



circuit breaker 3VA5 UL Frame 125 breaking capacity class S 25 kA @ 480 V 4-pole, line protection TM230, FTAM, In=45 A overload protection Ir=45 A permanently set short-circuit protection Ii=5...10 x In N conductor unprotected without connection

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	SEAS
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)	No
design of the overcurrent release	TM230
protection function of the overcurrent release	LI
number of poles	4
General technical data	
insulation voltage / rated value	800 V
operating voltage / at DC / rated value	600 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	11.4 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	3.8 W
mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	8 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	4 000
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
product function	
• communication function	No
• other measurement function	No
Net Weight	1.166 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	45 A
• at 45 °C	44 A
• at 50 °C	44 A
• at 55 °C	43 A
• at 60 °C	42 A

<ul style="list-style-type: none"> <li>• at 65 °C</li> </ul>	42 A
<ul style="list-style-type: none"> <li>• at 70 °C</li> </ul>	41 A
<b>Switching capacity according to IEC 60947</b>	
switching capacity class of the circuit breaker	S
maximum short-circuit current breaking capacity (I <sub>cu</sub> )	
<ul style="list-style-type: none"> <li>• at 240 V</li> </ul>	55 kA
<ul style="list-style-type: none"> <li>• at 415 V</li> </ul>	36 kA
<ul style="list-style-type: none"> <li>• at 690 V</li> </ul>	5 kA
operating short-circuit current breaking capacity (I <sub>cs</sub> )	
<ul style="list-style-type: none"> <li>• at 240 V</li> </ul>	55 kA
<ul style="list-style-type: none"> <li>• at 415 V</li> </ul>	36 kA
<ul style="list-style-type: none"> <li>• at 690 V</li> </ul>	5 kA
short-circuit current making capacity (I <sub>cm</sub> )	
<ul style="list-style-type: none"> <li>• at 240 V</li> </ul>	121 kA
<ul style="list-style-type: none"> <li>• at 415 V</li> </ul>	75.6 kA
<ul style="list-style-type: none"> <li>• at 690 V</li> </ul>	7.5 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
<b>Switching capacity according to UL 489</b>	
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 V</li> </ul>	25 kA
<ul style="list-style-type: none"> <li>• at 600 Y/347 V</li> </ul>	14 kA
<b>Adjustable parameters</b>	
adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sup>2</sup> t characteristic	
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	45 A
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	45 A
adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sup>2</sup> t 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
adjustable response value setting current (I <sub>i</sub> ) / for I-tripping	
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	225 A
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	450 A
adjustable setting current (I <sub>nN</sub> ) / for N-tripping	
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	0 A
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	0 A
design of the N-conductor protection	Without
product function / grounding protection	No
<b>Mechanical Design</b>	
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]	5.51 in
height	140 mm
width [in]	4 in
width	101.6 mm
depth [in]	3.01 in
depth	76.5 mm
<b>Connections</b>	
arrangement of electrical connectors / for main current circuit	Without connection
type of electrical connection / for main current circuit	Without
<b>Auxiliary circuit</b>	
number of CO contacts / for auxiliary contacts	0
<b>Accessories</b>	
product extension / optional / motor drive	Yes
<b>Environmental conditions</b>	

protection class IP / on the front	IP40
ambient temperature	
• during operation / minimum	-25 °C
• during operation / maximum	70 °C
• during storage / minimum	-40 °C
• during storage / maximum	80 °C
reference code / according to IEC 81346-2	Q

### Approvals / Certificates

#### General Product Approval



General Product Approval	EMV	Test Certificates
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[Miscellaneous](#)



[Special Test Certificate](#)

Test Certificates	Maritime application	other	Environment
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[Type Test Certificates/Test Report](#)



[Confirmation](#)

[Miscellaneous](#)

[Environmental Confirmations](#)

### 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=3VA5145-4EC41-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5145-4EC41-0AA0>

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

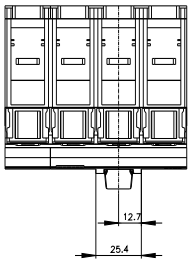
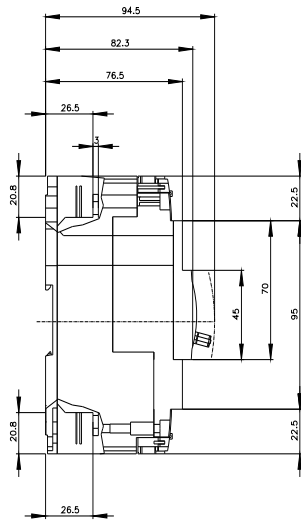
[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5145-4EC41-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5145-4EC41-0AA0)

CAX-Online-Generator

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

Tender specifications

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





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