SIEMENS

Data sheet

3VA1120-5GE42-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS M ICU=55KA @ 415 V 4-POLE, LINE PROTECTION TM220, ATFM, IN=20A OVERLOAD PROTECTION IR=14A ...20A SHORT CIRCUIT PROTECTION II=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	TM220

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 M Dissipation Active power loss • maximum W 12 Electricity Confinuous current / Rated value / maximum 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 voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • at 40 °C / Rated value • at 65 °C / Rated value • at 70 °C	Protection class IP		IP40
Switching capacity Switching capacity class of the circuit breaker Active power loss • maximum Active power loss • maximum Belance of the current / Rated value / maximum A 160 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 C / Rated value • at 40 °C / Rated value • at 55 °C / Rated value • at 65 °C / Rated value • at 66 °C / Rated value • at 67 °	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker Dissipation	Protective function of the overcurrent release		LI
Switching capacity class of the circuit breaker Dissipation	Switching capacity		
Active power loss			M
Active power loss • maximum M	Dissipation		
Continuous current / Rated value / maximum	Active power loss		
Continuous current / Rated value / maximum	• 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 value V 690 Operating current at 40 °C / Rated value A 20 at 55 °C / Rated value at 55 °C / Rated value A 20 at 65 °C / Rated value A 19 at 65 °C / Rated value A 19 at 67 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts Osurtability Suitability Suitability For use Adjustable parameters Adjustable response value current of I-trip / Full-scale value A 10 A 10 of I-trip / Full-scale value A 10 of I-trip / Full-scale value A 10 of I-trip / Full-scale value A 10	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 • 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 70 °C / Rated value A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability For use system protection Adjustable parameters Adjustable parameters Adjustable response value current • of 1-trip / Full-scale value • for N-conductor protection / initial value A 10		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 or DC / Rated value vertical value Operating current at 40 °C / Rated value at 50 °C / Rated value at 50 °C / Rated value at 50 °C / Rated value at 60 °C / Rated value at 70 °C / Rated value A 19 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 of I-trip / Full	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 • at 55 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated value • at 70 °C / Rated value • at 85 °C / Rated value • at 85 °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 Suitabile parameters Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value A 10	Adjustable response value current		
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 55 °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 Suitabile parameters Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value A 10 • for N-conductor protection / initial value A 100		Α	1
Operating voltage • 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 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 for use Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value A 10 • for N-conductor protection / initial value A 10		Α	10
with AC / at 50/60 Hz / Rated value v 690 for DC / Rated value V 600 Operating current at 40 °C / Rated value at 50 °C / Rated value at 55 °C / Rated value at 65 °C / Rated value at 60 °C / Rated value 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 Suitabile parameters Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value A 10 for N-conductor protection / initial value A 100	Main circuit		
for DC / Rated value V 600 Operating current	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 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 A 20 A 20 A 19 A 19 Suitabile parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value A 100	• 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 60 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value A 19 at 65 °C / Rated value A 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 A 10 for N-conductor protection / initial 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 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 Suitabile parameters Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value A 20 A 19 A 19 A 19 A 19 Auxiliary circuit Number of CO contacts / for auxiliary contacts 0 Suitability A 10 of I-trip / Full-scale value A 10	Operating current		
at 55 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value A 19 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 A 10 100	• 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 A 19 A 19 A 19 A 19 A 19 A 19 A 10 To N-conductor protection / initial value A 10 To N-conductor protection / initial 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 A 10 A 10	• at 55 °C / Rated value	Α	20
at 70 °C / Rated value 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 A 10 A 10	• 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 A 10	• 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 O System protection A 10 A 10	• at 70 °C / Rated value	Α	19
Number of CO contacts / for auxiliary contacts Suitability Suitability for use Suitability for use Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value O O O O O O O O O O O O O	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 System protection A 10			0
Suitability for use system protection Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value System protection A 10	Suitability		
Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value A 10			system protection
 of I-trip / Full-scale value for N-conductor protection / initial value A 10 A 100 	Adjustable parameters		
• for N-conductor protection / initial value A 100	Adjustable response value current		
	• of I-trip / Full-scale value	Α	10
• for N-conductor protection / Full-scale value A 100	• for N-conductor protection / initial value	Α	100
To 14 conductor proteotion / 1 dil codic value	• for N-conductor protection / Full-scale value	Α	100
Adjustable response value current / of the current- dependent overload release / initial value	-	Α	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		3VA1120-5GE42-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(lcs)		
• at 240 V / Rated value	kA	85
• at 415 V / Rated value	kA	55
• at 440 V / Rated value	kA	30
• 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	85
• at 415 V / Rated value	kA	55
• at 440 V / Rated value	kA	30
• at 500 V / Rated value	kA	20
• at 690 V / Rated value	kA	10
Short-circuit current making capacity (lcm)		
• at 240 V / Rated value	kA	187
• at 415 V / Rated value	kA	121
• at 690 V / Rated value	kA	11.9
Connections		
Arrangement of electrical connectors / for main		
		Front terminal
current circuit Type of connectable conductor cross-section		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

Certificates

Equipment marking

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

General Product Approval	EMC	Declaration of	Shipping Approval
		Conformity	





other







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/3VA11205GE420AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

http://support.automation.siemens.com/WW/view/en/3VA11205GE420AA0/all

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

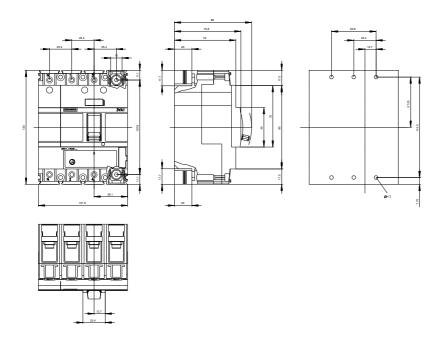
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11205GE420AA0}}$

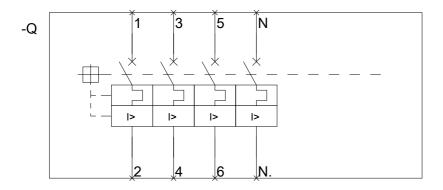
CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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