



circuit breaker 3VA2 IEC Frame 160 breaking capacity class C $I_{cu}=110 \text{ kA @ 415 V}$ 3-pole, line protection ETU860, LSIG, $I_n=40 \text{ A}$ overload protection $I_r=16 \text{ A} \dots 40 \text{ A}$ short-circuit protection $I_{sd}=0.6 \dots 10 \times I_n$, $I_i=1.5 \dots 12 \times I_n$ neutral conductor protection optionally with external current transformer, up to 160% ground-fault protection, can be switched off $I_g=0.4 \dots 1 \times I_n$, $t_g=0.05\text{-}0.8\text{ s}$ 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 | ETU860 |
| protection function of the overcurrent release | LSIG |
| 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 | 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 | Yes |
| ground-fault monitoring version | Summation current formation L-conductor |
| product function | |
| • communication function | Yes |
| • other measurement function | Yes |
| Net Weight | 2.5 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 | C |
| maximum short-circuit current breaking capacity (I_{cu}) | |
| • at 240 V | 150 kA |

| | |
|--|---|
| <ul style="list-style-type: none"> • at 415 V • at 440 V • at 500 V • at 690 V | <p>110 kA</p> <p>110 kA</p> <p>85 kA</p> <p>3 kA</p> |
| 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 | <p>150 kA</p> <p>110 kA</p> <p>110 kA</p> <p>85 kA</p> <p>2.5 kA</p> |
| short-circuit current making capacity (Icm) | |
| <ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V | <p>330 kA</p> <p>242 kA</p> <p>242 kA</p> <p>187 kA</p> <p>3.7 kA</p> |

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 | <p>16 A</p> <p>40 A</p> |
| adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic | |
| <ul style="list-style-type: none"> • minimum • maximum | <p>0.5 s</p> <p>25 s</p> |
| adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic | |
| <ul style="list-style-type: none"> • minimum • maximum | <p>24 A</p> <p>400 A</p> |
| adjustable response value setting current (I _{sd}) / of S-trip / with I _{2t} characteristic | |
| <ul style="list-style-type: none"> • minimum • maximum | <p>24 A</p> <p>400 A</p> |
| adjustable response value delay time (t _{sd}) / for S-tripping / with I _{0t} characteristic | |
| <ul style="list-style-type: none"> • minimum • maximum | <p>0.05 s</p> <p>0.5 s</p> |
| adjustable response value delay time (t _{sd}) / for S-tripping / with I _{2t} characteristic | |
| <ul style="list-style-type: none"> • minimum • maximum | <p>0.05 s</p> <p>0.5 s</p> |
| adjustable response value setting current (I _i) / for I-tripping | |
| <ul style="list-style-type: none"> • minimum • maximum | <p>60 A</p> <p>480 A</p> |
| adjustable current response value current / for G-tripping / with standard characteristic | |
| <ul style="list-style-type: none"> • initial value • full-scale value | <p>16 A</p> <p>40 A</p> |
| adjustable response value delay time (t _g) / for G-tripping / with I _{0t} characteristic | |
| <ul style="list-style-type: none"> • minimum • maximum | <p>0.05 s</p> <p>0.8 s</p> |
| adjustable response value setting current (I _g) / for G-tripping / with I _{2t} characteristic | |
| <ul style="list-style-type: none"> • minimum • maximum | <p>16 A</p> <p>40 A</p> |
| adjustable response value delay time (t _g) / for G-tripping / with I _{2t} characteristic | |
| <ul style="list-style-type: none"> • minimum • maximum | <p>0.05 s</p> <p>0.8 s</p> |
| adjustable setting current (I _n) / for N-tripping | |

| | |
|---|-----------------------------|
| • minimum | 16 A |
| • maximum | 64 A |
| design of the N-conductor protection | adjustable OFF; 40% to 160% |
| product function / grounding protection | Yes |

Mechanical Design

| | |
|------------------------|---------|
| product component | |
| • undervoltage release | No |
| • voltage trigger | No |
| • trip indicator | No |
| height [in] | 7.13 in |
| height | 181 mm |
| width [in] | 4.13 in |
| width | 105 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 | |
| • during operation / minimum | -25 °C |
| • during operation / maximum | 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 |
|--------------------------|-----|-------------------|----------------------|



[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



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



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

[Miscellaneous](#)

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

[Miscellaneous](#)

[Confirmation](#)



[Transport Information](#)

[Environmental Confirmations](#)



| |
|-------------|
| Environment |
|-------------|

[Environmental Confirmations](#)



| |
|---------------------|
| 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=3VA2140-7KQ32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2140-7KQ32-0AA0>

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

https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2140-7KQ32-0AA0

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=)

