MINGRI ELECTRIC
Voltage to Value

# Mingri Electric
# Low Voltage
## Selection Guide


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Claire

# Molded Case Circuit Breaker

## SJKM1


## ✱Product Description

The SJKM1 series **Molded Case Circuit Breaker** (hereinafter referred to as circuit breakers) are mainly used in power distribution networks with AC 50Hz or (60Hz), rated insulation voltage of 800V, rated working voltage of 690V and below, and rated current of 1250A and below. They are used for distributing electric energy and protecting lines and power supply equipment against overload, undervoltage and short circuit. Circuit breakers with a frame size of 400A and below can also be used for protecting motors against overload, undervoltage and short circuit. Under normal circumstances, they can be used for infrequent conversion of lines and infrequent starting of motors.
Compliant with standards: IEC60947-2 and GB14048.2.

## ✱Type **Designation**

SJKM1-□□□/□□□□
①②③ ④⑤⑥⑦

SJK:Manufacturer Code
M:Molded Case Circuit Breaker (MCCB) Code
1:Design Number / Series

①Frame Size / Rating
②Short-Circuit Breaking Capacity Rating4
③Operating mode3
④Number of poles2
⑤Tripping Method & Accessory Code
⑥Application code 1
⑦Type code (see Page N for the code of the number of poles; three-pole without code)

**Notes:**

1.There is no code for distribution circuit breakers; for motor - protection circuit breakers, use 2 to represent.

2.Number of poles: 2 for two - pole; 3 for three - pole; 4 for four - pole.

3.For handle - direct operation: use D to represent for power - distribution use, and use Z to represent for conversion - locking use.

4.For economy type: represent with E; for standard type: represent with M; for higher - reliability type: represent with H; for high - breaking type: represent with L.

# Molded Case Circuit Breaker

## ◆N - pole type code

| Type Code | Description |
|---|---|
| Type A | No over - current release element is installed on the N - pole, and the N - pole is always connected, and does not close and open together with the other three poles. |
| Type B | No over - current release element is installed on the N - pole, and the N - pole closes and opens together with the other three poles (the N - pole closes first and opens later). |
| Type C | An over - current release element is installed on the N - pole, and the N - pole closes and opens together with the other three poles (the N - pole closes first and opens later). |
| Type D | An over - current release element is installed on the N - pole, and the N - pole is always connected, and does not close and open together with the other three poles. |

## ◆Release Modes and Accessory Codes

| Accessory Name | | Without Accessory | Alarm Contact | Shunt Release | Auxiliary Contact | Under - voltage Release | Shunt Release Auxiliary Contact | Two - group Auxiliary Contacts | Shunt Release Under - voltage Release | Auxiliary Contact Under - voltage Release |
|---|---|---|---|---|---|---|---|---|---|---|
| Release Mode | Instantaneous Code | 200 | 208 | 210 | 220 | 230 | 240 | 250 | 260 | 270 |
| Release Mode | Compound Code | 300 | 208 | 310 | 320 | 330 | 340 | 350 | 360 | 370 |

(Continued from the previous table)

| Accessory Name | | Shunt Release Alarm Contact | Auxiliary Contact Alarm Contact | Under - voltage Release Alarm Contact | Shunt Release Auxiliary Contact Alarm Contact | Two - group Auxiliary Contact Alarm Contact | Auxiliary Contact Under - voltage Release Alarm Contact |
|---|---|---|---|---|---|---|---|
| Release Mode | Instantaneous Code | 218 | 228 | 238 | 248 | 268 | 278 |
| Release Mode | Compound Code | 318 | 328 | 338 | 348 | 268 | 378 |

**Notes:**

1) 200 indicates the circuit breaker body with only an electromagnetic release; 300 indicates the circuit breaker body with thermal and electromagnetic releases.

2) For the two - level products SJKM1 - 125 and SJKM1 - 250, only 210, 310, 220, 320, 230, and 330 are available.

# Molded Case Circuit Breaker

## ✱Normal Operating Conditions and Installation Conditions

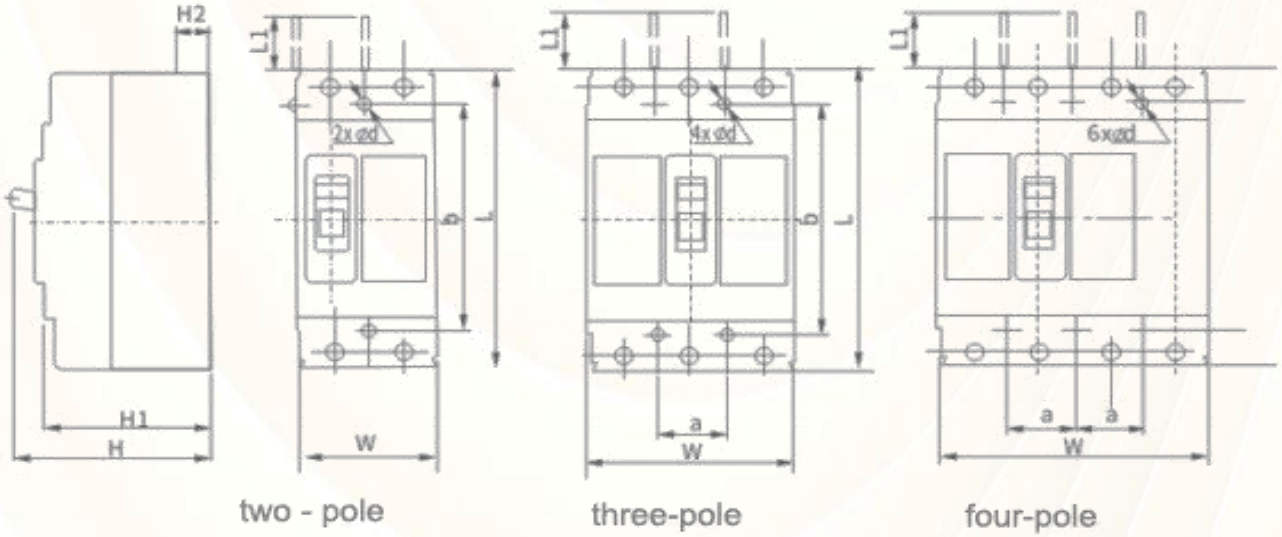
◆ Ambient temperature: The circuit breaker can operate normally at an ambient temperature range of -5°C to +40°C (except for special orders).
◆ Altitude: The altitude of the installation site of the circuit breaker shall not exceed 2000m.
◆ Pollution degree: The pollution degree of the circuit breaker is Grade 3.
◆ Installation category: The installation category of the circuit breaker is Category III.
◆ Installation position: The circuit breaker can be installed horizontally, vertically, or flat, without reducing its electrical performance.

## Main Parameters and Technical Performances

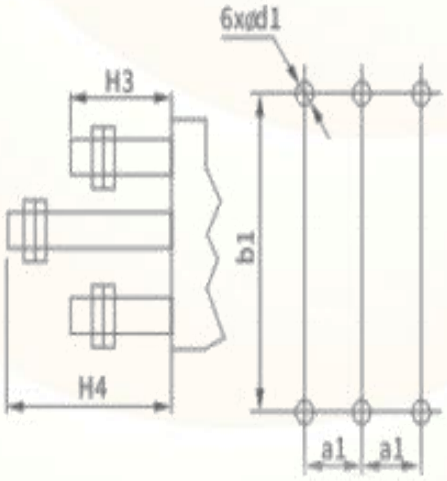
| Model | | SJKM1-63 | | SJKM1-125 | | | SJKM1-250 | | | SJKM1-400 | | SJKM1-630 | | SJKM1-800 | | SJKM1-1250 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pole Number | | 3 | 4 | 2 | 3 | 4 | 2 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 |
| Rated Current (In A ) | | 10<br>16<br>20<br>25<br>32<br>40<br>50<br>63 | | 16<br>20<br>25<br>32<br>40<br>50<br>63<br>80<br>100 125 | | | 100<br>125<br>140<br>160<br>180 200<br>225<br>250 | | | 225<br>250<br>315<br>350<br>400 | | 400<br>500<br>630 | | 630<br>700<br>800 | | 800<br>1000<br>1250 | |
| Rated Insulation Voltage Ui (V) | | 690 | | 1000 | | | 1000 | | | 1000 | | 1000 | | 1000 | | 1000 | |
| Rated Impulse Withstand Voltage Uimp V | | 6000 | | | | | | | | | | | | 8000 | | | |
| Rated Working Voltage Ue V | | 400 | | AC400/690 | | | AC400/690 | | | AC400/690 | | AC400/690 | | AC400/690 | | AC400/690 | |
| Breaking Capacity Level | | L | M | L | M | H | L | M | H | L | M | H | L | M | H | H | H |
| Ultimate Short-Circuit Breaking Capacity Icu(KA)(O-tCO) | 400V | 25 | 50 | 35 | 50 | 85 | 35 | 50 | 85 | 50 | 65 | 100 | 50 | 65 | 100 | 100 | 100 |
| | 690V | | | | | 25 | | | 25 | | | 30 | | | 30 | | 25 |
| Service Short-Circuit Breaking Capacity Ics(KA) (0-tCOtCO) | 400V | 18 | 30 | 25 | 35 | 50 | 25 | 35 | 65 | 35 | 50 | 65 | 35 | 50 | 65 | 65 | 50 |
| | 690V | | | | | 15 | | | 15 | | | 20 | | | 20 | | 20 |

# *Appearance and Installation Dimensions

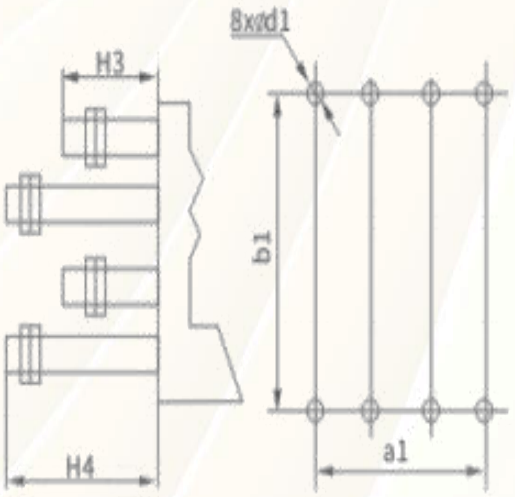
Appearance and installation dimensions of the fixed - type front - connected and rear - connected wiring




two - pole three-pole four-pole




Wiring dimensions behind the panel for three - pole




Wiring dimensions behind the panel for four - pole

# Molded Case Circuit Breaker

## ✱Appearance and installation dimensions of fixed - type front and rear wiring

| Model | Pole | Overall Dimensions （mm） | | | | | | Mounting Dimensions (mm) | | | Dimensions for Rear Terminal Wiring (mm) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | L1 | W | H | H1 | H2 | a | b | φd | al | b1 | d1 | H3 | H4 |
| SJKM1-63L | 3 | 135 | 21 | 76 | 88 | 72 | 19 | 25 | 117 | 4 | 25 | 117 | 18 | 52 | 75 |
| SJKM1-63M | | | | | 97 | 82 | 28 | | | | | | | | |
| SJKM1-63 | 4 | | | 103 | | | | | | | | | | | |
| SJKM1-125L | | 150 | 51 | 92 | 86 | 68 | 24 | 30 | 129 | 4.5 | 30 | 132 | 22 | 65 | 100 |
| SJKM1-125M | 3 | | | | 104 | 86 | 23 | | | | | | | | |
| SJKM1-125H | | | | | | | | | | | | | | | |
| SJKM1-125 | 2 | | | 65 | | | | --- | | | | | | | |
| | 4 | | | 122 | | | | 30 | | | | | | | |
| SJKM1-250L | | 165 | 64 | 107 | 108 | 87 | 25 | 35 | 126 | 5.5 | 35 | 144 | 24 | 70 | 110 |
| SJKM1-250M | 3 | 165 | | 107 | 124.5 | 104 | 24.5 | | | | | | | | |
| SJKM1-250H | | | | | | | | | | | | | | | |
| SJKM1-250 | 2 | | | 75 | | | | -- | | | | | | | |
| | 4 | | | 142 | | | | | | | | | | | |
| SJKM1-400 | 3 | 257 | 105 | 149 | 150 | 100 | 36.5 | 44 | 195 | 6.5 | 44 | 225 | 32 | 70 | 120 |
| | 4 | | | 198 | | | | | | | | | | | |
| SJKM1-630 | 3 | 270 | 118 | 182 | 155 | 108 | 41 | 58 | 200 | 7 | 58 | 234 | 40 | 70 | 120 |
| | 4 | | | 240 | | | | | | | | | | | |
| SJKM1-800 | 3 | 282 | 102 | 210 | 158 | 103 | 34.5 | 70 | 243 | 7 | 70 | 243 | 48 | 70 | 125 |
| | 4 | | | 280 | | | | | | | | | | | |
| SJKM1-1250 | 3 | 406 | 104 | 210 | 190 | 140.5 | 58.5 | 70 | 375 | 10 | | - | - | | - |

| Handle | H | W | Protrusion in the middle | L | W | H |
|---|---|---|---|---|---|---|
| 63 | 17 | 13.5 | 63 | 44 | 22 | 5.5 |
| 125 | 19 | 13 | 125 | 51 | 23 | 5.5 |
| 250 | 22 | 12.5 | 250 | 52 | 23 | 4 |
| 400 | 43.5 | 33.5 | 400 | 89.5 | 65 | 7 |
| 630 | 44 | 33.5 | 630 | 90 | 65.5 | 7 |
| 800 | 40 | 33.5 | 800 | 105 | 61 | 5 |
| 1250 | 51 | 41 | 1250 | 100 | 78 | 16 |