



CIRCUIT-BREAKER VL 160N STANDARD BREAKING CAPACITY ICU=55KA / 415 V AC 3 POLE, LINE PROTECTION ELECTRONIC TRIP UNIT ETU20, LSI IN=160A, RATED CURRENT IR=64-160A, OVERLOAD ISD=1,5TO10XIR, II=11XIN SHORT-CIRCUIT WITHOUT AUXILIARY RELEASE

Model		
Type of the driving mechanism / motor drive		No
Design of the overcurrent release		ETU20
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		LSI

Electricity

Continuous current / Rated value	A	160
Derating temperature / for the rated value of the continuous current	°C	50
Adjustable response value current		
<ul style="list-style-type: none"> • of the current-dependent overload release / Full-scale value 	A	160
<ul style="list-style-type: none"> • of the instantaneous short-circuit release / initial value 	A	1 760
<ul style="list-style-type: none"> • of the instantaneous short-circuit release / Full-scale value 	A	1 760

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	160
<ul style="list-style-type: none"> • at 50 °C / Rated value 	A	160
<ul style="list-style-type: none"> • at 55 °C / Rated value 	A	152
<ul style="list-style-type: none"> • at 60 °C / Rated value 	A	152
<ul style="list-style-type: none"> • at 65 °C / Rated value 	A	128
<ul style="list-style-type: none"> • at 70 °C / Rated value 	A	128

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/generator protection
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Adjustable parameters

Adjustable response value current / of the current-dependent overload release / initial value	A	64
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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 expansion / optional / motor drive		Yes

Product function

Product function		
• of the thermal overload release		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 connectable conductor cross-section		
• 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
• 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 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	-25
• 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		
• acc. to DIN EN 61346-2		Q

General Product Approval	EMC	Declaration of Conformity
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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/3VL27161SE330AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VL27161SE330AA0/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL27161SE330AA0

CAX-Online-Generator

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

Tender specifications

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

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