# **SIEMENS**

#### Data sheet

## 3VA1125-6GF42-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS H ICU=70KA @ 415 V 4-POLE, LINE PROTECTION TM240, ATAM, IN=25A OVERLOAD PROTECTION IR=17,5A ...25A SHORT CIRCUIT PROTECTION II=5 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  LI  Switching capacity Switching capacity class of the circuit breaker  H  Dissipation Active power loss  • maximum  W  8.5  Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 25  Adjustable response value current  • 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 • for DC / Rated value  • at 40 °C / Rated value  • at 40 °C / Rated value  • at 55 °C / Rated value  • at 65 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value	
Switching capacity  Switching capacity class of the circuit breaker  Active power loss  maximum  W  8.5  Electricity  Continuous current / Rated value / maximum  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  Main circuit  Operating voltage  with AC / at 50/60 Hz / Rated value  of the Capacity  Operating current  at 40 °C / Rated value  A 25  A 1  Full-scale value  of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  of ro DC / Rated value  A 25  At 40 °C / Rated value  A 25  At 40 °C / Rated value  A 26  A 27  A 27  A 28  A 29  A 20  A	
Switching capacity class of the circuit breaker  Dissipation  Active power loss  • maximum  W 8.5  Electricity  Continuous current / Rated value / maximum  A 160  Continuous current / Rated value A 25  Adjustable response value current  • 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  • for DC / 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	
Switching capacity class of the circuit breaker  Dissipation  Active power loss  • maximum  W 8.5  Electricity  Continuous current / Rated value / maximum  A 160  Continuous current / Rated value A 25  Adjustable response value current  • 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  • for DC / 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	
Active power loss  • maximum    M   8.5	
Active power loss  • maximum    Maximum   Maxi	
Electricity  Continuous current / Rated value / maximum A 160  Continuous current / Rated value A 25  Adjustable response value current  • 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  • for DC / Rated value V 600  Operating current  • at 40 °C / Rated value A 25  • at 50 °C / Rated value A 24  • at 60 °C / Rated value A 24  • at 60 °C / Rated value A 23  • at 70 °C / Rated value A 23  • at 70 °C / Rated value A 23  Auxiliary circuit	
Continuous current / Rated value / maximum  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 instantaneous short-circuit release / initial value  Main circuit  Operating voltage  with AC / at 50/60 Hz / Rated value  of or DC / Rated value  Volume  Operating current  at 40 °C / Rated value  A 25  at 50 °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  at 70 °C / Rated value  A 23  Auxiliary circuit	
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  Main circuit  Operating voltage  with AC / at 50/60 Hz / Rated value  of tor DC / Rated value  very for DC / Rated value  of at 40 °C / Rated value  at 50 °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 23  Auxiliary circuit	
Adjustable response value current  of the current-dependent overload release / Full-scale value of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage of with AC / at 50/60 Hz / Rated value of for DC / Rated value  V 690  Operating current of at 40 °C / Rated value A 25 of at 55 °C / Rated value A 24 of at 60 °C / Rated value A 24 of at 70 °C / Rated value A 23 Auxiliary circuit	
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     of rDC / Rated value     of rDC / Rated value      at 40 °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	
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  Operating current  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 60 °C / Rated value  • at 70 °C / Rated value  • at 70 °C / Rated value  A 23  • at 70 °C / Rated value	
Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  Operating current  • at 40 °C / Rated value  A 25  • at 50 °C / Rated value  A 24  • at 60 °C / Rated value  A 24  • at 60 °C / Rated value  A 23  • at 70 °C / Rated value  A 23  Auxiliary circuit	
Operating voltage              ● with AC / at 50/60 Hz / Rated value          V 690           ● for DC / Rated value         V 600           Operating current         A 25           ● at 40 °C / Rated value         A 25           ● at 50 °C / Rated value         A 24           ● at 60 °C / Rated value         A 24           ● at 65 °C / Rated value         A 23           ● at 70 °C / Rated value         A 23           ● at 70 °C / Rated value         A 23	
<ul> <li>with AC / at 50/60 Hz / Rated value</li> <li>for DC / Rated value</li> <li>Operating current</li> <li>at 40 °C / Rated value</li> <li>at 50 °C / Rated value</li> <li>at 55 °C / Rated value</li> <li>at 60 °C / Rated value</li> <li>at 60 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 70 °C / Rated value</li> <li>A 23</li> <li>Auxiliary circuit</li> </ul>	
<ul> <li>for DC / Rated value</li> <li>Operating current</li> <li>at 40 °C / Rated value</li> <li>at 50 °C / Rated value</li> <li>at 55 °C / Rated value</li> <li>at 60 °C / Rated value</li> <li>at 60 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 70 °C / Rated value</li> <li>A 23</li> <li>Auxiliary circuit</li> </ul> Auxiliary circuit	
Operating current  • at 40 °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 70 °C / Rated value  A 23  • at 70 °C / Rated value  A 23  Auxiliary circuit	
<ul> <li>at 40 °C / Rated value</li> <li>at 50 °C / Rated value</li> <li>at 55 °C / Rated value</li> <li>at 60 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 70 °C / Rated value</li> <li>A 23</li> <li>A 23</li> </ul> Auxiliary circuit	
<ul> <li>at 50 °C / Rated value</li> <li>at 55 °C / Rated value</li> <li>at 60 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 70 °C / Rated value</li> <li>A 23</li> <li>A 23</li> </ul> Auxiliary circuit	
<ul> <li>at 55 °C / Rated value</li> <li>at 60 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 70 °C / Rated value</li> <li>A 23</li> <li>A 23</li> </ul> Auxiliary circuit	
<ul> <li>at 60 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 70 °C / Rated value</li> <li>A 23</li> <li>A 23</li> <li>Auxiliary circuit</li> </ul>	
at 65 °C / Rated value     at 70 °C / Rated value  A 23  Auxiliary circuit	
at 70 °C / Rated value     A 23  Auxiliary circuit	
Auxiliary circuit	
Number of CO contacts / for auxiliary contacts 0	
Suitability	
Suitability for use system protection	
Adjustable parameters	
Adjustable response value current	
• of I-trip / Full-scale value A 10	
• for N-conductor protection / initial value A 100	
• for N-conductor protection / Full-scale value A 100	
Adjustable response value current / of the current- A 0.7 dependent overload release / initial value	
Product details	
Product component	

Trip indicator		No
• display		No
		No
Voltage trigger		No
undervoltage release		
undervoltage release with leading contact	_	No
Product property		No
<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		
<ul> <li>Intrinsic device protection</li> </ul>		Yes
• communication function		No
Phase failure detection		No
other measurement function		No
Accessories		
Manufacturer article number / of the supplied basic		3VA1125-6GF42-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(lcs)		
• 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	5
Maximum short-circuit current breaking capacity (Icu)		
• at 240 V / Rated value	kA	100
<ul><li>at 240 V / Rated value</li><li>at 415 V / Rated value</li></ul>	kA kA	100 70
● at 415 V / Rated value	kA	70
<ul><li>at 415 V / Rated value</li><li>at 440 V / Rated value</li></ul>	kA kA	70 36
<ul> <li>at 415 V / Rated value</li> <li>at 440 V / Rated value</li> <li>at 500 V / Rated value</li> </ul>	kA kA kA	70 36 20
<ul> <li>at 415 V / Rated value</li> <li>at 440 V / Rated value</li> <li>at 500 V / Rated value</li> <li>at 690 V / Rated value</li> </ul>	kA kA kA	70 36 20
<ul> <li>at 415 V / Rated value</li> <li>at 440 V / Rated value</li> <li>at 500 V / Rated value</li> <li>at 690 V / Rated value</li> </ul> Short-circuit current making capacity (Icm)	kA kA kA kA	70 36 20 10
<ul> <li>at 415 V / Rated value</li> <li>at 440 V / Rated value</li> <li>at 500 V / Rated value</li> <li>at 690 V / Rated value</li> </ul> Short-circuit current making capacity (Icm) <ul> <li>at 240 V / Rated value</li> </ul>	kA kA kA kA	70 36 20 10
<ul> <li>at 415 V / Rated value</li> <li>at 440 V / Rated value</li> <li>at 500 V / Rated value</li> <li>at 690 V / Rated value</li> </ul> Short-circuit current making capacity (Icm) <ul> <li>at 240 V / Rated value</li> <li>at 415 V / Rated value</li> <li>at 690 V / Rated value</li> </ul> Connections	kA kA kA kA	70 36 20 10 220 154 17
<ul> <li>at 415 V / Rated value</li> <li>at 440 V / Rated value</li> <li>at 500 V / Rated value</li> <li>at 690 V / Rated value</li> </ul> Short-circuit current making capacity (Icm) <ul> <li>at 240 V / Rated value</li> <li>at 415 V / Rated value</li> <li>at 690 V / Rated value</li> </ul> Connections Arrangement of electrical connectors / for main	kA kA kA kA	70 36 20 10 220 154
<ul> <li>at 415 V / Rated value</li> <li>at 440 V / Rated value</li> <li>at 500 V / Rated value</li> <li>at 690 V / Rated value</li> </ul> Short-circuit current making capacity (Icm) <ul> <li>at 240 V / Rated value</li> <li>at 415 V / Rated value</li> <li>at 690 V / Rated value</li> </ul> Connections	kA kA kA kA	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		

Certificates				
Equipment marking				
• acc. to DIN EN 6:				

Certificates

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

General Product Approval	EMC	Declaration of	Shipping Approval
		Conformity	











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/3VA11256GF420AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11256GF420AA0/all

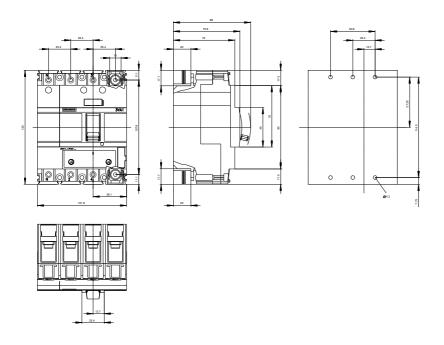
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA11256GF420AA0

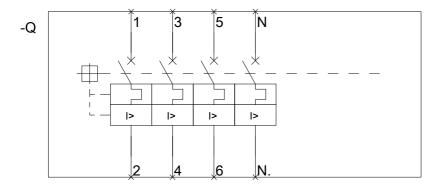
**CAx-Online-Generator** 

http://www.siemens.com/cax

**Tender specifications** 

http://ausschreibungstexte.siemens.com/tiplv





last modified: 11.03.2015