



circuit breaker 3VA1 IEC Frame 160 breaking capacity class S Icu=36 kA @ 415 V  
4-pole, line protection TM220, ATFM, In=25 A overload protection Ir=18 A...25 A  
short-circuit protection Ii=12.8 x In neutral conductor protection 100% nut keeper kit

| Model   |                             |
|---|-----------------------------|
| product brand name  | SENTRON                     |
| product designation   | Molded case circuit breaker |
| design of the product   | Line protection             |
| design of the overcurrent release   | TM220                       |
| protection function of the overcurrent release  | LI                          |
| number of poles   | 4                           |
| General technical data  |                             |
| insulation voltage / rated value  | 800 V                       |
| operating voltage / at DC / rated value   | 600 V                       |
| operating voltage / at AC / rated value   | 690 V                       |
| power loss [W] / maximum  | 8.5 W                       |
| mechanical service life (operating cycles) / typical  | 20 000                      |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                      | 9 000                       |
| electrical endurance (operating cycles) / at AC-1 / at 690 V  | 6 300                       |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof | No                          |
| ground-fault monitoring version   | Without                     |
| product function  |                             |
| • communication function  | No                          |
| • other measurement function  | No                          |
| Net Weight  | 1.234 kg                    |
| Current   |                             |
| operational current   |                             |
| • at 40 °C  | 25 A                        |
| • at 45 °C  | 25 A                        |
| • at 50 °C  | 25 A                        |
| • at 55 °C  | 24 A                        |
| • at 60 °C  | 24 A                        |
| • at 65 °C  | 23 A                        |
| • at 70 °C  | 23 A                        |
| Switching capacity according to IEC 60947   |                             |
| switching capacity class of the circuit breaker   | S                           |
| maximum short-circuit current breaking capacity (Icu)   |                             |
| • at 240 V  | 55 kA                       |
| • at 415 V  | 36 kA                       |
| • at 440 V  | 25 kA                       |
| • at 500 V  | 7 kA                        |
| • at 690 V  | 7 kA                        |
| operating short-circuit current breaking capacity (Ics)   |                             |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>  | 55 kA<br>36 kA<br>25 kA<br>5 kA<br>5 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 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul> | 121 kA<br>75.6 kA<br>52.5 kA<br>11.9 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>Adjustable parameters</b>  |  |
| product feature / for L-tripping / can be switched on/off   | No   |
| 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>      | 18 A<br>25 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>l</sub> ) / for I-tripping <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>   | 320 A<br>320 A   |
| adjustable setting current (I <sub>N</sub> ) / for N-tripping <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>  | 25 A<br>25 A   |
| design of the N-conductor protection  | 100%   |
| 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]   | 5.12 in  |
| height  | 130 mm   |
| width [in]  | 4 in   |
| width   | 101.6 mm   |
| depth [in]  | 2.76 in  |
| depth   | 70 mm  |
| <b>Connections</b>  |  |
| arrangement of electrical connectors / for main current circuit   | Front terminal   |
| type of electrical connection / for main current circuit  | nut keeper kit on both ends  |
| type of connectable conductor cross-sections / for flat-bar terminal connection / minimum   | 12 x 1 mm  |
| type of connectable conductor cross-sections / for flat-bar terminal connection / maximum   | 17 x 6,5 mm  |
| design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)  | Silver   |
| design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)   | Tin  |
| <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 <ul style="list-style-type: none"> <li>• during operation / minimum</li> <li>• during operation / maximum</li> </ul>  | -25 °C<br>70 °C  |

- during storage / minimum -40 °C
- during storage / maximum 80 °C

#### Environmental footprint

|  |           |
|--|-----------|
| Environmental Product Declaration(EPD)                   | Yes       |
| Global Warming Potential [CO2 eq] / total                | 190 kg    |
| Global Warming Potential [CO2 eq] / during manufacturing | 4.67 kg   |
| Global Warming Potential [CO2 eq] / during operation     | 186 kg    |
| Global Warming Potential [CO2 eq] / after end of life    | -0.826 kg |
| reference code / according to IEC 81346-2                | Q         |

#### Approvals / Certificates

##### General Product Approval



[Confirmation](#)



[Miscellaneous](#)

##### General Product Approval

##### EMV

##### Test Certificates

[KC](#)



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

[Miscellaneous](#)

#### Marine / Shipping



[CCS \(China Classification Society\)](#)

##### other

##### Environment

[Confirmation](#)

[Miscellaneous](#)

[Miscellaneous](#)



[Environmental Confirmations](#)

#### Environment

[Environmental Confirmations](#)

#### Further information

##### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

##### 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=3VA1125-4GE42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1125-4GE42-0AA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1125-4GE42-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1125-4GE42-0AA0)

##### CAX-Online-Generator

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

##### Tender specifications

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





