



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

Model		
Type of the driving mechanism / motor drive		No
Design of the overcurrent release		ETU20
General technical data		
Number of poles		3
Tripping characteristics / Upper tolerance band		AK_VL_ETU12_LIG_u.txt
Tripping characteristics / Lower tolerance band		AK_VL_ETU22_LSIGN_o.txt
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 Ue / max.	V	690
Insulation voltage		

• Rated value	V	800
• at AC / Rated value	V	800
Surge voltage resistance / Rated value	kV	8

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		
• of the current-dependent overload release / Full-scale value	A	160
• of the instantaneous short-circuit release / initial value	A	1 760
• of the instantaneous short-circuit release / Full-scale value	A	1 760

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	160
• at 50 °C / Rated value	A	160
• at 55 °C / Rated value	A	152
• at 60 °C / Rated value	A	152
• at 65 °C / Rated value	A	128
• at 70 °C / Rated value	A	128

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/generator protection
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Adjustable parameters

Adjustable response value current / of the current-dependent overload release / initial value	A	64
Product details		
Product component		
• Trip indicator		Yes
• Auxiliary switch		Yes
• Voltage trigger		Yes
• 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

— finely stranded / with core end processing

0.75 ... 1.5 mm²

0,75 ... 1.0 mm²

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
- during operation / maximum
- during storage / minimum
- during storage / maximum

°C

-25

°C

70

°C

-40

°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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[TSE](#)



Test
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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/3VL27161SE338TD1>

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

<http://support.automation.siemens.com/WW/view/en/3VL27161SE338TD1/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL27161SE338TD1

CAX-Online-Generator

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

Tender specifications

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

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