SIEMENS

Data sheet

3VA1120-5EE42-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS M ICU=55KA @ 415 V 4-POLE, LINE PROTECTION TM220, ATFM, IN=20A OVERLOAD PROTECTION IR=14A ...20A SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL UNPROTECTED BUSBAR CONNECTION

Figure similar

| Model | | | |
|---|----|-----------------------------|--|
| product brand name | S | SENTRON | |
| Product designation | N | Molded case circuit breaker | |
| Design of the product | L | Line protection | |
| Product variations | C | General Applications | |
| Ground fault monitoring version | V | Vithout | |
| Design of the auxiliary release | V | Nithout auxiliary release | |
| Design of the auxiliary switch | V | Vithout | |
| Design of the operating mechanism | to | oggle handle | |
| Type of the driving mechanism / motor drive | N | No | |
| Design of the overcurrent release | Т | ГМ220 | |

| General technical data | |
|---|--------|
| Number of poles | 4 |
| 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 LI Switching capacity Switching capacity class of the circuit breaker M 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 Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • of pC / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 55 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rat | 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 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 Main circuit 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 65 °C / Rated value • at 60 °C / Rated value • at 70 °C / | Protection class IP / on the front | _ | IP40 |
| Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 12 | Protective function of the overcurrent release | _ | LI |
| Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 12 | Switching capacity | | |
| Active power loss | | | M |
| Active power loss • maximum M | Dissipation | | |
| 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 A 10 Value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • of r DC / Rated value • at 40 °C / Rated value • at 55 °C / Rated value • at 60 °C / Rated value • at 67 °C / Rated value • at 70 °C / Rated value • at 70 °C / Rated value • at 70 °C / Rated value • at 67 °C / Rated value • at 70 °C / Rat | Active power loss | | |
| Continuous current / Rated value / maximum | • maximum | W | 12 |
| 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 Main circuit Operating voltage with AC / at 50/60 Hz / Rated value of or DC / Rated value value Operating current at 40 °C / Rated value of CRated value at 55 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value at 70 °C / Rated value of 70 °C / Rated value at 70 °C / Rat | Electricity | | |
| Adjustable response value current • 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 • 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 60 °C / Rated value • at 60 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated va | | 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 of or DC / Rated value verified to a 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 65 °C / Rated value at 67 °C / Rated val | 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 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 value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitability for use Adjustable parameters 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 | | |
| Main circuit | | Α | 1 |
| Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value V 600 Operating current • at 40 °C / Rated value A 20 • at 50 °C / Rated value A 20 • at 55 °C / Rated value A 19 • at 60 °C / Rated value A 19 • at 65 °C / Rated value A 19 • at 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts O 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 | | Α | 10 |
| with AC / at 50/60 Hz / Rated value for DC / Rated value v 600 Operating current at 40 °C / Rated value A 20 at 50 °C / Rated value A 20 at 55 °C / Rated value A 20 at 60 °C / Rated value A 19 at 65 °C / Rated value A 19 at 65 °C / Rated value A 19 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 / initial value for N-conductor protection / Full-scale value | Main circuit | | |
| for DC / Rated value Operating current at 40 °C / Rated value at 50 °C / Rated value at 55 °C / Rated value at 60 °C / Rated value at 66 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value at 670 °C / Rated value at 68 °C / Rated value at 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability for use Adjustable parameters 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 of or N-conductor protection / Full-scale value of or N-conductor protection / Full-scale 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 65 °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 Adjustable parameters 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 | • with AC / at 50/60 Hz / Rated value | V | 690 |
| at 40 °C / Rated value at 50 °C / Rated value at 50 °C / Rated value at 65 °C / Rated value at 66 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts Adjustable parameters Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / Full-scale value A 0 | • for DC / Rated value | V | 600 |
| 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 A 19 at 65 °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 of or N-conductor protection / Full-scale value A 0 of N-conductor protection / Full-scale value A 0 | 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 Suitabile parameters 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 of or N-conductor protection / Full-scale value of or N-conductor protection / Full-scale value A 0 | • 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 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 for N-conductor protection / Full-scale value of or N-conductor protection / Full-scale value A 10 | • at 50 °C / Rated value | Α | 20 |
| at 65 °C / Rated value at 70 °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 A 10 of N-conductor protection / Full-scale value A 0 of N-conductor protection / Full-scale value A 0 | • at 55 °C / Rated value | Α | 20 |
| at 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts O 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 • A 0 | • 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 A 0 • for N-conductor protection / Full-scale value A 0 | • 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 • for N-conductor protection / Full-scale value A 0 | • 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 for N-conductor protection / Full-scale value for N-conductor protection / Full-scale value A 0 | 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 of N-conductor protection / Full-scale value A 0 | | | 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 of N-conductor protection / Full-scale value A 0 | 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 N-conductor protection / Full-scale value A 0 | | | system protection |
| of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value A 0 0 | Adjustable parameters | | |
| for N-conductor protection / initial value for N-conductor protection / Full-scale value A 0 A 0 | Adjustable response value current | | |
| • for N-conductor protection / Full-scale value A 0 | • of I-trip / Full-scale value | Α | 10 |
| | • for N-conductor protection / initial value | Α | 0 |
| Adjustable response value current / of the current- A 0.7 | • for N-conductor protection / Full-scale value | Α | 0 |
| dependent overload release / initial value | Adjustable response value current / of the current- dependent overload release / initial value | Α | 0.7 |
| Product details | Product details | | |
| Product component | | | |

| | | N |
|---|----------|--------------------|
| • 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 | | 3VA1120-5EE42-0AA0 |
| switch | | |
| Short circuit | | |
| Operational short-circuit current breaking capacity | | |
| (lcs) | | |
| • at 240 V / Rated value | kA | 85 |
| • at 415 V / Rated value | kA | 55 |
| • at 440 V / Rated value | kA | 30 |
| • at 500 V / Rated value | kA | 15 |
| at 690 V / Rated value | kA | 5 |
| Maximum short-circuit current breaking capacity (Icu) | | |
| • at 240 V / Rated value | kA | 85 |
| ● at 415 V / Rated value | kA | 55 |
| • at 440 V / Rated value | kA | 30 |
| • at 500 V / Rated value | kA | 20 |
| • at 690 V / Rated value | kA | 10 |
| Short-circuit current making capacity (lcm) | | |
| • at 240 V / Rated value | | |
| at 240 V / Nateu value | kA | 187 |
| • at 415 V / Rated value | kA kA | 187 121 |
| | | |
| • at 415 V / Rated value | kA | 121 |
| at 415 V / Rated value at 690 V / Rated value Connections Arrangement of electrical connectors / for main | kA | 121 |
| at 415 V / Rated value at 690 V / Rated value Connections | kA | 121 17 |

| • 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 | 101.6 |
| 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

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

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





other







 GL

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/3VA11205EE420AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11205EE420AA0/all

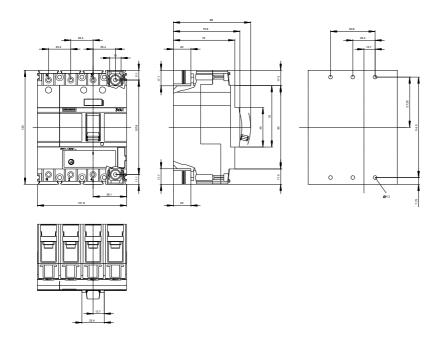
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11205EE420AA0

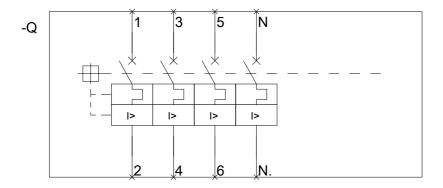
CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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