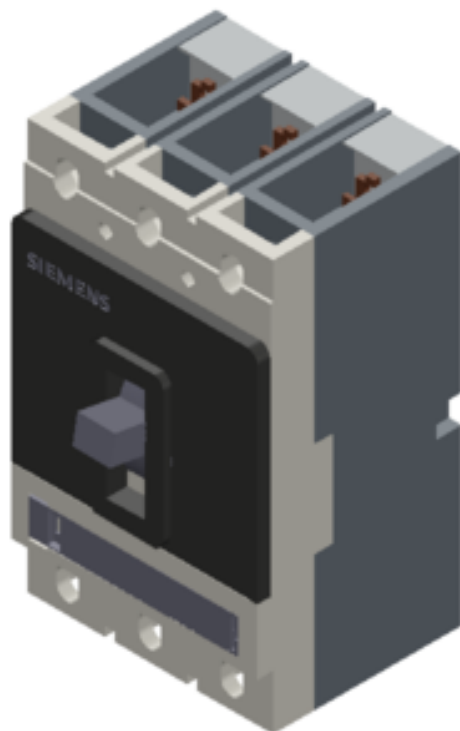




CIRCUIT-BREAKER VL 160L VERY HIGH BREAKING CAPACITY ICU= 100 KA, 415 V AC 3-POLE, MOTOR PROTECTION OVERCURRENT TRIGGER ETU30M, LI IN=160 A, NOM. CURRENT TC= 10 A ... 30, INERTIA CLASS II= 6 ... 11 X IN, SHORT-CIRCUIT PROTECTION WITHOUT AUXILIARY RELEASE

| Model                                                                                   |     |        |
|-----------------------------------------------------------------------------------------|-----|--------|
| Type of the driving mechanism / motor drive                                             |     | No     |
| Design of the overcurrent release                                                       |     | ETU30M |
| General technical data                                                                  |     |        |
| Number of poles                                                                         |     | 3      |
| Size of the circuit-breaker                                                             |     | 3VL2   |
| 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  | 160              |
| Derating temperature / for the rated value of the continuous current | °C | 50               |
| <b>Adjustable response value current</b>                             |    |                  |
| • of the current-dependent overload release / Full-scale value       | A  | 160              |
| • of the instantaneous short-circuit release / initial value         | A  | 960              |
| • of the instantaneous short-circuit release / Full-scale value      | A  | 1 760            |
| <b>Main circuit</b>                                                  |    |                  |
| <b>Operating frequency</b>                                           |    |                  |
| • 1 / rated value                                                    | Hz | 50               |
| • 2 / rated value                                                    | Hz | 60               |
| <b>Operating power / at AC-3</b>                                     |    |                  |
| • at 230 V / rated value                                             | kW | 29.4             |
| • at 400 V / rated value                                             | kW | 88.7             |
| <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  | 160              |
| • at 50 °C / rated value                                             | A  | 160              |
| • at 55 °C / rated value                                             | A  | 152              |
| • at 60 °C / rated value                                             | A  | 152              |
| • at 65 °C / rated value                                             | A  | 128              |
| • at 70 °C / rated value                                             | A  | 128              |
| <b>Auxiliary circuit</b>                                             |    |                  |
| Number of CO contacts / for auxiliary contacts                       |    | 0                |
| Number of NC contacts / for auxiliary contacts                       |    | 0                |
| Number of NO contacts / for auxiliary contacts                       |    | 0                |
| <b>Suitability</b>                                                   |    |                  |
| <b>Suitability for use</b>                                           |    | Motor Protection |

## Adjustable parameters

**Adjustable response value current / of the current-dependent overload release / initial value**

A 64

## Product details

### Product component

- Trip indicator
- Auxiliary switch
- Voltage trigger
- undervoltage release
- undervoltage release with leading contact

No

No

No

No

No

Product expansion / optional / motor drive

Yes

## Product function

### Product function

- of the thermal overload release
- Ground fault protection
- for neutral conductors / Short-circuit and overload proof
- Overload protection

adjustable

No

No

Yes

## Short circuit

### Operational short-circuit current breaking capacity (Ics)

- at 240 V / rated value
- at 415 V / rated value
- at 500 V / rated value
- at 690 V / rated value

kA 150  
kA 75  
kA 38  
kA 6

### Maximum short-circuit current breaking capacity (Icu)

- at 240 V / rated value
- at 415 V / rated value
- at 440 V / rated value
- at 480 V / acc. to NEMA / rated value
- at 500 V / rated value
- at 600 V / acc. to NEMA / rated value
- at 690 V / rated value

kA 200  
kA 100  
kA 75  
kA 75  
kA 50  
kA 12  
kA 12

## Connections

Arrangement of electrical connectors / for main current circuit

front side

Type of connectable conductor cross-sections

- for main contacts
  - with flexible busbar
  - solid
  - finely stranded / with core end processing

12 x 10 mm  
2.5 ... 95 mm<sup>2</sup>  
2.5 ... 50 mm<sup>2</sup>

|                                                          |                              |
|----------------------------------------------------------|------------------------------|
| — stranded                                               | 2.5 ... 95 mm <sup>2</sup>   |
| • for auxiliary contacts                                 |                              |
| — solid                                                  | 0.75 ... 1.5 mm <sup>2</sup> |
| — 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            | mm | 174.5          |
| Width             | mm | 104.5          |
| Depth             | mm | 106.5          |
| Mounting type     |    | fixed mounting |

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

| Certificates               |  |                                       |
|----------------------------|--|---------------------------------------|
| Certificate of suitability |  | IEC, very high switching capacity (L) |
| Equipment marking          |  |                                       |
| • acc. to DIN EN 61346-2   |  | Q                                     |

| General Product Approval | EMC | Declaration of Conformity |
|--------------------------|-----|---------------------------|
|--------------------------|-----|---------------------------|



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| Test Certificates | Shipping Approval | other |
|-------------------|-------------------|-------|
|-------------------|-------------------|-------|

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n](#)



[Umweltbestätigung](#)

| other                                                 |
|-------------------------------------------------------|
| <a href="#">Bestätigungen</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/3VL27163SS360AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VL27163SS360AA0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VL27163SS360AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL27163SS360AA0)

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

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

### **Tender specifications**

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

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