

circuit breaker 3VA5 UL frame 250 breaking capacity class H 65kA @ 480V 3-pole, line protection TM230, FTAM,  $I_n=110A$  overload protection  $I_r=110A$  fixed short-circuit protection  $I_i=5...10 \times I_n$  without connection



| Model                                                                                                                 |                             |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Product brand name                                                                                                    | SENTRON                     |
| Product designation                                                                                                   | Molded-case circuit breaker |
| Product designation / according to UL file                                                                            | HFAS                        |
| Product version                                                                                                       | System protection           |
| Design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) | Yes                         |
| Design of the overcurrent release                                                                                     | TM230                       |
| Protective function of the overcurrent release                                                                        | LI                          |
| Number of poles                                                                                                       | 3                           |
| General technical data                                                                                                |                             |
| Rated insulation voltage $U_i$                                                                                        | 800 V                       |
| Max. rated operational voltage $U_e$ with AC 50/60Hz                                                                  | 690 V                       |
| Max. rated operational voltage $U_e$ with DC                                                                          | 750 V                       |
| Power loss [W] / maximum                                                                                              | 22.6 W                      |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole                        | 7.53 W                      |
| Mechanical service life (switching cycles) / typical                                                                  | 20 000                      |

|                                                                           |         |
|---------------------------------------------------------------------------|---------|
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz | 8 000   |
| Electrical endurance (switching cycles) / at 480 V / at 50/60 Hz          | 8 000   |
| Electrical endurance (switching cycles) / at 600 V / at 50/60 Hz          | 4 000   |
| Neutral conductors / upgradeable/retrofitable                             | No      |
| Ground fault monitoring version                                           | Without |
| Product function                                                          |         |
| • communication function                                                  | No      |
| • other measurement function                                              | No      |

#### Current

|                                                  |       |
|--------------------------------------------------|-------|
| Marking / acc. to UL 489 / 100%-rated breaker    | No    |
| Max. rated operational current of the frame size | 250 A |
| Rated continuous current I <sub>u</sub>          | 110 A |
| Operating current                                |       |
| • at 40 °C                                       | 110 A |
| • at 45 °C                                       | 107 A |
| • at 50 °C                                       | 104 A |
| • at 55 °C                                       | 100 A |
| • at 60 °C                                       | 97 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 (I <sub>cu</sub> )     |                                                                                                                                                                |
| • at 240 V                                                             | 100 kA                                                                                                                                                         |
| • at 415 V                                                             | 70 kA                                                                                                                                                          |
| • at 690 V                                                             | 10 kA                                                                                                                                                          |
| Operational short-circuit current breaking capacity (I <sub>cs</sub> ) |                                                                                                                                                                |
| • at 240 V                                                             | 100 kA                                                                                                                                                         |
| • at 415 V                                                             | 70 kA                                                                                                                                                          |
| • at 690 V                                                             | 10 kA                                                                                                                                                          |
| Short-circuit current making capacity (I <sub>cm</sub> )               |                                                                                                                                                                |
| • at 240 V                                                             | 220 kA                                                                                                                                                         |
| • at 415 V                                                             | 154 kA                                                                                                                                                         |
| • at 690 V                                                             | 17 kA                                                                                                                                                          |
| Design of short-circuit protection                                     | For switching power values in DC networks, see the 3VA molded case circuit breaker device manual; link to be found under Service & Support in the last chapter |

#### Switching capacity according to UL 489

|                           |        |
|---------------------------|--------|
| Breaking capacity current |        |
| • at 240 V                | 100 kA |
| • at 480 V                | 65 kA  |
| • at 600 V                | 25 kA  |

#### Adjustable parameters

|                                                                         |         |
|-------------------------------------------------------------------------|---------|
| Adjustable response value current / I <sub>r</sub> min.                 | 110 A   |
| Adjustable response value current / I <sub>r</sub> max.                 | 110 A   |
| Adjustable response value current / I <sub>i</sub> min.                 | 550 A   |
| Adjustable response value current / I <sub>i</sub> max.                 | 1 100 A |
| Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF | No      |

#### Mechanical Design

|             |        |
|-------------|--------|
| Height [in] | 7.3 in |
| Height      | 185 mm |
| Width [in]  | 4.1 in |
| Width       | 105 mm |
| Depth [in]  | 3.3 in |
| Depth       | 83 mm  |

#### Connections

|                                                                 |                    |
|-----------------------------------------------------------------|--------------------|
| Arrangement of electrical connectors / for main current circuit | Without connection |
| Type of electrical connection / for main current circuit        | Without            |

#### 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

|                                                                                        |    |
|----------------------------------------------------------------------------------------|----|
| Reference code / 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 | Shipping Approval | other |
|---------------------------|-------------------|-------|
|---------------------------|-------------------|-------|



[Miscellaneous](#)

## Further information

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<http://www.siemens.com/lowvoltage/catalogs>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA5211-6EC31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5211-6EC31-0AA0>

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

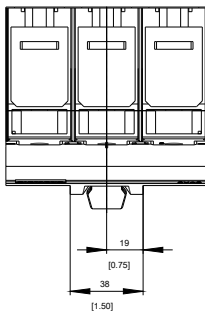
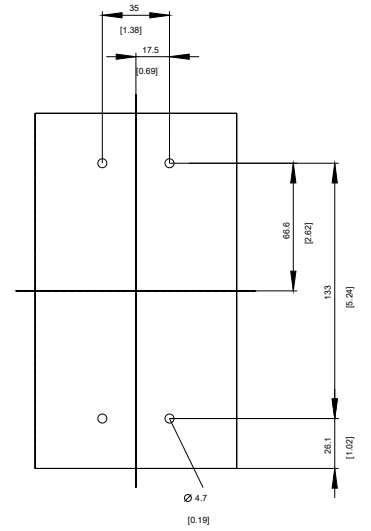
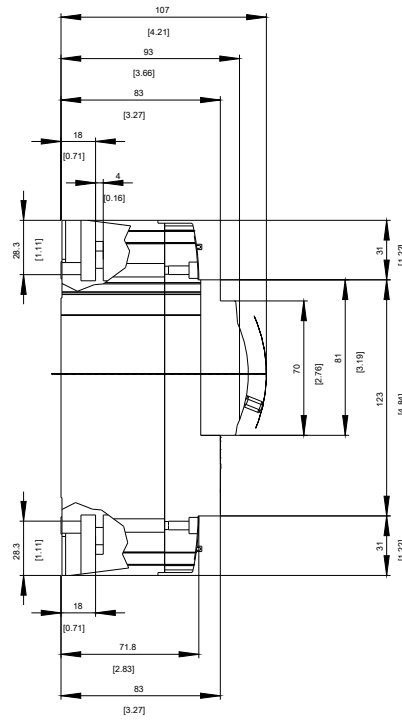
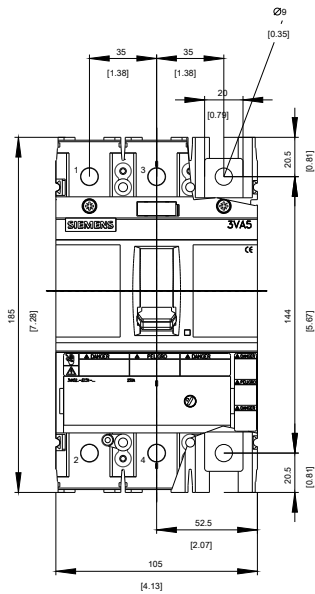
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5211-6EC31-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5211-6EC31-0AA0)

**CAX-Online-Generator**

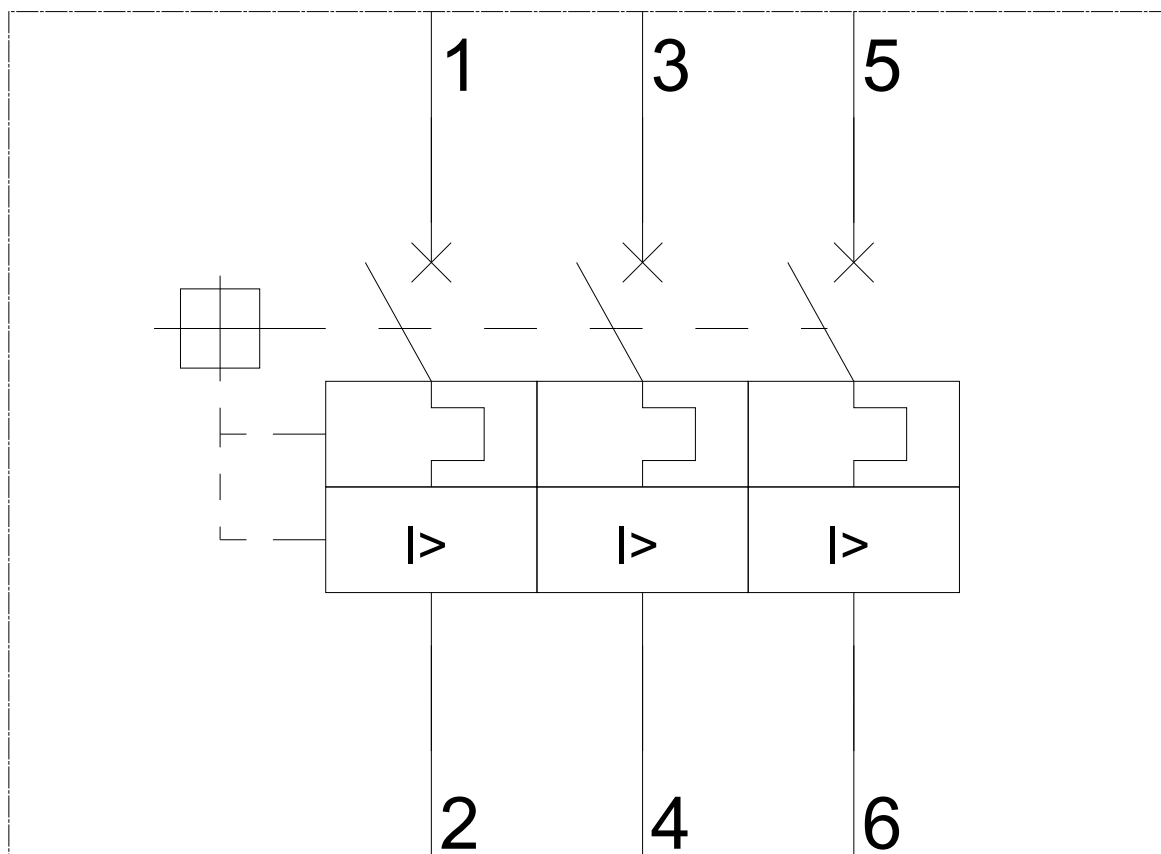
<http://www.siemens.com/cax>

**Tender specifications**

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

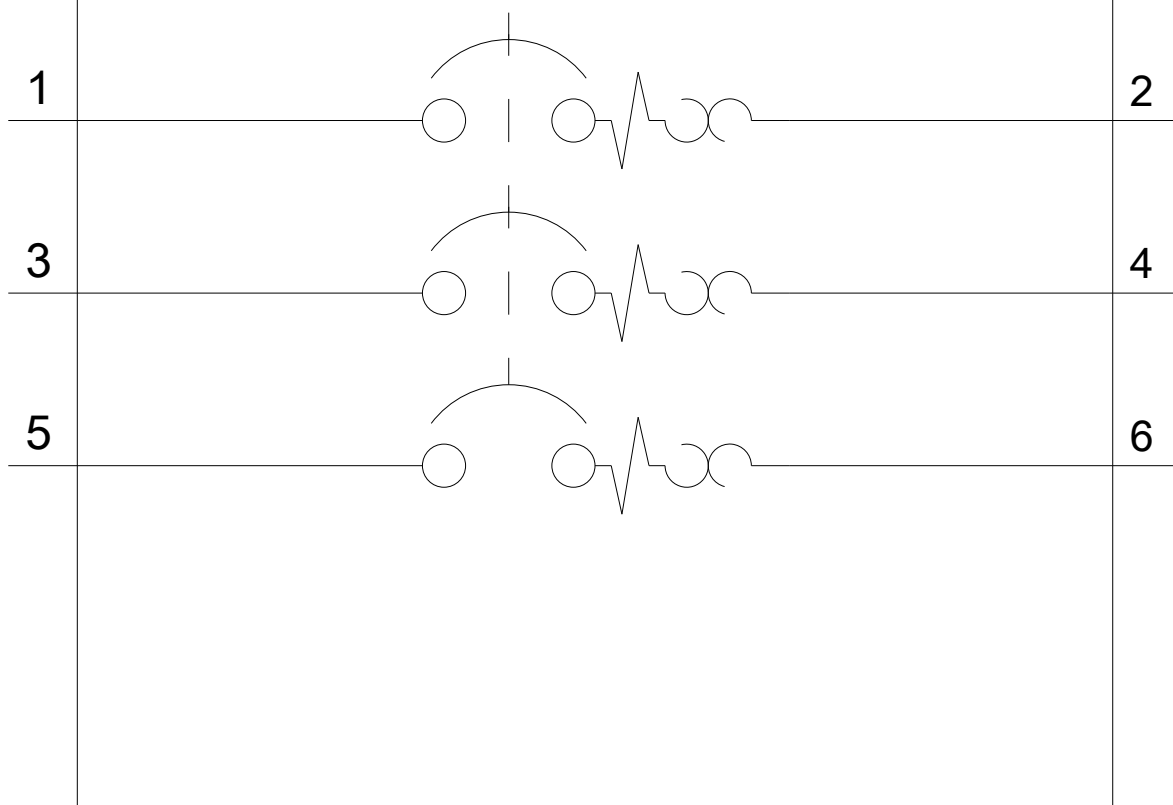


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