



circuit breaker 3VA5 UL frame 250 breaking capacity class M 35kA @ 480V 4-pole, line protection TM210, FTFM, In=225A overload protection Ir=225A fixed short-circuit protection li=10 x In N conductor unprotected without connection

| Model                                                                                                                 |                             |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                                                    | SETRON                      |
| product designation                                                                                                   | Molded-case circuit breaker |
| product designation / according to UL file                                                                            | MFAS                        |
| 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                                                                                                       | 4                           |
| General technical data                                                                                                |                             |
| rated insulation voltage Ui                                                                                           | 800 V                       |
| Max. rated operational voltage Ue with DC                                                                             | 1 000 V                     |
| power loss [W] / maximum                                                                                              | 51 W                        |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole                        | 17.07 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                                                                                                            | 220 A                       |
| • at 50 °C                                                                                                            | 216 A                       |
| • at 55 °C                                                                                                            | 211 A                       |
| • at 60 °C                                                                                                            | 206 A                       |
| • at 65 °C                                                                                                            | 201 A                       |
| • at 70 °C                                                                                                            | 197 A                       |
| Switching capacity according to IEC 60947                                                                             |                             |
| switching capacity class of the circuit breaker                                                                       | M                           |

|                                                                                                                                                                                                             |                                                                                                                                                                |                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| breaking capacity maximum short-circuit current (Icu) <ul style="list-style-type: none"><li>• at 240 V</li><li>• at 415 V</li><li>• at 690 V</li></ul>                                                      | 85 kA<br>55 kA<br>7 kA                                                                                                                                         |                           |
| breaking capacity operating short-circuit current (Ics) <ul style="list-style-type: none"><li>• at 240 V</li><li>• at 415 V</li><li>• at 690 V</li></ul>                                                    | 85 kA<br>55 kA<br>7 kA                                                                                                                                         |                           |
| short-circuit current making capacity (Icm) <ul style="list-style-type: none"><li>• at 240 V</li><li>• at 415 V</li><li>• at 690 V</li></ul>                                                                | 187 kA<br>121 kA<br>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 |                           |
| Switching capacity according to UL 489                                                                                                                                                                      |                                                                                                                                                                |                           |
| breaking capacity current <ul style="list-style-type: none"><li>• at 240 V</li><li>• at 480 V</li><li>• at 600 V</li></ul>                                                                                  | 85 kA<br>35 kA<br>18 kA                                                                                                                                        |                           |
| Adjustable parameters                                                                                                                                                                                       |                                                                                                                                                                |                           |
| Adjustable response value current / I <sub>g</sub> min.                                                                                                                                                     | 225 A                                                                                                                                                          |                           |
| Adjustable response value current / I <sub>g</sub> min.                                                                                                                                                     | 225 A                                                                                                                                                          |                           |
| design of the N-conductor protection                                                                                                                                                                        | Without                                                                                                                                                        |                           |
| Ground fault protection / tripping switchable / I <sub>2</sub> t=ON/OFF                                                                                                                                     | No                                                                                                                                                             |                           |
| Mechanical Design                                                                                                                                                                                           |                                                                                                                                                                |                           |
| height [in]                                                                                                                                                                                                 | 7.28 in                                                                                                                                                        |                           |
| Height                                                                                                                                                                                                      | 185 mm                                                                                                                                                         |                           |
| width [in]                                                                                                                                                                                                  | 5.51 in                                                                                                                                                        |                           |
| Width                                                                                                                                                                                                       | 140 mm                                                                                                                                                         |                           |
| depth [in]                                                                                                                                                                                                  | 3.27 in                                                                                                                                                        |                           |
| depth                                                                                                                                                                                                       | 83 mm                                                                                                                                                          |                           |
| Connections                                                                                                                                                                                                 |                                                                                                                                                                |                           |
| arrangement of electrical connectors / for main current circuit                                                                                                                                             | Without connection                                                                                                                                             |                           |
| type of electrical connection / for main current circuit                                                                                                                                                    | Without                                                                                                                                                        |                           |
| Auxiliary circuit                                                                                                                                                                                           |                                                                                                                                                                |                           |
| 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                                                                                                                                                 |                           |
| 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 <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                                                                                                                             |                           |
| Certificates                                                                                                                                                                                                |                                                                                                                                                                |                           |
| reference code / acc. to IEC 81346-2                                                                                                                                                                        | Q                                                                                                                                                              |                           |
| certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB                                                                                                                      | No                                                                                                                                                             |                           |
| General Product Approval                                                                                                                                                                                    | EMC                                                                                                                                                            | Declaration of Conformity |



[Miscellaneous](#)



[UK Declaration of  
Conformity](#)

| Declaration of<br>Conformity | Marine / Shipping | other |
|------------------------------|-------------------|-------|
|------------------------------|-------------------|-------|



EG-Konf.



ABS

[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=3VA5222-5ED41-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5222-5ED41-0AA0>

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

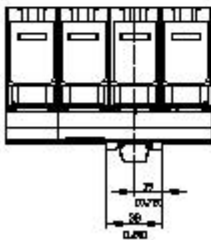
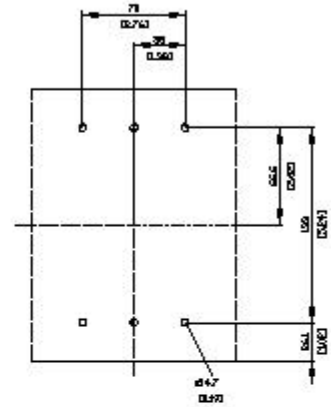
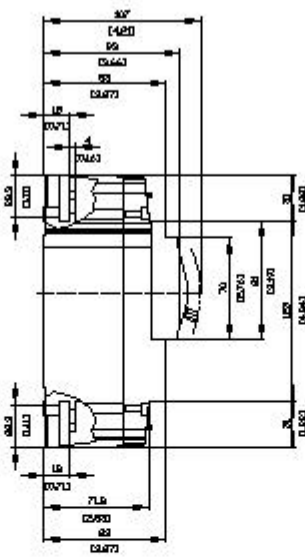
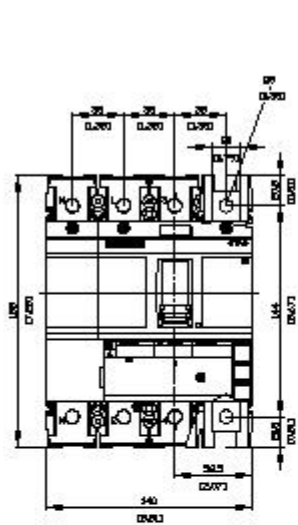
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5222-5ED41-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5222-5ED41-0AA0)

CAX-Online-Generator

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

Tender specifications

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



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