

circuit breaker 3VA5 UL frame 125 breaking capacity class S 25kA @ 480V 3-pole, line protection TM230, FTAM, In=100A overload protection Ir=100A fixed short-circuit protection li=5...10 x In without connection



| Model                                                                                                                 |                             |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Product brand name                                                                                                    | SETRON                      |
| Product designation                                                                                                   | Molded-case circuit breaker |
| Product designation / according to UL-File                                                                            | SEAS                        |
| 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                                                                                     | TM230                       |
| Protective function of the overcurrent release                                                                        | LI                          |
| Number of poles                                                                                                       | 3                           |
| General technical data                                                                                                |                             |
| Rated insulation voltage Ui                                                                                           | 800 V                       |
| Max. rated operational voltage Ue with AC 50/60Hz                                                                     | 690 V                       |
| Max. rated operational voltage Ue with DC                                                                             | 500 V                       |
| Power loss [W] / maximum                                                                                              | 22.8 W                      |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole                        | 7.6 W                       |
| Latching - endurance                                                                                                  | 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      |

## Electricity

|                                                                   |        |
|-------------------------------------------------------------------|--------|
| Marking / acc. to UL 489 / 100%-rated breaker                     | No     |
| Max. rated operational voltage of the size of the circuit-breaker | 125 A  |
| Rated continuous current I <sub>u</sub>                           | 100 A  |
| Operating current                                                 |        |
| • at 40 °C                                                        | 100 A  |
| • at 45 °C                                                        | 97.8 A |
| • at 50 °C                                                        | 95.7 A |
| • at 55 °C                                                        | 93.7 A |
| • at 60 °C                                                        | 91.7 A |
| • at 65 °C                                                        | 89.9 A |
| • at 70 °C                                                        | 88.1 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> )     |        |
| • at 240 V                                                             | 55 kA  |
| • at 415 V                                                             | 36 kA  |
| • at 690 V                                                             | 5 kA   |
| Operational short-circuit current breaking capacity (I <sub>cs</sub> ) |        |
| • at 240 V                                                             | 85 kA  |
| • at 415 V                                                             | 36 kA  |
| • at 690 V                                                             | 5 kA   |
| Short-circuit current making capacity (I <sub>cm</sub> )               |        |
| • at 240 V                                                             | 121 kA |
| • at 415 V                                                             | 76 kA  |
| • at 690 V                                                             | 7.5 kA |

|                                                                                        |                                                                                                                                                         |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Design of short-circuit protection                                                     | For breaking capacity values in DC networks, see the 3VA Molded Case Circuit Breaker Manual; link available under Service & Support in the last chapter |
| Switching capacity according to UL 489                                                 |                                                                                                                                                         |
| Breaking capacity current                                                              |                                                                                                                                                         |
| • at 240 V                                                                             | 65 kA                                                                                                                                                   |
| • at 480 V                                                                             | 25 kA                                                                                                                                                   |
| • at 600 Y/347 V                                                                       | 14 kA                                                                                                                                                   |
| Adjustable parameters                                                                  |                                                                                                                                                         |
| 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 | Declaration of Conformity |
|--------------------------|-----|---------------------------|
|--------------------------|-----|---------------------------|



| Test Certificates | Shipping Approval | other |
|-------------------|-------------------|-------|
|-------------------|-------------------|-------|

[Miscellaneous](#)



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#### 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=3VA5110-4EC31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5110-4EC31-0AA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5110-4EC31-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5110-4EC31-0AA0)

##### CAX-Online-Generator

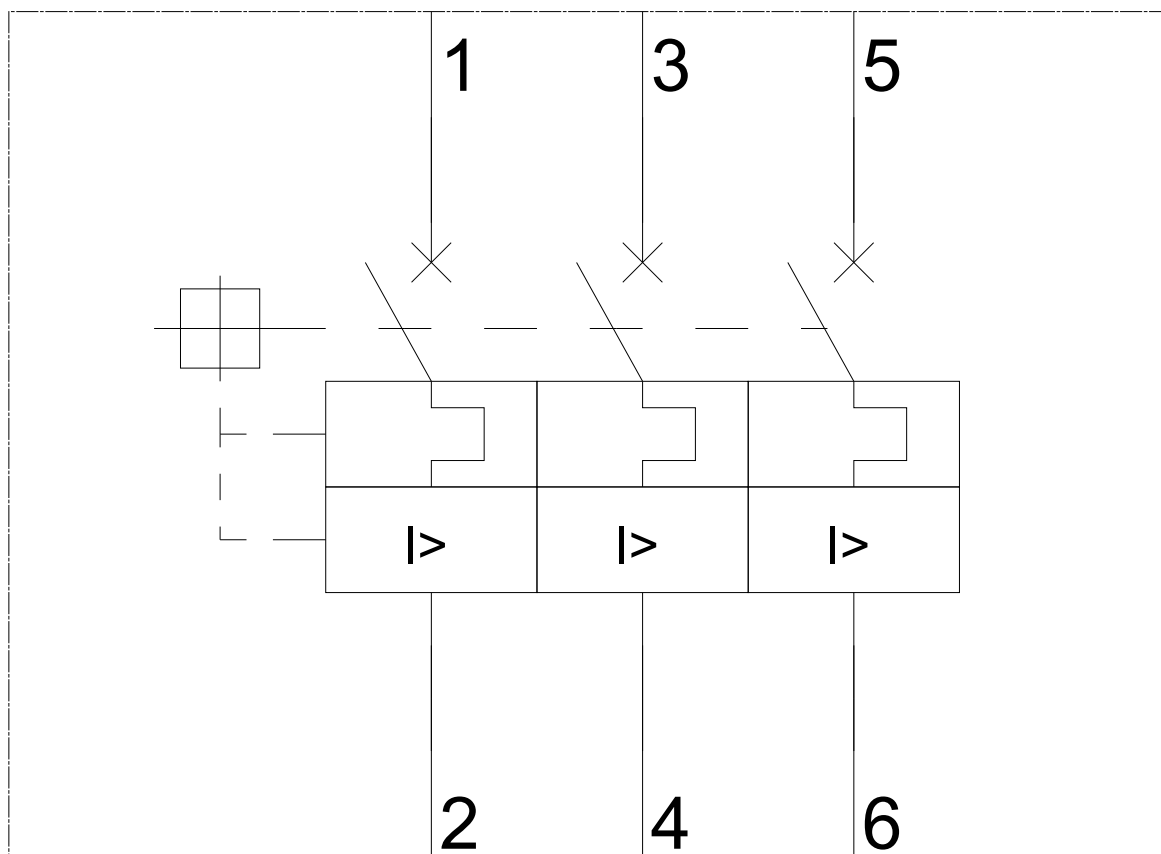
<http://www.siemens.com/cax>

##### Tender specifications

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

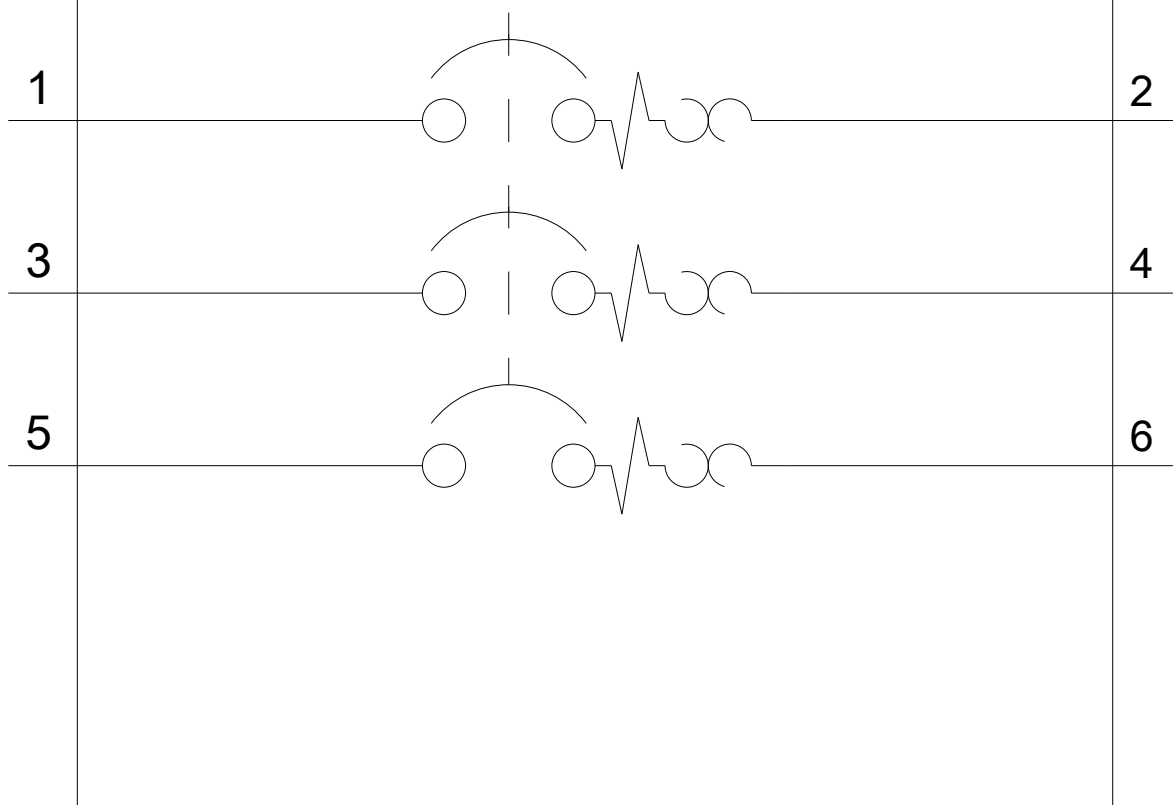


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