

circuit breaker VL160X N standard breaking capacity I<sub>cu</sub>=55kA, 415V AC 3-pole, line protection Trip Unit TM, LI I<sub>n</sub>=40A, rated current I<sub>r</sub>=32...40A, overload prot. II=600A, short-circuit prot. without auxiliary release Auxiliary/alarm switch mounting kit 2 AUX (1 NO+1 NC)+1 AS (1 NO)

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 (switching cycles) / typical	20 000
electrical endurance (switching 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
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>	40 A
continuous current / rated value	40 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>	40 A
Main circuit	
operating frequency <ul style="list-style-type: none"> <li>1 / rated value</li> <li>2 / rated value</li> </ul>	50 Hz
Auxiliary circuit	

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>	
suitability for use	system protection
<b>Adjustable parameters</b>	
adjustable current response value current / of the current-dependent overload release / initial value	32 A
<b>Product details</b>	
product component	
• trip indicator	Yes
• auxiliary switch	Yes
• 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	adjustable
• grounding protection	No
• for neutral conductors / short-circuit and overload proof	No
• overload protection	Yes
<b>Short circuit</b>	
breaking capacity operating short-circuit current (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
breaking capacity maximum short-circuit current (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
- maximum

-40 °C  
80 °C

### General Product Approval

[Miscellaneous](#)

[Confirmation](#)



[TSE](#)

[KC](#)



EMC

Declaration of Conformity

Test Certificates

Marine / Shipping



C-Tick



EG-Konf.

[UK Declaration of Conformity](#)

[Special Test Certificate](#)



ABS



BUREAU  
VERITAS

Marine / Shipping

other



LRS



PRS



RINA



RMRS



DNV-GL

[Environmental Confirmations](#)

other

[Miscellaneous](#)

[Confirmation](#)

[Miscellaneous](#)

### 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?mifb=3VL1704-1DD33-0AD1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VL1704-1DD33-0AD1>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mifb=3VL1704-1DD33-0AD1](http://www.automation.siemens.com/bilddb/cax_en.aspx?mifb=3VL1704-1DD33-0AD1)

CAX-Online-Generator

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

Tender specifications

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



