



circuit breaker 3VA1 IEC frame 160 breaking capacity class M Icu=55kA @ 415V 3-pole, line protection TM220, ATFM, In=100A overload protection Ir=70A...100A short-circuit protection Ii=10 x In nut keeper kit

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	3
General technical data	
insulation voltage / rated value	800 V
Max. rated operational voltage Ue with DC	500 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	25 W
mechanical service life (operating cycles) / typical	20 000
Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	9 000
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz	6 300
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	No
ground-fault monitoring version	Without
product function	
• communication function	No
• other measurement function	No
Net Weight	944 g
Current	
operational current	
• at 40 °C	100 A
• at 45 °C	100 A
• at 50 °C	100 A
• at 55 °C	98 A
• at 60 °C	96 A
• at 65 °C	94 A
• at 70 °C	91 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	M
maximum short-circuit current breaking capacity (Icu)	
• at 240 V	85 kA
• at 415 V	55 kA
• at 440 V	36 kA
• at 500 V	10 kA
• at 690 V	10 kA
operating short-circuit current breaking capacity (Ics)	

<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	85 kA
	55 kA
	36 kA
	5 kA
	5 kA
short-circuit current making capacity (I <sub>cm</sub> )	
<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	187 kA
	121 kA
	75.6 kA
	17 kA
	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

product feature / for L-tripping / can be switched on/off	No
adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic / minimum	70 A
adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic / maximum	100 A
adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic / minimum	1 s
adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic / maximum	1 s
adjustable response value setting current (I <sub>i</sub> ) / for I-tripping / minimum	1 000 A
adjustable response value setting current (I <sub>i</sub> ) / for I-tripping / maximum	1 000 A
adjustable absolute value setting current (I <sub>N</sub> ) / for N-tripping / minimum	0 A
adjustable absolute value setting current (I <sub>N</sub> ) / for N-tripping / maximum	0 A
Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF	No

### Mechanical Design

product component	
<ul style="list-style-type: none"> <li>• undervoltage release</li> <li>• voltage trigger</li> <li>• trip indicator</li> </ul>	No
	No
	No
height [in]	5.12 in
Height	130 mm
width [in]	3 in
Width	76.2 mm
depth [in]	2.76 in
depth	70 mm

### Connections

arrangement of electrical connectors / for main current circuit	Front terminal
type of electrical connection / for main current circuit	nut keeper kit on both ends
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
design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)	Silver
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	Tin

### 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"> <li>• during operation / minimum</li> <li>• during operation / maximum</li> </ul>	-25 °C
	70 °C

- during storage / minimum
- during storage / maximum

-40 °C  
80 °C

## Certificates

reference code / according to IEC 81346-2

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### General Product Approval



[Confirmation](#)



[Miscellaneous](#)

[KC](#)



### EMC

### Declaration of Conformity

### Test Certificates



RCM



EG-Konf.



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

### Marine / Shipping

### other



ABS



BUREAU  
VERITAS



DNV



RMRS

[CCS / China Classification Society](#)

[Environmental Confirmations](#)

### other

[Miscellaneous](#)

[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=3VA1110-5EE32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1110-5EE32-0AA0>

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

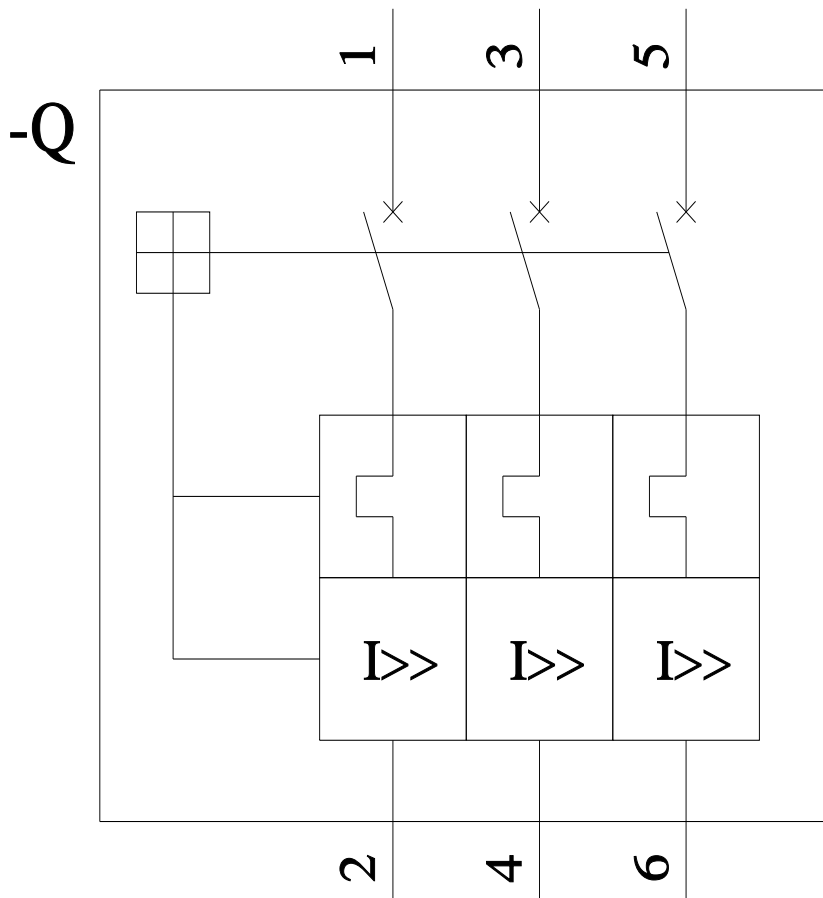
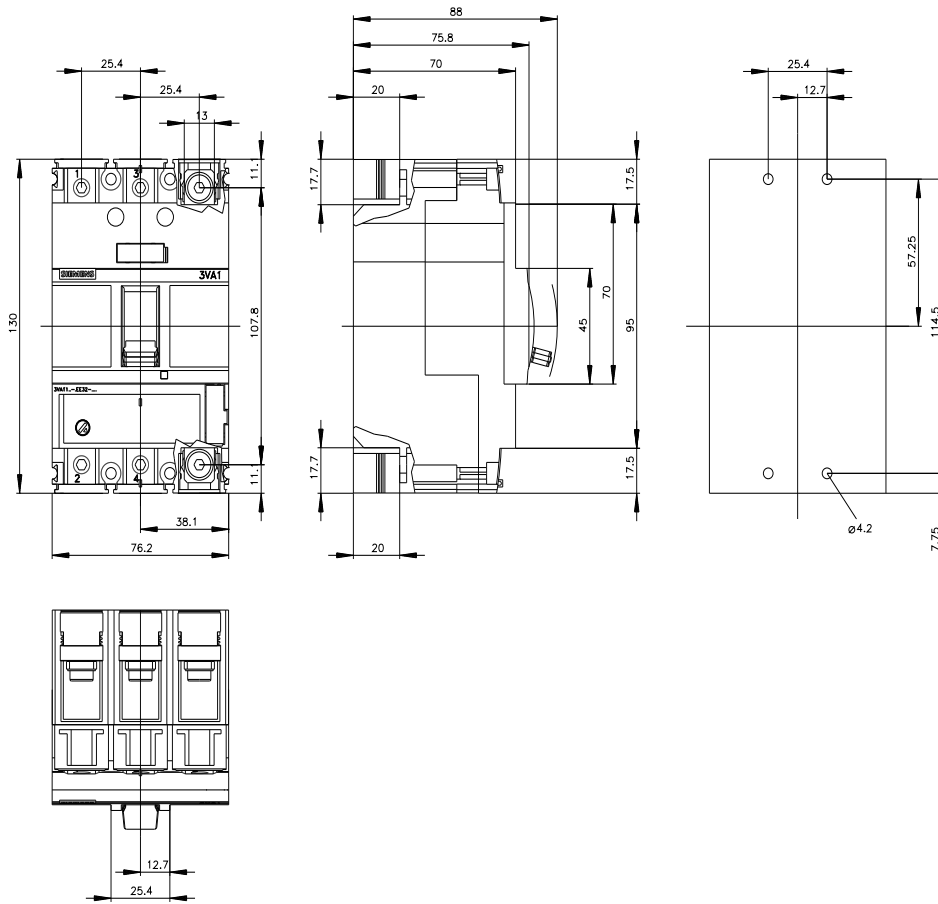
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1110-5EE32-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1110-5EE32-0AA0)

CAx-Online-Generator

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

Tender specifications

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



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