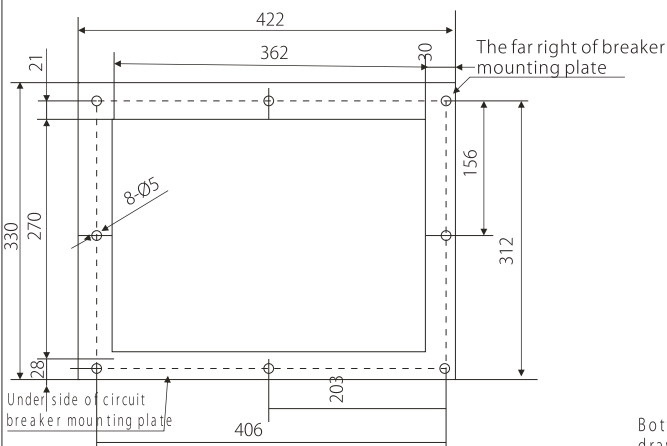


Drawer

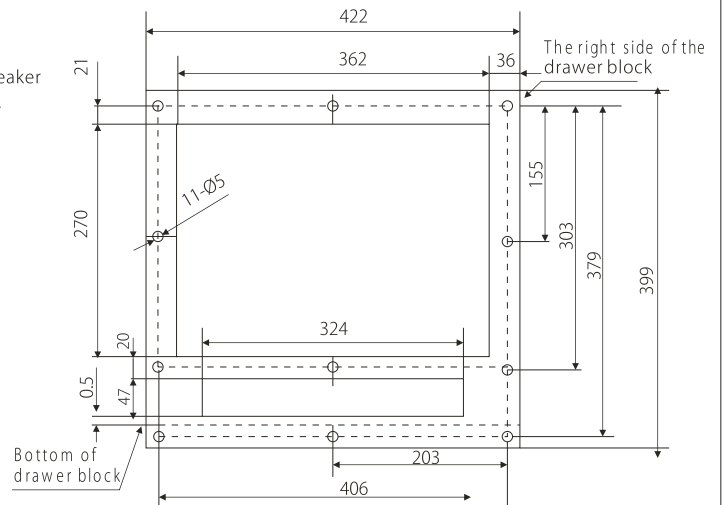


QW1-3200(3-pole,4-pole) QW1-4000(3-pole,4-pole) QW1-6300(3-pole,4-pole) Door installation size

Fixed



Drawer



Order specification

Please fill numbers in Please mark "✓" in

Distributor name		Assembling plant name	
Project name		Order amount	
Model QW1-		Order date	
Pole <input type="checkbox"/> Three poles		<input type="checkbox"/> Four poles	
Rated voltage <input type="checkbox"/> AC 400V		<input type="checkbox"/> AC 690V	
Rated current In= <input type="text"/> A		N pole rated current In <input type="checkbox"/> 50% In <input type="checkbox"/> 100% In	
Connection			
Fixed type <input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical			
Draw-out type <input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical			
Type selection	<input type="checkbox"/> L type		<input type="checkbox"/> M type
	<input type="checkbox"/> L2 type <input type="checkbox"/> L3 type <input type="checkbox"/> L4 type		
Basic function	Over-load long time delay protection Ir1 <input type="text"/> t1 <input type="text"/>		
	Short circuit short time delay protection Ir2 <input type="text"/> t2 <input type="text"/>		
	Short circuit Instantaneous protection Ir3 <input type="text"/>		
Selective function	<input type="checkbox"/> MCR and HSICS protection (used for L, M type)		
	<input type="checkbox"/> Voltage measurement function (used for M, H type)		
	Function meter function <input type="checkbox"/> D <input type="checkbox"/> U <input type="checkbox"/> P <input type="checkbox"/> H <input type="checkbox"/> UD <input type="checkbox"/> PD <input type="checkbox"/> HD (used for M, H type)		
Communication function	<input type="checkbox"/> modbus (used for H type)		
	<input type="checkbox"/> profibus (used for H type)		
	<input type="checkbox"/> devicenet (used for H type)		
Intelligent controller voltage	<input type="checkbox"/> AC 230V	<input type="checkbox"/> AC 400V	<input type="checkbox"/> DC 220V <input type="checkbox"/> DC 110V
Shunt release	<input type="checkbox"/> AC 230V	<input type="checkbox"/> AC 400V	<input type="checkbox"/> DC 220V <input type="checkbox"/> DC 110V
Closing electromagnet	<input type="checkbox"/> AC 230V	<input type="checkbox"/> AC 400V	<input type="checkbox"/> DC 220V <input type="checkbox"/> DC 110V
Electric operation mechanism	<input type="checkbox"/> AC 230V	<input type="checkbox"/> AC 400V	<input type="checkbox"/> DC 220V <input type="checkbox"/> DC 110V
Auxiliary switch	Standard type	<input type="checkbox"/> Four pieces of normally-open and four pieces of normally-closed contacts	
	Special type	<input type="checkbox"/> Six pieces of normally-open contacts and two pieces of normally-closed contacts	
		<input type="checkbox"/> Two pieces of normally-open contacts and six pieces of normally-closed contacts	
		<input type="checkbox"/> Three pieces of normally-open contacts and three pieces of normally-closed contacts	
<input type="checkbox"/> Under-voltage release	<input type="checkbox"/> AC 230V		<input type="checkbox"/> AC 400V
	<input type="checkbox"/> Under-voltage instantaneous release		<input type="checkbox"/> Under-voltage delay release
	<input type="checkbox"/> 0.5s <input type="checkbox"/> 1s <input type="checkbox"/> 2s <input type="checkbox"/> 3s		
<input type="checkbox"/> Mechanical interlock	<input type="checkbox"/> One circuit breaker		<input type="checkbox"/> One lock and one key
	<input type="checkbox"/> Two sets circuit breaker	<input type="checkbox"/> Steel cable lock interlock <input type="checkbox"/> Link rod interlock	
		<input type="checkbox"/> Three sets circuit breaker	
	<input type="checkbox"/> Two locks and one key		<input type="checkbox"/> Link rod interlock pattern one
	<input type="checkbox"/> Steel cable lock interlock		
<input type="checkbox"/> Link rod interlock pattern two		<input type="checkbox"/> Link rod interlock pattern three	
<input type="checkbox"/> Three locks and two keys			
<input type="checkbox"/> Neutral line N current transformer for external connection			
<input type="checkbox"/> Electrical indication mechanism on drawer base			
<input type="checkbox"/> Pushbutton lock mechanism		<input type="checkbox"/> Counter	<input type="checkbox"/> Partition plate