SIEMENS

Data sheet

3VA1116-4EE32-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS S ICU=36KA @ 415 V 3-POLE, LINE PROTECTION TM220, ATFM, IN=160A OVERLOAD PROTECTION IR=112A ...160A SHORT CIRCUIT PROTECTION II=10 X IN BUSBAR 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		3	
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 LI Switching capacity Switching capacity Switching capacity class of the circuit breaker S Dissipation Active power loss • maximum W 38 Electricity Continuous current / Rated value / maximum A A A A A A B Continuous current / Rated value / maximum A A A A B Continuous current / Rated value A A A B A A A B Continuous current / Rated value A A A B A A A B A A B A A	Protection class IP		IP40
Switching capacity Switching capacity class of the circuit breaker S Dissipation Active power loss • maximum W 38 Electricity Continuous current / Rated value / maximum A A A A A B Continuous current / Rated value • 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 Corrent / Rated value • of the instantaneous short-circuit release / initial value • of the Corrent / Rated value • of the Corrent / Rated value • of DC / Rated value • of DC / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker Active power loss • maximum **Maximum** **Telectricity** Continuous current / Rated value / maximum A 160 Continuous current / Rated value / maximum A 160 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 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 70 °C /	Protective function of the overcurrent release	_	LI
Switching capacity class of the circuit breaker Active power loss • maximum **Maximum** **Telectricity** Continuous current / Rated value / maximum A 160 Continuous current / Rated value / maximum A 160 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 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 70 °C /	Switching capacity		
Active power loss • maximum Maximum W 38			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 • 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 65 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated value •	Active power loss		
Continuous current / Rated value / maximum	• maximum	W	38
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 500 Operating current at 40 °C / Rated value A 160 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 at 70 °C / Rated value A 153 Auxilliary circuit Number of CO contacts / for auxiliary contacts Osuitability Suitability Suitabile parameters Adjustable parameters Adjustable response value current of r N-conductor protection / Full-scale value for N-conductor protection / Full-scale value of or N-conductor protection / Full-scale value of or N-conductor protection / Full-scale value of or N-conductor protection / Full-scale value A 0	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 of the To C / Rated value of to PC / Rated value A 160 Pat 40 °C / Rated value A 160 A 160 A 158 A 155 A 160 A 160 A 155 A 160 A 155 A 160 A 160 A 155 A 160 A 160 A 155 A 160 A 155 A 160 A 160 A 155 A 160 A 155 A 160 A 155 A 160 A	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 ro DC / Rated value v 500 Operating current at 40 °C / Rated value at 55 °C / Rated value at 55 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value at 67 °C / Rated value at	Continuous current / Rated value	Α	160
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 50 °C / Rated value • at 60 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value	Adjustable response value current		
Main circuit		Α	1
Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value V 500 Operating current • at 40 °C / Rated value A 160 • at 50 °C / Rated value A 160 • at 55 °C / Rated value A 158 • at 60 °C / Rated value A 155 • at 65 °C / Rated value A 153 • at 70 °C / Rated value A 150 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		А	10
with AC / at 50/60 Hz / Rated value for DC / Rated value v 500 Operating current at 40 °C / Rated value A 160 at 50 °C / Rated value A 160 at 55 °C / Rated value A 158 at 60 °C / Rated value A 155 at 65 °C / Rated value A 153 at 70 °C / Rated value A 150 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	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 153 • at 70 °C / Rated value A 150 Auxiliary circuit Number of CO contacts / for auxiliary contacts O 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	• with AC / at 50/60 Hz / Rated value	V	690
at 40 °C / Rated value at 50 °C / Rated value A 160 at 55 °C / Rated value A 158 at 60 °C / Rated value A 155 at 65 °C / Rated value A 155 at 65 °C / Rated value A 153 at 70 °C / Rated value A 150 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 of or N-conductor protection / Full-scale value A 0	• for DC / Rated value	V	500
at 50 °C / Rated value at 55 °C / Rated value A 158 at 60 °C / Rated value A 155 at 65 °C / Rated value A 155 at 65 °C / Rated value A 153 at 70 °C / Rated value A 150 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 of rN-conductor protection / Full-scale value A 0 of rN-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 155 at 65 °C / Rated value At 153 At 150 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 of or N-conductor protection / Full-scale 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	160
at 60 °C / Rated value at 65 °C / Rated value A 153 at 70 °C / Rated value A 150 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 for N-conductor protection / Full-scale value for N-conductor protection / Full-scale value A 10 of or N-conductor protection / Full-scale value A 0	• at 50 °C / Rated value	Α	160
at 65 °C / Rated value at 70 °C / Rated value A 150 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 A 10 of N-conductor protection / Full-scale value A 0	• at 55 °C / Rated value	Α	158
at 70 °C / Rated value A 150 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 o for N-conductor protection / Full-scale value A 0 o for N-conductor protection / Full-scale value A 0	• at 60 °C / Rated value	Α	155
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	153
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	150
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 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 of N-conductor protection / Full-scale value A 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 of 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			system protection
 of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value A 0 A 0 	Adjustable parameters		
 for N-conductor protection / initial value for N-conductor protection / Full-scale value A 0 A 0 			
• 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
	• for N-conductor protection / Full-scale value	Α	0
Adjustable response value current / of the current- A 0.7 dependent overload release / initial value	Adjustable response value current / of the current- dependent overload release / initial value	Α	0.7
Product details	Product details		
Product component			

		l N
• 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		3VA1116-4EE32-0AA0
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 (lcm)		
• at 240 V / Rated value		
	kA	121
• at 415 V / Rated value	kA kA	121 75.6
at 415 V / Rated valueat 690 V / Rated value		
	kA	75.6
at 690 V / Rated value Connections Arrangement of electrical connectors / for main	kA	75.6
at 690 V / Rated value Connections	kA	75.6 7.5

• for flat-bar terminal connection / minimum	12 x 0
• for flat-bar terminal connection / maximum	17 x 6.5
Type of electrical connection / for main current circuit	Lug terminal

Mechanical Design			
Height	mm	130	
Width	mm	76.2	
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	

00.	ou		
Ea	uipme	ent m	arking

Certificates

• acc. to DIN EN 61346-2 Q Q • acc. to DIN EN 81346-2

General Product Approval	EMC	Declaration of	Shipping Approval
		Conformity	





other







other

other

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/lowvoltage/catalogs

Industry Mall (Online ordering system)

https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA11164EE320AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11164EE320AA0/all

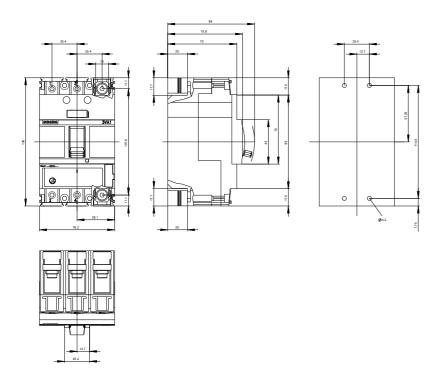
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11164EE320AA0

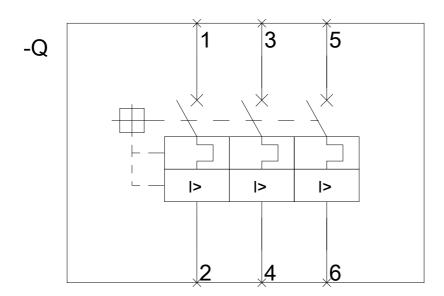
CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





last modified: 11.03.2015