

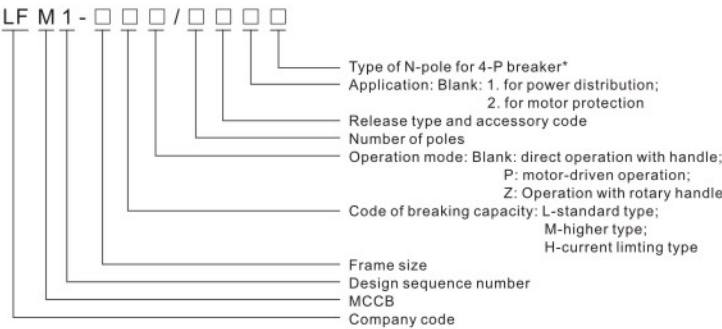
LFM1 Moulded Case Circuit Breaker



1. General

- 1.1 Electric ratings: AC 690V,50/60Hz, 10~800A;
- 1.2 Mounting mode: vertical and horizontal;
- 1.3 Standard: IEC/EN60947-2.

2. Type designation



Note*: There are 4 types of N-pole for 4P breaker

A: Without current release components, N-Pole is always 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);

C: With current release components, N-Pole makes and breaks with other three poles(N-Pole first makes then breaks);

D: With current release components, N-Pole is always at making status, not makes and breaks with other three poles;

3. Operation conditions

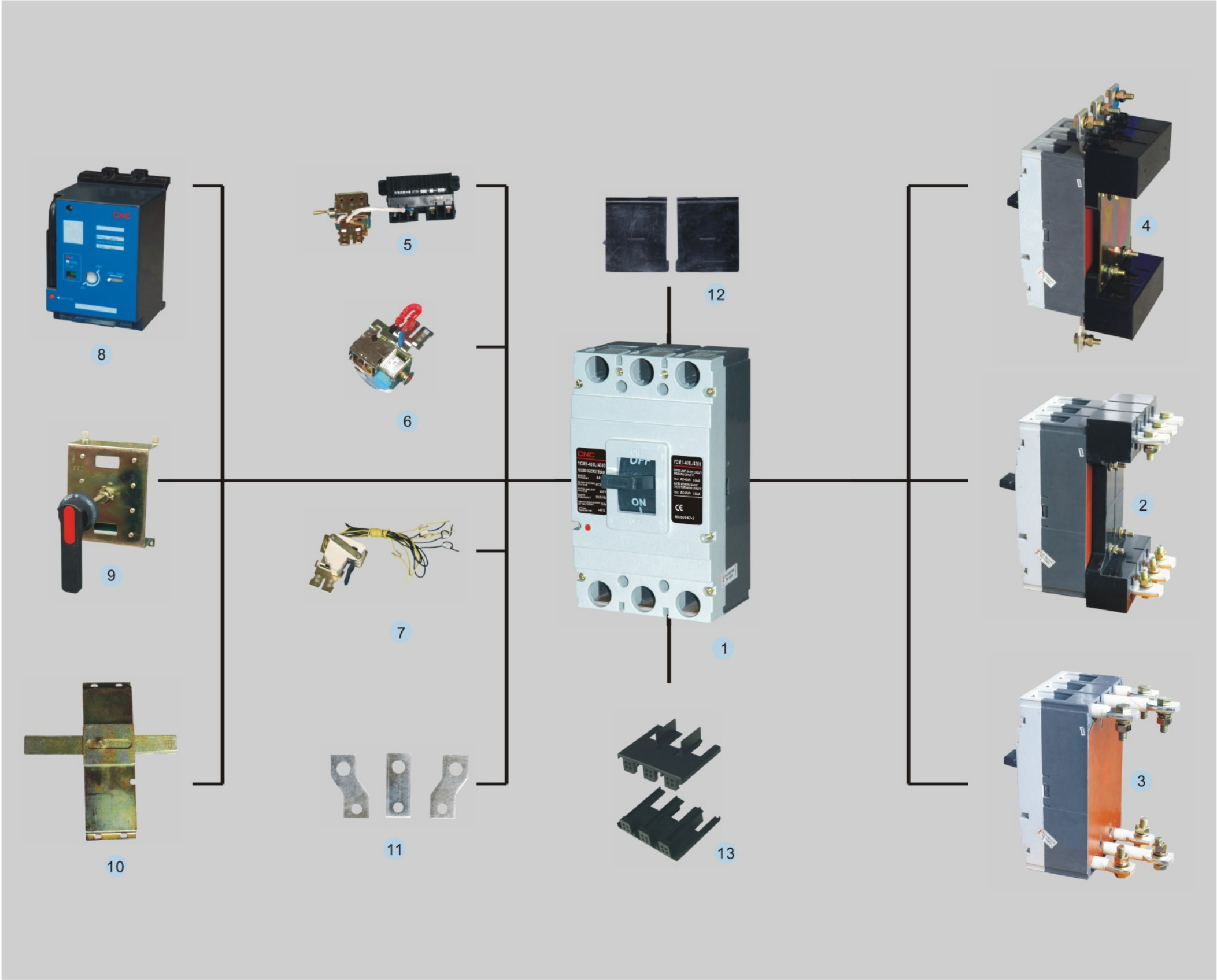
- 3.1 Temperature: -5℃~+40℃; the average value within 24h shall not exceed +35℃.For the circuit breaker with thermo-magnetic release, +40℃ is set to be the standard temperature for ratings. For temperature not between -5℃~+40℃, please contact us for temperature compensation correction;
- 3.2 Altitude: not exceed 2000m(Please contact with us for reduction coefficient if altitude at the mounted site exceed 2000m)
- 3.3 Pollution grade: Grade 3;
- 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.

LFM1 Moulded Case Circuit Breaker**4. Specifications**

Type		LFM1-63				LFM1-100				LFM1-225				LFM1-400				LFM1-630				LFM1-800			
Poles	P		3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4					
Rated current In	A		10,16,20,25,32,40,50,63		10,16,20,25,32,40,50,63,80,100		100,125,160,180,200,225		200,250,315,350,400		400,500,630		400,500,630,700,800												
Rated insulation voltage Ui	V		690		800																				
Rated impulse withstand voltage Uimp	V		6000		8000																				
Rated operation voltage Ue	V		400		AC400/690																				
Breaking capacity class			L	M	L	M	H		L	M	H		L	M	H		L	M	H		L	M	H		
Limit short-circuit breaking capacity Icu	kA	400V	25	50	35	50	85	50	35	50	85	50	50	70	100	50	45	65	100	65	50	70	100	50	
		690V				20	20		20	20		20		20			20				20				
Working short-circuit breaking capacity Ics	kA	400V	18	30	26	30	43	30	26	30	43	30	30	40	50	30	34	42	65	42	30	40	50	30	
		690V				10	10		10	10		10		10			10				10				
Arcing distance	mm		50												100										
Operation times	t		120		120		120		60		60		20												
			4000		3000		1500		1000		1000		500												
			6000		7000		6500		4000		4000		2500												
Power loss	W		20	25	33	35	40	40	26	63	55	60	60	40	80	80	40	120	130	150	150	200	125	135	180
			25	30		40	50	50		65	75	75		100	110		180	200	200		170	190			
Overall dimensions	mm		135		150		165		257		270		280												
			76	103	92	65	122	107	75	142	140	184	182	240	210	280									
			74	82	82	68	87	87	104	100	108	103													
Install dimensions	mm		25	50	30		60	35		70	44	88	58	118	70	140									
			117	117	129	129	129	126	126	126	215	215	200	200	243	243									
			3.5	3.5	4.5	4.5	4.5	5.5	5.5	5.5	6.5	6.5	7	7	7	7									

LFM1 Moulded Case Circuit Breaker



LFM1 Moulded Case Circuit Breaker

5. Product overview

LFM1 Moulded Case Circuit Breaker

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	Motor-drive operation mechanism
9	Extended manual operation handle
10	Mechanical interlock
11	Front connection plate
12	Rubber isolator
13	Short terminal cover

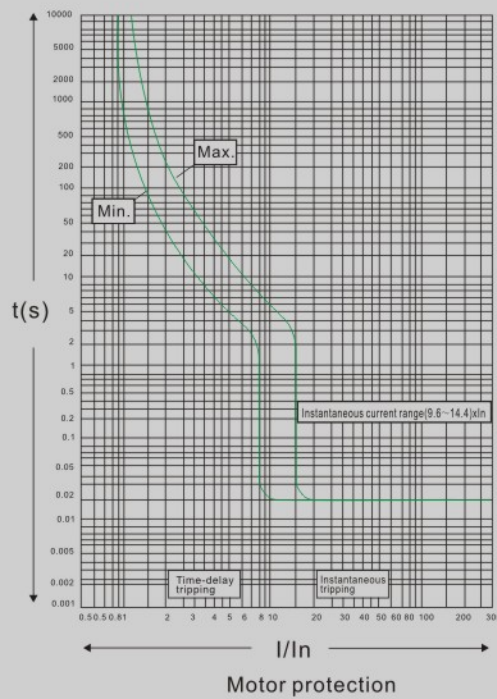
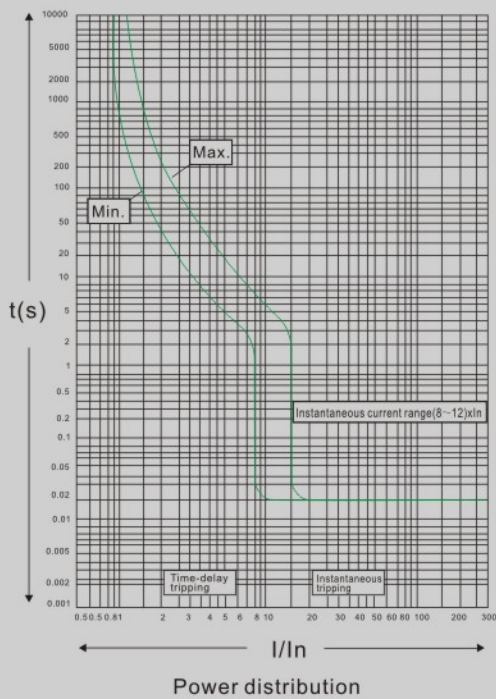
6. Accessories Code

Parts code	Release method	Instantaneous release	Reset release
Parts name			
Without parts		200	300
Alarm contact		208	308
Shunt release		210	310
Auxiliary contact		220	320
Undervoltage release		230	330
Auxiliary contact of shunt release		240	340
Secondary auxiliary contact		250	350
Auxiliary contact of undervoltage release		260	360
Alarm contact of shunt release		270	370
Secondary auxiliary contact and alarm contact		218	318
Alarm contact of shunt release		228	328
Undervoltage release alarm contact		238	338
Shunt release auxiliary contact alarm contact		248	348
Shunt release undervoltage release alarm contact		258	358
Secondary auxiliary contact alarm contact		268	368
Auxiliary contact undervoltage release alarm contact		278	378

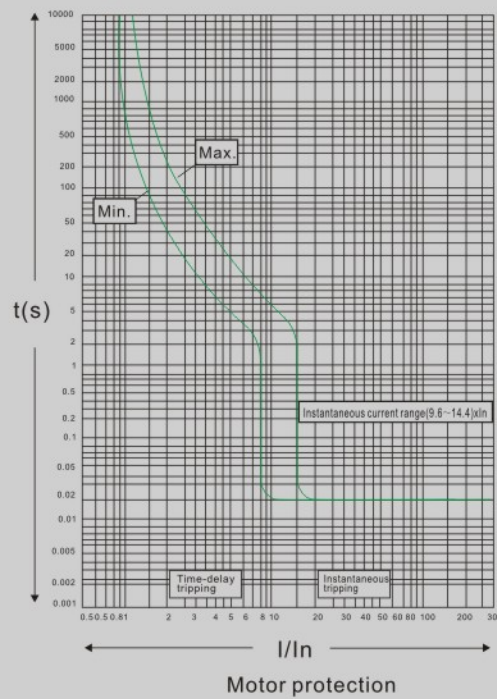
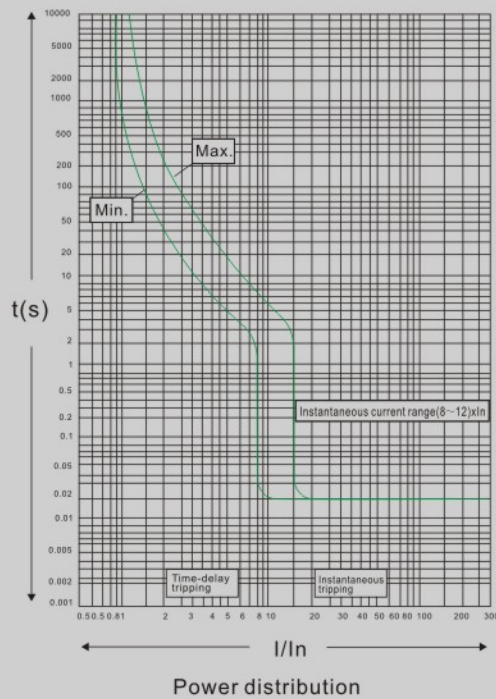
LFM1 Moulded Case Circuit Breaker

7. Technical characteristics

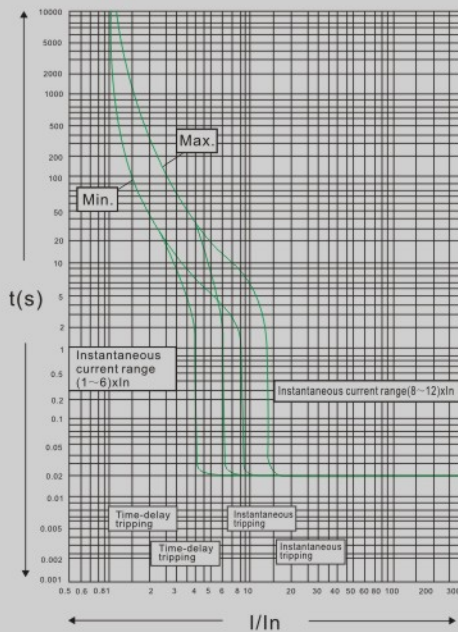
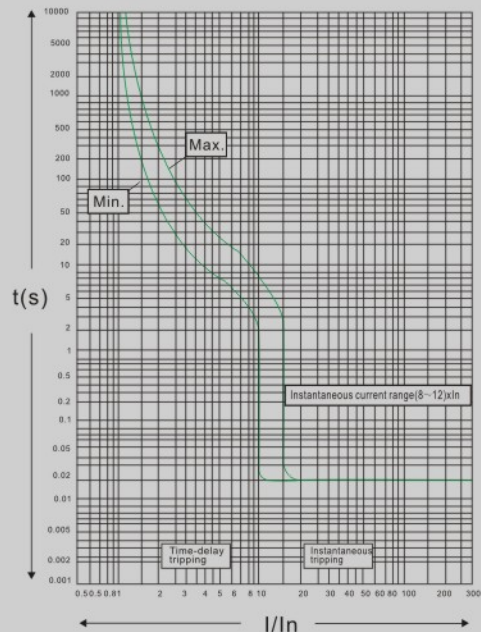
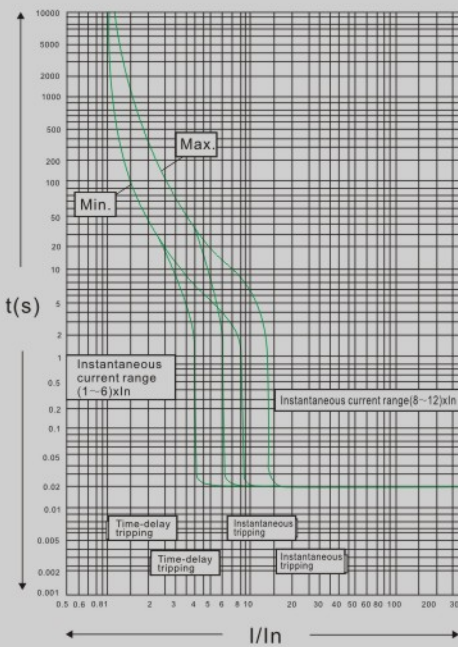
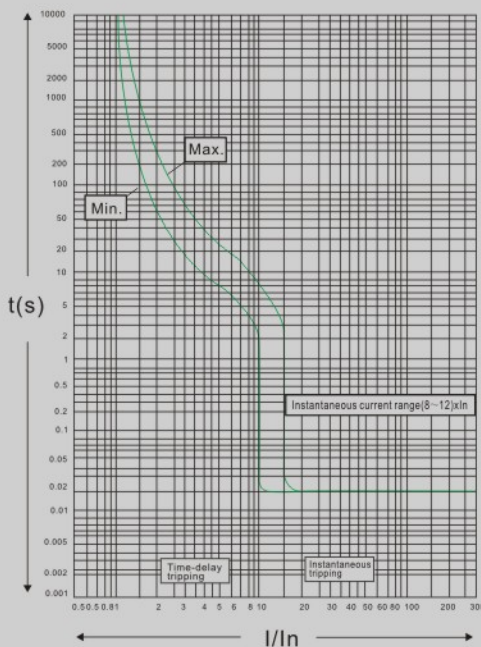
7.1 Curves



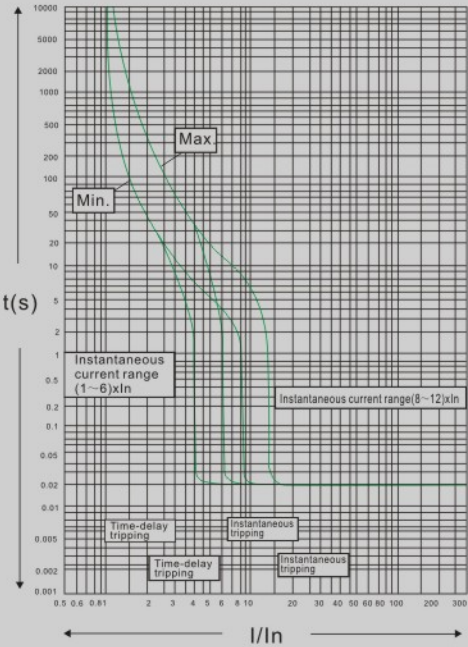
LFM1-63 time/current characteristic curve



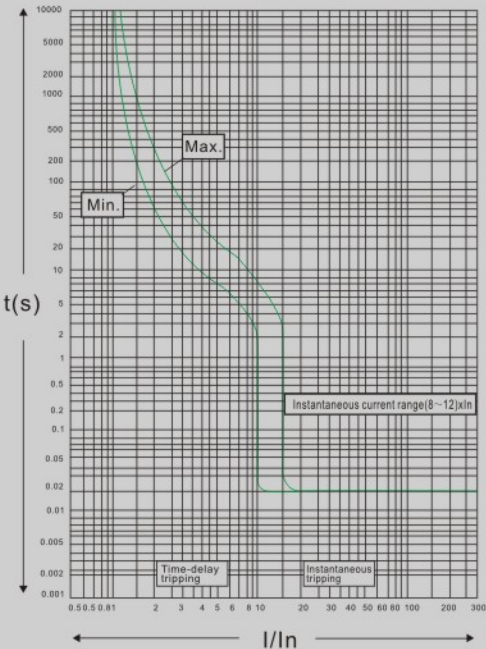
LFM1-100 time/current characteristic curve

LFM1 Moulded Case Circuit Breaker**Power distribution****Motor protection****LFM1-225 time/current characteristic curve****Power distribution****Motor protection****LFM1-400 time/current characteristic curve**

LFM1 Moulded Case Circuit Breaker

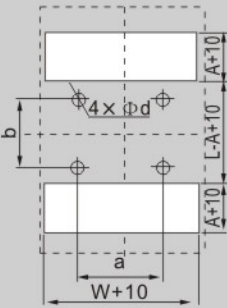
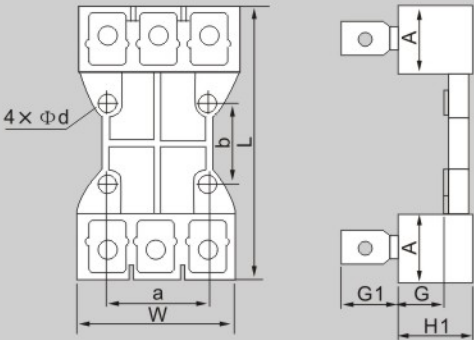


LFM1-630 time/current characteristic curve (distribution)



LFM1-800 time/current characteristic curve (distribution)

7.2 Figure and installation dimension of rear plug-in wiring type

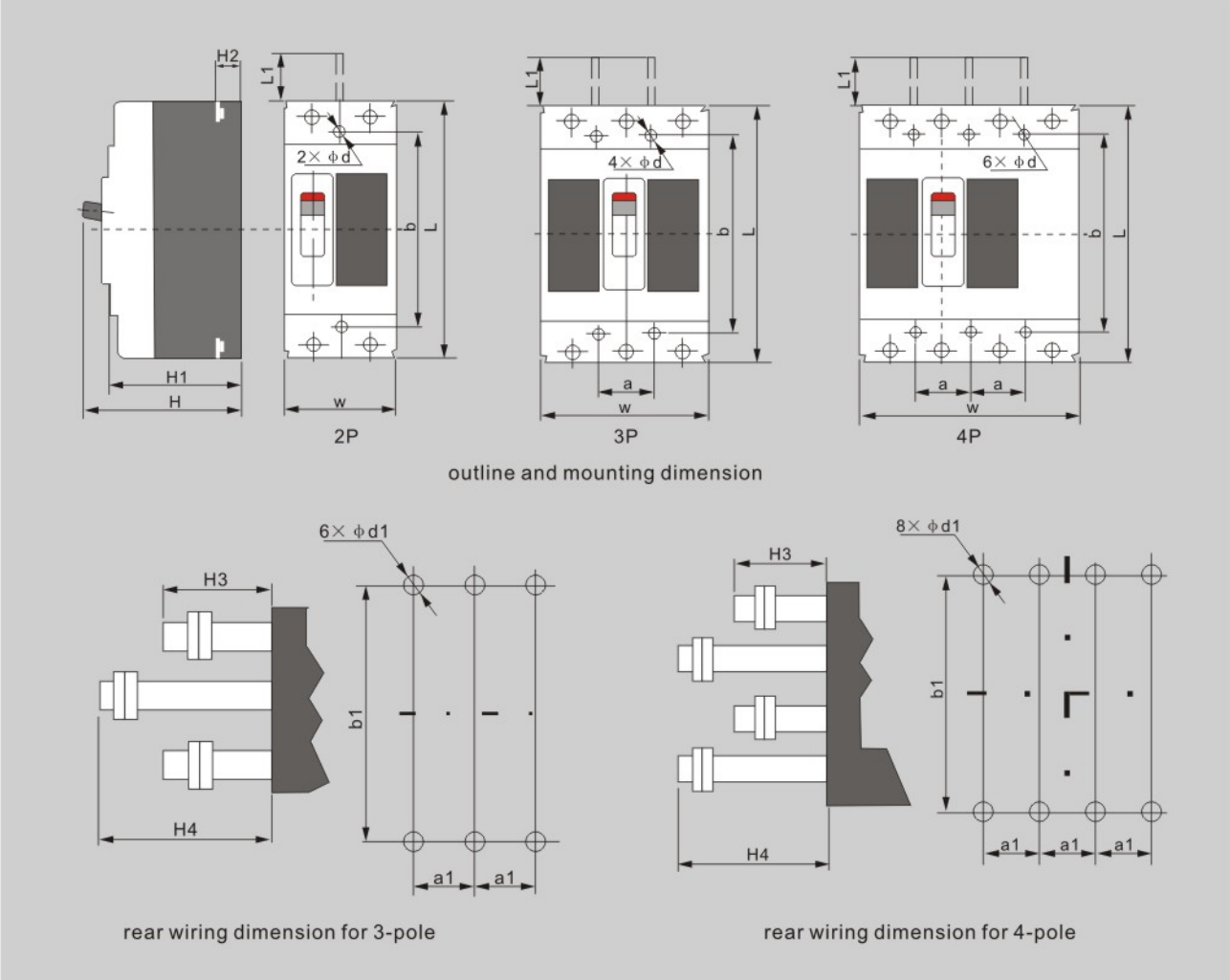


Dimension of installation hole

Figure and installation dimension of rear plug-in wiring type

Unit:mm

Type	W	L	A	H1	G	G1	a	b	d
LFM1-63	75	135	18	28	17	15	50	60	6
LFM1-100	92	170	38	50	33	28	60	56	6.5
LFM1-225	107	186	46	50	33	40	70	54	7
LFM1-400	144	270	50	60	40	48	88	143	9
LFM1-630	182	300	65	60	40	53	100	123	9
LFM1-800	212	298	57	100	43	129	140	143	9

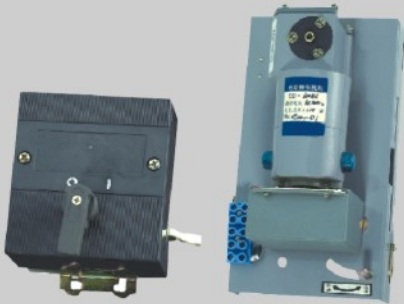
LFM1 Moulded Case Circuit Breaker**8. Overall and mounting dimensions(mm)**

Type	Pole	Outline dimensions													
		L	L1	W	H	H1	H2	a	b	φ d	a1	b1	d1	H3	H4 φ
LFM1-63L	3	135	21	76	89.5	74	21	25	117	3.5	25	117	18	52	75
LFM1-63M															
LFM1-63	4			103	99	82	28								
LFM1-100L	3	150	51	92	87	68	25	30	129	4.5	30	132	22	65	100
LFM1-100M															
LFM1-100H	2			65	103.5	87	24	-							
LFM1-100	4			122				30							
LFM1-225L	3	165	65	107	108	87	25	35	126	5.5	35	144	24	70	110
LFM1-225M															
LFM1-225H	2			75	124.5	104	24.5	-							
LFM1-225	4			142				35							
LFM1-400C,L,M,H	3	257	105	140	145	100	36.5	44	215	6.5	44	225	26	70	120
LFM1-400	4			184											
LFM1-630L,M,H	3	270	118	182	160	108	41	58	200	7	58	234	36	71	120
LFM1-630	4			240											
LFM1-800C,L,M,H	3	280	102	210	146	103	34.5	70	243	7	70	243	48	75	125
LFM1-800	4			280											

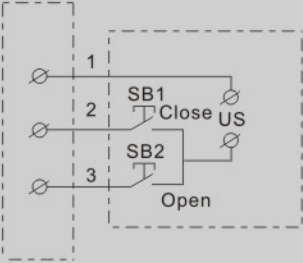
LFM1 Moulded Case Circuit Breaker

9. Accessories

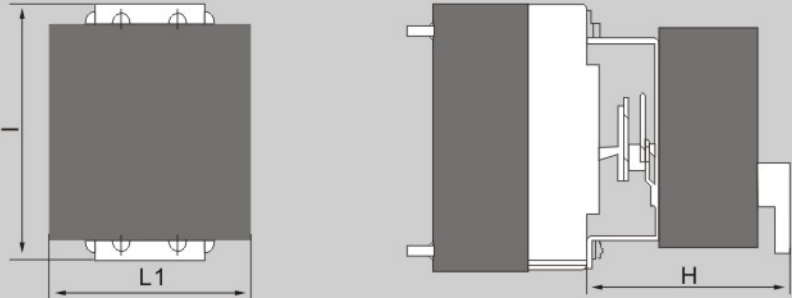
9.1 Motor-driven operation



Installation and electrical wiring of electric operation device
Figure and dimension of normal type electric operation device see picture and table



LFM1-63,100,225 Dimension of normal type electric operation device



LFM1-400,630,800 Dimension of normal type electric operation device

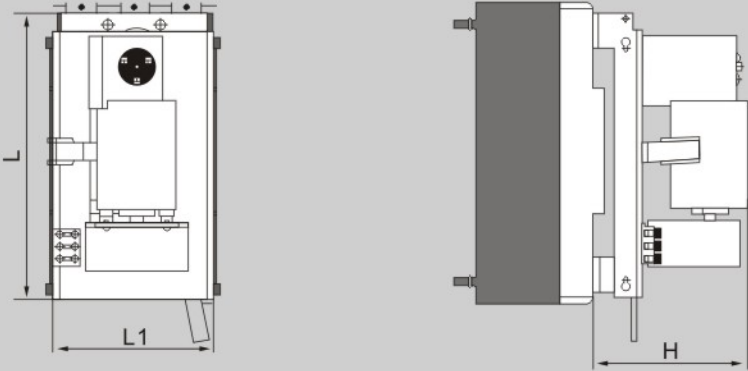


Figure and dimension of normal type electric operation device

Unit:mm

Type	Dimension		
	L	L1	H
LFM1-63	107	76	91
LFM1-100	118	90	103.5
LFM1-225	156	105	101
LFM1-400	254	141	132
LFM1-630	254	140.5	129
LFM1-800	226	132	122

LFM1 Moulded Case Circuit Breaker

Figure and dimension of electronic type electric operation device see picture and table

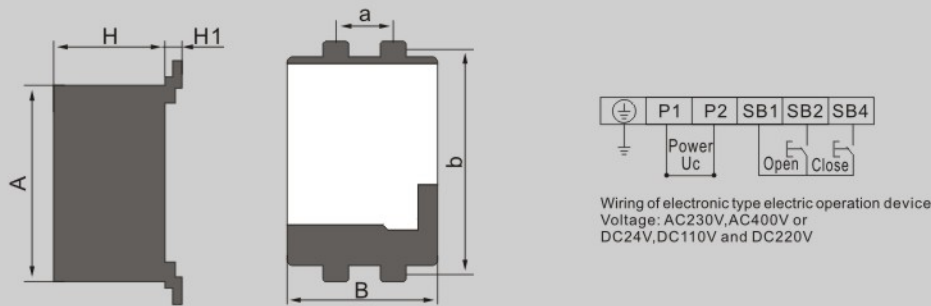


Figure and dimension of electronic type electric operation device

Unit:mm

Type	A	B	H	H1	a	b
LFM1-63	102	74	79	11.5	25	117
LFM1-100	116	90	77	12.5	30	128
LFM1-225	116	90	77	15	35	126
LFM1-400	176	130	115	27	44	215
LFM1-630	176	130	115	38	58	200
LFM1-800	176	130	115	31	70	243

9.2 Rotary manual operation mechanism

Figure and wiring of round handle operation device Unit:mm

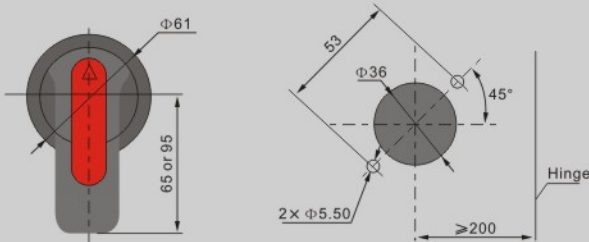
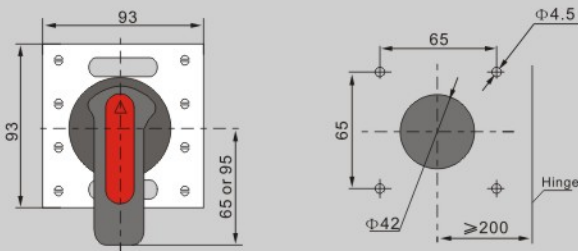
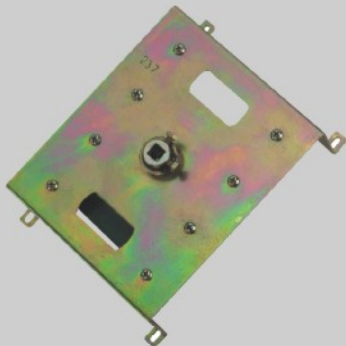
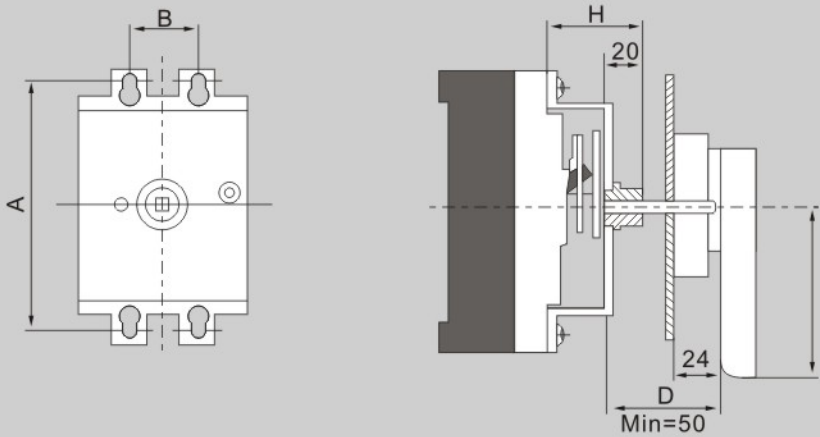


Figure and wiring of square handle operation device



LFM1 Moulded Case Circuit Breaker

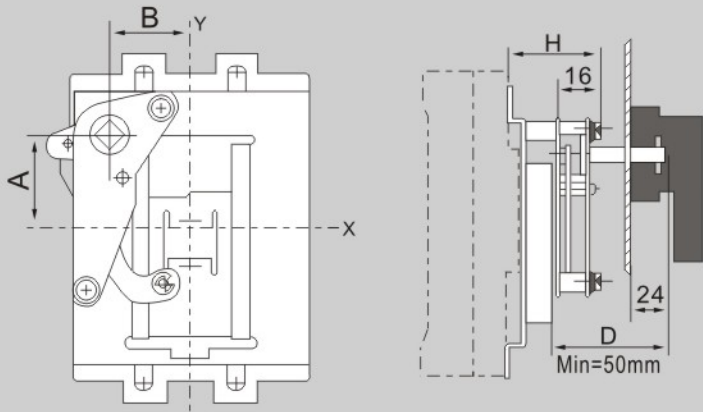
Figure and installation of central type rotary handle operation device



Unit:mm

Type	A	B	H
LFM1-63	117	25	49
LFM1-100	129	30	54
LFM1-225	126	35	54
LFM1-400	215	44	76
LFM1-630	200	58	83
LFM1-800	243	70	76

Figure and installation of electric type rotary handle operation device

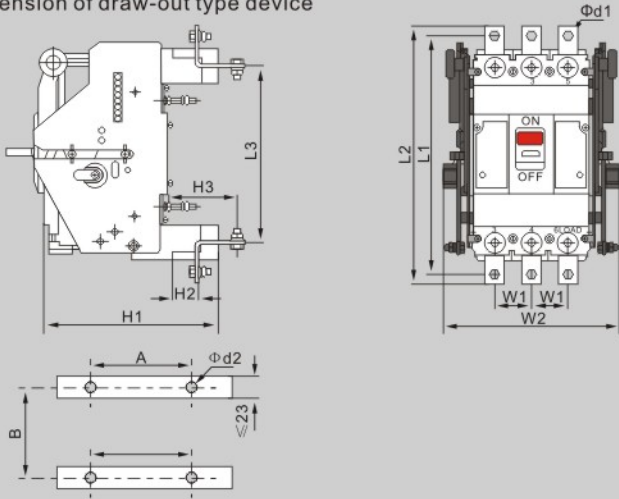


Unit:mm

Type	A	B	H
LFM1-100	35	11.5	46
LFM1-225	35	31	48
LFM1-400	65	15	61
LFM1-630	60	15	61
LFM1-800	48	15	66

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Figure and installation dimension of draw-out type device



Unit:mm

Type	Poles	Figure dimension								Installation dimension		
		L1	L2	L3	H1	H2	H3	W1	Φd1	A	B	Φd2
LFM1-400/M	3P	310	339	203	253	17.5	77	48	Φ11	96	134	Φ6.5
	4P	310	339	203	253	17.5	77	48	Φ11	144	134	Φ6.5
LFM1-630/M	3P	341	381	211	282	17.5	92	58	Φ13	116	140	Φ6.5
	4P	341	381	211	282	17.5	92	58	Φ13	174	140	Φ6.5
LFM1-800/M	3P	367	410	241	238	26	73	70	Φ13	140	131	Φ6.5
	4P	367	410	241	238	26	73	70	Φ13	210	131	Φ6.5

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	Rated thermal current Ith	3A
	Rated operation voltage	(0.7~1.1)Ue