



circuit breaker 3VA5 UL Frame 125 breaking capacity class S 25 kA @ 480 V 2-pole, line protection TM210, FTFM, In=20 A overload protection Ir=20 A permanently set short-circuit protection li=15 x In cable connection on two sides

| Model                                                                                                                      |                             |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                                                         | SENTRON                     |
| product designation                                                                                                        | Molded-case circuit breaker |
| product designation / according to UL file                                                                                 | SEAS                        |
| 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)                      | Yes                         |
| design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type)                                | Yes                         |
| design of the overcurrent release                                                                                          | TM210                       |
| protection function of the overcurrent release                                                                             | LI                          |
| number of poles                                                                                                            | 2                           |
| General technical data                                                                                                     |                             |
| insulation voltage / rated value                                                                                           | 500 V                       |
| operating voltage / at DC / rated value                                                                                    | 250 V                       |
| operating voltage / at AC / rated value                                                                                    | 415 V                       |
| power loss [W] / maximum                                                                                                   | 8.13 W                      |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole                                | 4.07 W                      |
| mechanical service life (operating cycles) / typical                                                                       | 20 000                      |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                                           | 8 000                       |
| electrical endurance (operating cycles) / at AC-1 / at 690 V                                                               | 4 000                       |
| electrical endurance (operating cycles) / at 480 V                                                                         | 8 000                       |
| electrical endurance (operating cycles) / at 600 V                                                                         | 4 000                       |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof                      | No                          |
| product function                                                                                                           |                             |
| • communication function                                                                                                   | No                          |
| • other measurement function                                                                                               | No                          |
| Net Weight                                                                                                                 | 0.657 kg                    |
| Current                                                                                                                    |                             |
| marking / according to UL 489 / 100%-rated breaker                                                                         | No                          |
| operational current                                                                                                        |                             |
| • at 40 °C                                                                                                                 | 20 A                        |
| • at 45 °C                                                                                                                 | 20 A                        |
| • at 50 °C                                                                                                                 | 19 A                        |
| • at 55 °C                                                                                                                 | 19 A                        |
| • at 60 °C                                                                                                                 | 19 A                        |
| • at 65 °C                                                                                                                 | 18 A                        |
| • at 70 °C                                                                                                                 | 18 A                        |

**Switching capacity according to IEC 60947**

|                                                                                                                                                    |                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| switching capacity class of the circuit breaker                                                                                                    | S                                                                                                                                                              |
| 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></ul>   | 55 kA<br>36 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></ul> | 55 kA<br>36 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></ul>             | 121 kA<br>75.6 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**

|                                                                                                                                  |                         |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| current breaking capacity <ul style="list-style-type: none"><li>• at 240 V</li><li>• at 480 V</li><li>• at 600 Y/347 V</li></ul> | 65 kA<br>25 kA<br>14 kA |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------|

**Adjustable parameters**

|                                                                                                                                                                                               |                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 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> | 20 A<br>20 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>                                      | 300 A<br>300 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             |

**Mechanical Design**

|                                                                                                                                             |                      |
|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 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]                                                                                                                                 | 5.51 in              |
| height                                                                                                                                      | 140 mm               |
| width [in]                                                                                                                                  | 2 in                 |
| type of connectable conductor cross-sections / of the round conductor terminal / stranded                                                   | 1 x (14 AWG - 8 AWG) |
| width                                                                                                                                       | 50.8 mm              |
| depth [in]                                                                                                                                  | 3.01 in              |
| depth                                                                                                                                       | 76.5 mm              |

**Connections**

|                                                                 |                                           |
|-----------------------------------------------------------------|-------------------------------------------|
| arrangement of electrical connectors / for main current circuit | Front connection                          |
| type of electrical connection / for main current circuit        | circular conductor terminal on both sides |

**Auxiliary circuit**

|                                                |   |
|------------------------------------------------|---|
| number of CO contacts / for auxiliary contacts | 0 |
|------------------------------------------------|---|

**Accessories**

|                                            |    |
|--------------------------------------------|----|
| product extension / optional / motor drive | No |
|--------------------------------------------|----|

**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> | -25 °C<br>70 °C<br>-40 °C<br>80 °C |

Approvals / Certificates

General Product Approval



|                          |     |                   |
|--------------------------|-----|-------------------|
| General Product Approval | EMV | Test Certificates |
|--------------------------|-----|-------------------|



[Miscellaneous](#)



[Type Test Certificates/Test Report](#)

|                   |                      |
|-------------------|----------------------|
| Test Certificates | Maritime application |
|-------------------|----------------------|

[Special Test Certificate](#)



|       |             |
|-------|-------------|
| other | Environment |
|-------|-------------|

[Confirmation](#)

[Miscellaneous](#)

[Environmental Confirmations](#)

Further information

Information on the packaging  
<https://support.industry.siemens.com/cs/ww/en/view/109813875>  
 Information for data generation and storage  
<https://support.industry.siemens.com/cs/ww/en/view/109995012>  
 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=3VA5120-4ED26-0AA0>  
 Service&Support (Manuals, Certificates, Characteristics, FAQs,...)  
<https://support.industry.siemens.com/cs/ww/en/ps/3VA5120-4ED26-0AA0>  
 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)  
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5120-4ED26-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5120-4ED26-0AA0)  
 CAx-Online-Generator  
<http://www.siemens.com/cax>  
 Tender specifications  
<http://www.siemens.com/specifications>



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