

CIRCUIT BREAKER 3VA1 IEC FRAME 250 BREAKING CAPACITY CLASS M ICU=55KA @ 415 V 3-POLE,MOTOR STARTER PROTECTION TM120M, AM, IN=200A WITHOUT OVERLOAD PROTECTION SHORT CIRCUIT PROTECTION II=6...14 X IN BUSBAR CONNECTION

| Model  |                             |
|--|-----------------------------|
| product brandname  | SENTRON                     |
| Product designation  | Molded case circuit breaker |
| Design of the product  | Starter protection          |
| Type of load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) | Yes                         |
| Design of the overcurrent release  | TM120M                      |
| Protective function of the overcurrent release   | I                           |
| Number of poles  | 3                           |

| General technical data   |           |
|--|-----------|
| Tension assignée d'isolement Ui  | 800 V     |
| Max. rated operational voltage Ue with AC 50/60Hz  | 690 V     |
| Max. rated operational voltage Ue with DC  | 500 V     |
| Operating power / at AC-3 / at 400 V   | 110 000 W |
| Operating power / at AC-3 / at 230 V   | 55 000 W  |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device | 42 W      |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole   | 14 W      |
| Mechanical service life (switching cycles) / typical   | 15 000    |
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz                        | 8 000     |
| Neutral conductors / upgradeable/retrofitable  | No        |
| Ground fault monitoring version  | Without   |
| Product function   |           |
| • communication function   | No        |
| • Phase failure detection  | No        |
| • other measurement function   | No        |
| Net weight   | 1.8 kg    |

| Electricity   |       |
|---|-------|
| Marking / according to UL 489 / 100%-rated breaker                | No    |
| Max. rated operational voltage of the size of the circuit-breaker | 250 A |

|                              |       |
|------------------------------|-------|
| Courant permanent assigné lu | 200 A |
| Operating current            |       |
| • at 40 °C                   | 200 A |
| • at 45 °C                   | 200 A |
| • at 50 °C                   | 200 A |
| • at 55 °C                   | 194 A |
| • at 60 °C                   | 188 A |
| • at 65 °C                   | 182 A |
| • at 70 °C                   | 176 A |

### Switching capacity according to IEC 60947

|  |        |
|--|--------|
| Switching capacity class of the circuit breaker                        | M      |
| Maximum short-circuit current breaking capacity (I <sub>cu</sub> )     |        |
| • at 240 V   | 85 kA  |
| • at 415 V   | 55 kA  |
| • at 440 V   | 36 kA  |
| • at 500 V   | 15 kA  |
| • at 690 V   | 3 kA   |
| Operational short-circuit current breaking capacity (I <sub>cs</sub> ) |        |
| • at 240 V   | 85 kA  |
| • at 415 V   | 55 kA  |
| • at 440 V   | 36 kA  |
| • at 500 V   | 10 kA  |
| • at 690 V   | 3 kA   |
| Short-circuit current making capacity (I <sub>cm</sub> )               |        |
| • at 240 V   | 187 kA |
| • at 415 V   | 121 kA |
| • at 440 V   | 76 kA  |
| • at 500 V   | 30 kA  |
| • at 690 V   | 4.5 kA |

### Adjustable parameters

|   |         |
|---|---------|
| Short-term delayed / tripping switchable / I <sub>2t</sub> =ON/OFF      | No      |
| Adjustable response value current / I <sub>i</sub> min.                 | 1 200 A |
| Adjustable response value current / I <sub>i</sub> max.                 | 2 800 A |
| Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF | No      |

### Mechanical Design

|             |        |
|-------------|--------|
| Height [in] | 6.2 in |
| Height      | 158 mm |
| Width [in]  | 4.1 in |

|            |        |
|------------|--------|
| Width      | 105 mm |
| Depth [in] | 2.8 in |
| Depth      | 70 mm  |

### Connections

|   |                |
|---|----------------|
| Arrangement of electrical connectors / for main current circuit | Front terminal |
| Type of electrical connection / for main current circuit        | lug terminal   |

### Auxiliary circuit

|  |   |
|--|---|
| Number of CO contacts / for auxiliary contacts | 0 |
|--|---|

### Accessories





|  |     |
|--|-----|
| Product extension / optional / motor drive | Yes |
|--|-----|

### Environmental conditions

|  |  |
|--|--|
| Protection class IP / on the front   | IP40   |
| Ambient temperature  |  |
| <ul style="list-style-type: none"> <li>• during operation / minimum</li> <li>• during operation / maximum</li> <li>• during storage / minimum</li> <li>• during storage / maximum</li> </ul> | <ul style="list-style-type: none"> <li>-25 °C</li> <li>70 °C</li> <li>-40 °C</li> <li>80 °C</li> </ul> |

### Certificates

|  |    |
|--|----|
| Equipment marking / acc. to DIN EN 81346-2   | Q  |
| Certificate of suitability / as approval for NAVAL (no combat vessels) / Supplement SB | No |

| General Product Approval   | EMC  | Declaration of Conformity  | Test Certificates   | other  |
|--|--|--|---|--|
| <br>CCC | <br>VDE | <br>RCM | <br>EG-Konf. | <a href="#">sonstig</a><br><a href="#">Bestätigungen</a> |

### other

[sonstig](#)

### Further information

#### Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/lowvoltage/catalogs>

#### Industry Mall (Online ordering system)

<https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA1220-5MH32-0AA0>

#### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3VA1220-5MH32-0AA0/all>

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1220-5MH32-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1220-5MH32-0AA0)

**CAX-Online-Generator**

<http://www.siemens.com/cax>

**Tender specifications**

<http://www.siemens.com/specifications>

**last modified:**

10/29/2016