# **SIEMENS**

## Data sheet

## 3VA1110-5GF46-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS M ICU=55KA @ 415 V 4-POLE, LINE PROTECTION TM240, ATAM, IN=100A OVERLOAD PROTECTION IR=70A ...100A SHORT CIRCUIT PROTECTION II=5...10 X IN NEUTRAL PROTECTION 100% CABLE 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		
	tage	
Insulation voltage / Rated value V 800	sulation voltage / Rated value	V

#### Protection class

Protection class IP / on the front Protective function of the overcurrent release  Switching capacity  Switching capacity class of the circuit breaker  Dissipation  Active power loss  • maximum  W 25  Electricity  Continuous current / Rated value / maximum  A 160  Continuous current / Rated value  • 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  • of the first 2 Rated value  • of the C/ Rated value  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 50 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value	Protection class IP		IP40
Switching capacity  Switching capacity class of the circuit breaker  Dissination  Active power loss  • maximum  W 25  Electricity  Continuous current / Rated value / maximum  A 160  Continuous current / Rated value  • 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  • of the instantaneous short-circuit release / initial value  • of the or DC / Rated value  • of DC / Rated value  • at 40 °C / Rated value  • at 55 °C / Rated value  • at 60 °C / Rated	Protection class IP / on the front	_	IP40
Switching capacity class of the circuit breaker  Dissipation  Active power loss  • maximum    V   25	Protective function of the overcurrent release	_	Ц
Switching capacity class of the circuit breaker  Dissipation  Active power loss  • maximum  Billoctricity  Continuous current / Rated value / maximum  • 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 role 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 60 °C / Rated value  • at 70 °C / Rated value  A 94  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitabile response value current  • of I-trip / Full-scale value  • for N-conductor protection / Full-scale value  • for N-conductor protection / Full-scale value  • for N-conductor protection / Full-scale value  Adjustable response value current of the current-  • Adjustable response value current of the current-	Switching capacity		
Active power loss  • maximum    M			M
Active power loss  • maximum    M	Dissipation		
Electricity  Continuous current / Rated value / maximum  A 160  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  • for DC / Rated value  • of or DC / Rated value  • at 40 °C / Rated value  • at 55 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value  A 94  • at 70 °C / Rated value  A 91  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability for use  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  • for N-conductor protection / Full-scale value  Adjustable response value current / of the current-  Adjustable response value current / of the current-  Adjustable response value current / of the current-			
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  volue  Operating current  at 40 °C / Rated value  A 100  at 55 °C / Rated value  at 55 °C / Rated value  at 60 °C / Rated value  at 60 °C / Rated value  at 60 °C / Rated value  A 98  at 65 °C / Rated value  A 99  at 65 °C / Rated value  A 99  at 65 °C / Rated value  A 99  at 60 °C / Rated value  A 99  at 70 °C / Rated value  b at 70 °C / Rated value  c at 70 °C / Rated value  A 91  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Sultability  Suitability or use  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-  Adjustable response value current / of the current-  Adjustable response value current / of the current-	• maximum	W	25
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  • of the instantaneous short-circuit release / initial value  • of the instantaneous short-circuit release / initial value  • of the instantaneous short-circuit release / initial value  • of the instantaneous short-circuit release / initial value  • of the instantaneous short-circuit release / initial value  • of the instantaneous short-circuit release / initial value  • of the instantaneous short-circuit release / initial value  • of the current-dependent overload release / A	Electricity		
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-ci	Continuous current / Rated value / maximum	Α	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     of DC / Rated value     v 600  Operating current     at 40 °C / Rated value     at 55 °C / Rated value     at 55 °C / Rated value     at 65 °C / Rated value     at 65 °C / Rated value     at 65 °C / Rated value     at 67 °C / Rated value     at 67 °C / Rated value     at 68 °C / Rated value     at 67 °C / Rated value	Continuous current / Rated value	Α	100
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 50 °C / Rated value  • at 50 °C / Rated value  • at 60 °C / Rated value  • at 60 °C / Rated value  • at 60 °C / Rated value  • at 70 °C / Rated value  A 91  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitable parameters  Adjustable parameters  Adjustable propose 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-  Adjustable response value current / of the current-	Adjustable response value current	_	
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         100           • at 50 °C / Rated value         A         98           • at 60 °C / Rated value         A         96           • at 65 °C / Rated value         A         94           • at 70 °C / Rated value         A         91           Auxiliary circuit           Number of CO contacts / for auxiliary contacts         0           Suitability           Suitability         system protection           Adjustable parameters         Adjustable parameters           Adjustable response value current         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         100		Α	1
Operating voltage		Α	5
with AC / at 50/60 Hz / Rated value     for DC / Rated value     V 600  Operating current     at 40 °C / Rated value     A 100     at 50 °C / Rated value     A 98     at 60 °C / Rated value     A 96     at 65 °C / Rated value     A 96     at 65 °C / Rated value     A 94     at 70 °C / Rated value     A 91  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitabile parameters  Adjustable 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-  Adjustable response value current / of the current-  Adjustable response value current / of the current-	Main circuit		
for DC / Rated value  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     at 70 °C / Rated value     A 94      at 70 °C / Rated value     A 91  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     of or N-conductor protection / Full-scale value  Adjustable response value current / of the current-  Adjustable response value current / of the current-  Adjustable response value current / of the current-  A 0.7	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 65 °C / Rated value  • at 70 °C / Rated value  • at 70 °C / Rated value  A 94  • at 70 °C / Rated value  A 91  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitability for use  Adjustable 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-  Adjustable response value current / of the current-  Adjustable response value current / of the current-	• with AC / at 50/60 Hz / Rated value	V	690
at 40 °C / Rated value  at 50 °C / Rated value  at 55 °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 94  at 70 °C / Rated value  A 91   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-  Adjustable response value current / of the current-  Adjustable response value current / of the current-	• for DC / Rated value	V	600
at 50 °C / Rated value at 55 °C / Rated value A 98  at 60 °C / Rated value A 96  at 65 °C / Rated value A 99  at 70 °C / Rated value A 91  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 A 10  for N-conductor protection / initial value of or N-conductor protection / Full-scale value  Adjustable response value current / of the current-  Adjustable response value current / of the current-  A 0.7	Operating current		
at 55 °C / Rated value at 60 °C / Rated value A 96 at 65 °C / Rated value A 94 at 70 °C / Rated value A 91  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 of or N-conductor protection / initial value of or N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current- Adjustable response value current / of the current- A 0.7	• at 40 °C / Rated value	Α	100
at 60 °C / Rated value  at 65 °C / Rated value  at 70 °C / Rated value  A 91  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-  Adjustable response value current / of the current-  A 0.7	• at 50 °C / Rated value	Α	100
at 65 °C / Rated value  at 70 °C / Rated value  A 91  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-  Adjustable response value current / of the current-  A 0.7	• at 55 °C / Rated value	Α	98
at 70 °C / Rated value  A 91  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 for N-conductor protection / initial value for N-conductor protection / Full-scale value  Adjustable response value current / of the current-  Adjustable response value current / of the current-	• at 60 °C / Rated value	Α	96
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-  Adjustable response value current / of the current-	• at 65 °C / Rated value	Α	94
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-  Adjustable response value current / of the current-	• at 70 °C / Rated value	Α	91
Number of CO contacts / for auxiliary contacts  Suitability Suitability for use  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	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  Adjustable response value current / of the current-  Adjustable response value current / of the current-			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  Adjustable response value current / of the current-  Adjustable response value current / of the current-	Suitability		
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-  A 0.7	· · · · · · · · · · · · · · · · · · ·		system protection
<ul> <li>of I-trip / Full-scale value</li> <li>for N-conductor protection / initial value</li> <li>for N-conductor protection / Full-scale value</li> <li>Adjustable response value current / of the current-</li> <li>A 0.7</li> </ul>	Adjustable parameters		
<ul> <li>for N-conductor protection / initial value</li> <li>for N-conductor protection / Full-scale value</li> <li>Adjustable response value current / of the current-</li> <li>A 0.7</li> </ul>	Adjustable response value current		
<ul> <li>◆ for N-conductor protection / Full-scale value</li> <li>Adjustable response value current / of the current-</li> <li>A 0.7</li> </ul>	• of I-trip / Full-scale value	Α	10
Adjustable response value current / of the current- A 0.7	• for N-conductor protection / initial value	Α	100
	• for N-conductor protection / Full-scale value	Α	100
	•	A	0.7
Product details	Product details		
Product component			

Trip indicator		No
• display		No
Voltage trigger		No
undervoltage release		No
undervoltage release with leading contact		No
Product property	_	
• for neutral conductors /		No
upgradeable/retrofittable / Short-circuit and		
overload proof		
Product expansion / optional / motor drive		Yes
Product function		
Product function		
Intrinsic device protection		Yes
<ul> <li>communication function</li> </ul>		No
Phase failure detection		No
• other measurement function		No
Accessories		
Manufacturer article number / of the supplied basic switch		3VA1110-5GF46-0AA0
SWILGI		
Short circuit		
Operational short-circuit current breaking capacity		
(Ics)  • at 240 V / Rated value	kA	85
	kA	55
at 415 V / Rated value	kA	30
• at 440 V / Rated value		
at 500 V / Rated value	kA	15
at 690 V / Rated value	kA	
	_	5
Maximum short-circuit current breaking capacity (Icu)	ĿΛ	
• at 240 V / Rated value	kA	85
<ul><li>at 240 V / Rated value</li><li>at 415 V / Rated value</li></ul>	kA	85 55
<ul> <li>at 240 V / Rated value</li> <li>at 415 V / Rated value</li> <li>at 440 V / Rated value</li> </ul>	kA kA	85 55 30
<ul> <li>at 240 V / Rated value</li> <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	85 55 30 20
<ul> <li>at 240 V / Rated value</li> <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	85 55 30
<ul> <li>at 240 V / Rated value</li> <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	85 55 30 20 10
<ul> <li>at 240 V / Rated value</li> <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	85 55 30 20 10
<ul> <li>at 240 V / Rated value</li> <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> </ul>	kA kA kA kA	85 55 30 20 10
<ul> <li>at 240 V / Rated value</li> <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	85 55 30 20 10
<ul> <li>at 240 V / Rated value</li> <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 Connections	kA kA kA kA	85 55 30 20 10 187 121
<ul> <li>at 240 V / Rated value</li> <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	85 55 30 20 10
<ul> <li>at 240 V / Rated value</li> <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 Connections	kA kA kA kA	85 55 30 20 10 187 121

<ul> <li>of the round conductor terminal / str</li> </ul>	anded			1 x (1.5 - 70 mm²)	
Type of electrical connection / for main cu	rrent circuit			Box 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 61346-2				Q	
● acc. to DIN EN 81346-2				Q	
General EMC Product	Declaration Conformity		Ship	pping Approval	other

## Further information

**Approval** 

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

other

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

Industry Mall (Online ordering system)
https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA11105GF460AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11105GF460AA0/all

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

EG-Konf.

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA11105GF460AA0

**CAx-Online-Generator** 

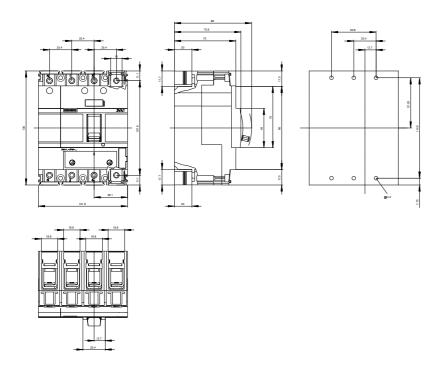
http://www.siemens.com/cax

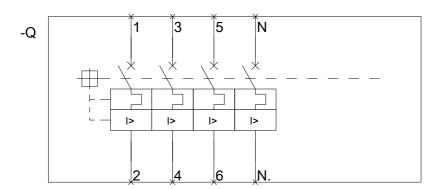
**Tender specifications** 

http://ausschreibungstexte.siemens.com/tiplv

other

GL





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