



CIRCUIT BREAKER 3VA2 IEC FRAME 160 BREAKING CAPACITY CLASS M ICU=55KA @ 415 V 4POLE, LINE PROTECTION ETU320, LI, IN=160A OVERLOAD PROTECTION IR=64A ...160A SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL PROTECTION ADJUSTABLE(OFF,50%,100%) BUSBAR CONNECTION

Model		
product brand name		SENTRON
Product designation		Molded case circuit breaker
Design of the product		Line protection
Product variations		Selective Applications
Ground fault monitoring version		Without
Design of the auxiliary release		without auxiliary release
Design of the auxiliary switch		Without
Design of the operating mechanism		toggle handle
Type of the driving mechanism / motor drive		No
Design of the overcurrent release		ETU320

General technical data		
Number of poles		4
Trip class / of the L-trip / with I <sup>2</sup> t characteristic / initial value		0.5
Trip class / of the L-trip / with I <sup>2</sup> t characteristic / Full-scale value		17
Electrical endurance (switching cycles)		12 000
<ul style="list-style-type: none"> <li>at AC-1 / at 380/415 V / at 50/60 Hz</li> </ul>		
circuit-breaker / Design		3VA
Mechanical service life (switching cycles) / typical		20 000

Voltage		
Insulation voltage / Rated value	V	800

Protection class		
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<b>Protection class IP</b>		IP40
Protection class IP / on the front		IP40
<b>Protective function of the overcurrent release</b>		LI

### Switching capacity

<b>Switching capacity class of the circuit breaker</b>		M
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### Dissipation

<b>Active power loss</b>		
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	W	25.5

### Electricity

<b>Continuous current / Rated value / maximum</b>	A	160
Continuous current / Rated value	A	160
Adjustable response value current / of the instantaneous short-circuit release / initial value	A	1.5

### Main circuit

<b>Operating voltage</b>		
<ul style="list-style-type: none"> <li>• with AC / at 50/60 Hz / Rated value</li> </ul>	V	690
<b>Operating current</b>		
<ul style="list-style-type: none"> <li>• at 40 °C / Rated value</li> <li>• at 50 °C / Rated value</li> <li>• at 60 °C / Rated value</li> <li>• at 65 °C / Rated value</li> <li>• at 70 °C / Rated value</li> </ul>	A	160
	A	160
	A	160
	A	160
	A	160

### Auxiliary circuit

<b>Number of NC contacts / for auxiliary contacts</b>		0
<b>Number of NO contacts / for auxiliary contacts</b>		0

### Suitability

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

<b>Adjustable response value current</b>		
<ul style="list-style-type: none"> <li>• of I-trip / Full-scale value</li> </ul>	A	10
<b>Adjustable response value current / of the current-dependent overload release / initial value</b>	A	0.394

### Product details

<b>Product component</b>		
<ul style="list-style-type: none"> <li>• Trip indicator</li> <li>• display</li> <li>• undervoltage release</li> </ul>		No
		No
		No
<b>Product property</b>		

• for neutral conductors / upgradeable/retrofitable / Short-circuit and overload proof	No
Product expansion / optional / motor drive	Yes

### Product function

<b>Product function</b>	
• Intrinsic device protection	Yes
• communication function	No
• Phase failure detection	No
• other measurement function	No

### Accessories

Manufacturer article number / of the supplied basic switch	<a href="#">3VA2116-5HL42-0AA0</a>
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### Short circuit

<b>Operational short-circuit current breaking capacity (Ics)</b>		
• at 240 V / Rated value	kA	85
• at 415 V / Rated value	kA	55
• at 440 V / Rated value	kA	55
• at 500 V / Rated value	kA	36
• at 690 V / Rated value	kA	2.5
<b>Maximum short-circuit current breaking capacity (Icu)</b>		
• at 240 V / Rated value	kA	85
• at 415 V / Rated value	kA	55
• at 440 V / Rated value	kA	55
• at 500 V / Rated value	kA	36
• at 690 V / Rated value	kA	2.5
<b>Short-circuit current making capacity (Icm)</b>		
• at 240 V / Rated value	kA	187
• at 415 V / Rated value	kA	121
• at 440 V / Rated value	kA	121
• at 500 V / Rated value	kA	79
• at 690 V / Rated value	kA	3.75

### Connections

Arrangement of electrical connectors / for main current circuit	Front terminal
Type of connectable conductor cross-section	
• for flat-bar terminal connection / minimum	13 x 1 mm
• for flat-bar terminal connection / maximum	25 x 8.5
Type of electrical connection / for main current circuit	Lug terminal

### Mechanical Design

Height	mm	181
Width	mm	140
Depth	mm	107
Mounting type		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

### Certificates

<b>Equipment marking</b>		
• acc. to DIN EN 61346-2		Q
• acc. to DIN EN 81346-2		Q

<b>General Product Approval</b>	<b>EMC</b>	<b>Declaration of Conformity</b>	<b>Shipping Approval</b>
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<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/3VA21165HL420AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA21165HL420AA0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mfb=3VA21165HL420AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA21165HL420AA0)

**CAX-Online-Generator**

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

**Tender specifications**

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



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