ZQM3T
Plastic housing circuit breaker

List of electrical characteristics

			ZQM3T M1			ZQM3T M2				ZQM3T M3	
Rated uninterrupted current Iu		[A]	160			160				250	
Number of poles		[No.]	3/4			3/4				3/4	
Rated operating voltage Ue	(AC) 50-60 Hz	[V]	690			690				690	
	(DC)	[V]	500			500				500	
Rated impulse withstand voltage Uimp		[kV]	8			8				8	
Rated isolation voltage Ui		[V]	800			800				800	
Power frequency test voltage for 1 minute		[V]	3000			3000				3000	
Rated limit short circuit breaking capacity Icu			B	C	N	N	S	H	L	N	S
(AC) 50-60 Hz 220/230 V		[kA]	25	40	50	65	85	100	120	50	85
(AC) 50-60 Hz 380/400/415 V		[kA]	16	25	36	36	50	70	85	36	50
(AC) 50-60 Hz 440 V		[kA]	10	15	22	30	45	55	75	25	40
(AC) 50-60 Hz 500 V		[kA]	8	10	15	25	30	36	50	20	30
(AC) 50-60 Hz 690 V		[kA]	3	4	6	6	7	8	10	5	8
(DC) 250 V - 2 poles in series		[kA]	16	25	36	36	50	70	85	36	50
(DC) 250 V - 3 poles in series		[kA]	20	30	40	40	55	85	100	40	55
(DC) 500 V - 2 poles in series		[kA]	-	-	-	-	-	-	-	-	-
(DC) 500 V - 3 poles in series		[kA]	16	25	36	36	50	70	85	36	50
(DC) 750 V - 3 poles in series		[kA]	-	-	-	-	-	-	-	-	-
Rated operating short circuit breaking capacity Ics											
(AC) 50-60 Hz 220/230 V		[%Icu]	100%	75%	75%	100%	100%	100%	75%	75%	50%
(AC) 50-60 Hz380/400/415V		[%Icu]	100%	100%	75%	100%	100%	100%	75%	75%	50%
(AC) 50-60 Hz 440 V		[%Icu]	100%	75%	50%	100%	100%	100%	75%	75%	50%
(AC) 50-60 Hz 500 V		[%Icu]	100%	75%	50%	100%	100%	100%	75%	75%	50%
(AC) 50-60 Hz 690 V		[%Icu]	100%	75%	50%	100%	100%	100%	75%	75%	50%
Rated short-circuit connection capacity Icm											
(AC) 50-60 Hz 220/230 V		[kA]	52.5	84	105	143	187	220	264	105	187
(AC) 50-60 Hz 380/400/415 V		[kA]	32	52.5	75.6	75.6	105	154	187	75.6	105
(AC) 50-60 Hz 440 V		[kA]	17	30	46.2	63	94.5	121	165	52.5	84
(AC) 50-60 Hz 500 V		[kA]	13.6	17	30	52.5	63	75.6	105	40	63
(AC) 50-60 Hz 690 V		[kA]	4.3	5.9	9.2	9.2	11.9	13.6	17	7.7	13.6
Opening time (415 V)		[ms]	7	6	5	3	3	3	3	7	6
Usage category (IEC 60947-2)			A			A				A	
Reference standards			IEC 60947-2			IEC 60947-2				IEC 60947-2	

◇ When In=16A and In=20A, the breaking capacity is set to 16kA.

1) 75% is applicable to M5 630.
2) 50% is suitable for M5 630.
3) Icw = 5 kA
4) Icw = 7.6 kA (630A)-10kA (800A)
5) Only applicable to M7 800/1000/1250A.
6) Icw = 20 kA (S、H、L)-15kA (V)

Note: at 40°C , the maximum set values of M2 and M3 plug-in and M5 630 pull-out need to be reduced by 10%.

List of electrical characteristics

ZQM3T M4					ZQM3T M5					ZQM3T M6				ZQM3T M7			
250					400/630					630/800				800/1000/1250/1600			
3/4					3/4					3/4				3/4			
690					690					690				690			
750					750					750				-			
8					8					8				8			
1000					1000					1000				1000			
3500					3500					3500				3500			
N	s	H	L	V	N	S	H	L	V	N	S	H	L	s	H	L	V
70	85	100	200	200	70	85	100	200	200	70	85	100	200	85	100	200	200
36	50	70	120	200	36	50	70	120	200	36	50	70	100	50	70	120	150
30	40	65	100	180	30	40	65	100	180	30	45	50	80	50	65	100	130
25	30	50	85	150	25	30	50	85	150	25	35	50	65	40	50	85	100
20	25	40	70	80	20	25	40	70	80	20	22	25	30	30	42	50	60
36	50	70	100	150	36	50	70	100	150	36	50	70	100	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	36	50	70	100	25	36	50	70	100	20	35	50	65	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	25	36	50	70	16	25	36	50	70	16	20	36	50	-	-	-	-
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	75%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	75%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	75%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%	100%	100%	100%[1]	100%[2]	100%	100%	100%	75%	100%	100%	75%	100%
100%	100%	100%	100%	100%	100%	100%	100%[1]	100%[2]	100%[3]	75%	75%	75%	75%	100%	75%	75%	75%
154	187	220	440	660	154	187	220	440	660	154	187	220	440	187	220	440	440
75.6	105	154	264	440	75.6	105	154	264	440	75.6	105	154	220	105	154	2G4	330
63	84	143	220	396	63	84	143	220	396	63	94.5	105	176	105	143	220	286
52.5	63	105	187	330	52.5	63	105	187	330	52.5	73.5	105	143	84	105	187	220
40	52.5	84	154	176	40	52.5	84	154	176	40	46	52.5	63	63	88.2	105	132
5	5	5	5	5	6	6	6	6	6	10	9	8	7	15	10	8	9
A					B (400 A)[3] - A (630 A)					B (630 A - 800 A)[4] - A (1000 A)				B[6]			
IEC 60947-2					IEC 60947-2					IEC 60947-2				IEC 60947-2			

ZQM3T
Plastic housing circuit breaker

List of electrical characteristics

				ZQM3T M1	ZQM3T M2	ZQM3T M3
Isolation function				■	■	■
Release:						
Thermomagnetic type	TMF	T iadjustable,M inot adjustable.		-	-	-
	TMD	T is adjustable, M is not.		■	■	■
	TMA	T adjustable, M adjustable (5...10 x In)		-	-	-
	TMG	T adjustable, M not adjustable (3 x In)		-	■ [2]	■
	TMG	T adjustable, M adjustable (2.5...5 x In)		-	_	-
Single magnetic type	MA			-	■ (MF up to In12.5A)	■
Electronic type	ZQPR221DS			-	-	-
	ZQPR221GP			-	-	-
	ZQPR222DS			-	-	-
	ZQPR223DS			-	-	-
	ZQPR231/P			-	-	-
	ZQPR232/P			-	-	-
	ZQPR331/P			-	-	-
	ZQPR332/P			-	-	-
Connection terminal type	Stationary type			E·S·C	E·F	E·F
	Plug-in			-	EF·VR	EF·VR
Nechanical life			[Number of operation cycles]	25000	25000	25000
			[number of operation cycles per hour]	240	240	240
Electrical life (415 V AC)			[Number of operation cycles]	8000	8000	8000
			[number of operation cycles per hour]	120	120	120
Basic size	Stationary type	3 pole	W/L [mm]	76	90	105
		4 pole	W/L [mm]	102	120	140
			D [mm]	70	70	70
			H [mm]	130	130	150
Weight	Stationary type	3/4 pole	[kg]	0.9/1.2	1.1/1.5	1.5/2
	Plug-in	3/4 pole	[kg]	-	1.5/1.9	2.7/3.7
	Drawout type	3/4 pole	[kg]	-	-	-

Description of terminal
F = Front terminal
E = Lengthening the front terminal
S = Deploy front terminal
F = Stationary
P = Plug-in type

List of electrical characteristics

ZQM3T M4	ZQM3T M5	ZQM3T M6	ZQM3T M7
■	■	■	■
-	-	-	-
■ (up to50A)	-	-	-
■ (up to 250A)	■ (up to 500A)	■ (up to 800A)[1]	-
-	-	-	-
-	■ (up to 500A)	-	-
■	-	-	-
■	■	■	-
-	-	-	-
■	■	■	-
■	■	■	-
-	-	-	■
-	-	-	■
-	-	-	■
-	-	-	■
E·F	E·F	E·F	E·F
EF·VR	EF·VR	-	-
20000	20000	20000	10000
240	120	120	60
8000	7000 (400 A) - 5000 (630 A)	7000 (630 A) - 5000 (800 A) - 4000 (1000 A)	2000(S,H,L) / 3000(V)
120	60	60	60
105	140	210	210
140	186	280	280
103.5	103.5	103.5	154 (manual))/178 (electric)
205	205	268	268
2.35/3.05	3.25/4.15	9.5/12	9.7/12.5 (Manual) -11/14 (Electric)
3.6/4.65	5.15/6.65	-	-
3.85/4.9	5.4/6.9	12.1/15.1	29.7/39.6 (manual) -32/42.6 (electric)

C = Copper cable front terminal

Application scope of circuit breaker in AC and DC systems

	Release	Scope [A]
	AC	
M1 160	TMD	16...160
M2 160	TMD	1.6...160
	TMG	16...160
	MF/MA	1...100
	ZQPR221DS	10...160
	ZQPR221GP	63...160
	ZQPR221MP	40...100
M3 250	TMG	63...250
	TMD	63...250
	MA	100...200
M4 250	TMD	20...50
	TMA	80...250
	MA	10...200
	ZQPR221DS	100...250
	ZQPR222DS/P-ZQPR222DS/PD	100...250
	ZQPR223DS	160...250
M5 400/630	TMG	320...500
	TMA	320...500
	ZQPR221DS	320...630
	ZQPR222DS/P-ZQPR222DS/PD	320...630
	ZQPR223DS	320...630
M6 630/800	TMA	630...800
	ZQPR221DS	630...800
	ZQPR222DS/P-ZQPR222DS/PD	630...800
	ZQPR223DS	630...800
M7 800/1000/ 1250/1600	ZQPR231/P.ZQPR232/P	400...1600
	ZQPR331/P.ZQPR232/P	400...1600
	DC	
M1 160	TMD	16...160
M2 160	TMD	1.6...160
	MF/MA	1...100
M3 250	TMD/TMG	63...250
	MA	100...200
M4 250	TMD	20...50
	TMA	80...250
	MA	10...200
M5 400/630	TMA/TMG	320...500
M6 630/800	TMA	630...800

◇ MF = Single magnetic release with non-adjustable magnetic threshold.
◇ MA = Single magnetic release with adjustable magnetic threshold.
◇ TMF = Thermomagnetic release with non-adjustable thermomagnetic threshold.
◇ TMD = Thermomagnetic release with adjustable thermomagnetic threshold and non-adjustable thermomagnetic threshold.
◇ TMA = Thermomagnetic release with adjustable thermomagnetic threshold.
◇ TMG = generator protection type thermo-magnetic release
◇ ZQPR22_, ZQPR23_, ZQPR33 = electronic release.

MA								ZQPR221DS-ZQPR222DS/P-ZQPR222DS/PD-ZQPR223DS[2]							ZQPR231/P[3]-ZQPR232/P-ZQPR331/P-ZQPR332/P					
10	25	52	80	100	125	160	200	100	160	250	320	400	630	800	400	630	800	1000	1250	1600
■	■	■	■	■	■	■		■	■	■	■	■								
											▲	▲	■							
													■							
														■						

MA	ZQPR221DS-ZQPR222DS/P-ZQPR222DS/PD-ZQPR223DS[4]	ZQPR231/P[3]-ZQPR232/P-ZQPR331/P-ZQPR332/P
▲	▲	▲
▲	▲	▲
▲	▲	▲
▲	▲	▲

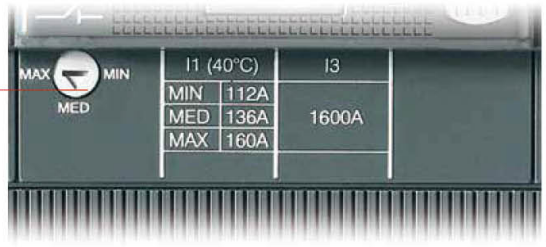
◇ ZQPR223DS minimum In=160A.

Thermomagnetic release

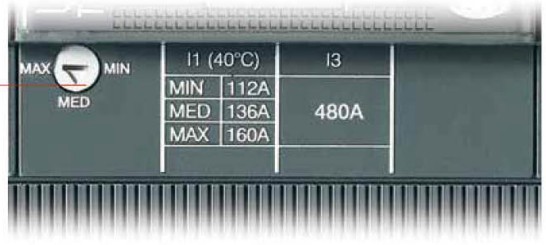
◇ M1, M2, M3, M4, M5 and M6 circuit breakers can be equipped with thermal magnetic release, and can be used to protect AC and DC power grids, with a range of 1.6 to 800 A. They can realize overload protection through a thermal release device using bimetallic sheet, and can also realize short-circuit protection through a magnetic release device.
◇ The 4-pole circuit breaker is provided with neutral line protection by the release. When the phase current is below 100A, the neutral line protection is set to 100% of the phase current. For circuit breakers with higher phase current, the current of the neutral line is set to 50% of the phase current.
◇ In addition, the TMG thermal magnetic release of M2, M3 and M5 has a low magnetic release threshold, which can be used for long cable and generator protection. M2 and M3 are equipped with adjustable thermal release (I1=0.7... 1 × In) and non-adjustable magnetic tripping (I3=3 × In) Thermomagnetic release, T5 with adjustable thermal release (I1=0.7... 1 × In) and adjustable magnetic trip (I3=2.5... 5 × In).

Thermomagnetic release TMD and TMG (applicable to M1, M2 and M3)

Thermal tripping threshold
Can range from 0.7 to 1×In140R1.



Thermal tripping threshold
Can range from 0.7 to 1×In



◇ TMD =with adjustable thermal trip threshold (I1=0.7... 1 × In) and non-adjustable magnetic trip threshold (I3=10 × In) thermal magnetic release
◇ TMG (for M3)=with adjustable thermal trip threshold (I1=0.7... 1 × In) and non-adjustable magnetic trip threshold (I3=3 × In) Thermomagnetic release for generator protection

ZQM3T
Plastic housing circuit breaker

Overview of features

◇ M2, M4, M5, M6 and M7 used in the AC system can be equipped with electronic releases based on micro-processing electronic technology. They can realize reliable protection, accurate release, and are not affected by temperature and electromagnetic elements, and comply with relevant standards.
◇ The power supply required for the normal operation of the release can be directly provided by the current sensor. Even under the single-phase load condition and the minimum set value, the normal release of the release can be guaranteed.

Characteristics of electronic release

Working temperature	-25℃ ...+70℃
Relative humidity	98%
Self-powered	0.2xIn (single phase)
Auxiliary power supply (on demand)	24VDC
Working frequency	45...66Hz
Electromagnetic compatibility (LF and HF)	IEC60947-2

◆ M2, M4, M5 and M6 protection tripping units are composed of the following parts:
◇ 3 or 4 current sensors
◇ Required external current sensor (such as external neutral line transformer)
◇ Tripping unit
◇ Tripping coil (M2: installed in the right slot; M4, M5 and M6: integrated with the electronic tripping unit)

◆ The M7 protection tripping unit consists of the following parts:
◇ 3 or 4 current sensors
◇ Required external current sensor
◇ Rated plug-in
◇ Tripping unit
◇ Tripping coil

额定插件

Circuit breaker	Rated current	In [A]					
		400	630	800	1000	1250	1600
M7	800	■	■	■			
	1000	■	■	■	■		
	1250	■	■	■	■	■	
	1600	■	■	■	■	■	■

◇ When the protection is tripped, the circuit breaker is opened through the opening coil, and the release is displayed by the change of a transfer contact (AUX-SA, orderable).

Current transformer

	In [A]	10	25	63	100	160	250	320	400	630	800	1000	1250	1600
ZQPR221DS	T2	■	■	■	■	■								
	T4				■	■	■	■						
	T5							■		■				
	T6									■	■			
ZQPR222DS/P , ZQPR222DS/PD	T4				■	■	■	■						
	T5							■		■				
	T6									■	■			
ZQPR231/P , ZQPR232/P , ZQPR331/P , ZQPR332/P	T7								■	■	■	■	■	■

◇ For ZQPR223DS, the minimum rated current is In=160A.

ZQPR221DS

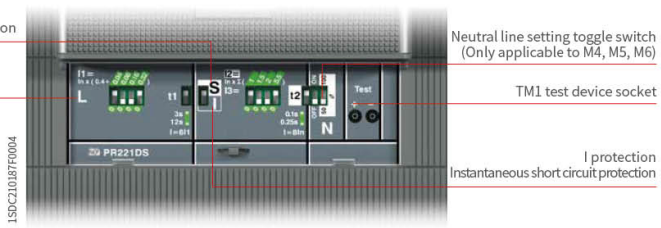
◇ ZQPR221DS can be used with M2, M4, M5 and M6 circuit breakers to provide three-stage protection (overload long delay+short circuit short delay+short circuit instantaneous, S mode) and two-stage protection (overload long delay+short circuit instantaneous, I mode). Similarly, release ZQPR221DS-I with only instantaneous short circuit I protection can also be selected

◇ When the M2, M4, M5 and M6 electronic release ZQPR221DS-LS/I short circuit protection is set to S mode, the instantaneous protection threshold of the circuit breaker is shown in the following table

Model	Short circuit protection threshold (A)
M2	160A*12
M4	320A*12
M5 400	400A*12
M5 630	630A*10
M6 800	800A*10

◇ The current and protection of the neutral line can be adjusted separately. For M2 (In=100A) circuit breaker, the user can select 50% or 100% of the phase current for the neutral line protection threshold; For M4, M5 and M6, the protection function can be turned off or set to 50% or 100% of the phase current directly through the toggle switch on the front panel of the circuit breaker.

ZQPR221DS-LS/I



ZQPR221DS-protection functions and parameters

Protection function[1]		Trip threshold	Trip curve[1]	Can be closed	t=f(I)
L Cannot be closed	Overload protection tripping characteristic: inverse time long delay (I2t=constant) (IEC 60947-2)	I1 = 0.40 - 1×In (Step = 0.04×In) Trip at 1.1...1.3×I1 (M4,M5,M6) Trip at 1.05...1.3×I1 (M2).	At 6×I1 T1 = 3-6s (only for M2)-12S (only for M4,M5,M6) Allowable deviation: ± 10% to 6×In (M4,M5,M6)、± 10% to 2×In (M2)、± 20% 6×In Above In (M4,M5,M6)、± 20% 2×In Above In (M2)	-	t = k / I2
S Can be closed	Inverse-time short time delay and tripping curve of delayed short circuit protection (I2t=constant) (S protection mode)	I2 = 1 - 1.5 - 2 - 2.5 - 3 - 3.5 - 4.5 - 5.5 - 6.5 - 7 - 7.5 - 8 - 8.5 - 9 - 10×In Allowable deviation: ± 10% (M4, M5, M6)、± 10% to 2 × In (M2)、± 20% 2 × In above (M2)	At 8 x In t2 = 0.1 - 0.25s Allowable deviation: ± 10% to 6×In (M4,M5,M6)、± 20% 6×In Above In (M4,M5,M6)、± 20% (M2)	■	t = k / I2
I Can be closed	Instantaneous short circuit protection (I protection mode)	I3 = 1 - 1.5 - 2 - 2.5 - 3 - 3.5 - 4.5 - 5.5 - 6.5 - 7 - 7.5 - 8 - 8.5 - 9 - 10×In Allowable deviation: 10% (M4,M5, M6)、± 20% (M2)	instant	■	t = k

◆ These allowable deviations are suitable for the following conditions:

◇ Release self-powered or auxiliary power supply
◇ 2 or 3 phase power supply

◆ In addition to those considered tolerances, the following deviations should also be considered:

	Trip threshold	Tripping time
S	± 20%	± 20%
I	± 20%	⩽ 40ms

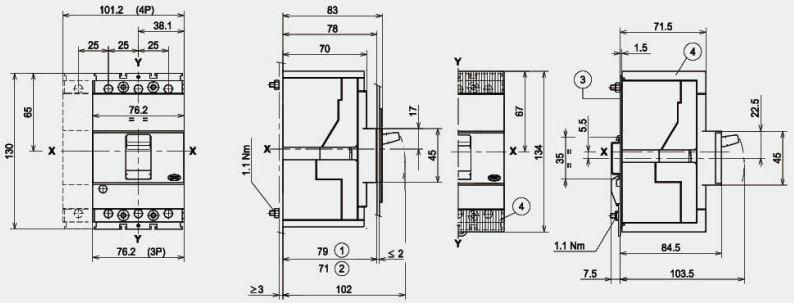
Overall dimension (mm)

ZQM3TxM1- stationary

Fixed circuit breaker

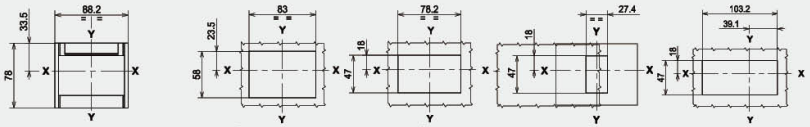
Mounted on steel plate

Mounted on the guide rail



Chamber door flange

Chamber door drilling drawing



With flange and circuit breaker flush with the chamber door (3-4 poles)

Without flange and circuit breaker flush with compartment door (3-4 poles) or extended (3 poles)

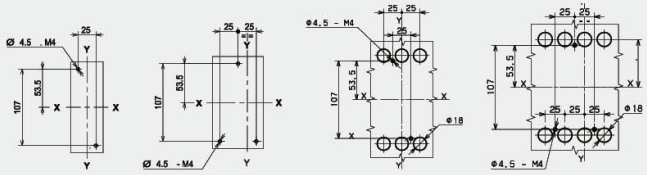
Monopole

Without flange and circuit breaker extension (4 poles)

Drilling drawing of support steel plate

Front terminal block-F

Rear terminal block-R



3-pole

4-pole

3-pole

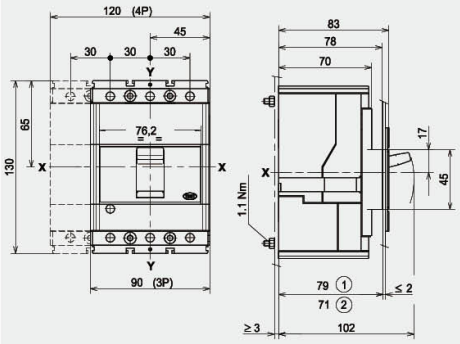
4-pole

Overall dimension (mm)

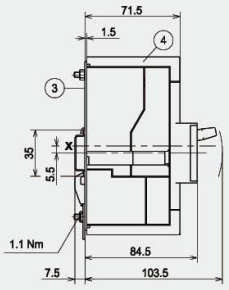
ZQM3TxM2-stationary

Fixed circuit breaker

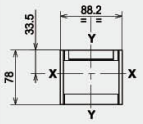
Mounted on steel plate



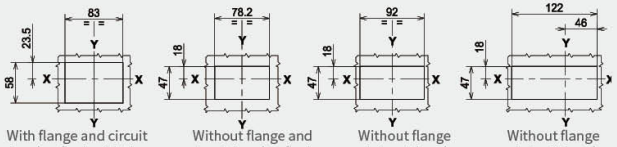
Mounted on the guide rail



Chamber door flange



Chamber door drilling drawing



With flange and circuit breaker flush with the chamber door (3-4 poles)

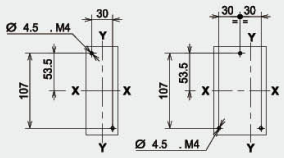
Without flange and circuit breaker flush with compartment door (3-4 poles)

Without flange and circuit breaker extension (3 poles)

Without flange and circuit breaker extension (4 poles)

Drilling drawing of support steel plate

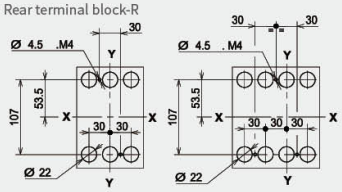
Front terminal block-F



3-pole

4-pole

Rear terminal block-R



3-pole

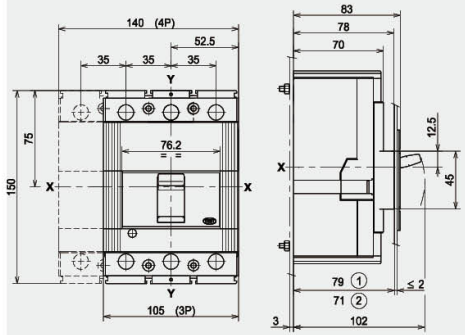
4-pole

Overall dimension (mm)

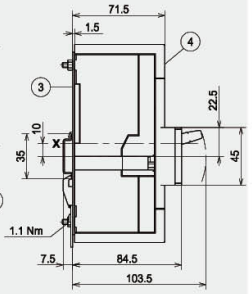
ZQM3TxM3-stationary

Fixed circuit breaker

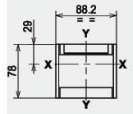
Mounted on steel plate



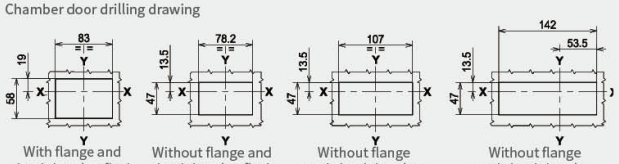
Mounted on the guide rail



Chamber door flange



Chamber door drilling drawing



With flange and circuit breaker flush with the chamber door (3-4 poles)

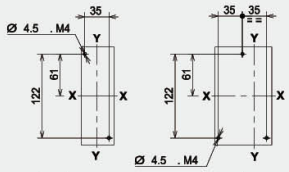
Without flange and circuit breaker flush with compartment door (3-4 poles)

Without flange and circuit breaker extension (3 poles)

Without flange and circuit breaker extension (4 poles)

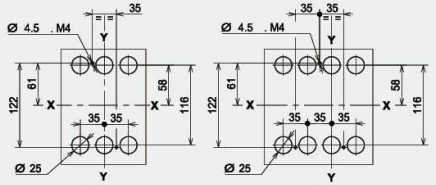
Drilling drawing of support steel plate

Front terminal block-F



3-pole 4-pole

Rear terminal block-R



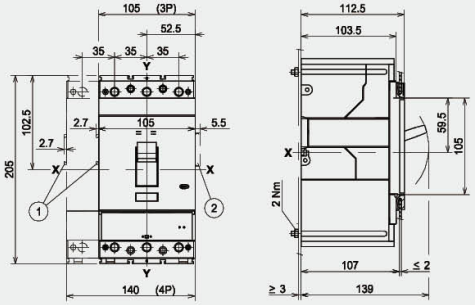
3-pole 4-pole

Overall dimension (mm)

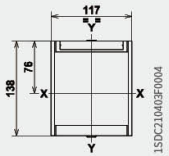
ZQM3TxM4-stationary

Fixed circuit breaker

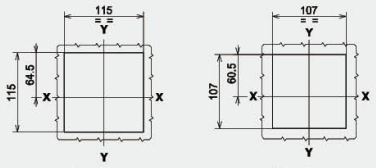
Mounted on steel plate



Chamber door flange



Chamber door drilling drawing

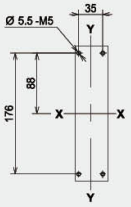


3-4 poles
(with flange)

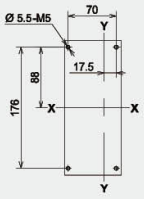
3-4 poles
(without flange)

Drilling drawing of support steel plate

Front terminal block-F

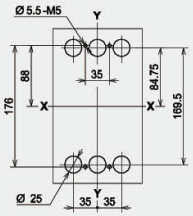


3-pole

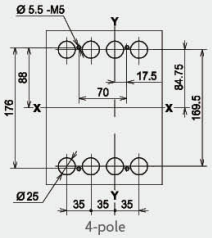


4-pole

Rear terminal block-R



3-pole



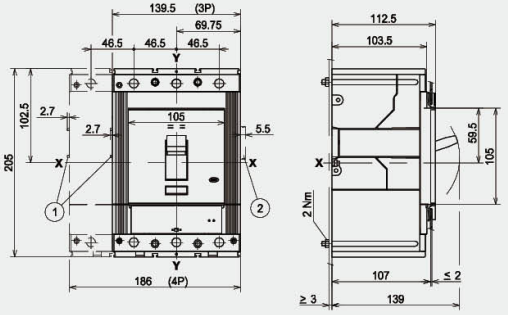
4-pole

Overall dimension (mm)

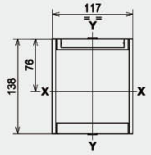
ZQM3TxM5-stationary

Fixed circuit breaker

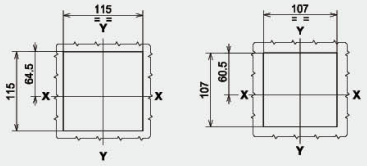
Mounted on steel plate



Chamber door flange



Chamber door drilling drawing



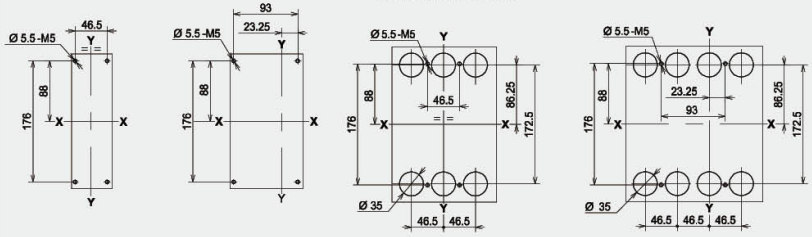
3-4 poles (with flange)

3-4 poles (without flange)

Drilling drawing of support steel plate

Front terminal block-F

Rear terminal block-R



3-pole

4-pole

3-pole

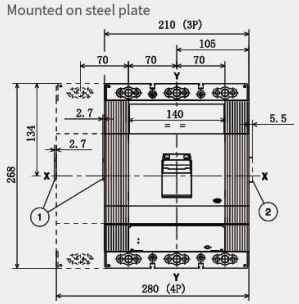
4-pole

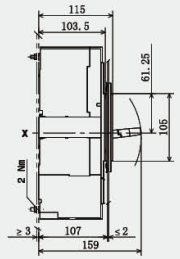
Overall dimension (mm)

ZQM3TxM6-stationary

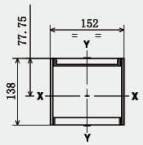
Fixed circuit breaker

Mounted on steel plate

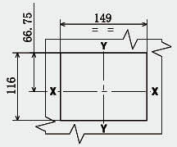


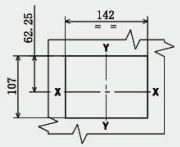


Chamber door flange



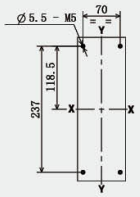
Chamber door drilling drawing



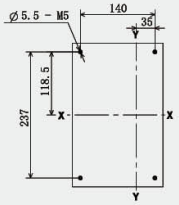


Drilling drawing of support steel plate

Front terminal block F, EF, ES, FC Cu, FC CuAl



3-pole



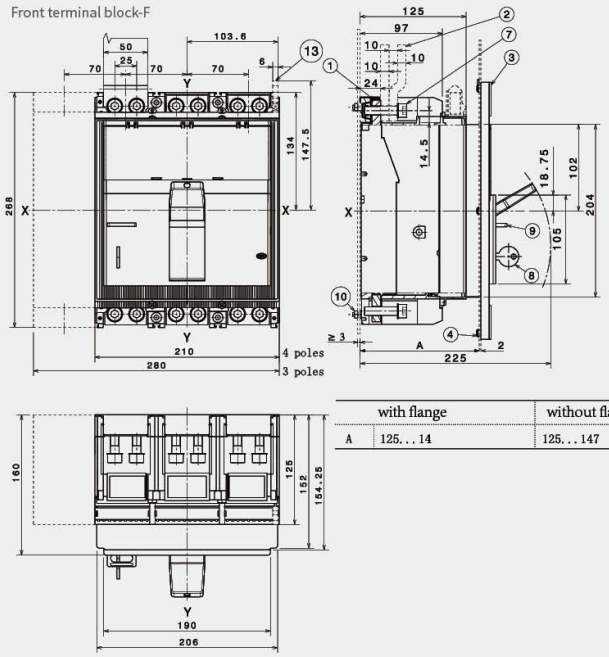
4-pole

Overall dimension (mm)

ZQM3TxM7-stationary

Fixed circuit breaker

Front terminal block-F



	with flange	without flange
A	125. . . 14	125. . . 147

Note:

① Front terminal block
② Busbar
(3) chamber door flange
④ Flange fixing screw
⑤ Drilling drawing of support steel plate
⑥ Torque: 18Nm
⑦ Key lock
⑧ Padlock (optional)
⑨ Torque: 2.5Nm
⑩ Chamber door drilling drawing (with flange)
⑪ Chamber door drilling drawing (without flange) 206x204
⑫ Terminal
⑬ Reduced chamber door flange
⑭ Chamber door drilling drawing (with reduced flange)
⑮ Chamber door drilling drawing (without rotary handle) 190x105

Terminal block

◇ The standard configuration terminal of molded case circuit breaker is as follows: M1 is the front terminal of copper cable (FC Cu); M2, M3, M4, M5 and M6 are front terminals (F)
◇ Users can choose different types of terminals according to their needs, and can make different combinations (one type for the upper terminal and one type for the lower terminal).
◇ In the product manual, the connection information of various terminal blocks is listed in detail, such as the torque value of the connecting bolts of the cable or busbar, and the maximum or minimum interface size of the bare conductor connecting cable
◇ Please read the product manual carefully and follow the torque requirements; In addition, all extended front terminal blocks (E) and extended front terminal blocks (F) are equipped with interphase partitions as standard. Pay attention to the product insulation requirements when using, and correctly use interphase partitions according to the product instructions

Extend front wiring terminal [1][2][3]-E

	6 pieces	8 pieces
	model	model
M1 extension front terminal E	E6/M1	E8/M1
M2 extension front terminal E	E6/M2	E8/M2
M3 extension front terminal E	E6/M3	E8/M3
M4 extension front terminal E	E6/M4	E8/M4
M5 extension front terminal E	E6/M5	E8/M5
M6 630 extension front terminal E	E6/M6 630	E8/M6 630
M6 800 extension front terminal E	E6/M6 800	E8/M6 800
M7-M7M extension front terminal E	E6/M7	E8/M7

Extended front terminal block*[1][4][5]-F

M2 extended front terminal F	F6/M2	F8/M2
M3 extended front terminal F	F6/M3	F8/M3
M4 extended front terminal F	F6/M4*	F8/M4
M5 extended front terminal F	F6/M5*	F8/M5
M6 extended front terminal F	F6/M6	F8/M6
M7-M7M Extended Front Terminal F	F6/M7	F8/M7

Copper cable front terminal[6][7][8]-F·C

M2 copper cable front terminal F.C	F·C6/M2	F·C8/M2
M3 copper cable front terminal F.C	F·C6/M3	F·C8/M3
M5 400 copper cable front terminal F.C	F·C6/M5 400	F·C8/M5 400
M5 630 copper cable front terminal F.C	F·C6/M5 630	F·C8/M5 630

Note:
◇ All extension front terminals are equipped with interphase partition as standard
◇ The dimension of the standard interphase partition for M1, M2 and M3 extended front terminal blocks is about 102.2 * 68 (mm)
◇ The dimension of the standard interphase partition for M4 and M5 lengthened front terminal blocks is about 102.2 * 100 (mm)
◇ The dimension of the standard interphase partition for M2 and M3 extended terminal blocks is about 202.2 * 100 (mm)
◇ The dimension of the standard interphase partition for M4 and M5 extended terminal blocks is about 202.2 * 100 (mm)
◇ The bare copper cable can be directly connected to the circuit breaker.
◇ The requirements for connecting cables, such as cross-sectional area, are listed in the product manual.
◇ See the product manual for the torque value of the connecting cable.

Shunt release -MX

◇ he shunt release can enable the circuit breaker to execute the electrical disconnection command
◇ When the voltage is 70%-110% (AC/DC) of the rated voltage Un of the shunt release, the trip will act.
◇ The shunt release of M1/M2/M3 pre-connected wire becomes the corresponding shunt release without wire after releasing the matched wire of the release
◇ The structure of the M4/M5/M6 pre-wired shunt release is different from that of the corresponding shunt release without wire
◇ Generally, the shunt release is installed in the left slot of the circuit breaker; For M4/M5 4P circuit breaker, it is installed in the second slot on the left

	model
M1-M3 shunt release MX 12Vdc	MX-12/M1-3
M1-M3 shunt release MX 24-30Vac/dc	MX-24/M1-3
M1-M3 shunt release MX 220-240Vac/220-250Vdc	MX-220/M1-3
M1-M3 shunt release MX 380-440Vac	MX-380/M1-3
M1-M3 shunt release MX 110-127Vac/110-125Vdc	MX-110/M1-3
M1-M3 shunt release MX 12Vdc	MX-48/M1-3
M4-M6 shunt release MX 24-30Vac/dc	MX-24/M4-6
M4-M6 shunt release MX 110-127Vac/110-125Vdc	MX-110/M4-6
M4-M6 shunt release MX 220-240Vac/220-250Vdc	MX-220/M4-6
M4-M6 shunt release MX 380-440Vac	MX-380/M4-6
M4-M6 shunt release MX 12Vdc	MX-12/M4-6
M4-M6 shunt release MX 48-60Vac/dc	MX-48M4-6
M4-M6 shunt release MX 480-525Vac	MX-480/M4-6

Note: M4-M6 plug-in type, draw-out type or circuit breaker equipped with electric operating mechanism must select the under-voltage release or shunt release with wire form; At the same time, the adapter needs to be ordered

辅助触头 -OF·SD

◇ The function of the electrical signal of the auxiliary contact: display the information related to the working state of the circuit breaker externally.
◇ During installation, the circuit breaker shall be installed directly from the front in the right slot of the circuit breaker
◇ Auxiliary contacts are divided into pre-wired type and non-wired type.
◇ Zhong qiao can provide the connecting wire of auxiliary contact: 6 Cables, 12 Cables

预接导线

	model
M1-M3 auxiliary contact OF 1Q+1SY 250V AC/DC	1Q1SY-C 250/M1-3
M1-M3 auxiliary contact OF 3Q+1SY 250V AC/DC	3Q1SY-C 250/M1-3
M1-M3 auxiliary contact OF 3Q+1SY 24V DC	3Q1SY-C 24/M1-3
M4-M6 auxiliary contact OF 1Q+1SY 250V AC/DC	1Q1SY-C 250/M4-6
M4-M6 auxiliary contact OF 3Q+1SY 250V AC/DC	3Q1SY-C 250/M4-6
M4-M6 auxiliary contact OF 1Q+1SY 400V AC	1Q1SY-C 400/M4-6
M4-M6 auxiliary contact OF 2Q 400V AC	2Q-C 400/M4-6
M4-M6 auxiliary contact OF 3Q+1SY 24V DC	3Q1SY-C 24/M4-6
M2 ZQPR221 auxiliary contact of1s51qsy (1)	1S511QSY-C ZQPR221DS/M2
M2 ZQPR221 auxiliary contact OF 2Q+1SY (2)	2Q1SY-C ZQPR221DS/M2

Contact model description:
Q (close/open)-indicates the position of the circuit breaker contact.
SY (Tripper Trip)-Electrical signal indicating the circuit breaker trip caused by electronic tripper ZQPR/RC/YO/YU/MOS/Trip.
S51 (tripping signal contact of electronic release)-the tripping signal caused by any protective action of electronic release.
(1) Theauxiliary contact is the special auxiliary contact for M2 circuit breaker with ZQPR221 release, which is applicable to both 3P and 4P

Undervoltage release -MN

◇ When the supply voltage of the undervoltage release drops to (0.7-0.35) Un of its rated value, the undervoltage release will open the circuit breaker
◇ When the undervoltage release is not energized, the circuit breaker or main contact cannot be closed.
◇ The under-voltage release of M1/M2/M3 pre-connected wire becomes the corresponding under-voltage release without wire after loosening the supporting wire of the release
◇ The structure of the undervoltage release of M4/M5/M6 pre-connected conductor is different from that of the corresponding undervoltage release without conductor.
◇ Generally, the undervoltage release is installed in the left slot of the circuit breaker; For M4/M5 4P circuit breaker, it is installed in the second slot on the left.

	model
M1-M3 undervoltage release MN 24-30Vac/dc	MN 24/M1-3
M1-M3 undervoltage release MN 48Vac/dc	MN 48/M1-3
M1-M3 undervoltage release MN 60Vac/dc	MN 60/M1-3
M1-M3 undervoltage release MN 110-127Vac/110-125Vdc	MN 110/M1-3
M1-M3 undervoltage release MN 220-240Vac/220-250Vdc	MN 220/M1-3
M1-M3 undervoltage release MN 380-440Vac	MN 380/M1-3
M1-M3 undervoltage release MN 480-525Vac	MN 480/M1-3
M4-M6 undervoltage release MN 24-30Vac/dc	MN 24/M1-6
M4-M6 undervoltage release MN 48Vac/dc	MN 48/M1-6
M4-M6 undervoltage release MN 60Vac/dc	MN 60/M1-6
M4-M6 undervoltage release MN 110-127Vac/110-125Vdc	MN 110/M1-6
M4-M6 undervoltage release MN 220-240Vac/220-250Vdc	MN 220/M1-6
M4-M6 undervoltage release MN 380-440Vac	MN 380/M1-6
M4-M6 undervoltage release MN 480-525Vac	MN 480/M1-6
M7-M7M undervoltage release MN 24Vac/dc	MN 24/M7
M7-M7M undervoltage release MN 30Vac/dc	MN 30/M7
M7-M7M undervoltage release MN 48Vac/dc	MN 48/M7
M7-M7M undervoltage release MN 60Vac/dc	MN 60/M7
M7-M7M undervoltage release MN 110-120Vac/dc	MN 110/M7
M7-M7M undervoltage release MN 120-127Vac/dc	MN 120/M7
M7-M7M undervoltage release MN 220-240Vac/dc	MN 220/M7
M7-M7M undervoltage release MN 240-250Vac/dc	MN 240/M7
M7-M7M undervoltage release MN 380-400Vac	MN 380/M7
M7-M7M undervoltage release MN 415-400Vac	MN 415/M7

Note:
◇ The under-voltage release of M1/M2/M3 pre-connected wire becomes the corresponding under-voltage release without wire after loosening the supporting wire of the release.
◇ M4/M5/M6 undervoltage release without conductor is an imported product. Please contact Zhong qiao to confirm the delivery date before ordering.

Rotary handle

◇ The rotary handle is mainly divided into two types: direct action type (RHD) and adjustable extension type (RHE).
◇ The three components constituting the adjustable extension type can be ordered separately: the cab door rotary handle (RHE_H), the extension rod (RHE_S), and the mechanism base (RHE_B) installed on the circuit breaker.
◇ The emergency rotary handle is a yellow-red handle and yellow panel, which is mostly used for machine tool control.
◇ In addition, Zhong qiao provide padlocks for opening position: RHL for M1/M2/M3 and KLF for M4/M5/M6.

Straight rotary handle-RHD

	model
M1-M3 straight rotary handle RHD	RHD F-P/M1-3
M4-M5 straight rotary handle RHD	RHD F-P/M4-5
M4-M5 straight rotary handle RHD	RHD W/M4-5
M6 straight rotary handle RHD	RHD F-P/M6
M6 straight rotary handle RHD	RHD W/M6
M7 straight rotary handle RHD	RHD F-P/M7(ml)
M7 straight rotary handle RHD	RHD W/M7(ml)

Adjustable extended rotary handle - RHE

	model
M1-M3 adjustable extended rotary handle RHE F-P	RHE F-P/M1-3
M4-M5 adjustable extended rotary handle RHE F-P	RHE F-P/M4-5
M4-M5 adjustable extendeded rotary handle RHE W	RHE W/M4-5
M6 adjustable extended rotary handle RHE F-P	RHE F-P/M6
M6 adjustable extened rotary handle RHE W	RHE W/M6
M7 adjustable extened rotary handle RHE F-P	RHE F-P/M7(ml)
M7 adjustable extened rotary handle RHE W	RHE W/M7(ml)

Interphase partition

◇ The part number of M4 and M5 circuit breakers with standard interphase partition is RA1752/002, and the size is about 100 × 26.4 (long × Wide)
◇ The dimension of the standard interphase partition for M1, M2 and M3 extended front terminal blocks is about 102.2 * 68 (mm).
The standard dimension of interphase separator for M 4 and M5 extended front terminal is about 102.2*100(mm).
◇ M2, M3 extended extension terminal comes standard with an external dimension of about 202.2*100(mm).
◇ The dimension of the standard interphase partition for M4 and M5 extended terminal blocks is about 202.2 * 100 (mm).
◇ M5 630 plug-in/draw-out extended front wiring fixed part is equipped with interphase partition as standard, and its overall dimension is about 202.2 × 100(mm).

	4 pole	3 pole
	model	model
M1-M3 interphase partition PB100	PB100 3×4/M1-3	PB100 4×6/M1-3
M1-M3 interphase partition PB200	PB200 3×4/M1-3	PB200 4×6/M1-3
M4-M5 interphase partition PB100	PB100 3×4/M4-5	PB100 4×6/M4-5
M4-M5 interphase partition PB200	PB200 3×4/M4-5	PB200 4×6/M4-5
M6 interphase partition PB100	PB100 3×4/M6	PB100 4×6/M6
M7-M7M interphase partition PB100	PB100 3×4/M7	PB100 4×6/M7
M7-M7M interphase partition PB200	PB200 3×4/M7	PB200 4×6/M7

Plug-in fixed part

◇ The plug-in ZQM3T is composed of the body, the conversion part and the plug-in fixed part. The body and the conversion part can be ordered separately or integrally, while the fixed part needs to be ordered separately

◇ M2/M3/M4/M5 can choose plug-in connection mode.

Front/rear wiring-F/R

	3- pole
	model
M2 plug-in front wiring fixed part PFP F[1]	PFP F3/M2
M3 plug-in front wiring fixed part PFP F[1]	PFP F3/M3
M2 plug-in front wiring fixed part PFP R[1]	PFP R3/M2
M3 Plug-in Front Wiring Fixed Part PFP R[1]	PFP F3/M3

Extended front wiring-EF

M4 plug-in extended front wiring fixed part PFP EF	PFP EF3/M4
M5 400 Plug-in extended Front Wiring fixed part PFP EF	PFP EF3/M5 400
M5 630 Plug-in extened Front wiring fixed part PFP EF[4]	PFP EF3/M5 630

Rear horizontal wiring-HR

M4 plug-in rear horizontal wiring fixed part PFP HR	PFP HR3/M4
M5 400 Plug-in rear horizontal wiring fixed part PFP HR	PFP HR3/M5 400
M5 630 Plug-in rear horizontal wiring fixed part PFP HR[4]	PFP HR3/M5 630