



# MF-1 S E R I E S

Moulded Case  
Circuit Breaker





## MF1 Series Moulded Case Circuit Breaker



### 1. Application

MF1 series moulded case circuit breaker, incorporated with internationally advanced technology, is suitable for distribution system with a rated voltage up to 750V, rated current 1250A and frequency 60Hz. This item is designed for the prevention of circuit and electrical equipment from damage resulting from overload, short circuit and under voltage. Besides, it can be used for the infrequent start of motor.

According to short circuit capacity, the series is divided into such three types as S type (standard capacity) H type (higher capacity) and R type (current limiting). The item is ideal defender due to its small volume, big short circuit capacity and short electrical arc.

### 5. Technical Data

5.2 Inverse time switch-off action property of the over current tripping gear of the breaker (used for power distribution) at the status that all poles are energized simultaneously

No.	Testing Current	I/In	Duration	Initial Status
1	Specified non-trip current	1.05	2h(In>63A), 1h(In≤63A)	cold position
2	Specified Trip current	1.30	2h(In>63A), 1h(In≤63A)	Following the test no. 1

Inverse time-lag switch-off action property of the over current tripping gear of the breaker (used for motor protection) at the status that all poles are energized simultaneously

No.	Rated Current	Specified Time	Initial Status
1	1.0In	>2h	Cold position
2	1.2In	≤2h	Following the test no. 1
3	1.5In	≤4min	Hot position
4	7.2In	4s≤T≤10s	Cold position

5.3. Set current for instantaneous tripping is 8 In for distribution purpose circuit breaker, while 12In for motor protection purpose.

### 2. Working Conditions

- 2.1. Ambient Temperature
  - a. upper limit +55°C
  - b. bottom limit -5°C
  - c. average value within 24h≤+40°C
- 2.2. Altitude ≤ 2000m
- 2.3 Atmosphere conditions: humidity shall be less than 50% below +40°C, maximum relative humidity 90% is permitted in damp month while the average temperature not exceeding +25°C.

### 3. Main Specifications

- 3.1. Short circuit capacity
  - a. standard (S type);
  - b. higher (H type);
  - c. current limiting (R type).
- 3.2. Connection way
  - a. front plate connection (basic connection);
  - b. back plate connection;
- 3.3 Operation way
  - a. manually direct switching;
  - b. doll rotating operation;
  - c. motor operation
- 3.4. Application:
  - a. for distribution system;
  - b. for motor protection.
- 3.5 Pole number;
  - a. 2 poles
  - b.3 poles

### 4. Options

- 4.1 Tripping arrangement
  - a. Lock and Key
  - b. Push to trip
- 4.2. Terminal cover
  - a. Phase barriers
  - b. Shroud
- 4.3. Rating label data
  - a. Adhesive label pasted on the cover
  - b. Engraved directly on the cover
- 4.4. Terminal
  - a. Box type
  - b. Staggered type
  - c. Pressure pad type

# MF1 WITH LOCK & KEY SERIES

Technical Data in Compliance with IEC-60947-2 and SEC Specification, 37-SDMS-01

Description	Operating Mechanism	Rated Frame Current (A)	Rated Current (A)	Rated Operational Voltage (V)	Rated Insulating Voltage (V)	Rated Short Circuit breaking Capacity "Icu" (kA) 230/400V	Rated Service Short Circuit breaking Capacity "Ics" (kA) 230/400V	Weight (kg)	Reference Operating Curve
MF1-125H	Lock and Key	125	20, 30, 40, 50, 60, 70, 100, 125	230/400	750	25/20	100% Icu	1.7	a
MF1-250H	Lock and Key	250	150, 200, 250			25/20	100% Icu	2.8	a
MF1-400S	Lock and Key	400	300, 400			25/20	100% Icu	6.6	a
MF1-630	Lock and Key	630	500, 600, 630			65/40	100% Icu	10	a
MF1-1000	Lock and Key	1000	800, 1000			65/40	100% Icu	10.5	a

Frame Size	Overall Dimensions (mm)								Mounting Dimension (mm)		
	Front Plate Connection								A	B	Ød
MCCB with Lock and Key	W	L	H	W1	L1		H1	L2			
					a	b					
MF1-125H	90	155	86	60	210	255	105	136	30	129	M-4
MF1-250H	103	165	103	70	210	360	125	144	35	126	M-4
MF1-400S	140	257	104	88	386	457	137	225	44	194	M-6
MF1-630	182	270	111	116	395	470	148	234	58	200	M-6
MF1-1000	210	276	107	140	403	470	149	243	70	243	M-6

# MF1 WITH OUT LOCK & KEY SERIES

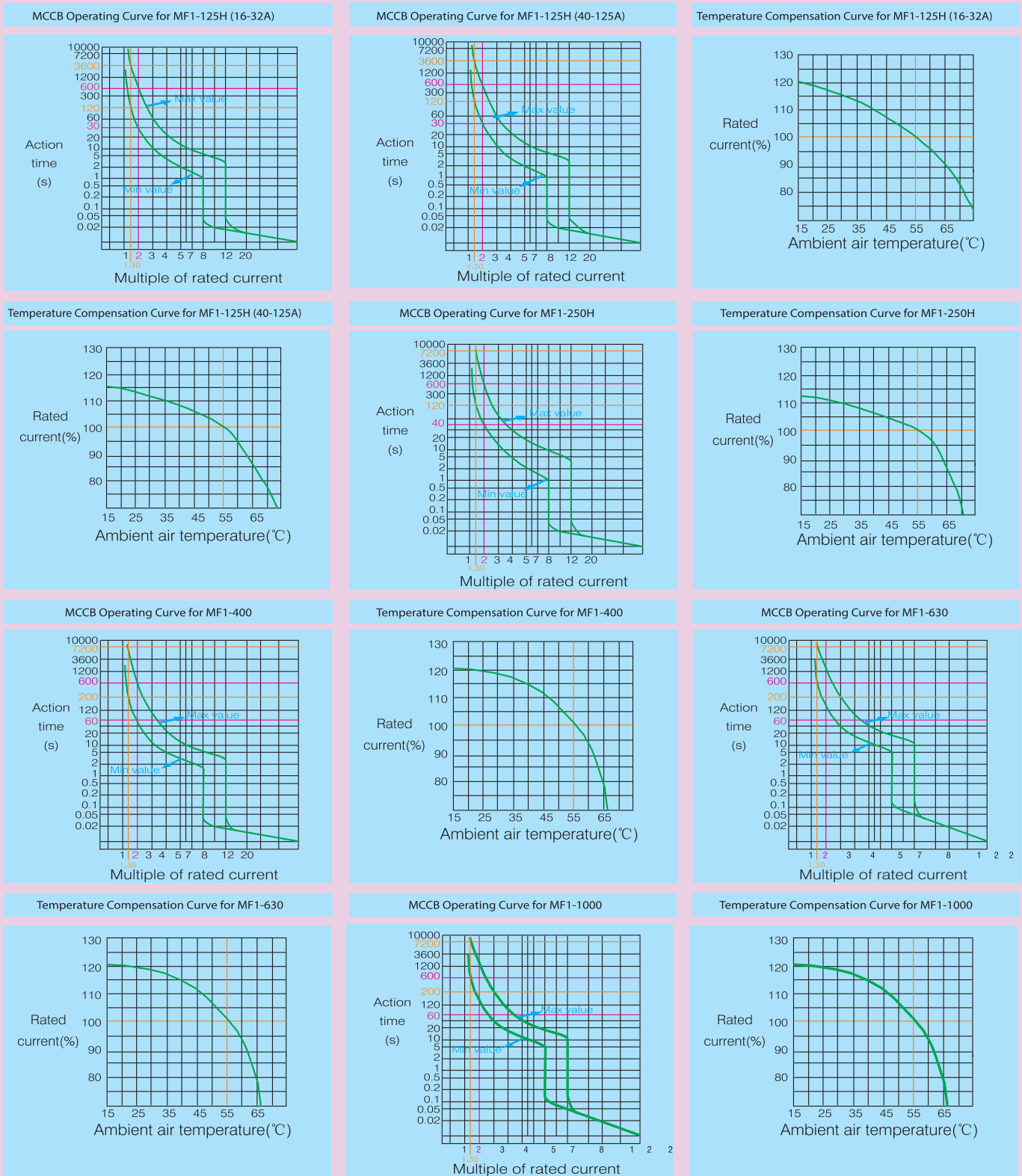
Description	Operating Mechanism	Rated Frame Current (A)	Rated Current (A)	Rated Operational Voltage (V)	Rated Insulating Voltage (V)	Rated Short Circuit breaking Capacity (kA); Icu	Rated Service Short Circuit breaking Capacity (kA); Ics	Weight (kg)	Reference Operating Curve
MF1-125S	PTT	125	20, 30, 40, 50, 60, 70, 80, 100, 125	230/400	750	35kA at 400V	100%Icu	1.4	b
MF1-125-DB	PTT	125	20, 30, 40, 50, 60, 70, 80, 100, 125			35kA at 400V	100%Icu	1.4	b
MF1-125-ECB	PTT	125	20, 30, 40, 50, 60, 70, 80, 100, 125			35kA at 400V	100%Icu	1.4	b
MF1-225	PTT	225	150, 160, 200, 225			50kA At 230V	100%Icu	2.3	b
MF1-250S	PTT	250	150, 160, 200, 225, 250			35kA at 400V	100%Icu	2.3	b
MF1-250-DB	PTT	250	150, 160, 200, 225, 250			35kA at 400V	100%Icu	2.3	b
MF1-250-ECB	PTT	250	150, 160, 200, 225, 250			35kA at 400V	100%Icu	2.3	b
MF1-400	without PTT & without Lock & Key	400	300, 350, 400			50kA at 230V	100%Icu	6.6	b
MF1-400S	PTT	400	300, 350, 400			50kA@230 and 70kA@400V	100%Icu at 230V & 50%Icu at 400V	6.6	b
MF1-630S	PTT	630	500, 600, 630			50kA@230 and 70kA@400V	100%Icu at 230V & 50%Icu at 400V	10	b
MF1-800H	PTT	800	630, 800			50kA@230 and 70kA@400V	100%Icu at 230V & 50%Icu at 400V	10.5	b
MF1-1250H	PTT	1250	800, 1000, 1250			50kA@230 and 65kA@400V	100%Icu at 230V & 50%Icu at 400V	18	b

\* PTT: Push to trip

Frame Size	Overall Dimensions (mm)								Mounting Dimension (mm)		
	Front Plate Connection								A	B	Ød
with PTT	W	L	H	W1	L1		H1	L2			
					a	b					
MF1-125S	90	155	68	60	249	160	84	136	30	129	M-4
MF1-125-DB	90	155	68	60	249	160	84	136	30	129	M-4
MF1-125-ECB	90	155	68	60	249		84	136	30	129	M-4
MF1-225	103	165	103	70	295	172	125	144	35	126	M-4
MF1-250S	105	165	86	70	295	170	110	144	35	126	M-4
MF1-250-DB	105	165	86	70	295	170	110	144	35	126	M-4
MF1-250-ECB	105	165	86	70	295		110	144	35	126	M-4
MF1-400	140	257	104	88	465	265	155	225	44	194	M-6
MF1-400S	140	257	104	88	465	265	155	225	44	194	M-6
MF1-630S	182	270	111	116	478	290	160	234	58	200	M-6
MF1-800H	210	280	107	140	480	290	150	243	70	243	M-6
MF1-1250H	210	406	141	140	610		202	375	70	375	M-8

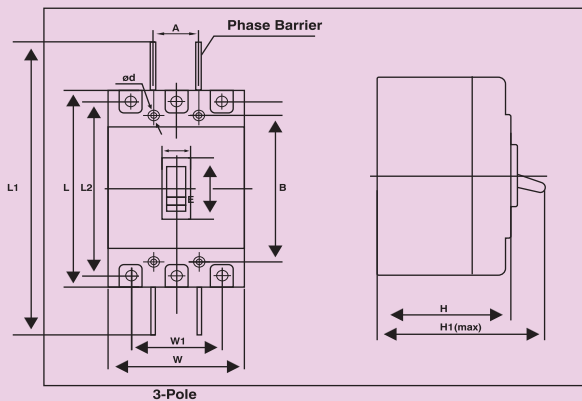
## 7. X-Stics Curves With Lock & Key Series

### Fig. (a)



**Note:** Other interrupting capacities are available on request.

- a. With terminal shrouds
- b. With phase barriers





## 6. X-Stics Curves With Out Lock & Key Series

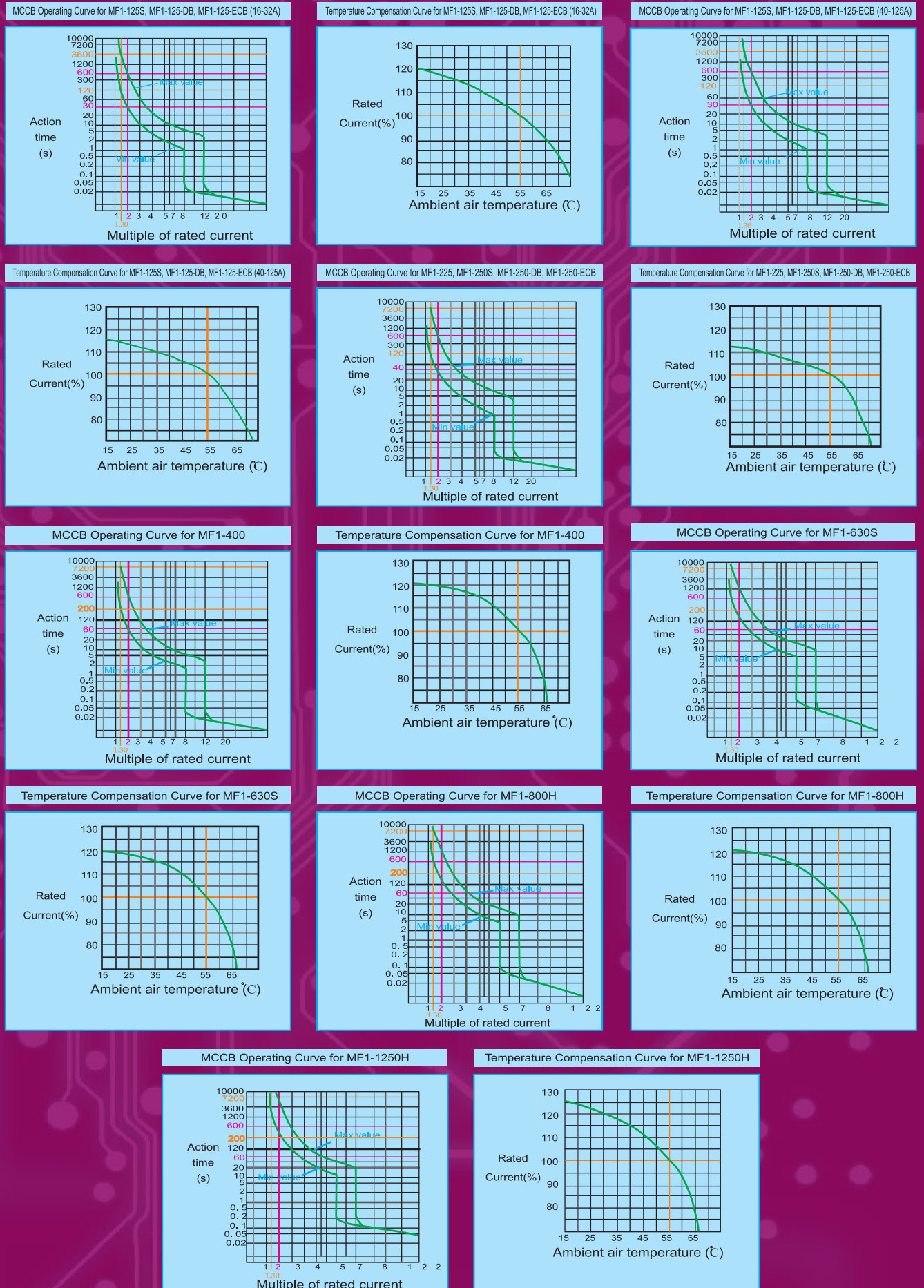


Fig. (b)



**MEMF**

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