SIEMENS

## Data sheet 3VA1080-2ED46-0AA0



circuit breaker 3VA1 IEC Frame 100 breaking capacity class B Icu=16 kA @ 415 V 4-pole, line protection TM210, FTFM, In=80 A overload protection Ir=80 A permanently set short-circuit protection Ii=10 x In N conductor unprotected terminal connection

| | |
|---|---|
| **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 | 4 |
| **General technical data** | |
| insulation voltage / rated value | 800 V |
| operating voltage / at DC / rated value | 600 V |
| operating voltage / at AC / rated value | 690 V |
| power loss [W] / maximum | 19.2 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/retrofittable / short-circuit and overload proof | No |
| ground-fault monitoring version | Without |
| product function | |
| ● communication function | No |
| ● other measurement function | No |
| Net Weight | 1.285 kg |
| **Current** | |
| operational current | |
| ● at 40 °C | 80 A |
| ● at 45 °C | 80 A |
| ● at 50 °C | 80 A |
| ● at 55 °C | 78 A |
| ● at 60 °C | 77 A |
| ● at 65 °C | 75 A |
| ● at 70 °C | 74 A |
| **Switching capacity according to IEC 60947** | |
| switching capacity class of the circuit breaker | B |
| maximum short-circuit current breaking capacity (Icu) | |
| ● at 240 V | 25 kA |
| ● at 415 V | 16 kA |


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| | |
|---|---|
| ● at 440 V | 8 kA |
| ● at 500 V | 5 kA |
| ● at 690 V | 5 kA |
| operating short-circuit current breaking capacity (Ics) | |
| ● at 240 V | 25 kA |
| ● at 415 V | 16 kA |
| ● at 440 V | 8 kA |
| ● at 500 V | 5 kA |
| ● at 690 V | 5 kA |
| short-circuit current making capacity (Icm) | |
| ● at 240 V | 52.5 kA |
| ● at 415 V | 32 kA |
| ● at 440 V | 13.6 kA |
| ● at 500 V | 7.5 kA |
| ● at 690 V | 7.5 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 (Ir) / of the L-trip / with I2t characteristic | |
| ● minimum | 80 A |
| ● maximum | 80 A |
| adjustable response value delay time (tr) / for L-tripping / with I2t characteristic | |
| ● minimum | 1 s |
| ● maximum | 1 s |
| adjustable response value setting current (Ii) / for I-tripping | |
| ● minimum | 800 A |
| ● maximum | 800 A |
| adjustable setting current (InN) / for N-tripping | |
| ● minimum | 0 A |
| ● maximum | 0 A |
| design of the N-conductor protection | without |
| product function / grounding protection | No |
| **Mechanical Design** | |
| product component | |
| ● undervoltage release | No |
| ● voltage trigger | No |
| ● trip indicator | No |
| height [in] | 5.12 in |
| height | 130 mm |
| width [in] | 4 in |
| type of connectable conductor cross-sections / of the round conductor terminal / stranded | 1 x (1,5 - 70 mm²) |
| width | 101.6 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 | box terminal on both sides |
| 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 | 0 |
| **Accessories** | |
| product extension / optional / motor drive | No |
| **Environmental conditions** | |


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|---|---|
| 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

| | |
|---|---|
| Environmental Product Declaration(EPD) | Yes |
| global warming potential [CO2 eq] / total | 190 kg |
| global warming potential [CO2 eq] / during manufacturing | 4.67 kg |
| global warming potential [CO2 eq] / during operation | 186 kg |
| global warming potential [CO2 eq] / after end of life | -0.826 kg |
| **reference code / according to IEC 81346-2** | Q |

## Approvals / Certificates

### General Product Approval

Miscellaneous

Confirmation

### General Product Approval | EMV | Test Certificates

Miscellaneous | Special Test Certific-ate | Type Test Certific-ates/Test Report

### Maritime application | other

CCS (China Classifica-tion Society) | Miscellaneous

### other | Environment

Confirmation | Environmental Con-firmations | Environmental Con-firmations

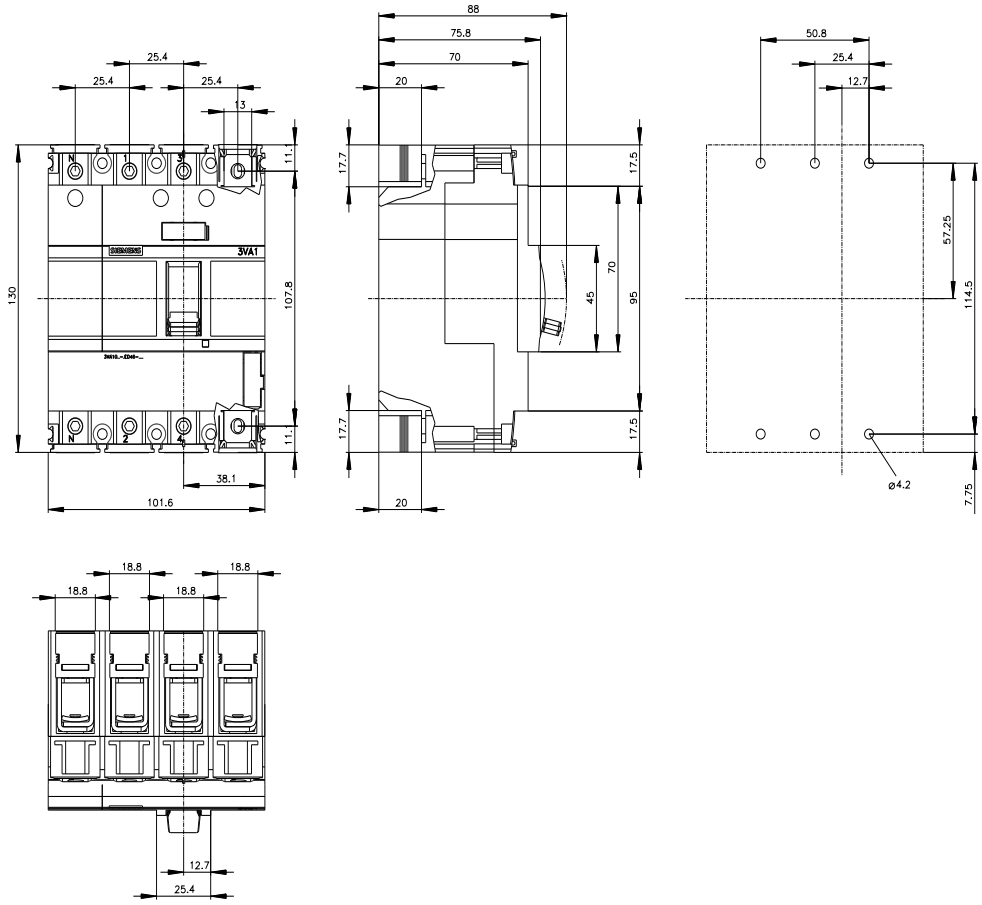
### Environment

## 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=3VA1080-2ED46-0AA0
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3VA1080-2ED46-0AA0
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**
https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1080-2ED46-0AA0

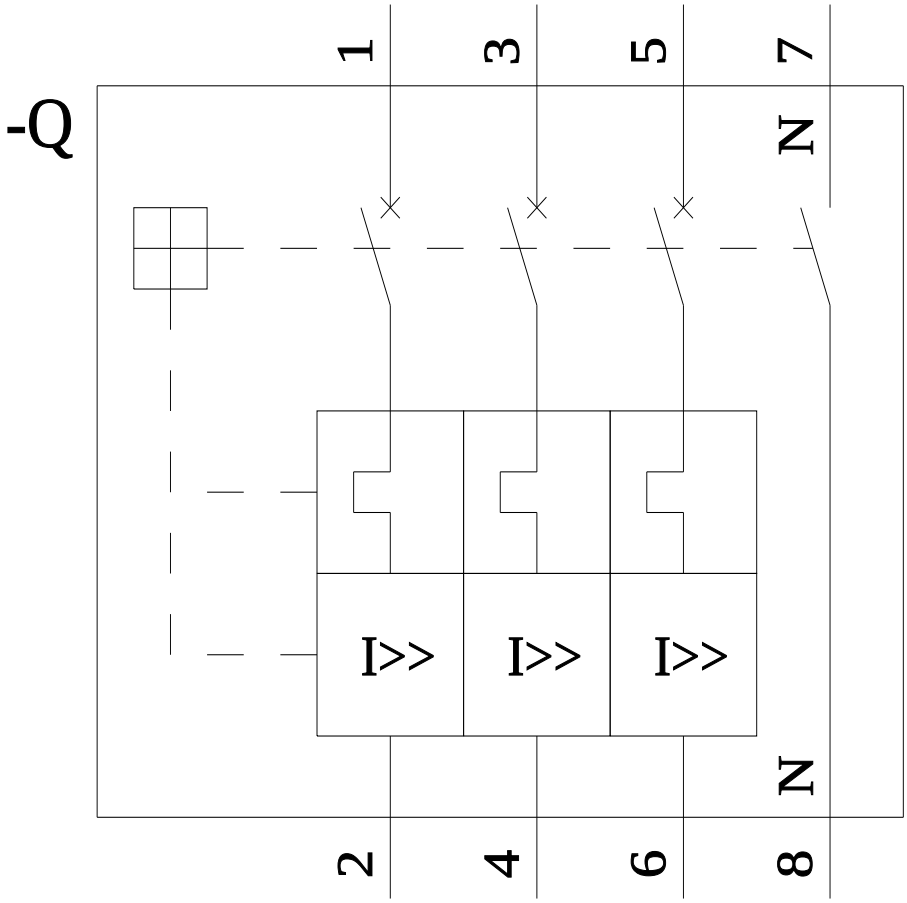

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https://www.siemens.com/cax
**Tender specifications**
https://www.siemens.com/specifications
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