

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
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
<b>Protection class</b>		
Protection class IP		IP20
Protective function of the overcurrent release		LSI
<b>Dissipation</b>		
Power loss [W]		
• maximum	W	260
<b>Electricity</b>		
Continuous current / rated value	A	1 600
Derating temperature / for the rated value of the continuous current	°C	50
<b>Adjustable pick-up value current</b>		
• of the current-dependent overload release / Full-scale value	A	1 600
• of instantaneous short-circuit trip unit / initial value	A	14 400
• of instantaneous short-circuit trip unit / Full-scale value	A	14 400
<b>Main circuit</b>		
<b>Operating frequency</b>		
• 1 / rated value	Hz	50
• 2 / rated value	Hz	60
<b>Operating voltage</b>		
• for main current circuit / at AC / at 50 Hz / maximum	V	690
• for main current circuit / at AC / at 60 Hz / maximum	V	690
<b>Operating current</b>		
• 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
<b>Auxiliary circuit</b>		
Number of CO contacts / for auxiliary contacts		0
Number of NC contacts / for auxiliary contacts		0
Number of NO contacts / for auxiliary contacts		0
<b>Suitability</b>		
Suitability for use		system/generator protection

## Adjustable parameters

<b>Adjustable pick-up value current / of the current-dependent overload release / initial value</b>	A	640
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## Product details

<b>Product component</b>		
• Trip indicator		No
• Auxiliary switch		No
• Voltage trigger		No
• undervoltage release		No
• undervoltage release with leading contact		No
<b>Product extension / optional / motor drive</b>		Yes

## Product function

<b>Product function</b>		
• of thermal overload trip unit		adjustable
• Ground fault protection		No
• for neutral conductors / Short-circuit and overload proof		No
• Overload protection		Yes

## Short circuit

<b>Operational short-circuit current breaking capacity (Ics)</b>		
• 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
<b>Maximum short-circuit current breaking capacity (Icu)</b>		
• 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 electrical connection / for main current circuit		without connection accessoires

## Mechanical Design

<b>Height</b>	mm	406.5
<b>Width</b>	mm	228.5
<b>Depth</b>	mm	333.5

Mounting type	fixed mounting
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### Environmental conditions

<b>Ambient temperature</b>		
• during operation / minimum	°C	-25
• during operation / maximum	°C	70
• during storage / minimum	°C	-40
• during storage / maximum	°C	80





### Certificates

<b>Certificate of suitability</b>	IEC, standard switching capacity (N)
<b>Equipment marking</b>	Q
• acc. to DIN EN 61346-2	

### General Product Approval

 CCC	 CSA	<a href="#">sonstig</a>	 EAC	<a href="#">TSE</a>	 C-TICK
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<b>Declaration of Conformity</b>	<b>Test Certificates</b>	<b>Shipping Approval</b>
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 EG-Konf.	<a href="#">spezielle Prüfbescheinigung</a> <a href="#">n</a>	 DNV	 GL	 RINA	 RMRS
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### other

<a href="#">sonstig</a>	<a href="#">Umweltbestätigung</a>	<a href="#">Bestätigungen</a>
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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](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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