# **SIEMENS**

## Data sheet

## 3VA1110-3EF46-0AA0



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 UNPROTECTED CABLE CONNECTION

Figure similar

Model			
product brand name	SENTRON		
Product designation	Molded case circuit brea	aker	
Design of the product	Line protection		
Product variations	General Applications		
Ground fault monitoring version	Without		
Design of the auxiliary release	Without auxiliary release	е	
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	Protection class IP		IP40
Switching capacity Switching capacity class of the circuit breaker  Dissipation  Active power loss  • maximum  W  25  Electricity  Continuous current / Rated value / maximum  • 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 • of the date value • at 40 °C / Rated value • at 50 °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	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker  Dissipation  Active power loss  • maximum  W  25  Electricity  Continuous current / Rated value / maximum  • 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  • of the date value  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 60 °C / Rated value  • at 70	Protective function of the overcurrent release		LI
Switching capacity class of the circuit breaker  Dissipation  Active power loss  • maximum  W  25  Electricity  Continuous current / Rated value / maximum  • 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  • of the date value  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 60 °C / Rated value  • at 70	Switching capacity		
Active power loss  • maximum    M   25			N
Active power loss  • 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 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 70 °C / Rated value  •	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  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-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 10  of the current-dependent overload release / initial value  A 10  of the current-dependent overload release / initial value  A 10  of the current-dependent overload release / initial value  A 10  of the current-dependent overload release / initial value  A 10  of the current-dependent overload release / initial value  A 10  of the current-dependent overload release / initial value	• 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 instantaneous short-circuit release / initial value  Main circuit  Operating voltage  with AC / at 50/80 Hz / Rated value  of or DC / Rated value  of or DC / Rated value  at 40 °C / Rated value  at 55 °C / Rated value  at 60 °C / Rated value  at 70 °C / Rated value  A 91  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitability or use  system protection  Adjustable 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  A 0  Adjustable response value current / of the current-dependent overload release / initial value	Electricity		
Adjustable response value current  of the current-dependent overload release / Full-scale value  of the instantaneous short-circuit release / initial value  A 100  690  690  690  690  690  690  690	Continuous current / Rated value / maximum	А	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     vith AC / Rated valu	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  V 690  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 96  • at 70 °C / Rated value  A 91  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  A 0.7  Adjustable response value current / of the current-dependent overload release / initial value  A 0.7	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  • 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  • at 70 °C / Rated value  A 91  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  • for N-conductor protection / Full-scale value  • for N-conductor protection / Full-scale value  • A 0  Adjustable response value current / of the current-dependent overload release / initial value		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 100  • at 50 °C / Rated value  A 98  • at 60 °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  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  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     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 65 °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 response value current     of I-trip / Full-scale value     for N-conductor protection / initial value     for N-conductor protection / Full-scale value     A 0  Adjustable response value current / of the current-dependent overload release / initial value  A 0.7	Main circuit		
for DC / Rated value     Operating current	Operating voltage		
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 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  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 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   Suitability  Suitability for use   Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  A 10  for N-conductor protection / initial value  Adjustable response value current / of the current-dependent overload release / initial value  A 0.7	• 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 65 °C / Rated value  at 70 °C / Rated value  A 91  Auxiliary circuit  Number of CO contacts / for auxiliary contacts   Suitability  Suitability  Suitability for use  system protection  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 70 °C / Rated value A 94  at 70 °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 I-trip / Full-scale value for N-conductor protection / initial value of or 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  A 0.7	• 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  of or 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	100
at 65 °C / Rated value     at 70 °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 I-trip / Full-scale value     for N-conductor protection / initial value  Adjustable response value current / of the current-dependent overload release / initial value  A 0.7	• at 55 °C / Rated value	Α	98
• at 70 °C / Rated value  A 91  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-dependent overload release / initial value  A 91  A	• 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-dependent overload release / initial value	• 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  Adjustable response value current / of the current-dependent overload release / initial value  0  System protection  A 10  0  0  0  0  0  0  0  0  0  0  0  0	• 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  of or N-conductor protection / Full-scale value  Adjustable response value current / of the current-dependent overload release / initial value  0  System protection  A 10  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  Adjustable response value current / of the current-dependent overload release / initial value  system protection  A 10  0  0  0  0  0  0  0  0  0  0  0  0			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  Adjustable response value current / of the current-dependent overload release / initial value  system protection  A 10  0  0  0  0  0  0  0  0  0  0  0  0	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  Adjustable response value current / of the current-dependent overload release / initial value	· · · · · · · · · · · · · · · · · · ·		system protection
<ul> <li>of I-trip / Full-scale value</li> <li>for N-conductor protection / initial value</li> <li>for N-conductor protection / Full-scale value</li> <li>Adjustable response value current / of the current-dependent overload release / initial value</li> </ul> A 10 <ul> <li>A 0</li> <li>A 0</li> </ul>	Adjustable parameters		
<ul> <li>for N-conductor protection / initial value</li> <li>for N-conductor protection / Full-scale value</li> <li>Adjustable response value current / of the current-dependent overload release / initial value</li> </ul> A 0 0.7	Adjustable response value current		
• for N-conductor protection / Full-scale value A 0  Adjustable response value current / of the current- dependent overload release / initial value 0  O.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
dependent overload release / initial value	• for N-conductor protection / Full-scale value	Α	0
Product details	•	Α	0.7
	Product details		
Product component			

		N
• Trip indicator		No
<ul><li>display</li></ul>		No
Voltage trigger		No
undervoltage release		No
<ul> <li>undervoltage release with leading contact</li> </ul>		No
Product property		
<ul> <li>for neutral conductors / upgradeable/retrofittable / Short-circuit and overload proof</li> </ul>		No
Product expansion / optional / motor drive		Yes
Product function		
Product function		
<ul> <li>Intrinsic device protection</li> </ul>		Yes
<ul> <li>communication function</li> </ul>		No
Phase failure detection		No
<ul> <li>other measurement function</li> </ul>		No
Accessories		
Manufacturer article number / of the supplied basic		3VA1110-3EF46-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(Ics)		22
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 co	onductor terminal / str	anded			1 x (1.5 - 70 mm²)		
-	Type of electrical co	nnection / for main cu	rrent circuit			Box terminal		
Mechanical Design								
	-leight			mm		130		
	Width			mm		101.6		
	Depth			mm		70		
	Mounting type					fixed mounting		
E	Environmental conditions							
	Ambient temperature							
• during operation / minimum			°C		-25			
	during operation / maximum			°C		70		
	during storage / minimum			°C		-40		
	during storage / maximum			°C		80		
С	Certificates							
	Equipment marking							
	• acc. to DIN EN 61346-2					Q		
	● acc. to DIN EN 81346-2				Q			
	General	EMC	Declaration	n of	Ship	oping Approval	other	
	Product		Conformity	,				
	Approval							

## Further information

**EH**[

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/3VA11103EF460AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11103EF460AA0/all

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

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA11103EF460AA0

**CAx-Online-Generator** 

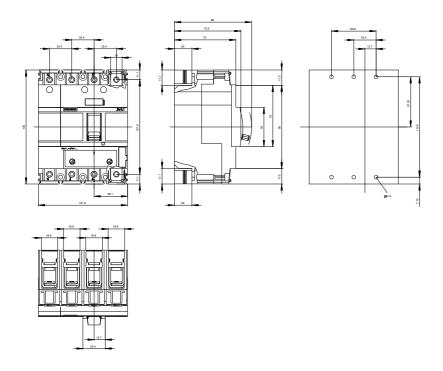
http://www.siemens.com/cax

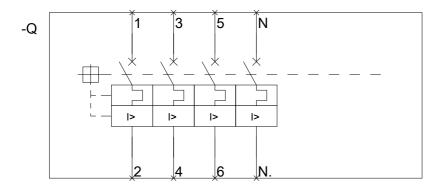
**Tender specifications** 

http://ausschreibungstexte.siemens.com/tiplv

other

GL





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