# **SIEMENS**

## Datasheet

# 3VA1110-3GE46-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS N ICU=25KA @ 415 V 4-POLE, LINE PROTECTION TM220, ATFM, IN=100A OVERLOAD PROTECTION IR=70A ...100A SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL PROTECTION 100% CABLE CONNECTION

Figure similar

product brand nameSENTRONProduct designationMolded case circuit breakerDesign of the productLine protectionProduct variationsGeneral ApplicationsGround fault monitoring versionWithoutDesign of the auxiliary releaseWithout auxiliary releaseDesign of the auxiliary switchWithout	
Design of the productLine protectionProduct variationsGeneral ApplicationsGround fault monitoring versionWithoutDesign of the auxiliary releaseWithout auxiliary release	
Product variationsGeneral ApplicationsGround fault monitoring versionWithoutDesign of the auxiliary releaseWithout auxiliary release	
Ground fault monitoring version     Without       Design of the auxiliary release     Without auxiliary release	
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 TM220	
General technical data	
Number of poles 4	
Trip class / of the L-trip / with I2t characteristic / initial       1         value       1	
Trip class / of the L-trip / with I2t characteristic / Full-       1         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	

Protective function of the overcurrent release     L1       Switching capacity class of the circuit breaker     N       Switching capacity class of the circuit breaker     N       Dissipation     Adive power loss          • maximum       W         Operating current / at 45 °C / Rated value       A       100         Continuous current / Rated value / maximum       A       100         Continuous current / at 45 °C / Rated value / maximum       A       100         Adjustable response value current       A       100         • Of the current-dependent overload release / Full-scale value       A       10         • of the instantaneous short-circuit release / initial value       A       10         Net weight       g       1 200         Main circuit       Goperating voltage       V         • with AC / at 5000 Hz / Rated value       V       600         Operating voltage       A       100         • at 40 °C / Rated value       A       100         • at 55 °C / Rated value       A       100         • at 65 °C / Rated value       A       98         • at 65 °C / Rated value       A       91         Auxiliary contacts       0       0         • of nauxiliary contacts       0       0 <th>Protection class</th> <th></th> <th></th>	Protection class		
Switching capacity class of the circuit breaker     N       Dissipation     X       Active power loss     ************************************	Protective function of the overcurrent release		LI
Switching capacity class of the circuit breaker     N       Dissipation     X       Active power loss     ************************************	Switching capacity		
Dissipation       Active power loss • maximum     W     25       Electricity     0       Operating current / Rated value / maximum     A     100       Continuous current / Rated value / maximum     A     160       Continuous current     A     100       Adjustable response value current     A     100       Adjustable response value current     A     10       • of the current-dependent overload release / Full-scale value     A     10       • of the instantaneous short-circuit release / initial value     A     10       Net weight     g     1 200       Main circuit     Operating voltage     V       • with AC / at 50/60 Hz / Rated value     V     690       • for DC / Rated value     A     100       • at 30 °C / Rated value     A     100       • at 50 °C / Rated value     A     98       • at 80 °C / Rated value     A     91       Auxiliary circuit     A     91       Auxiliary contacts     0     Suitability for use       Suitability for use     system protection       • for N-conductor protection / initial value     A     10		_	N
Active power loss       W       25            enaximum           Operating current / at 45 °C / Rated value           A         100             Continuous current / Rated value / maximum           A         100           A             Continuous current           Rated value           A           160             Continuous current           Rated value           A           100             Adjustable response value current           A           10           A             of the current-dependent overload release /           A           1               of the instantaneous short-circuit release / initial         value           A           10             of the instantaneous short-dircuit release / initial         value           A           10             Met weight           g           1           100             etring voltage           vith AC / at 50% OHz / Rated value           A           100             et at 0° C / Rated value           A             at 6			
• maximumW25ElectricityOperating current / at 45 °C / Rated valueA100Continuous current / Rated value / maximumA180Continuous current / • Rated value dvalueA100Adjustable response value current • of the current-dependent overload release / Full-scale valueA1• of the instantaneous short-circuit release / initial valueA10Net weightg1 200Met weightg1 200Operating current • of C/ Rated valueV690Operating current • at 60 °C / Rated valueA100• at 60 °C / Rated valueA98• at 65 °C / Rated valueA94• at 70 °C / Rated valueA91Auxiliary contacts0Suitability for usesystem protectionAdjustable parametersA10Adjustable parametersA10Adjustable parameters		_	
Electricity		10/	25
Operating current / at 45 °C / Rated value     A     100       Continuous current / Rated value / maximum     A     160       Continuous current     A     100       Rated value     A     100       Adjustable response value current     A     100       • of the current-dependent overload release / Initial value     A     1       • of the instantaneous short-circuit release / initial value     A     10       • Net weight     g     1 200       Main circuit     Generating current     A     10       • of the instantaneous short-circuit release / initial value     V     690       • of the datue     V     690       • of DC / Rated value     V     690       • of DC / Rated value     A     100       • at 40 °C / Rated value     A     100       • at 50 °C / Rated value     A     100       • at 50 °C / Rated value     A     96       • at 60 °C / Rated value     A     91       • at 70 °C / Rated value     A     91       Auxiliary circuit     Number of CO contacts     0       • for auxiliary contacts     0     5       Suitability     for auxiliary contacts     0       • Suitability for use     system protection       Adjustable parameters	• maximum	VV	25
Continuous current / Rated value / maximum       A       160         Continuous current       A       100         Adjustable response value current       A       100         Adjustable response value current       A       1         • of the current-dependent overload release / Full-scale value       A       10         • of the instantaneous short-circuit release / initial value       A       10         • of the instantaneous short-circuit release / initial value       A       10         • of the instantaneous short-circuit release / initial value       A       10         • of the instantaneous short-circuit release / initial value       A       100         • of the Circuit       G       1 200         Main Circuit       V       690         Operating voltage       V       600         • for DC / Rated value       V       600         • for DC / Rated value       A       100         • at 50 °C / Rated value       A       98         • at 60 °C / Rated value       A       96         • at 60 °C / Rated value       A       91         Auxiliary circuit       Auxiliary circuit       A         Number of CO contacts       0       Suitability         • Suitability for use <td>Electricity</td> <td></td> <td></td>	Electricity		
Continuous current       A       100         Adjustable response value current       A       1         • of the current-dependent overload release / Full-scale value       A       1         • of the instantaneous short-circuit release / initial value       A       10         • of the instantaneous short-circuit release / initial value       A       10         • Net weight       g       1 200         Main circuit       Q       200         Main circuit       V       690         • of DC / Rated value       V       690         • for DC / Rated value       V       600         Operating current       V       600         • at 60 °C / Rated value       A       100         • at 50 °C / Rated value       A       100         • at 55 °C / Rated value       A       98         • at 65 °C / Rated value       A       96         • at 65 °C / Rated value       A       91         Auxiliary circuit       A       91         Auxiliary contacts       0       0         Suitability for use       system protection         • for auxiliary contacts       0       0         Suitability       system protection         • of	Operating current / at 45 °C / Rated value	А	100
• Rated value       A       100         Adjustable response value current       A       1         • of the current-dependent overload release / Full-scale value       A       1         • of the instantaneous short-circuit release / initial value       A       10         • of the instantaneous short-circuit release / initial value       G       10         • Net weight       g       1 200         Main circuit       G       690         Operating voltage       V       690         • with AC / at 50/60 Hz / Rated value       V       600         Operating current       V       600         • at 40 °C / Rated value       A       100         • at 50 °C / Rated value       A       100         • at 55 °C / Rated value       A       98         • at 65 °C / Rated value       A       96         • at 65 °C / Rated value       A       91         Auxiliary circuit       A       91         Auxiliary contacts       0       0         Soltability       system protection         • for auxiliary contacts       o       0         Adjustable response value current       o       10         • of 1-trip / Full-scale value       A       10	Continuous current / Rated value / maximum	A	160
Adjustable response value current       A       1         • of the current-dependent overload release / Full-scale value       A       1         • of the instantaneous short-circuit release / initial value       A       10         Net weight       g       1 200         Main circuit       A       0         Operating voltage       V       690         • or DC / Rated value       V       690         • for DC / Rated value       V       600         Operating current       Image: Comparison of the compa	Continuous current		
• of the current-dependent overload release / Full-scale value       A       1         • of the instantaneous short-circuit release / initial value       A       10         Net weight       g       1 200         Main circuit       G       G         Operating voltage       V       690         • with AC / at 50/60 Hz / Rated value       V       690         • for DC / Rated value       V       600         Operating current       Image: Comparison of the c	Rated value	А	100
Full-scale value       A       10         Net weight       g       1 200         Main circuit       g       1 200         Main circuit       V       690         • with AC / at 50/60 Hz / Rated value       V       690         • for DC / Rated value       V       600         Operating current       4       100         • at 40 °C / Rated value       A       100         • at 40 °C / Rated value       A       100         • at 55 °C / Rated value       A       98         • at 65 °C / Rated value       A       96         • at 65 °C / Rated value       A       91         Auxiliary circuit       A       91         Auxiliary circuit       A       91         Auxiliary contacts       0       0         Suitability       system protection         • for auxiliary contacts       0       0         Suitability for use       system protection       4         • for l-trip / Full-scale value       A       10         • for N-conductor protection / initial value       A       10	Adjustable response value current		
• of the instantaneous short-circuit release / initial value       A       10         Net weight       g       1 200         Main circuit       Operating voltage       Image: Circuit AC / at 50/60 Hz / Rated value       V       690         • with AC / at 50/60 Hz / Rated value       V       690       600         Operating current       V       600         • at 40 °C / Rated value       A       100         • at 40 °C / Rated value       A       100         • at 50 °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       91         Auxiliary circuit       A       91         Number of CO contacts       0       0         • for auxiliary contacts       0       0         Suitability       system protection       100         Adjustable response value current       A       10         • of I-trip / Full-scale value       A       10         • for N-conductor protection / initial value       A       100	-	А	1
value     g     1 200       Main circuit     g     1 200       Main circuit     Generating voltage     g       • with AC / at 50/60 Hz / Rated value     V     690       • for DC / Rated value     V     600       Operating current     Image: Control of the cont			
Netweight         g         1 200           Main circuit            Operating voltage            • with AC / at 50/60 Hz / Rated value         V         690           • for DC / Rated value         V         690           • for DC / Rated value         V         690           • for DC / Rated value         V         600           Operating current             • at 40 °C / Rated value         A         100           • at 40 °C / Rated value         A         98           • at 50 °C / Rated value         A         98           • at 60 °C / Rated value         A         94           • at 60 °C / Rated value         A         91           Auxiliary circuit             Number of CO contacts          0           • for auxiliary contacts         0            Suitability for use         system protection           Adjustable response value current         A         10           • for N-conductor protection / initial value         A         100		A	10
Main circuit         Operating voltage       V       690         • with AC / at 50/60 Hz / Rated value       V       690         • for DC / Rated value       V       600         Operating current       V       600         • at 40 °C / Rated value       A       100         • at 50 °C / Rated value       A       100         • at 55 °C / Rated value       A       98         • at 60 °C / Rated value       A       96         • 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       0         • for auxiliary contacts       0       0         Suitability       System protection         • Suitability for use       system protection         Adjustable parameters       A       10         • of I-trip / Full-scale value       A       100			4 000
Operating voltage       690         • with AC / at 50/60 Hz / Rated value       V       690         • for DC / Rated value       V       600         Operating current	Net weight	y	1 200
• with AC / at 50/60 Hz / Rated valueV690• for DC / Rated valueV600Operating current-• at 40 °C / Rated valueA100• at 50 °C / Rated valueA98• at 50 °C / Rated valueA98• at 60 °C / Rated valueA96• at 60 °C / Rated valueA94• at 60 °C / Rated valueA91• at 60 °C / Rated valueA91• at 60 °C / Rated valueA91• dat 70 °C / Rated valueA91• for auxiliary contacts0• for auxiliary contacts0• for auxiliary contacts0• Suitability		-	
• for DC / Rated value       V       600         Operating current       -       -         • at 40 °C / Rated value       A       100         • at 50 °C / Rated value       A       98         • at 55 °C / Rated value       A       96         • at 60 °C / Rated value       A       96         • at 65 °C / Rated value       A       91         Auxiliary circuit       A       91         Auxiliary contacts       0       0         Suitability       -       -         • Suitability for use       system protection         Adjustable parameters       -       -         • of I-trip / Full-scale value       A       10         • for N-conductor protection / initial value       A       10	Operating voltage		
Operating current     A     100       • at 40 °C / Rated value     A     100       • at 50 °C / Rated value     A     100       • at 55 °C / Rated value     A     98       • at 60 °C / Rated value     A     96       • at 65 °C / Rated value     A     94       • at 65 °C / Rated value     A     91	• with AC / at 50/60 Hz / Rated value	V	690
• at 40 °C / Rated valueA100• at 50 °C / Rated valueA98• at 55 °C / Rated valueA98• at 60 °C / Rated valueA96• at 65 °C / Rated valueA94• at 70 °C / Rated valueA91Auxiliary circuitNumber of CO contacts • for auxiliary contactsI• for auxiliary contacts0Adjustable parametersAdjustable response value current • of I-trip / Full-scale valueA10• for N-conductor protection / initial valueA100	<ul> <li>for DC / Rated value</li> </ul>	V	600
at 50 °C / Rated valueA100• at 50 °C / Rated valueA98• at 55 °C / Rated valueA96• at 60 °C / Rated valueA96• at 65 °C / Rated valueA94• at 70 °C / Rated valueA91Auxiliary circuitNumber of CO contacts • for auxiliary contacts• for auxiliary contacts0Suitability for useAdjustable parametersAdjustable response value current • of I-trip / Full-scale valueA10• for N-conductor protection / initial valueA100	Operating current		
at 55 °C / Rated value       A       98         • at 55 °C / Rated value       A       96         • at 65 °C / Rated value       A       94         • at 65 °C / Rated value       A       91         Auxiliary circuit       A       91         Auxiliary circuit       O       O         Suitability       O       O         Suitability for use       System protection         Adjustable parameters       A       10         • for N-conductor protection / initial value       A       100	• at 40 °C / Rated value	А	100
e 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       0         Adjustable parameters         Adjustable response value current       A       10         • for N-conductor protection / initial value       A       100	● at 50 °C / Rated value	А	100
• at 65 °C / Rated valueA94• at 70 °C / Rated valueA91Auxiliary circuitA91Auxiliary circuit0Suitability0• for auxiliary contacts0• Suitabilitysystem protection• Suitability for usesystem protectionAdjustable parametersAdjustable response value current • of I-trip / Full-scale valueA• for N-conductor protection / initial valueA10• Allo100	• at 55 °C / Rated value	А	98
• at 70 °C / Rated valueA91Auxiliary circuitAuxiliary circuitNumber of CO contacts • for auxiliary contacts0Suitability0Suitabilitysystem protectionAdjustable parameterssystem protectionAdjustable response value current • of I-trip / Full-scale valueA10Adjustable response valueA100	• at 60 °C / Rated value	А	96
Auxiliary circuit         Number of CO contacts       0         • for auxiliary contacts       0         Suitability       •         • Suitability for use       system protection         Adjustable parameters       Adjustable response value current         • of I-trip / Full-scale value       A         • for N-conductor protection / initial value       A	• at 65 °C / Rated value	А	94
Number of CO contacts       0         • for auxiliary contacts       0         Suitability       0         • Suitability for use       system protection         • Adjustable parameters       Adjustable response value current         • of I-trip / Full-scale value       A         • for N-conductor protection / initial value       A	• at 70 °C / Rated value	А	91
Number of CO contacts       0         • for auxiliary contacts       0         Suitability       0         • Suitability for use       system protection         • Adjustable parameters       Adjustable response value current         • of I-trip / Full-scale value       A         • for N-conductor protection / initial value       A	Auxiliary circuit		
Suitability       system protection         • Suitability for use       system protection         Adjustable parameters       Adjustable response value current         • of I-trip / Full-scale value       A         • for N-conductor protection / initial value       A		_	
Suitability       system protection         • Suitability for use       system protection         Adjustable parameters       Adjustable response value current         • of I-trip / Full-scale value       A         • for N-conductor protection / initial value       A			0
• Suitability for use       system protection         Adjustable parameters       Adjustable response value current         • of I-trip / Full-scale value       A         • for N-conductor protection / initial value       A	- -		
Adjustable parameters       Adjustable response value current       • of I-trip / Full-scale value     A       • for N-conductor protection / initial value     A			overtage protoction
Adjustable response value current       A         • of I-trip / Full-scale value       A       10         • for N-conductor protection / initial value       A       100	Suitability for use		system protection
• of I-trip / Full-scale valueA10• for N-conductor protection / initial valueA100			
for N-conductor protection / initial value     A     100	Adjustable response value current		
· · · · · · · · · · · · · · · · · · ·	<ul> <li>of I-trip / Full-scale value</li> </ul>	А	10
for N-conductor protection / Full-scale value     A     100	<ul> <li>for N-conductor protection / initial value</li> </ul>	А	100
	<ul> <li>for N-conductor protection / Full-scale value</li> </ul>	А	100

Adjustable response value current / of the current-	А	0.7
dependent overload release / initial value		
Appearance		
Product details		
Product component		
Trip indicator		No
• display		No
Voltage trigger		No
<ul> <li>undervoltage release</li> </ul>		No
<ul> <li>undervoltage release with leading contact</li> </ul>		No
Product property		
<ul> <li>for neutral conductors / upgradeable/retrofittable / Short-circuit and overload proof</li> </ul>		No
Product expansion		
• optional		
— motor drive		Yes
Product function		
Product function		
<ul> <li>Intrinsic device protection</li> </ul>		Yes
<ul> <li>communication function</li> </ul>		No
<ul> <li>Phase failure detection</li> </ul>		No
<ul> <li>other measurement function</li> </ul>		No
Accessories		
Manufacturer article number / of the supplied basic switch		3VA1110-3GE46-0AA0
Short circuit Operational short-circuit current breaking capacity	-	
(lcs)		
• at 240 V / Rated value	kA	36
• at 415 V / Rated value	kA	25
at 440 V / Rated value	kA	16
at 500 V / Rated value	kA	8
at 690 V / Rated value	kA	5
-		
Maximum short-circuit current breaking capacity (Icu)		
<ul> <li>Maximum short-circuit current breaking capacity (Icu)</li> <li>at 240 V / Rated value</li> </ul>	kA	36
	kA kA	36 25
<ul> <li>at 240 V / Rated value</li> <li>at 415 V / Rated value</li> </ul>		
<ul> <li>at 240 V / Rated value</li> <li>at 415 V / Rated value</li> <li>at 440 V / Rated value</li> </ul>	kA	25
<ul> <li>at 240 V / Rated value</li> <li>at 415 V / Rated value</li> </ul>	kA kA	25 16

EHC		EG-Konf.		GL			
General Product Approval	EMC other	Declaration Conformity			oping roval	other	
acc. to DIN EN		_			Q		
<ul> <li>acc. to DIN EN</li> </ul>					Q		
Reference code							
Certificates							
<ul> <li>during storage</li> </ul>	/ maximum		°C		80		
<ul> <li>during storage / minimum</li> </ul>		°C		-40			
<ul> <li>during operation / maximum</li> </ul>		°C		70			
<ul> <li>during operation / minimum</li> </ul>		°C		-25			
Ambient temperature	•						
Environmental cond	itions						
Mounting type				fixed mounting			
Depth			mm		70		
Width			mm		101.6		
Mechanical Design Height			mm		130		
• for main curren					Box termina	I	
Design of the electric					1 X (1.0 - 70		
	conductor cross-sect				1 x (1.5 - 70 mm²)		
• for main curren		ion			Front terminal		
Arrangement of elect					<b>-</b>		
Connections			_				
• at 690 V / Rate	d value		kA		7.5		
• at 415 V / Rate	d value		kA		52.5		

### 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/3VA11103GE460AA0

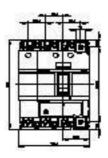
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11103GE460AA0/all

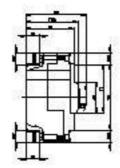
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA11103GE460AA0

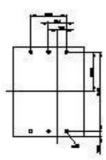
# CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications http://ausschreibungstexte.siemens.com/tiplv







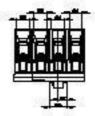


Figure similar

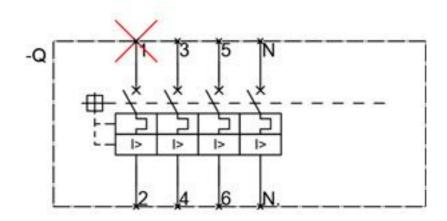


Figure similar

last modified:

21.10.2014