



circuit breaker 3VA5 UL Frame 125 breaking capacity class S 25 kA @ 277 V 1-pole, line protection TM210, FTFM, In=80 A overload protection Ir=80 A permanently set short-circuit protection li=10 x In UL489 SB (naval), 50 degrees Celsius nut keeper kit on two sides

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	SEAM
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)	No
design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type)	No
design of the overcurrent release	TM210
protection function of the overcurrent release	LI
number of poles	1
General technical data	
operating voltage / at AC / rated value	415 V
power loss [W] / maximum	6.43 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	6.43 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	0.404 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	80 A
• at 45 °C	78 A
• at 50 °C	77 A
• at 55 °C	76 A
• at 60 °C	74 A
• at 65 °C	73 A
• at 70 °C	72 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
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Switching capacity according to UL 489

current breaking capacity	
<ul style="list-style-type: none"> at 120 V at 277 V at 347 V 	65 kA 25 kA 14 kA

Adjustable parameters

adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic	
<ul style="list-style-type: none"> minimum maximum 	80 A 80 A
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	
<ul style="list-style-type: none"> minimum maximum 	1 s 1 s
adjustable response value setting current (Ii) / for I-tripping	
<ul style="list-style-type: none"> minimum maximum 	800 A 800 A
adjustable setting current (InN) / for N-tripping	
<ul style="list-style-type: none"> minimum maximum 	0 A 0 A
product function / grounding protection	No

Mechanical Design

product component	
<ul style="list-style-type: none"> undervoltage release voltage trigger trip indicator 	No No No
height [in]	5.51 in
height	140 mm
width [in]	1 in
width	25.4 mm
depth [in]	3.01 in
depth	76.5 mm

Connections

arrangement of electrical connectors / for main current circuit	Front connection
type of electrical connection / for main current circuit	nut keeper kit on both ends
type of connectable conductor cross-sections / for flat-bar terminal connection / minimum	12 x 1 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	17 x 6.5 mm

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"> during operation / minimum during operation / maximum during storage / minimum during storage / maximum 	-25 °C 70 °C -40 °C 80 °C

Approvals / Certificates

General Product Approval



[Confirmation](#)



[Miscellaneous](#)

General Product Ap-	EMV	Test Certificates	Marine / Shipping	other
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[Type Test Certificates/Test Report](#)



[Confirmation](#)

[Miscellaneous](#)

[Miscellaneous](#)

[Environmental Confirmations](#)

Further information

Information on the packaging

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

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=3VA5180-4ED12-1AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5180-4ED12-1AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5180-4ED12-1AA0

CAX-Online-Generator

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

Tender specifications

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





