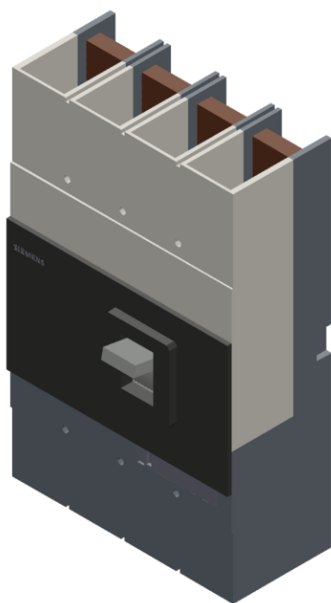


circuit breaker VL800N standard breaking capacity Icu=55kA, 415V AC 4-pole, line protection trip unit ETU20, LSI In=800A, rated current IR=320...800A, overload protection, ISD=1.5 to 7 xIR, II=8 xIN short-circuit protection N protected without auxiliary release without auxiliary/alarm switch



| Model                                             |       |
|---------------------------------------------------|-------|
| Type of the driving mechanism / motor drive       | No    |
| Design of the overcurrent release                 | ETU20 |
| General technical data                            |       |
| Number of poles                                   | 4     |
| Size of the circuit-breaker                       | 3VL6  |
| Electrical endurance (switching cycles) / typical | 3 000 |

|                                                                                      |        |
|--------------------------------------------------------------------------------------|--------|
| Usage category                                                                       | A      |
| Performance class for circuit breaker                                                | N      |
| Mechanical service life (switching cycles) / typical                                 | 10 000 |
| Reference code / acc. to DIN 40719 extended according to IEC 204-2 / acc. to IEC 750 | Q      |
| Operating frequency / maximum                                                        | 60 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  |

## Protection class

|                                                |      |
|------------------------------------------------|------|
| Protection class IP                            | IP20 |
| Protective function of the overcurrent release | LSIN |

## Electricity

|                                                                      |         |
|----------------------------------------------------------------------|---------|
| Operating current / at 45 °C / rated value                           | 800 A   |
| Continuous current / rated value                                     | 800 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       | 800 A   |
| • of instantaneous short-circuit trip unit / initial value           | 6 400 A |
| • of instantaneous short-circuit trip unit / Full-scale value        | 6 400 A |

## Main circuit

|                                                         |       |
|---------------------------------------------------------|-------|
| Operating frequency                                     |       |
| • 1 / rated value                                       | 50 Hz |
| • 2 / rated value                                       | 60 Hz |
| 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 |
| Operating current                                       |       |
| • at 40 °C / rated value                                | 800 A |
| • at 50 °C / rated value                                | 800 A |
| • at 55 °C / rated value                                | 760 A |
| • at 60 °C / rated value                                | 760 A |

|                          |       |
|--------------------------|-------|
| • at 65 °C / rated value | 640 A |
| • at 70 °C / rated value | 640 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/generator protection |
|---------------------|-----------------------------|

#### Adjustable parameters

|                                                                                                       |         |
|-------------------------------------------------------------------------------------------------------|---------|
| Adjustable pick-up value current / of the short-time delayed short-circuit release / Full-scale value | 5 600 A |
| Adjustable pick-up value current / of the current-dependent overload release / initial value          | 320 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 | Yes        |
| • Overload protection                                       | Yes        |

#### Short circuit

|                                                           |       |
|-----------------------------------------------------------|-------|
| Operational short-circuit current breaking capacity (Ics) |       |
| • at 240 V / rated value                                  | 65 kA |
| • at 415 V / rated value                                  | 55 kA |
| • at 500 V / rated value                                  | 20 kA |
| • at 690 V / rated value                                  | 10 kA |
| Maximum short-circuit current breaking capacity (Icu)     |       |
| • at 240 V / rated value                                  | 65 kA |
| • at 415 V / rated value                                  | 55 kA |
| • at 440 V / rated value                                  | 35 kA |
| • at 480 V / acc. to NEMA / rated value                   | 25 kA |

|                                         |       |
|-----------------------------------------|-------|
| • at 500 V / rated value                | 25 kA |
| • at 600 V / acc. to NEMA / rated value | 20 kA |
| • at 690 V / rated value                | 20 kA |

## Connections

|                                                                       |                              |
|-----------------------------------------------------------------------|------------------------------|
| Arrangement of electrical connectors / for main current circuit       | front side                   |
| <b>Type of connectable conductor cross-sections</b>                   |                              |
| • for auxiliary contacts / solid                                      | 0.75 ... 1.5 mm <sup>2</sup> |
| • for auxiliary contacts / finely stranded / with core end processing | 0,75 ... 1.0 mm <sup>2</sup> |
| Type of electrical connection / for main current circuit              | screw-type terminals         |

## Mechanical Design

|               |                |
|---------------|----------------|
| Height        | 406.5 mm       |
| Width         | 253.5 mm       |
| Depth         | 176.5 mm       |
| Mounting type | fixed mounting |

## Environmental conditions

|                              |        |
|------------------------------|--------|
| Ambient temperature          |        |
| • during operation / minimum | -25 °C |
| • during operation / maximum | 70 °C  |
| • during storage / minimum   | -40 °C |
| • during storage / maximum   | 80 °C  |

## Certificates

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

## General Product Approval

## EMC

## Declaration of Conformity



[Miscellaneous](#)

[TSE](#)



## Test Certificates

## Shipping Approval

## other

[Special Test Certificate](#)



[Miscellaneous](#)

[Environmental Confirmations](#)

[Confirmation](#)

## 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=3VL6780-1TF46-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VL6780-1TF46-0AA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VL6780-1TF46-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL6780-1TF46-0AA0)

### **CAX-Online-Generator**

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

### **Tender specifications**

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