



circuit breaker 3VA5 UL frame 250 breaking capacity class M 35kA @ 480 V 3-pole, line protection TM230, FTAM, In=80A overload protection Ir=80A fixed short-circuit protection Ii=5...10 x In UL489 SB (naval), 50 deg. cel. cable connection on both sides

| Model                                                                                                                      |                             |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                                                         | SETRON                      |
| product designation                                                                                                        | Molded-case circuit breaker |
| product designation / according to UL file                                                                                 | MFAM                        |
| Product version                                                                                                            | 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                                                                                          | TM230                       |
| protection function of the overcurrent release                                                                             | LI                          |
| number of poles                                                                                                            | 3                           |
| General technical data                                                                                                     |                             |
| operating voltage / at AC / rated value                                                                                    | 690 V                       |
| power loss [W] / maximum                                                                                                   | 20 W                        |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole                             | 6.8 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                          |
| ground-fault monitoring version                                                                                            | without                     |
| product function                                                                                                           |                             |
| • communication function                                                                                                   | No                          |
| • other measurement function                                                                                               | No                          |
| Net Weight                                                                                                                 | 2.308 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                                                                                                                 | 77.6 A                      |
| • at 60 °C                                                                                                                 | 76 A                        |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                |       |                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------------------|
| <ul style="list-style-type: none"><li>• at 65 °C</li><li>• at 70 °C</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 73.6 A<br>70.4 A                                                                                                                                               |       |                           |
| Switching capacity according to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                |       |                           |
| switching capacity class of the circuit breaker                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | M                                                                                                                                                              |       |                           |
| 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 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                                                                                                                                                             |       |                           |
| Mechanical Design                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                |       |                           |
| height [in]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 7.28 in                                                                                                                                                        |       |                           |
| Height                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 185 mm                                                                                                                                                         |       |                           |
| width [in]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4.13 in                                                                                                                                                        |       |                           |
| Width                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 105 mm                                                                                                                                                         |       |                           |
| depth [in]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.27 in                                                                                                                                                        |       |                           |
| depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 83 mm                                                                                                                                                          |       |                           |
| Connections                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                |       |                           |
| arrangement of electrical connectors / for main current circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Front connection                                                                                                                                               |       |                           |
| type of electrical connection / for main current circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | circular conductor terminal on both sides                                                                                                                      |       |                           |
| Type of connectable conductor cross-section, round conductor terminal, stranded                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1 x (6 AWG - 350 kcmil)                                                                                                                                        |       |                           |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                |       |                           |
| certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Yes                                                                                                                                                            |       |                           |
| General Product Approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                | EMC   | Declaration of Conformity |
| <div><div><a href="#">Confirmation</a></div><div><br/>CCC</div><div><br/>UL</div><div><br/>RCM</div><div><br/>UKCA</div><div><br/>EG-Konf.</div></div> |                                                                                                                                                                |       |                           |
| Marine / Shipping                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                | other |                           |



#### 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=3VA5280-5EC36-1AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5280-5EC36-1AA0>

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

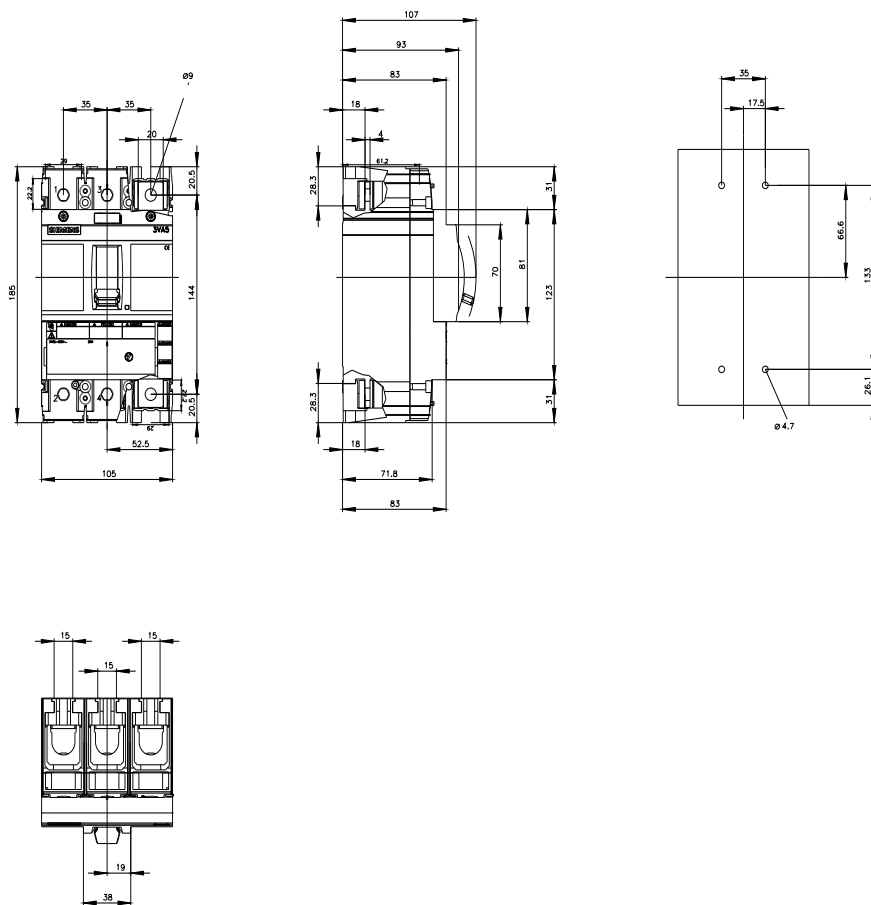
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5280-5EC36-1AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5280-5EC36-1AA0)

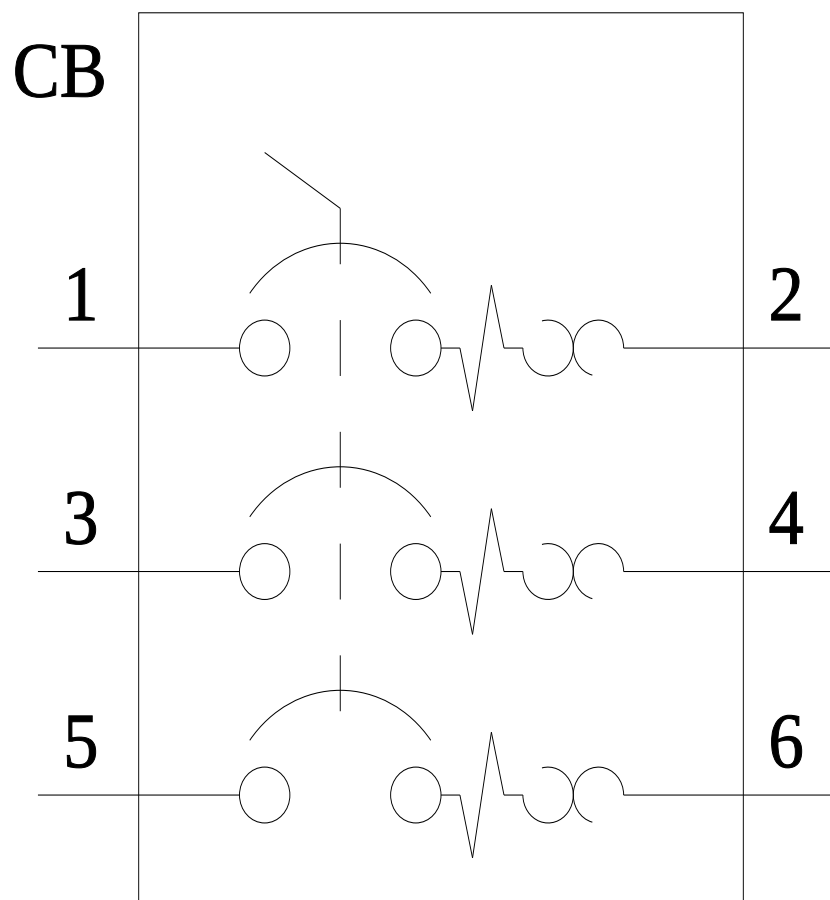
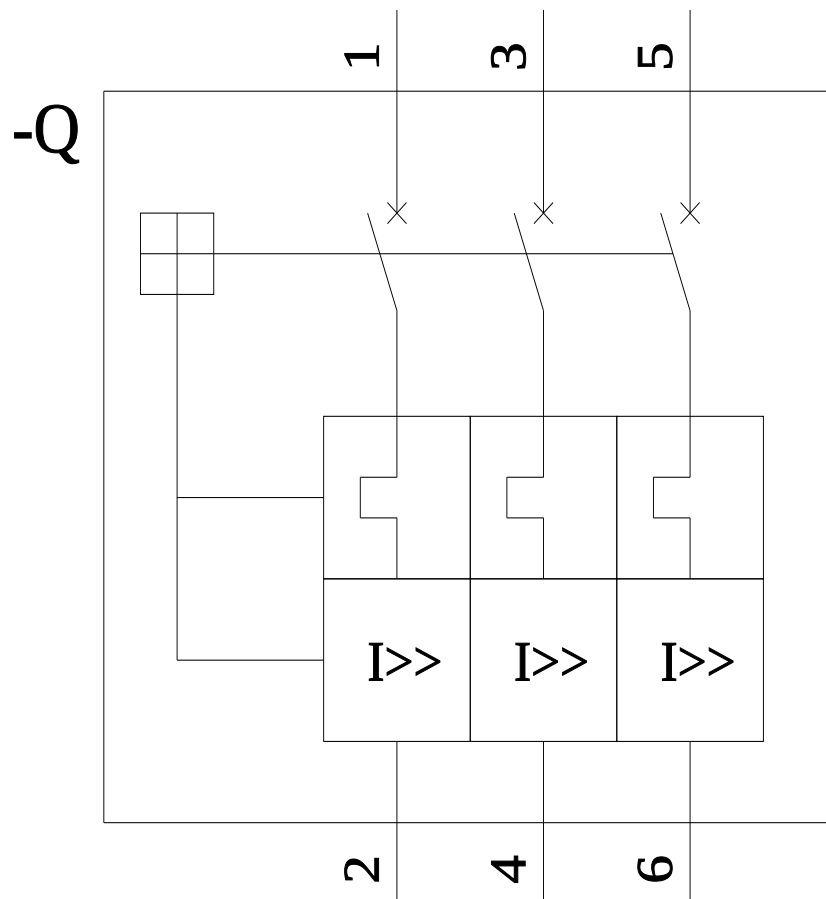
CAX-Online-Generator

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

Tender specifications

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





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