

circuit breaker 3VA1 IEC frame 160 breaking capacity class H
 $I_{cu}=70\text{kA}$ @ 415V 3-pole, starter protection TM120M, AM, $I_n=20\text{A}$
 without overload protection short-circuit protection $I_i=7\dots 16 \times I_n$ 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	1.5 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	0.5 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 _u	20 A
Operating current	
• at 40 °C	20 A
• at 45 °C	20 A
• at 50 °C	20 A
• at 55 °C	19.4 A
• at 60 °C	19 A
• at 65 °C	18.4 A
• at 70 °C	17.6 A

Switching capacity according to IEC 60947

Switching capacity class of the circuit breaker	H
Maximum short-circuit current breaking capacity (I _{cu})	
• at 240 V	100 kA
• at 415 V	70 kA
• at 440 V	55 kA
• at 500 V	10 kA
• at 690 V	5 kA
Operational short-circuit current breaking capacity (I _{cs})	
• at 240 V	100 kA
• at 415 V	70 kA
• at 440 V	40 kA
• at 500 V	5 kA
• at 690 V	5 kA
Short-circuit current making capacity (I _{cm})	
• at 240 V	220 kA
• at 415 V	154 kA
• at 440 V	121 kA
• at 500 V	17 kA
• at 690 V	7.5 kA

Adjustable parameters

Short-term delayed / tripping switchable / I _{2t} =ON/OFF	No
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Adjustable response value current / li min.	140 A
Adjustable response value current / li max.	320 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	
<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

Reference code / acc. to DIN EN 81346-2	Q
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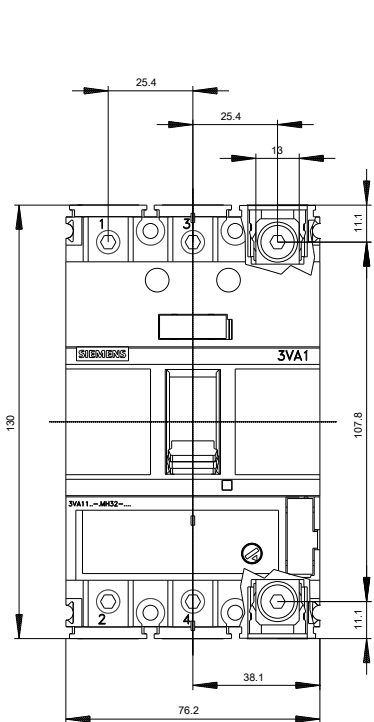
General Product Approval	EMC	Declaration of Conformity	Test Certificates
 Miscellaneous    EG-Konf.			Miscellaneous

Test Certificates	Shipping Approval	other
Special Test Certificate Type Test Certificates/Test Report	 LRS CCS / China Classification Society	Confirmation Manufacturer Declaration

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=3VA1120-6MH32-0AA0>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
<https://support.industry.siemens.com/cs/ww/en/ps/3VA1120-6MH32-0AA0>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1120-6MH32-0AA0
- CAX-Online-Generator**
<http://www.siemens.com/cax>
- Tender specifications**
<http://www.siemens.com/specifications>





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