



CIRCUIT BREAKER 3VA1 IEC FRAME 250 BREAKING CAPACITY CLASS M ICU=55KA @ 415 V 3-POLE, MOTOR STARTER PROT. TM120M, AM, IN=160A WITHOUT OVERLOAD PROTECTION SHORT CIRCUIT PROTECTION II=7...16 X IN BUSBAR CONNECTION SHUNT TRIP (STL) 220-250 V DC, 208-277 V AC 2 AUXILIARY SWITCH HQ 1 TRIP ALARM SWITCH HQ

| Model                                                                     |                                               |
|---------------------------------------------------------------------------|-----------------------------------------------|
| product brandname                                                         | SENTRON                                       |
| Product designation                                                       | Molded case circuit breaker                   |
| Design of the product                                                     | Starter protection                            |
| Design of the overcurrent release                                         | TM120M                                        |
| Protective function of the overcurrent release                            | I                                             |
| Number of poles                                                           | 3                                             |
| Design of the auxiliary release                                           | without auxiliary release                     |
| Design of the auxiliary switch                                            | 2 auxiliary switches + 1 trip alarm switch HQ |
| 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                                      | 55 W                                          |
| Operating power / at AC-3 / at 230 V                                      | 0 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                      | 2.01 kg |

#### Electricity

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| Max. rated operational voltage of the size of the circuit-breaker | 250 A   |
| Courant permanent assigné lu                                      | 160 A   |
| Operating current                                                 |         |
| • at 40 °C                                                        | 160 A   |
| • at 45 °C                                                        | 160 A   |
| • at 50 °C                                                        | 160 A   |
| • at 55 °C                                                        | 153.6 A |
| • at 60 °C                                                        | 150.4 A |
| • at 65 °C                                                        | 147.2 A |
| • at 70 °C                                                        | 144 A   |

#### Switching capacity according to IEC 60947

|                                                           |        |
|-----------------------------------------------------------|--------|
| Switching capacity class of the circuit breaker           | M      |
| Maximum short-circuit current breaking capacity (Icu)     |        |
| • at 240 V                                                | 85 kA  |
| • at 415 V                                                | 55 kA  |
| • at 440 V                                                | 30 kA  |
| • at 690 V                                                | 10 kA  |
| Operational short-circuit current breaking capacity (Ics) |        |
| • at 240 V                                                | 85 kA  |
| • at 415 V                                                | 55 kA  |
| • at 440 V                                                | 30 kA  |
| • at 690 V                                                | 5 kA   |
| Short-circuit current making capacity (Icm)               |        |
| • at 240 V                                                | 187 kA |
| • at 415 V                                                | 121 kA |
| • at 690 V                                                | 17 kA  |

#### Adjustable parameters

|                                             |     |
|---------------------------------------------|-----|
| Adjustable response value current / Ig min. | 0 A |
| Adjustable response value current / Ig min. | 0 A |
| Adjustable response value current / Ig min. | 0 A |
| Adjustable response value current / Ig min. | 0 A |
| Adjustable response value current / Ii min. | 0 A |

|                                                                 |                                    |
|-----------------------------------------------------------------|------------------------------------|
| Adjustable response value current / I <sub>n</sub> max.         | 0 A                                |
| <b>Mechanical Design</b>                                        |                                    |
| Height                                                          | 158 mm                             |
| Width                                                           | 105 mm                             |
| Depth                                                           | 70 mm                              |
| <b>Connections</b>                                              |                                    |
| Arrangement of electrical connectors / for main current circuit | Front terminal                     |
| Type of electrical connection / for main current circuit        | lug terminal                       |
| <b>Auxiliary circuit</b>                                        |                                    |
| Product component                                               |                                    |
| • undervoltage release                                          | No                                 |
| • Voltage trigger                                               | No                                 |
| • undervoltage release with leading contact                     | No                                 |
| • Trip indicator                                                | Yes                                |
| Number of CO contacts / for auxiliary contacts                  | 3                                  |
| <b>Accessories</b>                                              |                                    |
| Product extension / optional / motor drive                      | Yes                                |
| Manufacturer's article number                                   |                                    |
| • of the supplied basic switch                                  | <a href="#">3VA1216-5MH32-0AA0</a> |
| • of the integrated auxiliary switch/alarm switch               | <a href="#">3VA9988-0AA12</a>      |
| • of the integrated auxiliary switch/alarm switch               | <a href="#">3VA9988-0AB12</a>      |
| <b>Environmental conditions</b>                                 |                                    |
| Protection class IP / on the front                              | IP40                               |
| Ambient temperature                                             |                                    |
| • during operation / minimum                                    | -25 °C                             |
| • during operation / maximum                                    | 70 °C                              |
| • during storage / minimum                                      | -40 °C                             |
| • during storage / maximum                                      | 80 °C                              |
| <b>Certificates</b>                                             |                                    |
| Equipment marking / acc. to DIN EN 81346-2                      | Q                                  |

| General Product Approval                                                                 |                                                                                          | EMC                                                                                      | Declaration of Conformity                                                                | Test Certificates                                                                               |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <br>CCC | <br>VDE | <br>EAC | <br>RCM | <br>EG-Konf. |

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| other                         |                         |
|-------------------------------|-------------------------|
| <a href="#">Bestätigungen</a> | <a href="#">sonstig</a> |

## 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/3VA1216-5MH32-0AH0>

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

<http://support.automation.siemens.com/WW/view/en/3VA1216-5MH32-0AH0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1216-5MH32-0AH0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1216-5MH32-0AH0)

**CAX-Online-Generator**

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

**Tender specifications**

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





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