

circuit breaker VL160X N standard breaking capacity $I_{cu}=55\text{kA}$, 415V AC 4-pole, line protection Trip Unit TM, LI $I_n=40\text{A}$, rated current $I_r=40\text{A}$, overload protection $I_l=600\text{A}$, short-circuit prot. N unprotected 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	4
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_e / max.	690 V
- insulation voltage / rated value - insulation voltage (U_i) / at AC / rated value	800 V
surge voltage resistance / rated value	8 kV
operating voltage	
- rated value / maximum - for main current circuit / at AC / at 50 Hz / maximum - for main current circuit / at AC / at 60 Hz / maximum - for main current circuit / at DC / maximum	690 V 690 V 690 V 500 V
Protection class	
protection class IP	IP20
protection function of the overcurrent release	LI
Current	
operational current	
- at 40 °C / rated value - at 45 °C / rated value - at 50 °C / rated value - at 55 °C / rated value - at 60 °C / rated value - at 65 °C / rated value - at 70 °C / rated value	40 A 40 A 40 A 37.2 A 37.2 A 34.4 A 34.4 A
continuous current / rated value	40 A
derating temperature / for the rated value of the continuous current	50 °C
adjustable current response value current	
- of the current-dependent overload release / full-scale value - of instantaneous short-circuit trip unit / minimum - of instantaneous short-circuit trip unit / maximum	40 A 600 A 600 A
Main circuit	
operating frequency	
1 / rated value 2 / rated value	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
Suitability	
suitability for use	system protection
Adjustable parameters	
adjustable current response value current / of the current-dependent overload release / initial value	40 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	fixed
• grounding protection	No
• for neutral conductors / short-circuit and overload proof	No
• overload protection	Yes
Short circuit	
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
Connections	
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 ²
• finely stranded / with core end processing	2.5 ... 50 mm ²
• stranded	2.5 ... 95 mm ²
type of connectable conductor cross-sections / for auxiliary contacts	
• solid	0.75 ... 1.5 mm ²
• finely stranded / with core end processing	0.75 ... 1.0 mm ²
type of electrical connection / for main current circuit	box terminal
Mechanical Design	
height	157.5 mm
width	139.5 mm
depth	106.5 mm
fastening method	fixed mounting
Environmental conditions	
ambient temperature / during operation	
• minimum	0 °C
• maximum	70 °C

ambient temperature / during storage	
• minimum	-40 °C
• maximum	80 °C

General Product Approval

[Miscellaneous](#)

[Confirmation](#)



[TSE](#)

[KC](#)



EMC	Declaration of Conformity	Test Certificates	Marine / Shipping
-----	---------------------------	-------------------	-------------------



[UK Declaration of Conformity](#)

[Special Test Certificate](#)



Marine / Shipping	other
-------------------	-------



[Environmental Confirmations](#)

other

[Confirmation](#)

[Miscellaneous](#)

[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?mlfb=3VL1704-1EH43-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VL1704-1EH43-0AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL1704-1EH43-0AA0

CAX-Online-Generator

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

Tender specifications

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



