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CIRCUIT-BREAKER VL160X H HIGH BREAKING CAPACITY ICU=70KA / 415 V AC 3 POLE, LINE PROTECTION OVERCURRENT RELEASE TM, LI IN=20A, RATED CURRENT IR=20A, OVERLOAD II=300A, SHORT-CIRCUIT

**General technical data:**

|  |     |                   |
|--|-----|-------------------|
| <b>Number of poles</b>   |     | 3                 |
| <b>Design of the overcurrent release</b>                       |     | TM                |
| <b>Acceptability for application</b>                           |     | system protection |
| <b>Electrical operating cycles as operating time / typical</b> |     | 10,000            |
| <b>Mechanical operating cycles as operating time / typical</b> |     | 20,000            |
| <b>Active power loss / maximum</b>                             | W   | 70                |
| <b>Product component</b>                                       |     |                   |
| • auxiliary switch   |     | No                |
| • Voltage trigger  |     | No                |
| • undervoltage release mechanism                               |     | No                |
| • undervoltage release with leading contact                    |     | No                |
| <b>Product function</b>  |     |                   |
| • of the thermal overload release                              |     | adjustable        |
| • ground-fault protection                                      |     | No                |
| • for zero conductors / short-circuit and overload protection  |     | No                |
| • overload protection  |     | Yes               |
| <b>Operating cycles / maximum</b>                              | 1/s | 120               |
| <b>Protection class IP</b>                                     |     | IP20              |

|   |    |         |
|---|----|---------|
| <b>Protective function of the overcurrent release</b> |    | LI      |
| <b>Impulse voltage resistance / rated value</b>       | kV | 8       |
| <b>Ambient temperature</b>                            |    |         |
| • during operating                                    |    |         |
| • minimum   | °C | -25 ... |
| • maximum   | °C | 70      |
| • during storage                                      |    |         |
| • minimum   | °C | -40     |
| • maximum   | °C | 50      |

#### Main circuit:

|   |    |      |
|---|----|------|
| <b>Insulation voltage / for AC / rated value</b>                            | V  | 800  |
| <b>Operating frequency</b>  |    |      |
| • 1 / rated value   | Hz | 50   |
| • 2 / rated value   | Hz | 60   |
| <b>Item designation</b>   |    |      |
| • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750  |    | Q    |
| • according to DIN EN 61346-2   |    | Q    |
| <b>Operating voltage</b>  |    |      |
| • for main current circuit  |    |      |
| • at 50 Hz / for AC   |    |      |
| • maximum   | V  | 690  |
| • at 60 Hz / for AC   |    |      |
| • maximum   | V  | 690  |
| • for DC  |    |      |
| • maximum   | V  | 500  |
| <b>Operating current</b>  |    |      |
| • at 40 °C / rated value  | A  | 20   |
| • at 50 °C / rated value  | A  | 20   |
| • at 60 °C / rated value  | A  | 18.6 |
| • at 70 °C / rated value  | A  | 17.2 |
| <b>Continuous current / rated value</b>                                     | A  | 20   |
| <b>Derating temperature / for the rated value of the continuous current</b> | °C | 50   |

#### Auxiliary circuit:

|   |  |   |
|---|--|---|
| <b>Number of NC contacts / for auxiliary contacts</b> |  | 0 |
| <b>Number of NO contacts / for auxiliary contacts</b> |  | 0 |

#### Short-circuit:

|                                    |  |  |
|------------------------------------|--|--|
| <b>Adjustable response current</b> |  |  |
|------------------------------------|--|--|

|   |    |         |
|---|----|---------|
| <ul style="list-style-type: none"> <li>• of the current-dependent overload release <ul style="list-style-type: none"> <li>• initial value</li> <li>• final value</li> </ul> </li> <li>• of the non-delayed short-circuit release <ul style="list-style-type: none"> <li>• initial value</li> <li>• final value</li> </ul> </li> </ul> | A  | 16 ...  |
|   | A  | 20      |
|   | A  | 300 ... |
|   | A  | 300     |
| <b>Breaking capacity limit short-circuit current (I<sub>cu</sub>) / at 415 V / rated value</b>  | kA | 70      |

#### Installation/mounting/dimensions:

|                         |    |                |
|-------------------------|----|----------------|
| <b>Type of mounting</b> |    | fixed mounting |
| <b>Height</b>           | mm | 157.5          |
| <b>Width</b>            | mm | 104.5          |
| <b>Depth</b>            | mm | 106.5          |

#### Connections:

|   |  |  |
|---|--|--|
| <b>Arrangement of electrical connectors / for main current circuit</b>  |  | front side   |
| <b>Design of the electrical connection / for main current circuit</b>   |  | box terminals  |
| <b>Type of the connectable conductor cross-section</b>  |  |  |
| <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>• with flexible busbar</li> <li>• solid</li> <li>• finely stranded / with conductor end processing</li> <li>• stranded</li> </ul> </li> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded / with conductor end processing</li> </ul> </li> </ul> |  | 12 x 10 mm<br>2,5 ... 95 mm <sup>2</sup><br>2,5 ... 50 mm <sup>2</sup><br>2,5 ... 95 mm <sup>2</sup><br>0,75 ... 1.5 mm <sup>2</sup><br>0.75 ... 1.0 mm <sup>2</sup> |

#### Certificates/approvals:

#### Further information:

##### Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/lowvoltage/catalogs>

##### Industry Mall (Online ordering system)

<http://www.siemens.com/lowvoltage/mall>

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

<http://support.automation.siemens.com/WW/view/en/3VL1702-2DD33-0AA0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VL1702-2DD33-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL1702-2DD33-0AA0)

##### CAX-Online-Generator

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

last change:

Feb 8, 2013