



circuit breaker 3VA5 UL frame 125 breaking capacity class M 35kA @ 480 V 3-pole, line protection TM210, FTFM,  $I_n=80A$  overload protection  $I_r=80A$  fixed short-circuit protection  $I_i=10 \times I_n$  without connection

| Model                                                                                                                 |                             |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                                                    | SETRON                      |
| product designation                                                                                                   | Molded-case circuit breaker |
| product designation / according to UL file                                                                            | MEAS                        |
| 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                                                                                     | TM210                       |
| 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 DC                                                                          | 500 V                       |
| power loss [W] / maximum                                                                                              | 19.3 W                      |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole                        | 6.43 W                      |
| mechanical service life (switching cycles) / typical                                                                  | 20 000                      |
| 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                                                                    | 8 000                       |
| electrical endurance (switching cycles) / at 600 V                                                                    | 4 000                       |
| Neutral conductors / upgradeable/retrofitable                                                                         | No                          |
| product function                                                                                                      |                             |
| • communication function                                                                                              | No                          |
| • other measurement function                                                                                          | No                          |
| Current                                                                                                               |                             |
| marking / acc. to UL 489 / 100%-rated breaker                                                                         | No                          |
| operational current                                                                                                   |                             |
| • at 45 °C                                                                                                            | 78 A                        |
| • at 50 °C                                                                                                            | 77 A                        |
| • at 55 °C                                                                                                            | 76 A                        |
| • at 60 °C                                                                                                            | 74 A                        |
| • at 65 °C                                                                                                            | 73 A                        |
| • at 70 °C                                                                                                            | 72 A                        |
| Switching capacity according to IEC 60947                                                                             |                             |
| switching capacity class of the circuit breaker                                                                       | M                           |

|                                                                                        |                                                                                                                                                                |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| breaking capacity maximum short-circuit current (Icu)                                  |                                                                                                                                                                |
| • at 240 V                                                                             | 85 kA                                                                                                                                                          |
| • at 415 V                                                                             | 55 kA                                                                                                                                                          |
| • at 690 V                                                                             | 7 kA                                                                                                                                                           |
| breaking capacity operating short-circuit current (Ics)                                |                                                                                                                                                                |
| • at 240 V                                                                             | 85 kA                                                                                                                                                          |
| • at 415 V                                                                             | 55 kA                                                                                                                                                          |
| • at 690 V                                                                             | 5 kA                                                                                                                                                           |
| short-circuit current making capacity (Icm)                                            |                                                                                                                                                                |
| • at 240 V                                                                             | 187 kA                                                                                                                                                         |
| • at 415 V                                                                             | 121 kA                                                                                                                                                         |
| • at 690 V                                                                             | 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>                                          |                                                                                                                                                                |
| breaking capacity current                                                              |                                                                                                                                                                |
| • at 240 V                                                                             | 85 kA                                                                                                                                                          |
| • at 480 V                                                                             | 35 kA                                                                                                                                                          |
| • at 600 Y/347 V                                                                       | 18 kA                                                                                                                                                          |
| <b>Adjustable parameters</b>                                                           |                                                                                                                                                                |
| Adjustable response value current / I <sub>g</sub> min.                                | 80 A                                                                                                                                                           |
| Adjustable response value current / I <sub>g</sub> min.                                | 80 A                                                                                                                                                           |
| Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF                | No                                                                                                                                                             |
| <b>Mechanical Design</b>                                                               |                                                                                                                                                                |
| height [in]                                                                            | 5.51 in                                                                                                                                                        |
| Height                                                                                 | 140 mm                                                                                                                                                         |
| width [in]                                                                             | 3 in                                                                                                                                                           |
| Width                                                                                  | 76.2 mm                                                                                                                                                        |
| depth [in]                                                                             | 3.01 in                                                                                                                                                        |
| depth                                                                                  | 76.5 mm                                                                                                                                                        |
| <b>Connections</b>                                                                     |                                                                                                                                                                |
| arrangement of electrical connectors / for main current circuit                        | Without connection                                                                                                                                             |
| type of electrical connection / for main current circuit                               | Without                                                                                                                                                        |
| <b>Auxiliary circuit</b>                                                               |                                                                                                                                                                |
| product component                                                                      |                                                                                                                                                                |
| • undervoltage release                                                                 | No                                                                                                                                                             |
| • voltage trigger                                                                      | No                                                                                                                                                             |
| • trip indicator                                                                       | No                                                                                                                                                             |
| 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                                                                                                                                                          |
| <b>Certificates</b>                                                                    |                                                                                                                                                                |
| reference code / acc. to IEC 81346-2                                                   | Q                                                                                                                                                              |
| certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB | No                                                                                                                                                             |
| <b>General Product Approval</b>                                                        |                                                                                                                                                                |



[Miscellaneous](#)

| General Product Approval | EMC | Declaration of Conformity | Test Certificates |
|--------------------------|-----|---------------------------|-------------------|
|--------------------------|-----|---------------------------|-------------------|



[UK Declaration of Conformity](#)



[Miscellaneous](#)

[Special Test Certificate](#)

| Marine / Shipping | other |
|-------------------|-------|
|-------------------|-------|



[Miscellaneous](#)

[Miscellaneous](#)

#### 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=3VA5180-5ED31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5180-5ED31-0AA0>

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

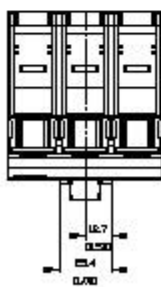
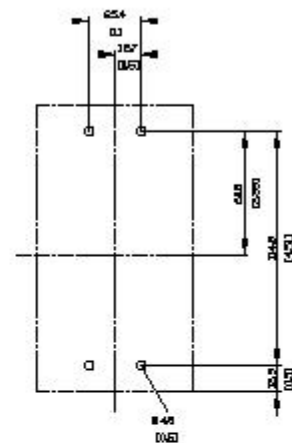
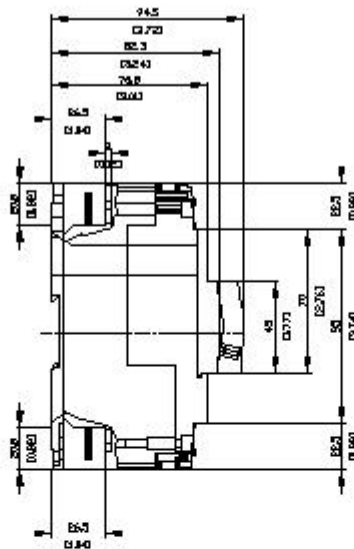
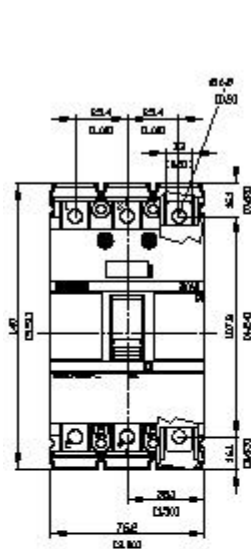
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5180-5ED31-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5180-5ED31-0AA0)

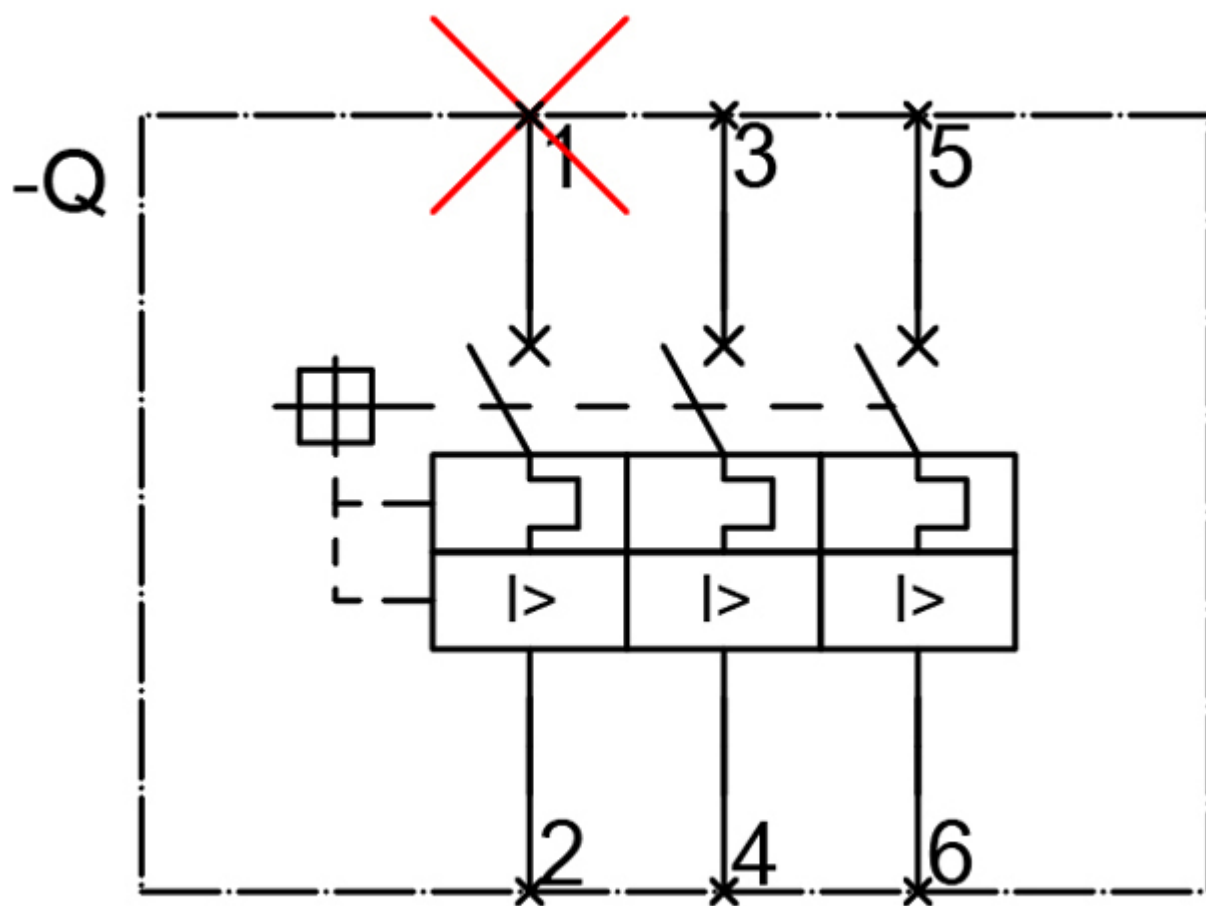
CAX-Online-Generator

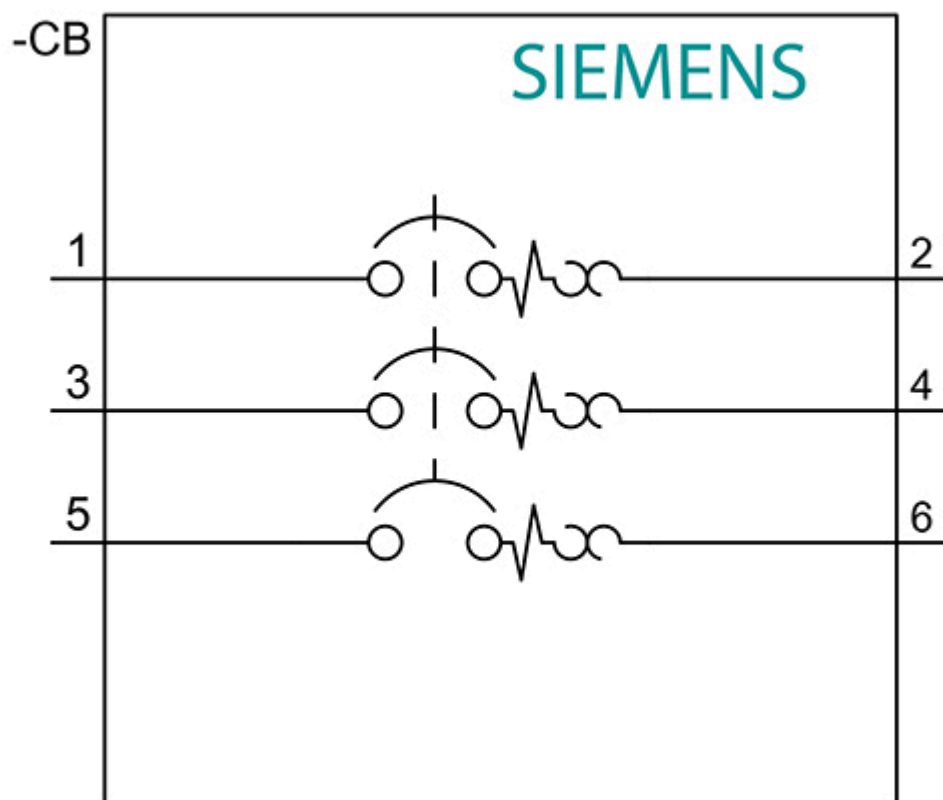
<http://www.siemens.com/cax>

Tender specifications

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







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