## 3VA5112-6ED32-0AA0

**Data sheet** 



circuit breaker 3VA5 UL frame 125 breaking capacity class H 65kA @ 480 V 3-pole, line protection TM210, FTFM, In=125A overload protection Ir=125A fixed short-circuit protection Ii=10 x In nut keeper kit on both sides

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	TM210
protection function of the overcurrent release	Ц
number of poles	3
General technical data	
insulation voltage / rated value	800 V
operating voltage / at DC / rated value	500 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	30.1 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	10.03 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	1.034 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	125 A
• at 45 °C	122 A
• at 50 °C	119 A
• at 55 °C	117 A
• at 60 °C	114 A
● at 65 °C	112 A

Switching capacity according to IEC 0597   Switching capacity (ass of the drawl breaking capacity (ass)   150 kA   70 kA   4 at 45 V   4 at 45 V   4 at 450 V   50 kA   4 at 45 V   4 at 450 V   50 kA   50 kA   4 at 45 V   4 at 450 V   50 kA   50	• at 70 °C	109 A
150 kA		Н
4 at 415 V   10 kA	maximum short-circuit current breaking capacity (Icu)	
4.16 0 V   Operating short circuit current breaking capacity (Ice)	• at 240 V	150 kA
operating short-circuit current breaking capacity (ice)  • al 240 V 5 KA  • al 650 V 5 KA  short-circuit current making capacity (icm)  • al 240 V 330 KA  • al 455 V 154 KA  • al 650 V 17 KA  • al 455 V 25 KA  design of short-circuit protection  6 For switching power values in DC networks, see the 3VA modified case circuit breaker devire manual; link to be found under Service & Support in the last chapter  current breaking capacity  • al 240 V 150 KA  • al 450 V 25 KA  Adjustable parameters  adjustable response value setting current (i/i) of the L-trip / with 12t characteristic  • ninimum  • naximum  • naximu	• at 415 V	70 kA
150 kA	• at 690 V	10 kA
41 41 5 V	operating short-circuit current breaking capacity (lcs)	
• at 890 V   S kA	• at 240 V	150 kA
short-circuit current making capacity (term)  • 1240 V  • 1415 V  • 1 150 V  design of short-circuit protection  for switching capacity according to UL-439  Soutching capacity according to UL-439  Sutching capacity according to UL-439  • 1240 V  • 1 120	• at 415 V	70 kA
e at 240 V e at 450 V 154 kA 154 V 154 kA 154 V 174 kA 154 V 175 kA 154 V 175 kA 154 V 175 kA 155 V 175 V	● at 690 V	5 kA
e at 415 V at 690 V 17 KA  design of short-circuit protection		
e at 690 V  design of short-circuit protection  for switching power values in DC networks, see the 3VA moided case circuit beaking capacity according to UL 489  current breaking capacity  al 240 V  at 480 V  at 600 Y/34 V  Adjustable parameters  adjustable response value setting current (itr) of the L-trip / with 12t characteristic  minimum  maximum  1 25 A  adjustable response value delay time (itr) for L-tripping / with 12t characteristic  minimum  maximum  1 250 A  adjustable response value setting current (ili) for I-tripping / with 12t characteristic  minimum  maximum  1 250 A  adjustable sesting current (ini) for I-tripping  minimum  1 250 A  adjustable sesting current (ini) for I-tripping  minimum  1 250 A  adjustable sesting current (ini) for I-tripping  minimum  0 A  adjustable setting current (ini) for I-tripping  minimum  0 A  adjustable setting current (ini) for I-tripping  minimum  0 A  adjustable setting current (ini) for I-tripping  minimum  0 A  adjustable current response value current / of the current- dependent overload release  No  No  worklage frager  No  worklage frager  No  worklage frager  No  worklage frager  No  ore product component  undervoltage release  No  no solitage frager  No  ore product component  undervoltage release  No  ore product component  for maximum  Alt mm  worklage frager  No  ore production or for maximum  Alt mm  worklage frager  No  ore production or for maximum  Alt mm  worklage frager  No  ore production or for maximum  For Emminication or for maximum  worklage frager  No  ore production or for maximum  for Emminication or for maximum  for Emminication or for maximum  for Emminication or for maximum  for Experiment or electrical connection / for main current circuit  prove of connectable conductor rose-sections / for flat-bar terminication or for flat-bar terminication or for flat-bar terminication for connection / framinication or for flat-bar terminication for CO contacts / for auxiliary cortacts  for Set for Maximum  for Experiment or CO contacts / for auxili		
design of short-circuit protection  For switching power values in DC networks, see the 3VA noted case circuit breaking capacity according to UL 489  current breaking capacity  at 240 V  at 480 V  at 800 Y;247 V  Adjustable parameters  adjustable response value setting current (ir) / of the L-trip / with 12t characteristic  minimum  maximum  adjustable response value delay time (ir) / for L-inpping / with 12t characteristic  minimum  maximum  1 s  adjustable response value setting current (ii) / for I-tripping / with 12t characteristic  minimum  1 s  maximum  1 s  adjustable response value setting current (iii) / for I-tripping / with 12t characteristic  minimum  1 s  maximum  1 s  adjustable response value setting current (iii) / for I-tripping  minimum  1 250 A  maximum  1 250 A  maximum  0 A  maximum  1 250 A  maximum  0 A  maximum  1 250 A  maximum  0 A  maximum  1 25 125 A  dependent overala drelease  No  voltage trigger  No  voltage trigg		
breaker device manual; link to be found under Service & Support in the last chapter  Switching capacity current breaking capacity  • at 240 V • at 480 V • at 880 V • at 890 Y/347 V  Adjustable parameters  adjustable response value setting current (Ir) / of the L-trip / with I2t characterister • minimum • maximum  adjustable response value delay time (Ir) / for L-tripping / with I2t characterister • minimum • maximum  adjustable response value setting current (II) / for I-tripping / with I2t characterister • minimum • maximum  adjustable response value setting current (II) / for I-tripping   • minimum • maximum  adjustable setting current (III) / for I-tripping   • minimum • maximum  adjustable setting current (III) / for I-tripping   • minimum • maximum  0 A  adjustable current response value current / of the current-dependent overlaad release  product function / grounding protection  No  Mochanical Design  roduct function / grounding protection  No  Mochanical Design • ving indicator • No  height [In] • 5.51 in height • 140 mm  width • 76.2 mm  depth In] • 3.01 in depth • 76.5 mm  Connections  arrangement of electrical connectors / for main current circuit pyee of electrical connection / for main current circuit pyee of electrical connection / for main current circuit pyee of electrical connection / for main current circuit pyee of electrical connection / for main current circuit pyee of electrical connection / for flat-bar terminal connection / minimum  vite por connection / minimum  yee of CO contacts / for auxiliary contacts  0 0		
current breaking capacity  at 240 V at 800 V; 347 V 25 kA  Adjustable parameters  adjustable response value setting current (ir) / of the L-trip / with l2t characteristic  minimum tadjustable response value delay time (tr) / for L-tripping / with l2t characteristic  minimum tadjustable response value delay time (tr) / for L-tripping / with l2t characteristic  minimum tadjustable response value delay time (tr) / for L-tripping / with l2t characteristic  minimum tadjustable response value setting current (ii) / for I-tripping minimum tadjustable setting current (in) / for N-tripping minimum tadjustable setting current (in) / for N-tripping minimum tadjustable setting current (in) / for N-tripping minimum tadjustable setting current / of the current tagion tadjustable setting current / of the current dependent overload release to A  adjustable current response value current / of the current dependent overload release  volde response value current / of the current dependent overload release  volde voltage release voltage trigger No tip indicator No height [in] 5.51 in height 40 mm width 76.2 mm depth [in] 3.01 in depth [in] 3.01 in depth [in] 76.5 mm  Connections  arrangement of electrical connectors / for main current circuit vype of ceneration / or main current circuit vype of ceneration / or main current circuit vype of ceneration / or main current circuit vype of ceneration connection / for main current circuit terminal connection / for main current circuit reterminal connection / for	design of short-circuit protection	breaker device manual; link to be found under Service & Support in the last
at 240 V at 480 V at 800 Y/347 V 25 kA  Adjustable parameters  adjustable response value setting current (ir) / of the L-trip / with IZt characteristic minimum 125 A adjustable response value delay time (tr) / for L-tripping / with IZt characteristic minimum 1 s maximum 1 s	Switching capacity according to UL 489	
	current breaking capacity	
al 600 Y/347 V     Adjustable parameters  adjustable response value setting current (ir) / of the L-trip / with 12t characteristic     minimum 125 A  adjustable response value delay time (tr) / for L-tripping / with 12t characteristic     minimum 15 A  adjustable response value setting current (iii) / for I-tripping / with 12t characteristic     minimum 15 A  adjustable response value setting current (iii) / for I-tripping / with 12t characteristic     minimum 15 A  adjustable response value setting current (iii) / for I-tripping / winimum 1250 A  adjustable setting current (inN) / for N-tripping / winimum 0 A  adjustable setting current (inN) / for N-tripping / winimum 0 A  adjustable current response value current / of the current-dependent overfoad release / roduct function / grounding protection No  Machanical Design / roduct current / of the current-dependent overfoad release / No  voltage trigger No  v	• at 240 V	150 kA
Adjustable persons value setting current (ir) / of the L-trip / with 12t characteristic  minimum maximum 125 A  adjustable response value delay time (tr) / for L-tripping / with 12t characteristic  minimum maximum 1 s  maximum 1 s  adjustable response value setting current (iii) / for I-tripping / with 12t characteristic  minimum maximum 1 s  adjustable personse value setting current (iii) / for I-tripping minimum maximum 1 250 A  adjustable setting current (inN) / for I-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 product function / grounding protection  Mochanical Design product function / grounding protection  Mochanical Design Product component undervoltage release No voltage trigger No voltage trigger No voltage trigger No height [in] 5.51 in height 140 mm width [in] 3.01 in depth (in) 40 mm width (in) 3.01 in depth (in) 76.2 mm  Connections  arrangement of electrical connectors / for main current circuit pye of electrical connectors / for main current circuit pye of connectable conductor cross-sections / for flat-bar terminal connector / maximum  Auxiliary circuit number of CO contacts / for auxiliary contacts 0	• at 480 V	65 kA
adjustable response value setting current (irr) / of the L-trip / with l2t characteristic  • minimum • maximum  adjustable response value delay time (tr) / for L-tripping / with 12t characteristic  • minimum • maximum  1 s  adjustable response value setting current (iii) / for L-tripping / with 12t characteristic  • minimum • maximum  1 s  adjustable response value setting current (iii) / for L-tripping • minimum • maximum  1 250 A  adjustable setting current (inN) / for N-tripping • minimum • maximum  0 A  adjustable setting current (inN) / for N-tripping • minimum • maximum  0 A  • maximum  1 250 A   4 00 A  4 00	● at 600 Y/347 V	25 kA
125 A   125	Adjustable parameters	
adjustable response value delay time (tr) / for L-tripping / with 12t characteristic e minimum 1 s 1 s 1 s 1 s 1 s 1 s 1 s 1 s 1 s 1		
adjustable response value delay time (tr) / for L-tripping / with 12t characteristic		
characteristic  iminimum		125 A
maximum minimum minim	characteristic	
adjustable response value setting current (iii) / for I-tripping		
<ul> <li>minimum</li> <li>maximum</li> <li>1 250 A</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>maximum</li> <li>0 A</li> <li>adjustable current response value current / of the current-dependent overload release</li> <li>product function / grounding protection</li> <li>No</li> <li>Machanical Design</li> <li>product component</li> <li>undervoltage release</li> <li>voltage trigger</li> <li>trip indicator</li> <li>height [in]</li> <li>5.51 in</li> <li>height [in]</li> <li>width 76.2 mm</li> <li>depth 76.5 mm</li> <li>Connections</li> <li>arrangement of electrical connectors / for main current circuit</li> <li>type of connectable conductor cross-sections / for flat-bar terminal connection / minimum</li> <li>type of connectable conductor cross-sections / for flat-bar terminal connection / maximum</li> <li>Auxiliary circuit</li> <li>number of CO contacts / for auxiliary contacts</li> <li>0</li> </ul>		18
Maximum		1.250 A
adjustable setting current (InN) / for N-tripping		
<ul> <li>minimum</li> <li>maximum</li> <li>0 A</li> <li>adjustable current response value current / of the current-dependent overload release</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 [in]</li> <li>5.51 in</li> <li>height [in]</li> <li>width [in]</li> <li>3 in</li> <li>width 76.2 mm</li> <li>depth 76.5 mm</li> </ul> Connections arrangement of electrical connectors / for main current circuit <ul> <li>type of electrical connection / for main current circuit</li> <li>type of connectable conductor cross-sections / for flat-bar terminal connection / minimum</li> <li>type of connectable conductor cross-sections / for flat-bar terminal connection / minimum</li> <li>type of connectable conductor cross-sections / for flat-bar terminal connection / minimum</li> <li>type of connectable conductor cross-sections / for flat-bar terminal connection / minimum</li> <li>type of connectable conductor cross-sections / for flat-bar terminal connection / minimum</li> <li>type of connectable conductor cross-sections / for flat-bar terminal connection / minimum</li> <li>type of connectable conductor cross-sections / for flat-bar terminal connection / maximum</li> <li>Auxiliary circuit</li> <li>number of CO contacts / for auxiliary contacts</li> <li>0</li> </ul>		120071
maximum     adjustable current response value current / of the current-dependent overload release     product function / grounding protection     No      Mechanical Design  product component     • undervoltage release     • voltage trigger     • trip indicator     height [in]     height [in]     height [in]     width [in]     a 3 in     width [in]     depth [		0 A
adjustable current response value current / of the current-dependent overload release product function / grounding protection  Mechanical Design  product component  • undervoltage release • voltage trigger • trip indicator  height [in] height   140 mm width   76.2 mm depth [in] depth   3.01 in depth   76.5 mm  Connections  arrangement of electrical connectors / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  Auxillary circuit  number of CO contacts / for auxiliary contacts  125 125 A		
dependent overload release product function / grounding protection  Mechanical Design  product component  • undervoltage release • voltage trigger • trip indicator No  height [in] height 140 mm width [in] 3 in width 76.2 mm depth [in] depth 76.5 mm  Connections  arrangement of electrical connectors / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  Auxillary circuit number of CO contacts / for auxiliary contacts  No  No  No  No  No  No  No  No  No  N		
Mechanical Design  product component	,	
product component  • undervoltage release • voltage trigger • trip indicator No height [in] height 140 mm width [in] width 76.2 mm depth [in] depth 76.5 mm  Connections  arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  Auxiliary circuit number of CO contacts / for auxiliary contacts  No		No
undervoltage release     voltage trigger     trip indicator     No  height [in]     5.51 in  height     width [in]     3 in  width     76.2 mm  depth [in]     3.01 in  depth     76.5 mm   Connections  arrangement of electrical connectors / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / mainmum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  Auxiliary circuit  number of CO contacts / for auxiliary contacts  No No No No No No Final Fin		
voltage trigger     trip indicator     No  height [in]     5.51 in  height     140 mm  width [in]     3 in  width     76.2 mm  depth [in]     3.01 in  depth     76.5 mm   Connections  arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  Auxiliary circuit  number of CO contacts / for auxiliary contacts  No  No  No  No  No  140 mm  17 x 6.5 mm  12 x 1 mm  17 x 6.5 mm	•	
• trip indicator  height [in]  height   140 mm  width [in]   3 in  width   76.2 mm  depth [in]   3.01 in  depth   76.5 mm   Connections  arrangement of electrical connectors / for main current circuit   12 x 1 mm  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  Auxiliary circuit  number of CO contacts / for auxiliary contacts   0	-	
height [in] 5.51 in height 140 mm  width [in] 3 in  width 76.2 mm  depth [in] 3.01 in  depth 76.5 mm  Connections  arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit terminal connection / minimum type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  Auxiliary circuit  number of CO contacts / for auxiliary contacts 0		
height 140 mm  width [in] 3 in  width 76.2 mm  depth [in] 3.01 in  depth 76.5 mm  Connections  arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit nut keeper kit on both ends  type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  Auxiliary circuit  number of CO contacts / for auxiliary contacts 0	·	
width [in] 3 in  width 76.2 mm  depth [in] 3.01 in  depth 76.5 mm  Connections  arrangement of electrical connectors / for main current circuit rype of electrical connection / for main current circuit nut keeper kit on both ends  type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  Auxiliary circuit  number of CO contacts / for auxiliary contacts  0		
width 76.2 mm  depth [in] 3.01 in  depth 76.5 mm   Connections  arrangement of electrical connectors / for main current circuit front connection type of electrical connection / for main current circuit nut keeper kit on both ends  type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  Auxiliary circuit  number of CO contacts / for auxiliary contacts  0		
depth [in] 3.01 in  depth 76.5 mm  Connections  arrangement of electrical connectors / for main current circuit Front connection type of electrical connection / for main current circuit nut keeper kit on both ends type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  Auxiliary circuit  number of CO contacts / for auxiliary contacts  3.01 in 76.5 mm  17 x 6.5 mm		
depth 76.5 mm  Connections  arrangement of electrical connectors / for main current circuit Front connection type of electrical connection / for main current circuit nut keeper kit on both ends type of connectable conductor cross-sections / for flat-bar terminal connection / minimum type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  Auxiliary circuit number of CO contacts / for auxiliary contacts  76.5 mm  12 x 1 mm 17 x 6.5 mm		
arrangement of electrical connectors / for main current circuit  type of electrical connection / for main current circuit  nut keeper kit on both ends  type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  Auxiliary circuit  number of CO contacts / for auxiliary contacts  Front connection  nut keeper kit on both ends  12 x 1 mm  17 x 6.5 mm		
arrangement of electrical connectors / for main current circuit  type of electrical connection / for main current circuit  nut keeper kit on both ends  type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  17 x 6.5 mm  Auxiliary circuit  number of CO contacts / for auxiliary contacts  0	<u> </u>	
type of electrical connection / for main current circuit nut keeper kit on both ends  type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  17 x 6.5 mm  Auxiliary circuit  number of CO contacts / for auxiliary contacts  0		Front connection
type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  Auxiliary circuit  number of CO contacts / for auxiliary contacts  12 x 1 mm  17 x 6.5 mm  17 x 6.5 mm  0		
terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  Auxiliary circuit  number of CO contacts / for auxiliary contacts  0		
terminal connection / maximum  Auxiliary circuit  number of CO contacts / for auxiliary contacts  0	terminal connection / minimum	
number of CO contacts / for auxiliary contacts 0	terminal connection / maximum	
	Auxiliary circuit	
Accessories	number of CO contacts / for auxiliary contacts	0
	Accessories	

product extension / entired / motor drive	Voo
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
<ul><li>during storage / maximum</li></ul>	80 °C
Certificates	
reference code / according to IEC 81346-2	Q
General Product Approval	



Confirmation





<u>Miscellaneous</u>



EMC Test Certificates Marine / Shipping other



Type Test Certificates/Test Report

Special Test Certificate



**Miscellaneous** 

Confirmation

## Further information

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

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=3VA5112-6ED32-0AA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3VA5112-6ED32-0AA0

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

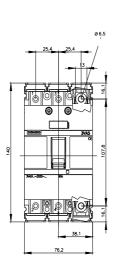
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA5112-6ED32-0AA0

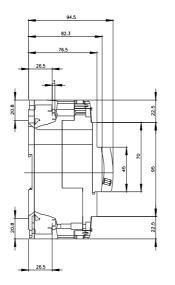
CAx-Online-Generator

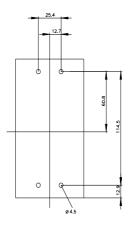
http://www.siemens.com/cax

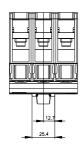
**Tender specifications** 

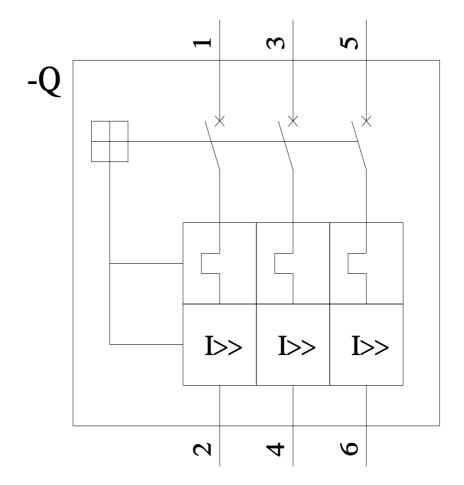
http://www.siemens.com/specifications

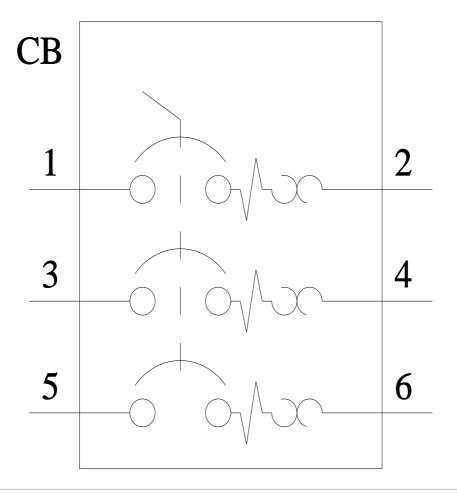












last modified: 8/15/2023 🖸

## **Mouser Electronics**

**Authorized Distributor** 

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Siemens:

3VA51126ED320AA0