

Circuit breaker 3VA5 UL Frame 250 Breaking capacity class M 35kA @ 480 V 2-pole, line protection TM210, FTFM, I<sub>n</sub>=45A Overload protection I<sub>r</sub>=40A fixed Short-circuit protection I<sub>i</sub>=10 x I<sub>n</sub> Without connection



| Model   |                             |
|---|-----------------------------|
| Product brand name  | SENTRON                     |
| Product designation   | Molded-case circuit breaker |
| Product designation / according to UL file  | MFAS                        |
| 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   | TM210                       |
| Protective function of the overcurrent release  | LI                          |
| Number of poles   | 2                           |
| General technical data  |                             |
| Rated insulation voltage U <sub>i</sub>   | 800 V                       |
| Max. rated operational voltage U <sub>e</sub> with AC 50/60Hz   | 690 V                       |
| Max. rated operational voltage U <sub>e</sub> with DC   | 500 V                       |
| Power loss [W] / maximum  | 14.8 W                      |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole                        | 7.4 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 AC-1 / at 690 V 50/60 Hz     | 4 000   |
| 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>          | 45 A  |

### Switching capacity according to IEC 60947

|  |  |
|--|--|
| Switching capacity class of the circuit breaker                        | M  |
| Maximum short-circuit current breaking capacity (I <sub>cu</sub> )     |  |
| • at 240 V   | 85 kA  |
| • at 415 V   | 55 kA  |
| • at 690 V   | 7 kA   |
| Operational short-circuit current breaking capacity (I <sub>cs</sub> ) |  |
| • at 240 V   | 85 kA  |
| • at 415 V   | 55 kA  |
| • at 690 V   | 7 kA   |
| Short-circuit current making capacity (I <sub>cm</sub> )               |  |
| • at 240 V   | 187 kA   |
| • at 415 V   | 121 kA   |
| • at 690 V   | 11.9 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                | 85 kA |
| • at 480 V                | 35 kA |
| • at 600 Y/347 V          | 18 kA |

### Adjustable parameters

|   |      |
|---|------|
| Adjustable response value current / I <sub>r</sub> min. | 45 A |
|---|------|

|   |       |
|---|-------|
| Adjustable response value current / I <sub>r</sub> max.                 | 45 A  |
| Adjustable response value current / I <sub>i</sub> min.                 | 450 A |
| Adjustable response value current / I <sub>i</sub> max.                 | 450 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  |  |
| <ul style="list-style-type: none"> <li>• during operation / minimum</li> <li>• during operation / maximum</li> <li>• during storage / minimum</li> <li>• during storage / maximum</li> </ul> | <ul style="list-style-type: none"> <li>-25 °C</li> <li>70 °C</li> <li>-40 °C</li> <li>80 °C</li> </ul> |

#### 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 |
|--------------------------|-----|



CCC



CSA



UL

[Miscellaneous](#)



RCM

|                           |                   |       |
|---------------------------|-------------------|-------|
| Declaration of Conformity | Shipping Approval | other |
|---------------------------|-------------------|-------|



EG-Konf.



ABS

[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=3VA5245-5ED61-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5245-5ED61-0AA0>

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

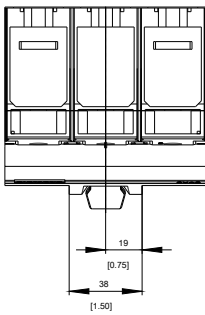
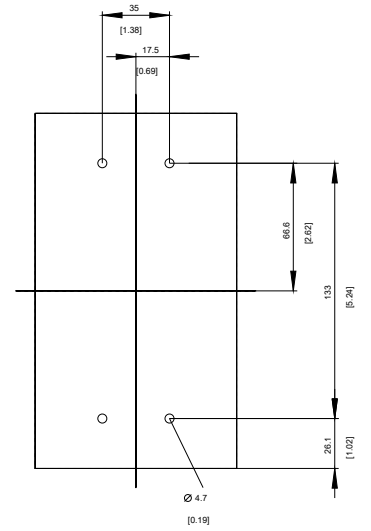
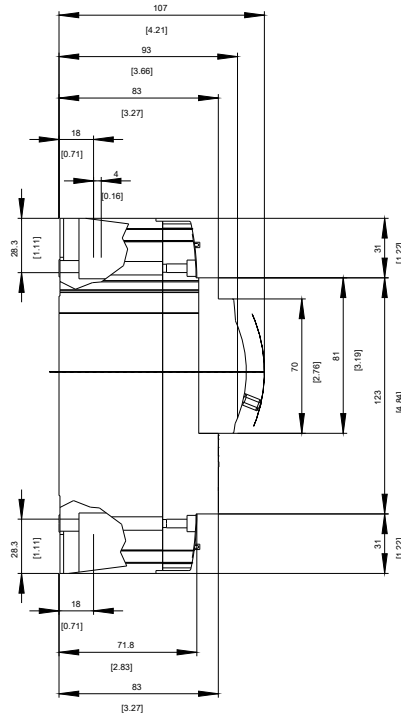
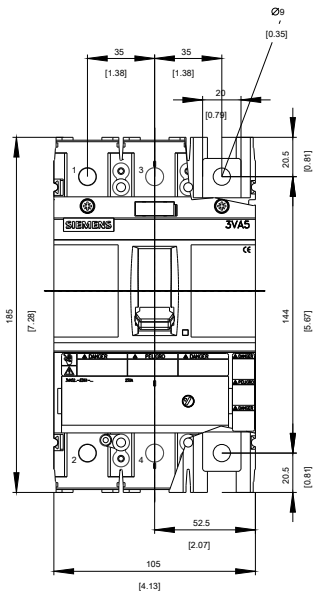
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5245-5ED61-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5245-5ED61-0AA0)

**CAX-Online-Generator**

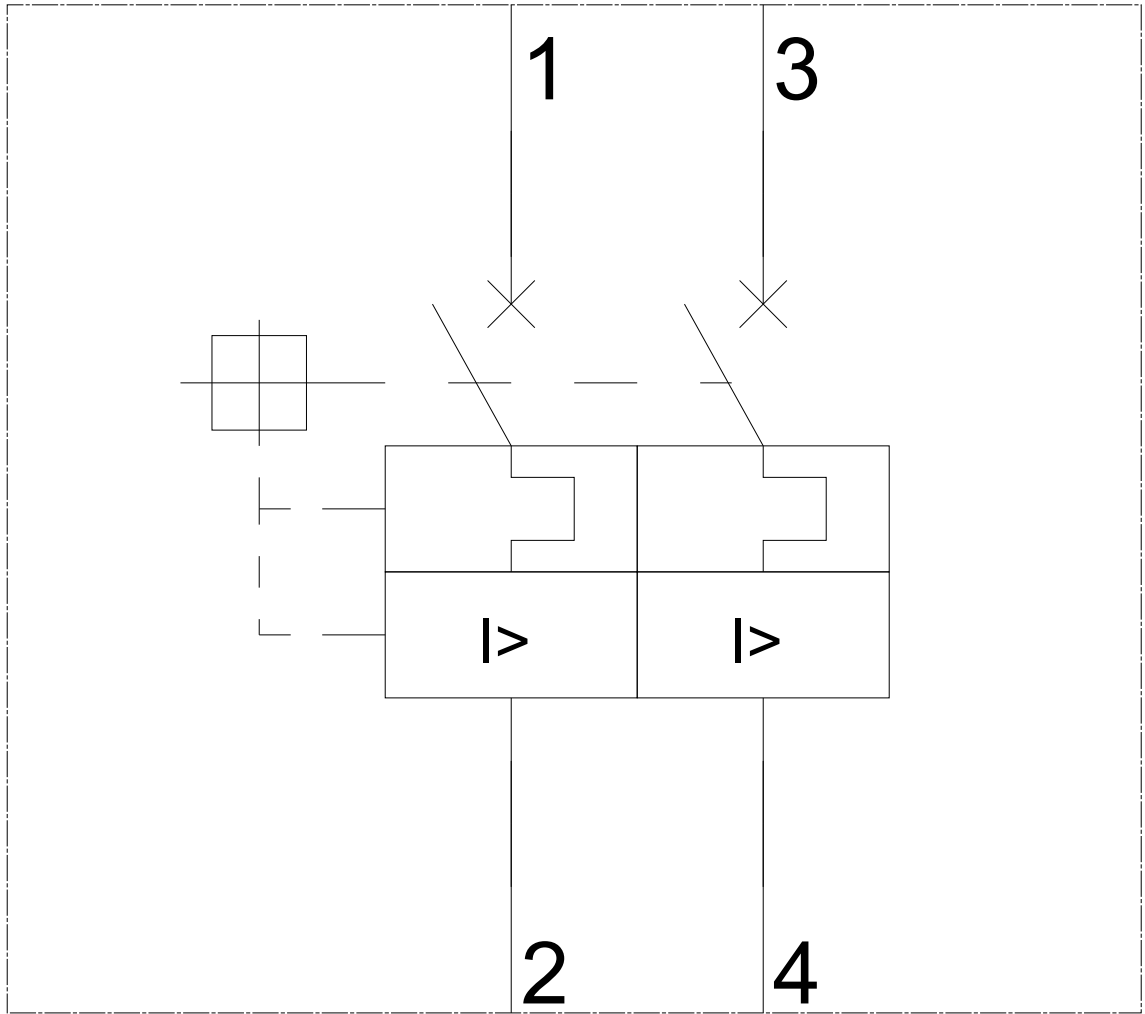
<http://www.siemens.com/cax>

**Tender specifications**

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

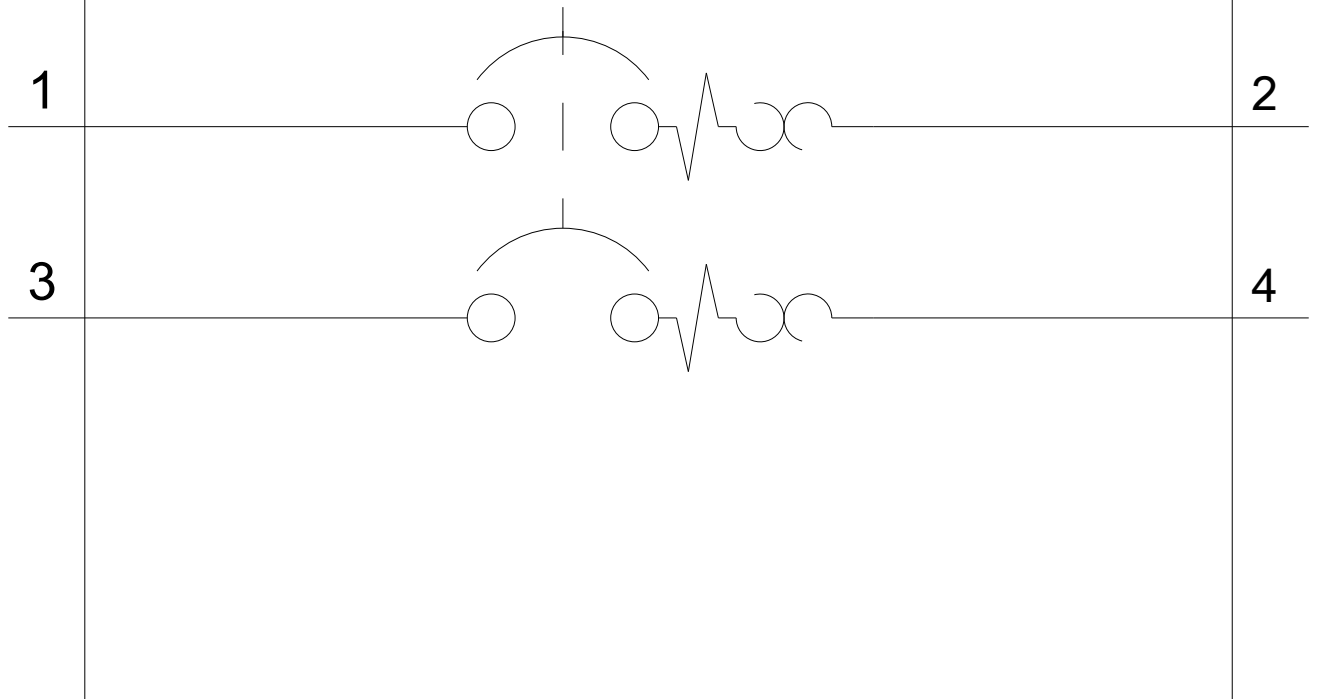


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