## 3VA5217-5EC41-0AA0

**Data sheet** 



circuit breaker 3VA5 UL frame 250 breaking capacity class M 35kA @ 480 V 4-pole, line protection TM230, FTAM, In=175A overload protection Ir=175A fixed short-circuit protection Ii=5...10 x In N conductor unprotected 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    Ceneral 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   35.1 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 690 V   \$50/60 Hz   Electrical endurance (switching cycles) / at AO-1 / at 690 V   \$50/60 Hz   Electrical endurance (switching cycles) / at 480 V   4000 V   \$50/60 Hz   Electrical endurance (switching cycles) / at 480 V   4000 V   Neutral conductors / upgradeable/retrofittable   No   ground-fault monitoring version   Without   product function   No    *6 other measurement function   No   Max. rated operational current of the frame size   250 A   Courant permanent assigné lu   0 operational current   *6 at 40 °C   175 A   *6 at 50 °C   175 A   *6 at 55 °C   160,75 A   *6 at 50 °C   175	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 680/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 680/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 680/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/00 V S0/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690/00 V S0/60 Hz Electrical endurance (switching cyc	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	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 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 Max. rated operational voltage Ue with DC 1000 V power loss [W] / maximum 35.1 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 50/60 Hz electrical endurance (switching cycles) / at 480 V electrical endurance (switching cycles) / at 480 V electrical endurance (switching cycles) / at 600 V Noutral conductors / upgradeable/retrofittable product function • communication function	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 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 [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 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/retrofittable No ground-fault monitoring version vernomunication 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 45 °C at 45 °C 175 A 175 A 175 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 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 4 000 Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version Without product function • communication function • communication function No Ourrent 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 40 °C at 45 °C 175 A • at 50 °C 175 A	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 35.1 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  Solvat S V 50/60 Hz  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 No  • other measurement function No  • other measurement function No  Amax. rated operational current of the frame size 250 A Courant permanent assigné lu operational current  • at 40 °C 175 A 175	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  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 4 000  Neutral conductors / upgradeable/retrofittable No  ground-fault monitoring version  product function  • communication function  • communication function  • other measurement function  No  Current  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 40 °C  at 45 °C  at 45 °C  175 A  • at 50 °C  175 A	protection function of the overcurrent release	Ш
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 35.1 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 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 480 V 4 000  Neutral conductors / upgradeable/retrofittable No  ground-fault monitoring version Without  product function No  • other measurement function No  Ourrent  marking / acc. to UL 489 / 100%-rated breaker No  Max. rated operational current of the frame size 250 A  Courant permanent assigné lu 175 A  • at 40 °C 175 A  • at 45 °C 175 A  • at 45 °C 175 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 600 V 4 000  Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version Without product function  • communication function No  • other measurement function No  Axx. rated operational current of the frame size 250 A  Courrant permanent assigné lu 175 A  operational current  • at 40 °C 175 A  • at 45 °C 175 A  • at 50 °C 175 A	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 20 000 Electrical endurance (switching cycles) / typical 8000 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 8000 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/retrofitable No ground-fault monitoring version Vithout product function • communication function • other measurement function No Current 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 40 °C • at 45 °C • at 45 °C • 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 175 A  operational current  • at 40 °C 175 A  • at 45 °C 175 A  • at 50 °C 175 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 175 A  operational current  • at 40 °C 175 A  • at 45 °C 175 A  • at 50 °C 175 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 175 A  operational current  • at 40 °C 175 A  • at 45 °C 175 A  • at 50 °C 175 A	power loss [W] / maximum	35.1 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 175 A  operational current  • at 40 °C • at 45 °C • at 50 °C  175 A  175 A		11.7 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 175 A  operational current  • at 40 °C 175 A  • at 45 °C 175 A  • at 50 °C 175 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  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 50 °C  175 A  • at 50 °C  175 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  at 50 °C  175 A		4 000
Neutral conductors / upgradeable/retrofittable ground-fault monitoring version  ● 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 50 °C  No  Without  No  No  175 A  175 A  175 A  175 A	electrical endurance (switching cycles) / at 480 V	8 000
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 50 °C  Without  No  No  175 A  175 A  175 A	electrical endurance (switching cycles) / at 600 V	4 000
product function  • communication function  • other measurement 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  • at 40 °C  • at 45 °C  • at 50 °C  175 A	Neutral conductors / upgradeable/retrofittable	No
<ul> <li>communication function</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 <ul> <li>operational current</li> <li>at 40 °C</li> <li>at 45 °C</li> <li>at 45 °C</li> <li>at 50 °C</li> <li>175 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 250 A  Courant permanent assigné lu 175 A  operational current  ● at 40 °C 175 A  ● at 45 °C 175 A  ● at 50 °C 175 A	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  No  No  175 A  175 A  175 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  175 A  175 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  175 A	Current	
Courant permanent assigné lu  operational current  • at 40 °C  • at 45 °C  • at 50 °C  175 A  175 A	marking / acc. to UL 489 / 100%-rated breaker	No
operational current	Max. rated operational current of the frame size	250 A
<ul> <li>at 40 °C</li> <li>at 45 °C</li> <li>at 50 °C</li> <li>175 A</li> <li>175 A</li> <li>175 A</li> </ul>	Courant permanent assigné lu	175 A
<ul> <li>at 45 °C</li> <li>at 50 °C</li> <li>175 A</li> <li>175 A</li> </ul>	operational current	
• at 50 °C 175 A	• at 40 °C	175 A
	● at 45 °C	175 A
• at 55 °C 169.75 A	● at 50 °C	175 A
	● at 55 °C	169.75 A

-1.00.90	400 OF A
• at 60 °C	166.25 A
at 65 °C     at 70 °C	161 A
200.10	154 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	M
breaking capacity maximum short-circuit current (Icu)	0.51.4
• 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	7 kA
short-circuit current making capacity (lcm)	/ IVA
• 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
accign of chart should protociton	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.	175 A
Adjustable response value current / lg min.	175 A
Adjustable response value current / li min.	875 A
Adjustable response value current / li max.	1 750 A
design of the N-conductor protection	Without
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

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=3VA5217-5EC41-0AA0

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

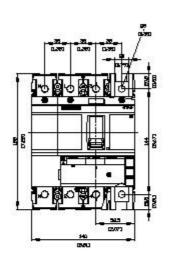
https://support.industry.siemens.com/cs/ww/en/ps/3VA5217-5EC41-0AA0

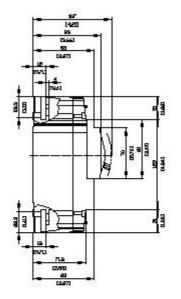
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

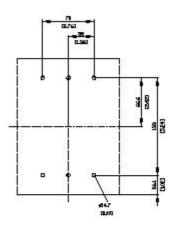
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA5217-5EC41-0AA0

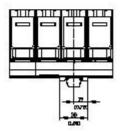
**Tender specifications** 

http://www.siemens.com/specifications









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