

circuit breaker 3VA1 IEC frame 160 breaking capacity class S  
 $I_{cu}=36\text{kA}$  @ 415V 3-pole, line protection TM240, ATAM,  $I_n=80\text{A}$   
 overload protection  $I_r=56\text{A}\dots80\text{A}$  short-circuit protection  $I_i=5\dots10 \times I_n$   
 clamp connection undervoltage release (UVR) 120-127V AC  
 50/60Hz 2 auxiliary switches HQ 1 trip alarm switch HQ



Model	
Product brand name	SENTRON
Product designation	Molded case circuit breaker
Product version	Line protection
Design of the overcurrent release	TM240
Protective function of the overcurrent release	LI
Number of poles	3
Design of the auxiliary release	Undervoltage release (UVR)
Auxiliary contact version	2 auxiliary switches + 1 trip alarm switch HQ
General technical data	
Rated insulation voltage $U_i$	800 V
Max. rated operational voltage $U_e$ with AC 50/60Hz	690 V
Max. rated operational voltage $U_e$ with DC	500 V
Latching - endurance	15 000
Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	8 000
Neutral conductors / upgradeable/retrofitable	No
Ground fault monitoring version	Without
Product function	

• communication function	No
• Phase failure detection	No
• other measurement function	No
Net weight	1.08 kg

### Current

Max. rated operational current of the frame size	160 A
Rated continuous current I <sub>u</sub>	80 A
Operating current	
• at 40 °C	80 A
• at 45 °C	80 A
• at 50 °C	80 A
• at 55 °C	76.8 A
• at 60 °C	75.2 A
• at 65 °C	73.6 A
• at 70 °C	72 A

### Switching capacity according to IEC 60947

Switching capacity class of the circuit breaker	S
Maximum short-circuit current breaking capacity (I <sub>cu</sub> )	
• at 240 V	55 kA
• at 415 V	36 kA
• at 440 V	25 kA
• at 690 V	7 kA
Operational short-circuit current breaking capacity (I <sub>cs</sub> )	
• at 240 V	55 kA
• at 415 V	36 kA
• at 440 V	25 kA
• at 690 V	5 kA
Short-circuit current making capacity (I <sub>cm</sub> )	
• at 240 V	121 kA
• at 415 V	75.6 kA
• at 440 V	52.5 kA
• at 690 V	11.9 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

### Adjustable parameters

Adjustable response value current / I <sub>r</sub> min.	56 A
Adjustable response value current / I <sub>r</sub> max.	80 A
Adjustable response value time / t <sub>r</sub> min.	1
Adjustable response value time / t <sub>r</sub> max.	1

Short-term delayed / tripping switchable / I <sub>2t</sub> =ON/OFF	No
Adjustable response value current / I <sub>i</sub> min.	400 A
Adjustable response value current / I <sub>i</sub> max.	800 A

### Mechanical Design

Height	130 mm
Width	76.2 mm
Depth	70 mm

### Connections

Arrangement of electrical connectors / for main current circuit	Front terminal
Type of electrical connection / for main current circuit	box terminal
Type of connectable conductor cross-section, round conductor terminal, stranded	1 x (1.5 - 70 mm <sup>2</sup> )

### Auxiliary circuit

Product component	
<ul style="list-style-type: none"> <li>• undervoltage release</li> <li>• Voltage trigger</li> <li>• undervoltage release with leading contact</li> <li>• Trip indicator</li> </ul>	<p>Yes</p> <p>No</p> <p>No</p> <p>Yes</p>
Number of CO contacts / for auxiliary contacts	3

### Accessories

Product extension / optional / motor drive	Yes
Manufacturer's article number	
<ul style="list-style-type: none"> <li>• of the integrated auxiliary switch/alarm switch</li> <li>• of the integrated auxiliary switch/alarm switch</li> <li>• of the integrated auxiliary trip</li> </ul>	<p><a href="#">3VA9988-0AA12</a></p> <p><a href="#">3VA9988-0AB12</a></p> <p>3VA9608-0BB24</p>

### Environmental conditions

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>	<p>-25 °C</p> <p>70 °C</p> <p>-40 °C</p> <p>80 °C</p>

### Certificates

Reference code / acc. to DIN EN 81346-2	Q
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General Product Approval	EMC	Declaration of Conformity
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CCC



VDE

[Miscellaneous](#)



RCM



EG-Konf.

Test Certificates	Shipping Approval
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[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

[Special Test Certificate](#)



ABS



BUREAU VERITAS



LRS

Shipping Approval	other
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RMRS

[CCS / China Classification Society](#)

[Manufacturer Declaration](#)

[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=3VA1180-4EF36-0CH0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1180-4EF36-0CH0>

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

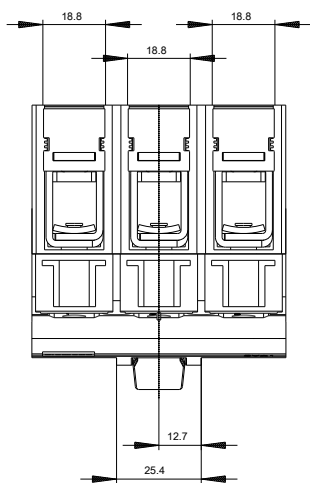
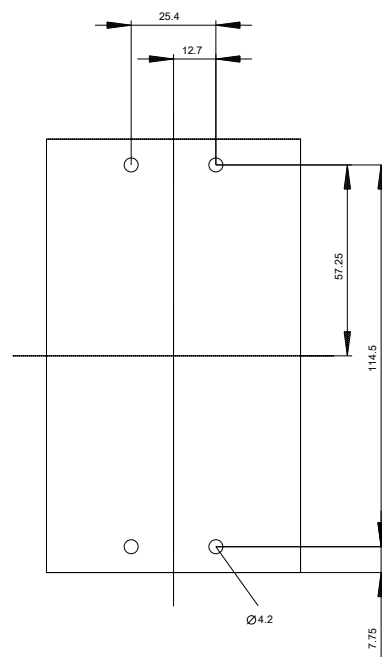
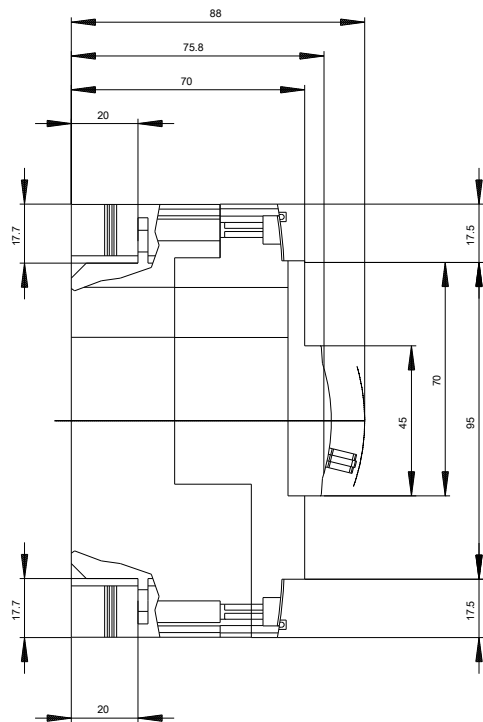
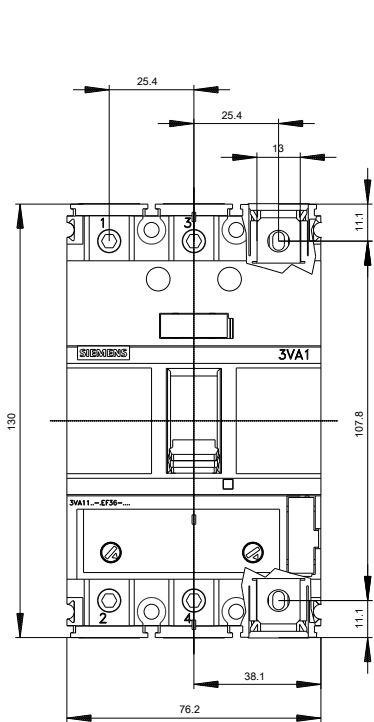
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1180-4EF36-0CH0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1180-4EF36-0CH0)

**CAX-Online-Generator**

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

**Tender specifications**

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





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