

CIRCUIT-BREAKER VL 1600N STANDARD
 BREAKING CAPACITY ICU=55KA / 415 V AC 3 POLE,
 LINE PROTECTION ELECTRONIC TRIP UNIT ETU12,
 LIG 3PHASES/3WIRES IN=1600A, RATED CURRENT
 IR=640-1600A, OVERLOAD II=1,25TO9XIN, SHORT
 CIRCUIT

Model		
Type of the driving mechanism / motor drive		No
Design of the overcurrent release		ETU12
General technical data		
Number of poles		3
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		LIG
Dissipation		
Power loss [W]		
• 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	2 000
• 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 protection

Adjustable parameters

Adjustable response value current / of the current-dependent overload release / initial value	A	640
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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
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Product function

Product function

• of the thermal overload release	adjustable
• Ground fault protection	Yes
• 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
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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 mm ²

Type of electrical connection / for main current circuit	without connection accessoires
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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	°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		Q
• acc. to DIN EN 61346-2		

General Product Approval				EMC
 CCC	 CSA	sonstig	 EAC	TSE  C-TICK

Declaration of Conformity	Test Certificates	Shipping Approval			
 EG-Konf.	spezielle Prüfbescheinigungen n	 DNV	 GL	 RINA	 RMRS

other		
Bestätigungen	Umweltbestätigung	sonstig

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/3VL87161SL300AA0
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)	http://support.automation.siemens.com/WW/view/en/3VL87161SL300AA0/all
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)	http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL87161SL300AA0

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

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

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