



CIRCUIT BREAKER 3VA2 IEC FRAME 250 BREAKING CAPACITY CLASS H ICU=85KA @ 415 V 4POLE, LINE PROTECTION ETU320, LI, IN=160A OVERLOAD PROTECTION IR=64A ...160A SHORT CIRCUIT PROTECTION II=12 X IN NEUTRAL PROTECTION ADJUSTABLE(OFF,50%,100%) BUSBAR CONNECTION

| Model | | |
|--|--|-----------------------------|
| product brand name | | SENTRON |
| Product designation | | Molded case circuit breaker |
| Design of the product | | Line protection |
| Product variations | | Selective Applications |
| Ground fault monitoring version | | Without |
| Design of the auxiliary release | | without auxiliary release |
| Design of the auxiliary switch | | Without |
| Design of the operating mechanism | | toggle handle |
| Type of the driving mechanism / motor drive | | No |
| Design of the overcurrent release | | ETU320 |

| General technical data | | |
|---|--|--------|
| Number of poles | | 4 |
| Trip class / of the L-trip / with I²t characteristic / initial value | | 0.5 |
| Trip class / of the L-trip / with I²t characteristic / Full-scale value | | 17 |
| Electrical endurance (switching cycles) | | |
| • at AC-1 / at 380/415 V / at 50/60 Hz | | 10 000 |
| circuit-breaker / Design | | 3VA |
| Mechanical service life (switching cycles) / typical | | 20 000 |

| Voltage | | |
|----------------------------------|---|-----|
| Insulation voltage / Rated value | V | 800 |

| Protection class | | |
|------------------|--|--|
|------------------|--|--|

| | | |
|---|--|------|
| Protection class IP | | IP40 |
| Protection class IP / on the front | | IP40 |
| Protective function of the overcurrent release | | LI |

Switching capacity

| | | |
|--|--|---|
| Switching capacity class of the circuit breaker | | H |
|--|--|---|

Dissipation

| | | |
|---|---|------|
| Active power loss | | |
| <ul style="list-style-type: none"> • maximum | W | 19.7 |

Electricity

| | | |
|--|---|-----|
| Continuous current / Rated value / maximum | A | 250 |
| Continuous current / Rated value | A | 160 |
| Adjustable response value current / of the instantaneous short-circuit release / initial value | A | 1.5 |

Main circuit

| | | |
|--|---|-----|
| Operating voltage | | |
| <ul style="list-style-type: none"> • with AC / at 50/60 Hz / Rated value | V | 690 |
| Operating current | | |
| <ul style="list-style-type: none"> • at 40 °C / Rated value • at 50 °C / Rated value • at 60 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value | A | 160 |
| | A | 160 |
| | A | 160 |
| | A | 160 |
| | A | 160 |

Auxiliary circuit

| | | |
|---|--|---|
| Number of NC contacts / for auxiliary contacts | | 0 |
| Number of NO contacts / for auxiliary contacts | | 0 |

Suitability

| | | |
|----------------------------|--|-------------------|
| Suitability for use | | system protection |
|----------------------------|--|-------------------|

Adjustable parameters

| | | |
|--|---|-------|
| Adjustable response value current | | |
| <ul style="list-style-type: none"> • of I-trip / Full-scale value | A | 12 |
| Adjustable response value current / of the current-dependent overload release / initial value | A | 0.394 |

Product details

| | | |
|---|--|----|
| Product component | | |
| <ul style="list-style-type: none"> • Trip indicator • display • undervoltage release | | No |
| | | No |
| | | No |
| Product property | | |

| | |
|--|-----|
| • for neutral conductors / upgradeable/retrofitable / Short-circuit and overload proof | No |
| Product expansion / optional / motor drive | Yes |

Product function

| | |
|-------------------------------|-----|
| Product function | |
| • Intrinsic device protection | Yes |
| • communication function | No |
| • Phase failure detection | No |
| • other measurement function | No |

Accessories

| | |
|--|------------------------------------|
| Manufacturer article number / of the supplied basic switch | 3VA2216-6HL42-0AA0 |
|--|------------------------------------|

Short circuit

| | | |
|--|----|-----|
| Operational short-circuit current breaking capacity (Ics) | | |
| • at 240 V / Rated value | kA | 110 |
| • at 415 V / Rated value | kA | 85 |
| • at 440 V / Rated value | kA | 85 |
| • at 500 V / Rated value | kA | 55 |
| • at 690 V / Rated value | kA | 3 |
| Maximum short-circuit current breaking capacity (Icu) | | |
| • at 240 V / Rated value | kA | 110 |
| • at 415 V / Rated value | kA | 85 |
| • at 440 V / Rated value | kA | 85 |
| • at 500 V / Rated value | kA | 55 |
| • at 690 V / Rated value | kA | 3 |
| Short-circuit current making capacity (Icm) | | |
| • at 240 V / Rated value | kA | 242 |
| • at 415 V / Rated value | kA | 187 |
| • at 440 V / Rated value | kA | 187 |
| • at 500 V / Rated value | kA | 121 |
| • at 690 V / Rated value | kA | 4.5 |

Connections

| | |
|---|----------------|
| Arrangement of electrical connectors / for main current circuit | Front terminal |
| Type of connectable conductor cross-section | |
| • for flat-bar terminal connection / minimum | 13 x 1 mm |
| • for flat-bar terminal connection / maximum | 25 x 8.5 |
| Type of electrical connection / for main current circuit | Lug terminal |

Mechanical Design

| | | |
|---------------|----|----------------|
| Height | mm | 181 |
| Width | mm | 140 |
| Depth | mm | 107 |
| Mounting type | | fixed mounting |

Environmental conditions

| | | |
|------------------------------|----|-----|
| Ambient temperature | | |
| • during operation / minimum | °C | -25 |
| • during operation / maximum | °C | 70 |
| • during storage / minimum | °C | -40 |
| • during storage / maximum | °C | 80 |

Certificates

| | | |
|--------------------------|--|---|
| Equipment marking | | |
| • acc. to DIN EN 61346-2 | | Q |
| • acc. to DIN EN 81346-2 | | Q |

| | | | |
|---------------------------------|------------|----------------------------------|--------------------------|
| General Product Approval | EMC | Declaration of Conformity | Shipping Approval |
|---------------------------------|------------|----------------------------------|--------------------------|



[other](#)



| | |
|--------------------------|--------------|
| Shipping Approval | other |
|--------------------------|--------------|

[other](#)



GL

Further information

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

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

Industry Mall (Online ordering system)

<https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA22166HL420AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA22166HL420AA0/all>

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

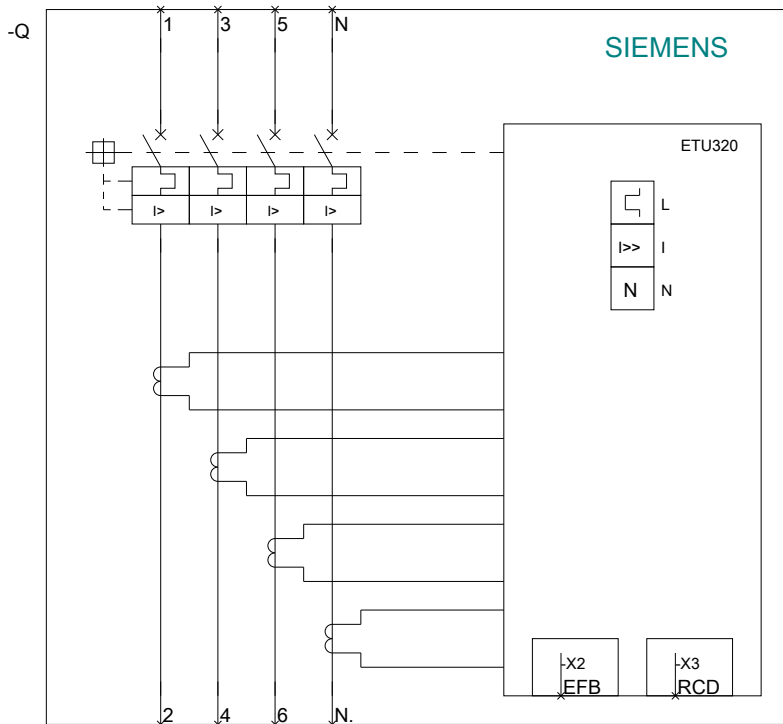
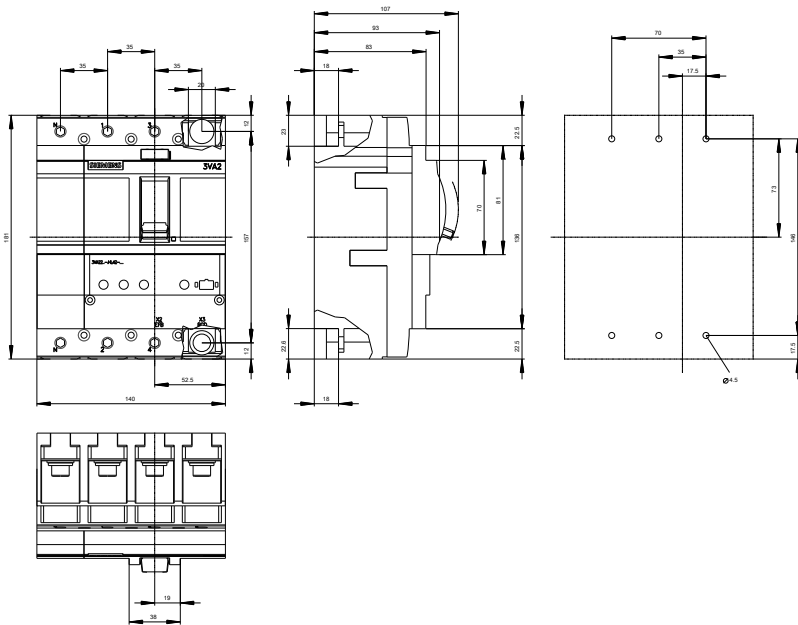
http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA22166HL420AA0

CAX-Online-Generator

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

Tender specifications

<http://ausschreibungstexte.siemens.com/tiplv>



last modified:

11.03.2015