

circuit breaker 3VA1 IEC frame 160 breaking capacity class S
 $I_{cu}=36kA @ 415V$ 4-pole, line protection TM240, ATAM, $I_n=20A$
 overload protection $I_r=14A...20A$ short-circuit protection $I_i=8...16 \times I_n$
 N conductor unprotected clamp connection



Model	
Product brand name	SENTRON
Product designation	Molded case circuit breaker
Product version	Line protection
Design of the overcurrent release	TM240
Protective function of the overcurrent release	LI
Number of poles	4
General technical data	
Rated insulation voltage 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
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	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
• other measurement function	No
Net weight	1.2 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	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	S
Maximum short-circuit current breaking capacity (I _{cu})	
• at 240 V	55 kA
• at 415 V	36 kA
• at 440 V	25 kA
• at 500 V	7 kA
• at 690 V	7 kA
Operational short-circuit current breaking capacity (I _{cs})	
• at 240 V	55 kA
• at 415 V	36 kA
• at 440 V	25 kA
• at 500 V	5 kA
• at 690 V	5 kA
Short-circuit current making capacity (I _{cm})	
• at 240 V	121 kA
• at 415 V	76 kA
• at 440 V	53 kA
• at 500 V	11.9 kA
• at 690 V	11.9 kA
Design of short-circuit protection	For switching power values in DC networks, see the 3VA molded case circuit breaker device manual; link to be found under Service & Support in the last chapter

Adjustable parameters

Adjustable response value current / I _r min.	14 A
Adjustable response value current / I _r max.	20 A
Short-term delayed / tripping switchable / I _{2t} =ON/OFF	No
Adjustable response value current / I _i min.	160 A
Adjustable response value current / I _i max.	320 A
Design of the N-conductor protection	Without
Ground fault protection / tripping switchable / I _{2t} =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 connectable conductor cross-section, round conductor terminal, stranded	1 x (1.5 - 70 mm ²)

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
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CCC



VDE

[Miscellaneous](#)

[KC](#)



RCM

Declaration of Conformity	Test Certificates	Shipping Approval
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EG-Konf.

[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

[Special Test Certificate](#)



ABS



BUREAU VERITAS

Shipping Approval	other
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LRS



RMRS

[CCS / China Classification Society](#)

[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=3VA1120-4EF46-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1120-4EF46-0AA0>

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

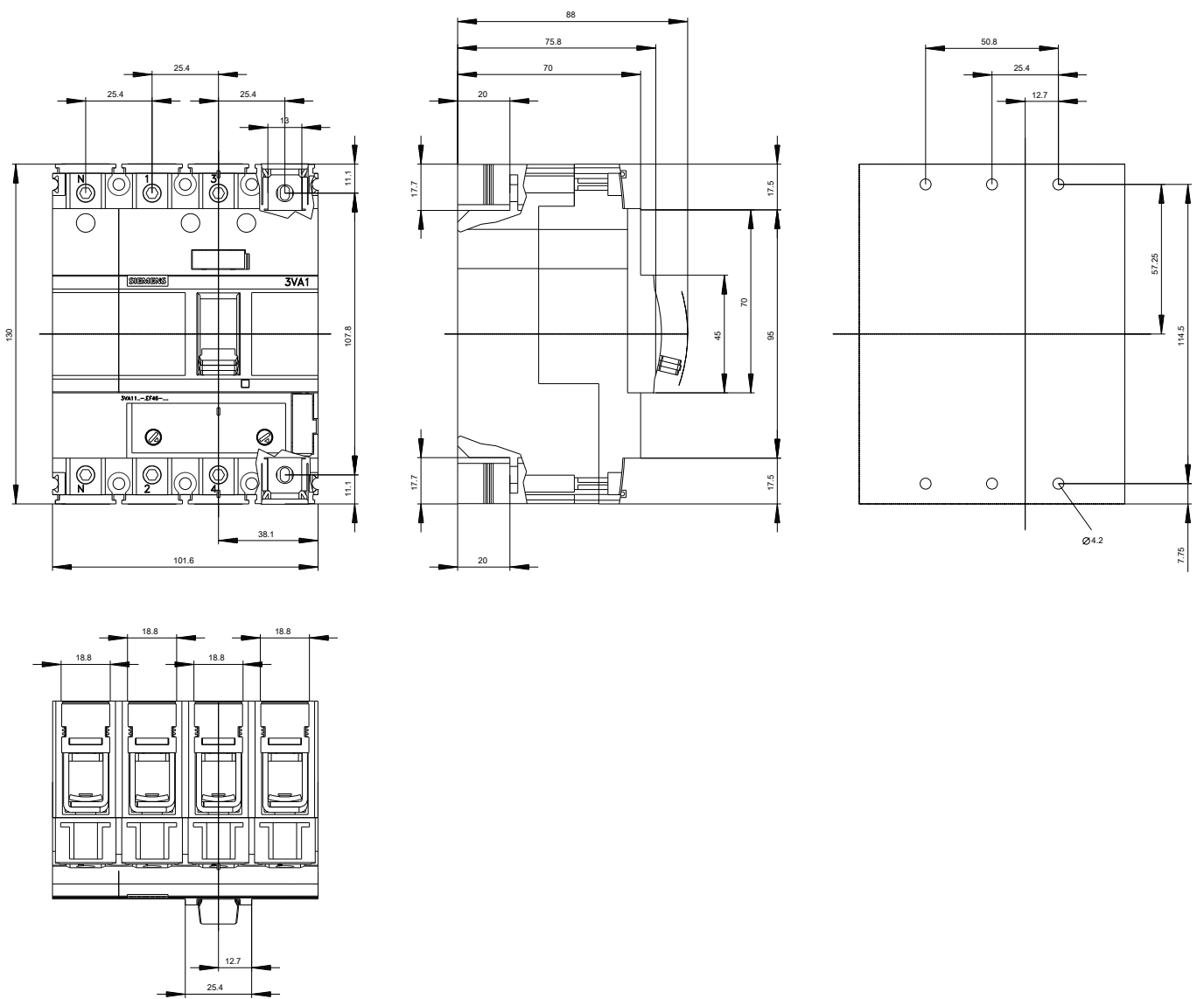
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1120-4EF46-0AA0

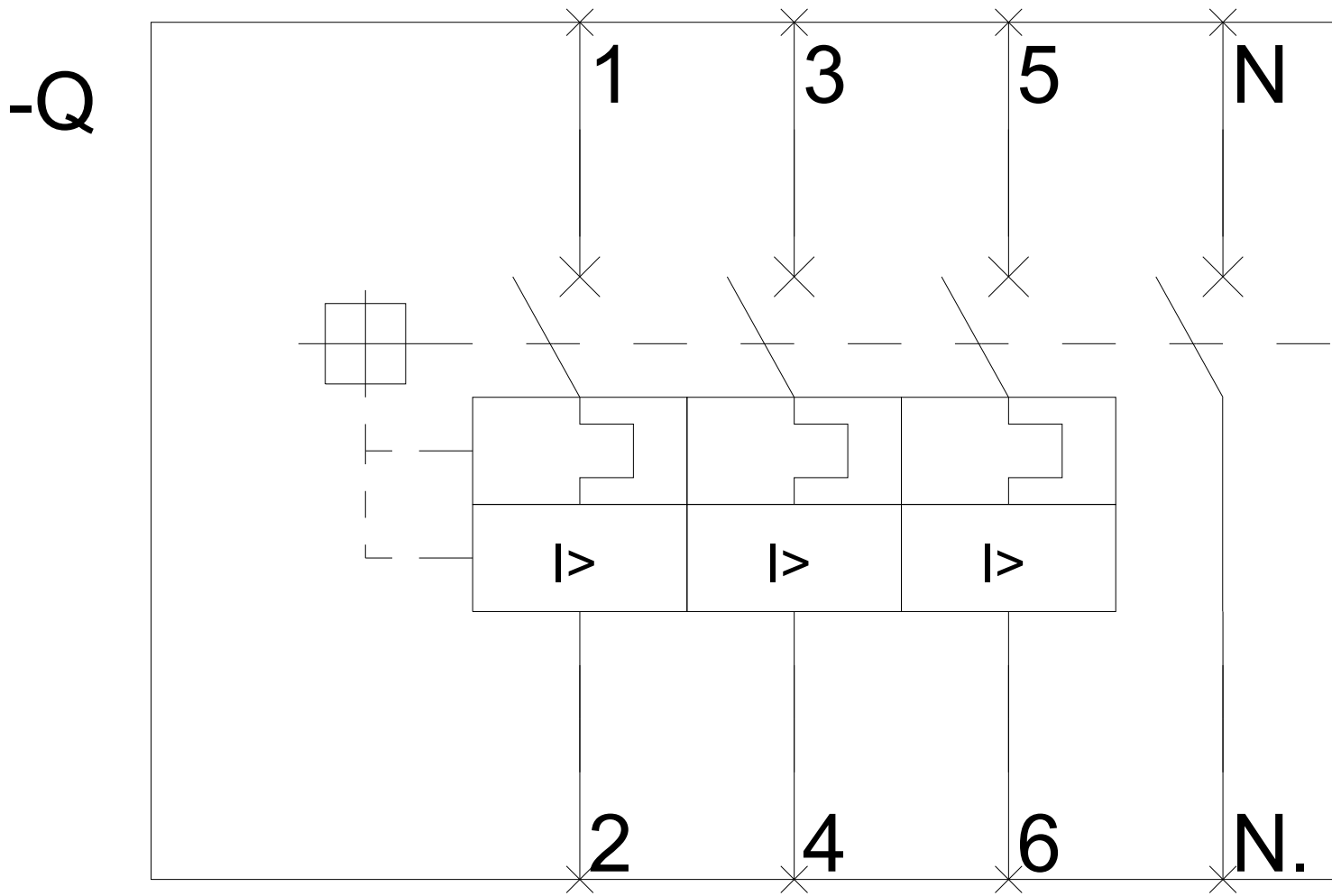
CAX-Online-Generator

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

Tender specifications

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





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