

circuit breaker VL160X N standard breaking capacity I_{cu}=55kA, 415V AC 3-pole, line protection Trip Unit TM, LI I_n=40A, rated current I_r=32...40A, overload prot. II=600A, 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 |
| mechanical service life (switching cycles) / typical | 20 000 |
| electrical endurance (switching cycles) / typical | 10 000 |
| utilization category | A |
| performance class for circuit breaker | N |
| 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 U _e / max. | 690 V |
| <ul style="list-style-type: none"> insulation voltage / rated value insulation voltage (U_i) / at AC / rated value | 800 V |
| surge voltage resistance / rated value | 8 kV |
| operating voltage <ul style="list-style-type: none"> rated value / maximum for main current circuit / at AC / at 50 Hz / maximum for main current circuit / at AC / at 60 Hz / maximum for main current circuit / at DC / maximum | 690 V |
| Protection class | |
| protection class IP | IP20 |
| protection function of the overcurrent release | LI |
| Current | |
| operational current <ul style="list-style-type: none"> at 40 °C / rated value at 45 °C / rated value at 50 °C / rated value at 55 °C / rated value at 60 °C / rated value at 65 °C / rated value at 70 °C / rated value | 40 A |
| continuous current / rated value | 40 A |
| derating temperature / for the rated value of the continuous current | 50 °C |
| adjustable current response value current <ul style="list-style-type: none"> of the current-dependent overload release / full-scale value of instantaneous short-circuit trip unit / minimum of instantaneous short-circuit trip unit / maximum | 40 A |
| Main circuit | |
| operating frequency <ul style="list-style-type: none"> 1 / rated value 2 / rated value | 50 Hz |
| | 60 Hz |
| 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 current response value current / of the current-dependent overload release / initial value | 32 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 |
| • grounding protection | No |
| • for neutral conductors / short-circuit and overload proof | No |
| • overload protection | Yes |
| Short circuit | |
| breaking capacity operating short-circuit current (Ics) | |
| • at 240 V / rated value | 65 kA |
| • at 415 V / rated value | 55 kA |
| • at 500 V / rated value | 14 kA |
| • at 690 V / rated value | 4 kA |
| breaking capacity maximum short-circuit current (Icu) | |
| • at 240 V / rated value | 65 kA |
| • at 415 V / rated value | 55 kA |
| • at 440 V / rated value | 25 kA |
| • at 480 V / acc. to NEMA / rated value | 25 kA |
| • at 500 V / rated value | 18 kA |
| • at 600 V / acc. to NEMA / rated value | 8 kA |
| • at 690 V / rated value | 8 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 mm ² |
| • finely stranded / with core end processing | 2.5 ... 50 mm ² |
| • stranded | 2.5 ... 95 mm ² |
| type of connectable conductor cross-sections / for auxiliary contacts | |
| • solid | 0.75 ... 1.5 mm ² |
| • finely stranded / with core end processing | 0,75 ... 1.0 mm ² |
| type of electrical connection / for main current circuit | box terminal |
| Mechanical Design | |
| height | 157.5 mm |
| width | 104.5 mm |
| depth | 106.5 mm |
| fastening method | fixed mounting |
| Environmental conditions | |
| ambient temperature / during operation | |
| • minimum | 0 °C |
| • maximum | 70 °C |

ambient temperature / during storage

- minimum
- maximum

-40 °C
80 °C

General Product Approval

EMC

[Miscellaneous](#)



[TSE](#)

[KC](#)



Declaration of Conformity

Test Certificates

Marine / Shipping



EG-Konf.

[Special Test Certificate](#)



ABS



BUREAU
VERITAS



LRS



PRS

Marine / Shipping

other



RINA



RMRS



DNV-GL

[Environmental Confirmations](#)

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other

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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=3VL1704-1DD33-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VL1704-1DD33-0AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL1704-1DD33-0AA0

CAx-Online-Generator

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

Tender specifications

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



