SIEMENS

Data sheet

3VA2110-7HN42-0AA0



CIRCUIT BREAKER 3VA2 IEC FRAME 160 BREAKING CAPACITY CLASS C ICU=110KA @ 415 V 4POLE, LINE PROTECTION ETU350, LSI, IN=100A OVERLOAD PROTECTION IR=40A ...100A SHORT CIRCUIT PROTECTION ISD=1,5... 10 X IR, II=12 X IN NEUTRAL PROTECTION ADJUSTABLE(OFF,50%,100%) BUSBAR CONNECTION

Model	
product brand name	SENTRON
Product designation	Molded case circuit breaker
Design of the product	Line protection
Product variations	Selective Applications
Ground fault monitoring version	Without
Design of the auxiliary release	without auxiliaryrelease
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	ETU350

General technical data	
Number of poles	4
Trip class / of the L-trip / with I2t characteristic / initial value	0.5
Trip class / of the L-trip / with I2t characteristic / Full-scale value	17
Electrical endurance (switching cycles)	
• at AC-1 / at 380/415 V / at 50/60 Hz	12 000
circuit-breaker / Design	3VA
Mechanical service life (switching cycles) / typical	20 000

Voltage		
Insulation voltage / Rated value	V	800

Protection class

Protection class P or the front			
Protective function of the overcurrent release Switching capacity Switching capacity class of the circuit breaker C Dissipation Active power loss • maximum W 10 Electricity Continuous current / Rated value / maximum Adjustable response value current / of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • at 40 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 70 °C / R	Protection class IP		IP40
Switching capacity Switching capacity class of the circuit breaker C Dissipation Active power loss • maximum W 10 Electricity Continuous current / Rated value / maximum Adjustable response value current / of the instantaneous short-circuit release / initial value Main circuit Operating current • at 40 °C / Rated value • at 50 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated valu	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker C Dissipation Active power loss • maximum W 10 Electricity Continuous current / Rated value / maximum A A A A A A B Continuous current / Rated value A A A A B A A B Continuous current / Rated value A A A A B A B Continuous current / Rated value A A A A B B Continuous current / Rated value A A A B B B B B B B B B B	Protective function of the overcurrent release		LSI
Dissipation Active power loss • maximum W 10 Electricity Continuous current / Rated value / maximum	Switching capacity		
Active power loss • maximum Description	Switching capacity class of the circuit breaker		С
Provincity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 100 Adjustable response value current / of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value V 690 Operating current • at 40 °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 A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts O 10 Suitability Suitability for use Adjustable parameters Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • of the short-time delayed short-circuit release / initial value • of st-trip / with 12t characteristic / initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value • of S-trip / with 12t characteristic / Initial value	Dissipation		
Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value Adjustable response value current / of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value V 690 Operating current • 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 • at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts O Suitability Suitability for use Adjustable parameters Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • of the short-time delayed short-circuit release / initial value • of st-trip / with I2t characteristic / initial value • of S-trip / with I2t characteristic / initial value • of S-trip / with I2t characteristic / initial value • of S-trip / with I2t characteristic / Initial value • of S-trip / with I2t characteristic / Initial value • of S-trip / with I2t characteristic / Initial value • of S-trip / with I2t characteristic / Initial value • of S-trip / with I2t characteristic / Initial value • of S-trip / with I2t characteristic / Initial value • of S-trip / with I2t characteristic / Initial value • of S-trip / with I2t characteristic / Initial value • of S-trip / with I2t characteristic / Initial value • of S-trip / with I2t characteristic / Initial value • of S-trip / with I2t characteristic / Initial value	Active power loss		
Continuous current / Rated value / maximum	• maximum	W	10
Continuous current / Rated value Adjustable response value current / of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • at 40 °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 • at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts O Suitability Suitability Suitability Suitabile response value current • of I-trip / Full-scale value • of the short-time delayed short-circuit release / initial value • of the short-time delayed short-circuit release / Full-scale value Adjustable delay time • of S-trip / with l2t characteristic / initial value • of S-trip / with l2t characteristic / initial value • of S-trip / with l2t characteristic / Full-scale • 0.02	Electricity		
Adjustable response value current / of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value V 690 Operating current • 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 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NC 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 the short-time delayed short-circuit release / initial value • of the short-time delayed short-circuit release / A 1.5 initial value • of the short-time delayed short-circuit release / A 10 Adjustable delay time • of S-trip / with 12t characteristic / initial value • of S-trip / with 12t characteristic / initial value • of S-trip / with 12t characteristic / Full-scale • of S-trip / with 12t characteristic / Full-scale • of S-trip / with 12t characteristic / Full-scale • of S-trip / with 12t characteristic / Full-scale • of S-trip / with 12t characteristic / Full-scale	Continuous current / Rated value / maximum	Α	160
instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value V 690 Operating current • 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 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts O Sultability Suitability Suitability for use Adjustable parameters Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • of the short-time delayed short-circuit release / a 1.5 initial value • of the short-time delayed short-circuit release / A 1.5 initial value • of S-trip / with 12t characteristic / initial value • of S-trip / with 12t characteristic / initial value • of S-trip / with 12t characteristic / Full-scale • 0.02 • 0.4	Continuous current / Rated value	Α	100
Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value V 690 Operating current • at 40 °C / Rated value • at 50 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated value • at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts O Suitability Suitability Suitability Suitable parameters Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • of the short-time delayed short-circuit release / initial value • of the short-time delayed short-circuit release / A 10 Full-scale value Adjustable delay time • of S-trip / with 12t characteristic / initial value • of S-trip / with 12t characteristic / Full-scale • 0.02 • of S-trip / with 12t characteristic / Full-scale \$ 0.04	Adjustable response value current / of the	Α	12
Operating voltage • with AC / at 50/60 Hz / Rated value Operating current • 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 70 °C / Rated value • at 70 °C / Rated value • at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts O Suitability Suitability Suitability for use Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • of the short-time delayed short-circuit release / initial value • of the short-time delayed short-circuit release / Full-scale value Adjustable delay time • of S-trip / with 12t characteristic / initial value • of S-trip / with 12t characteristic / Full-scale • 0.02 • of S-trip / with 12t characteristic / Full-scale	instantaneous short-circuit release / initial value		
• with AC / at 50/60 Hz / Rated value Operating current • 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 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts 0 Suitability Suitability Suitable parameters Adjustable parameters Adjustable parameters Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • of the short-time delayed short-circuit release / initial value • of the short-time delayed short-circuit release / Full-scale value Adjustable delay time • of S-trip / with I2t characteristic / initial value • of S-trip / with I2t characteristic / Full-scale • 0 of S-trip / with I2t characteristic / Full-scale • 0 of S-trip / with I2t characteristic / Full-scale • 0 of S-trip / with I2t characteristic / Full-scale	Main circuit		
Operating current • 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 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts 0 Suitability Suitability Suitability for use Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • of the short-time delayed short-circuit release / initial value • of the short-time delayed short-circuit release / Full-scale value Adjustable delay time • of S-trip / with 12t characteristic / initial value • of S-trip / with 12t characteristic / Full-scale • of S-trip / with 12t characteristic / Full-scale S 0.02 • 0 S-trip / with 12t characteristic / Full-scale	Operating voltage		
at 40 °C / Rated value at 50 °C / Rated value A 100 at 60 °C / Rated value A 100 at 65 °C / Rated value A 100 at 65 °C / Rated value A 100 at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts O Suitability Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value of the short-time delayed short-circuit release / initial value of the short-time delayed short-circuit release / Full-scale value Adjustable delay time of S-trip / with 2t characteristic / initial value of S-trip / with 2t characteristic / Full-scale Suitability Suitability System protection	 with AC / at 50/60 Hz / Rated value 	V	690
at 50 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts O Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value of the short-time delayed short-circuit release / initial value of the short-time delayed short-circuit release / Full-scale value Adjustable delay time of S-trip / with I2t characteristic / initial value of S-trip / with I2t characteristic / Full-scale s 0.02 of S-trip / with I2t characteristic / Full-scale s 0.4	Operating current		
at 60 °C / Rated value at 65 °C / Rated value A 100 at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts 0 Suitability Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value of the short-time delayed short-circuit release / initial value of the short-time delayed short-circuit release / Full-scale value Adjustable delay time of S-trip / with I2t characteristic / initial value of S-trip / with I2t characteristic / Full-scale s 0.02 of S-trip / with I2t characteristic / Full-scale s 0.4	• at 40 °C / Rated value	Α	100
at 65 °C / Rated value at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts 0 Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value of the short-time delayed short-circuit release / initial value of the short-time delayed short-circuit release / Full-scale value Adjustable delay time of S-trip / with I2t characteristic / initial value of S-trip / with I2t characteristic / Full-scale 0 100 100 100 100 100 100 100	• at 50 °C / Rated value	Α	100
at 70 °C / Rated value Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts 0 Suitability Suitability or use Adjustable parameters Adjustable response value current of I-trip / Full-scale value of the short-time delayed short-circuit release / initial value of the short-time delayed short-circuit release / Full-scale value Adjustable delay time of S-trip / with I2t characteristic / initial value of S-trip / with I2t characteristic / Full-scale s 0.02 of S-trip / with I2t characteristic / Full-scale s 0.4	• at 60 °C / Rated value	Α	100
Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts 0 Suitability Suitability Suitability for use Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • of the short-time delayed short-circuit release / initial value • of the short-time delayed short-circuit release / Full-scale value • of S-trip / with 12t characteristic / initial value • of S-trip / with 12t characteristic / Full-scale • of S-trip / with 12t characteristic / Full-scale s 0.02	• at 65 °C / Rated value	Α	100
Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts 0 Suitability Suitability for use system protection Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • of the short-time delayed short-circuit release / initial value • of the short-time delayed short-circuit release / Full-scale value Adjustable delay time • of S-trip / with I2t characteristic / initial value • of S-trip / with I2t characteristic / Full-scale s 0.02	• at 70 °C / Rated value	Α	100
Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts 0 Suitability Suitability for use system protection Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • of the short-time delayed short-circuit release / initial value • of the short-time delayed short-circuit release / Full-scale value Adjustable delay time • of S-trip / with I2t characteristic / initial value • of S-trip / with I2t characteristic / Full-scale s 0.02	Auxiliary circuit		
Suitability Suitability for use system protection Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • of the short-time delayed short-circuit release / initial value • of the short-time delayed short-circuit release / A 1.5 Full-scale value Adjustable delay time • of S-trip / with I2t characteristic / initial value s 0.02 • of S-trip / with I2t characteristic / Full-scale s 0.4	Number of NC contacts / for auxiliary contacts		0
Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value of the short-time delayed short-circuit release / A initial value of the short-time delayed short-circuit release / A full-scale value Adjustable delay time of S-trip / with I2t characteristic / initial value of S-trip / with I2t characteristic / Full-scale s 0.02	Number of NO contacts / for auxiliary contacts		0
Adjustable parameters Adjustable response value current of I-trip / Full-scale value of the short-time delayed short-circuit release / A 1.5 initial value of the short-time delayed short-circuit release / A 10 Full-scale value Adjustable delay time of S-trip / with I2t characteristic / initial value s 0.02 of S-trip / with I2t characteristic / Full-scale s 0.4	Suitability		
Adjustable response value current of I-trip / Full-scale value of the short-time delayed short-circuit release / A 1.5 initial value of the short-time delayed short-circuit release / A 10 Full-scale value Adjustable delay time of S-trip / with I2t characteristic / initial value s 0.02 of S-trip / with I2t characteristic / Full-scale s 0.4	Suitability for use		system protection
 of I-trip / Full-scale value of the short-time delayed short-circuit release / initial value of the short-time delayed short-circuit release / Full-scale value Adjustable delay time of S-trip / with I2t characteristic / initial value of S-trip / with I2t characteristic / Full-scale 0.02 0.4 	Adjustable parameters		
of the short-time delayed short-circuit release / initial value of the short-time delayed short-circuit release / A 10 Full-scale value Adjustable delay time of S-trip / with I2t characteristic / initial value s 0.02 of S-trip / with I2t characteristic / Full-scale s 0.4	Adjustable response value current		
initial value • of the short-time delayed short-circuit release / A Full-scale value Adjustable delay time • of S-trip / with I2t characteristic / initial value • of S-trip / with I2t characteristic / Full-scale s 0.02	• of I-trip / Full-scale value	Α	12
Full-scale value Adjustable delay time • of S-trip / with I2t characteristic / initial value s 0.02 • of S-trip / with I2t characteristic / Full-scale s 0.4		Α	1.5
 of S-trip / with I2t characteristic / initial value of S-trip / with I2t characteristic / Full-scale s 0.02 s 0.4 		Α	10
• of S-trip / with I2t characteristic / Full-scale s 0.4	Adjustable delay time		
	• of S-trip / with I2t characteristic / initial value	S	0.02
	• of S-trip / with I2t characteristic / Full-scale	S	0.4
Adjustable response value current / of the current- dependent overload release / initial value		A	0.4

Product details		
Product component		
Trip indicator		No
• display		No
undervoltage release		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		3VA2110-7HN42-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(Ics)		
• at 240 V / Rated value	kA	150
● at 415 V / Rated value	kA	110
• at 440 V / Rated value	kA	110
• at 500 V / Rated value	kA	85
• at 690 V / Rated value	kA	2.5
Maximum short-circuit current breaking capacity (Icu)		
• at 240 V / Rated value	kA	150
• at 415 V / Rated value	kA	110
• at 440 V / Rated value	kA	110
• at 500 V / Rated value	kA	85
• at 690 V / Rated value	kA	2.5
Short-circuit current making capacity (Icm)		
• at 240 V / Rated value	kA	330
• at 415 V / Rated value	kA	242
• at 440 V / Rated value	kA	242
• at 500 V / Rated value	kA	187
• at 690 V / Rated value	kA	3.75
Connections		

Arrangement of electrical connectors / for main current circuit	Front terminal
Type of connectable conductor cross-section	
 for flat-bar terminal connection / minimum 	13 x 1 mm
• for flat-bar terminal connection / maximum	25 x 8.5
Type of electrical connection / for main current circuit	Lug terminal

Mechanical Design					
Height	mm	181			
Width	mm	140			
Depth	mm	107			
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			Ī
	• acc. to DIN EN 61346-2	Q		
	• acc. to DIN EN 81346-2	Q		

General Product Approval	EMC	Declaration of	Shipping
		Conformity	Approval
·	•		











Shipping	other
Approval	



GL

other

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/3VA21107HN420AA0

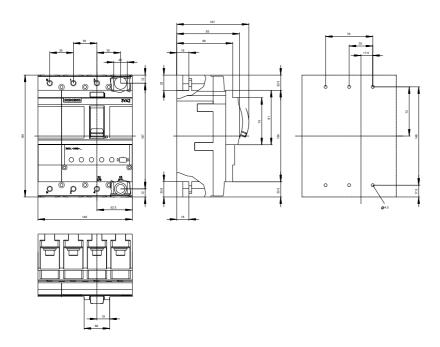
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA21107HN420AA0/all

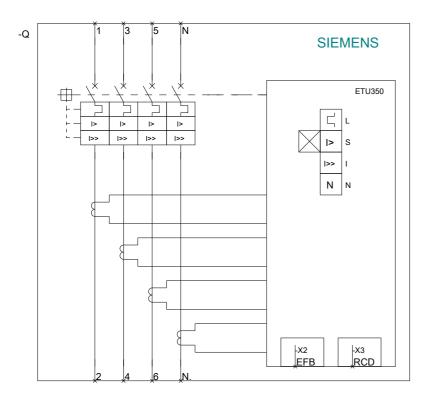
CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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