



circuit breaker 3VA5 UL frame 125 3-pole, starter protection TM120M, AM, In=100A without overload protection short-circuit protection  $I_i=5...12 \times I_n$  without connection

| Model                                                                                                                 |                             |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                                                    | SENTRON                     |
| product designation                                                                                                   | Molded-case circuit breaker |
| product designation / according to UL file                                                                            | HEAP                        |
| Product version                                                                                                       | Starter 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                                                                                     | TM120M                      |
| protection function of the overcurrent release                                                                        | I                           |
| 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                       |
| power loss [W] / maximum                                                                                              | 18.5 W                      |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole                        | 6.17 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                          |
| • phase failure detection                                                                                             | 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 $I_u$                                                                                       | 100 A                       |
| operational current                                                                                                   |                             |
| • at 40 °C                                                                                                            | 100 A                       |
| • at 45 °C                                                                                                            | 97.8 A                      |
| • at 50 °C                                                                                                            | 95.7 A                      |
| • at 55 °C                                                                                                            | 93.7 A                      |

|                                                                                                                                                                                                                  |                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| <ul style="list-style-type: none"> <li>• at 60 °C</li> <li>• at 65 °C</li> <li>• at 70 °C</li> </ul>                                                                                                             | 91.7 A<br>89.9 A<br>88.1 A         |
| <b>Switching capacity according to IEC 60947</b>                                                                                                                                                                 |                                    |
| 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>                                                       | 150 kA<br>70 kA<br>10 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>                                                     | 150 kA<br>70 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>                                                                 | 330 kA<br>154 kA<br>17 kA          |
| <b>Adjustable parameters</b>                                                                                                                                                                                     |                                    |
| Adjustable response value current / li min.                                                                                                                                                                      | 500 A                              |
| Adjustable response value current / li max.                                                                                                                                                                      | 1 200 A                            |
| Ground fault protection / tripping switchable / I2t=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 |
|--------------------------|-----|---------------------------|-------------------|-------------------|



[Miscellaneous](#)

[Special Test Certificate](#)



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=3VA5110-1MH31-0AA0>

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

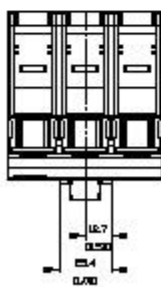
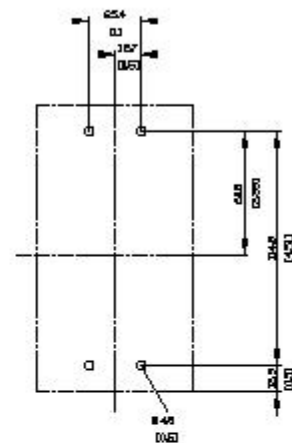
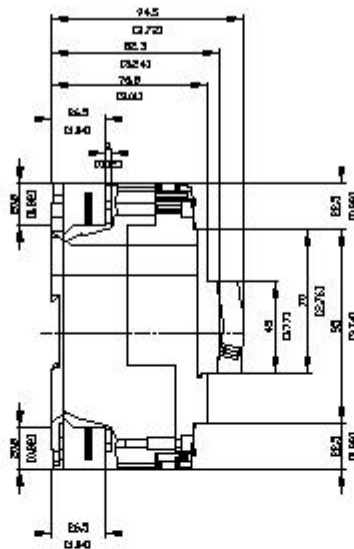
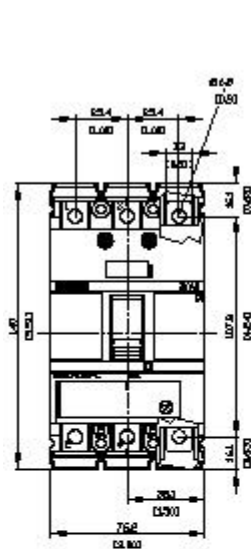
<https://support.industry.siemens.com/cs/ww/en/ps/3VA5110-1MH31-0AA0>

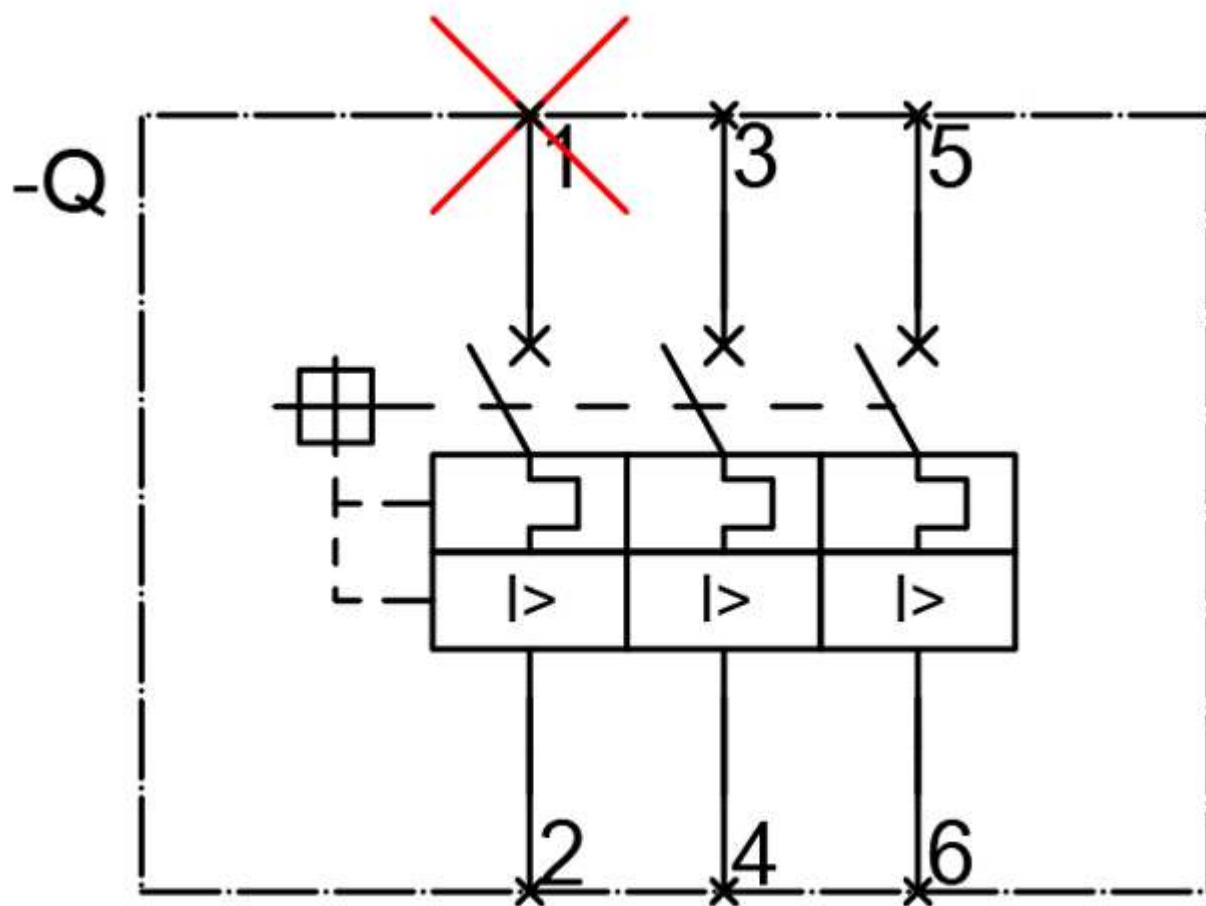
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

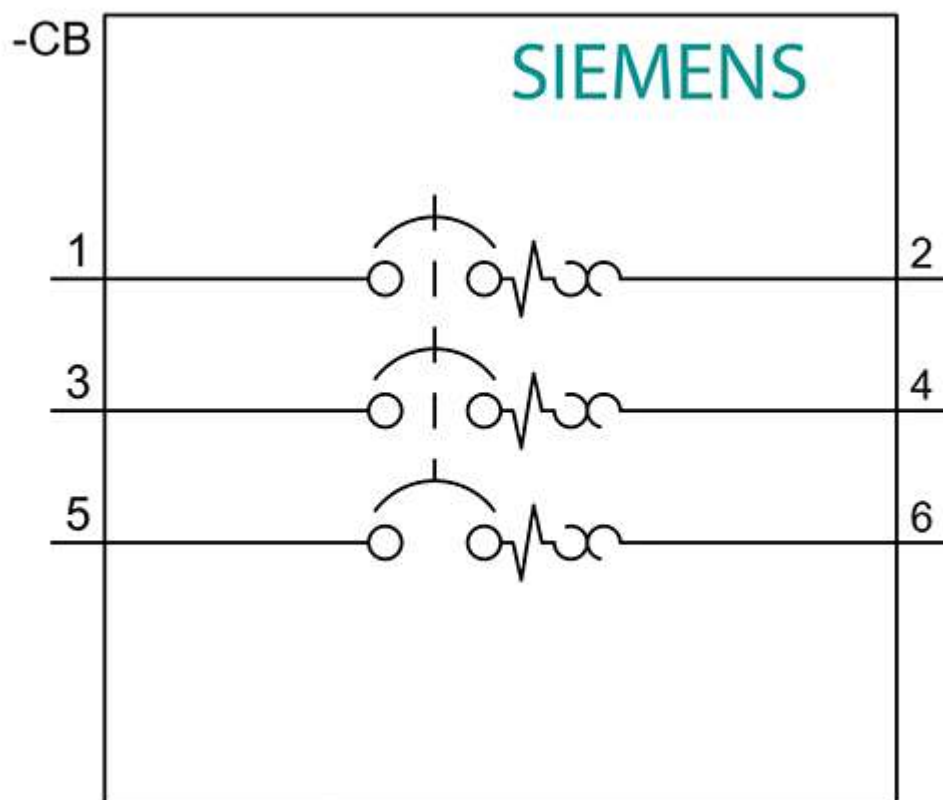
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5110-1MH31-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5110-1MH31-0AA0)

Tender specifications

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







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