

CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS S ICU=36KA @ 240 V 1-POLE, LINE PROTECTION TM210, FTFM, IN=20A OVERLOAD PROTECTION IR=20A FIXED SHORT CIRCUIT PROTECTION II=16 X IN BUSBAR 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 | 1 |
| General technical data | |
| Tension assignée d'isolement Ui | 500 V |
| Max. rated operational voltage Ue with AC 50/60Hz | 415 V |
| Max. rated operational voltage Ue with DC | 125 V |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device | 4 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 | 0.36 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 | S |
| Maximum short-circuit current breaking capacity (Icu) | |
| • at 240 V | 36 kA |
| • at 415 V | 6 kA |
| Operational short-circuit current breaking capacity (Ics) | |
| • at 240 V | 36 kA |
| • at 415 V | 6 kA |
| Short-circuit current making capacity (Icm) | |
| • at 240 V | 76 kA |
| • at 415 V | 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 |

| | |
|--|----|
| Ground fault protection / tripping switchable / I2t=ON/OFF | No |
|--|----|

Mechanical Design

| | |
|-------------|---------|
| Height [in] | 5.1 in |
| Height | 130 mm |
| Width [in] | 1 in |
| Width | 25.4 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 | lug terminal |

Auxiliary circuit

| | |
|--|---|
| Number of CO contacts / for auxiliary contacts | 0 |
|--|---|

Accessories

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

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 | <ul style="list-style-type: none"> -25 °C 70 °C -40 °C 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 | Test Certificates |
|--------------------------|-----|---------------------------|-------------------|



[Typprüfbescheinigung/Werkszeugnis](#)

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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/3VA1120-4ED12-0AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA1120-4ED12-0AA0/all>

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

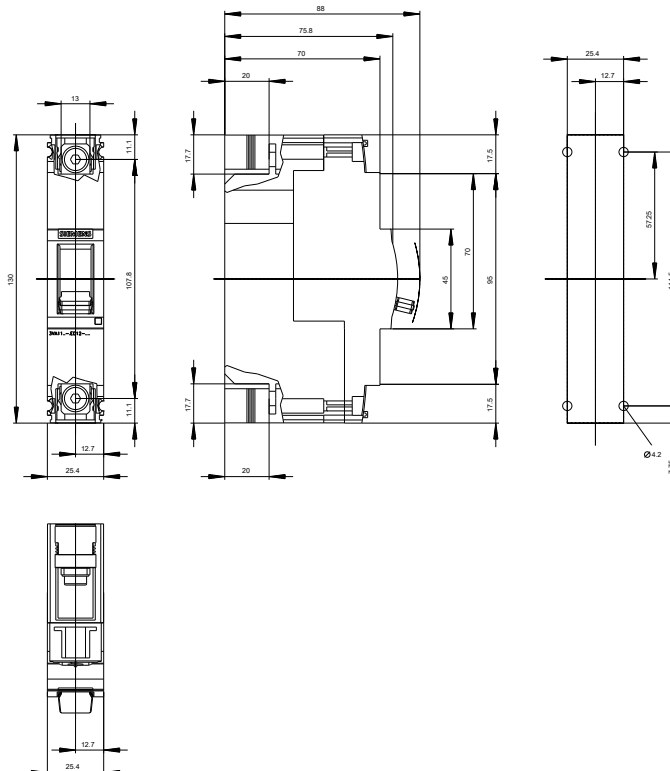
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1120-4ED12-0AA0

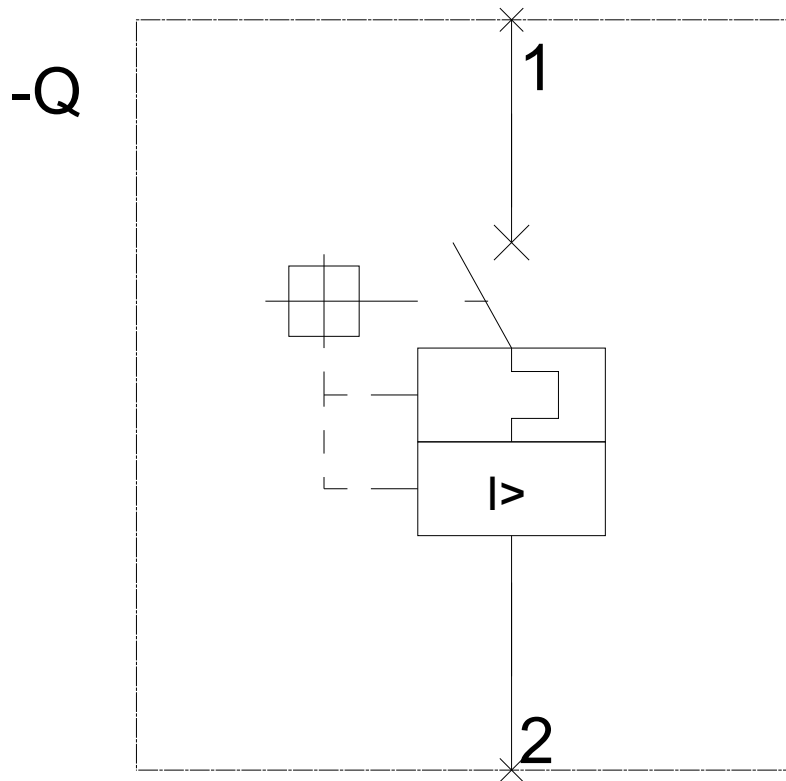
CAX-Online-Generator

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

Tender specifications

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





last modified:

10/24/2016