

circuit breaker VL160X N standard breaking capacity I<sub>cu</sub>=55kA, 415V AC 3-pole, line protection Electronic Trip Unit TM, LI I<sub>n</sub>=80A, rated current I<sub>r</sub>=80A, overload protection II=1000A, short-circuit prot. without auxiliary release without auxiliary/alarm switch

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
mechanical service life (operating cycles) typical	20 000
electrical endurance (operating cycles) typical	10 000
utilization category	A
performance class for circuit breaker	N
reference code according to DIN 40719 extended according to IEC 204-2 according to IEC 750	Q
operating frequency maximum	120 1/s
Voltage	
Rated operational voltage U <sub>e</sub> max.	690 V
<ul style="list-style-type: none"> <li>insulation voltage rated value</li> <li>insulation voltage (U<sub>i</sub>) at AC rated value</li> </ul>	800 V
surge voltage resistance rated value	8 kV
operating voltage	
<ul style="list-style-type: none"> <li>rated value maximum</li> <li>for main current circuit at AC at 50 Hz maximum</li> <li>for main current circuit at AC at 60 Hz maximum</li> <li>for main current circuit at DC maximum</li> </ul>	690 V 690 V 690 V 500 V
Protection class	
protection class IP	IP20
protection function of the overcurrent release	LI
Current	
operational current	
<ul style="list-style-type: none"> <li>at 40 °C rated value</li> <li>at 45 °C rated value</li> <li>at 50 °C rated value</li> <li>at 55 °C rated value</li> <li>at 60 °C rated value</li> <li>at 65 °C rated value</li> <li>at 70 °C rated value</li> </ul>	80 A 80 A 80 A 74.4 A 74.4 A 68.8 A 68.8 A
continuous current rated value	80 A
derating temperature for the rated value of the continuous current	50 °C
adjustable current response value current	
<ul style="list-style-type: none"> <li>of the current-dependent overload release full-scale value</li> <li>of instantaneous short-circuit trip unit minimum</li> <li>of instantaneous short-circuit trip unit maximum</li> </ul>	80 A 1 000 A 1 000 A
Main circuit	
operating frequency	
<ul style="list-style-type: none"> <li>1 rated value</li> <li>2 rated value</li> </ul>	50 Hz 60 Hz
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
<b>Suitability</b>	
suitability for use	system protection
<b>Adjustable parameters</b>	
adjustable current response value current of the current-dependent overload release initial value	80 A
<b>Product details</b>	
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
<b>Product function</b>	
product function	
• of thermal overload trip unit	fixed
• grounding protection	No
• for neutral conductors short-circuit and overload proof	No
• overload protection	Yes
<b>Short circuit</b>	
operating 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	14 kA
• at 690 V rated value	4 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	25 kA
• at 480 V according to NEMA rated value	25 kA
• at 500 V rated value	18 kA
• at 600 V according to NEMA rated value	8 kA
• at 690 V rated value	8 kA
<b>Connections</b>	
arrangement of electrical connectors for main current circuit	front side
type of connectable conductor cross-sections for main contacts	
• with flexible busbar	12 x 10 mm
• solid	2.5 ... 95 mm <sup>2</sup>
• finely stranded with core end processing	2.5 ... 50 mm <sup>2</sup>
• stranded	2.5 ... 95 mm <sup>2</sup>
type of connectable conductor cross-sections 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	box terminal
<b>Mechanical Design</b>	
height	157.5 mm
width	104.5 mm
depth	106.5 mm
fastening method	fixed mounting
<b>Environmental conditions</b>	
ambient temperature during operation	
• minimum	0 °C
• maximum	70 °C
ambient temperature during storage	
• minimum	-40 °C
• maximum	80 °C
<b>General Product Approval</b>	

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**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=3VL1708-1DA33-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VL1708-1DA33-0AA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VL1708-1DA33-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL1708-1DA33-0AA0)

CAx-Online-Generator

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

Tender specifications

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



