

CIRCUIT BREAKER 3VA5 UL FRAME 125 3-POLE, MOTOR STARTER PROTECTION TM120M, AM, IN=90A WITHOUT OVERLOAD PROTECTION SHORT CIRCUIT PROTECTION $I_i=5...12 \times I_N$ W/O CONNECTION



Model	
Product brand name	SENTRON
Product designation	Molded-case circuit breaker
Design of the product	Starter 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	TM120M
Protective function of the overcurrent release	I
Number of poles	3

General technical data	
Tension assignée d'isolement U_i	800 V
Max. rated operational voltage U_e with AC 50/60Hz	690 V
Max. rated operational voltage U_e with DC	500 V
Active power loss / for rated value of the current / at AC / in hot operating state / per device	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	15 000

Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	8 000
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/retrofitable	No
Ground fault monitoring version	Without
Product function	
• communication function	No
• Phase failure detection	No
• other measurement function	No

Electricity

Marking / acc. to UL 489 / 100%-rated breaker	No
Max. rated operational voltage of the size of the circuit-breaker	125 A
Courant permanent assigné lu	90 A
Operating current	
• at 40 °C	90 A
• at 45 °C	87.891 A
• at 50 °C	85.88 A
• at 55 °C	83.955 A
• at 60 °C	82.12 A
• at 65 °C	80.357 A
• at 70 °C	78.67 A

Switching capacity according to IEC 60947

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	150 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

Adjustable parameters

Adjustable response value current / li min.	450 A
Adjustable response value current / li max.	1 080 A

Ground fault protection / tripping switchable / I2t=ON/OFF	No
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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
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Accessories

Product extension / optional / motor drive	Yes
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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 	<ul style="list-style-type: none"> -25 °C 70 °C -40 °C 80 °C

Certificates

Equipment marking / acc. to DIN EN 81346-2	Q
Certificate of suitability / as approval for NAVAL (no combat vessels) / Supplement SB	No

General Product Approval		EMC	Declaration of Conformity	Shipping Approval	
 CSA	 UL		 RCM	 EG-Konf.	 ABS

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?mlfb=3VA5190-1MH31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5190-1MH31-0AA0>

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

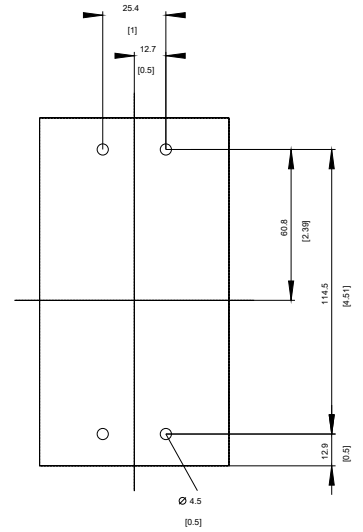
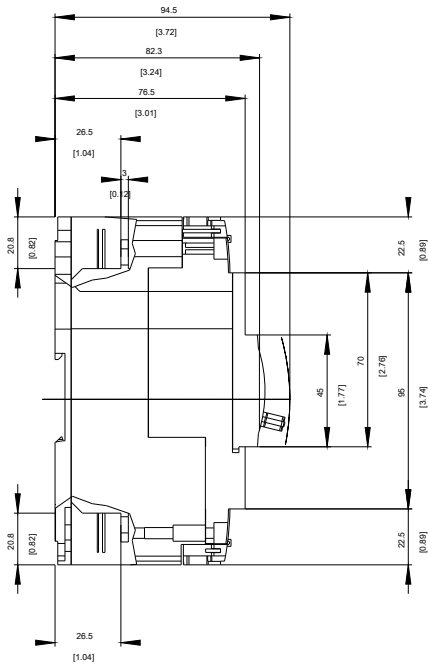
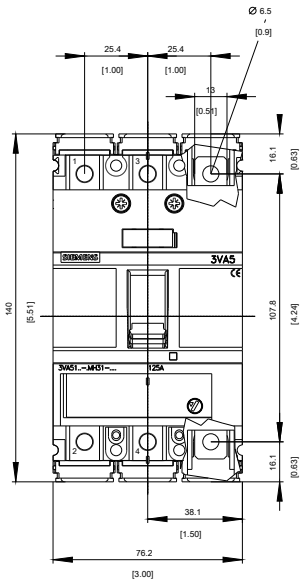
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5190-1MH31-0AA0

CAX-Online-Generator

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

Tender specifications

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



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