## 3VA5112-6GC41-0AA0

**Data sheet** 



circuit breaker 3VA5 UL frame 125 breaking capacity class H 65kA @ 480V 4-pole, line protection TM230, FTAM, In=125A overload protection Ir=125A fixed short-circuit protection Ii=5...10 x In N conductor protection 100% 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	TM230
protection function of the overcurrent release	LI
number of poles	4
General technical data	
Tension assignée d'isolement Ui	800 V
Max. rated operational voltage Ue with AC 50/60Hz	690 V
Max. rated operational voltage Ue with DC	600 V
power loss [W] / maximum	29.1 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	9.7 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/retrofittable	No
ground-fault monitoring version	Without
product function	
<ul> <li>communication function</li> </ul>	No
<ul> <li>other measurement function</li> </ul>	No
Current	
marking / acc. to UL 489 / 100%-rated breaker	No
Max. rated operational current of the frame size	125 A
Courant permanent assigné lu	125 A
operational current	
• at 40 °C	125 A
• at 45 °C	122.4 A
• at 50 °C	120 A
● at 55 °C	117.6 A

at 60 °C at 60 °C at 60 °C at 70 °C  1113.1 A  113.1 A  114.2  Switching capacity according to IEC 60947  switching capacity class of the circuit breaker  breaking capacity maximum short-circuit current (Icu) at 240 V at 415 V at 690 V  breaking capacity operating short-circuit current (Ics) at 240 V at 415 V breaking capacity operating short-circuit current (Ics) at 240 V at 690 V  breaking capacity operating short-circuit current (Ics) at 240 V at 690 V  short-circuit current making capacity (Icm) at 240 V at 415 V at 690 V  design of short-circuit protection  solution of short-circuit protec	
* at 70 °C  Switching capacity according to IEC 60947  switching capacity class of the circuit breaker  breaking capacity maximum short-circuit current (Icu)      * at 240 V     * at 415 V     * at 690 V  breaking capacity operating short-circuit current (Ics)      * at 240 V     * at 690 V  breaking capacity operating short-circuit current (Ics)      * at 240 V     * at 690 V      * at 415 V     * at 690 V  short-circuit current making capacity (Icm)      * at 240 V     * at 690 V  short-circuit current making capacity (Icm)      * at 240 V     * at 690 V  design of short-circuit protection  For switching power values in DC networks, see the 3VA molded cacircuit breaker device manual; link to be found under Service & Supin the last chapter  Switching capacity according to UL 489  breaking capacity current      * at 240 V     * at 480 V     * at 480 V     * at 600 Y/347 V  25 kA	
Switching capacity according to IEC 60947  switching capacity class of the circuit breaker  breaking capacity maximum short-circuit current (Icu)  • at 240 V  • at 415 V  • at 690 V  breaking capacity operating short-circuit current (Ics)  • at 240 V  • at 690 V  breaking capacity operating short-circuit current (Ics)  • at 240 V  • at 690 V  5 kA  short-circuit current making capacity (Icm)  • at 240 V  • at 690 V  short-circuit current making capacity (Icm)  • at 240 V  • at 690 V  for switching power values in DC networks, see the 3VA molded ca circuit breaker device manual; link to be found under Service & Supin the last chapter  Switching capacity according to UL 489  breaking capacity current  • at 240 V  • at 480 V  • at 600 Y/347 V  25 kA	
switching capacity class of the circuit breaker breaking capacity maximum short-circuit current (Icu)  • at 240 V  • at 415 V  • at 690 V  breaking capacity operating short-circuit current (Ics)  • at 240 V  • at 415 V  • at 690 V  150 kA  70 kA  • at 415 V  • at 690 V  5 kA  short-circuit current making capacity (Icm)  • at 240 V  • at 415 V  • at 690 V  5 kA  short-circuit current making capacity (Icm)  • at 240 V  • at 690 V  17 kA  design of short-circuit protection  Switching capacity according to UL 489  breaking capacity current  • at 240 V  • at 480 V  • at 600 Y/347 V  25 kA	
breaking capacity maximum short-circuit current (Icu)  • at 240 V  • at 415 V  • at 690 V  breaking capacity operating short-circuit current (Ics)  • at 240 V  • at 690 V  150 kA   **To kA  **To kA  • at 415 V  • at 690 V  \$ 5 kA  **Short-circuit current making capacity (Icm)  • at 240 V  • at 415 V  • at 690 V  \$ 330 kA  • at 415 V  • at 690 V  17 kA   **design of short-circuit protection  **To witching capacity according to UL 489  **Dreaking capacity current*  • at 240 V  • at 480 V  • at 690 Y/347 V  \$ 150 kA  • 5 kA  \$ 150 kA  • 65 kA  • 25 kA	
<ul> <li>at 240 V</li> <li>at 415 V</li> <li>at 690 V</li> <li>breaking capacity operating short-circuit current (Ics)</li> <li>at 240 V</li> <li>at 415 V</li> <li>at 690 V</li> <li>at 690 V</li> <li>short-circuit current making capacity (Icm)</li> <li>at 240 V</li> <li>at 415 V</li> <li>at 415 V</li> <li>at 690 V</li> <li>at 415 V</li> <li>at 690 V</li> <li>at 690 V</li> <li>at 690 V</li> <li>for switching power values in DC networks, see the 3VA molded ca circuit breaker device manual; link to be found under Service &amp; Supplin the last chapter</li> </ul> Switching capacity according to UL 489 breaking capacity current <ul> <li>at 240 V</li> <li>at 480 V</li> <li>at 480 V</li> <li>at 600 Y/347 V</li> </ul>	
at 415 V at 690 V breaking capacity operating short-circuit current (Ics)  at 240 V at 415 V at 690 V  5 kA  short-circuit current making capacity (Icm) at 240 V at 415 V at 690 V  short-circuit current making capacity (Icm) at 240 V at 415 V at 690 V  for switching power values in DC networks, see the 3VA molded cacircuit breaker device manual; link to be found under Service & Supplie in the last chapter  Switching capacity according to UL 489  breaking capacity current at 240 V at 480 V at 480 V at 600 Y/347 V  70 kA 70	
at 690 V breaking capacity operating short-circuit current (Ics)  at 240 V at 415 V at 690 V  short-circuit current making capacity (Icm) at 240 V at 415 V at 690 V  short-circuit current making capacity (Icm) at 240 V at 690 V  testing of short-circuit protection  switching capacity according to UL 489  breaking capacity current at 240 V at 480 V at 480 V at 690 Y/347 V  10 kA  150 kA  150 kA  150 kA  65 kA  25 kA	
breaking capacity operating short-circuit current (Ics)  • at 240 V  • at 415 V  • at 690 V  short-circuit current making capacity (Icm)  • at 240 V  • at 415 V  • at 690 V  330 kA  • at 415 V  • at 690 V  design of short-circuit protection  Switching capacity according to UL 489  breaking capacity current  • at 240 V  • at 480 V  • at 600 Y/347 V  150 kA  150 kA  150 kA  150 kA  25 kA	
at 240 V at 415 V at 690 V  short-circuit current making capacity (Icm)  at 240 V at 690 V  short-circuit current making capacity (Icm)  at 240 V at 415 V at 690 V  design of short-circuit protection  For switching power values in DC networks, see the 3VA molded ca circuit breaker device manual; link to be found under Service & Supplin the last chapter  Switching capacity according to UL 489  breaking capacity current at 240 V at 480 V at 480 V at 600 Y/347 V  150 kA	
<ul> <li>at 415 V</li> <li>at 690 V</li> <li>short-circuit current making capacity (Icm)</li> <li>at 240 V</li> <li>at 415 V</li> <li>at 690 V</li> <li>design of short-circuit protection</li> <li>For switching power values in DC networks, see the 3VA molded ca circuit breaker device manual; link to be found under Service &amp; Suprin the last chapter</li> <li>Switching capacity according to UL 489</li> <li>breaking capacity current</li> <li>at 240 V</li> <li>at 480 V</li> <li>at 600 Y/347 V</li> <li>25 kA</li> </ul>	
at 690 V  short-circuit current making capacity (Icm)  at 240 V  at 415 V  at 690 V  design of short-circuit protection  For switching power values in DC networks, see the 3VA molded ca circuit breaker device manual; link to be found under Service & Supplie in the last chapter  Switching capacity according to UL 489  breaking capacity current  at 240 V  at 480 V  at 600 Y/347 V  5 kA	
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<ul> <li>at 415 V</li> <li>at 690 V</li> <li>design of short-circuit protection</li> <li>For switching power values in DC networks, see the 3VA molded ca circuit breaker device manual; link to be found under Service &amp; Supplie in the last chapter</li> <li>Switching capacity according to UL 489</li> <li>breaking capacity current</li> <li>at 240 V</li> <li>at 480 V</li> <li>at 480 V</li> <li>at 600 Y/347 V</li> <li>25 kA</li> </ul>	
● at 690 V  design of short-circuit protection  For switching power values in DC networks, see the 3VA molded ca circuit breaker device manual; link to be found under Service & Suprin the last chapter  Switching capacity according to UL 489  breaking capacity current  ● at 240 V  ● at 480 V  ● at 600 Y/347 V  25 kA	
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breaking capacity current	
breaking capacity current	
<ul> <li>at 240 V</li> <li>at 480 V</li> <li>at 600 Y/347 V</li> <li>150 kA</li> <li>65 kA</li> <li>25 kA</li> </ul>	
• at 600 Y/347 V 25 kA	
Adjustable parameters	
Adjustable response value current / lg min. 125 A	
Adjustable response value current / Ig min. 125 A	
Adjustable response value current / li min. 625 A	
Adjustable response value current / li max. 1 250 A	
design of the N-conductor protection 100%	
Ground fault protection / tripping switchable / I2t=ON/OFF No	
Mechanical Design	
height [in] 5.5 in	
Height 140 mm	
width [in] 4 in	
Width 101.6 mm	
depth [in] 3 in	
depth 76.5 mm	
Connections	
arrangement of electrical connectors / for main current circuit  Without connection  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	
• during operation / minimum -25 °C	
• during operation / maximum 70 °C	
• during storage / minimum -40 °C	
during storage / maximum     80 °C	
Certificates	
reference code / acc. to IEC 81346-2 Q	
certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	

## **General Product Approval**











**Miscellaneous** 

General Product Approval

EMC

**Declaration of Conformity** 

**Test Certificates** 

**Shipping Approval** 







Special Test Certificate **Miscellaneous** 



Shipping Approval

other



**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=3VA5112-6GC41-0AA0

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

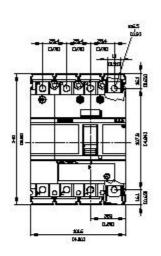
https://support.industry.siemens.com/cs/ww/en/ps/3VA5112-6GC41-0AA0

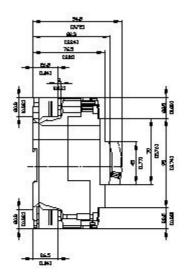
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

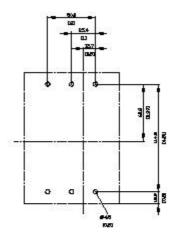
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA5112-6GC41-0AA0

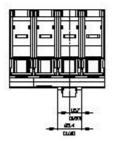
**Tender specifications** 

http://www.siemens.com/specifications









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