



CIRCUIT BREAKER 3VA2 IEC FRAME 100 BREAKING CAPACITY CLASS M ICU=55KA @ 415 V 4POLE, LINE PROTECTION ETU330, LIG, IN=100A OVERLOAD PROTECTION IR=40A ...100A SHORT CIRCUIT PROTECTION II=1,5...12 X IN NEUTRAL PROTECTION ADJUSTABLE(OFF,50%,100%) GROUNDFAULTPROTECTION IG=0,2... 1 X IN, TG=0,1/0,3MS 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 + N 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   |   | ETU330                                      |
| General technical data  |   |   |
| Number of poles   |   | 4   |
| 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        |   | 17  |
| Electrical endurance (switching cycles)<br>• at AC-1 / at 380/415 V / at 50/60 Hz           |   | 12 000                                      |
| Total disconnection time / for G-tripping / with standard characteristic / initial value    | s | 0.1   |
| Total disconnection time / for G-tripping / with standard characteristic / Full-scale value | s | 0.3   |
| 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>  |   | LIG               |
| 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 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                |
| <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  |  | No  |
| • 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 |  | No  |
| Product expansion / optional / motor drive   |  | Yes |

## Product function

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

## Accessories

|   |  |                                    |
|---|--|------------------------------------|
| <b>Manufacturer article number / of the supplied basic switch</b> |  | <a href="#">3VA2010-5HM42-0AA0</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<br>25 x 8.5 |
| Type of electrical connection / for main current circuit        |  | Lug terminal          |

## Mechanical Design

|               |    |                |
|---------------|----|----------------|
| Height        | mm | 181            |
| Width         | mm | 140            |
| Depth         | mm | 107            |
| Mounting type |    | fixed mounting |

## Environmental conditions

|                              |    |     |
|------------------------------|----|-----|
| Ambient temperature          |    |     |
| • 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 |  | Q |
| • acc. to DIN EN 81346-2 |  | Q |

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



CCC



VDE



other



EG-Konf.

other

## 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/3VA20105HM420AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA20105HM420AA0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mfb=3VA20105HM420AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA20105HM420AA0)

**CAX-Online-Generator**

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

**Tender specifications**

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



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