SIEMENS

Data sheet

3VA1112-5FF42-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS M ICU=55KA @ 415 V 4-POLE, LINE PROTECTION TM240, ATAM, IN=125A OVERLOAD PROTECTION IR=87,5A ...125A SHORT CIRCUIT PROTECTION II=5...10 X IN NEUTRAL PROTECTION 50% 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 Switching capacity Switching capacity Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 23.2 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value / A 125 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 • for DC / Rated value • at 40 °C / Rated value • at 40 °C / Rated value • at 60 °C / Rated value • at 70 °C / R	Protection class IP		IP40
Switching capacity Switching capacity class of the circuit breaker Dissination Active power loss • maximum W 23.2 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 value • at 70 °C / Rate	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 23.2 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 125 Adjustable response value current • of the current-dependent overload release / Full-scale value • of the instantaneous short-circuit release / initial A 5 V 690 Operating voltage • with AC / at 50/60 Hz / Rated value V 690 • for DC / Rated value V 690 • for DC / Rated value A 125 • at 40 °C / Rated value A 125 • at 55 °C / Rated value A 125 • at 60 °C / Rated value A 122 • at 60 °C / Rated value A 120 • at 65 °C / Rated value A 117 • at 70 °C / Rated value A 111 Auxiliary circuit Number of CO contacts / for auxiliary contacts 0 Suitability Suitability Suitabile response value current • of I-trip / Full-scale value A 10 • for N-conductor protection / Full-scale value A 0.5 Adjustable response value current • of I-trip / Full-scale value A 0.5 Adjustable response value current • of N-conductor protection / Full-scale value A 0.5 Adjustable response value current of the current Adjustable response value current • of N-conductor protection / Full-scale value A 0.5 Adjustable response value current of the current Adjustabl	Protective function of the overcurrent release		LI
Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 23.2	Switching capacity		
Active power loss			M
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 • 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 67 °C / Rated value • at 70 °C / Rated value A 117 • at 70 °C / Rated value 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 A 0.5 Adjustable response value current / of the current-	Active power loss		
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 or DC / Rated value V 690 Operating current at 40 °C / Rated value A 125 at 55 °C / Rated value A 122 at 60 °C / Rated value A 122 at 60 °C / Rated value A 120 at 65 °C / Rated value A 121 Auxiliary circuit Number of CO contacts / for auxiliary contacts Oguitability Suitability for use Adjustable parameters Adjustable response value current of the current-of the	• maximum	W	23.2
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 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-of the curre	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 of or DC / Rated value V 690 Operating current at 40 °C / Rated value A 125 at 55 °C / Rated value A 125 at 65 °C / Rated value A 122 at 65 °C / Rated value A 120 at 65 °C / Rated value A 117 at 70 °C / Rated value A 114 Auxiliary circuit Number of CO contacts / for auxiliary contacts Adjustable parameters Adjustable response value current of I-trip / Full-scale value A 10 for N-conductor protection / Full-scale value A 0.5 Adjustable response value current / of the current- Adjustable response value current / of the current-	Continuous current / Rated value	Α	125
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 • tor DC / Rated value • 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 70 °C / Rated value A 117 • at 70 °C / Rated value A 117 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 / Full-scale value • for N-conductor protection / Full-scale value A 0.5 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 125 • at 50 °C / Rated value A 122 • at 60 °C / Rated value A 120 • at 65 °C / Rated value A 117 • at 70 °C / Rated value A 114 Auxiliary circuit Number of CO contacts / for auxiliary contacts 0 Suitability Suitability Suitability for use system protection Adjustable parameters Adjustable response value current A 10 • for N-conductor protection / initial value A 0.5 • for N-conductor protection / Full-scale value A 0.5 Adjustable response value current / of the current- A 0.5		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 125 at 50 °C / Rated value A 125 at 55 °C / Rated value A 122 at 60 °C / Rated value A 120 at 60 °C / Rated value A 117 at 70 °C / Rated value A 117 at 70 °C / Rated value A 114 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 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-	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 670 °C / Rated value at 70 °C / Rated value A 117 at 70 °C / Rated value A 114 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability 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 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 117 • at 70 °C / Rated value A 114 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 • for N-conductor protection / Full-scale value A 0.5 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 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 117 at 70 °C / Rated value At 114 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 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 at 60 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 117 at 70 °C / Rated value A 114 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 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- A 0.5 Adjustable response value current / of the current-	Operating current		
at 55 °C / Rated value at 60 °C / Rated value A 120 at 65 °C / Rated value A 117 at 70 °C / Rated value A 114 Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability for use Suitable parameters 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- Adjustable response value current / of the current-	• at 40 °C / Rated value	Α	125
at 60 °C / Rated value at 65 °C / Rated value A 117 at 70 °C / Rated value A 114 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 / Full-scale value for N-conductor protection / Full-scale value Adjustable response value current Adjustable response value current A 0.5 Adjustable response value current / of the current- Adjustable response value current / of the current- A 0.7	• at 50 °C / Rated value	Α	125
at 65 °C / Rated value at 70 °C / Rated value A 117 Auxiliary circuit Number of CO contacts / for auxiliary contacts 0 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	122
at 70 °C / Rated value A 114 Auxiliary circuit Number of CO contacts / for auxiliary contacts 0 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 60 °C / Rated value	Α	120
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	117
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	114
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-	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 Adjustable response value current / of the current- Adjustable value System protection A 0.5 Adjustable response value current / of the current- A 0.7			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 A 0.5 Adjustable response value current / of the current- A 0.7			system protection
 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 0.5 	Adjustable parameters		
 for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current- A 0.5 Adjustable response value current / of the current- 	Adjustable response value current		
 ◆ for N-conductor protection / Full-scale value Adjustable response value current / of the current- A 0.5 A 0.7 	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	0.5
	• for N-conductor protection / Full-scale value	Α	0.5
	•	Α	0.7
Product details	Product details		
Product component Product component			

		Nie
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		3VA1112-5FF42-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(Ics)		25
• 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 (Icm)		
• at 240 V / Rated value	kA	187
● at 415 V / Rated value	kA	121
• at 690 V / Rated value	kA	17
Connections		
Arrangement of electrical connectors / for main		Front terminal
current circuit		
Type of connectable conductor cross-section		

• 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/3VA11125FF420AA0

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

http://support.automation.siemens.com/WW/view/en/3VA11125FF420AA0/all

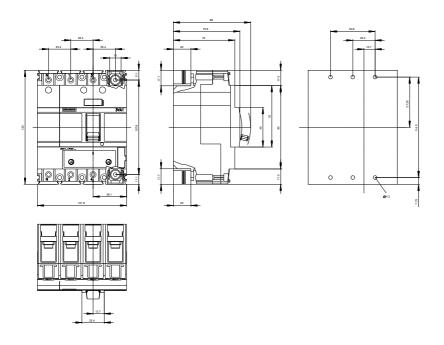
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11125FF420AA0

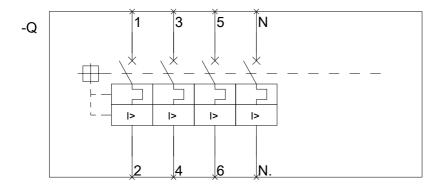
CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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