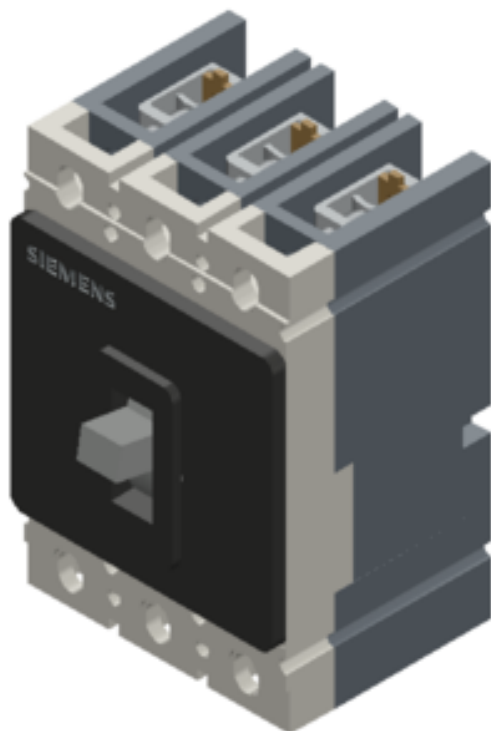




CIRCUIT-BREAKER VL160X N STANDARD  
 BREAKING CAPACITY ICU=55KA / 415 V AC 3 POLE,  
 LINE PROTECTION OVERCURRENT RELEASE TM, LI  
 IN=80A, RATED CURRENT IR=80A, OVERLOAD  
 II=1000A, SHORT-CIRCUIT

| 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                                                           | 1/s | 120    |
| Voltage                                                                                 |     |        |
| Rated operational voltage Ue / max.                                                     | V   | 690    |
| Insulation voltage                                                                      |     |        |
| • rated value                                                                           | V   | 800    |
| • at AC / rated value                                                                   | V   | 800    |

|                                                                                                     |    |                   |
|-----------------------------------------------------------------------------------------------------|----|-------------------|
| Surge voltage resistance / rated value                                                              | kV | 8                 |
| <b>Protection class</b>                                                                             |    |                   |
| <b>Protection class IP</b>                                                                          |    | IP20              |
| <b>Protective function of the overcurrent release</b>                                               |    | LI                |
| <b>Electricity</b>                                                                                  |    |                   |
| Continuous current / rated value                                                                    | A  | 80                |
| Derating temperature / for the rated value of the continuous current                                | °C | 50                |
| <b>Adjustable pick-up value current</b>                                                             |    |                   |
| • of the current-dependent overload release / Full-scale value                                      | A  | 80                |
| • of instantaneous short-circuit trip unit / initial value                                          | A  | 1 000             |
| • of instantaneous short-circuit trip unit / Full-scale value                                       | A  | 1 000             |
| <b>Main circuit</b>                                                                                 |    |                   |
| <b>Operating frequency</b>                                                                          |    |                   |
| • 1 / rated value                                                                                   | Hz | 50                |
| • 2 / rated value                                                                                   | Hz | 60                |
| <b>Operating voltage</b>                                                                            |    |                   |
| • for main current circuit / at AC / at 50 Hz / maximum                                             | V  | 690               |
| • for main current circuit / at AC / at 60 Hz / maximum                                             | V  | 690               |
| • for main current circuit / at DC / maximum                                                        | V  | 500               |
| <b>Operating current</b>                                                                            |    |                   |
| • at 40 °C / rated value                                                                            | A  | 80                |
| • at 50 °C / rated value                                                                            | A  | 80                |
| • at 55 °C / rated value                                                                            | A  | 74.4              |
| • at 60 °C / rated value                                                                            | A  | 74.4              |
| • at 65 °C / rated value                                                                            | A  | 68.8              |
| • at 70 °C / rated value                                                                            | A  | 68.8              |
| <b>Auxiliary circuit</b>                                                                            |    |                   |
| Number of CO contacts / for auxiliary contacts                                                      |    | 0                 |
| Number of NC contacts / for auxiliary contacts                                                      |    | 1                 |
| Number of NO contacts / for auxiliary contacts                                                      |    | 2                 |
| <b>Suitability</b>                                                                                  |    |                   |
| <b>Suitability for use</b>                                                                          |    | system protection |
| <b>Adjustable parameters</b>                                                                        |    |                   |
| <b>Adjustable pick-up value current / of the current-dependent overload release / initial value</b> | A  | 80                |

## Product details

|                                             |  |     |
|---------------------------------------------|--|-----|
| <b>Product component</b>                    |  |     |
| • Trip indicator                            |  | Yes |
| • Auxiliary switch                          |  | Yes |
| • Voltage trigger                           |  | Yes |
| • 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                                         | kA | 65 |
| • at 415 V / rated value                                         | kA | 55 |
| • at 500 V / rated value                                         | kA | 14 |
| • at 690 V / rated value                                         | kA | 4  |
| <b>Maximum short-circuit current breaking capacity (Icu)</b>     |    |    |
| • at 240 V / rated value                                         | kA | 65 |
| • at 415 V / rated value                                         | kA | 55 |
| • at 440 V / rated value                                         | kA | 25 |
| • at 480 V / acc. to NEMA / rated value                          | kA | 25 |
| • at 500 V / rated value                                         | kA | 18 |
| • at 600 V / acc. to NEMA / rated value                          | kA | 8  |
| • at 690 V / rated value                                         | kA | 8  |

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

## Environmental conditions

|                              |    |     |  |
|------------------------------|----|-----|--|
| <b>Ambient temperature</b>   |    |     |  |
| • during operation / minimum | °C | 0   |  |
| • during operation / maximum | °C | 70  |  |
| • during storage / minimum   | °C | -40 |  |
| • during storage / maximum   | °C | 80  |  |

## Certificates

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

|                                                                                          |                         |                                                                                   |                                                                                               |
|------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <b>General Product Approval</b>                                                          |                         |                                                                                   | <b>EMC</b>                                                                                    |
| <br>CCC | <a href="#">sonstig</a> |  | <br>C-Tick |
|                                                                                          |                         | <a href="#">TSE</a>                                                               | <a href="#">KTL</a>                                                                           |

|                                                                                               |                                                                  |                                                                                          |                                                                                                      |                                                                                            |                                                                                            |
|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <b>Declaration of Conformity</b>                                                              | <b>Test Certificates</b>                                         | <b>Shipping Approval</b>                                                                 |                                                                                                      |                                                                                            |                                                                                            |
| <br>EG-Konf. | <a href="#">spezielle Prüfbescheinigung</a><br><a href="#">n</a> | <br>ABS | <br>BUREAU VERITAS | <br>LRS | <br>PRS |

|                                                                                             |                                                                                             |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Shipping Approval</b>                                                                    | <b>other</b>                                                                                |
| <br>RINA | <br>RMRS |
|                                                                                             | <a href="#">Bestätigungen</a> <a href="#">Umweltbestätigung</a> <a href="#">sonstig</a>     |

## 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/3VL1708-1DA33-8TD1>

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

<http://support.automation.siemens.com/WW/view/en/3VL1708-1DA33-8TD1/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VL1708-1DA33-8TD1](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL1708-1DA33-8TD1)

### CAX-Online-Generator

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

### Tender specifications

<http://ausschreibungstexte.siemens.com/tiplv>

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