



circuit breaker 3VA5 UL frame 125 breaking capacity class H 65kA @ 480V  
3-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	HEAS
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
protection function of the overcurrent release	LI
number of poles	3
General technical data	
Tension assignée d'isolement U <sub>i</sub>	800 V
Max. rated operational voltage U <sub>e</sub> with AC 50/60Hz	690 V
Max. rated operational voltage U <sub>e</sub> with DC	500 V
power loss [W] / maximum	17.7 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	5.9 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
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz	4 000
electrical endurance (switching cycles) / at 480 V	8 000
electrical endurance (switching cycles) / at 600 V	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
Courant permanent assigné I <sub>u</sub>	80 A
operational current	
• at 40 °C	80 A
• at 45 °C	78.4 A
• at 50 °C	76.9 A
• at 55 °C	75.5 A

<ul style="list-style-type: none"> <li>• at 60 °C</li> <li>• at 65 °C</li> <li>• at 70 °C</li> </ul>	74.1 A 72.7 A 71.4 A
<b>Switching capacity according to IEC 60947</b>	
switching capacity class of the circuit breaker	H
breaking capacity maximum short-circuit current (I <sub>cu</sub> ) <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 690 V</li> </ul>	150 kA 70 kA 10 kA
breaking capacity operating short-circuit current (I <sub>cs</sub> ) <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 690 V</li> </ul>	100 kA 70 kA 5 kA
short-circuit current making capacity (I <sub>cm</sub> ) <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 690 V</li> </ul>	330 kA 154 kA 17 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>	
breaking capacity current <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 480 V</li> <li>• at 600 Y/347 V</li> </ul>	100 kA 65 kA 25 kA
<b>Adjustable parameters</b>	
Adjustable response value current / I <sub>g</sub> min.	80 A
Adjustable response value current / I <sub>g</sub> min.	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
<b>Mechanical Design</b>	
height [in]	5.5 in
Height	140 mm
width [in]	3 in
Width	76.2 mm
depth [in]	3 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 <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>	-25 °C 70 °C -40 °C 80 °C
<b>Certificates</b>	
reference code / acc. to IEC 81346-2	Q
certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	No
<b>General Product Approval</b>	



[Miscellaneous](#)

General Product Approval	EMC	Declaration of Conformity	Test Certificates	Shipping Approval
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[Miscellaneous](#)

[Special Test Certificate](#)



Shipping Approval	other
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[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=3VA5180-6ED31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5180-6ED31-0AA0>

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

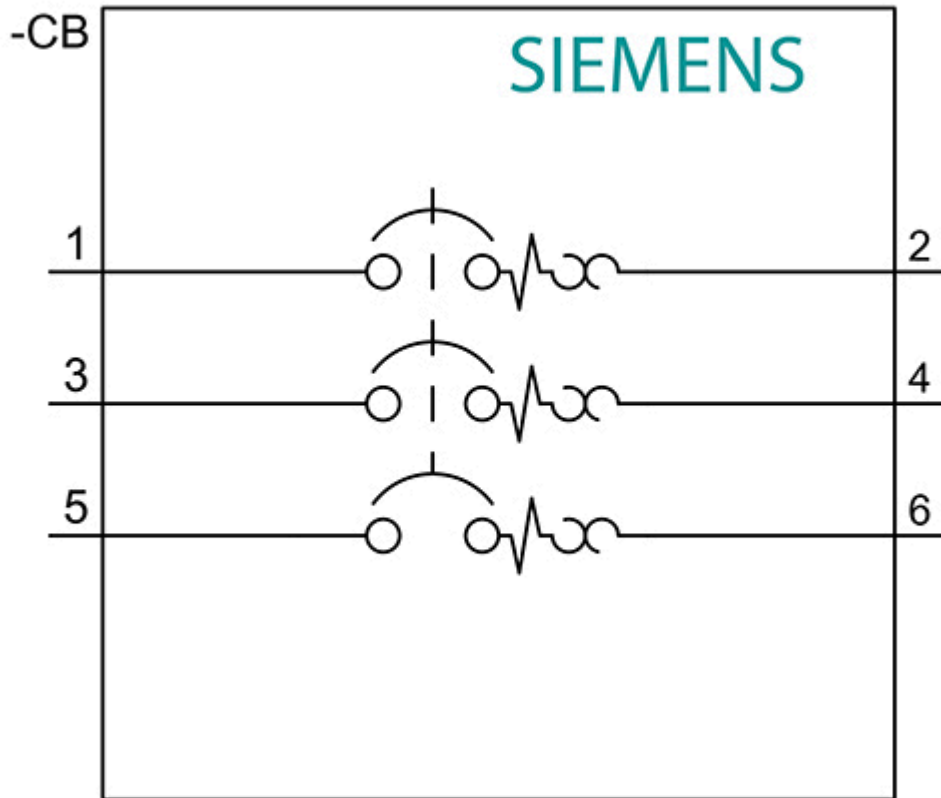
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5180-6ED31-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5180-6ED31-0AA0)

Tender specifications

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







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