SIEMENS

Data sheet 3VA5120-6ED31-0AA0



circuit breaker 3VA5 UL frame 125 breaking capacity class H 65kA @ 480V 3-pole, line protection TM210, FTFM, In=20A overload protection Ir=20A fixed short-circuit protection Ii=15 x In without connection

Model	
Product brand name	SENTRON
Product designation	Molded-case circuit breaker
Product designation / according to UL file	HEAS
Product version	System protection
Design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type)	Yes
Design of the overcurrent release	TM210
protection function of the overcurrent release	LI
Number of poles	3

General technical data	
Rated insulation voltage Ui	800 V
Max. rated operational voltage Ue with AC 50/60Hz	690 V
Max. rated operational voltage Ue with DC	500 V
Power loss [W] / maximum	12 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	4 W
Mechanical service life (switching cycles) / typical	15 000

Subject to change without notice
© Copyright Siemens

Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	8 000
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz	4 000
Electrical endurance (switching cycles) / at 480 V / at 50/60 Hz	8 000
Electrical endurance (switching cycles) / at 600 V / at 50/60 Hz	4 000
Neutral conductors / upgradeable/retrofittable	No
Ground fault monitoring version	Without
Product function	
• communication function	No
• other measurement function	No

Current	
Marking / acc. to UL 489 / 100%-rated breaker	No
Max. rated operational current of the frame size	125 A
Rated continuous current Iu	20 A
Operating current	
• at 40 °C	20 A
• at 45 °C	20 A
• at 50 °C	19.3 A
• at 55 °C	19 A
• at 60 °C	18.7 A
• at 65 °C	18.3 A
• at 70 °C	18.1 A

Switching capacity according to IEC 60947	
Switching capacity class of the circuit breaker	H
Maximum short-circuit current breaking capacity (Icu)	
• at 240 V	150 kA
• at 415 V	70 kA
• at 690 V	10 kA
Operational short-circuit current breaking capacity (Ics)	
• at 240 V	100 kA
• at 415 V	70 kA
• at 690 V	5 kA
Short-circuit current making capacity (Icm)	
• at 240 V	330 kA
• at 415 V	154 kA
• at 690 V	17 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

© Copyright Siemens

Switching capacity according to UL 489	
Breaking capacity current	
• at 240 V	100 kA
• at 480 V	65 kA
• at 600 Y/347 V	25 kA

Adjustable parameters	
Adjustable response value current / Ig min.	20 A
Adjustable response value current / Ig min.	20 A
Adjustable response value current / Ii min.	300 A
Adjustable response value current / Ii max.	300 A
Ground fault protection / tripping switchable / I2t=ON/OFF	No

Mechanical Design	
Height [in]	5.5 in
Height	140 mm
Width [in]	3 in
Width	76.2 mm
Depth [in]	3 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	
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 DIN EN 81346-2	Q
Certificate of suitability / as approval for NAVAL (no combat vessels) / Supplement SB	No

Subject to change without notice
© Copyright Siemens

General Product Approval					EMC
CSA	UL	UL	VDE		RCM

Declaration of Conformity	Test Certificates		Shipping Approval		other
EG-Konf.	Miscellaneous	Special Test Certificate	ABS	LRS	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=3VA5120-6ED31-0AA0

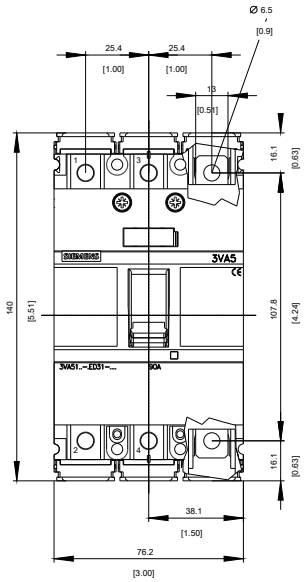
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3VA5120-6ED31-0AA0

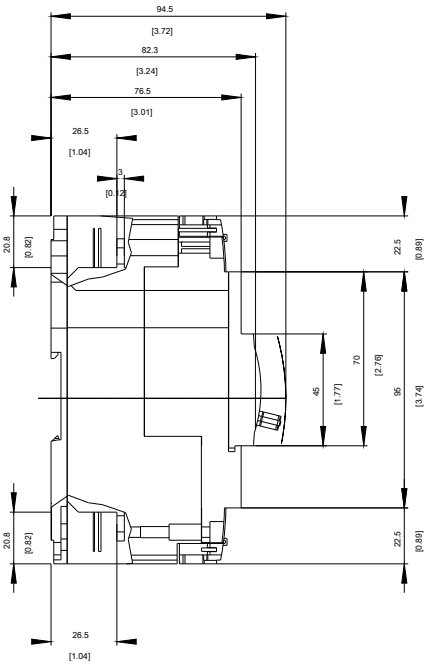
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5120-6ED31-0AA0

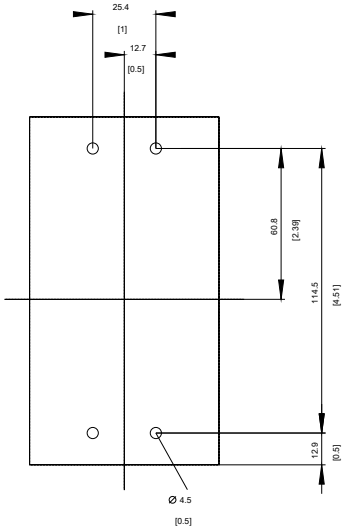
CAx-Online-Generator
http://www.siemens.com/cax

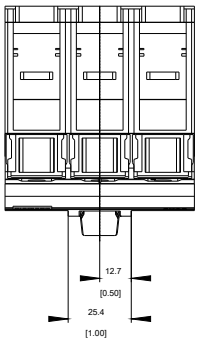
Tender specifications
http://www.siemens.com/specifications

Subject to change without notice
© Copyright Siemens

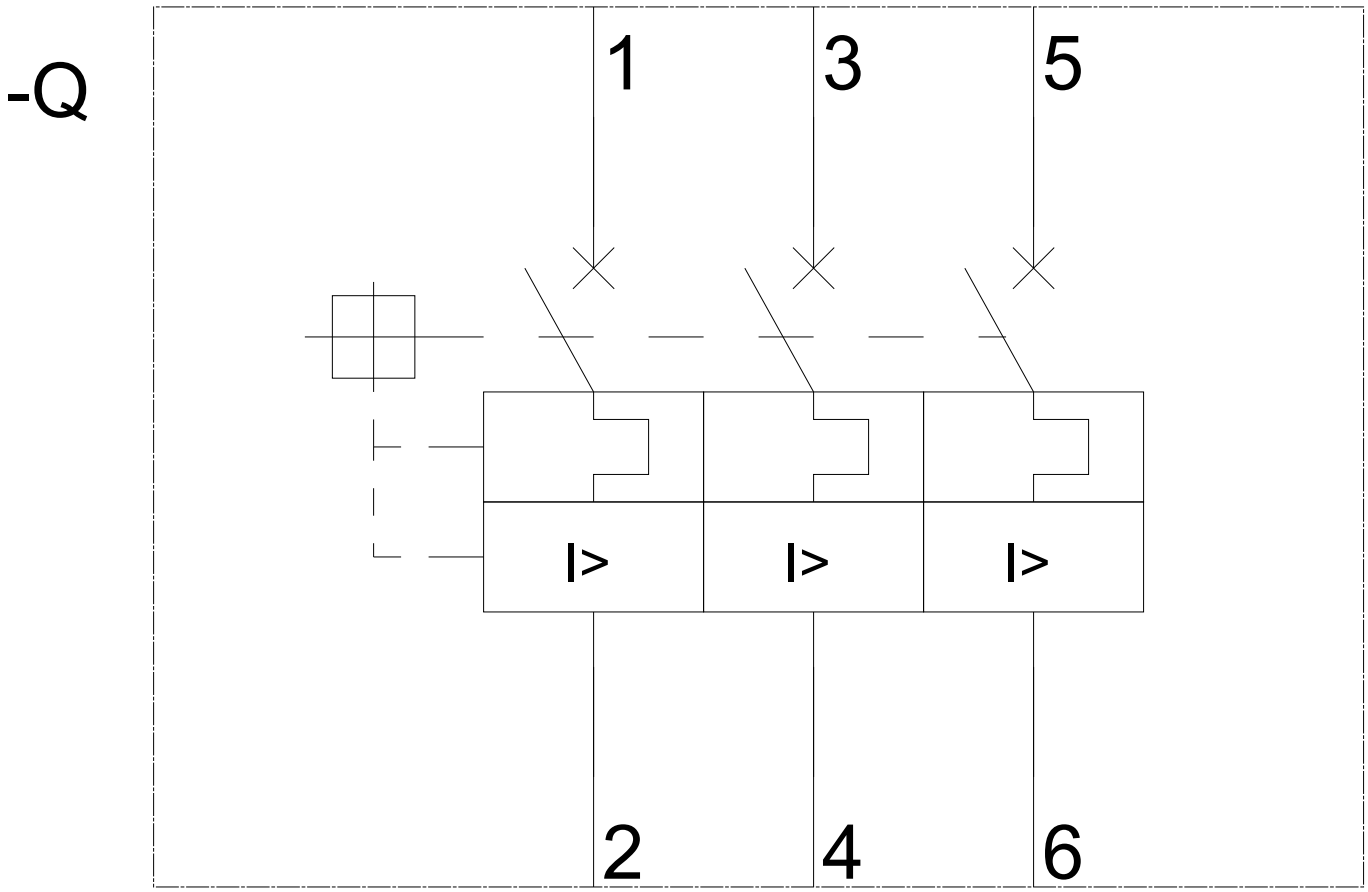




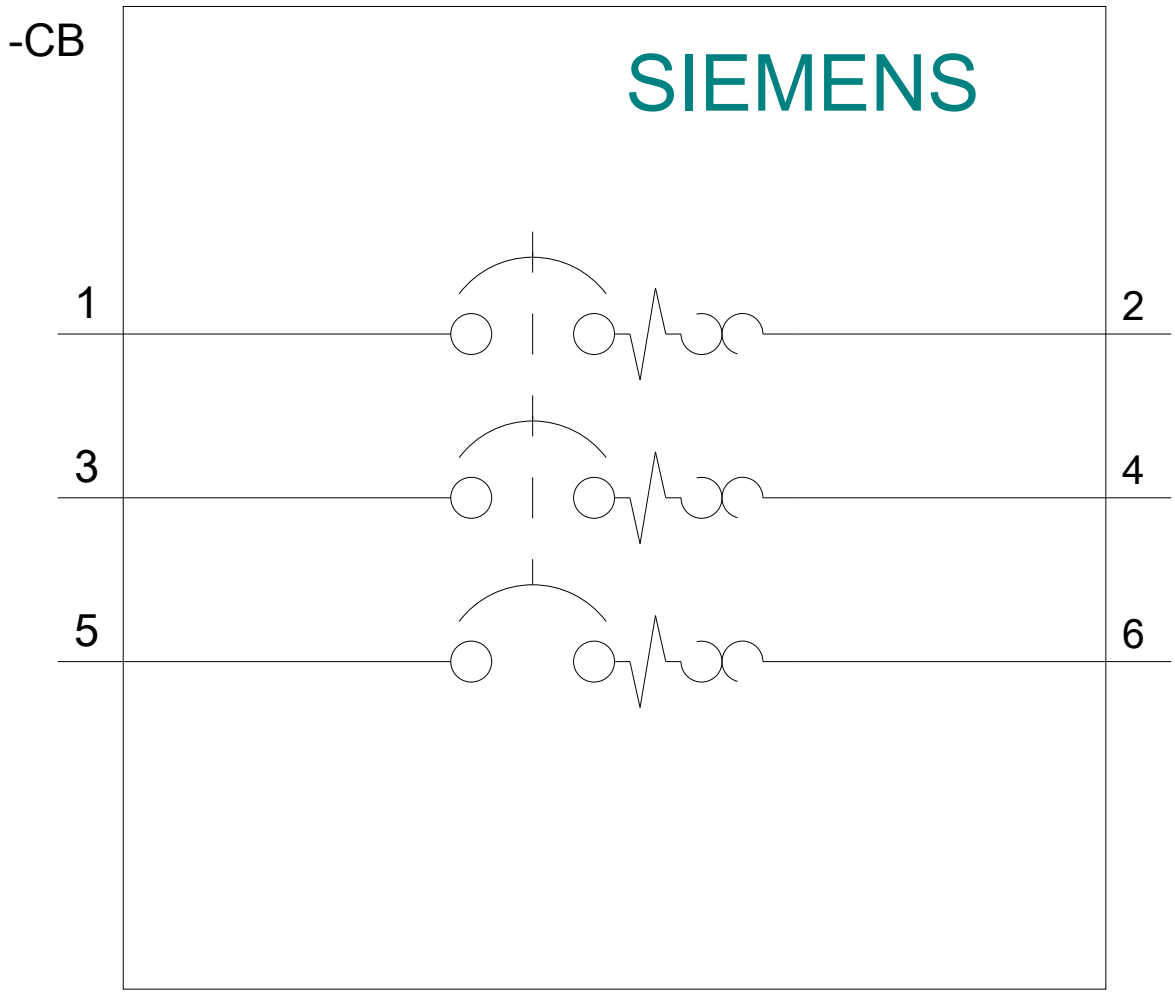




© Copyright Siemens



© Copyright Siemens



Subject to change without notice
© Copyright Siemens

last modified: 07/18/2020

Subject to change without notice
© Copyright Siemens