



circuit breaker 3VA1 IEC frame 250 breaking capacity class H  $I_{cu}=70kA @ 415V$  4-pole, line protection TM240, ATAM,  $I_n=200A$  overload protection  $I_r=140A...200A$  short-circuit protection  $I_i=5...10 \times I_n$  N conductor unprotected nut keeper kit

Model	
product brand name	SENTRON
product designation	Molded case circuit breaker
Product version	Line protection
design of the overcurrent release	TM240
protection function of the overcurrent release	LI
number of poles	4
General technical data	
rated insulation voltage $U_i$	800 V
Max. rated operational voltage $U_e$ with DC	600 V
power loss [W] / maximum	42 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	14 W
mechanical service life (switching cycles) / typical	20 000
Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	8 000
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz	5 400
Neutral conductors / upgradeable/retrofitable	No
ground-fault monitoring version	Without
product function	
• communication function	No
• other measurement function	No
net weight	2.084 kg
Current	
Max. rated operational current of the frame size	250 A
Courant permanent assigné $I_u$	200 A
operational current	
• at 40 °C	200 A
• at 45 °C	200 A
• at 50 °C	200 A
• at 55 °C	194 A
• at 60 °C	188 A
• at 65 °C	182 A
• at 70 °C	176 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	H
breaking capacity maximum short-circuit current ( $I_{cu}$ )	

<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	100 kA		
<ul style="list-style-type: none"> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	70 kA		
<ul style="list-style-type: none"> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	36 kA		
<ul style="list-style-type: none"> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	15 kA		
<ul style="list-style-type: none"> <li>• at 690 V</li> </ul>	10 kA		
breaking capacity operating short-circuit current (Ics)			
<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	100 kA		
<ul style="list-style-type: none"> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	70 kA		
<ul style="list-style-type: none"> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	36 kA		
<ul style="list-style-type: none"> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	10 kA		
<ul style="list-style-type: none"> <li>• at 690 V</li> </ul>	5 kA		
short-circuit current making capacity (Icm)			
<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	220 kA		
<ul style="list-style-type: none"> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	154 kA		
<ul style="list-style-type: none"> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	75.6 kA		
<ul style="list-style-type: none"> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	30 kA		
<ul style="list-style-type: none"> <li>• at 690 V</li> </ul>	17 kA		
design of short-circuit protection	For switching power values in DC networks, see the 3VA molded case circuit breaker device manual; link to be found under Service & Support in the last chapter		
<b>Adjustable parameters</b>			
Adjustable response value current / Ii min.	1 000 A		
Adjustable response value current / Ii max.	2 000 A		
design of the N-conductor protection	Without		
Ground fault protection / tripping switchable / I2t=ON/OFF	No		
<b>Mechanical Design</b>			
height [in]	6.22 in		
Height	158 mm		
width [in]	5.51 in		
Width	140 mm		
depth [in]	2.76 in		
depth	70 mm		
<b>Connections</b>			
arrangement of electrical connectors / for main current circuit	Front terminal		
type of electrical connection / for main current circuit	nut keeper kit on both ends		
Type of connectable conductor cross-section, connection screw, width x thickness , min.	13 x 1 mm		
Type of connectable conductor cross-section, connection screw, width x thickness , max.	25 x 8 mm		
<b>Auxiliary circuit</b>			
number of CO contacts / for auxiliary contacts	0		
<b>Accessories</b>			
product extension / optional / motor drive	Yes		
<b>Environmental conditions</b>			
protection class IP / on the front	IP40		
ambient temperature			
<ul style="list-style-type: none"> <li>• during operation / minimum</li> <li>• during operation / maximum</li> <li>• during storage / minimum</li> <li>• during storage / maximum</li> </ul>	-25 °C		
	70 °C		
	-40 °C		
	80 °C		
<b>Certificates</b>			
reference code / acc. to IEC 81346-2	Q		
<b>General Product Approval</b>	<b>EMC</b>	<b>Declaration of Conformity</b>	



[Miscellaneous](#)



EG-Konf.

Declaration of Conformity	Test Certificates	Marine / Shipping			
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[UK Declaration of Conformity](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

[Miscellaneous](#)



Marine / Shipping	other			
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LRS



RMRS



DNV-GL

[Miscellaneous](#)

[Miscellaneous](#)

#### Further information

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<http://www.siemens.com/lowvoltage/catalogs>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA1220-6EF42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1220-6EF42-0AA0>

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

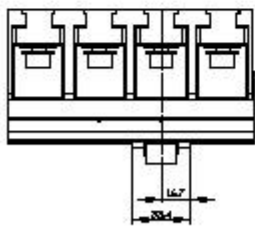
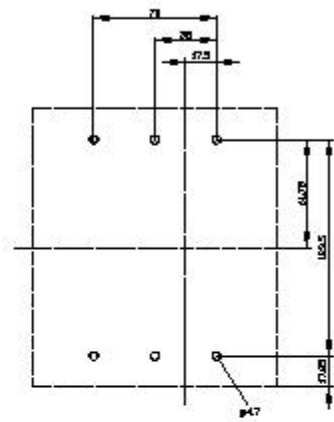
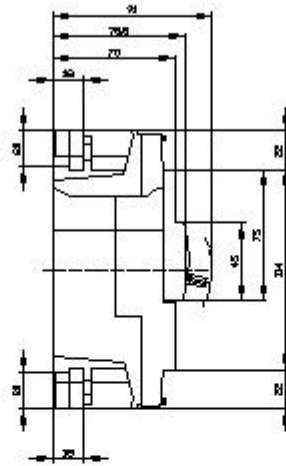
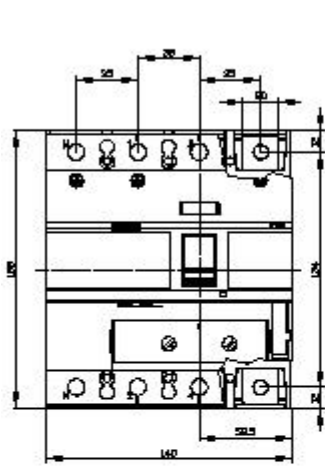
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1220-6EF42-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1220-6EF42-0AA0)

**CAX-Online-Generator**

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

**Tender specifications**

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





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