SIEMENS

Data sheet

3VA1120-4GF42-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS S ICU=36KA @ 415 V 4-POLE, LINE PROTECTION TM240, ATAM, IN=20A OVERLOAD PROTECTION IR=14A ...20A SHORT CIRCUIT PROTECTION II=5 X IN NEUTRAL PROTECTION 100% BUSBAR CONNECTION

Figure similar

Model		
product brand name	SENTRON	
Product designation	Molded case circuit brea	ker
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

Protective function of the overcurrent release LI Switching capacity Switching capacity Switching capacity class of the circuit breaker S Dissipation Active power loss • maximum W 12 Electricity Continuous current / Rated value / maximum • of the current-dependent overload release / A Adjustable response value current • of the current-dependent overload release / initial 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 • at 50 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated value •	Protection class IP		IP40
Switching capacity Switching capacity class of the circuit breaker S Dissipation Active power loss • maximum W 12 Electricity Continuous current / Rated value / maximum A	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker Dissipation Active power loss	Protective function of the overcurrent release		Ц
Switching capacity class of the circuit breaker Dissipation Active power loss	Switching capacity		
Active power loss			S
Active power loss	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 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 60 °C / Rated value • at 60 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 67 °C / Rated value •			
Continuous current / Rated value / maximum Continuous current / Rated value A 20 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 DC / Rated value of DC / Rated value at 40 °C / Rated value at 55 °C / Rated value at 65 °C / Rated value at 67 °C / Rated value at 70 °C / Rated value at 70 °C / Rated value at 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitability Full-scale value of I-trip / Full-scale value of I-trip / Full-scale value of or N-conductor protection / Full-scale value	• maximum	W	12
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 or DC / Rated value V 600 Operating current at 40 °C / Rated value A 20 at 55 °C / Rated value A 20 at 65 °C / Rated value A 20 at 65 °C / Rated value A 19 at 70 °C / Rated value A 19 Auxillary circuit Number of CO contacts / for auxiliary contacts Osuitability Suitability Suitabile parameters Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / Full-scale value A 100 A 100	Electricity		
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 cr DC / Rated value V 600 Operating current otat 40 °C / Rated value A 20 otat 55 °C / Rated value A 20 otat 65 °C / Rated value A 19 otat 65 °C / Rated value A 19 otat 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts Osuitability Suitability Suitability Suitabile parameters Adjustable parameters Adjustable response value current of I-trip / Full-scale value of or N-conductor protection / Full-scale value A 100 of N-conductor protection / Full-scale value of or N-conductor protection / Full-scale value A 100		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 of ro DC / Rated value verified to a state of the control of the c	Continuous current / Rated value	Α	20
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 A 20 • at 50 °C / Rated value A 20 • at 60 °C / Rated value A 19 • at 60 °C / Rated value A 19 • at 65 °C / Rated value A 19 • at 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts 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		
Main circuit		Α	1
Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value V 690 Operating current • at 40 °C / Rated value A 20 • at 50 °C / Rated value A 20 • at 50 °C / Rated value A 20 • at 60 °C / Rated value A 19 • at 60 °C / Rated value A 19 • at 65 °C / Rated value A 19 • at 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitable 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 A 100 • for N-conductor protection / Full-scale value A 100		Α	5
with AC / at 50/60 Hz / Rated value for DC / Rated value V 600 Operating current at 40 °C / Rated value A 20 at 50 °C / Rated value A 20 at 55 °C / Rated value A 20 at 60 °C / Rated value A 19 at 65 °C / Rated value A 19 at 65 °C / Rated value A 19 at 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitable 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 A 100	Main circuit		
for DC / Rated value V 600 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 70 °C / Rated value A 19 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 for N-conductor protection / Full-scale value A 100	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 65 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value A 19 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	• with AC / at 50/60 Hz / Rated value	V	690
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 65 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 19 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 of or N-conductor protection / Full-scale value A 100 of or N-conductor protection / Full-scale value A 100	• for DC / Rated value	V	600
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 65 °C / Rated value At 19 at 70 °C / Rated value At 19 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 of rN-conductor protection / Full-scale value At 100 To N-conductor protection / Full-scale value At 100 At 100	Operating current		
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 At 19 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 of or N-conductor protection / Full-scale value At 100 of or N-conductor protection / Full-scale value At 100	• at 40 °C / Rated value	Α	20
at 60 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 19 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 A 100	• at 50 °C / Rated value	Α	20
at 65 °C / Rated value at 70 °C / Rated value A 19 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 for N-conductor protection / Full-scale value A 100	● at 55 °C / Rated value	Α	20
at 70 °C / Rated value A 19 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 o for N-conductor protection / Full-scale value A 100 o for N-conductor protection / Full-scale value A 100	• at 60 °C / Rated value	Α	19
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 A 100 • for N-conductor protection / Full-scale value A 100	• at 65 °C / Rated value	Α	19
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 for N-conductor protection / Full-scale value A 100 for N-conductor protection / Full-scale value A 100	• at 70 °C / Rated value	Α	19
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 for N-conductor protection / Full-scale value A 100 for N-conductor protection / Full-scale value A 100	Auxiliary circuit		
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 for N-conductor protection / Full-scale value A 100			0
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	Suitability		
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	Suitability for use		system protection
 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 parameters		
 for N-conductor protection / initial value for N-conductor protection / Full-scale value A 100 A 100 	Adjustable response value current		
• for N-conductor protection / Full-scale value A 100	● of I-trip / Full-scale value	Α	10
	• for N-conductor protection / initial value	Α	100
Adjustable response value current / of the current- A 0.7	• for N-conductor protection / Full-scale value	Α	100
dependent overload release / initial value	-	А	0.7
Product details	Product details		
Product component			

		NI-
Trip indicator		No
display		No
Voltage trigger		No
undervoltage release		No
 undervoltage release with leading contact 		No
Product property		
 for neutral conductors / upgradeable/retrofittable / Short-circuit and overload proof 		No
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		3VA1120-4GF42-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(lcs)		
• at 240 V / Rated value	kA	55
● at 415 V / Rated value	kA	36
● at 440 V / Rated value	kA	25
• 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	55
• at 415 V / Rated value	kA	36
• at 440 V / Rated value	kA	25
● at 500 V / Rated value	kA	16
• at 690 V / Rated value	kA	7
Short-circuit current making capacity (lcm)		
• at 240 V / Rated value	kA	121
• at 415 V / Rated value	kA	75.6
• at 690 V / Rated value	kA	7.5
Connections		
Arrangement of electrical connectors / for main		Front terminal
		Front terminal

• 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				
during operation / minimum	°C	-25		
during operation / maximum	°C	70		
 during storage / minimum 	°C	-40		
during storage / maximum	°C	80		

C	er	tifi	ca	tes	

Equipment marking

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

General Product Approval	EMC	Declaration of	Shipping Approval
		Conformity	





other



Q

Q





 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/3VA11204GF420AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11204GF420AA0/all

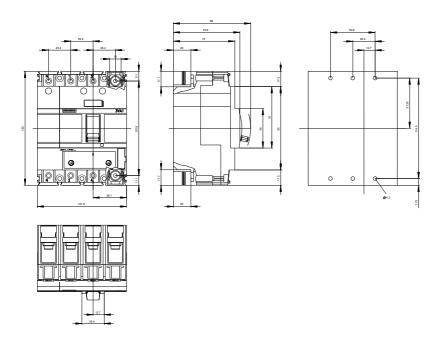
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11204GF420AA0

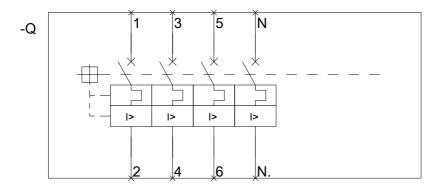
CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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