3VA5211-5GC41-0AA0

Data sheet



circuit breaker 3VA5 UL frame 250 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 Molded-case circuit breaker product designation according to UL file MFAS 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 number of poles 4 Genoral 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 1 000 V power loss [W] / maximum 22.6 W Active power loss / for rated value of the current / at AC / in hot operating slate / per pole mechanical service life (switching cycles) / typical 20 000 Electrical endurance (switching cycles) / at AC-1 / at 690 V \$50/60 Hz Electrical endurance (switching cycles) / at 480 V electrical endurance (switching cycles) / at 600 V No No Outroot marking / acc. to UL 489 / 100%-rated breaker Max. rated operational current of the frame size courant permanent assigné lu operational current el at 40 °C el 50 °C el 50 °C 110 A el 50 °C 110 A el 50 °C 110 A 110 A 100 F 110 A 110	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 4 Concrait Caphinical data Tension assignée d'isolement UI Max. rated operational voltage Ue with AC 50/60Hz Max. rated operational voltage Ue with DC power loss [VI] / maximum 22.6 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 68000 Solvido Hz Electrical endurance (switching cycles) / at AC-1 / at 69000 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 69000 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 69000 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 69000 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 69000 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 69000 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 69000 V 50/60 Hz Electrical endurance (switching cycles) / at AB0 V electrical endurance (switching cycles) / at B0000 Reutral conductors / upgradeable/retrofittable No Demander of the measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • at 40 °C • at 45 °C 110 A 110 A 110 A	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 1 000 V Max. rated operational voltage Ue with DC 1 000 V Active power loss / I/O rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical 20 000 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 800 electrical endurance (switching cycles) / at 800 v Neutral conductors / upgradeable/retrofittable ground-fault monitoring version volunt function • communication function • communication function • other measurement function No Outrent marking / acc. to UL 489 / 100%-rated breaker Max. rated operational current of the frame size 250 A Courant permanent assigné lu operational current • at 45 °C • at 45 °C 110 A 100 V 980 V 110 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 Inumber of poles 4 General technical data Tension assignée d'isolement Ui 800 V Max. rated operational voltage Ue with AC 50/60Hz Max. rated operational voltage Ue with DC 1000 V power loss [W] / maximum 22.6 W Active power loss [Vr] / maximum 22.6 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 690 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 600 V 8000 Electrical endurance (switching cycles) / at AC-1 / at 690 V 600 V 6	product designation / according to UL file	MFAS
Conditioning, and Refrigeration circuit breaker (HACR Type) design of the overcurrent release protection function of the overcurrent release LI mumber of poles Tension assignée d'isolement Ui Max. rated operational voltage Ue with AC 50/60Hz Max. rated operational voltage Ue with DC 1000 V power loss [W] / maximum 22.6 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 890 V 50/60 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/retorititable No ground-fault monitoring version without product function o communication function No other measurement function No Max. rated operational current of the frame size 250 A Courant permanent assigné lu operational current • at 40 °C 110 A • at 50 °C 110 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 690 V Max. rated operational voltage Ue with DC power loss [W] / maximum 22.6 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 480 V electrical endurance (switching cycles) / at 600 V Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version voluntial monitoring version voluntial monitoring version voluntial conductors / upgradeable/retrofittable normanication function communication function No current marking / acc. to UL 489 / 100%-rated breaker No Max. rated operational current of the frame size 250 A Courant permanent assigné lu operational current 110 A operational current 110 A operational current 110 A operational current	Conditioning, and Refrigeration circuit breaker (HACR	Yes
number of poles 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 1000 V power loss [W] / maximum 22.6 W Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical 20 000 Electrical endurance (switching cycles) / typical 8 000 Selectrical 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 • other measurement function No Max. rated operational current of the frame size 250 A Courant permanent assigné lu 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	design of the overcurrent release	TM230
Tension assignée d'isolement Ui Max. rated operational voltage Ue with AC 50/60Hz Max. rated operational voltage Ue with DC 1000 V power loss [W] / maximum 22.6 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 AC-1 / at 690 V 50/60 Hz electrical endurance (switching cycles) / at 600 V Neutral conductors / upgradeable/retrofittable ground-fault monitoring version product function • communication function • communication function • other measurement function Mo Adx. rated operational current of the frame size 250 A Courant permanent assigné lu operational current • at 40 °C at 45 °C 110 A • at 50 °C 110 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 1000 V power loss [W] / maximum 22.6 W Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical 20 000 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 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 250 A Courant permanent assigné lu 110 A operational current • at 40 °C 110 A • at 45 °C 110 A • at 45 °C 110 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 electrical endurance (switching cycles) / at 480 V v 50/60 Hz electrical endurance (switching cycles) / at 480 V for in the cycles in the cycles of the current / at 600 V Neutral conductors / upgradeable/retrofittable product function other measurement function work 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 110 A at 45 °C 110 A at 50 °C 110 A	General technical data	
Max. rated operational voltage Ue with DC power loss [W] / maximum 22.6 W Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical 20 000 Electrical endurance (switching cycles) / typical 20 000 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/retrofitable 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 250 A Courant permanent assigné lu 110 A operational current • at 40 °C • at 45 °C 110 A • at 50 °C	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 250 A Courant permanent assigné lu 110 A operational current • at 40 °C 110 A • at 45 °C 110 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 20 000 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 marking / acc. to UL 489 / 100%-rated breaker No Max. rated operational current of the frame size 250 A Courant permanent assigné lu operational current • at 40 °C 110 A • at 45 °C 110 A • at 50 °C 110 A	Max. rated operational voltage Ue with DC	1 000 V
in hot operating state / per pole mechanical service life (switching cycles) / typical 20 000 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 marking / acc. to UL 489 / 100%-rated breaker No Max. rated operational current of the frame size 250 A Courant permanent assigné lu 110 A operational current • at 40 °C 110 A • at 45 °C 110 A • at 50 °C 110 A	power loss [W] / maximum	22.6 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 250 A Courant permanent assigné lu 110 A operational current • at 40 °C 110 A • at 45 °C 110 A • at 50 °C 110 A		7.53 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 250 A Courant permanent assigné lu 110 A operational current • at 40 °C 110 A • at 45 °C 110 A • at 50 °C 110 A	mechanical service life (switching cycles) / typical	20 000
electrical endurance (switching cycles) / at 480 V electrical endurance (switching cycles) / at 600 V Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version • communication function • other measurement function Max. rated operational current of the frame size Courant permanent assigné lu operational current • at 40 °C • at 45 °C • at 50 °C 110 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 110 A other measurement in at 50 °C 110 A at 50 °C 110 A		4 000
Neutral conductors / upgradeable/retrofittable ground-fault monitoring version ordinate function ordinate function ordinate function ordinate function ordinate function ordinate function No Current marking / acc. to UL 489 / 100%-rated breaker Max. rated operational current of the frame size Courant permanent assigné lu operational current ordinate function 110 A operational current ordinate function 110 A operational current ordinate function 110 A operational current ordinate function 110 A operational current ordinate function 110 A operational current ordinate function 110 A operational current ordinate function 110 A operational current ordinate function 110 A	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 Without No No No No 10 No 110 No 110 No 110 No 110 No 110 110	electrical endurance (switching cycles) / at 600 V	4 000
product function	Neutral conductors / upgradeable/retrofittable	No
 Communication function No Other measurement function No Current Max. rated operational current of the frame size Courant permanent assigné lu Operational current at 40 °C at 45 °C at 45 °C at 50 °C 110 A 	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 250 A Courant permanent assigné lu 110 A operational current ● at 40 °C 110 A ● at 45 °C 110 A ● at 50 °C 110 A	product function	
Currentmarking / acc. to UL 489 / 100%-rated breakerNoMax. rated operational current of the frame size250 ACourant permanent assigné lu110 Aoperational current410 A• at 40 °C110 A• at 45 °C110 A• at 50 °C110 A	 communication function 	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 110 A	 other measurement function 	No
Max. rated operational current of the frame size Courant permanent assigné lu operational current • at 40 °C • at 45 °C • at 50 °C 110 A	Current	
Courant permanent assigné lu operational current • at 40 °C • at 45 °C • at 50 °C 110 A 110 A	marking / acc. to UL 489 / 100%-rated breaker	No
operational current	Max. rated operational current of the frame size	250 A
• at 40 °C	Courant permanent assigné lu	110 A
 at 45 °C at 50 °C 110 A 110 A 	operational current	
• at 50 °C 110 A	● at 40 °C	110 A
	● at 45 °C	110 A
• at 55 °C 106.7 A	• at 50 °C	110 A
	● at 55 °C	106.7 A

• at 60 °C	104.5 A
• at 65 °C	101.2 A
• at 70 °C	96.8 A
Switching capacity according to IEC 60947	30.0 A
	M
switching capacity class of the circuit breaker	IVI
breaking capacity maximum short-circuit current (Icu)	QE IA
• at 240 V	85 kA
• at 415 V	55 kA
• at 690 V	7 kA
breaking capacity operating short-circuit current (Ics)	05 1.4
• at 240 V	85 kA
• at 415 V	55 kA
• at 690 V	7 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]	7.3 in
Height	185 mm
width [in]	5.5 in
Width	140 mm
depth [in]	3.3 in
depth	83 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	
 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	No
combat vessels) / supplement SB	





Miscellaneous



EAC



Declaration of Conformity

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=3VA5211-5GC41-0AA0

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

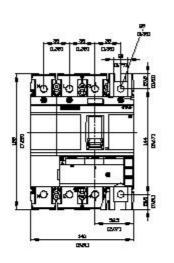
https://support.industry.siemens.com/cs/ww/en/ps/3VA5211-5GC41-0AA0

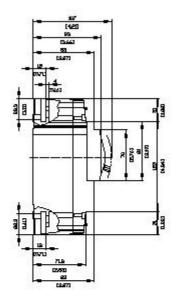
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

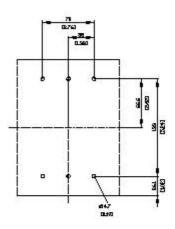
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5211-5GC41-0AA0

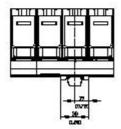
Tender specifications

http://www.siemens.com/specifications









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