



选型目录 Product Catalog

# MM1系列 塑料外壳式断路器

MM1 Series Moulded Case Circuit Breaker

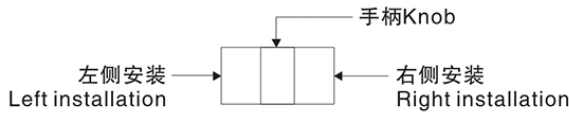




## 脱扣器方式及附件代号 Release mode and accessory code

□ 脱扣器方式及内部附件 (表5)

Tripping mode and inner accessory (Table 5)



□ 报警触头 Alarm contact

■ 辅助触头 Aux contact

● 分励脱扣器 Shunt release

○ 欠电压脱扣器 Under voltage release(UVT)

→ 引线方向 Lead the direction of

表5 Table 5

代号 Code	附件名称 Accessory name	型号Model 极数No. of poles	MM1-63、MM1-125	MM1-250	MM1-400	MM1-630	MM1-800	MM1-1600(1250)
			3,4	3,4	3,4	3,4	3,4	3,4
208、308	报警触头 Alarm contact							
210、310	分励脱扣器 Shunt release							
220、320	辅助触头 Auxiliary contact							
230、330	欠电压脱扣器 Under-voltage release							
240、340	分励脱扣器、辅助触头 Shunt auxiliary contact							
250、350	分励脱扣器、欠电压脱扣器 Shunt release UVT							—
260、360	二组辅助开关 Two groups auxiliary contacts							
270、370	辅助触头、欠电压脱扣器 Auxiliary contact UVT							
218、318	分励脱扣器、报警触头 Shunt alarm contact							
228、328	辅助触头、报警触头 Auxiliary alarm contact							—
238、338	欠电压脱扣器、报警触头 UVT alarm contact							—
248、348	分励脱扣器、辅助触头、报警触头 Shunt auxiliary alarm contact							—
268、368	二组辅助触头、报警触头 Two groups aux alarm contact							—
278、378	辅助触头、欠电压脱扣器、报警触头 Aux contact UVT alarm contact							—

### 注 note

- 200: 表示仅有电磁脱扣器的断路器; 300: 表示带有热动-电磁脱扣器的断路器; 000: 表示不带过流脱扣器的断路器 (隔离开关)
- 对MM1-125、250二极产品只有210/310/220/320/230/330;对MM1-63/125/250四极断路器, N极为A型和D型时无240/340/360/260/268/368;
- 对MM1-400、MM1-630及MM1-800其中248/348/278/378规格中辅助触头为一对触头 (即一常开、一常闭), 268/368规格中的辅助触头为三对触头 (即三常开三常闭); 其余规格辅助触头数量MM1-400及以上为二组, MM1-250以下为一组
- 对MM1-63、MM1-125、MM1-250其中220/320/240/340/270/370规格中辅助触头可供二对触头 (即二常开、二常闭), 260/360可供三对触头 (即三常开、三常闭), 订货时需注明。
- 200: Circuit breaker with electromagnetic release only; 300: Circuit breaker with thermal-magnetic release; 000: Circuit breaker without overcurrent release (disconnecter)
- For MM1-125, 250 two-pole products, there are only 210/310/220/320/230/330; for MM1-63 / 125/250 four-pole circuit breakers, there is no 240/340/360 / for N pole A and D 260/268/368;
- For MM1-400, MM1-630 and MM1-800, the auxiliary contacts in the 248/348/278/378 specifications are a pair of contacts (ie, one normally open, one normally closed), and the auxiliary contacts in the 268/368 specifications There are three pairs of contacts (ie three normally open and three normally closed); the number of auxiliary contacts of other specifications MM1-400 and above are two groups, and MM1-250 and below are a group
- For MM1-63, MM1-125, MM1-250, 220/320/240/340/270/370 specifications of the auxiliary contact can be used for two pairs of contacts (ie two normally open, two normally closed), 260/360 can For three pairs of contacts (ie three normally open, three normally closed), please specify when ordering.

# MM1系列塑料外壳式断路器

MM1 Series Moulded Case Circuit Breaker

## 主要性能指标 Technical Data




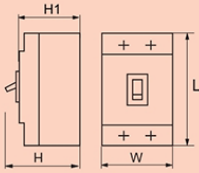
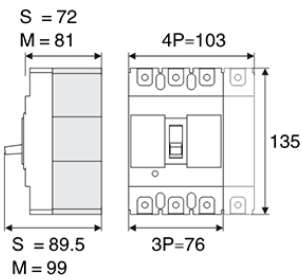
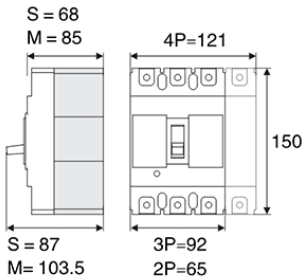
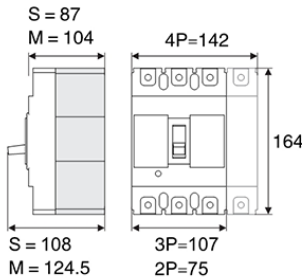
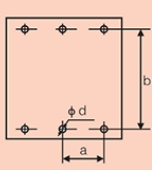
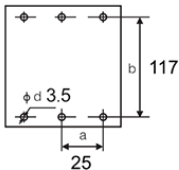
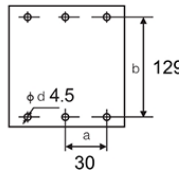
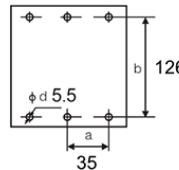




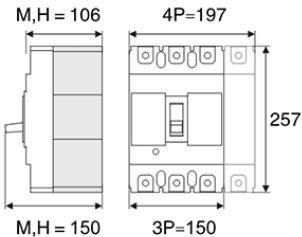
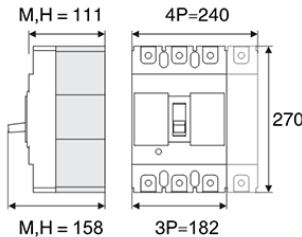
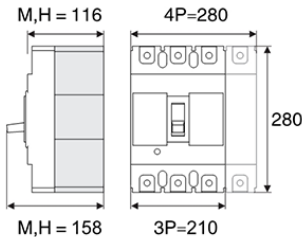
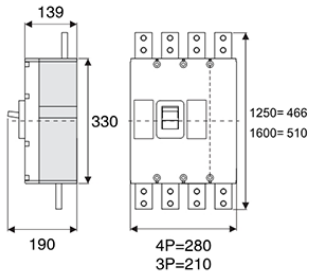
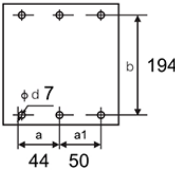
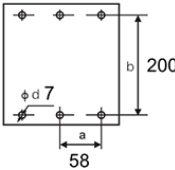
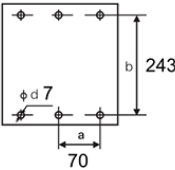
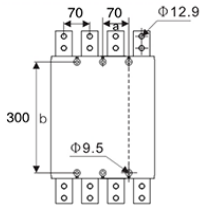
										
型号 Type	MM1-63	MM1-125	MM1-250							
壳架电流Inm Frame Inm (A)	63	125	250							
额定电流In (A) Rated current (A)	10、16、20、25、32、 40、50、63	16、20、25、32、40、 50、63、80、100、 125	100、125、140、160、 180、200、225、250							
额定电压 (V) Rated voltage Ue(V)	AC400	AC400 (2P:230V)	AC400 (2P:230V)							
额定绝缘电压 (V) Rated insulation voltage Ui(V)	AC800	AC800	AC800							
极数 Number of poles	3,4	2,3,4	2,3,4							
额定极限短路分断能力级别 Rated limit short-circuit breaking capacity level	S	M	S	M						
额定极限短路分断能力 Icu (kA) Rated limit short circuit breaking capacity	AC400V	12	18	35	12	35	50	12	35	50
额定运行短路分断能力 Ics (kA) Rated short-circuit breaking capacity	AC400V	6	12	22	6	22	35	6	22	35
操作循环次数 Operation life(cycle)	通电 NO	4500			3000			2500		
	不通电 OFF	8500			7000			6500		
飞弧距离 (mm) Arcing distance (mm)	0、< 50			0、< 50			< 50			
外形尺寸 (mm) Dimensions		 <p>S = 72 M = 81 4P=103 135 S = 89.5 M = 99 3P=76</p>			 <p>S = 68 M = 85 4P=121 150 S = 87 M = 103.5 3P=92 2P=65</p>			 <p>S = 87 M = 104 4P=142 164 S = 108 M = 124.5 3P=107 2P=75</p>		
	安装尺寸 (mm) Installation size		 <p>117 25 φd 3.5</p>			 <p>129 30 φd 4.5</p>			 <p>126 35 φd 5.5</p>	

表4 Table 4

			
MM1-400	MM1-630	MM1-800	MM1-1600(1250)
400	630	800	1600
225、250 315、350、400	400、500、630	630、700、800	630、700、800、1000、 1250、1600
AC400	AC400	AC400	AC400
AC800	AC800	AC800	AC1000
3,4	3,4	3,4	3,4
	M		M
35	65	35	65
22	45	22	50
1500	1500	1000	500
4000	4000	2500	2500
< 100	< 100	< 100	< 120
			
			

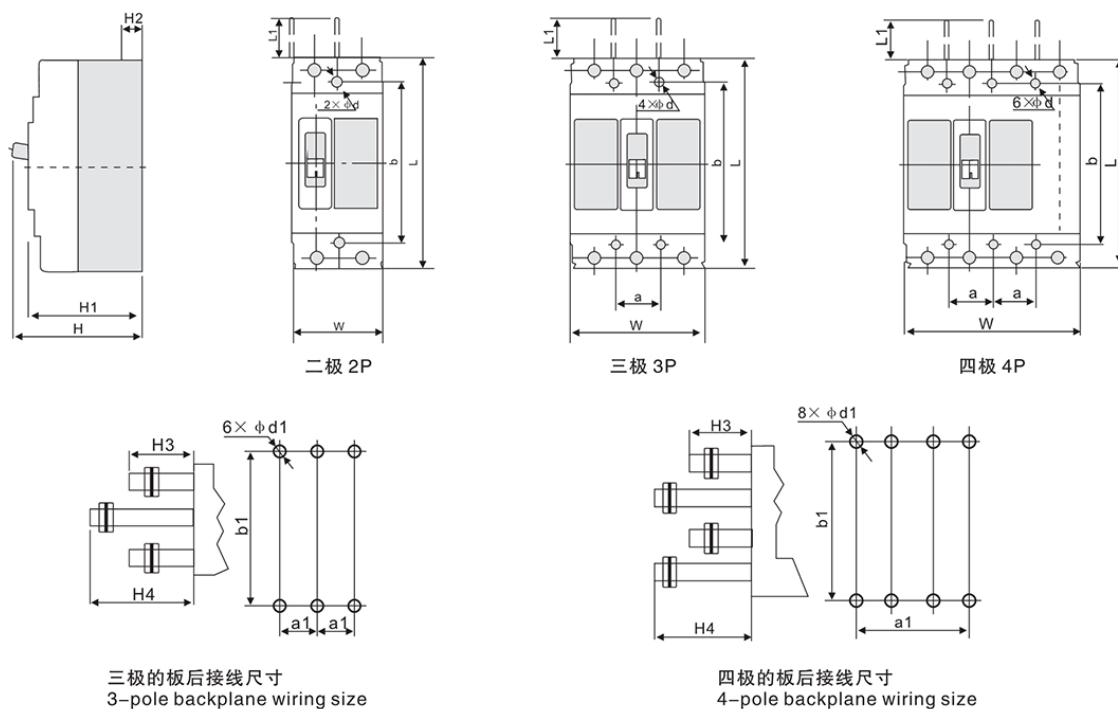


# MM1系列外形及安装尺寸

MM1 Series Outline And Mounting Dimensions

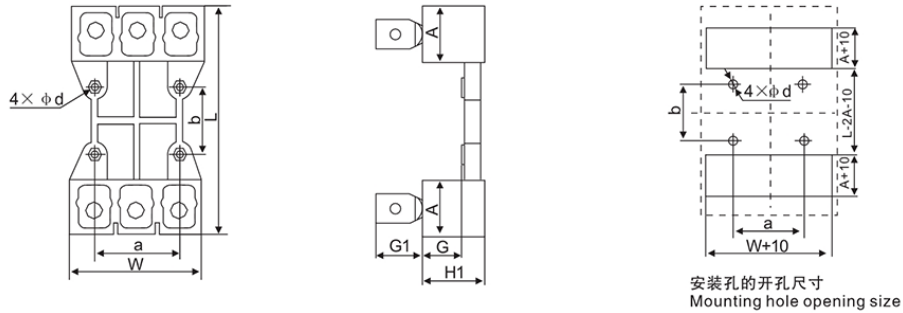
## MM1外形及安装尺寸 Shape and installation dimensions

□ 固定式板前、板后接线的外形及安装尺寸 Shape and installation dimensions



型号 Type	极数 pole	外形尺寸 (mm) Dimensions						安装尺寸(mm)Installation size			板后接线尺寸 (mm) Backplane wiring size													
		L	L1	W	H	H1	H2	a	b	$\phi d$	a1	b1	d1	H3	H4									
MM1-63S	3	135	21	76	89.5	72	18	25	117	3.5	25	117	18	52	75									
	4			103				50																
MM1-63M	3			76	99	81	28	25																
	4			103				50																
MM1-125S	2	150	51	65	87	68	24	...	129	4.5	30	132	22	65	100									
	3			92				30																
	4			121				60																
MM1-125M	2			65	103.5	85	23	...																
	3			92				30																
	4			121				60																
MM1-250S	2	164	64	75	108	87	24	...	126	5.5	35	144	24	70	110									
	3			107				35																
	4			142				70																
MM1-250M	2			75	124.5	104	24	...																
	3			107				35																
	4			142				70																
MM1-400	3	257	105	150	153	106	38	44	194	7	48	224	32	48.5	108.5									
	4			197				94																
MM1-630	3			270	105	182	157	111								43	58	200	7	58	234	40	70	120
	4					240											116							
MM1-800	3	280	105			210	158	116	42	70	243	7	70	243	48	75	125							
	4					280				140														

- 插入式板后接线的外形及安装尺寸
- Outline and installation dimensions of the wiring after the plug-in board

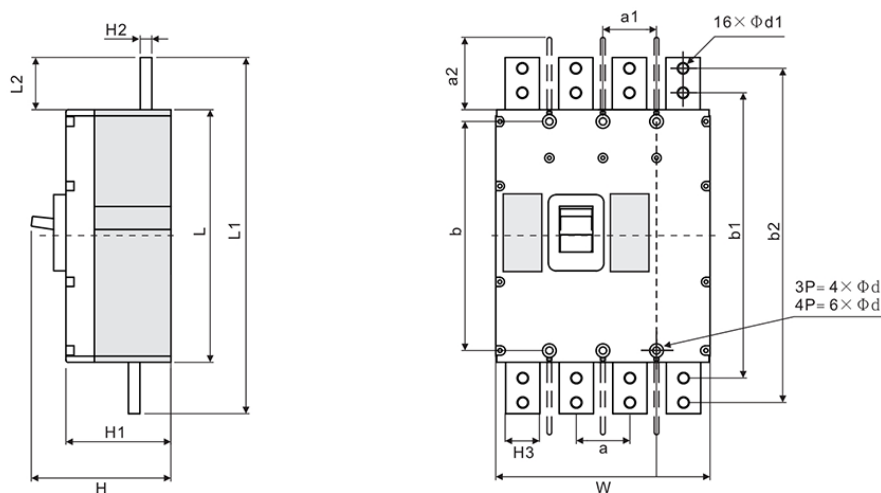


单位毫米Unit(mm)

型号 Type	W	L	A	H1	G	G1	a	b	d
MM1-63	75	135	18	28	18	16	50	60	5.5
MM1-125	91	168	38	50	33	28	60	56	6.5
MM1-250	107	186	46	50	33	37	70	54	6.5
MM1-400	149	280	55	60	38	46	60	129	8.5
MM1-630	182	300	65	60	39	50	100	123	8.5
MM1-800	212	305	62	87	60	22	90	146	11

### MM1-1600(1250)外形及安装尺寸 Shape and installation dimensions

- 断路器板前接线的外形及安装尺寸
- Outline and installation dimension of front wiring of circuit breaker board



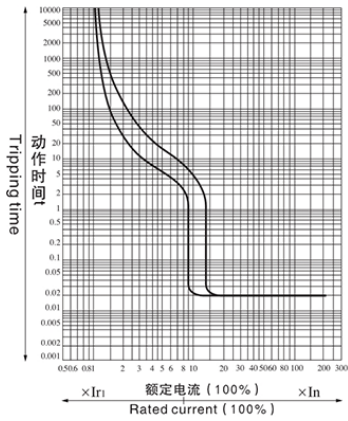
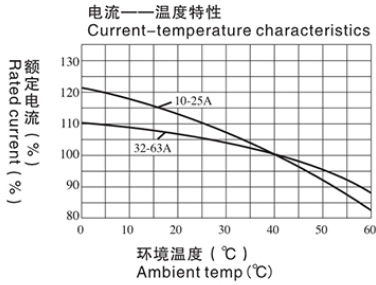
型号 Type	极数 pole	外形尺寸 ( mm ) Dimensions								安装尺寸(mm)Installation size							
		L	L1	L2	W	H	H1	H2	H3	a	a1	a2	b	b1	b2	Φd	Φd1
MM1-1250	3	330	466	68	210	190	139	15	45	70	70	107	300	370	436	9.5	12.9
	4	330	466	68	280	190	139	15	45	70	70	107	300	370	436	9.5	12.9
MM1-1600	3	330	510	90	210	190	139	16	45	70	70	107	300	390	470	9.5	12.9
	4	330	510	90	280	190	139	16	45	70	70	107	300	390	470	9.5	12.9

# MM1系列塑料外壳式断路器

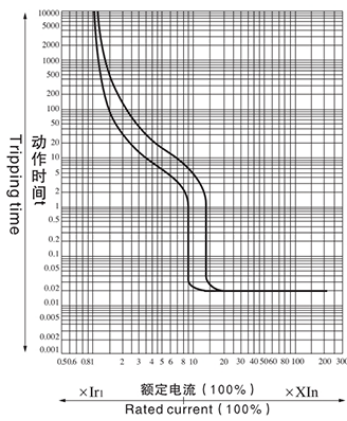
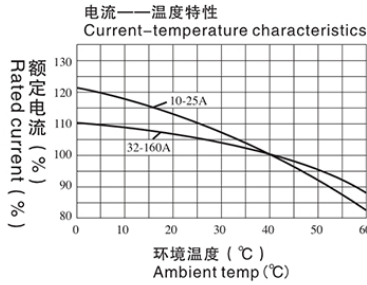
MM1 Series Moulded Case Circuit Breaker

## 断路器特性曲线 Tripping characteristics(curve)

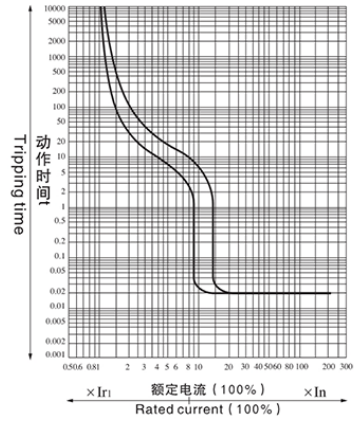
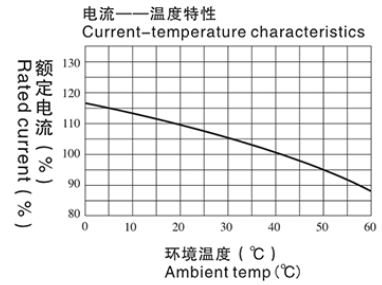
□ 说明：特性曲线是在冷态，三相负载下测得。  
 □ Note: The characteristic curve is measured under the cold state and three-phase load.



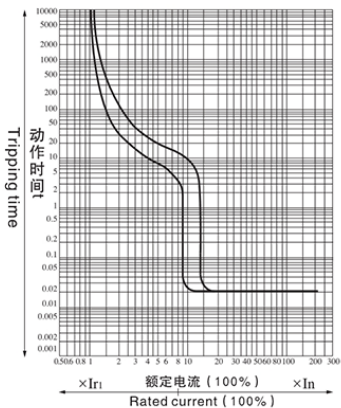
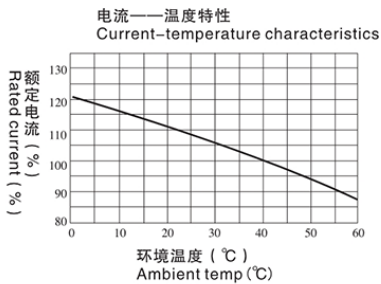
MM1-63S, M 时间/电流特性曲线  
 MM1-63S, M Time / current characteristic curve



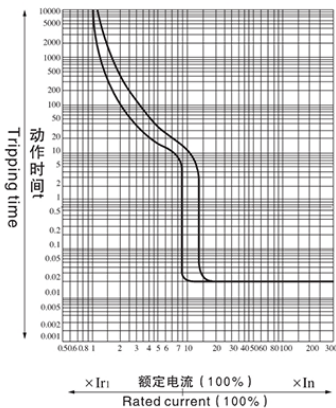
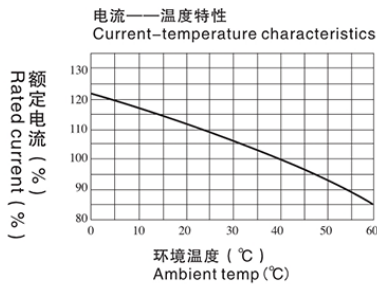
MM1-125S, M 时间/电流特性曲线  
 MM1-125S, M Time / current characteristic curve



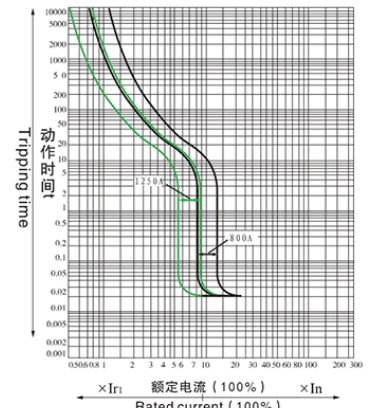
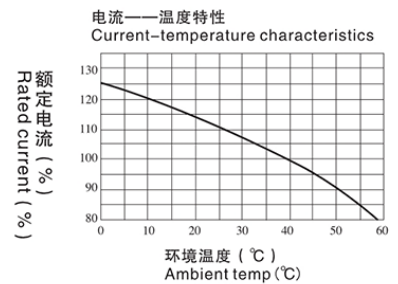
MM1-250S, M 时间/电流特性曲线  
 MM1-250S, M Time / current characteristic curve



MM1-400M 时间/电流特性曲线  
 MM1-400M Time / current characteristic curve



MM1-630M 时间/电流特性曲线  
 MM1-630M Time / current characteristic curve



MM1-800, 1250 时间/电流特性曲线  
 MM1-800, 1250 Time / current characteristic curve



## 保护特性 Protection characteristics

脱扣器动作性能 Trip performance

配用电 For power distribution

表1 Table 1

脱扣器额定工作电流 (A) Release Rated Operating Current (A)	热脱扣器 (基准温度40℃) Thermal release (reference temperature 40 °C)		电磁脱扣器动作电流 (A) Operating current of electromagnetic release (A)	备注 Remark
	1.05In(冷态)不动作时间 (h) 1.05 In(cold state)Inactivity time (h)	1.30In(热态)不动作时间 (h) 1.30 In(Hot state)Inactivity time (h)		
10<In≤63	>1	<1	10In±20%	配电保护型 注:1600A为7In±20%
63<In≤125	>2	<2	10In±20%	
125<In≤1600	>2	<2	5In±20% 7In±20% 10In±20%	Distribution protection type Note: 1600A for 7In±20%

注: 额定电流小于160A无5In 电流磁脱扣

Note: the rated current is less than 160A, and there is no magnetic trip with 5in current

保护电动机用 For motor protection

脱扣器额定工作电流 (A) Release Rated Operating Current (A)	热脱扣器 (基准温度40℃) Thermal release (reference temperature 40 °C)				电磁脱扣器动作电流 (A) Operating current of electromagnetic release (A)
	1.0In(冷态)不动作时间 (h) 1.0 In(cold state)Inactivity time (h)	1.20In(热态)动作时间 (h) 1.20 In(Hot state) Action time (h)	1.50In(热态)动作时间 (h) 1.50 In(Hot state) Action time (h)	7.20In(冷态)不动作时间 (h) 7.20In(cold state)Inactivity time (h)	
10<In≤1600	>2	<2	8min	6S<Tp<20s	12In±20%; 7In±20%

## 功率耗损 Power loss

断路器功率损耗 Circuit breaker power loss

表2 Table 2

型号 Type	通电电流(A) Electric current(A)	三极总功率损耗 (W) Three-pole total power loss (W)		
		板前、板后接线 Wiring before and after the board	插入式板前接线 Wiring in front of plug-in board	插入式板后接线 Wiring after plug-in board
MM1-63(S、M)直热型(Direct heating)(10A-25A)	25	28	/	32
MM1-125(S、M)直热型(Direct heating)(16A-25A)	25	40	42	45
MM1-63(S、M)间热型(Interheat)(32A-63A)	63	20	/	24
MM1-125(S、M)间热型(Interheat)(32A-100A)	125	35	37	40
MM1-250(S、M)	250	62	66	70
MM1-400	400	115	120	125
MM1-630	630	187	193	200
MM1-800	800	262	/	300
MM1-1600(1250)	1600	386	/	/

## 降容系数 Derating factor

断路器环境温度变化的降容系数 Derating factor of circuit breaker ambient temperature change

表3 Table 3

型号 Type	降容系数 (In) Derating factor (In)				
	+40℃	+45℃	+50℃	+55℃	+60℃
MM1-63	1	0.94	0.88	0.81	0.74
MM1-125	1	0.96	0.91	0.85	0.78
MM1-250	1	0.97	0.94	0.90	0.86
MM1-400	1	0.95	0.89	0.82	0.75
MM1-630	1	0.94	0.88	0.82	0.76
MM1-800	1	0.94	0.87	0.80	0.72
MM1-1600(1250)	1	0.92	0.85	0.79	0.70

注: 以上降容系数均在通于壳架额定电流下测得

Note: The above derating factors are measured under the rated current through the shell.

# MM1系列塑料外壳式断路器

MM1 Series Moulded Case Circuit Breaker

## 使用与维护 Use and maintenance

断路器各种特性及附件由制造厂整定，在使用中不要随意调节，用户务必对本产品技术资料详细了解后再对断路器的相关参数进行调整。

断路器手柄可以处在三个位置，分别表示闭合、断开、自由脱扣三种状态，当手柄处于自由脱扣位置时，应向断开方向扳动手柄，此时断路器再扣，然后才能合闸。

请用户遵守存储和使用条件，从制造厂发货之日起不超过12个月，产品如因制造质量问题发生损坏或不能正常使用时，制造厂负责维修或更换。

various characteristics and accessories of the circuit breaker shall be set by the manufacturer and shall not be adjusted arbitrarily during use. The user must understand the technical data of the product in detail before adjusting the relevant parameters of the circuit breaker.

the handle of the circuit breaker can be in three positions, which respectively represent the three states of closing, opening and free tripping. When the handle is in the free tripping position, pull the handle in the opening direction. At this time, the circuit breaker can be closed only after it is pulled again.

the user shall observe the storage and use conditions, which shall not exceed 12 months from the date of delivery by the manufacturer. If the product is damaged or cannot be used normally due to manufacturing quality problems, the manufacturer shall be responsible for repair or replacement.

## 订货须知 Ordering instructions

请写明断路器的型号规格以及订货数量，采用欠电压脱扣器、分励脱扣器或电动操作机构时，请注明工作电压或控制电源电压的电压值。

例如:MM1-125S/3300板后接线(板前接线可以不写)额定工作电流80A 10台。

周围气温属下列情况请申明:上限超过+40℃或下限低于-5℃

please indicate the model, specification and order quantity of the circuit breaker. When using undervoltage release, shunt release or electric operating mechanism, please indicate the voltage value of working voltage or control power supply voltage.

for example: 10 sets of MM1-125S / 3300 rear board wiring (front board wiring can not be written) with rated working current of 80A.

please state that the ambient temperature is under the following conditions: the upper limit exceeds + 40 °C or the lower limit is lower than - 5 °C

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