# **SIEMENS**

## Data sheet

## 3VA1110-4EF46-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS S ICU=36KA @ 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 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

Protective function of the overcurrent release  LI  Switching capacity Switching capacity class of the circuit breaker  S  Dissipation Active power loss  • maximum  W  25  Electricity  Continuous current / Rated value / maximum 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 at 40 °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	
Switching capacity Switching capacity class of the circuit breaker  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  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  A 100  Operating current • at 40 °C / Rated value A 100 • at 55 °C / Rated value A 98 • at 60 °C / Rated value A 98 • at 60 °C / Rated value A 99 • at 70 °C / Rated value A 91  Auxiliary circuit  Number of CO contacts / for auxiliary contacts	
Switching capacity class of the circuit breaker  Dissipation Active power loss  • maximum  W 25  Electricity  Continuous current / Rated value / maximum	
Switching capacity class of the circuit breaker  S  Dissipation  Active power loss  • maximum  W  25  Electricity  Continuous current / Rated value / maximum	
Active power loss  • maximum    Maximum   Maxi	
Active power loss  • maximum    Maximum   Maxi	
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  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 50 °C / Rated value  • at 60 °C / Rated value  • at 70 °C / Rated value	
Continuous current / Rated value / maximum  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  Main circuit  Operating voltage  with AC / at 50/60 Hz / Rated value  of or DC / Rated value  of or DC / Rated value  at 40 °C / Rated value  at 50 °C / Rated value  at 50 °C / Rated value  at 60 °C / Rated value	
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  of the value  V  690  Operating current  at 40 °C / Rated value  A 100  at 55 °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	
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 of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage of with AC / at 50/60 Hz / Rated value of for DC / Rated value of for DC / Rated value of at 40 °C / Rated value of at 50 °C / Rated value of at 55 °C / Rated value of at 65 °C / Rated value of at 65 °C / Rated value of at 67 °C / Rated value	
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 to DC / Rated value     of to DC / Rated value     at 40 °C / Rated value     at 50 °C / Rated value     at 55 °C / Rated value     at 65 °C / Rated value     at 65 °C / Rated value     at 60 °C / Rated value     at 60 °C / Rated value     at 60 °C / Rated value     at 65 °C / Rated value	
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 65 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated 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  O  A 91	
Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  V 600  Operating current  • at 40 °C / Rated value  A 100  • at 50 °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	
<ul> <li>with AC / at 50/60 Hz / Rated value</li> <li>for DC / Rated value</li> <li>Operating current</li> <li>at 40 °C / Rated value</li> <li>at 50 °C / Rated value</li> <li>at 55 °C / Rated value</li> <li>at 60 °C / Rated value</li> <li>at 60 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 70 °C / Rate</li></ul>	
• 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 60 °C / Rated value  • 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	
<ul> <li>at 40 °C / Rated value</li> <li>at 50 °C / Rated value</li> <li>at 55 °C / Rated value</li> <li>at 60 °C / Rated value</li> <li>at 60 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 70 °C / Rated value</li> <li>A 94</li> <li>at 70 °C / Rated value</li> <li>A 91</li> </ul> Auxiliary circuit Number of CO contacts / for auxiliary contacts	
<ul> <li>at 50 °C / Rated value</li> <li>at 55 °C / Rated value</li> <li>at 60 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 70 °C / Rated value</li> <li>A 94</li> <li>at 70 °C / Rated value</li> <li>A 91</li> </ul> Auxiliary circuit Number of CO contacts / for auxiliary contacts	
<ul> <li>at 55 °C / Rated value</li> <li>at 60 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 70 °C / Rated value</li> <li>A 94</li> <li>at 70 °C / Rated value</li> <li>A 91</li> </ul> Auxiliary circuit Number of CO contacts / for auxiliary contacts <ul> <li>0</li> </ul>	
<ul> <li>at 60 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 70 °C / Rated value</li> <li>A 91</li> </ul> Auxiliary circuit Number of CO contacts / for auxiliary contacts <ul> <li>0</li> </ul>	
at 65 °C / Rated value     at 70 °C / Rated value  A 94  A 91  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  0	
at 70 °C / Rated value     A 91  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  0	
Auxiliary circuit  Number of CO contacts / for auxiliary contacts  0	
Number of CO contacts / for auxiliary contacts 0	
Number of CO contacts / for auxiliary contacts 0	
Suitability	
Suitability for use system protection	
Adjustable parameters	
Adjustable response value current	
• of I-trip / Full-scale value A 10	
• for N-conductor protection / initial value A 0	
• for N-conductor protection / Full-scale value A 0	
Adjustable response value current / of the current- dependent overload release / initial value	
Product details	
Product component 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		
		Yes
Intrinsic device protection		No
• communication function		
Phase failure detection		No
other measurement function		No
Accessories		
Manufacturer article number / of the supplied basic switch		3VA1110-4EF46-0AA0
SWITCH		
Short circuit		
Operational short-circuit current breaking capacity		
(Ics)		
at 240 V / Rated value	kA	55
• at 415 V / Rated value	kA	36
• at 440 V / Rated value	kA	25
• 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	55
• at 415 V / Rated value	kA	36
• at 440 V / Rated value	kA	25
● at 500 V / Rated value	kA	16
• at 690 V / Rated value	kA	7
Short-circuit current making capacity (Icm)		
a at 0.40 \ / / Data dissals		
• at 240 V / Rated value	kA	121
<ul><li>at 240 V / Rated value</li><li>at 415 V / Rated value</li></ul>	kA kA	121 75.6
• at 415 V / Rated value	kA	75.6
at 415 V / Rated value     at 690 V / Rated value  Connections  Arrangement of electrical connectors / for main	kA	75.6
at 415 V / Rated value     at 690 V / Rated value  Connections	kA	75.6 7.5

• of the round conductor terminal / stranded				1 x (1.5 - 70 mm²)		
Type of electrical con	onnection / for main current circuit				Box terminal	
Mechanical Design						
Height	nt		mm		130	
Width	h		mm		101.6	
Depth			mm		70	
Mounting type	Mounting type				fixed mounting	
Environmental condi	Environmental conditions					
Ambient temperature						
<ul><li>during operation / minimum</li></ul>		°C		-25		
<ul><li>during operation / maximum</li></ul>		°C		70		
<ul><li>during storage / minimum</li></ul>		°C		-40		
during storage / maximum		°C		80		
Certificates						
Equipment marking	Equipment marking					
• acc. to DIN EN 61346-2			Q			
● acc. to DIN EN 81346-2				Q		
General Product	EMC	Declaration of Ship Conformity		Ship	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/3VA11104EF460AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11104EF460AA0/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=3VA11104EF460AA0

**CAx-Online-Generator** 

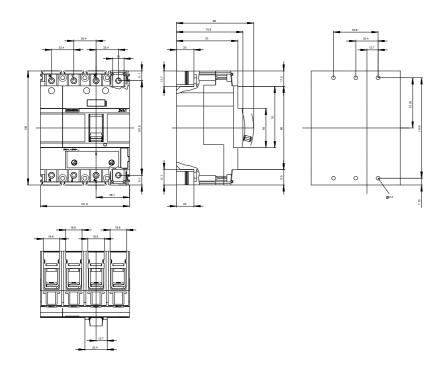
http://www.siemens.com/cax

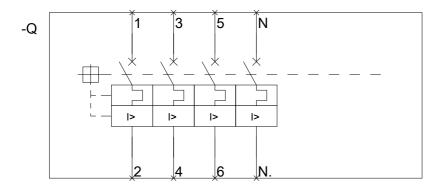
**Tender specifications** 

http://ausschreibungstexte.siemens.com/tiplv

other

GL





last modified: 11.03.2015