



CIRCUIT BREAKER 3VA2 IEC FRAME 100 BREAKING CAPACITY CLASS M ICU=55KA @ 415 V 3POLE, LINE PROTECTION ETU560, LSIG, IN=100A OVERLOAD PROTECTION IR=40A ...100A SHORT CIRCUIT PROTECTION ISD=0,6..10X IN, II=1,5..12X IN NEUTRAL PROTECTION OPTIONAL WITH EXT. CT,UPTO 160% GROUNDFAULT, SWITCHABLE IG=0,2... 1 X IN, TG=0,050,8MS BUSBAR CONNECTION

| Model   |   |   |
|---|---|---|
| product brand name  |   | SENTRON                                 |
| Product designation   |   | Molded case circuit breaker             |
| Design of the product   |   | Line protection                         |
| Product variations  |   | Selective Applications                  |
| Ground fault monitoring version   |   | Summation current formation L-conductor |
| Design of the auxiliary release   |   | without auxiliary release               |
| Design of the auxiliary switch  |   | Without                                 |
| Design of the operating mechanism   |   | toggle handle                           |
| Type of the driving mechanism / motor drive   |   | No                                      |
| Design of the overcurrent release   |   | ETU560                                  |
| General technical data  |   |   |
| Number of poles   |   | 3                                       |
| Trip class / of the L-trip / with I <sup>2</sup> t characteristic / initial value           |   | 0.5                                     |
| Trip class / of the L-trip / with I <sup>2</sup> t characteristic / Full-scale value        |   | 25                                      |
| Electrical endurance (switching cycles)   |   | 12 000                                  |
| • at AC-1 / at 380/415 V / at 50/60 Hz  |   |   |
| Total disconnection time / for G-tripping / with standard characteristic / initial value    | s | 0.05                                    |
| Total disconnection time / for G-tripping / with standard characteristic / Full-scale value | s | 0.8                                     |
| circuit-breaker / Design  |   | 3VA                                     |
| Mechanical service life (switching cycles) / typical  |   | 20 000                                  |

| Voltage  |   |                   |
|--|---|-------------------|
| Insulation voltage / Rated value   | V | 800               |
| Protection class   |   |                   |
| <b>Protection class IP</b>   |   | IP40              |
| Protection class IP / on the front   |   | IP40              |
| <b>Protective function of the overcurrent release</b>  |   | LSIG              |
| Switching capacity   |   |                   |
| <b>Switching capacity class of the circuit breaker</b>   |   | M                 |
| Dissipation  |   |                   |
| <b>Active power loss</b>   |   |                   |
| • maximum  | W | 13.5              |
| Electricity  |   |                   |
| <b>Continuous current / Rated value / maximum</b>  | A | 100               |
| Continuous current / Rated value   | A | 100               |
| Adjustable response value current / of the instantaneous short-circuit release / initial value | A | 1.5               |
| Main circuit   |   |                   |
| <b>Operating voltage</b>   |   |                   |
| • with AC / at 50/60 Hz / Rated value  | V | 690               |
| <b>Operating current</b>   |   |                   |
| • at 40 °C / Rated value   | A | 100               |
| • at 50 °C / Rated value   | A | 100               |
| • at 60 °C / Rated value   | A | 100               |
| • at 65 °C / Rated value   | A | 100               |
| • at 70 °C / Rated value   | A | 100               |
| Auxiliary circuit  |   |                   |
| <b>Number of NC contacts / for auxiliary contacts</b>  |   | 0                 |
| <b>Number of NO contacts / for auxiliary contacts</b>  |   | 0                 |
| Suitability  |   |                   |
| <b>Suitability for use</b>   |   | system protection |
| Adjustable parameters  |   |                   |
| <b>Adjustable response value current</b>   |   |                   |
| • for G-tripping / with I <sup>2</sup> t characteristic / initial value                        | A | 0.2               |
| • for G-tripping / with I <sup>2</sup> t characteristic / Full-scale value                     | A | 1                 |
| • for G-tripping / with standard characteristic / initial value                                | A | 0.2               |
| • for G-tripping / with standard characteristic / Full-scale value                             | A | 1                 |

|  |   |      |
|--|---|------|
| • of I-trip / Full-scale value   | A | 12   |
| • of the short-time delayed short-circuit release / initial value                                    | A | 0.6  |
| • of the short-time delayed short-circuit release / Full-scale value                                 | A | 10   |
| • of S-trip / with standard characteristic / initial value   | A | 0.6  |
| • of S-trip / with standard characteristic / Full-scale value  | A | 10   |
| <b>Adjustable delay time</b>   |   |      |
| • for G-tripping / with I2t characteristic / initial value   | s | 0.05 |
| • for G-tripping / with I2t characteristic / Full-scale value  | s | 0.8  |
| • of S-trip / with I2t characteristic / initial value  | s | 0.05 |
| • of S-trip / with I2t characteristic / Full-scale value   | s | 0.5  |
| • of S-trip / with standard characteristic / initial value   | s | 0.05 |
| • of S-trip / with standard characteristic / Full-scale value  | s | 0.5  |
| <b>Adjustable response value current / of the current-dependent overload release / initial value</b> | A | 0.4  |

### Product details

|  |  |     |
|--|--|-----|
| <b>Product component</b>   |  |     |
| • Trip indicator   |  | No  |
| • display  |  | Yes |
| • undervoltage release   |  | No  |
| <b>Product property</b>  |  |     |
| • of the circuit breaker with tripping unit / Tripping characteristic adjustable       |  | Yes |
| • for neutral conductors / upgradeable/retrofitable / Short-circuit and overload proof |  | Yes |
| Product expansion / optional / motor drive   |  | Yes |

### Product function

|                               |  |     |
|-------------------------------|--|-----|
| <b>Product function</b>       |  |     |
| • Intrinsic device protection |  | Yes |
| • communication function      |  | Yes |
| • Phase failure detection     |  | No  |
| • other measurement function  |  | No  |

### Accessories

|  |  |                                    |
|--|--|------------------------------------|
| Manufacturer article number / of the supplied basic switch |  | <a href="#">3VA2010-5JQ32-0AA0</a> |
|--|--|------------------------------------|

### Short circuit

|  |    |     |
|--|----|-----|
| <b>Operational short-circuit current breaking capacity (Ics)</b> |    |     |
| • at 240 V / Rated value   | kA | 85  |
| • at 415 V / Rated value   | kA | 55  |
| • at 440 V / Rated value   | kA | 55  |
| • at 500 V / Rated value   | kA | 36  |
| • at 690 V / Rated value   | kA | 2   |
| <b>Maximum short-circuit current breaking capacity (Icu)</b>     |    |     |
| • at 240 V / Rated value   | kA | 85  |
| • at 415 V / Rated value   | kA | 55  |
| • at 440 V / Rated value   | kA | 55  |
| • at 500 V / Rated value   | kA | 36  |
| • at 690 V / Rated value   | kA | 2   |
| <b>Short-circuit current making capacity (Icm)</b>               |    |     |
| • at 240 V / Rated value   | kA | 187 |
| • at 415 V / Rated value   | kA | 121 |
| • at 440 V / Rated value   | kA | 121 |
| • at 500 V / Rated value   | kA | 79  |
| • at 690 V / Rated value   | kA | 3   |

### Connections

|   |  |                |
|---|--|----------------|
| Arrangement of electrical connectors / for main current circuit |  | Front terminal |
| Type of connectable conductor cross-section                     |  | 13 x 1 mm      |
| • for flat-bar terminal connection / minimum                    |  | 25 x 8.5       |
| • for flat-bar terminal connection / maximum                    |  |                |
| Type of electrical connection / for main current circuit        |  | Lug terminal   |

### Mechanical Design

|                      |    |                |
|----------------------|----|----------------|
| <b>Height</b>        | mm | 181            |
| <b>Width</b>         | mm | 105            |
| <b>Depth</b>         | mm | 107            |
| <b>Mounting type</b> |    | fixed mounting |

### Environmental conditions

|                              |    |     |
|------------------------------|----|-----|
| <b>Ambient temperature</b>   |    |     |
| • during operation / minimum | °C | -25 |
| • during operation / maximum | °C | 70  |
| • during storage / minimum   | °C | -40 |
| • during storage / maximum   | °C | 80  |

## Certificates

### Equipment marking

- acc. to DIN EN 61346-2
- acc. to DIN EN 81346-2

Q

Q

### General Product Approval

### EMC

### Declaration of Conformity

### Shipping Approval



[other](#)



### Shipping Approval

### other

[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/3VA20105JQ320AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA20105JQ320AA0/all>

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

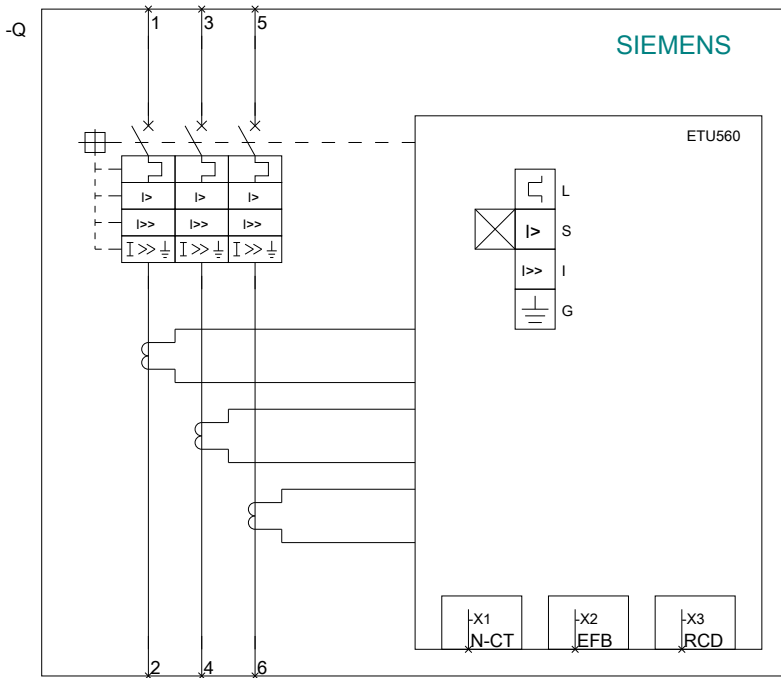
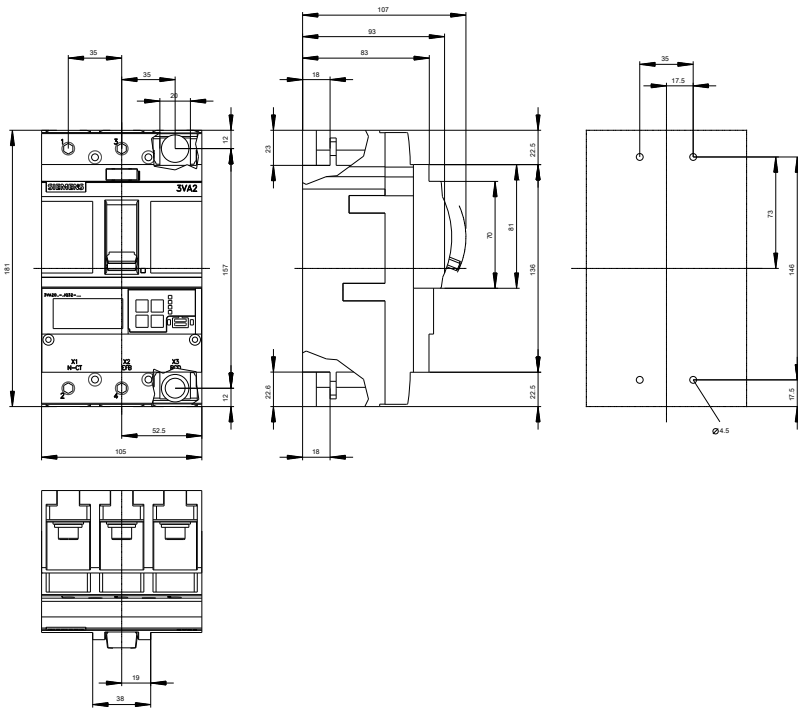
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mfb=3VA20105JQ320AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA20105JQ320AA0)

### CAX-Online-Generator

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

### Tender specifications

<http://ausschreibungstexte.siemens.com/tiplv>



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