## 3VA5111-5GC41-0AA0

**Data sheet** 



circuit breaker 3VA5 UL frame 125 breaking capacity class M 35kA @ 480 V 4-pole, line protection TM230, FTAM, In=110A overload protection Ir=110A fixed short-circuit protection Ii=5...10 x In N conductor protection 100% without connection

product designation product designation / according to UL file MEAS Product version System protection  design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type)  design of the overcurrent release TM230 protection function of the overcurrent release LI I I I I I I I I I I I I I I I I I I	Model	
product designation / according to UL file Product version design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) design of the overcurrent release protection function of the overcurrent release protection function of the overcurrent release LI number of poles  Tension assignée d'isolement UI Max. rated operational voltage Ue with AC 50/60Hz Max. rated operational voltage Ue with DC power loss [W] / maximum Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 680/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/4 S0/60 Hz Electrical endurance	product brand name	SENTRON
Product version  design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type)  design of the overcurrent release protection function of the overcurrent release  number of poles  4  General technical data  Tension assignée d'isolement Ui Max. rated operational voltage Ue with AC 50/60Hz Max. rated operational voltage Ue with DC power loss [M] / maximum Active power loss / Min rated represented in the operational voltage use with AC 50/60Hz in hot operating state / per pole mechanical service life (switching cycles) / typical Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 v 50/60 Hz electrical endurance (switching cycles) / at 80 V electrical endurance (switching cycles) / at 80 V  Neutral conductors / upgradeable/retrofittable ground-fault monitoring version without product function • communication function • other measurement function No  Ourrent marking / acc. to UL 489 / 100%-rated breaker Max. rated operational current of the frame size 125 A  Courant permanent assigné lu operational current • at 40 °C at 45 °C 110 A at 50 °C 195.8 A	product designation	Molded-case circuit breaker
design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type)  design of the overcurrent release protection function of the overcurrent release I	product designation / according to UL file	MEAS
Conditioning, and Refrigeration circuit breaker (HACR Type)  design of the overcurrent release protection function of the overcurrent release protection function of the overcurrent release protection function of the overcurrent release LI number of poles  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 25,4 W Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical Electrical endurance (switching cycles) / typical Electrical endurance (switching cycles) / at AC-1 / at 8000 V50/60 Hz electrical endurance (switching cycles) / at 480 V electrical endurance (switching cycles) / at 480 V electrical endurance (switching cycles) / at 600 V Neutral conductors / upgradeable/retofittable No ground-fault monitoring version without product function o communication function No Other measurement function No Max. rated operational current of the frame size 125 A Courant permanent assigné lu operational current at 45 °C 107.8 A 105.8 A	Product version	System protection
protection function of the overcurrent release number of poles  General technical data Tension assignée d'isolement Ui  Max. rated operational voltage Ue with AC 50/60Hz 600 V Max. rated operational voltage Ue with DC power loss [W] / maximum 25.4 W Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz 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 • communication function • communication function No Other measurement function No Max. rated operational current of the frame size 125 A Courant permanent assigné lu operational current • at 40 °C at 445 °C 110 A at 45 °C 107.8 A	Conditioning, and Refrigeration circuit breaker (HACR Type)	Yes
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 25.4 W  Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical 15 000  Electrical endurance (switching cycles) / typical 8 000  380/415 V 50/60 Hz  Electrical endurance (switching cycles) / at AC-1 / at 8000  380/415 V 50/60 Hz  Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz  electrical endurance (switching cycles) / at 480 V 8 000  electrical endurance (switching cycles) / at 600 V A 000  Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version Without product function Without product function No eommunication function No eommunication function No Active measurement function No Active measurement function No Active marking / acc. to UL 489 / 100%-rated breaker No Amax. rated operational current of the frame size 125 A Courant permanent assigné lu operational current + at 40 °C 110 A at 45 °C 107.8 A at 50 °C 105.8 A	design of the overcurrent release	
Tension assignée d'isolement Ui  Max. rated operational voltage Ue with AC 50/60Hz  600 V  Max. rated operational voltage Ue with DC  600 V  power loss [W] / maximum  Active power loss / for rated value of the current / at AC / in hot operating state / per pole  mechanical service life (switching cycles) / typical  Electrical endurance (switching cycles) / at AC-1 / at 8 000  8 000  Electrical endurance (switching cycles) / at AC-1 / at 8 000  Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz  Electrical endurance (switching cycles) / at AC-1 / at 690 V 4 000  V 50/60 Hz  electrical endurance (switching cycles) / at 600 V 4 000  Neutral conductors / upgradeable/retrofittable No  ground-fault monitoring version Without  product function  • communication function No  • other measurement function No  Amax. rated operational current of the frame size 125 A  Courant permanent assigné lu operational current  • at 40 °C  • at 45 °C  • at 50 °C  105.8 A	protection function of the overcurrent release	
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 25.4 W  Active power loss / for rated value of the current / at AC / in hot operating state / per pole  mechanical service life (switching cycles) / typical 15 000  Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz  Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz  Electrical endurance (switching cycles) / at 480 V 8 000  electrical endurance (switching cycles) / at 480 V 8 000  Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version Without product function No other measurement function No No ether measurement function No No Nax. rated operational current of the frame size 125 A  Courant permanent assigné lu 110 A operational current • at 40 °C 117.8 A • at 50 °C 105.8 A	number of poles	4
Max. rated operational voltage Ue with AC 50/60Hz  Max. rated operational voltage Ue with DC  power loss [W] / maximum  Active power loss / for rated value of the current / at AC / in hot operating state / per pole  mechanical service life (switching cycles) / typical  Electrical endurance (switching cycles) / at AC-1 / at 380/415 v 50/60 Hz  Electrical endurance (switching cycles) / at AC-1 / at 690 v 50/60 Hz  Electrical endurance (switching cycles) / at 480 v 8 000  electrical endurance (switching cycles) / at 480 v 9 000  Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version Without product function	General technical data	
Max. rated operational voltage Ue with DC power loss [W] / maximum Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical Electrical endurance (switching cycles) / typical Electrical endurance (switching cycles) / at AC-1 / at 3800415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 8 000 electrical endurance (switching cycles) / at 600 V 4 000 Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version Without product function • communication function • 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 lu 110 A operational current • at 40 °C • at 45 °C • at 50 °C 105.8 A	Tension assignée d'isolement Ui	800 V
power loss [W] / maximum  Active power loss / for rated value of the current / at AC / in hot operating state / per pole  mechanical service life (switching cycles) / typical  Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz  Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz  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  • communication 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 lu 110 A  operational current  • at 40 °C 110 A  • at 45 °C 107.8 A  • at 50 °C 105.8 A	Max. rated operational voltage Ue with AC 50/60Hz	690 V
Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical 15 000  Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz  Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz  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  • communication function No  • other measurement function No  Current Max. rated operational current of the frame size 125 A  Courant permanent assigné lu 0 110 A  operational current  • at 40 °C 110 A  • at 45 °C 107.8 A  • at 50 °C 105.8 A	Max. rated operational voltage Ue with DC	600 V
in hot operating state / per pole  mechanical service life (switching cycles) / typical  Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz  Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz  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  • 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 lu 110 A  operational current  • at 40 °C 110 A  • at 45 °C 107.8 A  • at 50 °C 105.8 A	power loss [W] / maximum	25.4 W
Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz  Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz  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  • 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 lu 110 A  operational current  • at 40 °C 110 A  • at 45 °C 107.8 A  • at 50 °C 105.8 A		8.47 W
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz  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  • 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 lu 110 A  operational current  • at 40 °C 110 A  • at 45 °C 107.8 A  • at 50 °C 105.8 A	mechanical service life (switching cycles) / typical	15 000
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  • 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 lu 110 A  operational current  • at 40 °C 110 A  • at 45 °C 107.8 A  • at 50 °C 105.8 A		8 000
electrical endurance (switching cycles) / at 600 V  Neutral conductors / upgradeable/retrofittable  ground-fault monitoring version  product function  communication function  other measurement function  Mo  Current  marking / acc. to UL 489 / 100%-rated breaker  Max. rated operational current of the frame size  Courant permanent assigné lu  operational current  at 40 °C  at 45 °C  at 45 °C  ot 107.8 A  otition  4 000  Without  No  No  No  100  100  100  100  100  1		4 000
Neutral conductors / upgradeable/retrofittable ground-fault monitoring version  or communication function or other measurement function  Mo  Current  marking / acc. to UL 489 / 100%-rated breaker  Max. rated operational current of the frame size  Courant permanent assigné lu  operational current  of at 40 °C of at 45 °C of at 50 °C  loss A  Without  No  No  100  No  100  No  100  No  100  100	electrical endurance (switching cycles) / at 480 V	8 000
ground-fault monitoring version  Product function  Current  marking / acc. to UL 489 / 100%-rated breaker  Max. rated operational current of the frame size  Courant permanent assigné lu  operational current  at 40 °C  at 45 °C  at 50 °C  whithout  No  No  No  No  110 A  110 A  110 A	electrical endurance (switching cycles) / at 600 V	4 000
product function	Neutral conductors / upgradeable/retrofittable	No
<ul> <li>communication function</li> <li>No</li> <li>other measurement function</li> <li>No</li> </ul> Current marking / acc. to UL 489 / 100%-rated breaker Max. rated operational current of the frame size Courant permanent assigné lu operational current <ul> <li>at 40 °C</li> <li>at 45 °C</li> <li>at 45 °C</li> <li>at 50 °C</li> <li>105.8 A</li> </ul>	ground-fault monitoring version	Without
● 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 lu 110 A  operational current  ● at 40 °C 110 A  ● at 45 °C 107.8 A  ● at 50 °C 105.8 A	product function	
Current  marking / acc. to UL 489 / 100%-rated breaker  Mo  Max. rated operational current of the frame size  Courant permanent assigné lu  operational current  • at 40 °C  • at 45 °C  • at 50 °C  No  No  110 A  110 A  110 A  107.8 A	<ul> <li>communication function</li> </ul>	No
marking / acc. to UL 489 / 100%-rated breaker  Max. rated operational current of the frame size  Courant permanent assigné lu  operational current  • at 40 °C  • at 45 °C  • at 50 °C  No  No  125 A  110 A  110 A  110 A  107.8 A  105.8 A	<ul> <li>other measurement function</li> </ul>	No
Max. rated operational current of the frame size  Courant permanent assigné lu  operational current  • at 40 °C  • at 45 °C  • at 50 °C  105.8 A	Current	
Courant permanent assigné lu  operational current  • at 40 °C  • at 45 °C  • at 50 °C  110 A  110 A  107.8 A  105.8 A	marking / acc. to UL 489 / 100%-rated breaker	No
operational current	Max. rated operational current of the frame size	125 A
<ul> <li>at 40 °C</li> <li>at 45 °C</li> <li>at 50 °C</li> <li>110 A</li> <li>107.8 A</li> <li>105.8 A</li> </ul>	Courant permanent assigné lu	110 A
<ul> <li>at 45 °C</li> <li>at 50 °C</li> <li>107.8 A</li> <li>105.8 A</li> </ul>	operational current	
• at 50 °C 105.8 A	• at 40 °C	110 A
	• at 45 °C	107.8 A
• at 55 °C 103.8 A	● at 50 °C	105.8 A
	● at 55 °C	103.8 A

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• at 60 °C	101.9 A
at 65 °C     at 70 °C	100 A
	98.2 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	M
breaking capacity maximum short-circuit current (Icu)	
• at 240 V	85 kA
● at 415 V	55 kA
• at 690 V	7 kA
breaking capacity operating short-circuit current (lcs)	
• at 240 V	85 kA
• at 415 V	55 kA
• at 690 V	5 kA
short-circuit current making capacity (lcm)	40714
• at 240 V	187 kA
• at 415 V	121 kA
• at 690 V	11.9 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	
• at 240 V	85 kA
● at 480 V	35 kA
• at 600 Y/347 V	18 kA
Adjustable parameters	
Adjustable response value current / lg min.	110 A
Adjustable response value current / lg min.	110 A
Adjustable response value current / li min.	550 A
Adjustable response value current / li max.	1 100 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	7.0.0 11111
	Without connection
arrangement of electrical connectors / for main current circuit	Without
type of electrical connection / for main current circuit	Without
Auxiliary circuit	0
number of CO contacts / for auxiliary contacts	0
Accessories	V
product extension / optional / motor drive	Yes
Environmental conditions	
protection class IP / on the front	IP40
ambient temperature	
<ul><li>during operation / minimum</li></ul>	-25 °C
<ul><li>during operation / maximum</li></ul>	70 °C
<ul><li>during storage / minimum</li></ul>	-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	No

## **General Product Approval**











**Miscellaneous** 

General Product Approval

EMC

**Declaration of Conformity** 

**Test Certificates** 

**Shipping Approval** 







**Miscellaneous** 

Special Test Certificate



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=3VA5111-5GC41-0AA0

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

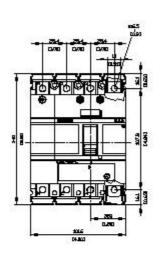
https://support.industry.siemens.com/cs/ww/en/ps/3VA5111-5GC41-0AA0

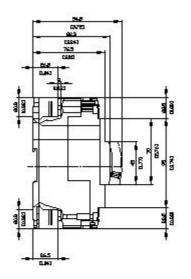
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

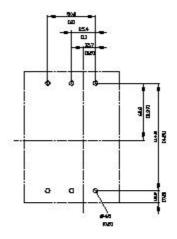
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA5111-5GC41-0AA0

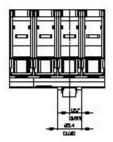
**Tender specifications** 

http://www.siemens.com/specifications









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