



circuit breaker 3VA5 UL frame 125 3-pole, starter protection TM120M, AM, In=90A without overload protection short-circuit protection $I_i=5...12 \times I_n$ nut keeper kit 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	
rated insulation voltage U_i	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

<ul style="list-style-type: none"> • at 55 °C • at 60 °C • at 65 °C • at 70 °C 	84 A		
	82 A		
	80 A		
	79 A		
Switching capacity according to IEC 60947			
breaking capacity maximum short-circuit current (Icu)			
<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 (Ics)			
<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 (Icm)			
<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			
Ground fault protection / tripping switchable / I2t=ON/OFF	No		
Mechanical Design			
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	Front connection		
type of electrical connection / for main current circuit	nut keeper kit on both ends		
Type of connectable conductor cross-section, connection screw, width x thickness , min.	12 x 1 mm		
Type of connectable conductor cross-section, connection screw, width x thickness , max.	17 x 6.5 mm		
Auxiliary circuit			
product component			
<ul style="list-style-type: none"> • undervoltage release • voltage trigger • trip indicator 	No		
	No		
	No		
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	Marine / Shipping	other



[Confirmation](#)



[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=3VA5190-1MH32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5190-1MH32-0AA0>

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

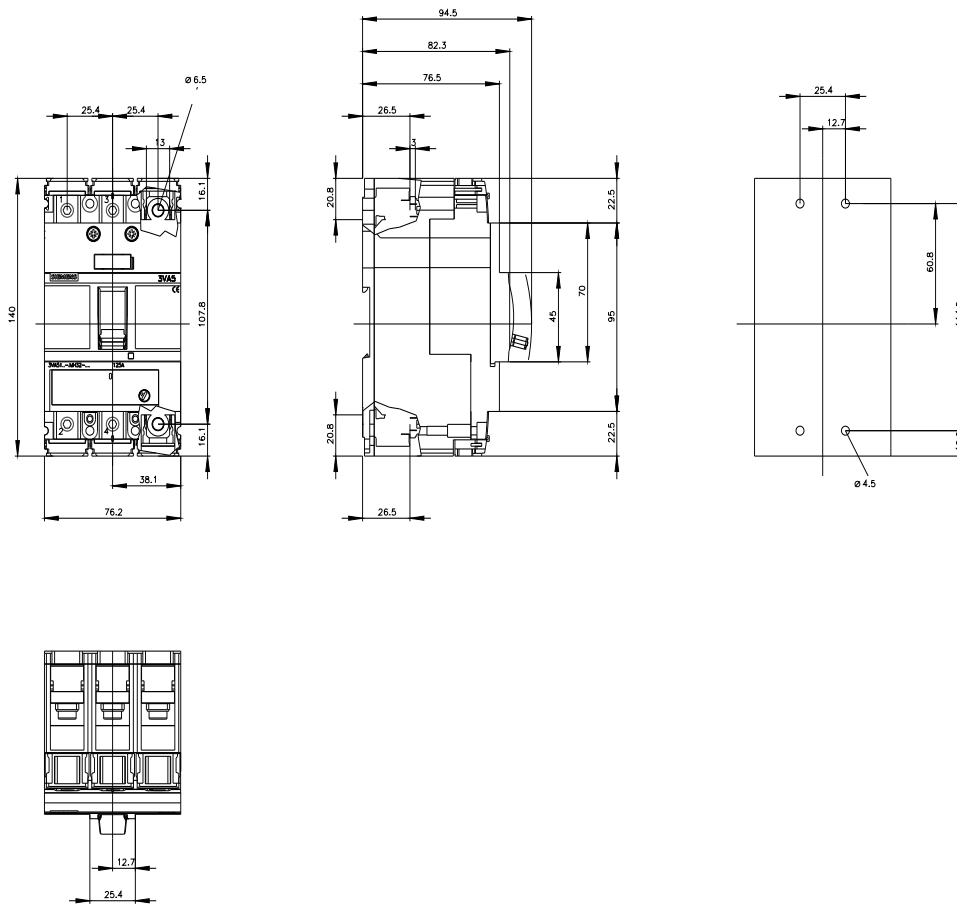
http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA5190-1MH32-0AA0

CAX-Online-Generator

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

Tender specifications

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





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