# **SIEMENS**

### **Data sheet**



circuit breaker 3VA1 IEC frame 160 breaking capacity class S Icu=36kA @ 415V 4-pole, line protection TM210, FTFM, In=100A overload protection Ir=100A fixed short-circuit protection Ii=10 x In N conductor protection 100% nut keeper kit

product brand name	SENTRON
product designation	Molded case circuit breaker
design of the product	Line protection
design of the overcurrent release	TM210
protection function of the overcurrent release	LI
number of poles	4
eneral 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	25 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
<ul> <li>other measurement function</li> </ul>	No
Net Weight	1.205 kg
urrent	
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
witching capacity according to IEC 60947	
switching capacity class of the circuit breaker	S
maximum short-circuit current breaking capacity (Icu)	
• at 240 V	55 kA
• at 415 V	36 kA
• at 440 V	25 kA
• at 500 V	7 kA
● at 690 V	7 kA

• at 240 V	55 kA
• at 415 V	36 kA
• at 440 V	25 kA
● at 500 V	5 kA
• at 690 V	5 kA
short-circuit current making capacity (Icm)	
● at 240 V	121 kA
● at 415 V	75.6 kA
• at 440 V	52.5 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
adjustable response value setting current (Ir) / of the L-trip / with	
12t characteristic	400 A
• minimum	100 A 100 A
maximum  adjustable response value delay time (tr) / for L-tripping / with I2t	100 A
characteristic	
• minimum	1 s
• maximum	1s
adjustable response value setting current (li) / for I-tripping	
• minimum	1 000 A
• maximum	1 000 A
adjustable setting current (InN) / for N-tripping	
• minimum	100 A
• maximum	100 A
design of the N-conductor protection	100%
product function / grounding protection	No
Mechanical Design	
Mechanical Design product component	
	No
product component	No No
product component  • undervoltage release	
product component	No
product component	No No 5.12 in 130 mm
product component	No No 5.12 in 130 mm 4 in
product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]  height  width [in]	No No 5.12 in 130 mm 4 in 101.6 mm
product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]  height  width [in]  width  depth [in]	No No 5.12 in 130 mm 4 in 101.6 mm 2.76 in
product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]  height  width [in]  width  depth [in]	No No 5.12 in 130 mm 4 in 101.6 mm
product component  • undervoltage release  • voltage trigger  • trip indicator height [in] height width [in] width depth [in] depth Connections	No No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm
product component	No No S.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm
product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]  height  width [in]  width  depth [in]  depth  Connections  arrangement of electrical connectors / for main current circuit  type of electrical connection / for main current circuit	No No S.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front terminal nut keeper kit on both ends
product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]  height  width [in]  width  depth [in]  depth  Connections  arrangement of electrical connectors / for main current circuit  type of electrical connection / for main current circuit  type of connectable conductor cross-sections / for flat-bar terminal connection / minimum	No No S.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front terminal nut keeper kit on both ends 12 x 1 mm
product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]  height  width [in]  width  depth [in]  depth  Connections  arrangement of electrical connectors / for main current circuit  type of electrical connection / for main current circuit  type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	No No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front terminal nut keeper kit on both ends 12 x 1 mm  17 x 6,5 mm
product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]  height  width [in]  width  depth [in]  depth  Connections  arrangement of electrical connectors / for main current circuit  type of electrical connection / for main current circuit  type of connectable conductor cross-sections / for flat-bar terminal connectable conductor cross-sections / for flat-bar	No No S.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front terminal nut keeper kit on both ends 12 x 1 mm
product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]  height  width [in]  width  depth [in]  depth  Connections  arrangement of electrical connectors / for main current circuit  type of electrical connection / for main current circuit  type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)  design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	No No S.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front terminal nut keeper kit on both ends 12 x 1 mm  17 x 6,5 mm  Silver
product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]  height  width [in]  width  depth [in]  depth  Connections  arrangement of electrical connectors / for main current circuit  type of electrical connection / for main current circuit  type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)  design of the surface / of the connections / on the bottom of the	No No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front terminal nut keeper kit on both ends 12 x 1 mm  17 x 6,5 mm  Silver
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product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]  height  width [in]  width  depth [in]  depth  Connections  arrangement of electrical connectors / for main current circuit  type of electrical connection / for main current circuit  type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)  design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)  Auxiliary circuit  number of CO contacts / for auxiliary contacts  Accessories	No No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front terminal nut keeper kit on both ends 12 x 1 mm  17 x 6,5 mm  Silver Tin
product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]  height  width [in]  width  depth [in]  depth  Connections  arrangement of electrical connectors / for main current circuit  type of electrical connection / for main current circuit  type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)  design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)  Auxiliary circuit  number of CO contacts / for auxiliary contacts  Accessories  product extension / optional / motor drive	No No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front terminal nut keeper kit on both ends 12 x 1 mm  17 x 6,5 mm  Silver Tin
product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]  height  width [in]  width  depth [in]  depth  Connections  arrangement of electrical connectors / for main current circuit  type of electrical connection / for main current circuit  type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)  design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)  Auxiliary circuit  number of CO contacts / for auxiliary contacts  Accessories  product extension / optional / motor drive  Environmental conditions	No No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front terminal nut keeper kit on both ends 12 x 1 mm  17 x 6,5 mm  Silver  Tin
product component  undervoltage release voltage trigger trip indicator height [in] height width [in] width depth [in] depth  Connections arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum type of connectable conductor cross-sections / for flat-bar terminal connection / maximum design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)  Auxiliary circuit number of CO contacts / for auxiliary contacts  Accessories product extension / optional / motor drive  Environmental conditions protection class IP / on the front	No No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front terminal nut keeper kit on both ends 12 x 1 mm  17 x 6,5 mm  Silver  Tin
product component  undervoltage release voltage trigger trip indicator height [in] height width [in] width depth [in] depth  Connections arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum type of connectable conductor cross-sections / for flat-bar terminal connection / maximum design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)  Auxiliary circuit number of CO contacts / for auxiliary contacts  Accessories product extension / optional / motor drive  Environmental conditions protection class IP / on the front ambient temperature	No

• during storage / minimum

-40 °C 80 °C

during storage / maximum

ertificates

reference code / according to IEC 81346-2

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#### **General Product Approval**



Confirmation



**Miscellaneous** 

<u>KC</u>



**EMC** 

**Declaration of Conformity** 

**Test Certificates** 







**Miscellaneous** 

Type Test Certificates/Test Report

Special Test Certificate

#### Marine / Shipping







CCS / China Classification Society

Confirmation

other

other

Environment

**Miscellaneous** 

**Miscellaneous** 

Environmental Confirmations

#### Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

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

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=3VA1110-4GD42-0AA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3VA1110-4GD42-0AA0

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

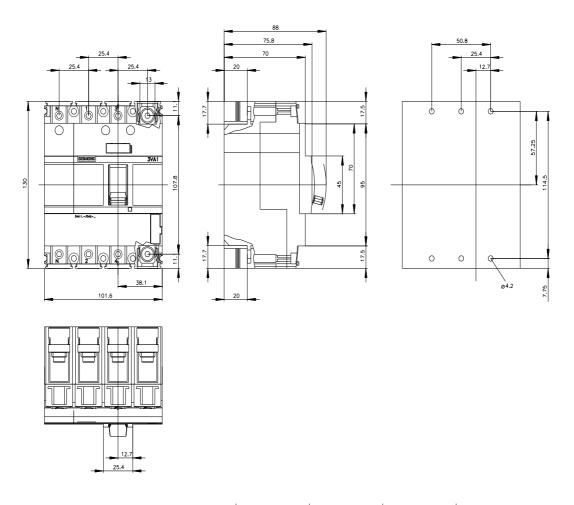
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA1110-4GD42-0AA0

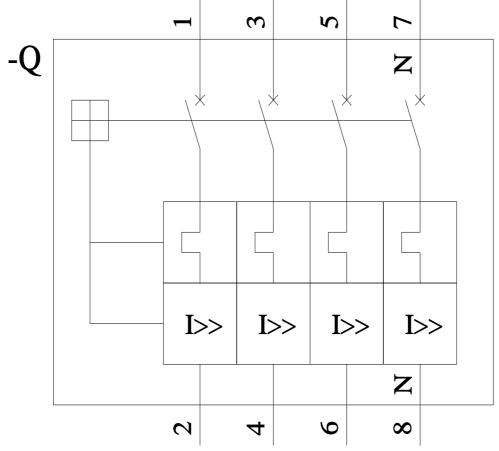
**CAx-Online-Generator** 

http://www.siemens.com/cax

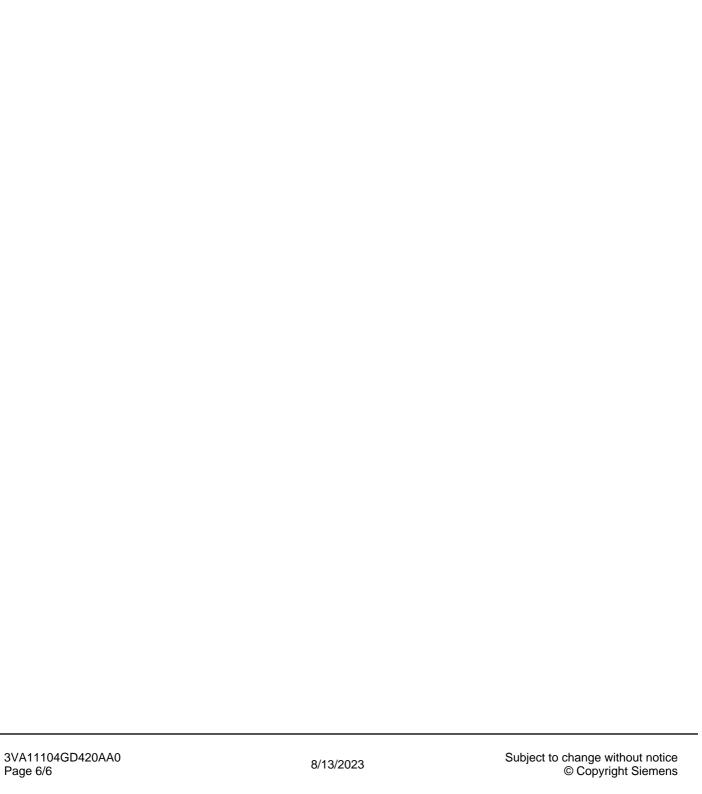
Tender specifications

http://www.siemens.com/specifications





last modified: 8/10/2023 🖸



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