



circuit breaker 3VA4 UL Frame 125 breaking capacity class S 25 kA @ 480 V 2-pole, line protection TM210, FTFM,  $I_n=20$  A overload protection  $I_r=20$  A permanently set short-circuit protection  $I_i=15 \times I_n$

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	SEAB
design of the product	System protection
design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type)	Yes
design of the load switch / according to UL 489 / High-Intensity-Discharge circuit breaker (HID Type)	Yes
design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type)	Yes
design of the overcurrent release	TM210
protection function of the overcurrent release	LI
number of poles	2
General technical data	
operating voltage / at AC / rated value	480 V
power loss [W] / maximum	5.6 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	2.8 W
mechanical service life (operating cycles) / typical	15 000
electrical endurance (operating cycles) / at 480 V	8 000
electrical endurance (operating cycles) / at 600 V	4 000
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	No
ground-fault monitoring version	Without
product function	
• communication function	No
• other measurement function	No
Net Weight	0.514 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	20 A
• at 45 °C	20 A
• at 50 °C	19 A
• at 55 °C	19 A
• at 60 °C	18 A
• at 65 °C	18 A
• at 70 °C	17 A
Switching capacity according to IEC 60947	

switching capacity class of the circuit breaker	S
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

current breaking capacity	
<ul style="list-style-type: none"> <li>at 240 V</li> </ul>	65 kA
<ul style="list-style-type: none"> <li>at 480 Y/277 V</li> </ul>	25 kA
<ul style="list-style-type: none"> <li>at 480 V</li> </ul>	25 kA
<ul style="list-style-type: none"> <li>at 600 Y/347 V</li> </ul>	14 kA

#### Adjustable parameters

adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	
<ul style="list-style-type: none"> <li>minimum</li> </ul>	1 s
<ul style="list-style-type: none"> <li>maximum</li> </ul>	1 s
product function / grounding protection	No

#### Mechanical Design

product component	
<ul style="list-style-type: none"> <li>undervoltage release</li> </ul>	No
<ul style="list-style-type: none"> <li>voltage trigger</li> </ul>	No
<ul style="list-style-type: none"> <li>trip indicator</li> </ul>	No
height [in]	5.09 in
height	129.4 mm
width [in]	2 in
type of connectable conductor cross-sections / of the round conductor terminal / stranded	1 x (14 AWG - 8 AWG)
width	50.8 mm
depth [in]	2.96 in
depth	75.1 mm

#### Connections

arrangement of electrical connectors / for main current circuit	output side: circular conductor connection
type of electrical connection / for main current circuit	Infeed side: Low tab
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	Tin

#### 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> </ul>	-25 °C
<ul style="list-style-type: none"> <li>during operation / maximum</li> </ul>	70 °C
<ul style="list-style-type: none"> <li>during storage / minimum</li> </ul>	-40 °C
<ul style="list-style-type: none"> <li>during storage / maximum</li> </ul>	80 °C

#### Further information

##### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

##### Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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

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

##### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA4120-4ED24-3AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA4120-4ED24-3AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA4120-4ED24-3AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA4120-4ED24-3AA0)

##### CAX-Online-Generator

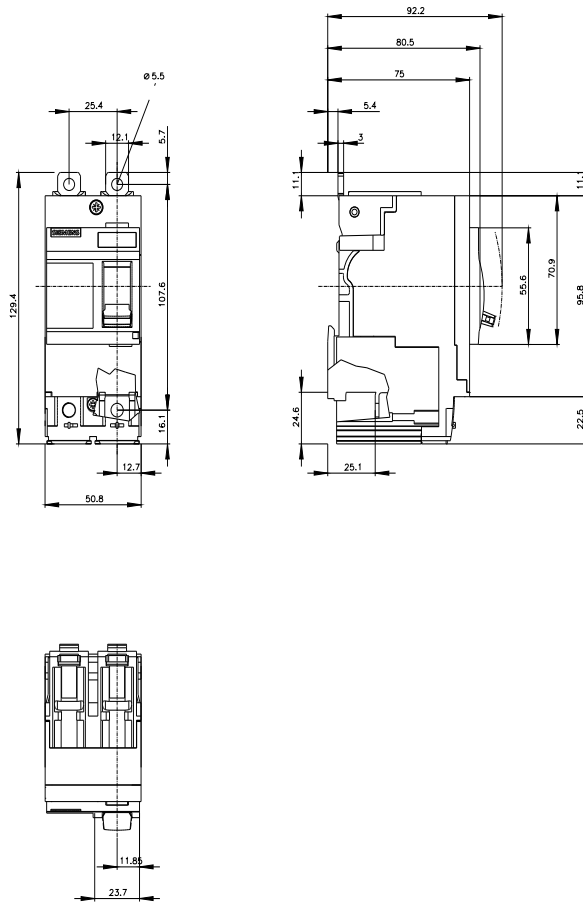
<https://www.siemens.com/cax>

##### Tender specifications

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

##### Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)



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