

CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS N ICU=25KA @ 415 V 4-POLE, LINE PROTECTION TM210, FTFM, IN=20A OVERLOAD PROTECTION IR=20A FIXED SHORT CIRCUIT PROTECTION II=16 X IN NEUTRAL UNPROTECTED CABLE CONNECTION



| Model | |
|--|-----------------------------|
| product brandname | SENTRON |
| Product designation | Molded case circuit breaker |
| Design of the product | Line protection |
| Type of load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) | Yes |
| Design of the overcurrent release | TM210 |
| Protective function of the overcurrent release | LI |
| Number of poles | 4 |

| General technical data | |
|--|--------|
| Tension assignée d'isolement Ui | 800 V |
| Max. rated operational voltage Ue with AC 50/60Hz | 690 V |
| Max. rated operational voltage Ue with DC | 600 V |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device | 12 W |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole | 4 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 |
| Neutral conductors / upgradeable/retrofitable | No |
| Ground fault monitoring version | Without |
| Product function | |
| • communication function | No |
| • other measurement function | No |
| Net weight | 1.2 kg |

Electricity

| | |
|---|-------|
| Marking / according to UL 489 / 100%-rated breaker | No |
| Max. rated operational voltage of the size of the circuit-breaker | 160 A |
| Courant permanent assigné Iu | 20 A |
| Operating current | |
| • at 40 °C | 20 A |
| • at 45 °C | 20 A |
| • at 50 °C | 20 A |
| • at 55 °C | 20 A |
| • at 60 °C | 19 A |
| • at 65 °C | 19 A |
| • at 70 °C | 19 A |

Switching capacity according to IEC 60947

| | |
|---|---------|
| Switching capacity class of the circuit breaker | N |
| Maximum short-circuit current breaking capacity (Icu) | |
| • at 240 V | 36 kA |
| • at 415 V | 25 kA |
| • at 440 V | 16 kA |
| • at 500 V | 8 kA |
| • at 690 V | 7 kA |
| Operational short-circuit current breaking capacity (Ics) | |
| • at 240 V | 36 kA |
| • at 415 V | 25 kA |
| • at 440 V | 16 kA |
| • at 500 V | 8 kA |
| • at 690 V | 5 kA |
| Short-circuit current making capacity (Icm) | |
| • at 240 V | 76 kA |
| • at 415 V | 53 kA |
| • at 440 V | 32 kA |
| • at 500 V | 13.6 kA |
| • at 690 V | 11.9 kA |

| Adjustable parameters | |
|---|---------|
| Adjustable response value current / I _g min. | 20 A |
| Adjustable response value current / I _g min. | 20 A |
| Adjustable response value current / I _g min. | 1 |
| Adjustable response value current / I _g min. | 1 |
| Short-term delayed / tripping switchable / I _{2t} =ON/OFF | No |
| Adjustable response value current / I _i min. | 320 A |
| Adjustable response value current / I _i max. | 320 A |
| Design of the N-conductor protection | Without |
| Ground fault protection / tripping switchable / I _{2t} =ON/OFF | No |

| Mechanical Design | |
|-------------------|----------|
| Height [in] | 5.1 in |
| Height | 130 mm |
| Width [in] | 4 in |
| Width | 101.6 mm |
| Depth [in] | 2.8 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 |
| Type of connectable conductor cross-section, round conductor terminal, stranded | 1 x (1.5 - 70 mm ²) |

| 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 |

| Certificates | |
|--|----|
| Equipment marking / acc. to DIN EN 81346-2 | Q |
| Certificate of suitability / as approval for NAVAL (no combat vessels) / Supplement SB | No |

| | | |
|--------------------------|-----|---------------------------|
| General Product Approval | EMC | Declaration of Conformity |
|--------------------------|-----|---------------------------|



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| | |
|-------------------|-------------------|
| Test Certificates | Shipping Approval |
|-------------------|-------------------|

[Typprüfbescheinigung/Werkszeugnis](#)

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| | |
|-------------------|-------|
| Shipping Approval | other |
|-------------------|-------|



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Further information

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

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

Industry Mall (Online ordering system)

<https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA1120-3ED46-0AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA1120-3ED46-0AA0/all>

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

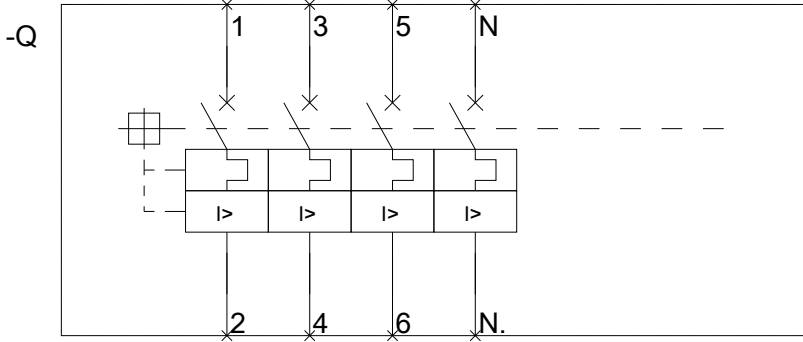
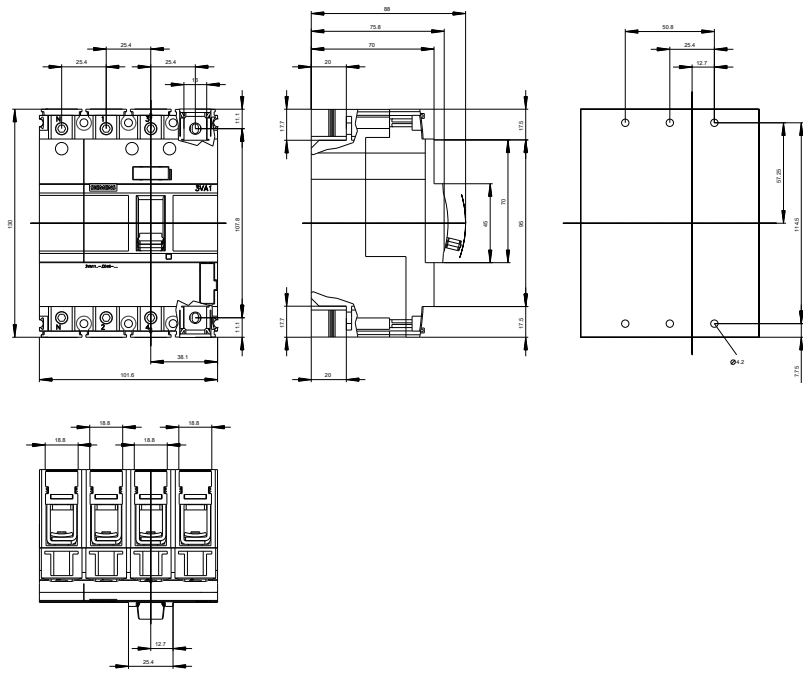
http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA1120-3ED46-0AA0

CAX-Online-Generator

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

Tender specifications

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



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