

circuit breaker 3VA1 IEC frame 160 breaking capacity class N  
 $I_{cu}=25kA @ 415 V$  4-pole, line protection TM220, atfm,  $I_n=80A$   
 overload protection  $i_r=56A \dots 80A$  short circuit protection  $i_l=10 \times I_n$   
 neutral protection 100% busbar connection



Model	
Product brand name	SENTRON
Product designation	Molded case circuit breaker
Design of the product	Line protection
Design of the overcurrent release	TM220
Protective function of the overcurrent release	LI
Number of poles	4
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	600 V
Active power loss / for rated value of the current / at AC / in hot operating state / per device	19.2 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	6.4 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
Neutral conductors / upgradeable/retrofitable	No

Ground fault monitoring version	Without
Product function	
• communication function	No
• other measurement function	No
Net weight	1.2 kg

#### Electricity

Max. rated operational voltage of the size of the circuit-breaker	160 A
Courant permanent assigné lu	80 A
Operating current	
• at 40 °C	80 A
• at 45 °C	80 A
• at 50 °C	80 A
• at 55 °C	78 A
• at 60 °C	77 A
• at 65 °C	75 A
• at 70 °C	74 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
• at 690 V	7 kA
Operational short-circuit current breaking capacity (I <sub>cs</sub> )	
• at 240 V	36 kA
• at 415 V	25 kA
• at 440 V	16 kA
• at 500 V	5 kA
• at 690 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
• at 690 V	11.9 kA

#### Adjustable parameters

Adjustable response value current / I <sub>g</sub> min.	56 A
Adjustable response value current / I <sub>g</sub> min.	80 A

Short-term delayed / tripping switchable / I2t=ON/OFF	No
Adjustable response value current / li min.	800 A
Adjustable response value current / li max.	800 A
Design of the N-conductor protection	100%
Ground fault protection / tripping switchable / I2t=ON/OFF	No

### Mechanical Design

Height [in]	5.1 in
Height	130 mm
Width [in]	4 in
Width	101.6 mm
Depth [in]	2.8 in
Depth	70 mm

### Connections

Arrangement of electrical connectors / for main current circuit	Front terminal
Type of electrical connection / for main current circuit	lug terminal
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	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
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[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

[Special Test Certificate](#)



ABS



BUREAU VERITAS



GL

Shipping Approval	other
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LRS



RMRS

[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=3VA1180-3GE42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1180-3GE42-0AA0>

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

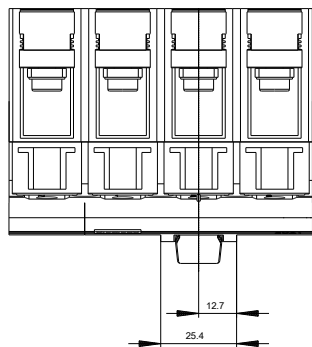
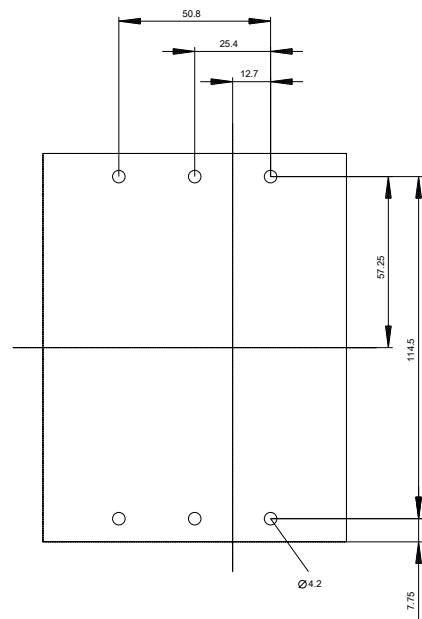
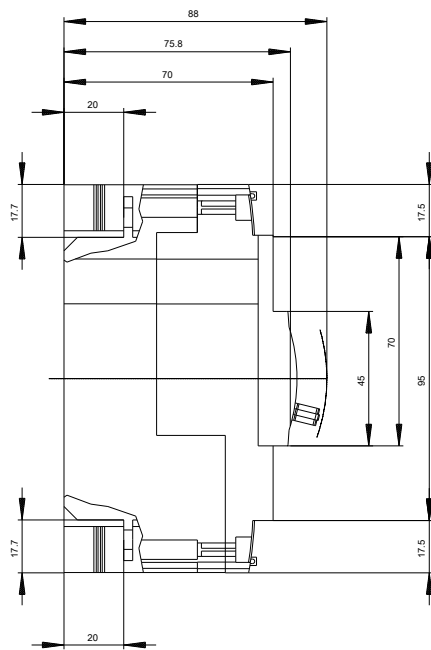
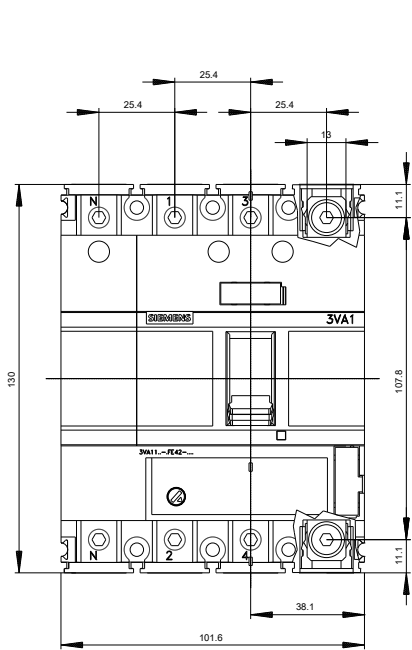
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**CAX-Online-Generator**

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

**Tender specifications**

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





**last modified:**

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