



circuit breaker 3VA1 IEC frame 100 breaking capacity class N
 $I_{cu}=25kA @ 415V$ 4-pole, line protection TM210, FTFM, $I_n=50A$
 overload protection $I_r=50A$ fixed short-circuit protection $I_i=10 \times I_n$ N
 conductor unprotected nut keeper kit shunt trip (STL) 12-30V DC;
 24V AC 50/60Hz 2 auxiliary switches HQ 1 trip alarm switch HQ

Model	
Product brand name	SENTRON
Product designation	Molded case circuit breaker
Product version	Line protection
Design of the overcurrent release	TM210
Protective function of the overcurrent release	LI
Number of poles	4
Design of the auxiliary release	Shunt trip (STL)
Auxiliary contact version	2 auxiliary switches + 1 trip alarm switch HQ
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
Latching - endurance	15 000
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
• Phase failure detection	No
• other measurement function	No
Net weight	1.38 kg

Current

Max. rated operational current of the frame size	100 A
Rated continuous current I _u	50 A
Operating current	
• at 40 °C	50 A
• at 45 °C	50 A
• at 50 °C	50 A
• at 55 °C	48 A
• at 60 °C	47 A
• at 65 °C	46 A
• at 70 °C	45 A

Switching capacity according to IEC 60947

Switching capacity class of the circuit breaker	N
Maximum short-circuit current breaking capacity (I _{cu})	
• at 240 V	36 kA
• at 415 V	25 kA
• at 440 V	16 kA
• at 690 V	5 kA
Operational short-circuit current breaking capacity (I _{cs})	
• at 240 V	36 kA
• at 415 V	25 kA
• at 440 V	16 kA
• at 690 V	5 kA
Short-circuit current making capacity (I _{cm})	
• at 240 V	75.6 kA
• at 415 V	52.5 kA
• at 440 V	32 kA
• at 690 V	7.5 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.	50 A
Adjustable response value current / I _r max.	50 A
Adjustable response value time / t _r min.	1
Adjustable response value time / t _r max.	1

Short-term delayed / tripping switchable / I _{2t} =ON/OFF	No
Adjustable response value current / I _i min.	500 A
Adjustable response value current / I _i max.	500 A
Design of the N-conductor protection	Without

Mechanical Design

Height	130 mm
Width	101.6 mm
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

Product component	
<ul style="list-style-type: none"> • undervoltage release 	No
<ul style="list-style-type: none"> • Voltage trigger 	Yes
<ul style="list-style-type: none"> • undervoltage release with leading contact 	No
<ul style="list-style-type: none"> • Trip indicator 	Yes
Number of CO contacts / for auxiliary contacts	3

Accessories

Product extension / optional / motor drive	No
Manufacturer's article number	
<ul style="list-style-type: none"> • of the integrated auxiliary switch/alarm switch 	3VA9988-0AA12
<ul style="list-style-type: none"> • of the integrated auxiliary switch/alarm switch 	3VA9988-0AB12
<ul style="list-style-type: none"> • of the integrated auxiliary trip 	3VA9688-0BL30

Environmental conditions

Protection class IP / on the front	IP40
Ambient temperature	
<ul style="list-style-type: none"> • during operation / minimum 	-25 °C
<ul style="list-style-type: none"> • during operation / maximum 	70 °C
<ul style="list-style-type: none"> • during storage / minimum 	-40 °C
<ul style="list-style-type: none"> • during storage / maximum 	80 °C

Certificates

Reference code / acc. to DIN EN 81346-2	Q
---	---

General Product Approval	EMC	Declaration of Conformity
--------------------------	-----	---------------------------



CCC



VDE

[Miscellaneous](#)



RCM



EG-Konf.

Test Certificates	Shipping Approval
-------------------	-------------------

[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

[Special Test Certificate](#)



ABS



BUREAU
VERITAS



LRS

Shipping Approval	other
-------------------	-------



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=3VA1050-3ED42-0HH0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1050-3ED42-0HH0>

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

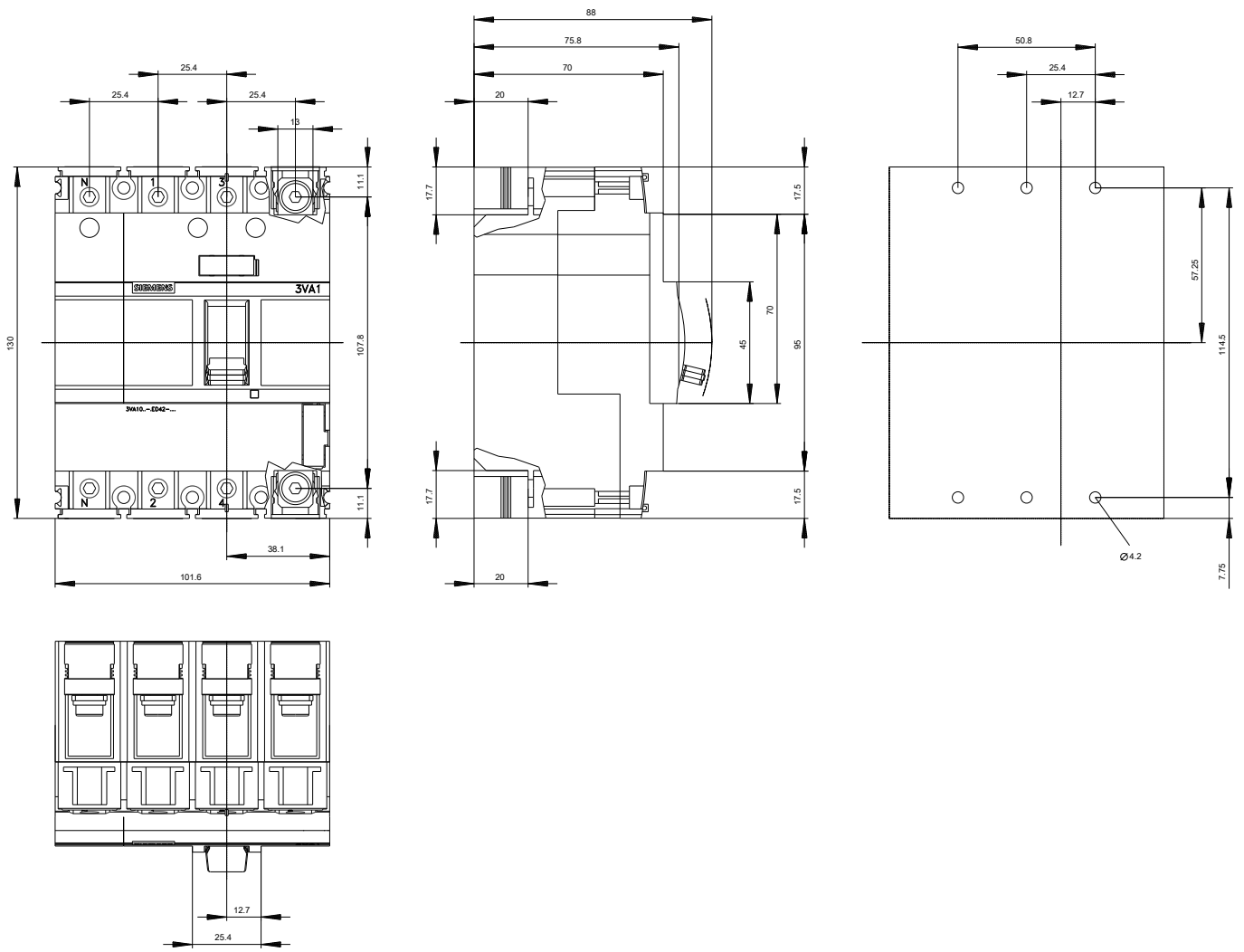
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1050-3ED42-0HH0

CAX-Online-Generator

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

Tender specifications

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





last modified:

08/10/2019