



circuit breaker 3VA1 IEC Frame 160 breaking capacity class M Icu=55 kA @ 240 V  
1-pole, line protection TM210, FTFM, In=125 A overload protection Ir=125 A  
permanently set short-circuit protection Ii=10 x In nut keeper kit

| Model   |                             |
|---|-----------------------------|
| product brand name  | SENTRON                     |
| product designation   | Molded case circuit breaker |
| design of the product   | Line protection             |
| design of the overcurrent release   | TM210                       |
| protection function of the overcurrent release  | LI                          |
| number of poles   | 1                           |
| General technical data  |                             |
| insulation voltage / rated value  | 500 V                       |
| operating voltage / at DC / rated value   | 125 V                       |
| operating voltage / at AC / rated value   | 415 V                       |
| power loss [W] / maximum  | 9.37 W                      |
| mechanical service life (operating cycles) / typical  | 20 000                      |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                      | 9 000                       |
| electrical endurance (operating cycles) / at AC-1 / at 690 V  | 6 300                       |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof | No                          |
| ground-fault monitoring version   | Without                     |
| product function  |                             |
| • communication function  | No                          |
| • other measurement function  | No                          |
| Net Weight  | 0.353 kg                    |
| Current   |                             |
| operational current   |                             |
| • at 40 °C  | 125 A                       |
| • at 45 °C  | 125 A                       |
| • at 50 °C  | 125 A                       |
| • at 55 °C  | 122 A                       |
| • at 60 °C  | 120 A                       |
| • at 65 °C  | 117 A                       |
| • at 70 °C  | 114 A                       |
| Switching capacity according to IEC 60947   |                             |
| switching capacity class of the circuit breaker   | M                           |
| maximum short-circuit current breaking capacity (Icu)   |                             |
| • at 240 V  | 55 kA                       |
| • at 415 V  | 6 kA                        |
| operating short-circuit current breaking capacity (Ics)   |                             |
| • at 240 V  | 55 kA                       |
| • at 415 V  | 6 kA                        |

|   |  |
|---|--|
| short-circuit current making capacity (I <sub>cm</sub> )  |  |
| • at 240 V  | 121 kA   |
| • at 415 V  | 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>Adjustable parameters</b>  |  |
| product feature / for L-tripping / can be switched on/off   | No   |
| adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic |  |
| • minimum   | 125 A  |
| • maximum   | 125 A  |
| adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic     |  |
| • minimum   | 1 s  |
| • maximum   | 1 s  |
| adjustable response value setting current (I <sub>i</sub> ) / for I-tripping                                      |  |
| • minimum   | 1 250 A  |
| • maximum   | 1 250 A  |
| adjustable setting current (I <sub>nN</sub> ) / for N-tripping  |  |
| • minimum   | 0 A  |
| • maximum   | 0 A  |
| product function / grounding protection   | No   |
| <b>Mechanical Design</b>  |  |
| product component   |  |
| • undervoltage release  | No   |
| • voltage trigger   | No   |
| • trip indicator  | No   |
| height [in]   | 5.12 in  |
| height  | 130 mm   |
| width [in]  | 1 in   |
| width   | 25.4 mm  |
| depth [in]  | 2.76 in  |
| depth   | 70 mm  |
| <b>Connections</b>  |  |
| arrangement of electrical connectors / for main current circuit   | Front terminal   |
| type of electrical connection / for main current circuit  | nut keeper kit on both ends  |
| type of connectable conductor cross-sections / for flat-bar terminal connection / minimum                         | 12 x 1 mm  |
| type of connectable conductor cross-sections / for flat-bar terminal connection / maximum                         | 17 x 6,5 mm  |
| design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)                                | Silver   |
| design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)                             | Tin  |
| <b>Auxiliary circuit</b>  |  |
| number of CO contacts / for auxiliary contacts  | 0  |
| <b>Accessories</b>  |  |
| product extension / optional / motor drive  | No   |
| <b>Environmental conditions</b>   |  |
| 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  |
| <b>Environmental footprint</b>  |  |
| Environmental Product Declaration (EPD)   | Yes  |
| global warming potential [CO <sub>2</sub> eq] / total   | 63.6 kg  |
| global warming potential [CO <sub>2</sub> eq] / during manufacturing  | 1.81 kg  |
| global warming potential [CO <sub>2</sub> eq] / during operation  | 62 kg  |

|   |           |
|---|-----------|
| global warming potential [CO2 eq] / after end of life | -0.282 kg |
| reference code / according to IEC 81346-2             | Q         |

### Approvals / Certificates

#### General Product Approval



[Miscellaneous](#)



[Confirmation](#)

#### General Product Approval      EMV      Test Certificates



EG-Konf.



RCM

[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

#### Maritime application      other



[CCS \(China Classification Society\)](#)

[Miscellaneous](#)

[Confirmation](#)



#### Environment

[Environmental Confirmations](#)

[Environmental Confirmations](#)



#### Further information

##### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

##### Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

##### Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/lowvoltage/catalogs>

##### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA1112-5ED12-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1112-5ED12-0AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1112-5ED12-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1112-5ED12-0AA0)

##### CAX-Online-Generator

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

##### Tender specifications

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

##### Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)





