SIEMENS

Data sheet

3VA1120-3EF32-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS N ICU=25KA @ 415 V 3-POLE, LINE PROTECTION TM240, ATAM, IN=20A OVERLOAD PROTECTION IR=14A ...20A SHORT CIRCUIT PROTECTION II=5...10 X IN BUSBAR CONNECTION

Figure similar

| Model | | | |
|---|-----------------------------|--|--|
| product brand name | SENTRON | | |
| Product designation | Molded case circuit breaker | | |
| Design of the product | Line protection | | |
| Product variations | General 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 | TM240 | | |
| | | | |

| General technical data | | | |
|---|--|--------|--|
| Number of poles | | 3 | |
| Trip class / of the L-trip / with I2t characteristic / initial value | | 1 | |
| Trip class / of the L-trip / with I2t characteristic / Full-scale value | | 1 | |
| Electrical endurance (switching cycles) | | | |
| • at AC-1 / at 380/415 V / at 50/60 Hz | | 8 000 | |
| circuit-breaker / Design | | 3VA | |
| Mechanical service life (switching cycles) / typical | | 15 000 | |

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

Protection class

| Protection class IP / on the front Protective function of the overcurrent release Switching capacity Switching capacity class of the circuit breaker N Dissipation Active power loss • maximum W 12 Electricity Continuous current / Rated value / maximum Ontinuous current / Rated value / maximum • of the current-dependent overload release / Full-scale value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • at 40° C / Rated value • at 50° C / Rated value • at 60° C / Rated value • at 70° C / Ra | Protection class IP | | IP40 |
|--|---|---|-------------------|
| Switching capacity Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 12 Electricity Continuous current / Rated value / maximum • of the current-dependent overload release / Full-scale value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • of PC / Rated value Operating current • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated | Protection class IP / on the front | | IP40 |
| Switching capacity class of the circuit breaker N Dissipation Active power loss • maximum W 12 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 20 Adjustable response value current • of the current-dependent overload release / Full-scale value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the C / Rated value • at 40 °C / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 60 °C / Rated value • at 60 °C / Rated value • at 70 | Protective function of the overcurrent release | | LI |
| Switching capacity class of the circuit breaker N Dissipation Active power loss • maximum W 12 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 20 Adjustable response value current • of the current-dependent overload release / Full-scale value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the C / Rated value • at 40 °C / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 60 °C / Rated value • at 60 °C / Rated value • at 70 | Switching capacity | | |
| Active power loss • maximum M | | | N |
| Active power loss • maximum M | Dissipation | | |
| Electricity Continuous current / Rated value / maximum Continuous current / Rated value A 20 Adjustable response value current of the current-dependent overload release / Full-scale value of the instantaneous short-circuit release / initial value of the instantaneous short-circuit release / initial value Main circuit Operating voltage with AC / at 50/60 Hz / Rated value of to DC / Rated value of DC / Rated value of C / Rated value at 50 °C / Rated value at 50 °C / Rated value at 60 °C / Rated value at 70 °C / Ra | · | | |
| Continuous current / Rated value / maximum Continuous current / Rated value Adjustable response value current of the current-dependent overload release / Full-scale value of the instantaneous short-circuit release / initial value of the instantaneous short-circuit release / initial value of the instantaneous short-circuit release / initial value of the instantaneous short-circuit release / initial value of the instantaneous short-circuit release / initial value of the instantaneous short-circuit release / initial value of the instantaneous short-circuit release / initial value of the current of the current-circuit release / initial value | • maximum | W | 12 |
| Continuous current / Rated value / maximum | Electricity | | |
| Adjustable response value current of the current-dependent overload release / Full-scale value of the instantaneous short-circuit release / initial value A 10 of the instantaneous short-circuit release / initial value of the current of the c | | Α | 160 |
| of the current-dependent overload release / Full-scale value of the instantaneous short-circuit release / initial value Main circuit Operating voltage with AC / at 50/60 Hz / Rated value v | Continuous current / Rated value | Α | 20 |
| Full-scale value • of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 55 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value | Adjustable response value current | _ | |
| Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • at 40 °C / Rated value • at 40 °C / Rated value • at 55 °C / Rated value • at 55 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitabile parameters Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / Full-scale value A 10 Adjustable response value current / of the current-dependent overload release / initial value Product details | | Α | 1 |
| Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value Operating current • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 55 °C / Rated value • at 55 °C / Rated value • at 60 °C / Rated value • at 60 °C / Rated value • at 60 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability for use system protection Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value • for N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value Product details | | Α | 5 |
| with AC / at 50/60 Hz / Rated value for DC / Rated value v 500 Operating current at 40 °C / Rated value at 50 °C / Rated value at 50 °C / Rated value at 50 °C / Rated value at 60 °C / Rated value at 60 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value at | Main circuit | | |
| for DC / Rated value | Operating voltage | | |
| Operating current • at 40 °C / Rated value • at 50 °C / Rated value • at 55 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated value • at 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitability for use Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value • for N-conductor protection / Full-scale value • for N-conductor protection / Full-scale value • for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value Product details | • with AC / at 50/60 Hz / Rated value | V | 690 |
| at 40 °C / Rated value at 50 °C / Rated value A 20 at 55 °C / Rated value A 19 at 60 °C / Rated value A 19 at 60 °C / Rated value A 19 at 60 °C / Rated value A 19 at 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / Initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / Initial value Product details | • for DC / Rated value | V | 500 |
| at 50 °C / Rated value at 55 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability or use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value Product details | Operating current | | |
| at 55 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability Suitability system protection Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value Product details | • at 40 °C / Rated value | Α | 20 |
| at 60 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts 0 Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value Product details | • at 50 °C / Rated value | Α | 20 |
| at 65 °C / Rated value at 65 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / Initial value of or N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value Product details | • at 55 °C / Rated value | Α | 20 |
| at 70 °C / Rated value Auxiliary circuit Number of CO contacts / for auxiliary contacts 0 Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value A 0 Adjustable response value current / of the current-dependent overload release / initial value Product details | • at 60 °C / Rated value | Α | 19 |
| Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability for use Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value • for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value Product details | • at 65 °C / Rated value | Α | 19 |
| Number of CO contacts / for auxiliary contacts Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value Product details | • at 70 °C / Rated value | Α | 19 |
| Number of CO contacts / for auxiliary contacts Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value of or N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value Product details | Auxiliary circuit | | |
| Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value A 0 for N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value Product details | | | 0 |
| Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value A 0 for N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value Product details | Suitability | | |
| Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value A 0 of I-trip / Full-scale value A 0 of I-trip / Full-scale value A 0 of I-trip / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value Product details | | | system protection |
| Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value A 0 of I-trip / Full-scale value A 0 of I-trip / Full-scale value A 0 of I-trip / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value Product details | Adjustable parameters | | |
| • for N-conductor protection / initial value • for N-conductor protection / Full-scale value • for N-conductor protection / Full-scale value • A Adjustable response value current / of the current-dependent overload release / initial value Product details A 0 A 0.7 | | | |
| ◆ for N-conductor protection / Full-scale value Adjustable response value current / of the current- dependent overload release / initial value Product details O A 0.7 | • of I-trip / Full-scale value | Α | 10 |
| Adjustable response value current / of the current- dependent overload release / initial value Product details | • for N-conductor protection / initial value | Α | 0 |
| Product details | • for N-conductor protection / Full-scale value | Α | 0 |
| | • | Α | 0.7 |
| | Product details | | |
| r route component | Product component | | |

| | | Na |
|---|----|--------------------|
| Trip indicator | | No |
| display | | No |
| Voltage trigger | | No |
| undervoltage release | | No |
| undervoltage release with leading contact | | No |
| Product property | | |
| for neutral conductors / upgradeable/retrofittable / 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 | | 3VA1120-3EF32-0AA0 |
| Short circuit | | |
| Operational short-circuit current breaking capacity | | |
| (lcs) | | |
| • at 240 V / Rated value | kA | 36 |
| ● at 415 V / Rated value | kA | 25 |
| • at 440 V / Rated value | kA | 16 |
| • at 500 V / Rated value | kA | 8 |
| • at 690 V / Rated value | kA | 5 |
| Maximum short-circuit current breaking capacity (Icu) | | |
| • at 240 V / Rated value | kA | 36 |
| • at 415 V / Rated value | kA | 25 |
| • at 440 V / Rated value | kA | 16 |
| • at 500 V / Rated value | kA | 8 |
| • at 690 V / Rated value | kA | 7 |
| Short-circuit current making capacity (Icm) | | |
| • at 240 V / Rated value | kA | 75.6 |
| • at 415 V / Rated value | kA | 52.5 |
| • at 690 V / Rated value | kA | 7.5 |
| Connections | | |
| Arrangement of electrical connectors / for main | | Front terminal |
| current circuit | | |
| Type of connectable conductor cross-section | | |

| • for flat-bar terminal connection / minimum | 12 x 0 | |
|--|--------------|--|
| • for flat-bar terminal connection / maximum | 17 x 6.5 | |
| Type of electrical connection / for main current circuit | Lug terminal | |

| Mechanical Design | | |
|-------------------|----|----------------|
| Height | mm | 130 |
| Width | mm | 76.2 |
| Depth | mm | 70 |
| 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

Q • acc. to DIN EN 61346-2 Q • acc. to DIN EN 81346-2

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





other







other

other

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/3VA11203EF320AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11203EF320AA0/all

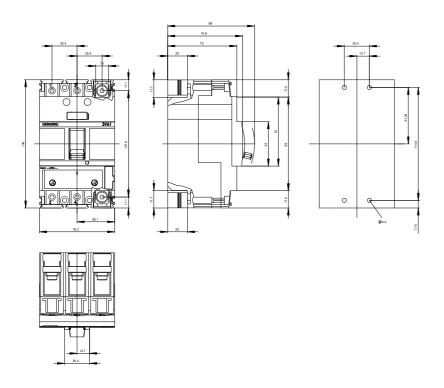
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11203EF320AA0

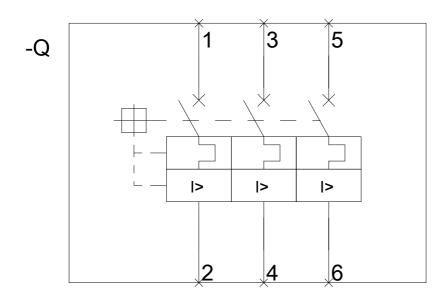
CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





last modified: 11.03.2015