

Siemens  
EcoTech



circuit breaker 3VA5 UL Frame 600 breaking capacity class M 35 kA @ 480 V 3-pole, line protection TM230, FTAM, In=500 A overload protection Ir = 500 A permanently set short-circuit protection Ii=5...10 x In cable connection on two sides

| Model                                                                                                                      |                             |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                                                         | SENTRON                     |
| product designation                                                                                                        | Molded-case circuit breaker |
| product designation / according to UL file                                                                                 | MLAS                        |
| design of the product                                                                                                      | System protection           |
| design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) | Yes                         |
| design of the load switch / according to UL 489 / High-Intensity-Discharge circuit breaker (HID Type)                      | No                          |
| design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type)                                | No                          |
| design of the overcurrent release                                                                                          | TM230                       |
| protection function of the overcurrent release                                                                             | LI                          |
| number of poles                                                                                                            | 3                           |
| General technical data                                                                                                     |                             |
| insulation voltage / rated value                                                                                           | 800 V                       |
| operating voltage / at DC / rated value                                                                                    | 500 V                       |
| operating voltage / at AC / rated value                                                                                    | 690 V                       |
| power loss [W] / maximum                                                                                                   | 122 W                       |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole                                | 40.77 W                     |
| mechanical service life (operating cycles) / typical                                                                       | 20 000                      |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                                           | 4 000                       |
| electrical endurance (operating cycles) / at AC-1 / at 690 V                                                               | 2 700                       |
| electrical endurance (operating cycles) / at 480 V                                                                         | 4 000                       |
| electrical endurance (operating cycles) / at 600 V                                                                         | 2 700                       |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof                      | No                          |
| product function                                                                                                           |                             |
| • communication function                                                                                                   | No                          |
| • other measurement function                                                                                               | No                          |
| Net Weight                                                                                                                 | 9.521 kg                    |
| Current                                                                                                                    |                             |
| marking / according to UL 489 / 100%-rated breaker                                                                         | No                          |
| operational current                                                                                                        |                             |
| • at 40 °C                                                                                                                 | 500 A                       |
| • at 45 °C                                                                                                                 | 488 A                       |

|                                                                                                                                              |                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 50 °C</li> <li>• at 55 °C</li> <li>• at 60 °C</li> <li>• at 65 °C</li> <li>• at 70 °C</li> </ul> | 476 A<br>464 A<br>451 A<br>439 A<br>427 A                                                                                                                      |
| <b>Switching capacity according to IEC 60947</b>                                                                                             |                                                                                                                                                                |
| switching capacity class of the circuit breaker                                                                                              | M                                                                                                                                                              |
| maximum short-circuit current breaking capacity (I <sub>cu</sub> )                                                                           |                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 690 V</li> </ul>                                         | 85 kA<br>55 kA<br>7 kA                                                                                                                                         |
| operating short-circuit current breaking capacity (I <sub>cs</sub> )                                                                         |                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 690 V</li> </ul>                                         | 85 kA<br>55 kA<br>6 kA                                                                                                                                         |
| short-circuit current making capacity (I <sub>cm</sub> )                                                                                     |                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 690 V</li> </ul>                                         | 187 kA<br>121 kA<br>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 |
| <b>Switching capacity according to UL 489</b>                                                                                                |                                                                                                                                                                |
| current breaking capacity                                                                                                                    |                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 480 V</li> <li>• at 600 V</li> </ul>                                         | 85 kA<br>35 kA<br>18 kA                                                                                                                                        |
| <b>Adjustable parameters</b>                                                                                                                 |                                                                                                                                                                |
| adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic                            |                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                               | 500 A<br>500 A                                                                                                                                                 |
| adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic                                |                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                               | 1 s<br>1 s                                                                                                                                                     |
| adjustable response value setting current (I <sub>i</sub> ) / for I-tripping                                                                 |                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                               | 2 500 A<br>5 000 A                                                                                                                                             |
| adjustable setting current (I <sub>nN</sub> ) / for N-tripping                                                                               |                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                               | 0 A<br>0 A                                                                                                                                                     |
| product function / grounding protection                                                                                                      | No                                                                                                                                                             |
| <b>Mechanical Design</b>                                                                                                                     |                                                                                                                                                                |
| product component                                                                                                                            |                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• undervoltage release</li> <li>• voltage trigger</li> <li>• trip indicator</li> </ul>                | No<br>No<br>No                                                                                                                                                 |
| height [in]                                                                                                                                  | 9.76 in                                                                                                                                                        |
| height                                                                                                                                       | 248 mm                                                                                                                                                         |
| width [in]                                                                                                                                   | 5.43 in                                                                                                                                                        |
| type of connectable conductor cross-sections / of the round conductor terminal / stranded                                                    | 2 x (2/0 - 600 kcmil)                                                                                                                                          |
| width                                                                                                                                        | 138 mm                                                                                                                                                         |
| depth [in]                                                                                                                                   | 4.33 in                                                                                                                                                        |
| depth                                                                                                                                        | 110 mm                                                                                                                                                         |
| <b>Connections</b>                                                                                                                           |                                                                                                                                                                |
| arrangement of electrical connectors / for main current circuit                                                                              | Front connection                                                                                                                                               |
| type of electrical connection / for main current circuit                                                                                     | circular conductor terminal on both sides                                                                                                                      |
| <b>Auxiliary circuit</b>                                                                                                                     |                                                                                                                                                                |

|                                                |        |
|------------------------------------------------|--------|
| number of CO contacts / for auxiliary contacts | 0      |
| <b>Accessories</b>                             |        |
| product extension / optional / motor drive     | Yes    |
| <b>Environmental conditions</b>                |        |
| 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  |
| reference code / according to IEC 81346-2      | Q      |
| <b>Approvals / Certificates</b>                |        |
| <b>General Product Approval</b>                |        |



[Miscellaneous](#)



[Miscellaneous](#)



|                              |     |                   |                                                    |
|------------------------------|-----|-------------------|----------------------------------------------------|
| General Product Approval     | EMV | Test Certificates | Maritime application                               |
| <a href="#">Confirmation</a> |     |                   | <a href="#">Type Test Certificates/Test Report</a> |
|                              |     |                   |                                                    |

|                               |                                             |
|-------------------------------|---------------------------------------------|
| other                         | Environment                                 |
| <a href="#">Miscellaneous</a> | <a href="#">Confirmation</a>                |
|                               | <a href="#">Environmental Confirmations</a> |
|                               |                                             |

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| <b>Further information</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p>Information on the packaging<br/> <a href="https://support.industry.siemens.com/cs/ww/en/view/109813875">https://support.industry.siemens.com/cs/ww/en/view/109813875</a></p> <p>Information for data generation and storage<br/> <a href="https://support.industry.siemens.com/cs/ww/en/view/109995012">https://support.industry.siemens.com/cs/ww/en/view/109995012</a></p> <p>Information- and Downloadcenter (Catalogs, Brochures,...)<br/> <a href="https://www.siemens.com/lowvoltage/catalogs">https://www.siemens.com/lowvoltage/catalogs</a></p> <p>Industry Mall (Online ordering system)<br/> <a href="https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA5450-5EC36-0AA0">https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA5450-5EC36-0AA0</a></p> <p>Service&amp;Support (Manuals, Certificates, Characteristics, FAQs,...)<br/> <a href="https://support.industry.siemens.com/cs/ww/en/ps/3VA5450-5EC36-0AA0">https://support.industry.siemens.com/cs/ww/en/ps/3VA5450-5EC36-0AA0</a></p> <p>Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)<br/> <a href="https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5450-5EC36-0AA0">https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5450-5EC36-0AA0</a></p> <p>CAX-Online-Generator<br/> <a href="https://www.siemens.com/cax">https://www.siemens.com/cax</a></p> <p>Tender specifications<br/> <a href="https://www.siemens.com/specifications">https://www.siemens.com/specifications</a></p> <p>Characteristic curves<br/> <a href='https://curves.simaris.siemens.com/curves/&lt;mmp_prod_noCOMP="HAUPT"&gt;&lt;/mmp_prod_no&gt;'>https://curves.simaris.siemens.com/curves/&lt;mmp_prod_noCOMP="HAUPT"&gt;&lt;/mmp_prod_no&gt;</a></p> |





