

circuit breaker 3VA5 UL frame 125 breaking capacity class S 25kA @ 480V 2-pole, line protection TM210, FTFM, I<sub>n</sub>=80A overload protection I<sub>r</sub>=80A fixed short-circuit protection I<sub>i</sub>=10 x I<sub>n</sub> without connection



Model	
Product brand name	SENTRON
Product designation	Molded-case circuit breaker
Product designation / according to UL file	SEAS
Product version	System protection
Design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type)	Yes
Design of the overcurrent release	TM210
Protective function of the overcurrent release	LI
Number of poles	2
General technical data	
Rated insulation voltage U <sub>i</sub>	600 V
Max. rated operational voltage U <sub>e</sub> with AC 50/60Hz	415 V
Max. rated operational voltage U <sub>e</sub> with DC	250 V
Power loss [W] / maximum	11 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	5.5 W
Latching - endurance	15 000

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	4 000
Electrical endurance (switching cycles) / at 480 V / at 50/60 Hz	8 000
Electrical endurance (switching cycles) / at 600 V / at 50/60 Hz	4 000
Neutral conductors / upgradeable/retrofitable	No
Ground fault monitoring version	Without
Product function	
• communication function	No
• other measurement function	No

### Current

Marking / acc. to UL 489 / 100%-rated breaker	No
Max. rated operational current of the frame size	125 A
Rated continuous current I <sub>u</sub>	80 A
Operating current	
• at 40 °C	80 A
• at 45 °C	78.4 A
• at 50 °C	76.9 A
• at 55 °C	75.5 A
• at 60 °C	74.1 A
• at 65 °C	72.7 A
• at 70 °C	71.4 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
Operational short-circuit current breaking capacity (I <sub>cs</sub> )	
• at 240 V	55 kA
• at 415 V	36 kA
Short-circuit current making capacity (I <sub>cm</sub> )	
• at 240 V	121 kA
• at 415 V	76 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

### Switching capacity according to UL 489

Breaking capacity current	
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• at 240 V	65 kA
• at 480 V	25 kA
• at 600 Y/347 V	14 kA

#### Adjustable parameters

Adjustable response value current / I <sub>r</sub> min.	80 A
Adjustable response value current / I <sub>r</sub> max.	80 A
Adjustable response value current / I <sub>i</sub> min.	800 A
Adjustable response value current / I <sub>i</sub> max.	800 A
Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF	No

#### Mechanical Design

Height [in]	5.5 in
Height	140 mm
Width [in]	2 in
Width	50.8 mm
Depth [in]	3 in
Depth	76.5 mm

#### Connections

Arrangement of electrical connectors / for main current circuit	Without connection
Type of electrical connection / for main current circuit	Without

#### 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	
• during operation / minimum	-40 °C
• during operation / maximum	70 °C
• during storage / minimum	-40 °C
• during storage / maximum	80 °C

#### Certificates

Reference code / acc. to DIN EN 81346-2	Q
Certificate of suitability / as approval for NAVAL (no combat vessels) / Supplement SB	No

General Product Approval	EMC
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[Miscellaneous](#)



Declaration of Conformity	Test Certificates	Shipping Approval	other
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[Miscellaneous](#)

[Special Test Certificate](#)



[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=3VA5180-4ED21-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5180-4ED21-0AA0>

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

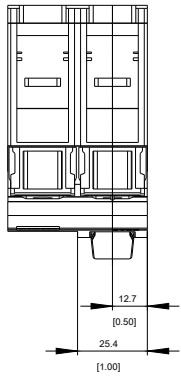
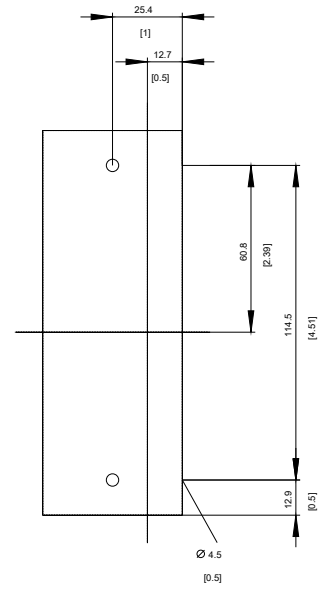
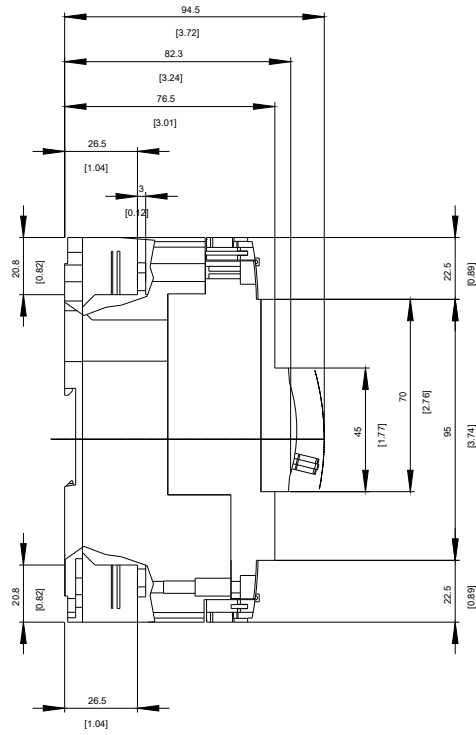
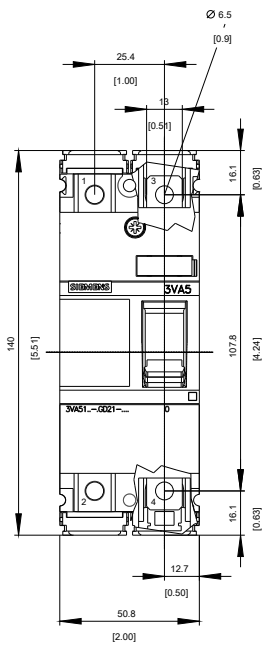
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**CAX-Online-Generator**

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

**Tender specifications**

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



**last modified:**

12/10/2019