



Figure similar

CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS N ICU=25KA @ 415 V 4-POLE, LINE PROTECTION TM220, ATFM, IN=160A OVERLOAD PROTECTION IR=112A ...160A SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL UNPROTECTED BUSBAR CONNECTION

Model		
product brand name		SENTRON
Product designation		Molded case circuit breaker
Design of the product		Line protection
Product variations		General 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		TM220
General technical data		
Number of poles		4
Trip class / of the L-trip / with I <sub>2t</sub> characteristic / initial value		1
Trip class / of the L-trip / with I <sub>2t</sub> characteristic / Full-scale value		1
Electrical endurance (switching cycles)		
• at AC-1 / at 380/415 V / at 50/60 Hz		8 000
circuit-breaker / Design		3VA
Mechanical service life (switching cycles) / typical		15 000
Voltage		
Insulation voltage		
• Rated value	V	800

Protection class		
Protective function of the overcurrent release		LI
Switching capacity		
Switching capacity class of the circuit breaker		N
Dissipation		
Active power loss		
• maximum	W	38
Electricity		
Operating current / at 45 °C / Rated value	A	160
Continuous current / Rated value / maximum	A	160
Continuous current		
• Rated value	A	160
Adjustable response value current		
• of the current-dependent overload release / Full-scale value	A	1
• of the instantaneous short-circuit release / initial value	A	10
Net weight	g	1 200
Main circuit		
Operating voltage		
• with AC / at 50/60 Hz / Rated value	V	690
• for DC / Rated value	V	600
Operating current		
• at 40 °C / Rated value	A	160
• at 50 °C / Rated value	A	160
• at 55 °C / Rated value	A	158
• at 60 °C / Rated value	A	155
• at 65 °C / Rated value	A	153
• at 70 °C / Rated value	A	150
Auxiliary circuit		
Number of CO contacts		
• for auxiliary contacts		0
Suitability		
• Suitability for use		system protection
Adjustable parameters		
Adjustable response value current		
• of I-trip / Full-scale value	A	10
• for N-conductor protection / initial value	A	0
• for N-conductor protection / Full-scale value	A	0

Adjustable response value current / of the current-dependent overload release / initial value	A	0.7
Appearance		
Product details		
<b>Product component</b> <ul style="list-style-type: none"> <li>• Trip indicator</li> <li>• display</li> <li>• Voltage trigger</li> <li>• undervoltage release</li> <li>• undervoltage release with leading contact</li> </ul>		No No No No No
<b>Product property</b> <ul style="list-style-type: none"> <li>• for neutral conductors / upgradeable/retrofitable / Short-circuit and overload proof</li> </ul>		No
<b>Product expansion</b> <ul style="list-style-type: none"> <li>• optional — motor drive</li> </ul>		Yes
Product function		
<b>Product function</b> <ul style="list-style-type: none"> <li>• Intrinsic device protection</li> <li>• communication function</li> <li>• Phase failure detection</li> <li>• other measurement function</li> </ul>		Yes No No No
Accessories		
Manufacturer article number / of the supplied basic switch		3VA1116-3EE42-0AA0
Short circuit		
<b>Operational short-circuit current breaking capacity (Ics)</b> <ul style="list-style-type: none"> <li>• at 240 V / Rated value</li> <li>• at 415 V / Rated value</li> <li>• at 440 V / Rated value</li> <li>• at 500 V / Rated value</li> <li>• at 690 V / Rated value</li> </ul>	kA kA kA kA kA	36 25 16 8 5
<b>Maximum short-circuit current breaking capacity (Icu)</b> <ul style="list-style-type: none"> <li>• at 240 V / Rated value</li> <li>• at 415 V / Rated value</li> <li>• at 440 V / Rated value</li> <li>• at 500 V / Rated value</li> <li>• at 690 V / Rated value</li> </ul>	kA kA kA kA kA	36 25 16 8 7
Short-circuit current making capacity (Icm)		

- at 240 V / Rated value
- at 415 V / Rated value
- at 690 V / Rated value

kA	75.6
kA	52.5
kA	7.5

## Connections

<b>Arrangement of electrical connectors</b>		
• for main current circuit		Front terminal
Type of connectable conductor cross-section		
• for flat-bar terminal connection / minimum		12 x 0
• for flat-bar terminal connection / maximum		17 x 6.5
<b>Design of the electrical connection</b>		
• for main current circuit		Lug terminal

## Mechanical Design

<b>Height</b>	mm	130
<b>Width</b>	mm	101.6
<b>Depth</b>	mm	70
<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

## Certificates

<b>Reference code</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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CCC



other



EG-Konf.



GL

other

## 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/3VA11163EE420AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA11163EE420AA0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA11163EE420AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11163EE420AA0)

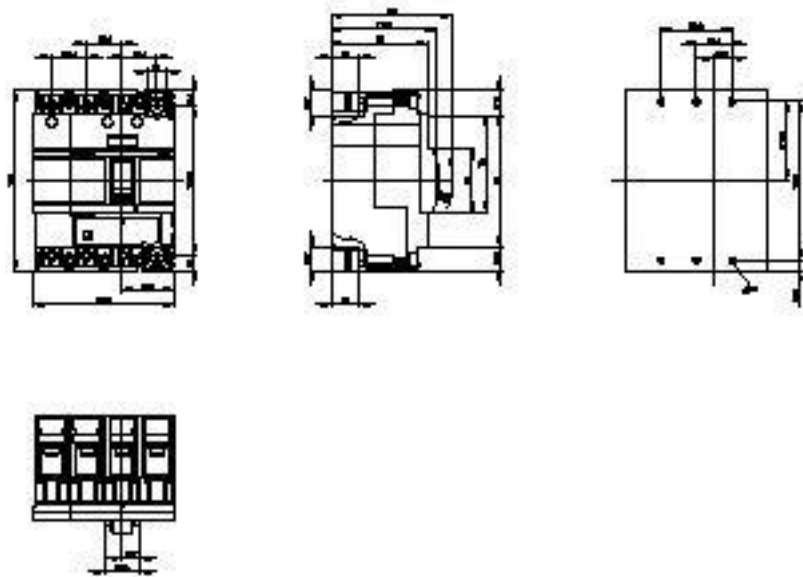


Figure similar



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