# **SIEMENS**

### **Data sheet**



circuit breaker 3VA1 IEC frame 160 breaking capacity class S Icu=36kA @ 415V 4-pole, line protection TM210, FTFM, In=20A overload protection Ir=20A fixed short-circuit protection Ii=16 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	12 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	1.2 kg
urrent	
operational current	
• at 40 °C	20 A
• at 45 °C	20 A
• at 50 °C	20 A
• at 55 °C	20 A
• at 60 °C	19 A
• at 65 °C	19 A
● at 70 °C	19 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 (lcm)	
• 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	
l2t characteristic  ● minimum	20 A
• maximum	20 A
adjustable response value delay time (tr) / for L-tripping / with I2t	207
characteristic	
• minimum	1 s
• maximum	1 s
adjustable response value setting current (li) / for I-tripping	
• minimum	320 A
maximum	320 A
adjustable setting current (InN) / for N-tripping	
• minimum	20 A
maximum	20 A
design of the N-conductor protection	100%
product function / grounding protection	No
Mechanical Design	
Mechanical Design product component	
Mechanical Design  product component  • undervoltage release	No
Mechanical Design  product component  • undervoltage release  • voltage trigger	No
Mechanical Design  product component  • undervoltage release  • voltage trigger  • trip indicator	No No
Mechanical Design  product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]	No No 5.12 in
Mechanical Design  product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]  height	No No 5.12 in 130 mm
Mechanical Design  product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]  height  width [in]	No No 5.12 in 130 mm 4 in
Mechanical Design  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
Mechanical Design  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
Mechanical Design  product component  • undervoltage release  • voltage trigger  • trip indicator  height [in]  height  width [in]  width  depth [in]  depth	No No 5.12 in 130 mm 4 in 101.6 mm
Mechanical Design  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
Mechanical Design  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	No No S.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm
Mechanical Design  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
mechanical Design  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	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	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	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	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	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	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  Tin
product component	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	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	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	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	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	No

• during storage / minimum

-40 °C 80 °C

• during storage / maximum

ertificates

reference code / according to IEC 81346-2

Q

#### **General Product Approval**

Confirmation





**Miscellaneous** 

<u>KC</u>



**EMC** 

**Declaration of Conformity** 

**Test Certificates** 





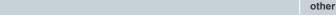


**Miscellaneous** 

Type Test Certificates/Test Report

Special Test Certificate

Marine / Shipping











CCS / China Classification Society

Confirmation

other

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=3VA1120-4GD42-0AA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3VA1120-4GD42-0AA0

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

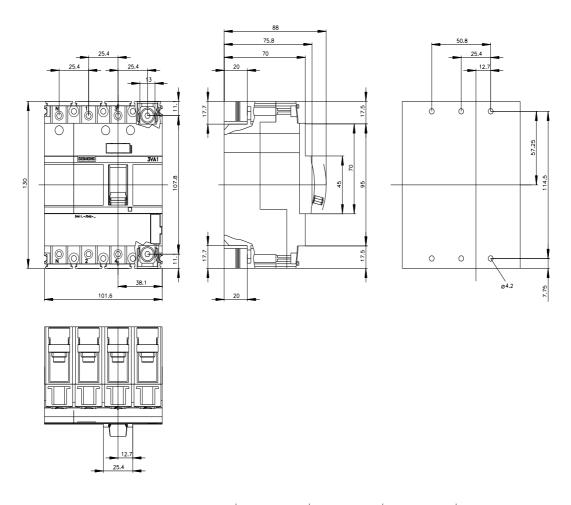
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA1120-4GD42-0AA0

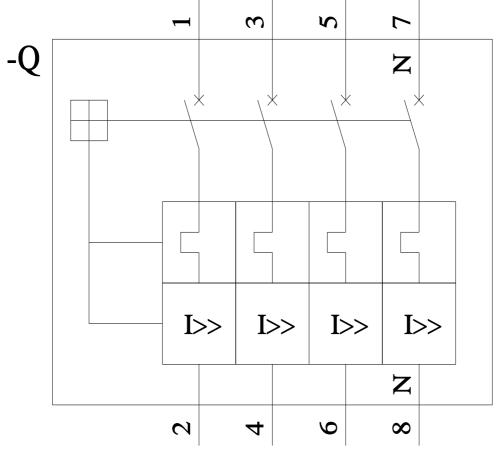
**CAx-Online-Generator** 

http://www.siemens.com/cax

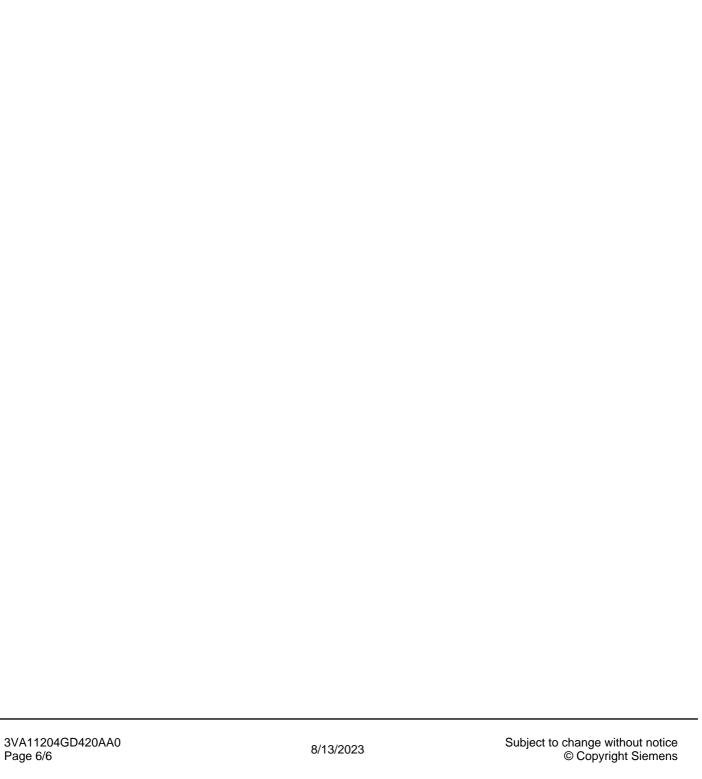
**Tender specifications** 

http://www.siemens.com/specifications





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3VA11204GD420AA0