



CIRCUIT-BREAKER VL160X N STANDARD BREAKING CAPACITY  
 ICU=55KA / 415 V AC 3 POLE, LINE PROTECTION  
 OVERCURRENT RELEASE TM, LI IN=100A, RATED CURRENT  
 IR=100A, OVERLOAD II=1000A, SHORT-CIRCUIT

| 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  |
| Usage category                                                                          | A       |
| Performance class for circuit breaker                                                   | N       |
| Mechanical service life (switching cycles) / typical                                    | 20 000  |
| Equipment marking / 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 <sub>e</sub> / max.                                         | 690 V   |
| Insulation voltage                                                                      |         |
| • rated value                                                                           | 800 V   |
| • at AC / rated value                                                                   | 800 V   |

|                                                                                              |                   |
|----------------------------------------------------------------------------------------------|-------------------|
| Surge voltage resistance / rated value                                                       | 8 kV              |
| <b>Protection class</b>                                                                      |                   |
| Protection class IP                                                                          | IP20              |
| Protective function of the overcurrent release                                               | LI                |
| <b>Electricity</b>                                                                           |                   |
| Continuous current / rated value                                                             | 100 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                               | 100 A             |
| • of instantaneous short-circuit trip unit / initial value                                   | 1 000 A           |
| • of instantaneous short-circuit trip unit / Full-scale value                                | 1 000 A           |
| <b>Main circuit</b>                                                                          |                   |
| Operating frequency                                                                          |                   |
| • 1 / rated value                                                                            | 50 Hz             |
| • 2 / rated value                                                                            | 60 Hz             |
| Operating voltage                                                                            |                   |
| • 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             |
| Operating current                                                                            |                   |
| • at 40 °C / rated value                                                                     | 100 A             |
| • at 50 °C / rated value                                                                     | 100 A             |
| • at 55 °C / rated value                                                                     | 93 A              |
| • at 60 °C / rated value                                                                     | 93 A              |
| • at 65 °C / rated value                                                                     | 86 A              |
| • at 70 °C / rated value                                                                     | 86 A              |
| <b>Suitability</b>                                                                           |                   |
| Suitability for use                                                                          | system protection |
| <b>Adjustable parameters</b>                                                                 |                   |
| Adjustable pick-up value current / of the current-dependent overload release / initial value | 100 A             |
| <b>Product details</b>                                                                       |                   |
| Product component                                                                            |                   |
| • Trip indicator                                                                             | No                |
| • Auxiliary switch                                                                           | Yes               |

|                                             |     |
|---------------------------------------------|-----|
| • Voltage trigger                           | No  |
| • undervoltage release                      | No  |
| • undervoltage release with leading contact | No  |
| Product extension / optional / motor drive  | Yes |

## Product function

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

## Short circuit

|                                                                  |       |
|------------------------------------------------------------------|-------|
| <b>Operational short-circuit current breaking capacity (Ics)</b> |       |
| • 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  |
| <b>Maximum short-circuit current breaking capacity (Icu)</b>     |       |
| • 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 electrical connection / for main current circuit        | box terminals |

## Mechanical Design

|                      |                |
|----------------------|----------------|
| <b>Height</b>        | 157.5 mm       |
| <b>Width</b>         | 104.5 mm       |
| <b>Depth</b>         | 106.5 mm       |
| <b>Mounting type</b> | fixed mounting |

## Environmental conditions

|                              |        |
|------------------------------|--------|
| <b>Ambient temperature</b>   |        |
| • during operation / minimum | 0 °C   |
| • during operation / maximum | 70 °C  |
| • during storage / minimum   | -40 °C |

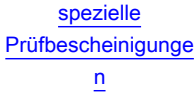
• during storage / maximum

80 °C

## Certificates

|                                   |                                      |
|-----------------------------------|--------------------------------------|
| <b>Certificate of suitability</b> | IEC, standard switching capacity (N) |
| <b>Equipment marking</b>          |                                      |
| • acc. to DIN EN 61346-2          | Q                                    |

| General Product Approval                                                                  | EMC                                                                                           |
|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <br>CCC  | <br>C-Tick |
|          |  TSE         |
|  sonstig |  KTL       |

| Declaration of Conformity                                                                     | Test Certificates                                                                                | Shipping Approval                                                                       |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <br>EG-Konf. |                 |  ABS   |
|                                                                                               |  BUREAU VERITAS |  LRS |
|                                                                                               |                                                                                                  |  PRS |

| Shipping Approval                                                                       | other                                                                                               |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
|  RINA |  RMRS             |
|                                                                                         |  Bestätigungen     |
|                                                                                         |  Umweltbestätigung |
|                                                                                         |  sonstig         |

## 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/3VL1710-1DA33-0AB1>

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

<http://support.automation.siemens.com/WW/view/en/3VL1710-1DA33-0AB1/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VL1710-1DA33-0AB1](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL1710-1DA33-0AB1)

### CAX-Online-Generator

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

### Tender specifications

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