



circuit breaker 3VA1 IEC Frame 160 breaking capacity class H Icu=70 kA @ 415 V
3-pole, starter protection TM120M, AM, In=40 A without overload protection short-circuit protection Ii=7...16 x In nut keeper kit

| Model | |
|---|-----------------------------|
| product brand name | SENTRON |
| product designation | Molded case circuit breaker |
| design of the product | Starter protection |
| design of the overcurrent release | TM120M |
| protection function of the overcurrent release | I |
| number of poles | 3 |
| General technical data | |
| insulation voltage / rated value | 800 V |
| operating voltage / at AC / rated value | 690 V |
| power loss [W] / maximum | 10.8 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 | 931 g |
| Current | |
| operational current | |
| • at 40 °C | 40 A |
| • at 45 °C | 40 A |
| • at 50 °C | 40 A |
| • at 55 °C | 39 A |
| • at 60 °C | 39 A |
| • at 65 °C | 38 A |
| • at 70 °C | 37 A |
| Switching capacity according to IEC 60947 | |
| switching capacity class of the circuit breaker | H |
| maximum short-circuit current breaking capacity (Icu) | |
| • at 240 V | 100 kA |
| • at 415 V | 70 kA |
| • at 440 V | 55 kA |
| • at 500 V | 5 kA |
| • at 690 V | 5 kA |
| operating short-circuit current breaking capacity (Ics) | |
| • at 240 V | 100 kA |

| | |
|--|---|
| <ul style="list-style-type: none"> • at 415 V • at 440 V • at 500 V • at 690 V | <p>70 kA</p> <p>40 kA</p> <p>5 kA</p> <p>5 kA</p> |
| <p>short-circuit current making capacity (I_{cm})</p> <ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V | <p>220 kA</p> <p>154 kA</p> <p>121 kA</p> <p>7.5 kA</p> <p>7.5 kA</p> |
| <p>design of short-circuit protection</p> | <p>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</p> |

Adjustable parameters

| | |
|--|---------------------------|
| <p>adjustable response value setting current (I_i) / for I-tripping</p> <ul style="list-style-type: none"> • minimum • maximum | <p>280 A</p> <p>640 A</p> |
| <p>adjustable setting current (I_{nN}) / for N-tripping</p> <ul style="list-style-type: none"> • minimum • maximum | <p>0 A</p> <p>0 A</p> |
| <p>product function / grounding protection</p> | <p>No</p> |

Mechanical Design

| | |
|--|-------------------------------|
| <p>product component</p> <ul style="list-style-type: none"> • undervoltage release • voltage trigger • trip indicator | <p>No</p> <p>No</p> <p>No</p> |
| <p>height [in]</p> | <p>5.12 in</p> |
| <p>height</p> | <p>130 mm</p> |
| <p>width [in]</p> | <p>3 in</p> |
| <p>width</p> | <p>76.2 mm</p> |
| <p>depth [in]</p> | <p>2.76 in</p> |
| <p>depth</p> | <p>70 mm</p> |

Connections

| | |
|--|------------------------------------|
| <p>arrangement of electrical connectors / for main current circuit</p> | <p>Front terminal</p> |
| <p>type of electrical connection / for main current circuit</p> | <p>nut keeper kit on both ends</p> |
| <p>type of connectable conductor cross-sections / for flat-bar terminal connection / minimum</p> | <p>12 x 1 mm</p> |
| <p>type of connectable conductor cross-sections / for flat-bar terminal connection / maximum</p> | <p>17 x 6,5 mm</p> |
| <p>design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)</p> | <p>Silver</p> |
| <p>design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)</p> | <p>Tin</p> |

Auxiliary circuit

| | |
|---|----------|
| <p>number of CO contacts / for auxiliary contacts</p> | <p>0</p> |
|---|----------|

Accessories

| | |
|---|------------|
| <p>product extension / optional / motor drive</p> | <p>Yes</p> |
|---|------------|

Environmental conditions

| | |
|---|---|
| <p>protection class IP / on the front</p> | <p>IP40</p> |
| <p>ambient temperature</p> <ul style="list-style-type: none"> • during operation / minimum • during operation / maximum • during storage / minimum • during storage / maximum | <p>-25 °C</p> <p>70 °C</p> <p>-40 °C</p> <p>80 °C</p> |

Environmental footprint

| | |
|--|------------------|
| <p>Environmental Product Declaration (EPD)</p> | <p>Yes</p> |
| <p>Global Warming Potential [CO₂ eq] / total</p> | <p>190 kg</p> |
| <p>Global Warming Potential [CO₂ eq] / during manufacturing</p> | <p>4.67 kg</p> |
| <p>Global Warming Potential [CO₂ eq] / during operation</p> | <p>186 kg</p> |
| <p>Global Warming Potential [CO₂ eq] / after end of life</p> | <p>-0.826 kg</p> |
| <p>reference code / according to IEC 81346-2</p> | <p>Q</p> |

Approvals / Certificates

General Product Approval



[Confirmation](#)



[Miscellaneous](#)

General Product Approval

EMV

Test Certificates

Marine / Shipping



[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

[Special Test Certificate](#)



Marine / Shipping

other

Environment



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

[Miscellaneous](#)

[Confirmation](#)

[Miscellaneous](#)



Environment



[Environmental Confirmations](#)

[Environmental Confirmations](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA1140-6MH32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1140-6MH32-0AA0>

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

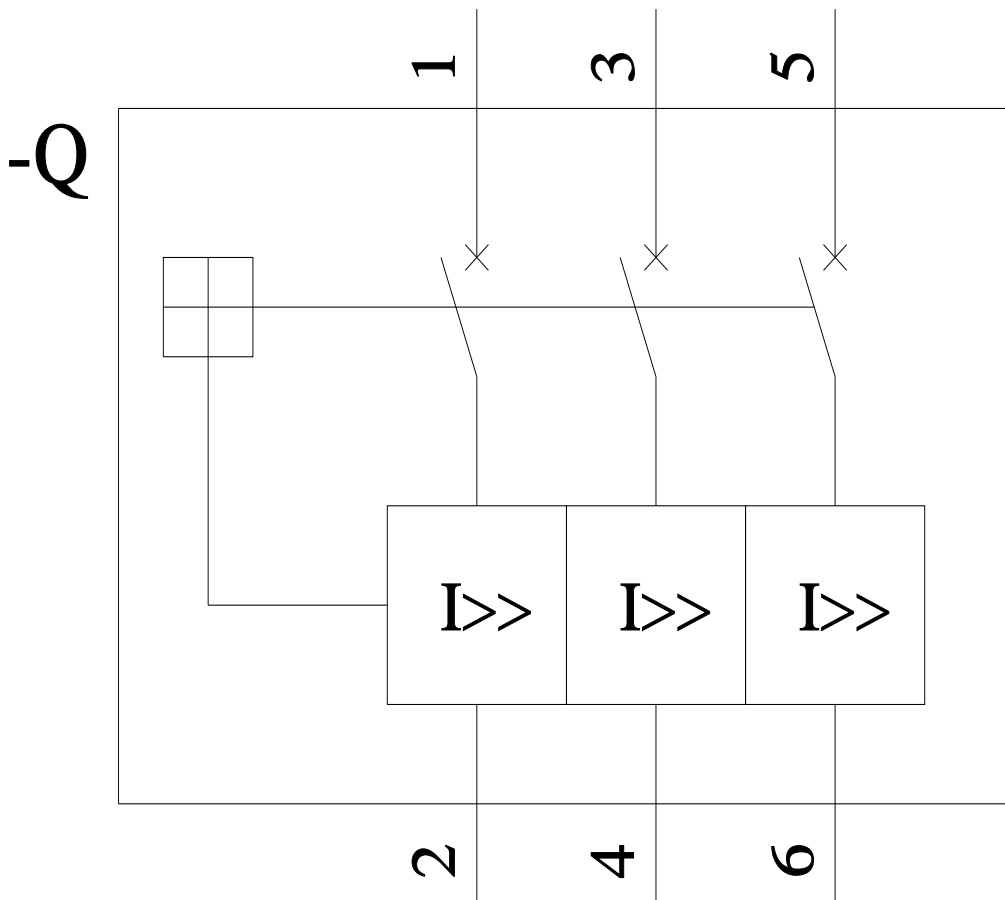
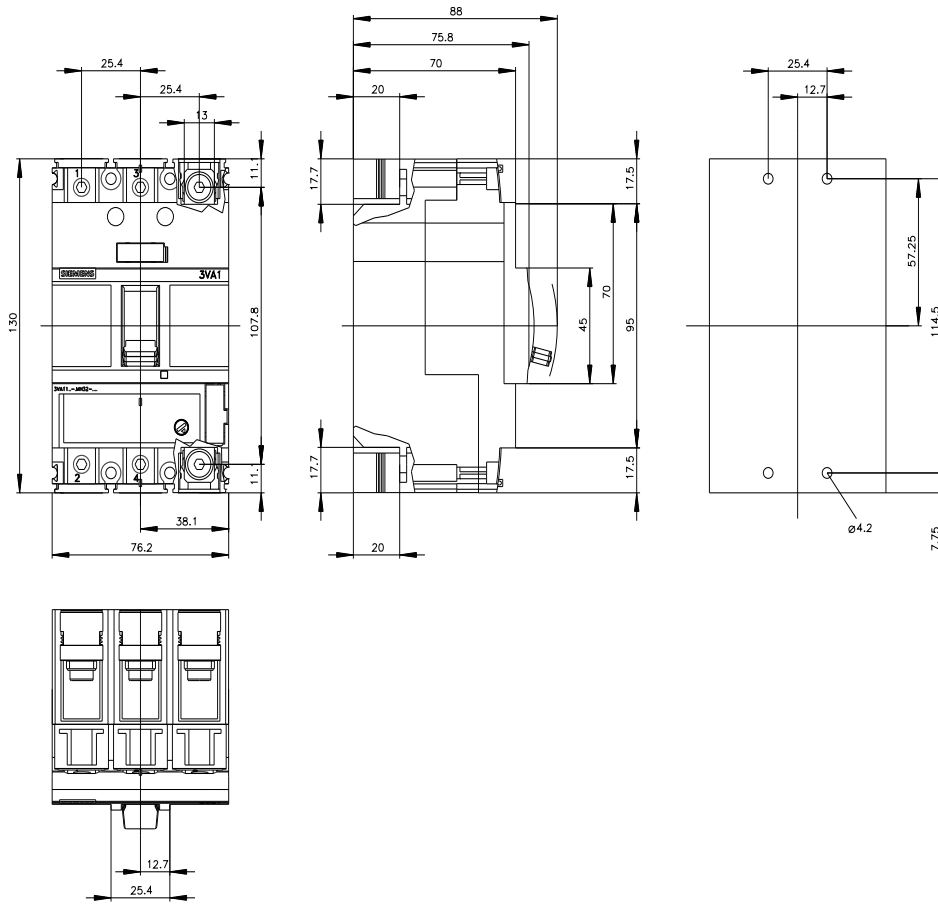
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1140-6MH32-0AA0

CAX-Online-Generator

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

Tender specifications

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



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