

CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS M ICU=55KA @ 240 V 1-POLE, LINE PROTECTION TM210, FTFM, IN=20A OVERLOAD PROTECTION IR=20A FIXED SHORT CIRCUIT PROTECTION II=16 X IN BUSBAR CONNECTION



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

General technical data	
Tension assignée d'isolement $U_i$	500 V
Max. rated operational voltage $U_e$ with AC 50/60Hz	415 V
Max. rated operational voltage $U_e$ with DC	250 V
Active power loss / for rated value of the current / at AC / in hot operating state / per device	4 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	2 W
Mechanical service life (switching cycles) / typical	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
• other measurement function	No

### Electricity

Max. rated operational voltage of the size of the circuit-breaker	160 A
Courant permanent assigné Iu	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	M
Maximum short-circuit current breaking capacity (Icu)	
• at 240 V	55 kA
• at 415 V	6 kA
Operational short-circuit current breaking capacity (Ics)	
• at 240 V	55 kA
• at 415 V	6 kA
Short-circuit current making capacity (Icm)	
• at 240 V	121 kA
• at 415 V	9 kA

### Adjustable parameters

Adjustable response value current / I <sub>g</sub> min.	20 A
Adjustable response value current / I <sub>g</sub> min.	20 A
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
Height	130 mm
Width [in]	1 in
Width	25.4 mm
Depth [in]	2.8 in

Depth	70 mm
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### Connections

Arrangement of electrical connectors / for main current circuit	Front terminal
Type of electrical connection / for main current circuit	lug terminal
Type of connectable conductor cross-section, connection screw, width x thickness , min.	12 x 0
Type of connectable conductor cross-section, connection screw, width x thickness , max.	17 x 6.5

### 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

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

Test Certificates	other	
<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Special Test Certificate</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=3VA1120-5ED12-0AA0>

**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**  
<https://support.industry.siemens.com/cs/ww/en/ps/3VA1120-5ED12-0AA0>

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

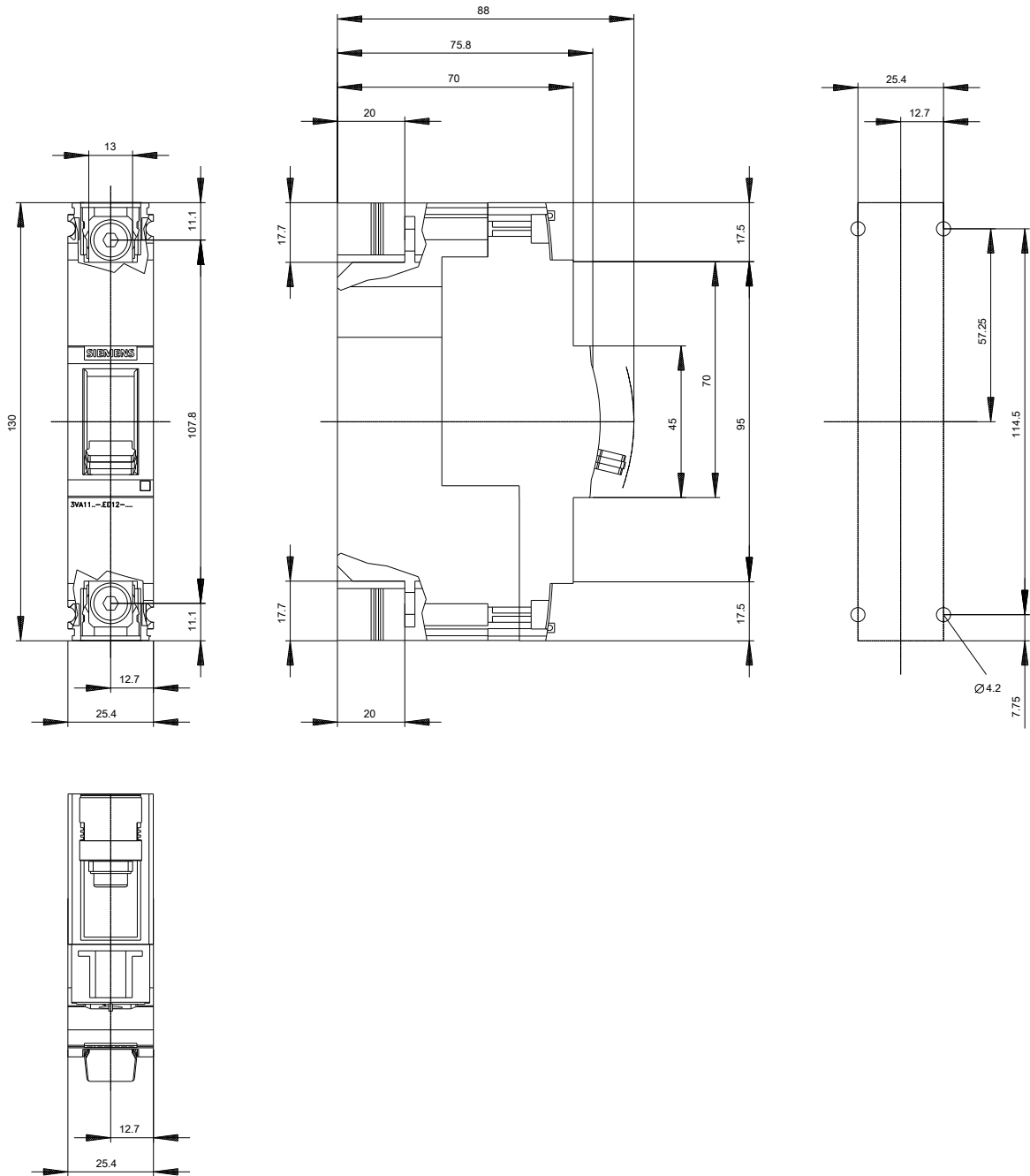
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1120-5ED12-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1120-5ED12-0AA0)

CAX-Online-Generator

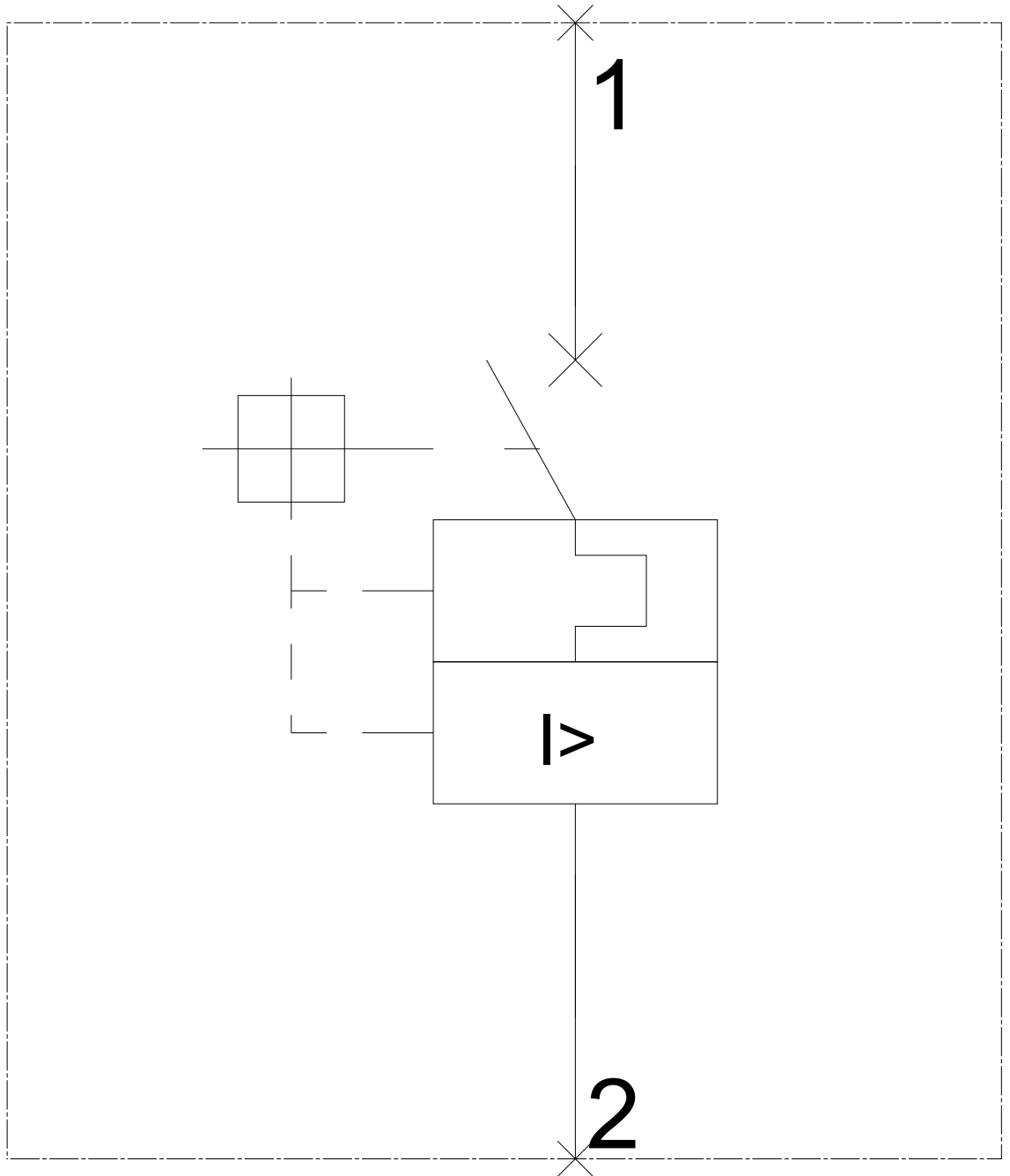
<http://www.siemens.com/cax>

Tender specifications

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



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**last modified:**

08/20/2017