SIEMENS

Data sheet

3VA1110-3FF46-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS N ICU=25KA @ 415 V 4-POLE, LINE PROTECTION TM240, ATAM, IN=100A OVERLOAD PROTECTION IR=70A ...100A 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 class of the circuit breaker N Dissipation Active power loss • maximum W 25 Electricity Continuous current / Rated value / maximum • of the current-dependent overload release / Full-scale value • of the current-dependent overload release / Full-scale value • of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with hc/ at 50/60 Hz / Rated value • of ro DC / Rated value • at 40° C/ Rated value • at 50° C/ Rated value • at 50° C/ Rated value • at 60° C/ Rated value • at 70° C/ Rat	Protection class IP		IP40	
Switching capacity Switching capacity class of the circuit breaker Dissipation	Protection class IP / on the front		IP40	
Switching capacity class of the circuit breaker N Dissipation Active power loss • maximum W 25 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 100 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-dependent overload release / initial value Product details	Protective function of the overcurrent release		Ц	
Switching capacity class of the circuit breaker N Dissipation Active power loss • maximum W 25 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 100 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-dependent overload release / initial value Product details	Switching capacity			
Active power loss • maximum M 25			N	
Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 100 Adjustable response value current • of the current-dependent overload release / A 1 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 current-dependent overload release / initial value A 100 690 690 690 690 690 690 690	Dissipation			
Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 100 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 owith AC / at 50/60 Hz / Rated value of to PC / Rated value of to PC / Rated value ot 100 Operating current ot 100 ot 150 °C / Rated value ot 150 °C / Rated value ot 150 °C / Rated value ot 160 °C / Rated value ot 170 °C / Rated va	Active power loss			
Continuous current / Rated value / maximum	• maximum	W	25	
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 current dependent overload release / initial value A 1 5 5 0 6 7 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	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 of the current-dependent overload release / initial value A 10 of the instantaneous short-circuit release / initial value of the current-dependent overload release / initial value A 1 of the current-dependent overload release / initial value Product details	Continuous current / Rated value / maximum	А	160	
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 v 600 Operating current at 40 °C / Rated value v 600 Operating current at 40 °C / Rated value at 55 °C / Rated value at 65 °C / Rated value at 67 °C / Rated value at 67 °C / Rated value at 67 °C / Rated value at 68 °C / Rated value at 69 °C / Rated value at 69 °C / Rated value at 67 °C / Rated	Continuous current / Rated value	Α	100	
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 50 °C / Rated value • at 55 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value	Adjustable response value current			
Value 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 100 • at 55 °C / Rated value A 98 • 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 O Suitability Suitability Suitability Suitable parameters Adjustable parameters Adjustable parameters Adjustable response value current • of I-trip / Full-scale value 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-dependent overload release / initial value A 0.7 Product details		Α	1	
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 100 • at 50 °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 96 • at 65 °C / Rated value A 94 • at 70 °C / Rated value A 91 Auxiliary circuit Number of CO contacts / for auxiliary contacts O 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 • for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value Product details		Α	5	
with AC / at 50/60 Hz / Rated value for DC / Rated value v 600 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 60 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 91 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 Adjustable response value current / of the current-dependent overload release / initial value Product details	Main circuit			
for DC / Rated value	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 70 °C / Rated value • at 70 °C / Rated value A 94 • at 70 °C / Rated value A 91 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 A 0.5 Adjustable response value current / of the current-dependent overload release / initial value Product details	• with AC / at 50/60 Hz / Rated value	V	690	
at 40 °C / Rated value 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 91 Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability for use Adjustable parameters Adjustable response value current of ror N-conductor protection / Full-scale value A 10 Adjustable response value current / of the current-dependent overload release / initial value Product details	• for DC / Rated value	V	600	
at 55 °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 94 at 70 °C / Rated value A 91 Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability or use Suitability or 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 Product details	Operating current			
at 55 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 91 Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability or 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 Product details	• at 40 °C / Rated value	Α	100	
at 60 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 91 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-dependent overload release / initial value Product details	• at 50 °C / Rated value	Α	100	
at 65 °C / Rated value at 65 °C / Rated value A 91 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 the current-dependent overload release / initial value Product details	• at 55 °C / Rated value	Α	98	
at 70 °C / Rated value 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 N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value Product details	• at 60 °C / Rated value	Α	96	
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 of the current dependent overload release / initial value Product details	● at 65 °C / Rated value	Α	94	
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 0.5 of or N-conductor protection / Full-scale value A 0.5 Adjustable response value current / of the current-dependent overload release / initial value Product details	• at 70 °C / Rated value	Α	91	
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 0.5 of or N-conductor protection / Full-scale value A 0.5 Adjustable response value current / of the current-dependent overload release / initial value Product details	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 Product details			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 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 Product details	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 Product details	· · · · · · · · · · · · · · · · · · ·		system protection	
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 Product details	Adjustable parameters			
• 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 Product details				
◆ for N-conductor protection / Full-scale value A 0.5 Adjustable response value current / of the current- dependent overload release / initial value Product details	• of I-trip / Full-scale value	A	10	
Adjustable response value current / of the current- dependent overload release / initial value Product details	• for N-conductor protection / initial value	Α	0.5	
Product details	• for N-conductor protection / Full-scale value	Α	0.5	
	•	A	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		3VA1110-3FF46-0AA0
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 (Icm)		
• 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
current circuit		
Type of connectable conductor cross-section		

 of the round conductor 	terminal / stranded			1 x (1.5 - 70 mm²)		
Type of electrical connection / for main current circuit		ıit		Box terminal		
Mechanical Design						
Height		mr	n	130		
Width		mr	n	101.6		
Depth		mr	n	70		
Mounting type				fixed mounting		
Environmental conditions						
Ambient temperature						
during operation / mini	mum	°C		-25		
during operation / max	during operation / maximum			70		
• during storage / minim	during storage / minimum			-40		
• during storage / maxim	num	°C		80		
Certificates	Certificates					
Equipment marking	Equipment marking					
• acc. to DIN EN 61346-2				Q		
● acc. to DIN EN 81346-2				Q		
General EMC	Declar	ation of	Shi	pping Approval		other
Product	Confor	mitv				

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/3VA11103FF460AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11103FF460AA0/all

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11103FF460AA0

CAx-Online-Generator

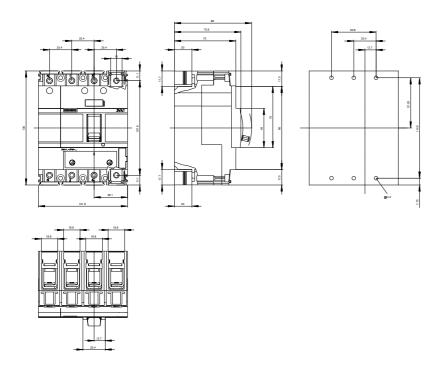
http://www.siemens.com/cax

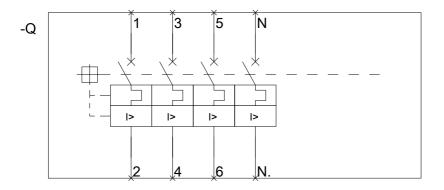
Tender specifications

http://ausschreibungstexte.siemens.com/tiplv

other

GL





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