

CIRCUIT-BREAKER VL 1600N STANDARD
 BREAKING CAPACITY ICU=55KA / 415 V AC 3 POLE,
 LINE PROTECTION ELECTRONIC TRIP UNIT ETU20,
 LSI IN=1600A, RATED CURRENT IR=640-1600A,
 OVERLOAD ISD=1,5TO8XIR, II=9XIN 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		3VL8
Electrical endurance (switching cycles) / typical		1 500
Usage category		A
Performance class for circuit breaker		N
Mechanical service life (switching cycles) / typical		3 000
Equipment marking / acc. to DIN 40719 extended according to IEC 204-2 / acc. to IEC 750		Q
Operating frequency / maximum	1/s	30

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

Dissipation

Active power loss		
• maximum	W	260

Electricity

Continuous current / Rated value	A	1 600
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	1 600
• of the instantaneous short-circuit release / initial value	A	14 400
• of the instantaneous short-circuit release / Full-scale value	A	14 400

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
Operating current		
• at 40 °C / Rated value	A	1 600
• at 50 °C / Rated value	A	1 600
• at 55 °C / Rated value	A	1 520
• at 60 °C / Rated value	A	1 520
• at 65 °C / Rated value	A	1 280
• at 70 °C / Rated value	A	1 280

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
Adjustable parameters		
Adjustable response value current / of the current-dependent overload release / initial value	A	640
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	35
• at 415 V / Rated value	kA	28
• at 500 V / Rated value	kA	20
• at 690 V / Rated value	kA	10
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	35
• 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	20
• at 690 V / Rated value	kA	20
Connections		
Arrangement of electrical connectors / for main current circuit		front side
Type of connectable conductor cross-section		
• for auxiliary contacts		
— solid		0.75 ... 1.5 mm ²

— finely stranded / with core end processing

0,75 ... 1.0 mm²

Type of electrical connection / for main current circuit

without connection accessories

Mechanical Design

Height	mm	406.5
Width	mm	228.5
Depth	mm	333.5
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



CCC



CSA

[sonstig](#)



[TSE](#)



C-TICK

Declaration of Conformity

Test Certificates

Shipping Approval



EG-Konf.

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DNV



GL



RINA



RMRS

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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/3VL87161SE300AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VL87161SE300AA0/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL87161SE300AA0

CAX-Online-Generator

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

Tender specifications

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

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