

circuit breaker 3VA5 UL frame 125 breaking capacity class H 65kA @ 480V 3-pole, line protection TM240, ATAM,  $I_n=80A$  overload protection  $I_r=63A...80A$  short-circuit protection  $I_i=5...10 \times I_n$  without connection



| Model                                                                                                                 |                             |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Product brand name                                                                                                    | SETRON                      |
| Product designation                                                                                                   | Molded-case circuit breaker |
| Product designation / according to UL file                                                                            | HEAS                        |
| 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                                                                                     | TM240                       |
| protection function of the overcurrent release                                                                        | LI                          |
| Number of poles                                                                                                       | 3                           |
| General technical data                                                                                                |                             |
| Rated insulation voltage $U_i$                                                                                        | 800 V                       |
| Max. rated operational voltage $U_e$ with AC 50/60Hz                                                                  | 690 V                       |
| Max. rated operational voltage $U_e$ with DC                                                                          | 500 V                       |
| Power loss [W] / maximum                                                                                              | 17.7 W                      |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole                        | 5.9 W                       |
| Mechanical service life (switching cycles) / typical                                                                  | 15 000                      |

|                                                                           |         |
|---------------------------------------------------------------------------|---------|
| 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 | 125 A  |
| Rated continuous current I <sub>u</sub>          | 80 A   |
| Operating current                                |        |
| • at 40 °C                                       | 80 A   |
| • at 45 °C                                       | 78.4 A |
| • at 50 °C                                       | 76.9 A |
| • at 55 °C                                       | 75.5 A |
| • at 60 °C                                       | 74.1 A |
| • at 65 °C                                       | 72.7 A |
| • at 70 °C                                       | 71.4 A |

### Switching capacity according to IEC 60947

|                                                                        |                                                                                                                                                                |
|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Switching capacity class of the circuit breaker                        | H                                                                                                                                                              |
| Maximum short-circuit current breaking capacity (I <sub>cu</sub> )     |                                                                                                                                                                |
| • at 240 V                                                             | 150 kA                                                                                                                                                         |
| • at 415 V                                                             | 70 kA                                                                                                                                                          |
| • at 690 V                                                             | 10 kA                                                                                                                                                          |
| Operational short-circuit current breaking capacity (I <sub>cs</sub> ) |                                                                                                                                                                |
| • at 240 V                                                             | 150 kA                                                                                                                                                         |
| • at 415 V                                                             | 70 kA                                                                                                                                                          |
| • at 690 V                                                             | 5 kA                                                                                                                                                           |
| Short-circuit current making capacity (I <sub>cm</sub> )               |                                                                                                                                                                |
| • at 240 V                                                             | 330 kA                                                                                                                                                         |
| • at 415 V                                                             | 154 kA                                                                                                                                                         |
| • at 690 V                                                             | 17 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                                                                             | 150 kA             |
| • at 480 V                                                                             | 65 kA              |
| • at 600 Y/347 V                                                                       | 25 kA              |
| Adjustable parameters                                                                  |                    |
| Adjustable response value current / Ig min.                                            | 56 A               |
| Adjustable response value current / Ig min.                                            | 80 A               |
| Adjustable response value current / li min.                                            | 400 A              |
| Adjustable response value current / li max.                                            | 800 A              |
| Ground fault protection / tripping switchable / I2t=ON/OFF                             | No                 |
| Mechanical Design                                                                      |                    |
| Height [in]                                                                            | 5.5 in             |
| Height                                                                                 | 140 mm             |
| Width [in]                                                                             | 3 in               |
| Width                                                                                  | 76.2 mm            |
| Depth [in]                                                                             | 3 in               |
| Depth                                                                                  | 76.5 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                                                                    |                    |
| • during operation / minimum                                                           | -25 °C             |
| • during operation / maximum                                                           | 70 °C              |
| • during storage / minimum                                                             | -40 °C             |
| • during storage / maximum                                                             | 80 °C              |
| 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                                                                                        |
|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <br>CSA | <br>UL | <br>UL | <br>VDE | <br>EAC | <br>RCM |

| Declaration of Conformity                                                                     | Test Certificates                                                         | Shipping Approval                                                                                                                                                                      | other                         |
|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| <br>EG-Konf. | <a href="#">Miscellaneous</a><br><a href="#">Special Test Certificate</a> | <br>ABS<br><br>LRS | <a href="#">Miscellaneous</a> |

#### 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=3VA5180-6EF31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5180-6EF31-0AA0>

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

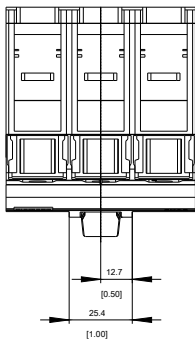
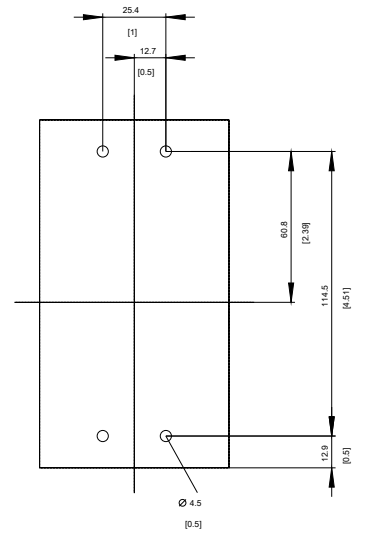
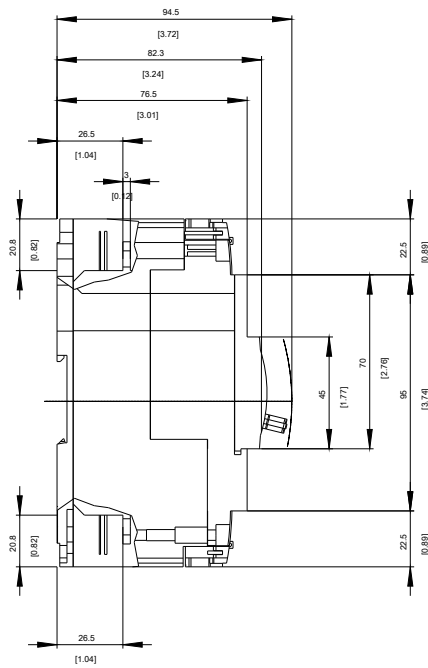
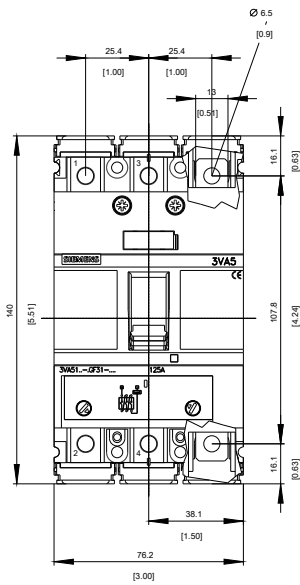
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5180-6EF31-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5180-6EF31-0AA0)

**CAX-Online-Generator**

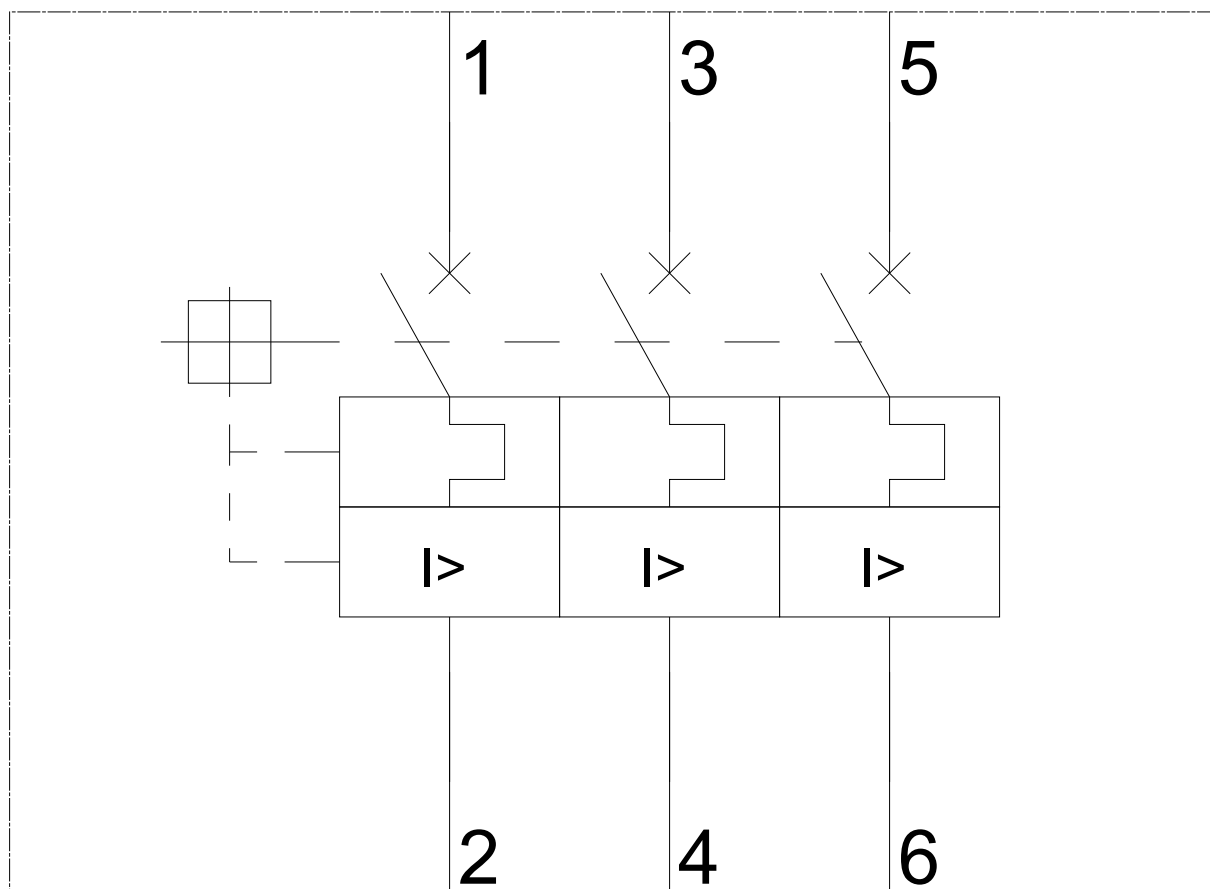
<http://www.siemens.com/cax>

**Tender specifications**

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

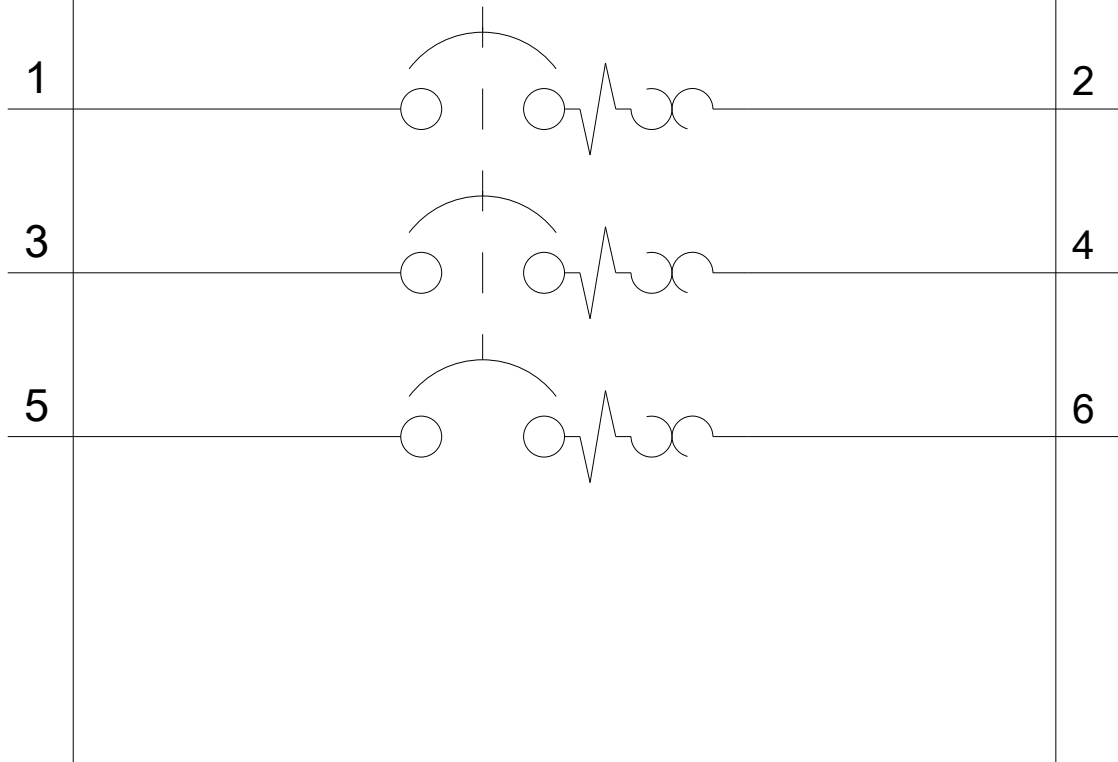


-Q



-CB

SIEMENS



last modified:

08/25/2020