

circuit breaker 3VA1 IEC frame 160 breaking capacity class N  
 $I_{cu}=25kA @ 240V$  1-pole, line protection TM210, FTFM,  $I_n=20A$   
 overload protection  $I_r=20A$  fixed short-circuit protection  $I_i=16 \times I_n$   
 clamp connection



Model	
Product brand name	SENTRON
Product designation	Molded case circuit breaker
Product version	Line protection
Design of the overcurrent release	TM210
Protective function of the overcurrent release	LI
Number of poles	1

General technical data	
Rated insulation voltage $U_i$	500 V
Max. rated operational voltage $U_e$ with AC 50/60Hz	415 V
Max. rated operational voltage $U_e$ with DC	125 V
Power loss [W] / maximum	4 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	4 W
Latching - endurance	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	8 000

Neutral conductors / upgradeable/retrofitable	No
Ground fault monitoring version	Without
Product function	
• communication function	No
• other measurement function	No
Net weight	0.402 kg

### Electricity

Max. rated operational voltage of the size of the circuit-breaker	160 A
Rated continuous current I <sub>u</sub>	20 A
Operating current	
• at 40 °C	20 A
• at 45 °C	20 A
• at 50 °C	20 A
• at 55 °C	20 A
• at 60 °C	19 A
• at 65 °C	19 A
• at 70 °C	19 A

### Switching capacity according to IEC 60947

Switching capacity class of the circuit breaker	N
Maximum short-circuit current breaking capacity (I <sub>cu</sub> )	
• at 240 V	25 kA
• at 415 V	5 kA
Operational short-circuit current breaking capacity (I <sub>cs</sub> )	
• at 240 V	25 kA
• at 415 V	5 kA
Short-circuit current making capacity (I <sub>cm</sub> )	
• at 240 V	53 kA
• at 415 V	7.5 kA

### Adjustable parameters

Adjustable response value current / I <sub>r</sub> min.	20 A
Adjustable response value current / I <sub>r</sub> max.	20 A
Short-term delayed / tripping switchable / I <sub>2t</sub> =ON/OFF	No
Adjustable response value current / I <sub>i</sub> min.	320 A
Adjustable response value current / I <sub>i</sub> max.	320 A
Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF	No

### Mechanical Design

Height [in]	5.1 in
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Height	130 mm
Width [in]	1 in
Width	25.4 mm
Depth [in]	2.8 in
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

Number of CO contacts / for auxiliary contacts	0
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### Accessories

Product extension / optional / motor drive	No
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### 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>	<ul style="list-style-type: none"> <li>-25 °C</li> <li>70 °C</li> <li>-40 °C</li> <li>80 °C</li> </ul>

### Certificates

Reference code / acc. to DIN EN 81346-2	Q
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General Product Approval	EMC	Declaration of Conformity
 CCC  VDE <a href="#">Miscellaneous</a>	 EAC	 RCM  EG-Konf.

Test Certificates	Shipping Approval	other
<a href="#">Type Test Certificates/Test Report</a> <a href="#">Miscellaneous</a> <a href="#">Special Test Certificate</a>	 LRS	<a href="#">Manufacturer Declaration</a> <a href="#">Miscellaneous</a>

### 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=3VA1120-3ED16-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1120-3ED16-0AA0>

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

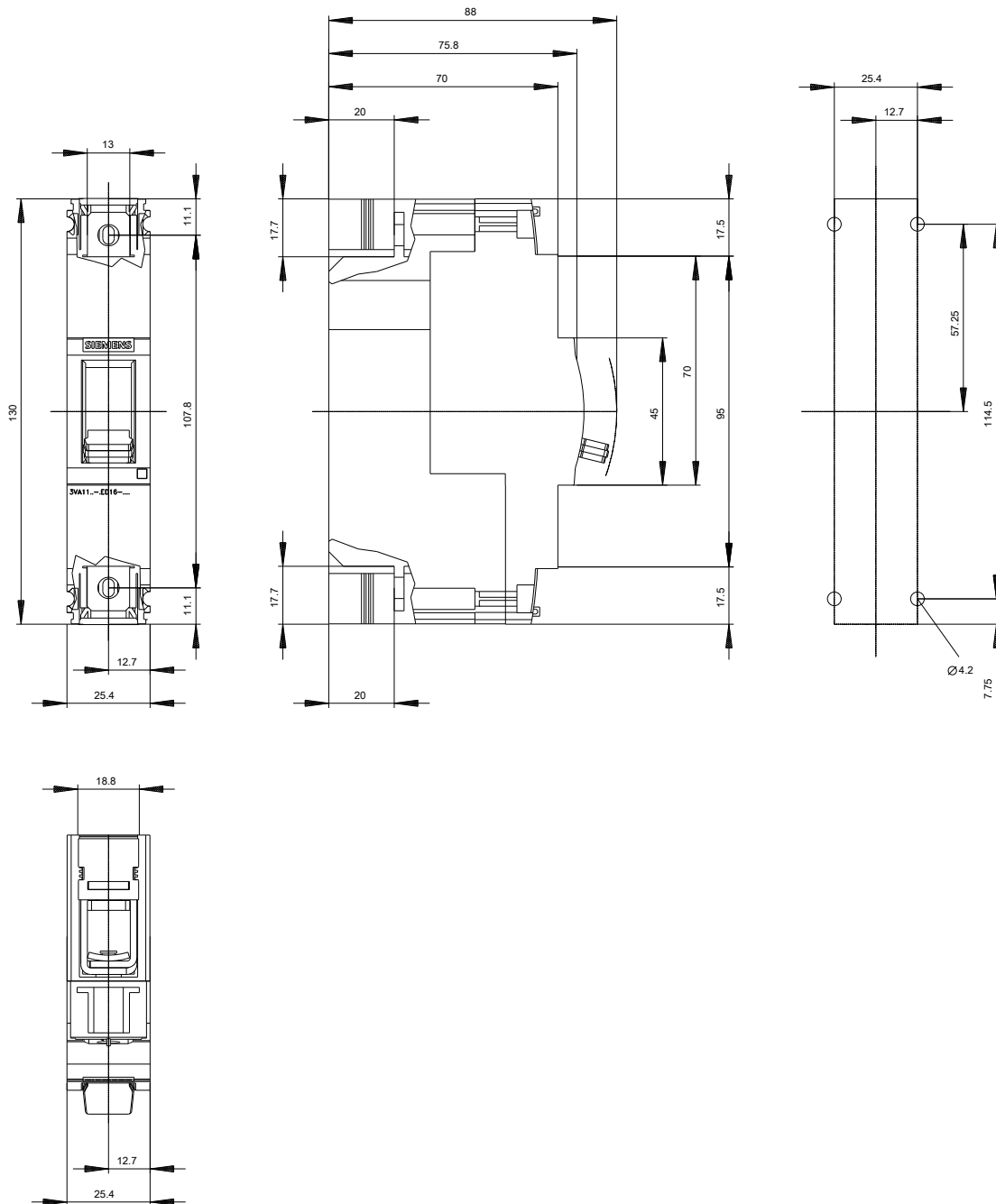
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1120-3ED16-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1120-3ED16-0AA0)

**CAX-Online-Generator**

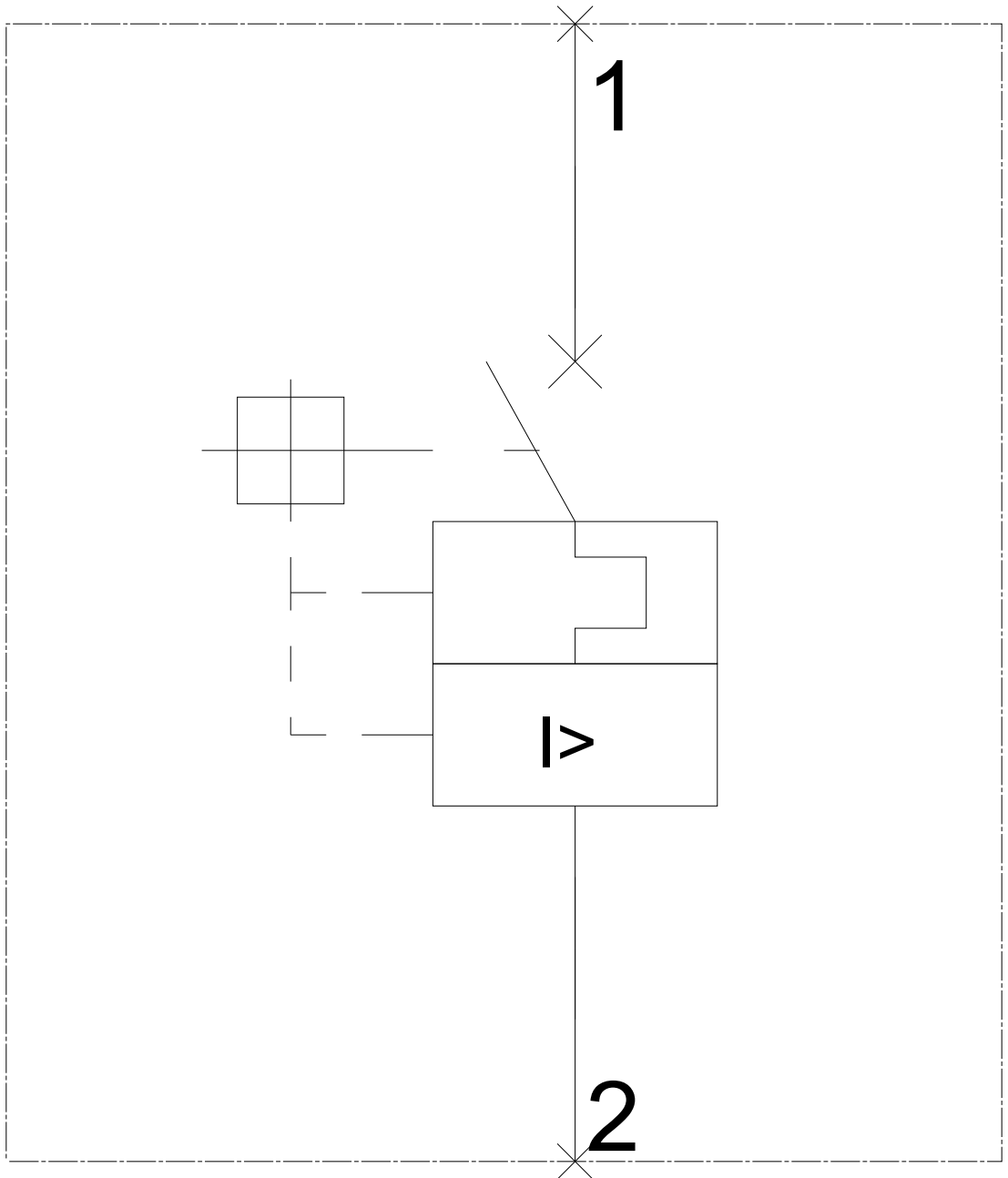
<http://www.siemens.com/cax>

**Tender specifications**

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



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