SIEMENS

Data sheet

3VA1196-6EE46-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS H ICU=70KA @ 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	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	TM220

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 Dissipation Active power loss • maximum W 10.6 Electricity Continuous current / Rated value / maximum Active power loss • 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 60 °C / Rated value • at 70 °C / Rated value • at 70 °C / Rated value A 15 Auxillary circuit Number of CO contacts / for auxillary contacts Osurtability Sutability for use Adjustable parameters Adjustable parameters Adjustable parameters Adjustable parameters Adjustable parameters Adjustable response value current / of the current-dependent overload release / initial value • for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value Product details	Protection class IP		IP40			
Switching capacity Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 10.6 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 • 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 / Rated value •	Protection class IP / on the front		IP40			
Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 10.6 Electricity Continuous current / Rated value / maximum • of the current-dependent overload release / A 16 Adjustable response value current • of the instantaneous short-circuit release / initial A 10 Value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • of the data 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 • at	Protective function of the overcurrent release		LI			
Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 10.6 Electricity Continuous current / Rated value / maximum • of the current-dependent overload release / A 16 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 of the of the value value • of the of the of the value value • of the value value value • at 40 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated value	Switching capacity					
Active power loss • maximum Maximum Maxi	Switching capacity class of the circuit breaker		Н			
Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 16 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 rDC / Rated value veriff of C / Rated value at 40 °C / Rated value at 50 °C / Rated value at 55 °C / Rated value at 65 °C / Rated valu	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 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 •	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 current-circuit release / initial value of the current-dependent overload release / initial value of the current-circuit release / initial value of the current-dependent overload release / initial value A 10 10 11 12 13 14 15 16 16 16 16 16 16 16 16 16	• 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 r DC / Rated value of r DC / Rated value at 40 °C / Rated value at 55 °C / Rated value at 60 °C / Rated value at 70 °C /	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 10 A 10 A 10 A 16 A 15 A 16 A 1	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 vith AC / Rated valu	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 V 690 Operating current • at 40 °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 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 Adjustable response value current / of the current-dependent overload release / initial value 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 65 °C / Rated value • at 70 °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 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 • 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 16 • 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 65 °C / Rated value A 15 • at 70 °C / Rated value A 15 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	10			
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 15 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 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 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 15 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 Adjustable response value current / of the current-dependent overload release / initial value A 0.7	• with AC / at 50/60 Hz / Rated value	V	690			
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 70 °C / Rated value buildiary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability Suitability or 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	• 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 At 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 for 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 15 at 60 °C / Rated value At 15 at 70 °C / Rated value At 15 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 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	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 for 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	16			
at 65 °C / Rated value 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 of or N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value A 0.7	• at 55 °C / Rated value	Α	16			
• 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 • 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 Adjustable response value current / of the current-dependent overload release / initial value	• at 60 °C / Rated value	Α	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 • 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	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 Adjustable response value current / of the current-dependent overload release / initial value 0 System protection A	• 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 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			
Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value A A A A A A A A A A A A A	Adjustable parameters					
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 10 A 0 A 0 O 0 Adjustable response value current / of the current-dependent overload release / initial 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 0.7	•	Α	10			
• for N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current- dependent overload release / initial value 0.7						
Adjustable response value current / of the current- dependent overload release / initial value	•					
Product details	Adjustable response value current / of the current-					
	Product details					
Product component						

Trip indicator		No
		No
• display		No
Voltage trigger		No
undervoltage release		
undervoltage release with leading contact		No
Product property		No
 for neutral conductors / upgradeable/retrofittable / Short-circuit and 		INO
overload proof		
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		3VA1196-6EE46-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(lcs)		
• at 240 V / Rated value	kA	100
• at 415 V / Rated value	kA	70
• at 440 V / Rated value	kA	36
• at 500 V / Rated value	kA	15
at 690 V / Rated value		15
at 050 V / Nated Value	kA	5
Maximum short-circuit current breaking capacity (Icu)	kA	
	kA kA	
Maximum short-circuit current breaking capacity (Icu)		5
Maximum short-circuit current breaking capacity (Icu) ■ at 240 V / Rated value	kA	100
Maximum short-circuit current breaking capacity (Icu) ■ at 240 V / Rated value ■ at 415 V / Rated value	kA kA	5 100 70
Maximum short-circuit current breaking capacity (Icu) • at 240 V / Rated value • at 415 V / Rated value • at 440 V / Rated value	kA kA kA	5 100 70 36
Maximum short-circuit current breaking capacity (Icu) • at 240 V / Rated value • at 415 V / Rated value • at 440 V / Rated value • at 500 V / Rated value	kA kA kA	5 100 70 36 20
Maximum short-circuit current breaking capacity (Icu) • at 240 V / Rated value • at 415 V / Rated value • at 440 V / Rated value • at 500 V / Rated value • at 690 V / Rated value	kA kA kA	5 100 70 36 20
Maximum short-circuit current breaking capacity (Icu) • at 240 V / Rated value • at 415 V / Rated value • at 440 V / Rated value • at 500 V / Rated value • at 690 V / Rated value Short-circuit current making capacity (Icm)	kA kA kA kA	5 100 70 36 20 10
Maximum short-circuit current breaking capacity (Icu) • at 240 V / Rated value • at 415 V / Rated value • at 440 V / Rated value • at 500 V / Rated value • at 690 V / Rated value Short-circuit current making capacity (Icm) • at 240 V / Rated value	kA kA kA kA kA	5 100 70 36 20 10
Maximum short-circuit current breaking capacity (Icu) • at 240 V / Rated value • at 415 V / Rated value • at 440 V / Rated value • at 500 V / Rated value • at 690 V / Rated value Short-circuit current making capacity (Icm) • at 240 V / Rated value • at 415 V / Rated value • at 690 V / Rated value • at 690 V / Rated value	kA kA kA kA kA	5 100 70 36 20 10 220 154 17
Maximum short-circuit current breaking capacity (Icu) • at 240 V / Rated value • at 415 V / Rated value • at 440 V / Rated value • at 500 V / Rated value • at 690 V / Rated value Short-circuit current making capacity (Icm) • at 240 V / Rated value • at 415 V / Rated value • at 690 V / Rated value • at 690 V / Rated value Connections Arrangement of electrical connectors / for main	kA kA kA kA kA	5 100 70 36 20 10 220 154
Maximum short-circuit current breaking capacity (Icu) • at 240 V / Rated value • at 415 V / Rated value • at 440 V / Rated value • at 500 V / Rated value • at 690 V / Rated value Short-circuit current making capacity (Icm) • at 240 V / Rated value • at 415 V / Rated value • at 690 V / Rated value • at 690 V / Rated value	kA kA kA kA kA	5 100 70 36 20 10 220 154 17

 of the round conductor terminal / st 	tranded		1 x (1.5 - 70 mm²)	
Type of electrical connection / for main c	urrent circuit		Box terminal	
Mechanical Design				
			400	
Height		mm	130	
Width		mm	101.6	
Depth		mm	70	
Mounting type			fixed mounting	
Environmental conditions				
Ambient temperature				
during operation / minimum		°C	-25	
during operation / maximum		°C	70	
during storage / minimum		°C	-40	
during storage / maximum		°C	80	
Certificates				
Equipment marking				
• acc. to DIN EN 61346-2			Q	
• acc. to DIN EN 81346-2			Q	
General EMC	Declaration	n of S	hipping Approval	other

Further information

Product

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/3VA11966EE460AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11966EE460AA0/all

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

Conformity

EG-Konf.

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11966EE460AA0

CAx-Online-Generator

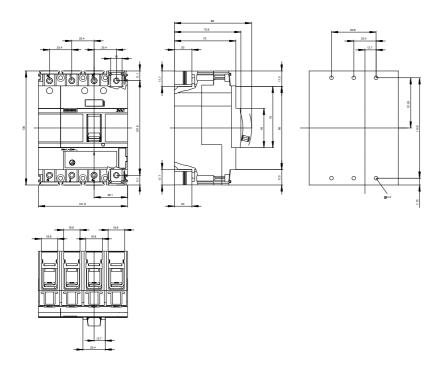
http://www.siemens.com/cax

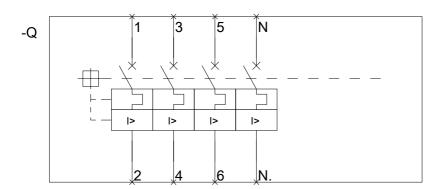
Tender specifications

http://ausschreibungstexte.siemens.com/tiplv

other

GL





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