



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS H ICU=70KA @ 415 V 4-POLE, LINE PROTECTION TM210, FTFM, IN=100A OVERLOAD PROTECTION IR=100A FIXED SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL PROTECTION 50% CABLE CONNECTION

| Model  |                             |
|--|-----------------------------|
| product brandname  | SENTRON                     |
| Product designation  | Molded case circuit breaker |
| Design of the product  | Line protection             |
| Type of load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) | Yes                         |
| Design of the overcurrent release  | TM210                       |
| Protective function of the overcurrent release   | LI                          |
| Number of poles  | 4                           |
| 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  | 600 V                       |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device                     | 25 W                        |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole                       | 8.33 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      |
| • other measurement function  | No      |
| Net weight  | 1.2 kg  |

### Electricity

|   |       |
|---|-------|
| Marking / according to UL 489 / 100%-rated breaker                | No    |
| 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 500 V  | 20 kA  |
| • at 690 V  | 10 kA  |
| Operational short-circuit current breaking capacity (Ics) |        |
| • at 240 V  | 100 kA |
| • at 415 V  | 70 kA  |
| • at 440 V  | 40 kA  |
| • at 500 V  | 15 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 500 V  | 40 kA  |
| • at 690 V  | 17 kA  |

| Adjustable parameters   |         |
|---|---------|
| Adjustable response value current / I <sub>g</sub> min.                 | 100 A   |
| Adjustable response value current / I <sub>g</sub> min.                 | 100 A   |
| Adjustable response value current / I <sub>g</sub> min.                 | 1       |
| Adjustable response value current / I <sub>g</sub> min.                 | 1       |
| Short-term delayed / tripping switchable / I <sub>2t</sub> =ON/OFF      | No      |
| Adjustable response value current / I <sub>i</sub> min.                 | 1 000 A |
| Adjustable response value current / I <sub>i</sub> max.                 | 1 000 A |
| Design of the N-conductor protection                                    | 50%     |
| Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF | No      |

| Mechanical Design |          |
|-------------------|----------|
| Height [in]       | 5.1 in   |
| Height            | 130 mm   |
| Width [in]        | 4 in     |
| Width             | 101.6 mm |
| Depth [in]        | 2.8 in   |
| Depth             | 70 mm    |

| Connections   |                                 |
|---|---------------------------------|
| Arrangement of electrical connectors / for main current circuit                 | Front terminal                  |
| Type of electrical connection / for main current circuit                        | box terminal                    |
| Type of connectable conductor cross-section, round conductor terminal, stranded | 1 x (1.5 - 70 mm <sup>2</sup> ) |

| Auxiliary circuit                              |   |
|--|---|
| Number of CO contacts / for auxiliary contacts | 0 |

| Accessories                                |     |
|--|-----|
| Product extension / optional / motor drive | Yes |

| 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  |
| Certificate of suitability / as approval for NAVAL (no combat vessels) / Supplement SB | No |

|                          |     |                           |
|--------------------------|-----|---------------------------|
| 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/3VA1110-6FD46-0AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA1110-6FD46-0AA0/all>

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

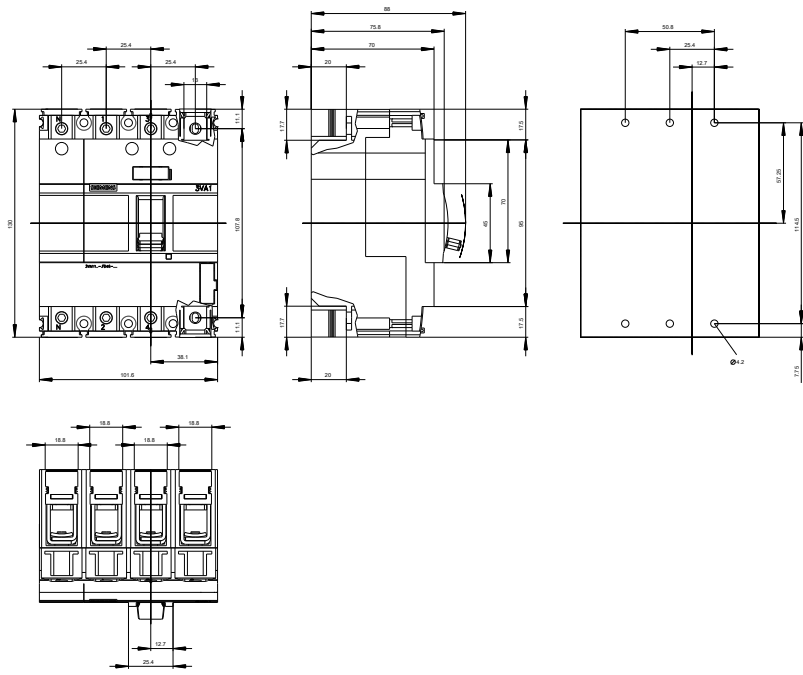
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mfb=3VA1110-6FD46-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA1110-6FD46-0AA0)

##### CAX-Online-Generator

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

##### Tender specifications

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



**last modified:**

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