



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS S ICU=36KA @ 415 V 3-POLE, LINE PROTECTION TM240, ATAM, IN=20A OVERLOAD PROTECTION IR=14A ...20A SHORT CIRCUIT PROTECTION II=8...16 X IN BUSBAR CONNECTION 1 AUXILIARY SWITCH HQ 1 TRIP ALARM SWITCH HQ

| Model  |   |
|--|---|
| product brandname                              | SENTRON                                     |
| Product designation                            | Molded case circuit breaker                 |
| Design of the product                          | Line protection                             |
| Design of the overcurrent release              | TM240                                       |
| Protective function of the overcurrent release | LI  |
| Number of poles                                | 3   |
| Design of the auxiliary release                | without auxiliary release                   |
| Design of the auxiliary switch                 | 1 auxiliary switch + 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 | 12 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  | 0.96 kg |

### Electricity

|   |        |
|---|--------|
| Max. rated operational voltage of the size of the circuit-breaker | 160 A  |
| Courant permanent assigné Iu                                      | 20 A   |
| Operating current   |        |
| • at 40 °C  | 20 A   |
| • at 45 °C  | 20 A   |
| • at 50 °C  | 20 A   |
| • at 55 °C  | 19.2 A |
| • at 60 °C  | 18.8 A |
| • at 65 °C  | 18.4 A |
| • at 70 °C  | 18 A   |

### Switching capacity according to IEC 60947

|   |         |
|---|---------|
| Switching capacity class of the circuit breaker           | S       |
| Maximum short-circuit current breaking capacity (Icu)     |         |
| • at 240 V  | 55 kA   |
| • at 415 V  | 36 kA   |
| • at 440 V  | 25 kA   |
| • at 690 V  | 7 kA    |
| Operational short-circuit current breaking capacity (Ics) |         |
| • at 240 V  | 55 kA   |
| • at 415 V  | 36 kA   |
| • at 440 V  | 25 kA   |
| • at 690 V  | 5 kA    |
| Short-circuit current making capacity (Icm)               |         |
| • at 240 V  | 121 kA  |
| • at 415 V  | 75.6 kA |
| • at 440 V  | 52.5 kA |
| • at 690 V  | 11.9 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 0         |
| Type of connectable conductor cross-section, connection screw, width x thickness , max. | 17 x 6.5       |

### Auxiliary circuit

|   |     |
|---|-----|
| Product component   |     |
| <ul style="list-style-type: none"> <li>• undervoltage release</li> </ul>                      | No  |
| <ul style="list-style-type: none"> <li>• Voltage trigger</li> </ul>                           | No  |
| <ul style="list-style-type: none"> <li>• undervoltage release with leading contact</li> </ul> | No  |
| <ul style="list-style-type: none"> <li>• Trip indicator</li> </ul>                            | Yes |
| Number of CO contacts / for auxiliary contacts  | 2   |

### Accessories

|   |                                    |
|---|------------------------------------|
| Product extension / optional / motor drive  | Yes                                |
| Manufacturer's article number   |                                    |
| <ul style="list-style-type: none"> <li>• of the supplied basic switch</li> </ul>                    | <a href="#">3VA1120-4EF32-0AA0</a> |
| <ul style="list-style-type: none"> <li>• of the integrated auxiliary switch/alarm switch</li> </ul> | <a href="#">3VA9988-0AA12</a>      |
| <ul style="list-style-type: none"> <li>• of the integrated auxiliary switch/alarm switch</li> </ul> | <a href="#">3VA9988-0AB12</a>      |
| <ul style="list-style-type: none"> <li>• of the integrated auxiliary trip</li> </ul>                | <a href="#">3VA9608-0BB24</a>      |

### Environmental conditions

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

### Certificates

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

|                          |     |                           |
|--------------------------|-----|---------------------------|
| General Product Approval | EMC | Declaration of Conformity |
|--------------------------|-----|---------------------------|



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|                   |                   |
|-------------------|-------------------|
| Test Certificates | Shipping Approval |
|-------------------|-------------------|

[Typprüfbescheinigung/Werkszeugnis](#)

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|                   |       |
|-------------------|-------|
| Shipping Approval | other |
|-------------------|-------|



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#### 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/3VA1120-4EF32-0AF0>

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

<http://support.automation.siemens.com/WW/view/en/3VA1120-4EF32-0AF0/all>

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

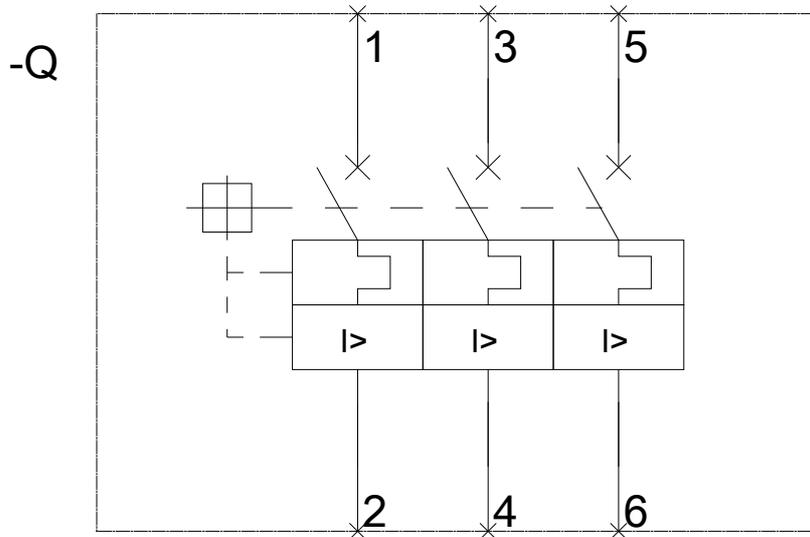
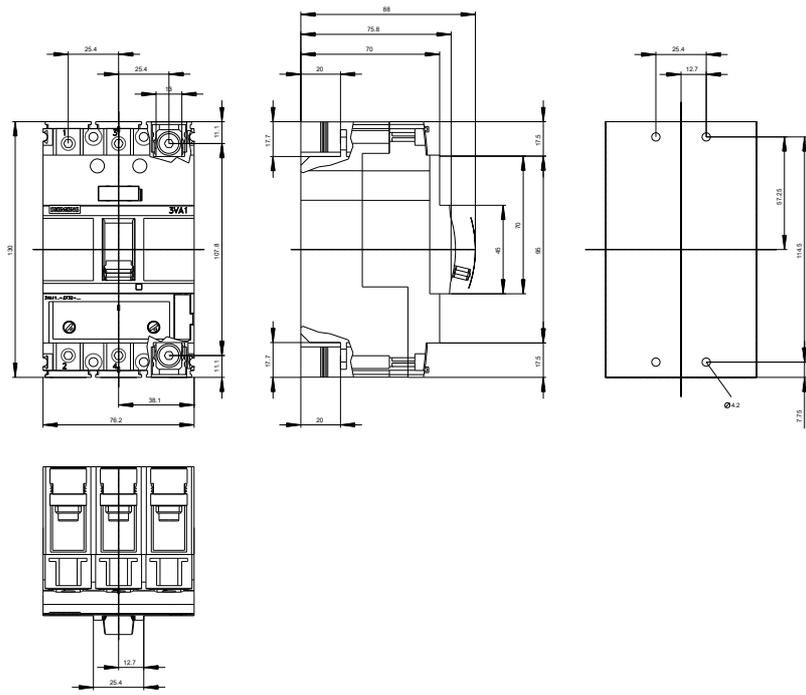
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mfb=3VA1120-4EF32-0AF0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA1120-4EF32-0AF0)

##### CAX-Online-Generator

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

##### Tender specifications

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



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