CHAC

CQM6 Series Molded case circuit breaker
CQC6 Series AC contactor
Product Catalog

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CQM6 Series
Molded case circuit breaker

Product Features

- Core Protection: Provides essential protection against overloads and short-circuits for distribution systems and motor circuits.
- Current Range: Comprehensive coverage from 10A up to 1250A.
- Compact Design: Features a miniaturized and unified footprint for easy panel integration and space savings.
- Accessory Flexibility: Supports a wide range of accessories (shunt trips, auxiliaries, etc.) for customized control and monitoring.

Compliance

- Meets international and regional standards including

IEC/EN 60947-1(General Rules)	GB/T 14048.1
IEC/EN 60947-2(Circuit-Breakers)	GB/T 14048.2
IEC/EN 60947-3(Switchgear)	GB/T 14048.3
IEC/EN 60947-4(Contactors & Motor-Starters)	GB/T 14048.4

Selection Guide

CQM6 - 125 C P / 4 300 - 125A 2 A Q1 D1 Q 2

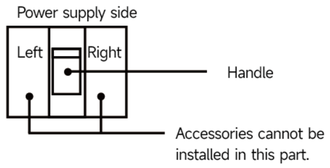
Product code	Shell frame grade	Breaking capacity					Operating method	Operating method
CQM6	125	C					P	4
			C	S	M	H	P:Motorized operation Z:Tuming handle W.Direct operation	3:Tripolar 4:Quadrupolar
Molded case circuit breaker	125	125	15/8	25/18	35/25	/		
	160	160	25/18	35/25	50/35	/		
	250	250	35/26	50/36	/	/		
	630	630	/	35/26	50/36	75/50		
	800	800	/	35/25	50/35	75/75		
	1250	1250	/	35/25	50/35	75/75		

Decoupler method and internal accessories	Rated current A		Function	Optional code for tour-pole products
300	125A		2	A
The first digit indicates the type of detent 2:Instantaneous detent only 3:Duplicate detent Note:The last two digits are the accessory designator(see accessory table).	125	10,16,20,32,40,50,63,80,100,125	1:For power distribution 2:For motor protection	A:N-pole is unprotected and cannot be combined B:N-pole is unprotected and can be combined C:N-pole is protected and can be combined D:N-pole is protected and cannot be combined
	160	10,16,20,32,40,50,63,80,100,125, 140,160		
	250	100,125,140,160,180,200,225,250		
	630	250,315,350,400,500,630		
	800	500,630,700,800		
	1250	800,1000,1250		

Accessory Voltage			Motorized operating voltage		Installation	Whether to install a terminal block
Q1			D1		Q	2
Undervoltage detent Q1:AC220V Q2:AC240V Q3:AC380V Q4:AC415V	Shunt release F1:AC220V F2:AC380V F3:DC110V F4:DC24V	Auxiliary alarm J1:AC125V J2:AC250V J3:DC125V J4:DC24V	DC1 Electrical Operation D1:AC220V D2:AC230V D3:AC380V D4:AC400V	DC3 Electrical Operation D5:AC230V D6:AC110V D7:DC220 D8:DC110 D9:AC110~240V D10:DC100~220V	Q:Front of plate H:Rear of plate C:Inserted	1:Noinstallation 2:Installation
			Note:When motorized operation is selected,please refer to the external accessories for the two voltages applicable for motorized operation.			

Accessory List

Model number		CQM6-125	CQM6-160	CQM6-250	CQM6-630	CQM6-800	CQM6-1250
Breaking capacily		C,S,M	C,S,M	C,S,M	S,M,H	S,M,H	S,M,H
Number of poles		3,4	3,4	3,4	3,4	3,4	3,4
Accessory code	Accessory description						
208、308	Alarm Switch						
210、310	Shunt Release						
220、320	Auxiliary Switch						
230、330	Undervoltage Release						
240、340	Shunt Release and Auxiliary Switch						
240、250	Shunt Release and Undervoltage Release						
260、360	Two Auxiliary Switches						
270、370	Auxiliary Switch and Undervoltage Release						
218、318	Shunt Release and Alarm Switch						
228、328	Auxiliary Switch and Alarm Switch						
238、338	Undervoltage Release and Alarm Switch						
248、348	Shunt Release, Auxiliary Switch and Alarm Switch						
268、368	Two Auxiliary Switches and Alarm Switch						
278、378	Auxiliary Switch, Undervoltage Release and Alarm						
280、380	Two Auxiliary Switches and Shunt Release						

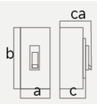


● Alarm swich　　○ Auxiliary switch

■ Undervoltage release　　□ Shunt trip

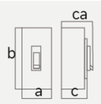
1. Our company can provide three new products for customers to choose from,namely the right-side auxilary switch,the left-side shunt trip device,and the left-side undervoltage release device.
2. For the spedfcations of 220,320,240,340,270 and 370,the auxilaryswitch can provide two pairs of switches.Please specily this vhen placing an order.
3. For the 250 and 350 specifications,the shunt trip device and undervoltage release for models 400 and above can only be installed on 3-pole circuit breakers.

Main Technical Parameters

Model number			CQM6-125			CQM6-160		
Rated current of frame level Inm(A)			125			160		
Number of poles			3，4			3，4		
Rated current In(A),at 40°C,50°C,55°C			10,16,20,25,32,40,50,63,80,100,125			10,16,20,25,32,40,50,63,80,100,125 140,160		
Rated operating voltage Ue(V),AC 50/60Hz			400/415			400/415		
Rated insulation voltage Ui (V)			800			800		
Rated impulse withstand voltage Uimp(KV)			8			8		
Breaking capacity designation			C	S		C	S	M
Short-circuit breaking capacity Icu/Ics(kA)	AC400/415V		15/8	25/18		25/18	35/25	50/35
Selectivity category			A	A		A	A	A
Number of operating cycles (cycle)		ON	3000			3000		
		OFF	7000			7000		
Trip mechanisms and protection types	Magnetic trip	Power distribution protection	●	●	●	●	●	●
		Motor protection	●	●	●	●	●	●
	Thermal-magnetic trip	Power distribution protection	●	●	●	●	●	●
		Motor protection	●	●	●	●	●	●
Accessory	Auxiliary contacts		●	●	●	●	●	●
	Alarm contacts		●	●	●	●	●	●
	Shunt disconnect		●	●	●	●	●	●
	Undervoltage detent		●	●	●	●	●	●
	Manual operating mechanism		●	●	●	●	●	●
	Motorized operating mechanism		●	●	●	●	●	●
	Backplane wiring		●	●	●	●	●	●
	Inserted		●	●	●	●	●	●
	Coupling plate		●	●	●	●	●	●
	Partition between phases		●	●	●	●	●	●
Derivative products	Dedicated for prepayment electric meters		●	●	●	●	●	●
	Overload alarm without trip		-	-	-	●	●	●
Overall dimensions (mm) (a-b-c-ca)		3 P	75-130-68-92			90-155-70-94		90-155 -84-109
		4 P	100-130-68-92			120-155-70-94		120-155 -84-109

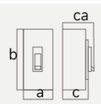
Note: ● for optional accessories; "-" for no optional accessories.

Main Technical Parameters

Model number			CQM6-250			CQM6-630		
Rated current of frame level Inm(A)			250			630		
Number of poles			3,4			3,4		
Rated current In(A),at 40°C,50°C,55°C			125,140,160,180,200,225,250			250,315,350,400,500,630		
Rated operating voltage Ue(V),AC 50/60Hz			400/415			400/415		
Rated insulation voltage Ui (V)			800			800		
Rated impulse withstand voltage Uimp(KV)			8			8		
Breaking capacity designation			C	S		C	S	M
Short-circuit breaking capacity Icu/Ics(kA)	AC400/415V		35/26	50/36		35/26	50/36	70/50
Selectivity category			A	A		A	A	A
Number of operating cycles (cycle)		ON	3000			2000		
		OFF	7000			6000		
Trip mechanisms and protection types	Magnetic trip	Power distribution protection	●	●	●	●	●	●
		Motor protection	●	●	●	●	●	●
	Thermal-magnetic trip	Power distribution protection	●	●	●	●	●	●
		Motor protection	●	●	●	●	●	●
Accessory	Auxiliary contacts		●	●	●	●	●	●
	Alarm contacts		●	●	●	●	●	●
	Shunt disconnect		●	●	●	●	●	●
	Undervoltage detent		●	●	●	●	●	●
	Manual operating mechanism		●	●	●	●	●	●
	Motorized operating mechanism		●	●	●	●	●	●
	Backplane wiring		●	●	●	●	●	●
	Inserted		●	●	●	●	●	●
	Coupling plate		●	●	●	●	●	●
	Partition between phases		●	●	●	●	●	●
Derivative products	Dedicated for prepayment electric meters		●	●	●	●	●	●
	Overload alarm without trip		●	●	●	●	●	●
Overall dimensions (mm) (a-b-c-ca)		3 P	105-165-70-96		105-165-93-120	140-257-105-155		
		4 P	140-165-70-96		140-165-93-120	185-257-105-155		

Note: ● for optional accessories; "-" for no optional accessories.

Main Technical Parameters

Model number			CQM6-800			CQM6-1250		
Rated current of frame level Inm(A)			800			1250		
Number of poles			3,4			3,4		
Rated current In(A),at 40°C,50°C,55°C			500，630，700，800			1000，1250		
Rated operating voltage Ue(V),AC 50/60Hz			400/415			400/415		
Rated insulation voltage Ui (V)			800			800		
Rated impulse withstand voltage Uimp(KV)			8			8		
Breaking capacity designation			S	M	H	S	M	H
Short-circuit breaking capacity Icu/Ics(kA)		AC400/415V	35/25	50/35	75/75	25/18	35/25	75/75
Selectivity category			A	A	A	A	A	A
Number of operating cycles (cycle)		ON	1500			1500		
		OFF	4000			4000		
Trip mechanisms and protection types	Magnetic trip	Power distribution protection	●	●	●	●	●	●
		Motor protection	●	●	●	●	●	●
	Thermal-magnetic trip	Power distribution protection	●	●	●	●	●	●
		Motor protection	●	●	●	●	●	●
	Auxiliary contacts		●	●	●	●	●	●
	Alarm contacts		●	●	●	●	●	●
	Shunt disconnect		●	●	●	●	●	●
	Undervoltage detent		●	●	●	●	●	●
Accessory	Manual operating mechanism		●	●	●	●	●	●
	Motorized operating mechanism		●	●	●	●	●	●
	Backplane wiring		●	●	●	●	●	●
	Inserted		●	●	●	●	●	●
	Coupling plate		●	●	●	●	●	●
	Partition between phases		●	●	●	●	●	●
Derivative products	Dedicated for prepayment electric meters		●	●	●	●	●	●
	Overload alarm without trip		●	●	●	●	●	●
Overall dimensions (mm) (a-b-c-ca)		3 P	210-275-105-155			210-275-105-155		
		4 P	280-275-105-155			280-275-105-155		

Note: ● for optional accessories; "-" for no optional accessories.

Operating Characteristics

1. The inverse time operating characteristics of power distribution circuit breakers when all poles are energized simultaneously at anambient air temperature of+40°C(with no humidity compensation)are shown in the following table:

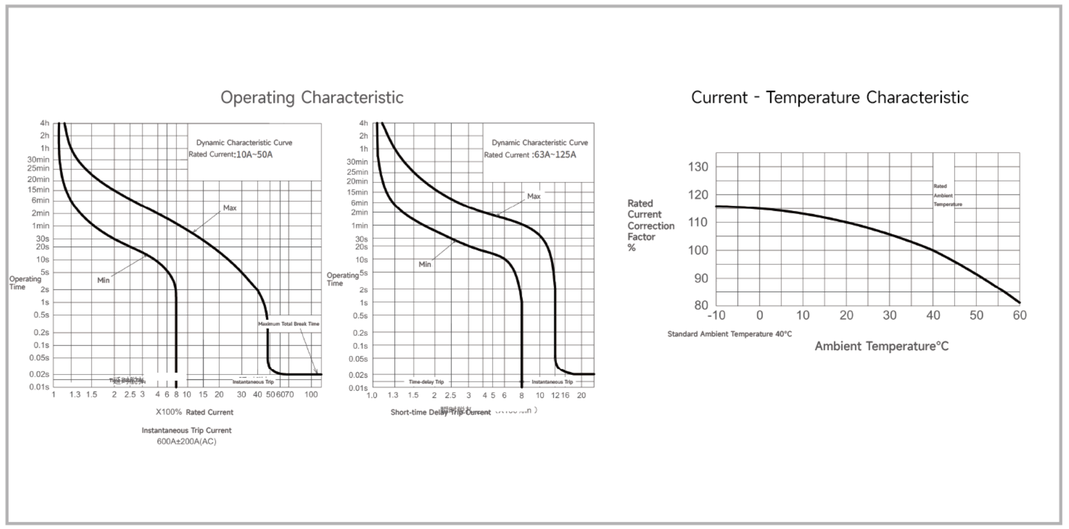
Test current designation	Setting current multiple	Conventional time	Initial state
		In≤63 63<In	
Conventional non-tripping current	1.05	≥1h ≥2h	Cool state
Conventional non-tripping current	1.30	<1h <2h	Hot state

2. The inverse time action characteristics of circuit breakers for motor protection without humidity compensation when all poles areenergized simultaneously at an ambient air temperature of+40C are shown in the following table.

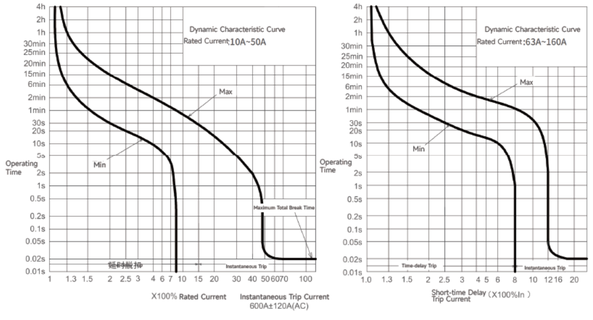
Test current designation	Setting current multiple	Conventional time	Initial state
		In≤800	
Conventional non-tripping current	1.0	≥2h	Cool state
Conventional non-tripping current	1.2	<2h	Hot state

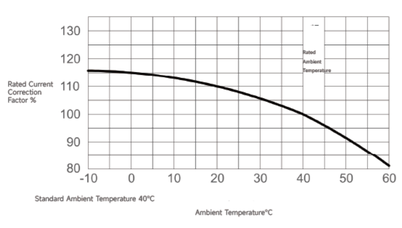
3. Action characteristics under short-circuit condition:The short-circuit curent setting value of the instantaneous tripper of the circuitbreaker for power distribution is 10In.
The short-circuit current setting value of the instantaneous tripper of the circuit breaker for motorprotection is 12In.
The accuracy of the short-circuit curent setting value of the instantaneous tripper is 20%of the short-circuit currentsetting value.

CQM6-125 Operating Characteristic Curve

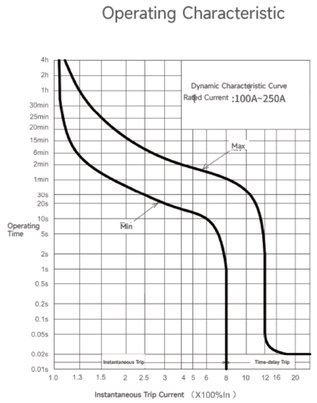


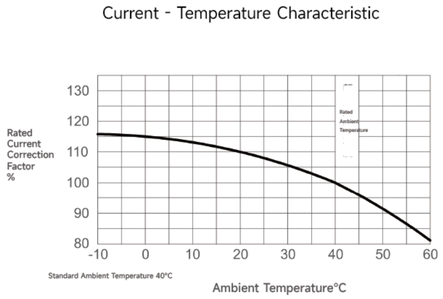
CQM6-160 Operating Characteristic Curve



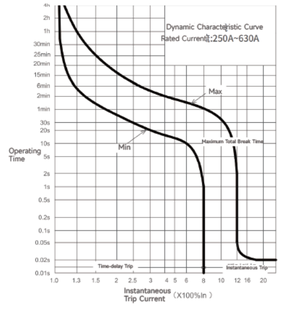


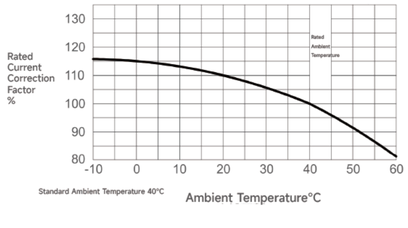
CQM6-250 Operating Characteristic Curve



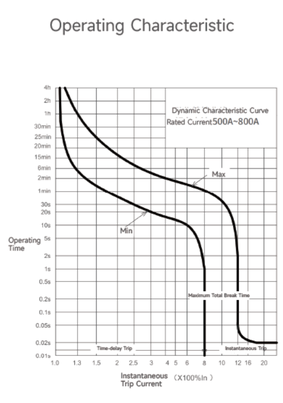


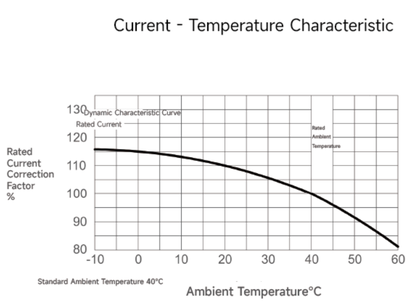
CQM6-630 Operating Characteristic Curve



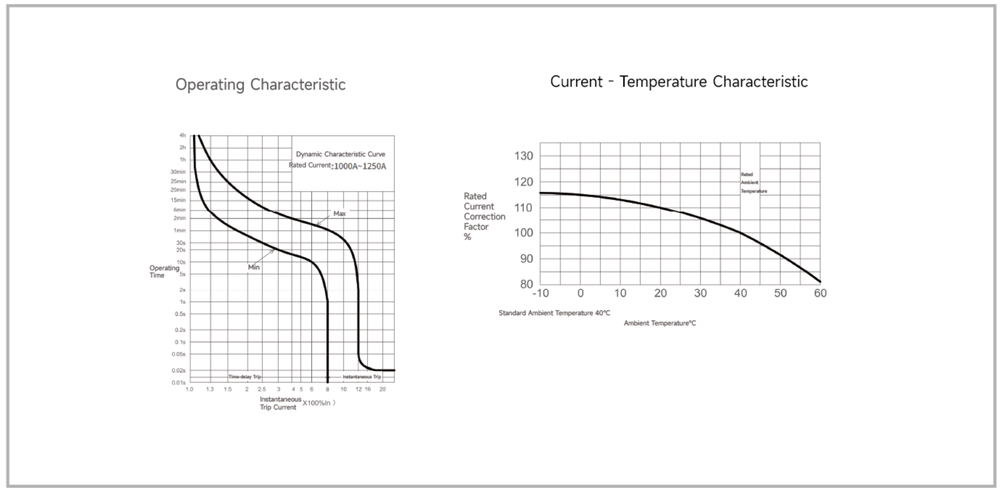


CQM6-800 Operating Characteristic Curve

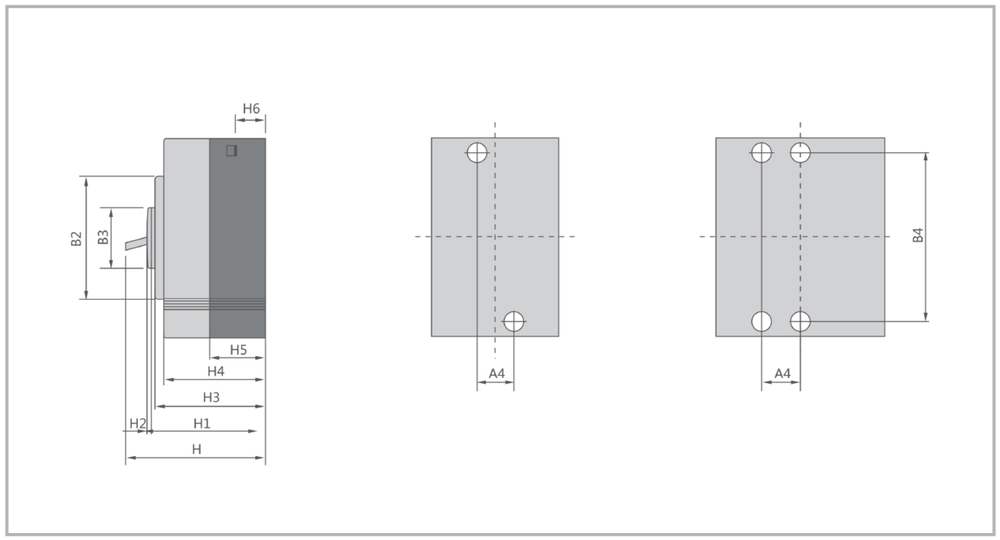




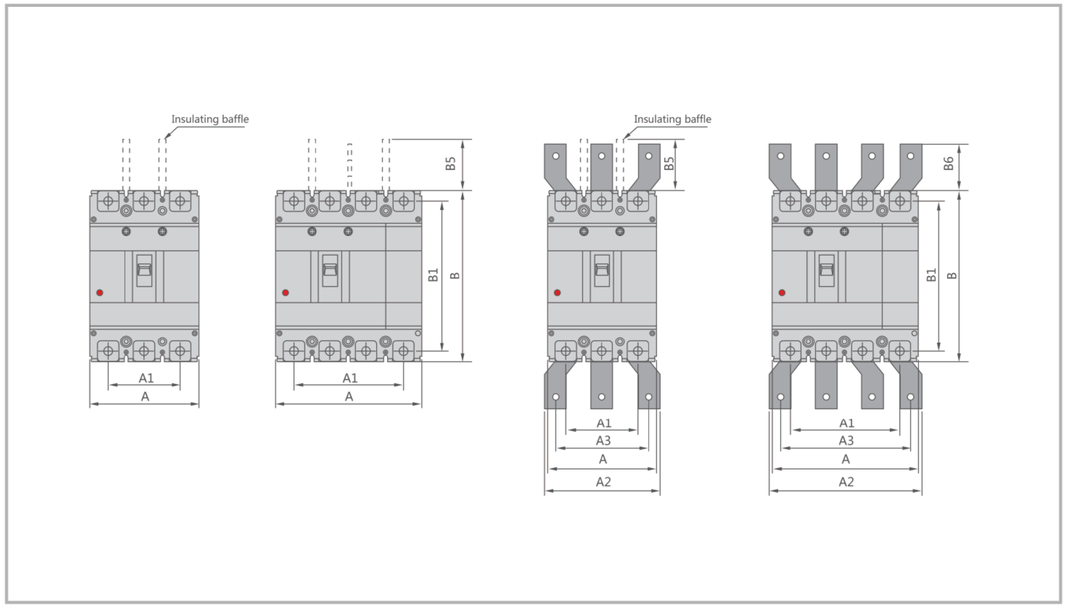
CQM6-1250 Operating Characteristic Curve



Outline and Installation Dimensions(mm)



Outline and Installation Dimensions(mm)



Molded case circuit breaker	Overall dimension																				Installation dimensions		Boit
	A		A1		A2		A3		B	B1	B2	B3	B5	B6	H	H1	H2	H3	H4	H5	H6	A4	B4	
	3P	4P	3P	4P	3P	4P	3P	4P																
CQM6-125CSM	75	100	50	75	-	-	-	-	130	114	85	50	50	-	92	72	4	68	61	41	24	25	111	M8/M6
CQM6-160CS	90	120	60	90	-	-	-	-	155	134	103	50	50	-	94	72	4	70	61	41	24	30	132	M8
CQM6-160M	90	120	60	90	-	-	-	-	155	134	103	50	50	-	109	83	4	83	76	24.5	24.5	30	132	M8
CQM6-250CS	105	140	70	105	-	-	-	-	165	144	103	50	100	-	96	72	4	70	61	46	24	35	126	M8
CQM6-250M	105	140	70	105	-	-	-	-	165	144	102	50	110	-	120	95	4	91	84	22.5	24	35	126	M8
CQM6-630SMH	140	185	88	132	140	196	112	168	257	230	179	90	110	42	155	107	5	105	97	64	35	44	194	M10
CQM6-800SMH	210	280	140	210	180	250	140	210	275	243	192	90	110	87	155	107	5	104	97	65	24	70	242.5	M12
CQM6-1250SMH	210	280	140	210	180	250	140	210	275	243	192	90	110	87	155	107	5	104	97	65	24	70	242.5	M10*2

CQM6L Series

Residual current operated circuit breakers

Product Features

- Integrated Safety: Combines the overcurrent protection of a standard MCCB with earth leakage (RCCB) functionality in a single device for enhanced safety.
- Seamless Compatibility: Shares the same compact dimensions and accessory platform as the standard CQM6 series, allowing for easy upgrades.
- Selective Tripping: Offers configurable options for the N-pole (protected/unprotected, combinable) to meet specific system grounding requirements.
- High Reliability: Maintains the proven environmental resilience and mechanical durability of the CQM6 product line.

Compliance

- Meets international and regional standards including

IEC/EN 60947-1(General Rules)	GB/T 14048.1
IEC/EN 60947-2(Circuit-Breakers)	GB/T 14048.2
IEC/EN 60947-3(Switchgear)	GB/T 14048.3
IEC/EN 60947-4(Contactors & Motor-Starters)	GB/T 14048.4

Selection Guide

CQM6L - 160 S P / 4 300 - 160A 2 A L1 Y1 Q1 D1 Q 2

Product code	Shell frame grade	Breaking capacity					Operating method	Operating method
CQM6L	160	C					P	4
			C	S		H	P:Motorized operation Z:Tuming handle W.Direct operation	3:Tripolar 4:Quadrupolar
Molded case circuit breaker	160	160	25/18	35/25	50	/		
	250	250	35/26	50/36	/	/		
	630	630	/	35/26	50/36	70/50		
	800	800	/	35/25	50/35	75/75		
	1250	1250	/	35/25	50/35	75/75		

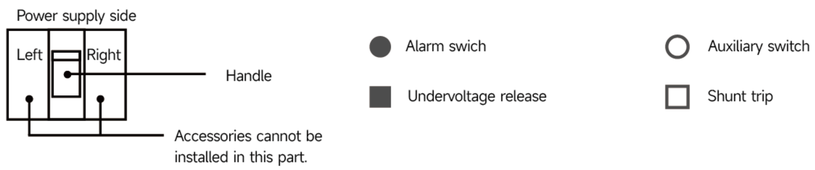
Decoupler method and internal accessories	Rated current A		Function	Optional code for tour-pole products
300	160A		2	A
The first digit indicates the type of detent 2:Instantaneous detent only 3:Duplicate detent Note:The last two digits are the accessory designator(see accessory table).	160	10,16,20,32,40,50,63,80,100,125,140,160	1:For power distribution 2:For motor protection	A:N-pole is unprotected and cannot be combined B:N-pole is unprotected and can be combined C:N-pole is protected and can be combined D:N-pole is protected and cannot be combined
	250	100,125,140,160,180,200,225,250		
	630	250,315,350,400,500,630		
	800	500,630,700,800		

Product code			Breaking capacity				
L1			Y1				
Fixed delay type		Quick three-step adjustable	Fixed delay type				Quick three-step adjustable
L1:30	L6:200	L11:30,50,100	Y1:0.1S	Y4:0.4S	Y7:0.7S	Y10:1.0S	Y13:0.45,1,2
L2:50	L7:300	L12:30,100,200					
L3:75	L8:500	L13:30,100,500	Y2:0.2S	Y5:0.5S	Y8:0.8S	Y11:1.1S	Y14:1,2,3
L4:100	L9:500	L14:100,300,500					
L5:150	L10:1000	L15:100,300,500	Y3:0.3S	Y6:0.6S	Y9:0.9S	Y12:1.2S	
		L16:100,300,1000					

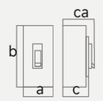
Accessory Voltage			Motorized operating voltage		Installation	Whether to install a terminal block
Q1			D1		Q	2
Undervoltage detent Q1:AC220V Q2:AC240V Q3:AC380V Q4:AC415V	Shunt release F1:AC220V F2:AC380V F3:DC110V F4:DC24V	Auxiliary alarm J1:AC125V J2:AC250V J3:DC125V J4:DC24V	DC1 Electrical Operation D1:AC220V D2:AC230V D3:AC380V D4:AC400V	DC3 Electrical Operation D5:AC230V D6:AC110V D7:DC220 D8:DC110 D9:AC110~240V D10:DC100~220V	Q:Front of plate H:Rear of plate C:Inserted	1:Noinstallation 2:Installation
			Note:When motorized operation is selected,please refer to the external accessories for the two voltages applicable for motorized operation.			

Accessory List

Model number		CQM6L-160	CQM6L-250	CQM6L-630	CQM6L-800
Breaking capacity		C,S	C,S,	S,M,H	S,M,H
Number of poles		4	4	4	4
Accessory code					
208、308	Alarm Switch				
210、310	Shunt Release				
220、320	Auxiliary Switch				
230、330	Undervoltage Release				
240、340	Shunt Release and Auxiliary Switch				
260、360	Two Auxiliary Switches				
270、370	Auxiliary Switch and Undervoltage Release				
218、318	Shunt Release and Alarm Switch				
228、328	Auxiliary Switch and Alarm Switch				
238、338	Undervoltage Release and Alarm Switch				
248、348	Shunt Release, Auxiliary Switch and Alarm Switch				
268、368	Two Auxiliary Switches and Alarm Switch				
278、378	Auxiliary Switch, Undervoltage Release and Alarm Switch				
280、380	Two Auxiliary Switches and Shunt Release				

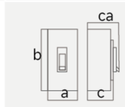


Main Technical Parameters

Model number			CQM6L-160		CQM6L-250	
Rated current of frame level Inm(A)			160		250	
Number of poles			4		4	
Rated current In(A),at 40°C,50°C,55°C			10, 16, 20, 32, 40, 50, 63, 80, 100, 125, 160		125,140,160,180,200,225,250	
Rated operating voltage Ue(V),AC 50/60Hz			400/415		400/415	
Rated insulation voltage Ui (V)			800		800	
Rated impulse withstand voltage Uimp(KV)			8		8	
Breaking capacity designation			C	S	C	S
Short-circuit breaking capacity Icu/Ics(kA)		AC400/415V	25/18	35/25	35/26	50/36
Selectivity category			A	A	A	A
Number of operating cycles		ON	3000		3000	
(cycle)		OFF	7000		7000	
Trip mechanisms and protection types	Magnetic trip	Power distribution protection	●	●	●	●
		Motor protection	●	●	●	●
	Thermal-magnetic trip	Power distribution protection	●	●	●	●
		Motor protection	●	●	●	●
Accessory	Auxiliary contacts		●	●	●	●
	Alarm contacts		●	●	●	●
	Shunt disconnect		●	●	●	●
	Undervoltage detent		●	●	●	●
	Manual operating mechanism		●	●	●	●
	Motorized operating mechanism		●	●	●	●
	Backplane wiring		●	●	●	●
	Inserted		●	●	●	●
	Coupling plate		●	●	●	●
	Partition between phases		●	●	●	●
Derivative products	Dedicated for prepayment electric meters		●	●	●	●
	Overload alarm without trip		●	●	●	●
Overall dimensions (mm) (a-b-c-ca)		4 P	120-155-70-94		140-165-70-96	

Note: ● for optional accessories; "-" for no optional accessories.

Main Technical Parameters

Model number			CQM6L-630			CQM6L-800		
Rated current of frame level Inm(A)			630			800		
Number of poles			4			4		
Rated current In(A),at 40°C,50°C,55°C			250, 315, 350, 400, 500, 630			500,630,700,800		
Rated operating voltage Ue(V),AC 50/60Hz			400/415			400/415		
Rated insulation voltage Ui (V)			800			800		
Rated impulse withstand voltage Uimp(KV)			8			8		
Breaking capacity designation			S	M	H	S	M	H
Short-circuit breaking capacity Icu/Ics(kA)		AC400/415V	35/26	50/36	70/50	35/25	50/35	75/75
Selectivity category			A	A	A	A	A	A
Number of operating cycles (cycle)		ON	2000			1500		
		OFF	6000			1500		
Trip mechanisms and protection types	Magnetic trip	Power distribution protection	●	●	●	●	●	●
		Motor protection	●	●	●	●	●	●
	Thermal-magnetic trip	Power distribution protection	●	●	●	●	●	●
		Motor protection	●	●	●	●	●	●
	Auxiliary contacts		●	●	●	●	●	●
	Alarm contacts		●	●	●	●	●	●
	Shunt disconnect		●	●	●	●	●	●
	Undervoltage detent		●	●	●	●	●	●
Accessory	Manual operating mechanism		●	●	●	●	●	●
	Motorized operating mechanism		●	●	●	●	●	●
	Backplane wiring		●	●	●	●	●	●
	Inserted		●	●	●	●	●	●
	Coupling plate		●	●	●	●	●	●
	Partition between phases		●	●	●	●	●	●
Derivative products	Dedicated for prepayment electric meters		●	●	●	●	●	●
	Overload alarm without trip		●	●	●	●	●	●
Overall dimensions (mm) (a-b-c-ca)		4 P	185-257-105-155			280-275-105-155		

Note: ● for optional accessories; "–" for no optional accessories.

Operating Characteristics

1. The inverse time operating characteristics of power distribution circuit breakers when all poles are energized simultaneously at anambient air temperature of+40°C(with no humidity compensation)are shown in the following table:

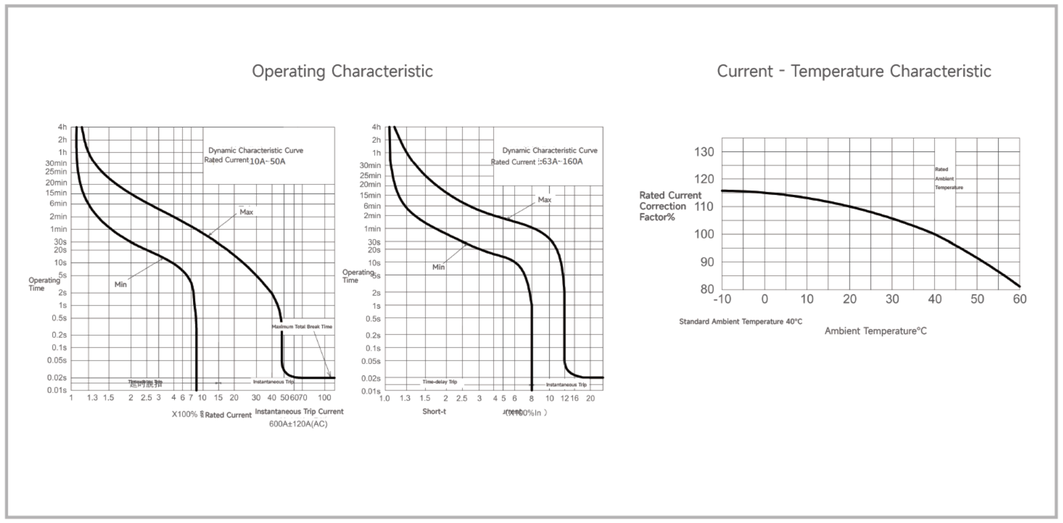
Test current designation	Setting current multiple	Conventional time	Initial state
		In≤63 In > 63	
Conventional non-tripping current	1.05	≥1h ≥2h	Cool state
Conventional non-tripping current	1.30	<1h <2h	Hot state

2. The inverse time action characteristics of circuit breakers for motor protection without humidity compensation when all poles areenergized simultaneously at an ambient air temperature of +40C are shown in the following table.

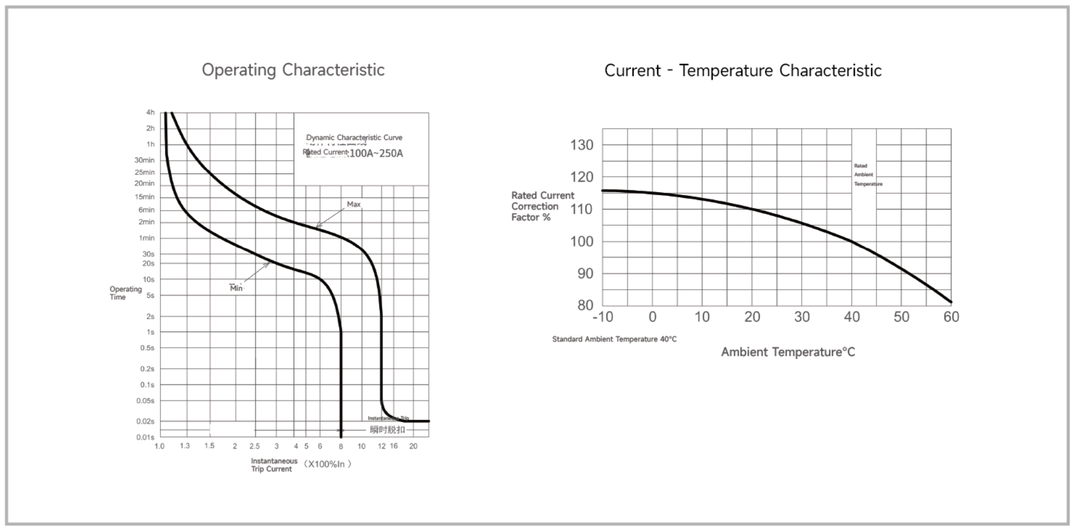
Test current designation	Setting current multiple	Conventional time	Initial state
		In≤800	
Conventional non-tripping current	1.0	≥2h	Cool state
Conventional non-tripping current	1.2	<2h	Hot state

3. Action characteristics under short-circuit condition:The short-circuit curent setting value of the instantaneous tripper of the circuit breaker for power distribution is 10In
The short-circuit current setting value of the instantaneous tripper of the circuit breaker for motorprotection is 12In
The accuracy of the short-circuit curent setting value of the instantaneous tripper is 20%of the short-circuit currentsetting value.

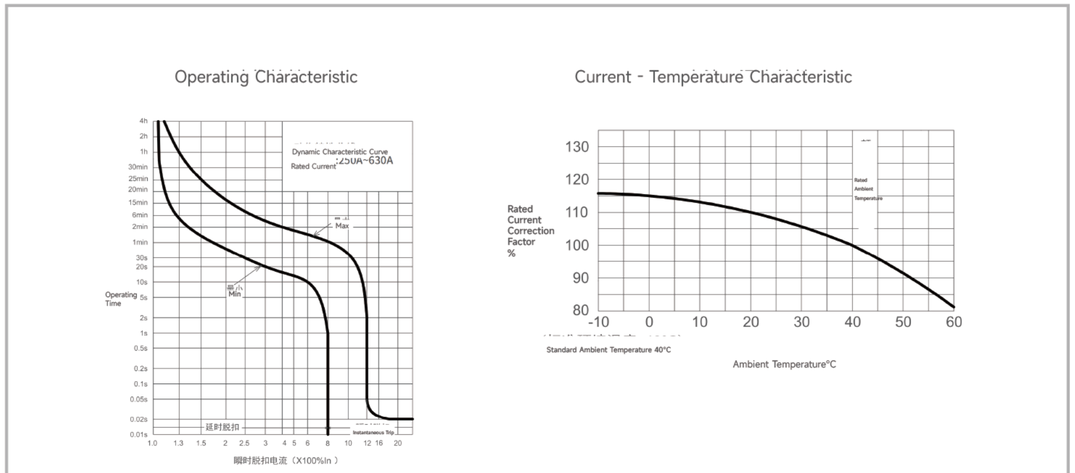
CQM6L-125 Operating Characteristic Curve



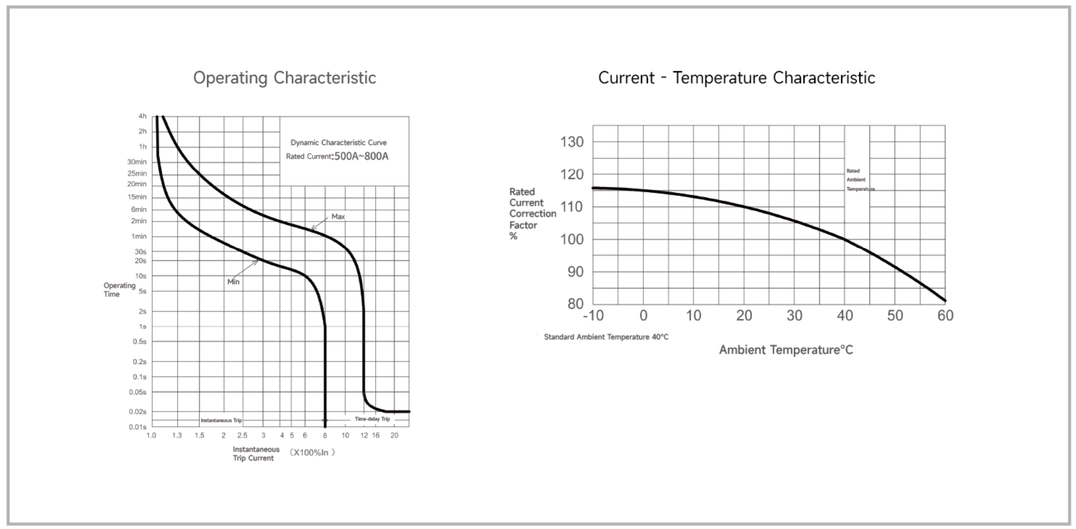
CQM6L-250 Operating Characteristic Curve



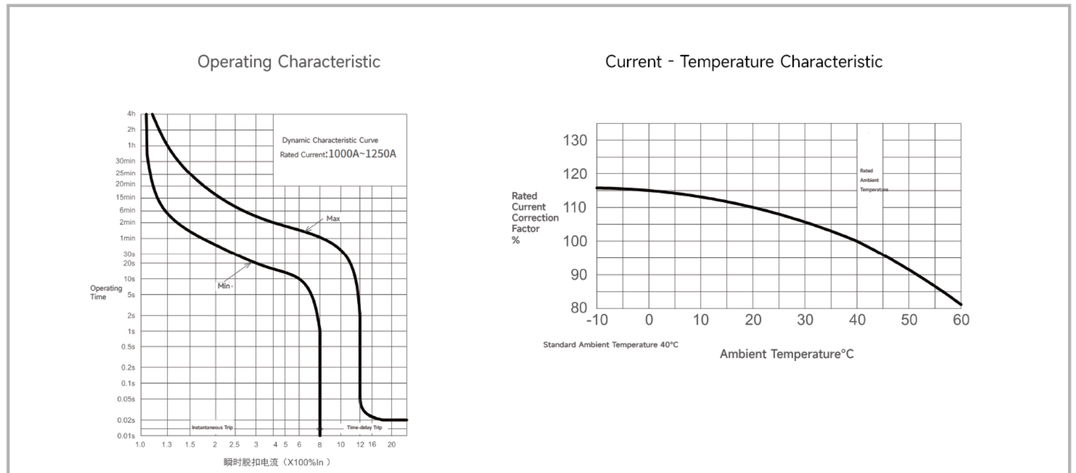
CQM6L-630 Operating Characteristic Curve



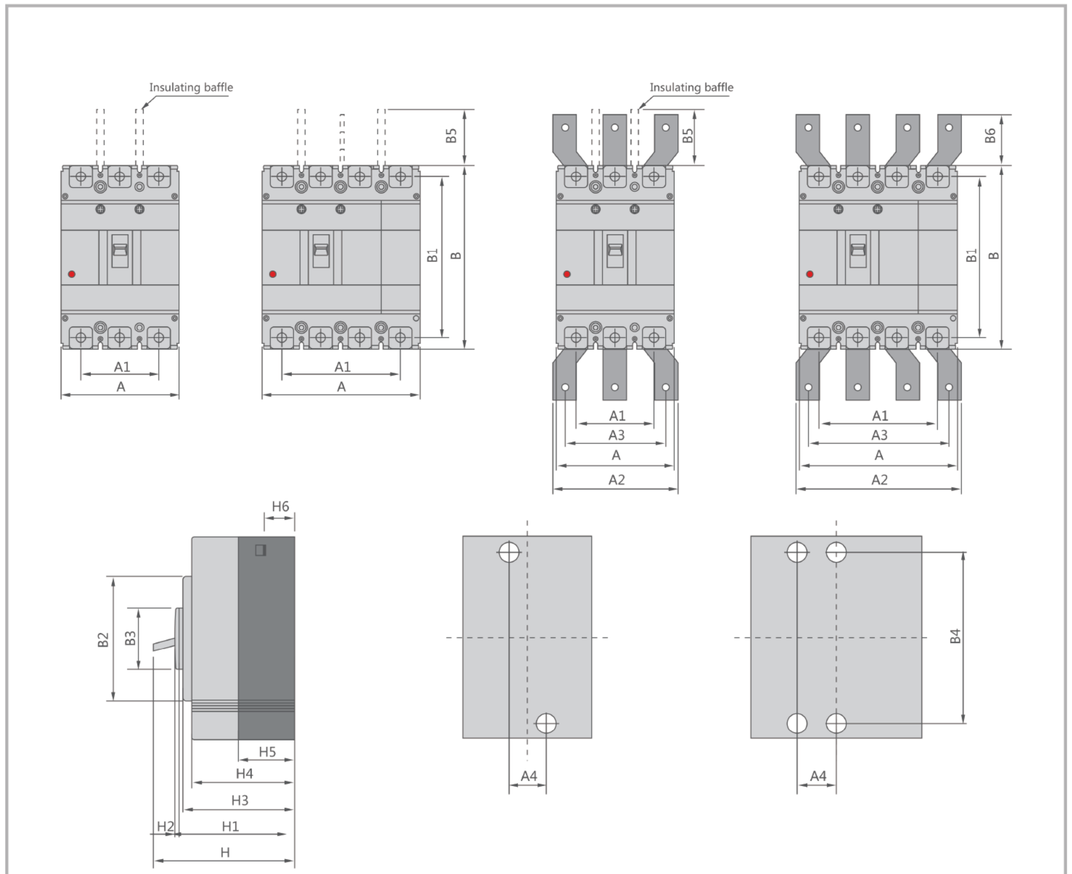
CQM6L-800 Operating Characteristic Curve



CQM6L-1250 Operating Characteristic Curve



Outline and Installation Dimensions(mm)



Molded case circuit breaker	Overall dimension																					Installation dimensions		Boit
	A		A1		A2		A3		B	B1	B2	B3	B5	B6	H	H1	H2	H3	H4	H5	H6	A4	B4	
	3P	4P	3P	4P	3P	4P	3P	4P																
CQM6L-160	-	120	-	90	-	-	-	-	155	134	103	50	50	-	94	72	4	70	61	41	24	30	132	M8
CQM6L-250	-	140	-	105	-	-	-	-	165	144	103	50	100	-	96	72	4	70	61	46	24	35	126	M8
CQM6L-630	-	185	-	132	-	196	-	168	257	230	179	90	110	42	155	107	5	105	97	64	35	44	194	M10
CQM6L-800	-	280	-	210	-	250	-	210	275	243	192	90	110	87	155	107	5	104	97	65	24	70	242.5	M12

CQM6T/A、RT Series

Molded case circuit breaker

Product Features

- Field-Adjustable Settings: Allows for precise on-site customization of both overload (Ir) and short-circuit (Im) protection settings for optimized coordination.
- Dual Protection Curves: Available with trip units optimized for either "Power Distribution" or "Motor Protection" applications.
- Proven Robustness: Designed for reliable operation across a wide temperature range (-35°C to +70°C) and at high altitudes up to 2000m.
- Accessory Compatibility: Supports a full range of accessories, including shunt releases and undervoltage trips, for extended control capabilities.

Compliance

- Meets international and regional standards including

IEC/EN 60947-1(General Rules)	GB/T 14048.1
IEC/EN 60947-2(Circuit-Breakers)	GB/T 14048.2
IEC/EN 60947-3(Switchgear)	GB/T 14048.3
IEC/EN 60947-4(Contactors & Motor-Starters)	GB/T 14048.4

Selection Guide

CQM6 RT - 160 H Z / 3 300 2 A Q1 D Q 2

Product code	Shell frame grade	Breaking capacity	Operating method				
CQM6	RT	160	C				
Molded case circuit breaker	RT stands for thermomagnetic ally adjustable T、A stands for single adjustable (i.e.,thermally adjustable/magn etically fixed).			C	S	M	H
		160	160	25/18	35/25	50/35	/
		250	250	35/26	50/26	/	/
		630	630	/	35/26	50/36	70/50
		800	800	/	35/25	50/35	75/75

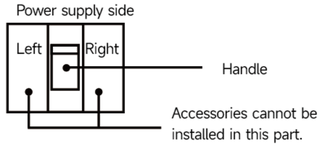
Operating method	The number of poles	Decoupler method and internal accessories	Rated current A	
P	4	300	125A	
P:Motorized operation Z:Turn the handle W:Direct operation DElectric operation DC1DC 2,DC3	2: 2-pole 3: 3-pole 4: 4-pole	The first digit indicates the type of detent 2:Instantaneous detent only 3:Duplicate detent Note:The last two digits are the accessory designator(see accessory table).	160	32,40,50,63,80,100,125,140,160
			250	100,125,140,160,180,200,225,250
			630	250,315,350,400,500,630
			800	500,630,700,800

Application	Optional code for Level 4 products
2	A
1:For power distribution	A:N-pole unprotected,not combinable A
2:For motor protection	B:N-pole unprotected,combinable

Accessory Voltage			Motorized operating voltage		Installation	Whether to install a terminal block
Q1			D1		Q	2
Undervoltage detent UVT	Shunt release Shunt	Auxiliary alarm Auxiliary	DC1	DC3 D5:AC230V	Q:Front of plate H:Rear of plate C:Inserted	1:No installation 2:Installation
Q1:AC220V	F1:AC220V	J1:AC125V	D1:AC220V	D6:AC110V		
Q2:AC240V	F2:AC380V	J2:AC250V	D2:AC230V	D7:DC220V		
Q3:AC380V	F3:DC110V	J3:DC125V	D3:AC380V	D8:DC110V		
Q4:AC415V	F4:DC24V	J4:DC24V	D4:AC400V	D9:AC110~240V		
				D10:DC100~220V		

Accessory List

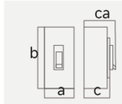
Model number		CQM6T/A.RT-160	CQM6T/A.RT-250	CQM6T/A.RT-630	CQM6T/A.RT-800
Breaking capacily		C,S,M	C,S,M	S,M,H	S,M,H
Number of poles		3,4	3,4	3,4	3,4
Accessory code					
208、308	Alarm Switch				
210、310	Shunt Release				
220、320	Auxiliary Switch				
230、330	Undervoltage Release				
240、340	Shunt Release and Auxiliary Switch				
260、360	Two Auxiliary Switches				
270、370	Auxiliary Switch and Undervoltage Release				
218、318	Shunt Release and Alarm Switch				
228、328	Auxiliary Switch and Alarm Switch				
238、338	Undervoltage Release and Alarm Switch				
248、348	Shunt Release, Auxiliary Switch and Alarm Switch				
268、368	Two Auxiliary Switches and Alarm Switch				
278、378	Auxiliary Switch, Undervoltage Release and Alarm				
280、380	Two Auxiliary Switches and Shunt Release				



Alarm swich
Auxiliary switch
Undervoltage release
Shunt trip

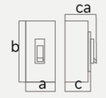
1. MH can provide thre new products right auxiary svitch,left stunt and left undervoltape for custorrers to chose.
2. In 220,320,240.,340,270,370 specincafons,the auxilary swich can be used for Mopairs of swches, which shoukdbe specfied when ordering.

Main Technical Parameters

Model number			CQM6T/A.RT-160			CQM6T/A.RT-250		
Rated current of frame level Inm(A)			160			250		
Number of poles			3，4			3，4		
Rated current In(A),at 40°C,50°C,55°C			63,80,100,125,160			125,140,160,180,200,225,250		
Rated operating voltage Ue(V),AC 50/60Hz			400/415			400/415		
Rated insulation voltage Ui (V)			800			800		
Rated impulse withstand voltage Uimp(KV)			8			8		
Breaking capacity designation			C	S	M	C	S	
Short-circuit breaking capacity Icu/Ics(kA)		AC400/415V	25/18	35/25	50/35	35/26	50/36	
Selectivity category			A	A	A	A	A	
Number of operating cycles (cycle)		ON	3000			3000		
		OFF	7000			7000		
Trip mechanisms and protection types	Magnetic trip	Power distribution protection	●	●	●	●	●	●
		Motor protection	●	●	●	●	●	●
	Thermal-magnetic trip	Power distribution protection	●	●	●	●	●	●
		Motor protection	●	●	●	●	●	●
Accessory	Auxiliary contacts		●	●	●	●	●	●
	Alarm contacts		●	●	●	●	●	●
	Shunt disconnect		●	●	●	●	●	●
	Undervoltage detent		●	●	●	●	●	●
	Manual operating mechanism		●	●	●	●	●	●
	Motorized operating mechanism		●	●	●	●	●	●
	Backplane wiring		●	●	●	●	●	●
	Inserted		●	●	●	●	●	●
	Coupling plate		●	●	●	●	●	●
	Partition between phases		●	●	●	●	●	●
Derivative products	Dedicated for prepayment electric meters		●	●	●	●	●	●
	Overload alarm without trip		●	●	●	●	●	●
Overall dimensions (mm) (a-b-c-ca)		3 P	90-155-70-94		90-155 -84-109	105-165-70-96		105-165-93-120
		4 P	120-155-70-94		120-155 -84-109	140-165-70-96		140-165-93-120

Note: ● for optional accessories; "-" for no optional accessories.

Main Technical Parameters

Model number			CQM6T/A.RT-630			CQM6T/A.RT-800		
Rated current of frame level Inm(A)			630			800		
Number of poles			3,4			3,4		
Rated current In(A),at 40°C,50°C,55°C			250,315,350,400,500,630			500,630,700,800		
Rated operating voltage Ue(V),AC 50/60Hz			400/415			400/415		
Rated insulation voltage Ui (V)			800			800		
Rated impulse withstand voltage Uimp(KV)			8			8		
Breaking capacity designation			S	M	H	S	M	H
Short-circuit breaking capacity Icu/Ics(kA)		AC400/415V	35/26	50/36	70/50	35/25	50/35	75/75
Selectivity category			A	A	A	A	A	A
Number of operating cycles (cycle)		ON	2000			1500		
		OFF	6000			4000		
Trip mechanisms and protection types	Magnetic trip	Power distribution protection	●	●	●	●	●	●
		Motor protection	●	●	●	●	●	●
	Thermal-magnetic trip	Power distribution protection	●	●	●	●	●	●
		Motor protection	●	●	●	●	●	●
Accessory	Auxiliary contacts		●	●	●	●	●	●
	Alarm contacts		●	●	●	●	●	●
	Shunt disconnect		●	●	●	●	●	●
	Undervoltage detent		●	●	●	●	●	●
	Manual operating mechanism		●	●	●	●	●	●
	Motorized operating mechanism		●	●	●	●	●	●
	Backplane wiring		●	●	●	●	●	●
	Inserted		●	●	●	●	●	●
	Coupling plate		●	●	●	●	●	●
	Partition between phases		●	●	●	●	●	●
Derivative products	Dedicated for prepayment electric meters		●	●	●	●	●	●
	Overload alarm without trip		●	●	●	●	●	●
Overall dimensions (mm) (a-b-c-ca)		3 P	210-275-105-155			210-275-105-155		
		4 P	280-275-105-155			280-275-105-155		

Note: ● for optional accessories; "-" for no optional accessories.

Operating Characteristics

1. The inverse time operating characteristics of power distribution circuit breakers when all poles are energized simultaneously at anambient air temperature of+40°C(with no humidity compensation)are shown in the following table:

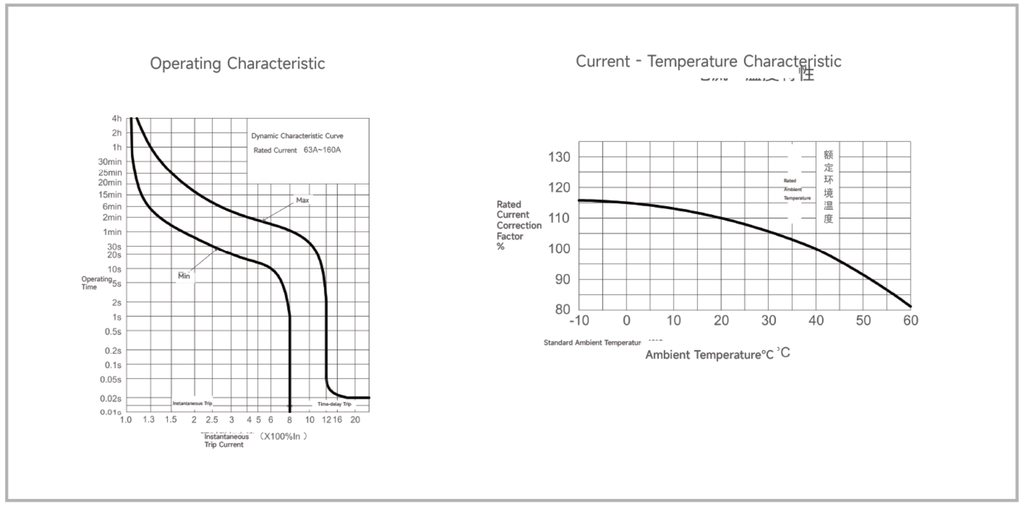
Test current designation	Setting current multiple	Conventional time	Initial state
		In≤63 In > 63	
Conventional non-tripping current	1.05	≥1h ≥2h	Cool state
Conventional non-tripping current	1.30	<1h<2h	Hot state

2. The inverse time action characteristics of circuit breakers for motor protection without humidity compensation when all poles areenergized simultaneously at an ambient air temperature of+40C are shown in the following table.

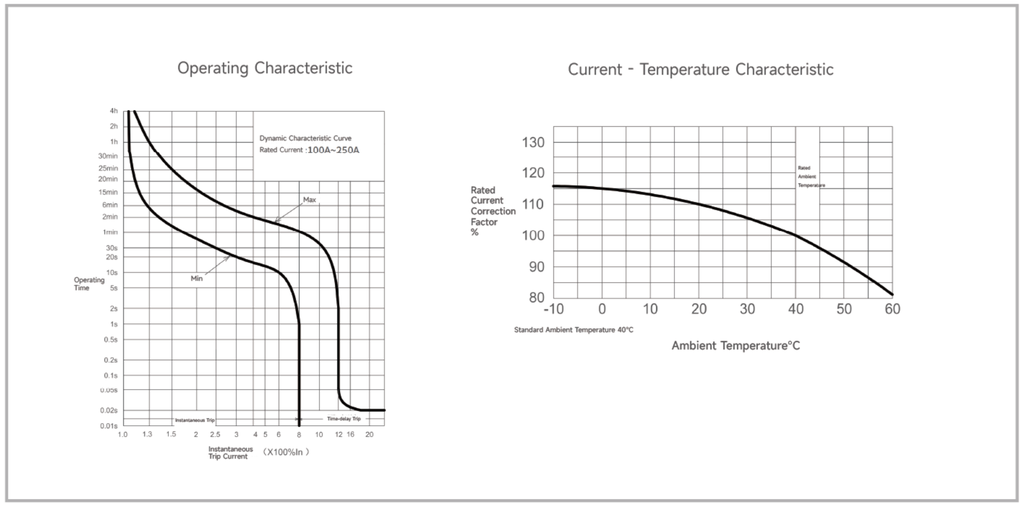
Test current designation	Setting current multiple	Conventional time	Initial state
		In≤800	
Conventional non-tripping current	1.0	≥2h	Cool state
Conventional non-tripping current	1.2	<2h	Hot state

3. Action characteristics under short-circuit condition:The short-circuit curent setting value of the instantaneous tripper of the circuitbreaker for power distribution is 10In.
   The short-circuit current setting value of the instantaneous tripper of the circuit breaker for motorprotection is 12In.
   The accuracy of the short-circuit curent setting value of the instantaneous tripper is 20%of the short-circuit currentsetting value.

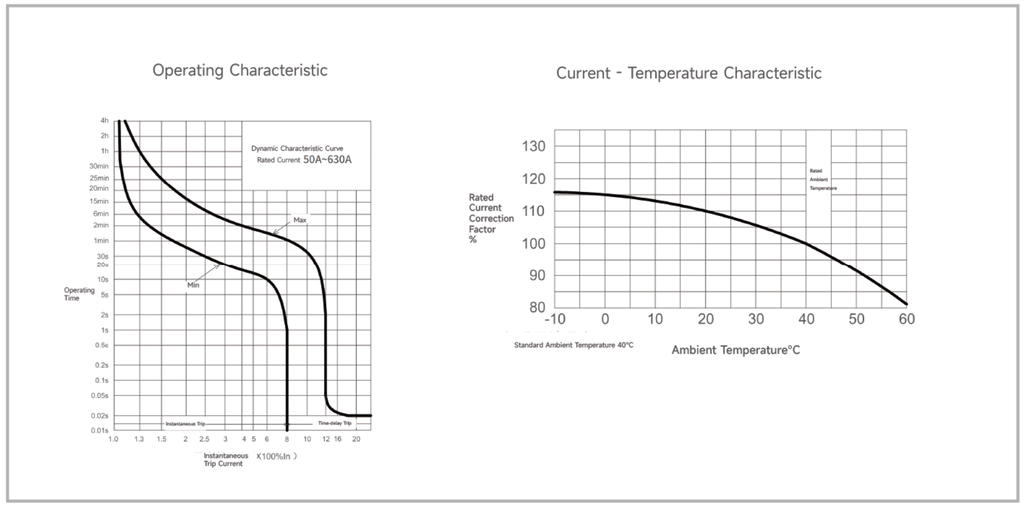
CQMGT/A.RT-160 Operating Characteristic Curve



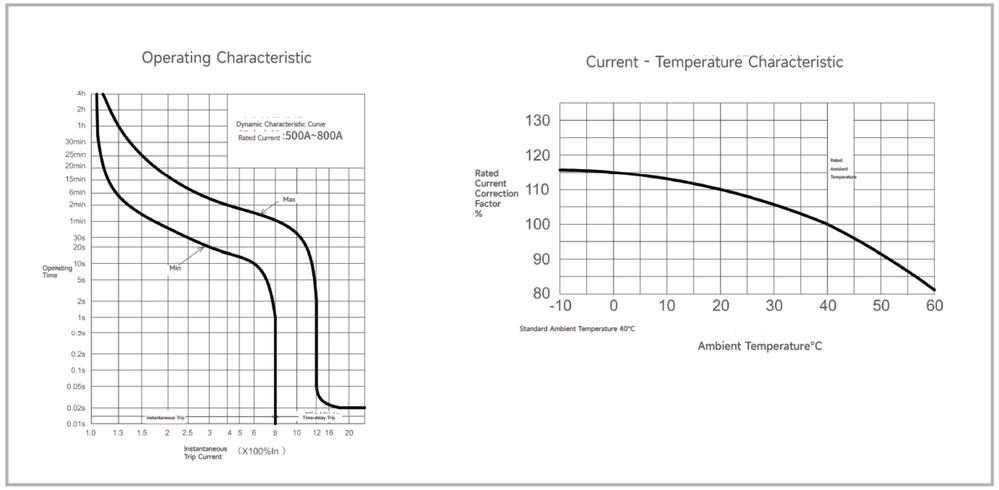
CQMGT/A.RT-250 Operating Characteristic Curve



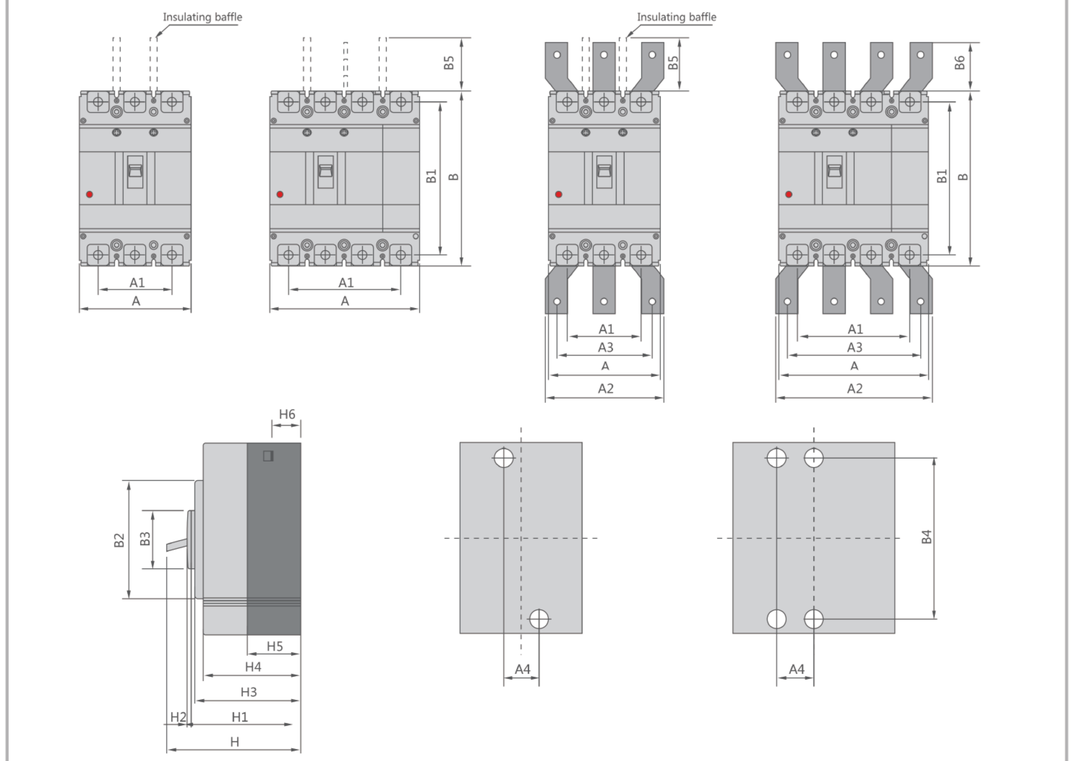
CQMGT/A.RT-630 Operating Characteristic Curve



CQMGT/A.RT-800 Operating Characteristic Curve



Outline and Installation Dimensions(mm)



Molded case circuit breaker	Overall dimension																					Installation dimensions		Boit
	A		A1		A2		A3		B	B1	B2	B3	B5	B6	H	H1	H2	H3	H4	H5	H6	A4	B4	
	3P	4P	3P	4P	3P	4P	3P	4P																
CQM6T/A.RT-160CS	90	120	60	90	-	-	-	-	155	134	103	50	50	-	94	72	4	70	61	41	24	30	132	M8
CQM6T/A.RT-160M	90	120	60	90	-	-	-	-	155	134	103	50	50	-	109	83	4	83	76	24.5	24.5	30	132	M8
CQM6T/A.RT-250CS	105	140	70	105	-	-	-	-	165	144	103	50	100	-	96	72	4	70	61	46	24	35	126	M8
CQM6T/A.RT-250M	105	140	70	105	-	-	-	-	165	144	102	50	110	-	120	95	4	91	84	22.5	24	35	126	M8
CQM6T/A.RT-630SMH	140	185	88	132	140	196	112	168	257	230	179	90	110	42	155	107	5	105	97	64	35	44	194	M10
CQM6T/A.RT-800SMH	210	280	140	210	180	250	140	210	275	243	192	90	110	87	155	107	5	104	97	65	24	70	242.5	M12

CQM6RE series

Electronic molded case circuit breaker

Product Features

- Precise Electronic Trip: Features an adjustable electronic release for highly accurate Long-Time, Short-Time, and Instantaneous (L-S-I) protection.
- Advanced Ground Fault Protection: Includes a dedicated ground fault (G) protection setting for enhanced system safety.
- Visual Status Indication: Equipped with an intuitive control panel featuring a current light bar and clear indicators for overload and pre-alarm status.
- Communication Ready: Provides the foundation for smart functionality, supporting integration with motorized operators for remote control.

Compliance

- Meets international and regional standards including

IEC/EN 60947-1(General Rules)	GB/T 14048.1
IEC/EN 60947-2(Circuit-Breakers)	GB/T 14048.2
IEC/EN 60947-3(Switchgear)	GB/T 14048.3
IEC/EN 60947-4(Contactors & Motor-Starters)	GB/T 14048.4

Selection Guide

CQM6 RE - 160 P/3 400 160A 2 A

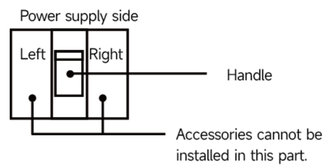
Product code	Shell frame grade	Shell frame rating current optional designator	Breaking capacity			
CQM6	RE	160		S	M	H
Molded case circuit breaker	RE Electronically Adjustable	160	160	/	50/35	50/50
		250	250	/	35/26	50/36
		630	630	35/26	50/36	70/50
		800	800	35/25	50/35	75/75
		1250	1250	35/25	50/35	75/75

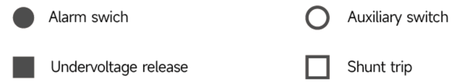
Operating method	Number of poles	Decoupler method and internal accessories
	4	300
P:Motorized operation Z:Turn the handle W:Direct operation	3:Tri-pole 4:Quad-pole	2:Intelligent disconnectors Note:The last two digits are the accessory code (see attachment)

Function	Four-pole products can be selected code
2	A
1:For power distribution 2:For motor protection	A:N-pole without protection,can not be combined B:N-pole without protection,can be combined C:N-pole with protection,can be combined D:N-pole with protection,can not be combined Note:If the customer does not have a clear request,four-pole products will be defaulted to the B category

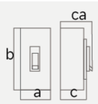
Accessory List

Model number		CQM6RE-160	CQM6RE-250	CQM6RE-630	CQM6RE-800	CQM6RE-1250
Breaking capacily		M,H	M,H	S,M,H	S,M,H	S,M,H
Number of poles		3,4	3,4	3,4	3,4	3,4
Accessory code						
308	Alarm Switch					
310	Shunt Release					
320	Auxiliary Switch					
330	Undervoltage Release					
340	Shunt Release and Auxiliary Switch					
360	Two Auxiliary Switches					
370	Auxiliary Switch and Undervoltage Release					
318	Shunt Release and Alarm Switch					
328	Auxiliary Switch and Alarm Switch					
338	Undervoltage Release and Alarm Switch					
348	Shunt Release, Auxiliary Switch and Alarm Switch					
368	Two Auxiliary Switches and Alarm Switch					
378	Auxiliary Switch, Undervoltage Release and Alarm Switch					
380	Two Auxiliary Switches and Shunt Release					



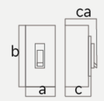


Main Technical Parameters

Model number			CQM6RE-160		CQM6RE-250	
Rated current of frame level Inm(A)			160		250	
Number of poles			3,4		3,4	
Rated current In(A),at 40°C,50°C,55°C			32, 63, 125, 160		160,250	
Rated operating voltage Ue(V),AC 50/60Hz			400/415		400/415	
Rated insulation voltage Ui (V)			800		800	
Rated impulse withstand voltage Uimp(KV)			8		8	
Breaking capacity designation			M	H	M	H
Short-circuit breaking capacity Icu/Ics(kA)		AC400/415V	50/35	50/50	50/35	50/50
Rated short-time withstand current Icw(kA),1s		AC400/415V	2	2	5	5
Selectivity category			B	B	B	B
Number of operating cycles (cycle)	ON		3000		3000	
	OFF		7000		7000	
Electronic decouping (adjustable)	Power distribution protection		●	●	●	●
	Motor protection		●	●	●	●
Accessory	Auxiliary contacts		●	●	●	●
	Alarm contacts		●	●	●	●
	Shunt disconnect		●	●	●	●
	Undervoltage detent		●	●	●	●
	Manual operating mechanism		●	●	●	●
	Motorized operating mechanism		●	●	●	●
	Backplane wiring		●	●	●	●
	Inserted		●	●	●	●
	Coupling plate		●	●	●	●
	Partition between phases		●	●	●	●
Overall dimensions (mm) (a-b-c-ca)		3 P	90-155-84-109		105-165-93-120	
		4 P	120-155-84-109		140-165-93-120	

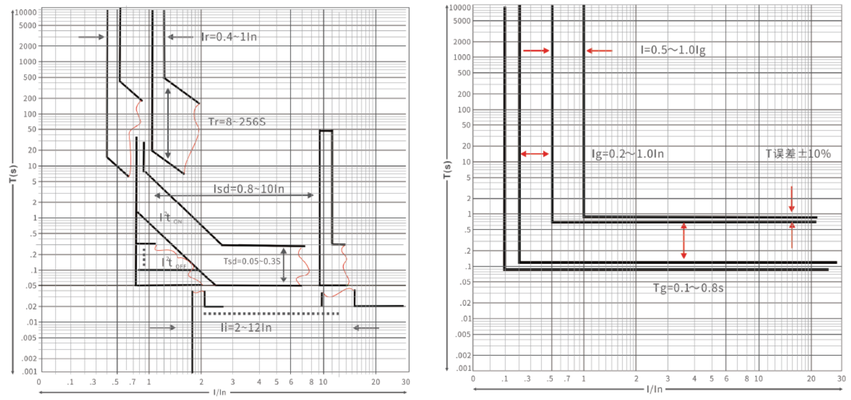
Note: ● for optional accessories; "-" for no optional accessories.

Main Technical Parameters

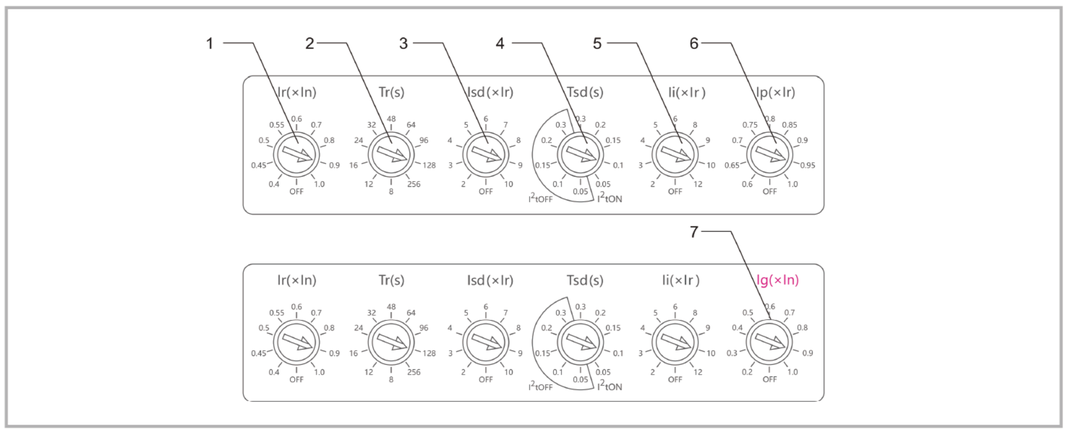
Model number			CQM6RE-630			CQM6RE-800			CQM6RE-1250		
Rated current of frame level Inm(A)			630			800			1250		
Number of poles			3,4			3,4			3,4		
Rated current In(A),at 40°C,50°C,55°C			400，630			630，800			1000，1250		
Rated operating voltage Ue(V),AC 50/60Hz			400/415			400/415			400/415		
Rated insulation voltage Ui (V)			800			800			800		
Rated impulse withstand voltage Uimp(KV)			8			8			8		
Breaking capacity designation			S	M	H	S	M	H	S	M	H
Short-circuit breaking capacity Icu/Ics(kA)		AC400/415V	35/26	50/36	70/50	35/25	50/35	75/75	35/25	50/35	75/75
Rated short-time withstand current Icw(kA),1s		AC400/415V	8	8	8	10	10	10	19.2	19.2	19.2
Selectivity category			B	B	B	B	B	B	B	B	B
Number of operating cycles (cycle)	ON		2000			1500			1500		
	OFF		4000			4000			4000		
Electronic decouping (adjustable)	Power distribution protection		●	●	●	●	●	●	●	●	●
	Motor protection		●	●	●	●	●	●	●	●	●
Accessory	Auxiliary contacts		●	●	●	●	●	●	●	●	●
	Alarm contacts		●	●	●	●	●	●	●	●	●
	Shunt disconnect		●	●	●	●	●	●	●	●	●
	Undervoltage detent		●	●	●	●	●	●	●	●	●
	Manual operating mechanism		●	●	●	●	●	●	●	●	●
	Motorized operating mechanism		●	●	●	●	●	●	●	●	●
	Backplane wiring		●	●	●	●	●	●	●	●	●
	Inserted		●	●	●	●	●	●	●	●	●
	Coupling plate		●	●	●	●	●	●	●	●	●
	Partition between phases		●	●	●	●	●	●	●	●	●
Overall dimensions (mm) (a-b-c-ca)		3 P	140-257-105-155			210-275-105-155			210-275-105-155		
		4 P	185-257-105-155			280-275-105-155			280-275-105-155		

Note: ● for optional accessories; "-" for no optional accessories.

Characteristic curve



Intlligent Release Adjustment Panel



1. Ir: Rated Current (Ir) Setting Dial
The setting dial for the rated current, applicable to 160-1250 frame sizes. The selectable settings on the front panel are: 0.4, 0.45, 0.5, 0.55, 0.6, 0.7, 0.8, 0.9, 1.0, OFF.
2. Tr: Long-Time Delay (Tr) Setting Dial
The setting dial for the overload long-time delay. When the current passing through the circuit breaker reaches 1.5 times Ir (×In), the breaker trips within the set time. The selectable settings are: 8s, 12s, 16s, 24s, 32s, 48s, 64s, 96s, 128s, 256s.
3. Isd: Short-Time Delay Current (Isd) Setting Dial
The setting dial for the short-time delay current multiplier. Selectable settings are: 2, 3, 4, 5, 6, 7, 8, 9, 10, OFF. When a short-circuit current equal to the set value (×Ir, ×In) passes through the breaker, it will trip after a time delay.
4. Tsd: Short-Time Delay Operating Time (Tsd) Setting Dial
The setting dial for the short-time delay operating time. It is divided into inverse-time protection (^{2}t ON) and definite-time protection (^{2}t OFF). Selectable settings are: 0.05s, 0.1s, 0.15s, 0.2s, 0.3s. When a short-circuit current equal to Isd passes through the breaker, it will trip within the set time.
5. Ii: Instantaneous Current (Ii) Setting Dial
The setting dial for the instantaneous current multiplier. Selectable settings are: 2, 3, 4, 5, 6, 8, 9, 10, 12. When a short-circuit current equal to the set value (×In) passes through the breaker, it will trip instantaneously.
6. Ip: Pre-alarm Current (Ip) Setting Dial
The setting dial for the pre-alarm current multiplier. Selectable settings are: 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95%, 100%, OFF. When the current passing through the breaker reaches the set value (×Ir, ×In), the pre-alarm indicator light will illuminate.
7. Ig: Ground Fault Current (Ig) Setting Dial
The setting dial for the ground fault current multiplier. Selectable settings are: 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, OFF. When the ground fault current passing through the breaker reaches the set value (×In), the breaker will trip due to the ground fault.

Characteristics of Intelligent Release: It has protection functions such as overload long-delay inverse time, short-circuit short-delay inverse time, short-circuit short-delay fixed time, and short-circuit instantaneous action. These functions can be set by the user to form the required protection characteristics. The inverse time action characteristics of long-delay overcurrent protection are shown in the table:

Current		time of action	
power distribution	1.05Ir	>2h inoperative(In>63A),1h inoperative (In≤63A)	
	1.3r	<1h action	
	1.51r	Settling time tr(s)	Inm-125A、250A、400A、630A、800A、1250A
			8、12、16、24、32、48、64、96、128、256

Remarks:Tolerance of operation value is ±10%,tolerance of operation time is ±15%.
Short delay overcurrent protection action characteristics

When Tsd is within the I²tON stall range,it is a fixed time limit:

Current	time of action					
I≤Isd≤6Ir counter-time limit	I² T2=(6XIr)² Tsd					
I≥Isd andI≥6Ir Inverse time limit to fixed time limit	Consolidation time	0.05	0.1	0.15	0.2	0.3
	Inaccuracies	±0.02	±0.03	±0.04	±0.06	±0.08
	Returnable time	-	-	0.14	0.21	0.3

Remarks :1 is the actual passing current,T2 is the actual action time,Isd is the set short delay curent,Tsd is the set short delay action time

When Tsd is in the range of I²tOFF gear,it is fixed time limit:

Current	time of action					
I≥Isd Current Error±10%	Consolidation time	0.05	0.1	0.15	0.2	0.3
	Inaccuracies	±0.02	±0.03	±0.04	±0.06	±0.08
	Returnable time	-	-	0.14	0.21	0.3

Remarks:Iis the actual passing current,T2 is the actual action time;Isd is the short delay curent,Tsd is the short delay actiontime.

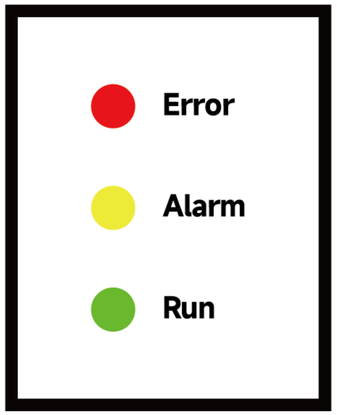
Short-circuit transient protection action characteristics

Current	Ii=(2,3,4,5,6,8,9,10,12)×1n	
Motion Characteristics	Operating current	Minimum operating current 0.9Ii Maximum inoperative current 1.1Ii
	time of action	<0.1s

Grounding protection operating characteristics

Current	Ig=(0.2,0.3,0.4,0.5,0.6,0.7,0.8,0.9,1.0)×1n	
Motion Characteristics	Ig≤0.9Ig Circuit breaker inoperative	Ig>1.1Ig
	time of action	Tg=0.4(fixed time limit)

The electronic striker panel indicators are set as follows



Overload pre-warning characteritics:

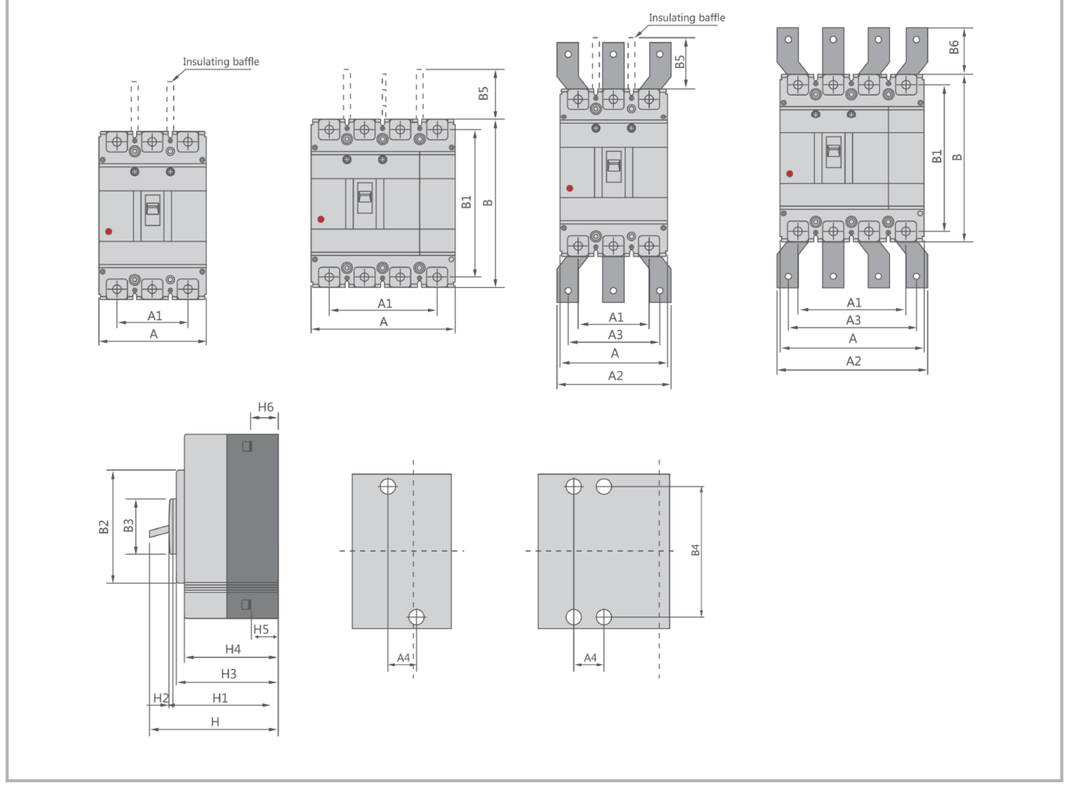
Load Current	I < 1Ip	I ≥ 1Ip
Indicator status	Indicator ligh is not flashing,does not light up	Indicator light constant

Load Current	I < 1.15Ip	I ≥ 1.15Ip
Indicator status	Indicator light is not on	Indicator ligh is on

Load Current	≥0.4In(Single phase)	1≥0.2In(Tri-phase)
Indicator status	Indicator light is on	Indicator light is on

Note: 1. The above current error±10%.
2. The pre-alarm current needs to satisfy the startup current constraint,i.e.,the current cannot be lower than the operating condition.

Outline and Installation Dimensions(mm)



Molded case circuit breaker	Overall dimension																						Installation dimensions		Boit
	A		A1		A2		A3		B	B1	B2	B3	B5	B6	H	H1	H2	H3	H4	H5	H6	A4	B4	
	3P	4P	3P	4P	3P	4P	3P	4P																
CQM6RE-160	90	120	60	90	-	-	-	-	155	134	102	50	50	-	109	83	4	83	76	24.5	24.5	30	132	M8
CQM6RE-250	105	140	70	105	-	-	-	-	165	144	102	50	110	-	120	95	4	91	84	22.5	24	35	126	M8
CQM6RE-630	140	185	88	132	140	196	112	196	257	230	179	90	110	42	155	107	5	105	97	30	32	44	194	M10
CQM6RE-800	210	280	140	210	180	250	140	250	275	243	192	90	110	87	155	107	5	104	97	25	25	70	242.5	M12
CQM6RE-1250	210	280	140	210	180	250	140	250	275	243	192	90	110	87	155	107	5	104	97	25	25	70	242.5	M10*2

CQM6Z series

Electronic molded case circuit breaker

Product Features

- Advanced Monitoring & Measurement: Integrates measurement of key electrical parameters (current, voltage, power, energy) with a clear LCD display.
- Comprehensive Protection Suite: Includes configurable protection for overcurrent, over/under voltage, phase loss, and zero-loss (power failure trip).
- Smart Connectivity: Features a standard RS-485 communication interface (Modbus-RTU) for system integration, data logging, and remote management.
- Event Recording: Stores the last 10 fault records with timestamps, facilitating quick diagnostics and post-event analysis.

Compliance

- Meets key international and national standards: IEC 60947-2, GB 14048.2 (Product), IEC 60529, GB/T 4208 (IP Rating), and environmental test methods GB/T 2423.1/2.

Selection Guide

CQM6 Z - 250 P/3 400 250A 2 A

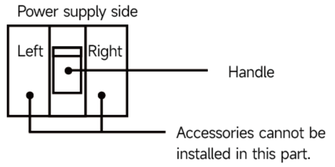
Product code	Shell frame grade	Shell frame rating current optional designator	Breaking capacity			
				S	M	H
Molded case circuit breaker	Z Liquid crystal metering type Electronic circuit breaker	250	250	/	50/35	50/50
		630	630	35/25	50/35	75/75

Operating method	Number of poles	Decoupler method and internal accessories
	3	300
P:Motorized operation Z:Turn the handle W:Direct operation	3:Triple pole	2:Intelligent disconnectors Note:The last two digits are the accessory code (see attachment)

Function	Four-pole products can be selected code
2	A
1:For power distribution 2:For motor protection	A:N-pole without protection,can not be combined B:N-pole without protection,can be combined C:N-pole with protection,can be combined D:N-pole with protection,can not be combined Note:If the customer does not have a clear request,four-pole products will be defaulted to the B category

Accessory List

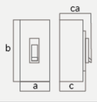
Model number		CQM6Z-250	CQM6Z-630
Breaking capacity		M,H	S,M,H
Number of poles		3	3
Accessory code			
208、308	Alarm switch		
210、310	Shunt release		
220、320	Auxiliary switch		
230、330	Undervoltage release		
240、340	Shunt release, auxiliary switch		
240、250	Shunt release, auxiliary switch		
260、360	Two sets of auxiliary switches		
270、370	Auxiliary switch, undervoltage release		
218、318	Shunt release, auxiliary switch		
228、328	Auxiliary switch, alarm switch		
238、338	Undervoltage release, alarm switch		
248、348	Shunt release, auxiliary switch, alarm switch		
268、368	Shunt trip device, auxiliary switch, alarm switch		
278、378	Auxiliary switch, undervoltage release, alarm switch		
280、380	Two sets of auxiliary switches, shunt trip device		



Alarm swich
Auxiliary switch
Undervoltage release
Shunt trip

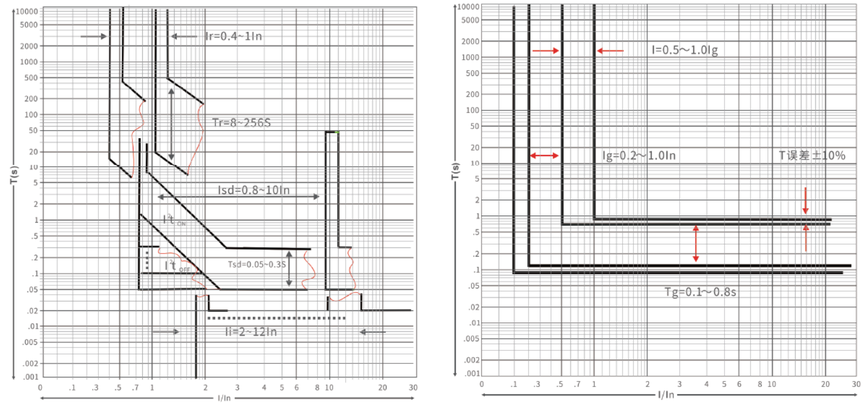
1. MH can provide thre new products right auxiary svitch,left stunt and left undervoltape for custorrers to chose.
2. In 220.320,240.,340,270,370 specincafons,the auxilary swich can be used for Mo pairsof swches,which shoukdbe specfied when ordering.

Main Technical Parameters

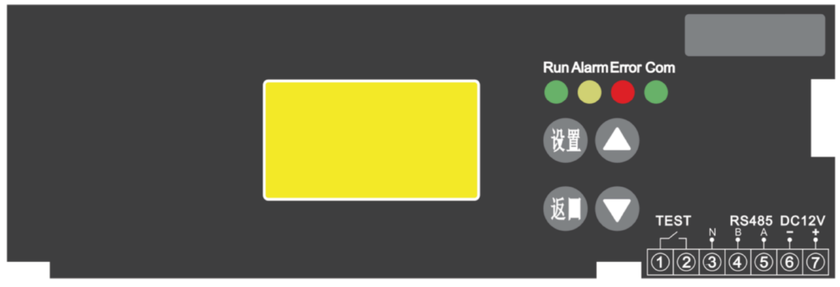
Model number			CQM6Z-250		CQM6Z-630		
Rated current of frame level Inm(A)			250		630		
Number of poles			3，4		3，4		
Rated current In(A),at 40°C,50°C,55°C			160，250		400，630		
Rated operating voltage Ue(V),AC 50/60Hz			400/415		400/415		
Rated insulation voltage Ui (V)			800		800		
Rated impulse withstand voltage Uimp(KV)			8		8		
Breaking capacity designation			M	H	S	M	H
Short-circuit breaking capacity Icu/Ics(kA)		AC400/415V	50/35	50/50	35/25	50/35	75/75
Selectivity category			A	A	A	A	A
Number of operating cycles (cycle)		ON	3000		2000		
		OFF	7000		4000		
Trip mechanisms and protection types	Magnetic trip	Power distribution protection	●	●	●	●	●
		Motor protection	●	●	●	●	●
	Thermal-magnetic trip	Power distribution protection	●	●	●	●	●
		Motor protection	●	●	●	●	●
Accessory	Auxiliary contacts		●	●	●	●	●
	Alarm contacts		●	●	●	●	●
	Shunt disconnect		●	●	●	●	●
	Undervoltage detent		●	●	●	●	●
	Manual operating mechanism		●	●	●	●	●
	Motorized operating mechanism		●	●	●	●	●
	Backplane wiring		●	●	●	●	●
	Inserted		●	●	●	●	●
	Coupling plate		●	●	●	●	●
	Partition between phases		●	●	●	●	●
Overall dimensions (mm) (a-b-c-ca)		3 P	105-165-99-120		140-257-111-155		

Note: ● for optional accessories; "-" for no optional accessories.

Characteristic curve



Electronic controller adjustment panel



Note:(E-PRO20)

Characteristic parameter

Rated operating frequency:50Hz;
Rated operating voltage:AC 400V;
AC voltage measurement accuracy:three-phase voltage sampling deviation does not exceed earth 2%;AC current measurementaccuracy :0.4-1.0In; three-phase curent sampling deviation does not exceed±5%:(High-precision)AC current measurement accuracyof high-precision type:0.2-1.0In three-phase current sampling deviation does not exceed±0.2%.

Product Function

- Overcurent protecion:Le.overioad long delay inverse time protection,shot-circuit short delay protection,short-cicuit instantaneous protection;
- Voltage protecion:ie.over-volage protection,under-voltage proteclion,phase-loss protecion,zero-oss protection,power failure trip.
- RS485 communication interface,which can realize the functions of elecommunication,telemetry,remote control and remote adjustment.
- LCD human-computer nteraction:you can change the LCD reference on the controller panel by presing the key to set the proteclion parameters.
- Protection value setting:change the parameters on the LCD screen of the controller panel by presing the key,and set the protection parameters;
- Measurement function:can change the parameters on the LCD screen of the controller panel by pressing the key
- Measurement function:measurable parameters are current and phase voltage.
- Fault record query:can query the last ten tripping causes and occurrence time;
- Real-time clock.

Function Description

1.Explanation of symbols
The following symbols are used in the characterization

Ia: Current value of phase A
Ua: Voltage value of phaseA
Ir: Overload long-delay tripping seting current
tsd: Short-circuit short-delay setting time
U:Undervomage protection action value

Ib: B-phase current value
Ub: B-phase voltage value
tr: Overload long delay setting time
Ii: Short-circuit instantaneous release seting current

Ic: C-phase current value
UC: C-phase voltage value
Isd: Shor-circuit short-delay debounce seting current
Uvo: Overvoltage protection action value

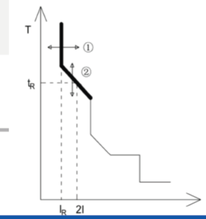
Specifications&Features			
Categorization	Description		
Display mode	LCD+LED Indicator		●
Interface operation	Buttons		●
Protection Function	Current Protection	Overload long delay protection function	●
		Short-circuit and short-delay protection	●
		Short-circuit transient protection	●
		Overload pre-warning function	●
	Voltage Protection	Undervoltage protection function	●
		Overvoltage protection function	●
		Phase loss protection function	●
		Zero-break protection function on the power supply side	●
	Communications Function	Specification of DL/T645 for Intelligent Circuit Breakers	O
		Modbus-RTU communication protocol	●
		Communication hardware:1 channel of RS-485	●
	External DI/O Port Function	Communication auxiliary power supply input	O
		One channel of DI/O programmable control input	O
	Fault Record	Storage of 10 tripping faults	●
		Recording of 80 events of protection function enabling and disabling	●
		Recording of 10 events of breaker position changes	●
		Recording of 10 alarm events	●
	Time Function	Wth year,month,day,hour,minute and second real-time clock function	●
Measurement Function	Measurement of electrical parameters	Voltage 0.7Ue-1.3Ue,±0.5%	●
		Current 0.2In-1.2In,±0.5%	●
		Three-phase and total power factor 0.5~10. ±005	●
		Three-phase and total active power,reactive power,apparent power	●
		Three-phase and total active energy,reactive energy,apparent energy	●
		Voltage harmonics and total voltage harmonic distortion	●
		Current harmonics and total current harmonic distortion	●

Explanation:The symbol'● 'Indicates that the ftunction is avalable;the symbol 'o ndicates tha the tunction is optional;the symbol "O "indicates tht the function is not avallable.

- Overload long delay protection

Overload long delay protection is used to prevent lines and equipment from overheating under overload conditions.

No.	Parameters	Instruction
①	Ir	Overload long delay release setting current
②	Tr	Overload long delay setting time



Setting range for Ir1:

In(A)	250	400	630
Ir(A)	(0.4-1.0)*In		
	Pole difference 1A		

- Overload long-delay protection operating characteristics.

t1 set value			In=250A~630A			
			12	60	100	150
Decoupling time(s)	Power distribution	1.05Ir	No movement for 2 hours			
		1.3Ir	Action within 1 hour			
		1.5Ir	12	60	100	150
		tolerance	<3 Ir:±10%;>3Ir:15%			

Note:The overload long delay protection adopts the inverse time protection curve,and the calculation formula is as follows.

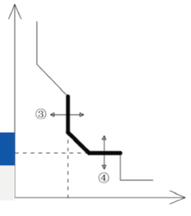
$$T=\left(\frac{1.5I_R}{I}\right)^2\cdot t_R;\ 1.2I_R\le I<I_{sd}$$

For example,Ir=250A,I=600A,Tr=60s,and the data is substituted into equation (1):

$$T=\left(\frac{1.5\times250}{600}\right)^2\cdot60=41.67s$$

- Short-circuit short-delay protection

Short-circuit short-delay protection is for short-circuit faults of medium intensity and provides selective protection for the distribution system.



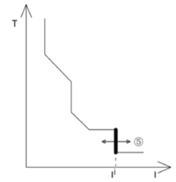
No.	Parameters	Instruction
③	Isd	Short-circuit short-delay tripping setting current,(2-10)*1r
④	Tsd	Short-circuit short delay setting time,0.1s,0.2s,0.3s,0.4s adjustab

- Short-circuit short-delay protection action characteristics:

Consolidation time:Tsd			0.1	0.2	0.3	0.4
Operation time(s)	Isd≤I<1.5Isd	inverse time limit	T=(1.5Isd/I)*Tsd,±15%			
	1.51sd≤I<Isd	inverse time limit	0.1±0.03	0.2±0.03	0.3±0.045	0.4±0.06
Note:There is an error of±20 ms;						

Short-circuit transient protection
Short-circuit transient protection action characteristics:

No.	Parameters	explanation
⑤	Ii	Instantaneous tripping setting current,(2~14)X Ii



Load	Current	I≤0.85Ii	I≥1.15Ii
Movement Time		No movement	<100ms

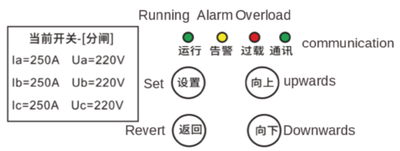
- Overvoltage protection characteristics
  volage acfon vatue:phase wlage 250-20V adjustanhe (deau z2DV.kevel difrene 1V.can be urned of aclion delay tire 1-5 adjustabe (defaul 3S),level diference 1s.trger condtonr "any phase votage s greater tan the ovevotape setin value.Truger cndtiton:"Any one phase voltug s greater han the overvotage setingvalue.

- Under-voltage protection characteristics
  Votage acion value:phase votag is145-200V adjustable (defaut 160V)levelditerence 1V,can be closed,action delay time:1-5s adjustable (default3s),level diference 1s.trger condions:any phase voltage is less than the undervoltage seting value.Action voltage tolerance±5V.

- Phase-loss protection characteristics
  voltage acio vaue:phase electic musie for 10-100Vafjestabe (defaunt sov,teveldiference 1v,can b cosed:acio delay ine:1-5s adjustabe (defaul 19.,eve diference15.Triogercondntions:anyphas voltape ls less tha the missing phase seting value.Aclion voltage tolerance ±5V.

- Power failure tripping
  When the tre-phase votag olection valueat te ncoming terminal sless than the curent phase los seting.twl immedately act to tip and can be tumed ott.

Liquid crystal display and controller operating instructions



The oontroller operation interface is shown in Fig.1,which consists of a liquid display window,3LED function indicators and 4 function buttons.
Figure 1:The operation interface of the controller

1.1.1 Function Definition of LED Indicators
Closng Lamp:When the swich is in the closing state,the indicator lamp is constanty on,and the indicator lamp is ofin theopening state,
Fault Lamp:The indicator larmp tashes when there is a faut alam on the switch.Communcation Lamp:The indicator lamp fashes when there is a data exchange between the swtch and the host computer.

1.1.2. Key Function Definitions
Up key :Dispiays the curent curent curent curent voltage and curent switching status.Donn key :5wiching n the seting state,the menu scnol doun or daasubraction operation in normal operaton state,pres down key to marullyand artficial tri the cicit breakor and kep the breake in the tiped state seupioK key:Mhen the swich isinarystate,pres this key to acassthe riain menu niertacg ot the controler.When the swtch is nithasetup state,press tis key o anter the manu salection or store theseup data Return key:when the switch is n te setup state,press tis key to exit the setup menu.Ths key s aso used foruniocking the swtch in the biocked state toretum to the normal operatin state,for abandoning the storage operaion in ine data setup state,and for returning to the revious level ot the submenu.

1.13. Key Operation Definitions
Tap:press a key and malintaina short time (les than 1s)and then release;long press:press a key and mintain 3s~5s time and then release: continuous tap:continuous tap a key,the interval time is less than 1s.

1.1.4. Displaying the interface status
Controller display state is divided into:normal operation state,alarm state,fault blocking state and human-machine operation state.

1.1.5. Normal Operation State
The nomal peratonsate retersto te sthus contn or th lud eysa dsplay and ndcator lns whan te contoler s n he sutch-an operaton state wthout anytuts orarms.in the normal operation state,the liquid crystal displays ral-time intormation such as the curent and voltage of the main cicuit.
Figures 2-a and 2-b show the liquid crystal display interfaces in the normal operation state,

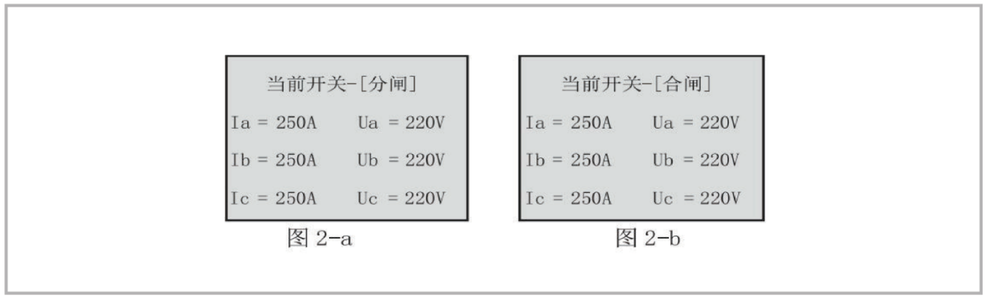
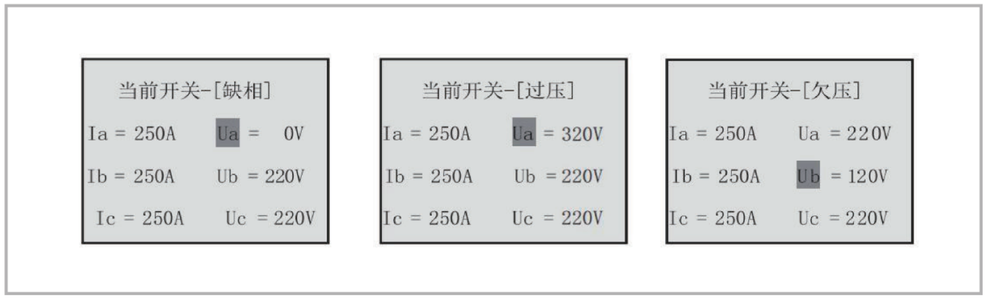


图 2-a 图 2-b

In the nomal operation interace,the operaton"indicator light remalns constanty on at the same time.In Figure 2-a,when the switch is in the open state:Switch-[Open Circuit Breaker].In Figure 2,when the switch is in the closed state:Switch-[Closed Circuit Breaker].

1.1.6.Alarm Status Interface
The alarm status interace refers to the interace that displays alarm infomation when the controler has afault trip delay or when there is a fault alam without a trp.Asshown in Figure 3,there are several types of alam interfaces.At the same time,the "Alam"indicator light fashes to give an alarm.
Figure 3:Alarm Status Interface



The blacked-out display in the alam interface indicates the phase where the fault has occurred.

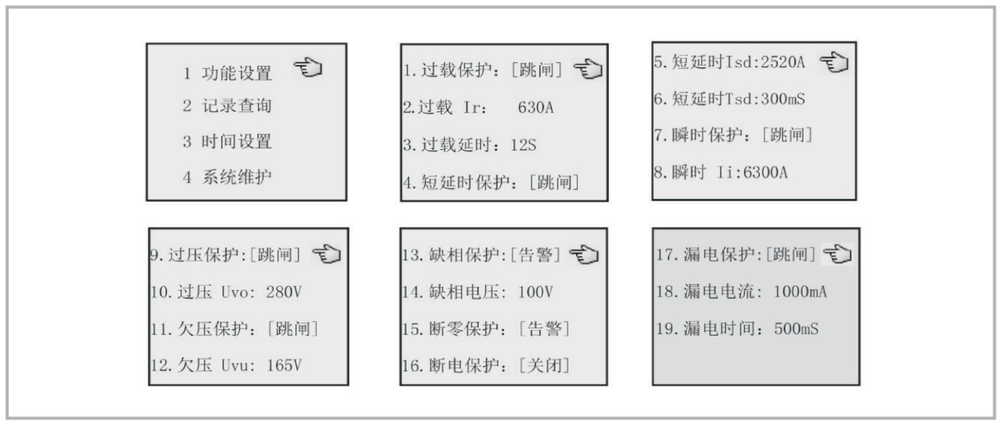
1.1.7 Fault Lockout State Interface
The faut lockou ntertace refers to the intormation nterface displayed by the controler ater the switch trps.As shown in Figure 4,there are several typesof fault lockout interfaces.A the same time,the "Fauk"indicator light is constantly on to give an alarm.
Figure 4:Fault Lockout Interface

In the fault lockout interface,the black-highlighted display indicates the faulty phase.

1.18. Human-Machine Operation Interface Man-Machine Operation Interface

The human-machine operation interface reers to the interface information displayed in some seting and query states.Several operation indicationstatus interfaces are shown in Figure 5.

Figure 5:Operation Indication Interface



The above operation indications only list some of the interfaces.For specificoperations,please refer to the corresponding operationsaccording to different interfaces.The symbol""indicates that there is sub-menu data,and the symbols"-"or the "square box"indicate the currently settable data options.

1.19LCD Operation

1.1.9.1.Main Menu Operation

Inany state of the swatch,you can pres the “setling”key to set parameters or quey inormaton,ec.Special note:n the tiping stane o the swtch,you shoud detemine thereason for the swtch triping.and exclude the fauts before pressng the “selting”key to enter the seting meru.operation metot Pres the-seing key,the contrle enters the main menu of sting,as shoun in Fg.6,and then pressthe Up and "Dow"keys to browse the menu Inormatnon upward o dowrward,and then press the Up'and Doun"keys to browse to the curent menu.Then pres5 Un"or Down"key to browse themenu information upward o dowrward,and then prss sevconfrm key to ener the submernu coresponding to this item in the curent menu ofthe controler.The main men includes:1Function Setting,2 Record Inquiry,3 Time Sting,4 System Maintenance.

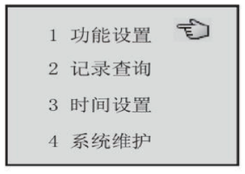


图 6

1.1.9.2 Function Setting Options

The functio list includes"seting menu1-19'which means there are 1-19 protection seting contents.Under the Function Seting'menu,press "Up"or Down' key to browse the parameter seting options,when the parameter seting item pointed to by"°,press "Set"key,the parameter can be set atthis time.Whe n the"a"pointing to the parameter seting item,press the "set"key,the parameter can be set a this time through the "up"ordown' on the parameter or function to set,and then by pressing the "ser"key,the parameter or function can be set.The parameter or function can be set byup"or"down",and then the parameter orftuncion can be stored by taping the ser key or the setting can be abandoned by tapping the "Return"key.The procedure is shown in Figure 7

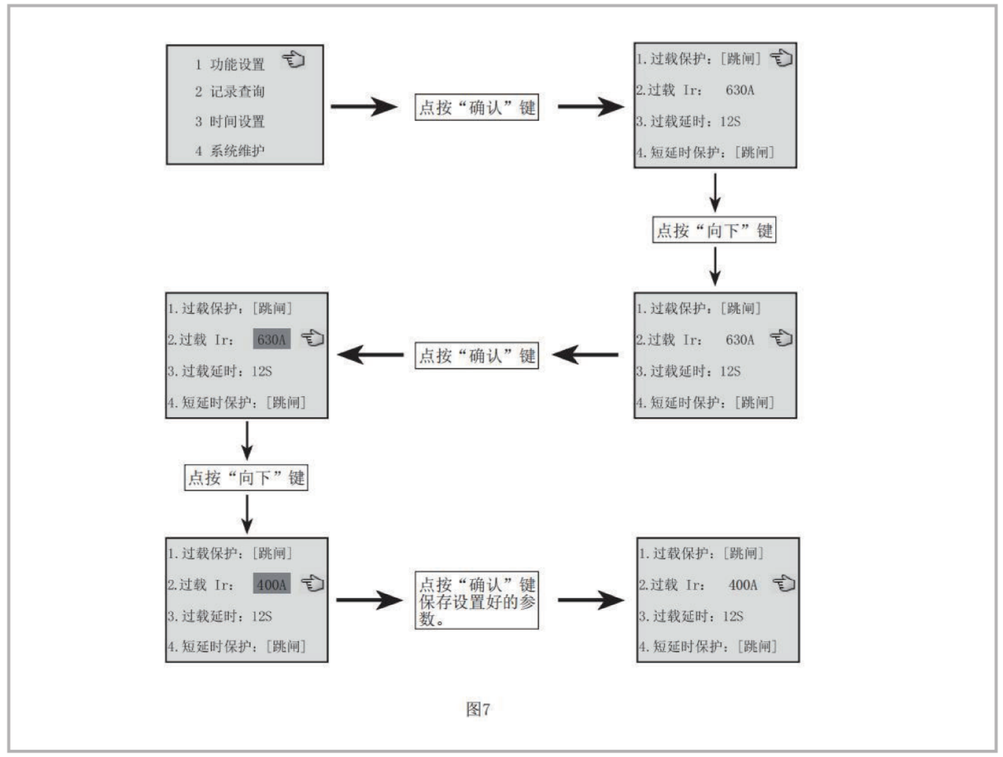


图7

The setting items and setting ranges of all parameters in the function setting menu are shown in the following table:

Setting parameters menu	Setting Item	Parameter Setting Range	Factory default value
Function Setting 1	Overload protection function	Shutdown,alarm,trip	Trip
Function Setting 2	Threshold of overload current	Ir=(0.4~1.0)*In,6倍反时限曲线	1.0In
Function Setting 3	Overload action delay	3~18s	12s
Function Setting 4	Short-time delay protection against short-circuit	Shutdown,alarm,trip	Trip
Function Setting 5	Short-time delay protection against short-circuit	Isd=(2~10)*Ir	4Ir
Function Setting 6	Short-circuit short delay time	0.1~1.0s	0.3s
Function Setting 7	Short circuit transient protection	Shutdown,alarm,trip	Trip
Function Setting 8	Short circuit instantaneous threshold	Ii=(2~12)*Ir	10Ir
Function Setting 9	Overvoltage protection function	Shutdown,alarm,trip	Trip
Function Setting 10	Overvoltage protection threshold	253v~286v,step Iv continuously adjustable	280V
Function Setting 11	Undervoltage protection function	Shutdown,alarm,trip	Trip
Function Setting 12	Undervoltage protection threshold	154v~187v,step 1 continuously adjustable	165V
Function Setting 13	Phase loss protection function	Shutdown,alarm,trip	Alarm
Function Setting 14	Phase loss protection threshold	50v~200v,step Iv continuously adjustable	100V
Function Setting 15	Neutral disconnection protection function	Shutdown,alarm,trip	Alarm
Function Setting 16	Power-off protection function	Shutdown,alarm,trip	Alarm

1.1.9.3 Record Search Options

In the setup interface,press the up and down keys to select "Record Query"press the "OK"key to enter,the record query optionincludes two sub-menus:1,trip records,2,the number of trips,as shown in Figure 8.

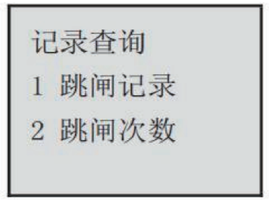


图 8

图 9

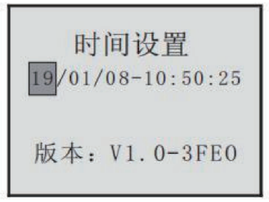


图 10

1.1.9.4 Trip record query,as shown in Figure 9.

A total of 10 trip records are available for querying 1 in 1/10 means the trip records in the current total records Press "Set",'ODelete'appears, press "OK"to delete all trip records.Press "OK"to delete altrip records.Press other keys to exit the deletion interface.

1.1.9.5 Clock settingClock setting is used to manually calibrate the product year,month,day,hour,minute and second,and also can be used to query the product's software version number and software upgrade address code,as shown inFigure 10.

1.1.9.6 Trip Count Inquiry

The trip count includes the following 9 trip count queries as shown in Figure 11 below.

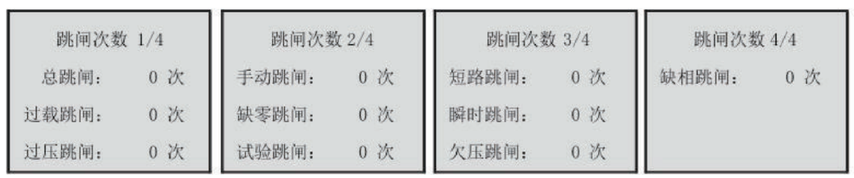


图 11

1.1.10 System Maintenance Options

The System Maintenance option is used to set important parameters of the controller.

1.1.10.1 Communication Setup MenuThe comunicationseting mernu inctudes two options commuricaton rate andcomrunication adress.Comuncation rat seting arge:0.6,1.2,24,4.8,9.6,19.2KbpsDefault is 9.6Kbps.Communcation adressA5-A tot of 6-bt ouble-byte parameter (coresponong to the acktressted in DLT 645 protoco),drudled nto 12+it ata setings,ach setingrange 0-9spechc correspondence trom lettorghi seting order:A5 A4 A3 A2 A1 AD=0000000000101 A5 A4 A3 A2 A1 A0=000000000001

1.1.10.2 Record Clearance Menu

The Record Zero menu is used to reset allfaults,alarms,events and trip counts before the product is tested and shipped out ofthe factory.

Communication Port Description

1.1.The definitio ofthe communication port is shown in Figure 12 and Table 1.

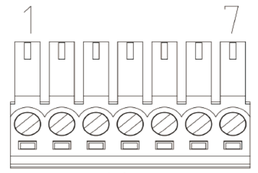


图 12

Pin Configuration	1	2	3	4	5	6	7
Pin Definition	Tap-	Tap+	N	RS-485-B	RS-485-A	DC 12V-	DC 12V+

Table 1 Communication Port Definitions

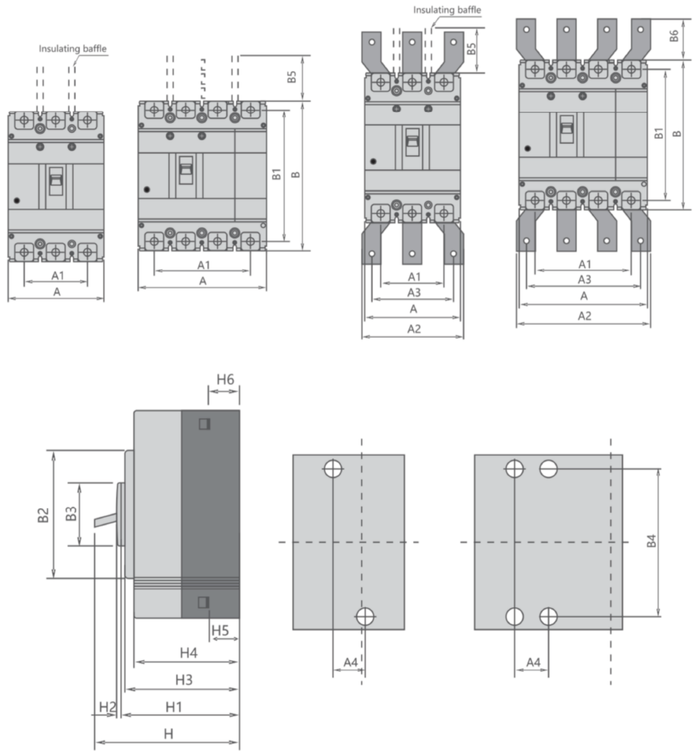
1.1.1 Terminal Remote Tapping7P ports "Tap-"and"Tap+"are connectedto DC12V power supply,and the switch performs the tap operation.

1.1.2 Terminal communication7P port "RS-485-B"and"RS-485-A"can be connected for 485 communication.

1.1.3 External power supply toterminals

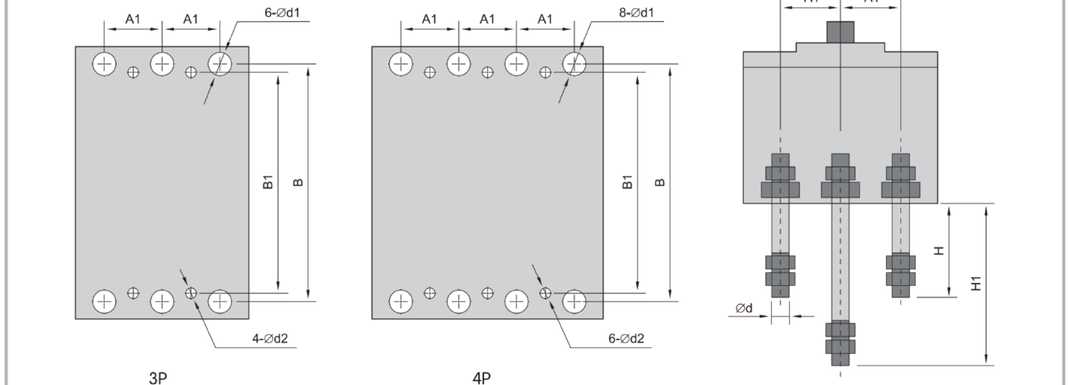
The "DC 12V-"and "DC 12V+°of port 7P can be connected to DC9-15V power supply.

Outline and Installation Dimensions(mm)

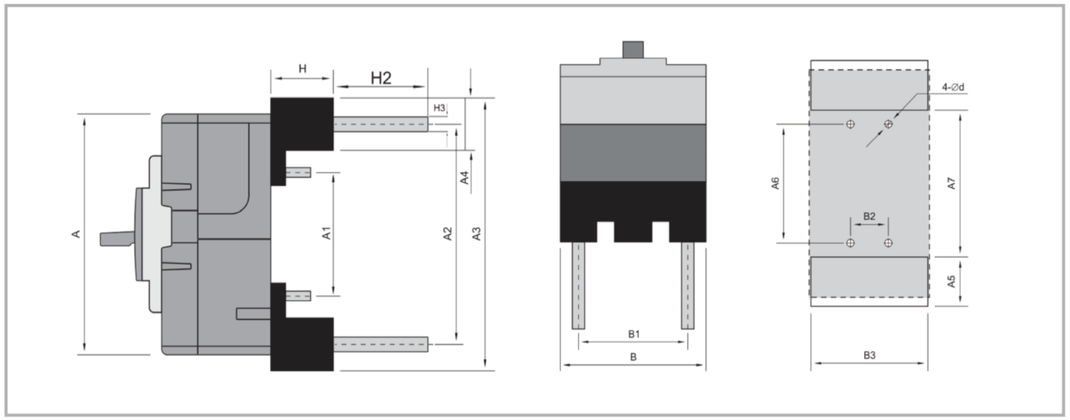


Molded case circuit breaker	Overall dimension																				Installation dimensions		Boit
	A		A1		A2		A3		B	B1	B2	B3	B5	B6	H	H1	H2	H3	H4	H5	H6	A4	B4	
	3P	4P	3P	4P	3P	4P	3P	4P																
CQM6Z-250	105	-	70	-	-	-	-	-	165	144	104	59	110	-	120	99	2	98	84	22.5	24	35	126	M8
CQM6Z-630	140	-	88	-	140	-	112	-	257	230	179	100	110	42	155	111	3	110	97	29	30	44	194	M10

Appearance and instllation dimensions at the rear of the panel

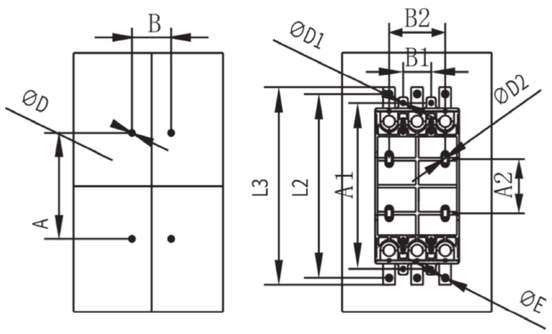


Appearance and installation dimensions of the rear part for the plug-in type(on the panel)

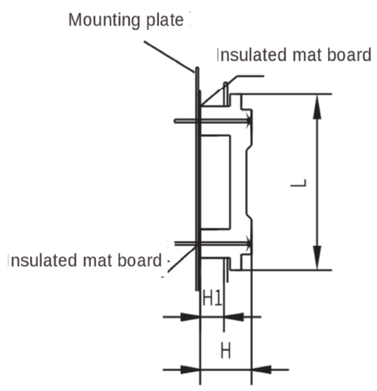


Molded case circuit breaker	B-board rear wiring dimensions								C Front-of-Board Wring Dimensions			C Plug-in wiring size															
	A1	B	B1	H	H1	ϕd	ϕd1	ϕd2	ϕd3	A4	B4	A	A1	A2	A3	A4	A5	A6	A7	H	B	B1	B2	B3	ϕd	H2	H3
125	25	114	111	62	87	6	14	5	5	25	111	130	58	115	132	17.5	20	58	97	28	75	50	50	77	5.5	15	10.5
160	30	134	132	72	112	8	18	5	5	30	132	155	60	134	173	38	40	60	98	50	92	60	60	94	6.5	31	19.5
250	35	144	126	87	126	12	24	5	5	35	126	165	54	144	184	45	47	54	95	50	107	70	70	109	6.5	35	21.5
630	44	230	194	83	136	18	35	7	7	44	194	257	125	225	280	55	57	125	169	60	140	87	60	142	9	32	φ23
800	70	243	243	174	243	26	48	7	7	70	243	275	147	242	42	55	58	147	190	91	218	140	107	222	10.5	31	φ27

Appearance and installation dimensions of the rear part for the plug-in type(on the panel)



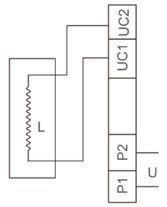
Note: 400A,630A,800A do not need insulating pads.



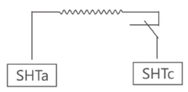
Model Number	A	E	L2	L3	D	E	H	H1	L	A1	B1	D1	A2	B2	D2
160	112	30	200	216	4.5	6.5	56	28	182	172	30	5.5	67	60	6.5
250	150	35	233	245	4.5	8.5	74	33	202	191	35	5.5	74	70	6.5
630	283	70	363	405	6.5	12.5	125	67	341	327	70	6.5	143	140	7
800	283	70	363	405	6.5	12.5	125	67	341	327	70	6.5	143	140	7

The internal accessories of CQM6E series include under-voltage detent,shunt detent,auxiliary alarm detent,its main technical parameters and wiring diagrams are as follows.

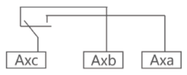
Under-voltage release device



Internal accessories	
Rated voltage of the power supply	Main Performance
AC220,AC240 AC380,AC415	A. When the supply voltage drops to 70%and 35%of the rated voltage, the undervoltage detector shall operate. B. When the electro-hydraulic voltage is lower than 35%of the rated voltage,the undervoltage detractor should not be able to absorb,in order to prevent the circuit breaker from closing. C.When the power supply voltage is equal to or greater than 85% of the rated voltage,the undervoltage detractor will ensure the absorption, and ensure the reliable closing of the circuit breaker.

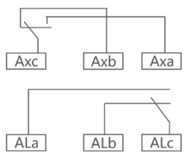


Shunt release device	
Rated supply voltage	Main Performance
DC24,DC110 AC220,AC3B0	The shunt release can operate reliably between 70%and 110%of the rated voltage value.



Auxiliary alarm contact	
Rated voltage of power supply	Main performance
Auxiliary switch AC 125V 5A,AC 250V 3A DC 125V 0.4A,DC 125V 0.2A	Provides differentiated signals for circuit breakers in the "closed" and "open"positions.

Alarm switch AC 125V 5A,AC 250V 3A DC 125V0.4A,DC 125V 0.2A	Provides signals to distinguish between “normal operation” and “fault free release” positions of circuit breakers.

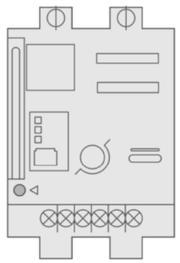


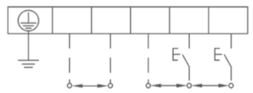
Auxiliary alarm switch AC 125V 5A,AC 250V 3A DC 125V 0.4A,DC125V 0.2A	Provides signals to distinguish between “closed”, “open” and “fault free release” positions of the circuit breaker.

Internal accessory

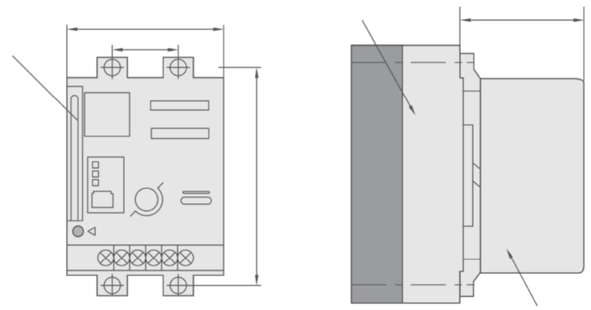
DC3 Electric Operation Mechanism
DC3 series electric operation mechanism is adopted advanced switching power supply technology,utilizing smallpermanent contact motordrive,small working current,suitable for 63-800A plastic case circuit breakers.

Model Number		DC3-125	DC3-160	DC3-250	DC3-630	DC3-800
Compatible Model		CQM6-125	CQM6-160 CQM6RT-160 CQM6RE-160	CQM6RE-250 CQM6-250 CQM6L-250 CQM6RT-250 CQM6Z-250	CQM6-630 CQM6L-630 CQM6RT-630 CQM6RE-630 CQM6Z-630	CQM6-800 CQM6L-800 CQM6RT-800 CQM6RE-800 CQM6L-1250 CQM6RE-1250
Overall Dimensions	A	25	30	35	44	70
	B	117	132	126	194	243
	C	73	90	90	130	130
	H	98	98(89.5)	102(92)	152	153
Rated voltated V		AC-110-240, DC100-220,DC24				AC 230,DC 220 AC 100,DC 110
Starting current A		≤0.5				≤2
Mechanical life(times)		14000			10000	5000
Power(W)		14				35



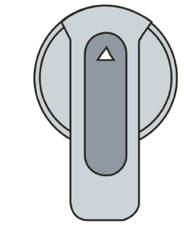


1. Manual operation:Counterclockwse operation is prohibited.
2. When operating manually,insert the handle at the starting point and turn it 180° in a clockwise direction.

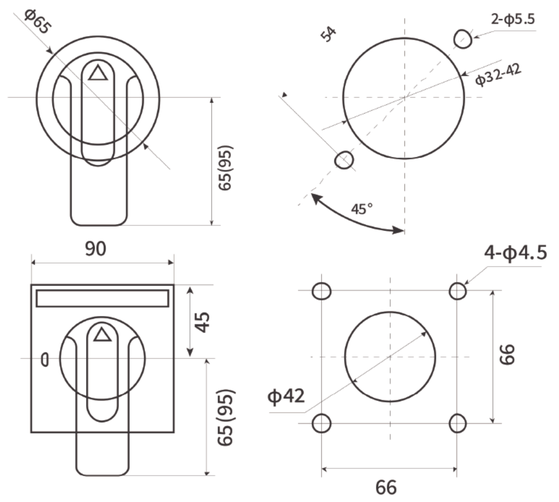


Manual operating mechanism

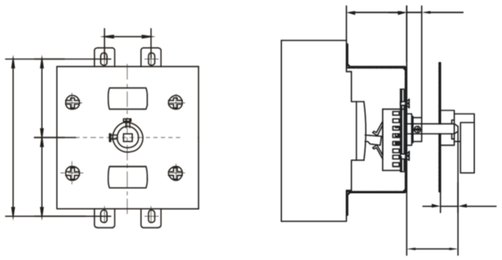
Shape of the circular handle and the door panel opening size (the distance from the center of the opening to the hinge should not be less than 200mm)



中心式转轴开孔示意图



Outline and Installation Schematic Diagram of the Central Series Manual Operation Mechanism



Hand-operated mechanism model	A	B	C	D	H
160	30	132	66	66	46
250	35	126	63	63	51
630	128	194	97	97	76
800	198	243	121.5	121.5	76
1250	198	243	121.5	121.5	76

CQC6 Series

AC contactor

Key Specifications & Applications

- For 50Hz systems up to 690V, 95A rated current (AC-3, 380V).
- Remote circuit switching for resistive, inductive, and capacitive loads.
- It can be combined with thermal relays to form electromagnetic starters, providing reliable protection for circuits susceptible to overloads.
- Its primary function is to make and break circuits remotely, and it is suitable for resistive, inductive, and capacitive loads.

Main Technical Features:

- Compact size, light weight, low power consumption, and long service life
- Easily expanded with auxiliary contacts, timers, or combined with thermal relays.
- Supports both screw and standard DIN rail mounting (Models 06-38: 35mm; Models 40-95: 35/75mm).
- Unibody cover for easy maintenance

Standard Operating and Installation Conditions:

- Ambient Temperature: -5°C to +40°C (Range: -35°C to +70°C)
- Altitude: ≤2000m
- Protection Rating: IP20
- Pollution Degree: 3
- Installation Category: III

Type designation

CQ C 6 - □□ □□

- Contact Code
  10: 3NO Main + 1NO Aux. (≤38A)
  01: 3NO Main + 1NC Aux. (≤38A)
  11: 3NO Main + 1NO+1NC Aux. (≥40A)
- Basic Spec Code: Rated current at 380V AC-3
- Design Series Number
- Product Code
- Company code

F5 - □□

- Timing Range Codes
  0: 0.1–3 sec
  2: 0.1–30 sec
  4: 10–180 sec
- T: On-delay
  D: Off-delay
- Delay Type Codes

F4 - □□

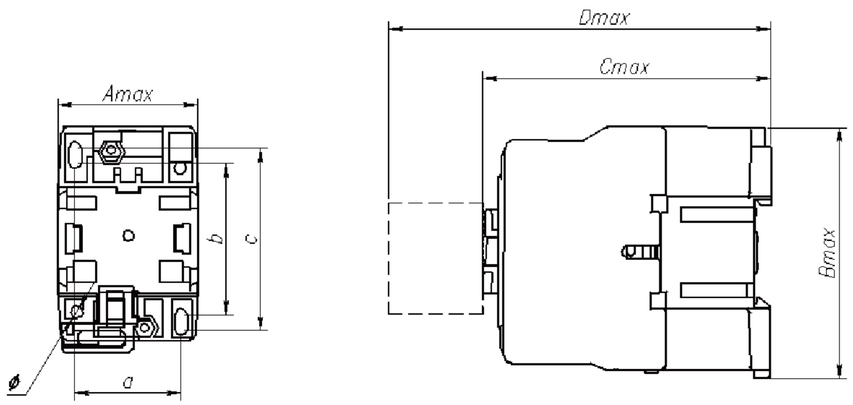
- Number of NC Auxiliary Contacts
- Number of NO Auxiliary Contacts
- Auxiliary Contact Assembly

Technical Specifications

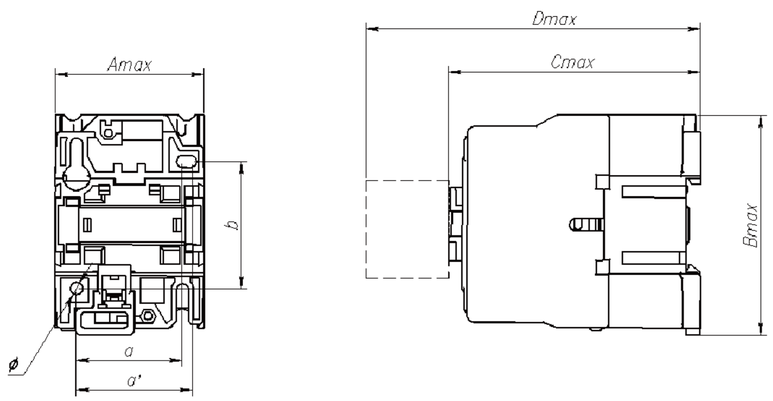
Model number		CQC6 -06	CQC6 -09	CQC6 -12	CQC6 -18	CQC6 -25	CQC6 -32	CQC6 -38	CQC6 -40	CQC6 -50	CQC6 -65	CQC6 -80	CQC6 -95
Rated insulation voltage (Ui)		690V											
Rated impulse withstand voltage (Uimp)		8kV											
Rated frequency		50Hz,50/60Hz											
Number of poles (P)		3											
Rated Operational Current (A) - AC-3	220V/230V	6	9	12	18	25	32	38	40	50	65	80	95
	380V/400V	6	9	12	18	25	32	38	40	50	65	80	95
	660V/690V	4.8	6.6	8.9	12	18	20.2	20.2	34	39	42	49	49
Conventional Free-Air Thermal Current (A) (AC-1, θ ≤ 60°C)		20	25	25	32	40	50	50	60	80	80	110	110
Short-Time Withstand Current (A)	10s	80	105	105	145	145	260	310	320	400	520	640	800
	1min	45	61	61	84	84	138	150	165	208	260	320	400
	10min	20	30	30	40	40	60	60	72	84	110	135	135
Controlled 3-Phase Squirrel Cage Motor Power (kW) - AC-3	220V/230V	1.5	2	3.5	4	6	7.5	9	11	15	18.5	22	25
	380V/400V	2.2	4	5.5	7.5	11	15	18.5	18.5	22	30	37	45
	660V/690V	3	5.5	7.5	10	15	18.5	18.5	30	33	37	45	45
Short-circuit protection by gG fuses (U ≤ 690V) for Type 2 coordination, without integral thermal overload relay		20	25	25	32	40	50	50	60	80	80	110	110
Electrical Endurance (10^4 operations)		120					100					80	
Rated Making Capacity (AC-3)		10 × Ie, in accordance with IEC 60947-4-1 and GB/T 14048.4.											
Rated Breaking Capacity (AC-3)		8 × Ie, in accordance with IEC 60947-4-1 and GB/T 14048.4.											
Characteristics of AC controlcircuits													
Operating Frequency (operations/h)		1200					600						
Mechanical Life (10^4 operations, 3600 ops/h)		1200			1000			800			600		
AC Coil Power (50/60Hz)	Pick-up (VA)	70			110			200			200		
	Sealed (VA)	8			11			20			20		
Operate Time (ms)	Close	12-22			12-22			20-35			20-35		
	Open	4-19			4-19			6-15			6-15		
Operate Voltage Range (50/60Hz)		Pick-up Voltage: 80%Us ~ 110%Us; Drop-out Voltage: 20%Us ~ 75%Us											
Rated Control Supply Voltage Us		AC 24/36/48/110/220/230/380/400/415/440V, 50/60Hz											
Applicable accessories	Auxiliary contact block	●	●	●	●	●	●	●	●	●	●	●	●
	Coil surge absorber	●	●	●	●	●	●	●	●	●	●	●	●
	Main circuit conductor	●	●	●	●	●	●	●	●	●	●	●	●
	Mechanical interlock	●	●	●	●	●	●	●	●	●	●	●	●
	Mechano-electrical interlock	●	●	●	●	●	●	●	●	●	●	●	●
DIN rail mounting		●	●	●	●	●	●	●	●	●	●	●	●
Certifications obtained		CCC CE CB											

Dimensions（mm）

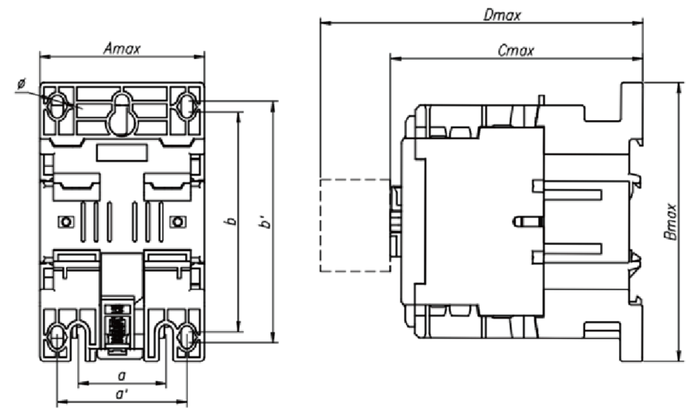
CQC6-06~25



CQC6-32~38



CQC6-40~95



Model number	Amax	Bmax	Cmax	Dmax	a/a¹	b	c	Φ
CQC6-06~25	46	76	83	117	35	50	60	Φ4.5
CQC6-32~38	57	85	96	130	40/43	48	/	Φ4.5
CQC6-40~65	76	128	115	149	40/59	100	110	Φ5.5
CQC6-80~95	85	128	124	158	40/67	100	110	Φ5.5