



circuit breaker 3VA5 UL frame 125 breaking capacity class S 25kA @ 480V
3-pole, line protection TM230, FTAM, $I_n=45A$ overload protection $I_r=45A$
fixed short-circuit protection $I_i=5...10 \times I_n$ 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	TM230
protection function of the overcurrent release	LI
number of poles	3
General technical data	
Tension assignée d'isolement U_i	800 V
Max. rated operational voltage U_e with AC 50/60Hz	690 V
Max. rated operational voltage U_e with DC	500 V
power loss [W] / maximum	10.2 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	3.4 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_u	45 A
operational current	
• at 40 °C	45 A
• at 45 °C	44.3 A
• at 50 °C	43.7 A
• at 55 °C	43.1 A

<ul style="list-style-type: none"> • at 60 °C • at 65 °C • at 70 °C 	42.5 A 41.9 A 41.3 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	S
breaking capacity maximum short-circuit current (Icu) <ul style="list-style-type: none"> • at 240 V • at 415 V • at 690 V 	55 kA 36 kA 5 kA
breaking capacity operating short-circuit current (Ics) <ul style="list-style-type: none"> • at 240 V • at 415 V • at 690 V 	85 kA 36 kA 5 kA
short-circuit current making capacity (Icm) <ul style="list-style-type: none"> • at 240 V • at 415 V • at 690 V 	121 kA 76 kA 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
Switching capacity according to UL 489	
breaking capacity current <ul style="list-style-type: none"> • at 240 V • at 480 V • at 600 Y/347 V 	65 kA 25 kA 14 kA
Adjustable parameters	
Adjustable response value current / I _g min.	32 A
Adjustable response value current / I _g min.	45 A
Adjustable response value current / I _i min.	225 A
Adjustable response value current / I _i max.	450 A
Ground fault protection / tripping switchable / I _{2t} =ON/OFF	No
Mechanical Design	
height [in]	5.5 in
Height	140 mm
width [in]	3 in
Width	76.2 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
Accessories	
product extension / optional / motor drive	Yes
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
Certificates	
reference code / acc. to IEC 81346-2	Q
certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	No
General Product Approval	



[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=3VA5145-4EC31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5145-4EC31-0AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5145-4EC31-0AA0

Tender specifications

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





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