



circuit breaker 3VA4 UL Frame 125 breaking capacity class H 65 kA @ 277 V 1-pole, line protection TM210, FTFM,  $I_n=80$  A overload protection  $I_r=80$  A permanently set short-circuit protection  $I_i=10 \times I_n$  UL 489 SB (naval), 50 °C, terminal connection

| Model                                                                                                                      |                             |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                                                         | SETRON                      |
| product designation                                                                                                        | Molded-case circuit breaker |
| product designation / according to UL file                                                                                 | HEAM                        |
| 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                                                                                          | TM210                       |
| protection function of the overcurrent release                                                                             | LI                          |
| number of poles                                                                                                            | 1                           |
| General technical data                                                                                                     |                             |
| operating voltage / at AC / rated value                                                                                    | 480 V                       |
| power loss [W] / maximum                                                                                                   | 5.5 W                       |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole                                | 5.5 W                       |
| mechanical service life (operating cycles) / typical                                                                       | 15 000                      |
| 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                          |
| ground-fault monitoring version                                                                                            | Without                     |
| product function                                                                                                           |                             |
| • communication function                                                                                                   | No                          |
| • other measurement function                                                                                               | No                          |
| Net Weight                                                                                                                 | 0.28 kg                     |
| Current                                                                                                                    |                             |
| marking / according to UL 489 / 100%-rated breaker                                                                         | No                          |
| operational current                                                                                                        |                             |
| • at 40 °C                                                                                                                 | 80 A                        |
| • at 45 °C                                                                                                                 | 80 A                        |
| • at 50 °C                                                                                                                 | 80 A                        |
| • at 55 °C                                                                                                                 | 78 A                        |
| • at 60 °C                                                                                                                 | 77 A                        |
| • at 65 °C                                                                                                                 | 75 A                        |
| • at 70 °C                                                                                                                 | 74 A                        |
| Switching capacity according to IEC 60947                                                                                  |                             |

|                                                                                                                                                                                                          |                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| switching capacity class of the circuit breaker                                                                                                                                                          | H                                                                                                                                                              |
| 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 120 V</li> <li>at 277 V</li> <li>at 347 V</li> </ul>                                                                                 | 150 kA<br>65 kA<br>25 kA                                                                                                                                       |
| <b>Adjustable parameters</b>                                                                                                                                                                             |                                                                                                                                                                |
| adjustable response value delay time (tr) / for L-tripping / with I2t characteristic <ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>                                          | 1 s<br>1 s                                                                                                                                                     |
| 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]                                                                                                                                                                                              | 5.09 in                                                                                                                                                        |
| height                                                                                                                                                                                                   | 129.4 mm                                                                                                                                                       |
| width [in]                                                                                                                                                                                               | 1 in                                                                                                                                                           |
| type of connectable conductor cross-sections / of the round conductor terminal / stranded                                                                                                                | 1 x (8 AWG - 3/0)                                                                                                                                              |
| width                                                                                                                                                                                                    | 25.4 mm                                                                                                                                                        |
| depth [in]                                                                                                                                                                                               | 2.96 in                                                                                                                                                        |
| depth                                                                                                                                                                                                    | 75.09 mm                                                                                                                                                       |
| <b>Connections</b>                                                                                                                                                                                       |                                                                                                                                                                |
| arrangement of electrical connectors / for main current circuit                                                                                                                                          | output side: circular conductor connection                                                                                                                     |
| type of electrical connection / for main current circuit                                                                                                                                                 | Infeed side: Low tab                                                                                                                                           |
| 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                                                                                                                                                               | No                                                                                                                                                             |
| <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> <li>during storage / minimum</li> <li>during storage / maximum</li> </ul> | -25 °C<br>70 °C<br>-40 °C<br>80 °C                                                                                                                             |
| <b>Approvals / Certificates</b>                                                                                                                                                                          |                                                                                                                                                                |
| General Product Approval                                                                                                                                                                                 | EMV                                                                                                                                                            |


[Miscellaneous](#)
[Miscellaneous](#)

[Confirmation](#)


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

## 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,...)

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA4180-6ED14-1AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA4180-6ED14-1AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA4180-6ED14-1AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA4180-6ED14-1AA0)

CAX-Online-Generator

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

Tender specifications

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

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP='HAUPT'></mmp_prod_no>)



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