

circuit breaker 3VM1 IEC frame 160 breaking capacity class N  
 $I_{cu}=25kA @ 415V$  3-pole, line protection TM220, ATFM,  $I_n=20A$   
 overload protection  $I_r=14A...20A$  short-circuit protection  $I_i=16 \times I_n$  nut  
 keeper kit



Model	
Product brand name	SENTRON
Product designation	Molded case circuit breaker
Product version	Line protection
Design of the overcurrent release	TM220
Protective function of the overcurrent release	LI
Number of poles	3
General technical data	
Rated insulation voltage $U_i$	690 V
Max. rated operational voltage $U_e$ with AC 50/60Hz	500 V
Max. rated operational voltage $U_e$ with DC	500 V
Power loss [W] / maximum	12 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	4 W
Mechanical service life (switching cycles) / typical	12 000
Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	6 000
Neutral conductors / upgradeable/retrofittable	No
Ground fault monitoring version	Without

Product function	
• communication function	No
• other measurement function	No
Net weight	0.788 kg

### Current

Max. rated operational current of the frame size	160 A
Rated continuous current I <sub>u</sub>	20 A
Operating current	
• at 40 °C	20 A
• at 45 °C	20 A
• at 50 °C	20 A
• at 55 °C	20 A
• at 60 °C	19 A
• at 65 °C	19 A
• at 70 °C	19 A

### Switching capacity according to IEC 60947

Switching capacity class of the circuit breaker	N
Maximum short-circuit current breaking capacity (I <sub>cu</sub> )	
• at 240 V	36 kA
• at 415 V	25 kA
• at 440 V	16 kA
• at 500 V	7 kA
Operational short-circuit current breaking capacity (I <sub>cs</sub> )	
• at 240 V	27 kA
• at 415 V	18 kA
• at 440 V	12 kA
• at 500 V	5 kA
Short-circuit current making capacity (I <sub>cm</sub> )	
• at 240 V	76 kA
• at 415 V	53 kA
• at 440 V	32 kA
• at 500 V	11.9 kA

### Adjustable parameters

Adjustable response value current / I <sub>r</sub> min.	14 A
Adjustable response value current / I <sub>r</sub> max.	20 A
Short-term delayed / tripping switchable / I <sub>2t</sub> =ON/OFF	No
Adjustable response value current / I <sub>i</sub> min.	320 A
Adjustable response value current / I <sub>i</sub> max.	320 A

Ground fault protection / tripping switchable / I2t=ON/OFF	No
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### 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 connection
Type of connectable conductor cross-section, connection screw, width x thickness , min.	12 x 0
Type of connectable conductor cross-section, connection screw, width x thickness , max.	17 x 6,5

### Auxiliary circuit

Number of CO contacts / for auxiliary contacts	0
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### Accessories

Product extension / optional / motor drive	No
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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	Declaration of Conformity	Test Certificates
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CCC



VDE

[Miscellaneous](#)



EG-Konf.

[Miscellaneous](#)

## Shipping Approval



LRS

## 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=3VM1120-3EE32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VM1120-3EE32-0AA0>

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

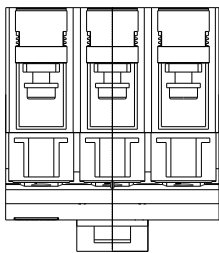
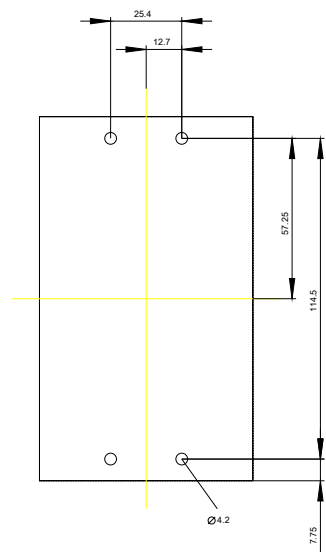
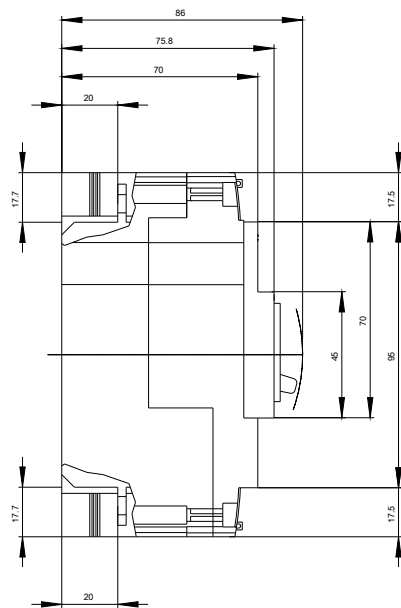
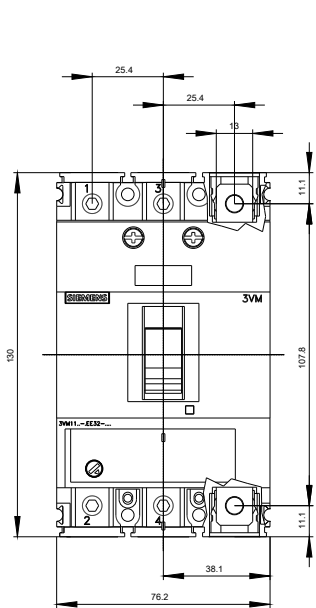
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VM1120-3EE32-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VM1120-3EE32-0AA0)

**CAX-Online-Generator**

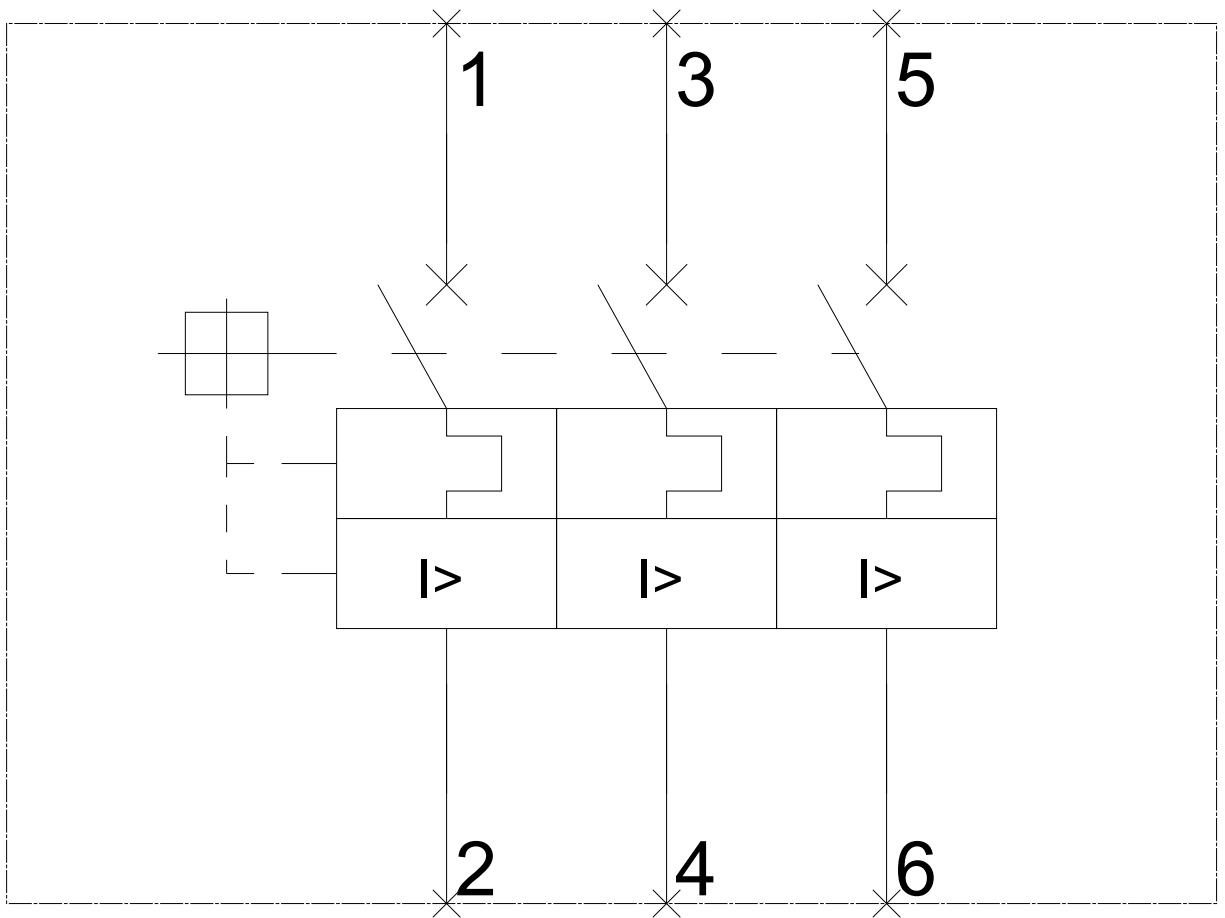
<http://www.siemens.com/cax>

**Tender specifications**

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



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