SIEMENS

Data sheet

3VA1112-3FF46-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS N ICU=25KA @ 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% 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		
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 N Dissipation Active power loss • maximum W 23.2 Electricity Continuous current / Rated value / maximum Active power loss • maximum A 160 Continuous current / Rated value / maximum A 125 Adjustable response value current • of the current-dependent overload 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 60 °C / Rated value • at 70 °C / Rated value • at	Protection class IP		IP40
Switching capacity Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 23.2 Electricity 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 • 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 CP (Rated value • of the CP (Rated value • of the CP (Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 70 °C /	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 • 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 of table value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the value value • of the instantaneous short-circuit release / initial value • of the value value	Protective function of the overcurrent release		Ц
Switching capacity class of the circuit breaker Dissipation	Switching capacity		
Active power loss • maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maxi			N
Active power loss • maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maximum Maxi	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 40 °C / Rated value • at 55 °C / Rated value • at 65 °C / Rated value • at 67 °C / Rated value • at 70 °C / Rated value •	Active power loss		
Continuous current / Rated value / maximum 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 • 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 / initial value A 125 • of the current-dependent overload release / initial value A 125 • of N-conductor protection / Full-scale value A 10 • of N-conductor protection / Full-scale value A 0.5 Adjustable response value current / of the current-dependent overload release / initial value	• 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 Main circuit Operating voltage with AC / at 50/60 Hz / Rated value of r DC / Rated value v 690 Operating current of the instantaneous short-circuit release / initial value for DC / Rated value v 690 Operating current of the victor of v 600 Operating current of v 600 Operating current of v 7 / Rated value of v 8 / Rated value	Electricity		
Adjustable response value current of the current-dependent overload release / Full-scale value of the instantaneous short-circuit release / initial value of the current-dependent overload release / initial value	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 verified value	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 Operating current • at 40 °C / Rated value • at 55 °C / Rated value • at 50 °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 • at 70 °C / Rated value • at 60 °C / Rated value • at	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 55 °C / Rated value A 122 • at 60 °C / Rated value A 117 • 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 for use system protection Adjustable parameters Adjustable parameters Adjustable response value current • 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-dependent overload release / initial value A 0.7		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 125 • at 50 °C / Rated value A 125 • at 50 °C / Rated value A 122 • at 60 °C / Rated value A 120 • at 60 °C / Rated value A 120 • at 60 °C / Rated value A 117 • at 70 °C / Rated value A 117 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 A 0.5 Adjustable response value current / of the current-dependent overload release / initial value A 0.7		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 50 °C / Rated value A 122 at 60 °C / Rated value A 120 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 O Suitability Suitability Suitabile parameters Adjustable parameters Adjustable presponse 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-dependent overload release / initial value A 0.7	Main circuit		
for DC / Rated value	Operating voltage		
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 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 • for N-conductor protection / Full-scale value • for N-conductor protection / Full-scale value A 0.5 Adjustable response value current / of the current-dependent overload release / initial value	• with AC / at 50/60 Hz / Rated value	V	690
at 40 °C / Rated value at 50 °C / Rated value A 125 at 55 °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 Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value A 10 for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / O.5 Adjustable response value current / Of the current-dependent overload release / initial value A 0.5 Adjustable response value current / of the current-dependent overload release / initial value	• for DC / Rated value	V	600
at 55 °C / Rated value at 65 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value At 117 at 70 °C / Rated value At 114 Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability Suitability or 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 Adjustable response value current / of the current-dependent overload release / initial value A 0.7	Operating current		
at 55 °C / Rated value at 60 °C / Rated value at 65 °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 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 Adjustable response value current of I-trip / Full-scale value A 0.5 Adjustable response value current / of the current-dependent overload release / initial value A 0.7	• 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 for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value of N-conductor protection / Full-scale value Adjustable response value current / Of the current-dependent overload release / initial value A 0.7	• at 50 °C / Rated value	Α	125
at 65 °C / Rated value 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 / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current Adjustable response value current / of the current-dependent overload release / initial value A 0.7	• at 55 °C / Rated value	Α	122
at 70 °C / Rated value 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 for N-conductor protection / Full-scale value Adjustable response value current / of the current Adjustable response value current / of the current-dependent overload release / initial value A 10 O.5 Adjustable response value current / of the current-dependent overload release / initial value	• 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-dependent overload release / initial value	• 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-dependent overload release / initial value 0 0 0 0 0 0 0 0 0 0 0 0 0	• 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-dependent overload release / initial value 0 0 0 0 0 0 0 0 0 0 0 0 0	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 A 0.5 for N-conductor protection / Full-scale value A 0.5 Adjustable response value current / of the current-dependent overload release / initial value			0
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 of Initial value A 0.5 Adjustable response value current / of the current-dependent overload release / initial value	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 of Initial value A 0.5 Adjustable response value current / of the current-dependent overload release / initial value	Suitability for use		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-dependent overload release / initial value A 10 0.5 Adjustable response value current / of the current-dependent overload release / initial value	Adjustable parameters		
 for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value A 0.5 A 0.7	Adjustable response value current		
● for N-conductor protection / Full-scale value A 0.5 Adjustable response value current / of the current- dependent overload release / initial value A 0.7	● of I-trip / Full-scale value	Α	10
Adjustable response value current / of the current- dependent overload release / initial value	• for N-conductor protection / initial value	Α	0.5
dependent overload release / initial value	• for N-conductor protection / Full-scale value	Α	0.5
Product details	•	А	0.7
	Product details		
Product component 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		3VA1112-3FF46-0AA0
switch		
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)		
• 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	7
Short-circuit current making capacity (lcm)		
• at 240 V / Rated value	kA	75.6
• at 415 V / Rated value	kA	52.5
• at 690 V / Rated value	kA	7.5
Connections		
Arrangement of electrical connectors / for main		Front terminal
		Front terminal

 of the round conductor termina 	l / stranded			1 x (1.5 - 70 mm²)	
Type of electrical connection / for ma	ain current circuit			Box terminal	
Mechanical Design					
Height		mm		130	
Width		mm		101.6	
Depth		mm		70	
Mounting type				fixed mounting	
Environmental conditions					
Ambient temperature					
during operation / minimum	• during operation / minimum			-25	
during operation / maximum		°C		70	
during storage / minimum		°C		-40	
during storage / maximum		°C		80	
Cautificates					
Certificates					
Equipment marking					
● acc. to DIN EN 61346-2				Q	
• acc. to DIN EN 81346-2				Q	
General EMC Product		Declaration of Ship Conformity		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/3VA11123FF460AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11123FF460AA0/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=3VA11123FF460AA0

CAx-Online-Generator

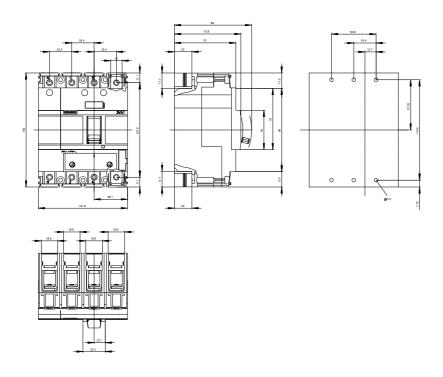
http://www.siemens.com/cax

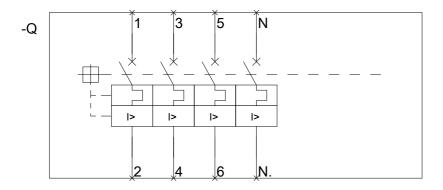
Tender specifications

http://ausschreibungstexte.siemens.com/tiplv

other

GL





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