



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS H ICU=70KA @ 415 V 3-POLE, MOTOR STARTER PROTECTION TM120M, AM, IN=100A WITHOUT OVERLOAD PROTECTION SHORT CIRCUIT PROTECTION II=5...15 X IN BUSBAR CONNECTION UNDERVOLTAGE RELEASE (UVR) 24 V DC 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                                                                  | Undervoltage release (UVR)                    |
| 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                                                             | 0 W                                           |
| Operating power / at AC-3 / at 230 V                                                             | 0 W                                           |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device | 25 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                                                                | 1.05 kg |

#### Electricity

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Max. rated operational voltage of the size of the circuit-breaker | 160 A |
| Courant permanent assigné Iu                                      | 100 A |
| Operating current                                                 |       |
| • at 40 °C                                                        | 100 A |
| • at 45 °C                                                        | 100 A |
| • at 50 °C                                                        | 100 A |
| • at 55 °C                                                        | 98 A  |
| • at 60 °C                                                        | 96 A  |
| • at 65 °C                                                        | 94 A  |
| • at 70 °C                                                        | 91 A  |

#### Switching capacity according to IEC 60947

|                                                           |        |
|-----------------------------------------------------------|--------|
| Switching capacity class of the circuit breaker           | H      |
| Maximum short-circuit current breaking capacity (Icu)     |        |
| • at 240 V                                                | 100 kA |
| • at 415 V                                                | 70 kA  |
| • at 440 V                                                | 55 kA  |
| • at 690 V                                                | 5 kA   |
| Operational short-circuit current breaking capacity (Ics) |        |
| • at 240 V                                                | 100 kA |
| • at 415 V                                                | 70 kA  |
| • at 440 V                                                | 40 kA  |
| • at 690 V                                                | 5 kA   |
| Short-circuit current making capacity (Icm)               |        |
| • at 240 V                                                | 220 kA |
| • at 415 V                                                | 154 kA |
| • at 440 V                                                | 121 kA |
| • at 690 V                                                | 8.5 kA |

#### Adjustable parameters

|                                                         |     |
|---------------------------------------------------------|-----|
| Adjustable response value current / I <sub>g</sub> min. | 0 A |
|---------------------------------------------------------|-----|

|                                             |     |
|---------------------------------------------|-----|
| Adjustable response value current / lg min. | 0 A |
| Adjustable response value current / lg min. | 0 A |
| Adjustable response value current / lg min. | 0 A |
| Adjustable response value current / li min. | 0 A |
| Adjustable response value current / li max. | 0 A |

## Mechanical Design

|        |         |
|--------|---------|
| Height | 130 mm  |
| Width  | 76.2 mm |
| Depth  | 70 mm   |

## Connections

|                                                                                         |                |
|-----------------------------------------------------------------------------------------|----------------|
| Arrangement of electrical connectors / for main current circuit                         | Front terminal |
| Type of electrical connection / for main current circuit                                | lug terminal   |
| Type of connectable conductor cross-section, connection screw, width x thickness , min. | 12 x 1         |
| Type of connectable conductor cross-section, connection screw, width x thickness , max. | 17 x 6.5       |

## Auxiliary circuit

|                                                |     |
|------------------------------------------------|-----|
| Product component                              |     |
| • undervoltage release                         | Yes |
| • Voltage trigger                              | No  |
| • undervoltage release with leading contact    | No  |
| • Trip indicator                               | Yes |
| Number of CO contacts / for auxiliary contacts | 3   |

## Accessories

|                                                   |                                    |
|---------------------------------------------------|------------------------------------|
| Product extension / optional / motor drive        | Yes                                |
| Manufacturer's article number                     |                                    |
| • of the supplied basic switch                    | <a href="#">3VA1110-6MH32-0AA0</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>      |
| • of the integrated auxiliary trip                | <a href="#">3VA9608-0BB11</a>      |

## Environmental conditions

|                                    |        |
|------------------------------------|--------|
| 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  |

## Certificates

|                                            |   |
|--------------------------------------------|---|
| Equipment marking / acc. to DIN EN 81346-2 | Q |
|--------------------------------------------|---|

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

[sonstig](#)

| 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/3VA1110-6MH32-0BH0>

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

<http://support.automation.siemens.com/WW/view/en/3VA1110-6MH32-0BH0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1110-6MH32-0BH0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1110-6MH32-0BH0)

**CAX-Online-Generator**

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

**Tender specifications**

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





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