3VA5110-6EC41-0AA0

## **Data sheet**



circuit breaker 3VA5 UL frame 125 breaking capacity class H 65kA @ 480V 4-pole, line protection TM230, FTAM, In=100A overload protection Ir=100A fixed short-circuit protection Ii=5...10 x In N conductor unprotected without connection

Model		
product brand name	SENTRON	
product designation	Molded-case circuit breaker	
product designation / according to UL file	HEAS	
design of the product	System protection	
design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type)	Yes	
design of the load switch / according to UL 489 / High-Intensity- Discharge circuit breaker (HID Type)	No	
design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type)	No	
design of the overcurrent release	TM230	
protection function of the overcurrent release	LI	
number of poles	4	
General technical data		
insulation voltage / rated value	800 V	
operating voltage / at DC / rated value	600 V	
operating voltage / at AC / rated value	690 V	
power loss [W] / maximum	22.8 W	
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	7.6 W	
mechanical service life (operating cycles) / typical	20 000	
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	8 000	
electrical endurance (operating cycles) / at AC-1 / at 690 V	4 000	
electrical endurance (operating cycles) / at 480 V	8 000	
electrical endurance (operating cycles) / at 600 V	4 000	
product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof	No	
ground-fault monitoring version	without	
product function		
<ul> <li>communication function</li> </ul>	No	
other measurement function	No	
Net Weight	952 g	
Current		
marking / according to UL 489 / 100%-rated breaker	No	
operational current		
• at 40 °C	100 A	
• at 45 °C	98 A	
• at 50 °C	95 A	
● at 55 °C	93 A	
• at 60 °C	91 A	
● at 65 °C	89 A	

Switching capacity according to IEC 0947  switching capacity class of the circuit breaker  awarium short circuit current breaking capacity (ks)  * at 240 V  * at 415 V  * at 890 V  * at 845 V  * at 890 V  * at 845 V  * at 890 V  * at 845 V  * at 890 V  * at 840 V  * at 890 V  * at	• at 70 °C	87 A
switching capacity class of the circuit breaker air 240 V		
maximum short-cocult current breaking capacity (los)   150 kA   1615 V   70 kA   1690 V   150 kA   1690 V   1690 V   1690 kA   1690 V   1690 V   1690 kA   1690 V		Н
1914   19		
a dt 415 V and 890 V  operating short circuit current breaking capacity (ics) at 240 V at 415 V at 415 V below V belo	- 1 - 1 - 1	150 kA
• a 1690 V   10 kA		
operating short dirout current breaking capacity (ics)  • at 260 V • at 415 V • at 600 V		
* a14 15 V		
+ at 415 V		150 kA
and task of the control current making capacity (fcm)  and task of the control current making capacity (fcm)  and task of tas		
short-crout current making capacity (Icm)  • all 240 V • all 415 V • at 990 V  design of short-circuit protection  For switching power values in DC networks, see the 3VA moided case circuit breaker device manual; link to be found under Service & Support in the last chapter  switching capacity according to UL 489  current breaking capacity • at 240 V • at 480 V • at 480 V • at 480 V • at 480 V • at 600 YY47 V  25 kA  Adjustable parameters  adjustable response value setting current (Ir) / of the L-trip / with 2t characteristic • minimum • maximum • maximum • maximum  adjustable response value setting current (III) / for L-tripping / with 12t • minimum • maximum • maximum • maximum  100 A  adjustable setting current (IRI) / for N-tripping • minimum • minimum • minimum • minimum • minimum • minimum • modistable certification • minimum • minimum • minimum • modistable response value current / of the current-dependent overload release • minimum • minimum • minimum • minimum • DA • Modistable current response value current / of the current-dependent overload release • No • voltage frigger • Voltager		5 kA
e at 240 V e 1415 V e 1415 V e 154 RA e 156 RA e 156 RA e 156 RA design of short-circuit protection  Switching capacity according to UL-499  Current breaking capacity e 124 RA e 1480 V e 1480 V e 1480 V e 150 RA e 150 R		
e at 690 V  design of short-circuit protection  beater device manual, link to be found under Service & Support in the last chapter  surrent breaking capacity at 240 V at 480 V at 600 Y/347 V  Adjustable parameters adjustable response value setting current (Ir) / of the L-trip / with I2C characteristics minimum maximum 100 A maximum 100 A dijustable response value delay time (tr) / for L-tripping / with I2C characteristic minimum maximum 1 s maximum 1 s dijustable setting current (III) / for I-tripping / with I2C characteristic minimum maximum 1 s maximum 1 s  dijustable setting current (III) / for I-tripping minimum maximum 1 s  dijustable setting current (III) / for I-tripping minimum maximum 1 s  dijustable setting current (III) / for I-tripping minimum 0 A maximum 1 s  dijustable setting current (III) / for I-tripping minimum 0 A maximum 1 s  design of the N-conductor protection Without product function / grounding protection No Michanical Dasign product component underottage release No No No No Nephit [In] Midth Mephit [In] Midth		330 kA
design of short-circuit protection  For extribing power values in DC networks, see the 3VA modded case circuit breaking capacity according to UL 489  current breaking capacity  • at 240 V • at 880 V • at 800 Y/347 V  Adjustable parameters  adjustable response value setting current (ir) / of the L-trip / with 12t characteristic • minimum • maximum  • maximum  adjustable response value setting current (ii) / for L-tripping / with 12t characteristic • minimum • maximum  adjustable response value setting current (iii) / for L-tripping / with 12t characteristic • minimum • maximum  1 s  • maximum  adjustable response value setting current (iii) / for L-tripping • minimum • maximum  adjustable response value setting current (iii) / for L-tripping • minimum • maximum  0 A  display to the current response value current / of the current • dependent overhead release  design of the N-conductor protection  No  Machanical Design  product function / grounding protection  No  Machanical Design  product component • under-ording release • voltage trigger • No • ovloage trigger • Ovloage trigger • No • ovloage trigger • Ovloage trigger • Ovloage tri		
breaker device manual; link to be found under Service & Support in the last chapter  Switching capacity secording to UL 489  Learner breaking capacity 150 kA 150 k	● at 690 V	17 kA
breaker device manual; link to be found under Service & Support in the last chapter  Switching capacity secording to UL 489  Learner breaking capacity 150 kA 150 k		For switching power values in DC networks, see the 3VA molded case circuit
Switching capacity according to UL 459  current breaking capacity		breaker device manual; link to be found under Service & Support in the last
current breaking capacity  at 240 V  at 480 V  adjustable parameters  adjustable response value setting current (ir) / of the L-trip / with 12t characteristic  minimum  maximum  100 A  adjustable response value delay time (tr) / for L-tripping / with 12t characteristic  minimum  1 s  maximum  1 s  adjustable response value setting current (ii) / for I-tripping  minimum  500 A  maximum  1 s  adjustable setting current (inN) / for N-tripping  minimum  0 A  adjustable setting current (inN) / for N-tripping  minimum  0 A  adjustable setting current (inN) / for N-tripping  minimum  0 A  dayustable setting current (reny)  minimum  0 A  maximum  1 s  Adjustable current response value current / of the current-dependent overload release  design of the N-conductor protection  without  product component  undervoltage release  voltage release  volta	Switching capacity according to UL 489	
at 240 V at 480 V at 480 V 5 KA  Adjustable parameters  adjustable response value setting current (ir) / of the L-trip / with l2t characteristic minimum maximum 100 A adjustable response value delay time (tr) / for L-tripping / with l2t characteristic minimum maximum 1 s 00 A  adjustable response value setting current (ii) / for I-tripping 9 minimum maximum 1 s 00 A  adjustable setting current (in) / for N-tripping minimum 0 A maximum 0 A  adjustable setting current (inN) / for N-tripping minimum 0 A maximum 0 A  adjustable current response value current / of the current-dependent overload release design of the N-conductor protection Without product function / grounding protection No Mechanical Design product component undervoltage release voltage trigger vitip indicator No height [in] 10 S-51 in height 140 mm width [in] width 101.6 mm depth [in] 3.51 in height 140 mm width [in] width 101.6 mm depth [in] 3.91 in depth [in] 3.91 in depth [in] 3.91 in depth [in] 4.4 in without connection  arrangement of electrical connectors / for main current circuit Without connection  Type of electrical connectors / for main current circuit Without Nounber of CO contacts / for axiliany contacts 0 Accessorios product extension / optional / motor drive Environmental conditions		
at 600 Y/347 V  Adjustable parameters adjustable response value setting current (tr) / of the L-trip / with   2t characteristic     ininimum		150 kA
at 600 Y/347 V  Adjustable parameters adjustable response value setting current (tr) / of the L-trip / with   2t characteristic     ininimum	• at 480 V	65 kA
Adjustable parameters  adjustable response value setting current (ir) / of the L-irip / with I2t characteristic  minimum maximum 100 A  adjustable response value delay time (tr) / for L-tripping / with I2t characteristic  minimum maximum 1 s maximum 1 s  adjustable response value setting current (ii) / for I-tripping minimum maximum 1 s  adjustable response value setting current (ii) / for I-tripping minimum maximum 1 000 A  adjustable setting current (inN) / for N-tripping minimum maximum 0 A  adjustable setting current (inN) / for N-tripping minimum maximum 0 A  adjustable current response value current / of the current-dependent overload release design of the N-conductor protection product function / grounding protection  Mechanical Design  product component undervoltage release voltage trigger voltage trigger voltage trigger voltage trigger No vitip indicator No height inj height 140 mm width 101.6 mm depth inj depth 75.5 mm  Connections  arrangement of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit vipe of electrical connectors / for main current circuit		
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e maximum  adjustable response value delay time (tr) / for L-tripping / with 12t characteristic  e minimum  1 s  e maximum  1 s  adjustable response value setting current (ii) / for I-tripping  e minimum  minimum  foo A  e maximum  1 000 A  adjustable setting current (InN) / for N-tripping  e minimum  minimum  o A  e maximum  adjustable setting current (InN) / for N-tripping  e minimum  o A  e maximum  adjustable current response value current / of the current-dependent overload release  design of the N-conductor protection  Without  product function / grounding protection  Mo  Mechanical Design  product component  e undervoltage release  voltage trigger  voltage trigger  No  e trip indicator  No  height [in]  depth	adjustable response value setting current (Ir) / of the L-trip / with	
adjustable response value delay time (tr) / for L-tripping / with 12t characteristic	• minimum	100 A
characteristic  minimum maximum adjustable response value setting current (ii) / for I-tripping minimum maximum maximu	• maximum	100 A
maximum     adjustable response value setting current (ii) / for I-tripping         • minimum		
adjustable response value setting current (iii) / for I-tripping	• minimum	1 s
<ul> <li>minimum</li> <li>maximum</li> <li>adjustable setting current (inN) / for N-tripping</li> <li>minimum</li> <li>0 A</li> <li>maximum</li> <li>0 A</li> <li>adjustable current response value current / of the current-dependent overload release</li> <li>design of the N-conductor protection</li> <li>Without</li> <li>product function / grounding protection</li> <li>No</li> <li>Mechanical Design</li> <li>product component</li> <li>undervoltage release</li> <li>voltage trigger</li> <li>trip indicator</li> <li>height</li> <li>width</li> <li>depth</li> <li>for 5.51 in</li> <li>height</li> <li>width</li> <li>depth</li> <li>76.5 mm</li> <li>Connections</li> <li>arrangement of electrical connectors / for main current circuit</li> <li>type of electrical connector / for main current circuit</li> <li>Without</li> <li>Auxiliary circuit</li> <li>number of CO contacts / for auxiliary contacts</li> <li>D</li> <li>Accessories</li> <li>product extension / optional / motor drive</li> <li>Yes</li> <li>Environmental conditions</li> </ul>	• maximum	1 s
maximum     adjustable setting current (InN) / for N-tripping     minimum	adjustable response value setting current (Ii) / for I-tripping	
adjustable setting current (InN) / for N-tripping  • minimum • maximum 0 A  adjustable current response value current / of the current- dependent overload release  design of the N-conductor protection Without product function / grounding protection No  Mechanical Design  product component • undervoltage release • voltage trigger • No • trip indicator height [in] height 140 mm width [in] width 101.6 mm depth [in] depth 76.5 mm  Connections  arrangement of electrical connectors / for main current circuit type of electrical connector / for auxiliary contacts  0 Accessories product extension / optional / motor drive Yes  Environmental conditions	• minimum	500 A
• minimum     • maximum     0 A     adjustable current response value current / of the current-dependent overload release     design of the N-conductor protection     without     product function / grounding protection     No  Mechanical Design  product component     • undervoltage release     • voltage trigger     • trip indicator     height [in]     height [in]     height [in]     depth [in]     describes     product extension / optional / motor drive [in]     Pes  Environmental conditions	• maximum	1 000 A
maximum     adjustable current response value current / of the current-dependent overload release design of the N-conductor protection     product function / grounding protection     No  Mechanical Design  product component     • undervoltage release     • voltage trigger     • trip indicator     height [in]     height   140 mm  width   101 mm  depth [in]     depth   76.5 mm  Connections  arrangement of electrical connectors / for main current circuit type of electrical connection / for auxiliary contacts  Accessories  product extension / optional / motor drive Yes  Environmental conditions	adjustable setting current (InN) / for N-tripping	
adjustable current response value current / of the current-dependent overload release  design of the N-conductor protection Without product function / grounding protection No  Mechanical Design  product component  • undervoltage release • voltage trigger • voltage	• minimum	0 A
design of the N-conductor protection Without product function / grounding protection No  Mechanical Design  product component	• maximum	0 A
design of the N-conductor protection Without product function / grounding protection No  Mechanical Design  product component  • undervoltage release No • voltage trigger No • trip indicator No  height [in] 5.5.1 in height 140 mm width [in] 4 in width 101.6 mm depth [in] 3.01 in depth 76.5 mm  Connections  arrangement of electrical connectors / for main current circuit Without Auxiliary circuit number of CO contacts / for auxiliary contacts 0  Accessories product extension / optional / motor drive Yes  Environmental conditions		100 100 A
product function / grounding protection  Mechanical Design  product component  • undervoltage release • voltage trigger		MEG
Product component  • undervoltage release • voltage trigger • volt		
product component  • undervoltage release  • voltage trigger  • trip indicator  No  height [in]  5.51 in  height  width [in]  width [in]  4 in  width  depth [in]  3.01 in  depth  Connections  arrangement of electrical connectors / for main current circuit  type of electrical connection / for main current circuit  without  Auxiliary circuit  number of CO contacts / for auxiliary contacts  Accessories  product extension / optional / motor drive  Environmental conditions		No
undervoltage release     voltage trigger     No     trip indicator     No height [in]     5.51 in height     140 mm width [in]     4 in width [in]     3.01 in depth [in]     3.01 in depth  Connections arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit  Auxiliary circuit number of CO contacts / for auxiliary contacts  O Accessories product extension / optional / motor drive  Yes  Environmental conditions		
voltage trigger     trip indicator     No height [in] height     140 mm  width [in]     4 in  width in] depth [in] depth [in] depth  Connections  arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit  Auxiliary circuit number of CO contacts / for auxiliary contacts  Accessories  product extension / optional / motor drive  Environmental conditions		
in trip indicator     height [in]	-	
height [in] 5.51 in height 140 mm  width [in] 4 in width 101.6 mm depth [in] 3.01 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  Accessories product extension / optional / motor drive Yes  Environmental conditions		
height 140 mm  width [in] 4 in  width 101.6 mm  depth [in] 3.01 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	·	
width [in] 4 in width 101.6 mm depth [in] 3.01 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		
width depth [in] depth 76.5 mm  Connections arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit Without Auxiliary circuit number of CO contacts / for auxiliary contacts  Accessories product extension / optional / motor drive Environmental conditions	•	
depth [in] 3.01 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		
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  Accessories product extension / optional / motor drive Yes  Environmental conditions		
Connections arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit  Auxiliary circuit number of CO contacts / for auxiliary contacts  Accessories product extension / optional / motor drive Environmental conditions  Without connection Without  Without  Without  Yes	_ · · · · ·	
arrangement of electrical connectors / for main current circuit  type of electrical connection / for main current circuit  Without  Auxiliary circuit  number of CO contacts / for auxiliary contacts  Accessories  product extension / optional / motor drive  Environmental conditions	·	76.5 mm
type of electrical connection / for main current circuit  Auxiliary circuit  number of CO contacts / for auxiliary contacts  Accessories  product extension / optional / motor drive  Environmental conditions  Without  Without  Yes		
Auxiliary circuit number of CO contacts / for auxiliary contacts  Accessories product extension / optional / motor drive Environmental conditions		
number of CO contacts / for auxiliary contacts 0  Accessories  product extension / optional / motor drive Yes  Environmental conditions		Without
Accessories  product extension / optional / motor drive  Environmental conditions  Yes	Auxiliary circuit	
product extension / optional / motor drive Yes Environmental conditions	number of CO contacts / for auxiliary contacts	0
Environmental conditions	Accessories	
	product extension / optional / motor drive	Yes
protection class IP / on the front IP40	Environmental conditions	
	protection class IP / on the front	IP40

ambient temperature

• during operation / minimum

• during operation / maximum

70 °C

• during storage / minimum

• during storage / maximum

80 °C

Certificates

reference code / according to IEC 81346-2

Q

General Product Approval

Confirmation









**Miscellaneous** 

General Product Approval

EMC

**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping









Special Test Certificate



Marine / Shipping

other



**Miscellaneous** 

Confirmation

**Miscellaneous** 

## **Further information**

Siemens has decided to exit the Russian market (see here).

 $\underline{\text{https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business}}$ 

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=3VA5110-6EC41-0AA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3VA5110-6EC41-0AAC

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

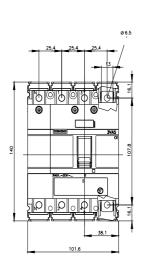
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA5110-6EC41-0AA0

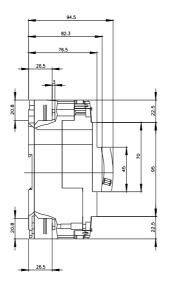
**CAx-Online-Generator** 

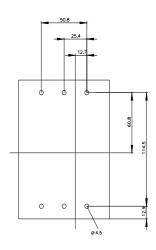
http://www.siemens.com/cax

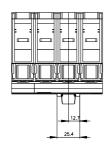
**Tender specifications** 

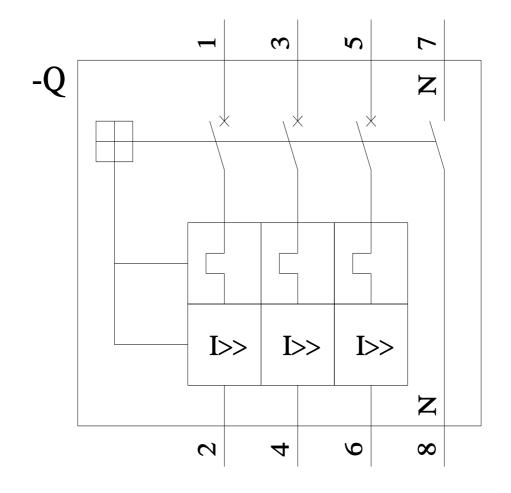
http://www.siemens.com/specifications

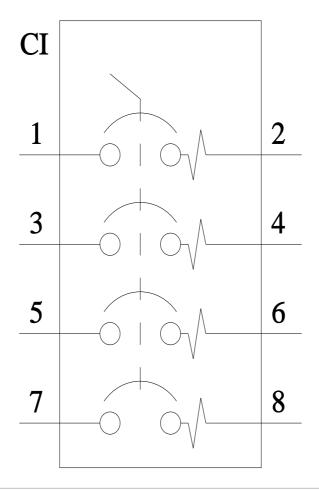












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