



circuit breaker 3VA2 IEC Frame 160 breaking capacity class H Icu=85 kA @ 415 V 4-pole, line protection ETU330, LIG, In=40 A overload protection Ir=16 A...40 A short-circuit protection Ii=1.5...12 x In neutral conductor protection adjustable (OFF, 100%) ground-fault protection Ig=0.4...1 x In= tg=0.1/0.3s nut keeper kit

| Model | |
|---|---|
| product brand name | SENTRON |
| product designation | Molded case circuit breaker |
| design of the product | Line protection |
| design of the overcurrent release | ETU330 |
| protection function of the overcurrent release | LIG |
| number of poles | 4 |
| General technical data | |
| insulation voltage / rated value | 800 V |
| operating voltage / at AC / rated value | 690 V |
| power loss [W] / maximum | 1.6 W |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole | 0.53 W |
| mechanical service life (operating cycles) / typical | 25 000 |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V | 14 000 |
| electrical endurance (operating cycles) / at AC-1 / at 690 V | 9 800 |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof | No |
| ground-fault monitoring version | Summation current formation L + N conductor |
| product function | |
| • communication function | No |
| • other measurement function | No |
| Net Weight | 3.2 kg |
| Current | |
| operational current | |
| • at 40 °C | 40 A |
| • at 45 °C | 40 A |
| • at 50 °C | 40 A |
| • at 55 °C | 40 A |
| • at 60 °C | 40 A |
| • at 65 °C | 40 A |
| • at 70 °C | 40 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 | 110 kA |
| • at 415 V | 85 kA |
| • at 440 V | 85 kA |
| • at 500 V | 55 kA |
| • at 690 V | 3 kA |
| operating short-circuit current breaking capacity (Ics) | |
| • at 240 V | 110 kA |
| • at 415 V | 85 kA |
| • at 440 V | 85 kA |
| • at 500 V | 55 kA |
| • at 690 V | 2.5 kA |
| short-circuit current making capacity (Icm) | |
| • at 240 V | 242 kA |

| | |
|---|--------------------------------------|
| <ul style="list-style-type: none"> • at 415 V • at 440 V • at 500 V • at 690 V | 187 kA 187 kA 121 kA 3.7 kA |
| Adjustable parameters | |
| product feature / for L-tripping / can be switched on/off | No |
| adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic | |
| <ul style="list-style-type: none"> • minimum • maximum | 16 A 40 A |
| adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic | |
| <ul style="list-style-type: none"> • minimum • maximum | 0.5 s 17 s |
| adjustable response value setting current (I _i) / for I-tripping | |
| <ul style="list-style-type: none"> • minimum • maximum | 60 A 480 A |
| adjustable current response value current / for G-tripping / with standard characteristic | |
| <ul style="list-style-type: none"> • initial value • full-scale value | 16 A 40 A |
| adjustable response value delay time (t _g) / for G-tripping / with I _{0t} characteristic | |
| <ul style="list-style-type: none"> • minimum • maximum | 0.1 s 0.3 s |
| adjustable setting current (I _{nN}) / for N-tripping | |
| <ul style="list-style-type: none"> • minimum • maximum | 16 A 40 A |
| design of the N-conductor protection | adjustable OFF; 100% |
| product function / grounding protection | Yes |
| Mechanical Design | |
| product component | |
| <ul style="list-style-type: none"> • undervoltage release • voltage trigger • trip indicator | No No No |
| height [in] | 7.13 in |
| height | 181 mm |
| width [in] | 5.51 in |
| width | 140 mm |
| depth [in] | 3.39 in |
| depth | 86 mm |
| Connections | |
| arrangement of electrical connectors / for main current circuit | Front terminal |
| type of electrical connection / for main current circuit | on both sides nut keeper kit |
| type of connectable conductor cross-sections / for flat-bar terminal connection / minimum | 13 x 1 mm |
| type of connectable conductor cross-sections / for flat-bar terminal connection / maximum | 25 x 8 mm |
| design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) | tin |
| 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 | -25 °C 70 °C |

- during storage / minimum -40 °C
- during storage / maximum 80 °C

Environmental footprint

| | |
|--|-----------------|
| global warming potential [CO2 eq] / total | 61.814 kg |
| global warming potential [CO2 eq] / during manufacturing | 14.6 kg |
| global warming potential [CO2 eq] / during operation | 48.9 kg |
| global warming potential [CO2 eq] / after end of life | -2.2 kg |
| Siemens Eco Profile (SEP) | Siemens EcoTech |
| reference code / according to IEC 81346-2 | Q |

Approvals / Certificates

General Product Approval



[Miscellaneous](#)



[Confirmation](#)

| General Product Approval | EMV | Test Certificates | | | Maritime application |
|--------------------------|-----|-------------------|--|--|----------------------|
|--------------------------|-----|-------------------|--|--|----------------------|



[Special Test Certificate](#)

[Miscellaneous](#)

[Type Test Certificates/Test Report](#)



| Maritime application | other | | | | |
|----------------------|-------|--|--|--|--|
|----------------------|-------|--|--|--|--|



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

[Miscellaneous](#)

[Miscellaneous](#)

| other | Dangerous goods | Environment | | | |
|-------|-----------------|-------------|--|--|--|
|-------|-----------------|-------------|--|--|--|

[Confirmation](#)



[Transport Information](#)

[Environmental Confirmations](#)

[Environmental Confirmations](#)



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=3VA2140-6HM42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2140-6HM42-0AA0>

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

https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2140-6HM42-0AA0

CAX-Online-Generator

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

Tender specifications

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

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)

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