AMU SERIES MOULDED CASE CIRCUIT BREAKER

VeKON

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VEKON Global Corp.

About us

VEKON Global company is a leading provider of high–technology products and complex solutions in the fields of electrical engineering, automation, and engineering infrastructure.

We promote the VEKON brand and its values worldwide, ensuring easy access for our Customers to VEKON innovations through a wide product range, balanced commercial policies, and exceptional Customer service.

Our core manufacturing facility, Zhejiang VEKON Technology Co., Ltd., located in Yueqing Bay Power Technology Town, Zhejiang Province, China, is a technological leader in modular electrical equipment. Established in 2002, it produces a diverse range of products including RCCB/RCBOs, MCBs, AFDDs, relays, contactors, and signaling and control devices. Manufactured on automated production lines, the facility boasts a daily output of 500,000 units. Our products are exported globally to Europe, the Americas, Southeast Asia, and Africa. Advanced technology, reliable equipment, guaranteed quality, and dedicated technical support have secured a substantial base of loyal customers worldwide. VEKON holds patents on its own designs and its products are CE, SEMKO, KEMA, and other internationally recognized certifications compliant. Our manufacturing facilities maintain ISO 9001 certification.

In addition to Zhejiang VEKON Technology Co., Ltd., the VEKON brand encompasses over 30 other manufacturing sites across Mainland China. We design, manufacture, and supply a comprehensive range of low – and medium–voltage electrical products (up to 35 kV), as well as a wide array of industrial automation and process control equipment.

VEKON's strategy is built on Partnerships. By collaborating with professional distributors, retailers, panel builders, installers, system integrators, and service centers, we strive to provide seamless customer proximity. At VEKON, responsibility and reputation are paramount. Our greatest reward is the establishment of long–term, mutually beneficial business and personal relationships with our Partners.

Customers and Partners who choose VEKON products can rely on our commitment to VEKON values throughout the entire product lifecycle — from ideation and innovation to manufacturing, reliable supply, comprehensive solution implementation, and comprehensive warranty and post–warranty services.

AMU series
moulded case circuit breaker

General

AMU series moulded case circuit breaker(herein after called circuit breaker) adopts international advanced design and manufactural technology, it can be divided into L-type (standard type), M-type (higher type)according to the rated ultimate short circuit breaking capacity (Icu). With the features of small and compact, high breaking capacity, short arcing-over distance, anti-vibration, the circuit breaker is used popularly on land and marine products, they are applied for the power distribution network of AC 50Hz,rated insulation voltage 800V (**AMU**-63 to 500V), rated working voltage 690V(**AMU**-63 to 400V) and below, rated current up to 1600A, it can be used to distribute electric power and protect power equipment against overload, short circuit, undervoltage etc, It also takes protective effect when motors infrequently start and protecting against overload, short circuit and lacking voltage. In the series, frame ranging from 63-630A three-pole product also comes with a transparent cover, it is convenient for customer to observe the product operation.

The circuit breaker can be installed vertically, or horizontally.

Standard : IEC60947-2.

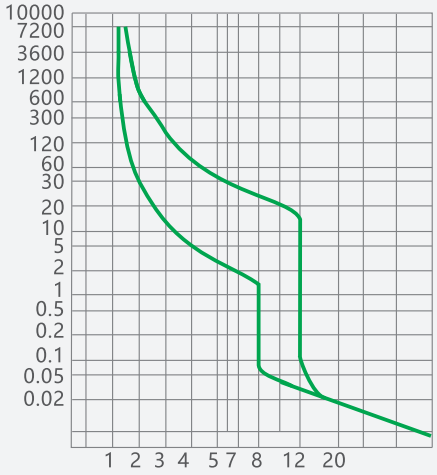
Type designation

AMU - □ □ □ / □ □ □

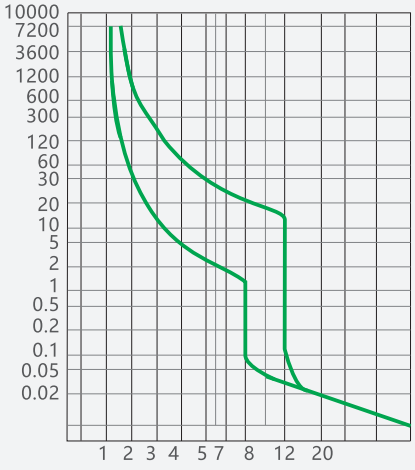
- N pole for 4P circuit breaker(note 3)
- Application(note 1)
  - 1. for power distribution;
  - 2. for motor protection
- Number of poles
- Operation mode(note 2):
- Code of breaking capacity:
  - L-standard type;
  - M-higher type;
- Frame size
- Company code

Note:

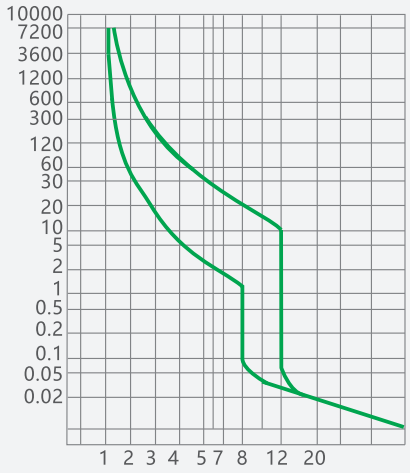
1. Blank for power distribution,2 for motor protection
2. Blank for direct operation with handle, Z for operation with rotary handle, P for motor-driven operation.
3. There are 2 types of N-pole for 4P breaker:
   A:Without current release components, N-Pole is always at making status(not breakers);
   B:Without current release components, N-Pole makes with the other three poles;



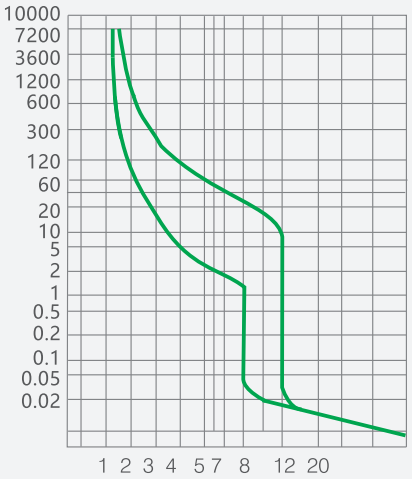
AMU-63(10~32), AMU-125(25~32)
Characteristic Curve



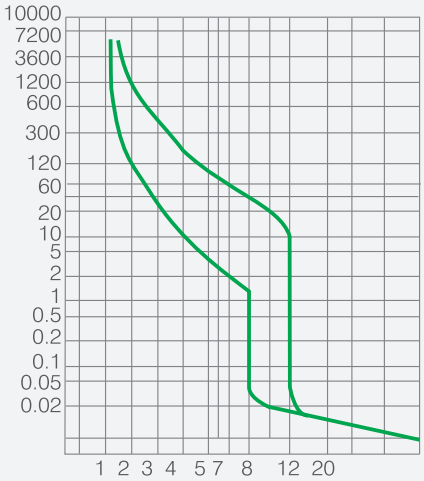
AMU-63(40~63), AMU-125(40~125)
Characteristic Curve



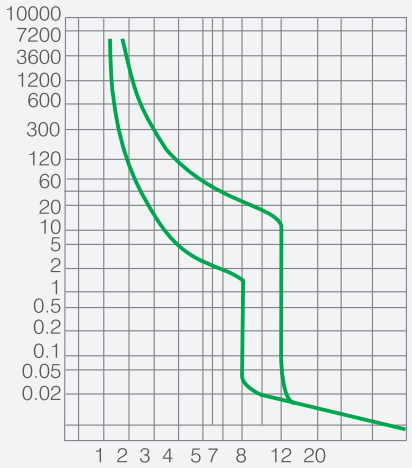
AMU-160, AMU-250
Characteristic Curve



AMU-400
Characteristic Curve



AMU-630, AMU-800
Characteristic Curve



AMU-1250, AMU-1600
Characteristic Curve

Operating conditions

1. Temperature: -5℃~+40℃; the average value within 24h shall not exceed +35℃. For the circuit breaker with thermo-magnetic release, +40℃ is set to be the standard temperature for ratings. For temperature not between -5℃~+40℃, please contact us for temperature compensation correction;
2. Altitude: not exceed 2000m (Please contact with us for reduction coefficient if altitude at the mounted site exceed 2000m)
3. Pollution grade: Grade 3;
4. Air conditions:
   At mounting site, relative humidity not exceed 50% at the max temperature of +40℃, higher relative humidity is allowable under lower temperature. For example, RH could be 90% at +20℃, special measures should be taken to occurrence of dews.

Technical data

Type			AMU-63		AMU-125		AMU-160	AMU-250		AMU-400		AMU-630		AMU-800	AMU-1250	AMU-1600
Poles	P		3	3, 4	2, 3, 4		3P	2, 3, 4		3	4	3	4	3, 4	3	3
Rated current In	A		10, 16, 20, 25, 32, 40, 50, 63		10, 16, 20, 25, 32, 40, 50, 63 80, 100, 125		100, 125,140, 160	100, 125, 140 160, 180, 200 225, 250		225, 250, 315,350, 400		400, 500, 630		630, 700, 800	800, 1000 1250	1600
Rated insulation voltage Ui	V		500		800											
Rated impulse withstand voltage Uimp	V		6000		8000											
Rated operation voltage Ue	V		AC400		AC400/690											
Breaking capacity class			L	M	L	M	L	L	M	L	M	L	M	M	M	M
Limit short-circuit breaking capacity Icu	kA	400V	25	50	35	50	35	35	50	50	65	50	65	75	85	85
		690V			8	10	8	8	10	10	20	10	20	30	30	30
Working short-circuit breaking capacity Ics	kA	400V	18	25	22	25	22	22	25	35	42	35	42	50	50	50
		690V			4	5	4	4	5	5	10	5	10	15	15	15
Arcing distance	mm		50							100						
Operating frequency	Electrical life		1500		1500		1500	1000		1000		1000		500	500	500
	mechanical life		8500		8500		8500	7000		4000		4000		2500	2500	2500

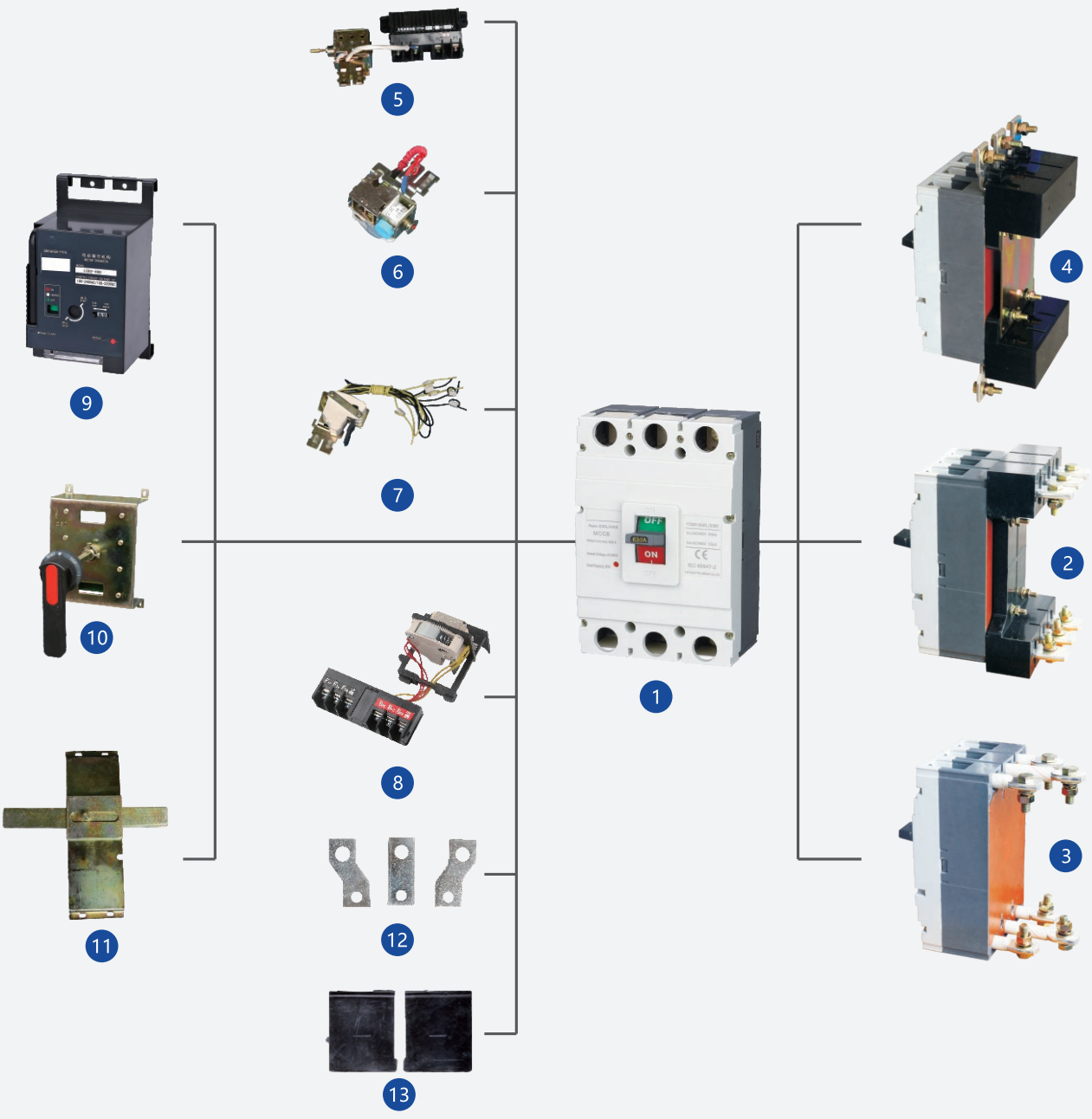
Inner accessories

Table 1

	Release method and accessories code		Accessories installation and down-leads			
Accessories name	Electromagnetic release	Complex release	AMU-63 AMU-125	AMU-160 AMU-250	AMU-400 AMU-630	AMU-800 AMU-1250
Without parts	200	300				
Alarm contact	208	308				
Shunt release	210	310				
Auxiliary contact	220	320				
Undervoltage release	230	330				
Shunt release, Auxiliary contact	240	340				
Shunt release, under-voltage release	250	350				
Secondary auxiliary contact	260	360				
Auxiliary contact, Undervoltage release	270	370				
Shunt release, Alarm contact	218	318				
Auxiliary contact, Alarm contact	228	328				
Undervoltage release, Alarm contact	238	338				
Shunt release, Auxiliary contact, Alarm contact	248	348				
Secondary auxiliary contact, Alarm contact	268	368				
Auxiliary contact, Undervoltage release, Alarm contact	278	378				

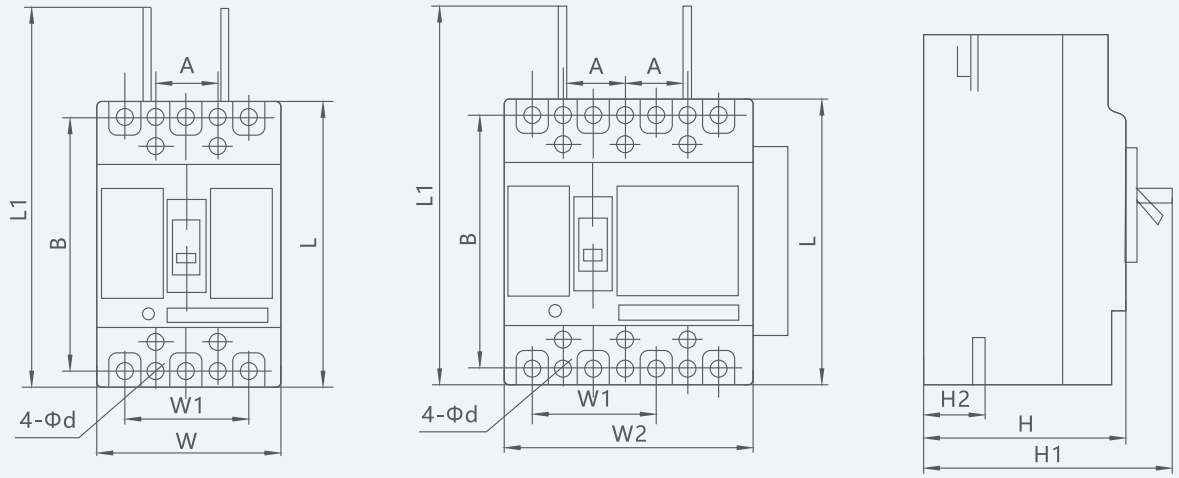
Note: handle left right Alarm contact □ Shunt release ● Auxiliary contact ■ Undervoltage release ○

Overview



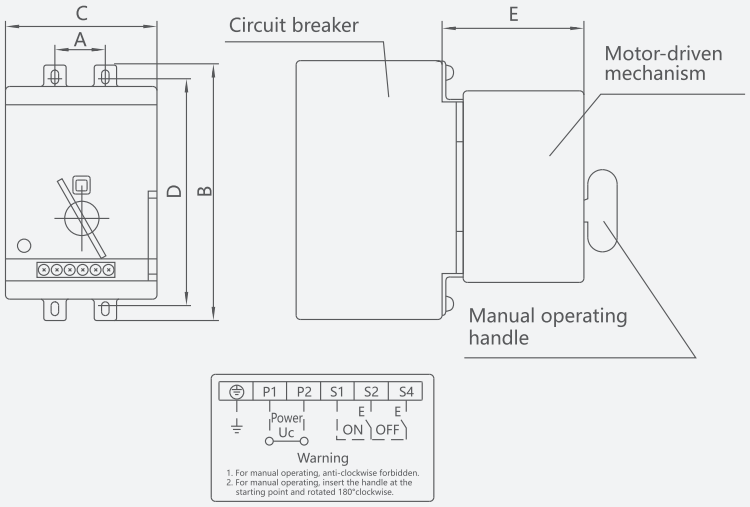
1. MCCB (fixed type)
2. Rear plug-in type
3. Rear connection type
4. Front plug-in type
5. Under-voltage release
6. Shunt release
7. Alarm contact
8. Auxiliary contact
9. Motor-drive operation mechanism
10. Extended manual operation handle
11. Mechanical interlock
12. Front connection plate
13. Interphase barrier

Overall and mounting dimensions(mm)



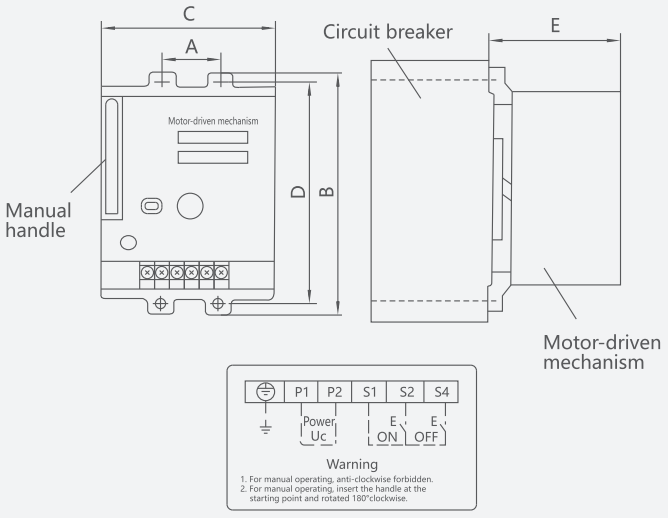
Type	Overall size (mm)								Installation size (mm)		
	W	L	H	W1	W2	L1	H1	H2	A	B	Φd
AMU-63L	78	135	74	50	-	156	92	28	25	117	3.5
AMU-63M	78	135	82	50	103	156	100	28	25	117	3.5
AMU-125L	92	150	68	60	-	200	88	24	30	129	4.5
AMU-125M	92	150	86	60	122	200	105	24	30	129	4.5
AMU-160L	93	151	76	60	-	200	96	24	30	129	4.5
AMU-250L	107	165	86	70	-	215	110	24	35	126	5
AMU-250M	107	165	103	70	142	215	127	24	35	126	5
AMU-400L	150	257	107	96	198	357	162	38	44	194	7
AMU-400M	150	257	107	96	198	357	162	38	44	194	7
AMU-630L	182	271	112	116	240	370	165	42	58	200	7
AMU-630M	182	271	112	116	240	370	165	42	58	200	7
AMU-800M	210	280	116	140	280	385	168	42	70	243	7
AMU-1250M	210	406	158	140	-	610	193	60	70	375	11

Overall and mounting dimensions(mm)



Wiring diagram

AMU-63,125,250



Wiring diagram

AMU-400,630,800,1250,1600

Model	Dimensions					Ue(V)	Ie(A)	Mechanical life (times)	Motor power (W)
	A	B	C	D	E				
AMU-63	25	117	74	102	79	K1	≤0.5	14000	14
AMU-100	30	129	90	116	77	K1	≤0.5	14000	14
AMU-225	35	126	90	116	77	K1	≤0.5	14000	14
AMU-400	44	194	130	176	115	K2	≤2	5000	35
AMU-630	58	200	130	176	115	K2	≤2	5000	35
AMU-800	70	243	130	176	115	K2	≤2	5000	35
AMU-1250	70	300	130	176	115	K2	≤2	5000	35
AMU-1600	196	318	130	300	154	K2	≤2	5000	35

Under voltage release	Rated working voltage Ue V	AC230V AC400V
	Acting voltage V	(0.35-0.7)Ue
	Reliable close voltage V	(0.85~1.1)Ue

Shunt release	Rated control power voltage Us V	AC230V AC400V DC24V DC110V DC220V
	Acting voltage V	(0.7~1.1)Ue

Auxiliary, Alarm contact	Frame current Inm	Rated thermal current Ith
	Inm≤225	3A
	Inm≥400	6A

General

AMU-LE series earth leakage circuit breaker (herein after called circuit breaker)is applied for the power distribution network of AC 50Hz,rated current 630A.The circuit breaker can protect people against indirect contact with dangerous electric current and prevent fire disaster caused by insulation fault and single-phase ground fault. It can be used to distribute electric power and protect power equipment against overload and short circuit. The circuit breaker can change the circuit and start motor infrequently. The rated residual operating current and the maximum off-time can be adjusted on-site according to actual situation, the circuit breaker can be customized alarm function and no tripping function.
Standard: IEC60947-2.

Type designation

AMU - LE - □ □ □ / □ □ □ □ □

- Alarm modular:
  (I: alarm, tripping; II: alarm, no tripping)
- Note is for 4P code
- Application:
  blank: for power distribution
  2.for motor protection
- Release method and accessories code(Table 1)
- Number of poles (2,3,4P)
- Operation mode:
  blank:direct operation with handle
  Z:operation with rotary handle
  P:motor-driven operation
- Code of breaking capacity:
  L-standard type
  M-higher type
- Frame size
- Electronic residual Current Circuit Breaker
- Company code

Note:

A: Without current release components, N-Pole is alwaus at making status, not makes and breaks with other three poles;

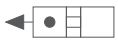
B: Without current release components, N-Pole makes with the other three poles(N-Pole first makes then breaks);

Technical data

Type		AMU-LE-125			AMU-LE-250			AMU-LE-400		AMU-LE-630 AMU-LE-800	
Frame current Inm(A)		125			250			400		630 800	
Rated current In(A)		10, 16, 20, 25, 32, 40 50, 63, 80, 100, 125			100, 125, 140, 160 180, 200, 225, 250			225, 315, 350, 400		400, 500, 630 630, 700, 800	
Pole		2	3	4	2	3	4	3	4	3	4
Rated insulation voltage Ui(V)		AC800									
Rated working voltage Ue(V)		AC400									
Rated impulse withstand voltage Uimp(V)		8000									
Arcing-over distance (mm)		50						100			
Breaking ability level		L	M		L	M		L	M	L	M
Rated ultimate short-circuit breaking capacity Icu(kA)		35	50		35	50		50	65	50	65
Rated working short-circuit breaking capacity Ics(kA)		22	25		22	25		35	42	35	42
Rated residual short-circuit breaking capacity		7.5	12.5		7.5	12.5		12.5	13.5	12.5	13.5
Rated residual operating current IΔn(mA)	No time-delay type	30/100/500 100/300/500			30/100/500 100/300/500			100/300/500		300/500/1000	
	Time-delay type	100/300/500			100/300/500			100/300/500		300/500/1000	
Rated residual unoperating current IΔn(mA)		1/2 IΔn			1/2 IΔn			1/2 IΔn		1/2 IΔn	
Operating performance (times)	Power on	1500			1000			1000		1000	
	Power off	8500			7000			4000		4000	
	Total times	10000			8000			5000		5000	
Residual current protection opreating time		IΔn			2IΔn			5IΔn		10IΔn	
Max. breaking time(s)	No time-delay type	0.2			0.1			0.04		0.04	
	Time-delay type	0.4/1			0.4/1			0.3/1		0.3/1	

Inner accessories

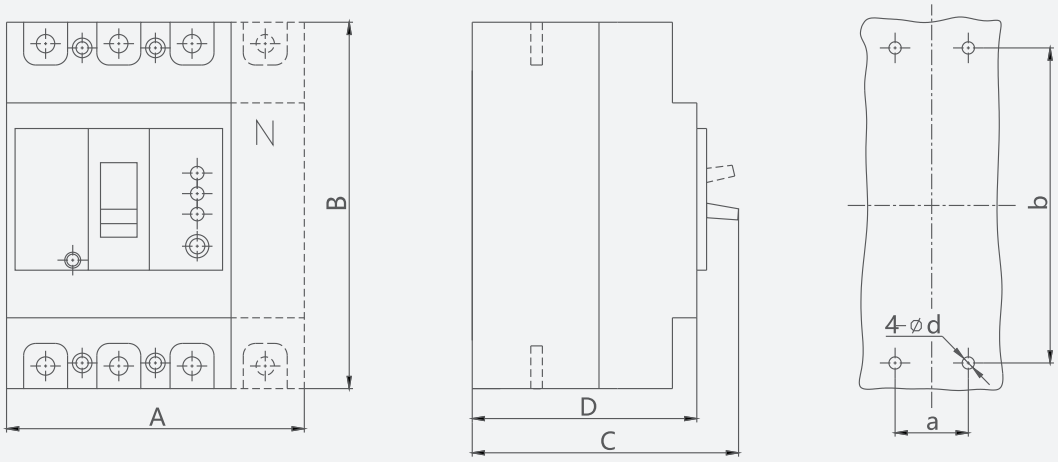
Table 1

Accessories name	Release method and accessories code		Accessories installation and down-leads			
	Electromagnetic release	Complex release	AMU-LE-125/3 AMU-LE-250/3	AMU-LE-125/4 AMU-LE-250/4	AMU-LE-400/3 AMU-LE-630/3 AMU-LE-800/3	AMU-LE-400/4 AMU-LE-630/4 AMU-LE-800/4
Without parts	200	300				
Alarm contact	208	308				
Shunt release	210	310				
Auxiliary contact	220	320				
Undervoltage release	230	330				
Shunt release, Auxiliary contact	240	340	—		—	
Secondary auxiliary contact	260	360				
Auxiliary contact, Undervoltage release	270	370	—		—	
Shunt release, Alarm contact	218	318	—		—	
Auxiliary contact, Alarm contact	228	328				
Undervoltage release, Alarm contact	238	338	—		—	
Shunt release, Auxiliary contact, Alarm contact	248	348	—		—	
Secondary auxiliary contact, Alarm contact	268	368	—		—	
Auxiliary contact, Undervoltage release, Alarm contact	278	378	—		—	

Note: 

Alarm contact □ Shunt release ● Auxiliary contact ■ Undervoltage release ○

Overall and mounting dimensions(mm)



Type	Pole	Overall size (mm)				Installation size (mm)		
		A	B	C	D	a	b	Φd
AMU-LE-125	3	92	150	110	92	30	129	4.5
	4	122				60		
AMU-LE-250	3	107	165	110	90	35	126	4.5
	4	142				70		
AMU-LE-400	3	150	257	146.5	106.5	44	194	7
	4	198				94		
AMU-LE-630 AMU-LE-800	3	210	280	155	115.5	70	243	7
	4	280				140		

AMU7 series
moulded case circuit breaker

General

AMU7, AMU7RT, AMU7T/A, AMU7RE series circuit breaker is a new generation of breaker.

This breaker is applied for the distribution network of AC 50Hz, rated insulation voltage 800V, rated working current up to 800A, which is for electric energy distribution, circuit protection, protection power supply facility from destroying by the fault of overloading, short circuit and undervoltage, meanwhile it is also used for protection from unfrequent starting, over loading, short circuit and undervoltage of the motor.

This breaker has such characteristics as high short circuit interrupting capacity, short arcing and etc., which is a ideal product for users. This breaker can be installed vertically, and also horizontally.

Standard: IEC60947-2.

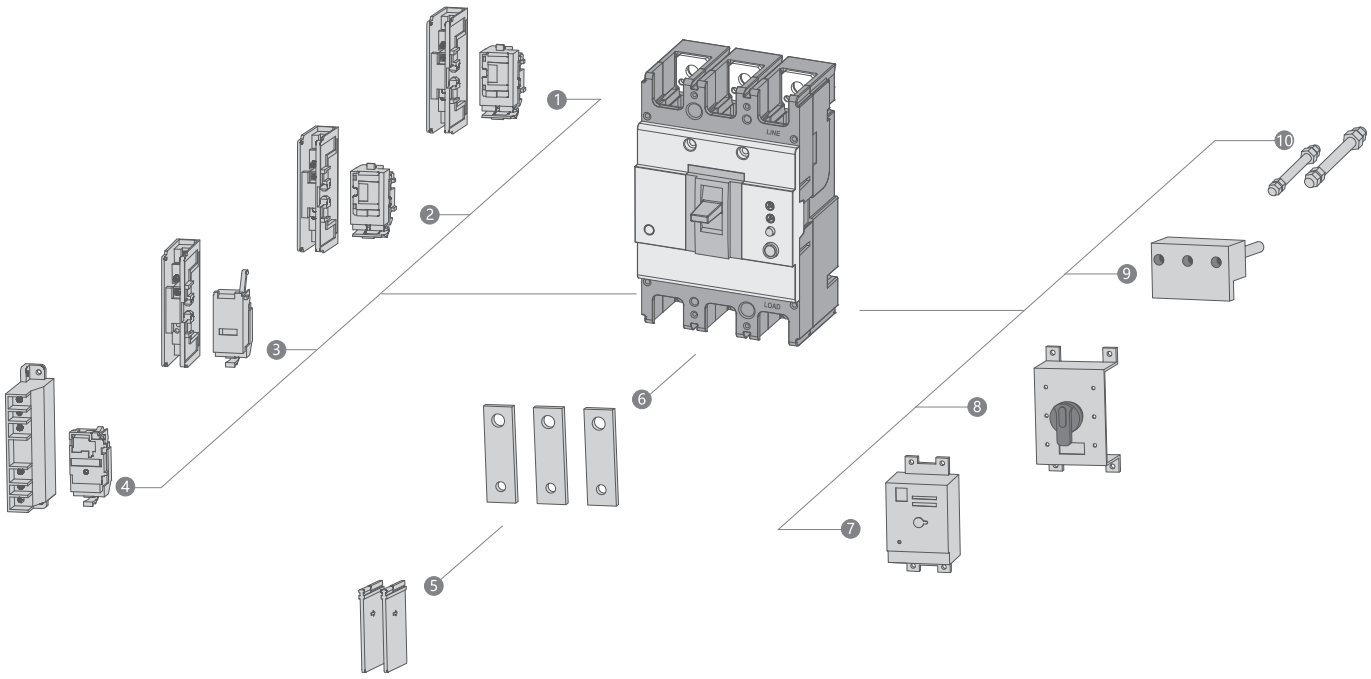
Features

1. Miniaturization design
   Product volume miniaturization can meet the customer's personality needs of the product installation size.
2. Size uniform
   The same shell level, different breaking capacity (S, M), different functions (air, leakage) product installation size is completely consistent.
3. The function of the reasonable parameter setting
   Circuit breaker can realize long-time delay overload inverse time, short circuit instantaneous action protection functions such as parameter setting, users can set their own protective properties required, the distribution network is used in the circuit breaker on the lower level with more reasonable.

Operating conditions

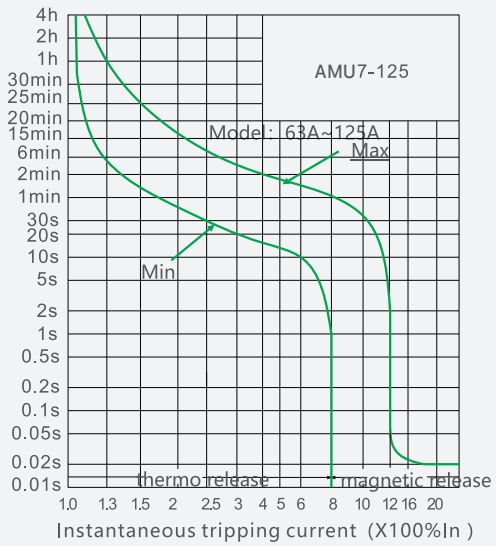
1. Altitude less than 2000m
2. Ambient medium temperature is from -5℃ to +40℃ (+45℃ for shipping product)
3. Humidity resistance
4. Bacteria resistance
5. Nuelear radiation resistance
6. Max lean degree is 22.5 degree.
7. Can operate normally when it comes to vibrataion of ship.
8. Can operate normally when it comes to earthquake(4g).
9. The medium should be no risk of blasting and can't erode the metal and damage insulating gas as well as conductive dust.
10. Work in the places where is no rain and snow.

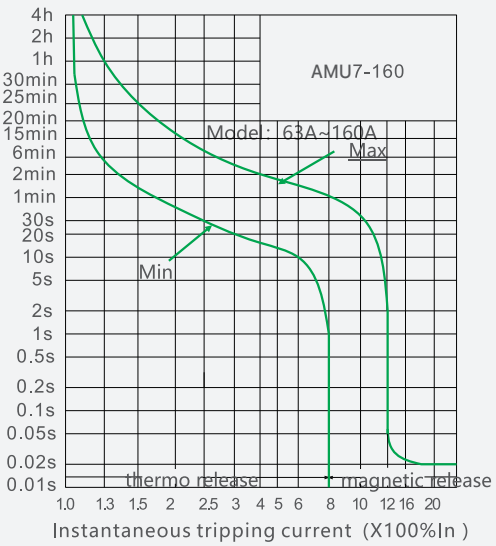
Overview

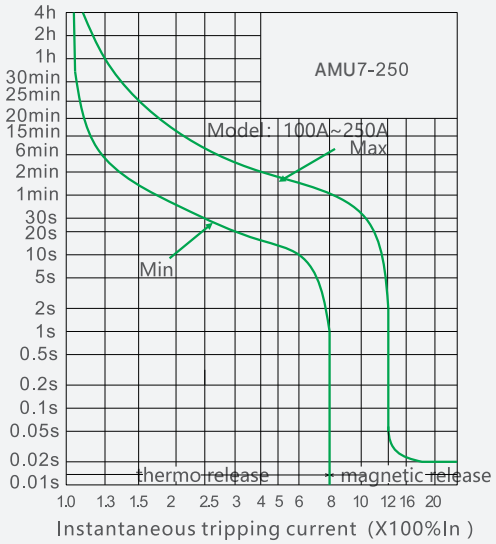


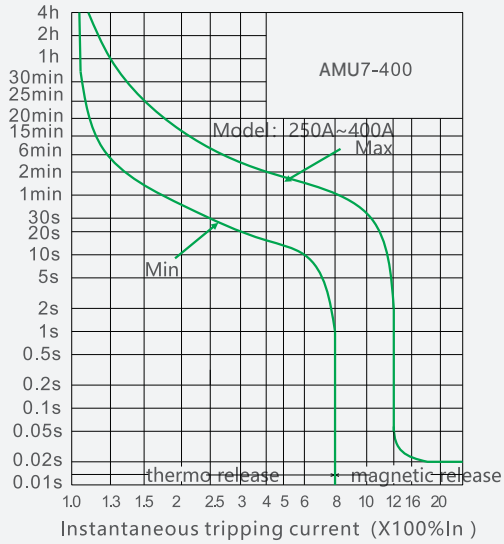
1. Auxiliary contact
2. Alarm contact
3. Shunt release
4. Undervoltage release
5. Interphase barrier
6. Front connection plate
7. Motor driven operation mechanism
8. Extended manual operation handle
9. Plug in rear connection
10. Rear connection plate

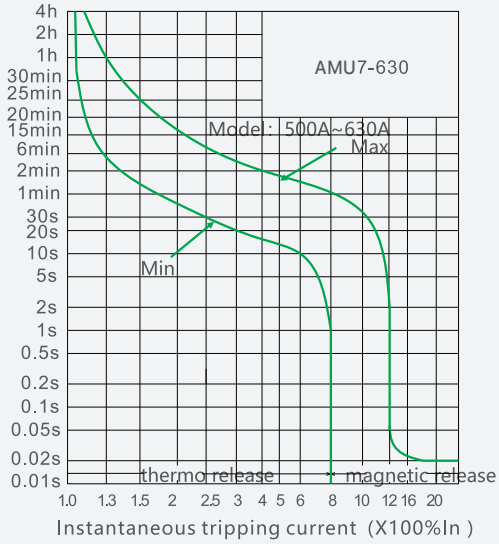
Curve

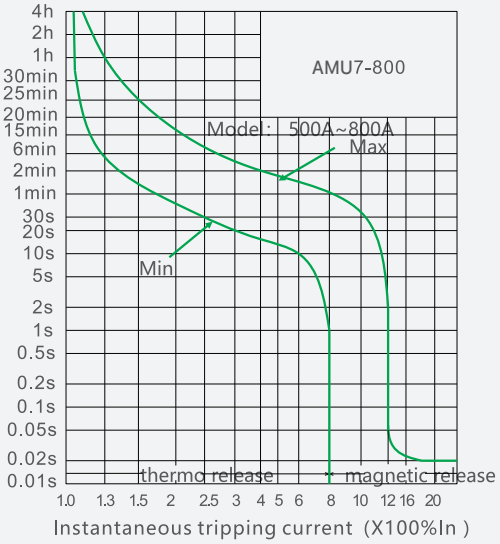

AMU7-125
Model: 63A~125A
Max
Min
thermo release
magnetic release
4h
2h
1h
30min
25min
20min
15min
6min
2min
1min
30s
20s
10s
5s
2s
1s
0.5s
0.2s
0.1s
0.05s
0.02s
0.01s
1.0 1.3 1.5 2 2.5 3 4 5 6 8 10 12 16 20
Instantaneous tripping current (X100%In)


AMU7-160
Model: 63A~160A
Max
Min
thermo release
magnetic release
4h
2h
1h
30min
25min
20min
15min
6min
2min
1min
30s
20s
10s
5s
2s
1s
0.5s
0.2s
0.1s
0.05s
0.02s
0.01s
1.0 1.3 1.5 2 2.5 3 4 5 6 8 10 12 16 20
Instantaneous tripping current (X100%In)


AMU7-250
Model: 100A~250A
Max
Min
thermo release
magnetic release
4h
2h
1h
30min
25min
20min
15min
6min
2min
1min
30s
20s
10s
5s
2s
1s
0.5s
0.2s
0.1s
0.05s
0.02s
0.01s
1.0 1.3 1.5 2 2.5 3 4 5 6 8 10 12 16 20
Instantaneous tripping current (X100%In)


AMU7-400
Model: 250A~400A
Max
Min
thermo release
magnetic release
4h
2h
1h
30min
25min
20min
15min
6min
2min
1min
30s
20s
10s
5s
2s
1s
0.5s
0.2s
0.1s
0.05s
0.02s
0.01s
1.0 1.3 1.5 2 2.5 3 4 5 6 8 10 12 16 20
Instantaneous tripping current (X100%In)


AMU7-630
Model: 500A~630A
Max
Min
thermo release
magnetic release
4h
2h
1h
30min
25min
20min
15min
6min
2min
1min
30s
20s
10s
5s
2s
1s
0.5s
0.2s
0.1s
0.05s
0.02s
0.01s
1.0 1.3 1.5 2 2.5 3 4 5 6 8 10 12 16 20
Instantaneous tripping current (X100%In)


AMU7-800
Model: 500A~800A
Max
Min
thermo release
magnetic release
4h
2h
1h
30min
25min
20min
15min
6min
2min
1min
30s
20s
10s
5s
2s
1s
0.5s
0.2s
0.1s
0.05s
0.02s
0.01s
1.0 1.3 1.5 2 2.5 3 4 5 6 8 10 12 16 20
Instantaneous tripping current (X100%In)

Type designation

AMU7 - 125 M P / 4 300 - 125A 2 A Q1 D1 Q 2

Type	Frame Inm	Breaking capacity Icu/Ics(kA)	Operation	Poles
AMU7	125	M	P	4
MCCB	125, 160, 250, 630, 800 Remark: 125 Frame upgrade from 63 160 Frame upgrade from 125 250 Frame upgrade from 225 630 Frame upgrade from 400	S / M 125: 15/8 / - 160: 25/18 / - 250: 25/18 / - 400: 35/25 / 50/35 630: - / 50/35 800: - / 50/35	P: Motor-driven Z: Rotory handle W: Direct	3: 3P 4: 4P

Tripping mode and inner accessory	Rated current(A)	Application	Option for 4P MCCB
300	125A	2	A
First figure means tripping unit way 2: Only with magnetic release 3: Thermal release+,magnetic release body Remark: The last two figures means accessory code (see accessories list)	125: 63, 80, 100, 125 160: 63, 80, 100, 125, 140, 160 250: 100, 125, 140, 160, 180, 200, 225, 250 400: 250, 315, 350, 400 630: 500, 630 800: 500, 630, 700, 800	1. Power distribution 2. Motor-protection	A: N pole without protection, N pole is always ON B: N pole without protection, N pole makes with the other three poles

Accessory voltage			Motor-driven operation voltage	Connection	With the connection plate or not
Q1			D1	Q	2
UVT	Shunt	Auxiliary	DC3	Q: Front	1: not
Q1: AC220V	F1: AC220V	J1: AC125V	D5: AC220V	H: Rear	2: yes
Q2: AC240V	F2: AC380V	J2: AC250V	D6: AC110V	C: Plug-in	
Q3: AC380V	F3: DC110V	J3: DC125	D7: DC220V		
Q4: AC415V	F4: DC24V	J4: DC24V	D8: DC110V		
			D9: AC110~240V		
			D10: DC100~220V		

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