



circuit breaker 3VA1 IEC Frame 160 breaking capacity class M Icu=55 kA @ 415 V 3-pole, starter protection TM120M, AM, In=50 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 | 14.6 W |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole | 4.87 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 | 944 g |
| Current | |
| operational current | |
| • at 40 °C | 50 A |
| • at 45 °C | 50 A |
| • at 50 °C | 50 A |
| • at 55 °C | 49 A |
| • at 60 °C | 48 A |
| • at 65 °C | 46 A |
| • at 70 °C | 45 A |
| Switching capacity according to IEC 60947 | |
| switching capacity class of the circuit breaker | M |
| maximum short-circuit current breaking capacity (Icu) | |
| • at 240 V | 85 kA |
| • at 415 V | 55 kA |
| • at 440 V | 36 kA |
| • at 500 V | 5 kA |
| • at 690 V | 5 kA |
| 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 | 85 kA 55 kA 36 kA 5 kA 5 kA |
| short-circuit current making capacity (I _{cm}) <ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V | 187 kA 121 kA 75.6 kA 7.5 kA 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

| | |
|---|----------------|
| adjustable response value setting current (I _i) / for I-tripping <ul style="list-style-type: none"> • minimum • maximum | 350 A 800 A |
| adjustable setting current (I _{nN}) / for N-tripping <ul style="list-style-type: none"> • minimum • maximum | 0 A 0 A |
| product function / grounding protection | No |

Mechanical Design

| | |
|---|----------------|
| product component <ul style="list-style-type: none"> • undervoltage release • voltage trigger • trip indicator | No No No |
| 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 | 0 |
|--|---|

Accessories

| | |
|--|-----|
| product extension / optional / motor drive | Yes |
|--|-----|

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 |

Environmental footprint

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

Approvals / Certificates

General Product Approval



[Confirmation](#)



[Miscellaneous](#)

General Product Approval

EMV

Test Certificates

[KC](#)



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

Marine / Shipping

other



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

[Confirmation](#)

[Miscellaneous](#)

[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=3VA1150-5MH32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1150-5MH32-0AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1150-5MH32-0AA0

CAX-Online-Generator

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

Tender specifications

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

