



Figure similar

CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS H ICU=70KA @ 415 V 4-POLE, LINE PROTECTION TM220, ATFM, IN=160A OVERLOAD PROTECTION IR=112A ...160A SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL PROTECTION 50% CABLE CONNECTION

Model		
product brand name		SENTRON
Product designation		Molded case circuit breaker
<b>Design of the product</b>		Line protection
<b>Product variations</b>		General Applications
<b>Ground fault monitoring version</b>		Without
<b>Design of the auxiliary release</b>		Without auxiliary release
<b>Design of the auxiliary switch</b>		Without
<b>Design of the operating mechanism</b>		toggle handle
<b>Type of the driving mechanism / motor drive</b>		No
<b>Design of the overcurrent release</b>		TM220
General technical data		
<b>Number of poles</b>		4
<b>Trip class / of the L-trip / with I<sup>2</sup>t characteristic / initial value</b>		1
<b>Trip class / of the L-trip / with I<sup>2</sup>t characteristic / Full-scale value</b>		1
<b>Electrical endurance (switching cycles)</b>		8 000
• at AC-1 / at 380/415 V / at 50/60 Hz		
<b>circuit-breaker / Design</b>		3VA
<b>Mechanical service life (switching cycles) / typical</b>		15 000
Voltage		
Insulation voltage / Rated value	V	800
Protection class		

<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>		H
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### Dissipation

<b>Active power loss</b>		
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	W	38

### Electricity

<b>Continuous current / Rated value / maximum</b>	A	160
Continuous current / Rated value	A	160
<b>Adjustable response value current</b>		
<ul style="list-style-type: none"> <li>• of the current-dependent overload release / Full-scale value</li> </ul>	A	1
<ul style="list-style-type: none"> <li>• of the instantaneous short-circuit release / initial value</li> </ul>	A	10

### 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
<ul style="list-style-type: none"> <li>• for DC / Rated value</li> </ul>	V	600
<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	158
<ul style="list-style-type: none"> <li>• at 60 °C / Rated value</li> </ul>	A	155
<ul style="list-style-type: none"> <li>• at 65 °C / Rated value</li> </ul>	A	153
<ul style="list-style-type: none"> <li>• at 70 °C / Rated value</li> </ul>	A	150

### Auxiliary circuit

Number of CO contacts / for auxiliary contacts		0
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### 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
<ul style="list-style-type: none"> <li>• for N-conductor protection / initial value</li> </ul>	A	0.5
<ul style="list-style-type: none"> <li>• for N-conductor protection / Full-scale value</li> </ul>	A	0.5
<b>Adjustable response value current / of the current-dependent overload release / initial value</b>	A	0.7

### Product details

<b>Product component</b>		
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• Trip indicator		No
• display		No
• Voltage trigger		No
• undervoltage release		No
• undervoltage release with leading contact		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

<b>Manufacturer article number / of the supplied basic switch</b>		<a href="#">3VA1116-6FE46-0AA0</a>
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### Short circuit

<b>Operational short-circuit current breaking capacity (Ics)</b>		
• at 240 V / Rated value	kA	100
• at 415 V / Rated value	kA	70
• at 440 V / Rated value	kA	36
• at 500 V / Rated value	kA	15
• at 690 V / Rated value	kA	5
<b>Maximum short-circuit current breaking capacity (Icu)</b>		
• at 240 V / Rated value	kA	100
• at 415 V / Rated value	kA	70
• at 440 V / Rated value	kA	36
• at 500 V / Rated value	kA	20
• at 690 V / Rated value	kA	10
<b>Short-circuit current making capacity (Icm)</b>		
• at 240 V / Rated value	kA	220
• at 415 V / Rated value	kA	154
• at 690 V / Rated value	kA	17

### Connections

Arrangement of electrical connectors / for main current circuit		Front terminal
Type of connectable conductor cross-section		

• of the round conductor terminal / stranded		1 x (1.5 - 70 mm <sup>2</sup> )
Type of electrical connection / for main current circuit		Box terminal

### Mechanical Design

Height	mm	130
Width	mm	101.6
Depth	mm	70
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>	<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/3VA11166FE460AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA11166FE460AA0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mfb=3VA11166FE460AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA11166FE460AA0)

**CAX-Online-Generator**

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

**Tender specifications**

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



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