



CIRCUIT-BREAKER VL 160L VERY HIGH BREAKING CAPACITY ICU=100KA / 415 V AC 4 POLE, LINE PROTECTION ELECTRONIC TRIP UNIT LCD ETU40, LI/LS/LSI IN=160A, RATED CURRENT IR=64-160A, OVERLOAD ISD=1,5TO10XIR, II=11XIN SHORT-CIRCUIT N PROTECTED WITHOUT AUXILIARY RELEASE

Model		
Type of the driving mechanism / motor drive		No
Design of the overcurrent release		LCD ETU40
General technical data		
Number of poles		4
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

<b>Protection class IP</b>		IP20
<b>Protective function of the overcurrent release</b>		LSIN

### Electricity

Continuous current / rated value	A	160
Derating temperature / for the rated value of the continuous current	°C	50
<b>Adjustable pick-up value current</b>		
<ul style="list-style-type: none"> <li>• of the current-dependent overload release / Full-scale value</li> </ul>	A	160
<ul style="list-style-type: none"> <li>• of instantaneous short-circuit trip unit / initial value</li> </ul>	A	200
<ul style="list-style-type: none"> <li>• of instantaneous short-circuit trip unit / Full-scale value</li> </ul>	A	1 760

### Main circuit

<b>Operating frequency</b>		
<ul style="list-style-type: none"> <li>• 1 / rated value</li> </ul>	Hz	50
<ul style="list-style-type: none"> <li>• 2 / rated value</li> </ul>	Hz	60
<b>Operating voltage</b>		
<ul style="list-style-type: none"> <li>• for main current circuit / at AC / at 50 Hz / maximum</li> </ul>	V	690
<ul style="list-style-type: none"> <li>• for main current circuit / at AC / at 60 Hz / maximum</li> </ul>	V	690
<ul style="list-style-type: none"> <li>• for main current circuit / at DC / maximum</li> </ul>	V	500
<b>Operating current</b>		
<ul style="list-style-type: none"> <li>• at 40 °C / rated value</li> </ul>	A	160
<ul style="list-style-type: none"> <li>• at 50 °C / rated value</li> </ul>	A	160
<ul style="list-style-type: none"> <li>• at 55 °C / rated value</li> </ul>	A	152
<ul style="list-style-type: none"> <li>• at 60 °C / rated value</li> </ul>	A	152
<ul style="list-style-type: none"> <li>• at 65 °C / rated value</li> </ul>	A	128
<ul style="list-style-type: none"> <li>• at 70 °C / rated value</li> </ul>	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

<b>Suitability for use</b>		system/generator protection
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### Adjustable parameters

<b>Adjustable pick-up value current / of the current-dependent overload release / initial value</b>	A	64
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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
Product extension / optional / motor drive		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		Yes
• Overload protection		Yes

## Short circuit

<b>Operational short-circuit current breaking capacity (Ics)</b>		
• at 240 V / rated value	kA	150
• at 415 V / rated value	kA	75
• at 500 V / rated value	kA	38
• at 690 V / rated value	kA	6
<b>Maximum short-circuit current breaking capacity (Icu)</b>		
• at 240 V / rated value	kA	200
• at 415 V / rated value	kA	100
• at 440 V / rated value	kA	75
• at 480 V / acc. to NEMA / rated value	kA	75
• at 500 V / rated value	kA	50
• 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 electrical connection / for main current circuit		box terminals

## Mechanical Design

<b>Height</b>	mm	174.5
<b>Width</b>	mm	139.5
<b>Depth</b>	mm	106.5
<b>Mounting type</b>		fixed mounting

## 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

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

<b>General Product Approval</b>	<b>EMC</b>	<b>Declaration of Conformity</b>
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<b>Test Certificates</b>	<b>Shipping Approval</b>	<b>other</b>
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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/3VL27163UJ430AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VL27163UJ430AA0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VL27163UJ430AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL27163UJ430AA0)

**CAX-Online-Generator**

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

**Tender specifications**

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

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