

circuit breaker 3VA1 IEC frame 160 breaking capacity class H  
 $I_{cu}=70\text{kA}$  @ 415V 3-pole, starter protection TM120M, AM,  $I_n=40\text{A}$   
 without overload protection short-circuit protection  $I_i=7...16 \times I_n$  nut  
 keeper kit



Model	
Product brand name	SENTRON
Product designation	Molded case circuit breaker
Product version	Starter protection
Design of the overcurrent release	TM120M
Protective function of the overcurrent release	I
Number of poles	3
General technical data	
Rated insulation voltage $U_i$	800 V
Max. rated operational voltage $U_e$ with AC 50/60Hz	690 V
Power loss [W] / maximum	3.6 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	1.2 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	8 000
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	0.9 kg

### Current

Max. rated operational current of the frame size	160 A
Rated continuous current I <sub>u</sub>	40 A
Operating current	
• at 40 °C	40 A
• at 45 °C	40 A
• at 50 °C	40 A
• at 55 °C	39 A
• at 60 °C	39 A
• at 65 °C	38 A
• at 70 °C	37 A

### Switching capacity according to IEC 60947

Switching capacity class of the circuit breaker	H
Maximum short-circuit current breaking capacity (I <sub>cu</sub> )	
• at 240 V	100 kA
• at 415 V	70 kA
• at 440 V	55 kA
• at 500 V	5 kA
• at 690 V	5 kA
Operational short-circuit current breaking capacity (I <sub>cs</sub> )	
• at 240 V	100 kA
• at 415 V	70 kA
• at 440 V	36 kA
• at 500 V	5 kA
• at 690 V	5 kA
Short-circuit current making capacity (I <sub>cm</sub> )	
• at 240 V	220 kA
• at 415 V	154 kA
• at 440 V	121 kA
• at 500 V	7.5 kA
• at 690 V	7.5 kA

### Adjustable parameters

Short-term delayed / tripping switchable / I <sub>2t</sub> =ON/OFF	No
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Adjustable response value current / li min.	280 A
Adjustable response value current / li max.	640 A
Ground fault protection / tripping switchable / I2t=ON/OFF	No

### Mechanical Design

Height [in]	5.1 in
Height	130 mm
Width [in]	3 in
Width	76.2 mm
Depth [in]	2.8 in
Depth	70 mm

### Connections

Arrangement of electrical connectors / for main current circuit	Front terminal
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

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	
• 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
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General Product Approval	EMC	Declaration of Conformity
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CCC



VDE

[Miscellaneous](#)



RCM



EG-Konf.

Test Certificates	Shipping Approval	other
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[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



LRS

[CCS / China Classification Society](#)

[Confirmation](#)

other
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[Manufacturer Declaration](#)

[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=3VA1140-6MH32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1140-6MH32-0AA0>

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

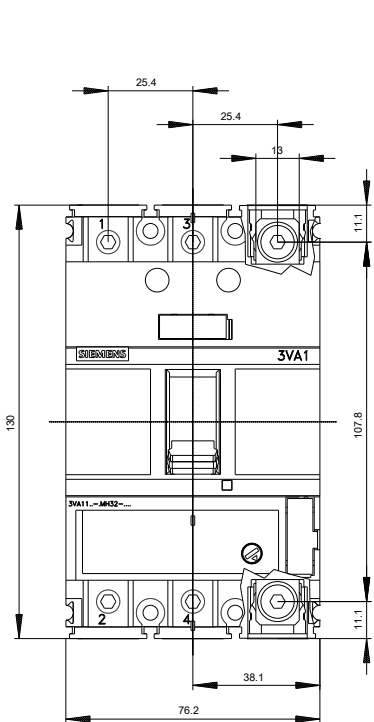
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1140-6MH32-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1140-6MH32-0AA0)

### CAX-Online-Generator

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

### Tender specifications

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





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