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Data sheet 3VA1112-3EE46-0AA0



circuit breaker 3VA1 IEC frame 160 breaking capacity class N Icu=25kA @ 415V 4-pole, line protection TM220, ATFM, In=125A overload protection Ir=88A...125A short-circuit protection Ii=10 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	
insulation voltage / rated value	800 V
Max. rated operational voltage Ue with DC	600 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	28.1 W
mechanical service life (switching 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
Neutral conductors / upgradeable/retrofittable	No
ground-fault monitoring version	Without
product function	
● communication function	No
● other measurement function	No
Net Weight	1.345 kg
Current	
operational current	
● at 40 °C	125 A
● at 45 °C	125 A
● at 50 °C	125 A
● at 55 °C	122 A
● at 60 °C	120 A
● at 65 °C	117 A
● at 70 °C	114 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	N
breaking capacity maximum short-circuit current (Icu)	
● at 240 V	36 kA
● at 415 V	25 kA
● at 440 V	16 kA
● at 500 V	7 kA
● at 690 V	7 kA
breaking capacity operating short-circuit current (Ics)	
● at 240 V	36 kA

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● at 415 V	25 kA
● at 440 V	16 kA
● at 500 V	5 kA
● at 690 V	5 kA
short-circuit current making capacity (Icm)	
● at 240 V	75.6 kA
● at 415 V	52.5 kA
● at 440 V	32 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	
product feature / for L-tripping / can be switched on/off	No
product feature / for L-tripping / selectable characteristic function	No
type of value list setting current (Ir) / for L-tripping / with I2t characteristic	St
reference value setting current (Ir) / for L-tripping / with I2t characteristic	x In
set values setting current (Ir) / for L-tripping / with I2t characteristic	0.7;0.8;0.9;1
adjustable response factor setting current (Ir) / for L-tripping / with I2t characteristic / minimum	0.7
adjustable response factor setting current (Ir) / for L-tripping / with I2t characteristic / maximum	1
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic / minimum	88 A
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic / maximum	125 A
type of value list delay time (tr) / for L-tripping / with I2t characteristic	Fest
reference value delay time (tr) / for L-tripping / with I2t characteristic	s
set values delay time (tr) / for L-tripping / with I2t characteristic	1
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic / minimum	1 s
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic / maximum	1 s
product feature / for S-tripping / independent of direction / selectable characteristic function	No
product feature / for I-tripping / can be switched on/off	No
design of I-trip / adjustable	No
reference value setting current (Ii) / for I-tripping	x In
set values setting current (Ii) / for I-tripping	10
adjustable response factor setting current (Ii) / for I-tripping / minimum	10
adjustable response factor setting current (Ii) / for I-tripping / maximum	10
adjustable response value setting current (Ii) / for I-tripping / minimum	1 250 A
adjustable response value setting current (Ii) / for I-tripping / maximum	1 250 A
product feature / for G-tripping / selectable characteristic function	No
product feature / with neutral conductor protection / can be switched on/off	No
product feature / with neutral conductor protection / adjustable	Yes
type of value list setting current (InN) / for N-tripping	St
reference value setting current (InN) / for N-tripping	x In
adjustable response factor setting current (InN) / for N-tripping / minimum	0
adjustable response factor setting current (InN) / for N-tripping / maximum	0
adjustable absolute value setting current (InN) / for N-tripping / minimum	0 A

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adjustable absolute value setting current (InN) / for N-tripping / maximum	0 A
tripping characteristic / of the lower tolerance band	AK_3VA1_1_125A_TM2_NuSuMuH_uT
tripping characteristic / of the upper tolerance band	AK_3VA1_1_125A_TM2_NuSuMuH_oT
let-through energy characteristic / at 240 V	DE_3VA1_0u1_125A_TM_line u starter_3u4p_240V
let-through energy characteristic / at 415 V	DE_3VA1_0u1_125A_TM_line u starter_3u4p_415V
let-through energy characteristic / at 690 V	DE_3VA1_0u1_125A_TM_line u starter_3u4p_690V
type of value list setting current (Ii) / for I-tripping	Fest
tripping characteristic / of the let-through current characteristic / at 240 V	DS_3VA1_0u1_125A_TM_line u starter_3u4p_240V
tripping characteristic / of the let-through current characteristic / at 415 V	DS_3VA1_0u1_125A_TM_line u starter_3u4p_415V
tripping characteristic / of the let-through current characteristic / at 690 V	DS_3VA1_0u1_125A_TM_line u starter_3u4p_690V
design of the N-conductor protection	without
Ground fault protection / tripping switchable / I2t=ON/OFF	No
Mechanical Design	
product component	
● undervoltage release	No
● voltage trigger	No
● trip indicator	No
height [in]	5.12 in
Height	130 mm
width [in]	4 in
Type of connectable conductor cross-section, round conductor terminal, stranded	1 x (1,5 - 70 mm²)
Width	101.6 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	box terminal on both sides
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
Accessories	
product extension / optional / motor drive	Yes
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 / according to IEC 81346-2	Q

General Product Approval | **EMC**

Confirmation | Miscellaneous

Declaration of Conformity | **Test Certificates** | **Marine / Shipping**

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EG-Konf.

Special Test Certificate

Type Test Certificates/Test Report

Miscellaneous

ABS

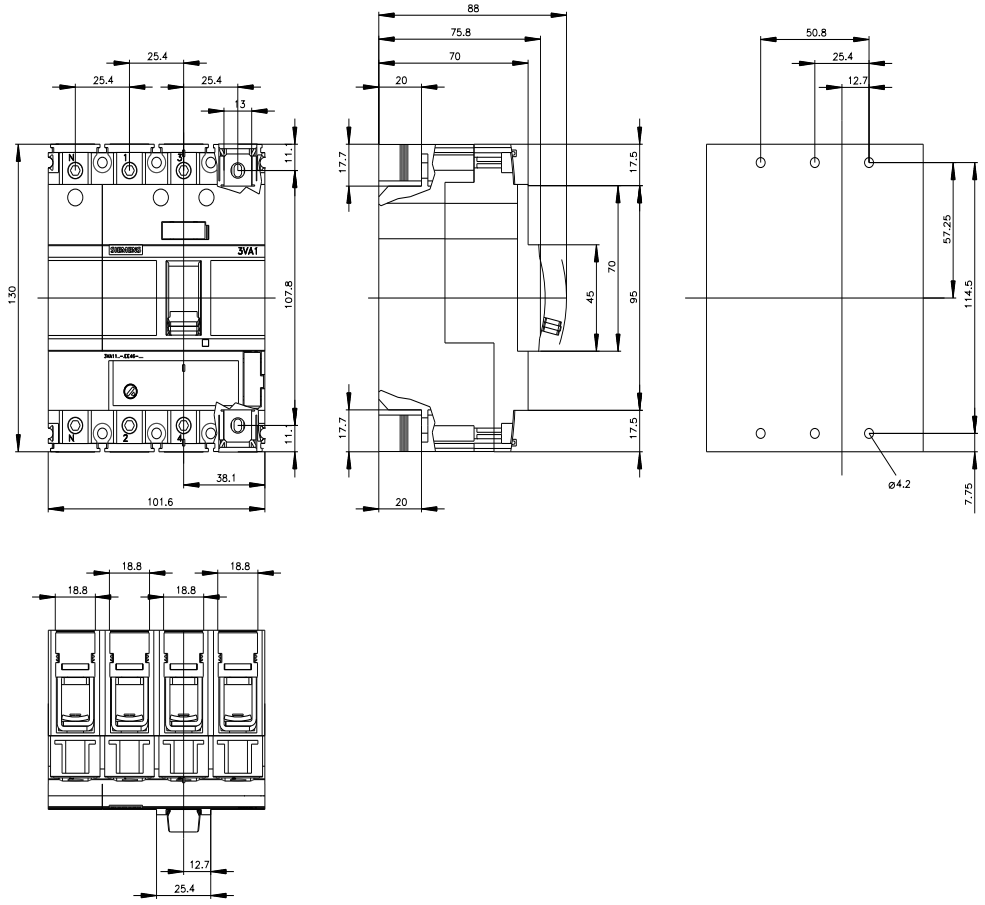
Marine / Shipping				other	
BUREAU VERITAS	DNV	RMRS	CCS / China Classification Society	Miscellaneous	Environmental Confirmations

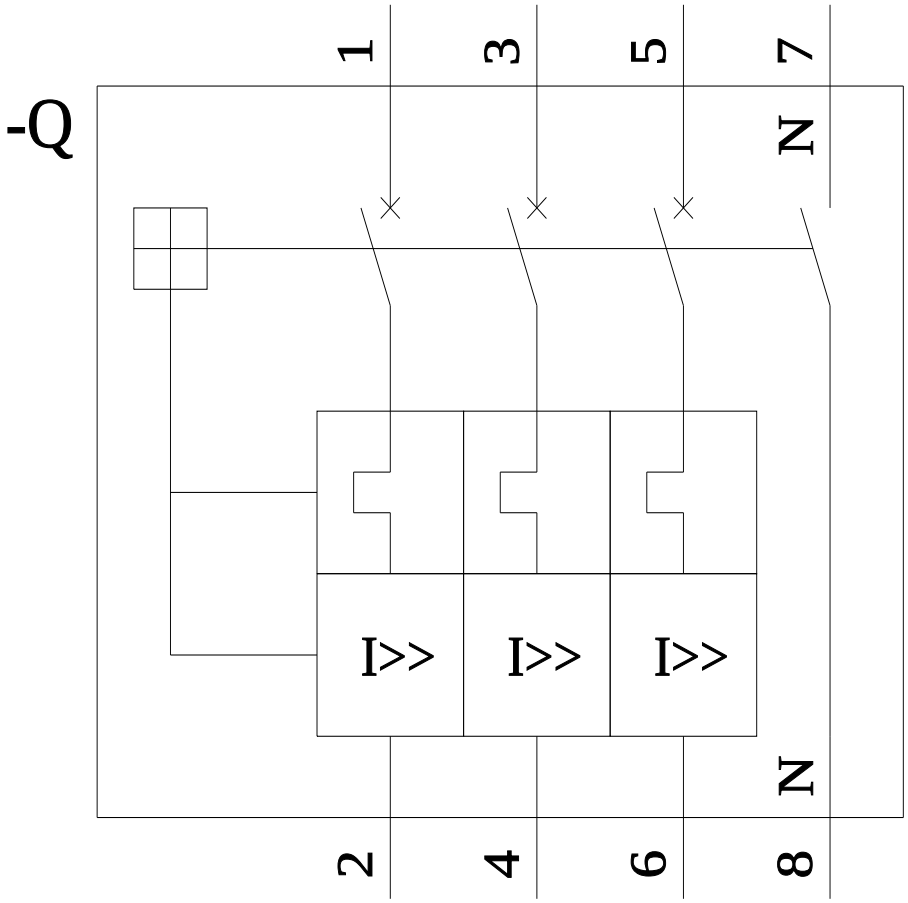
other
Miscellaneous

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=3VA1112-3EE46-0AA0
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3VA1112-3EE46-0AA0
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1112-3EE46-0AA0
CAx-Online-Generator
http://www.siemens.com/cax
Tender specifications
http://www.siemens.com/specifications

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