# **SIEMENS**

## Data sheet

# 3VA1112-6GF42-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS H ICU=70KA @ 415 V 4-POLE, LINE PROTECTION TM240, ATAM, IN=125A OVERLOAD PROTECTION IR=87,5A ...125A SHORT CIRCUIT PROTECTION II=5...10 X IN NEUTRAL PROTECTION 100% BUSBAR CONNECTION

Figure similar

Model	
product brand name	SENTRON
Product designation	Molded case circuit breaker
Design of the product	Line protection
Product variations	General Applications
Ground fault monitoring version	Without
Design of the auxiliary release	Without auxiliary release
Design of the auxiliary switch	Without
Design of the operating mechanism	toggle handle
Type of the driving mechanism / motor drive	No
Design of the overcurrent release	TM240

General technical data			
Number of poles		4	
Trip class / of the L-trip / with I2t characteristic / initial value		1	
Trip class / of the L-trip / with I2t characteristic / Full-scale value		1	
Electrical endurance (switching cycles)			
• at AC-1 / at 380/415 V / at 50/60 Hz		8 000	
circuit-breaker / Design		3VA	
Mechanical service life (switching cycles) / typical		15 000	

Voltage		
Insulation voltage / Rated value	V	800

#### Protection class

Protection class IP / on the front Protective function of the overcurrent release  Switching capacity Switching capacity class of the circuit breaker    H	Protection class IP		IP40
Switching capacity Switching capacity class of the circuit breaker  Dissipation  Active power loss  • maximum  W 23.2  Electricity Continuous current / Rated value / maximum • of the current-dependent overload release / Full-scale value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value  Main circuit Operating outage • with AC / at 50/60 Hz / Rated value • of PC / Rated value  Operating current • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated value •	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker  Dissipation Active power loss  • maximum  W 23.2  Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 125  Adjustable response value current • of the current-dependent overload release / Full-scale value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value  Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • for DC / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 55 °C / Rated value • at 60 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 67 °C / Rated value • at 70 °C / Rated value	Protective function of the overcurrent release		LI
Switching capacity class of the circuit breaker  Dissipation Active power loss  • maximum  W 23.2  Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 125  Adjustable response value current • of the current-dependent overload release / Full-scale value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value  Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • for DC / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 55 °C / Rated value • at 60 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 67 °C / Rated value • at 70 °C / Rated value	Switching capacity		
Active power loss  • maximum    Maximum   Maxi			н
Active power loss  • maximum    Maximum   Maxi	Dissipation		
Electricity  Continuous current / Rated value / maximum  Continuous current / Rated value  A 125  Adjustable response value current  of the current-dependent overload release / Full-scale value  of the instantaneous short-circuit release / initial value  of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  with AC / at 50/60 Hz / Rated value  of to DC / Rated value  of DC / Rated value  of C / Rated value  at 50 °C / Rated value  at 60 °C / Rated value  at 70 °C / R	Active power loss		
Continuous current / Rated value / maximum	• maximum	W	23.2
Continuous current / Rated value  Adjustable response value current  of the current-dependent overload release / Full-scale value  of the instantaneous short-circuit release / initial value  of the current of the instantaneous short-circuit release / initial value  of the current of the current-dependent overload release / initial value  A 125  of the outer of the overland overland initial value  A 125  of the outer of the current-dependent overload release / initial value  A 100  Ordinate of the current-dependent overload release / initial value  Product details	Electricity		
Adjustable response value current  of the current-dependent overload release / Full-scale value  of the instantaneous short-circuit release / initial value  A 10  of the instantaneous short-circuit release / initial value  of the current of the c	Continuous current / Rated value / maximum	А	160
of the current-dependent overload release / Full-scale value     of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage     with AC / at 50/60 Hz / Rated value     v 690     veriff voltage     veriff	Continuous current / Rated value	Α	125
Full-scale value  • of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  • at 40 °C / Rated value  • at 55 °C / Rated value  • at 55 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value  A 117  • at 70 °C / Rated value  A 114  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / Full-scale value  A 100  Adjustable response value current / of the current-dependent overload release / initial value  Product details	Adjustable response value current		
Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  • at 40 °C / Rated value  • at 40 °C / Rated value  • at 55 °C / Rated value  • at 55 °C / Rated value  • at 60 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value  A 117  • at 70 °C / Rated value  A 114  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / initial value  • for N-conductor protection / Full-scale value  Adjustable response value current / of the current-dependent overload release / initial value  Product details		Α	1
Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  Operating current  • at 40 °C / Rated value  • at 50 °C / Rated value  A 125  • at 50 °C / Rated value  A 125  • at 55 °C / Rated value  A 122  • at 60 °C / Rated value  A 120  • at 60 °C / Rated value  A 120  • at 65 °C / Rated value  A 117  • at 70 °C / Rated value  A 117  • at 70 °C / Rated value  A 114  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability for use  System protection  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / initial value  • for N-conductor protection / Full-scale value  A 100  Adjustable response value current / of the current-dependent overload release / initial value  Product details		Α	5
with AC / at 50/60 Hz / Rated value     for DC / Rated value     v 600  Operating current     at 40 °C / Rated value     at 50 °C / Rated value     at 50 °C / Rated value     at 55 °C / Rated value     at 60 °C / Rated value     at 60 °C / Rated value     at 65 °C / Rated value     at 65 °C / Rated value     at 70 °C / Rated value     A 114  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitability for use  Adjustable parameters  Adjustable parameters  Adjustable parameters  Adjustable response value current     of I-trip / Full-scale value     for N-conductor protection / Initial value     of or N-conductor protection / Full-scale value  Adjustable response value current / of the current-dependent overload release / Initial value  Product details	Main circuit		
for DC / Rated value	Operating voltage		
Operating current  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 55 °C / Rated value  • at 60 °C / Rated value  • at 60 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value  • at 70 °C / Rated value  A 117  • at 70 °C / Rated value  A 114  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / initial value  • for N-conductor protection / Full-scale value  A 100  Adjustable response value current / of the current-dependent overload release / initial value  Product details	• with AC / at 50/60 Hz / Rated value	V	690
at 40 °C / Rated value at 50 °C / Rated value A 125 at 50 °C / Rated value A 122 at 60 °C / Rated value A 120 at 60 °C / Rated value A 120 at 65 °C / Rated value A 117 at 70 °C / Rated value A 114  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value  Product details  A 125  A 125  A 126  A 117  A 114  A 114  A 114  A 114  A 114  A 100  A 10	• for DC / Rated value	V	600
at 55 °C / Rated value at 55 °C / Rated value A 122  at 60 °C / Rated value A 120  at 65 °C / Rated value A 117  at 70 °C / Rated value A 114  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  Suitability or use  Suitability or use  Adjustable parameters  Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value of or N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value  Product details	Operating current		
at 55 °C / Rated value  at 60 °C / Rated value  at 65 °C / Rated value  at 65 °C / Rated value  A 117  at 70 °C / Rated value  A 114  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  for N-conductor protection / initial value  for N-conductor protection / Full-scale value  Adjustable response value current / of the current-dependent overload release / initial value  Product details	• at 40 °C / Rated value	Α	125
at 60 °C / Rated value at 65 °C / Rated value A 117 at 70 °C / Rated value A 114  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value for N-conductor protection / initial value  for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value  Product details	• at 50 °C / Rated value	Α	125
at 65 °C / Rated value  at 65 °C / Rated value  A 117  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  for N-conductor protection / Initial value  of or N-conductor protection / Full-scale value  Adjustable response value current / of the current-dependent overload release / initial value  Product details	• at 55 °C / Rated value	Α	122
at 70 °C / Rated value  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  0  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  for N-conductor protection / initial value  for N-conductor protection / Full-scale value  Adjustable response value current / of the current-dependent overload release / initial value  Product details	• at 60 °C / Rated value	Α	120
Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / initial value  • for N-conductor protection / Full-scale value  Adjustable response value current / of the current-dependent overload release / initial value  Product details	• at 65 °C / Rated value	Α	117
Number of CO contacts / for auxiliary contacts  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  for N-conductor protection / initial value  for N-conductor protection / Full-scale value  A 100  of or N-conductor protection / Full-scale value  A 100  Adjustable response value current / of the current-dependent overload release / initial value  Product details	• at 70 °C / Rated value	Α	114
Number of CO contacts / for auxiliary contacts  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  for N-conductor protection / initial value  for N-conductor protection / Full-scale value  A 100  of or N-conductor protection / Full-scale value  A 100  Adjustable response value current / of the current-dependent overload release / initial value  Product details	Auxiliary circuit		
Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  for N-conductor protection / initial value  for N-conductor protection / Full-scale value  A 100  for N-conductor protection / Full-scale value  A 100  Adjustable response value current / of the current-dependent overload release / initial value  Product details			0
Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  for N-conductor protection / initial value  for N-conductor protection / Full-scale value  A 100  for N-conductor protection / Full-scale value  A 100  Adjustable response value current / of the current-dependent overload release / initial value  Product details	Suitability		
Adjustable response value current  of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value  for N-conductor protection / Full-scale value  A 100  Adjustable response value current / of the current-dependent overload release / initial value  Product details	· · · · · · · · · · · · · · · · · · ·		system protection
of I-trip / Full-scale value     for N-conductor protection / initial value     for N-conductor protection / Full-scale value     for N-conductor protection / Full-scale value     A 100  Adjustable response value current / of the current-dependent overload release / initial value  Product details	Adjustable parameters		
• for N-conductor protection / initial value     • for N-conductor protection / Full-scale value     • for N-conductor protection / Full-scale value     A 100  Adjustable response value current / of the current-dependent overload release / initial value  Product details	Adjustable response value current		
◆ for N-conductor protection / Full-scale value     Adjustable response value current / of the current- dependent overload release / initial value  Product details  A 100  A 0.7	• of I-trip / Full-scale value	Α	10
Adjustable response value current / of the current- dependent overload release / initial value  Product details	• for N-conductor protection / initial value	Α	100
Product details	• for N-conductor protection / Full-scale value	Α	100
	•	Α	0.7
	Product details		
r roduct component	Product component		

Trip indicator		No
• display		No
		No
Voltage trigger		No
undervoltage release		
undervoltage release with leading contact		No
Product property		Na
<ul> <li>for neutral conductors / upgradeable/retrofittable / Short-circuit and</li> </ul>		No
overload proof		
Product expansion / optional / motor drive		Yes
Product function		
Product function		
Intrinsic device protection		Yes
• communication function		No
Phase failure detection		No
• other measurement function		No
Accessories		
Manufacturer article number / of the supplied basic		3VA1112-6GF42-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(Ics)		400
at 240 V / Rated value	kA	100
● at 415 V / Rated value	kA	70
• at 440 V / Rated value	kA	36
• at 500 V / Rated value	kA	
		15
at 690 V / Rated value	kA	15 5
Maximum short-circuit current breaking capacity (Icu)		5
Maximum short-circuit current breaking capacity (Icu)  ● at 240 V / Rated value	kA	100
Maximum short-circuit current breaking capacity (Icu)		5 100 70
Maximum short-circuit current breaking capacity (Icu)  ■ at 240 V / Rated value	kA kA kA	5 100 70 36
Maximum short-circuit current breaking capacity (Icu)  ■ at 240 V / Rated value  ■ at 415 V / Rated value	kA kA kA kA	5 100 70 36 20
Maximum short-circuit current breaking capacity (Icu)  • at 240 V / Rated value  • at 415 V / Rated value  • at 440 V / Rated value  • at 500 V / Rated value  • at 690 V / Rated value	kA kA kA	5 100 70 36
Maximum short-circuit current breaking capacity (Icu)  • at 240 V / Rated value  • at 415 V / Rated value  • at 440 V / Rated value  • at 500 V / Rated value  • at 690 V / Rated value  Short-circuit current making capacity (Icm)	kA kA kA kA	5 100 70 36 20 10
Maximum short-circuit current breaking capacity (Icu)  • at 240 V / Rated value  • at 415 V / Rated value  • at 440 V / Rated value  • at 500 V / Rated value  • at 690 V / Rated value	kA kA kA kA	5 100 70 36 20
Maximum short-circuit current breaking capacity (Icu)  • at 240 V / Rated value  • at 415 V / Rated value  • at 440 V / Rated value  • at 500 V / Rated value  • at 690 V / Rated value  Short-circuit current making capacity (Icm)	kA kA kA kA	5 100 70 36 20 10
Maximum short-circuit current breaking capacity (Icu)  • at 240 V / Rated value  • at 415 V / Rated value  • at 440 V / Rated value  • at 500 V / Rated value  • at 690 V / Rated value  Short-circuit current making capacity (Icm)  • at 240 V / Rated value	kA kA kA kA kA	5 100 70 36 20 10
Maximum short-circuit current breaking capacity (Icu)  • at 240 V / Rated value  • at 415 V / Rated value  • at 440 V / Rated value  • at 500 V / Rated value  • at 690 V / Rated value  Short-circuit current making capacity (Icm)  • at 240 V / Rated value  • at 415 V / Rated value  • at 690 V / Rated value  • at 690 V / Rated value	kA kA kA kA kA	5  100  70  36  20  10  220  154  17
Maximum short-circuit current breaking capacity (Icu)  • at 240 V / Rated value  • at 415 V / Rated value  • at 440 V / Rated value  • at 500 V / Rated value  • at 690 V / Rated value  Short-circuit current making capacity (Icm)  • at 240 V / Rated value  • at 415 V / Rated value  • at 690 V / Rated value  • at 690 V / Rated value  Connections  Arrangement of electrical connectors / for main	kA kA kA kA kA	5  100  70  36  20  10  220  154
Maximum short-circuit current breaking capacity (Icu)  • at 240 V / Rated value  • at 415 V / Rated value  • at 440 V / Rated value  • at 500 V / Rated value  • at 690 V / Rated value  Short-circuit current making capacity (Icm)  • at 240 V / Rated value  • at 415 V / Rated value  • at 690 V / Rated value  • at 690 V / Rated value	kA kA kA kA kA	5  100  70  36  20  10  220  154  17

• for flat-bar terminal connection / minimum	12 x 0
• for flat-bar terminal connection / maximum	17 x 6.5
Type of electrical connection / for main current circuit	Lug terminal

Mechanical Design			
Height	mm	130	
Width	mm	101.6	
Depth	mm	70	
Mounting type		fixed mounting	

Environmental conditions			
Ambient temperature			
<ul><li>during operation / minimum</li></ul>	°C	-25	
<ul> <li>during operation / maximum</li> </ul>	°C	70	
<ul> <li>during storage / minimum</li> </ul>	°C	-40	
<ul><li>during storage / maximum</li></ul>	°C	80	

Ce	ertifi	ca	tes	

## **Equipment marking**

• acc. to DIN EN 61346-2 Q • acc. to DIN EN 81346-2 Q

General Product Approval	EMC	Declaration of	Shipping Approval
		Conformity	





other







 $\mathsf{GL}$ 

### other

other

## Further information

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

http://www.siemens.com/lowvoltage/catalogs

Industry Mall (Online ordering system)

https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA11126GF420AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11126GF420AA0/all

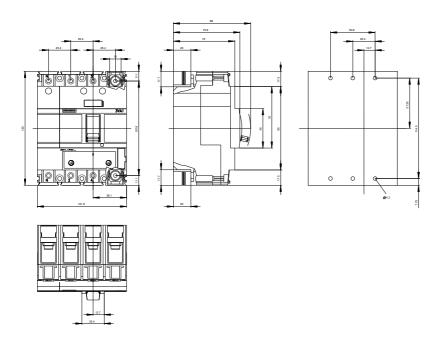
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA11126GF420AA0

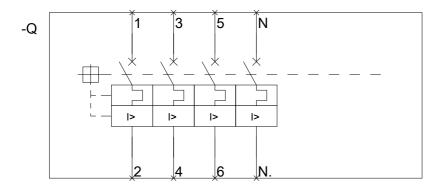
**CAx-Online-Generator** 

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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