

### 1. Application

AM1 series moulded case circuit breaker is one of products developed and manufactured by adopting international advanced technology. It is supplied with rated insulating voltage 550 and 800V and used for circuit of AC 50/60Hz, rated operating voltage AC 400V (or below), rated operating current up to 1600A for infrequent changing over and starting of the motors. The products conform to IEC60947-2 standard.

### 2. Main Technical Specification (table1)

Type	Rated current (A)	Pole number	Rated insulating voltage (V)	Rated operating voltage (V)	Arcing-over distance (mm)	Ultimate short circuit breaking capacity (KA)	Series short circuit breaking capacity (KA)	Operation performance		Utilization category
								Load	Unload	
AM1-63L	(6), 10, 16, 20, 25, 32	3, 4	500V	400V	0	25	18	1500	8500	A
AM1-63M	40, 50, 63				0	50	35			
AM1-100L	(10), 16, 20, 25				0(≤50)	35	22			
AM1-100M	32, 40, 50, 63				0(≤50)	50	35			
AM1-100H	80, 100				0(≤50)	85	50			
AM1-225L	100, 125		≤50		35	22	1000	7000		
AM1-225M	160, 180		≤50		50	35				
AM1-225H	200, 225		≤50		85	50				
AM1-400L	225, 250, 315, 350		≤50		50	35				
AM1-400M	400		≤100		65	42				
AM1-630L	400, 500, 630	≤100	50	35	1000	4000				
AM1-630M		≤100	65	42						
AM1-630H		≤100	100	65						
AM1-800M	630, 700	≤100	75	50						
AM1-800H	800	≤100	100	65						
AM1-1250M	1000, 1250	≤100	100	65	1000	4000				
AM1-1250H		≤100	125	75						
AM1-1600M	1600	≤100	150	80						

Type A: Without current trip-release on N pole which making all the time, not closing and opening with the other three poles.

Type B: Without current trip-release on N pole which closing and opening with the other poles.

Type C: With current trip-release which closing and opening with the other three poles.

Type D: With current trip-release which making all the time not closing and opening with the other three poles.

### 3. Protection Characteristic

The thermodynamic release of a circuit breaker provides the feature of inverse time-delay, while the magnetic release is the instantaneous operation as shown on table 2 (distribution circuit breaker) and table 3 (motor protection circuit breaker).

Table 2

Rated current of release (A)	Thermodynamic release ( ambient temperature ) land +40°C marine +45°C		Operating current of magnetic release (A)
	1.05In(cold state) inoperative time(h)	1.30In(heat state) Operative time(h)	
10 ≤ In ≤ 63	≥ 1	< 1	10In ± 20%
63 < In ≤ 100	≥ 2	< 2	
100 ≤ In ≤ 800	≥ 2	< 2	5In ± 20% 10In ± 20%

Table 3

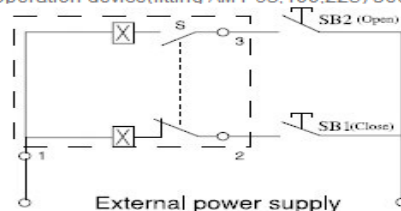
Rated current of release (A)	Thermodynamic release ( ambient temperature ) land +40°C marine +45°C				Operating current of magnetic release (A)
	1.0In(cold state) non-trip time(h)	1.20In(heat state) trip time (h)	1.50In(heat state) trip time (h)	7.2In(cold state) trip time(h)	
10 ≤ In ≤ 225	≥ 2	< 2	≤ 4min	4s < Tp ≤ 10s	12In ± 20%
225 ≤ In ≤ 630			≤ 8min	6s < Tp ≤ 20s	

### 4. Accessories of Circuit breaker

#### 4.1 The external accessories of the breaker

##### Motor-driven operation device

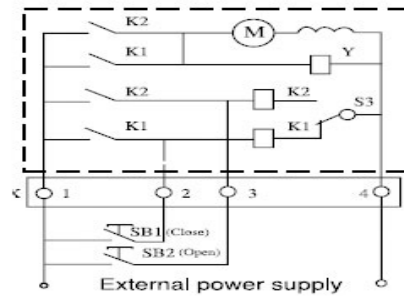
1) Wiring diagram of type CDM electromagnetic operation device (fitting AM1-63, 100, 225) see the following drawing (wiring diagram of the



Code description: SB<sub>1</sub> SB<sub>2</sub> stand for push button.(provided by users themselves) Number "1" "2" "3" stand for number of wiring terminals.

Voltage rating: AC50Hz 230V 400V DC 220V

2) Wiring diagram of type CD motor-driven operation device (fitting AM1-400 630 800) see belows (wiring diagram of the external accessories of the breaker in the dotted frame)

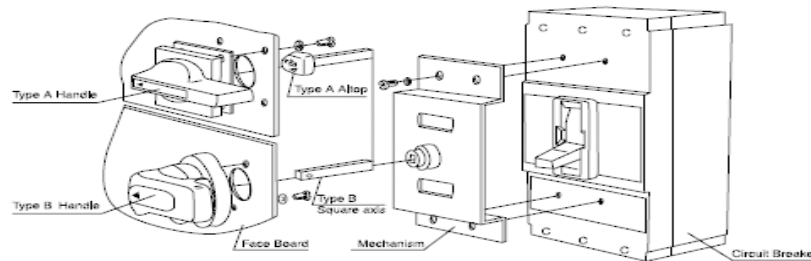


Code description: SB<sub>1</sub> SB<sub>2</sub> stand for push button. (provided by users themselves) "X" stands for line connection terminals

Voltage rating: AC50Hz 230V 400V DC 220V

### Rotary handle operation device

The mechanism is used in moulded case circuit breaker to operate the draw-out panel. Power distribution panel and supply box outside the panel by turning the handle, and to ensure the door of panel would not be opened when the breaker being on. The hand-drive mechanism can be equipped with two types of operation, one is "A" model square handle, the other is "B" model round handle.



SHT: Shunt release; UVR: Under-voltage release; AX: Auxiliary contact; AL: Alarm contact

Release pattern and accessories code	Name/Type	AM1-63, 100, 225	AM1-400	AM1-630	AM1-800
200, 300	No accessories	200: magnetic release (only short circuit protection) 300: thermal magnetic release (both overload and short circuit protection)			
208, 308	Alarm contact	AL █ █ █ █	AL █ █ █ █	AL █ █ █ █	AL █ █ █ █
210, 310	Shunt release	SHT █ █ █ █	SHT █ █ █ █	SHT █ █ █ █	█ █ █ █ SHT
220, 320	Auxiliary contact	AX █ █ █ █	AX █ █ █ █	AX █ █ █ █	AX █ █ █ █
230, 330	Under-voltage release	█ █ █ █ UVR	█ █ █ █ UVR	█ █ █ █ UVR	UVR █ █ █ █
240, 340	Shunt release Auxiliary contact	SHT █ █ █ █ AX	SHT █ █ █ █ AX	SHT █ █ █ █ AX	AX █ █ █ █ SHT
250, 350	Shunt release Under-voltage release	SHT █ █ █ █ UVR	SHT █ █ █ █ UVR	SHT █ █ █ █ UVR	UVR █ █ █ █ SHT
260, 360	Two group of auxiliary contact	AX █ █ █ █ AX	AX █ █ █ █ AX	AX █ █ █ █ AX	AX █ █ █ █ AX
270, 370	Under-voltage release Auxiliary contact	AX █ █ █ █ UVR	AX █ █ █ █ UVR	AX █ █ █ █ UVR	UVR █ █ █ █ AX
218, 318	Shunt release Alarm contact	AL █ █ █ █ SHT	SHT █ █ █ █ AL	AL █ █ █ █ SHT	AL █ █ █ █ SHT
228, 328	Alarm contact Auxiliary contact	AL █ █ █ █ AX	AL █ █ █ █ AX	AL █ █ █ █ AX	AL █ █ █ █ AX
238, 338	Under-voltage release Alarm contact	AL █ █ █ █ UVR	AL █ █ █ █ UVR	AL █ █ █ █ UVR	AL █ █ █ █ UVR
248, 348	Shunt release, Alarm contact, Auxiliary contact	AL █ █ █ █ SHT AX	SHT █ █ █ █ AL AX	AL █ █ █ █ SHT AX	AL █ █ █ █ SHT AX
268, 368	Two group of auxiliary contact, Alarm contact	AL █ █ █ █ AX	AL █ █ █ █ AX	AL █ █ █ █ AX	AL █ █ █ █ AX
278, 378	Shunt release, Alarm contact, Under-voltage release	AL █ █ █ █ UVR AX	AL █ █ █ █ UVR AX	AL █ █ █ █ UVR AX	AL █ █ █ █ UVR AX

According to user's demands, accessories could lead to direct wire outcoming or line wiring terminals could be added (please mark out in case of making order).

### Under-voltage release

Wiring diagram of the under-voltage module connected externally (the internal accessories in the dotted frame) Ue: AC50Hz 230V, 400V

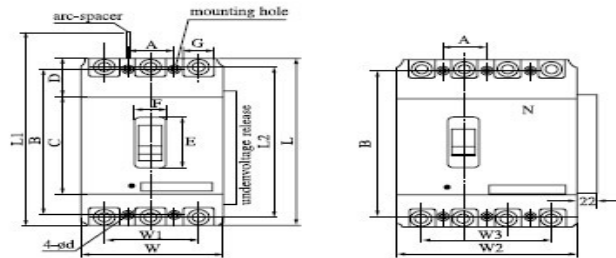


Type	Outline Dimensions(mm)															Installation Dimensions		
	Back panel connection					Plug-in connection												
	L4	H5	H6	φD	φD1	L5	L6	H7	H8	H9	H10	J	K	φd1	M	A	B	φd
AM1-63L	117	44	66	8	8											25	117	3.5
AM1-63M	117	44	66	8	8											25	117	3.5
AM1-100L	129	68	108	26	16	92	168	50	62	74	17.5	56	60	6.5	M8	30	129	4.5
AM1-100M	129	68	108	26	16	92	168	50	62	74	17.5	56	60	6.5	M8	30	129	4.5
AM1-100H	129	68	108	26	16	92	168	50	62	74	17.5	56	60	6.5	M8	30	129	4.5
AM1-225L	126	66	110	20	20	94	183	50	69.5	84.5	17.5	54	70	6.5	M8	35	126	5
AM1-225M	126	66	110	20	20	94	183	50	69.5	84.5	17.5	54	70	6.5	M8	35	126	5
AM1-225H	126	66	110	20	20	94	183	50	69.5	84.5	17.5	54	70	6.5	M8	35	126	5
AM1-400L	194	60	120	33	33	169	279	60	83.5	106.5	21	129	60	8.5	M10	44	194	7
AM1-400M	200	65	125	36	36	169	299	60	92	110	21	123	100	8.5	M12	58	200	7
AM1-630L	200	65	125	36	36	169	299	60	92	110	21	123	100	8.5	M12	58	200	7
AM1-630M	200	65	125	36	36	169	299	60	92	110	21	123	100	8.5	M12	58	200	7
AM1-630H		128														70	243	7.2
AM1-800M		128														70	243	7.2
AM1-800H		128														70	243	7.2
AM1-1250M																		
AM1-1250H																		
AM1-1600M																		

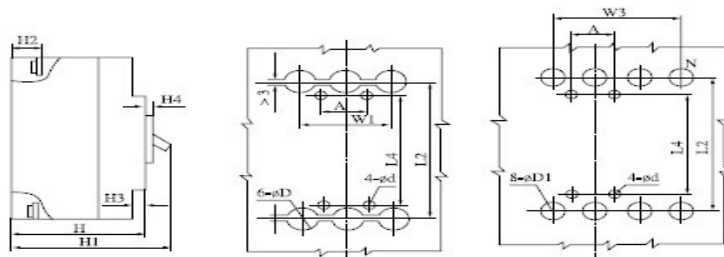
ie> AM1-1250H 210 140 393 200 AM1-1600M 210 140 393 200

Type	Outline Dimensions(mm)															Installation Dimensions		
	Back panel connection					Plug-in connection												
	L4	H5	H6	φD	φD1	L5	L6	H7	H8	H9	H10	J	K	φd1	M	A	B	φd
AM1-63L	117	44	66	8	8											25	117	3.5
AM1-63M	117	44	66	8	8											25	117	3.5
AM1-100L	129	68	108	26	16	92	168	50	62	74	17.5	56	60	6.5	M8	30	129	4.5
AM1-100M	129	68	108	26	16	92	168	50	62	74	17.5	56	60	6.5	M8	30	129	4.5
AM1-100H	129	68	108	26	16	92	168	50	62	74	17.5	56	60	6.5	M8	30	129	4.5
AM1-225L	126	66	110	20	20	94	183	50	69.5	84.5	17.5	54	70	6.5	M8	35	126	5
AM1-225M	126	66	110	20	20	94	183	50	69.5	84.5	17.5	54	70	6.5	M8	35	126	5
AM1-225H	126	66	110	20	20	94	183	50	69.5	84.5	17.5	54	70	6.5	M8	35	126	5
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AM1-630M	200	65	125	36	36	169	299	60	92	110	21	123	100	8.5	M12	58	200	7
AM1-630H		128														70	243	7.2
AM1-800M		128														70	243	7.2
AM1-800H		128														70	243	7.2
AM1-1250M																		
AM1-1250H																		
AM1-1600M																		

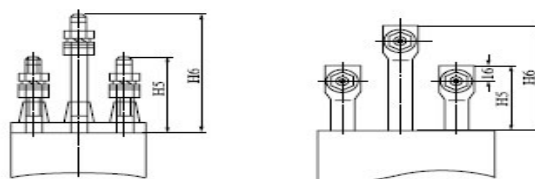
Front panel connection



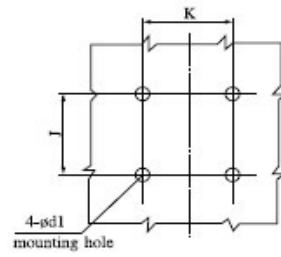
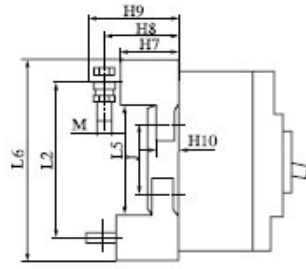
Back panel connection picture



Back panel connection



Plug-in connection



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