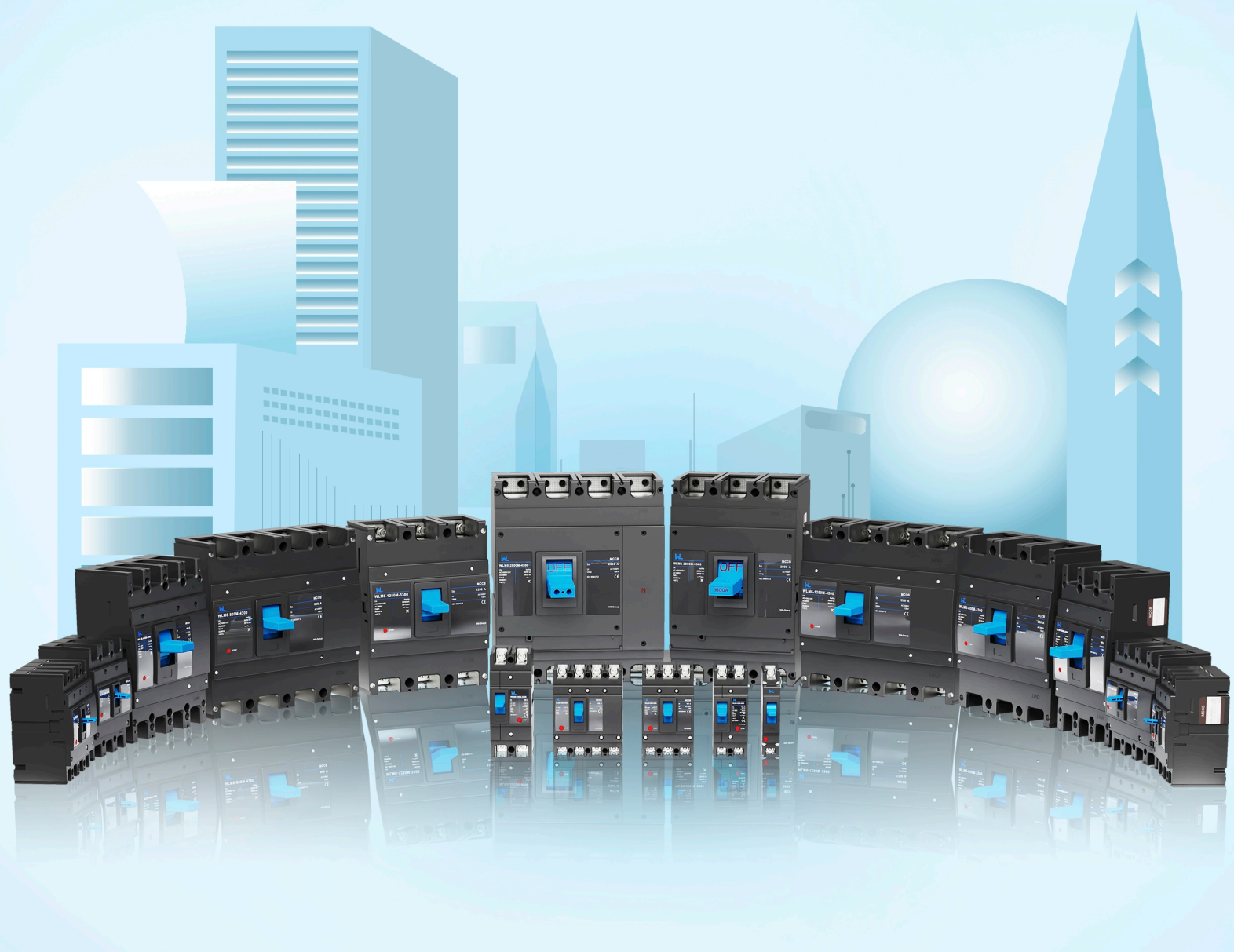


W9 GROUP

Heart for the world, electricity for the night



Moulded Case Circuit Breakers

ABOUT W9

“W9” was Founded in 2024, and is headquartered in Yueqing Wenzhou, the city of electrical appliances in China. It is a modern manufacturing company which includes trading and manufacturing, researching and development design... The total factory area is 37000 square meters. The total annual sales of W9 group are 500 million RMB. The main members of W9 Group are JIUCE (MCB), WL (MCCB), and WE (ACB). We are committed to building a group enterprise, strictly controlling the quality, and providing customers with more convenient and cost-effective services. As a major export brand in 2020, W9 Group’s main partners are domestic mid to high end brand strategic partners

Why choose us?

Our R&D strength: We have an independent R&D team. We have independently designed our own double break molded case circuit breakers, single break molded case circuit breakers, with frame sizes ranging from 125A to 2000A, as well as air circuit breakers and solar air circuit breakers with frame sizes ranging from 1000A to 7500A, We are also the enterprise with the most complete exclusive product series, including thermal magnetic, double adjustable, single adjustable, and electronic 6-knob ,Electronic three knob adjustable, electronic LCD type, etc

We have strong manufacturing capabilities and have five major processing workshops
mold manufacturing workshop.

With mold design and processing as the core, the slow wire cutting, high-precision EDM, CNC machine tools, engraving machine and other precision processing equipment have the ability to design and manufacture precision molds for stamping, DMC, injection molding, etc

stamping workshop:injection molding workshop,Spot welding workshop, assembly workshop, and PCB manufacturing workshop.

We have integrated four major processing techniques and multiple fully automatic inspection production lines.Furthermore,we have strictly built a dust-free workshop to significantly improve production efficiency and product quality.

Our quality inspection equipment: We have a GPL-3 high and low temperature alternating humidity and heat test chamber, with a temperature setting of -40 °C -70 °C. We can independently inspect the mechanical life, short circuit short delay, and overload long delay of products, as well as test the flame retardancy, pressure resistance, and copper plating of product components to meet customer quality factory requirementsc

The purpose of W9’s establishment is to bring h better prices, better quality, and more competitive product to customers worldwide,, and to provide quality assurance services for customers, so that they can purchase without worry.

Our R&D strength: We have over 50 engineers for minimum circuit breakers, 50 engineers for molded case circuit breakers, and 6 engineers for ACB

Main Businesses



Clean Energy



Low-voltage Apparatus



Power Transmission and Distribution



Instrumentation and Apparatus



Smart Home



Intelligent Building



Intelligent Manufacturing



Industry Automation



Smart Heating



Smart Water



Home Electrical Apparatus



Energy Efficiency Management

ABOUT W9 Honors

W9 Honors

- 2007-2016
 - "WL" "WE" "JIUCE" factory established

- 2020
 - "WCED" England Brand registered

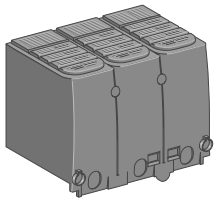
- 2020
 - Certification: IEC, UL, CSA, GB, CE, UKCA, CCC
Our company passed the ISO9001
quality management system certification
all products comply with RoHS and REACH

- 2024
 - "W9-Group" Brand registered, W9 members:
"WL" "WE" "JIUCE"

Certification

Certification: IEC, UL, CSA, GB, CE, UKCA, CCC Our company passed the ISO9001 ,quality management system certification all products comply with RoHS and REACH



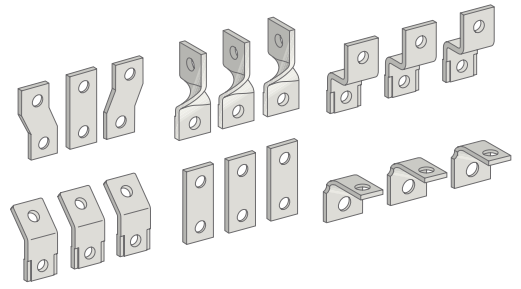


Sealable long terminal

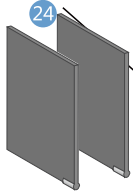
11



Rear connectors

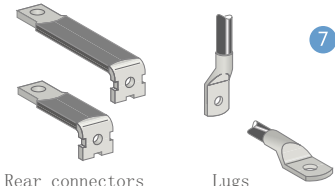


Terminal extensions



Interphase barriers

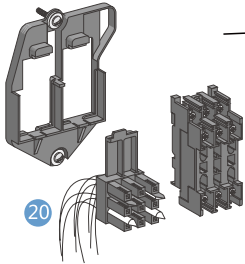
24



Rear connectors

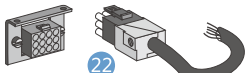
Lugs

7



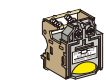
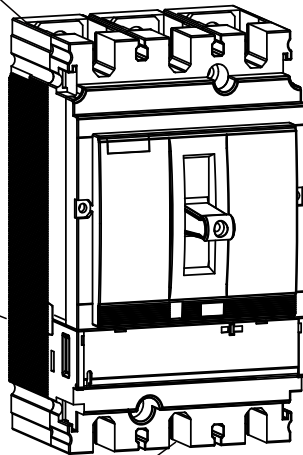
20

21 Automatic withdrawable auxiliary connector

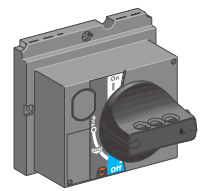


22

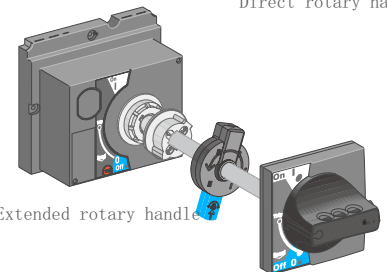
Manual auxiliary connector



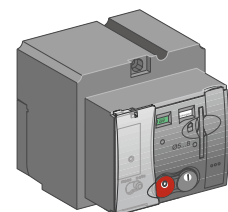
Voltage release



Direct rotary handle



Extended rotary handle



Motor mechanism

Contents

1. General	
2. Operating conditions	
3. Type designation	
4. Technical data.....	
5. Release.....	
6. Tripping curve	
7. Mounting of circuit breaker.....	
8. Overall and Mounting Dimensions	
9. Accessories characteristics and installation	
10. Technical Supplement	
11. Ordering notice	

1. General

WLM6Q series moulded case circuit breaker is suitable for the circuit of AC 50/60Hz, with rated voltage AC690V and below, DC system rated voltage DC1000V and below, Solar system rated voltage 1140V and below and rated current of 12.5A and 1600A.

It can protect circuits and electric equipment against overload, short circuit or undervoltage, and can also provide protection of overload, short circuit and under voltage for infrequent start of motor. Products have functions of power distribution protection, motor protection, residual current protection and isolation.

The circuit breaker can be installed vertically, installed horizontally and can also enter the line from the bottom.

Standards compliant:

IEC 60947-1 general rules for low-voltage switchgear and control equipment;

IEC 60947-2 low-voltage switchgear and control equipment circuit breakers;

IEC 60947-3 low-voltage switchgear and control equipment switches,

disconnectors and fuse combination appliances;

IEC 60947-4-1 Electromechanical contactors and motor starters (including motor protectors) for low voltage switchgear and control equip.



2. Operating conditions

2.1 Temperature:

Operating and storage temperature is $-35^{\circ}\text{C}\sim+70^{\circ}\text{C}$; the average value within 24 hours does not exceed $+35^{\circ}\text{C}$; when the ambient temperature is $-35^{\circ}\text{C}\sim+70^{\circ}\text{C}$, users need to consider derating or temperature compensation whose details can be referred to i

2.2 Altitude: $\leq 2000\text{m}$;

2.3 Pollution grade: Grade 3;

2.4 IP grade: IP20

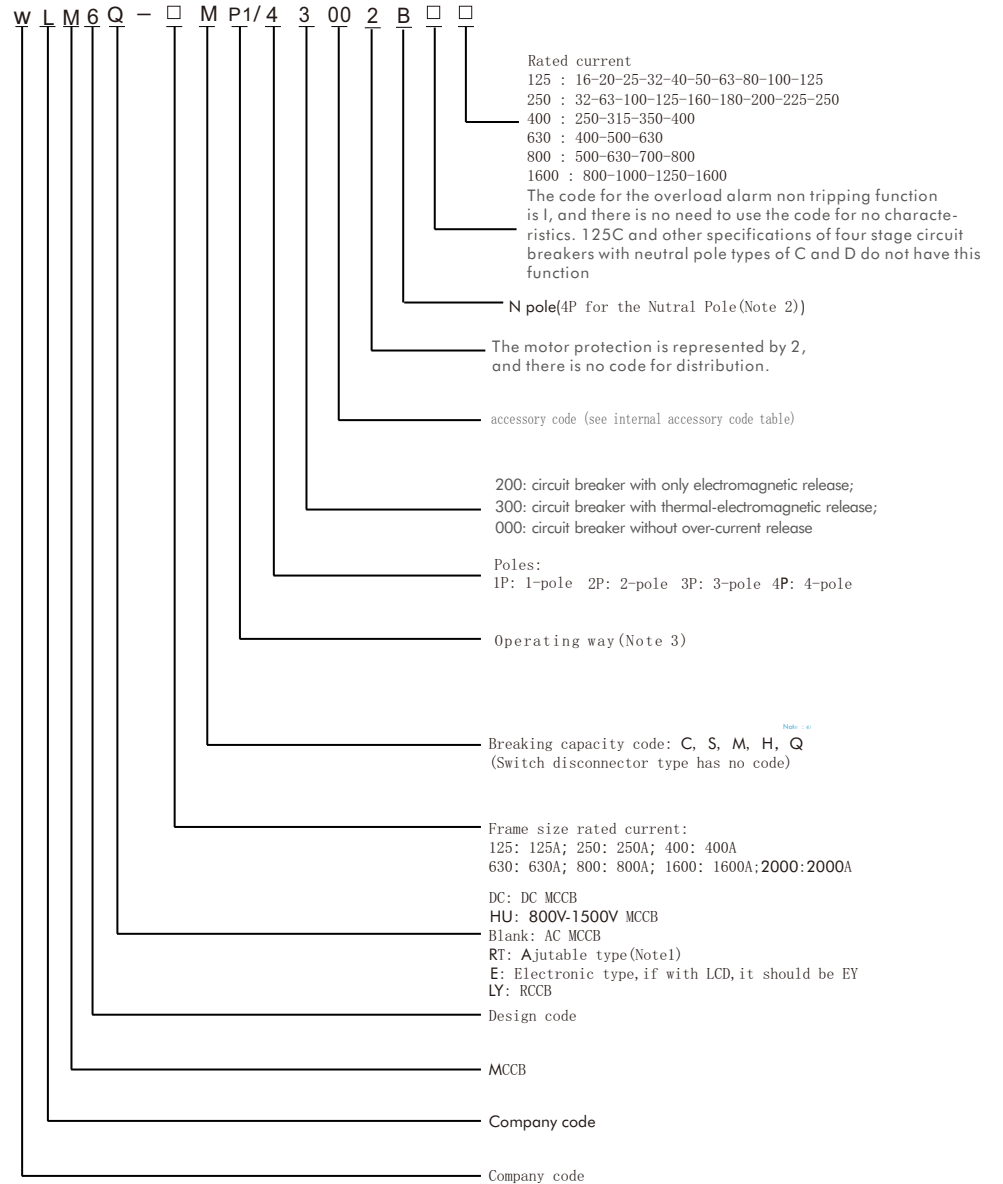
2.5 Air conditions:

At mounting site, relative humidity not exceed 50% at the max temperature of $+40^{\circ}\text{C}$, higher relative humidity is allowable under lower temperature. For example, RH could be 90% at $+20^{\circ}\text{C}$, special measures should be taken to occurrence of dews.



3. Type designation

3.1 WLM6 Moulded Case Circuit Breaker and Switch Disconnecter



Note

Note : 1)

RT-A: only adjust for loading(0.7-1In)
RT-P: only adjust for instantaneous (7-10In)

Note : 2)

In the four-pole products:

- Type A: The N-pole is not equipped with over-current release, and the N-pole is always connected, not closed or opened with other three poles.
- Type B: N-pole is not equipped with over-current release, and N-pole is closed and opened together with other three poles (N-pole is closed first and then opened).
- Type C: N-pole is equipped with over-current release, and N-pole is closed and opened together with other three poles (N-pole is closed first and then opened).
- Type D: N-pole is equipped with over-current release, and the N-pole is always connected, not closed and opened with other three poles.

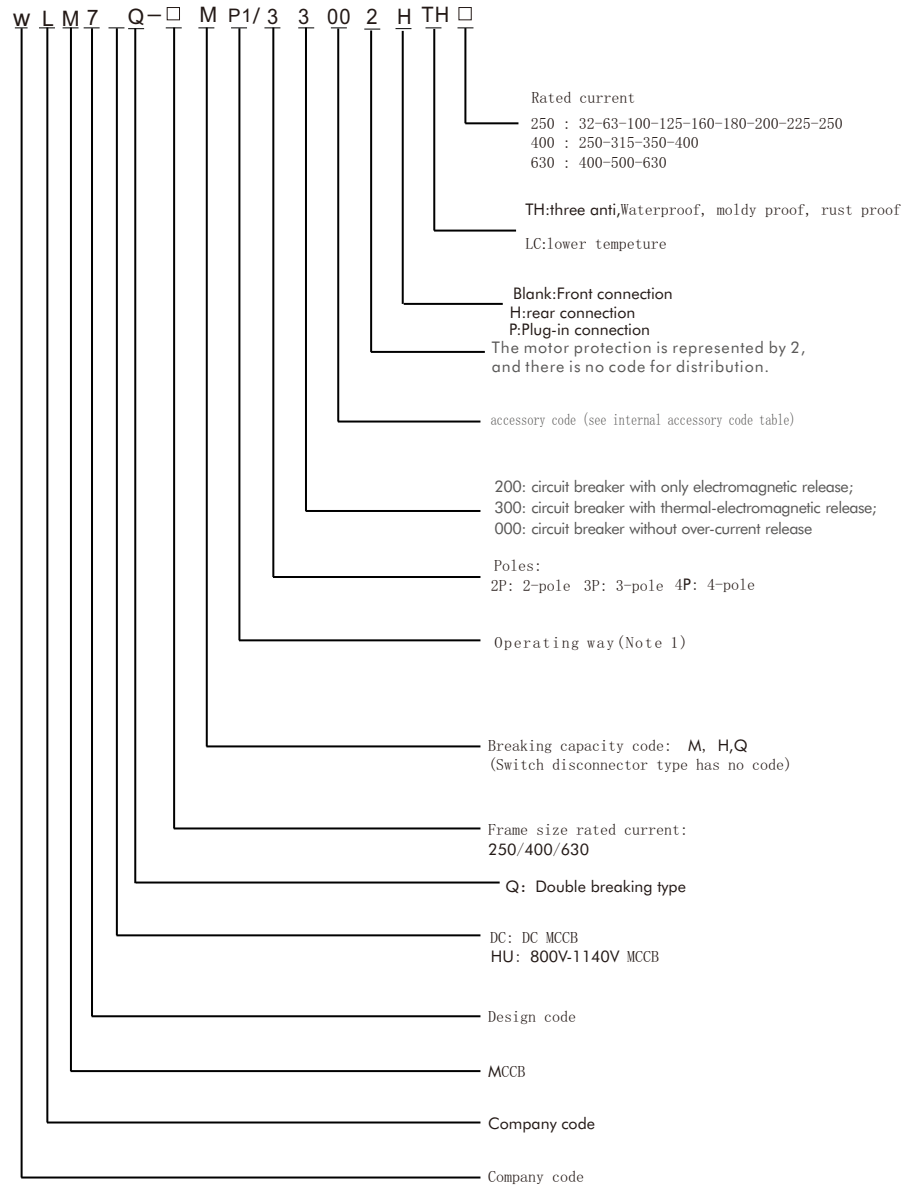
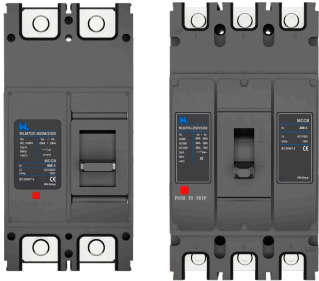
Note : 3)

No code: direct operation
 P1: DC3 electric operation(General market version)
 P2: DC6 series electric operation(self-manufacturing)
 ZY1: Rotating handle (manual center type - circular handle) - (defaulted)
 ZF1: Rotating handle (manual center type - square handle)
 ZY2: Rotating handle (hand operated eccentric - circular handle)
 ZF2: Rotating handle (manual eccentric square handle)
 Z3: Rotating handle (hand operated integrated)
 (Only available in 125, 160, and 250)Note:one pole and two pole products only have Direct operation function.
 The voltage of electric operation is divided into:DC24/DC110V/DC220V/AC230V/AC400V, defaulted is:AC230V

Note : 4) Q structure:double breaking type

3. Type designation

3.1 WLM7 Moulded Case Circuit Breaker



Note

Note 1

No code: direct operation

P1: DC3 electric operation (General market version)

P2: DC6 series electric operation (self-manufacturing)

ZY1: Rotating handle (manual center type - circular handle) - (defaulted)

ZF1: Rotating handle (manual center type - square handle)

ZY2: Rotating handle (hand operated eccentric - circular handle)


ZF2: Rotating handle (manual eccentric square handle)

Z3: Rotating handle (hand operated integrated)

(Only available in 125, 160, and 250) Note: one pole and two pole products only have Direct operation function.


The voltage of electric operation is divided into: DC24/DC110V/DC220V/AC230V/AC400V, defaulted is: AC230V

4. Thermal Type Technical data

WLM6Q Moulded Case Circuit Breaker		100	160	
Rated operating current I_n (A),40°C	Thermal-magnetic type	12. 5/16/20/25/32/40/50/63/80/100	16/20/25/32/40/50/63/80/100/125/160	
	Ir Adjustable type	12. 5/16/20/25/32/40/50/63/80/100	16/20/25/32/40/50/63/80/100/125/160	
	I _{sd} Adjustable type	12. 5/16/20/25/32/40/50/63/80/100	16/20/25/32/40/50/63/80/100/125/160	
Electric characteristics				
Rated insulation voltage U_i (V)		1000	1000	
Rated impulse withstand voltage (kV)		8	8	
Rated operational voltage U_e (V),AC 50/60Hz		380/400/415,440,500,660/690	380/400/415,440,500,660/690	
Breaking capacity code		C S M H Q	C S M H Q	
Number of poles	IP(Adjustable has no this type)	— — — — —	— — — — —	
	2P	— — — — —	— — — — —	
	3P	■ ■ ■ ■ ■	■ ■ ■ ■ ■	
	4P	■ ■ ■ ■ ■	■ ■ ■ ■ ■	
Rated ultimate short-circuit breaking capacity I_{cu} (kA)	AC220/230/240V ¹⁾	— — — — —	— — — — —	
	AC380/400/415V	35 50 85 100 150	35 50 85 100 150	
	AC440V	— — — — —	— — — — —	
	AC500V	— 35 50 60 65	— 35 50 60 65	
	AC660/690V	— 5 8 10 20	— 5 8 10 20	
	AC220/230/240V ¹⁾	— — — — —	— — — — —	
Rated service breaking capacity I_{cs} (kA)	AC380/400/415V	35 50 85 100 150	35 50 85 100 150	
	AC440V	— — — — —	— — — — —	
	AC500V	— 35 50 60 65	— 35 50 60 65	
	AC660/690V	— 5 8 10 20	— 5 8 10 20	
Standard		IEC/EN 60947-2		
Utilization category		A		
Ambient temperature		-40°C ~+70 °C ²⁾		
Safety of insulation		■		
Arcing distance		0		
Mechanical life (CO recycle)	Maintenance	15000		
	AC415V,I _n	8000		
Electrical life (CO recycle)	AC690V,I _n	2000		
		1500		
Release units				
remaining current Protection	earth leakage	■		
Distribution Protection	TM	■		
Mounting and connection				
Fixed	Front connection	■		
	Rear connection	■		
Plug-in ³⁾	Front connection			
	Rear connection			
Draw-out ³⁾	Front connection	—		
	Rear connection	—		
DIN rail	Front connection	■		
Dimension				
Dimension (mm) W×H×D		Width (3P/4P)	105/140	105/140
		Height	157	157
		Depth	87	87
Weight				
Weight(kg)/Fixed	IP	—		
	2P	—		
	3P	0.913		
	4P	1.161		
				1.501
				1.909

Note :

- The operating temperature of basic (dial code) electronic type is -35°C~+70 °C ,and the operating temperature of standard (liquid crystal) electronic type is -5 °C ~+40 °C ;
- For 3/4 pole product only;


WLM6Q Moulded Case Circuit Breaker		250	400	630
Rated operating current I_n (A),40°C	Thermal-magnetic type	100-160-180-200-225-250	250-315-350-400	400-500-630
	Ir Adjustable type	100-160-180-200-225-250	250-315-350-400	400-500-630
	Isd Adjustable type	100-160-180-200-225-250	250-315-350-400	400-500-630
Electric characteristics				
Rated insulation voltage U_i (V)		1000	1000	1000
Rated impulse withstand voltage (kV)		8	8	8
Rated operational voltage U_e (V),AC 50/60Hz		380/400/415,440,500,660/690	380/400/415,440,500,660/690	380/400/415,440,500,600/690
Breaking capacity code		S M H Q	S M H Q	S M H Q
Number of poles	1P	— — — —	— — — —	— — — —
	2P	— — — —	— — — —	— — — —
	3P	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■
	4P	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■
Rated ultimate short-circuit breaking capacity I_{cu} (kA)	AC220/230/240V ¹⁾	— — — —	— — — —	— — — —
	AC380/400/415V	50 85 100 150	50 85 100 150	50 85 100 150
	AC440V	— — — —	— — — —	— — — —
	AC500V	35 50 60 65	35 50 60 65	35 50 60 65
	AC660/690V	5 8 10 20	5 8 10 20	5 8 10 20
Rated service breaking capacity I_{cs} (kA)	AC220/230/240V ¹⁾	— — — —	— — — —	— — — —
	AC380/400/415V	50 85 100 150	50 85 100 150	50 85 100 150
	AC440V	— — — —	— — — —	— — — —
	AC500V	35 50 60 65	35 50 60 65	35 50 60 65
	AC660/690V	5 8 10 20	5 8 10 20	5 8 10 20
Standard		IEC/EN 60947-2		IEC/EN 60947-2
Utilization category		A	A	A(Thermal-magnetic)/B(Electronic)
Ambient temperature		-40°C ~+70°C ²⁾		-40°C ~+70°C ²⁾
Safety of insulation		■	■	■
Arcing distance		0	0	0
Mechanical life (CO recycle)	Maintenance	15000	15000	10000
	Electrical life (CO recycle)	8000	8000	5000
Electrical life (CO recycle)	AC415V, I_n	8000	8000	5000
	AC690V, I_n	2000	1500	1500
Release units				
remaining current Protection	earth leakage	■	■	■
Distribution Protection	TM	■	■	■
Mounting and connection				
Fixed	Front connection	—	—	—
	Rear connection	—	—	—
Plug-in ³⁾	Front connection	■	■	■
	Rear connection	■	■	■
Draw-out ³⁾	Front connection	—	—	■
	Rear connection	—	—	■
DIN rail	Front connection	■	■	—
Dimension				
Dimension (mm) W×H×D		Width (3P/4P)	105/140	140/184
		Height	157	257
		Depth	87	111
Weight				
Weight(kg)/Fixed	1P	—	—	—
	2P	—	—	—
	3P	1.501	4.68	6
	4P	1.909	6.314	7.3


Note :
¹⁾ The operating temperature of basic (dial code) electronic type is -35°C~+70°C ,and the operating temperature of standard (liquid crystal) electronic type is -5 °C ~+40 °C ;
²⁾ For 3/4 pole product only;

WLM6Q Moulded Case Circuit Breaker		800	1250	1600
Rated operating current I_n (A), 40°C	Thermal-magnetic type	500-630-700-800	630-800-1000-1250	800-1000-1250-1600
	Ir Adjustable type	500-630-700-800	630-800-1000-1250	800-1000-1250-1600
	Isd Adjustable type	500-630-700-800	630-800-1000-1250	800-1000-1250-1600
Electric characteristics				
Rated insulation voltage U_i (V)		1000	1000	1000
Rated impulse withstand voltage (kV)		8	8	8
Rated operational voltage U_e (V), AC 50/60Hz		380/400/415,440,500,660/690	380/400/415,440,500,660/690	380/400/415,440,500,660/690
Breaking capacity code		S M H Q	S M H	S M H
Number of poles	1P	— — — —	— — —	— — —
	2P	— — — —	— — —	— — —
	3P	■ ■ ■ ■	■ ■ ■	— ■ ■
	4P	■ ■ ■ ■	■ ■ ■	— ■ ■
Rated ultimate short-circuit breaking capacity I_{cu} (kA)	AC220/230/240V ¹⁾	— — — —	65 80 85	— — —
	AC380/400/415V	50 85 100 150	50 70 100	— 70 100
	AC440V	— — — —	— — —	— — —
	AC500V	35 50 60 65	— — —	— — —
	AC660/690V	5 8 10 20	20 25 35	— 20 20
	AC220/230/240V ¹⁾	— — — —	40 65 70	— — —
Rated service breaking capacity I_{cs} (kA)	AC380/400/415V	50 85 100 150	35 50 70	— 50 70
	AC440V	— — — —	— — —	— — —
	AC500V	35 50 60 65	— — —	— — —
	AC660/690V	5 8 10 20	10 15 20	— 20 20
Standard				
Utilization category		A(Thermal-magnetic)/B(Electronic)	A(Thermal-magnetic)/B(Electronic)	A(Thermal-magnetic)/B(Electronic)
Ambient temperature				
Safety of insulation		■	■	■
Arcing distance		0	0	0
Mechanical life (CO recycle)	Maintenance	8000	8000	8000
	Electrical life (CO recycle)			
Electrical life (CO recycle)	AC415V, I_n	1000	1000	1000
	AC690V, I_n	800	800	800
Release units				
remaining current Protection	earth leakage	■	■	■
Distribution Protection	TM	■	■	■
Mounting and connection				
Fixed	Front connection	■	—	■
	Rear connection	■	■	—
Plug-in ²⁾	Front connection	■	—	—
	Rear connection	■	—	—
Draw-out ³⁾	Front connection	■	■	—
	Rear connection	■	■	—
DIN rail	Front connection	—	—	—
Dimension				
Dimension (mm) W×H×D	Width (3P/4P)	210/280	210/280	210/280
	Height	326	326	326
	Depth	142	142	142
Weight				
Weight(kg)/Fixed	1P	—	—	—
	2P	—	—	—
	3P	8.437	8.9	16.46/16.72/18.42
	4P	11.245	11.931	21.4/22.78/24.1



5. Electronic Type Technical data


WLM6EQ/WLM6EYQ Moulded Case Circuit Breaker		100	160	
Rated operating current I_n (A), 40°C	6 adjustable knobs	12-16-20-25-32-40-50-63-80-100-125-160	100-125-160-180-200-225-250	
	3 adjustable knobs	12-16-20-25-32-40-50-63-80-100-125-160	100-125-160-180-200-225-250	
Electric characteristics				
Rated insulation voltage U_i (V)		1000	1000	
Rated impulse withstand voltage (kV)		8	8	
Rated operational voltage U_e (V), AC 50/60Hz		380/400/415,440,500,660/690	380/400/415,440,500,660/690	
Breaking capacity code		C S M H Q	C S M H Q	
Number of poles	1P	— — — — —	— — — — —	
	2P	— — — — —	— — — — —	
	3P	■ ■ ■ ■ ■	■ ■ ■ ■ ■	
	4P	■ ■ ■ ■ ■	■ ■ ■ ■ ■	
Rated ultimate short-circuit breaking capacity I_{cu} (kA)	AC220/230/240V ¹⁾	— — — — —	— — — — —	
	AC380/400/415V	35 50 85 100 150	35 50 85 100 150	
	AC440V	— — — — —	— — — — —	
	AC500V	— 35 50 60 65	— 35 50 60 65	
	AC660/690V	— 5 8 10 20	— 5 8 10 20	
	AC220/230/240V ¹⁾	— — — — —	— — — — —	
Rated service breaking capacity I_{cs} (kA)	AC380/400/415V	35 50 85 100 150	35 50 85 100 150	
	AC440V	— — — — —	— — — — —	
	AC500V	— 35 50 60 65	— 35 50 60 65	
	AC660/690V	— 5 8 10 20	— 5 8 10 20	
Rated short-time withstand current I_{cw} (kA,1s)		5 (micrologic 5.0A)	5 (micrologic 5.0A)	
Standard		IEC/EN 60947-2		
Utilization category		A	B	
Ambient temperature		-40 °C ~+70 °C ²⁾		
Safety of insulation		■	■	
Arcing distance		0	0	
Mechanical life (CO recycle)	Maintenance	15000	15000	
	Electrical life (CO recycle)			
Electrical life (CO recycle)	AC415V, I_n	8000	8000	
	AC690V, I_n	2000	1500	
Release units				
Electromagnetic release		■	■	
Communication protocol				
Rs485		■	■	
Mounting and connection				
Fixed	Front connection	—	—	
	Rear connection	—	—	
Plug-in ³⁾	Front connection	■	■	
	Rear connection	■	■	
Draw-out ³⁾	Front connection	—	—	
	Rear connection	—	—	
DIN rail	Front connection	■	■	
Dimension				
Dimension (mm) W×H×D		Width (3P/4P)	105/140	105/140
		Height	157	157
		Depth	87	87
Weight				
Weight(kg)/Adjustable	1P	—	—	
	2P	—	—	
	3P	1.553	2.118	
	4P	2.059	2.726	

WLM6EQ/WLM6EQ Moulded Case Circuit Breaker		250	400	
Rated operating current I_n (A), 40°C	6 adjustable knobs	100-112-125-137-157-175-200-225-250	160-200-240-280-320-360-400	
	3 adjustable knobs	100-112-125-137-157-175-200-225-250	160-200-240-280-320-360-400	
Electric characteristics				
Rated insulation voltage U_i (V)		1000	1000	
Rated impulse withstand voltage (kV)		8	8	
Rated operational voltage U_e (V), AC 50/60Hz		380/400/415,440,500,660/690	380/400/415,440,500,660/690	
Breaking capacity code		S M H Q	S M H Q	
Number of poles	1P	— — — —	— — — —	
	2P	— — — —	— — — —	
	3P	■ ■ ■ ■	■ ■ ■ ■	
	4P	■ ■ ■ ■	■ ■ ■ ■	
Rated ultimate short-circuit breaking capacity I_{cu} (kA)	AC220/230/240V ¹⁾	— — — —	— — — —	
	AC380/400/415V	50 85 100 150	50 85 100 150	
	AC440V	— — — —	— — — —	
	AC500V	35 50 60 65	35 50 60 65	
	AC660/690V	5 8 10 20	5 8 10 20	
	AC220/230/240V ¹⁾	— — — —	— — — —	
Rated service breaking capacity I_{cs} (kA)	AC380/400/415V	50 85 100 150	50 85 100 150	
	AC440V	— — — —	— — — —	
	AC500V	35 50 60 65	35 50 60 65	
	AC660/690V	5 8 10 20	5 8 10 20	
Rated short-time withstand current I_{cw} (kA,1s)		5 (micrologic 5.0A)	5 (micrologic 5.0A)	
Standard		IEC/EN 60947-2		
Utilization category		B	B	
Ambient temperature		-40 °C ~+70 °C ²⁾		
Safety of insulation		■	■	
Arcing distance		0	0	
Mechanical life (CO recycle)	Maintenance	15000	15000	
	Electrical life (CO recycle)			
Electrical life (CO recycle)	AC415V, I_n	8000	8000	
	AC690V, I_n	2000	1500	
Release units				
Electromagnetic release		■	■	
Communication protocol				
Rs485		■	■	
Mounting and connection				
Fixed	Front connection	—	—	
	Rear connection	—	—	
Plug-in ³⁾	Front connection	■	■	
	Rear connection	■	■	
Draw-out ³⁾	Front connection	—	—	
	Rear connection	—	—	
DIN rail	Front connection	■	■	
Dimension				
Dimension (mm) W×H×D		Width (3P/4P)	105/140	140/184
		Height	157	257
		Depth	87	111
Weight				
Weight(kg)/Adjustable	1P	—	—	
	2P	—	—	
	3P	4.922	5.391	
	4P	6.543	7.266	

WLM6EQ/WLM6EYQ Moulded Case Circuit Breaker		630	1250	1600
Rated operating current I_n (A), 40°C	6 adjustable knobs	252-315-380-440-500-560-630	500-625-750-875-1000-1100-1250	640-800-1000-1100-1250-1600
	3 adjustable knobs	252-315-380-440-500-560-630	500-625-750-875-1000-1100-1250	640-800-1000-1100-1250-1600
Electric characteristics				
Rated insulation voltage U_i (V)		1000	1000	1000
Rated impulse withstand voltage (kV)		8	8	8
Rated operational voltage U_e (V), AC 50/60Hz		380/400/415,440,500,660/690	380/400/415,440,500,660/690	380/400/415,440,500,660/690
Breaking capacity code		S M H Q	S M H	M H
Number of poles	1P	— — — —	— — —	— — —
	2P	— — — —	— — —	— — —
	3P	■ ■ ■ ■	■ ■ ■	— ■ ■
	4P	■ ■ ■ ■	■ ■ ■	— ■ ■
Rated ultimate short-circuit breaking capacity I_{cu} (kA)	AC220/230/240V ¹⁾	— — —	65 80 85	— — —
	AC380/400/415V	50 85 100 150	50 70 100	— 70 100
	AC440V	— — — —	— — —	— — —
	AC500V	35 50 60 65	— — —	— — —
	AC660/690V	5 8 10 20	20 25 35	— 20 20
	AC220/230/240V ¹⁾	— — — —	40 65 70	— — —
Rated service breaking capacity I_{cs} (kA)	AC380/400/415V	50 85 100 150	35 50 70	— 50 70
	AC440V	— — — —	— — —	— — —
	AC500V	35 50 60 65	— — —	— — —
	AC660/690V	5 8 10 20	10 15 20	— 20 20
Rated short-time withstand current I_{cw} (kA,1s)		5 (micrologic 5.0A)	5 (micrologic 5.0A)	5 (micrologic 5.0A)
Standard		IEC/EN 60947-2		
Utilization category		B	B	B
Ambient temperature		-40 °C ~+70 °C ²⁾		
Safety of insulation		■	■	■
Arcing distance		0	0	0
Mechanical life (CO recycle)	Maintenance	2500	2500	2500
	Electrical life (CO recycle)	500	500	500
Electrical life (CO recycle)	AC415V, I_n	500	500	500
	AC690V, I_n	400	400	400
Release units				
Electromagnetic release		■	■	■
Communication protocol				
Rs485		■	■	■
Mounting and connection				
Fixed	Front connection	■	■	■
	Rear connection	■	■	—
Plug-in ³⁾	Front connection	■	■	—
	Rear connection	■	■	—
Draw-out ³⁾	Front connection	■	■	■
	Rear connection	■	■	■
DIN rail	Front connection	■	■	—
Dimension				
Dimension (mm) W×H×D	Width (3P/4P)	140/184	210/280	210/280
	Height	257	326	326
	Depth	111	142	142
Weight				
Weight(kg)/Adjustable	1P	—	—	—
	2P	—	—	—
	3P	9.253	9.896	16.8/17.1/18.82
	4P	11.07	13.187	21.86/23.24/24.54




6. RCCB Type Technical data

WLM6LQ/WLM6LYQ Residual Current protection module		100	160	250	400	
Rated current (A) of circuit breaker 40°C		16-20-25-30-32-40-50-60 -63-75-80-90-100-125	16-20-25-30-32-40-50 60-63-75-80-90-100-125 140-150-160	100-125-140-150-160 175-180-200-225-250	250-315-350-400	
Rated insulation voltage U_i (V)		1000	1000	1000	1000	
Rated impulse withstand voltage (kV)		8	8	8	8	
Rated operational voltage U_e (V), AC 50/60Hz		AC230V(2P) /AC400(3P、3P+N、4P)	AC230V(2P) /AC400(3P、3P+N、4P)	AC400V	AC400V	
Breaking capacity code		S M H Q	S M H Q	S M H Q	S M H Q	
Number of poles	2P	■ ■ ■ ■	■ ■ ■ ■	— — — —	— — — —	
	3P	■ ■ ■ ■	■ ■ ■ ■	— — ■ ■	— — ■ ■	
	4P	■ ■ ■ ■	■ ■ ■ ■	— — ■ ■	— — ■ ■	
Rated ultimate short-circuit breaking capacity I_{cu} (kA)	AC380/400/415V	50 85 100 150	50 85 100 150	50 85 100 150	50 85 100 150	
Rated service breaking capacity I_{cs} (kA)	AC380/400/415V	50 85 100 150	50 85 100 150	50 85 100 150	50 85 100 150	
Sensitivity $I\Delta n$ (A) adjustable range		0.03-0.3-1-3-10	0.03-0.3-1-3-10	0.03-0.3-1-3-10	0.03-0.3-1-3-10	
Limit non-actuating time Δt (ms) ¹⁾		60-150-310	60-150-310	60-150-310	60-150-310	
Leakage alarm non-tripping function		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
overcurrent tripping type		Thermal type	Thermal type	Thermal type	Thermal type	
Leakage tripping type		Electronic Type	Electronic Type	Electronic Type	Electronic Type	
Residual current type		AC	AC	AC	AC	
Standard		IEC/EN 60947-2				
Utilization category		A				
Ambient temperature		-40°C ~+70 °C ²⁾				
Safety of insulation		■				
Arcing distance		0				
Mechanical life (CO recycle)	Maintenance	15000	15000	15000	15000	
	AC415V,In	8000	8000	8000	8000	
Electrical life (CO recycle)	AC690V,In	2000	2000	2000	2000	
Release units						
Mounting and connection						
Fixed	Front connection	—	—	—	—	
	Rear connection	—	—	—	—	
Plug-in ³⁾	Front connection	■	■	■	■	
	Rear connection	■	■	■	■	
Draw-out ³⁾	Front connection	—	—	—	■	
	Rear connection	—	—	—	■	
DIN rail	Front connection	■	■	■	■	
Dimension						
Dimension (mm) W×H×D		Width (2P/3P/4P)	105/140	105/140	105/140	140/185
		Height	214	214	214	327
		Depth	87	87	87	111
Weight						
Weight(kg)/Fixed	2P		—	—	—	
	3P	0.913	1.45	1.532	4.758	
	4P	1.161	1.592	2.024	6.314	

Note :
¹⁾ The operating temperature of basic (dial code) electronic type is -35°C~+70°C ,and the operating temperature of standard (liquid crystal) electronic type is -5 °C ~+40 °C ;



WLM6L/WLM6LY Residual Current protection module		630	800	1250
Rated current (A) of circuit breaker 40°C		400-500-630	500-630-700-800	1000-1250
Rated insulation voltage U_i (V)		1000	1000	1000
Rated impulse withstand voltage (kV)		8	8	8
Rated operational voltage U_e (V),AC 50/60Hz		AC400(3P、3P+N、4P)	AC400(3P、3P+N、4P)	AC400V
Breaking capacity code		H Q	H Q	H Q
Number of poles	2P	- -	- -	- -
	3P	■ ■	■ ■	■ ■
	4P	■ ■	■ ■	■ ■
Rated ultimate short-circuit breaking capacity I_{cu} (kA)	AC380/400/415V	100 150	100 150	100 150
Rated service breaking capacity I_{cs} (kA)	AC380/400/415V	100 150	100 150	100 150
Rated residual making and breaking capacity $I\Delta_m$ (kA)		16.25 16.25	16.25 16.25	16.25 16.25
Limit non-actuating time Δt (ms) ¹⁾		0.06s/0.2s/0.5s/1s	0.06s/0.2s/0.5s/1s	0.06s/0.2s/0.5s/1s
Leakage alarm non-tripping function		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
overcurrent tripping type		Thermal type	Thermal type	Thermal type
Leakage tripping type		Electronic Type	Electronic Type	Electronic Type
Residual current type		AC	AC	AC
Standard		IEC/EN 60947-2		
Utilization category		A		
Ambient temperature		-40°C ~+70 °C ²⁾		
Safety of insulation		■		
Arcing distance		0		
Mechanical life (CO recycle)	Maintenance	15000	15000	15000
	AC415V,In	8000	8000	8000
Electrical life (CO recycle)	AC690V,In	2000	2000	2000
Release units				
Mounting and connection				
Fixed	Front connection	■	■	■
	Rear connection	■	■	■
Plug-in ³⁾	Front connection	■	■	■
	Rear connection	■	■	■
Draw-out ³⁾	Front connection	—	—	—
	Rear connection	—	—	—
DIN rail	Front connection	■	■	■
Dimension				
Dimension (mm) W×H×D 	Width (3P/4P)	140/184	210/280	210/280
	Height	327	275.5	275.5
	Depth	111	103	103
Weight				
Weight(kg)/Fixed	2P	—	—	—
	3P	5.2	8.437	9.8
	4P	6.672	11.245	13

Note :
¹⁾ The operating temperature of basic (dial code) electronic type is -35°C~+70°C ,and the operating temperature of standard (liquid crystal) electronic type is -5 °C ~+40 °C ;

7. HU Type Technical data

WLM7QHU Moulded Case Circuit Breaker		250/315		400		630/800	
Rated operating current In (A),40℃		16-20-25-32-40-50-63 -80-100-125-140- 160-180-200-225-250	280 300-315	250-315-350-400		400-500-630	630-700-800
Rated insulation voltage Ui (V)		1150		1250		1250	
Rated impulse withstand voltage Uimp (kV)		12		12		12	
Rated operational voltage Ue (V),AC		415,690,800,1000,1140V		415,690,800,1000,1140V		415,690,800,1000,1140V	
Breaking capacity code		M	H	M	H	M	H
Number of poles	3P	■	■	■	■	■	■
Rated ultimate short-circuit breaking capacity Icu(kA)	AC415V				100		100
	AC690V			60	65	60	65
	AC800V	35	50	50	50	50	50
	AC1000V	15	20	20	25	20	30
	AC1140V	15	15	15	20	15	20
Rated service breaking capacity Ics(kA)	AC415V				100		100
	AC690V			60	65	60	65
	AC800V	35	50	37.5	50	37.5	50
	AC1000V	15	20	15	20	20	30
	AC1140V	15	15	15	15	15	20
Standard		IEC/EN 60947-2					
Utilization category		A		A			
Ambient temperature		-40℃~+70℃					
Safety of insulation		■		■			
Arcing distance		0		0			
Mechanical life (C0 recycle)	Maintenance free	20000		15000		10000	
Electrical life (C0 recycle)		1500		1000-5000		1000-5000	
Release units							
Distribution protection TM		■		■		■	
Mounting and connection							
Fixed	Front connection	■		■		■	
	Rear connection	■		■		■	
Plug-in ¹⁾	Front connection	■		■		■	
	Rear connection	■		■		■	
Draw-out ¹⁾	Front connection	—		—		■	
	Rear connection	—		—		■	
DIN rail	Front connection	—		—		—	
Dimension							
Dimension(mm) W×H×D	Width	107		150		182	
	Height	200		257		270	
	Depth	109		125.8		125.8	
Weight							
Weight (kg)/Fixed	3P	3		5.8		8	



8. HUEQ Type Technical data

WLM7HUEQ Moulded Case Circuit Breaker		250/315		400		630/800	
Rated operating current In (A),40℃		16-20-25-32-40-50-63 -80-100-125-140- 160-180-200-225-250	280 300-315	250-315-350-400		400-500-630	630-700-800
Rated insulation voltage Ui (V)		1150		1250		1250	
Rated impulse withstand voltage Uimp (kV)		12		12		12	
Rated operational voltage Ue (V),AC		415,690,800,1000,1140V		415,690,800,1000,1140V		415,690,800,1000,1140V	
Breaking capacity code		M	H	M	H	M	H
Number of poles	3P	■	■	■	■	■	■
Rated ultimate short-circuit breaking capacity Icu(kA)	AC415V				100		100
	AC690V			60	65	60	65
	AC800V	35	50	50	50	50	50
	AC1000V	15	20	20	25	20	30
	AC1140V	15	15	15	20	15	20
Rated service breaking capacity Ics(kA)	AC415V				100		100
	AC690V			60	65	60	65
	AC800V	35	50	37.5	50	37.5	50
	AC1000V	15	20	15	20	20	30
	AC1140V	15	15	15	15	15	20
Standard		IEC/EN 60947-2					
Utilization category		A		A			
Ambient temperature		-40℃~+70℃					
Safety of insulation		■		■			
Arcing distance		0		0			
Mechanical life (C0 recycle)	Maintenance free	20000		15000		10000	
Electrical life (C0 recycle)		1500		1000-5000		1000-5000	
Release units							
Distribution protection TM		■		■		■	
Mounting and connection							
Fixed	Front connection	■		■		■	
	Rear connection	■		■		■	
Plug-in ¹⁾	Front connection	■		■		■	
	Rear connection	■		■		■	
Draw-out ¹⁾	Front connection	—		—		■	
	Rear connection	—		—		■	
DIN rail	Front connection	—		—		—	
Dimension							
Dimension(mm) W×H×D	Width	107		150		182	
	Height	200		257		270	
	Depth	109		125.8		125.8	
Weight							
Weight (kg)/Fixed	3P	3		5.8		8	



8. HUEQ Type Technical data

WLM7HUEQ Moulded Case Circuit Breaker		250/315		400		630/800	
Rated operating current In (A),40℃		16-20-25-32-40-50-63 -80-100-125-140- 160-180-200-225-250	280 300-315	250-315-350-400		400-500-630	630-700-800
Rated insulation voltage Ui (V)		1150		1250		1250	
Rated impulse withstand voltage Uimp (kV)		12		12		12	
Rated operational voltage Ue (V),AC		415,690,800,1000,1140V		415,690,800,1000,1140V		415,690,800,1000,1140V	
Breaking capacity code		H	Q	H	Q	H	Q
Number of poles	3P	■	■	■	■	■	■
Rated ultimate short-circuit breaking capacity Icu(kA)	AC415V						
	AC690V						
	AC800V	50	50	50	50	50	50
	AC1000V	20	20	25	25	30	30
	AC1140V	15	15	20	20	20	20
Rated service breaking capacity Ics(kA)	AC415V						
	AC690V						
	AC800V	40	50	40	50	40	50
	AC1000V	20	20	20	20	30	30
	AC1140V	15	15	15	15	20	20
Standard		IEC/EN 60947-2					
Utilization category		A		A			
Ambient temperature		-40℃~+70℃					
Safety of insulation		■		■			
Arcing distance		0		0			
Mechanical life (C0 recycle)	Maintenance free	20000		15000		10000	
Electrical life (C0 recycle)		1500		1000-5000		1000-5000	
Release units							
Distribution protection TM		■		■		■	
Mounting and connection							
Fixed	Front connection	■		■		■	
	Rear connection	■		■		■	
Plug-in ¹⁾	Front connection	■		■		■	
	Rear connection	■		■		■	
Draw-out ¹⁾	Front connection	—		—		■	
	Rear connection	—		—		■	
DIN rail	Front connection	—		—		—	
Dimension							
Dimension(mm) W×H×D	Width	107		140		182	
	Height	200		257		270	
	Depth	109		125.8		125.8	
Weight							
Weight (kg)/Fixed	3P	3		5.8		8	

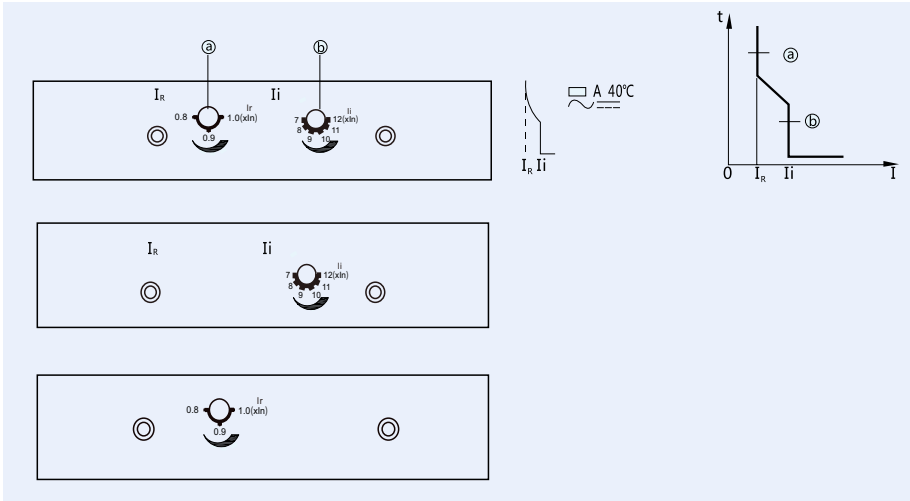


7. Release

7.1 Protection for power distribution

7.1.1 Thermo-magnetic type release TM

Thermo-magnetic release of WLM6RT-100, 160, 250, 400, 630, 800, 1250, 1600 breakers can be set to meet protection requirements



Thermal-magnetic trip units 100 to 250A

Ratings (A)	In at 40 ° C ^[1]	12.5	16	20	25	32	40	50	63	80	100	125	160	200	250	
		breaker	ComPact WLM7Q100	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	-	-	-
	ComPact WLM7Q160	-	-	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	-	-	
	ComPact WLM7Q250	-	-	-	-	-	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
Thermal protection																
Pick-up (A) tripping between 1.05 and 1.20 I_R	$I_R = I_n \times \dots$	adjustable in amps from 0.8 to 1 x I_n														
Time delay (s)	t_r	non-adjustable														
	t_r at 5-10 x I_n	100A to 630A														
	t_r at 10 x I_R	1250A														
Magnetic protection																
Pick-up (A) accuracy $\pm 20\%$	I_m	fixed													adjustable	
	ComPact WLM7Q100	190	300	400	500	500	500	640	800							
	ComPact WLM7Q160/250	190	300	400	500	500	500	640	800	1250	1250	5 to 10x I_n				
Time delay	t_m	fixed														
Neutral protection																
Unprotected neutral	4P 3D	no detection														
Fully protected neutral	4P 4D	1 x I_R														

[1] For temperatures greater than 40 ° C, the thermal protection characteristics are modified. See the temperature derating table.

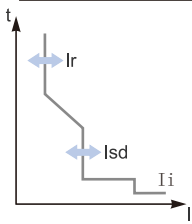
Magnetic trip units Motor 100A-250A

Ratings (A)	In at 65 ° C ^[1]	12.5	16	20	25	32	40	50	63	80	100	125	160	200	250	
		breaker	ComPact WLM6Q100	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	-	-	-
	ComPact WLM6Q160	-	-	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	-	-	
	ComPact WLM6Q250	-	-	-	-	-	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
Instantaneous magnetic protection																
Pick-up (A) accuracy $\pm 20\%$	$I_m = I_n \times \dots$	Adjustable from 6 to 14 x I_n (settings 2-15In)										Adjustable from 9 to 14 x I_n (settings 9, 10, 11, 12, 13, 14)				
Time delay (ms)	t_m	fixed														

[1] MA100 3P adjustable from 6 to 14 x I_n .
MA100 4P adjustable from 9 to 14 x I_n .

Note: all the trip units have a transparent lead-sealable cover that protects access to the adjustment dials.

Thermal-magnetic trip units 100 to 630A



Ratings (A)	In at 40 ° C ^[1]	40	100	160	250	400	630
Circuit breaker	ComPact WLM6Q100	○	○	-	-	-	-
	ComPact WLM6Q160	○	○	○	-	-	-
	ComPact WLM6Q50	○	○	○	○	-	-
	ComPact WLM6Q400	-	-	-	○	○	-
	ComPact WLM6Q630	-	-	-	○	○	○

L Long-time protection

Pick-up (A)	tripping between 1.05 and 1.20 Ir	Io	value depending on trip unit rating (In) and setting on dial													
In = 40 A	Io =	18	18	20	23	25	28	32	36	40						
In = 100 A	Io =	40	45	50	55	63	70	80	90	100						
In = 160 A	Io =	63	70	80	90	100	110	125	150	160						
In = 250 A (WLM6Q250)	Io =	100	110	125	140	160	175	200	225	250						
In = 250 A (WLM6Q400)	Io =	70	100	125	140	160	175	200	225	250						
In = 400 A	Io =	160	180	200	230	250	280	320	360	400						
In = 630 A	Io =	250	280	320	350	400	450	500	570	630						

Ir = Io x ... 9 fine adjustment settings from 0.9 to 1 (0.9 - 0.92 - 0.93 - 0.94 - 0.95 - 0.96 - 0.97 - 0.98 - 1) for each value of Io

Time delay (s)	tr	non-adjustable
accuracy 0 to -20%	1.5 x Ir	400
	6 x Ir	16
	7.2 x Ir	11

Thermal memory 20 minutes before and after tripping

S₀ Short-time protection with fixed time delay

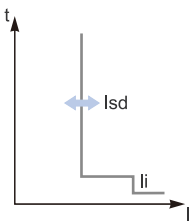
Pick-up (A)	Isd = Ir x ...	1.5	2	3	4	5	6	7	8	10
accuracy ±10 %										
Time delay (ms)	tsd	non-adjustable								
	Non-tripping time	20								
	Maximum break time	80								

I Instantaneous protection

Pick-up (A)	Ii non-adjustable	600	1500	2400	3000	4800	6900	
accuracy ±15 %								
	Non-tripping time	10 ms						
	Maximum break time	50 ms						

[1] If the trip units are used in high-temperature environments, the MicroLogic setting must take into account the thermal limitations of the circuit breaker. See the temperature derating table.

Thermal-magnetic trip units 100 to 630A



Ratings (A)	In at 65 ° C ^[1]	320	500
Circuit breaker	ComPact WLM6Q400	○	-
	ComPact WLM6Q630	○	○

S Short-time protection

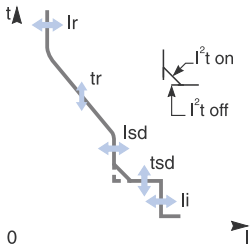
Pick-up (A)	Isd	Adjustable directly in amps
accuracy ±15 %		9 settings: 1600, 1920, 2240, 2560, 9 settings: 2500, 3000, 3500, 4000, 2880, 3200, 3520, 3840, 4160 A 4500, 5000, 5500, 6000, 6500 A
Time delay (ms)	tsd	Non-adjustable
	Non-tripping time	10
	Maximum break time	60

I Instantaneous protection

Pick-up (A)	Ii non-adjustable	4800	6500
accuracy ±15 %			
	Non-tripping time	0	
	Maximum break time	30 ms	

[1] Motor standards require operation at 65 ° C. Circuit-breaker ratings are derated to take this requirement into account.

Electromagnetic type trip units 100 to 630A with Ground-fault protection



Ratings (A)	In at 40 °C [1]	40 [2]	100	160	250	400	630
Circuit breaker	ComPact WLM6Q100	○	○	-	-	-	-
	ComPact WLM6Q160	○	○	○	-	-	-
	ComPact WLM6Q250	○	○	○	○	-	-
	ComPact WLM6Q400	-	-	-	-	○	-
	ComPact WLM6Q630	-	-	-	-	○	○

L Long-time protection

Pick-up (A) tripping between 1.05 and 1.20 Ir	Ir = ...	dial setting	value depending on trip unit rating (In) and setting on dial									
		In = 40 A Io =	18	18	20	23	25	28	32	36	40	
		In = 100 A Io =	40	45	50	55	63	70	80	90	100	
		In = 160 A Io =	63	70	80	90	100	110	125	150	160	
		In = 250 A Io =	100	110	125	140	160	175	200	225	250	
		In = 400 A Io =	160	180	200	230	250	280	320	360	400	
		In = 630 A Io =	250	280	320	350	400	450	500	570	630	
		keypad setting	Fine adjustment in 1 A steps below maximum value set on dial									
Time delay (s) accuracy 0 to -20 %	tr = ...	keypad setting	0.5	1	2	4	8	16				
		1.5 x Ir	15	25	50	100	200	400				
		6 x Ir	0.5	1	2	4	8	16				
		7.2 x Ir	0.35	0.7	1.4	2.8	5.5	11				
Thermal memory	20 minutes before and after tripping											

S Short-time protection with adjustable time delay

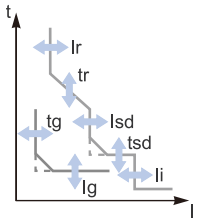
Pick-up (A) accuracy ±10 %	Isd = Ir x	dial setting for MicroLogic 5	1.5	2	3	4	5	6	7	8	10
		keypad settings for MicroLogic 6	Adjustment in steps of 0.5 x Ir over the range 1.5 x Ir to 10 x Ir								
Time delay (s)	tsd = ...	keypad setting	I ² off	0	0.1	0.2	0.3	0.4			
		setting	I ² on	-	0.1	0.2	0.3	0.4			
		Non-tripping time (ms)		20	80	140	230	350			
		Maximum break time (ms)		80	140	200	320	500			

I Instantaneous protection

Pick-up (A) accuracy ±15 %	Ii = In x	keypad setting	Adjustment in steps of 0.5 x In over the range 1.5 x In to: 15 x In (40 to 160 A), 12 x In (250 to 400 A) or 11 x In (630 A)								
		Non-tripping time	10 ms								
		Maximum break time	50 ms								

G Ground-fault protection

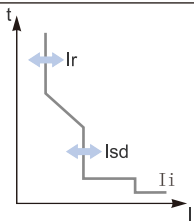
Pick-up (A) accuracy ±10 %	Ig = In x	dial setting										
		In = 40 A	0.4	0.4	0.5	0.6	0.7	0.8	0.9	1	Off	
		In > 40 A	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	Off	
			Fine adjustment in 0.05 A steps using the keypad									
Time delay (s)	tg = ...	keypad setting	I ² off	0	0.1	0.2	0.3	0.4				
		setting	I ² on	-	0.1	0.2	0.3	0.4				
		Non-tripping time (ms)		20	80	140	230	350				
		Maximum break time (ms)		80	140	200	320	500				
Test	Ig function		built-in									



[1] If the trip units are used in high-temperature environments, the MicroLogic setting must take into account the thermal limitations of the circuit breaker. See the temperature derating table.

[2] For 40 A rating, the neutral N/2 adjustment is not possible.

Electromagnetic type trip units 100 to 630A with integrated earth leakage protection



Ratings (A)	In at 40 ° C [1]	40	100	160	250	400	570
Circuit breaker	ComPact WLM6Q100	○	○				
	ComPact WLM6Q160	○	○	○			
	ComPact WLM6Q250	○	○	○	○		
	ComPact WLM6Q400					○	
	ComPact WLM6Q630					○	○

L Long-time protection	
Pick-up (A)	Io value depending on the rating (In) and the dial setting
tripping between 1.05 and 1.20 Ir	In = 40 A Io = 18 18 20 23 25 28 32 36 40
	In = 100 A Io = 40 45 50 55 63 70 80 90 100
	In = 160 A Io = 63 70 80 90 100 110 125 150 160
	In = 250 A Io = 100 110 125 140 160 175 200 225 250
	In = 400 A Io = 160 180 200 230 250 280 320 360 400
	In = 570 A Io = 250 280 320 350 400 450 500 570 570
Ir = Io x	9 fine adjustment settings from 0.9 to 1 (0.9 – 0.92 ... 0.98 - 1)

Time delay (s)	tr non-adjustable
accuracy 0 to -20%	at 1.5 x Irtr = 400 s
	at 6 x Ir tr = 16 s
	at 7.2 x Irtr = 11 s

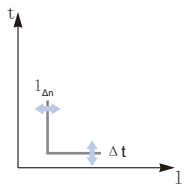
Thermal memory 20 minutes before and after tripping

S₀ Short-time protection with fixed time delay

Pick-up (A)	Isd = Ir x ...	1.5	2	3	4	5	6	7	8	10
accuracy ±10 %										
Time delay (ms)	tsd non-adjustable									
	Non-tripping time	20								
	Maximum break time	80								

I Instantaneous protection

Pick-up (A)	Ii non-adjustable	600	1500	2400	3000	4800	6900
accuracy ±15 %	Non-tripping time	10 ms					
	Maximum break time	50 ms					



R Earth leakage protection / Earth leakage alarm	
Sensitivity (A)	Type A, adjustable (9 positions)
	In = 40 A IΔn = 0.03 0.03 0.1 0.3 0.5 1 3 5 OFF
	In = 100 A IΔn = 0.03 0.03 0.1 0.3 0.5 1 3 5 OFF
	In = 160 A IΔn = 0.03 0.03 0.1 0.3 0.5 1 3 5 OFF
	In = 250 A IΔn = 0.03 0.03 0.1 0.3 0.5 1 3 5 OFF
	In = 400 A IΔn = 0.3 0.3 0.5 1 3 5 10 10 OFF
	In = 570 A IΔn = 0.3 0.3 0.5 1 3 5 10 10 OFF
Time delay Δt (ms)	Adjustable Δt = 0 60 [2] 150 [2] 500 [2] 1000 [2]
Maximum break time (ms)	<40 <140 <300 <800 <1500 ms

[1] For the use in high temperature environment, take into account the thermal limitation of the breaker.
 [2] The time delay (Δt) is mandatory and forced to "Δt = 0" when the IΔn dial is set on 30mA (0.03). The time delay has no effect when the dial IΔn is set to the "off" position

8. Products Controller function Technical Indicator

Micrologic 5.0E measurement function

Protection function	Current (A)	Overload protection	●	
		Short circuit short delay protection	●	
		Instantaneous action protection	●	
		Netural line protection (4P)	○	
		Grounding protection	●	
		Current unbalance protection	○	
		Overload preliminary warning	○	
Voltage(V)	Voltage(V)	Breaking zero	●	
		Voltage unbalance protection	●	
		Over frequency and under frequency protection	●	
		Phase sequence protection	●	
Measurement function	Current (A)	Phase current and Neutral line current	●	
		Average phase current	●	
		The maximum value of phase current and neutral line current	●	
		Percentage of grounding faults	●	
		Interphase Unbalanced Current value	●	
	Voltage(V)	Voltage(V)	Line Voltage	●
			Line Voltage	●
			Average line voltage	●
			Average line voltage	●
			Unbalanced line voltage, unbalanced phase voltage	●
			Phase sequence	●
	Power	Power	Frequency (Hz)	●
			Active	○
			Active	○
			Seen in	○
	Electricity	Electricity	Cosφ Power factors and measured	○
Active (kWh), reactive (kVARh), visual (kVAh)			○	
Maintenance function	The figures record	Times of all kinds of prection of tripping	●	
	MAX/MIN value record	Max/Min record of current and voltage from each phase	●	
	Record	Trip ,alarm,and deflection record	●	
	Contact abrasive wear	Contact abrasive wear record	●	
	Times of operate	The times of operate record	●	
	RTC Function	Real time clock	●	
	Auxiliary alarm detection function function	Auxiliary alarm detection, display the state of circuit breaker	●	
	Electric operation control function	Remote electric operation control function	●	
	Human and machine interaction	Human and machine interaction	LED display	●
			LCD display	●
Enter setting			●	
Communication function	Communication function	Moedbus RTU DL/T645	●	

● Have ○ Optional

8. LCD Products Controller function Technical Indicator

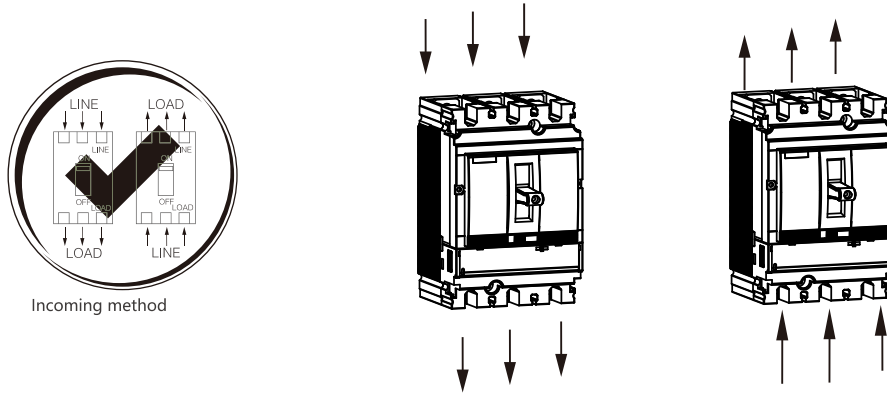
Table of characteristics & functions of intelligent protection controller:
 Table 1: Characteristics & Functions of Product

Spec. & Functions			
Classification	Description		
Classification	LCD+LED indicator light		
Interface operation	Key		
Protective functions	Current protection	Overload long time delay protection	●
		Short-circuit short time delay protection	●
		Short-circuit instantaneous protection	●
		Overload pre-alarm function	●
	Voltage protection	Under-voltage and over-voltage protection functions	●
		Phase loss protection function	●
		Protection function of fault neutral line at power supply side	-
		Protection function of voltage loss and trip at power supply side	-
	Communication function	DL/T 645-2007 Multi-functional meter communication protocol	●
		Modbus-RTU communication protocol	○
		Communication hardware 1-channel RS-485	●
	Function of external DI/O port	Auxiliary communication power input	○
		1-channel DI/O programmable control input	○
		1-channel passive contact output	-
	Fault record	Storage of 10 times of trip faults (the upper computer needs to read the feedback information uploaded each time for query of more records)	●
		Record of max./min. voltage and current in 30 days	●
		Record of 10 self-check events of protector	
		Record of 80 protection function enable/disable events	●
		Record of 10 gate position change events●	●
		Record of 10 alarm events	●
		Record of 10 times of high voltage power loss and recovery	●
Time function	With the function of real-time clock which consists of YY, MM, DD, hh, mm and ss.	●	

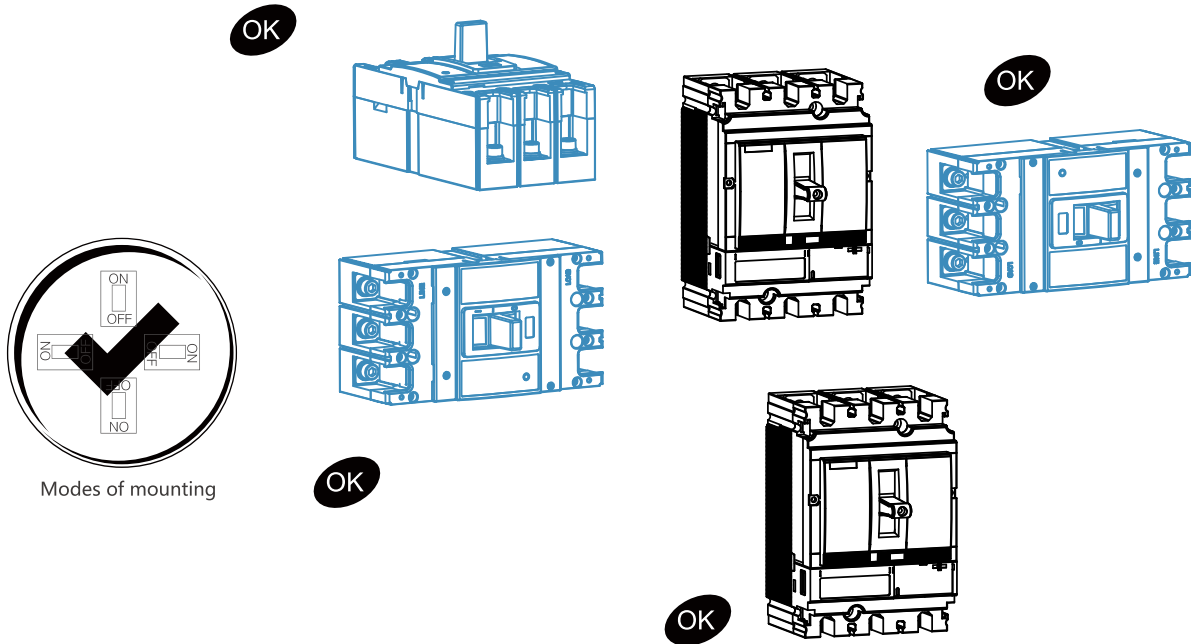
Notes: symbol "●" indicates that this function is available; symbol "○" indicates that this function can be selected; and symbol "-" indicates that this function is not available.

10. Mounting of circuit breaker

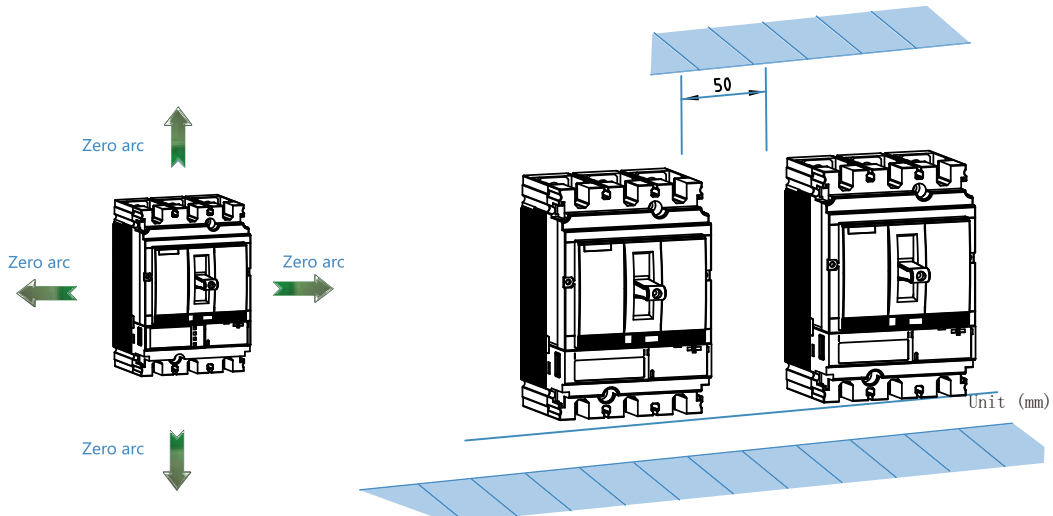
10.1 Modes of down-lead



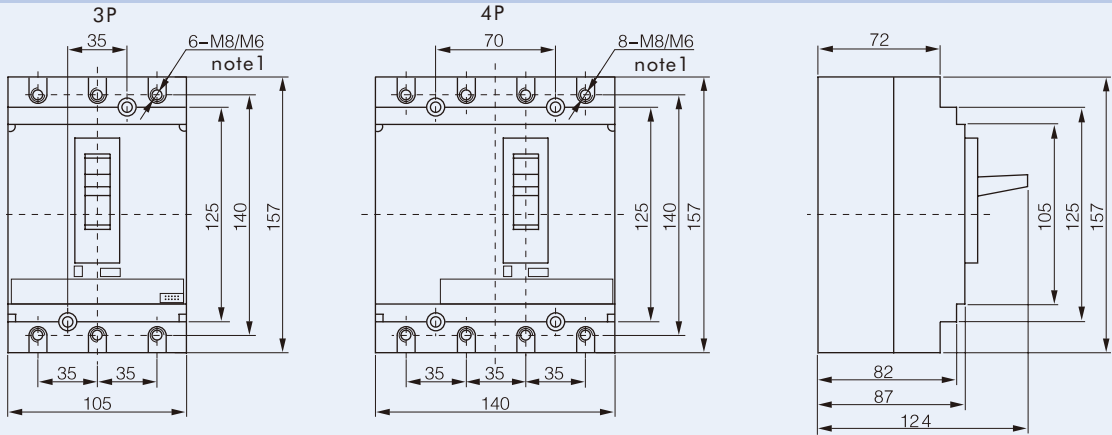
10.2 Modes of mounting



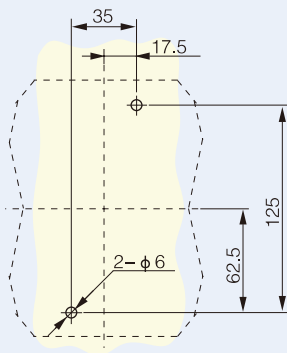
10.3 Safe distance



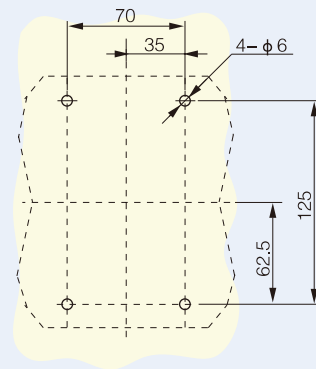
WLM6Q-250Q(3P/4P)Front connection



Attention1:when in > 100A,Fixing screw size should be M8, When $I_n \leq 100A$, fixing screw size should be M6.



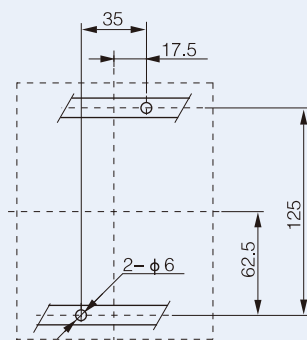
3P



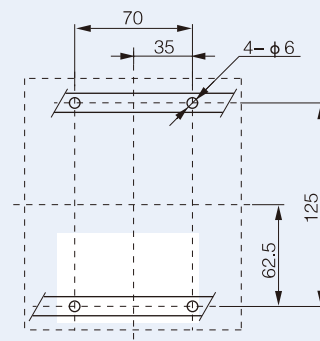
4P

Unit (mm)

WLM6Q-250Q DIN-rail mounting



3P

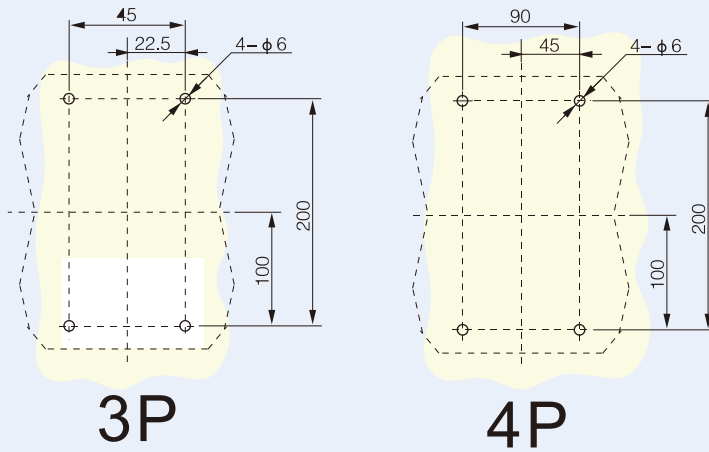
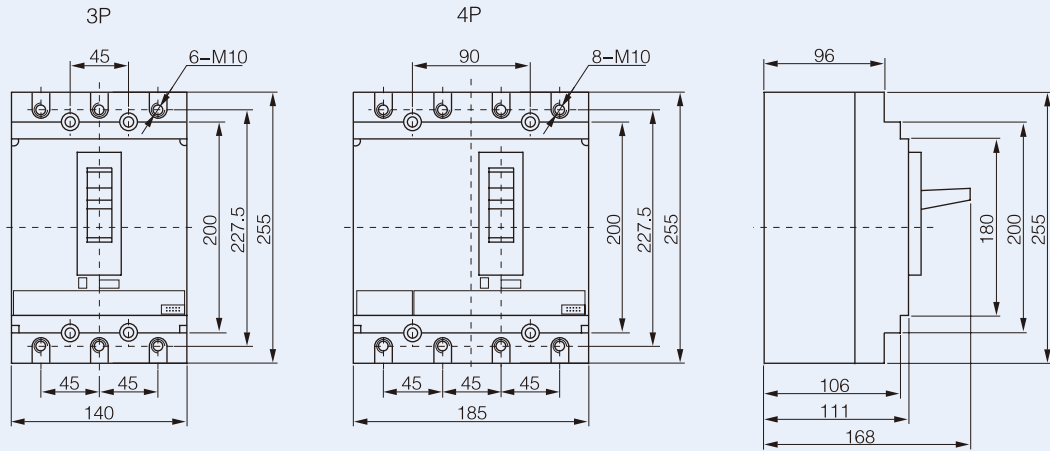


4P

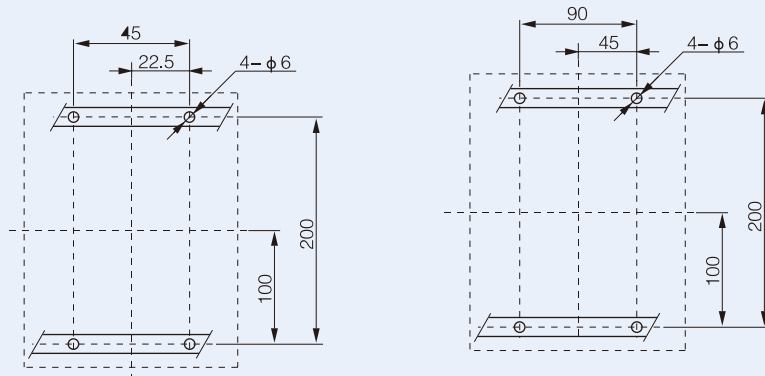
Unit (mm)

11.3 WLM6Q-400、WLM6Q-630

WLM6Q-400/630 Front connection

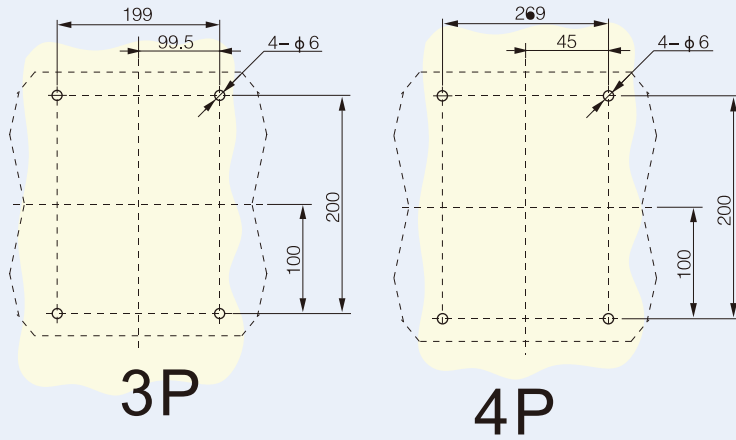
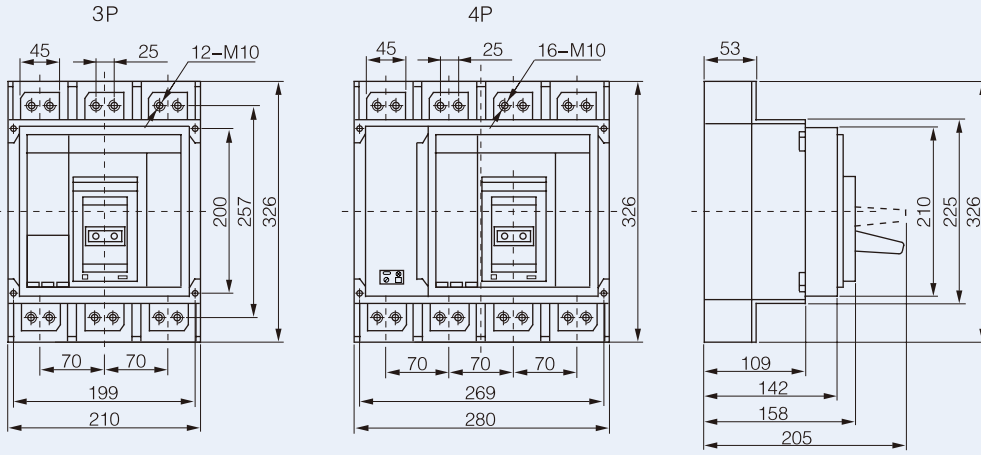


WLM6Q-400Q/630Q DIN-rail mounting

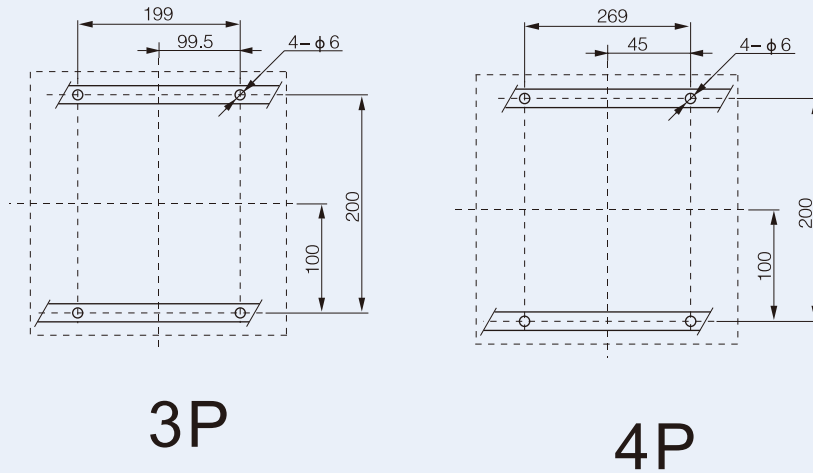


11.5 WLM6Q-1250/1600

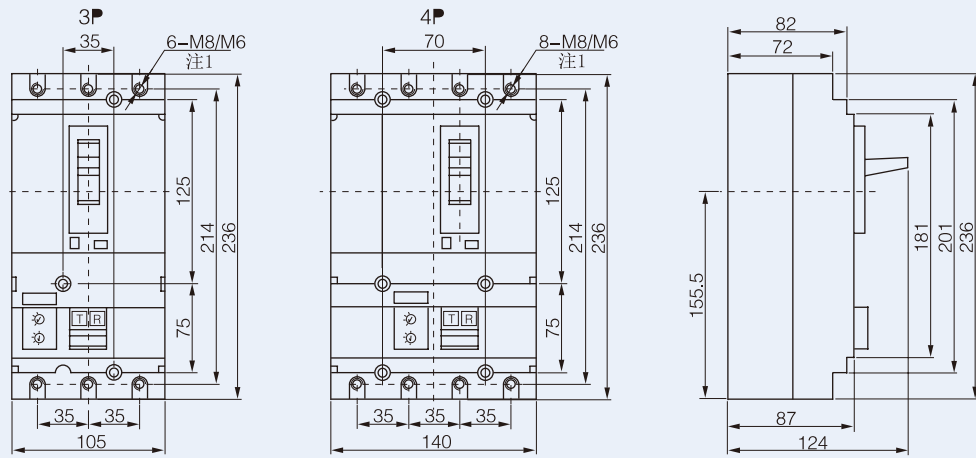
WLM6Q-1250/1600 Front connection



WLM6Q-1250/1600 DIN-rail mounting

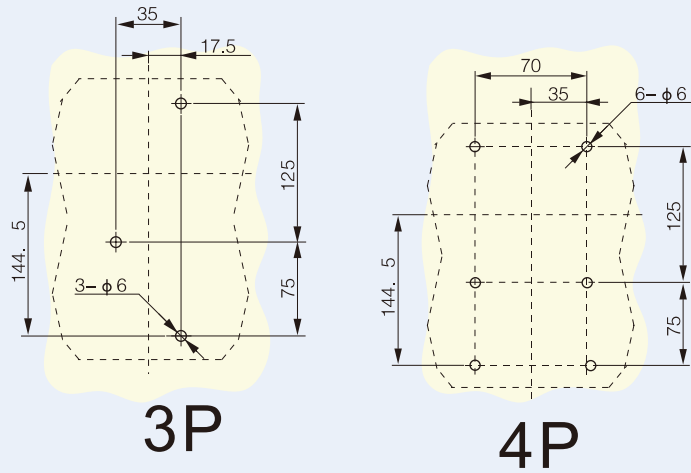


WLM6LYQ-100/160/250 Front connection



注1: 当 $I_n > 100A$ 时接线螺栓为 M8, 当 $I_n \leq 100A$ 时接线螺栓为 M6.

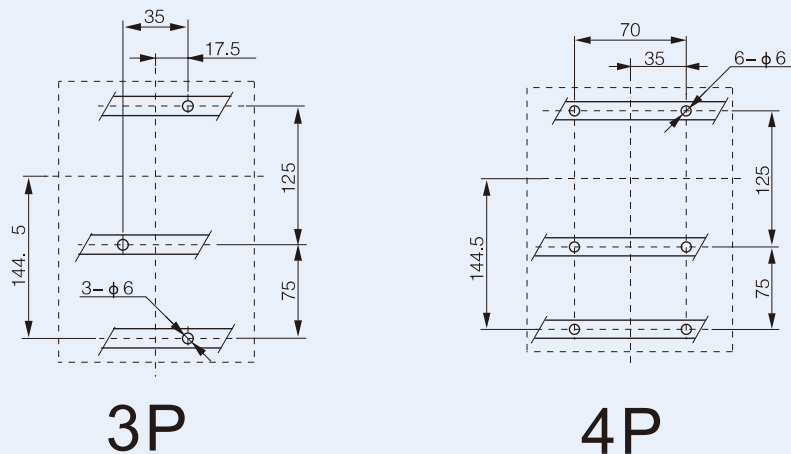
Attention1: when $I_n > 100A$, Fixing screw size should be M8, When $I_n \leq 100A$, fixing screw size should be M6.



3P

4P

WLM6LYQ-100/160/250 DIN-rail mounting

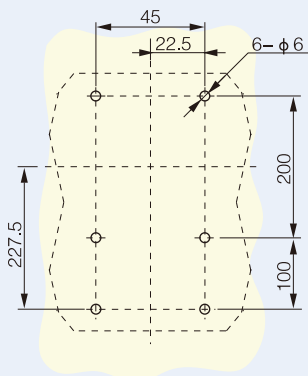
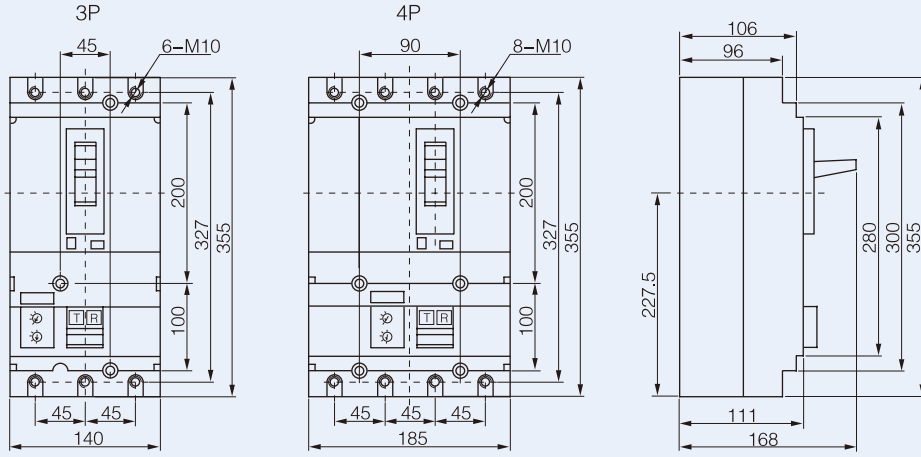


3P

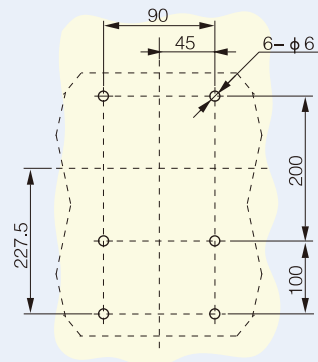
4P

11.5 WLM6LYQ-400/630

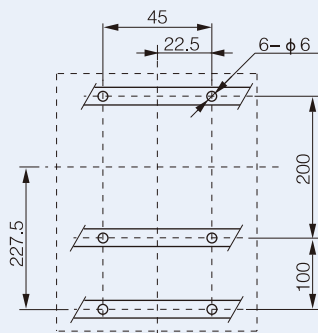
WLM6LYQ-400/630 Front connection



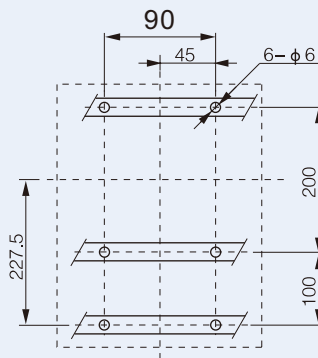
3P



4P



3P



4P

WLM6Q accessories and auxiliaries

Selection of auxiliaries

Standard

All ComPact WLM6Q100/160/250 circuit breakers and switch-disconnectors have slots for the electrical auxiliaries listed below.

5 indication contacts

b 2 ON/OFF (OF1 and OF2)

b 1 trip indication (SD)

b 1 fault-trip indication (SDE)

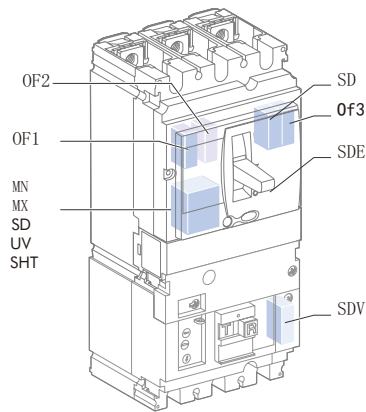
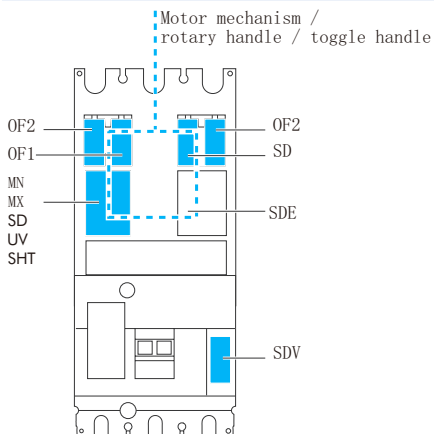
b 1 earth-fault indication (SDV), when the device is equipped with Leakage protection unit

b either 1 MN undervoltage release

b or 1 MX shunt release.

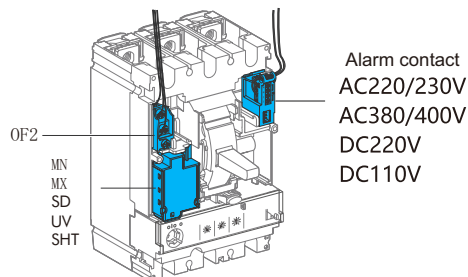
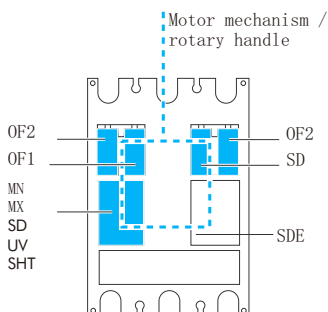
WLM6LYQ-100/160/250/400/630






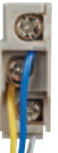
Standard



WLM6EQ-100/160/250/400/630

Standard



Accessory name	Rated operatin voltage	Applicable shell frame
 <p>MX</p> <p>Shunt release</p> 	<p>AC220/230V AC380/400V DC220V DC110V</p>	<p>WLM6Q-100 WLM6Q-160 WLM6Q-250 WLM6Q-400 WLM6Q-630</p>
 <p>UV</p> <p>Undervoltage release</p> 	<p>AC220/230V AC380/400V</p>	<p>WLM6Q-100 WLM6Q-160 WLM6Q-250 WLM6Q-400 WLM6Q-630</p>
 <p>AX</p> <p>Auxiliary contact</p>	<p>AC220/230V AC380/400V DC220V DC110V</p>	<p>WLM6Q-100 WLM6Q-160 WLM6Q-250 WLM6Q-400 WLM6Q-630</p>
 <p>AL</p> <p>Alarm contact</p>		<p>WLM6Q-100 WLM6Q-160 WLM6Q-250 WLM6Q-400 WLM6Q-630</p>

Withdrawable circuit breakers

In addition to the advantages provided by the base, installation on a chassis facilitates **handling**. It offers **three positions**, with transfer from one to the other after mechanical unlocking:

- b connected: the power circuits are connected
- b disconnected: the power circuits are disconnected, the device can be operated to check auxiliary operation
- b removed: the device is free and can be removed from the chassis.

Parts of a withdrawable configuration

A withdrawable configuration requires two side plates installed on the base and two sides plates mounted on the circuit breaker. Similar to the plug-in version, a safety trip causes automatic tripping if the device is ON, before engaging or withdrawing it, and enables device operation in the disconnected position.

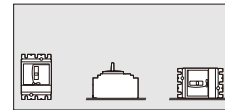
Accessories

Accessories are the same as for the base, with in addition:

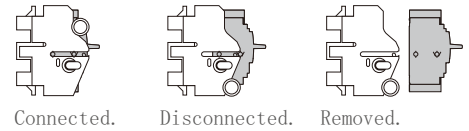
- b auxiliary contacts for installation on the fixed part, indicating the "connected" and "disconnected" positions

Locking by 1 to 3 padlocks (shackle diameter 5 to 8 mm), to:

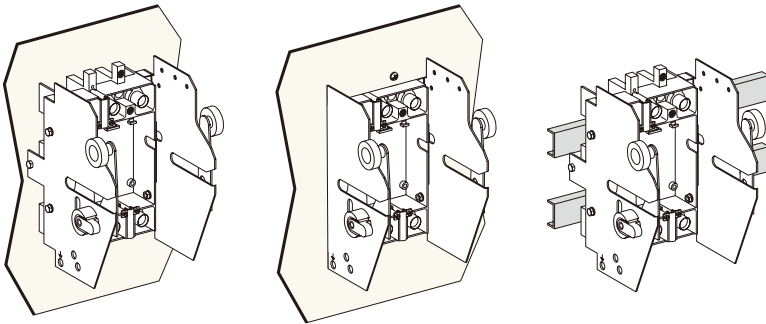
Withdrawable Com Pact WLM6Q250.



Installation positions.

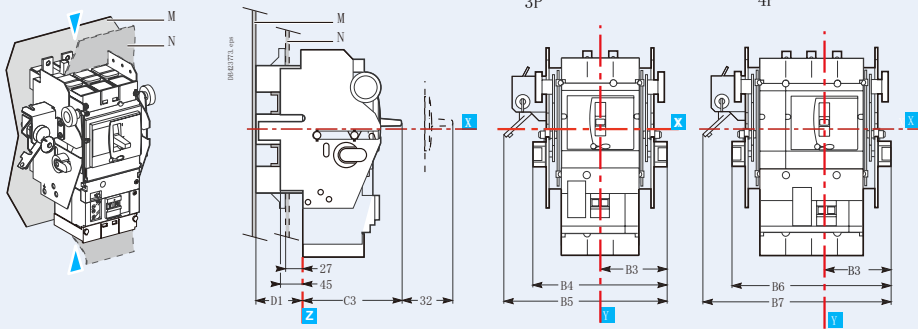


Mounting



Mounting on a backplate. Mounting through a front panel. Mounting on rails.

WLM6-250Q/400Q/630Q withdrawable version

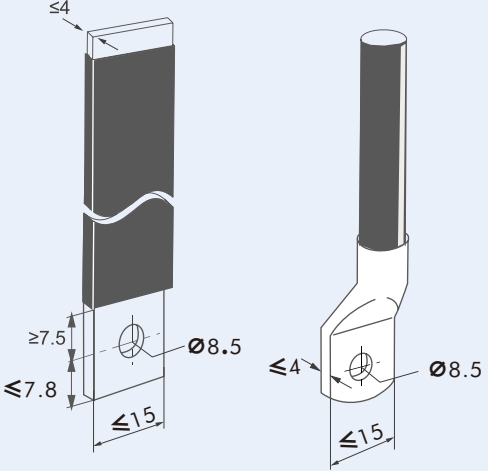
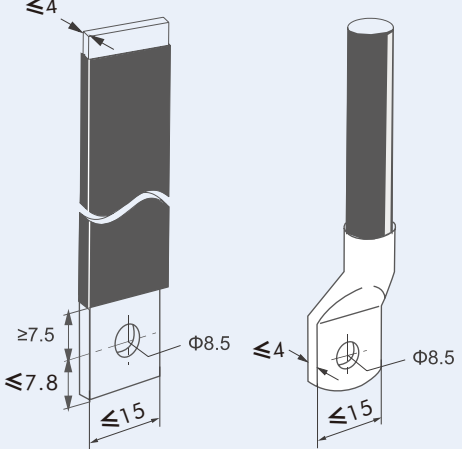
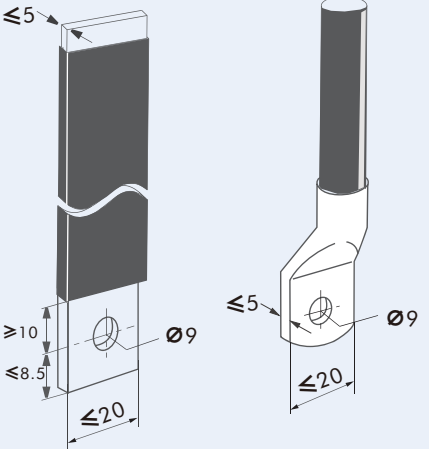
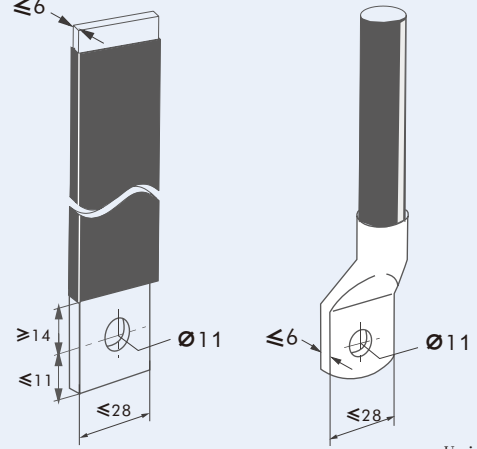
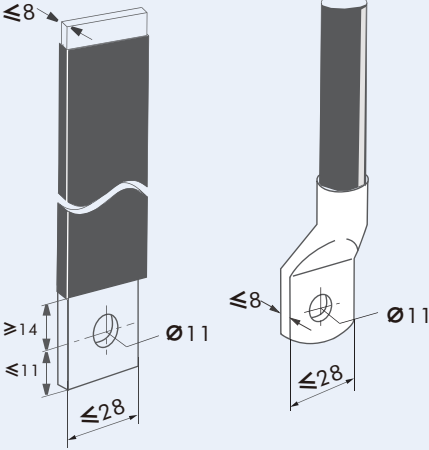
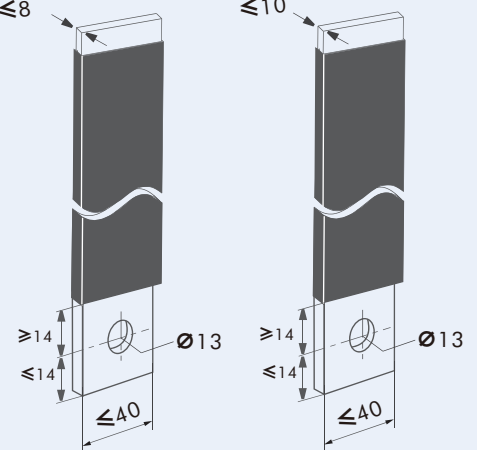


Type	A	A2	A5	A6	A7	A10	A11	B	B1	B2	B3	B4	B5	B6	B7	C3	D1
WLM6Q-250Q	80.5	94	155.5	236	169	175	210	52.5	105	140	92.5	185	216	220	251	126	75
WLM6Q400/630Q	127.5	142.5	227.5	355	242.5	244	281	70	140	185	110	220	250	265	295	168	100

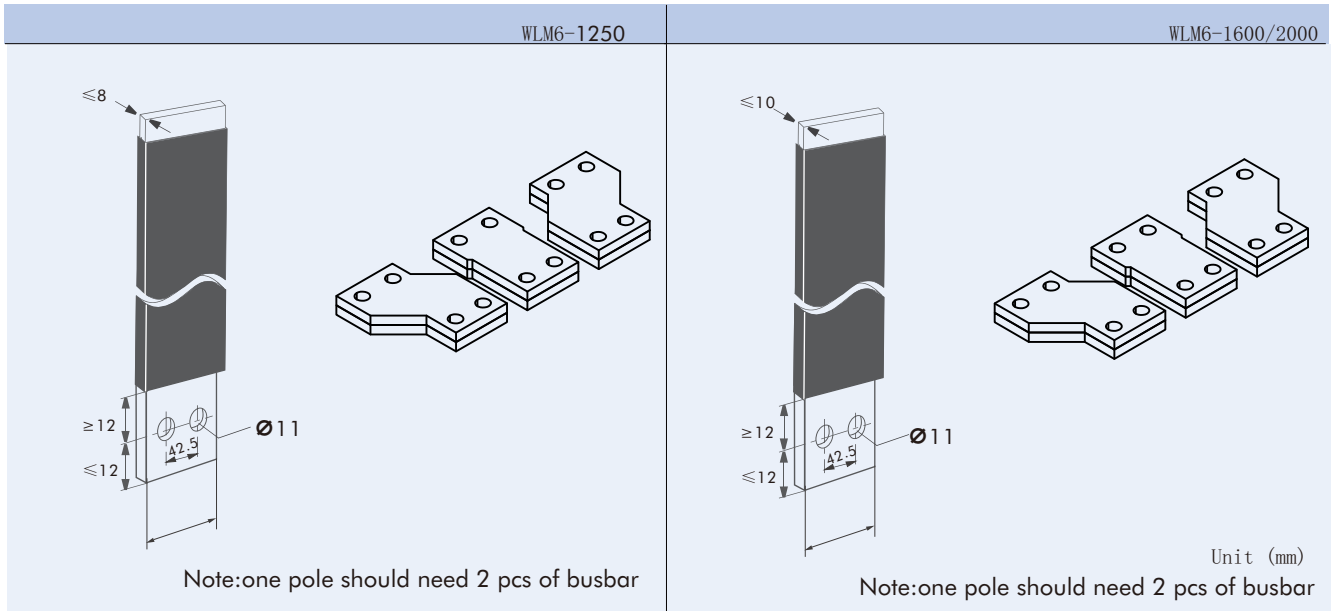
Unit (mm)

11.9 Wiring

Note: the busbar silvering is 3μ

WLM6-125	WLM6-160
	 <p style="text-align: right;">Unit (mm)</p>
WLM6-250	WLM6-400
	 <p style="text-align: right;">Unit (mm)</p>
WLM6-630	WLM6-800 (630A) WLM6-800
	 <p style="text-align: right;">Unit (mm)</p>

Note:the busbar silvering is 3 μ



12. Accessories characteristics and installation

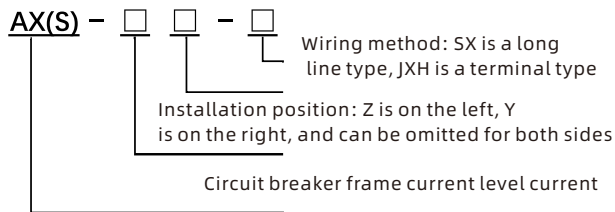
WLM6 moulded case circuit breaker has various accessory modules, which can be found in P84 for more details

12.1 AX Auxiliary contact

9.1.1 Function

Remotely indicate the circuit breaker's making (on) or breaking / tripping (OFF) status, connected to the auxiliary circuit of the circuit breaker.

12.1.2 Model description



Name: AX represents auxiliary, (S) represents double

12.1.2 Code for mccb Frame

Frame	125/160	250	400
code	AX-125	AX-250	AX-400

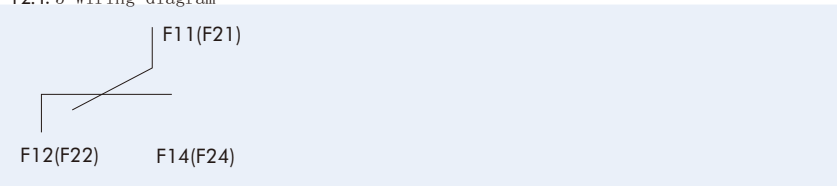
12.1.3 Indication of circuit breaker status

The circuit breaker is in the "off" or "free trip" position	double AX	
	single AX	
"Normally closed" contacts status	change from "closed" to "open", change from "open" to "closed"	

12.1.4 Electrical characteristics

Ue (V)	AC		DC		
	230V	400V	110	220	24
In (A)	0.3	0.3	0.15	0.15	0.15

12.1.5 Wiring diagram



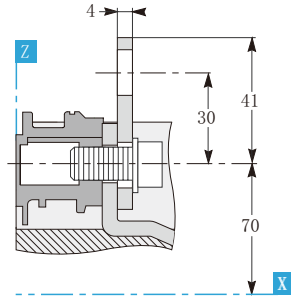
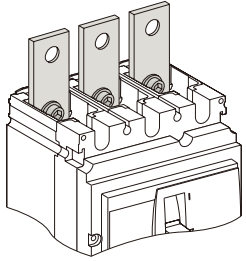
AX-125 single auxiliary contact



AXS-125 Double auxiliary contact

12. WLM6Q100 to 630A with Busbar

Straight terminal extension (for WLM6Q100 to 250 only)

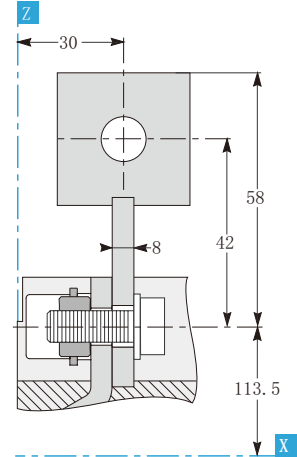
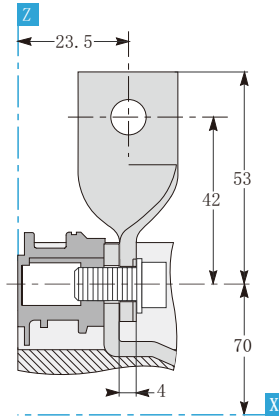
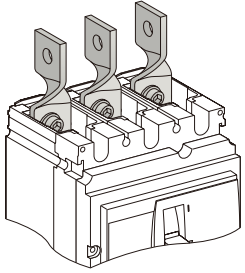


Edgewise terminal extensions

WLM6Q100 to 250

WLM6Q400/630

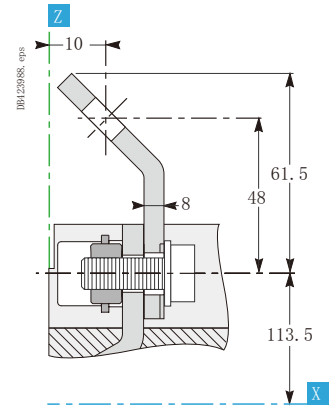
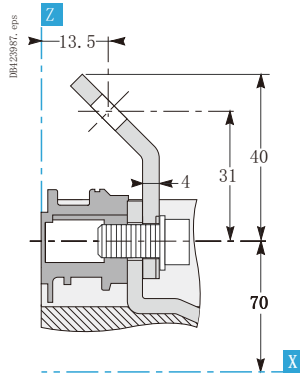
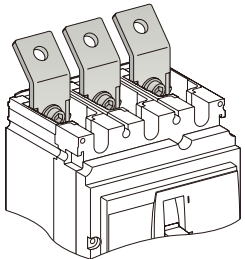
DB115163, eps



45° terminal extensions

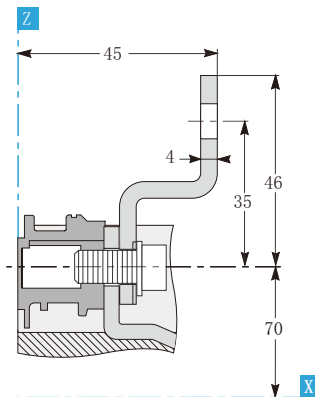
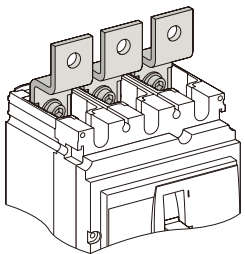
WLM6Q100 to 250

WLM6Q400/630



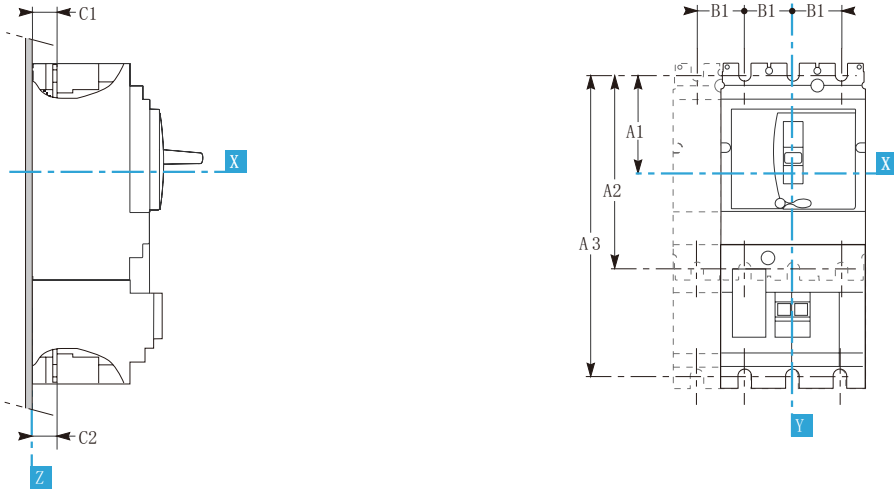
Double-L terminal extensions

WLM6Q 100 to 250



12 WLM6Q100 to 630 with/without Leakage protection unit fixed version

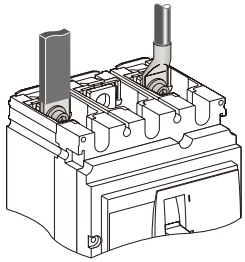
Connection locations



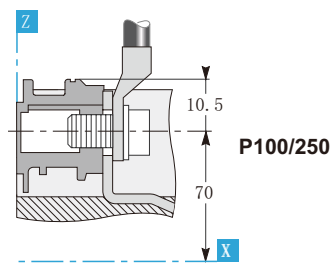
Type	A1	A2	B1	C1	C2
WLM6Q100/160	70	140	35	19.5	19.5
WLM6Q250	70	140	35	21.5	19.5
WLM6Q400/630	113.5	227	45	26	26

Type	A1	A3	B1	C1	C2
WLM6Q100/160+Unit	70	215	35	19.5	21.5
WLM6Q250 +Unit	70	215	35	21.5	21.5
WLM6Q400/630 +Unit	113.5	327	45	26	26

Front connection without accessories

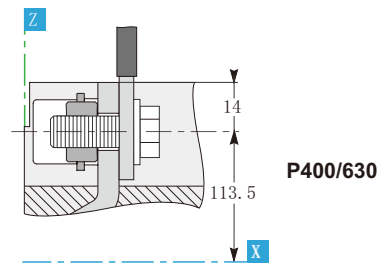


WLM6Q100 to 250



Cables with lugs/bars

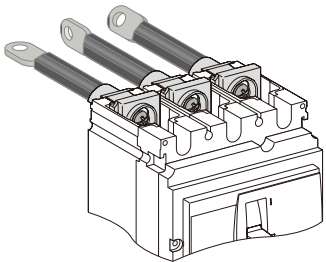
WLM6Q400/630



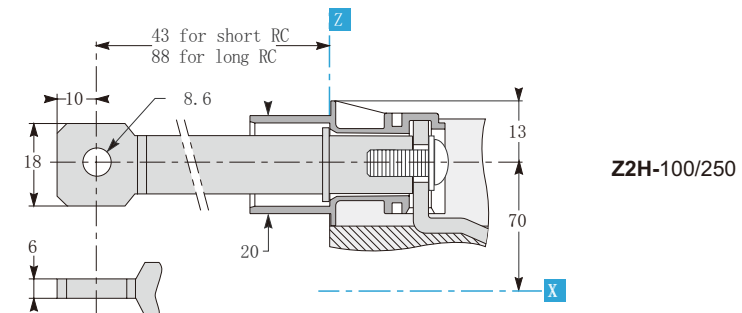
Bars/cables with lugs

Connection with accessories

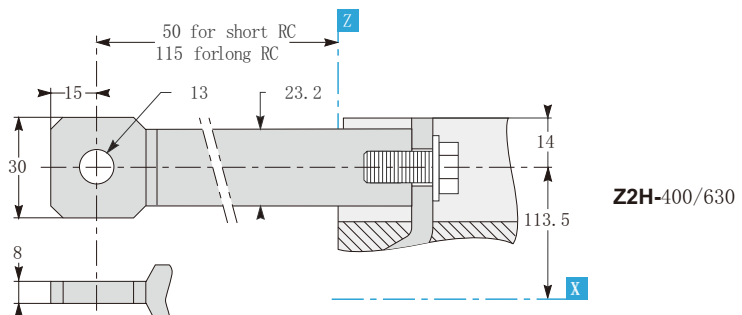
Long and short rear connectors

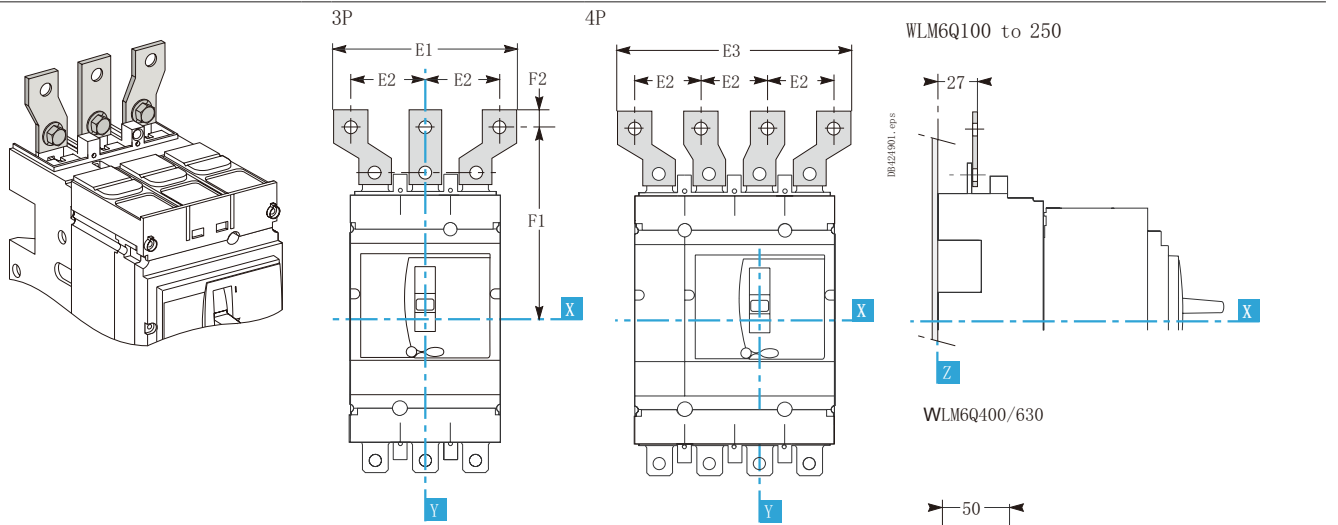


WLM6Q100 to 250

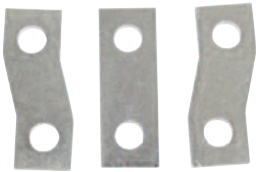


WLM6Q400/630

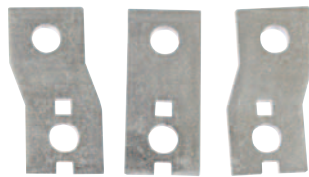




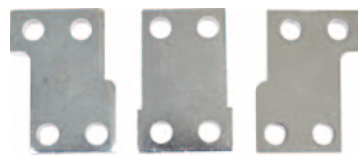
Type	E1	E2	E3	F1	F2
WLM6Q100 to 250	114	45	159	130	11
WLM6Q400/630	135	52.5	187.5	195.5	15
	170	70	240	209	



WLM6Q100/160/ 250
Outer connecting plate



WLM6Q400/630
Outer connecting plate



WLM6Q1250/1600
Outer connecting plate



AL-125 alarm contact

12.2 AL Alarm contact

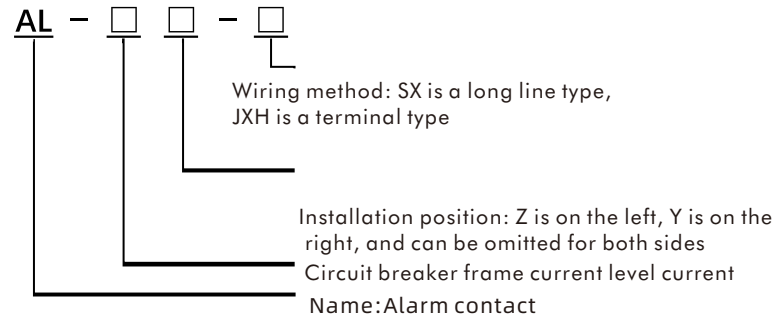
12.2.1 Function

It is mainly used to provide a signal when the load of the circuit breaker is overloaded, short-circuited or undervoltage, or tripped.

The reasons for the failure of the alarm signal are:

- Over-load or short-circuit
- Undervoltage trip
- Residual current action trip
- Manual free trip

12.2.2 Model description



12.2.3 Code for mccb Frame

Frame	125/160	250	400
code	AL-125	AL-250	AL-400

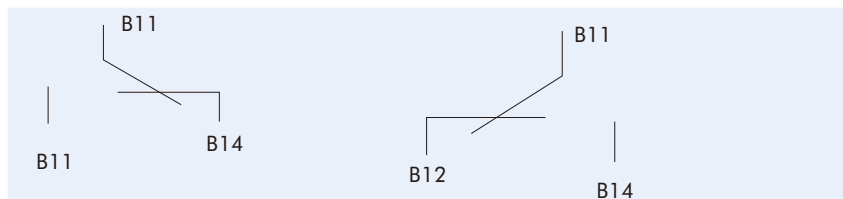
12.2.4 Indication of circuit breaker status

Circuit breaker is at breaking or making status	B14 ———— B11 B12 ————
Circuit breaker is at free tripping status	B14 ———— B11 B12 ————

12.2.5 Electrical characteristics

Ue (V)	AC			DC	
	230V	400V	110	220	24
In (A)	0.3	0.3	0.15	0.15	0.15

12.2.6 Wiring diagram





MX

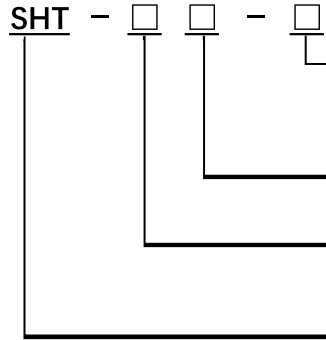
SHT-125shunt release

12.3 SHT Shunt release

12.3.1 Function

Shunt releases operate according to electrical signals, enabling remote control and automatic control of circuit breakers. When the supply voltage is equal to any voltage between 70% and 110% of the rated control power supply voltage, the shunt release should enable the circuit breaker to operate reliably.

12.3.2 Model description



Wiring method: SX is a long line type, JXH is a terminal type

Installation position: Z is on the left, Y is on the right, and can be omitted for both sides

Circuit breaker frame current level current

Name:shunt release

12.3.2 Code for mccb Frame

Frame	125/160	250	400
code	SHT-125	SHT-250	SHT-400

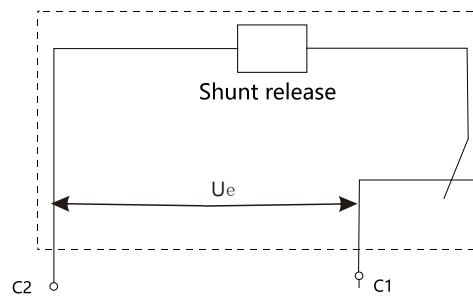
12.3.3 Electrical characteristics

Ue (V)	AC		DC		
	230V	400V	110	220	24
ln (A)	0.3	0.3	0.15	0.15	0.15

12.3.4 Action characteristics

Can be powered for a long time. Response time: pulse type $\geq 220\text{ms}$, $\leq 60\text{ms}$

12.3.5 Wiring diagram



Note:

When the rated control power supply voltage DC24V shunt release is used, the maximum length of the copper wire (each of the two wires) must meet the following table:

Rated control supply voltage U_s (DC24V)	Conductor cross-sectional area	
	1.5mm ²	2.5mm ²
100% U_s	150m	250m
85% U_s	100m	160m



12.4 UVT Under-voltage release

12.4.1 Function

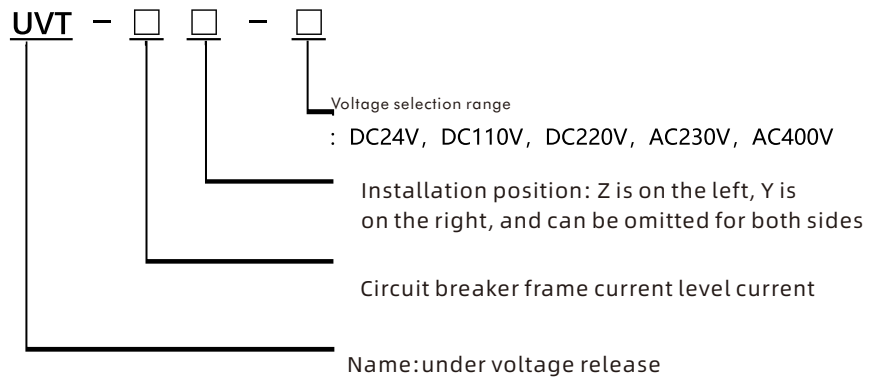
Realize the under-voltage protection function of the circuit breaker, open the circuit breaker when the power supply voltage is too low, and protect the electrical equipment.

- When the supply voltage drops (even slowly) to 70% to 35% of the rated control supply voltage, the under voltage, the undervoltage trips, the breaker should open the circuit breaker reliably.
- When the supply voltage is equal to or greater than 85% of the rated control supply voltage of the undervoltage release, the circuit breaker should be guaranteed to close.
- When the supply voltage is less than 35% of the rated control supply voltage of the undervoltage release, the undervoltage release should prevent the circuit breaker.



UVT-125 Under voltage release

12.4.2 Model description



UVT-1250 Under voltage release

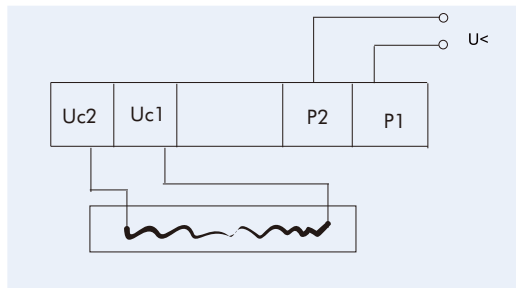
12.4.3 Code for mccb Frame

Frame	125/160	250	400
code	UVT-125	UVT-250	UVT-400

12.4.4 Electrical characteristics

Ue (V)	AC		DC		
	230V	400V	110	220	24
In (A)	0.3	0.3	0.15	0.15	0.15

12.4.5 Wiring diagram





DC3-250 Motor operating mechanism

12.5CD Motor-driven mechanism

12.5.1 Function

It is suitable for closing, opening and re-opening of circuit breakers at long distances as well as automation applications.

A: Protection level: IP40

- Reliable insulation;
- With isolation function indication;
- 0 (open), I (closed) and free trip 3 position indications;
- Free circuit breaker trip;
- Manually or automatically operated circuit breakers for closing and opening.

B: manual operation

Pull the "manul/auto" switch to the manual position and turn the operation handle to switch on and off the circuit breaker.

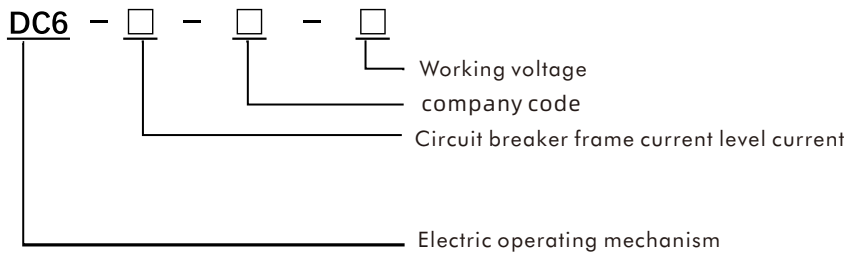
C: automatic operation

Pull the "manul/auto" switch to the automatic position, and remotely press the "close or open" button to switch on and off the circuit breaker.

D: Automatically switch on or off by pulse or self-holding signal control.

E: Only when the control voltage is $\geq 85\% U_n$ and $\leq 110\% U_n$ can the circuit breaker be reliably switched on and off.

12.5.2 Model description

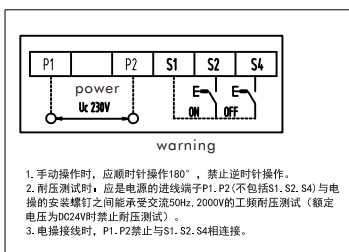
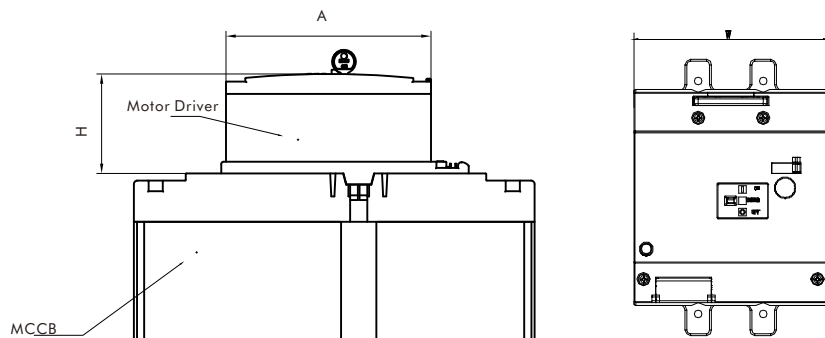


Note: The 1600 frame motor-driven mechanism is assembled in the factory and is suitable for electronic circuit breakers and disconnectors according to the inside of the circuit breaker.

12.5.3 Electrical characteristics

Model	125/160/250/400/630/800/1250/2000
type	
Ue	AC230V 、 400V 、 DC24V
Hz	50HZ

12.5.4 Installation dimension diagram of motor operating mechanism



Product Model	DC6 -160	DC6 -250	DC6 -400	DC6 -800	DC6 -2000
Size A	110	140	177	174	174
Size H	62	59	61	78	78
Size W	90	105	140	210	210

Motor Driver assembling size(mm)

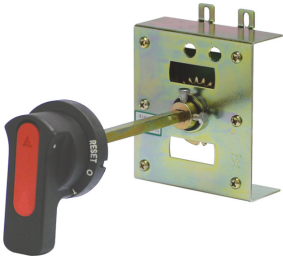
12.6 SC Economic extended rotary handle

12.6.1 Function

The unique design and transmission structure are adopted to realize the closing, opening and re-closing operation of the circuit breaker by rotating the handle.

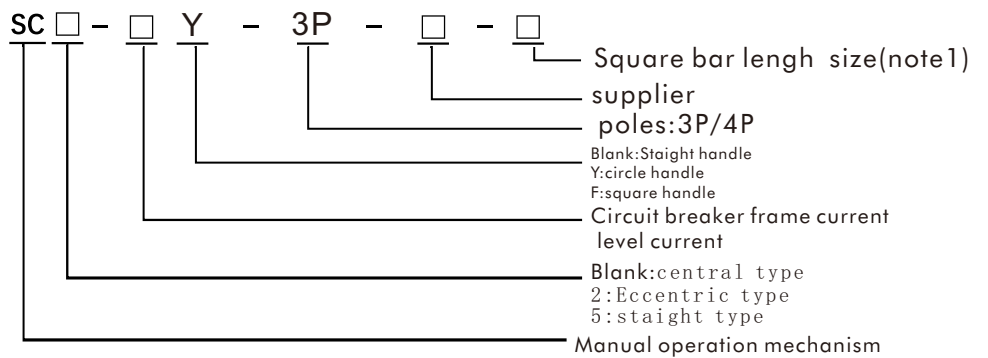
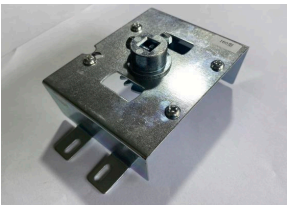
Protection degree: IP30

- With isolation function indication;
- O (open), I (closed) and free trip 3 position indications;
- The circuit breaker can be locked in the OFF position with 1~3 padlocks with a diameter of 5~8mm. At this time, it can prevent the circuit breaker from closing and the switch cabinet from opening;
- When the switch is in the ON position, the cabinet door cannot be opened under the action of the rotary handle (if the cabinet door is opened urgently, the cabinet door can be opened by the emergency unlocking device on the handle).



12.6.2 Model description

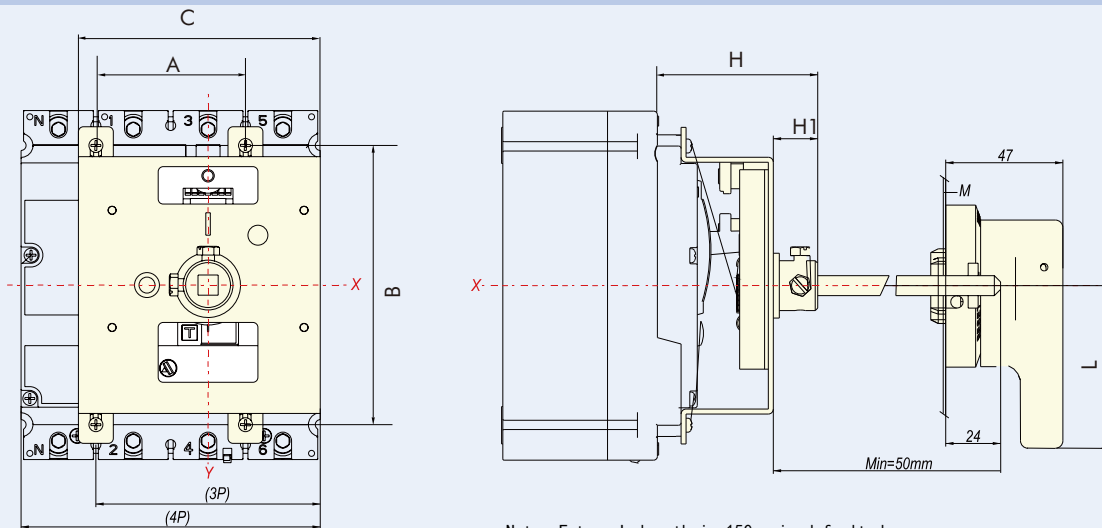
SC-160 Manual operation mechanism



Note1:default length of shaft is 150mm
 150mm/200mm/300mm/350mm/500mm

12.6.3 Installation dimension drawing

SC Overall and mounting dimension



Frame current	SC -125	SC -160	SC -250	SC -400/630	SC -800	
Size	A	25	30	35	128	198
	B	111	132	126	194	243
	C	77	82	105	140	208
	H	58	57	64	95	94
	H1	13	13	13	20	20

Outline and Installation Dimensions of Operating Mechanism Handle for SC
 Unit:mm

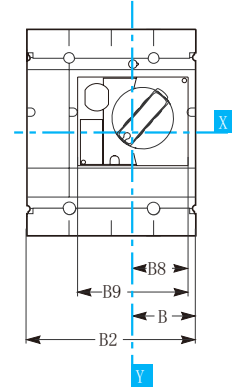
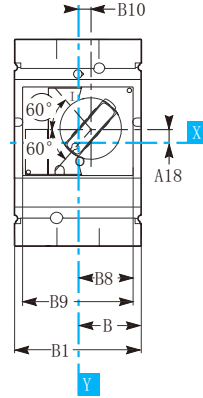
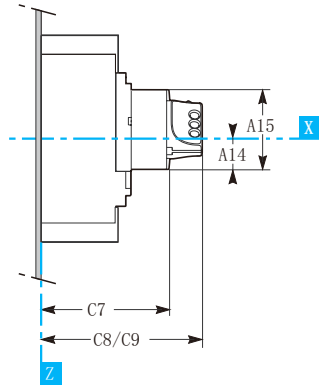
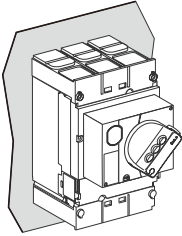
12. WLM6Q100 to 630 with Direct rotary handle

Dimensions

Fixed circuit breaker

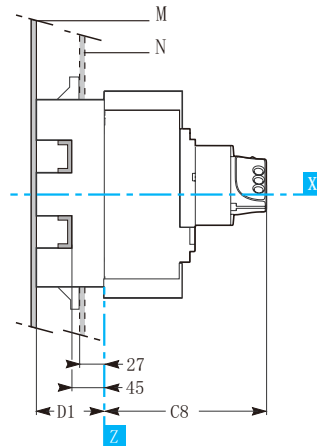
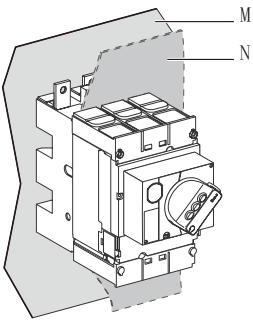
3P

4P

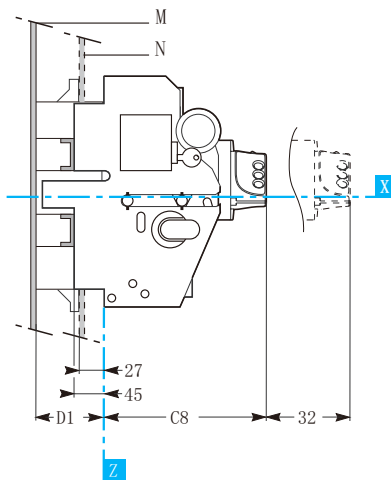
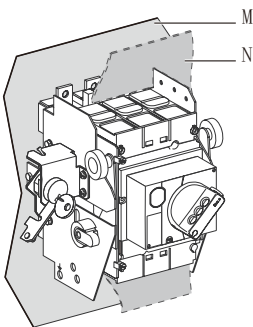


C8: without keylock
C9: with keylock

Plug-in circuit breaker



Withdrawable circuit breaker

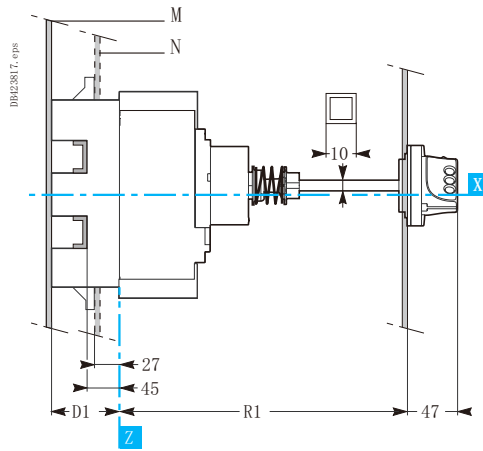
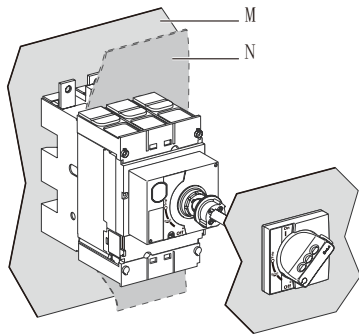


Type	A14	A15	A18	B	B1	B2	B8	B9	B10	C7	C8	C9	D1
WLM6Q100 to 250	27.5	73	9	52.5	105	140	45.5	91	9.25	121	155	164	75
WLM6Q400/630	40	123	24.6	70	140	185	61.5	123	5	145	179	188	100

12. WLM6Q100 to 630 with Extended rotary handle

Dimensions

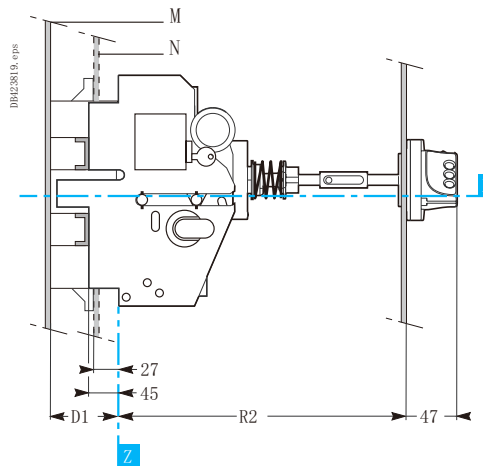
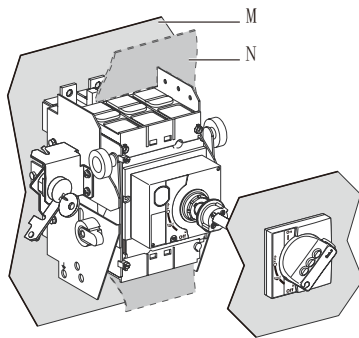
Fixed and plug-in circuit breakers



Cutout for shaft (mm)

Type	R1
WLM6Q100 to 250	min. 171 max. 600
WLM6Q400/630	min. 195 max. 600

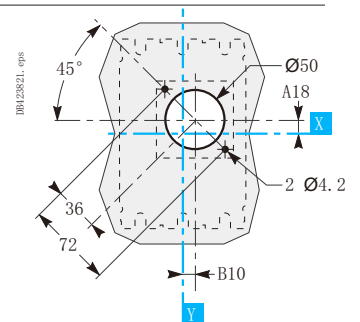
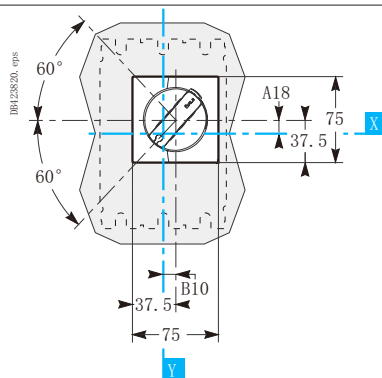
Withdrawable circuit breaker



Cutout for shaft (mm)

Type	R
WLM6Q100 to 250	min. 248 max. 600
WLM6Q400/630	min. 272 max. 600

Dimensions and front-panel cutout



Type	A18	B10	D1
WLM6Q100 to 250	9	9.25	75
WLM6Q400/630	24.6	5	100

12.10 P Front connection plate

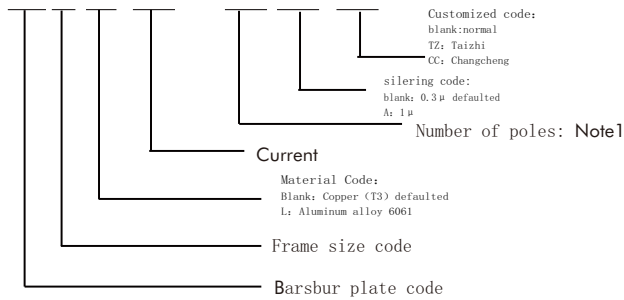
12.10.1 Function



Make the circuit breaker have a flexible wiring mode. By installing this accessory, the pole spacing can be increased to increase the electrical gap between adjacent poles at the inlet and outlet ends of the circuit breaker and enhance the safety between lines.

12.10.2 Model description

P - 250 - L - 250A - 3P - A - TZ



Note 1):

C=curved,S=straigh	L=left,R=right,U=up,D=down	3P: 4C2S(curved for L&R)	4P: 6C2S(curved for L&R)
		3P1: 2C1S(curved for L&R)	4P1: 3C1S(curved for L&R)
		3P2: 2C4S(curved for U&D)	4P2: 4C4S(curved for U&D)
		3P3: 1C2S(curved for U&D)	4P3: 2C2S(curved for U&D)
		3P4: 6S(Sraight)	4P4: 8S(Sraight)
		4P5: 2C2S(curved for L&R)	4P6: 4C4S(curved for L&R)
		1Z1: 1S (Sraight)	2Z1: 2S(Sraight)
		3Z1: 3S (Sraight)	4Z1: 4S(Sraight)
		1W1: 1C (curved for L&R)	2W1: 2C (curved for L&R)
		3W1: 3C (curved for L&R)	4W1: 4C (curved for L&R)
		1W2: 1C (curved for U&D)	2W2: 2C(curved for U&D)
		3W2: 3C(curved for U&D)	4W2: 4C(curved for U&D)

tips:1250#only has the staight type,Using for 2sets
2000#only has curved type for Left and right,using for 2sets

12.11COMA Communication module

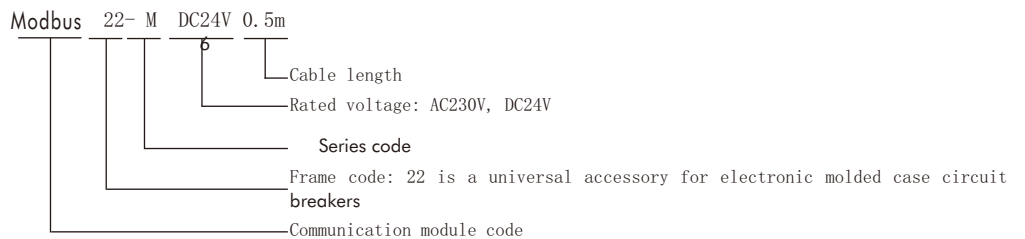
12.11.1 Function

The COMA communication module is an interface module for the communication between the electronic plastic case circuit breaker and the bus system, and performs communication and relay control output. Combined with the Modbus-RTU communication protocol, this communication module can easily establish a connection with a fieldbus master device to achieve three remote or four remote functions.

The technical parameters are as follows:

- Rated voltage: AC230V or DC24V (error range ± 15%)
- Communication type: RS485 (Modbus-RTU protocol)
- Contact capacity: AC250V / 3A; DC30V / 3A
- Transmission distance: shielded twisted pair
- Transmission distance: 1.2km (using category A shielded twisted pair)
- Working status indication: LED indication
- Number of stations: 1 station

12.11.2 Model description



12.11.3 Communication solution

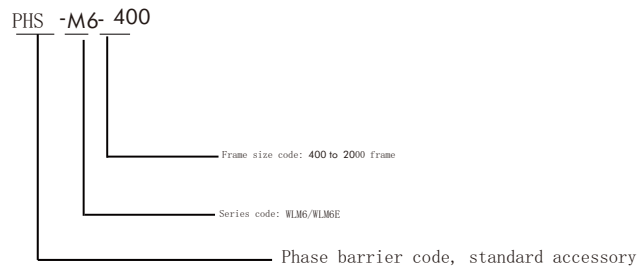


12.12 Phase barrier

12.12.1 Function

Guarantees phase-to-phase insulation safety and prevents phase-to-phase short circuit.

12.12.2 Model description

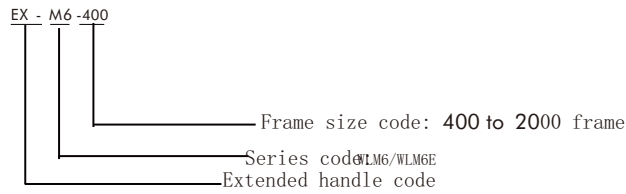


12.13 Extended handle

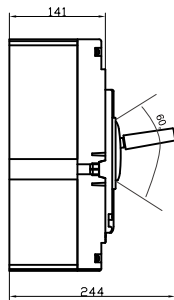
12.13.1 Function

With a unique design, the circuit breaker can be closed, opened and re-latched by rotating the handle. It is only applicable to 400-2000A.

12.13.2 Model description



12.13.3 Overall dimension



7 Technical materials

B

Number	Current of circuit breaker	connection wire mm ²	Current of circuit breaker	connection wire mm ²
1	0-8A	1.0	9-12A	1.5
2	13-15A	2.5	16-20A	2.5
3	21-25A	4.0	26-32A	6.0
4	33-50A	10.0	51-65A	16.0
5	66-85A	25.0	86-100A	35.0
6	101-115A	35.0	116-130A	50.0
7	131-150A	50.0	151-175A	70.0
8	176-200A	95.0	201-225A	95.0
9	226-250A	120.0	251-275A	150.0
10	276-300A	185.0	301-350A	185.0
11	351-400A	240.0	401-500A	2 wires*150mm ²
12	501-630A	2 wires*185mm ²	631-800A	2 wires*240mm ²
13	801-1000A	2 wires*300mm ²	1001-1250A	2 wires*400mm ²
14	1251-1600A	2 wires*500mm ²	1601-2000A	3 wires*500mm ²

10.3 WLM6 thermal magnetic circuit breaker rated operational current and temperature compensation coefficient table

Model	40 °C	-35 °C	-30 °C	-25 °C	-20 °C	-15 °C	-10 °C	-5 °C	0 °C	5 °C	10 °C	15 °C	20 °C	25 °C	30 °C	35 °C	40 °C	45 °C	50 °C	55 °C	60 °C	65 °C	70 °C	75 °C
WLM6-125	1.36	1.35	1.33	1.31	1.3	1.2	1.18	1.15	1.15	1.1	1.08	1.06	1.04	1.03	1.02	1.01	1	0.977	0.957	0.936	0.915	0.894	0.873	0.851
WLM6-160	1.36	1.35	1.34	1.32	1.3	1.25	1.22	1.2	1.15	1.14	1.12	1.09	1.07	1.05	1.03	1.01	1	0.977	0.957	0.936	0.915	0.894	0.873	0.851
WLM6-250	1.48	1.45	1.4	1.35	1.3	1.25	1.2	1.18	1.15	1.13	1.11	1.09	1.08	1.07	1.05	1.02	1	0.985	0.968	0.952	0.935	0.919	0.887	0.855
WLM6-400	1.68	1.65	1.6	1.55	1.44	1.42	1.4	1.35	1.3	1.22	1.18	1.13	1.09	1.06	1.04	1.02	1	0.985	0.968	0.952	0.935	0.919	0.887	0.855
WLM6-630	1.42	1.4	1.35	1.31	1.3	1.25	1.2	1.18	1.13	1.11	1.09	1.08	1.07	1.05	1.03	1.01	1	0.985	0.968	0.952	0.935	0.919	0.887	0.855
WLM6-800	1.4	1.35	1.34	1.32	1.31	1.3	1.25	1.23	1.18	1.15	1.13	1.1	1.07	1.05	1.03	1.02	1	0.978	0.957	0.936	0.915	0.894	0.873	0.851
WLM6-1250	1.42	1.36	1.35	1.34	1.3	1.28	1.25	1.21	1.2	1.15	1.13	1.1	1.08	1.06	1.04	1.02	1	0.978	0.957	0.936	0.915	0.894	0.873	0.851
WLM6-1600/2000	1.4	1.35	1.3	1.25	1.2	1.19	1.18	1.15	1.12	1.15	1.13	1.1	1.08	1.06	1.04	1.02	1	0.978	0.957	0.936	0.915	0.894	0.873	0.851

10.3 WLM6E Electronic circuit breaker rated operational current and temperature compensation coefficient table

Model	40 °C	-35 °C	-30 °C	-25 °C	-20 °C	-15 °C	-10 °C	-5 °C	0 °C	5 °C	10 °C	15 °C	20 °C	25 °C	30 °C	35 °C	40 °C	45 °C	50 °C	55 °C	60 °C	65 °C	70 °C	75 °C
WLM6E-160	1.36	1.35	1.34	1.32	1.3	1.25	1.22	1.2	1.15	1.14	1.12	1.09	1.07	1.05	1.03	1.01	1	0.977	0.957	0.936	0.915	0.894	0.873	0.851
WLM6E-250	1.48	1.45	1.4	1.35	1.3	1.25	1.2	1.18	1.15	1.13	1.11	1.09	1.08	1.07	1.05	1.02	1	0.985	0.968	0.952	0.935	0.919	0.887	0.855
WLM6E-400	1.68	1.65	1.6	1.55	1.44	1.42	1.4	1.35	1.3	1.22	1.18	1.13	1.09	1.06	1.04	1.02	1	0.985	0.968	0.952	0.935	0.919	0.887	0.855
WLM6E-630	1.42	1.4	1.35	1.31	1.3	1.25	1.2	1.18	1.13	1.11	1.09	1.08	1.07	1.05	1.03	1.01	1	0.985	0.968	0.952	0.935	0.919	0.887	0.855
WLM6E-800	1.4	1.35	1.34	1.32	1.31	1.3	1.25	1.23	1.18	1.15	1.13	1.1	1.07	1.05	1.03	1.02	1	0.978	0.957	0.936	0.915	0.894	0.873	0.851
WLM6E-1250	1.42	1.36	1.35	1.34	1.3	1.28	1.25	1.21	1.2	1.15	1.13	1.1	1.08	1.06	1.04	1.02	1	0.978	0.957	0.936	0.915	0.894	0.873	0.851
WLM6E-1600/2000	1.4	1.35	1.3	1.25	1.2	1.19	1.18	1.15	1.12	1.15	1.13	1.1	1.08	1.06	1.04	1.02	1	0.978	0.957	0.936	0.915	0.894	0.873	0.851

10.6 Derating factor table for circuit breakers with plug-in or draw-out accessories

Model		Derating factor	
		+Plug-in type	+Economic draw-out type
WLM6-125	16A-100A	1	/
	125A	0.95	/
WLM6-250	125A-180A	1	/
	200A-250A	0.95	/
WLM6-250 electronic type	32A、63A、100A、160A	1	/
	250A	0.95	/
WLM6-400	250A-400A	1	1
WLM6-400 electronic type	250A-400A	1	1
WLM6-630	400A	1	1
	500A	0.95	1
WLM6-630 electronic type	400A-500A	1	1
	630A	0.9	0.9
WLM6-800/1250/2000	500-700A	/	0.95
	800A-2000A	/	0.9
WLM6-800/1250/2000 electronic type	630A	/	1
	800A-2000A	/	0.9

10.7 Thermal type Derating factor table for circuit breakers altitude

Altitude (m)	2000	2500	3000	4000	4500	5000
Power-frequency(V) withstand voltage	2500	2500	2250	1950	1775	1625
Uimp (V)	1000	1000	900	780	710	650
Working Voltage (V)	400	400	350	312	284	260
Working current correction factor	1	1	0.98	0.95	0.92	0.9

10.7 Electronic type Derating factor table for circuit breakers altitude

Altitude (m)	2000	2500	3000	4000	4500	5000
Power-frequency(V) withstand voltage	2500	2500	2250	1950	1775	1625
Uimp (V)	1000	1000	900	780	710	650
Working Voltage (V)	400	400	350	312	284	260
Working current correction factor	1	1	0.98	0.95	0.92	0.9

10.8 Cascading (AC220/230/240V, R for double breaking)

Upstream	WLM6-125					WLM6-250					WLM6-400					WLM6-630					WLM6-800/1250/2000					
Breaking capacity (kA rms)	C	S	M	H	R	C	S	M	H	R	C	S	M	H	R	C	S	M	H	R	C	S	M	H	R	
	36	50	70	100	150	36	50	70	100	150	36	50	70	100	150	36	50	70	100	150	36	50	70	100	150	
Downstream	Breaking capacity (kA rms)																									
WLM6-125C	25	30	40	60	60	25	30	40	60	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
WLM6-125S	30	40	50	65	65	30	40	50	65	65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
WLM6-125M		50	60	80	100		50	60	80	100		50	60	80	100		50	60	80	100		50	60	80	100	
WLM6-125H			70	90	120			70	90	120			70	90	120			70	90	120			70	90	120	
WLM6-250C				90	140				90	140				90	140				90	140				90	140	
WLM6-250S					150			60		150					150					150					150	
WLM6-250M							50	70	80	100		50	60	80	100		50	60	80	100		50	60	80	100	
WLM6-250H									90	120				70	90	120			70	90	120			70	90	120
WLM6-400C									90	140				90	140				90	140				90	140	
WLM6-400S										150					150					150					150	
WLM6-400M												50	60	80	100		50	60	80	100		50	60	80	100	
WLM6-400H														70	90	120			70	90	120			70	90	120
WLM6-630S														90	140				90	140				90	140	
WLM6-630M															150					150					150	
WLM6-630H																	50	60	80	100		50	60	80	100	
WLM6-800S																		70	90	120			70	90	120	
WLM6-800M																			90	140				90	140	
WLM6-800H																				150					150	
WLM6-1600M																							50	60	80	100
WLM6-1600H																								70	90	120
WLM6-2000M																									90	140
WLM6-2000H																										150



10.9 Cascading (AC380/400/415V, R for double breaking)

Upstream	WLM6-125					WLM6-250					WLM6-400					WLM6-630					WLM6-800/1250/2000									
Breaking capacity (kA rms)	C	S	M	H	Q	C	S	M	H	Q	C	S	M	H	Q	C	S	M	H	Q	C	S	M	H	Q					
	36	50	70	100	150	36	50	70	100	150	36	50	70	100	150	36	50	70	100	150	36	50	70	100	150					
Downstream	Breaking capacity (kA rms)																													
WLM6-160C	20	25	25	25	25	20	25	25	25	25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
WLM6-160S	30	30	30	30	30	30	30	30	30	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
WLM6-160M/H		50	50	80	100		50	50	80	100		50	50	80	100		50	50	80	100		50	50	80	100		50	50	80	100
WLM6-160Q			70	90	100			70	90	100			70	90	100			70	90	100			70	90	100			70	90	100
WLM6-250C				90	140				90	140				90	140				90	140				90	140				90	140
WLM6-250S					150					150					150					150					150					150
WLM6-250M/H							50	50	80	100		50	50	80	100		50	50	80	100		50	50	80	100		50	50	80	100
WLM6-250Q								70	90	120			70	90	120			70	90	120			70	90	120			70	90	120
WLM6-400S												50					50					50					50			
WLM6-400M													65					65					65					65		
WLM6-400H												50	50	70	100		50	50	70	100		50	50	70	100		50	50	70	100
WLM6-400Q												50	85	100	150		50	85	100	150		50	85	100	150		50	85	100	150
WLM6-630M												50	80				50	80				50	80				50	80		
WLM6-630H													80	85				80	85				80	85				80	85	
WLM6-630Q																	50	80	85	150		50	80	85	150		50	80	85	150
WLM6-800M																		70	85	120			70	85	120			70	85	120
WLM6-800H																			85	100				85	100				85	100
WLM6-1600M																						50	50	80	100		50	50	80	100
WLM6-1600H																						50	50	85	100		50	50	85	100
WLM6-2000M																							70	90	120			70	90	120
WLM6-2000H																								90	140				90	140
																									150					150

Note

Lined area for notes with horizontal dashed lines.



11. Ordering notice

11.1 Quick selection of DC circuit breaker

WLM7	DC	-	250	S	2	300	Z	In
Current type	Frame current (A)	Breaking code	Poles	Rated current (A)	Terminal	In current		
DC : Direct current	125 250 400	C : 20kA S : 35kA M : 50kA H : 75kA	2P : Two-pole 3P : Three-pole	125 : 16, 20, 25, 32, 40, 50, 63, 80, 100, 125 250 : 125, 160, 180, 200, 225, 250 320 : 100, 125, 140, 160, 180, 200, 225, 250, 280, 315, 320 400 : 250, 315, 350, 400				
	630	M : 50kA H : 75kA	3P : Three-pole 4P : Four-pole	630: 400, 500, 630				

Note: ¹⁾
Note: ¹⁾

11.2 Quick selection of 800V-1140V circuit breaker

Company code	MCCB Type	Frame current (A)	Operation way	Poles	internal accessories	Special purpose	Rated current(A)
WLM6	HU	250	P	3	300	2 TH	250
WLM6 moulded case circuit breaker	HU: AC 800V-1500V	250 320 400/630	P1: DC3 electric operation (general market version) P2: DC6 series electric operation (self-manufacturing) ZY1: Rotating handle (manual center type - circular handle) - (defaulted) ZF1: Rotating handle (manual center type - square handle) ZY2: Rotating handle (hand operated eccentric - circular handle) ZF2: Rotating handle (manual eccentric square handle) Z3: Rotating handle (hand operated integrated)	1P : One pole 2P : Two-pole 3P : Three-pole 4B : Four-pole 4C : Four-pole 3P: Three-pole 4B : Four-pole 4C : Four-pole	check page 51	TH: Waterproof, moldy proof, rust proof LC: low temperature	250: 63,75,80,100,125,140,160,180 200,225,250 320: 16,20,25,32,40,50,63,75,80,100 125,140,160,180,200,225,250,320 400/630: 225,250,320,350,400,500,630

11.3 Quick selection of power distribution and motor protection circuit breakers1

Company code	MCCB Type	Frame current (A)	Breaking Capacity code	Poles	internal accessories	Rated current(A)
WLM6 moulded case circuit breaker	Blank: AC MCCB RT: Adjustable type E: Electronic type, EY: E with LCD L: RCCB LY: RCCB with LCD Q: double breaking	125	C : 20kA	1P : One pole 2P : Two-pole 3P : Three-pole 4B : Four-pole ²⁾ 4C : Four-pole ²⁾	check page 51	125 : 16, 20, 25, 32, 40, 50, 63, 80, 100, 125
		250	S : 35kA	250 : 125, 160, 180, 200, 225, 250		250 : 32, 63, 100, 160, 250
		400	M : 50kA	400 : 250, 315, 350, 400		400 : 250, 400
		630	H : 75kA	630 : 400, 500		630 : 400, 630
		800	Q : 150kA	800 : 500, 630, 700, 800		800 : 630, 800
		1600	M : 50kA H : 75kA	1250 : 630, 700, 800, 1000, 1250		
		2000	Q : 150kA	2000:1000,1250,1600,2000		

For customer needs beyond the technical requirements of the sample, you can contact the company's sales department or technical department as a special order processing; The body and accessories should be written separately when ordering. If the user requires the factory to assemble the body and accessories, it must be specified when ordering, otherwise the factory will ship separately; Motor protection is only applicable to 3P / 4P;

²⁾ 4B: Neutral poles without protection, can be operated with other three poles;
⁴⁾ 4C: Neutral poles with protection, can be operated with other three poles.
³⁾

MCCB Modlle List

(pls Tick Or Fill in_____)

Company				
Model List	<input type="checkbox"/> WLM6 <input type="checkbox"/> one knob <input type="checkbox"/> two knob <input type="checkbox"/> WLM6E <input type="checkbox"/> three knob <input type="checkbox"/> six knob <input type="checkbox"/> WLM6EY (LCD type) <input type="checkbox"/> WLM6L <input type="checkbox"/> WLM6LY <input type="checkbox"/> WLM7 <input type="checkbox"/> DC <input type="checkbox"/> HU <input type="checkbox"/> LCD	<input type="checkbox"/> S <input type="checkbox"/> 1P <input type="checkbox"/> C <input type="checkbox"/> 2P <input type="checkbox"/> M <input type="checkbox"/> 3P <input type="checkbox"/> H <input type="checkbox"/> 4P	<input type="checkbox"/> Rated current _____ A if Q type ,the stucture is double breaking type	
Table				
Function	wiring way	<input checked="" type="checkbox"/> up in down out	<input type="checkbox"/> up out down in	
	Plug in way			
	Knob	<input type="checkbox"/> six knob <input type="checkbox"/> three knob Current range: <u>100A-400A/630-2000A</u> ; Frame size: <u>250A/400A/630A800A/1250A</u>		
	Testing	Temperature : <input type="checkbox"/> -30°C <input checked="" type="checkbox"/> 40°C <input type="checkbox"/> 50°C <input type="checkbox"/> 55°C	Protection: <input type="checkbox"/> Power distributor <input type="checkbox"/> Mactor protection	
	Temperature rising	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> lower temperature rising 55K	
	Comnunication	<input type="checkbox"/> DL645	<input type="checkbox"/> Customized : Modbus RTU485	
	Breaking capacity	<input type="checkbox"/> Normal	<input type="checkbox"/> Customized <u>70/100</u> KA	
	Electronic life	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Customized	
	Mechanical life	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Customized	
	Ig protection	<input checked="" type="checkbox"/> Have	<input type="checkbox"/> No	
	loading pre-alarm	<input checked="" type="checkbox"/> Have	<input type="checkbox"/> No	
	communication	<input checked="" type="checkbox"/> Have Voltage: <input type="checkbox"/> AC230V <input type="checkbox"/> AC400V <input type="checkbox"/> DC24V others: _____	<input checked="" type="checkbox"/> No	
	ROHS	<input type="checkbox"/> Have	<input checked="" type="checkbox"/> No	
Salt spray test	<input checked="" type="checkbox"/> Have <input type="checkbox"/> 48h <input type="checkbox"/> 72h	<input checked="" type="checkbox"/> No		
Apperance	Base cover colour	<input checked="" type="checkbox"/> blanck3C <input type="checkbox"/> COOL GRAY 1C		
	Handle colour	<input checked="" type="checkbox"/> blanck3C <input type="checkbox"/> Red 186C <input type="checkbox"/> gray11C <input type="checkbox"/> dark gray 7547U <input type="checkbox"/> blue3015C <input type="checkbox"/> gray430C		
	Middle cover colour	material: <input checked="" type="checkbox"/> DMC <input type="checkbox"/> PA6	Prited: line, LOAD: <input checked="" type="checkbox"/> have <input type="checkbox"/> No	
		<input checked="" type="checkbox"/> blanck3C <input type="checkbox"/> COOL GRAY 1C <input type="checkbox"/> dark gray 7547U <input type="checkbox"/> gray430C <input type="checkbox"/> Cool gray 431C		
	Top cover colour	<input checked="" type="checkbox"/> blanck3C <input type="checkbox"/> COOL GRAY 1C <input type="checkbox"/> dark gray 7547U <input type="checkbox"/> gray430C <input type="checkbox"/> Cool gray 431C		
	Tripping Knob	<input type="checkbox"/> RED 186C <input type="checkbox"/> dark blue 661U-1 <input type="checkbox"/> Orange1645C		
	adjustable Knob	<input type="checkbox"/> RED 186C <input type="checkbox"/> dark blue 661U-1 <input type="checkbox"/> light blue2128C <input type="checkbox"/> Orange1645C		
top cover screw	<input type="checkbox"/> Blue white zinc <input type="checkbox"/> Black zinc others: _____			
Stickers	Nameplate	<input type="checkbox"/> Blank <input type="checkbox"/> Laser <input type="checkbox"/> Print <input type="checkbox"/> name plate		
	Nameplate	<input type="checkbox"/> Customer provide <input type="checkbox"/> W9 provide <input type="checkbox"/> others: _____		
	Current plate	<input checked="" type="checkbox"/> Blanck <input type="checkbox"/> White	position: <input checked="" type="checkbox"/> Base right side <input type="checkbox"/> middle cover	
	Side information plate	<input type="checkbox"/> Customer provide <input checked="" type="checkbox"/> W9 provide <input type="checkbox"/> others: _____	<input type="checkbox"/> No	
	Series No.	<input checked="" type="checkbox"/> Have	<input type="checkbox"/> No	
	box plate	<input type="checkbox"/> Customer provide <input type="checkbox"/> W9 provide <input type="checkbox"/> others: _____	<input type="checkbox"/> No	
	outside box plate	<input type="checkbox"/> Customer provide <input type="checkbox"/> W9 provide <input type="checkbox"/> others: _____	<input type="checkbox"/> No	
Accessories	Shunt release	AC230V <input type="checkbox"/> ; AC380V/400V <input type="checkbox"/> ; DC220V <input type="checkbox"/> ; DC24V <input type="checkbox"/> ;		
	Undervoltage release	AC230V <input type="checkbox"/> ; AC380V/400V <input type="checkbox"/> ; DC220V <input type="checkbox"/> ; DC24V <input type="checkbox"/> ;		
	Auxiliary switch	1 set <input type="checkbox"/> ; 2 sets <input type="checkbox"/>		
	Wiring method of internal accessories	lead wire [default]; terminal block <input type="checkbox"/> ;		
	Length of accessory wire	50cm (default); 100cm [chargeable] <input type="checkbox"/> ; customized length [chargeable] <input type="checkbox"/> ;		

Accessory	Motor Driver (DC3/DC6)	P1: DC3 electric operation(General market version)	<input type="checkbox"/> DC24 <input type="checkbox"/> DC110V <input type="checkbox"/> DC220V <input type="checkbox"/> AC400V	
		P2: DC6 series electric operation(self-manufacturing)	<input type="checkbox"/> AC230V(defaulted)	
	Terminal Cover			
	Busbar			
	Operation Handle	Zy1: Rotating handle (manual center type - circular handle) - (defaulted)		
		Zf1: Rotating handle (manual center type - square handle)		
Zy2: Rotating handle (hand operated eccentric - circular handle)				
Zf2: Rotating handle (manual eccentric square handle)				
	Z3: Rotating handle (hand operated integrated)			
Instructions	Neutral	<input checked="" type="checkbox"/> Have	<input type="checkbox"/> No	
	Customized	<input type="checkbox"/> Customer provide <input type="checkbox"/> W9 provide <input type="checkbox"/> others: _____	<input type="checkbox"/> No	
Box	Neutral	<input checked="" type="checkbox"/> Have	<input type="checkbox"/> No	
	Customized	<input type="checkbox"/> Customer provide <input type="checkbox"/> W9 provide <input type="checkbox"/> others: _____	<input type="checkbox"/> No	
Packaging box	Neutral	<input checked="" type="checkbox"/> Have	<input type="checkbox"/> No	
	Customized	<input type="checkbox"/> Customer provide <input type="checkbox"/> W9 provide <input type="checkbox"/> others: _____	<input type="checkbox"/> No	
Sealing tape	Neutral	<input checked="" type="checkbox"/> Have	<input type="checkbox"/> No	
	Customized	<input type="checkbox"/> Customer provide <input type="checkbox"/> W9 provide <input type="checkbox"/> others: _____	<input type="checkbox"/> No	
others				
Notes				



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