

CIRCUIT-BREAKER VL 160N STANDARD BREAKING CAPACITY ICU=55KA / 415 V AC 3 POLE, LINE PROTECTION OVERCURRENT RELEASE TM, LI IN=50A, RATED CURRENT IR=40-50A, OVERLOAD II=300-600A, 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		3VL2
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	50
Derating temperature / for the rated value of the continuous current	°C	50
Adjustable pick-up value current		
<ul style="list-style-type: none"> • of the current-dependent overload release / Full-scale value 	A	50
<ul style="list-style-type: none"> • of instantaneous short-circuit trip unit / initial value 	A	300
<ul style="list-style-type: none"> • of instantaneous short-circuit trip unit / Full-scale value 	A	600

Main circuit

Operating frequency		
<ul style="list-style-type: none"> • 1 / rated value 	Hz	50
<ul style="list-style-type: none"> • 2 / rated value 	Hz	60
Operating voltage		
<ul style="list-style-type: none"> • for main current circuit / at AC / at 50 Hz / maximum 	V	690
<ul style="list-style-type: none"> • for main current circuit / at AC / at 60 Hz / maximum 	V	690
<ul style="list-style-type: none"> • for main current circuit / at DC / maximum 	V	500
Operating current		
<ul style="list-style-type: none"> • at 40 °C / rated value 	A	50
<ul style="list-style-type: none"> • at 50 °C / rated value 	A	50
<ul style="list-style-type: none"> • at 55 °C / rated value 	A	46.5
<ul style="list-style-type: none"> • at 60 °C / rated value 	A	46.5
<ul style="list-style-type: none"> • at 65 °C / rated value 	A	43
<ul style="list-style-type: none"> • at 70 °C / rated value 	A	43

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	40
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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		adjustable
• 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	20
• at 690 V / rated value	kA	6
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	25
• at 600 V / acc. to NEMA / rated value	kA	12
• at 690 V / rated value	kA	12

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	174.5
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	EMC
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	  C-TICK

Declaration of Conformity	Test Certificates	Shipping Approval			
 EG-Konf.	spezielle Prüfbescheinigunge n	 ABS	 BUREAU VERITAS	 DNV	 GL

Shipping Approval	other				
 LRS	 PRS	 RINA	 RMRS	Umweltbestätigung	Bestätigungen

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/3VL27051DC330AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VL27051DC330AA0/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VL27051DC330AA0

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

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

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