



circuit breaker 3VA1 IEC Frame 100 breaking capacity class B $I_{cu}=16 \text{ kA} @ 415 \text{ V}$
 3-pole, line protection TM210, FTFM, $I_n=100 \text{ A}$ overload protection $I_r=100 \text{ A}$
 permanently set short-circuit protection $I_i=10 \times I_n$ nut keeper kit 2 auxiliary switches
 HQ

| 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 | 3 |
| design of the auxiliary switch | 2 auxiliary switches HQ |
| 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 | 25 W |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole | 8.33 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 | 0.96 kg |
| Current | |
| operational current | |
| • at 40 °C | 100 A |
| • at 45 °C | 100 A |
| • at 50 °C | 100 A |
| • at 55 °C | 98 A |
| • at 60 °C | 96 A |
| • at 65 °C | 94 A |
| • at 70 °C | 91 A |
| Switching capacity according to IEC 60947 | |
| switching capacity class of the circuit breaker | B |
| maximum short-circuit current breaking capacity (I_{cu}) | |
| • at 240 V | 25 kA |
| • at 415 V | 16 kA |

| | |
|--|--|
| <ul style="list-style-type: none"> • at 440 V • at 500 V • at 690 V | <p>8 kA</p> <p>5 kA</p> <p>5 kA</p> |
| operating short-circuit current breaking capacity (Ics) | |
| <ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V | <p>25 kA</p> <p>16 kA</p> <p>8 kA</p> <p>5 kA</p> <p>5 kA</p> |
| short-circuit current making capacity (Icm) | |
| <ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V | <p>52.5 kA</p> <p>32 kA</p> <p>13.6 kA</p> <p>7.5 kA</p> <p>7.5 kA</p> |
| 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 _r) / of the L-trip / with I ² t characteristic | |
| <ul style="list-style-type: none"> • minimum • maximum | <p>100 A</p> <p>100 A</p> |
| adjustable response value delay time (tr) / for L-tripping / with I ² t characteristic | |
| <ul style="list-style-type: none"> • minimum • maximum | <p>1 s</p> <p>1 s</p> |
| adjustable response value setting current (I _i) / for I-tripping | |
| <ul style="list-style-type: none"> • minimum • maximum | <p>1 000 A</p> <p>1 000 A</p> |
| adjustable setting current (I _{nN}) / for N-tripping | |
| <ul style="list-style-type: none"> • minimum • maximum | <p>0 A</p> <p>0 A</p> |
| product function / grounding protection | No |

Mechanical Design

| | |
|---|-------------------------------|
| product component | |
| <ul style="list-style-type: none"> • undervoltage release • voltage trigger • trip indicator | <p>No</p> <p>No</p> <p>No</p> |
| height [in] | 5.12 in |
| height | 130 mm |
| width [in] | 3 in |
| width | 76.2 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 | 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 |

Auxiliary circuit

| | |
|--|---|
| number of CO contacts / for auxiliary contacts | 2 |
|--|---|

Accessories

| | |
|--|----|
| product extension / optional / motor drive | No |
|--|----|

| | |
|--|---|
| manufacturer's article number | |
| <ul style="list-style-type: none"> • of the supplied basic switch • of the integrated auxiliary switch/alarm switch | 3VA10102ED320AA0 3VA9988-0AA12 |
| Environmental conditions | |
| protection class IP / on the front | IP40 |
| ambient temperature | |
| <ul style="list-style-type: none"> • during operation / minimum • during operation / maximum • during storage / minimum • during storage / maximum | -25 °C 70 °C -40 °C 80 °C |
| reference code / according to IEC 81346-2 | Q |

Approvals / Certificates

General Product Approval



[Miscellaneous](#)



[Confirmation](#)

General Product Approval EMV Test Certificates



[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

Maritime application



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

other Environment

[Miscellaneous](#)

[Confirmation](#)

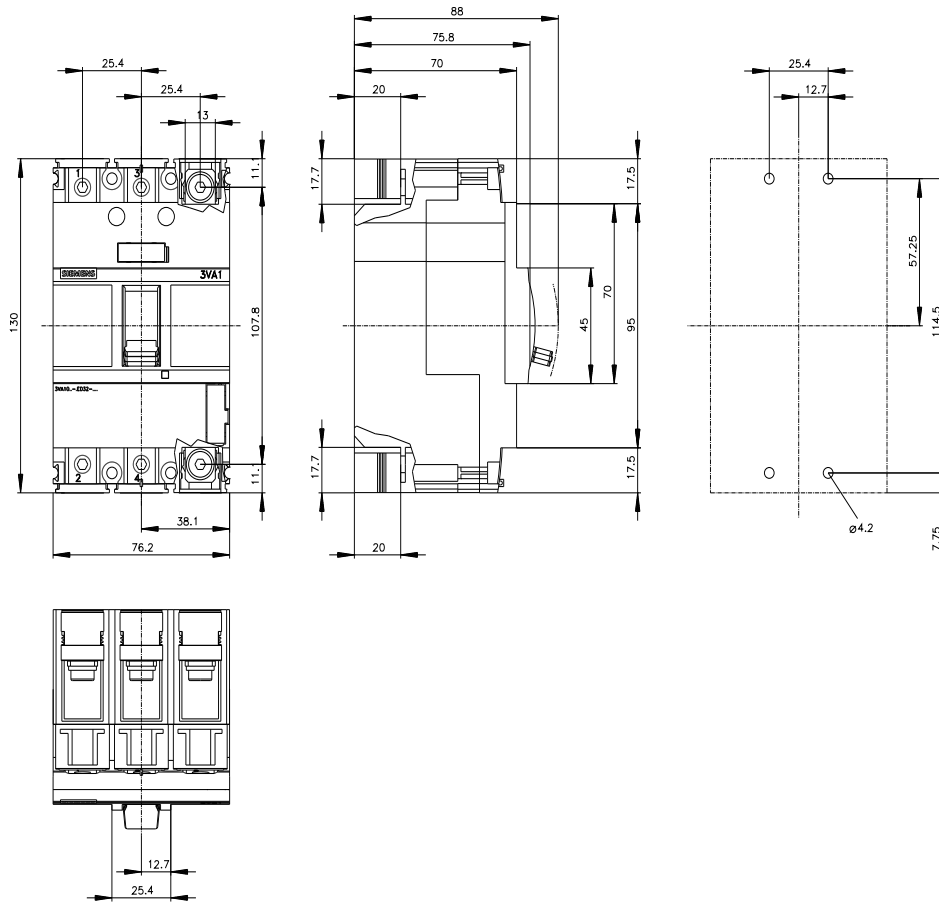


[Environmental Confirmations](#)

[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=3VA1010-2ED32-0AC0>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3VA1010-2ED32-0AC0>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1010-2ED32-0AC0
- 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='HAUPT'></mmp_prod_no>)



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