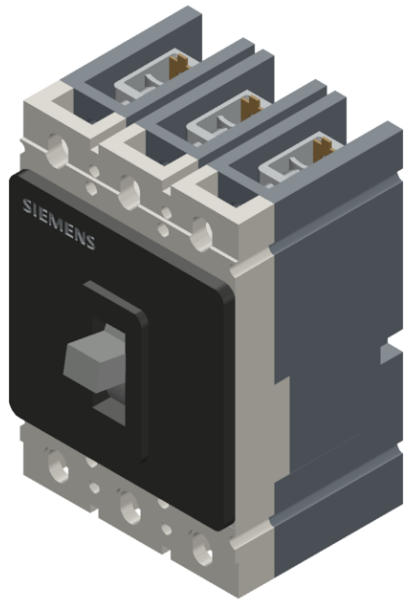
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## Data sheet 3VL1702-2DD33-0AA0

circuit breaker VL160X H high breaking capacity Icu=70kA, 415V AC 3-pole, line protection Electronic Trip Unit TM, LI In=20A, rated current Ir=20A, overload protection II=300A, short-circuit prot. without auxiliary release without auxiliary/alarm switch




| Model | |
|---|---|
| Type of the driving mechanism / motor drive | No |
| Design of the overcurrent release | TM |

| General technical data | |
|---|---|
| Number of poles | 3 |
| Size of the circuit-breaker | 3VL1 |
| Electrical endurance (switching cycles) / typical | 10 000 |


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| | |
|---|---|
| Usage category | A |
| Performance class for circuit breaker | N |
| Mechanical service life (switching cycles) / typical | 20 000 |
| Reference code / acc. to DIN 40719 extended according to IEC 204-2 / acc. to IEC 750 | Q |
| Operating frequency / maximum | 120 1/s |

| Voltage | |
|---|---|
| Rated operational voltage Ue / max. | 690 V |
| Insulation voltage | |
| • rated value | 800 V |
| • at AC / rated value | 800 V |
| Surge voltage resistance / rated value | 8 kV |
| Operating voltage | |
| • rated value / maximum | 690 V |
| • for main current circuit / at AC / at 50 Hz / maximum | 690 V |
| • for main current circuit / at AC / at 60 Hz / maximum | 690 V |
| • for main current circuit / at DC / maximum | 500 V |

| Protection class | |
|---|---|
| Protection class IP | IP20 |
| protection function of the overcurrent release | LI |

| Current | |
|---|---|
| Operating current / at 45 °C / rated value | 20 A |
| Continuous current / rated value | 20 A |
| Derating temperature / for the rated value of the continuous current | 50 °C |
| Adjustable pick-up value current | |
| • of the current-dependent overload release / Full-scale value | 20 A |
| • of instantaneous short-circuit trip unit / initial value | 300 A |
| • of instantaneous short-circuit trip unit / Full-scale value | 300 A |

| Main circuit | |
|---|---|
| Operating frequency | |
| • 1 / rated value | 50 Hz |
| • 2 / rated value | 60 Hz |
| Operating current | |
| • at 40 °C / rated value | 20 A |
| • at 50 °C / rated value | 20 A |
| • at 55 °C / rated value | 18.6 A |


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| | |
|---|---|
| • at 60 °C / rated value | 18.6 A |
| • at 65 °C / rated value | 17.2 A |
| • at 70 °C / rated value | 17.2 A |

| Auxiliary circuit | |
|---|---|
| Number of CO contacts / for auxiliary contacts | 0 |
| 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 pick-up value current / of the current-dependent overload release / initial value | 16 A |

| Product details | |
|---|---|
| Product component | |
| • Trip indicator | No |
| • Auxiliary switch | No |
| • Voltage trigger | No |
| • undervoltage release | No |
| • undervoltage release with leading contact | No |
| Product extension / optional / motor drive | Yes |

| Product function | |
|---|---|
| Product function | |
| • of thermal overload trip unit | adjustable |
| • Ground fault protection | No |
| • for neutral conductors / Short-circuit and overload proof | No |
| • Overload protection | Yes |

| Short circuit | |
|---|---|
| Operational short-circuit current breaking capacity (Ics) | |
| • at 240 V / rated value | 75 kA |
| • at 415 V / rated value | 70 kA |
| • at 500 V / rated value | 23 kA |
| • at 690 V / rated value | 6 kA |
| Maximum short-circuit current breaking capacity (Icu) | |
| • at 240 V / rated value | 100 kA |
| • at 415 V / rated value | 70 kA |
| • at 440 V / rated value | 42 kA |
| • at 480 V / acc. to NEMA / rated value | 42 kA |
| • at 500 V / rated value | 30 kA |


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| | |
|---|---|
| • at 600 V / acc. to NEMA / rated value | 12 kA |
| • at 690 V / rated value | 12 kA |

| Connections | |
|---|---|
| Arrangement of electrical connectors / for main current circuit | front side |
| Type of connectable conductor cross-sections / for main contacts | |
| • with flexible busbar | 12 x 10 mm |
| • solid | 2.5 ... 95 mm² |
| • finely stranded / with core end processing | 2.5 ... 50 mm² |
| • stranded | 2.5 ... 95 mm² |
| Type of connectable conductor cross-sections / for auxiliary contacts | |
| • solid | 0.75 ... 1.5 mm² |
| • finely stranded / with core end processing | 0,75 ... 1.0 mm² |
| Type of electrical connection / for main current circuit | box terminal |

| Mechanical Design | |
|---|---|
| Height | 157.5 mm |
| Width | 104.5 mm |
| Depth | 106.5 mm |
| Mounting type | fixed mounting |

| Environmental conditions | |
|---|---|
| Ambient temperature / during operation | |
| • minimum | 0 °C |
| • maximum | 70 °C |
| Ambient temperature / during storage | |
| • minimum | -40 °C |
| • maximum | 80 °C |

| Certificates | |
|---|---|
| Certificate of suitability | IEC, high switching capacity (H) |
| Reference code | |
| • acc. to DIN EN 61346-2 | Q |


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| General Product Approval | | | | EMC | Declaration of Conformity |
|---|---|---|---|---|---|
| CCC | Miscellaneous | TSE | KC | C-Tick | EG-Konf. |

| Test Certificates | Shipping Approval | | | | |
|---|---|---|---|---|---|
| Special Test Certificate | ABS | BUREAU VERITAS | LRS | PRS | RINA |

| Shipping Approval | other | | | |
|---|---|---|---|---|
| RMRS | Confirmation | Miscellaneous | Environmental Confirmations | Manufacturer Declaration |

## Further information

**Information- and Downloadcenter (Catalogs, Brochures,…)**
http://www.siemens.com/lowvoltage/catalogs

**Industry Mall (Online ordering system)**
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VL1702-2DD33-0AA0

**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3VL1702-2DD33-0AA0

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL1702-2DD33-0AA0

**CAx-Online-Generator**
http://www.siemens.com/cax

**Tender specifications**
http://www.siemens.com/specifications


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