



circuit breaker 3VA6 UL Frame 600 breaking capacity class H 65 kA @ 480 V 3-pole, line protection ETU550, LSI, $I_n=600$ A overload protection $I_r=240$ A...600 A short-circuit protection $I_{sd}=0.6..9x I_n$, $I_i=1.5..9x I_n$ neutral conductor protection optionally with external current transformer, up to 160% without connection

| Model | |
|--|-----------------------------|
| product brand name | SENTRON |
| product designation | Molded-case circuit breaker |
| product designation / according to UL file | HLAE |
| design of the product | System protection |
| design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) | Yes |
| design of the overcurrent release | ETU550 |
| protection function of the overcurrent release | LSI |
| 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 | 151 W |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole | 50.33 W |
| mechanical service life (operating cycles) / typical | 20 000 |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V | 4 000 |
| electrical endurance (operating cycles) / at AC-1 / at 690 V | 3 500 |
| electrical endurance (operating cycles) / at 480 V | 4 000 |
| electrical endurance (operating cycles) / at 600 V | 3 500 |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof | Yes |
| ground-fault monitoring version | without |
| product function | |
| • communication function | Yes |
| • other measurement function | No |
| Net Weight | 5.3 kg |
| Current | |
| marking / according to UL 489 / 100%-rated breaker | No |
| operational current | |
| • at 40 °C | 600 A |
| • at 45 °C | 600 A |
| • at 50 °C | 570 A |
| • at 55 °C | 540 A |
| • at 60 °C | 510 A |
| • at 65 °C | 480 A |

| | |
|---|-----------------------------|
| ● at 70 °C | 450 A |
| Switching capacity according to IEC 60947 | |
| switching capacity class of the circuit breaker | H |
| maximum short-circuit current breaking capacity (I _{cu}) | |
| ● at 240 V | 110 kA |
| ● at 415 V | 85 kA |
| ● at 690 V | 6 kA |
| operating short-circuit current breaking capacity (I _{cs}) | |
| ● at 240 V | 110 kA |
| ● at 415 V | 85 kA |
| ● at 690 V | 6 kA |
| short-circuit current making capacity (I _{cm}) | |
| ● at 240 V | 242 kA |
| ● at 415 V | 187 kA |
| ● at 690 V | 9 kA |
| Switching capacity according to UL 489 | |
| current breaking capacity | |
| ● at 240 V | 100 kA |
| ● at 480 V | 65 kA |
| ● at 600 V | 22 kA |
| Adjustable parameters | |
| adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic | |
| ● minimum | 250 A |
| ● maximum | 600 A |
| adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic | |
| ● minimum | 0.5 s |
| ● maximum | 15 s |
| adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic | |
| ● minimum | 360 A |
| ● maximum | 5 400 A |
| adjustable response value setting current (I _{sd}) / of S-trip / with I _{2t} characteristic | |
| ● minimum | 360 A |
| ● maximum | 5 400 A |
| adjustable response value delay time (t _{sd}) / for S-tripping / with I _{0t} characteristic | |
| ● minimum | 0.05 s |
| ● maximum | 0.5 s |
| adjustable response value delay time (t _{sd}) / for S-tripping / with I _{2t} characteristic | |
| ● minimum | 0.05 s |
| ● maximum | 0.5 s |
| adjustable response value setting current (I _l) / for I-tripping | |
| ● minimum | 900 A |
| ● maximum | 5 400 A |
| adjustable setting current (I _{nN}) / for N-tripping | |
| ● minimum | 0.2 A |
| ● maximum | 1.6 A |
| design of the N-conductor protection | adjustable OFF; 20% to 160% |
| product function / grounding protection | No |
| Mechanical Design | |
| product component | |
| ● undervoltage release | No |
| ● voltage trigger | No |
| ● trip indicator | No |
| height [in] | 9.76 in |
| height | 248 mm |

| | |
|------------|---------|
| width [in] | 5.43 in |
| width | 138 mm |
| depth [in] | 4.33 in |
| depth | 110 mm |

Connections

| | |
|---|--------------------|
| arrangement of electrical connectors / for main current circuit | Without connection |
| type of electrical connection / for main current circuit | Without |

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 |

Environmental footprint

| | |
|--|-----------------|
| Environmental Product Declaration(EPD) | Yes |
| global warming potential [CO2 eq] / total | 495 kg |
| global warming potential [CO2 eq] / during manufacturing | 28.7 kg |
| global warming potential [CO2 eq] / during operation | 470 kg |
| global warming potential [CO2 eq] / after end of life | -4.07 kg |
| Siemens Eco Profile (SEP) | Siemens EcoTech |
| reference code / according to IEC 81346-2 | Q |

Approvals / Certificates

General Product Approval



[Confirmation](#)

[Miscellaneous](#)



General Product Approval

EMV

Test Certificates



[Miscellaneous](#)



[Type Test Certificates/Test Report](#)

Maritime application

other



[Confirmation](#)

other

Dangerous goods

Environment

[Miscellaneous](#)

[Transport Information](#)



Siemens EcoTech



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=3VA6460-6JP31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6460-6JP31-0AA0>

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

https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6460-6JP31-0AA0

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=)





