



circuit breaker 3VA1 IEC Frame 160 breaking capacity class M $I_{cu}=55 \text{ kA} @ 415 \text{ V}$
 4-pole, line protection TM240, ATAM, $I_n=160 \text{ A}$ overload protection $I_r=112 \text{ A} \dots 160 \text{ A}$
 A short-circuit protection $I_i=5 \dots 10 \times I_n$ N conductor unprotected nut keeper kit
 undervoltage release (UVR) 208-230 V AC 50/60 Hz 2 auxiliary switches HQ 1 trip
 alarm switch HQ

Model	
product brand name	SENTRON
product designation	Molded case circuit breaker
design of the product	Line protection
design of the overcurrent release	TM240
protection function of the overcurrent release	LI
number of poles	4
design of the auxiliary release	undervoltage release (UVR)
design of the auxiliary switch	2 auxiliary switches + 1 trip alarm switch HQ
General technical data	
insulation voltage / rated value	800 V
operating voltage / at DC / rated value	600 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	40.5 W
mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	9 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	6 300
product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof	No
ground-fault monitoring version	Without
product function	
• communication function	No
• other measurement function	No
Net Weight	1.38 kg
Current	
operational current	
• at 40 °C	160 A
• at 45 °C	160 A
• at 50 °C	160 A
• at 55 °C	158 A
• at 60 °C	155 A
• at 65 °C	153 A
• at 70 °C	150 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	M
maximum short-circuit current breaking capacity (I_{cu})	
• at 240 V	85 kA
• at 415 V	55 kA
• at 440 V	36 kA

• at 500 V • at 690 V	10 kA
operating short-circuit current breaking capacity (Ics)	10 kA
• at 240 V • at 415 V • at 440 V • at 500 V • at 690 V	85 kA
	55 kA
	36 kA
	5 kA
	5 kA
short-circuit current making capacity (Icm)	
• at 240 V • at 415 V • at 440 V • at 500 V • at 690 V	187 kA
	121 kA
	75.5 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 (Ir) / of the L-trip / with I2t characteristic	
• minimum • maximum	112 A
	160 A
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	
• minimum • maximum	1 s
	1 s
adjustable response value setting current (Ii) / for I-tripping	
• minimum • maximum	800 A
	1 600 A
adjustable setting current (InN) / for N-tripping	
• minimum • maximum	0 A
	0 A
design of the N-conductor protection	without
product function / grounding protection	No
Mechanical Design	
product component	
• undervoltage release • voltage trigger • trip indicator	Yes
	No
	Yes
height [in]	5.12 in
height	130 mm
width [in]	4 in
width	101.5 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-sections / for flat-bar terminal connection / minimum	12 x 1 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	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	3
Accessories	
product extension / optional / motor drive	Yes

manufacturer's article number	
• of the supplied basic switch	3VA11165EF420AA0
• of the integrated auxiliary switch/alarm switch	3VA9988-0AA12
• of the integrated auxiliary switch/alarm switch	3VA9988-0AB12
• of the integrated auxiliary trip unit	3VA9608-0BB25

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
reference code / according to IEC 81346-2	Q

Approvals / Certificates

General Product Approval



[Miscellaneous](#)



[Confirmation](#)

General Product Approval

EMV

Test Certificates



[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

Maritime application



[CCS \(China Classification Society\)](#)

other

Environment

[Miscellaneous](#)

[Confirmation](#)



[Environmental Confirmations](#)

[Environmental Confirmations](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/lowvoltage/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA1116-5EF42-0DH0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1116-5EF42-0DH0>

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

https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1116-5EF42-0DH0

CAX-Online-Generator

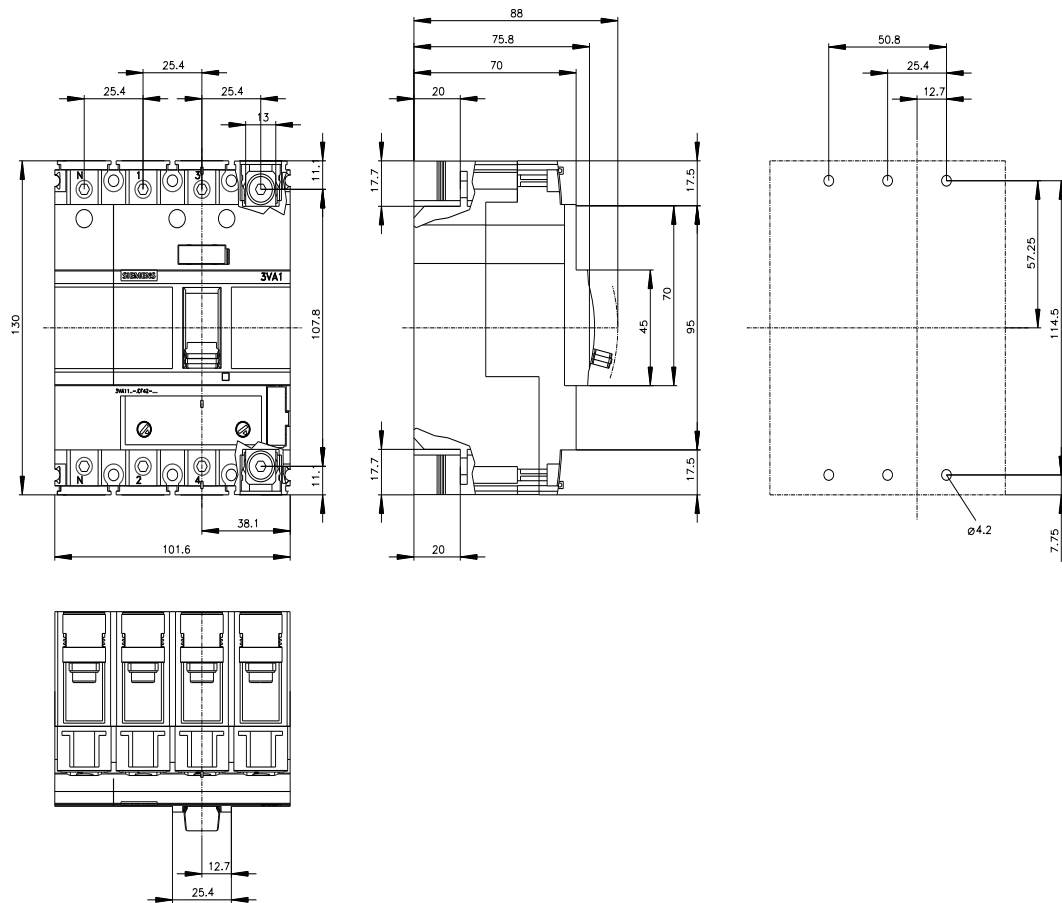
<https://www.siemens.com/cax>

Tender specifications

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

Characteristic curves

https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP='HAUPT'></mmp_prod_no>



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