

circuit breaker VL160X N standard breaking capacity I_{cu}=55kA, 415V AC 4-pole, line protection Electronic Trip Unit TM, LI I_n=16A, rated current I_r=16A, overload protection II=300A, short-circuit prot. N unprotected Shunt release 110...127 V DC 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	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
<ul style="list-style-type: none"> insulation voltage / rated value insulation voltage (U_i) / at AC / rated value 	800 V
surge voltage resistance / rated value	8 kV
operating voltage	
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> 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 	16 A 16 A 16 A 14.8 A 14.8 A 13.8 A 13.8 A
continuous current / rated value	16 A
derating temperature / for the rated value of the continuous current	50 °C
adjustable current response value current	
<ul style="list-style-type: none"> of the current-dependent overload release / full-scale value of instantaneous short-circuit trip unit / minimum of instantaneous short-circuit trip unit / maximum 	16 A 300 A 300 A
Main circuit	
operating frequency	
<ul style="list-style-type: none"> 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	1
number of NO contacts / for auxiliary contacts	2
Suitability	
suitability for use	system protection
Adjustable parameters	
adjustable current response value current / of the current-dependent overload release / initial value	16 A
Product details	
product component	
<ul style="list-style-type: none"> • trip indicator • auxiliary switch • voltage trigger • undervoltage release • undervoltage release with leading contact 	<ul style="list-style-type: none"> Yes Yes Yes No No
product extension / optional / motor drive	Yes
Product function	
product function	
<ul style="list-style-type: none"> • of thermal overload trip unit • grounding protection • for neutral conductors / short-circuit and overload proof • overload protection 	<ul style="list-style-type: none"> fixed No No Yes
Short circuit	
breaking capacity operating short-circuit current (Ics)	
<ul style="list-style-type: none"> • at 240 V / rated value • at 415 V / rated value • at 500 V / rated value • at 690 V / rated value 	<ul style="list-style-type: none"> 65 kA 55 kA 14 kA 4 kA
breaking capacity maximum short-circuit current (Icu)	
<ul style="list-style-type: none"> • at 240 V / rated value • at 415 V / rated value • at 440 V / rated value • at 480 V / according to NEMA / rated value • at 500 V / rated value • at 600 V / according to NEMA / rated value • at 690 V / rated value 	<ul style="list-style-type: none"> 65 kA 55 kA 25 kA 25 kA 18 kA 8 kA 8 kA
Connections	
arrangement of electrical connectors / for main current circuit	front side
type of connectable conductor cross-sections / for main contacts	
<ul style="list-style-type: none"> • with flexible busbar • solid • finely stranded / with core end processing • stranded 	<ul style="list-style-type: none"> 12 x 10 mm 2.5 ... 95 mm² 2.5 ... 50 mm² 2.5 ... 95 mm²
type of connectable conductor cross-sections / for auxiliary contacts	
<ul style="list-style-type: none"> • solid • finely stranded / with core end processing 	<ul style="list-style-type: none"> 0.75 ... 1.5 mm² 0,75 ... 1.0 mm²
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	
<ul style="list-style-type: none"> • 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 Conformations](#)

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?mlfb=3VL1796-1EH43-8KD1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VL1796-1EH43-8KD1>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL1796-1EH43-8KD1

CAx-Online-Generator

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

Tender specifications

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



