



circuit breaker 3VA1 IEC Frame 250 breaking capacity class M Icu=55 kA @ 415 V  
3-pole, line protection TM240, ATAM, In=200 A overload protection Ir=140 A...200 A  
A short-circuit protection Ii=5...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                                                                      | TM240                       |
| protection function of the overcurrent release                                                         | LI                          |
| number of poles                                                                                        | 3                           |
| General technical data                                                                                 |                             |
| insulation voltage / rated value                                                                       | 800 V                       |
| operating voltage / at DC / rated value                                                                | 500 V                       |
| operating voltage / at AC / rated value                                                                | 690 V                       |
| power loss [W] / maximum                                                                               | 42 W                        |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole            | 14 W                        |
| mechanical service life (operating cycles) / typical                                                   | 20 000                      |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                       | 8 000                       |
| electrical endurance (operating cycles) / at AC-1 / at 690 V                                           | 5 400                       |
| product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof | No                          |
| ground-fault monitoring version                                                                        | Without                     |
| product function                                                                                       |                             |
| • communication function                                                                               | No                          |
| • other measurement function                                                                           | No                          |
| Net Weight                                                                                             | 1.581 kg                    |
| Current                                                                                                |                             |
| operational current                                                                                    |                             |
| • at 40 °C                                                                                             | 200 A                       |
| • at 45 °C                                                                                             | 200 A                       |
| • at 50 °C                                                                                             | 200 A                       |
| • at 55 °C                                                                                             | 194 A                       |
| • at 60 °C                                                                                             | 188 A                       |
| • at 65 °C                                                                                             | 182 A                       |
| • at 70 °C                                                                                             | 176 A                       |
| Switching capacity according to IEC 60947                                                              |                             |
| switching capacity class of the circuit breaker                                                        | M                           |
| maximum short-circuit current breaking capacity (Icu)                                                  |                             |

|                                                                                                                                                                                                      |                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>                                                         | 85 kA<br>55 kA<br>36 kA<br>15 kA<br>10 kA                                                                                                                      |
| operating short-circuit current breaking capacity (Ics) <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul> | 85 kA<br>55 kA<br>36 kA<br>10 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 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>             | 187 kA<br>121 kA<br>75.6 kA<br>30 kA<br>17 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 |

#### Adjustable parameters

|                                                                                                                                                                                                  |                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 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 <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul> | 140 A<br>200 A     |
| adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>     | 1 s<br>1 s         |
| adjustable response value setting current (I <sub>i</sub> ) / for I-tripping <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                      | 1 000 A<br>2 000 A |
| adjustable setting current (I <sub>nN</sub> ) / for N-tripping <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                    | 0 A<br>0 A         |
| product function / grounding protection                                                                                                                                                          | No                 |

#### Mechanical Design

|                                                                                                                                                 |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 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 |
| height [in]                                                                                                                                     | 6.22 in        |
| height                                                                                                                                          | 158 mm         |
| width [in]                                                                                                                                      | 4.13 in        |
| width                                                                                                                                           | 105 mm         |
| depth [in]                                                                                                                                      | 2.76 in        |
| depth                                                                                                                                           | 70 mm          |

#### Connections

|                                                                                           |                             |
|-------------------------------------------------------------------------------------------|-----------------------------|
| 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 | 13 x 1 mm                   |
| type of connectable conductor cross-sections / for flat-bar terminal connection / maximum | 25 x 8 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)     | Silver                      |

#### Auxiliary circuit

|                                                |   |
|------------------------------------------------|---|
| 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                                      |           |
| • during operation / minimum                             | -25 °C    |
| • during operation / maximum                             | 70 °C     |
| • during storage / minimum                               | -40 °C    |
| • during storage / maximum                               | 80 °C     |
| Environmental footprint                                  |           |
| global warming potential [CO2 eq] / total                | 285.47 kg |
| global warming potential [CO2 eq] / during manufacturing | 6.87 kg   |
| global warming potential [CO2 eq] / during operation     | 279 kg    |
| global warming potential [CO2 eq] / after end of life    | -0.78 kg  |
| reference code / according to IEC 81346-2                | Q         |
| Approvals / Certificates                                 |           |
| General Product Approval                                 |           |



[Miscellaneous](#)



| General Product Approval | EMV | Test Certificates |
|--------------------------|-----|-------------------|
|--------------------------|-----|-------------------|

[Confirmation](#)



[Miscellaneous](#)

[Special Test Certificate](#)

| Test Certificates | Maritime application |
|-------------------|----------------------|
|-------------------|----------------------|

[Type Test Certificates/Test Report](#)



| Maritime application | other | Environment |
|----------------------|-------|-------------|
|----------------------|-------|-------------|

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

[Miscellaneous](#)

[Confirmation](#)



[Environmental Confirmations](#)

[Environmental Confirmations](#)

| Environment |
|-------------|
|-------------|



| 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=3VA1220-5EF32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1220-5EF32-0AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1220-5EF32-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1220-5EF32-0AA0)

CAX-Online-Generator

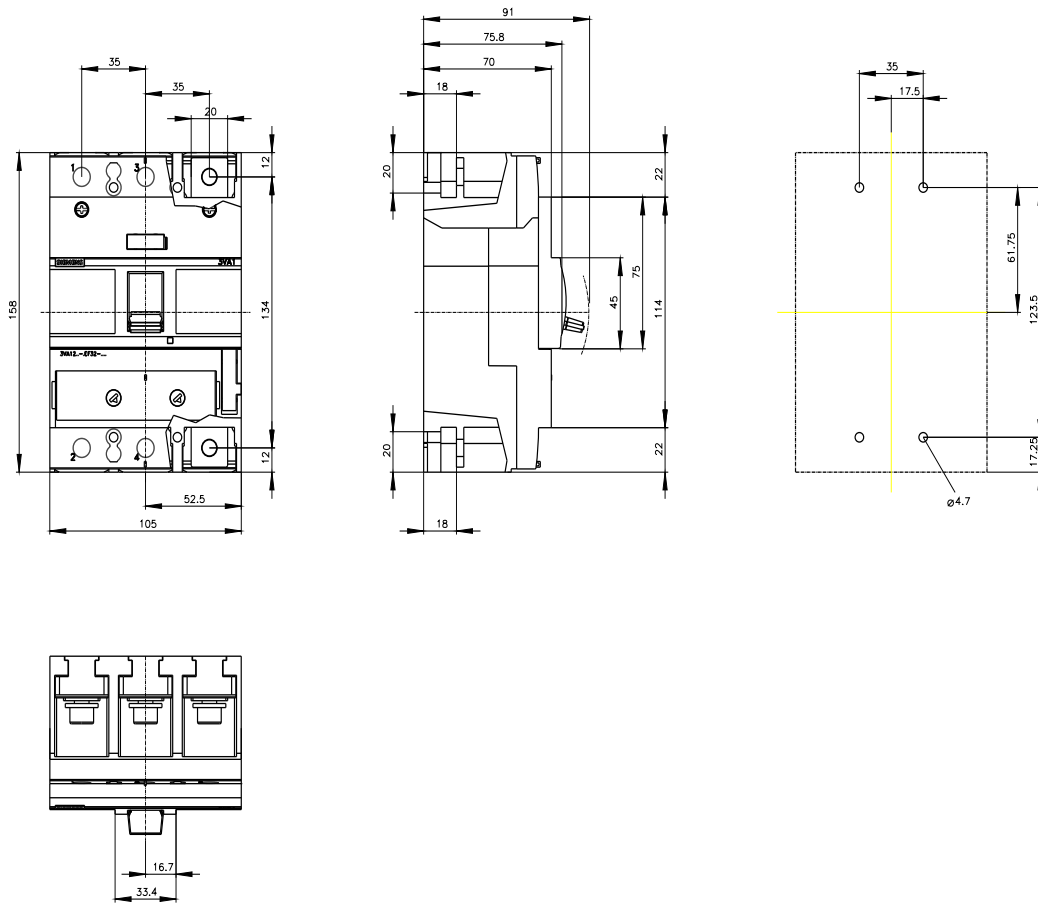
<https://www.siemens.com/cax>

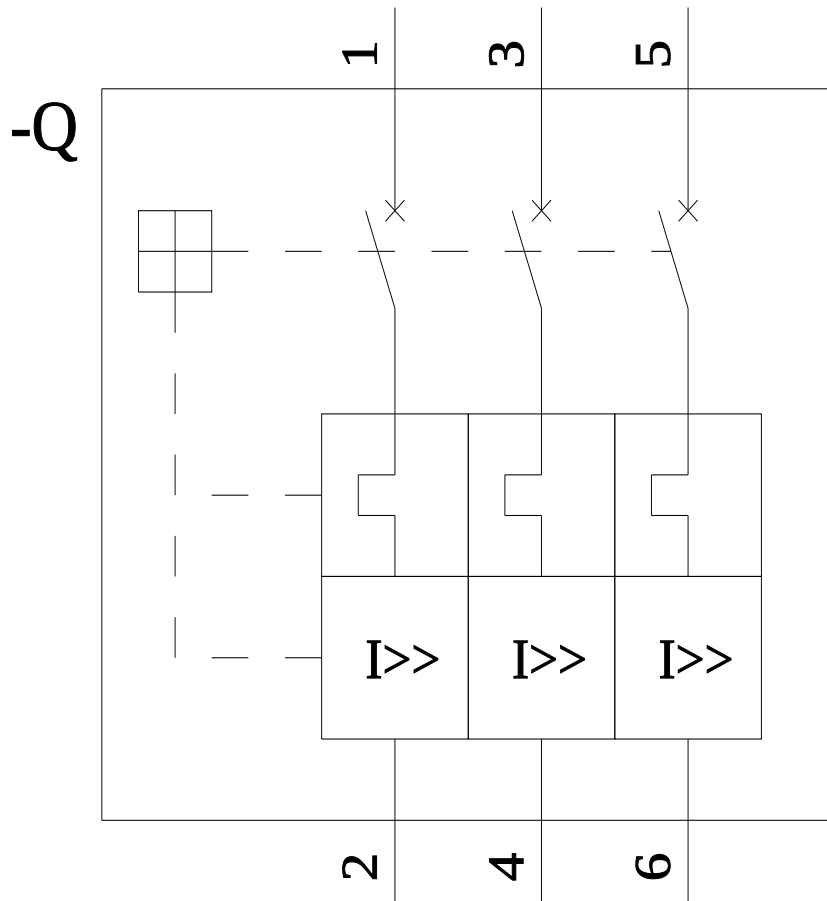
Tender specifications

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

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<https://curves.simaris.siemens.com/curves/3VA1220-5EF32-0AA0>





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