# **SIEMENS**

## Data sheet

# 3VA1196-4EE46-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS S ICU=36KA @ 415 V 4-POLE, LINE PROTECTION TM220, ATFM, IN=16A OVERLOAD PROTECTION IR=11,2A ...16A SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL UNPROTECTED CABLE CONNECTION

Figure similar

Model		
product brand name	S	SENTRON
Product designation	N	Molded case circuit breaker
Design of the product	L	Line protection
Product variations	C	General Applications
Ground fault monitoring version	V	Vithout
Design of the auxiliary release	V	Nithout auxiliary release
Design of the auxiliary switch	V	Vithout
Design of the operating mechanism	to	oggle handle
Type of the driving mechanism / motor drive	N	No
Design of the overcurrent release	Т	ГМ220

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 class of the circuit breaker  Sisting capacity class of the circuit capacity capacit	Protection class IP		IP40
Switching capacity  Switching capacity class of the circuit breaker  S  Dissipation  Active power loss  • maximum  W  10.6  Electricity  Continuous current / Rated value / maximum  A  A  A  A  A  A  A  A  A  A  A  A  A	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker    Dissipation	Protective function of the overcurrent release		Ц
Switching capacity class of the circuit breaker    Dissipation	Switching capacity		
Active power loss  • maximum    M			S
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  Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  • of ro DC / Rated value  • at 40 °C / Rated value  • at 55 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 67 °C / Rated value  • at 67 °C / Rated value  • at 70 °C / Rated value  • at 70 °C / Rated value  • at 67 °C / Rated value  • at 67 °C / Rated value  • at 68 °C / Rated value  • at 68 °C / Rated value  • at 69 °C / Rated value  • at 69 °C / Rated value  • at 69 °C / Rated value  • at 70 °C / Rated value  •			
Continuous current / Rated value / maximum	• maximum	W	10.6
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 600  Operating current  at 40 °C / Rated value  A 16  at 55 °C / Rated value  A 16  at 65 °C / Rated value  A 15  at 65 °C / Rated value  A 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Adjustable parameters  Adjustable parameters  Adjustable response value current  of r N-conductor protection / Full-scale value  of or N-conductor protection / Full-scale value	Electricity		
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 16  • at 50 °C / Rated value  A 16  • at 55 °C / Rated value  A 16  • at 65 °C / Rated value  A 15  • at 65 °C / Rated value  A 15  • at 67 °C / Rated value  A 15  • at 67 °C / Rated value  • for To C ocntacts / for auxiliary contacts  O  Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / Full-scale 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     of for DC / Rated value     volume  Operating current     at 40 °C / Rated value     A 16     at 50 °C / Rated value     A 16     at 55 °C / Rated value     A 16     at 65 °C / Rated value     A 15     at 65 °C / Rated value     A 15     at 67 °C / Rated value     A 15     at 70 °C / Rated value     A 15  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     of or N-conductor protection / initial value     of or N-conductor protection / Full-scale value	Continuous current / Rated value	Α	16
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  A 16  • at 50 °C / Rated value  A 16  • at 50 °C / Rated value  A 16  • at 60 °C / Rated value  A 15  • at 60 °C / Rated value  A 15  • at 70 °C / Rated value  A 15  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	Adjustable response value current	_	
Main circuit		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 16  • at 50 °C / Rated value  A 16  • at 50 °C / Rated value  A 16  • at 60 °C / Rated value  A 15  • at 60 °C / Rated value  A 15  • at 65 °C / Rated value  A 15  • at 70 °C / Rated value  A 15  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		Α	10
with AC / at 50/60 Hz / Rated value     for DC / Rated value     v 600  Operating current     at 40 °C / Rated value     A 16     at 50 °C / Rated value     A 16     at 55 °C / Rated value     A 16     at 60 °C / Rated value     A 15     at 65 °C / Rated value     A 15     at 65 °C / Rated value     A 15     at 70 °C / Rated value     A 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitable 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	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 60 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value  A 15  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	• with AC / at 50/60 Hz / Rated value	V	690
at 40 °C / Rated value at 50 °C / Rated value A 16  at 55 °C / Rated value A 16  at 60 °C / Rated value A 15  at 65 °C / Rated value A 15  at 65 °C / Rated value A 15  at 70 °C / Rated value A 15  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 of or N-conductor protection / Full-scale value A 0	• for DC / Rated value	V	600
at 50 °C / Rated value at 55 °C / Rated value A 16 at 60 °C / Rated value A 15 at 65 °C / Rated value A 15 at 65 °C / Rated value A 15 at 70 °C / Rated value A 15  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 of or N-conductor protection / initial value of or N-conductor protection / Full-scale value A 0	Operating current	_	
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 15  Auxiliary circuit  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  of or N-conductor protection / Full-scale value  of or N-conductor protection / Full-scale value  At 10	• at 40 °C / Rated value	Α	16
at 60 °C / Rated value  at 65 °C / Rated value  A 15  at 70 °C / Rated value  A 15  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  A 10  of N-conductor protection / Full-scale value  A 0	• at 50 °C / Rated value	Α	16
at 65 °C / Rated value  at 70 °C / Rated value  A 15  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  A 10  of N-conductor protection / Full-scale value  A 0	● at 55 °C / Rated value	Α	16
at 70 °C / Rated value  A 15  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  • for N-conductor protection / Full-scale value  A 0  • for N-conductor protection / Full-scale value  A 0	• at 60 °C / Rated value	Α	15
Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  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  A 0  • for N-conductor protection / Full-scale value  A 0	• at 65 °C / Rated value	Α	15
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  for N-conductor protection / Full-scale value  A  0	• at 70 °C / Rated value	Α	15
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  for N-conductor protection / Full-scale value  A  0	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  A 0  • for N-conductor protection / Full-scale value  A 0			0
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  A 0  • for N-conductor protection / Full-scale value  A 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  of I-trip / Full-scale value A  0  of N-conductor protection / Full-scale value A  0			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>A</li> <li>0</li> <li>0</li> </ul>	Adjustable parameters		
<ul> <li>for N-conductor protection / initial value</li> <li>for N-conductor protection / Full-scale value</li> <li>A</li> <li>0</li> <li>0</li> </ul>	Adjustable response value current		
• for N-conductor protection / Full-scale value A 0	● of I-trip / Full-scale value	Α	10
	• for N-conductor protection / initial value	Α	0
Adjustable response value current / of the current- A 0.7	• for N-conductor protection / Full-scale value	Α	0
dependent overload release / initial value	•	А	0.7
Product details	Product details		
Product component Product component			

		N
Trip indicator		No 
• display		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		
Intrinsic device protection		Yes
• communication function		No
Phase failure detection		No
<ul> <li>other measurement function</li> </ul>		No
Accessories		
Manufacturer article number / of the supplied basic		3VA1196-4EE46-0AA0
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)		
• at 240 V / Rated value	kA	121
● at 415 V / Rated value	kA	75.6
• at 690 V / Rated value	kA	7.5
Connections		
Arrangement of electrical connectors / for main		Front terminal
Type of connectable conductor cross-section		

• of the round conduct	or terminal / strand	anded			1 x (1.5 - 70 mm²)	
Type of electrical connection	connection / for main current circuit				Box terminal	
Mechanical Design	Mechanical Design					
Height			mm		130	
Width			mm		101.6	
Depth			mm		70	
Mounting type	Mounting type				fixed mounting	
Environmental conditions	Environmental conditions					
Ambient temperature						
<ul><li>during operation / mi</li></ul>	during operation / minimum		°C		-25	
<ul><li>during operation / ma</li></ul>	during operation / maximum		°C		70	
<ul><li>during storage / mini</li></ul>	during storage / minimum		°C		-40	
during storage / max	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 EM Product		Declaration of Ship Conformity		Ship	oping 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/3VA11964EE460AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11964EE460AA0/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=3VA11964EE460AA0

**CAx-Online-Generator** 

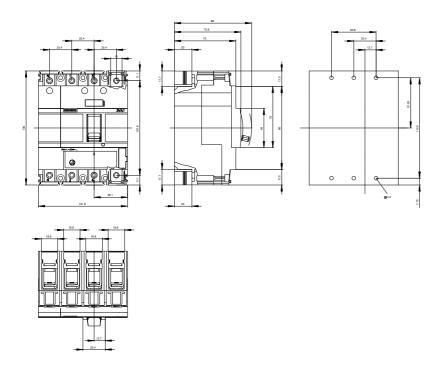
http://www.siemens.com/cax

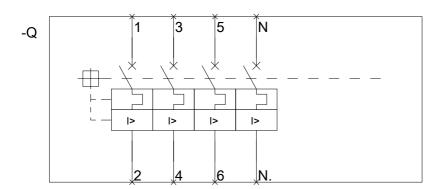
**Tender specifications** 

http://ausschreibungstexte.siemens.com/tiplv

other

GL





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