



circuit breaker 3VA1 IEC frame 160 breaking capacity class H $I_{cu}=70\text{kA}$ @ 415V 3-pole, line protection TM220, ATFM, $I_n=32\text{A}$ overload protection $I_r=22\text{A}\dots32\text{A}$ short-circuit protection $I_i=10 \times I_n$ 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	3

General technical data

insulation voltage / rated value	800 V
Max. rated operational voltage U_e with DC	500 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	10.6 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/retrofitable	No
ground-fault monitoring version	Without
product function	
• communication function	No
• other measurement function	No
Net Weight	1.03 kg

Current

operational current	
• at 40 °C	32 A
• at 45 °C	32 A
• at 50 °C	32 A
• at 55 °C	31 A
• at 60 °C	31 A
• at 65 °C	30 A
• at 70 °C	30 A

Switching capacity according to IEC 60947

switching capacity class of the circuit breaker	H
breaking capacity maximum short-circuit current (I_{cu})	
• 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
breaking capacity operating short-circuit current (I_{cs})	
• at 240 V	100 kA

• at 415 V • at 440 V • at 500 V • at 690 V	70 kA
short-circuit current making capacity (I _{cm})	40 kA
• at 240 V • at 415 V • at 440 V • at 500 V • at 690 V	5 kA
design of short-circuit protection	5 kA
	220 kA
	154 kA
	121 kA
	17 kA
	17 kA
	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 (I _r) / for L-tripping / with I _{2t} characteristic	St
reference value setting current (I _r) / for L-tripping / with I _{2t} characteristic	x I _n
set values setting current (I _r) / for L-tripping / with I _{2t} characteristic	0.7;0.8;0.9;1
adjustable response factor setting current (I _r) / for L-tripping / with I _{2t} characteristic / minimum	0.7
adjustable response factor setting current (I _r) / for L-tripping / with I _{2t} characteristic / maximum	1
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic / minimum	22 A
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic / maximum	32 A
type of value list delay time (t _r) / for L-tripping / with I _{2t} characteristic	Fest
reference value delay time (t _r) / for L-tripping / with I _{2t} characteristic	s
set values delay time (t _r) / for L-tripping / with I _{2t} characteristic	1
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic / minimum	1 s
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} 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 (I _i) / for I-tripping	x I _n
set values setting current (I _i) / for I-tripping	10
adjustable response factor setting current (I _i) / for I-tripping / minimum	10
adjustable response factor setting current (I _i) / for I-tripping / maximum	10
adjustable response value setting current (I _i) / for I-tripping / minimum	320 A
adjustable response value setting current (I _i) / for I-tripping / maximum	320 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 (I _{nN}) / for N-tripping	St
reference value setting current (I _{nN}) / for N-tripping	x I _n
adjustable response factor setting current (I _{nN}) / for N-tripping / minimum	0
adjustable response factor setting current (I _{nN}) / for N-tripping / maximum	0
adjustable absolute value setting current (I _{nN}) / for N-tripping / minimum	0 A

adjustable absolute value setting current (InN) / for N-tripping / maximum	0 A
tripping characteristic / of the lower tolerance band	AK_3VA1_0u1_32A_TM220_BuNuSuMuH_uT
tripping characteristic / of the upper tolerance band	AK_3VA1_0u1_32A_TM220_BuNuSuMuH_oT
let-through energy characteristic / at 240 V	DE_3VA1_0u1_32A_TM_line u starter_3u4p_240V
let-through energy characteristic / at 415 V	DE_3VA1_0u1_32A_TM_line u starter_3u4p_415V
let-through energy characteristic / at 690 V	DE_3VA1_0u1_32A_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_32A_TM_line u starter_3u4p_240V
tripping characteristic / of the let-through current characteristic / at 415 V	DS_3VA1_0u1_32A_TM_line u starter_3u4p_415V
tripping characteristic / of the let-through current characteristic / at 690 V	DS_3VA1_0u1_32A_TM_line u starter_3u4p_690V
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]	3 in
Type of connectable conductor cross-section, round conductor terminal, stranded	1 x (1,5 - 70 mm²)
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	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
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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 / according to IEC 81346-2	Q
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General Product Approval

EMC



[Confirmation](#)



[Miscellaneous](#)



Declaration of Conformity

Test Certificates

Marine / Shipping



[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)





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=3VA1132-6EE36-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1132-6EE36-0AA0>

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

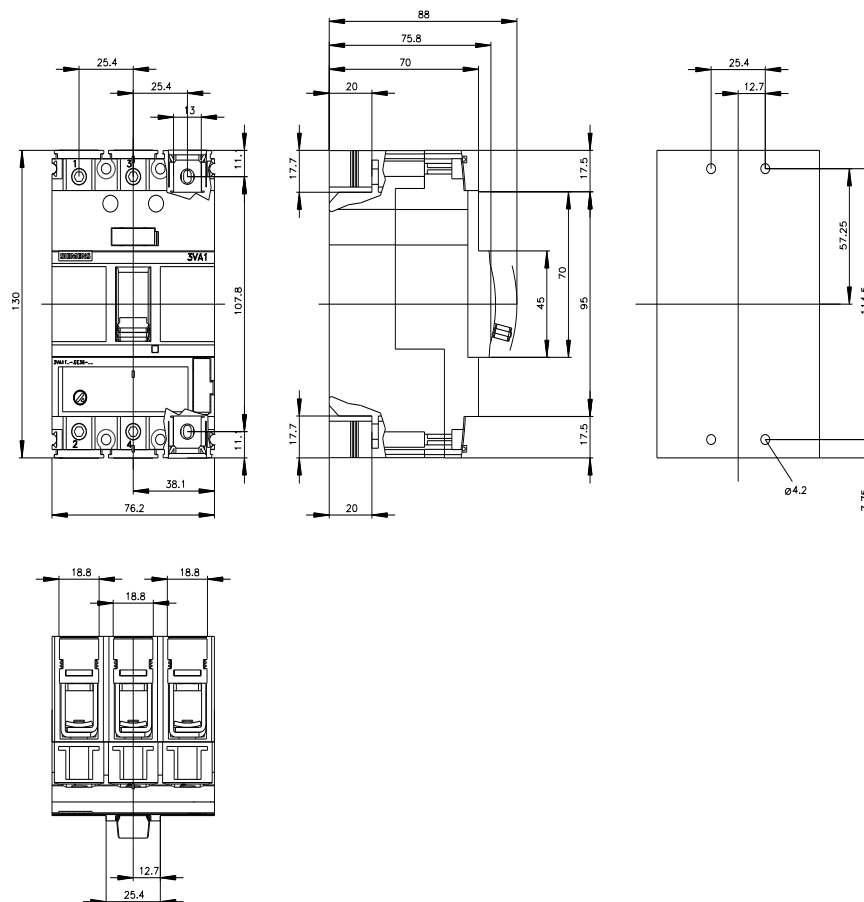
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1132-6EE36-0AA0

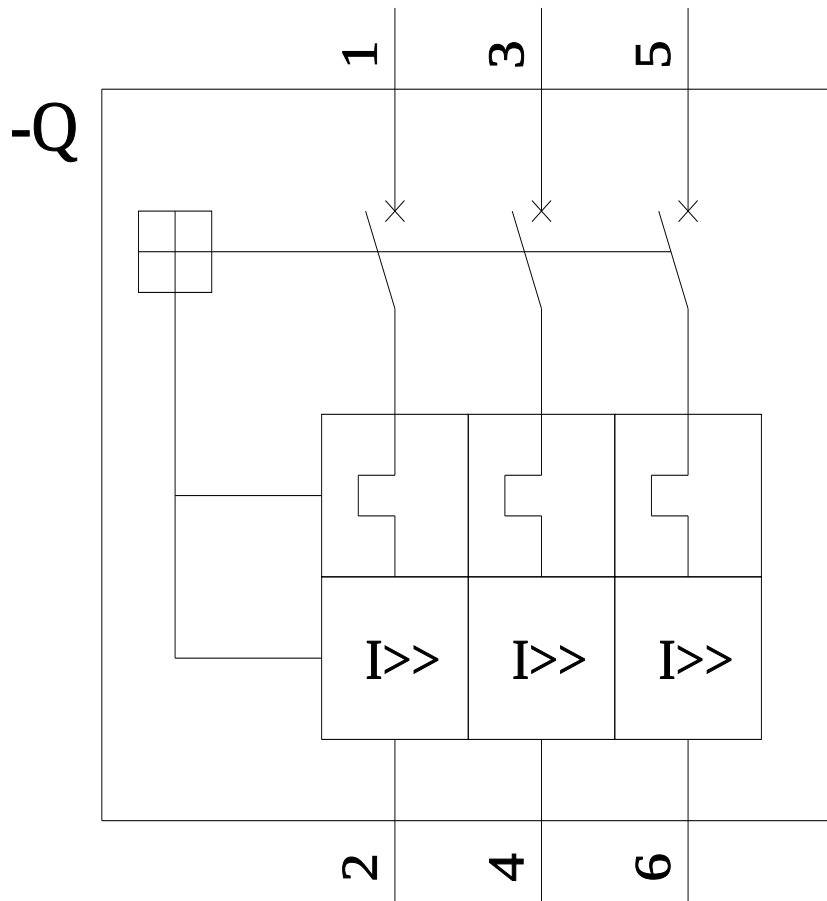
CAX-Online-Generator

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

Tender specifications

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





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