



circuit breaker 3VA5 UL frame 125 breaking capacity class M 35kA @ 480 V 3-pole, line protection TM230, FTAM, In=90A overload protection Ir=90A fixed short-circuit protection li=5...10 x In without connection

| Model   |                             |
|---|-----------------------------|
| product brand name  | SENTRON                     |
| 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   | TM230                       |
| protection function of the overcurrent release  | LI                          |
| number of poles   | 3                           |
| General technical data  |                             |
| Tension assignée d'isolement $U_i$  | 800 V                       |
| Max. rated operational voltage $U_e$ with AC 50/60Hz  | 690 V                       |
| Max. rated operational voltage $U_e$ with DC  | 500 V                       |
| power loss [W] / maximum  | 17.7 W                      |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole                        | 5.9 W                       |
| mechanical service life (switching cycles) / typical  | 15 000                      |
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz   | 8 000                       |
| Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz   | 4 000                       |
| electrical endurance (switching cycles) / at 480 V  | 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                          |
| Current   |                             |
| marking / acc. to UL 489 / 100%-rated breaker   | No                          |
| Max. rated operational current of the frame size  | 125 A                       |
| Courant permanent assigné $I_u$   | 90 A                        |
| operational current   |                             |
| • at 40 °C  | 90 A                        |
| • at 45 °C  | 87.9 A                      |
| • at 50 °C  | 85.9 A                      |
| • at 55 °C  | 84 A                        |

|  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• at 60 °C</li> <li>• at 65 °C</li> <li>• at 70 °C</li> </ul>   | 82.1 A<br>80.4 A<br>78.7 A   |
| <b>Switching capacity according to IEC 60947</b>   |  |
| 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>   | 110 kA<br>55 kA<br>5 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 |
| <b>Switching capacity according to UL 489</b>  |  |
| breaking capacity current <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 480 V</li> <li>• at 600 Y/347 V</li> </ul>   | 85 kA<br>35 kA<br>18 kA  |
| <b>Adjustable parameters</b>   |  |
| Adjustable response value current / I <sub>g</sub> min.  | 90 A   |
| Adjustable response value current / I <sub>g</sub> min.  | 90 A   |
| Adjustable response value current / I <sub>i</sub> min.  | 450 A  |
| Adjustable response value current / I <sub>i</sub> max.  | 900 A  |
| Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF  | No   |
| <b>Mechanical Design</b>   |  |
| height [in]  | 5.5 in   |
| Height   | 140 mm   |
| width [in]   | 3 in   |
| Width  | 76.2 mm  |
| depth [in]   | 3 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>   |  |
| 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 <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   |
| <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 | Shipping Approval |
|--------------------------|-----|---------------------------|-------------------|-------------------|



[Special Test Certificate](#)

[Miscellaneous](#)



|                   |       |
|-------------------|-------|
| Shipping Approval | other |
|-------------------|-------|



[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=3VA5190-5EC31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5190-5EC31-0AA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5190-5EC31-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5190-5EC31-0AA0)

Tender specifications

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







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