



circuit breaker 3VA5 UL frame 125 3-pole, starter protection TM120M, AM, In=90A without overload protection short-circuit protection $I_i=3...7 \times I_n$ cable connection on both sides

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	HEAP
Product version	Starter 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	TM120M
protection function of the overcurrent release	I
number of poles	3
General technical data	
insulation voltage / rated value	800 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	18 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	6 W
mechanical service life (switching cycles) / typical	20 000
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	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
• phase failure detection	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	90 A
• at 45 °C	88 A
• at 50 °C	86 A
• at 55 °C	84 A
• at 60 °C	82 A

<ul style="list-style-type: none"> at 65 °C at 70 °C 	80 A 79 A	
Switching capacity according to IEC 60947		
breaking capacity maximum short-circuit current (I _{cu})		
<ul style="list-style-type: none"> at 240 V at 415 V at 690 V 	150 kA 70 kA 10 kA	
breaking capacity operating short-circuit current (I _{cs})		
<ul style="list-style-type: none"> at 240 V at 415 V at 690 V 	150 kA 70 kA 5 kA	
short-circuit current making capacity (I _{cm})		
<ul style="list-style-type: none"> at 240 V at 415 V at 690 V 	330 kA 154 kA 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	
Adjustable parameters		
adjustable response value setting current (I _i) / for I-tripping / minimum	270 A	
adjustable response value setting current (I _i) / for I-tripping / maximum	630 A	
adjustable absolute value setting current (I _{nN}) / for N-tripping / minimum	0 A	
adjustable absolute value setting current (I _{nN}) / for N-tripping / maximum	0 A	
Ground fault protection / tripping switchable / I _{2t} =ON/OFF	No	
Mechanical Design		
product component		
<ul style="list-style-type: none"> undervoltage release voltage trigger trip indicator 	No No No	
height [in]	5.51 in	
Height	140 mm	
width [in]	3 in	
Type of connectable conductor cross-section, round conductor terminal, stranded	1 x (8 AWG - 3/0)	
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	circular conductor terminal on both sides	
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		
<ul style="list-style-type: none"> during operation / minimum during operation / maximum during storage / minimum during storage / maximum 	-25 °C 70 °C -40 °C 80 °C	
Certificates		
reference code / according to IEC 81346-2	Q	
certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	Yes	
General Product Approval	EMC	Declaration of Conformity

[Confirmation](#)



[Miscellaneous](#)



EG-Konf.

Marine / Shipping

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?mfb=3VA5190-1MU36-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5190-1MU36-0AA0>

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

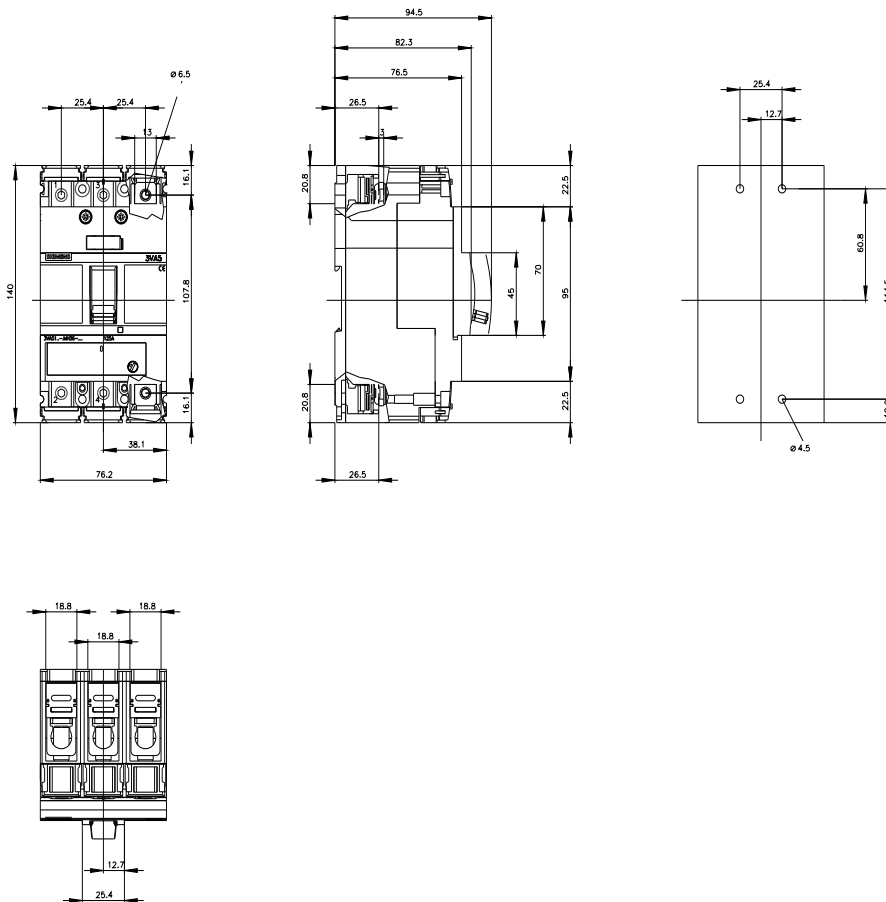
http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA5190-1MU36-0AA0

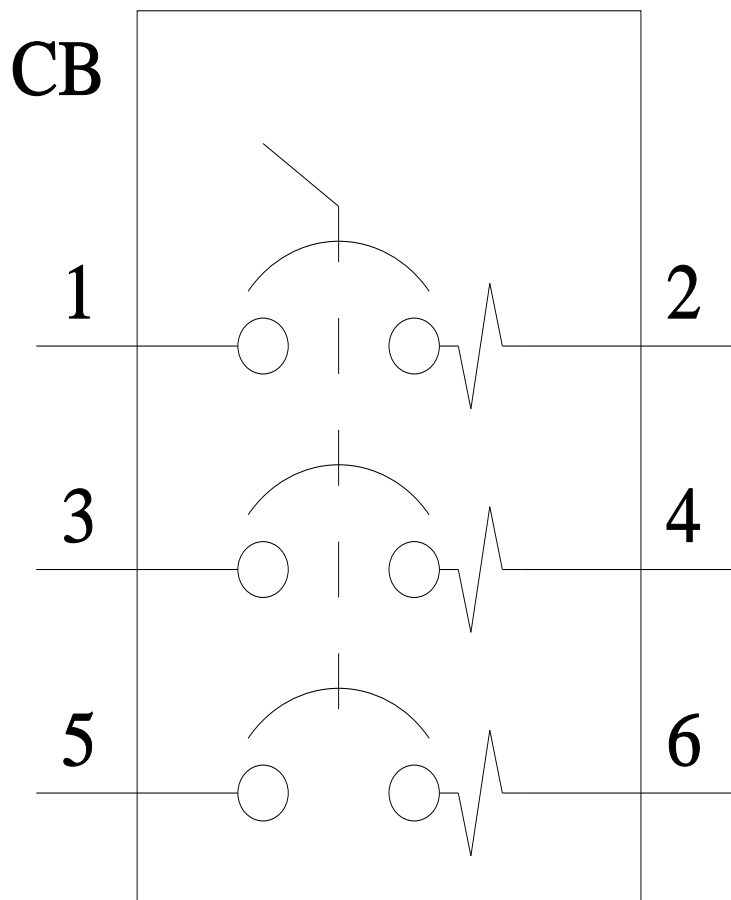
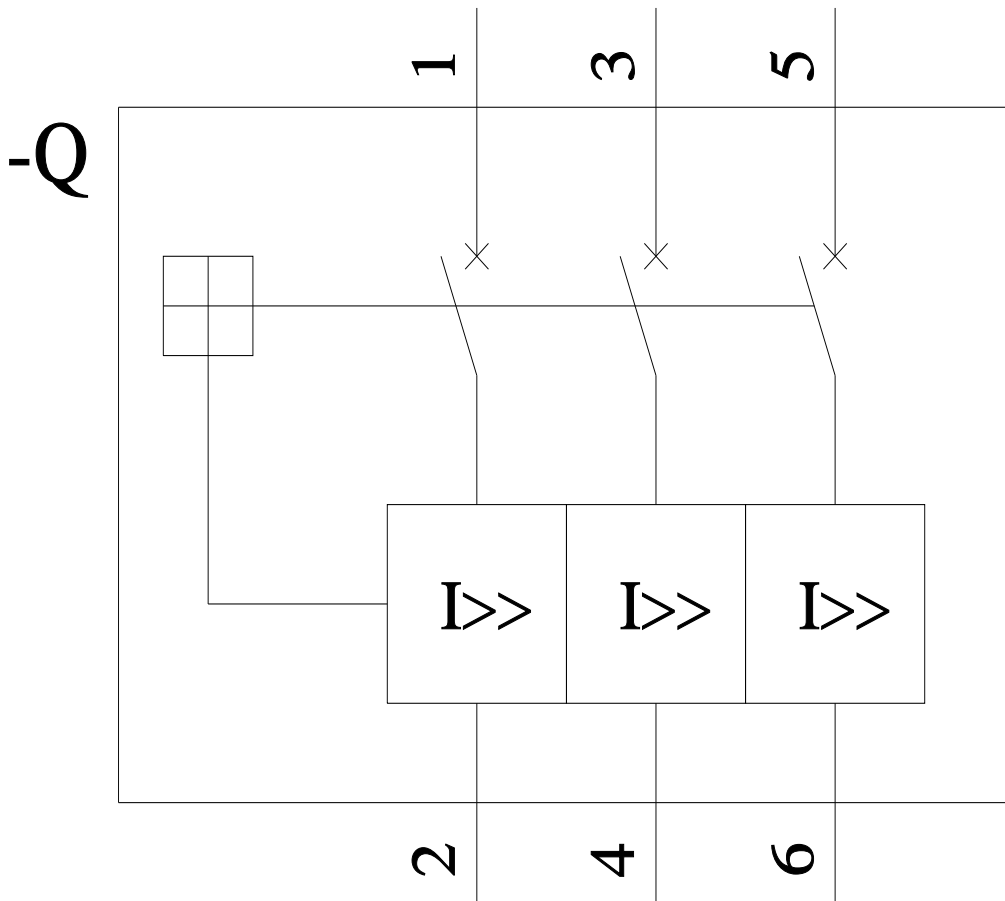
CAX-Online-Generator

<http://www.siemens.com/cax>

Tender specifications

<http://www.siemens.com/specifications>





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