



circuit breaker 3VA1 IEC frame 160 breaking capacity class H
Icu=70kA @ 415V 4-pole, line protection TM220, ATFM, In=20A
overload protection Ir=14A...20A short-circuit protection Ii=16 x In 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	TM220
protection function of the overcurrent release	LI
number of poles	4

General technical data	
Tension assignée d'isolement Ui	800 V
Max. rated operational voltage Ue with AC 50/60Hz	690 V
Max. rated operational voltage Ue 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
Courant permanent assigné lu	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	H
maximum short-circuit current breaking capacity (Icu)	
• at 240 V	100 kA
• at 415 V	70 kA
• at 440 V	55 kA
• at 500 V	10 kA
• at 690 V	10 kA
operational short-circuit current breaking capacity (Ics)	
• 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 (Icm)	
• at 240 V	220 kA
• at 415 V	154 kA
• at 440 V	121 kA
• at 500 V	17 kA
• at 690 V	17 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 _g min.	14 A
Adjustable response value current / I _g min.	20 A
Short-term delayed / tripping switchable / I _{2t} =ON/OFF	No
Adjustable response value current / I _i min.	320 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	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



LRS

Shipping Approval	other
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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=3VA1120-6EE46-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1120-6EE46-0AA0>

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

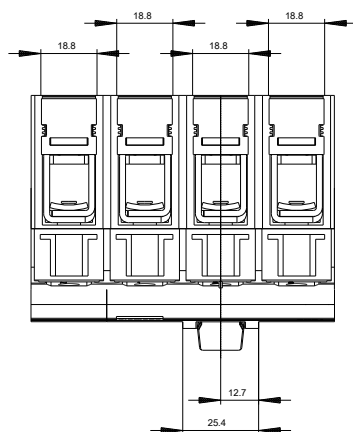
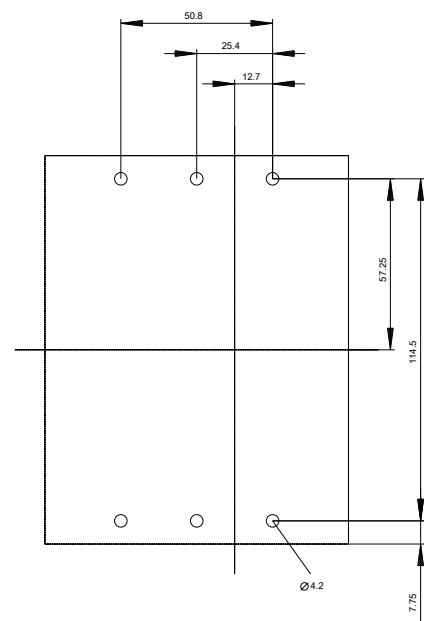
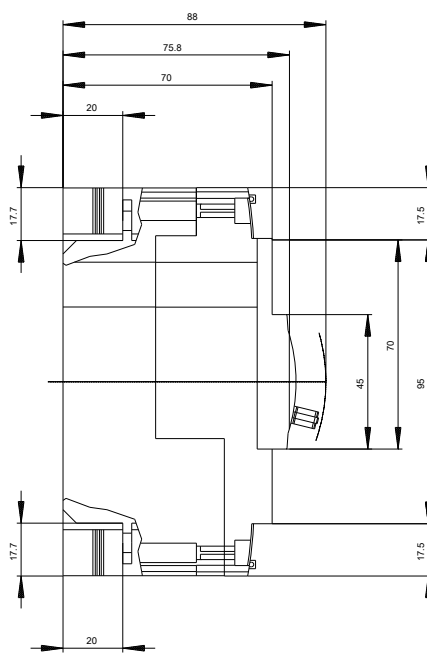
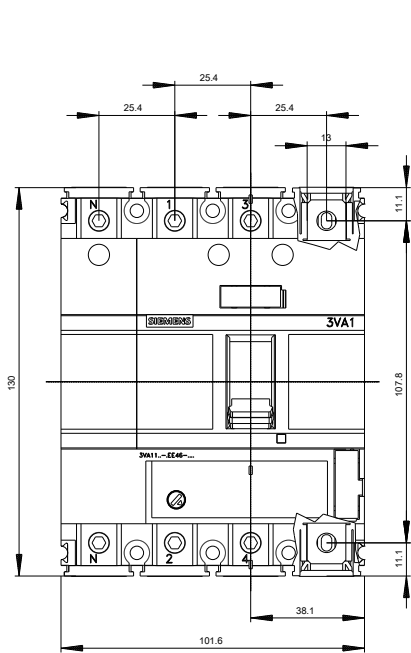
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1120-6EE46-0AA0

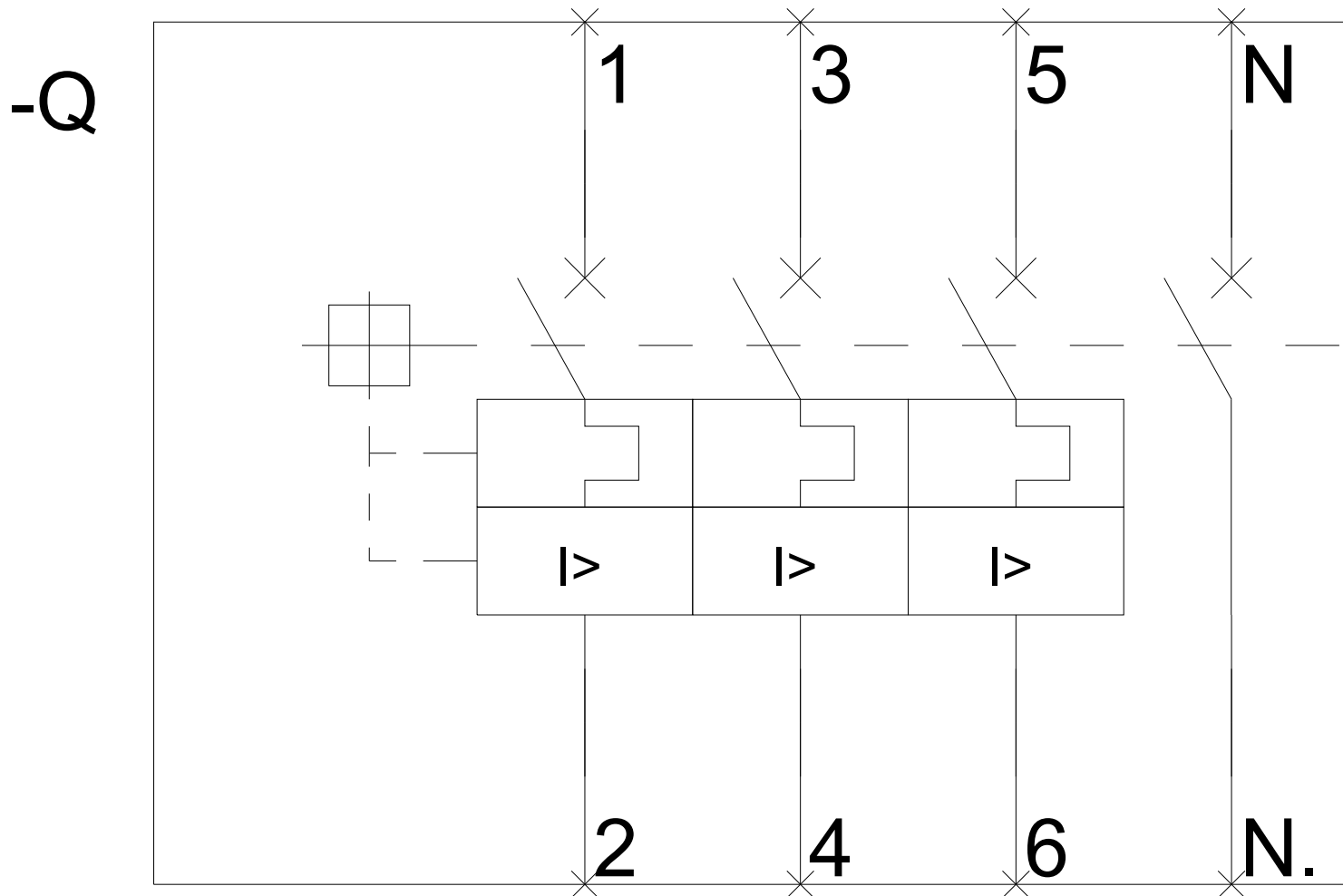
CAX-Online-Generator

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

Tender specifications

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





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