



CIRCUIT-BREAKER VL160X N STANDARD
 BREAKING CAPACITY ICU=55KA / 415 V AC 3 POLE,
 LINE PROTECTION OVERCURRENT RELEASE TM, LI
 IN=20A, RATED CURRENT IR=20A, OVERLOAD
 II=300A, SHORT-CIRCUIT

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
Electrical endurance (switching cycles) / typical		10 000
Usage category		A
Performance class for circuit breaker		N
Mechanical service life (switching cycles) / typical		20 000
Equipment marking / acc. to DIN 40719 extended according to IEC 204-2 / acc. to IEC 750		Q
Operating frequency / maximum	1/s	120
Voltage		
Rated operational voltage U_e / max.	V	690
Insulation voltage		
• rated value	V	800
• at AC / rated value	V	800

Surge voltage resistance / rated value	kV	8
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Protection class

Protection class IP		IP20
Protective function of the overcurrent release		LI

Electricity

Continuous current / rated value	A	20
Derating temperature / for the rated value of the continuous current	°C	50
Adjustable pick-up value current		
• of the current-dependent overload release / Full-scale value	A	20
• of instantaneous short-circuit trip unit / initial value	A	300
• of instantaneous short-circuit trip unit / Full-scale value	A	300

Main circuit

Operating frequency		
• 1 / rated value	Hz	50
• 2 / rated value	Hz	60
Operating voltage		
• for main current circuit / at AC / at 50 Hz / maximum	V	690
• for main current circuit / at AC / at 60 Hz / maximum	V	690
• for main current circuit / at DC / maximum	V	500
Operating current		
• at 40 °C / rated value	A	20
• at 50 °C / rated value	A	20
• at 55 °C / rated value	A	18.6
• at 60 °C / rated value	A	18.6
• at 65 °C / rated value	A	17.2
• at 70 °C / rated value	A	17.2

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
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Adjustable parameters

Adjustable pick-up value current / of the current-dependent overload release / initial value	A	20
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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
• Ground fault protection		No
• for neutral conductors / Short-circuit and overload proof		No
• Overload protection		Yes

Short circuit

Operational short-circuit current breaking capacity (Ics)		
• at 240 V / rated value	kA	65
• at 415 V / rated value	kA	55
• at 500 V / rated value	kA	14
• at 690 V / rated value	kA	4
Maximum short-circuit current breaking capacity (Icu)		
• at 240 V / rated value	kA	65
• at 415 V / rated value	kA	55
• at 440 V / rated value	kA	25
• at 480 V / acc. to NEMA / rated value	kA	25
• at 500 V / rated value	kA	18
• at 600 V / acc. to NEMA / rated value	kA	8
• at 690 V / rated value	kA	8

Connections

Arrangement of electrical connectors / for main current circuit		front side
Type of electrical connection / for main current circuit		box terminals

Mechanical Design

Height	mm	157.5
Width	mm	104.5
Depth	mm	106.5
Mounting type		fixed mounting

Environmental conditions

Ambient temperature		
• during operation / minimum	°C	0
• during operation / maximum	°C	70
• during storage / minimum	°C	-40
• during storage / maximum	°C	80

Certificates

Certificate of suitability		IEC, standard switching capacity (N)
Equipment marking		Q
• acc. to DIN EN 61346-2		

General Product Approval

 CCC	sonstig		TSE	KTL	 C-TICK
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Declaration of Conformity	Test Certificates	Shipping Approval
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 EG-Konf.	spezielle Prüfbescheinigunge n	 ABS  BUREAU VERITAS  DNV  GL
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Shipping Approval	other
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 LRS  PRS  RINA  RMRS	Bestätigungen Umweltbestätigung
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other

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Further information

- Information- and Downloadcenter (Catalogs, Brochures,...)**
<http://www.siemens.com/lowvoltage/catalogs>
- Industry Mall (Online ordering system)**
<https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VL17021DA330AA0>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
<http://support.automation.siemens.com/WW/view/en/3VL17021DA330AA0/all>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**
http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VL17021DA330AA0

CAx-Online-Generator
<http://www.siemens.com/cax>

Tender specifications
<http://ausschreibungstexte.siemens.com/tiplv>

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